

DRINKING WATER, SANITATION AND HYGIENE IN SCHOOLS

Global baseline report 2018

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



Drinking Water, Sanitation and Hygiene in Schools: Global Baseline Report 2018

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Highlights

The World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF), through the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP), have produced regular updates on water, sanitation and hygiene (WASH) since 1990. Together, they are responsible for monitoring Sustainable Development Goal (SDG) targets 6.1 and 6.2 and supporting monitoring of other WASH-related targets.

This first JMP report on WASH in schools introduces new service ladders (Figure 1) and establishes national, regional and global baseline estimates that contribute towards global monitoring of SDG targets 6.1 and 6.2 – universal access to WASH – and SDG target 4.a – inclusive and effective learning environments for all (Table 1).

The SDGs aim for universal access to WASH and inclusive and effective learning environments for all



SDG	SDG TARGETS AND INDICATORS
 Goal 6: Ensure availability and sustainable management of water and sanitation for all	6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all 6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
 Goal 4: Ensure inclusive and quality education for all and promote lifelong learning	4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all 4.a.1 Proportion of schools with access to: (a) electricity; (b) the internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)

TABLE 1: Global goals and targets related to WASH in schools

SDG indicators for WASH in schools focus on achieving a basic minimum level of service

SERVICE LEVEL	DRINKING WATER	SANITATION	HYGIENE
BASIC SERVICE	Drinking water from an improved source and water is available at the school at the time of the survey	Improved sanitation facilities at the school that are single-sex and usable (available, functional and private) at the time of the survey	Handwashing facilities with water and soap available at the school at the time of the survey
LIMITED SERVICE	Drinking water from an improved source but water is unavailable at the school at the time of the survey	Improved sanitation facilities at the school that are either not single-sex or not usable at the time of the survey	Handwashing facilities with water but no soap available at the school at the time of the survey
NO SERVICE	Drinking water from an unimproved source or no water source at the school	Unimproved sanitation facilities or no sanitation facilities at the school	No handwashing facilities available or no water available at the school

FIGURE 1: New JMP service ladders for monitoring WASH in schools

Drinking water in schools

Key messages

In 2016,

- 92 countries and five out of eight SDG regions had sufficient data to estimate coverage of basic drinking water services in schools^{1,2}.
- 69% of schools had a basic drinking water service, defined as an improved source with water available at the time of the survey.
- 12% of schools had a limited drinking water service, defined as an improved source with water unavailable at the time of the survey.
- 19% of schools had no drinking water service, defined as an unimproved source or no source at all.
- Nearly 570 million children lacked a basic drinking water service at their school³.
- Less than half of schools in Oceania and only two thirds of schools in Central and Southern Asia had a basic drinking water service.
- Nearly half of schools in sub-Saharan Africa, and over a third of schools in Small Island Developing States had no drinking water service.
- Rural schools had lower coverage of basic drinking water services than urban schools in almost all countries with disaggregated data.
- One in four primary schools and one in six secondary schools had no drinking water service. There were insufficient data to calculate global estimates for pre-primary schools.
- Few countries reported on drinking water quality in schools but the limited data available showed that compliance with national standards varied widely.

Globally, 69% of schools had a basic drinking water service in 2016

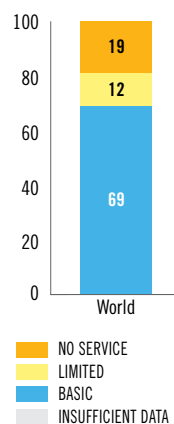


FIGURE 2: Global school drinking water coverage, 2016 (%)

Five out of eight SDG regions had estimates for basic drinking water services in schools in 2016

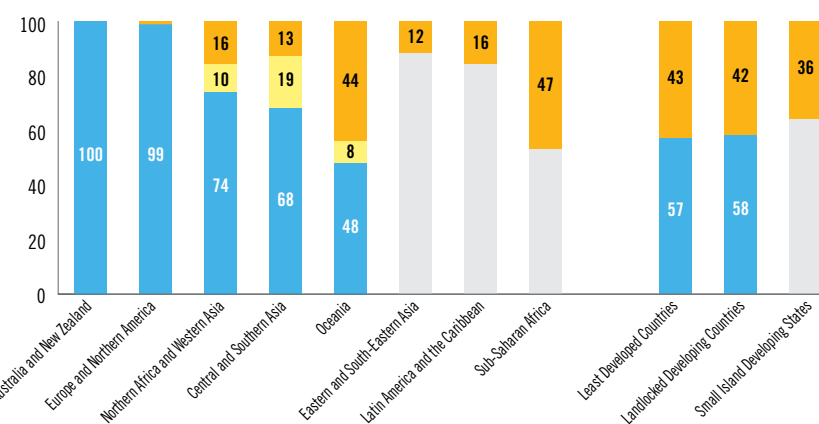


FIGURE 3: Regional school drinking water coverage, 2016 (%)

58 out of 92 countries had >75% coverage of basic drinking water services in schools in 2016

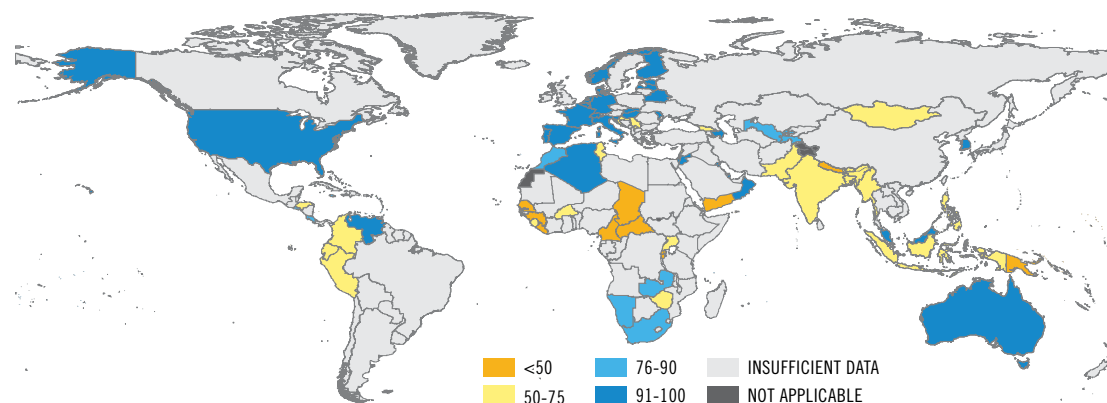


FIGURE 4: Proportion of schools with a basic drinking water service, by country, 2016 (%)

1 Regional and global estimates are made where data are available for at least 30% of the relevant school-age population.
 2 Most countries had data on the types of water sources used by schools but fewer had data on the availability of drinking water.
 3 UNESCO Institute of Statistics (UIS) estimates that there were 1.8 billion pre-primary, primary and secondary school-age children worldwide in 2016. This includes the 263 million children who were not in primary or secondary education for the school year ending in 2016. <<http://uis.unesco.org/en/topic/out-school-children-and-youth>>



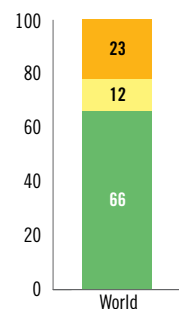
Sanitation in schools

Key messages

In 2016,

1. 101 countries and seven out of eight SDG regions had sufficient data to estimate coverage of basic sanitation services in schools⁴.
2. 66% of schools had a basic sanitation service, defined as an improved single-sex facility that is usable at the time of the survey.
3. 12% of schools had a limited sanitation service, defined as an improved facility that is not single-sex or not usable at the time of the survey.
4. 23% of schools had no sanitation service, defined as an unimproved facility or no facility at all.
5. Over 620 million children worldwide lacked a basic sanitation service at their school.
6. Coverage of basic sanitation services in schools varied widely between regions, ranging from 46% in Oceania to 100% in Australia and New Zealand.
7. A third of schools in sub-Saharan Africa and Eastern and South-Eastern Asia had no sanitation service.
8. Almost one in five primary schools and one in eight secondary schools had no sanitation service. There were insufficient data to calculate global estimates for pre-primary schools.
9. The ratio of students to toilets often exceeded national guidelines, for both girls and boys.
10. In most countries with data, fewer than 50% of schools had toilets accessible to students with limited mobility.

Globally, 66% of schools had a basic sanitation service in 2016



■ NO SERVICE
■ LIMITED
■ BASIC
■ INSUFFICIENT DATA

FIGURE 5: Global school sanitation coverage, 2016 (%)

Seven out of eight SDG regions had estimates for basic sanitation services in schools in 2016

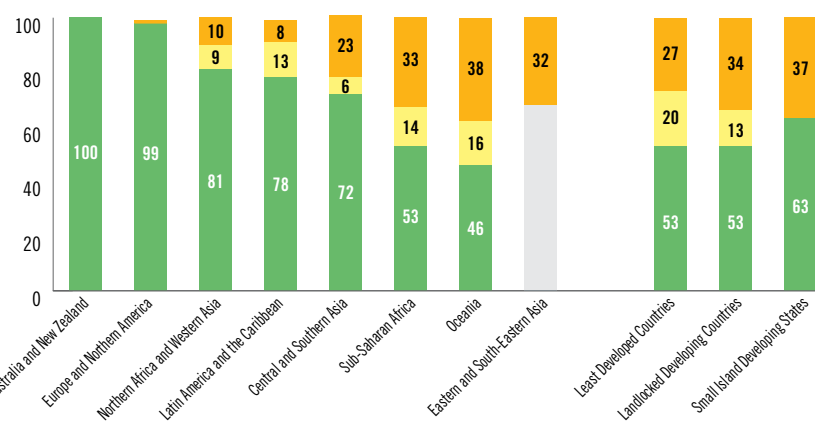


FIGURE 6: Regional school sanitation coverage, 2016 (%)

67 out of 101 countries had >75% coverage of basic sanitation services in schools in 2016

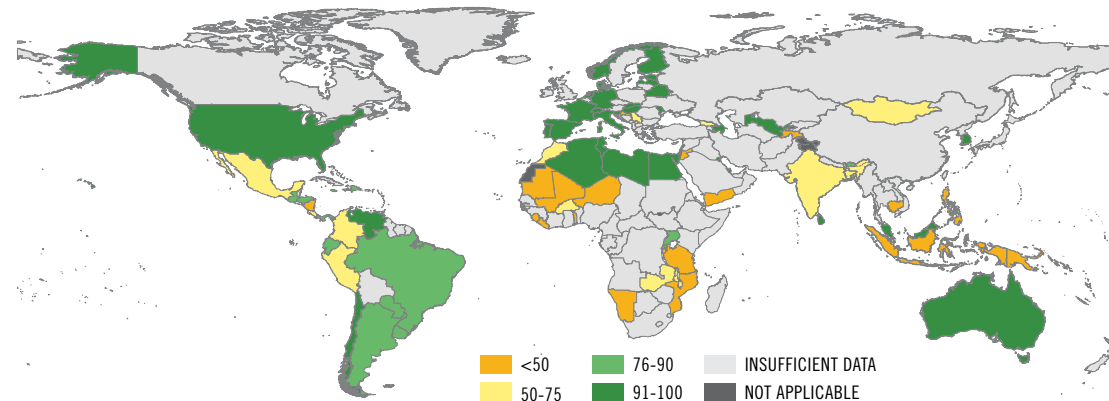


FIGURE 7: Proportion of schools with a basic sanitation service, by country, 2016 (%)

⁴ Most countries had data on the availability of sanitation facilities but relatively few had data on whether they are improved, usable and single-sex.

Hygiene in schools

Key messages

In 2016,

- 81 countries and seven out of eight SDG regions had sufficient data to estimate coverage of basic hygiene services in schools⁵.
- 53% of schools had a basic hygiene service, defined as a handwashing facility with water and soap available at the time of the survey.
- 11% of schools had a limited hygiene service, defined as a handwashing facility with water but no soap available at the time of the survey.
- 36% of schools had no hygiene service, defined as no facility or no water available.
- Nearly 900 million children worldwide lacked a basic hygiene service at their school.
- Coverage of basic hygiene services in schools was below 50% in Oceania and sub-Saharan Africa.
- More than a third of schools worldwide and half of schools in Least Developed Countries had no hygiene service.
- Secondary schools had higher coverage of basic hygiene services than primary schools in most countries with disaggregated data.
- More than one in three primary schools and a quarter of secondary schools had no hygiene service. There were insufficient data to calculate global estimates for pre-primary schools.
- Few countries had data on the proportion of schools providing menstrual hygiene management (MHM) education, sanitary towels and facilities for the disposal of used materials.

Globally, 53% of schools had a basic hygiene service in 2016

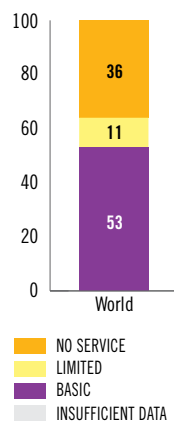


FIGURE 8: Global school hygiene coverage, 2016 (%)

Seven out of eight SDG regions had estimates for basic hygiene services in schools in 2016

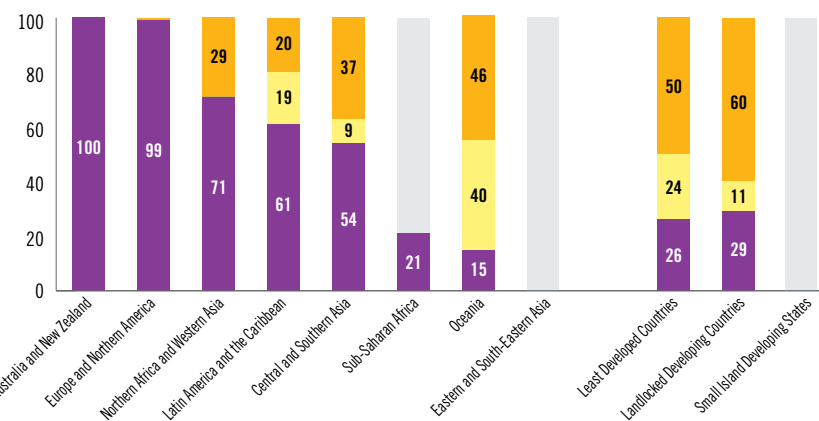


FIGURE 9: Regional school hygiene coverage, 2016 (%)

48 out of 81 countries had >75% coverage of basic hygiene services in schools in 2016

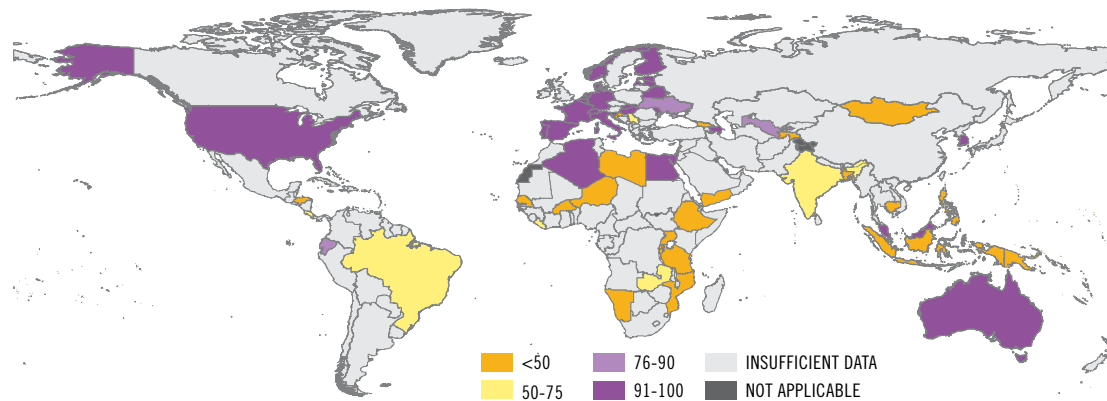


FIGURE 10: Proportion of schools with a basic hygiene service, by country, 2016 (%)

⁵ Many countries had data on the availability of facilities but fewer had data on the availability of water and soap.



Introduction

In 1990 the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) established the Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP). Since then, the JMP has been instrumental in establishing global norms to benchmark and compare progress in water, sanitation and hygiene (WASH) across countries. WHO and UNICEF, through the JMP, were previously responsible for tracking progress towards the Millennium Development Goals (MDGs) and are now responsible for monitoring global progress towards the WASH-related Sustainable Development Goal (SDG) targets⁶.

The global effort to achieve sanitation and water for all⁷ by 2030 is extending beyond the household to include institutional settings, such as schools, healthcare facilities and workplaces. This has been reinforced by global education for all⁸ strategies highlighting how WASH in schools improves access to education and learning outcomes, particularly for girls, by providing a safe, inclusive and equitable learning environment for all⁹. This report is the first comprehensive global assessment of WASH in schools and establishes a baseline for the SDG period.

The 2030 vision for WASH in schools

Transforming our world: The 2030 Agenda for Sustainable Development was agreed by all 193 Member States of the United

Nations (UN) General Assembly, which resolved to end poverty in all its forms, take bold and transformative steps to shift the world onto a sustainable and resilient path, and ensure that no one will be left behind¹⁰. The 2030 Agenda established 17 SDGs and 169 global targets addressing the social, economic and environmental dimensions of sustainable development in an integrated manner. It seeks to realize the human rights of all, and achieve gender equality and the empowerment of all women and girls. This ambitious universal agenda is intended to be implemented by all countries and all stakeholders, working in partnership.

SDG6 aims to 'ensure available and sustainable management of water and sanitation for all' and includes targets for universal access to drinking water, sanitation and hygiene for all by 2030 (6.1 and 6.2). The term 'universal' implies all settings, including households, schools, healthcare facilities, workplaces and public places, and 'for all' implies services that are suitable for men, women, girls and boys of all ages, including people living with disabilities¹¹.

SDG4 aims to 'ensure inclusive and quality education for all and promote lifelong learning' and includes targets for access to pre-primary, primary and secondary education, improved learning outcomes and the elimination of inequalities at all levels of education (4.1–4.7). Target 4.a addresses the means of implementation and aims to build and upgrade education facilities

6 World Health Organization and the United Nations Children's Fund Joint Monitoring Programme for Water Supply, Sanitation and Hygiene, *Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines*, WHO/UNICEF, Geneva, 2017. <<https://washdata.org/report/jmp-2017-report-final>>

7 Sanitation and Water for All global partnership <<http://sanitationandwaterforall.org>>

8 Education for All global initiative <www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all>

9 UNESCO, *Global education monitoring report 2015: Education for all 2000–2015. Achievements and challenges*, 2nd ed., UNESCO, Paris, 2015. <<http://unesdoc.unesco.org/images/0023/002322/232205e.pdf>>

10 United Nations, *Transforming our world: The 2030 Agenda for Sustainable Development*, UN General Assembly Resolution A/RES/70/1, 21 October 2015. <www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E>

11 World Health Organization and the United Nations Children's Fund Joint Monitoring Programme for Water Supply, Sanitation and Hygiene, *WASH in the 2030 Agenda: New global indicators for drinking water, sanitation and hygiene*, WHO/UNICEF, 2017. <<https://washdata.org/report/jmp-2017-wash-2030-agenda>>





BOX 1:

Learning to realize education's promise

The *World development report 2018*¹² highlights a global learning crisis and notes that, while school enrolment has improved, learning outcomes remain poor in many parts of the world. Because of this crisis, 250 million primary school-age children (38%) are currently failing to learn basic numeracy and literacy, and just one in 10 young people in low-income countries are on track to gain basic secondary skills by 2030. The report calls for a renewed focus on learning and its determinants, improved evidence to make schools work for all learners, and better

alignment of different actors to make the whole system work better. While this requires a context-specific mix of interventions, the report identifies a range of 'highly effective practices in increasing access and learning outcomes', including providing 'washrooms and water' in schools. It also highlights findings from the Education Commission that the potential returns on investment in education are greatest in low-income countries, where every dollar invested in an additional year of schooling generates \$10 in earnings and health benefits¹³.

¹² World Bank Group, *World development report 2018: Learning to realize education's promise*, International Bank for Reconstruction and Development/The World Bank, Washington DC, 2018. <www.worldbank.org/en/publication/wdr2018>

¹³ The Education Commission, *The learning generation: Investing in education for a changing world: A report by the International Commission on Financing Global Education Opportunity*, The Education Commission, 2016. <http://report.educationcommission.org/wp-content/uploads/2016/09/Learning_Generation_Full_Report.pdf>

that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all, including, among other things, providing access to basic drinking water, sanitation and hygiene services in all schools.

These targets are highly ambitious but mutually reinforcing and consistent with the wider 2030 Agenda to end poverty in all its forms and achieve gender equality. The global SDG targets are intended to be aspirational and each national government must decide how to incorporate them into their planning processes, policies and strategies. Governments are expected to set their own targets for WASH in schools, being guided by the global level of ambition and existing international agreements, including the human rights to education and to safe water and sanitation¹⁴, and taking into account their national circumstances.

¹⁴ United Nations Development Group, *Mainstreaming 2030 Agenda: Tailoring SDG to national, sub-national and local contexts*, online, accessed June 2018. <<https://undg.org/2030-agenda/mainstreaming-2030-agenda/tailoring-sdg-to-national-context>>

The official list of global SDG indicators¹⁵ was approved by the UN Statistical Commission in March 2017, and adopted by the UN General Assembly in July 2017¹⁶. Custodian agencies are expected to lead the development of methods and standards for data collection, contribute to statistical capacity building and data collection, establish mechanisms for the compilation and verification of national data, maintain global databases, and provide international comparable estimates for inclusion in the SDG global database. WHO and UNICEF, through the JMP, are the global custodians of SDG indicators 6.1.1 and 6.2.1 and the JMP contributes towards reporting on other WASH-related SDG global indicators, including 4.a.1 on education facilities, for which the UNESCO Institute for Statistics (UIS) is the global custodian. Box 2 summarizes ongoing efforts to harmonize the indicator definitions and methods used to monitor WASH in schools.

The new JMP service ladders for WASH in schools

The JMP has developed new service ladders for WASH in schools to make it easier to benchmark and compare progress across countries. These ladders build on the established JMP classification of facilities into improved and unimproved types and introduce additional criteria relating to the levels of service provided (Figure 11).

The new service ladders are primarily designed to track progress towards a basic level of drinking water, sanitation and hygiene service, which is the indicator selected for global monitoring of progress towards the WASH-related SDG targets. The ladders also distinguish between schools providing services that don't fully meet the criteria for basic services (limited services) and schools that provide no service.

¹⁵ United Nations Statistics Division, SDG indicators, online, accessed June 2018. <<https://unstats.un.org/sdgs/indicators/indicators-list>>

¹⁶ United Nations, *Work of the Statistical Commission pertaining to the 2030 Agenda for Sustainable Development*, UN General Assembly Resolution 71/313, July 2017. <<https://undocs.org/A/RES/71/313>>

The new JMP service ladders for global monitoring of WASH in schools

DRINKING WATER	SANITATION	HYGIENE
<p>Advanced service: Additional criteria may include quality, quantity, continuity, and accessibility to all users</p>	<p>Advanced service: Additional criteria may include student per toilet ratios, menstrual hygiene facilities, cleanliness, accessibility to all users, and excreta management systems</p>	<p>Advanced service: Additional criteria may include hygiene education, group handwashing, menstrual hygiene materials, and accessibility to all users</p>
<p>Basic service: Drinking water from an improved source and water is available at the school at the time of the survey</p>	<p>Basic service: Improved sanitation facilities at the school that are single-sex and usable (available, functional and private) at the time of the survey</p>	<p>Basic service: Handwashing facilities with water and soap available at the school at the time of the survey</p>
<p>Limited service: Drinking water from an improved source but water is unavailable at the school at the time of the survey</p>	<p>Limited service: Improved sanitation facilities at the school that are either not single-sex or not usable at the time of the survey</p>	<p>Limited service: Handwashing facilities with water but no soap available at the school at the time of the survey</p>
<p>No service: Drinking water from an unimproved source or no water source at the school</p>	<p>No service: Unimproved sanitation facilities or no sanitation facilities at the school</p>	<p>No service: No handwashing facilities available or no water available at the school</p>
<p><i>Note: Improved sources include piped water, boreholes or tubewells, protected dug wells, protected springs and packaged or delivered water. Unimproved sources include unprotected wells, unprotected springs and surface water.</i></p>	<p><i>Note: Improved facilities include flush/pour-flush toilets, ventilated improved pit latrines, composting toilets and pit latrines with a slab or platform. Unimproved facilities include pit latrines without a slab or platform, hanging latrines and bucket latrines.</i></p>	<p><i>Note: Handwashing facilities may be fixed or portable, 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.</i></p>

FIGURE 11: New JMP service ladders for monitoring WASH in schools

BOX 2:

Harmonizing approaches to monitoring WASH in schools

International consultations between 2011 and 2013 identified schools as a priority setting for global WASH monitoring post-2015. A preliminary UNICEF review identified 149 countries with existing national data on WASH in primary schools¹⁷, but found indicator definitions were often missing and varied widely between national data sources, limiting the potential for cross-country comparison. The WHO/UNICEF JMP subsequently convened a global task team of WASH and education experts to review global norms and standards

and develop a harmonized set of core indicators and questions for monitoring basic drinking water, sanitation and hygiene services in schools¹⁸. The official global indicator for SDG target 4.a refers to these harmonized definitions for WASH in schools ('as per WASH definitions') and the core questions and indicators are increasingly being incorporated into national Education Information Management Systems (EMIS) and major school surveys around the world. Continued collaboration between WASH and education stakeholders will be



important to support the progressive standardization of data collection and analysis for national and global reporting of WASH in schools.

17 United Nations Children's Fund, *Advancing WASH in schools monitoring*, working paper, UNICEF, New York, 2015. <www.unicef.org/wash/schools/files/Advancing_WASH_in_Schools_Monitoring.pdf>

18 World Health Organization and the United Nations Children's Fund, *Core questions and indicators for monitoring WASH in schools in the Sustainable Development Goals*, WHO/UNICEF, New York, 2018. <<https://washdata.org/report/jmp-core-questions-monitoring-wash-schools-2018>>



Illustrative example of school drinking water service ladder construction in the Philippines

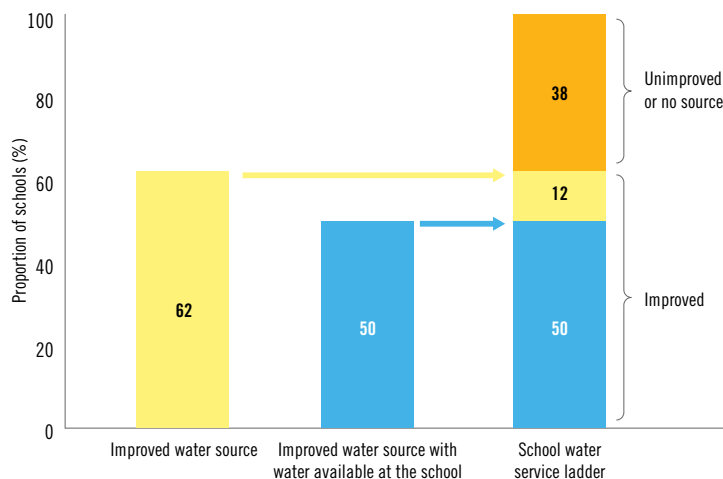


FIGURE 12: Proportion of schools with basic, limited and no drinking water services, the Philippines, 2016 (%)

In the spirit of progressive realization, countries may first eliminate schools without any service at all, while making progress towards universal coverage of basic WASH services in schools.

Basic services alone are not sufficient. The full realization of the human rights to education and to safe water and sanitation will require enhanced monitoring, using additional criteria that will need to be progressively integrated into national data systems to monitor advanced levels of WASH in schools. The prospects for enhanced monitoring of advanced levels of service are discussed in Section 5.

A basic drinking water service means that water from an improved source is available at the school. Improved drinking water sources are those that, by nature of their design and construction, have the potential to deliver safe water. To meet the SDG criteria for a basic

Illustrative example of school sanitation service ladder construction in Indonesia

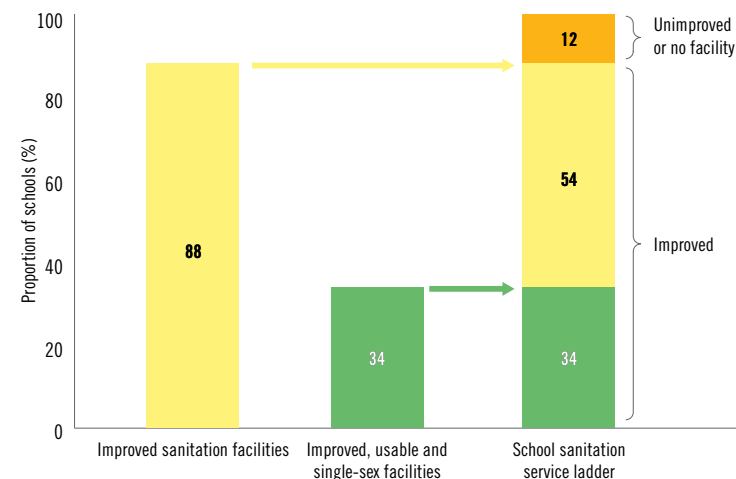


FIGURE 13: Proportion of schools with basic, limited and no sanitation services, Indonesia, 2016 (%)

service, schools must have access to an improved source¹⁹ and water from the improved source must be available at the school on the day of the survey²⁰ (Figure 11). Schools with access to an improved source but no water available at the time of the survey are categorized as having a limited service. Schools using an unimproved source or with no source at all are classified as having no service (Figure 12). Where enhanced monitoring is feasible, additional criteria for assessing advanced service levels might include water quality, water quantity or water point accessibility to all users (see Section 5).

A basic sanitation service means that schools have improved sanitation facilities that are usable and single-sex. Improved sanitation facilities are those designed to hygienically separate excreta from human contact. To meet the SDG criteria for a basic sanitation service, schools

¹⁹ The improved source may be located on or off the school premises.

²⁰ In the absence of more detailed information this serves as a proxy for water availability on a 'typical day' (when averaged across all schools and surveys).

Illustrative example of school hygiene service ladder construction in Papua New Guinea

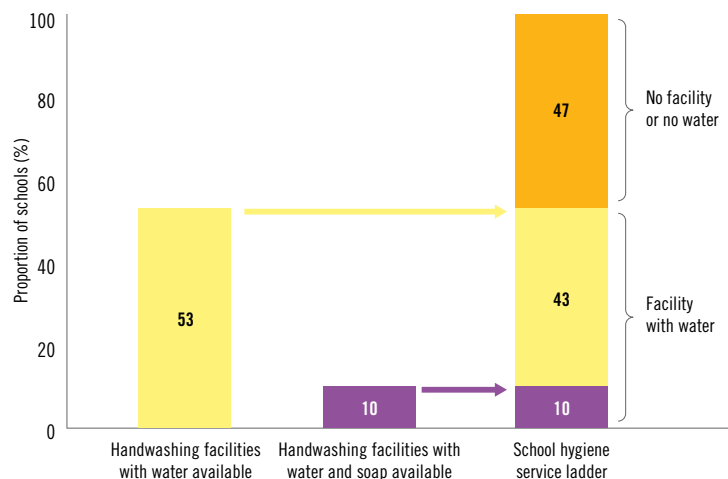


FIGURE 14: Proportion of schools with basic, limited and no handwashing services, Papua New Guinea, 2016 (%)

must have improved facilities that are single-sex²¹ and usable²² at the time of the survey (Figure 11). Schools with improved sanitation facilities that are either not usable or not single-sex are classified as providing

a limited service. Schools with unimproved facilities or no facility at all are classified as having no service (Figure 13). Additional criteria that may be considered for enhanced monitoring of advanced service levels include student per toilet ratios, menstrual hygiene management (MHM) services, toilet cleanliness, accessibility to all users, and systems for excreta management (see Section 5).

A basic hygiene service means schools have a handwashing facility with water and soap available. To meet the SDG criteria for a basic hygiene service schools must have a handwashing facility with water and soap available at the time of the survey (Figure 11). Schools that have facilities with water but no soap are classified as providing a limited service. Schools with no handwashing facilities or no water are classified as providing no service (Figure 14). Additional criteria that may be considered for enhanced monitoring of advanced service levels include group handwashing at critical times, as well as the provision of guidance and materials for MHM and the accessibility of handwashing stations to all users (see Section 5).

²¹ Pre-primary schools must have improved sanitation facilities that are usable, but they do not necessarily need to be single-sex.

²² Facilities are considered usable if they are available to students (doors are unlocked or a key is available at all times), functional (the toilet is not broken, the toilet hole is not blocked and water is available for flush/pour-flush toilets) and private (there are closable doors that lock from the inside and no large gaps in the structure).

BOX 3:

Sources of national data used in this report

The JMP uses national data to produce internationally comparable estimates of coverage and progress on WASH in schools. The main sources of national data used to produce estimates are routine administrative reporting through EMIS and periodic censuses or surveys of school facilities. Data from these primary sources were compiled by UNICEF and WHO country offices in consultation with national statistics offices and ministries

²³ UNESCO Institute for Statistics <<http://uis.unesco.org>>

of education. The JMP also draws on secondary sources of data, including information compiled by UNESCO²³.

The JMP WASH in schools country files contain a complete list of data sources available for each year since 2000 and show how national data correspond to the international standard classification used for global monitoring. Where possible, the JMP extracts data that are representative of national, urban and rural populations and

pre-primary, primary and secondary schools. Estimates are only made where data are available for at least 30% of the relevant school-age population in each domain.

The JMP global database contains national data for 152 countries, areas and territories. For this report, the JMP used an average of four national datasets per country. For further information on current data availability and the methods used to produce estimates see Annex 1.



Basic WASH in schools

The 2030 Agenda established ambitious SDG targets, which aim, among other things, for universal access to WASH for all (SDG6, which covers both household and institutional settings) and safe, inclusive and effective learning environments for all (SDG4, which includes WASH in schools). It further calls for systematic attention to gender equality and the empowerment of women and girls in the implementation of the new Agenda (see Section 1).

SDG target 4.a. aims to ‘build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all’. The indicator selected by the Inter-Agency Expert Group on SDG Indicators

(IAEG-SDG)²⁴ for global monitoring of progress towards SDG target 4.a addresses the aspects of education facilities considered most important for a safe, inclusive and effective learning environment for all:

‘Proportion of schools with access to: (a) electricity; (b) the internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; **(e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)**’

Achieving universal access to basic WASH services in schools by 2030 presents a huge challenge. In many countries it will not only imply building and upgrading WASH facilities in schools but also strengthening EMIS so they go beyond simply recording the availability of WASH infrastructure and take account of the quality of WASH services provided for students and staff. This is consistent with wider shifts in education monitoring systems to measure the quality of education provided and the resulting learning outcomes.

Even though education sector stakeholders are committed to continuously improving the quality of data collected, 2016 baseline estimates for basic water, sanitation and hygiene services were only available for 92, 101 and 81 countries respectively. Furthermore only 68 countries were able to generate national coverage estimates for all three types of basic WASH service in schools²⁵ (Figure 15).

Just 68 countries had national estimates for all three basic WASH services in schools in 2016

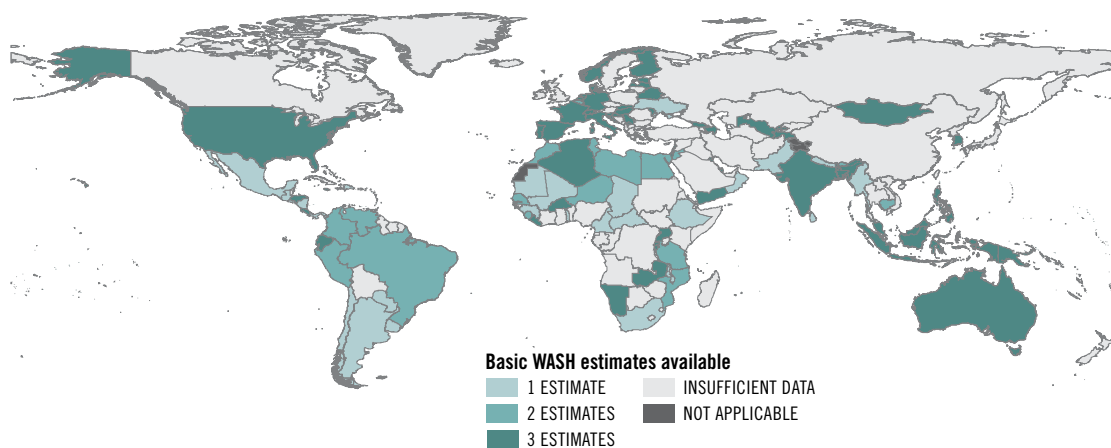


FIGURE 15: Countries with national estimates for one, two or three basic WASH services in schools, 2016

²⁴ United Nations Statistics Division, *SDG indicators*, accessed June 2018. <<https://unstats.un.org/sdgs/indicators/indicators-list>>

²⁵ Only a small number of countries were able to produce school-level estimates for all three elements and in all cases the combined estimate was significantly lower (see Figure 28).





Basic drinking water services in schools

Globally, in 2016, 69% of schools had an improved source of drinking water with water available and were therefore classified as providing a basic drinking water service²⁶ (Figure 16). A further 12% of schools had an improved source but water was unavailable at the time of the survey so they were therefore counted as providing a limited service. 19% of schools worldwide had no service, meaning they either relied on unimproved sources, such as an unprotected dug well, unprotected spring or surface water, or had no facility at all. This means nearly 570 million children worldwide lacked a basic service and had either limited or no drinking water service at their school.

²⁶ Note that the improved source does not have to be located on the school premises but water from an improved source must be available at the school.

In 2016, less than half of schools in Oceania and just two thirds of schools in Central and Southern Asia had a basic service and insufficient data were available to produce estimates for basic services in sub-Saharan Africa, Latin America and the Caribbean, and Eastern and South-Eastern Asia. The region with the highest proportion of schools with no service was sub-Saharan Africa (47%).

Figure 17 shows that coverage of basic drinking water services in schools varied widely among the 92 countries with data available and between SDG regions. Countries with less than 50% coverage were found in four out of eight SDG regions. Estimates were available for 24 countries in Europe and Northern America and 17 countries in sub-Saharan Africa. Eight countries in sub-Saharan Africa had less than 50% coverage of basic water services in schools, including Guinea, the Central African Republic and Chad where less than one in four schools had a basic water service in 2016. The widest variation was in Oceania, with 3% coverage in the Marshall Islands compared with 100% coverage in Cook Islands and Niue²⁷.

²⁷ In 2016, there were 19,366 school-age children in the Marshall Islands compared with 4,190 in Cook Islands and just 340 school-age children in Niue.

69% of schools had a basic drinking water service in 2016

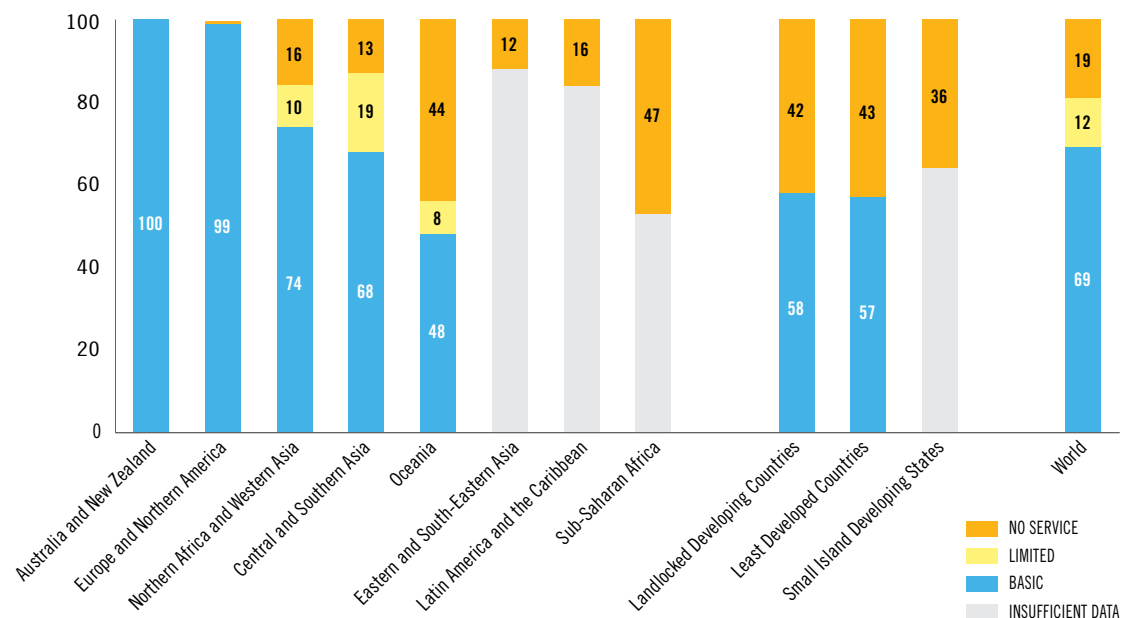


FIGURE 16: Global and regional school drinking water coverage, 2016 (%)



Coverage of basic drinking water in schools varied widely between countries and regions in 2016

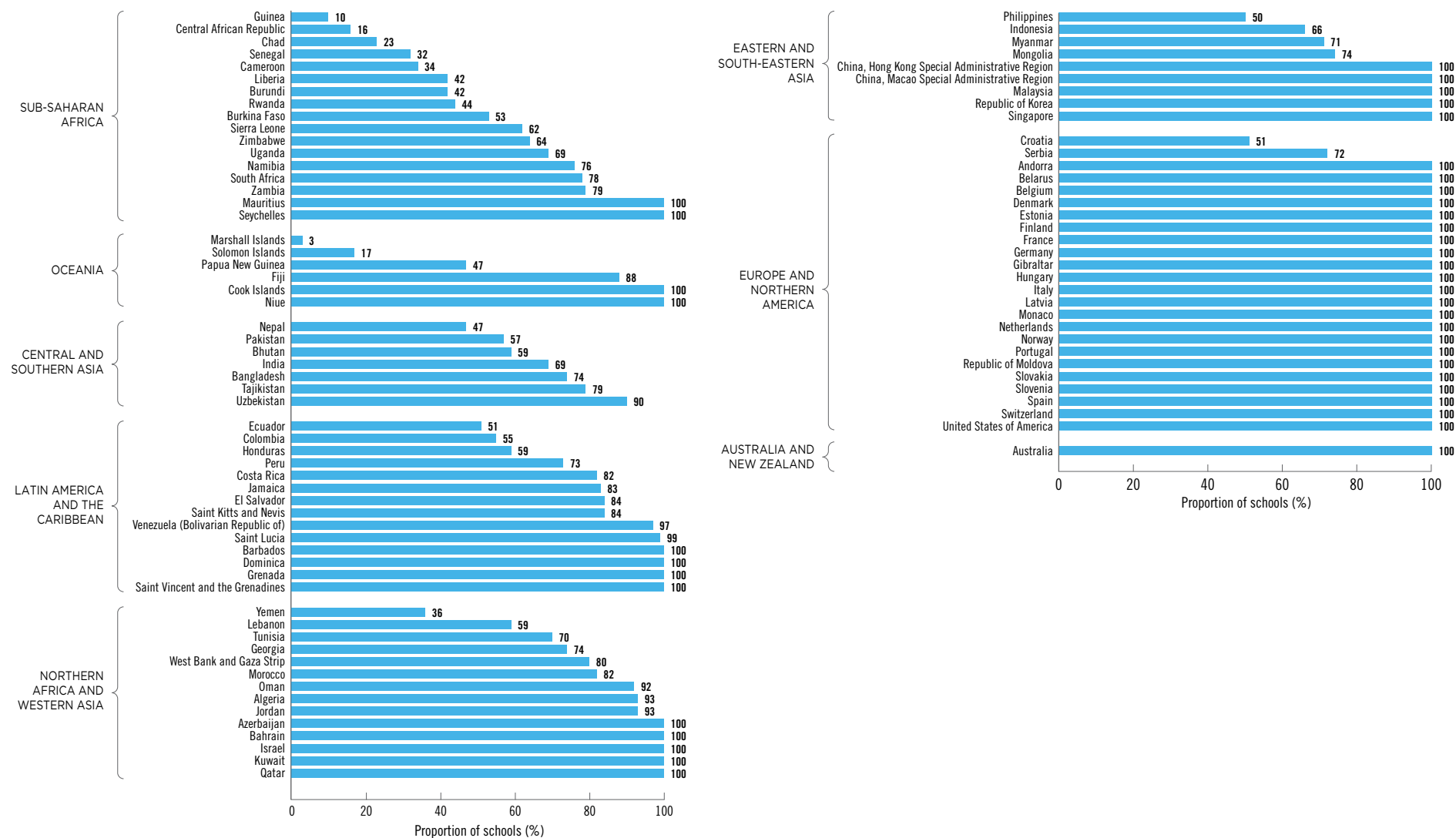


FIGURE 17: Proportion of schools with a basic drinking water service, by country and SDG region, 2016 (%)



SECTION THREE

In 2016, most countries had data on the types of drinking water sources used and schools could therefore be classified as having either an improved or unimproved water source, but only 92 countries had data on whether water was available on the day of the survey. Figure 18 shows that in almost all countries the proportion of schools with a basic service was lower than the proportion with an improved source. This illustrates the challenge of moving beyond simply building water supply infrastructure and establishing management systems to ensure that water is always available when needed during the school day.

Figure 19 shows the 25 countries that had sufficient data to estimate trends and recorded at least a five percentage point decrease in the proportion of schools with no drinking water service between 2010 and 2016. Benin, Tanzania and Burundi recorded dramatic reductions of 39, 25 and 25 percentage points respectively. Cabo Verde, the Dominican Republic, Ecuador, Namibia, Paraguay, Sao Tome and Principe, and South Africa all succeeded in halving the proportion of schools with no service. Over the same six-year period, Republic of Moldova reduced the proportion of schools with no drinking water service to zero.

Not all schools with an improved source met the criteria for a basic drinking water service

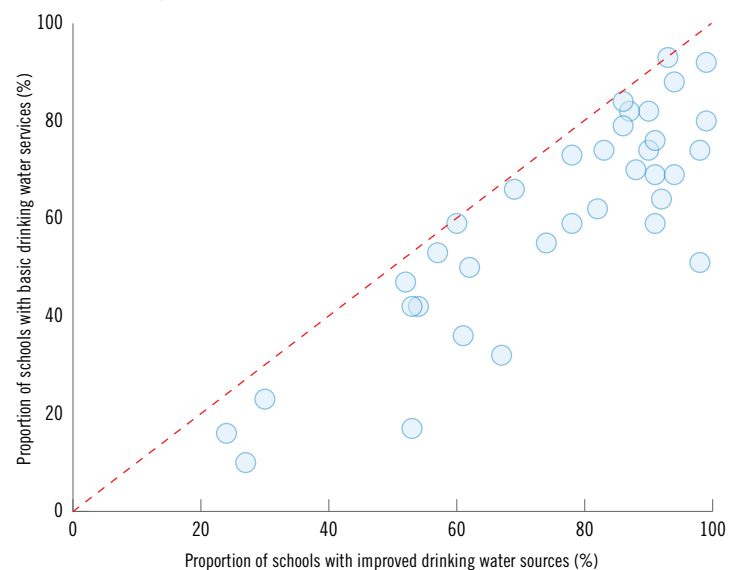


FIGURE 18: Proportion of schools with improved and basic drinking water services, among countries with <99% coverage, 2016 (%)



BOX 4:

In many countries, students bring water to school from home

Schools in many countries reported that students bring drinking water from home. This is common where schools do not have their own supply, or the water available is insufficient or of poor quality. It is also one of the first steps in *The Three Star approach for WASH in schools*²⁸ which encourages schools to take simple, inexpensive steps to incrementally create a healthy and protective learning environment for children.

In India, for example, 5% of schools reported that their main water source was *students bringing drinking water from home*. It is estimated that these schools served around 19 million school-age children in 2016. Domestic service levels also varied widely. The JMP estimates that while 88% of the population in India used a basic drinking water service at home in 2015, in rural areas less than half (49%) were located on the premises and only two thirds (64%) were free from contamination. In the Solomon Islands, where just 14% of schools had an improved water source, 89% of students brought water to school from home. However, in rural areas only half of the population (56%) used a basic drinking water service at home and just 42% were accessible on the premises in 2015²⁹.

While 79% of Palestinian students reported that water is always available at school, 31% of students still brought water to school from home. This suggests that some students may simply prefer to bring their own water from home. Schools nevertheless ultimately have a duty to make sure that sufficient quantities of safe drinking water are available to all students throughout the school day.

²⁸ Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH and the United Nations Children's Fund, *Field guide: The three star approach for WASH in schools*, GIZ/UNICEF, New York, 2013. <www.unicef.org/wash/schools/files/UNICEF_Field_Guide-3_Star-Guide.pdf>

²⁹ World Health Organization and the United Nations Children's Fund Joint Monitoring Programme for Water Supply, Sanitation and Hygiene, *Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines*, WHO/UNICEF, Geneva, 2017. <<https://washdata.org/report/jmp-2017-report-final>>

25 countries have reduced the proportion of schools with no drinking water service by >5% since 2010

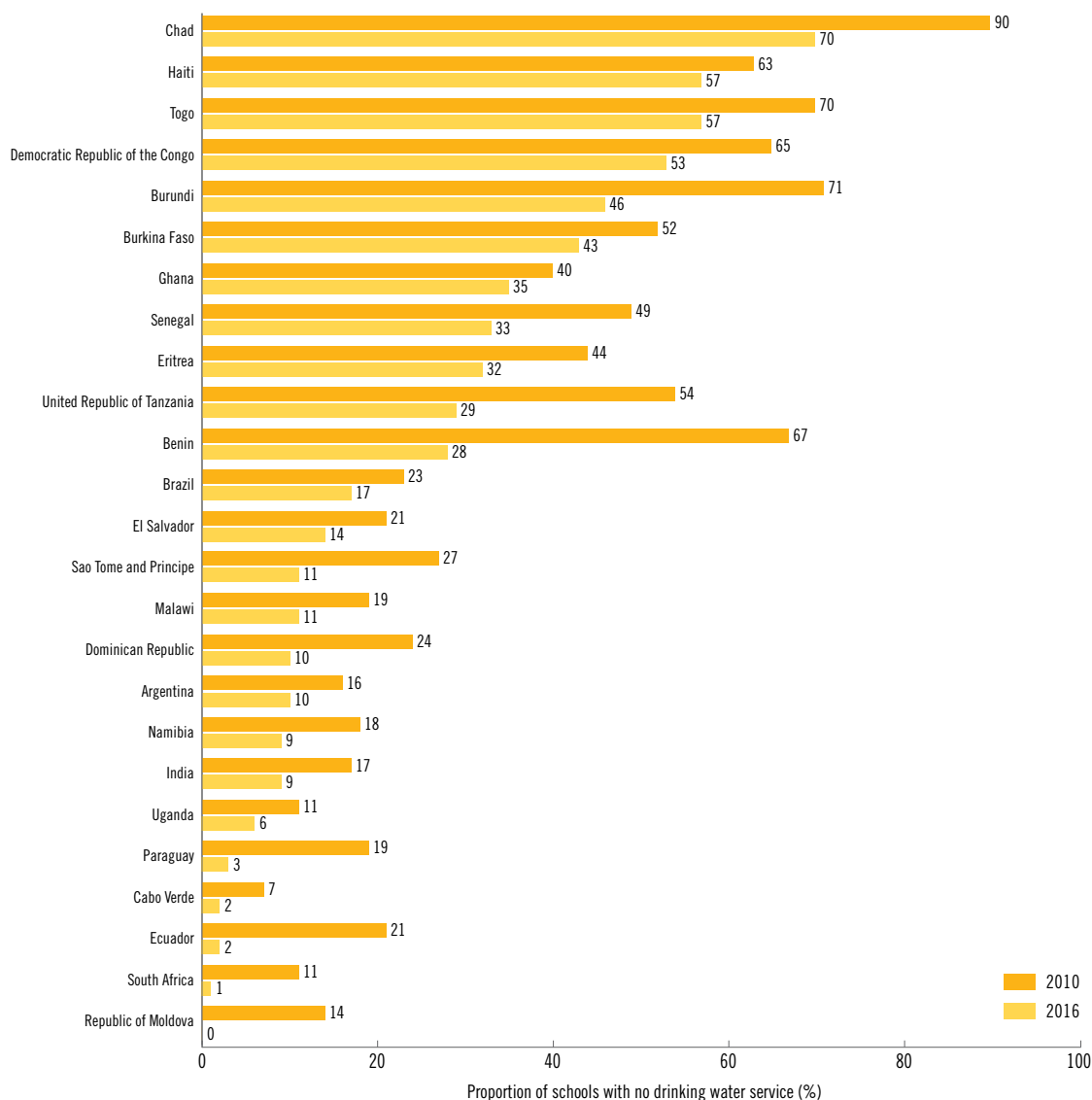


FIGURE 19: Proportion of schools with no drinking water service in 2010 and 2016, among countries recording a decrease of >5 percentage points



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Basic sanitation services in schools

Globally, in 2016, 66% of schools had improved single-sex sanitation facilities usable at the time of the survey and were therefore classified as providing a basic sanitation service. A further 12% of schools had improved facilities that were either not single-sex or not usable and were therefore counted as providing a limited service. 23% of schools worldwide had no service, and either relied on unimproved facilities, such as pit latrines without a slab or platform, hanging latrines or bucket latrines, or had no sanitation facility at all³⁰. On this basis it is estimated that over 620 million children lacked a basic service and had either a limited or no sanitation service at their school.

³⁰ Students and staff at schools with no sanitation service must either use facilities at another location, return home or urinate and defecate in the open, thereby reducing the time they can spend learning and teaching.

In 2016, four out of five schools in Northern Africa and Western Asia, and Latin America and the Caribbean had basic services, compared to fewer than half of schools in Oceania. Insufficient data were available to produce an estimate for Eastern and South-Eastern Asia. Just over half of schools in Least Developed Countries had basic sanitation services.

Figure 21 shows that coverage of basic sanitation services varied widely among the 101 countries with data available. Countries with less than 50% coverage were found in seven out of eight SDG regions, and coverage was generally lower among countries in Oceania and sub-Saharan Africa. More than half of the countries in sub-Saharan Africa had less than 50% coverage and just one in eight schools in Sierra Leone had a basic sanitation service. Estimates were available for 21 countries in Latin America and ranged from 100% coverage in Barbados, Dominica, and St Vincent and the Grenadines to 43% coverage in Nicaragua. The lowest coverage in Northern Africa and Western Asia was found in Yemen (25%) and Jordan (33%).

Globally 66% of schools had a basic sanitation service in 2016

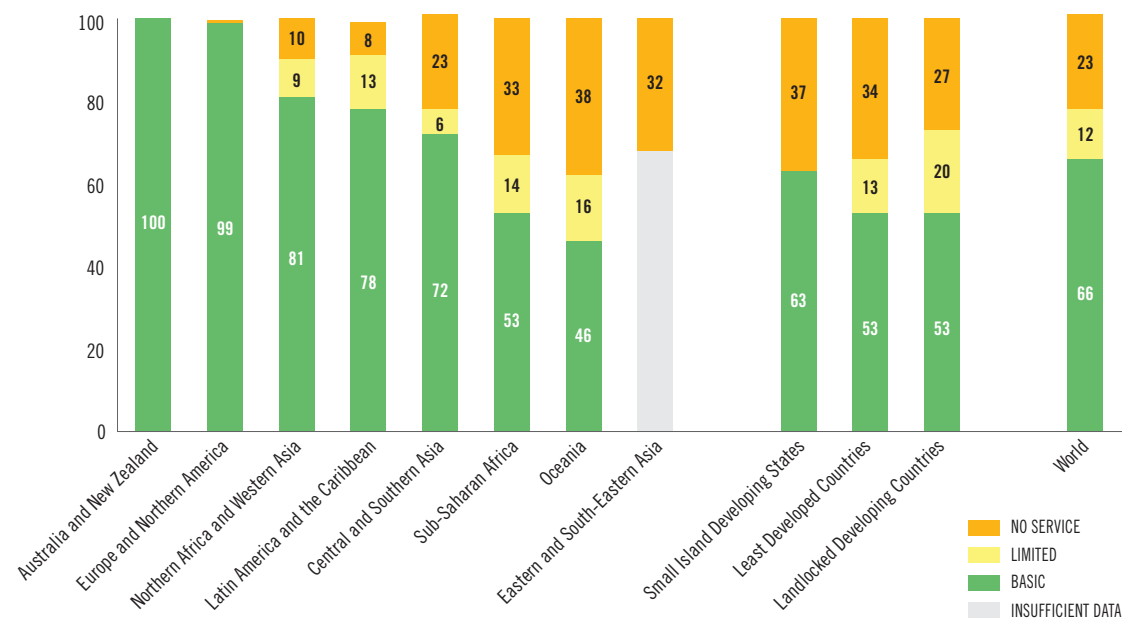


FIGURE 20: Global and regional school sanitation coverage, 2016 (%)



Coverage of basic sanitation services in schools varied widely between countries in 2016

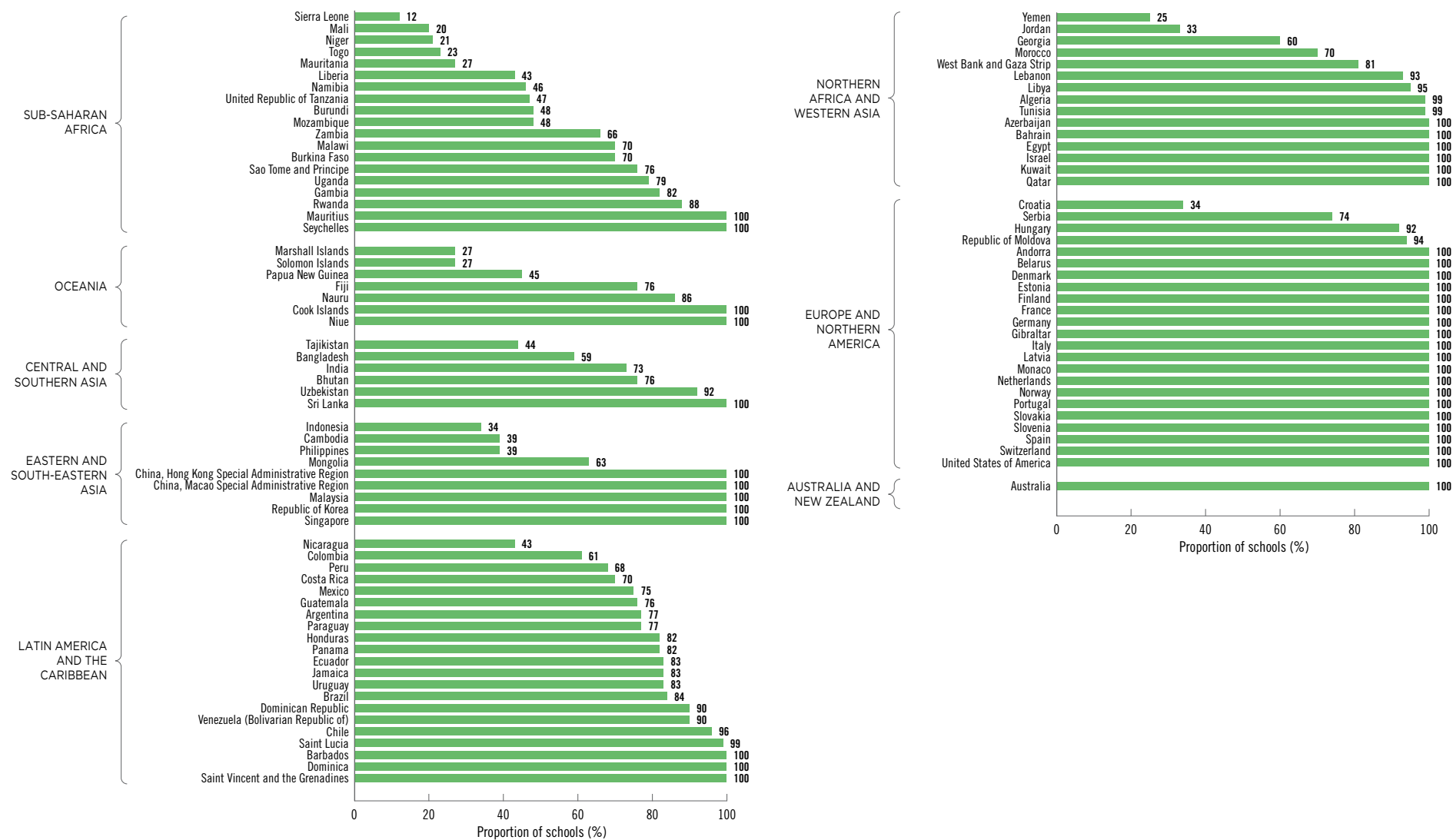


FIGURE 21: Proportion of schools with a basic sanitation service, by country and SDG region, 2016 (%)



SECTION THREE

In 2016, most countries had data on the availability of sanitation facilities in schools but not all had information on whether they were improved and it was only possible to produce basic service estimates for 101 countries (see Box 5). Figure 22 shows that in countries with data available schools were significantly more likely to have improved sanitation facilities than to have a basic sanitation service.

16 countries have reduced the proportion of schools with no sanitation service by >5% since 2010

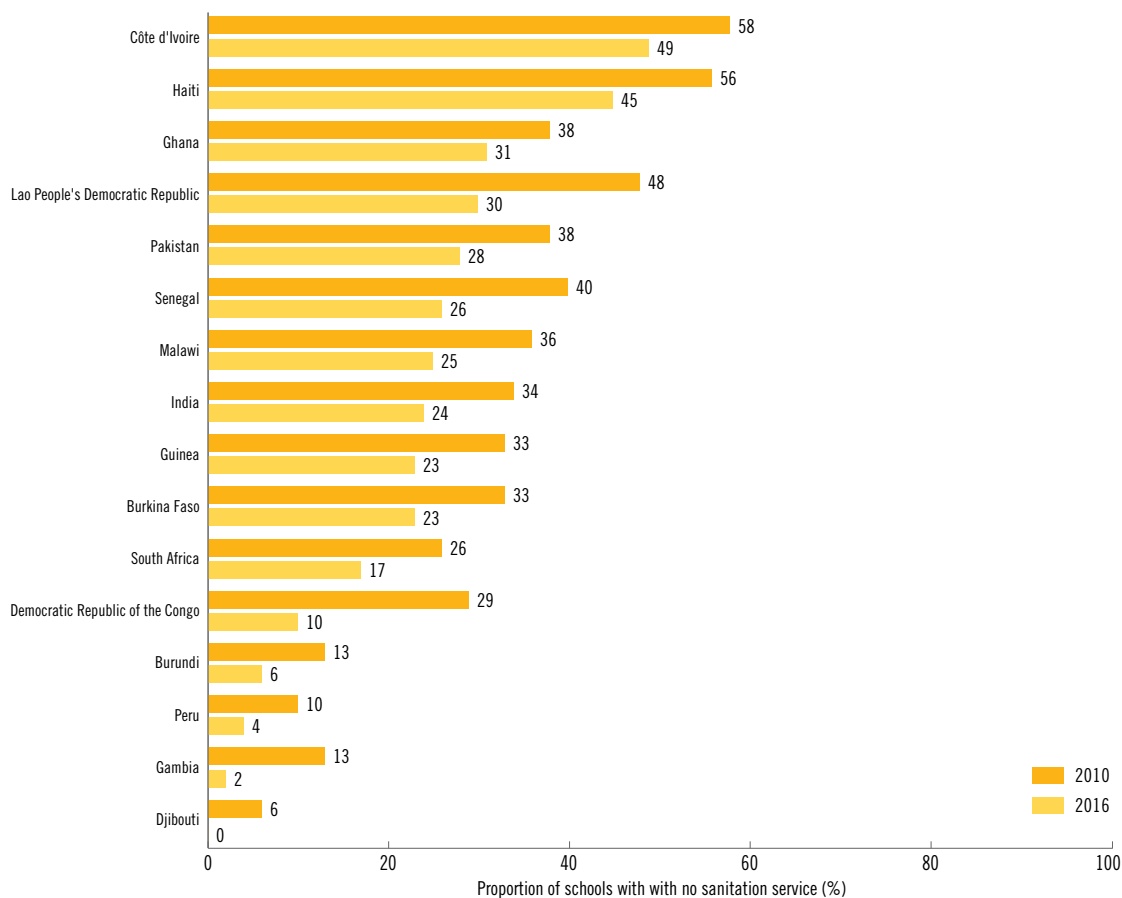


FIGURE 23: Proportion of schools with no sanitation service in 2010 and 2016, among countries recording a decrease of >5 percentage points

Most schools had improved facilities but fewer met the criteria for a basic sanitation service

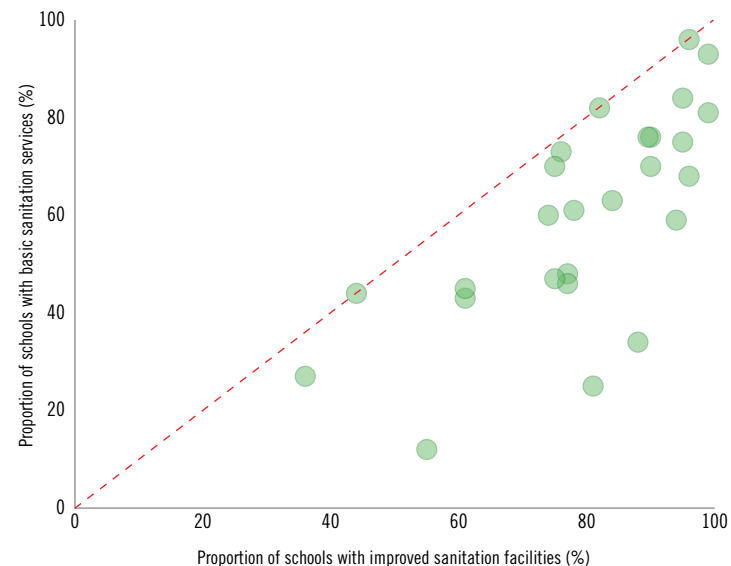


FIGURE 22: Proportion of schools with improved and basic sanitation services, among countries with <99% coverage, 2016 (%)

This underlines the challenge of moving beyond simply building school infrastructure and ensuring that it meets minimum standards for a basic level of sanitation service.

Only a small number of countries had enough data to estimate trends over time. Figure 23 shows the 14 countries that recorded at least a five percentage point decrease in the proportion of schools with no sanitation service between 2010 and 2016. The Democratic Republic of the Congo and Lao PDR recorded significant reductions of 19 and 18 percentage points respectively. Peru, Gambia and Burundi all succeeded in reducing the proportion of schools with no service to less than 10% by 2016, while Djibouti reduced the proportion of schools with no service to zero.

BOX 5:

Estimating the proportion of schools with improved facilities that are usable and single-sex

To meet the criteria for a basic sanitation service, schools must have at least one usable improved toilet for girls and one for boys. In 2016, many countries had data on the proportion of schools with improved toilets, and some countries had data on the proportion of schools with single-sex toilets, although this is not required for pre-primary or single-sex schools where all toilets were counted as single-sex. Others had estimates for the proportion of schools with improved toilets that were usable on the day of the survey, but only a handful of countries had information on all three

criteria. In Namibia, for example, 72% of schools had improved single-sex toilets, but only 49% of schools (on average) had improved toilets that were usable at the time of the survey.

For this baseline report, in the absence of more and better disaggregated data on sanitation service levels in schools, the JMP produced estimates for basic services if countries had data on the proportion of schools with sanitation facilities that were usable (considered the most stringent of the three criteria) as well as data

on either the proportion that were improved or the proportion that were single-sex³¹.

While many countries have data on the proportion of schools with single-sex sanitation facilities, these are more commonly found in secondary schools than in primary schools among the 26 countries with disaggregated data (Figure 24). The acceptability of sanitation facilities for girls and boys, including transgender students, is discussed further in Section 5.

³¹ For more information on the JMP methodology see Annex 1.

Secondary schools are more likely to have single-sex sanitation facilities

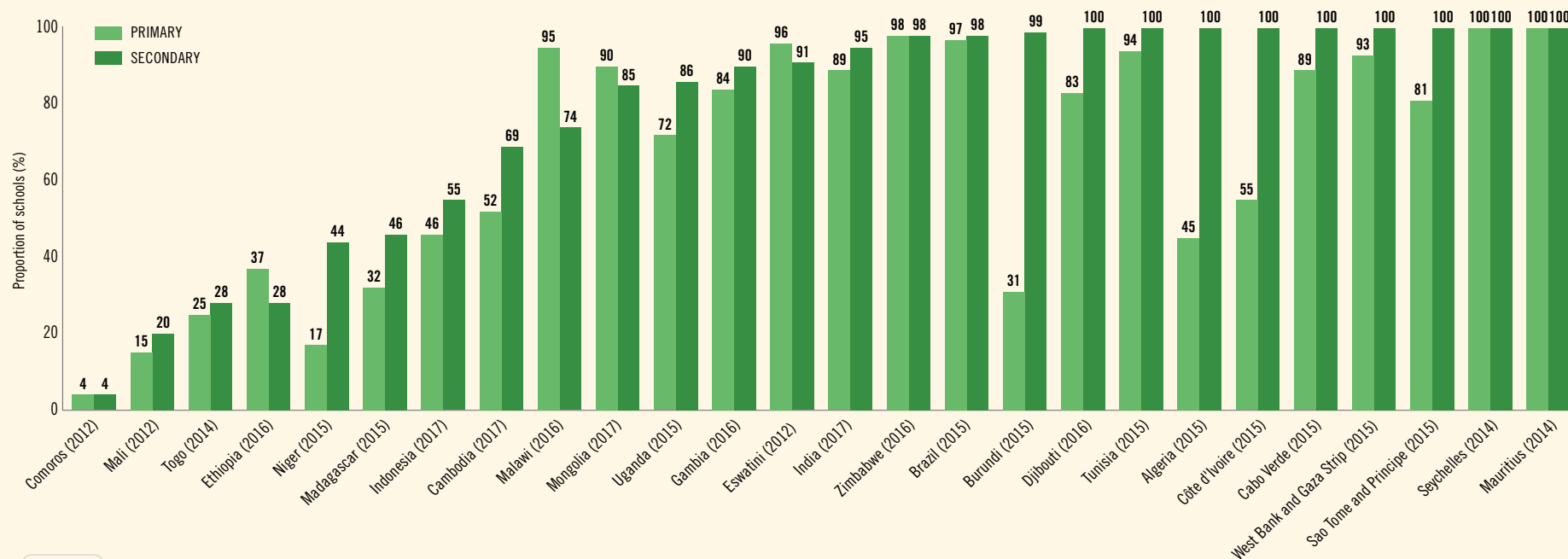


FIGURE 24: Proportion of primary and secondary schools with single-sex toilets, by country, 2012–17 (%)



SECTION THREE

Basic hygiene services in schools

Globally, in 2016, 53% of schools worldwide had handwashing facilities with soap and water available at the time of the survey and were therefore classified as having a basic hygiene service. 11% had handwashing facilities but no soap available at the time of the survey so they were counted as providing a limited service. 36% of schools had no handwashing service (Figure 25). It is therefore estimated that over 850 million children lacked a basic service and either had a limited or no handwashing service at their school.

In 2016, many countries had data on the availability of handwashing facilities with water in schools and could therefore be classified as providing either a limited or no service, and

Only half of schools had a basic hygiene service in 2016

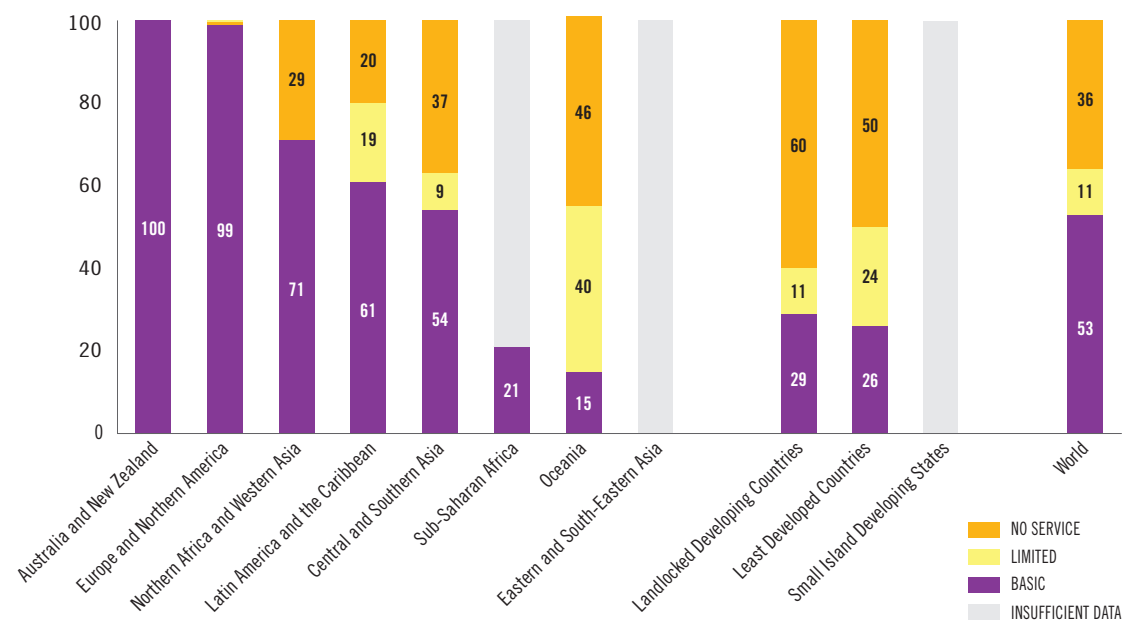


FIGURE 25: Global and regional school hygiene coverage, 2016 (%)

81 countries had data on whether soap was available on the day of the survey. Figure 26 shows that in the 45 countries with disaggregated data available, the proportion of schools with any type of handwashing facility was significantly higher than the proportion with facilities with water and soap available on the day of the survey. This highlights the challenge of designing and maintaining handwashing facilities so that soap and water are available to students for handwashing at critical times.

Figure 27 shows that coverage of basic hygiene services in schools varied widely across countries. Countries with less than 50% coverage were found in seven out of eight SDG regions. Data were available for 25 countries in Europe and Northern America, with

Many schools had handwashing facilities but far fewer had water and soap available

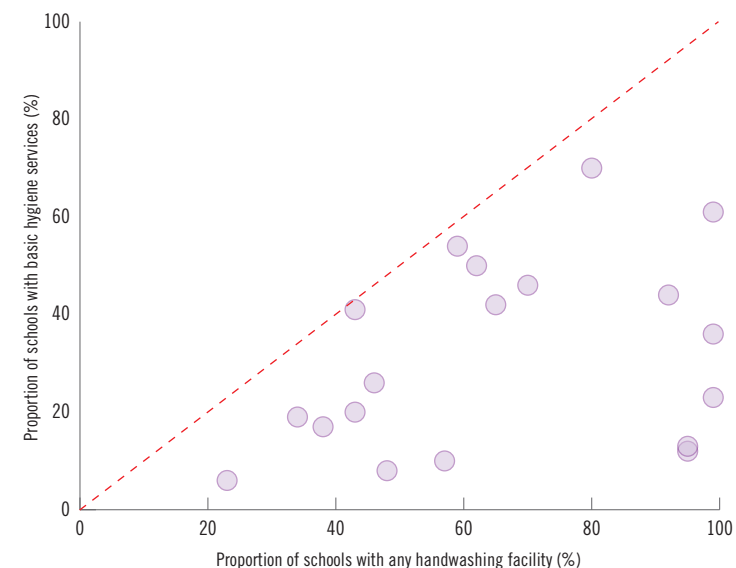


FIGURE 26: Proportion of schools with any facility and basic hygiene services, by country, 2016 (%)

Coverage of basic hygiene services in schools varied widely between countries in 2016

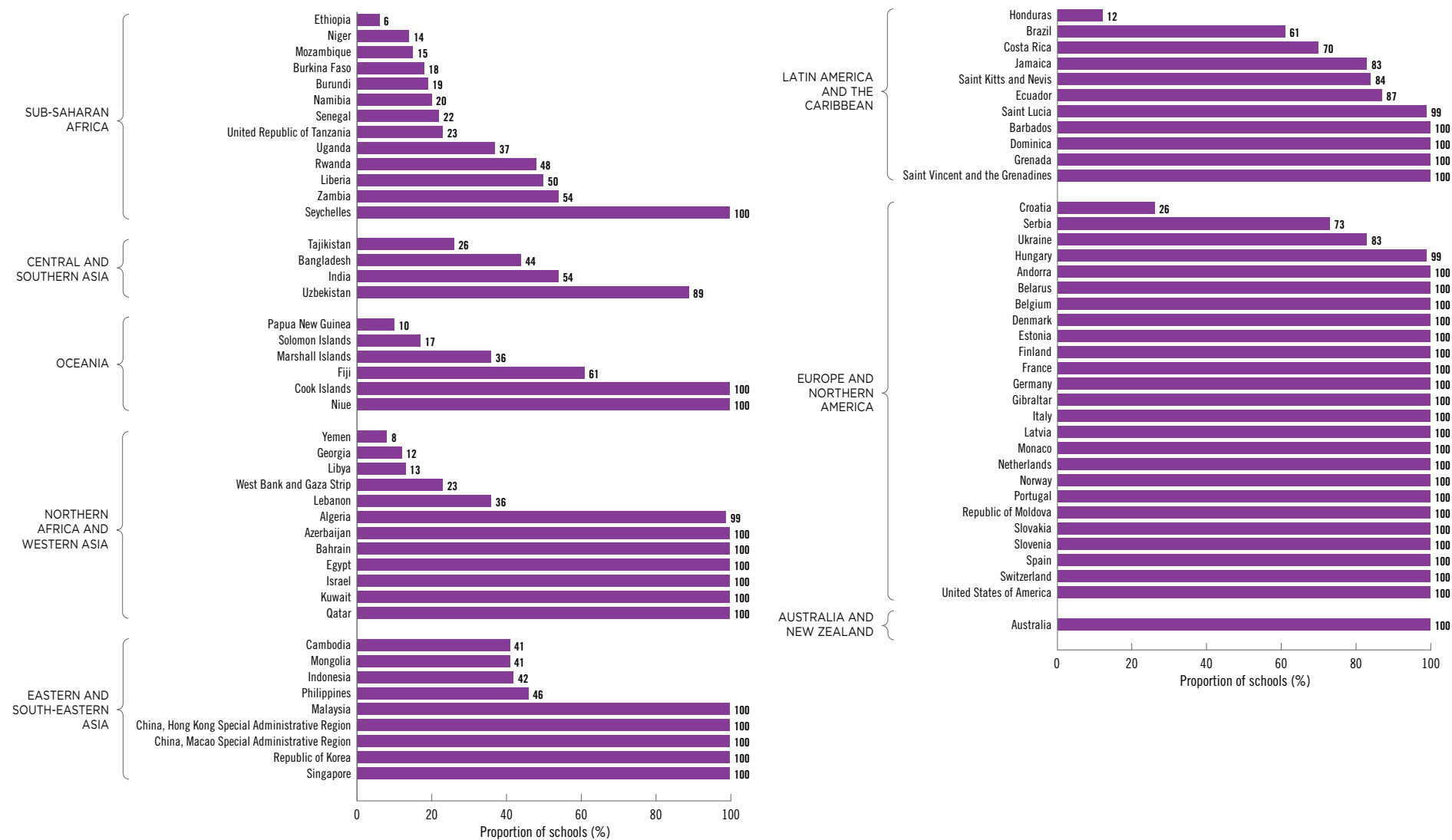


FIGURE 27: Proportion of schools with a basic hygiene service, by country and SDG region, 2016 (%)



SECTION THREE

coverage ranging from 100% to 26% in Croatia, while in most countries with data in Eastern and South-Eastern Asia fewer than half of schools had a basic handwashing service. The greatest variation was found in sub-Saharan Africa where coverage ranged from 100% to just 6% in Ethiopia. On this basis, it is estimated that 37 out of 39 million school-age children in Ethiopia lacked a basic hygiene service at their school.

Access to WASH is widely recognised as an essential foundation for establishing a safe and healthy learning environment³², but in 2016 only 68 countries were able to produce national estimates of the proportion of schools with access to basic WASH services. In countries where microdata are available, it is possible to estimate the proportion meeting the basic service criteria for all three elements of WASH. In such cases, combined estimates are often significantly lower (Figure 28). For example, it is estimated that in 2009 nearly half of schools in Belize had a basic sanitation service but fewer

³² United Nations Educational, Scientific and Cultural Organization, *The Dakar Framework for Action: Education for all: Meeting our collective commitments*, UNESCO, Paris, 2000. <<http://unesdoc.unesco.org/images/0012/001211/121147e.pdf>>

BOX 6:

Basic WASH is vital for MHM

While access to basic WASH services is essential for the health and wellbeing of girls and boys of all ages, poor quality services disproportionately impact adolescent girls who often struggle to manage their menstrual hygiene in school. Access to all three elements of WASH is necessary for adequate menstrual hygiene management (MHM). Girls attending schools with functional single-sex toilets that provide a private place to wash and change and a reliable supply of water and soap are much more likely to be able to manage their periods with confidence and dignity. As such, it is adolescent girls who stand to gain most from ongoing efforts to achieve universal access to WASH in schools. It is estimated that, in 2016, 335 million girls went to primary and secondary schools without water and soap available for washing their hands when changing sanitary pads or cloths, an essential aspect of MHM (see Section 5).

than a third had basic WASH. This means over 73,000 school-age students in Belize did not have basic services at their school.

Coverage of all three elements of basic WASH services in schools is often significantly lower than for individual elements

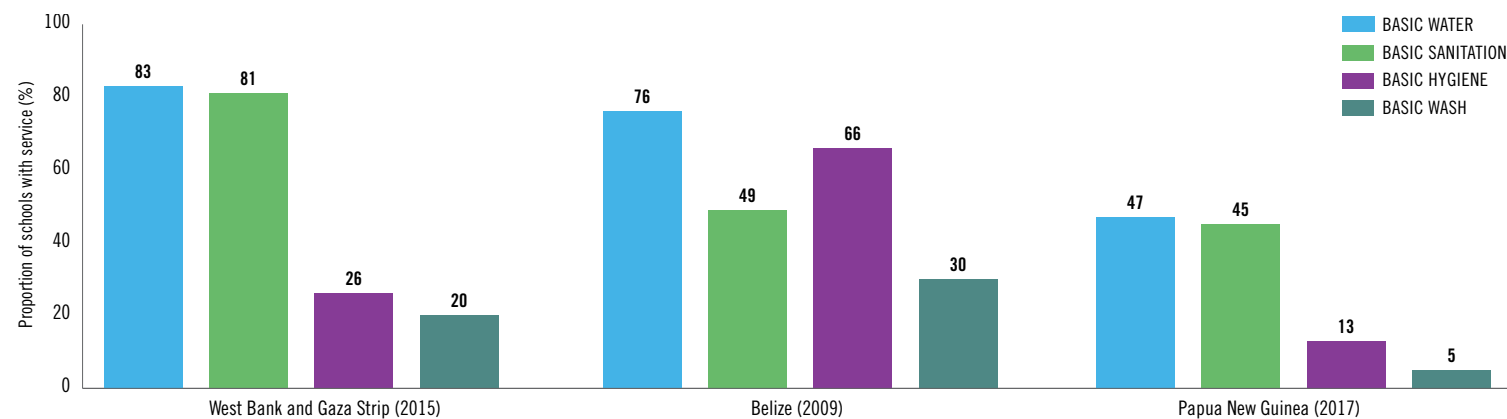


FIGURE 28: Proportion of schools with basic water, basic sanitation, basic hygiene and all three (%)





Effective learning environments for all



Goal 4: Ensure inclusive and quality education for all and promote lifelong learning

4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all

4.a.1 Proportion of schools with access to: (a) electricity; (b) the internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; **(e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)**

SDG4 aims to ‘ensure inclusive and quality education for all and promote lifelong learning’. It includes a range of different targets related to educational outcomes from early years through to adulthood, plus targets addressing the means of achieving them. Target 4.a focuses on school infrastructure and aims to ‘build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all’. This is consistent with efforts to ensure that schools work for all learners, including the child-friendly schools initiative (Box 7).

The IAEG-SDG has proposed a global indicator (4.a.1) that addresses several aspects of school infrastructure. To track progress,

countries are not only expected to report on basic WASH but also on the proportion of schools with a) electricity, b) the internet for pedagogical purposes, c) computers for pedagogical purposes, and d) adapted infrastructure and materials for students with disabilities.

UNESCO Institute of Statistics (UIS) compiles global data on each of these elements and in 2016 a total of 75 countries had data on electricity in schools, compared to 56 countries with data on internet access, 58 countries with data on computers in schools, and 28 countries with data on adapted infrastructure³⁴. WHO/UNICEF JMP estimates for basic WASH in schools are available for 92, 101 and 81 countries respectively.

BOX 7:

Child-friendly schools

UNICEF has developed a framework for rights-based, child-friendly educational systems and schools³³. Child-friendly schools are: *inclusive of children* – embracing diversity and not excluding, discriminating or stereotyping on the basis of difference; *effective for learning* – promoting good quality teaching and learning processes with individualized instruction appropriate to each child’s needs and abilities; *healthy and protective of children* – ensuring a healthy, hygienic and safe learning environment, with adequate WASH facilities and healthy classrooms, policies and practices, and providing health services such as nutritional supplementation and counselling; *gender-sensitive* – promoting gender equality in enrolment and achievement and encouraging respect for each other’s rights, dignity and equality; and *involved with children, families, and communities* – working to strengthen families as the child’s primary caregivers and educators and helping children, parents and teachers work together and mobilize the community around education and child rights.

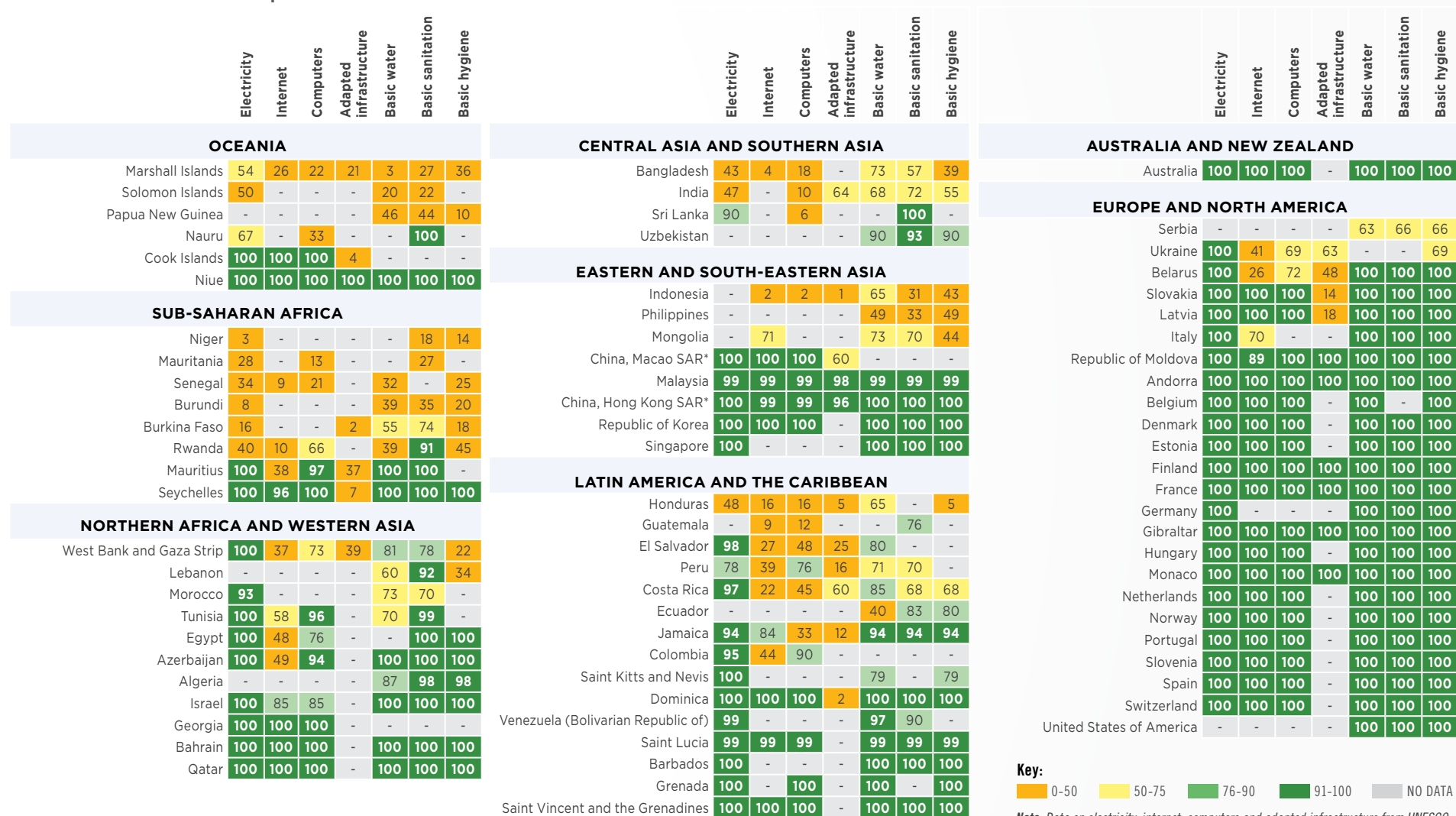
33 The United Nations Children’s Fund, *Child friendly schools manual*, UNICEF, New York, 2009. <www.unicef.org/publications/files/Child_Friendly_Schools_Manual_EN_040809.pdf>

Figure 29 combines these data in the form of a heat map that shows the proportion of primary schools with each component of school infrastructure per country. In 2016, 77 countries had data for at least three out of seven components and only 18 countries had data available for all seven.

Further work is required to harmonize the definitions and methods used to collect information on these different components. The objective will be to generate comparable national estimates for each and to combine them into a composite score for school infrastructure that can be used for national and global reporting of progress towards SDG target 4.a.

34 UNESCO Institute for Statistics <<http://uis.unesco.org>>

Few countries had data on adapted infrastructure and materials for students with disabilities in 2016



Key:
 0-50
 50-75
 76-90
 91-100
 NO DATA

Note: Data on electricity, internet, computers and adapted infrastructure from UNESCO Institute of Statistics (2018) and data on basic drinking water, sanitation and hygiene services from WHO/UNICEF JMP (2018).

*Special Administrative Region

FIGURE 29: Proportion of schools with (a) electricity, (b) internet, (c) computers, (d) adapted infrastructure³⁵, (e) water, (f) sanitation and (g) hygiene, 2016 (%)



Inequalities in access to basic WASH in schools

The 2030 Agenda not only includes SDG targets for universal access to WASH at home and in schools but also aims to 'reduce inequalities between and within countries' (SDG 10). The 2030 Agenda further commits Member States to 'leave no one behind' and calls for SDG indicators to be disaggregated, where relevant, by income, sex, age, race, ethnicity, migratory status, disability and geographic location.

This section reviews currently available national data on inequalities in basic WASH services in schools, by level of education (pre-primary, primary and secondary), by location of school (urban, rural,

peri-urban and sub-national regions), by type of school (public, private and other), and between schools and households. For this report it was not possible to access data on the socio-economic characteristics of students attending schools with and without basic WASH services, although these are available in some countries³⁶.

Figure 30 shows the number of countries with national estimates available for basic drinking water, sanitation and hygiene services (and all three) and the number of countries for which national

³⁶ For example, see Duarte, J et al, *Sufficiency, equity and effectiveness of school infrastructure in Latin America according to TERCE*, Inter-American Development Bank and UNESCO, Santiago, 2017. <<https://publications.iadb.org/handle/11319/81158>>

Fewer countries had disaggregated data for rural, urban and pre-primary schools in 2016

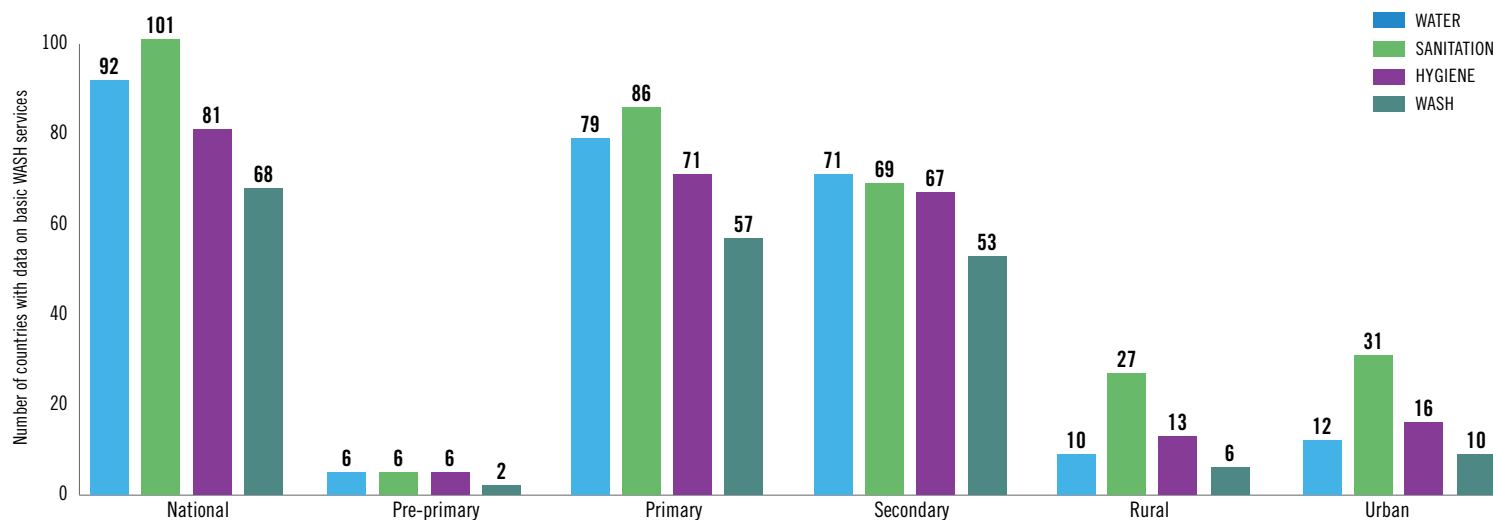


FIGURE 30: Number of countries with disaggregated data available on basic WASH services, 2016





SECTION FOUR

Schools that serve the youngest students tended to have the lowest WASH coverage in 2016

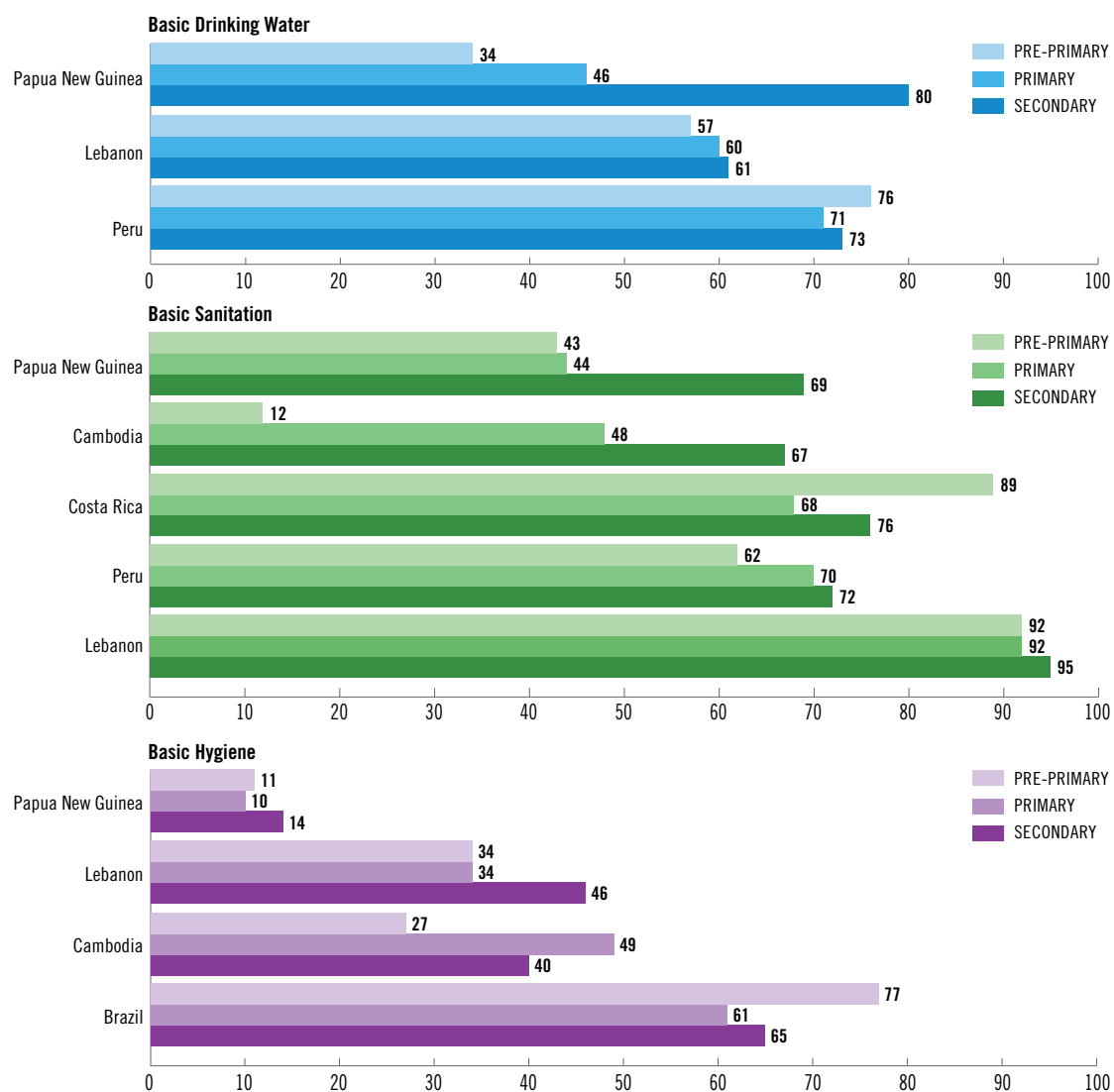


FIGURE 31: Proportion of pre-primary, primary and secondary schools with basic drinking water, sanitation and hygiene by country, 2016 (%)

estimates can be further disaggregated by school type (pre-primary, primary and secondary) and by residence (urban and rural). While most countries with data on basic WASH services have disaggregated data on primary and secondary, only a small number report separately on pre-primary, and relatively few can disaggregate between rural and urban areas.

Pre-primary, primary and secondary school levels

Disaggregated data on WASH in pre-primary, primary and secondary schools are essential to ensure that students are provided with safe and inclusive learning environments at all levels of education. While age groups may vary across countries, it is nevertheless informative to compare access to basic WASH services at each level of school.

In 2016, 53 countries had estimates for basic WASH in secondary schools and 57 countries had estimates for basic WASH in primary schools, but just two countries had estimates for basic WASH in pre-primary schools (Figure 30). These data were insufficient to produce regional and global estimates for all school levels.

Among those countries with disaggregated data available, coverage of basic WASH was generally lower in pre-primary and primary than in secondary schools (Figure 31). For example, in Cambodia there was a 36 percentage point gap in basic sanitation coverage and a 22 percentage point gap in basic hygiene coverage between primary schools and pre-primary schools. This means that 0.9 million pre-primary school-age children lacked a basic sanitation service at their school. Papua New Guinea had a 26 percentage point gap between basic drinking water in primary and secondary schools and a 25 percentage point gap for basic sanitation. Out of the 1.3 million primary school-age children, 0.6 million had basic sanitation at their school.

BOX 8:

WASH and early childhood development

The world development report 2018¹³ notes that ‘children often arrive at school unprepared to learn – if they arrive at all. Malnutrition, illness, low parental investments, and the harsh environments associated with poverty undermine early childhood learning. Severe deprivations—whether in terms of nutrition, unhealthy environments, or lack of nurture by caregivers—have long-lasting effects because they impair infants’ brain development.’ There is a large body of evidence on the importance of household WASH for the nutrition and health of young children³⁷. Studies have also shown that provision of basic handwashing and sanitation facilities in pre-primary and primary schools can reduce absenteeism and cases of diarrhoea and other infectious diseases such as soil transmitted helminths (worms) among young children³⁸. There is also evidence that providing drinking water to keep children hydrated in school improves their memory, attention and general cognitive performance³⁹.

37 Cairncross, S et al, *Water, sanitation and hygiene: Evidence paper*, UK Department for International Development, London, 2013. <<https://assets.publishing.service.gov.uk/media/57a08a3ded915d622c00062f/WASH-evidence-paper-april2013.pdf>>
 38 Bowen, A et al, ‘A cluster-randomized controlled trial evaluating the effect of a handwashing-promotion program in Chinese primary schools’, *American Journal of Tropical Medicine and Hygiene*, vol. 76, no. 6, pp. 1166–1173, The American Society of Tropical Medicine, Oakbrook Terrace, IL, 2007. <www.ajtmh.org/content/journals/10.4269/ajtmh.2007.76.1166>
 39 Benton, D, ‘Dehydration influences mood and cognition: A plausible hypothesis?’, *Nutrients*, vol. 3, no. 5, pp. 555–73, MDPI, Basel, Switzerland, 2011. <www.ncbi.nlm.nih.gov/pubmed/22254111>

A larger number of countries had disaggregated estimates for primary and secondary schools. Figure 32 shows that in most of these countries coverage of basic WASH was higher in secondary schools. For example, Burundi had the largest gap in basic sanitation coverage, 54 percentage points higher in secondary schools, while in Nepal the gap in basic drinking water coverage was 37 percentage points and in Serbia the gap in basic hygiene coverage was 25 percentage points. In a small number of countries the opposite is true. In Burkina Faso, for example, coverage of basic drinking water and basic sanitation was significantly higher in primary schools.

Disaggregated data reveal significant disparities between primary and secondary schools

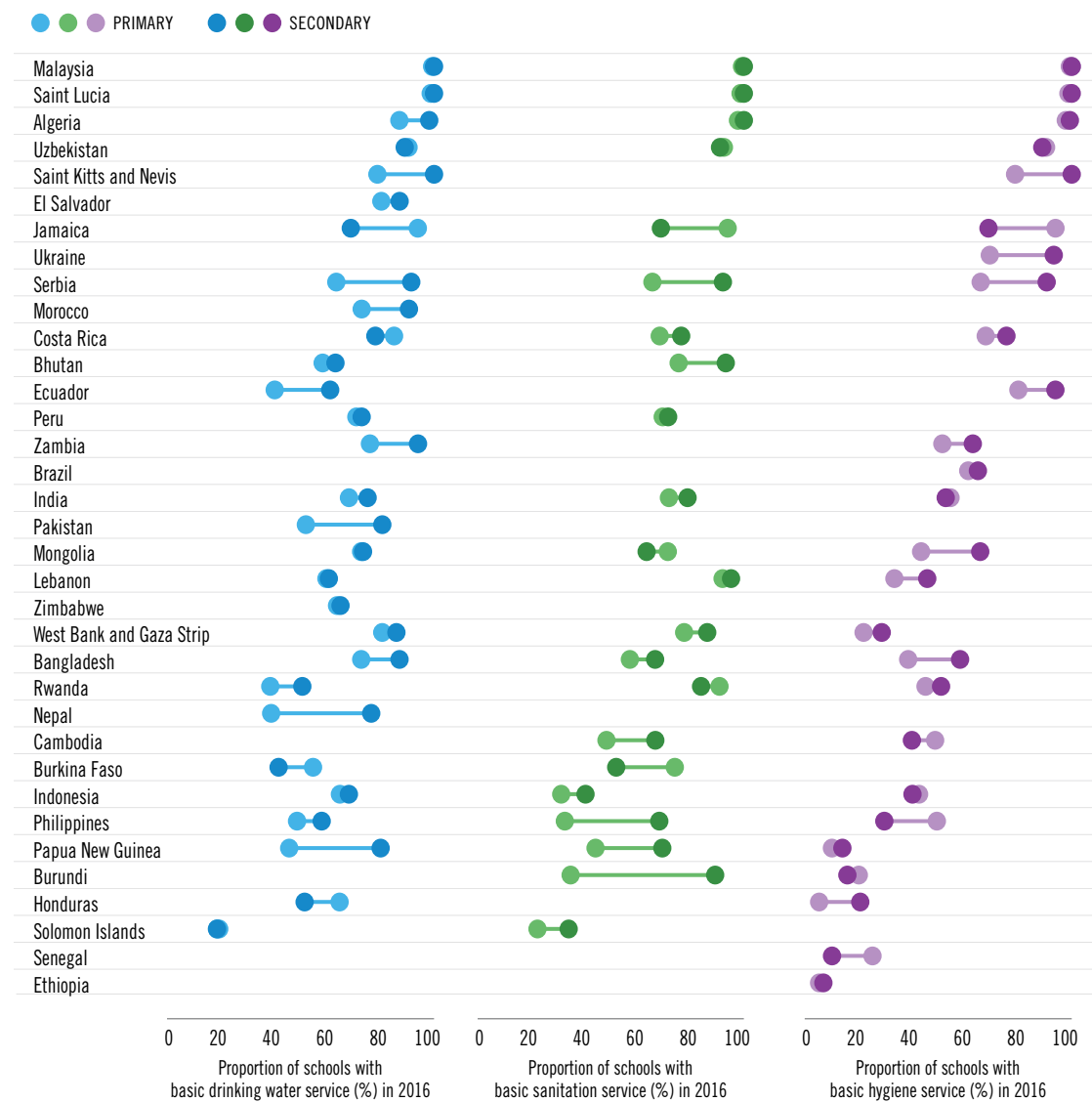


FIGURE 32: Proportion of primary and secondary schools with basic drinking water, basic sanitation and basic hygiene, 2016 (%)



SECTION FOUR

Urban, rural and peri-urban schools

National data on WASH in schools are not always disaggregated by urban and rural schools so comparison is only possible for a subset of countries. While it is not possible to generate regional and global estimates for the proportion of rural and urban schools meeting the criteria for basic services, it is estimated that in 2016 11% of urban

schools and 27% of rural schools had no drinking water service and 26% of rural schools had no sanitation service. Insufficient data were available to calculate the proportion of urban schools with no sanitation service.

Basic WASH coverage was generally higher in urban schools than rural schools in 2016

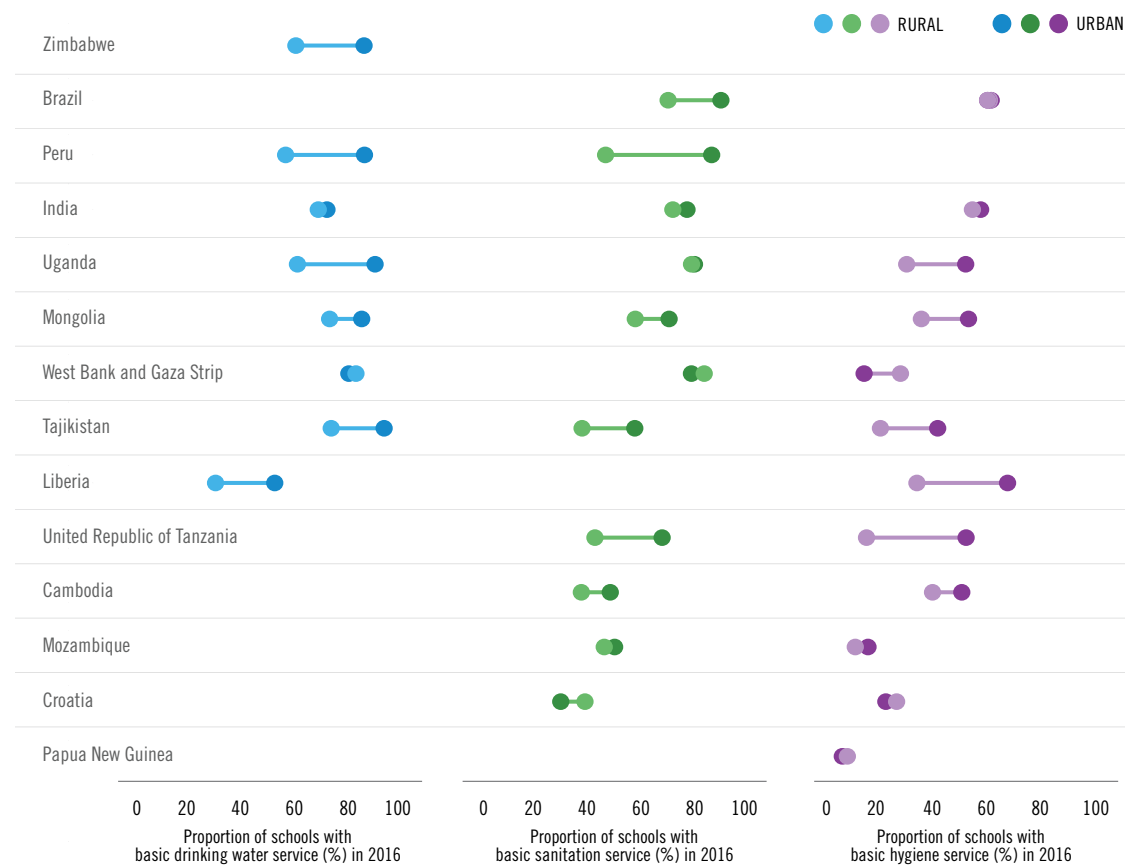


FIGURE 33: Proportion of urban and rural schools with basic water, sanitation and hygiene services by country, 2016 (%)

Figure 33 shows the gap in coverage of basic WASH services between urban and rural schools in countries with data available in 2016. Basic drinking water coverage was significantly higher in urban schools in almost all countries. Peru, Zimbabwe and Uganda all had coverage gaps of more than 25 percentage points. Basic sanitation coverage was generally higher in urban schools than rural schools. Peru had the largest coverage gap of 39 percentage points. The largest disparities in basic hygiene coverage were observed in United Republic of Tanzania and Liberia which had respective gaps of 37 and 34 percentage points.

The UNESCO Latin American Laboratory for Assessment of the Quality of Education (LLECE) school surveys produce WASH in schools data for nine countries in Latin America with sufficient data to disaggregate coverage into urban, peri-urban and rural areas. Figure 34 shows that in 2006 coverage of drinking water was generally higher in urban than in peri-urban schools, which in turn had significantly better coverage than rural schools. The disparity in *drinking water* was most pronounced in Peru and Ecuador, where the gap in coverage between peri-urban and rural schools was around 50 percentage points. Disparities in *sufficient number of toilets* were less marked, and in Guatemala and Uruguay coverage was higher in rural than in peri-urban and urban schools.



In Latin America in 2006 drinking water coverage was lower in peri-urban schools and lowest in rural schools

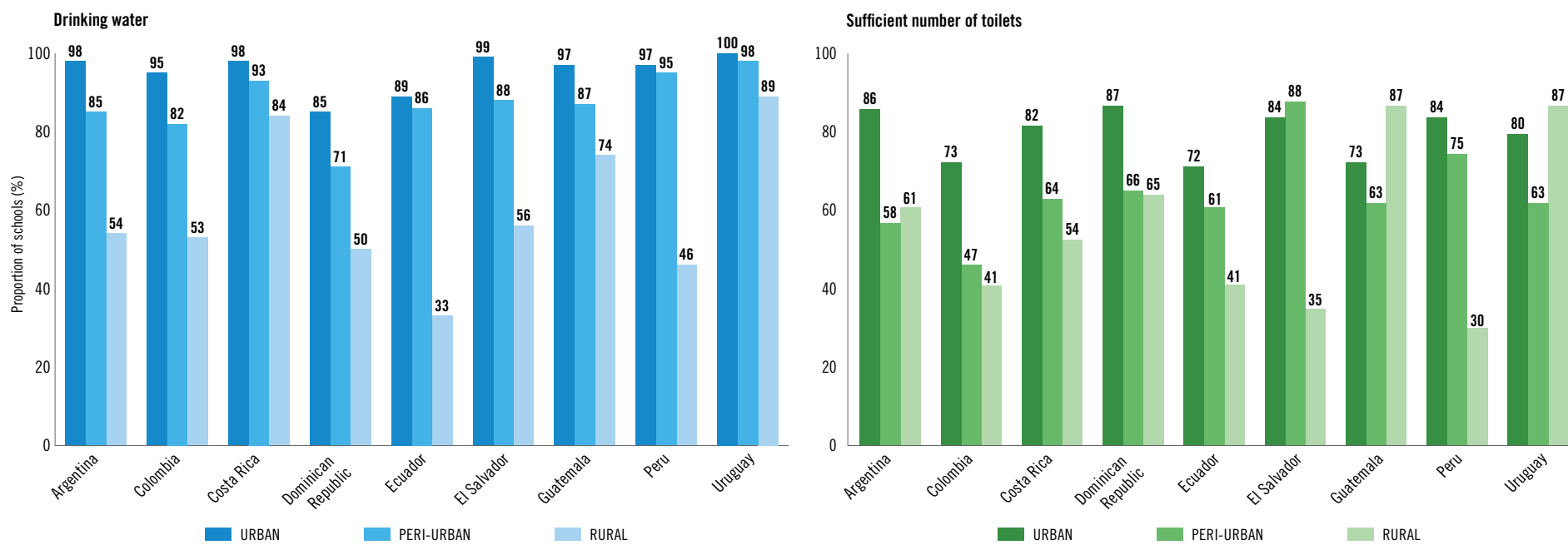


FIGURE 34: Proportion of schools with drinking water and sufficient toilets in urban, peri-urban and rural areas, across nine countries in Latin America, 2006 (%)

Note: Data from the UNESCO LLECE Second Regional Comparative and Explanatory Study (2008).



SECTION FOUR

Disaggregated data highlight inequalities in school WASH coverage between sub-national regions

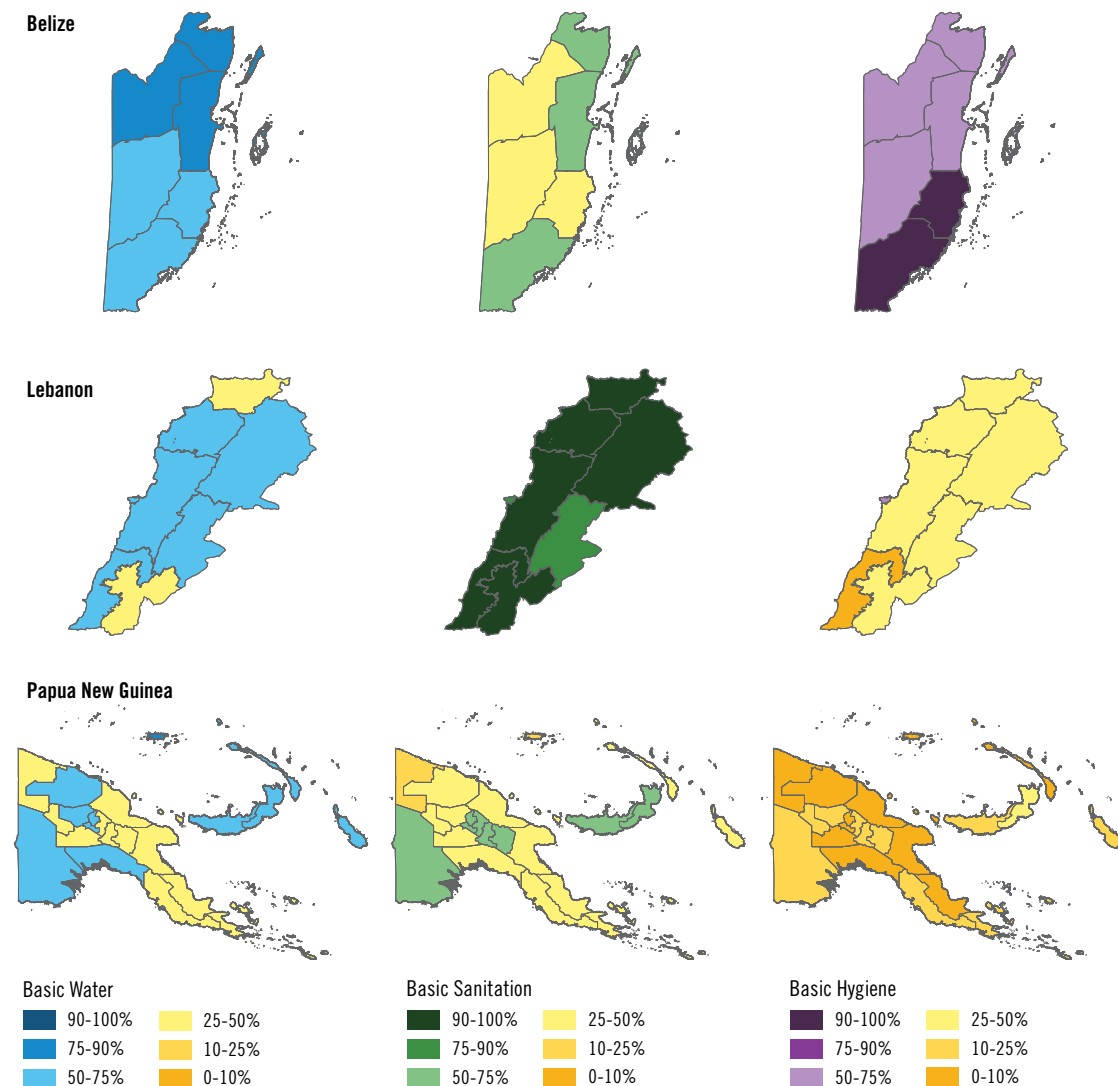


FIGURE 35: Sub-national coverage of basic drinking water, sanitation and hygiene in schools in Belize, Papua New Guinea and Lebanon

Sub-national regions

Many datasets allow disaggregation of basic WASH coverage by sub-national regions, such as districts. Figure 35 shows inequalities in coverage of basic WASH in schools between sub-national regions in three countries. In Belize, all districts have achieved at least 50% coverage of basic WASH in schools but disparities remain. While basic water coverage is highest in the northern districts of Corozal, Orange Walk and Belize, basic sanitation coverage is higher in the coastal districts and hygiene coverage is highest in the southern districts of Stann Creek and Toledo.

In Lebanon, all governorates have over 50% coverage of basic drinking water in schools except for Akkar in the north and Nabatiyei in the south. Only Beirut has achieved more than 50% coverage of basic handwashing facilities in schools and coverage in the southern governorate is below 25%. In Papua New Guinea, less than half of provinces have achieved 50% coverage of basic water and sanitation in schools and coverage is lowest in the northern and highland provinces. Basic hygiene coverage in schools is below 25% in all provinces, except for East New Britain and Chimbu.

Public, private and other types of school

Another potentially important dimension of inequality is between different types of school, including public, private, religious and community-managed schools. Several countries report separately on public and private schools, and while these data show disparities in water and sanitation coverage, there is no consistent pattern (Figure 36). It is important to note that definitions of public or private schools vary widely between and within countries. Private schools, for example, may range from large elite metropolitan academies to small rural schools run by non-governmental organisations (NGOs).

The types of school vary according to country context. For example, the EMIS in Mali not only distinguishes public and private but also madrassas (religious schools) and community schools. Figure 37 shows that coverage of functional toilets is higher than coverage of functional single-sex toilets in all four types of school, and that it is significantly higher in private and public schools than in madrassas and lowest in community schools.

According to the Bhutan EMIS, in 2016 12,000 students were enrolled in monastic institutions while 169,560 were enrolled in general education schools, and a recent survey found that monastic institutions have higher coverage of basic water but lower coverage of basic sanitation than non-monastic schools. In 2014, the Namibia EMIS reported that boarding schools were more likely than other schools to have water and soap available for handwashing and separate and lockable girls' toilets. They were also less likely to exceed the national guideline of no more than 30 boys or 30 girls per toilet.

Community-run schools have the lowest sanitation coverage in Mali

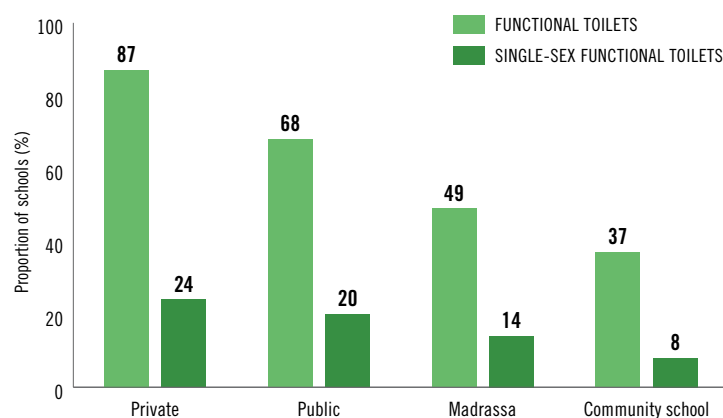


FIGURE 37: Proportion of primary schools with functional and single-sex toilets, by school type, Mali (%)

Disparities are also found between WASH coverage in public and private schools

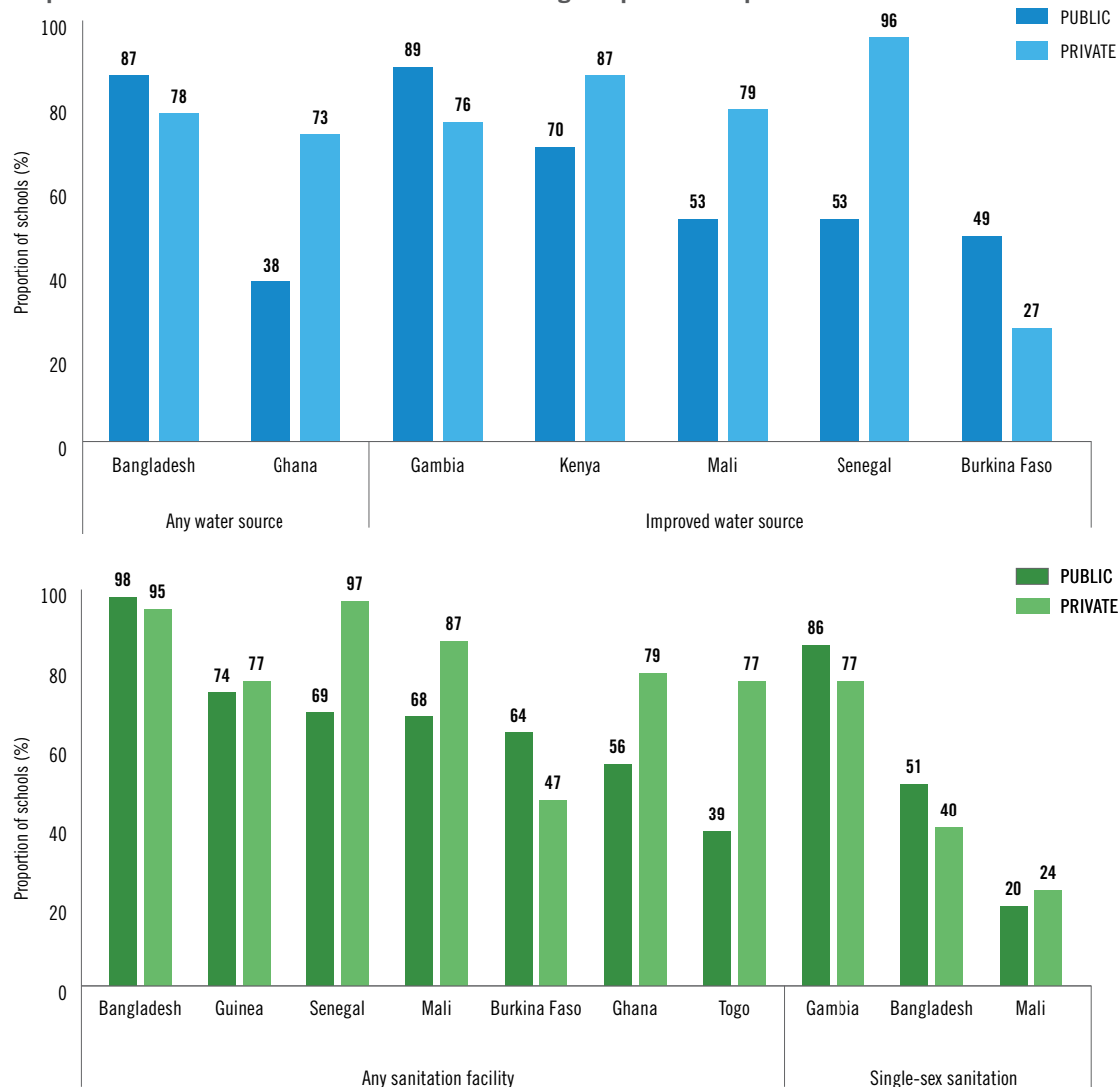


FIGURE 36: Proportion of public and private primary schools with access to any water source, to an improved water source, to any sanitation facility, and to a single-sex facility (%)



SECTION FOUR

WASH coverage in households and schools varies widely across countries

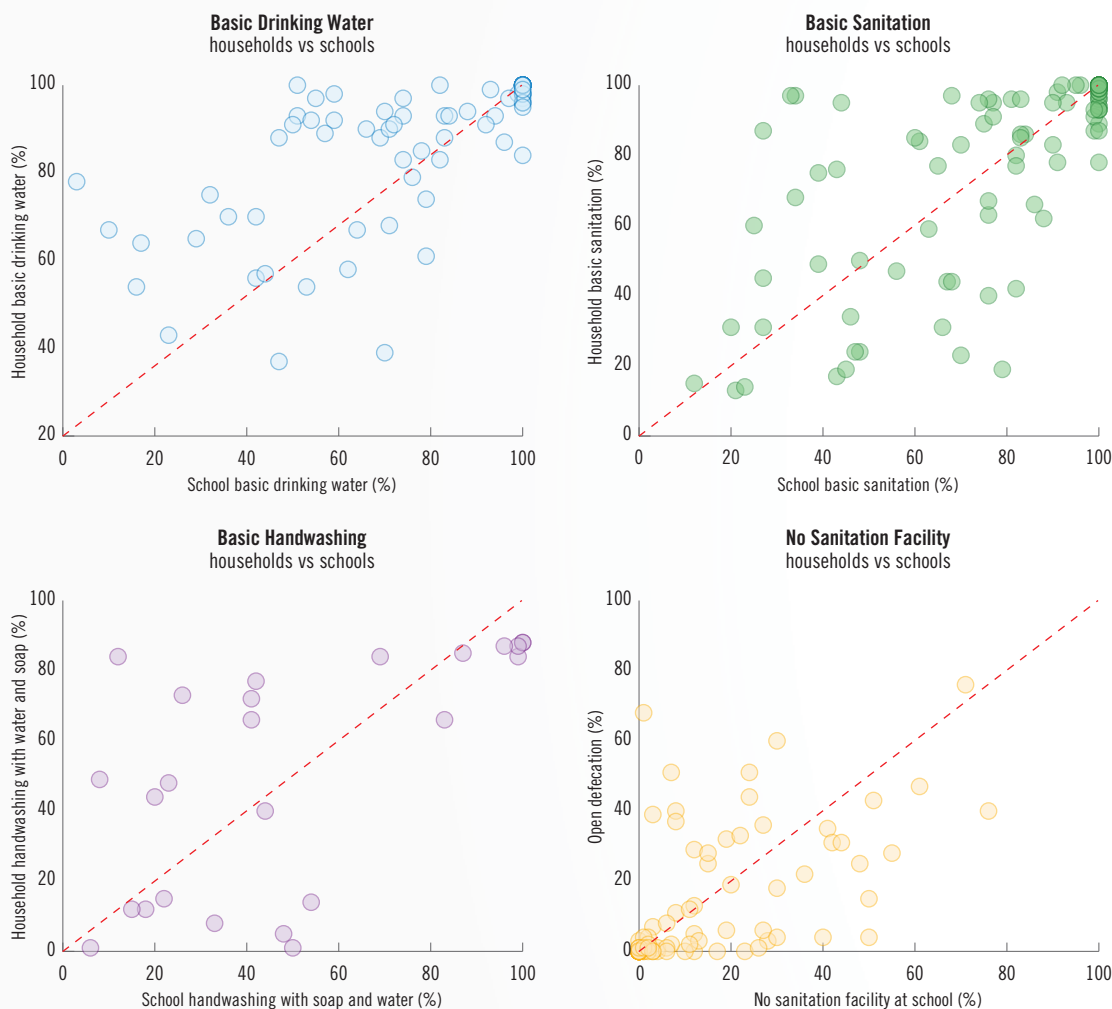


FIGURE 38: Proportion of households and schools with basic drinking water, sanitation and handwashing facilities and no sanitation facilities, by country (%)

Note: Source of household estimates is World Health Organization and the United Nations Children's Fund Joint Monitoring Programme for Water Supply, Sanitation and Hygiene, Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines. WHO/UNICEF, Geneva, 2017. <<https://washdata.org/report/jmp-2017-report-final>>

Universal access to WASH at home and in schools

The SDG targets aim to end open defecation and achieve universal access to WASH at home and in schools and other institutional settings. While the definitions of service differ between households and schools, the technology classifications of improved and unimproved facilities are the same, and it is interesting to consider the extent to which countries that lack basic WASH services in schools also lack basic WASH services in the home. Figure 38 shows that in most countries national coverage of basic drinking water in households is higher than in schools, whereas the reverse is true for sanitation and there is no clear pattern for handwashing.

Open defecation⁴⁰ is closely associated with extreme poverty and the 892 million people still practising open defecation are increasingly concentrated in a relatively small number of countries. JMP 2017 estimates show that in countries with high

⁴⁰ Open defecation refers to the disposal of human faeces in fields, forests, bushes, open bodies of water, beaches or other open spaces, or with solid waste.





rates of open defecation schools often lack sanitation facilities. In Niger, for example, nearly three quarters of the population still practise open defecation and the same proportion of schools lack sanitation facilities. In Eritrea, three out of four people practise open defecation and two out of five schools lack sanitation facilities. While in Mauritania, nearly a third of the population practises open defecation and two thirds of schools lack sanitation facilities.

WASH in schools programmes provide an entry point for the education, awareness-raising and behaviour change required to achieve the SDG6 target of ending open defecation in these and other countries by 2030. India, for example, has made rapid progress in increasing access to sanitation facilities in schools. Figure 39 shows that between 2000 and 2016 the proportion of schools without any sanitation facility decreased even faster than the proportion of the population practising open defecation⁴¹. Based on these trends, the JMP estimates that almost all schools in India had some type of sanitation facility in 2016, while 10 years earlier half the schools in India reported having no sanitation facility at all. Between 2000 and 2016, the number of school-age children in India increased from 352 million to 378 million.

India has made rapid progress in increasing access to sanitation in schools

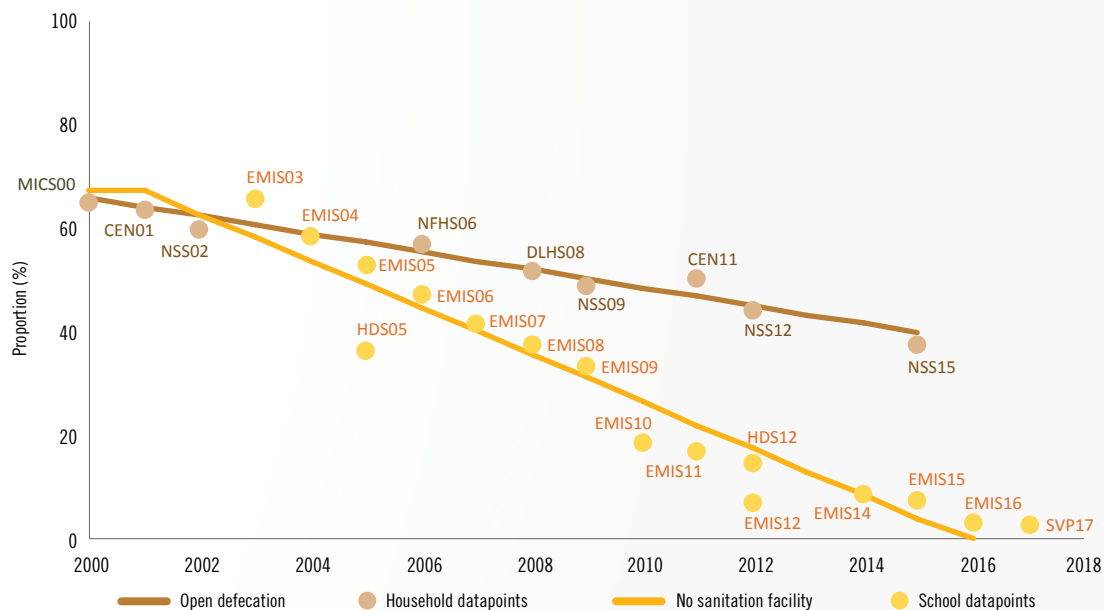


FIGURE 39: Proportion of the population practising open defecation and proportion of schools with no sanitation facility, India, 2000–16 (%)

Note: Source of household estimates is World Health Organization and the United Nations Children's Fund Joint Monitoring Programme for Water Supply, Sanitation and Hygiene, Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines. WHO/UNICEF, Geneva, 2017. <<https://washdata.org/report/jmp-2017-report-final>>

41 World Health Organization and the United Nations Children's Fund Joint Monitoring Programme for Water Supply, Sanitation and Hygiene, Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines. WHO/UNICEF, Geneva, 2017. <<https://washdata.org/report/jmp-2017-report-final>>



Enhanced monitoring and advanced service levels

Defining advanced service levels for WASH in schools

The SDG targets for universal access to basic WASH in schools further reinforce existing international agreements on the human right to education and the human rights to safe water and sanitation. However, in line with the concept of the progressive realization of human rights, continuous improvements are required which go beyond ensuring a basic level of WASH service in all schools (Box 9).

Each government must decide how to incorporate the SDG global targets and indicators into its national policies and strategies, considering the national context, priorities and resources. Those countries that have already achieved a basic level of service in all schools should set targets for further improvements in service levels.

For example, a 2016 report by the WHO Regional Office for Europe⁴² noted that basic WASH was already the norm in many European schools and provided recommendations for additional indicators that may be considered depending on context and the availability of resources for monitoring. These included drinking water quality compliance with national and/or WHO guidelines, toilet paper availability inside toilet facilities at all times, the availability of a private place to safely dispose of menstrual hygiene materials, and the promotion of hand hygiene in school (Box 10).

⁴² van Maanen, P et al, *Prioritizing pupils' education, health and well-being: Water, sanitation and hygiene in schools in the pan-European region*, World Health Organization Regional Office for Europe, Copenhagen, 2016. <www.euro.who.int/__data/assets/pdf_file/0007/321838/Prioritizing-pupils-education-health-well-being-en.pdf?ua=1>

BOX 9:

Progressive realization of the human rights to education and to safe water and sanitation

The human right to education focuses on the right of access to education at all stages of childhood, the right to quality education both in terms of curriculum and learning environment, and the right to respect in the learning environment. While the provision of WASH in schools relates directly to the quality of the learning environment, inadequate services may also affect access to education, particularly for girls and those with limited mobility, and respect for students with different gender identities.

The Special Rapporteur on the right to education has recommended that States allocate resources to school

infrastructure, specifying that 'infrastructure must be sited within communities and include a drinking water supply and separate, private, safe sanitation services for girls' and also that they 'establish efficient mechanisms for supplying sanitary towels to adolescent girls who so wish, especially in rural areas, and ensure they can always have the use of the sanitation facilities they need'⁴³.

The human rights to safe water and sanitation focus on the accessibility, availability, acceptability and quality of the

⁴³ United Nations Commission on Human Rights, *Sixty-second session on social and cultural rights agenda item 10: Girls' right to education. Report submitted by the Special Rapporteur on the right to education*, 8 February 2006. <<https://undocs.org/E/CN.4/2006/45>>

services themselves. The Special Rapporteur has noted that 'sanitation facilities must be physically accessible for everyone within, or in the immediate vicinity of, each household, health or educational institution, public institutions and places, and the workplace'.

The Committee on the Rights of the Child has also regularly linked sanitation to education in its concluding remarks, and notes that while direct responsibility for education usually lies in an individual governmental department, a coordinated mechanism is needed for planning, budgeting and implementation across government departments and at all educational levels.





SECTION FIVE

BOX 10: Defining advanced service levels for WASH in schools in Serbia

The Government of the Republic of Serbia conducted a survey of rural schools in two regions using the WHO/UNICEF JMP-recommended core questions for monitoring basic WASH in schools¹⁸ plus an additional set of questions related to advanced levels of service. While most of the schools surveyed in Serbia provided a basic level of WASH, few met the additional criteria specified for an advanced level. Drinking water quality, the accessibility of facilities for children with disabilities, and the provision of education and facilities for MHM were the main barriers to meeting advanced service levels.

¹⁸ World Health Organization and the United Nations Children's Fund, *Core questions and indicators for monitoring WASH in schools in the Sustainable Development Goals*, WHO/UNICEF, New York, 2018. <<https://washdata.org/report/jmp-core-questions-monitoring-wash-schools-2018>>

DRINKING WATER SERVICE LEVEL	PROPORTION OF SCHOOLS	REASONS FOR NOT MEETING THE ADVANCED SERVICE LEVEL	
Advanced	5.9%		
Basic	92.8%	Water is not available in school at all times	5.5%
		Drinking water is not accessible to children with disabilities	89.9%
		Water is not safe to drink	42.8%
Limited	0.8%		
No service	0.4%		
SANITATION SERVICE LEVEL	PROPORTION OF SCHOOLS	REASONS FOR NOT MEETING THE ADVANCED SERVICE LEVEL	
Advanced	0.4%		
Basic	84.9%	Toilets are not clean	3.4%
		Toilets are not accessible to children with disabilities	99.6%
		Inadequate number of toilets (>25 boys/girls per toilet)	10.9%
		No menstrual waste disposal options	76.9%
Limited	11.8%		
No service	2.9%		
HYGIENE SERVICE LEVEL	PROPORTION OF SCHOOLS	REASONS FOR NOT MEETING THE ADVANCED SERVICE LEVEL	
Advanced	0.8%		
Basic	92.4%	Handwashing facilities are not accessible to children with disabilities	97.1%
		There is no education on menstrual hygiene	49.6%
Limited	5.9%		
No service	0.8%		

Source: Government of Serbia (2017) Water, sanitation and hygiene (WASH) in rural schools in Šumadija and Pomoravlje districts in the Republic of Serbia; (n=238).

The normative criteria of the human rights to safe water and sanitation provide a useful framework for identifying additional indicators that could be used to enhance the monitoring of WASH in schools, where resources allow, and to inform the development of future benchmarks for more advanced levels of service. While data are currently only available for a small number of countries, the following section highlights examples of additional data that may be collected on: the accessibility of WASH facilities for all students, including those with disabilities; the availability of drinking water and the number of sanitation facilities; the quality of the facilities provided in schools; and their acceptability to students and staff, particularly to girls and students with different gender identities.

Accessibility of WASH in schools

SDG target 4.a aims to build, upgrade and adapt school infrastructure to ensure it is accessible to all students and teachers, including those with disabilities. This not only implies progressively making sure that school buildings and premises are accessible, but also ensuring that school WASH facilities are accessible to all.

To meet the criteria for a basic drinking water service, water from an improved source must be available at the school on the day of the survey, but the improved source may either be located on the school premises or elsewhere. While most schools in Uganda and Sierra Leone used water from an improved source in 2014 and 2016 respectively, just 60% of schools in Uganda and 42% of schools in Sierra Leone had an improved source located on the school premises (Figure 40).

The location of handwashing facilities significantly affects their accessibility and it has been shown that students are more likely to wash their hands at critical times, such as before eating and after using the toilet, when handwashing facilities are located close to

Schools often do not have an improved drinking water source on the premises

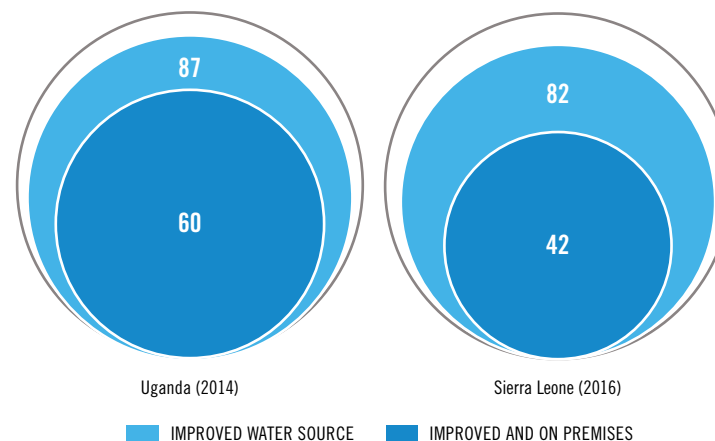


FIGURE 40: Proportion of schools with an improved water source and with an improved water source on the premises, Uganda and Sierra Leone (%)

Handwashing facilities are not always close to toilets

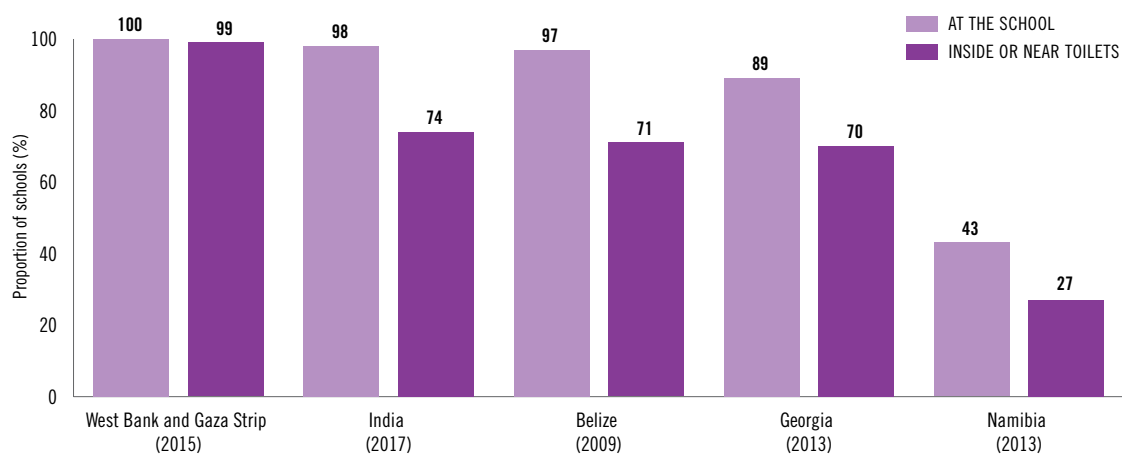


FIGURE 41: Proportion of schools with handwashing facilities in different locations, by country (%)



In most countries with data less than half of schools have toilets accessible to students with limited mobility

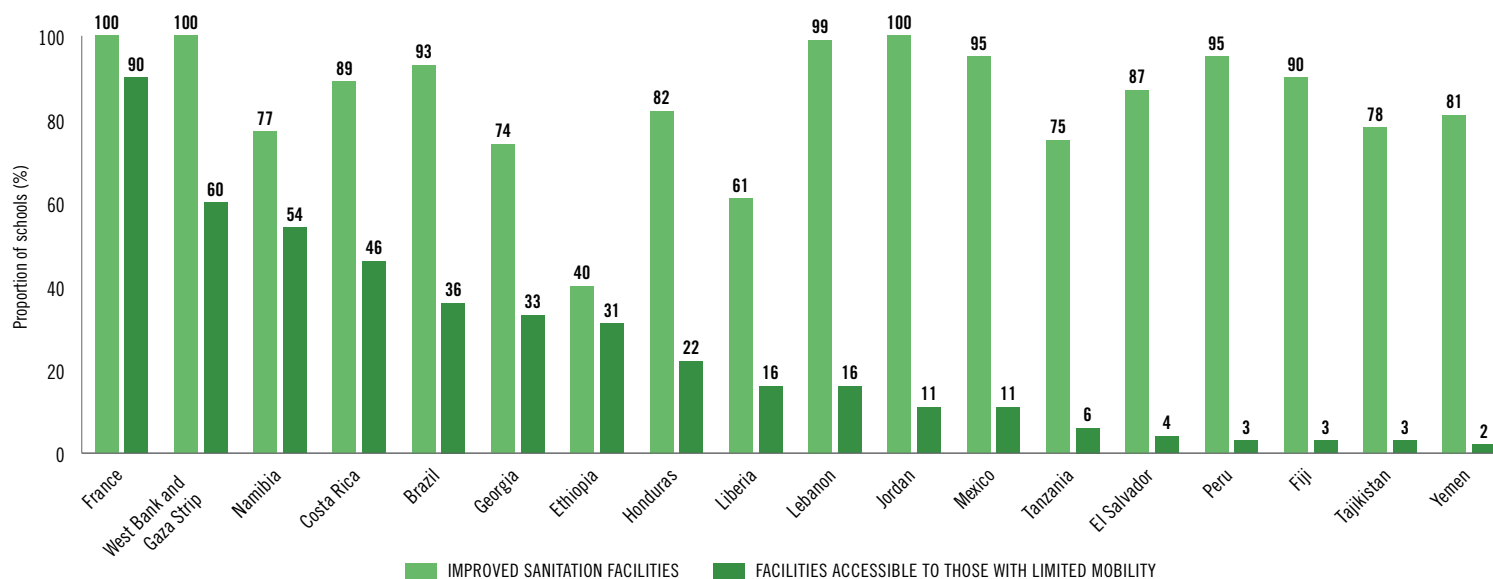


FIGURE 42: Proportion of schools with improved sanitation facilities and with facilities accessible to those with limited mobility (national definitions vary) (%)

the toilet or dining areas⁴⁴. The location of facilities is reported in several recent school surveys and shows that while handwashing facilities are often available at school, they are not always available close to the toilets (Figure 41). For example, in India and Belize almost all schools had handwashing facilities at the school but fewer than three quarters had facilities inside or near the toilets, while in Namibia just one in four schools had handwashing facilities inside or near the toilets.

Of the 18 countries with data on the accessibility of sanitation facilities for students with limited mobility, coverage varies but in

many countries there is a large gap between the proportion of schools with improved sanitation facilities and the proportion with accessible facilities (Figure 42). The biggest disparities are observed in Peru and Fiji which have gaps of 92 and 87 percentage points. In 11 of the countries less than 25% of schools have accessible toilets.

To be able to compare progress across countries, further work is required to harmonize national definitions and indicators for accessible toilets. For example, Peru defines accessibility as toilets with a support bar and obstacle-free space for a wheelchair to turn around. In Fiji the definition of accessible toilets includes wheelchair access/ramps. The Tajikistan definition requires a separate toilet facility for students with disabilities. While 29% of

⁴⁴ Chittleborough, C et al. 'Factors influencing hand washing behaviour in primary schools: Process evaluation within a randomized controlled trial', *Health Education Research*, vol. 27, no. 6, pp 1055–1068, Oxford University Press, Oxford, 2012. <<https://academic.oup.com/her/article/27/6/1055/656533>>

schools in India report having a toilet accessible to children with special needs, only 14% have at least a ramp and handrail and just 6% also have a wide door for wheelchair entry and support structure inside the toilet⁴⁵.

Time series data from the Brazilian education census shows that the proportion of schools with a disability-accessible toilet has increased rapidly over the past decade, from 7% in 2005 to 36% in 2016 (Figure 43). The same census records the proportion of schools with toilets accessible to young children and shows that these are more commonly found in pre-primary schools than in primary schools. Between 2009 and 2016, the proportion of pre-primary schools with toilets accessible to young children doubled, from 27% to 54%.

In 2016, Ethiopia had 8.4 million primary school-age children. One in five primary schools had handwashing facilities but only one in 10 had handwashing facilities accessible to young children. Nearly nine out of 10 primary schools had toilets but less than half were accessible to young children (Figure 44). National definitions of accessibility for young children vary and may range from latrines, sinks and water fountains that are easier for small children to access and operate to additional safety precautions to reduce the risk of children falling into wells or pit latrines.

Availability of WASH in schools

The human rights to safe water and sanitation specify that services should be available in sufficient quantities to meet basic needs at all times but also note that minimum standards for availability are context specific. Some countries collect information on the number of toilets, urinals, handwashing facilities and quantities of water available per student for comparison against national standards⁴⁶.

⁴⁵ Based on 2016-17 data provided by the Swachh Vidyalaya Puraskar programme for 268,080 schools.

⁴⁶ Measurement is more complicated in countries where schools operate multiple shifts or separate shifts for girls and for boys.

In Brazil coverage of toilets for students with limited mobility has increased rapidly since 2005

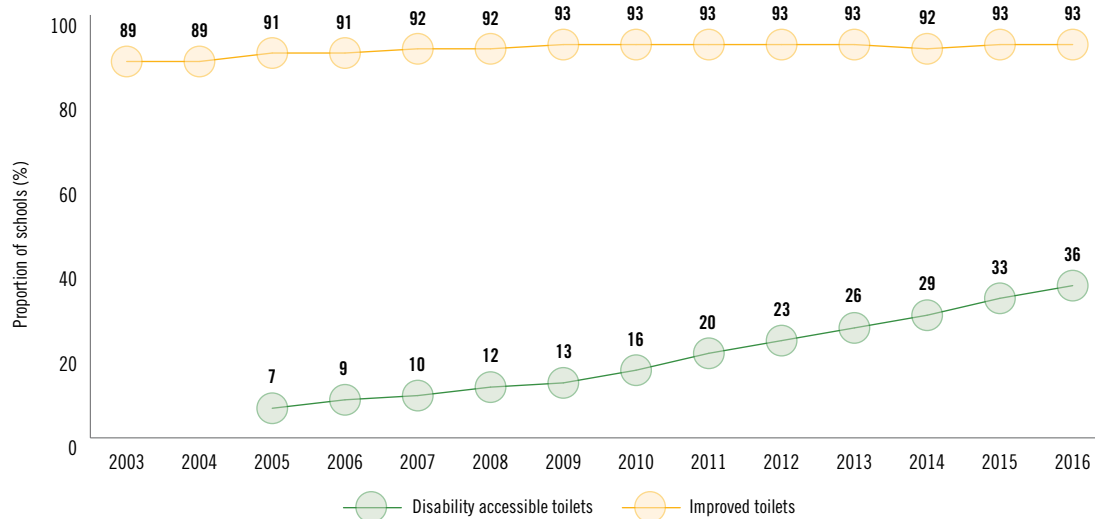


FIGURE 43: Proportion of schools with improved toilets and disability-accessible toilets, Brazil, 2000–16 (%)

In Ethiopian primary schools only half of the toilets and handwashing facilities were accessible to young children in 2016

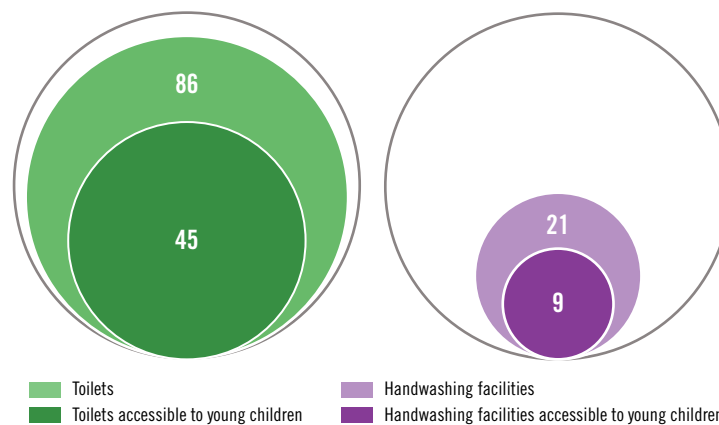


FIGURE 44: Proportion of primary schools in Ethiopia with WASH facilities and with WASH facilities accessible to young children (%)



SECTION FIVE

The number of students per toilet varies widely among countries with data available

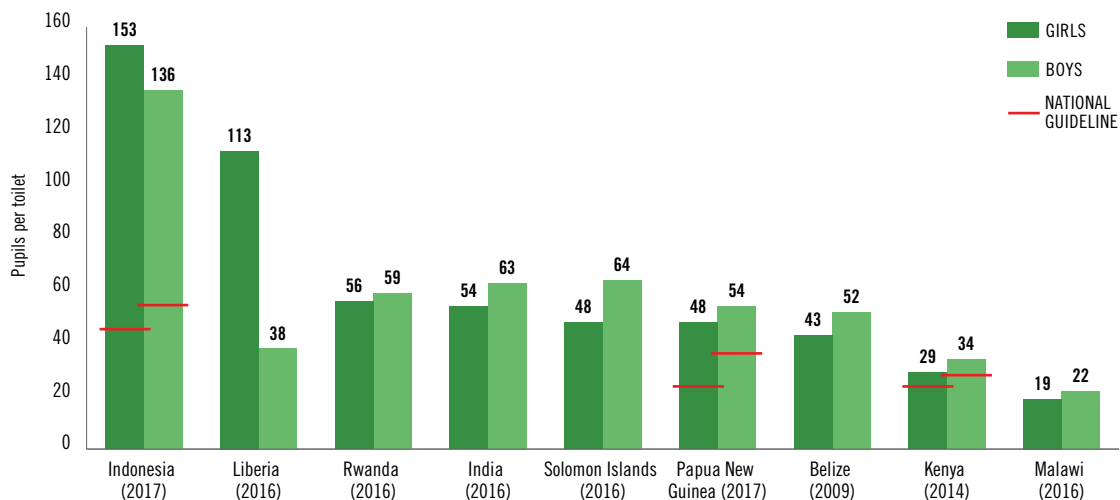


FIGURE 45: Number of students per toilet, by sex and by country

Student-to-toilet ratios declined in all regions of Guinea between 2007 and 2015

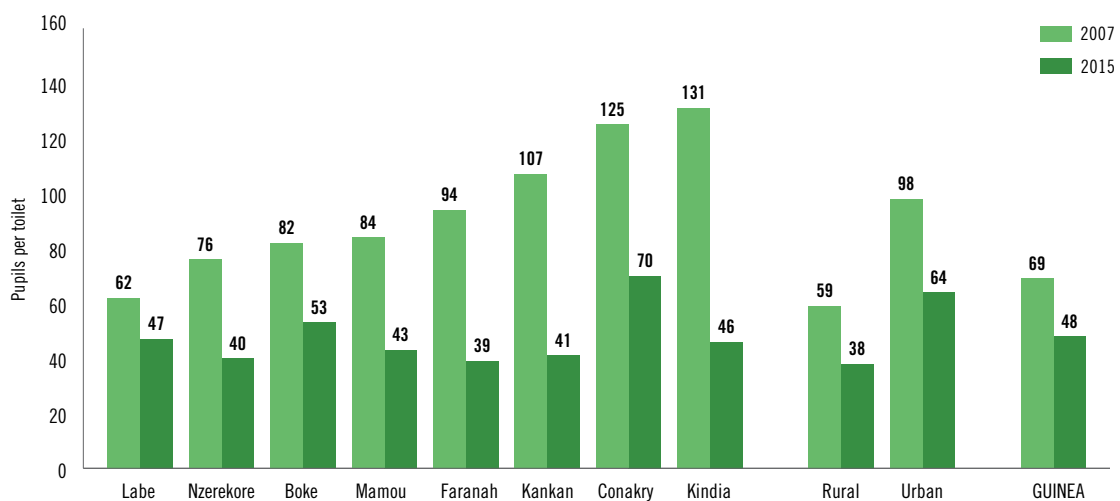


FIGURE 46: Total number of students per toilet by region, Guinea

National guidelines for the number of female and male students per toilet or urinal vary widely and are often exceeded in practice (Figure 45). In Indonesia, for example, the ratio for girls is more than three times the national guideline while the ratio for boys is more than twice the guideline. In Liberia there are three times as many girls than boys per toilet. Trend data is also important to understand whether the situation is getting better or worse. For example, Guinea succeeded in reducing the number of students per latrine in every region between 2007 and 2015 (Figure 46).

The availability of sufficient quantities of drinking water, as well as water to flush toilets, wash hands, cook and keep school facilities clean, is also a major concern in many parts of the world. For example, a recent assessment in Jordan⁴⁷ showed that 10% of

⁴⁷ Ministry of Education, United Nations Children's Fund, and Japan Emergency NGO, *School WASH Assessment*, MoE/UNICEF/JEN, Amman, November 2015.

Most Jordanian schools dependent on water tankers receive deliveries <5 times a month

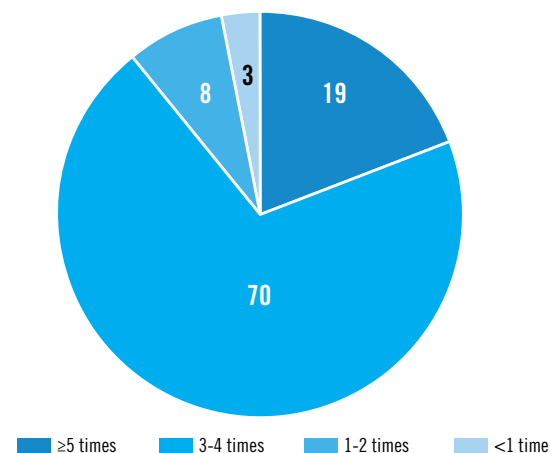


FIGURE 47: Frequency of water tanker deliveries to schools per month, Jordan, 2015

schools were dependent on tankers, either as their main source of drinking water or to supplement the public supply, and the vast majority received deliveries less than five times a month (Figure 47). Over half of the schools surveyed (57%) reported that the frequency of supply and available storage capacity was insufficient to provide the national minimum of 10 litres of water per student per day.

The availability of a group handwashing facility designed to enable children to practise washing their hands together at critical times is also monitored in several countries. For example, the EMIS in the Philippines records the presence of group handwashing facilities, functionality and the presence of soap. It showed that

in 2017, 59% of schools in the country had group handwashing facilities but only 40% were functional with soap, and while 54% of secondary schools had group handwashing facilities, just 28% were functional with soap.

A recent survey in India also collected information on the availability of facilities for MHM. Figure 48 shows that the proportion of schools with bins with lids for the disposal of sanitary materials varied widely across states in India in 2017, from 98% in Chandigarh to 36% in Chhattisgarh. Mizoram is the only state where more than 50% of schools have a functional incinerator for the disposal of sanitary waste.

Availability of facilities for the disposal of menstrual hygiene materials varied widely across India in 2017

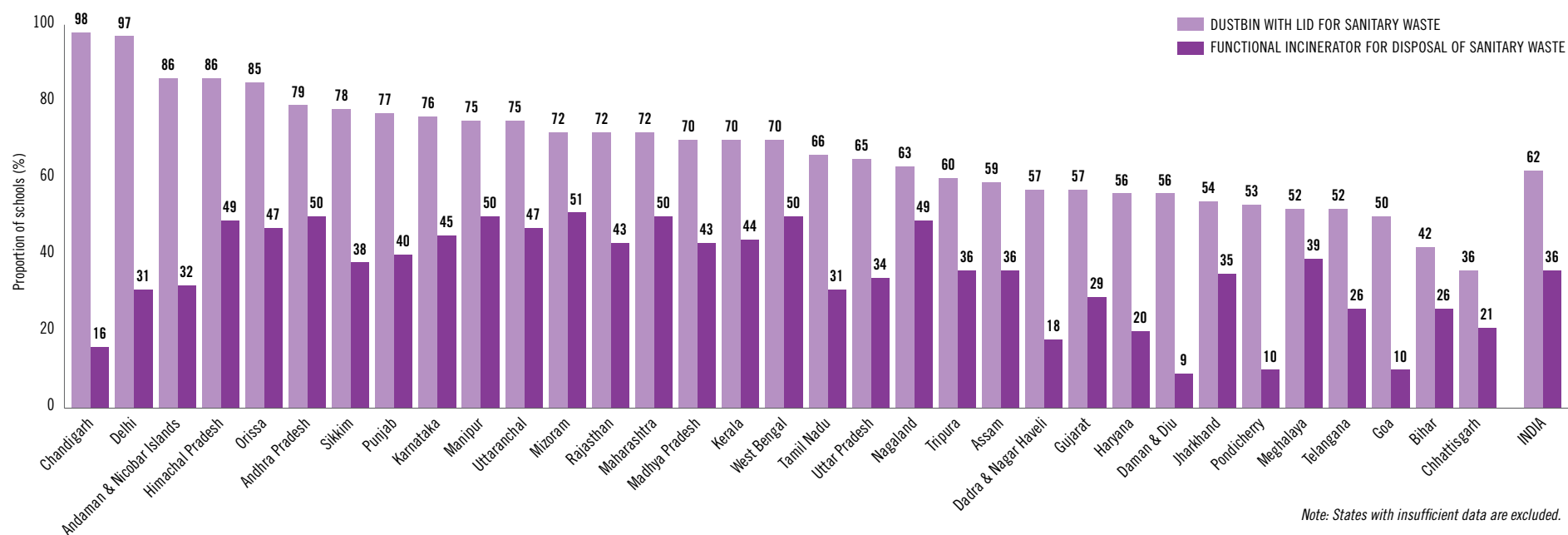


FIGURE 48: Proportion of schools with a dustbin with lid and with a functional incinerator for sanitary waste, by state, India, 2017 (%)



Quality of WASH in schools

There are many additional criteria that may be used to assess the quality of WASH services in schools. The importance of drinking water quality for health is well established but while there has been a progressive harmonization of national standards with the WHO Guidelines for Drinking Water Quality, relatively few countries routinely monitor the quality of drinking water in schools. While many schools report on the condition and cleanliness of their toilets, technical assessments of the adequacy of on-site sanitation systems are less common.

Improved drinking water sources are less likely to be contaminated than unimproved sources but are not necessarily safe. Results from countries that have conducted water quality testing in schools show that compliance with national standards varies widely (Figure 49). For example, measurement of *E. coli* in school supplies in Lebanon has enabled a more detailed assessment of the risks of contamination in each governorate (Figure 50). However, in many countries the proportion of schools in which drinking water is tested remains low. For example, available data show that water quality has been tested in three out of four schools in Palestine and one in four schools in Bangladesh, while in Liberia and Georgia water quality testing is more common in urban schools than rural schools.

Several countries record information on the quality or general condition of toilet facilities in schools. For example, the most common problems reported in schools in Mexico are major cracks/holes and leaks, followed by lack of electric light, lack of water, and broken windows and doors. But while in many countries a significant proportion of schools do not have a sewer connection (Figure 51), there is little data available on the extent to which on-site sanitation systems are safely managed to ensure that students, teachers and the wider community are not exposed to pathogens.

Compliance of school supplies with national water quality standards varies widely

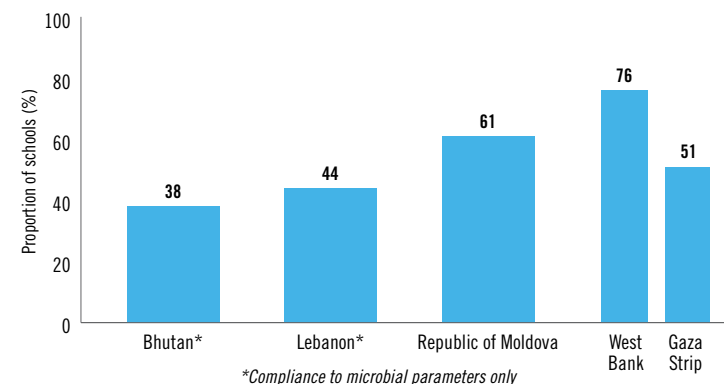
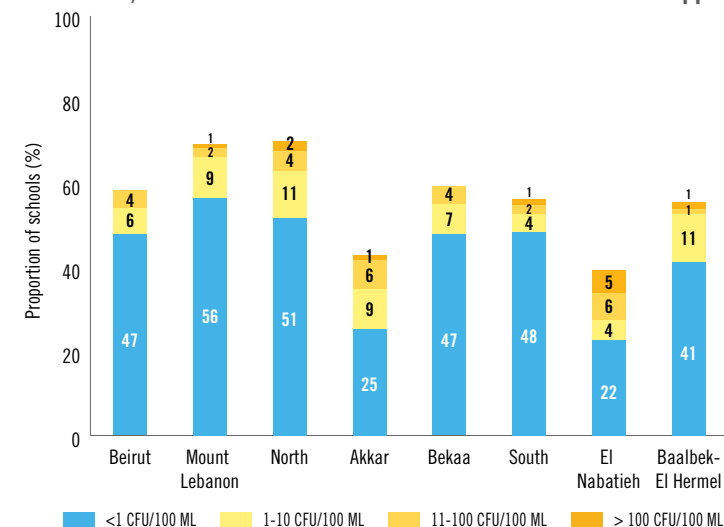


FIGURE 49: Proportion of schools compliant with national standards for drinking water quality, by country (%)

In Lebanon, different levels of *E. coli* were detected in school supplies



Note: The remaining schools have no available drinking water source.

FIGURE 50: Proportion of public schools by levels of *E. coli* detected, by governorate, Lebanon, 2016 (%)⁴⁸

48 Source: Sustainable Alternatives, *WASH in public schools in Lebanon*, final survey report submitted to UNICEF in February 2018.

In many countries a significant proportion of schools do not have a sewer connection

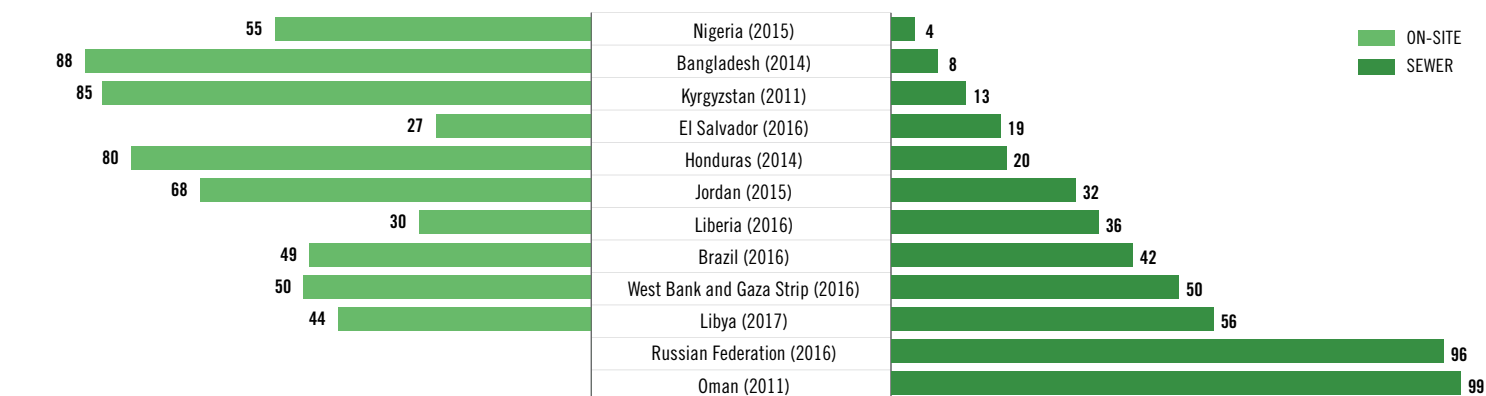


FIGURE 51: Proportion of schools with a sewer connection and on-site sanitation system, by country (%)

Acceptability of WASH in schools

The acceptability of WASH facilities can be an important determinant of the extent to which students are willing and able to use them. Acceptability is closely related to accessibility, availability and quality but tends to be more context specific. It can either be defined in national norms and standards or elicited through feedback from students and teachers. Key concerns include safety, comfort, privacy, cleanliness and ease of maintenance but these may be subjective. This makes it difficult to measure and compare acceptability as facilities may be acceptable to some people but not others.

The acceptability of WASH facilities can significantly determine the ability of schoolgirls to safely manage their menstrual hygiene in privacy and with dignity. The provision of basic WASH facilities is an essential prerequisite for MHM. However, when asked⁴⁹, adolescent girls identify a range of other barriers that go beyond infrastructure and materials and encompass educating girls and boys and raising

awareness among teachers and parents to address the social taboos and stigma that lead to discrimination against girls (Box 11).



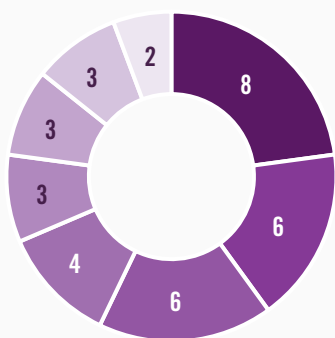
49 See proceedings of the Virtual Conference on MHM in Schools. <www.mhmvirtualconference.com>



BOX 11:

Menstrual hygiene management

National data are available for a range of MHM indicators, but definitions vary



- Disposal bin with lid in toilets
- Menstrual hygiene education
- Soap and water near toilets
- Private toilets
- Clean toilets
- Sanitary pads available
- Private washing facilities
- Disposal/incineration facilities



FIGURE 52: Number of countries reporting on each element of MHM, based on data for 11 countries

The importance of MHM has gained recognition in recent years, and this is reflected in SDG target 6.2 which aims to achieve adequate and equitable sanitation and hygiene for all, paying attention to the specific needs of women and girls. International consultations convened by WHO and UNICEF proposed the following normative definition of MHM:

Women and adolescent girls use hygienic materials to absorb or collect menstrual blood, which can be changed in privacy as often as necessary for the duration of a menstrual period, use soap and water for washing the body as required, and have access to safe and convenient materials to dispose of used materials. They understand the basic facts linked to the menstrual cycle and how to manage it with dignity and without discomfort or fear.

Schools provide an important entry point for raising awareness of MHM, which remains a taboo subject in many societies, and providing materials and facilities so that adolescent girls and female teachers

can manage their periods safely and with dignity. A recent survey of 2,332 adolescent girls in Bangladesh found that just 36% knew about menstruation before starting their period. 40% reported missing school during menstruation, an average of 2.8 days per cycle, and 55% reported being excluded from religious activities at school during menstruation⁵⁰. Girls in Bangladesh were less likely to miss school during menstruation if their schools had usable single-sex toilets. Meanwhile quantitative analysis of EMIS data from over 10,000 schools in Zambia indicate that provision of improved sanitation facilities was correlated with higher female-to-male enrolment ratios and reduced repeated absence and dropout, especially among girls⁵¹.

⁵⁰ International Centre for Diarrheal Diseases Research, Bangladesh, WaterAid and the Ministry of Local Government, Rural Development and Cooperatives, *Bangladesh national hygiene baseline survey*, WaterAid Bangladesh, Dhaka, 2015. <https://assets.publishing.service.gov.uk/media/57a08990e5274a31e0000152/Research_Brief__Bangladesh-National-Hygiene-Baseline-Survey_Feb2015.pdf>

⁵¹ Agol, D et al. 'Sanitation and water supply in schools and girls' educational progression in Zambia', *Journal of Water, Sanitation and Hygiene for Development*, vol. 8, no. 1, pp 53–61, IWA Publishing, London, 2017. <<http://washdev.iwaponline.com/content/early/2017/11/21/washdev.2017.032>>

Less than half of schools provided MHM education in seven out of 10 regions in Zambia



FIGURE 53: Proportion of schools providing MHM education, sanitary towels and disposal facilities, Zambia, 2016 (%)

Several countries have developed national guidelines on MHM in schools and are developing frameworks for monitoring progress. Access to basic WASH is considered to be an essential foundation for MHM but information has also been collected on a range of other aspects (Figure 52). The JMP expanded set of questions for monitoring WASH in schools includes questions on MHM but further work is required to prioritise and harmonize these indicators to mainstream MHM within WASH in schools monitoring and enable comparison within and between countries, while recognising that some aspects may be culturally context specific.

In countries where MHM data has been included in national surveys significant disparities are observed. For example, the 2016 EMIS in Zambia collected information for the first time on the proportion of schools providing MHM education, sanitary towels and facilities for disposal of used materials and found that nearly twice as many schools provided MHM education in Southern region than in the Copperbelt (Figure 53).

A recent survey in Liberia recorded the proportion of schools in which girls' toilets have a bin and soap and water available in the stalls and revealed that while coverage was low in all counties, there were also big disparities between counties and between urban and rural and public and private schools (Figure 54). The Government of India issued national guidelines on MHM in 2015 but a survey in 2016-2017 showed that only two thirds of schools in India provided menstrual hygiene education with wide variations between states (Figure 55).

Zambia is one of the first countries to track the provision of facilities for MHM in schools through the national EMIS. A 2012 WASH in schools bottleneck analysis noted that toilets did not provide privacy or user-friendly facilities for managing menstrual hygiene and highlighted the lack of information on MHM in schools. In response, a WASH in schools coordination mechanism was established in 2012, including an MHM Technical Working Group led by the Ministry of Education with participation of key line ministries and multilateral and non-governmental organizations. The government subsequently conducted a pilot study in 2013 which helped to prioritise and establish appropriate MHM indicators for the Zambia context. These influenced the 2013 interim school WASH standards which include specific reference to cost-effective MHM in schools. The 2015-2016 EMIS data collection round included new MHM indicators, and the government plans to analyse the impact of MHM services on the performance and retention of schoolgirls.

In Liberia, private schools were more likely to have latrines with bins, soap and water for MHM

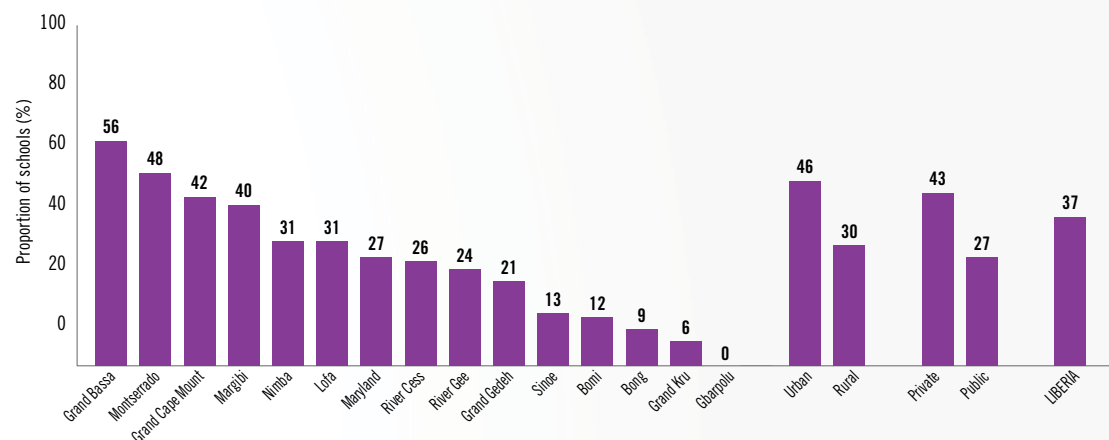
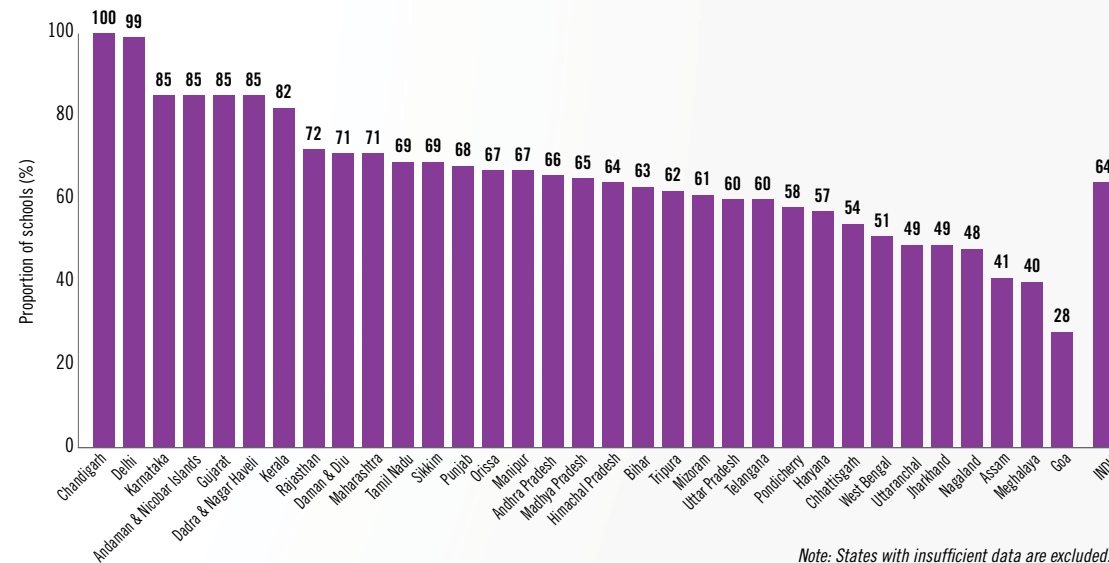


FIGURE 54: Proportion of schools with latrines that incorporate MHM components, by county, residence and school type, Liberia, 2016 (%)

In India, the provision of menstrual hygiene education varied widely across states



Note: States with insufficient data are excluded.

FIGURE 55: Proportion of schools with female students providing menstrual hygiene education, by state, India, 2017 (%)



SECTION FIVE

In France, West Bank and Gaza Strip and Djibouti girls are less likely to use school toilets than boys

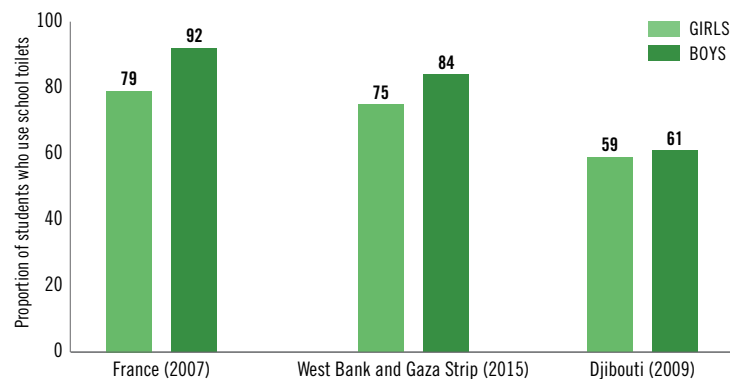


FIGURE 56: Proportion of girls and boys who use school toilets, across three countries (%)

The acceptability of sanitation facilities may be perceived differently by students

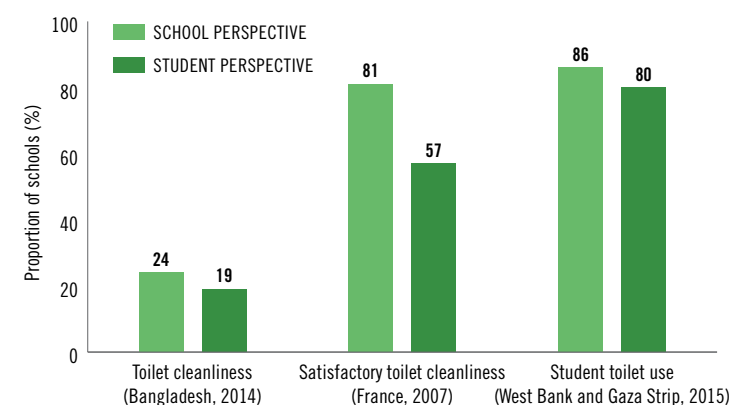


FIGURE 58: Proportion of schools and students reporting WASH facilities as acceptable, across three countries (%)

Dirty toilets and bad smells were the main problems reported by students in West Bank and Gaza Strip in 2015

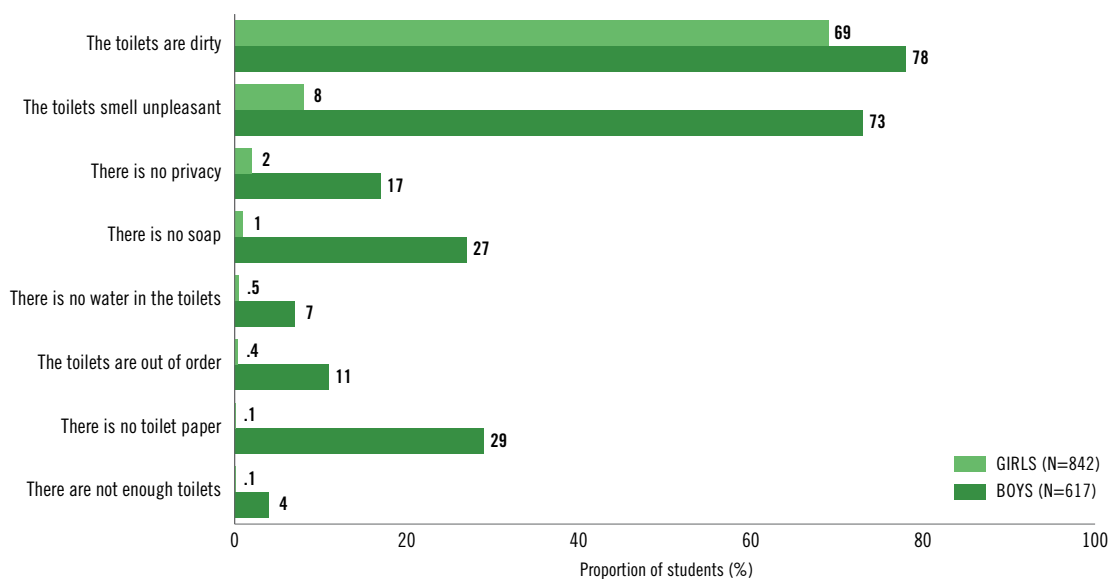


FIGURE 57: Proportion of girls and boys who feel uncomfortable using school toilets, by reason given, West Bank and Gaza Strip, 2015 (%)

Interviews with students and teachers can provide valuable information on the reasons they do not feel comfortable using the toilets, which may differ for girls and boys. For example, surveys in France, West Bank and Gaza Strip, and Djibouti showed that a significant proportion of students did not actually use the school toilets and that girls often felt less comfortable using them than boys (Figure 56). In Djibouti, 41% of girls and 39% of boys reported not using the toilets and students were less likely to use the toilets in schools that had simple latrines or bucket latrines (56%) than in schools with flush toilets (76%).

In West Bank and Gaza Strip dirtiness and unpleasant smells were the most common barriers to toilet use reported by girls and boys (Figure 57). In France 14% of students reported being scared in school toilets due to a lack of adequate locks or privacy and fear of mockery or bullying, and nearly half reported getting stomach ache due to not going to the bathroom.

Finally, the adequacy and acceptability of WASH facilities in schools may be perceived differently by students and teachers (Figure 58). This underlines the importance of seeking direct feedback from students to complement data collected through administrative sources and inform the design of future WASH facilities in schools so that they meet the needs of all learners.



BOX 12:

Towards school sanitation facilities that meet the needs of gender-diverse students

Students whose gender identities do not match their biological sex can face problems using sanitation facilities in schools. Requirements that children use toilets that match their sex at birth can lead to harassment or embarrassment for transgender children, and confusion about which facilities intersex children should use. Students who do not conform to a fixed idea of gender might experience humiliation, violence and abuse when using single-sex sanitation facilities. For example, transgender girls who use the boys' toilets and transgender boys who use the girls' toilets in schools are highly vulnerable to bullying, harassment and assault by other students⁵².

An approach taken by some schools is to allow gender-diverse students to choose which toilet to use. The Government of South Australia has published a mandatory policy and accompanying transgender and intersex support procedure⁵³ which call for decisions about the use of toilets to be made in consultation with

students and their families. The policy is mandatory and notes that failure to provide transgender students with access to appropriate toilets could breach anti-discrimination legislation.

Schools may also opt to have unisex or gender-neutral facilities to address gender issues. The Government of Scotland is in the process of updating its requirements and standards for sanitation facilities in schools and may amend the standards to allow schools to permit unisex toilets⁵⁴. Unisex toilets within single rooms could in principle protect gender non-conforming students from harassment, though they might not be as numerous or conveniently located as bathrooms with multiple cubicles. Several Scottish schools have already implemented bathrooms with male and female cubicles and a shared handwashing area. The South Australian procedure notes that it would be inappropriate to insist that any student, including a transgender student, use a unisex toilet if they are not comfortable doing so. Solutions are more likely to be effective when gender-diverse students are involved in planning school policies, and when teachers and administrators are trained and supported in fostering non-violent learning environments.

52 United Nations Human Rights Council, *Thirty-third session agenda item 3: Report of the Special Rapporteur on the human rights to safe drinking water and sanitation*, 27 July 2016 <http://ap.ohchr.org/documents/dpage_e.aspx?si=A/HRC/33/49>

53 Government of South Australia Department for Education, *Supporting same sex attracted, intersex and gender diverse students policy*, online, accessed June 2018 <www.decd.sa.gov.au/doc/supporting-same-sex-attracted-intersex-and-gender-diverse-students-policy> and *Transgender and intersex support procedure*, online, accessed June 2018. <www.decd.sa.gov.au/doc/transgender-and-intersex-support-procedure>

54 Scottish Government, *Updating the School Premises Regulations 1967: Consultation*, online, accessed June 2018. <<https://beta.gov.scot/publications/consultation-document-updating-school-premises-general-requirements-standards-scotland-regulations>>



Conclusion

This first comprehensive global report on WASH in schools has established the baseline situation at the start of the SDG period. It has underlined the nature and scale of the challenges faced in extending access to basic WASH services for all schools and progressively improving the levels of service provided. The report has also highlighted the need to adopt harmonized indicators to enable more reliable comparison of status and trends within and between countries and to strengthen national monitoring systems to address the remaining data gaps.

Extending basic WASH services to all schools

SDG6 includes targets for universal access to WASH by 2030 and SDG4 includes a target to establish safe, non-violent, inclusive and effective learning environments for all, including providing basic WASH in all schools. These targets are ambitious but mutually reinforcing and call for close collaboration between WASH and education stakeholders at national and international levels.

Achieving a basic level of WASH in all schools will require a renewed effort to raise awareness among students, parents, teachers, governments and donors of the importance of WASH for student health and welfare and to ensure that WASH continues to be recognised as an essential foundation and integral component of an inclusive and effective learning environment.

Simply building WASH infrastructure and counting the number of taps, toilets and sinks in schools will not suffice – national authorities also have a mandate and duty to ensure that the WASH





SANITATION

- Using the toilet keeps germs away.
- Friends of SOPO use the toilet and keep it clean.
- Clean toilets makes school fun.



HAND WASHING

- Wash your hands with soap and water, and stay free from germs and diseases.
- Wash your hands with clean water and soap before eating, after using the toilet and before and after handling food.
- Washing hands is cool and keeps you in school.



SAFE WATER

- Collect drinking water hygienically.
- Boil or treat and store water properly before drinking.
- Always drink safe water.

Sopo
Champion Board





services provided meet relevant standards and that the resources for operation and maintenance are adequate. Education systems require robust monitoring to ensure schools make progress towards and sustain at least a basic level of service. This is consistent with wider shifts in education monitoring systems to measure the quality of education provided and the resulting learning outcomes.

Universal access implies ensuring basic WASH is provided in all schools, not only primary and secondary but also pre-primary schools, so that students of all ages benefit. This will require an explicit focus on identifying inequalities between and within countries and targeting available domestic and international resources to progressively reduce disparities between schools in rural, urban and peri-urban areas and different sub-national regions, and between public, private and other types of schools in any given country.

WASH in schools programmes also provide an important entry point for raising awareness and promoting the behaviour change necessary to end open defecation and achieve universal access to WASH in households and in other institutional settings, including health care facilities and workplaces. They will therefore continue to be a core component of wider national and global strategies to achieve sanitation and water for all and education for all by 2030.

Progressively improving WASH services in schools

Achieving universal access to basic WASH in schools is necessary but not sufficient for the progressive realization of the human right to education and the human rights to safe water and sanitation. While extending basic services to schools that do not yet have them will remain a top priority in many low- and middle-income countries, governments and donors should also seek to progressively improve the quality of WASH provided in schools.

Schools should seek to continuously improve service levels with attention to the specific needs of girls, boys and transgender students, young children, adolescents, and students with disabilities. This report has identified a range of additional criteria and indicators that may be used, where resources allow, to enhance national monitoring of WASH in schools and inform the development of national and global benchmarks for more advanced levels of service.

The report has highlighted examples of additional data that are already being collected in some countries on the accessibility and location of WASH facilities, the availability of drinking water, the number of sanitation facilities, the quality and condition of the facilities provided in schools, and the acceptability of services for students and staff, particularly girls, students with disabilities and gender non-conforming students.

The relative importance of these different aspects depends partly on the country context and the specific challenges faced but in all cases there is a need for better understanding of the ways in which WASH affects access to education and learning outcomes as well as the wider impacts on the nutrition and health of students. This will help inform the targeting and sequencing of investments in WASH and other aspects of the learning environment.

Harmonizing definitions and addressing data gaps

This report has established national, regional and global estimates for basic WASH services in schools based on the latest available national data sources. While it presents comparable estimates for a total of 152 countries, the availability and quality of data on WASH in schools varies widely at the start of the SDG era.

While most countries have data on the availability of any WASH facilities in schools, not all countries have information on whether



they are of an improved or unimproved type. Even fewer currently have information on the levels of service provided and whether schools meet the minimum criteria for basic WASH. Specifically, many national monitoring systems lack information on the availability of drinking water, the availability of water and soap for handwashing, and the usability of single-sex toilets at the time of the survey.

Where indicator definitions are missing or ambiguous it is difficult to determine the correspondence between national data and the international standard classification used by the JMP for global monitoring. The recommended core questions for monitoring basic WASH in schools have been widely disseminated, including through the International Learning Exchanges on WASH in schools⁵⁵. But while significant progress has been made towards integrating the harmonized set of core questions and indicators in national EMIS systems and recent major school surveys, further work is required

to standardize the collection of data on WASH, together with other aspects of school infrastructure.

The JMP WASH in schools country files contain a complete list of national sources of data identified for each of the 152 countries for which estimates are presented in this report. While some countries have data points for each year in the reference period (2000–16) others have just one or two data points. For this report the JMP identified an average of four national datasets per country, but not all of these could be used to produce estimates. The JMP global database on WASH in schools includes a total of 616 data sources, 495 of which were used to produce national estimates. As more and better quality national data become available these will be incorporated into future updates and the reliability of national, regional and global estimates is expected to continue to improve over the course of the SDG period. See Annex 1 for a summary of the methodology used for this baseline report and current data availability and gaps. ■

⁵⁵ See outcome document from the 5th WinS ILE in Jakarta (14–18 November 2016). <www.schoolsandhealth.org/Shared%20Documents/WASH%20in%20School_International%20Learning%20Exchange.pdf>



Annex 1: JMP methods

Since it was established in 1990, the JMP has been instrumental in developing norms and standards to benchmark and compare progress on drinking water, sanitation and hygiene across countries and regularly convenes expert groups to provide technical advice on methodological issues. The methodology used to produce estimates for WASH in schools builds on established methods developed by the JMP for monitoring WASH services at the household level.

JMP classification of facility types and service levels

The JMP classifies drinking water and sanitation technologies into improved and unimproved types. Improved drinking water sources¹ are designed to protect against contamination while improved sanitation facilities² are designed to hygienically separate excreta from human contact. A handwashing facility³ is a device designed to contain, transport or regulate the flow of water to facilitate handwashing.

The first step in the estimation process is to compile information on the types of facilities available to estimate the proportion of schools with improved and unimproved water and sanitation facilities and the proportion of schools with and without handwashing facilities.

The second step is to compile information on the level of service provided, specifically the availability of drinking water, availability of single-sex toilets that are usable at the time of the survey, and

¹ Improved sources include piped water, boreholes or tubewells, protected dug wells, protected springs, and packaged or delivered water. Unimproved sources include unprotected wells, unprotected springs and surface water.
² Improved facilities include flush/pour-flush toilets, ventilated improved pit latrines, composting toilets and pit latrines with a slab or platform. Unimproved facilities include pit latrines without a slab or platform, hanging latrines and bucket latrines.
³ Handwashing facilities may be fixed or mobile and include a sink with tap water, buckets with taps, tippy-taps, and jugs or basins designated for handwashing.

National data sources used in the JMP 2018 report

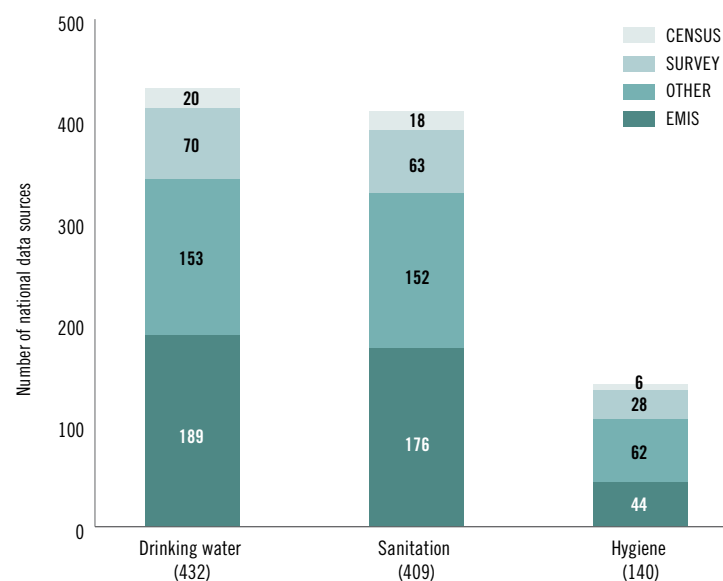


FIGURE A1: Number of national data sources used in the JMP 2018 report, by type

presence of water and soap⁴ for handwashing. Information on facility types and service levels is then combined to estimate the proportion of schools providing basic, limited or no service as described in Section 2.

⁴ Soap includes bar soap, liquid soap, powder detergent, and soapy water but does not include ash, soil, sand or other handwashing agents.





National data sources for WASH in schools

JMP estimates are calculated from data produced by national authorities. The primary sources of national data are routine Education Management Information Systems (EMIS) and periodic (non-EMIS) censuses and school facility surveys. Other sources of national data include secondary information compiled by UNESCO Institute of Statistics and regional monitoring initiatives such as the European Protocol on Water and Health. Where available the JMP uses primary sources rather than secondary sources and uses original microdata or tabulations provided by national authorities rather than summary reports.

In 2018 the JMP global database for WASH in schools contained a total of 616 national datasets covering the period 2000–17. These were used to produce estimates for 152 countries, representing an average of four data points per country. Figure A1 shows that three times as many datasets were used to generate national estimates for drinking water (432) and sanitation (409) than for hygiene (140).

The majority of datasets used to generate national estimates were drawn from EMIS (42%) followed by other (secondary) sources (38%), school surveys (16%), and periodic censuses (4%). National data are only included if they meet minimum standards for data quality and coverage. For example, EMIS or census data are only used if the response rate is at least 33%. Survey data are only used if there are at least 50 schools per domain. Sub-national surveys are only used if they are representative of rural or urban schools.

The JMP extracts data that are representative of national, urban and rural schools and pre-primary, primary and secondary schools. Unless otherwise categorised by national authorities, all schools with primary level students are counted as 'primary', all schools with secondary level students are counted as 'secondary', and all schools

with pre-primary level students are counted as 'pre-primary'⁵. This means that some schools may be double-counted and the total number of schools does not necessarily equal the sum of the pre-primary, primary and secondary schools.

The data for pre-primary, primary and secondary school-age populations used in this report are published by the UNESCO Institute of Statistics⁶. The data for the proportion of the population living in urban and rural areas are published by the UN Population Division.

Country estimates for WASH in schools

The JMP WASH in schools country files⁷ contain a complete list of data sources available for each year since 2000 and show how national data correspond to the international standard classification used for global monitoring. The JMP uses a simple linear regression to generate estimates from all of the available data points for each of the following indicators (Figure A2):

Proportion of schools with:

- **Any water facility**
- **Improved water source**
- **Basic water service**

Proportion of schools with:

- **Any sanitation facility**
- **Improved sanitation facility**
- **Basic sanitation service**

Proportion of schools with:

- **Any handwashing facility**
- **Handwashing facility with water**
- **Basic hygiene service**

⁵ Where data are available for Early Childhood Development centres these are counted as 'pre-primary'.

⁶ Last updated February 2018.

⁷ Country files are available to download at the JMP website. <<https://washdata.org>>

These estimates are used to calculate the remaining schools with no facility or unimproved facilities, and with limited services.

Trends are calculated if there are two or more data points available spanning at least four years. If the data points span less than four years then an average is used. On average, there were 2.8 national data points per country for drinking water, 2.7 for sanitation and 0.9 for hygiene. For this report, the number of data points used to calculate national estimates ranged from one to 18 data points for drinking water and for sanitation, and from one to 13 data points for hygiene.

Separate regressions are made for urban and rural schools and for pre-primary, primary and secondary schools. A national estimate can be calculated from urban and rural estimates or pre-primary, primary and secondary estimates. If data are only available for primary schools a national estimate may be calculated where these represent the majority of schools in a country.



JMP uses linear regressions to derive estimates from available data points

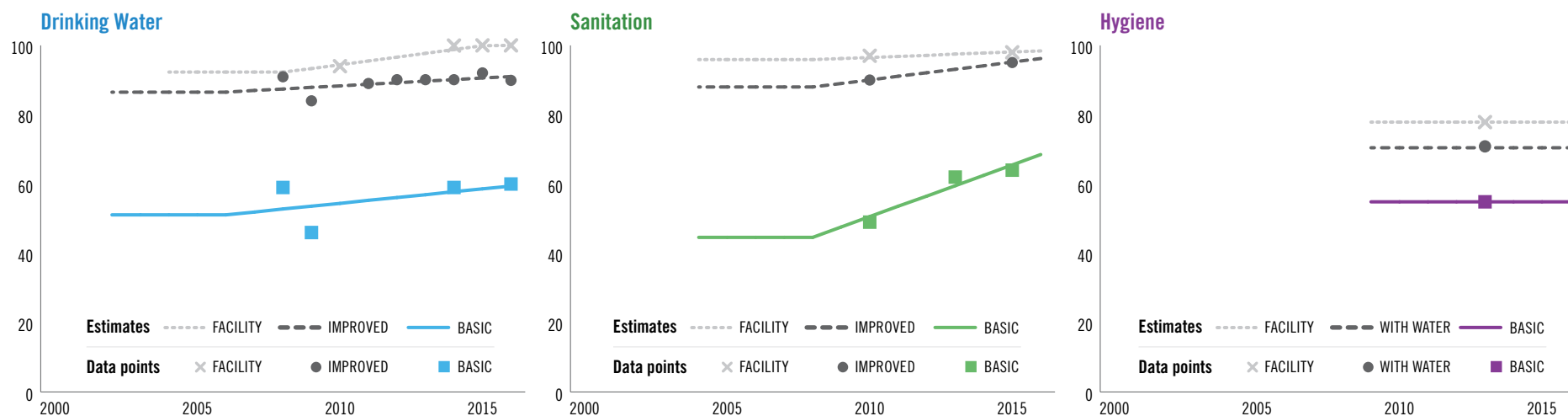


FIGURE A2: Examples of linear regressions producing estimates for drinking water, sanitation and hygiene



Regional and global estimates for WASH in schools

Regional and global estimates are made by aggregating the populations of school-age children with and without WASH in schools⁸. In countries with incomplete trend data the school-age population is calculated using linear regression. In countries with no data, values are imputed based on an average proportion of the population that is school-age within the relevant M49 sub-region⁹. Urban and rural school-age populations are calculated based on the proportion of the national population that lives in urban areas.

Regional and global estimates are calculated provided that data

⁸ Reliable data on the total number of schools with and without WASH services is not yet available for all countries.

⁹ <https://unstats.un.org/unsd/methodology/m49/overview/>

on WASH in schools are available for at least 30% of the school-age population in each domain (i.e. total, urban and rural schools, and pre-primary, primary and secondary schools). Missing data for each WASH in schools indicator are imputed based on a school-age population-weighted average of estimates from countries with data. Global estimates use imputed values based on SDG regional groupings (see Annex 2). Estimates for basic, limited and no service are then normalized to ensure they sum to 100%.

Figure A3 shows the global and SDG regional coverage of data on basic drinking water, sanitation and hygiene in schools for the school-age population in 2016.

Global availability of data on basic WASH in schools

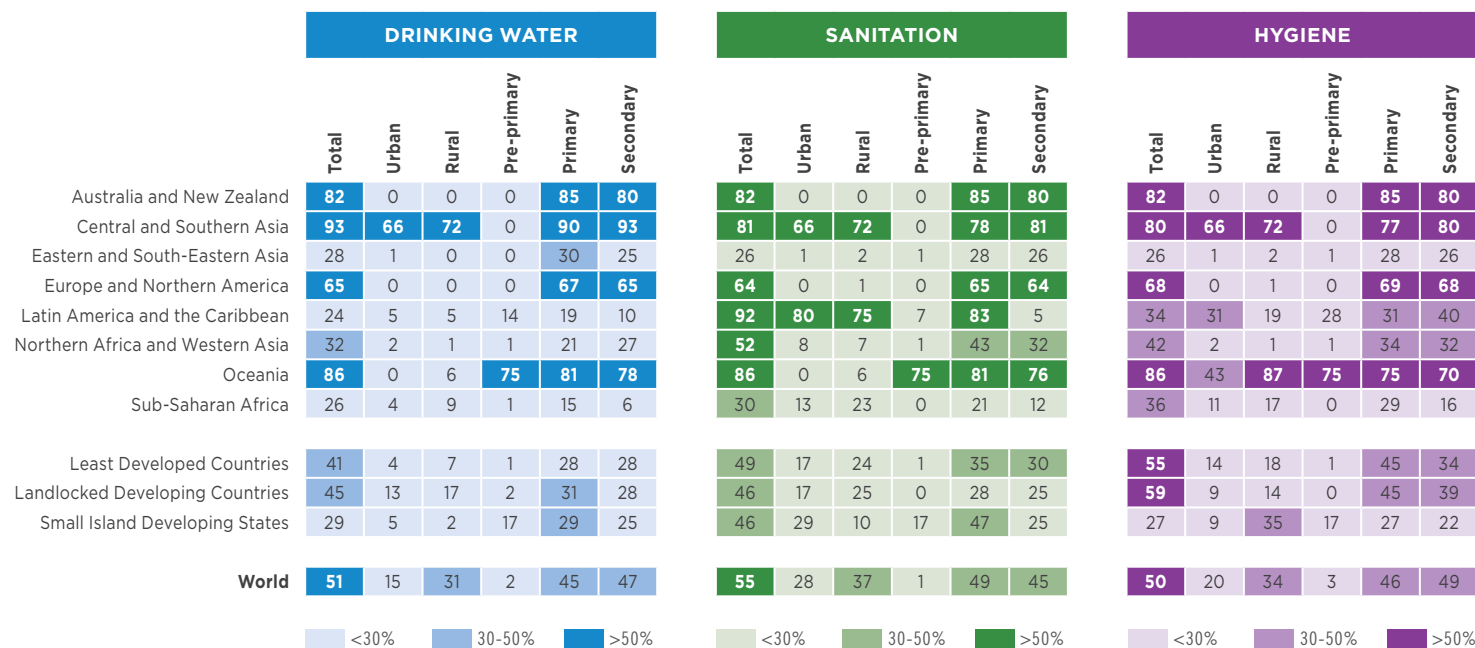


FIGURE A3: Proportion of relevant school-age population for which data were available on basic drinking water, sanitation and hygiene in schools in each domain, by SDG region (%)





Annex 2: Regional groupings

Sustainable Development Goals

AUSTRALIA AND NEW ZEALAND: Australia, New Zealand.

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

EASTERN AND SOUTH-EASTERN ASIA: Brunei Darussalam, Cambodia, China, 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.

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 Kitts and Nevis, Saint Lucia, 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).

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, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, San Marino, Saint Pierre and Miquelon, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, The former Yugoslav Republic of Macedonia, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America.

Sustainable Development Goal regional groupings

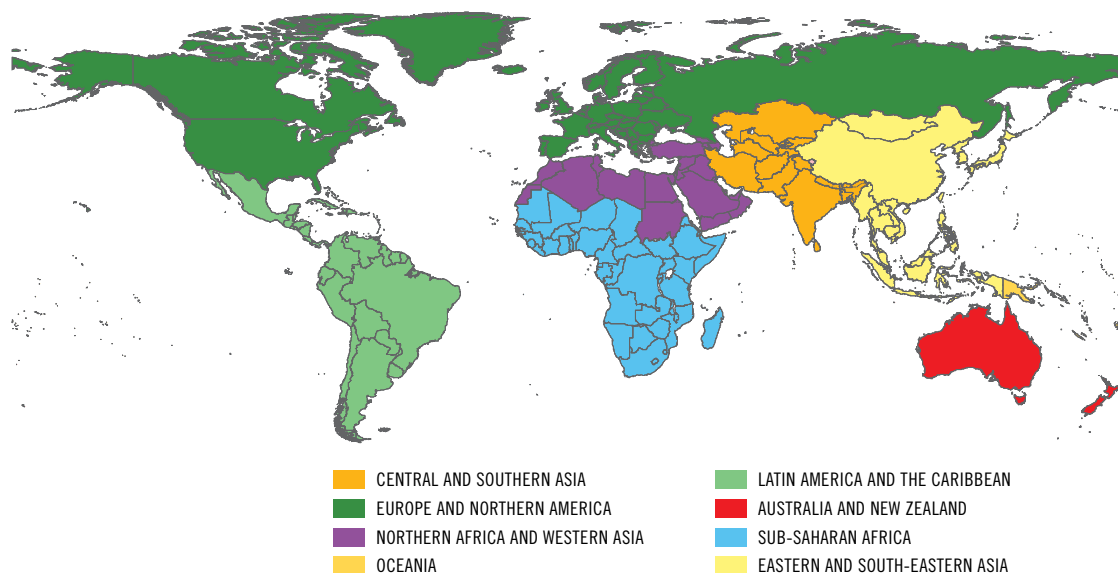


FIGURE A4: Sustainable Development Goals regional groupings

NORTHERN AFRICA AND WESTERN ASIA: Algeria, Armenia, Azerbaijan, Bahrain, Cyprus, Egypt, Georgia, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syrian Arab Republic, Tunisia, Turkey, United Arab Emirates, West Bank and Gaza Strip, 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, Paraguay, Republic of Moldova, Rwanda, South Sudan, Tajikistan, The former Yugoslav Republic of Macedonia, Turkmenistan, Uganda, Uzbekistan, Zambia, Zimbabwe.

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

SMALL ISLAND DEVELOPING STATES (SIDS): American Samoa, Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Bonaire, Sint Eustatius and Saba (Caribbean Netherlands), British Virgin Islands, Cabo Verde, Cayman Islands, Comoros, Cook Islands, Cuba, Curaçao, Dominica, Dominican Republic, Fiji, French Polynesia, Grenada, Guadeloupe, Guam, Guinea-Bissau, Guyana, Haiti, Jamaica, Kiribati, Maldives, Marshall Islands, Mauritius, Micronesia (Federated States of), Montserrat, Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, 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.



Annex 3: National WASH in schools estimates

Water, sanitation and hygiene in schools by country (2016)

COUNTRY, AREA OR TERRITORY	Year	School-age population (thousands)	% urban	% pre-primary	% primary	% secondary	NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY					
							Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)
Afghanistan	2016	13 299	27	16	45	39	-	70	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Algeria	2016	8 513	71	10	43	47	93	0	7	-	-	-	-	-	-	-	-	87	0	13	98	0	1				
Andorra	2016	-	-	-	-	-	100	0	0	-	-	-	-	-	-	-	-	100	0	0	100	0	0				
Angola	2014	9 413	43	10	51	39	-	51	49	-	-	-	-	-	-	-	-	-	51	49	-	-	-				
Argentina	2016	10 822	92	20	40	39	-	90	10	-	98	2	-	83	17	-	-	-	-	90	10	-	-	-			
Australia	2016	4 198	90	8	51	41	100	0	0	-	-	-	-	-	-	-	-	100	0	0	100	0	0				
Azerbaijan	2016	1 945	55	26	28	46	100	0	0	-	-	-	-	-	-	-	-	100	0	0	100	0	0				
Bahrain	2016	265	89	23	42	35	100	0	0	-	-	-	-	-	-	-	-	100	0	0	100	0	0				
Bangladesh	2016	47 710	35	19	33	48	74	10	17	-	-	-	-	-	-	-	-	73	10	17	87	10	3				
Barbados	2016	49	31	15	46	39	100	0	0	-	-	-	-	-	-	-	-	100	0	0	100	0	0				
Belarus	2016	1 355	77	25	30	46	100	0	0	-	-	-	-	-	-	-	-	100	0	0	100	0	0				
Belgium	2016	1 911	98	21	40	39	100	0	0	-	-	-	-	-	-	-	-	100	0	0	100	0	0				
Belize	2013	108	44	14	43	43	76	19	5	88	12	0	71	23	7	82	16	1	76	20	5	-	-	-			
Benin	2016	4 061	44	16	43	41	-	72	28	-	-	-	-	-	-	-	-	-	74	26	-	68	32				
Bhutan	2016	219	39	13	46	40	59	32	9	-	-	-	-	-	-	-	-	58	31	11	63	29	8				
Bolivia (Plurinational State of)	2016	3 197	69	15	43	42	-	-	-	-	100	0	-	-	-	-	-	-	-	-	-	-	-	-			
Botswana	2016	682	58	22	47	31	-	100	0	-	-	-	-	-	-	-	-	-	100	0	-	100	0				
Brazil	2016	44 161	86	13	32	54	-	83	17	-	96	4	-	54	46	-	78	22	-	80	20	-	94	6			
Burkina Faso	2016	7 913	31	23	40	37	53	4	43	-	72	28	-	51	49	-	70	30	55	1	44	42	19	39			
Burundi	2016	3 755	12	17	43	40	42	13	46	-	-	-	-	-	-	50	6	45	39	6	55	-	82	18			
Cabo Verde	2016	168	66	20	40	41	-	98	2	-	-	-	-	-	-	-	-	-	97	3	-	100	0				
Cambodia	2016	4 769	21	22	40	38	-	49	51	-	49	51	-	48	52	-	33	67	-	61	39	-	47	53			

Key: - NO ESTIMATE NA NOT APPLICABLE *Note: For JMP estimation methods see Annex 1. For unrounded estimates see <https://washdata.org>.*



COUNTRY, AREA OR TERRITORY	Year	School-age population (thousands)	% urban	% pre-primary	% primary	% secondary	NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY					
							Basic water service (Improved and available)	Limited water service (Improved, not available)	No water service (no facility or unimproved)	Basic water service (Improved and available)	Limited water service (Improved, not available)	No water service (no facility or unimproved)	Basic water service (Improved and available)	Limited water service (Improved, not available)	No water service (no facility or unimproved)	Basic water service (Improved and available)	Limited water service (Improved, not available)	No water service (no facility or unimproved)	Basic water service (Improved and available)	Limited water service (Improved, not available)	No water service (no facility or unimproved)	Basic water service (Improved and available)	Limited water service (Improved, not available)	No water service (no facility or unimproved)	Basic water service (Improved and available)	Limited water service (Improved, not available)	No water service (no facility or unimproved)
							Cameroon	2016	8 739	55	16	43	41	30	0	70	-	-	-	-	-	-	-	-	31	0	69
Central African Republic	2016	1 961	40	21	39	39	16	8	76	-	-	-	-	-	-	51	49	16	5	79	-	43	57				
Chad	2016	6 325	23	23	40	37	23	7	70	-	-	-	-	-	-	64	36	19	3	78	-	57	43				
Chile	2016	3 762	90	19	40	41	-	96	4	-	100	0	-	90	10	-	-	-	96	4	-	-	-				
China	2016	242 332	57	21	40	39	-	97	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
China, Hong Kong Special Administrative Region	2016	853	100	20	37	42	100	0	0	100	0	0	NA	NA	NA	-	-	-	100	0	0	100	0	0			
China, Macao Special Administrative Region	2016	71	100	24	35	41	100	0	0	100	0	0	NA	NA	NA	-	-	-	100	0	0	100	0	0			
Colombia	2016	11 033	77	20	35	44	55	19	26	-	94	6	-	50	50	57	16	27	-	74	26	-	-	-			
Comoros	2016	306	28	22	39	39	-	12	88	-	-	-	-	-	-	-	-	-	11	89	-	12	88				
Congo	2016	2 022	66	23	40	37	-	44	56	-	-	-	-	-	-	56	44	-	40	60	-	68	32				
Cook Islands	2016	4	75	12	41	47	100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0			
Costa Rica	2016	943	78	15	46	39	82	8	10	-	97	3	-	100	0	-	98	2	85	3	11	78	16	6			
Côte d'Ivoire	2016	9 602	55	22	39	39	-	47	53	-	69	31	-	31	69	-	62	38	-	45	55	-	84	16			
Croatia	2016	703	59	25	24	51	51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Cuba	2016	1 896	77	19	38	42	-	-	-	-	100	0	-	-	-	-	-	-	-	-	-	-	-	-			
Democratic Republic of the Congo	2016	31 419	43	25	42	33	-	47	53	-	-	-	-	-	-	-	-	-	47	53	-	44	57				
Denmark	2016	1 075	88	18	43	39	100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0			
Djibouti	2016	274	77	14	35	50	-	85	15	-	-	-	-	-	-	-	-	-	86	14	-	76	24				
Dominica	2016	14	70	14	47	38	100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0			
Dominican Republic	2016	3 107	80	21	41	39	-	90	10	-	90	10	-	88	12	-	-	-	90	10	-	-	-	-			
Ecuador	2016	4 620	64	21	40	39	51	47	2	-	94	6	-	100	0	-	-	-	40	58	2	61	-	-			
Egypt	2016	25 805	43	17	44	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
El Salvador	2016	1 827	67	19	39	42	84	2	14	-	95	5	-	84	16	-	-	-	80	-	-	87	-	-			
Equatorial Guinea	2016	375	40	25	42	33	-	31	69	-	-	-	-	-	-	-	28	72	-	29	71	-	57	43			
Eritrea	2016	1 754	23	17	39	44	-	68	32	-	-	-	-	-	-	-	-	-	63	37	-	77	23				
Estonia	2016	218	67	29	39	32	100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0			

NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY			NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY				
Basic sanitation service (Improved, usable and single-sex)	Limited sanitation service (Improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (Improved, usable and single-sex)	Limited sanitation service (Improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (Improved, usable and single-sex)	Limited sanitation service (Improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (Improved, usable and single-sex)	Limited sanitation service (Improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (Improved, usable and single-sex)	Limited sanitation service (Improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (Improved, usable and single-sex)	Limited sanitation service (Improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)					
-	49	51	-	-	-	-	-	-	-	-	-	-	-	42	59	-	71	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
-	41	59	-	-	-	-	-	-	-	76	24	-	41	59	-	77	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
96	1	4	98	2	0	91	-	-	-	-	-	96	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
-	58	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
100	0	0	100	0	0	NA	NA	NA	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	NA	NA	NA	-	-	-	-	-	-	-	-	-		
100	0	0	100	0	0	NA	NA	NA	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	NA	NA	NA	-	-	-	-	-	-	-	-	-		
61	16	22	-	97	3	-	-	-	-	92	8	-	-	-	-	-	-	-	54	46	-	-	-	-	-	-	19	-	-	-	-	-	-	-	-		
-	32	68	-	-	-	-	-	-	-	-	-	-	27	73	-	35	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	60	40	-	-	-	-	-	-	-	60	40	-	60	40	-	75	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	NA	NA	NA	-	-	-	-	-	-	-	-	-		
70	20	10	-	-	-	-	-	-	89	9	3	68	21	11	76	18	5	70	0	30	-	-	-	-	-	-	-	87	13	68	0	32	76	2	23		
-	51	49	-	65	35	-	35	65	-	62	38	-	49	51	-	88	12	-	27	73	-	-	-	-	-	-	-	51	50	-	24	76	-	-	-		
34	-	-	30	-	-	39	-	-	-	-	-	-	-	-	-	-	-	26	-	-	22	-	-	26	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	100	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	90	10	-	-	-	-	-	-	-	-	-	-	90	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	100	0	-	-	-	-	-	-	-	-	-	-	100	0	-	96	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	
90	-	-	96	-	-	79	-	-	-	-	-	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
83	-	-	82	-	-	83	-	-	-	-	-	83	-	-	-	-	-	87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	87	13	-	98	2	-	83	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	99	1	-	-	-	-	-	-	-	99	1	-	99	1	-	96	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	57	43	-	-	-	-	-	-	-	-	-	-	47	53	-	73	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-



COUNTRY, AREA OR TERRITORY	Year	School-age population (thousands)	% urban	% pre-primary	% primary	% secondary	NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY					
							Basic water service (Improved and available)	Limited water service (Improved, not available)	No water service (no facility or unimproved)	Basic water service (Improved and available)	Limited water service (Improved, not available)	No water service (no facility or unimproved)	Basic water service (Improved and available)	Limited water service (Improved, not available)	No water service (no facility or unimproved)	Basic water service (Improved and available)	Limited water service (Improved, not available)	No water service (no facility or unimproved)	Basic water service (Improved and available)	Limited water service (Improved, not available)	No water service (no facility or unimproved)	Basic water service (Improved and available)	Limited water service (Improved, not available)	No water service (no facility or unimproved)	Basic water service (Improved and available)	Limited water service (Improved, not available)	No water service (no facility or unimproved)
Eswatini	2016	483	21	22	47	31	-	89	11	-	-	-	-	-	-	-	-	-	-	87	13	-	93	7			
Ethiopia	2016	39 070	20	21	41	38	-	23	77	-	-	-	-	-	-	-	-	-	-	20	80	-	54	46			
Fiji	2016	267	54	20	39	41	88	5	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Finland	2016	961	84	26	37	37	100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0			
France	2016	11 771	80	20	34	46	100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0			
Gabon	2015	622	87	24	34	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Gambia	2016	859	60	30	38	31	-	75	25	-	-	-	-	-	-	-	63	37	-	80	20	-	90	10			
Georgia	2016	711	54	23	40	37	74	16	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Germany	2016	11 844	76	18	24	59	100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0			
Ghana	2016	9 772	55	15	42	43	-	65	35	-	-	-	-	-	-	-	72	28	-	69	31	-	93	7			
Gibraltar	2016	4	100	8	54	37	100	0	0	100	0	0	NA	NA	NA	-	-	-	100	0	0	100	0	0			
Grenada	2016	26	36	15	50	35	100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0			
Guatemala	2016	5 415	52	21	43	35	-	81	19	-	99	1	-	73	27	-	-	-	-	81	19	-	-	-			
Guinea	2016	4 870	38	22	39	38	10	17	73	-	59	41	-	18	82	-	92	8	10	15	75	-	46	54			
Guinea-Bissau	2014	646	49	24	41	35	-	20	80	-	-	-	-	-	-	-	-	-	-	20	80	-	-	-			
Guyana	2014	208	28	14	45	41	71	12	17	-	-	-	-	-	-	-	-	-	71	12	17	-	-	-			
Haiti	2016	3 773	60	20	38	42	-	43	57	-	-	-	-	-	-	-	-	-	-	48	52	-	-	-			
Honduras	2016	2 775	55	21	43	36	59	20	22	-	96	4	-	81	19	-	80	20	65	18	17	52	44	5			
Hungary	2016	1 554	72	24	25	51	100	0	0	-	-	-	-	-	-	-	100	0	100	0	0	100	0	0			
India	2016	377 929	33	20	34	47	69	22	9	72	20	8	69	21	10	-	-	-	68	22	10	75	20	5			
Indonesia	2016	65 403	54	14	44	42	66	3	31	-	-	-	-	-	-	-	-	-	65	4	32	68	4	28			
Israel	2016	2 119	92	23	41	37	100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0			
Italy	2016	8 914	69	18	32	50	100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0			
Jamaica	2016	732	55	18	47	35	83	-	-	-	-	-	-	-	-	-	-	-	94	-	-	69	-	-			
Jordan	2016	2 275	84	13	36	51	93	7	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Kenya	2016	18 868	26	22	42	36	-	75	25	-	-	-	-	-	-	-	-	-	-	74	26	-	80	20			

NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY			NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY					
Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)						
-	88	12	-	-	-	-	-	-	-	-	-	-	-	89	11	-	87	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
-	40	60	-	-	-	-	-	-	-	-	-	-	-	39	61	-	54	46	6	18	77	-	-	-	-	-	-	-	-	-	-	-	-	-				
76	14	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61	27	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	-	-	-	-	-	-			
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	-	-	-	-	-	-			
-	61	39	-	-	-	-	-	-	-	-	-	-	61	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
82	16	2	-	-	-	-	-	-	-	-	-	83	14	3	80	20	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
60	14	26	-	-	-	-	-	-	-	88	12	-	-	-	-	-	-	12	61	27	-	-	-	-	-	-	80	20	-	100	0	-	100	0	-			
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	-	-	-	-	-	-			
-	69	31	-	-	-	-	-	-	-	71	29	-	64	36	-	92	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
100	0	0	100	0	0	NA	NA	NA	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0
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76	-	-	88	11	1	71	-	-	-	-	-	76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	77	23	-	92	8	-	67	33	-	87	13	-	73	27	-	92	8	-	29	71	-	30	70	-	29	71	-	-	29	71	-	-	-	-	-	-		
-	20	80	-	-	-	-	-	-	-	-	-	-	20	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
17	81	2	-	-	-	-	-	-	-	-	-	17	81	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	55	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
82	0	18	91	5	4	64	-	-	-	-	-	-	-	-	-	-	-	12	47	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
92	8	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	99	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
73	3	24	77	7	16	72	0	28	-	-	-	72	4	24	79	0	21	54	5	41	57	21	21	54	18	28	-	-	-	-	-	-	-	-	-	-		
34	54	12	-	-	-	-	-	-	-	-	-	31	56	12	41	47	12	42	23	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83	-	-	-	-	-	-	-	-	-	-	-	94	-	-	69	-	-	83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
33	66	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	100	0	-	100	0	-	100	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



COUNTRY, AREA OR TERRITORY	Year	School-age population (thousands)	% urban	% pre-primary	% primary	% secondary	NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY					
							Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)
							Kiribati	2016	41	44	22	40	38	-	66	34	-	-	-	-	-	-	-	-	-	-	56
Kuwait	2016	705	98	17	38	45	100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0			
Kyrgyzstan	2016	1 661	36	33	27	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Lao People's Democratic Republic	2016	2 214	40	21	34	45	-	34	66	-	-	-	-	-	-	-	-	-	34	66	-	-	-	-			
Latvia	2016	311	67	28	39	33	100	0	0	-	-	-	-	-	-	-	-	100	0	0	100	0	0				
Lebanon	2016	1 445	88	18	38	44	59	1	40	-	-	-	-	-	57	3	40	60	3	37	61	3	37				
Lesotho	2016	756	28	21	46	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Liberia	2016	1 773	50	23	42	35	42	12	47	53	12	35	31	11	58	-	-	-	-	-	-	-	-	-			
Libya	2016	1 570	79	15	43	42	-	87	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Madagascar	2016	9 500	36	22	35	43	-	19	81	-	-	-	-	-	-	-	-	-	14	86	-	24	76				
Malawi	2016	7 332	16	23	42	35	-	89	11	-	96	4	-	88	12	-	-	-	88	12	-	92	8				
Malaysia	2016	7 244	75	14	41	45	100	-	-	-	-	-	-	-	-	-	-	99	-	-	100	0	0				
Mali	2016	7 860	41	31	39	30	-	38	62	-	-	-	-	-	-	-	-	-	35	65	-	47	53				
Marshall Islands	2016	19	73	15	46	39	3	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-				
Mauritania	2016	1 636	60	22	39	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42	58				
Mauritius	2016	255	40	11	37	52	100	0	0	-	-	-	-	-	-	-	-	100	0	0	100	0	0				
Mexico	2016	34 694	80	20	40	41	-	89	11	-	97	3	-	77	23	-	90	10	-	87	13	-	88	12			
Monaco	2016	-	-	-	-	-	100	0	0	-	-	-	NA	NA	NA	-	-	-	100	0	0	100	0	0			
Mongolia	2016	696	73	18	38	44	74	24	2	85	15	0	73	25	2	-	-	-	73	24	3	73	25	1			
Morocco	2016	8 593	61	15	43	42	82	5	13	-	-	-	-	-	-	-	-	73	11	16	91	0	9				
Mozambique	2016	11 876	33	24	48	28	-	31	69	-	46	54	-	28	72	-	-	-	31	69	-	-	-	-			
Myanmar	2016	12 893	35	14	38	48	71	-	-	-	-	-	-	-	-	-	-	71	-	-	-	-	-	-			
Namibia	2016	785	48	16	50	34	76	14	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Nauru	2016	4	100	25	43	32	-	-	-	-	-	-	NA	NA	NA	-	-	-	-	-	-	-	-	-			
Nepal	2016	9 029	19	13	35	52	47	31	23	-	-	-	-	-	-	-	-	39	-	-	76	-	-	-			
Netherlands	2016	2 906	91	18	40	42	100	0	0	-	-	-	-	-	-	-	-	100	0	0	100	0	0				

NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY			NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY			
Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)				
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100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	70	30	-	-	-	-	-	-	-	-	-	-	70	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	
93	7	1	-	-	-	-	-	-	92	7	1	92	7	1	95	4	1	36	60	4	-	-	-	-	-	34	62	4	34	62	5	46	51	3		
-	96	4	-	-	-	-	-	-	-	-	-	96	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
43	18	39	-	86	14	-	53	47	-	-	-	-	-	-	-	-	50	9	41	67	8	25	34	10	57	-	-	-	-	-	-	-	-	-		
95	5	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	82	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	69	31	-	-	-	-	-	-	-	-	-	63	37	52	24	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
70	5	25	73	5	22	70	4	26	-	-	-	72	4	24	61	7	32	-	37	63	-	45	55	-	36	64	-	-	-	-	38	62	-	32	68	
100	-	-	-	-	-	-	-	-	-	-	-	99	-	-	100	0	0	100	-	-	-	-	-	-	-	-	-	-	-	99	-	-	100	0	0	
20	43	37	-	-	-	-	-	-	-	-	-	17	44	39	20	50	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
27	-	-	-	-	-	-	-	-	-	-	-	27	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	
27	13	60	-	-	-	-	-	-	-	-	-	27	13	60	26	8	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
75	21	5	86	12	2	57	36	7	-	95	5	75	21	5	-	96	4	-	70	30	-	88	12	-	52	48	-	73	27	-	67	33	-	72	28	
100	0	0	-	-	-	NA	NA	NA	-	-	-	100	0	0	100	0	0	100	0	0	-	-	-	NA	NA	NA	-	-	-	100	0	0	100	0	0	
63	21	16	70	30	0	58	18	24	-	-	-	70	16	14	63	21	15	41	36	23	53	34	13	35	41	24	-	-	-	44	36	20	66	10	24	
70	19	11	82	-	-	56	-	-	-	-	-	70	14	16	-	94	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
48	29	24	50	31	19	46	28	25	-	-	-	48	29	24	-	-	-	15	-	-	15	-	-	11	-	-	-	-	15	-	-	-	-	-	-	
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46	31	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	16	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
86	-	-	87	-	-	NA	NA	NA	-	-	-	100	0	0	66	-	-	-	-	-	-	-	-	NA	NA	NA	-	-	-	-	-	-	-	-	-	-
-	82	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	

NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY			NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY					
Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)						
43	-	-	64	-	-	32	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
21	3	76	28	8	64	20	0	80	-	22	78	18	5	77	-	56	44	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
-	48	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0			
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0	100	0	0			
-	98	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
-	72	28	-	82	18	-	69	31	-	-	-	-	64	36	-	91	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
82	-	-	91	-	-	75	-	-	-	-	-	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
45	16	39	-	-	-	-	-	-	43	19	38	44	16	39	69	12	19	10	43	47	6	44	50	8	42	50	11	42	48	10	43	47	14	41	45			
77	-	-	84	-	-	69	-	-	-	-	-	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
68	28	4	86	13	1	47	45	8	62	34	4	70	26	4	72	25	3	-	78	22	-	84	16	-	68	32	-	79	21	-	78	22	-	78	22			
39	60	1	-	-	-	-	-	-	-	-	-	33	63	4	68	25	7	46	14	40	-	-	-	-	-	-	-	-	-	49	10	40	30	33	37			
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0			
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0			
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0			
94	6	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	
-	98	2	-	-	-	-	-	-	-	98	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
88	12	0	-	-	-	-	-	-	-	-	-	91	9	0	84	16	0	48	-	-	-	-	-	-	-	-	-	-	45	-	-	51	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	84	-	-	-	-	-	-	-	-	-	-	79	-	-	100	0	0	100	0	0	
99	-	-	-	-	-	-	-	-	-	-	-	99	-	-	100	0	0	99	-	-	-	-	-	-	-	-	-	-	99	-	-	100	0	0	100	0	0	
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	
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76	20	4	-	-	-	-	-	-	-	-	-	73	23	4	100	0	0	-	90	10	-	-	-	-	-	-	-	-	-	88	12	-	100	0	0	100	0	0
-	74	26	-	94	6	-	69	31	-	38	62	-	75	25	-	84	16	22	-	-	-	-	-	-	-	-	-	-	25	-	-	10	-	-	-	-	-	
74	-	-	-	-	-	-	-	-	-	-	-	66	-	-	92	-	-	73	-	-	-	-	-	-	-	-	-	-	66	-	-	91	-	-	-	-	-	
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	

NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY			NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY				
Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (improved, usable and single-sex)	Limited sanitation service (improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)					
12	42	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	64	-	-	-	-	-	-	-	-	-	-	-	-	-				
100	0	0	100	0	0	NA	NA	NA	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	NA	NA	NA	-	-	-	100	0	0	100	0	0		
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	100	0	0	100	0	0		
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	100	0	0	100	0	0		
27	9	64	-	-	-	25	11	64	-	-	-	22	-	-	34	-	-	17	17	66	-	-	-	17	17	66	-	-	-	-	-	-	-	-			
-	40	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	83	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	55	45	-	-	-	-	-	-	-	66	34	-	51	49	-	70	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	-	-	-	-	-	100	0	0	100	0	0	100	0	0
100	0	0	-	-	-	-	-	-	-	-	-	100	-	-	100	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	62	38	-	-	-	-	-	-	-	-	-	-	60	40	-	70	30	-	25	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	-	-	-	-	-	100	0	0	100	0	0	100	0	0
44	0	56	58	3	40	38	0	62	-	-	-	-	-	-	-	-	26	13	61	41	15	44	20	12	68	-	-	-	-	-	-	-	-	-	-	-	
23	34	43	25	51	25	21	26	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
99	0	1	-	-	-	-	-	-	-	-	-	99	0	1	-	100	0	-	88	12	-	-	-	-	-	-	-	-	88	12	-	-	-	-	-	-	
79	21	0	80	20	0	79	21	0	-	-	-	-	-	-	-	-	37	25	39	52	19	29	30	26	44	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	83	-	-	-	-	-	-	-	-	-	-	69	-	-	93	-	-	-	-	
47	28	25	68	18	14	43	30	27	-	-	-	47	28	25	-	100	0	23	-	-	52	-	-	15	-	-	-	23	-	-	-	-	-	-	-	-	
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	100	0	0	-	-	-	-	100	0	0	100	0	0	100	0	0	
83	-	-	84	-	-	82	-	-	-	-	-	83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
92	-	-	-	-	-	-	-	-	-	-	-	93	-	-	91	-	-	89	-	-	-	-	-	-	-	-	-	90	-	-	89	-	-	-	-	-	
90	-	-	-	-	-	-	-	-	-	-	-	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
81	19	1	79	21	0	83	17	0	-	100	0	78	22	0	86	12	1	23	70	6	14	78	8	27	69	3	-	-	-	22	70	8	29	58	13		
25	56	19	-	97	3	-	74	26	-	-	-	-	-	-	-	-	8	8	84	-	73	27	-	38	62	-	-	-	-	-	-	-	-	-	-	-	
66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	-	-	-	-	-	-	-	-	-	52	-	-	63	-	-	-	-	-	
-	96	4	-	94	6	-	96	4	-	76	24	-	96	4	-	94	6	-	63	37	-	88	12	-	58	42	-	65	35	-	63	37	-	59	41		



Annex 4: Regional and global WASH in schools estimates

Water, sanitation and hygiene in schools by region (2016)

REGION	Year	School-age population (thousands)	% urban	% pre-primary	% primary	% secondary	NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY		
							Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)	Basic water service (improved and available)	Limited water service (improved, not available)	No water service (no facility or unimproved)
SDG REGIONS																								
Australia and New Zealand	2016	5 130	89	9	49	42	100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0
Central and Southern Asia	2016	546 239	35	19	35	46	68	19	13	72	18	10	69	18	13	-	-	-	66	19	14	77	17	6
Eastern and South-Eastern Asia	2016	424 217	56	19	41	40	-	88	12	-	-	-	-	-	-	-	-	-	66	-	-	-	-	-
Europe and Northern America	2016	184 408	77	21	36	43	99	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0
Latin America and the Caribbean	2016	156 275	79	18	39	43	-	84	16	-	96	4	-	71	29	-	83	17	-	83	17	-	91	9
Northern Africa and Western Asia	2016	132 503	59	18	40	42	74	10	15	-	-	-	-	-	-	-	-	-	-	85	15	-	94	6
Oceania	2016	3 806	24	20	44	36	48	8	44	-	-	-	-	-	-	34	6	60	44	7	49	76	10	14
Sub-Saharan Africa	2016	370 203	37	19	44	37	-	53	47	-	-	-	-	58	42	-	-	-	-	47	53	-	62	38
OTHER REGIONAL GROUPINGS																								
Least Developed Countries	2016	356 251	32	21	41	38	57	0	43	-	-	-	-	-	-	-	-	-	-	50	50	-	67	33
Landlocked Developing Countries	2016	179 555	28	22	40	38	58	0	42	-	88	12	-	72	28	-	-	-	47	0	53	-	63	37
Small Island Developing States	2016	17 618	58	20	41	39	-	64	36	-	94	6	-	-	-	-	-	-	-	65	35	-	-	-
WORLD	2016	1822 780	50	19	39	42	69	12	19	-	89	11	64	8	27	-	-	-	66	8	27	75	9	15

Key: - NO ESTIMATE Note: For JMP estimation methods see Annex 1. For unrounded estimates see <https://washdata.org>.

NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY			NATIONAL			URBAN			RURAL			PRE-PRIMARY			PRIMARY			SECONDARY		
Basic sanitation service (Improved, usable and single-sex)	Limited sanitation service (Improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (Improved, usable and single-sex)	Limited sanitation service (Improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (Improved, usable and single-sex)	Limited sanitation service (Improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (Improved, usable and single-sex)	Limited sanitation service (Improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (Improved, usable and single-sex)	Limited sanitation service (Improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic sanitation service (Improved, usable and single-sex)	Limited sanitation service (Improved, not usable or not single-sex)	No sanitation service (no facility or unimproved)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)	Basic hygiene service (facility with water and soap)	Limited hygiene service (facility with water, but no soap)	No hygiene service (no facility or no water)			
100	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	100	0	0	-	-	-	-	-	-	-	-	-	-	100	0	0		
72	6	23	77	7	17	71	0	29	-	-	-	71	5	24	78	4	18	54	9	37	57	21	21	54	18	29	-	-	-	53	8	39			
-	68	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
99	0	0	-	-	-	-	-	-	-	-	-	100	0	0	100	0	0	99	1	0	-	-	-	-	-	-	-	-	-	99	1	0			
78	13	8	87	10	2	65	27	9	-	94	6	79	16	4	-	97	3	61	19	20	61	31	8	-	67	33	-	82	18	60	21	19			
82	9	10	-	-	-	-	-	-	-	-	-	90	0	10	94	0	6	71	0	29	-	-	-	-	-	-	-	-	95	-	-	94	-	-	
46	16	38	-	-	-	-	-	-	43	19	38	43	18	39	66	14	19	15	39	46	6	44	50	8	41	51	11	42	48	11	42	47			
53	14	33	-	-	-	-	76	24	-	-	-	-	64	36	-	76	24	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
53	20	27	-	-	-	-	72	28	-	-	-	51	19	31	62	18	20	26	24	50	-	-	-	-	-	-	-	-	-	24	-	-			
53	13	34	-	-	-	-	75	25	-	-	-	-	56	44	-	68	32	29	12	60	-	-	-	-	-	-	-	-	23	8	69				
63	0	37	-	-	-	-	-	-	-	-	-	72	-	-	-	-	-	-	-	-	-	-	-	8	41	51	-	-	-	-	-	-			
66	12	23	-	91	9	57	16	26	-	-	-	63	18	18	72	15	13	53	11	36	-	-	-	39	21	39	-	-	-	53	10	37			



UN-Water is the United Nations (UN) inter-agency coordination mechanism for freshwater related issues, including sanitation. It was formally established in 2003 building on a long history of collaboration in the UN family. UN-Water is comprised of UN entities with a focus on, or interest in, water related issues as Members and other non-UN international organizations as Partners.

The main purpose of UN-Water is to complement and add value to existing programmes and projects by facilitating synergies and joint efforts, so as to maximize system-wide coordinated action and coherence. 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.

PERIODIC REPORTS:

World Water Development Report (WWDR) is the reference publication of the UN system on the status of the freshwater resource. The Report is the result of the strong collaboration among UN-Water Members and Partners and it represents the coherent and integrated response of the UN system to freshwater-related issues and emerging challenges. The report production is coordinated by the World Water Assessment Programme and the theme is harmonized with the theme of World Water Day (22 March). From 2003 to 2012, the WWDR was released every three years and from 2014 the Report is released annually to provide the most up to date and factual information of how water-related challenges are addressed around the world.

- ✓ Strategic outlook
- ✓ State, uses and management of water resources
- ✓ Global
- ✓ Regional assessments
- ✓ Triennial (2003-2012)
- ✓ Annual (from 2014)
- ✓ Links to the theme of World Water Day (22 March)

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

- ✓ Strategic outlook
- ✓ Water supply and sanitation
- ✓ Global
- ✓ Regional assessments
- ✓ Biennial (since 2008)

The progress report of the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) is affiliated with UN-Water and presents the results of the global monitoring of progress towards access to safe drinking water, and adequate sanitation and hygiene. Monitoring draws on the findings of household surveys and censuses usually supported by national statistics bureaus in accordance with international criteria and increasingly draws on national administrative and regulatory datasets.

- ✓ Status and trends
- ✓ Water supply and sanitation
- ✓ Global
- ✓ Regional and national assessments
- ✓ Biennial updates (1990-2012, 2017 onwards)
- ✓ Annual updates (2013-2015)

UN-WATER PLANNED PUBLICATIONS 2017-2018

- Update of UN-Water Policy Brief on Water and Climate Change
- UN-Water Policy Brief on the Water Conventions
- UN-Water Analytical Brief on Water Efficiency
- SDG 6 Synthesis Report 2018 on Water and Sanitation

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Drinking water in schools (2016)

- **92 countries** had sufficient data to estimate coverage of basic drinking water services in schools
- **69% of schools** had a basic drinking water service
- Nearly **570 million children** worldwide lacked a basic drinking water service at their school
- **19% of schools** had no drinking water service at all
- **Drinking water quality** varied widely in the few countries with data available



Sanitation in schools (2016)

- **101 countries** had sufficient data to estimate coverage of basic sanitation services in schools
- **66% of schools** had a basic sanitation service
- Over **620 million children** worldwide lacked a basic sanitation service at their school
- **23% of schools** had no sanitation service at all
- **Fewer than 50% of schools** had toilets accessible to students with limited mobility in most countries with data available



Hygiene in schools (2016)

- **81 countries** had sufficient data to estimate coverage of basic hygiene services in schools
- **53% of schools** had a basic hygiene service
- **Nearly 900 million** children worldwide lacked a basic hygiene service at their school
- **36% of schools** had no hygiene service at all
- Some countries had data on **menstrual hygiene management** in schools, but definitions varied

JMP WEBSITE: WASHDATA.ORG