

# Improving toilet hygiene and handwashing practices during and post-COVID-19 pandemic in Indonesian schools

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# Abbreviations and acronyms

APBD	Local Government Budgets ( <i>Anggaran Pendapatan dan Belanja Daerah</i> )
BOS	School Operational Assistance ( <i>Bantuan Operasional Sekolah</i> )
DAK	Special Allocation Fund ( <i>Dana Alokasi Khusus</i> )
Dapodik	Basic Education Data ( <i>Data Pokok Pendidikan</i> )
DAU	General Allocation Grant ( <i>Dana Alokasi Umum</i> )
Gol	Government of Indonesia
HE	His Excellency
IDR	Indonesian Rupiah
KemenPUPR	Ministry of Public Works and Housing Regulation ( <i>Kementerian Pekerjaan Umum dan Perumahan Rakyat</i> )
KRISNA	Collaborative Planning and Budget Information ( <i>Kolaborasi Perencanaan dan Informasi Anggaran</i> )
M&E	Monitoring and Evaluation
MI	Islamic Primary School ( <i>Madrasah Ibtidaiyah</i> )
MoECRT	Ministry of Education, Culture, Research, and Technology Ministry of Education Culture (MoEC) was merged with Ministry of Research and Technology (MoRT) to form the Ministry of Education, Culture, Research, and Technology (MoECRT) as approved by the Parliament on 9 April 2021.
MoF	Ministry of Finance
MoH	Ministry of Health
MoRA	Ministry of Religious Affairs
PAD	Own-Source Revenue ( <i>Pendapatan Asli Daerah</i> )
Permendikbud	MoECRT Ministerial Regulation ( <i>Peraturan Menteri Pendidikan dan Kebudayaan</i> )
Permendiknas	MoECRT Ministerial Regulation ( <i>Peraturan Menteri Pendidikan Nasional</i> )
PP	Government Regulation ( <i>Peraturan Pemerintah</i> )
SD	Elementary School ( <i>Sekolah Dasar</i> )
SDI	Service Delivery Indicator
SMA	Senior Secondary School ( <i>Sekolah Menengah Atas</i> )
SMP	Junior Secondary School ( <i>Sekolah Menengah Pertama</i> )
UKS	School Health Unit ( <i>Unit Kesehatan Sekolah</i> )
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations International Children's Emergency Fund
USA	United States of America
USD	United States Dollar
WASH	Water, Sanitation, and Hygiene
WB	World Bank
WFP	World Food Programme
WHO	World Health Organization



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## Overview

Many countries around the world closed schools along with other widespread restrictions as an immediate response to the spread of COVID-19. However, disruptions to instructional time in the classroom can have a severe impact on a child's ability to learn. In Indonesia, the COVID-19 pandemic has led to school closures, similar to other countries, forcing more than 68 million young Indonesians out of their classrooms, but the new school reopening plan is expected to come into effect from the new academic year starting July 2021. Consistent with the global framework of school reopening, the school reopening guidelines emphasize that school reopening must be safe and aligned with the country's overall COVID-19 response, including an emphasis on water, sanitation and hygiene (WASH) facilities. This Policy Note aims to summarize an assessment of the current situation of WASH facilities, norms, standards and practices in schools and to discuss policy implications related to the response to the COVID-19 pandemic and implications for achieving universal access to basic WASH in schools by 2030 under the Sustainable Development Goals.

This study included a rapid situation analysis of WASH facilities in Indonesian schools using quantitative and qualitative data, including a review of relevant regulations. It covers schools under both the Ministry of Education, Culture, Research, and Technology (MoECRT) and the Ministry of Religious

Affairs (MoRA) but focuses on the basic education sub-sector only (primary to senior secondary schools). Nationally, eight percent of MoECRT schools and 20 percent of MoRA primary schools have no functional toilets for students. Even if toilets are available in schools, more than 25 percent of MoECRT schools do not have gender-segregated toilets, and the average number of toilets, 58 students to one toilet in primary schools, is not up to the international standards of 25:1 ratio. Twenty-two percent of MoECRT schools have no access to water and 47 percent reported no soap nor running water.

This Policy Note identifies four areas of policy gaps: (1) current national regulations and requirements under COVID, (2) written regulations and implementation of them, (3) stipulated standards and school practices, and (4) national regulations and international standards. The key corresponding recommendations for these four gaps are: (1) ensure the availability of handwashing facilities for teachers and students to practice regular handwashing for disease prevention at school; (2) ensure planning and budget allocation to comply with the regulations and standards of WASH facilities (at national and subnational levels); (3) ensure all stakeholders are aware of the standards and follow appropriate practices at school level; and (4) update the national standards to international standards.

# Introduction

Many countries around the world closed schools along with other widespread restrictions as an immediate response to the spread of COVID-19. However, disruptions to instructional time in the classroom can have a severe impact on a child's ability to learn, and countries continue to grapple with the complex decisions of when and how to reopen schools for in-person learning following widespread closures due to the pandemic.<sup>1</sup>

In Indonesia, the COVID-19 pandemic has led to school closures, similar to other countries, forcing more than 68 million young Indonesians out of their classrooms.<sup>2</sup> The Government of Indonesia (GoI)'s plan to re-open schools has prescribed a district-by-district approach based on infection rates and appropriate facilities for social distancing, with higher levels of education (secondary) opening before lower levels (primary).<sup>3</sup>

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1

UNESCO, UNICEF, World Bank, WFP, UNHCR 2020. Supplement to Framework for reopening schools: Emerging lessons from country experiences in managing the process of reopening schools. <https://unesdoc.unesco.org/ark:/48223/pf0000374312>

2

MoECRT Circular Letter No. 4/2020 on Implementation of Education activities in the COVID-19 Emergency Period which closed all schools and suspended exams on March 24, 2020.

3

<https://www.kemdikbud.go.id/main/blog/2020/06/buku-saku-panduan-pembelajaran-di-masa-pandemi-covid19>

The new school reopening plan is expected to come into effect from July 2021, allowing face-to-face learning after teacher vaccination is completed in June 2021. Indonesia's face-to-face learning policy is based on a system of permits granted by the local government / regional education offices / Ministry of Religious Affairs (MoRA) offices and includes a tiered system of consent from education units and parents. The previously applied risk zoning map will no longer determine the granting of face-to-face learning permits.<sup>4</sup>

Consistent with the global framework of school reopening<sup>5</sup>, the guidelines emphasize that school re-opening must be safe and aligned with the country's overall COVID-19 health response, with all reasonable measures taken to protect students, staff, teachers and their families. In line with the development of school reopening protocols and procedures, there has been increased attention to the status of water, sanitation and hygiene (WASH) facilities in Indonesian schools, including toilets and hand washing facilities<sup>6</sup>. This is not only to address the urgent conditions due to the pandemic, but also to accelerate the achievement of universal access to basic WASH in schools by 2030 under the Sustainable Development Goals that aim for 'universal' and 'equitable' access to safe drinking

water, sanitation and hygiene 'for all', while 'paying special attention to the needs of women and girls and those in vulnerable situations'.

The objective of this note is to summarize a quick assessment of the current situation of WASH facilities, norms, standards and practices in schools and to discuss policy implications related to the response to the COVID-19 pandemic and more generally.

Existing literature on school hygiene and WASH facilities shows that even before the pandemic, WASH was seen as important for student enrollment, retention, school attendance, and academic performance. Developing country cases such as Zambia<sup>7</sup> and Ethiopia<sup>8</sup> demonstrate this, as does a review of twelve low-income country studies<sup>9</sup>. Developed country cases such as New York state in the USA also indicate the importance of WASH in schools. Functional and hygienic WASH facilities are particularly important for adolescent girls.<sup>11</sup> The need for WASH facilities is even more acute when it comes to disease prevention during and after pandemics – as reported by emerging literature from China<sup>12,13</sup>, and a recent comparative review of policy and practices from Norway, Denmark, Singapore, and China<sup>14</sup>.

**4**  
Based on MoECRT Minister, HE. Nadiem Makarim's presentation on November 20, 2020.

**5**  
UNESCO, UNICEF, World Bank, WFP, UNHCR. 2020.

**6**  
In this note, we define WASH facilities as toilets and handwashing facilities (faucets/running water).

**7**  
Citation: Agol, D. and Harvey, P., 2018. Gender differences related to WASH in schools and educational efficiency. *Water Alternatives*, 11(2), p.284.

**8**  
[https://www.unicef.org/wash/schools/files/WinS\\_ESAR\\_-\\_Nairobi\\_Workshop\\_Final\\_Report\\_August\\_2012.pdf](https://www.unicef.org/wash/schools/files/WinS_ESAR_-_Nairobi_Workshop_Final_Report_August_2012.pdf)

**9**  
McMichael, C., 2019. Water, sanitation and hygiene (WASH) in schools in low-income countries: A review of evidence of impact. *International journal of environmental research and public health*, 16(3), p.359.

**10**  
Durán-Narucki, V., 2008. School building condition, school attendance, and academic achievement in New York City public schools: A mediation model. *Journal of environmental psychology*, 28(3), pp.278-286.

**11**  
Van Eijk, A., M. Sivakami, M. Thakkar, A. Bauman, K. Laserson, S. Coates, and P. Phillips-Howard. 2016. "Menstrual Hygiene Management among Adolescent Girls in India: A Systematic Review and Meta-Analysis." *BMJ Open* 6(3).

**12**  
Chen, X., Ran, L., Liu, Q., Hu, Q., Du, X. and Tan, X., 2020. Hand Hygiene, Mask-Wearing Behaviors and Its Associated Factors during the COVID-19 Epidemic: A Cross-Sectional Study among Primary School Students in Wuhan, China. *International journal of environmental research and public health*, 17(8), p.2893. <https://www.mdpi.com/1660-4601/17/8/2893>

**13**  
Cheng, S.Y., Wang, C.J., Shen, A.C.T. and Chang, S.C., 2020. How to safely reopen colleges and universities during COVID-19: experiences from Taiwan. *Annals of Internal Medicine*, 173(8), pp.638-641. <https://www.acpjournals.org/doi/full/10.7326/M20-2927>

**14**  
Melnick, H. and Darling-Hammond, L., 2020. Reopening Schools in the Context of COVID-19: Health and Safety Guidelines from Other Countries. Policy Brief. Learning Policy Institute. <https://files.eric.ed.gov/fulltext/ED606555.pdf>



This study included a rapid situation analysis of WASH facilities in Indonesian schools using quantitative and qualitative data, including a review of relevant regulations. It covers schools under both the Ministry of Education, Culture, Research, and Technology (MoECRT) and the Ministry of Religious Affairs (MoRA) but focuses on the basic education sub-sector only (primary to senior secondary schools). This study adopts quantitative and qualitative approaches to assess the current provision of WASH facilities in Indonesian schools. Two quantitative data sets are used, including the following: (a) Service Delivery Indicator (SDI)

Survey conducted during 2018 of a sample of 350 primary schools (of which 87 are from MoECRT and 263 from MoRA); and (b) Dapodik data 2019 for MoECRT, which contains information on 219,950 schools (including all levels of schools from primary to upper secondary). The study also took a qualitative approach: (c) conducting a desk review of government policies, regulations and norms for service provision, and (d) conducting interviews in a selected number of SDI sampled schools using semi-structured questionnaires with some open-ended answers.



# Key Findings

## 2.1

### Key findings from Dapodik - a focus on MoECRT schools

#### Toilet availability in schools

**N**ationally, 8.2 percent of schools in Indonesia did not have a functional toilet in 2019. According to Dapodik 2019 data, 18,019 out of 219,084 schools in the country do not have a functional (usable) toilet. This proportion is similar for public and for private schools – 8.3 percent (13,845) and 7.9 percent (4,174) of public and private schools do not have toilets. The statistics can be further broken down to schools without any toilets and schools with toilets that are not functional. In fact, 3.6 percent (7,816) of schools reported there are no toilets in the school and 4.7 percent (10,233) reported they have toilets but that they are not functional. Schools without functional toilets, whether because they do not exist or do not function, are commonly found in West Java, North Sumatera, East Java and Papua, all of which have more than a thousand schools each without functional toilets.

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#### 15

*Definition of usable toilets in Dapodik:* Toilets function properly for students, and there is clean water available for the needs of the toilet and wiping (anal washing). Water can be sourced from a faucet that flows clean water or there is a tub/water reservoir in the latrine which holds enough clean water. Toilet must be walled, roofed, lockable and easy cleaned. The minimum standard by the government regulations is three toilets (for boys, girls and teachers) as discussed in the following paragraphs. However, the statistics here show that 8.2 percent of schools do not have even one functional toilet.

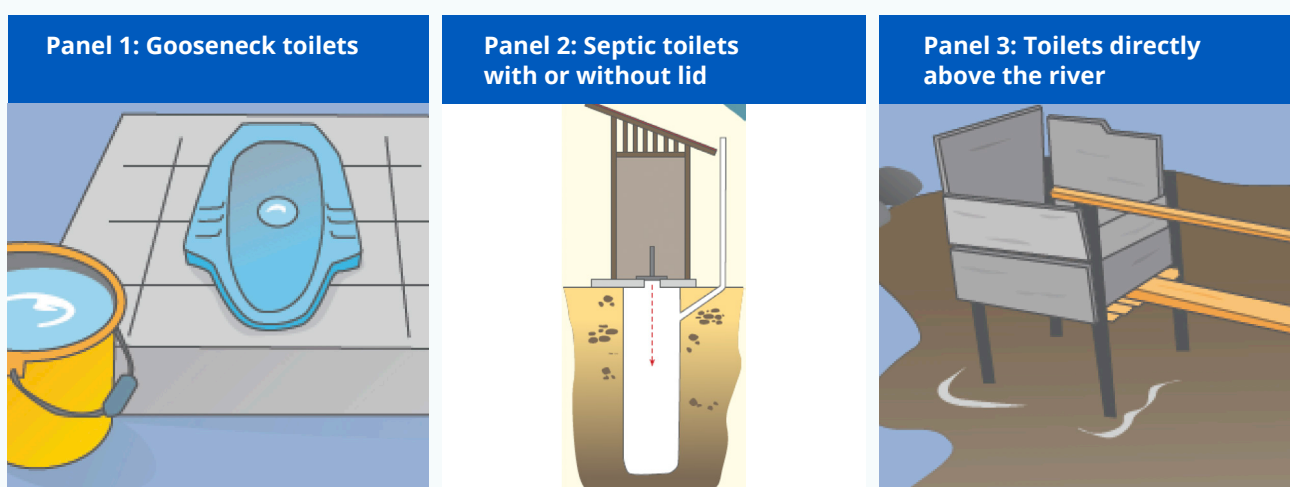
## ☐☐ Nationally, 8.2 percent of schools in Indonesia did not have a functional toilet in 2019. ☐☐

In schools where toilets are available, 92 percent of MoECRT schools have gooseneck toilets while the remaining eight percent of schools have septic tank toilets or toilets above the river, raising a question concerning the standards for functional toilets. In 201,095 schools where toilets are available, gooseneck toilets are the most common type (Panel 1) in public and private schools. However, some provinces still have hundreds of schools using septic tanks without lids (Panel 2), such as East Java, Central Java, West Java, and North Sumatera. Toilets directly over a river (Panel 3) also exist in 0.5 percent of schools (1,066 schools) even though they are considered functional.

Even if toilets are available in schools, they may not be available to students if there are insufficient facilities and they are not separated

by gender. Dapodik data show that the national average number of toilets available are one toilet per 58 students in elementary schools (SDs), one per 47 in junior secondary schools (SMPs), and one per 51 in senior secondary schools (SMAs). The available data does not allow the calculation of toilet ratio and students by gender as required in the MoECRT Regulation No. 24/2007 and MoECRT Regulation No. 40/2008 (Table 1). At the aggregate level, nationally, the ratios for elementary schools are close to the standard norms, but the ratios for secondary schools are not. There is also regional variation in these ratios. The worst cases can be found in Papua, Banten, and West Java, especially in elementary public schools where more than 80 students may have to share a single toilet. Nationally, 41.1 percent of schools in Indonesia fail to meet the criteria of the minimum three functional toilets.

**Figure 1.** Types of toilets



Sources: MoECRT's Guidelines for School Sanitation Data in DAPODIK version 2017

**The standards for toilets can be reviewed in comparison with international standards.**

Although the student to toilet ratio seems overall consistent with the standard norms, this may not be in line with international standards as stipulated by WHO and UNICEF, which determine a ratio of 1:25

for girls or female staff (i.e. one toilet to 25 staff and student) and one toilet plus one urinal per 50 boys or male staff (i.e. the ratio of 1:25 of toilet/urinal to boys or male staff).<sup>17</sup> By this definition, 75.9 percent (152,580) of schools with at least one toilet do not meet the standard of 1:25.

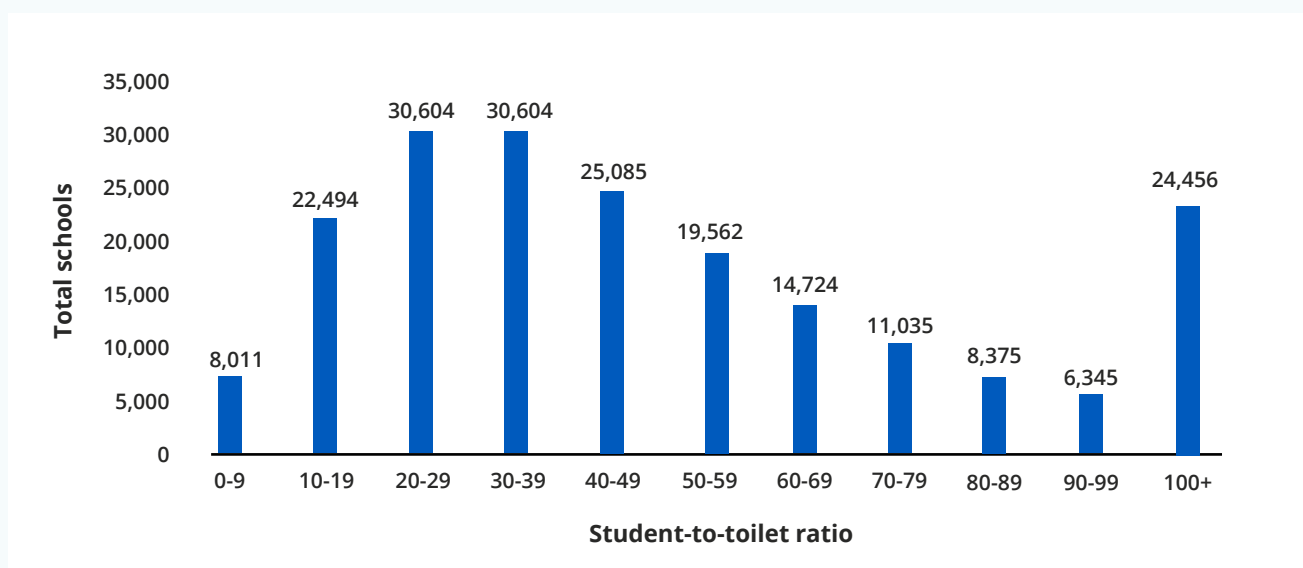
**Table 1.** Comparison of student-to-toilet ratio by standards against the national average and WHO guidelines

	Standards	National average	WHO guidelines
<b>Elementary Schools</b>	-	<b>1:58</b>	<b>1:25</b>
<b>Boys</b>	1:60	-	1:25
<b>Girls</b>	1:50	-	1:25
<b>Secondary Schools</b>	-	<b>1:49</b>	<b>1:25</b>
<b>Boys</b>	1:40	-	1:25
<b>Girls</b>	1:30	-	1:25

**Sources:** Regulation No. 24/2007 and MoECRT Regulation No. 40/2008; Dapodik 2019; Adams, John, et al., 2009.

**Note:** More detailed descriptions of WHO guidelines are found in Box 1.

**Figure 2:** Distribution of schools with student-to-toilet ratios



**Source:** Dapodik 2019



**Box 1.** Excerpts from the WHO guidelines for school WASH facilities**For toilets:**

- Sufficient, accessible, private, secure, clean and culturally-appropriate toilets are provided for school children and staff.
- There are sufficient toilets available – 1 per 25 girls or female staff, and 1 toilet plus 1 urinal (or 50 centimeters of urinal wall) per 50 boys or male staff.

**Water:**

- **Quality:** Water for drinking, cooking, personal hygiene, cleaning and laundry is safe for the purpose intended.
- **Quantity:** Sufficient water is available at all times for drinking and personal hygiene, and for food preparation, cleaning and laundry when applicable.
  - Day schools 5 liters per person per day for all school children and staff
  - Flushing toilets 10–20 liters per person per day for conventional flushing toilets/1.5–3 liters per person per day for pour-flush toilets

Source: Adams, John, et al., 2009.

**Water availability is more of a challenge than the availability of toilets – 22 percent of MoECRT schools have no access to water.** Among 219,084 MoECRT schools with available data, 47,393 schools reported no access to water. By definition, this means schools do not have water sources for sanitation available around the school environment or collected and stored around the school for student needs. Private schools are marginally better – 19.1 percent of private schools reported no water access whereas 22.4 percent of public schools reported no water access. Schools without water availability are concentrated in *West Java* and *East Java*, where more than 5,000 schools have no water. *East Nusa Tenggara* also faces the same problem, with more than 4,000 schools with no water availability. In terms of the proportion of schools, *North Kalimantan*, *East Nusa Tenggara*, and *Papua* face the worst situation since more than 50 percent of their schools have no water.

**Almost half of schools in Indonesia reported that they had no soap and flowing water (47%), and this poses a serious public health concern as regular handwashing with hand soap is critical for disease prevention.** By school type, 48.9 percent of

public schools and 39.8 percent of private schools reported no soap nor flowing water available. While soap is commonly available in local markets, this may be partly because the government regulations do not require soap for school toilets. According to the statistics, schools without soap and flowing water are largely located in *West Java*, *East Java*, and *North Sumatera* – where more than 10,000 schools reported that they had no soap or flowing water. By proportion, many provinces, namely Aceh, Bengkulu, East Java, North Maluku, Papua, West Papua, East Nusa Tenggara, West Sumatera, Central Sulawesi, Southeast Sulawesi, and North Sumatera report that more than 60 percent of schools have no soap nor flowing water.

**Regulations related to waste management are not clear.** While waste management such as drainage and availability of emptying services are important elements in WASH facilities, the regulatory framework is not explicit about requirements for them. Standard information on waste management focusing on sewage and drainage has now been incorporated to the Dapodik questionnaire for 2021.<sup>19</sup>

<sup>18</sup>

Either from bottled water, piped water, river water, rainwater, protected/unprotected well, protected/unprotected water springs, or other sources.

<sup>19</sup>

The new Dapodik questionnaire covers basic questions: whether school has trash bins, a sewage system, and if schools routinely clean the septic tank (every 3-5 years). unprotected water springs, or other sources.

## 2.2

## Key findings from SDI data - a focus on MoRA schools

The team then reviewed the Survey Delivery Indicator (SDI) survey 2019 dataset which was collected in a sample of 350 primary schools in February–March 2019. This dataset contains information on both MoECRT and MoRA schools but is more focused on MoRA schools.<sup>20</sup> The sample includes 253 madrasahs that were randomly chosen from across the country, although the sample is not large enough to make comparisons across provinces. The SDI collected information about toilets and handwashing facilities assessed by an independent survey firm, instead of relying on school principals' self-reported information. A World Bank study on education data reliability found that data discrepancies between the real conditions in schools and information recorded in education datasets appear in 28 percent of sampled schools (World Bank, forthcoming-b). Although the reason for the discrepancy is not assessed, this dataset allows more objective insights relating to the conditions of the WASH facilities and information from MoRA schools (as enumerators apply the same criteria across sampled schools).

**The WASH indicators for MoRA madrasahs are overall lower than MoECRT schools, largely because private madrasahs, consisting the majority of MoRA madrasahs, perform lower on these indicators.** Table 2 presents a comparison of some key WASH indicators. Although the total number of public madrasahs is much smaller than private madrasahs, the condition of WASH facilities is generally better among public madrasahs. Public madrasahs alone show better statistics than MoECRT schools (except relating to toilets for staff), however the less developed WASH facilities in private madrasahs seem a critical issue when compared to other types of schools in the country. It should be also noted that both MoRA madrasah and MoECRT schools perform some way below international standards. Generally, the ratio of students per toilet is 1:86 in public madrasahs and 1:75 in private madrasahs, which is about three times higher than the international standard. In comparison with government regulations, out of all madrasahs that have separate toilets for boys and girls, 47.5% fulfill the minimum ratio for girls (the ratio of 1:50), and 50.3% fulfill the minimum ratio for boys (1:60).

**Table 2.** Percentage of schools with WASH facilities by school type, 2019 SDI

Indicator	MoRA Madrasah Ibtidaiyah			MoECRT		
	All	Public	Private	SDI (Primary schools only)	Dapodik (Primary schools only)	Dapodik (all schools)
Toilets for staff	77.2	89.4	76.3	92.3	N/A	N/A
Toilets for students	80.4	86.2	80.0	85.7	91.5	91.8
Hand-washing facilities (with soap)	49.7	64.3	48.6	56.0	54.0	53.3
Number of toilets per school	3.4	6.4	3.2	5.2	3.5	4.6

Source: Sawamoto & Marshall, 2020.<sup>21</sup>

<sup>20</sup>

A small number of non-madrasah religious schools were also included, but their results are not represented due to the very small sample size. There may also be some limits to the generalizability of the madrasah sub-sample results (public and private), especially since there are only 54 public madrasahs. A convenience sampling was employed for the selection of MoECRT schools (i.e., the selection was made based on their proximity to madrasah schools). The sample size of MoECRT schools is small relative to the population, so it is provided simply as a reference point.

<sup>21</sup>

World Bank. Forthcoming-a. Infrastructure, Learning Complements, and Student Learning: Working Together for a Brighter Future. Washington, D.C.

## 2.3

## Key findings from school interviews

The third source of data was qualitative interviews of a selected number of school principals and local government officials.<sup>22</sup> Interviews were conducted with a sub-sample of 15 school principals from SDI-surveyed schools and three local government officials based in the locations of SDI school samples. The interviews were qualitative in nature with the main objective of assessing the WASH related knowledge of school principals and norms in schools.

### Assessment of WASH facility standards

School principals are typically unaware of the standards for WASH facilities and do not know how to assess them against standards. Based on the limited sample of the interviews, there seems to be a gap in principals' familiarity with the standards for school WASH facilities – as stipulated by the MoECRT Regulation No. 24/2007 and MoECRT Regulation No. 40/2008. Principals tended to say that the conditions of WASH facilities are compliant with the standards as long as they do not have any broken or unusable toilets.

There is a lack of objective and pragmatic criteria for assessing WASH functionality. The interviews with the principals of the SDI-sampled schools identified gaps between principals' assessments and SDI enumerators' assessments of the conditions of toilets/WASH facilities, and it was clear that these gaps originated from knowledge gaps and the definition of functionality. In SDI, toilets are marked as functional if they fulfill three requirements namely *clean, private,*

*and accessible.*<sup>23</sup> On the other hand, definitions of functionality commonly used by principals are: *availability of gooseneck toilet, running water, good air circulation, lighting, privacy and cleanliness.* The negative list for declaring dysfunctionality of toilets are: heavily damaged or can no longer be used by the students. Consequently, except for one school without a toilet, principals' assessments are generally more positive than the SDI surveyor's assessments. While it is not clear if the gap comes from the difference of the definition or objectivity of assessment by the assessors, it is likely that a much larger proportion of schools actually have issues with the functionality of toilets if we apply the SDI standards.

There is scope to refine MoECRT's regulations on school WASH facilities and to strengthen enforcement, especially during the pandemic. The COVID-19 pandemic has led schools across the world to follow new hygiene practices and guidelines to prevent the spread of disease in school premises. A review of MoECRT Regulation No. 24/2007 and MoECRT Regulation No. 40/2008 indicates that there is an opportunity to refine Indonesia's school WASH standards as at present, soap is not a requirement in school toilets, only one toilet is required for teachers, without gender separation. There are no specific requirements for handwashing facilities. In addition, enforcement of these laws seems to be weak – as evidence from the ground has demonstrated. Many schools have not fulfilled the stipulated minimum requirements, and with a lack of adequate funding for WASH facilities, there is no strong pressure at present to enforce these policies in schools.

<sup>22</sup>

The interview questionnaires and more detailed information about the interviews are available upon request. Please contact Rythia Afkar <rafkar@worldbank.org> for more information.

<sup>23</sup>

This indicator is composed by using three questions: 1. Are the toilets clean? (1= Extremely clean, 2= Reasonably clean, 3= Not clean); 2. Are the toilets private (have doors or separating entry way wall?); and 3. Are the toilets accessible (unlocked, not overflowing, etc.)

## Gender dimensions of WASH facilities

**More than twenty-five percent of schools reported that there were no gender-segregated toilets for students or teachers.** According to Dapodik data, more than 25 percent of MoECRT schools nationally do not have gender-segregated and decent toilets. Forty five percent of special schools do not have separate and decent toilets<sup>24</sup>. Based on the interviews, out of 15 schools, one does not have a toilet at all and three have only one toilet for all, including teachers. A lack of gender-segregated toilets is also an issue for teachers. According to MoECRT Regulation No. 24/2007 and MoECRT Regulation No. 40/2008, at a minimum there should be one toilet for teachers, so gender-segregated toilets are not a standard requirement and thus less likely to be provided. From our interview samples, in addition to three schools which only have one toilet for all (students and teachers), four schools only have one toilet for teachers.

## Maintenance practices and responsibilities

**Schools are responsible for maintaining school WASH facilities, but they may not be adequately incentivized to do so.** Schools are responsible for maintaining their WASH facilities according to MoECRT Regulation No. 8/2020<sup>25</sup> and are provided with an annual per capita-based School Operational Grant –

BOS (*Bantuan Operasional Sekolah*). According to the regulations (Presidential Regulation No. 141/2018 and MoECRT Regulation No. 11/2020), schools are expected to use BOS funds for minor repairs or maintenance of toilets if the observed damage is less than 30 percent of the physical damage. However, many schools do not commonly allocate BOS to the expenses related to toilet repair and maintenance. The primary reason is that schools prioritize honorary teacher salaries within the limited amount of BOS funds, followed by purchase of teaching and learning materials or consumables. Consequently, repair and maintenance of WASH facilities usually comes lower on the priority list. Moreover, if the damage of the WASH facilities is assessed at 30 percent or more<sup>26</sup>, then the responsibility for repair is shifted to the subnational governments (provinces, districts, cities). The issues associated with this current policy lie in the ambiguity in the definition and criteria of the 30 percent damage and also the perverse incentive related to repair and maintenance of WASH facilities – as repairing more damaged toilets falls under the remit of subnational governments, thus freeing schools of the responsibility.

**Schools are entitled to funds from the government for major repairs or new construction, but WASH facilities are not usually prioritized.** According to Presidential Regulation No 88/2019 on the Physical Special Allocation Fund (*DAK-Fisik*), funds for the rehabilitation of toilets will be provided to schools if their damage is assessed as medium (30-45 percent) or major (45-65 percent)<sup>27</sup>. Under this scenario,

**24**

Based on MoECRT's presentation titled "*Penyediaan WASH (water, sanitation, hygiene) di Satuan Pendidikan*" on 8 September 2020

**25**

The use of BOS funding includes maintenance of school facilities and infrastructure with minor damage including repair of school toilets, hand washing stations, drainage of dirty water and other sanitation.

**26**

According to Minister of Public Works and Housing Regulation, Permen PUPR 22/2018 on Construction of State Buildings, slight damage (0-30 percent) is defined as damage to non-structural components, such as roof covers, ceilings, floor covers and infill walls, medium damage (30-45 percent) includes damage to some non-structural components, and / or structural components such as roof and floors structures, heavy damage (> 45 percent) is damage to most building components, both structural and non-structural, which after repair can still function effectively.

**27**

The Circular letter from the Minister of Finance (MoF) to Governors/Mayors (S-30/MK.7/2020) on the guideline for proposal submission of DAK-Fisik funds states that the subnational governments submit their proposals based on function/sub-function/activity through the KRISNA portal. In the case of education, MoECRT and subnational governments usually gather to discuss the plan to address school infrastructure gaps. MoECRT then validates the gaps with Dapodik data to ensure that the proposals are aligned with infrastructure needs. MoF then allocates DAK-Fisik funds for education based on final verification from MoECRT.



the responsibility to fix WASH facilities shifts from schools to local governments. However, subnational governments typically do not prioritize the use of DAK-*Fisik* for repair of toilets as the priorities are usually related to facilities that are seen as directly supporting learning such as classrooms or libraries. Apart from DAK-*Fisik*, subnational governments can also use their own source revenue (PAD/*Pendapatan Asli Daerah*) as part of their APBD (local government budgets) to fund the rehabilitation of school toilets and other WASH facilities. However, limited data and information is available to estimate how much of subnational government budgets are allocated for the rehabilitation of school WASH facilities.

**Subnational government decision making relies heavily on the Dapodik data on school facilities, but schools may report inaccurately as they lack civil engineering expertise.** According to interviews with principals and districts, there are variations in the practices of identifying the needs for repair and maintenance. Out of three districts interviewed, two reported that schools should submit requests for maintenance while the other said they would rely on MoECRT to decide based on Dapodik. In districts where only Dapodik is used, there is a caveat. MoECRT guidelines for Dapodik are comprehensive, containing detailed information on how to determine the level of damage to facilities. However, without civil engineer inputs, calculations of damage to infrastructure is not an easy task for most school staff. Interviews with schools and districts indicate that some inspection visits by districts local offices discover a much higher degree of damage than was reported by schools in Dapodik, which would cause the schools to be left out of opportunities to receive funding for necessary repairs and maintenance.

**Needs for repair and maintenance of WASH facilities, as perceived by policy makers, may be underestimated.** The number of schools in need of new construction of toilets is huge. Based on Dapodik data in December 2019<sup>28</sup>, there are 28,725 schools without WASH facilities and 91,868 with limited facilities,<sup>29</sup> with an estimated IDR 14.8 trillion (US\$ 3.5 billion) needed for repair, maintenance, and construction of WASH facilities. Accurate assessments by civil engineers may be required for all schools because schools may not have reported accurate conditions of the toilets according to the government guidelines. There could be other potential hidden infrastructure costs as well. MoECRT Regulation No. 11/2020 requires elementary schools to provide a minimum 28 square-meter area for one toilet, but there are cases where this criterion may not be met due to lack of space.<sup>30</sup>

 **75.9 percent of schools with at least one toilet do not meet the international standard of toilet ratio 1:25.** 

<sup>28</sup>

MoECRT PowerPoint received during a meeting on 8 September 2020.

<sup>29</sup>

Schools with limited drinking water facilities are defined as schools with insufficient water resources (not available at all times). Limited toilet facilities mean toilets are not separated (for boys and girls) and/or damaged. Limited handwashing facilities are those without running water and hand soap.

<sup>30</sup>

There is a requirement for an area of field for ceremonies and sports (15x20 m). Toilets cannot be constructed if there is not sufficient land in school campuses. The land on which the school is built must be owned either by the school itself or by the local government. Thus, availability of land is important for building new WASH facilities (either on a new land or in an extension to an upper floor), and this could be a constraint for schools with limited space.

## 2.4

## Key findings from district interviews

**O**verall, interviews with district officers validate the findings identified from interviews with school principals. Local education offices (*Dinas Pendidikan*) only support schools in terms of funding for the repair of toilets with medium to heavy damage (i.e. above 30 percent damage, which is not clearly defined) while schools are responsible for regular maintenance using BOS funds. Determining the schools with medium to heavily damaged WASH facilities is based on Dapodik data. This confirms the importance of accurate Dapodik information to properly identify the needs for WASH facility repairs and to allocate necessary resources from education budgets.

**Procedures for repair and maintenance of WASH facilities vary across education local offices.** There are different systems in each district for schools to follow in order to obtain funding for toilet repairs and construction. Among the interviewed districts, two require proposals from schools to proceed while one reported that Dapodik data is sufficient for such decisions. The first two districts select which schools get the funding while one does not have the authority to do it as MoECRT selects directly based on Dapodik data.

**Local education offices tend not to prioritize WASH facility repairs.** The small sample of interviews gave the impression that the repair and maintenance of WASH facilities is overall low on their priority list because there are many other competing demands for civil works, such as improvement of classroom and facilities that are seen as more directly linked to learning. When resources are allocated to the repair of WASH facilities, higher priority is given to more damaged WASH facilities which meet the minimum land ownership and physical space requirements.

☐☐ **Almost half of schools in Indonesia reported that they had no soap and flowing water, and this poses a serious public health concern as regular handwashing with hand soap is critical for disease prevention.** ☐☐

# Conclusions and policy recommendations

3.

To recap, functional WASH facilities consist of: **(a) sanitation infrastructure – toilets, (b) hygiene infrastructure – for handwashing and bathing, (c) non-polluted adequate quality water, and (d) effective waste management – drainage and waste emptying.** In addition, particularly for adolescent girls, gender segregated facilities are a necessity.

In conclusion, this study highlights four gaps to be addressed by future policy discussions and presents a number of policy recommendations. It also suggests concrete immediate next steps for policy maker consideration.

## **GAP 1: Between the required and current availability of handwashing facilities at schools during and after the COVID-19 pandemic.**

The most urgent gap relates to the availability of handwashing facilities for teachers and students so they can practice regular handwashing for disease prevention at school. Refining MoECRT Regulation No. 24/2007 and MoECRT Regulation No. 40/2008 on school WASH facility standards to require every school to have functional handwashing facilities with running water and hand soap will help limit transmission of COVID-19 and other common diseases. This regulation

can be further elaborated by the ratio of students to the facilities and protocols for maintenance and ‘sanitization’ practices of handwashing facilities. To this end, the immediate recommended actions are to (i) supply necessary hand soap; (ii) install handwashing facilities with running water if currently unavailable as well as maintain the soap supply and handwashing facilities; and (iii) maintain consistent messaging on handwashing as key strategy for COVID-19 prevention.

## **GAP 2: Between national regulations and resource availability for local implementation of the regulations**

Planning and budgetary allocations are required to enable all Indonesian schools to comply with the regulations and standards of WASH facilities. To implement the regulations of WASH facilities, especially during this pandemic, public financing for the capital cost of toilets in 28,725 public/private schools and repair/maintenance costs in 91,868 public/private schools will be required and should particularly focus in regions and districts where there is a lack of functional

WASH facilities.<sup>31,32</sup> For MoRA schools, the number is unknown, however by extrapolating SDI findings, around 3,514 public schools and 40,262 private schools need the repair and renovation of toilet facilities.<sup>33</sup> The total investment to achieve the national target for toilet facilities in all schools in Indonesia is estimated at around IDR 18.5 trillion (USD 1.3 billion).<sup>34</sup> Meanwhile public financing for the capital cost of handwashing and water facilities in 91,627 public/private schools and

<sup>31</sup>

MoECRT Presentation on 8 September 2020.

<sup>32</sup>

Private schools can also obtain funding from the government through DAK-Fisik, but public schools are usually prioritized.

<sup>33</sup>

SDI data shows: (i) percentage of schools without toilets are 14 percent and 20 percent for public and private MoRA primary schools respectively, (ii) schools with limited toilet facilities are 74 percent and 63 percent for public and private MoRA primary schools respectively.

<sup>34</sup>

Estimated with the assumptions on the unit cost to support schools with no and limited facilities as much as 200 and 100 million rupiah per school respectively (MoECRT Presentation on September 8, 2020). The total number of schools in need of funding are for all school levels under both MoECRT and MoRA combined.



## The most urgent gap to address relates to the availability of handwashing facilities for teachers and students so they can practice regular handwashing for disease prevention at school.

repair/maintenance costs of 48,410 public/private schools is estimated to be around IDR 1.77 trillion (USD 125.5 million)<sup>35</sup>. This means not only providing one functional toilet/handwashing facility for each school (which currently 8.2 percent of schools lack) but also to comply with student-toilet ratios and gender-segregated toilets (which currently 41.1 percent of schools lack). Proper installment of these WASH facilities will require investment (capital) budgets. This is critical during the pandemic and an additional budget allocation is required if schools are to open safely. However, if this capital spending should be allocated over time, all subnational governments need to develop WASH facility improvement plans for the next three years, estimating the needs for capital and repair/maintenance budgets.

**Recommendations:** Ensure availability of gender-separated toilets and nurture a preventive maintenance culture rather than fix and repair in schools for sustainable maintenance of functional WASH facilities, clarifying the BOS guidelines for that purpose. As per current standards, it is important to ensure that gender-separated toilets are available for all schools to manage menstrual hygiene-related needs. While the current standards require gender-separated toilets for students only, gender-separated toilets for teachers and staff are also necessary; thus the recommendation for four toilets (male and female for students and teachers). In terms of maintenance practices, the current system divides responsibilities of minor maintenance and major repairs between

local education offices and schools respectively. However, systemic incentives of different stakeholders may not be aligned as schools perceive that financial responsibilities are passed on to the education local offices once toilets become dysfunctional and they therefore neglect the importance of minor maintenance. A sustainable maintenance scheme is built on a culture of preventive maintenance at schools, where schools maintain WASH facilities (and buildings as well) before the damage becomes large. This will have financial implications as the average life of facilities and buildings will be prolonged. As schools receive BOS funding every year, it is imperative to understand how schools use BOS – especially related to salary and non-salary expenditures. Regular maintenance of WASH facilities will prevent escalation of minor damages to moderate and major damage. **Immediate action would be to develop a training program to improve assessment, planning and budgeting for better WASH facility management, and deliver training to all relevant subnational government officers to adequately assess WASH needs and reflect these in the planning and budget preparation process, providing targeted support to specific geographical areas and private madrasahs that show low performance on key WASH indicators.** In addition, collaboration and coordination across relevant ministries (such as MoECRT and Ministry of Public Works) as well as coordination with subnational and village governments (through Village Funds) could also be strengthened to ensure all schools have proper and functional WASH facilities.

## GAP 3: **Between the standards, implementation, and monitoring at school level**

All stakeholders including central and subnational governments, school principals and communities need correct information about standards and follow appropriate practices at school level. The study has discovered that most of the interviewed principals are not aware of the standards for WASH facilities. While many deviations might be minor, it is important for principals to know the correct standards for good hygiene practices at schools, including knowledge of the importance of gender-separated toilets and nurture a preventive maintenance culture. Schools need to be able to assess the conditions of their WASH facilities and take adequate action. Parents and communities can help to promote local oversight on the adequacy of the WASH facilities at school. Both subnational and central government should use this information as a benchmark to develop short- and long-term investment and improvement plans to accelerate progress in achieving the Sustainable Development Goal targets to provide universal access to basic WASH in schools.

**Recommendations: Develop an assessment and monitoring tool<sup>36</sup> for regular use by principals, governments, and communities and raise awareness of school hygiene practices and maintenance of WASH facilities among principals, teachers, students, and communities.** School hygiene practices can only improve through behavioral changes of all stakeholders. Awareness raising of all school level stakeholders is necessary to establish good school hygiene – including proper use of WASH facilities and regular handwashing for disease prevention, regular cleaning and

maintenance, and accurate assessments of the conditions and planning to mobilize necessary resources to maintain WASH functions. *As an immediate action, develop an assessment tool for regular use by principals to assess the condition of drinking water, sanitation, hygiene, and waste management facilities/infrastructure and usage.* Then produce (online-based) awareness raising programs for principals and teachers to update their knowledge. Good hygiene practices are key to prevent spread of diseases and to maintain health. It is recommended that principals are held accountable for ensuring good hygiene practice within their schools through annual reviews. The tool should be used by school supervisors in their regular school visits. The tool should also produce reliable and timely data which can support both subnational and central governments to identify and plan immediate and long-term actions to improve WASH facilities at school. To support long-term behavioral change, integrating hygiene education and practices in the curriculum (for example through Science and Physical and Health Education) as well as in the school regulations (requirement to wash hands before entering school premises, after outdoor activities, before and after lunch break, etc.) could support hygiene behavior change and improve the health status in school environment. *Another immediate action could be to develop a hotline for students and communities to directly raise WASH related issues in the schools.* Posters and brochures accessible to girls and boys, including those with disabilities, those from minority language groups, and those in remote areas, will be useful to inform them about the hotline.

## GAP 4: Between international and Indonesian standards of WASH facilities

The currently implemented standards for school hygiene in Indonesia may not be sufficient for the current pandemic and are not up to international standards. WHO guidelines recommend 1:25 ratio for toilets to children (for both boys and girls) at elementary and secondary school. On the other hand, the standards in Indonesia are 1:60 (boys) or 1:50 (girls) for elementary schools and 1:40 (boys) and 1:30 (girls) for secondary schools. There is scope for improving the standards of WASH facilities for schools in Indonesia and reviewing the specifications of facilities – such as locations, ventilation, lighting, space, size of the facilities, and waste management – for various types of schools (including pre-schools, primary, and secondary schools), and for male and female students and teachers.

**Recommendations:** Review and ensure that the policies and regulations governing school hygiene are sufficient to prevent COVID-19 transmission and are aligned with international standards. Several immediate and medium-term policy measures can be considered to fill the gaps between international and national norms and standards for WASH facilities. The policy would also need to ensure all types of schools, including both public and private schools under MoECRT and MoRA, adhere to the standards. In the medium term, it is important to re-evaluate and update the current regulations, including updating the regulations to ensure all WASH facilities are accessible to all children, including children with special needs in inclusive schools.<sup>37</sup> *Immediate action would be to conduct a review of the current policy framework against international standards in all aspects of WASH facilities in the context of COVID-19 and update them if necessary.*

All stakeholders including central and subnational governments, school principals and communities need correct information about standards and to follow appropriate practices at school level!

**Table 3.** Summary of gap areas and policy recommendations

Suggested measures		
Gaps	During COVID-19 (immediate)	Post-COVID-19 (medium- to long-term)
Required versus currently available handwashing facilities	<ul style="list-style-type: none"> <li>• Availability of handwashing facilities is a critical aspect of for schools to reopen safely during and post-pandemic. If current standards do not prescribe this, they should be updated.</li> <li>• Consider additional budgets and immediate repair or installation of functional WASH facilities in schools where WASH facilities are not functional. This should be a minimum requirement for school reopening during the COVID-19 pandemic.</li> <li>• <b>Immediate action: (i) supply necessary hand soap; (ii) install handwashing facilities with running water if currently unavailable as well as maintaining soap supply and handwashing facilities; and (iii) maintain consistent messaging on handwashing as key strategy for COVID-19 prevention.</b></li> </ul>	<ul style="list-style-type: none"> <li>• Continue promoting good handwashing practice in schools for disease prevention and daily hygiene.</li> </ul>
National regulations versus funding against implementation of the regulations	<ul style="list-style-type: none"> <li>• Consider additional budgets for constructing gender-separated toilets for both students and for teachers. The standard of gender-separated toilets for teachers is necessary though not explicit in the current regulations.</li> <li>• <b>Immediate action: Develop awareness and training materials to improve diagnosis, planning, and budgeting process for WASH at subnational government level.</b></li> <li>• <b>Immediate action: Provide targeted support to specific geographical areas and private madrasahs that show low performance on key WASH indicators.</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Develop subnational government-wide yearly plans</b> for upgrading all toilets to functional status, instead of relying on ad hoc budget allocations.</li> <li>• Gradually shift the funding mechanism to incentivize <b>preventive maintenance</b> over waiting for major repairs.</li> <li>• Conduct a stock-take of the use of BOS and identify how much flexibility schools have to spend on non-salary expenses from BOS.</li> <li>• Clarify the guidelines for using BOS for salary and non-salary expenses.</li> <li>• Update data collection and reporting protocols for more consistent and standardized information about WASH facilities across districts.</li> <li>• Strengthen necessary coordination between central, subnational, and village governments on the funding for WASH facilities at school.</li> </ul>

Standards versus practices in schools	<ul style="list-style-type: none"> <li>● Provide information training for all school principals about the standards for WASH facilities and expected hygiene practices and ensure they are well informed about them (notification of regulations; information packages, with confirmation of their understanding of the regulations).</li> <li>● <b>Immediate action: Develop an assessment tool for WASH facilities for regular use by principals and provide training in its use.</b></li> <li>● <b>Immediate action: Introduce a community monitoring and reporting hotline.</b> Brochures and posters for awareness raising will be useful.</li> </ul>	<ul style="list-style-type: none"> <li>● Develop a regular online training program for school headmasters and staff (including teachers) for school maintenance, including maintenance of WASH facilities.</li> <li>● Promote a culture of <b>preventive maintenance</b> in schools.</li> <li>● Integrating hygiene education and practices in the curriculum as well as in the school regulations.</li> <li>● Providing relevant information on hygiene education and its practices in school for parents and communities.</li> </ul>
International versus national standards	<ul style="list-style-type: none"> <li>● <b>Immediate action: Review the current policy framework against international standards and update as needed.</b></li> </ul>	<ul style="list-style-type: none"> <li>● Re-evaluate, revise and update the regulations to align standards for WASH facilities to international standards, including accessibility for children with special needs.</li> <li>● Ensure the updated standards apply to all types of schools – MoECRT, MoRA, public, and private schools.</li> </ul>



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# Annex 1

## Government Regulations setting standards for WASH facilities in Indonesia

1	Government Regulation (PP) No. 19 Year 2005 (PP No.19/2005)	In the description on school facility standards, toilets are not mentioned as facilities that should exist in schools.
2	Ministry of Health (MoH) Regulation No. 1429/2006 – Guidelines on School Environmental Health	<p><i>Ratio:</i> 1:40 for boys, 1:25 for girls  <i>Location:</i> Separated from classrooms, the health emergency room (UKS room), and the library  <i>Condition:</i> Clean, no standing water  <i>Air circulation:</i> Ventilation hole area to floor area 30%  <i>Lighting:</i> Light intensity 100 LUX, no glare</p>
3	MoECRT Ministerial Regulation (Permendiknas) No. 24 Year 2007 (Permendiknas No.24/2007)	<p><b>Toilet</b>  Ratio of toilets to students  Primary (SD): 1: 60 for boys; 1:50 for girls  Secondary (SMP and SMA): 1:40 for boys, 1:30 for girls  Building requirement: Toilet has roof, wall, can be locked, has clean water, and is easy to clean.  Size: Minimum 2 m<sup>2</sup>.</p> <p><b>Sink (for washing hands)</b>  <i>Ratio:</i> 1 per classroom, 1 per UKS room, 1 per teacher room.  No explanation about the size or other requirement.</p> <p><b>Building age (for schools):</b> Built to last at least 20 years (no specific instruction about the age of toilets)</p>
4	Permendikbud No.8/2018 on Operational Guidelines for the Special Allocation Fund (DAK) for Education Physical (Construction)	<p><b>Toilet blocks in schools</b>  2 toilets for boys, 2 toilets for girls  2 urinals for boys  <i>Sinks:</i> 2 for boys, 4 for girls  No per classroom requirement for sinks.</p> <p><i>Water:</i> Clean water from a water tower, if there is no public water supply  <i>Air circulation:</i> Available as per building standards  <i>Lighting:</i> Available as per building standards  <i>Location:</i> Easy to access  <i>Size:</i> Minimum 1.5 m x 1.75 m = 2.55 m<sup>2</sup></p>

