

# Progress on drinking water, sanitation and hygiene in schools

2000-2021 DATA UPDATE

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



## Progress on drinking water, sanitation and hygiene in schools: 2000-2021 data update

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SECTION 2

# Preparing schools for future pandemics



## Building back better

The coronavirus disease 2019 (COVID-19) pandemic triggered an unprecedented global health and economic crisis, upending the lives of billions of people all around the globe and exacerbating inequalities. Global efforts to control the virus have sought to balance the risks to public health with the social and economic impacts of lockdown measures, and to mitigate the impacts of school closures on children's education, nutrition and well-being. Evidence suggests that learning losses have disproportionately affected the poorest and most disadvantaged children, including those living with disabilities<sup>8</sup>. With subsequent increases in vaccination coverage and the gradual lifting of restrictions, the UN Secretary General has called on Member States to seize the opportunity to 'build back better' and ensure the world is better prepared for future pandemics<sup>9</sup>.

The Sanitation and Water for All (SWA) global partnership has called for a transformative approach focused on strengthening key building blocks of the enabling environment: sector policy and planning; sector budget and financing; planning, monitoring and review; institutional arrangements; and sector capacity development<sup>10</sup>. The WASH in Schools Network<sup>11</sup> is documenting country-level examples of good practices designed to improve pandemic preparedness and response by strengthening the enabling environment for WASH in schools.

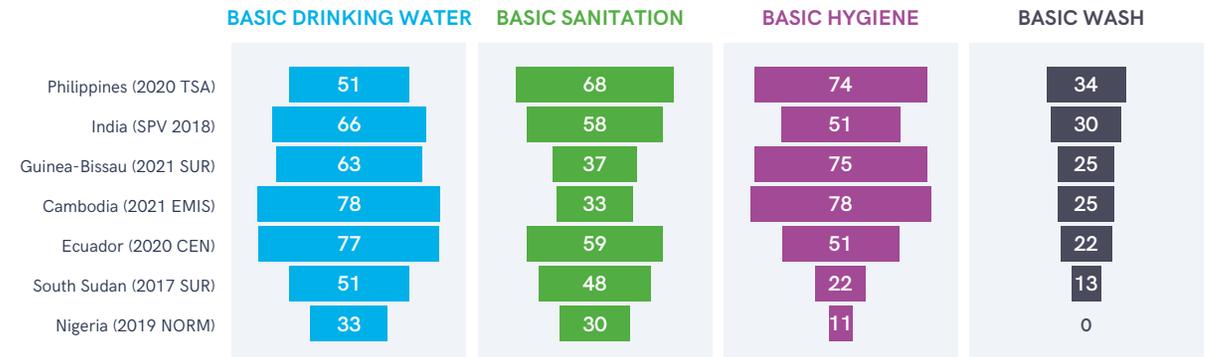
<sup>8</sup> *Learners with Disabilities and COVID-19 School Closures: Findings from a global survey conducted by the World Bank's Inclusive Education Initiative*. World Bank, 2021 <<https://openknowledge.worldbank.org/handle/10986/36326>>.

<sup>9</sup> *The Sustainable Development Goals Report 2021*. UN, 2021 <<https://unstats.un.org/sdgs/report/2021>>.

<sup>10</sup> *Building blocks*. In: Sanitation and Water for All [website]. <<https://www.sanitationandwaterforall.org/about/our-work/priority-areas/building-blocks>>.

<sup>11</sup> WASH in Schools Network [website]. <<https://www.winsnetwork.org>>.

## Disaggregated data show that few schools meet the criteria for all three basic WASH services



**FIGURE 33** Proportion of schools with basic drinking water, sanitation and hygiene services, selected countries (%)

The JMP 2020 progress update on WASH in schools<sup>12</sup> had a special focus on COVID-19 and noted that infection prevention and control (IPC) needs to extend beyond the provision of basic WASH services and include additional measures related to hygiene, cleaning, disinfection and waste management. This thematic pullout section highlights examples of emerging national data which go beyond the basic service indicators used for global monitoring and provide additional insights into specific challenges related to improving pandemic preparedness and response in schools.

The COVID-19 pandemic has caused significant disruption to education monitoring systems around the world. Some countries have conducted rapid assessments of WASH in schools, but it remains to be seen whether new questions and indicators will be integrated into routine monitoring. While global data availability is improving, many countries still have

<sup>12</sup> *Progress on Drinking Water, Sanitation and Hygiene in Schools: Special focus on COVID-19*. New York: UNICEF and WHO, 2020. <<https://data.unicef.org/resources/progress-on-drinking-water-sanitation-and-hygiene-in-schools-special-focus-on-covid-19>>.

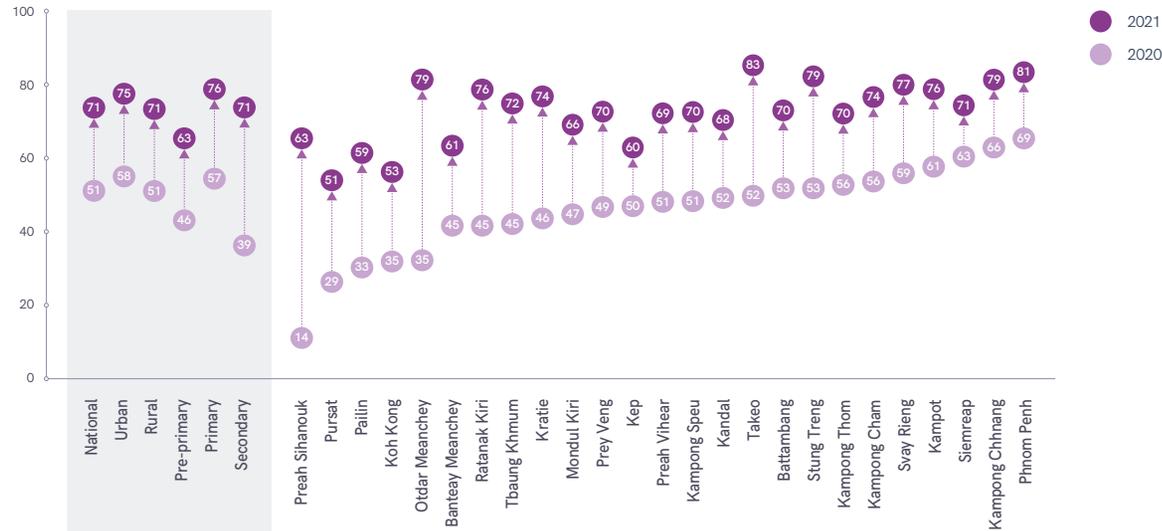
data gaps which makes it difficult to assess progress towards 'safe and effective learning environments for all' (SDG 4.a).

Furthermore, currently available data suggest that while many schools already meet some of the criteria for basic WASH services, far fewer schools meet all of them. Figure 33<sup>13</sup> shows that among countries with school-level information on basic drinking water, sanitation and hygiene, the proportion of schools with access to all three services is often significantly lower. In Guinea-Bissau, while three quarters of schools had basic hygiene services, two thirds had basic drinking water and more than a third had basic sanitation, only a quarter of schools had access to all three (WASH) in 2021. In Nigeria, while a third of schools had basic water and basic sanitation and a tenth had basic hygiene, none of the schools surveyed had all three basic services in 2020.

<sup>13</sup> Unless otherwise indicated, figures in this section are based on individual data sources. Short survey codes are provided for reference. For further information please refer to the relevant JMP country files for WASH in schools: <<https://washdata.org/data/downloads>>.



## In Cambodia, availability of group handwashing facilities has increased in all 25 provinces since 2020

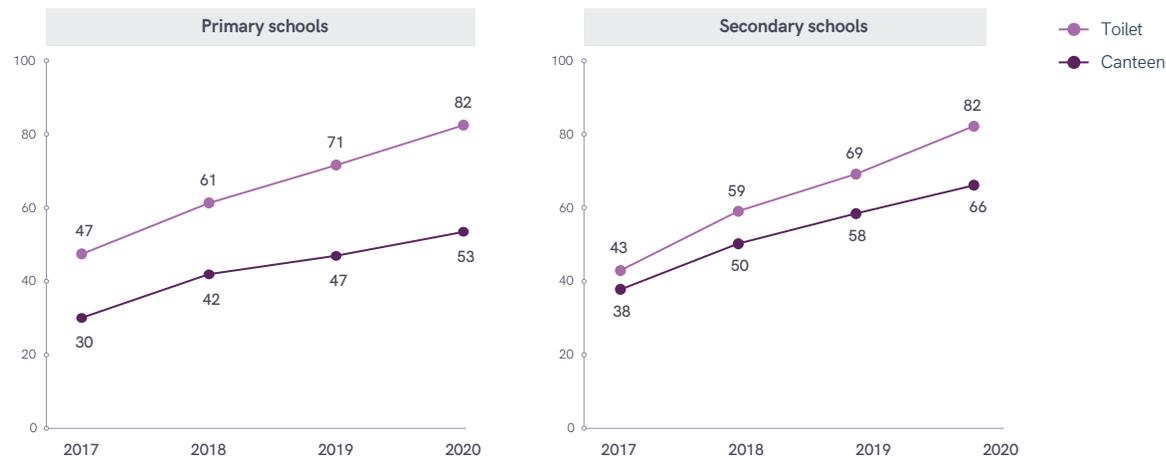


**FIGURE 34** Proportion of schools with group handwashing facilities, by province in Cambodia 2020-2021 (%)

## Hygiene promotion

To monitor pandemic preparedness and response, countries also need to be able to track progress over time. For example, Cambodia has integrated WASH questions into the Education Management Information System (EMIS) which is updated every 12 months. Improving hand hygiene in schools has been a key focus of the government's pandemic response and EMIS data show a rapid increase in the availability of group handwashing facilities (Figure 34). Between 2020 and 2021, coverage of group handwashing facilities increased by 20 % pts with similar increases in both urban and rural and pre-primary and primary schools and an even bigger increase of 32 % pts in secondary schools. Availability of group handwashing facilities has improved in all 25 provinces despite wide variations in coverage at the start of the pandemic. By 2021, Kampong Chhnang, Stung Treng and Otdar Meanchey had all achieved 79% coverage, but from respective baselines of 66%, 53% and 35% in 2020. Preah Sihanouk increased coverage by nearly 50 % pts.

## In the Philippines, availability of handwashing facilities in toilets and canteens has increased rapidly in both primary and secondary schools



**FIGURE 35** Proportion of schools with handwashing facilities with soap in toilets and the canteen, by school level in the Philippines 2017-2020 (%)

The Philippines uses a Three Star Approach<sup>14</sup> for routine monitoring of WASH in schools which not only provides data on the availability of handwashing facilities but also whether they are present in key locations for promoting hand hygiene within the school. Between 2017 and 2020, the availability of handwashing facilities increased rapidly in both primary and secondary schools (Figure 35), but the availability of handwashing facilities in the toilets has increased more quickly than in the canteens. Progress on both indicators has been faster in secondary schools (9,201) than in primary schools (39,018). By 2020, four out of five primary and secondary schools had handwashing facilities in the toilets, but only half of primary schools had handwashing facilities in the canteen, compared with two thirds of secondary schools.

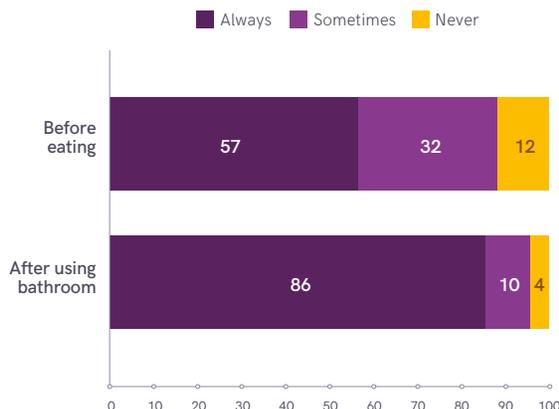
<sup>14</sup> Republic of the Philippines Department of Education WASH in Schools Programme [website]. <<https://wins.deped.gov.ph>>.

In addition to monitoring the availability and location of handwashing facilities, some countries also collect information on student handwashing behaviour at critical times. For example, a nationwide survey of hygienic behaviours of Iranian children and adolescents asked teachers to record how frequently students wash their hands after using the bathroom and before eating. Teachers reported that while 86% of students always washed their hands after using the bathroom, only 57% always washed their hands before eating, and students were three times as likely to 'never' wash their hands before eating than after using the bathroom (Figure 36).

Pandemic preparedness and response planning has led to a renewed focus on the role of hygiene promotion in preventing the spread of infectious diseases. Schools have an important role to play in promoting the formation of healthy habits and behaviours among children and hygiene behaviour change programmes often employ a range of different approaches. For example, the 2021 National Assessment of Water, Sanitation and Hygiene Facilities in Schools in Sudan found that while almost all schools routinely included hygiene messages in morning assemblies, only half included hygiene in the core curriculum and fewer than a fifth had dedicated hygiene lessons or participated in special events linked to hygiene (Figure 37).

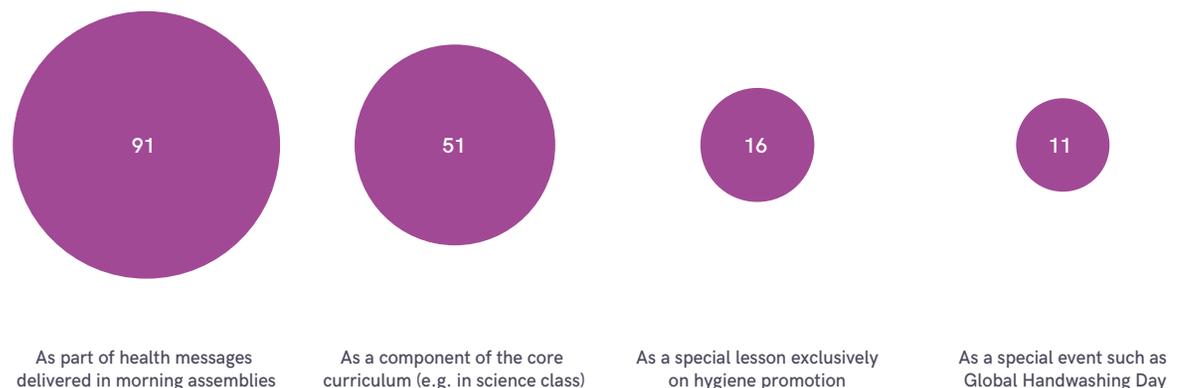


**In Iran, children were found to be more likely to wash their hands after using the bathroom than before eating**



**FIGURE 36** Proportion of schools by reported frequency of student handwashing behaviour after using the bathroom and before eating, in Iran in 2016 (%)

**In Sudan, only half of schools include hygiene within the core curriculum but 9 out of 10 schools include health messages in morning assemblies**



**FIGURE 37** Proportion of schools promoting hygiene by methods used in Sudan, 2020 (%)



In 2020, in response to COVID-19, Ecuador conducted a rapid nationwide assessment of the status of WASH in schools which enabled detailed analysis of the distribution of schools that did not meet national WASH standards and required additional support to reopen. Figure 38 shows that while 79% of schools had a basic drinking water service and 59% had a basic sanitation service, just 51% had a basic hygiene service. Within Latin America and the Caribbean, Nicaragua was the only country with lower coverage of basic sanitation (12%) and hygiene (40%) in schools.

The Ecuador assessment enabled further analysis of sub-national inequalities in hygiene. While there was little difference in coverage of basic hygiene services in rural (52%) and urban (49%) schools, there were very large differences between sub-national provinces, ranging from 70% in Carchi to just 24% in Pastaza. Further analysis of school-level data shows that coverage of group handwashing facilities was higher than coverage of individual handwashing facilities, but in both cases significantly fewer schools had facilities that were in good condition with water and soap available.

In 2020, 92% of secondary schools, 90% of pre-primary and 83% of primary schools had a group handwashing facility but only 56%, 52% and 45% respectively were found to be in good condition. While most of those in good condition had water available, fewer than a third of pre-primary and primary schools and a quarter of secondary schools had both water and soap at group handwashing facilities. While a larger proportion of individual handwashing facilities were found to be in good condition, only a quarter of pre-primary and a fifth of secondary schools had individual handwashing facilities meeting all criteria.

### In Ecuador, disaggregated data highlight sub-national inequalities in coverage of basic hygiene services, and in the condition and availability of water and soap at group and individual handwashing facilities

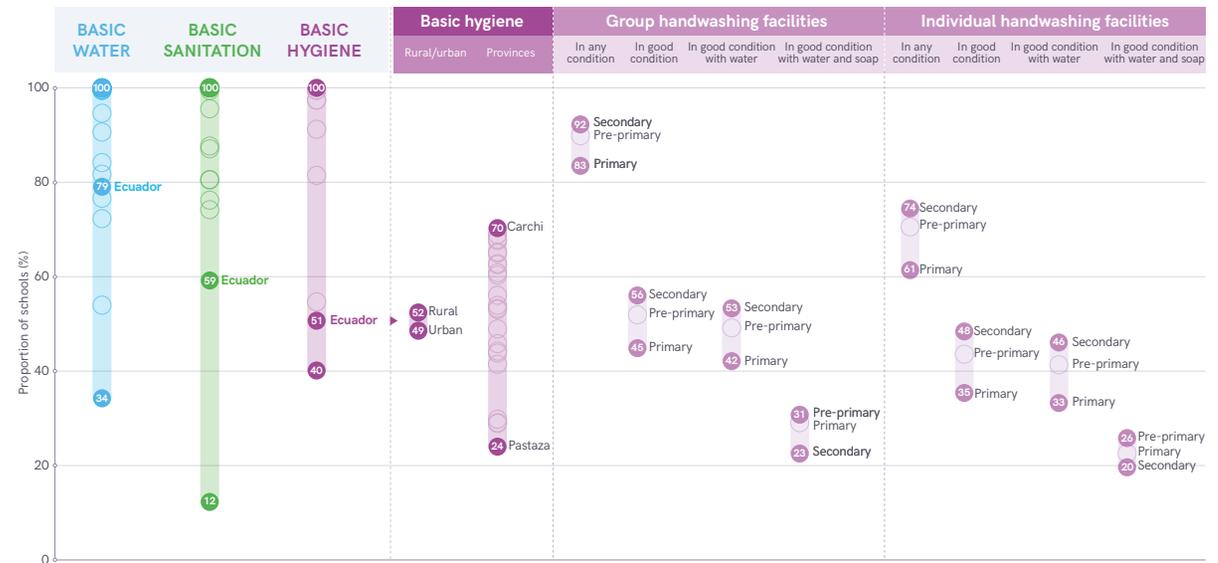


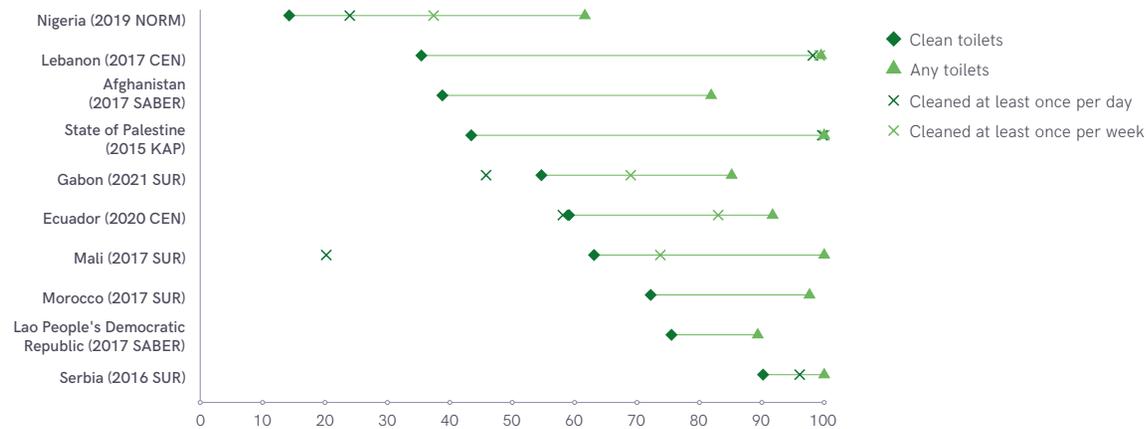
FIGURE 38 Sub-national inequalities in coverage of basic hygiene services and condition of handwashing facilities in Ecuador, 2020 (%)





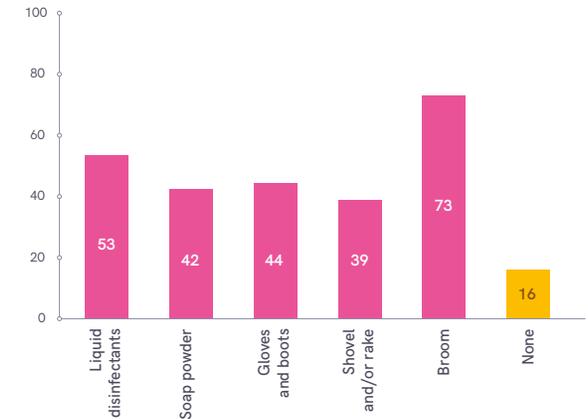


## In many countries with data available, more than a quarter of toilets were not clean, and the reported frequency of cleaning varied widely



**FIGURE 39** Proportion of schools with any toilet by frequency of cleaning and cleanliness, selected countries with recent data available (%)

## In Gabon, half of schools lacked liquid disinfectants and other basic cleaning materials in 2021



**FIGURE 40** Proportion of schools with environmental cleaning materials in Gabon, 2021 (%)

## Cleaning and waste management

A growing number of countries also collect information on cleaning and waste management in schools. While indicator definitions vary and are not always directly comparable, they nevertheless provide interesting insights. For example, many countries collect information on the cleanliness of toilets, classifying facilities as 'extremely clean', 'clean', 'somewhat clean' and 'not clean' based on observations by teachers. Some countries also collect information on the frequency at which toilets are cleaned. Categories include 'more than once per day', 'once per day', 'two to four times per week', 'once per week' and 'not cleaned' and the results are reported by school managers. Among countries with data available it is possible to compare the proportion of schools with any toilet and 'clean' toilets and to calculate the proportion of schools in

which toilets are cleaned 'at least once per day' and 'at least once per week'.

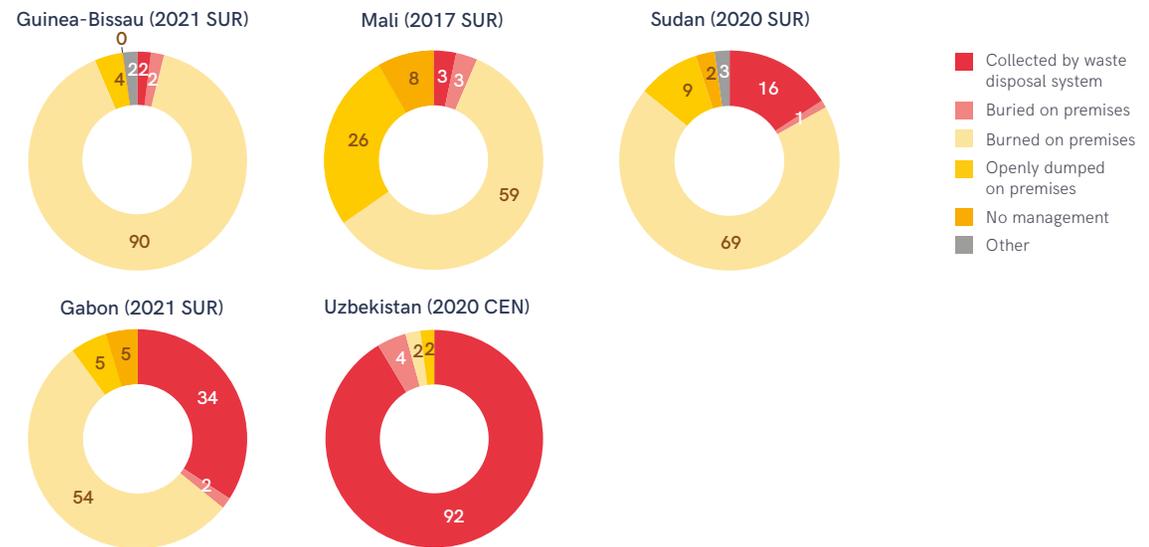
In many countries, a significant proportion of school toilets were classified as 'not clean' (Figure 39). A 2016 survey in Serbia found that all schools had toilets, 96% were cleaned at least once per day, and 90% were 'clean' at the time of the survey. By contrast, a 2015 Knowledge, Attitudes and Practices (KAP) survey in the State of Palestine showed that while almost all schools had toilets that were cleaned at least once per day, just 42% were found to be 'clean'. 2017 SABER surveys found that the 'cleanliness gap' between any toilet and clean toilets was much bigger in Afghanistan (44 % pts) than in the Lao People's Democratic Republic (14 % pts). The 2019 WASH NORM survey found an even bigger gap in Nigeria (48 % pts), and showed that a third (36%) of school toilets were cleaned once per

week and only a fifth (22%) were cleaned once per day, with just one in ten school toilets (12%) clean at the time of the survey.

Environmental cleaning is a major focus of IPC strategies in schools and requires that school managers have basic materials available for regular cleaning and disinfection of the school environment, including classrooms, canteens and playgrounds. Relatively few countries have national data on environmental cleaning but a 2021 school survey in Gabon included questions on the availability of basic cleaning materials. While three quarters of schools had brooms, only half had liquid detergents and even fewer schools had soap powder, gloves and boots and a shovel and/or rake. More than one in six schools reported that they had none of these materials available at the time of the survey (Figure 40).

Improving solid waste management has also been identified as a priority for pandemic preparedness and response. But in countries where school surveys and censuses have included questions, many schools lacked proper systems for safe management of solid waste (Figure 41). The 2020 school census in Uzbekistan showed that 92% of schools had solid waste collection services and 4% buried waste on premises, while 4% used unsafe disposal methods such as burning or openly dumping waste on the school premises. However, just 34% of schools in Gabon and 16% of schools in Sudan had solid waste collection services. The vast majority of schools in Guinea-Bissau (90%) reported burning waste on the premises and just 2% had solid waste collection services. In Mali, more than a quarter of schools reported dumping waste on the premises (27%) and nearly one in ten (8%) had no system at all for managing solid waste.

### In countries with data on solid waste management, many schools burn waste on the premises



**FIGURE 41** Proportion of schools using different methods of solid waste management, selected countries with recent data available (%)





## UN-Water Reports

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

### PERIODIC REPORTS

#### SDG 6 Progress Update 2021 – Summary

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

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

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

#### SDG 6 Progress Update 2021 – 8 reports, by SDG 6 global indicator

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

#### United Nations World Water Development Report

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

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

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

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JMP website: <https://washdata.org>

## DRINKING WATER IN SCHOOLS IN 2021

- 133 countries and 7 out of 8 SDG regions had national estimates for basic drinking water services in schools.
- 71% of schools had a basic drinking water service, 14% had a limited service, and 15% had no service.
- 546 million children lacked a basic drinking water service at their school, including 288 million whose school still had no water service.
- Achieving universal access (>99%) to basic drinking water services in schools by 2030 would require a 14x increase in the current rate of progress.

## SANITATION IN SCHOOLS IN 2021

- 123 countries and all 8 SDG regions had national estimates for basic sanitation services in schools.
- 72% of schools had a basic sanitation service, 16% had a limited service, and 13% had no service.
- 539 million children lacked a basic sanitation service at their school, including 240 million whose school still had no sanitation service.
- Achieving universal access to basic sanitation services in schools by 2030 would require a 3x increase in the current rate of progress.

## HYGIENE IN SCHOOLS IN 2021

- 121 countries and 7 out of 8 SDG regions had national estimates for basic hygiene services in schools.
- 58% of schools had a basic hygiene service, 17% had a limited service, and 25% had no service.
- 802 million children lacked a basic hygiene service at their school, including 480 million whose school still had no hygiene service.
- Achieving universal access to basic hygiene services in schools by 2030 would require a 5x increase in the current rate of progress.



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