



Equity of Access to WASH in Schools

A Comparative Study of Policy and Service Delivery in Kyrgyzstan, Malawi, the Philippines, Timor-Leste, Uganda and Uzbekistan



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The Convention on the Rights of Persons with Disabilities, adopted by the United Nations General Assembly in 2006, promotes the right of children with disabilities to access an inclusive, quality and free primary and secondary education on an equal basis with others in the communities in which they live (article 24). To emphasize the inclusive nature of this right, the education sector is moving away from using the terms 'special needs' or 'special education'. The researchers for this comparative study on equity of access to WASH in Schools use the term 'disability' to the extent possible.

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Executive Summary



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Water, sanitation and hygiene education in schools – WASH in Schools – provides a healthy and comfortable environment that helps improve children’s health and boosts educational attendance and achievement. School-aged children in many countries, however, are unable to benefit from adequate access to WASH in Schools. Although all children are affected by lack of access, vulnerable populations often bear a disproportionate burden. Even in schools where adequate facilities are in place, some children are excluded due to discrimination against certain groups and the failure to provide facilities that meet special needs. Consequences of this exclusion have been shown to lead to inadequate and unequal learning environments, and increased drop-out and repetition rates, among affected groups of children.

Focus for the equity dimensions, by country

Kyrgyzstan: Gender; regional disparities (ethnicity); urban-rural disparities.


Malawi: Urban-rural disparities; gender; disabilities.

Philippines: Regional disparities; disabilities.

Timor-Leste: Urban-rural disparities; gender.

Uganda: Gender; disabilities; regional disparities.

Uzbekistan: Regional disparities; gender.



Understanding the mechanisms by which children are excluded from WASH in Schools is essential to ensuring adequate and equitable access for all school-aged children.

‘Equity of Access to WASH in Schools’ presents findings from a six-country study conducted by UNICEF and the Center for Global Safe Water at Emory University. This research was carried out in collaboration with UNICEF country offices in Kyrgyzstan, Malawi, the Philippines, Timor-Leste, Uganda and Uzbekistan and their partners. The six case studies presented together contribute to the broader understanding of inequities in WASH in Schools access by describing various dimensions that contribute to equitable or inequitable access across regions, cultures, gender and communities.

The researchers identified key dimensions of equity through formative investigations that included discussions with service delivery providers and policymakers. In some countries, inequity existed but was found to be linked to poverty and the prioritization of other health and development objectives, rather than a specific policy. In other cases, some dimensions could not be fully investigated, usually due to lack of data. Because it was not feasible to explore every equity dimension in each of the six countries, focus areas were prioritized for each case study.

Some dimensions were found to be relevant across country contexts. Limited access to WASH in Schools compromised children’s health, educational attainment and well-being, and exacerbated already existing inequities and challenges in each of the countries.

Gender was identified as a key aspect of inequity in all six countries, but the mechanisms and manifestations of gender inequities varied within each context. Menstruating girls in Malawi and Uganda faced consistent challenges in obtaining adequate access to WASH in Schools facilities, preventing them from comfortably practising proper hygiene. In this context, a lack of access to school WASH facilities is a potential cause of increased drop-out rates. Girls in Kyrgyzstan and Uzbekistan were affected by the poor maintenance of facilities and lack of privacy, rather than by overall lack of basic access. In these settings, lack of doors and private latrine stalls, coupled with proximity to boys’ latrines, led to girls avoiding the use of school WASH facilities, which may have deleterious health effects.

Accessibility of WASH facilities for children with disabilities was identified as an issue in all countries. In Malawi and Uganda, concerted effort has been made to include school sanitation, water and hand-washing facilities appropriate for children with disabilities. The designs for facilities, however, were often found to inadequately address students' needs, and hand-washing facilities remain largely inaccessible, compromising students' health.

Regional disparities in access to WASH in Schools were also prevalent across country contexts. Urban schools in Malawi faced extreme crowding, as well as difficulty in maintaining and providing sufficient WASH facilities. In Timor-Leste, children in rural schools suffered from limited access to water infrastructure and to school WASH. Schools in conflict-affected regions in southern areas of the Philippines had much larger pupil-to-toilet-bowl ratios and were much more likely to lack access to water than their northern peers. In Kyrgyzstan, schools populated by minority ethnic groups were found to have inequitable access to WASH in Schools. The arid regions of western Uzbekistan near the Aral Sea faced increasing challenges to ensuring access to school WASH, as surface and groundwater sources continue to be depleted.

School WASH policies

Policies that apply to WASH in Schools already exist in many countries, most of which acknowledge the need for, and supply provision for, equitable access. These policies, however, do not always result in equitable environments on the ground. Although it is essential to create a positive policy environment at the national level, many barriers to equitable access – including maintenance and cleanliness of facilities – must also be tackled at the local and school levels.

Vulnerable populations – such as girls, children with disabilities, students of minority ethnic groups, and children from marginalized and isolated sub-national regions – are disproportionately affected by a lack of access to WASH in Schools. General findings regarding the policy gaps include:

- Inadequate enforcement of existing policies, or lack of policies, leads to low accountability at the national, district and school levels to include adequate provision of school WASH facilities.
- Insufficient monitoring and evaluation of WASH in Schools programmes leads to an inaccurate understanding of true access at the school level and to potentially misplaced allocation of funds to schools.
- WASH in Schools infrastructure, operation and maintenance are underfunded at all levels of government and implementation. Often, funding is available for capital costs, such as latrine construction, but not for recurrent costs of maintaining those facilities.

Recommendations for addressing the challenges

Addressing the gaps in policy and provision of water, sanitation and hygiene in schools will greatly enhance the accessibility and usability of WASH in Schools infrastructure in all country settings and will help diminish inequities of access. Overall recommendations to address the mechanisms of exclusion and the specific inequities of access that result are as follows:

- Include stipulations for the inclusion of vulnerable populations within policies and guidelines for school WASH infrastructure and practice.
- Increase accountability for WASH in Schools at all levels. This accountability should include increased monitoring and evaluation, along with the designation of clear roles and responsibilities for providing and maintaining school WASH infrastructure.
- Increase financial investment in operation, maintenance and cleanliness of existing facilities. This can be accomplished via national budget allocations or by identifying school-level income-generating practices such as school gardening.
- Improve designs for school infrastructure to better accommodate students' needs. Designs intended to improve equitable access to school WASH, such as infrastructure for children with disabilities and girls of secondary school age, should be informed by the actual experience of those students.

Ensuring equitable access to WASH in Schools helps fulfil the widely endorsed mandate of the Convention on the Rights of the Child and builds a foundation of health and learning for all children. Understanding the various dimensions of inequity in access across country contexts, as well as the mechanisms that cause or perpetuate those inequities, will help broaden the understanding of how access to WASH in Schools at a global scale can be achieved.

1

Introduction: Equity of Access to WASH in Schools

Background

Access to safe water, improved sanitation and hygiene education has been shown to reduce the incidence of diarrhoeal illness, acute respiratory infection and helminthic infection. Much of the attention in the water, sanitation and hygiene (WASH) sector has been focused on achieving the Millennium Development Goal of reducing by half the proportion of people without sustainable access to safe drinking water and basic sanitation at the household level. With the advent of free primary education around the world, more children are attending school, yet there has not been a commensurate increase in infrastructure improvement to support those students.

In many countries, national-level data are not available to track progress on school water, sanitation and hygiene coverage. Research on WASH has largely focused on diarrhoeal morbidity among children under age 5, but a few studies have been conducted to assess the health and educational impacts of WASH in Schools. Poor children and girls are more likely to miss school, and there is evidence that improved WASH conditions lead to reduced absence. Improved access to WASH in Schools may also reduce diarrhoeal disease among pupils and their siblings.

School-aged children bear the greatest burden of morbidity due to soil-transmitted helminths, and evidence suggests that improved access to WASH in Schools helps mitigate both infection and its recurrence. Reduced incidence of helminthic infection improves nutrition among children. Better nutritional status improves children's attendance and cognition, which in turn can have lasting benefits for their abilities to secure a livelihood as adults. Improved WASH in Schools also contributes to increased comfort and quality of the overall learning environment, which has a direct impact on learning outcomes.

In 2010, more than 20 partners joined together to launch 'Raising Clean Hands', the global Call to Action for WASH in Schools. The Call to Action identified six points of action to ensure that all schools have child-friendly water and sanitation facilities and provide hygiene education, and that all children have access to the benefits of WASH in Schools. These points of action are:

1. Increase investment in the sector.
2. Engage policymakers.
3. Involve multiple stakeholders.
4. Demonstrate quality programming.
5. Monitor access.
6. Contribute to the evidence base.

In response to the Call to Action, the global WASH in Schools community has scaled up advocacy and technical efforts for increasing school WASH coverage. Progress in coverage and access cannot be evaluated without a clear understanding of the issues that affect equitable access to WASH facilities and hygiene education in schools. At the global level, however, equity issues have yet to be fully described and discussed. Often data are not available at meaningful units of analysis to understand levels of service at the school level nor do they describe the quality of this coverage/attainment within the school. Instead, they are usually aggregated measures of coverage, often broken down only to the number of students per facility by district or province.

Study goals

In March 2011, Emory University's Center for Global Safe Water developed a collaboration with UNICEF to assess the global scope of access to WASH in Schools. The purpose of this collaboration was to contribute to strengthening WASH in Schools programming in support of the global Call to Action and to provide case studies to highlight issues of inequitable access. Six UNICEF country offices came forward to participate in developing case studies: Kyrgyzstan, Malawi, Philippines, Timor-Leste, Uganda and Uzbekistan. The specific objectives of the research were to:

1. Quantify and describe access to WASH in Schools.
2. Describe the country-specific policy environment for equity of access to WASH in Schools at the national, district and local levels.
3. Explore the country-specific dimensions of WASH equity and evaluate how the relationship between policy and provision of WASH are affected by equity.

Methods

Researchers from Emory University spent three months at the UNICEF country office in each of the case study countries. Country placements occurred between July and December 2011. The first phase of the research included a situation analysis in which the research team reviewed available literature on water, sanitation and hygiene, and WASH in Schools access, from sources within the Government, UNICEF and other non-governmental organizations (NGOs). Key informant interviews (KIIs) were then conducted with locally based international NGOs and national officials. This national-level data collection aimed to answer the following questions:

- What is known about the current situation of WASH in Schools? What is the national Government's view of the situation, and what is UNICEF's?
- What is the official policy related to WASH in Schools? Are national standards in place? What do these standards include, and what are they missing?
- What are the WASH considerations unique to this country's culture?
- What other actors or data sets are important to understanding the situation of WASH in Schools in this country?

The second phase of the research involved analysis of available data and collection of primary data, including field visits to schools and focus group discussions (FGDs). The purpose of the field visits was to establish the 'ground truth' for official statistics as much as possible. Observations of school WASH facilities were taken, and FGDs were conducted with students, teachers and parents. In each country, the research team focused on a crucial domain of equity within the country context.

The study combines qualitative and quantitative methods to not only describe the current situation, but also to document *why* this is the current situation in schools. By more fully understanding who is served and not served by current policy and practices, it is possible for stakeholders to more effectively reach their child health, education and equity goals.

Implementing an effective and sustainable WASH in Schools programme involves numerous factors. Identifying the challenges and analysing their impact will contribute to the scaling-up process. We used a bottleneck analysis approach to document the gaps in the policy and provision of WASH in Schools. Specific approaches to each of the study objectives are discussed below:

Summary of primary data collection

Kyrgyzstan: 30 key informant interviews, 18 school visits and 22 focus group discussions.

Malawi: 46+ semi-structured interviews, plus focus group discussions with primary-school students.

Philippines: 17 key informant interviews and 18 focus group discussions.

Timor-Leste: 30 key informant interviews, 23 school observations and 13 focus group discussions.

Uganda: 37 semi-structured interviews and five informal focus group discussions with primary-school students.

Uzbekistan: 13 key informant interviews, plus four school visits for structured observation/interviews.

1. Quantifying access to WASH in Schools

We quantified access through a desk review of available data at the international and national levels. Key informant interviews were conducted with government officials, UNICEF staff and NGO staff members. The available data varied considerably from country to country.

2. Understanding the policy environment

Equity is typically manifest in strong policy and robust execution of that policy among all stakeholders. Policy dimensions explored as part of this study include:

Accountability. It is often unclear whether the ministry of water, health or education is primarily responsible for school water, sanitation and hygiene education. Policies should be in place that designate clear roles and responsibilities at the ministerial and local levels for provision of WASH in Schools.

Funding. Distribution of funds must be based on need, not political calculations, and be sufficient to address marginalized conditions such as water scarcity.

Technology standards. Latrine, water supply and hand-washing technology standards must account for children of different religious beliefs, ages and abilities. Standards must be developed for schools with different soil types (for latrines) and water availability.

Hygiene education. Educational materials need to be available in minority languages of instruction and for children of all ages and literacy skills. Materials must also be gender appropriate and should consider topics relevant to menstrual hygiene management in appropriate age groups.

Monitoring access. Monitoring of school-level indicators, for functionality of facilities as well as presence, is crucial to track progress towards universal access to WASH in Schools.

3. Dimensions of WASH in Schools equity

Researchers explored inequities that are evident at the sub-national and school levels. Sub-national dimensions include urban-rural disparities, climatic or geographical conditions, type of school institution (public, private, informal) and regional disparities. Individual dimensions include gender; age; socio-economic status, caste or tribe; religion; and disabilities. The dimensions, as outlined below, were identified through a literature review, with specific focus areas derived from discussions with country-level and international stakeholders:

Urban-rural disparities. Schools in urban and rural areas have varying access to replacement parts and require different low-cost technologies.

Climatic or geographical conditions. Schools in semi-arid or arid areas may require more expensive technology for water access and may require sanitation facilities that use little or no water. In areas with sandy soils, pit latrines may not be appropriate.

Type of school institution. Certain schools are supported exclusively by the community, without government support. Populations in the areas where these schools are located are typically more marginalized and the community may not have the knowledge to promote WASH in Schools or the expertise to construct appropriate facilities.

Regional disparities. Certain districts or provinces may receive less funding or attention because they are farther from the capital city, more remote, have poorer road access, or are occupied by minority or marginalized subgroups, tribes or ethnicities. Explicit policies that dictate equitable distribution of resources are essential to ensure these areas are served.

Gender. Much has been written about the impact of WASH in Schools on girls. Girls typically have lower rates of enrolment and primary school completion. They are frequently required to fetch water and clean latrines, and are more affected by inadequate WASH in Schools access. Standards need to account for girls' needs.

Age. Young children’s needs are frequently overlooked in the design and provision of WASH in Schools facilities and promotion of age-appropriate hygiene education materials.

Socio-economic status, caste or tribe. Marginalized populations have poorer access to WASH in Schools due to a multitude of reasons, including discrimination in coverage and knowledge of how to use facilities properly.

Religion. Different religions require different hygiene practices. Standards must be in place to ensure that facilities create an enabling environment for children of different faiths.

Disabilities. Children with limited physical mobility and reduced mental abilities face pervasive exclusion from WASH in Schools. Based on the type of infrastructure available, facilities at school often do not accommodate children with disabilities.

Overview of the findings

The researchers identified key dimensions of equity through formative investigations that included discussions with service delivery providers and policymakers. In some countries, inequity existed but was found to be linked to poverty and the prioritization of other health and development objectives, rather than a specific policy. In other cases, some dimensions could not be fully investigated, usually due to lack of data. Because it was not feasible to explore every equity dimension in each of the six countries, focus areas were prioritized for each case study. Table 1.1 lists the key dimensions explored in each country.

TABLE 1.1 Equity dimensions explored in detail, by country

Country	Dimensions
Kyrgyzstan	Gender • Regional disparities (ethnicity) • Urban-rural disparities
Malawi	Urban-rural disparities • Gender • Disabilities
Philippines	Regional disparities • Disabilities
Timor-Leste	Urban-rural disparities • Gender
Uganda	Gender • Disabilities • Regional disparities
Uzbekistan	Regional disparities • Gender

If policy, programming and funding fail to identify the equity issues noted above, steps are not taken to address these inequities and students’ education, health and well-being suffer – often without national-level actors even realizing there is a problem. Identifying and including all of these inequities in discussions is vital if we hope to support local communities in achieving equity for all their children.

This study documents basic methods to identify the policy environment and the equitable provision of and access to WASH in Schools. Our vision is that all children attend a school with a safe and clean environment. Access to WASH facilities that provide safe water and sanitation, and allow children to practise proper hygiene, are fundamental components of that vision. To achieve this goal, it is important to document aspects of inequity, to recognize disadvantaged populations and to understand the role of policy in supporting the equitable provision of WASH in Schools.

2

Kyrgyzstan



Kyrgyzstan country snapshot

Household access to improved water ¹	90%
Household access to improved sanitation ¹	93%
School access to improved water	N/A
School access to improved sanitation	N/A
School hand-washing facilities coverage	N/A
Hand-washing with soap practice among schoolchildren	N/A
Primary education net enrolment ratio ²	86%
Secondary education gross enrolment ratio ²	86%
Gender Inequality Index ³	66
Number of primary schools nationwide ⁴	1,600

1. % population, JMP 2012. 2. UNESCO 2011. 3. Rank out of 156 countries, UNDP 2011. 4. Formal schools, Ministry of Education 2010 (estimate).

Abstract

Water and sanitation coverage in Kyrgyzstan is high relative to other low-income countries. Nearly all schools provide basic hygiene education and have access to sanitation on school grounds; roughly half have access to water on school grounds. Water and sanitation infrastructure, however, is in need of substantial repair at the national level to ensure continued school and household coverage.

National policies relating to water, sanitation and hygiene are primarily focused on large systems, and no specific WASH in Schools policy or coordinating body exists. WASH in Schools data have not been collected at the national level, although two recent situation assessments provide the first picture of access across the country.

Findings of this case study indicate the disparities in WASH in Schools access at various levels. School sanitation and hygiene do not meet girls' needs, particularly for secondary-school students, leading to widespread avoidance of school facilities. Schools populated by minority ethnic groups often receive a reduced amount of government support, which precludes schools from engaging in necessary maintenance and repair of WASH systems. Regional disparities are also evident. Rural schools are more likely to have limited or no access to WASH, and they are isolated from the greater policy and monitoring environment, which does not regulate basic infrastructure such as latrines.

Ensuring realistic standards for WASH in Schools and a more inclusive policy environment, as well as establishing mechanisms and providing funds for operation and maintenance of facilities, may greatly contribute to improved and equitable access.

Background

The education system in Kyrgyzstan has undergone dedicated reform during the past 20 years, even in the face of economic and political instability. The current system inherited much from the previous Soviet structure: Regular school attendance is well established; literacy and numeracy rates are traditionally high; and school infrastructure is large, sturdy and complex (Becbolotov 2004).

Schools in Kyrgyzstan serve both primary and secondary students, from Grades 1–11, in two daily shifts. While rural schools may have fewer than 200 students, some urban schools serve more than 2,000 (Becbolotov 2004). Most schools were built under Soviet direction prior to 1990, and the Government of Kyrgyzstan has identified that many are in need of substantial structural repair. Current public expenditure for education primarily covers the cost of teachers' salaries and school administration. Despite very high enrolment levels, assessments suggest that learning achievement levels need to be improved (UNICEF 2009). Towards this end, the Government has established raising the level of educational outcomes as a national priority.



Many schools in Kyrgyzstan are in need of substantial repairs, including water and sanitation infrastructure. A first day of school in Osh Province is shown above.

Photo credit: Stephanie Ogden © 2011

Household-level WASH coverage in Kyrgyzstan, as in other Central Asian countries, appears to be relatively high, and access measurements indicate that coverage is steady (ACTED 2010, Regallet 2011). Since the collapse of the Soviet Union and the subsequent decentralization process, however, public water system infrastructure, sewage and waste disposal systems have suffered due to the lack of adequate funding and regular maintenance. Although national data do not currently exist, mounting evidence suggests that infrastructure has been deteriorating, and indicators for water and sanitation coverage may not accurately reflect the reality of coverage across the communities in Kyrgyzstan (ACTED 2010, Regallet 2011).

No national data regarding WASH in Schools coverage are currently available. Water and sanitation infrastructure serving schools, including centralized water supply and sewage systems, as well as concrete pit latrine structures, is widely identified as poorly maintained and in a state of increasing disrepair (ACTED 2010, CAAW 2011, Domashov, et al., 2011).

Methods

The case study research on WASH in Schools equity in Kyrgyzstan consisted of the following:

- A desk review of relevant national and local government documents.
- 30 key informant interviews with members of national and local government, experts working in local and international NGOs and aid agencies, and school administrators and teachers.
- Structured observations conducted during 18 school visits.
- 22 focus group discussions conducted with students, primarily secondary-school-aged girls, but also boys, and children from Grades 3 and 4.

School observations and focus group discussions took place primarily in the southern provinces of Batken, Jalal-Abad and Osh, although six focus group discussions were conducted in the capital city of Bishkek and rural communities of Chui Province in the north.

Policy and enabling environment

Providing access to clean water has a prominent place in national policy, particularly in relation to children. Access to water is a basic right guaranteed by the Government, and Kyrgyzstan has ratified the Convention on the Rights of the Child, which establishes every child's right to clean drinking water, in article 24. The Ministries of Health and of Rural Water Supply, along with local governments, bear responsibility for general water and sanitation provision. No national legislation assigns specific responsibilities for water, sanitation or hygiene in schools, however, and there is no national-level coordinating body to link school authorities responsible for various aspects of WASH in Schools.

Local government is assigned the responsibility to ensure operational provision of drinking water to schools, to remove waste from school grounds and to ensure repair of school infrastructure. School administrators and staff are responsible for ensuring hygienic conditions within school grounds.

Standards for WASH in Schools are set by the State Department of Sanitation and Epidemiological Services, Ministry of Health, via regulations known as the Sanitary Rules and Norms (SanPiN). These regulations outline minimum standards for water quality and sanitary conditions of school grounds and facilities, and specify the design of sanitation and hygiene infrastructure such as toilets, latrines and washrooms.

Schools are monitored by the Department Centers for Sanitary and Epidemiological Services, and school administrators and staff are accountable for non-compliance to hygienic standards via fines to school budgets or administrators' salaries. Table 2.1 illustrates the various roles and responsibilities for ensuring WASH in Schools access in Kyrgyzstan.

TABLE 2.1 Roles and responsibilities for WASH in Schools, Kyrgyzstan

Key WASH stakeholders	Roles and responsibilities
Ministry of Education	Provides national funding for schools, including school infrastructure, repairs and materials
Department Centers for Sanitary and Epidemiological Services, Ministry of Health	Monitors the sanitary and hygienic conditions of schools and acts as a regulatory body
Local government (local self-governing bodies)	Responsible for providing water, sanitation and other communal services to the greater community, including schools and public institutions (via local water service providers)
School administrators	Responsible for cleanliness, maintenance and repair of WASH infrastructure at schools

Sources: The SanPiN of the Kyrgyz Republic and key informant interviews with the Ministry of Education, the Department of Education Osh Province, the Osh Department Center for Sanitary and Epidemiological Services, and school administrators.

Interviews with school administrators reveal that the frequency and regularity of monitoring by the Centers for Sanitary and Epidemiological Services vary greatly among schools. Some schools report that no monitoring is conducted at the school. Documents from the Centers for Sanitary and Epidemiological Services indicate that the general condition of school infrastructure and children's appearance as a measure of hygiene practices are monitored. The Centers do not, however, monitor the condition of WASH in Schools infrastructure thoroughly. Water supply and sewage infrastructure is recorded as 'existent' or 'not-existent', but the functional and hygienic conditions of that infrastructure are not recorded. Pit latrines are excluded entirely from the monitoring documents; neither their existence nor condition is recorded.

WASH in Schools coverage

No nationally aggregated data regarding school water and sanitation currently exist. An Education Management Information System (EMIS) database is being established within the Ministry of Education, which may facilitate collection and aggregation of school-level data. The Government of Kyrgyzstan and its partners have recognized the need to collect information on centralized water and sewage infrastructure. It is unclear whether the data collection will be extended to include latrine infrastructure, non-piped water sources and hygiene infrastructure.

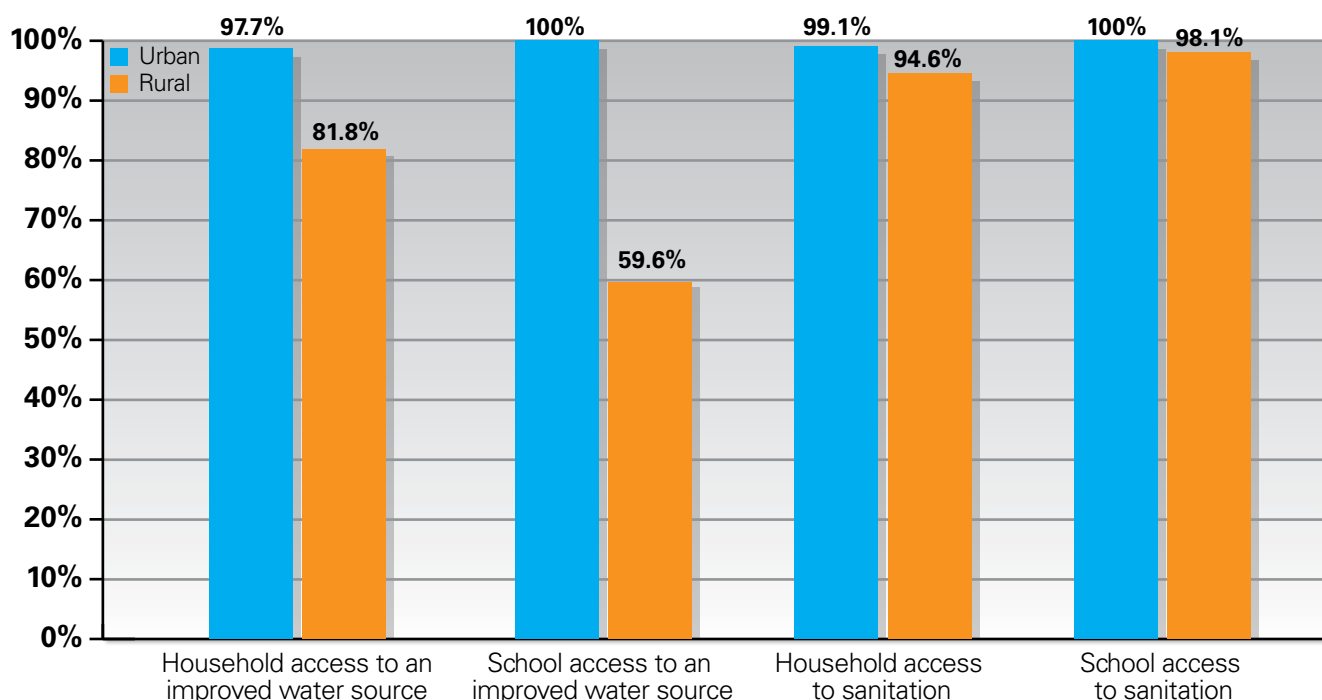
Two UNICEF-supported surveys have recently been conducted to assess the situation of water, sanitation and hygiene in schools and primary health-care facilities. A survey of 60 schools was conducted in the northern provinces of Issyk-Kul, Naryn and Talas (Domashov, et al., 2011), and a study of 30 schools was conducted in the southern provinces of Jalal-Abad and Osh (CAAW 2011). These assessments provide the first detailed information on access to WASH in Schools throughout Kyrgyzstan, with the exception of Batken and Chuy Provinces, which were not included due to logistical limitations.

Data suggest that fewer than 50 per cent of schools have access to a water source on or near school grounds. Nearly all schools have access to some type of sanitation infrastructure, predominantly reinforced pit latrines of Soviet design, although maintenance and use of these latrines appears to be low. A large majority of schools do not have functioning hand-washing facilities for students, and almost no schools make soap available for hand washing.

UNICEF data regarding water availability in schools are in direct contrast to official 2011 government statistics, which indicate that 100 per cent of schools have consistent access to an improved water source (NSC 2011). Although the source of this discrepancy is unclear, it suggests that the perception of WASH in Schools access held within the national government may be markedly overestimated.

Access to WASH in Schools appears to be proportionally less than household access, particularly in rural areas. Although 80 per cent of rural households have access to an improved water source, only 60 per cent of rural schools do. Figure 2.1 summarizes the disparities between household and school access to water and sanitation.

FIGURE 2.1 Comparison of household and school access to water and sanitation, Kyrgyzstan, by %



Sources: Household access – MICS 2006; School access – Domashov, et al., 2011.

The existence of water supply systems may not ensure that water is consistently accessible in schools. As shown in Table 2.2, many schools with supply systems report that water is not always available. Several rural and peri-urban schools reported that water was only available on certain days per week or several days per month. Many urban schools reported that water is often available only two to four hours a day, predominantly during the morning session. In such cases, students who attend school in the afternoon are left without access to water.

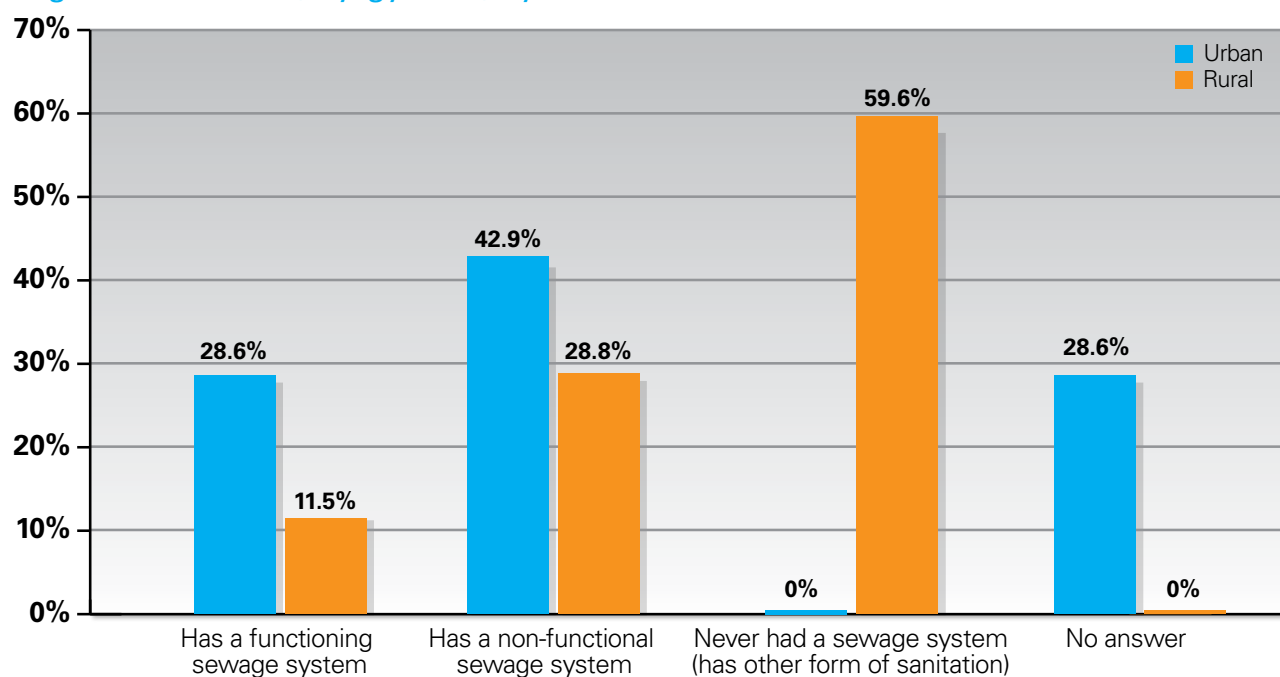
TABLE 2.2 Access to WASH in Schools, Issyk-Kul, Naryn and Talas Oblasts, northern Kyrgyzstan

Indicator	% of surveyed schools
Schools have access to an improved water source within 50 metres of school grounds	30%
<i>Schools that report that they:</i>	
Always have water	45%
Sometimes have water	23%
Never have water	28%
Have access to sanitation infrastructure	98%
Have toilets connected to central sewage	13%
Have pit latrines	85%

n = 60 schools Source: Domashov, et al., 2011 (statistics from the corresponding data set).

Many schools report that water supply and sanitation infrastructure is non-functional or is minimally functional. Of the 60 schools surveyed in the northern provinces of Kyrgyzstan, nearly two thirds once had functioning sewage systems, of which 69 per cent are no longer working, as shown in Figure 2.2. These schools have reverted to the use of pit latrines. No similar data were captured regarding water systems, but the high percentage of non-working sewage systems in schools suggests that many centralized water systems may be similarly non-functional. Further investigation is needed to determine how many schools have access to working water and sanitation systems.

FIGURE 2.2 Surveyed rural and urban schools with functional sewage infrastructure, Kyrgyzstan, by %



n = 59 schools Source: Domashov, et al., 2011.

The condition of school pit latrines across Kyrgyzstan has been consistently reported as unsanitary. Faecal matter is often present, and school administrators report that pits are not emptied regularly due to lack of government funds for communal services. Outdoor school pit latrines adhere to Soviet design standards, last updated in 1986, and are enforced by the local department of architecture. These designs have no exterior doors and none to separate squat holes to provide privacy. Figure 2.3 shows latrines where lack of maintenance has resulted in faecal deposits that increase the risk of disease transmission (*left and centre*), and a girls' latrine constructed by UNICEF, without doors.

Observation during 18 school visits in Batken, Jalal-Abad and Osh suggest that functional hand-washing facilities are present in a minority of schools. Hand-washing facilities with water were accessible near the latrine in only one third of the schools visited, and soap was present in only two schools. Previous studies conducted in the northern provinces of Kyrgyzstan suggest that household use of hand-washing facilities and soap is similarly low (Biran 2001).

FIGURE 2.3 School latrines, Osh Province, Kyrgyzstan



Photo credit: Stephanie Ogden © 2011

Bottlenecks

The bottleneck analysis is a visual representation of the challenges and barriers prohibiting equitable access to WASH in Schools. Indicators are organized into four categories: (1) policy and enabling environment; (2) supply; (3) demand; and (4) quality.

The WASH situation in Kyrgyzstan benefits from the expansive reach of current infrastructure, strong government investment in education and a history of access to WASH systems across the country. As a result, WASH in Schools access could be quickly and effectively improved. The bottleneck analysis matrix shown in Table 2.3 describes the conditions of WASH in Schools access and identifies those that are currently unmet. These unmet conditions are considered to be the primary barriers to equitable WASH in Schools access and are discussed below.

The policy environment in Kyrgyzstan is relatively strong, and the presence of WASH facilities across the country generally high. Primary barriers to equitable access to WASH in Schools relate to supply, demand and quality of provision. Lack of funding at the national and local levels prevents proper investment in facilities and human resources, which results in poorly maintained and inadequate facilities at the school level. Additionally, because school priorities are many and funding to schools is limited, the expressed demand for improvement of WASH in Schools facilities is low.

The current lack of established monitoring mechanisms and data collection for WASH in Schools precludes an accurate understanding of needs and challenges schools face in ensuring daily access for their students. Additionally, lack of monitoring of school hygiene and sanitation systems has resulted in infrastructure that is not well maintained. Addressing data collection and broader monitoring is essential to understanding the true state of WASH in Schools access in Kyrgyzstan.

No formal budget is allocated to WASH in Schools at the national level. Local government budgets are allocated yearly to schools but are largely distributed in the form of credit for the purchase of materials. Therefore, schools do not have funds to purchase, maintain or repair WASH infrastructure. Furthermore, schools do not have sufficient budgets allocated for cleaning materials to ensure that latrines are kept in sanitary condition. The sanitary condition of school WASH infrastructure is further compromised by the fact that there are no clear responsibilities assigned for the maintenance of school WASH infrastructure at the national or local government levels, or at the school level.

TABLE 2.3 Bottleneck analysis of WASH in Schools, Kyrgyzstan

Category	Determinant	Indicators	Metric/source of information	Stoplight evaluation of existing situation
Policy and enabling environment	Social norms	Teachers and government officials express that WASH in Schools is a priority	KIIs with teachers, national and local government officials	Although water access is valued, latrines and hand washing are not
		Children have been taught good WASH behaviours and recognize their importance	WASH in Schools assessments (studies on knowledge, attitudes and practices); FGDs with students	Hygiene knowledge among children is high, but behaviours are not enforced
		School culture is non-discriminatory	FGDs and KIIs with teachers; KII with in-country education specialist	Students with disabilities are largely excluded from community schools
	Policy framework	School WASH standards are in place and contain stipulations for equity	National Sanitary Rules and Norms (SanPiN)	Standards are in place but have no stipulations for equity
		Mechanism to enforce policy has been established	Ministry of Education Strategy	Enforcement strategy is in place but without funding for implementation
	Budget/ expenditure	Adequate budget is allocated for WASH in Schools at the national and local levels	KII with Ministry of Education officials	No specific budget allocated at the national level for WASH in Schools
	Availability of essential inputs	% of schools that have functioning water points on or near premises, or have another source of safe water	WASH in Schools situation assessments (CAAW, Domashov)	An estimated 50% of schools have access to an improved water source on or near schools grounds
	Monitoring of WASH in Schools	Effective monitoring is taking place, with data management at the national level	KIIs with Ministry of Education officials and education specialists	No data on WASH in Schools are currently collected and managed at the national level

Key

- In place and functioning well
- In place but not fully functioning
- Non-functional or not in place

Category	Determinant	Indicators	Metric/source of information	Stoplight evaluation of existing situation
Supply	Existence of functioning WASH in Schools infrastructure	% of schools that have functioning latrines	WASH in Schools situation assessments (CAAW, Domashov)	More than 90% of schools have latrines
		% of schools that have latrines that conform to international standards of privacy	WASH in Schools situation assessments (CAAW, Domashov); school observations	Fewer than 10% of schools are estimated to have latrines with exterior doors or fully enclosed stalls
		% of schools that have functioning hand-washing facilities with soap	WASH in Schools situation assessments (CAAW, Domashov); school observations	Few schools have hand-washing facilities and almost none have soap
	Availability of human resources	% of schools with teachers trained in hygiene education or staff dedicated to hygiene curriculum	WASH in Schools situation assessments (CAAW, Domashov)	A majority of schools report teaching hygiene curriculum
		Presence of human resources required for operation and maintenance	KIIs with school administrators and local government officials	Responsibilities for operation and maintenance are not well defined at the school level; technical capacity and materials are insufficient
	Equitable geographical access	Geographical disparities between urban and rural areas or different sub-national regions	WASH in Schools situation assessments (CAAW, Domashov); school observations	Urban-rural disparities in WASH in Schools access are marked
	Budget for operation and maintenance	School-level funding is available for infrastructure, maintenance and materials	KIIs with teachers and local government officials	No allocation of funding for school WASH at the school/ local levels
Demand	Mechanisms for operation and maintenance	School-level system is in place to maintain cleanliness and usability of WASH infrastructure	KIIs with teachers and school administrators; FGDs with students	No systems at school for maintaining cleanliness of latrines
	Desire for use	School WASH improvements are requested at the local level	FGDs with students; KIIs with district official and school administrators	Need/want for improved WASH facilities varied from school to school; most schools expressed other priorities

Category	Determinant	Indicators	Metric/source of information	Stoplight evaluation of existing situation
Quality	Gender-appropriate facilities	% of schools that have separate, private and gender-appropriate toilets	School observations; FGDs with girls	Latrines are separate but do not provide sufficient privacy for girls
	Facilities appropriate for children with disabilities	% of schools that have WASH infrastructure accessible to children with disabilities	School observations; WASH in Schools situation assessments (CAAW, Domashov)	Few facilities have taken children with disabilities into account
	Status of environmental sanitation	% of schools with clean school grounds	School observations; KIIs with school administration	Solid waste collection on school grounds and pit emptying of latrines remain a challenge – schools largely manage these functions privately
	Status of WASH facilities	% of schools with clean latrines and maintained hand-washing facilities	School observations; WASH in Schools assessments (CAAW, Domashov); KIIs with teachers	Data are not collected at the national or local levels; schools visited had poor maintenance of sanitation facilities and few hand-washing facilities available

Equity dimensions

Findings suggest that disparities in access to school WASH exist at various levels. Girls, particularly those of secondary school age, have inadequate access to sanitation in schools. Mono-ethnic Uzbek schools, particularly in the south, may receive less government support for WASH, which may create inequities between Kyrgyz and Uzbek schools. Disparities of WASH access between rural and urban schools are marked. Rural schools are more likely to have variable water access and to access water from unprotected sources. They are also more likely to be excluded from the current policy environment, which is focused almost exclusively on large-scale water and sanitation infrastructure and has too few provisions for basic infrastructure such as pit latrines.

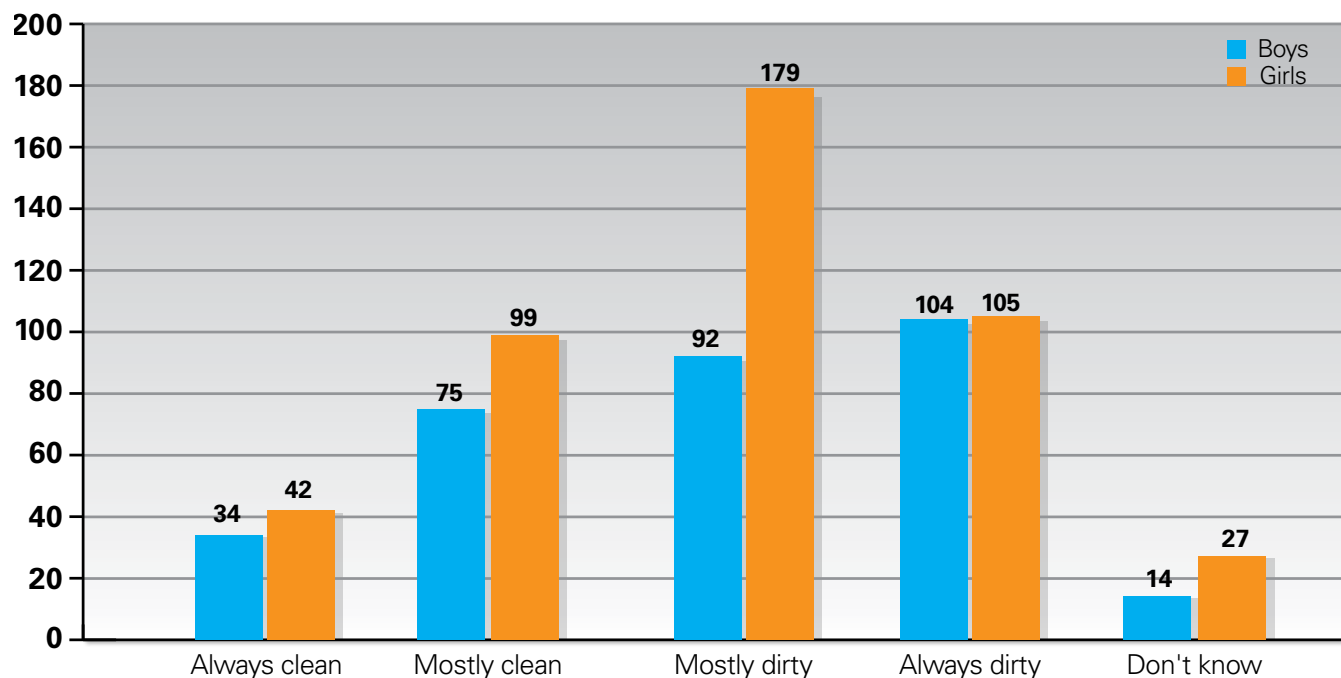
Gender

Kyrgyzstan does not suffer gender inequities in a traditional sense. Girls' matriculation and completion of primary and secondary school is slightly higher than boys, and girls' performance on standardized testing has outranked boys' (Becbolotov 2004, UNICEF 2007). Overall educational opportunities appear to be equivalent for boys and girls throughout primary and secondary schooling. The current state of sanitation and hygiene access in schools, however, creates challenges to ensuring a comfortable learning environment for girls.

Focus group discussions with secondary-school-aged girls suggest that the majority do not use school latrines, except during cases of diarrhoea or menstruation. Girls cite lack of cleanliness, lack of privacy and proximity of girls' latrines to boys' latrines as the primary reasons for avoiding them. These responses are corroborated by interviews conducted during the WASH in Schools assessment in the northern provinces, in which students revealed that they often go to the toilet as little as possible, especially in the winter, and try to wait until they get home to use the toilet (Domashov, et al., 2011).

Students commonly described the school latrines as not hygienic, intolerable and disgusting. When students in northern Kyrgyzstan were asked how they would classify the sanitary condition of their school toilets, a vast majority classified them as dirty, including two thirds of all girls surveyed, as shown in Figure 2.4. Girls' impressions of the sanitary condition of latrines are captured in Table 2.4, which lists the words they used to describe their school latrines.

FIGURE 2.4 Students' perceptions of school latrines, Kyrgyzstan, by number of respondents



n = 771 students Source: Focus group discussions with secondary-school girls in Batken, Chui and Osh Provinces, 2011.

TABLE 2.4 Girls' perceptions of school latrines, Kyrgyzstan, in order of most frequent response

Single word girls chose to describe current school latrines	How girls described their ideal school latrines
<ul style="list-style-type: none"> • Horrible • Dirty • Intolerable • Not hygienic • Smelly/stinky • Offensive • Nightmare • Nasty • Disgusting • Chaos • Dampness • Abomination • Terror 	<ul style="list-style-type: none"> • Clean floors, clean sinks • There are cabins/booths with doors that can be closed • The door to the [exterior] closes tightly • Cleaned every day • Trash bins with a lid, located in the stalls • There is a mirror • There is always toilet paper • Disposable paper towels • There is liquid soap • Working sinks, with hot water • Washstand that works properly • Warm inside • Light

Source: Focus group discussions with secondary-school girls in Batken, Chui and Osh Provinces, 2011.

Several girls at different schools in southern Kyrgyzstan related a similar fear of using school latrines because the stench permeated their clothing and hair, and they “would smell for hours afterwards.” Girls in Batken Oblast said they were afraid of using the latrines because the facilities were so dirty they were afraid to “catch disease.”

Avoidance of school latrines takes several forms that may affect students’ health and education. Secondary-school girls responded that they avoid drinking and eating before and during school hours so that they do not have to use school toilets. An estimated 15 per cent of students interviewed reported leaving school grounds to use the toilets elsewhere, rather than using school latrines. This is of particular concern because absenteeism has been identified as a significant and growing problem in Kyrgyzstan (UNICEF 2011). Although some students reported that leaving school grounds caused tardiness to class, few suggested it led to further absenteeism. Further study is needed to better understand how the condition of WASH infrastructure in schools affects absenteeism.

Older girls report that school latrines are not sanitary for menstrual hygiene. There is no water source in or near latrines with which to clean adequately, no disposal for sanitary napkins, and the lack of privacy makes them “ashamed” to engage in proper menstrual hygiene.

Girls’ expressed need for privacy may manifest itself in ways that create hidden inequities in Kyrgyzstan. Girls of all ages report that they often entered the latrine block one by one, and have friends guard the door while they use the toilet. This self-imposed privacy renders the number of holes in each latrine irrelevant because only one hole is used at any given time. Thus, the calculated ‘stance ratio,’ or number of students per squat hole, is obviated and schools effectively operate with only one squat hole for the entire female population. Although global standards mandate the maximum seat ratio as 50 students per latrine, the effective ratio for girls who insist on privacy may be upward of 400 to 1 in many schools.

Regional disparities (ethnicity)

Kyrgyzstan’s population includes a number of ethnic groups, most notably Kyrgyz, Russian and Uzbek. Tension between ethnic Kyrgyz and ethnic Uzbeks erupted in June 2010 and led to violent riots. Nearly 500 people were killed, more than 2,000 injured, and approximately 40,000 people displaced in the southern regions of Jalal-Abad and Osh, most of them ethnic Uzbek. Following the violence, a report by the International Commission of Inquiry found strong evidence of widespread, institutionalized discrimination against ethnic Uzbeks (KIC 2011). Additionally, assessments regarding the Lolu communities – a population related to the Roma of Eastern Europe and associated in Central Asia as being of Hindi or Tajik ethnic origin – suggest that they receive no formal support from the Government.

Evidence of systemic prejudice indicates that public institutions in southern Kyrgyzstan, including schools, may not be providing equitable services to ethnic minorities. These greater disparities potentially create inequities in school WASH, as imbalanced financing could hinder Uzbek schools from maintaining and repairing deteriorating WASH infrastructure.

After the violence of 2010, there was a marked increase in matriculation of students to mono-ethnic schools, where classes are taught in Kyrgyz, Russian, Uzbek or another language (Naumann 2011). Schools in Kyrgyzstan are formally termed monolingual or multilingual according to the language of instruction. However, because Kyrgyz-speaking and Uzbek-speaking schools serve almost exclusively populations of native-born speakers, they are often effectively mono-ethnic. Most schools are monolingual, and 9 per cent of primary and secondary students attend monolingual Uzbek schools, as shown in Table 2.5.

TABLE 2.5 Schools and language of instruction, Kyrgyzstan, 2002–2003

	% of total primary and secondary schools	% of total students
Monolingual schools	80%	69%
Kyrgyz	65%	49%
Russian	7%	10%
Uzbek	7%	9%
Multilingual schools	20%	31%
Kyrgyz-Russian	15%	24%
Kyrgyz-Uzbek	3%	3%

Source: Juraev 2005.

No official data regarding the allocation of school funds were made available, and no formal assessment of WASH in Schools has taken ethnic composition into account. However, the voluntary segregation of ethnic Kyrgyz and ethnic Uzbek students, coupled with institutionalized discrimination against ethnic Uzbeks, creates a significant potential for inequitable distribution of resources to mono-ethnic schools by the national Government.

Interviews and informal data suggest that Uzbek schools perceive that they receive less overall governmental support than schools with higher populations of ethnic Kyrgyz students. Administrators of Uzbek schools in Osh Province report that their schools are less likely than Kyrgyz schools to receive funding or other assistance from the local government. Several headmasters of Uzbek schools in peri-urban and urban Osh also suggested that funding was widely considered to be inequitable.

Additionally, the Government of Kyrgyzstan does not provide textbooks or other materials in Uzbek, so many Uzbek-speaking schools rely on outdated textbooks obtained from Uzbekistan. As a result, within the current system, these schools are informally excluded from elements of the Kyrgyz curriculum, including the optional curriculum known as ‘Healthy Lifestyles’ that incorporates hygiene education.

One assessment of hygiene knowledge in schools throughout Jalal-Abad and Osh indicated that Uzbek students’ knowledge of hygiene education is correspondingly lower than that of Kyrgyz students (CAAW 2011). However, this does not necessarily suggest that hygiene *practice* among Uzbek students is correspondingly lower. An epidemiological survey of intestinal worm infection among students in Osh Province, for example, concluded that Uzbek and Kyrgyz students had similar hygiene and sanitation-related risks of infection (Steinmann 2009).

The imbalance of governmental support for schools, including funding and oversight, renders Uzbek schools less able to adapt to challenges and repair failing infrastructure. Because existing water supply systems and latrines continue to deteriorate in schools nationwide, this is particularly relevant to WASH infrastructure. Currently, WASH infrastructure is not observably different between Uzbek and Kyrgyz schools in Jalal-Abad and Osh. Systems in both types of schools are in similar states of disrepair, but inequities are likely to emerge in the near future if Uzbek schools are allocated fewer funds. These emergent disparities of access to WASH in Schools may also be reinforced if inconsistent monitoring excludes Uzbek schools from national and local data sets.

Urban-rural

Disparities between urban and rural communities are particularly evident in Kyrgyzstan, where mountainous terrain makes many rural areas difficult to access. Despite lack of national data on WASH in Schools coverage, extrapolation of household data suggests that rural water coverage in schools is markedly lower than urban coverage. While 89 per cent of urban households have a piped water connection, only 34 per cent of rural households do (JMP 2010). Piped water connections to rural schools may be even more reduced because rural water access in schools appears to be lower than rural household access (see *Figure 2.1, page 13*).

Although disparities between rural and urban areas are pervasive throughout developing countries, the divide in Kyrgyzstan is particularly significant with respect to WASH in Schools. Here, rural schools are more likely to access water from unprotected and potentially contaminated sources such as irrigation canals, as shown in *Figure 2.5*.

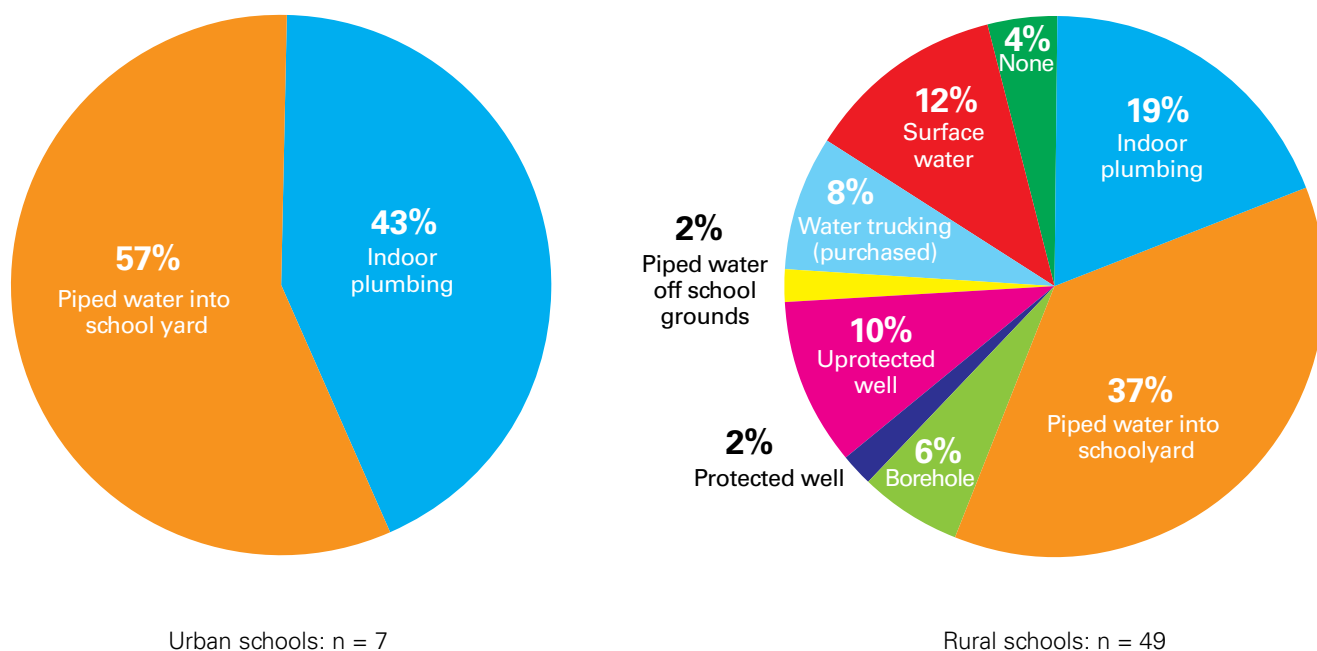
Additionally, awareness, policy and funding for school WASH are almost exclusively focused on centralized water and sewage systems, although most rural schools have neither. As a result, many schools are effectively excluded from a policy environment that should provide standards, monitoring, and funding for maintenance and repair. Policies and regulations for WASH and WASH in Schools are written almost exclusively with regard to centralized water system infrastructure and centralized sewage – effectively excluding the vast majority of rural schools in Kyrgyzstan.



Schools in the mountainous rural areas of Kyrgyzstan have significantly less access to water sources than those in urban areas.

Photo credit: Stephanie Ogden © 2011

FIGURE 2.5 Types of water access in schools, Kyrgyzstan



Source: Domashov, et al., 2011.

This issue is particularly noticeable in regard to school sanitation. Interviews with government and school officials indicate that flush-toilet systems are considered to be the only acceptable sanitation option. Pit latrines, improved pit latrines and composting toilets are viewed as so far beneath the flush-toilet standard that they are largely ignored.

A report by the Kyrgyz National Statistics Committee, in 2011, provides an example of the policy language used in references to flush toilets and pit latrines. The report asserted that “only 10% of [the nation’s] schools are provided with well-equipped toilets,” while the other 90 per cent of schools must use “outside toilets.” The number of “well-equipped” toilets corresponds to the number of flush toilets connected to centralized sewage. The report records that 93 per cent of schools in the city of Bishkek have flush toilets, but only 31 per cent of schools in Osh (Kyrgyzstan’s second-largest city) and less than 2 per cent of urban schools in the Batken region have flush toilets. In fact, nationwide, only 2 per cent of rural schools have flush toilets, while the remainder have pit latrines or none at all.

Schools that do not have centralized infrastructure are left without government oversight. The Department of State Sanitary and Epidemiological Services monitors the existence or absence of sewage infrastructure but not the condition of latrines. Therefore, latrines are not monitored or maintained, although approximately 90 per cent of schools rely on them. Schools with only basic sanitation infrastructure are additionally left without specific funds for emptying latrine pits or cleaning concrete slabs.

Rural schools disproportionately access water from unsafe sources. While urban schools surveyed in the northern provinces depend entirely on municipal water supply, rural schools access water from a range of sources, including surface and groundwater (*see Figure 2.5, page 22*). More than 10 per cent of schools surveyed in the north rely on surface water such as irrigation canals; an additional 10 per cent rely on unprotected wells (Domashov, et al., 2011). Quality analyses have found that the water from irrigation canals has a high degree of chemical and bacterial contamination, and is unsuitable for drinking without treatment (CAAW 2011, Domashov, et al., 2011).

Because hygiene education is understood to be most effective when accompanied by water access, the Government’s efforts to include hygiene education in school curricula have been primarily visible only in areas with existing water-system infrastructure. As a result, schools that do not have water-system access are excluded from the push towards hygiene education, and children already at a disadvantage due to lack of water access are at a further disadvantage for lack of hygiene education.

Inequitable attention to schools with basic or no existing infrastructure has resulted in an imbalance of hygiene knowledge as well as an imbalanced provision of hygiene facilities in rural and urban schools. According to the surveys conducted in the northern region, school administrators in urban areas were much more likely to report that soap was always available for students to wash their hands, and urban schools were more than twice as likely as rural schools to report that the school had designated a separate fund for soap and other supplies.

Recommendations for Kyrgyzstan

Recommendations for improving equity and access in Kyrgyzstan are based on the six points of action established by the Call to Action for WASH in Schools, a collaboration between key stakeholders around the world.

Increase investment in WASH in Schools:

- Increase government and NGO investment in maintenance and repair of existing water systems and sanitation facilities in schools.
- Allocate specific funds to WASH in Schools within national and local government budgets.
- Establish regular funding mechanisms for maintenance and cleanliness of latrines at the school level to encourage students' use of latrines, particularly girls of secondary school age.

Engage those who set policies:

- Encourage realistic WASH in Schools guidelines that include regulations for schools that do not have centralized water and sanitation facilities.
- Update government standards for school sanitation facilities. Ensure that guidelines for WASH in Schools address the needs of all students and provide privacy for all students, as well as appropriate infrastructure for students with disabilities.

Demonstrate quality WASH in Schools projects:

- Ensure that hygiene education is taught adaptively and appropriately at schools with and without centralized infrastructure.
- Improve the distribution of hygiene education curricula in the Uzbek language to Uzbek monolingual schools in Kyrgyzstan.
- Ensure greater privacy measures for school sanitation facilities, including individual stalls with lockable doors.

Monitor WASH in Schools programmes:

- Increase monitoring of WASH in Schools infrastructure. Monitor functionality, not just presence, of WASH facilities in schools.

Contribute evidence that provides a solid base for informed decision making:

- Conduct a formal nationwide assessment of WASH in Schools. Include data on funding allocations, presence of government monitoring and the composition of students' ethnicities.

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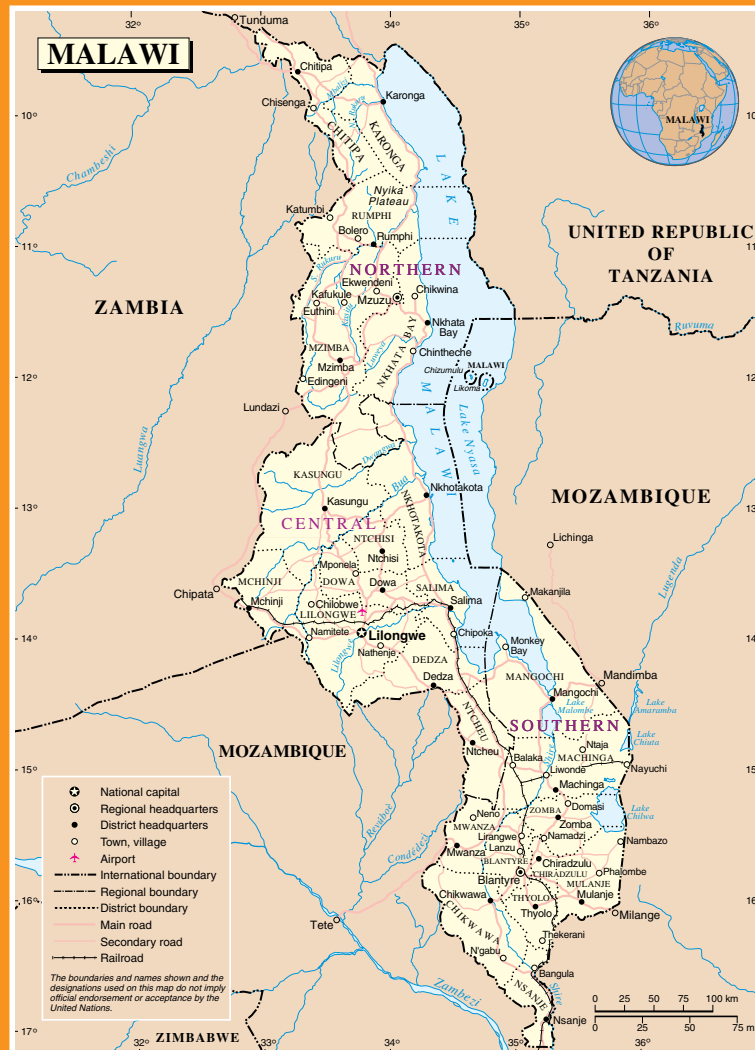
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3

Malawi



Malawi country snapshot

Household access to improved water ¹	83%
Household access to improved sanitation ¹	51%
School access to improved water ²	82%
School access to improved sanitation ²	23%
School hand-washing facilities coverage ²	19%
Hand-washing with soap practice among schoolchildren ²	N/A
Primary education net enrolment ratio ³	91%
Secondary education gross enrolment ratio ³	29%
Gender Inequality Index ⁴	120
Number of primary schools nationwide ⁵	5,876

1. % population, JMP 2012. 2. MOEST May 2009. 3. UNESCO 2011.
4. Rank out of 156 countries, UNDP 2011. 5. EMIS 2009.

Abstract

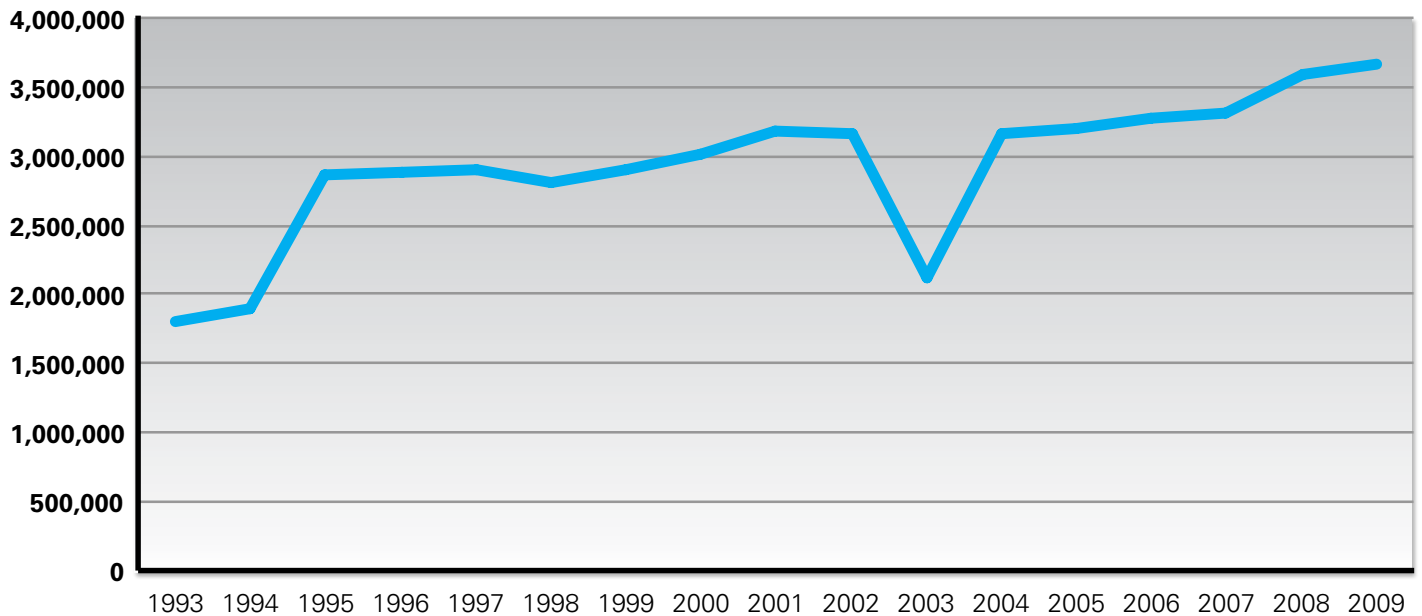
The Government of Malawi has instituted comprehensive WASH policies that include explicit guidelines on gender and children with disabilities. Overall, substantial improvements have been made for water coverage in schools. In the majority of schools, providing adequate sanitation and hygiene facilities for all schoolchildren, as well as facilities that are gender friendly and accessible to children with disabilities, is an ongoing challenge.

Female students, children with disabilities, and rural and urban populations are identified as being subject to inequitable access to WASH in Schools in Malawi. The case study recommends that data management, programme evaluation and enforcement of policies should be increased to address the existing inequities.

Background

Nearly half of Malawi's population is under age 15 and less than 3 per cent is older than 65 (NSO and ICF Macro 2011). These demographics, along with the enactment of universal primary education, have resulted in a steady rise in school enrolment since 1994, as shown in Figure 3.1.

FIGURE 3.1 Enrolment trends in basic and secondary education, Malawi, 1993–2009



Source: EMIS 2009.

The Ministry of Education, Science and Technology recognizes the importance of adequate water, sanitation and hygiene services in schools. To ensure a healthy learning environment for children, it has taken steps to increase WASH in Schools investments and support. To achieve national school WASH standards, an estimated US\$10 per student is needed to reach nearly 4 million children enrolled in primary school. 'Malawi School WASH 2008', the national status report on water, sanitation and hygiene in primary schools, directed the current strategic plan to improve access to facilities nationwide. The assessment highlighted progress made, as well as challenges such as overcrowded WASH facilities (MOEST May 2009).

Methods

This case study used qualitative and quantitative data collection to evaluate the level of equitable access to WASH in Schools in Malawi. Access to school WASH was investigated at the national, district and school levels. An extensive analysis was conducted on national policies and legislation regarding inclusive education, particularly as they apply to WASH access in schools. Research literature and grey documents available in Malawi were also reviewed.

Semi-structured interviews were held with representatives of non-profit organizations and with 11 national ministry or district officials. All participants in the interviews were directly involved with establishing or implementing inclusive school WASH policy. Interviews were also conducted with teachers and students in primary schools, including 25 head teachers and 10 students with disabilities. Informal focus group discussions were held with primary school students aged 7–17 and were separated by gender.

A purposive sampling technique was used to identify schools for visitations and collecting observational data on school WASH facilities.

Policy and enabling environment

The Government of Malawi has shown support for the development of new guidelines and standards for WASH in Schools programming. Key documents – such as the National Sanitation Policy (2008), National Water Policy (2007), National Gender Policy (2004) and many others – create an inclusive framework. The guidelines and policies are advanced in that they include explicit mention of equity dimensions such as gender and children with disabilities. A lack of funding, data and accountability measures, however, has held back the full potential of these progressive policies put in place by the Ministry of Education, Science and Technology.

Providing the necessary infrastructure to deliver improved sanitation services and sustainable environmental management in schools is one objective of the National Sanitation Policy. The strategies outlined within the policy to reach this goal include:

- Provide regular maintenance of sanitary facilities in all schools.
- Ensure adequate provision of separate improved sanitation facilities with adequate security and privacy for boys and girls at each learning institution.
- Ensure provision of at least one improved sanitation facility for boys and girls with disabilities at each school as the situation might determine.

National standards assist the Ministry of Education, Science and Technology, as well as donor organizations, to focus their efforts in improving the school environment. The 'National Norms and Guidelines for Primary School Construction, Rehabilitation and Maintenance in Malawi' is currently in draft format. International donors and government agencies are advocating for the guidelines to be incorporated into the national education agenda so that specific guiding principles outline the construction, rehabilitation or maintenance of WASH in Schools facilities.

A national school health and nutrition programme is in place and led by the School Health and Nutrition Guidelines. The programme includes hygiene education and focuses on hand washing with soap after latrine use in schools. The programme is elective, and districts may choose to participate if funding allows. With decentralization of the national Government, the capacity for implementation of many of these policies varies considerably by district. Competing priorities, such as lack of classrooms and housing for teachers, as well as stretched resources, have led to only a few implementing districts.

Major roles in implementing policies are played by the Ministry of Education, Science and Technology; the Ministry of Agriculture, Irrigation and Water Development; and the Ministry of Local Government and Rural Development, as described in Table 3.1.

TABLE 3.1 Roles and responsibilities for WASH in Schools, Malawi

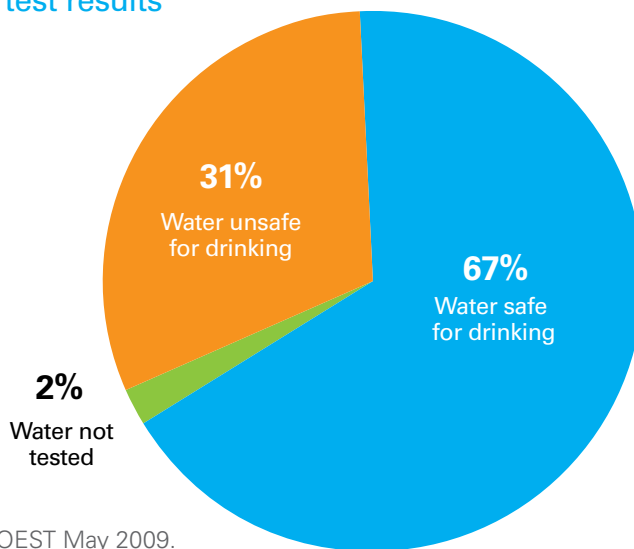
Key WASH stakeholders	Roles and responsibilities
Ministry of Education, Science and Technology	<ul style="list-style-type: none"> • Develops national guidelines and standards for school water, sanitation and hygiene • Provides funding for school sanitation and hygiene education
Ministry of Agriculture, Irrigation and Water Development	<ul style="list-style-type: none"> • Responsible for providing water to communities and schools
Ministry of Local Government and Rural Development	<ul style="list-style-type: none"> • Applies national standards at local level • Helps determine financial priorities within district • Monitors at district level • Builds and implements school WASH at district level
Schools and communities	<ul style="list-style-type: none"> • School management committees manage school projects and financing • Maintain school WASH facilities • Teach WASH curriculum

WASH in Schools coverage

In 2008, the Ministry of Education conducted a nationwide WASH in Schools survey that covered 98 per cent of schools. Among the findings, 82 per cent of schools had access to drinking water from a protected source and 67 per cent had water that tested as biologically safe for drinking, as shown in Figure 3.2. Only 19 per cent of schools had access to hand-washing facilities, and a majority of hand-washing facilities were without soap. Twenty-three per cent of schools had access to an acceptable level of sanitation, defined as one “clean and functional” latrine per 60 students (MOEST May 2009). More than 20 per cent of schools had more than 60 students per improved latrine (see Figure 3.3).

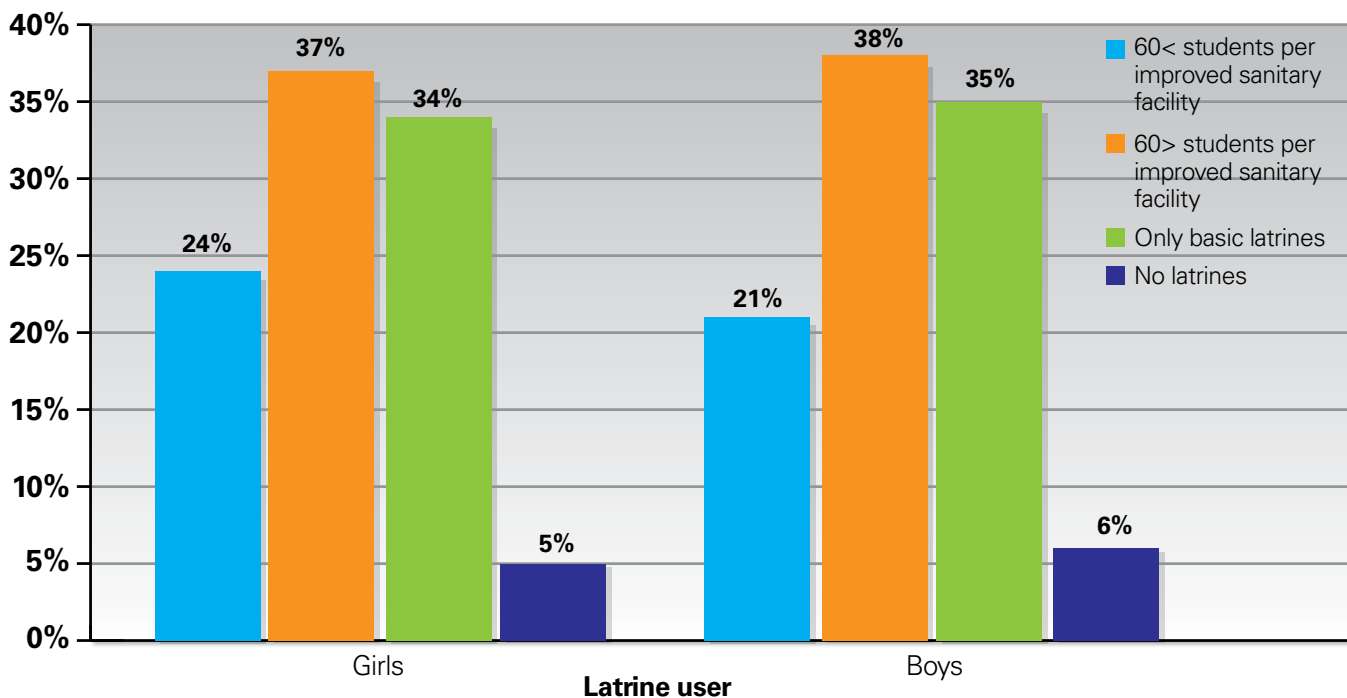
Only a minimum of nationally representative data is available on the existence of accessible and appropriate school WASH facilities for girls and children with disabilities. School WASH facility designs for these students, based on students’ experiences, are also lacking. The students interviewed for this study identified clean, well-maintained facilities as critical aspects for access and use for both female students and students with disabilities. Children with disabilities also focused on the need for an elevated toilet bowl or pedestal to avoid being placed on the latrine floor. Female students highlighted the need for increased privacy, better water supply and disposal receptacles for menstrual hygiene management during school hours.

FIGURE 3.2 Proportion of schools, Malawi, by water quality test results



Source: MOEST May 2009.

FIGURE 3.3 Proportion of school sanitation facilities, Malawi, by quality and quantity



Note: Malawi’s National Sanitation Policy, 2008, defines ‘basic sanitation’ as safe disposal of faeces; facilities are located at least 30 metres from a groundwater source, are functional and not full, and offer users safety and privacy. ‘Improved sanitation’ is defined as basic sanitation with the addition of an impermeable floor and a tight-fitting lid to the latrine.

Source: MOEST May 2009.

Accountability at the national, district and local levels of enforcing current inclusive educational policies and guidelines are low. There is no national system for keeping schools accountable for maintaining their overall school facilities and allowing access and use for all students. District officials cited lack of transportation as the largest barrier to collecting data at the school level.

Motivation for implementing national policies has waned without a systematic mechanism for holding schools accountable for failure to follow through. The national standards cannot be met without accurate data management and enforcement of school WASH policies.

Bottlenecks

The bottleneck analysis is a visual representation of the challenges and barriers prohibiting equitable access to WASH in Schools. Indicators are organized into four categories: (1) policy and enabling environment; (2) supply; (3) demand; and (4) quality.

Key areas where work needs to be done in Malawi were identified through discussions with national-, district- and school-level WASH in Schools experts. The bottleneck analysis also examined strengths and weaknesses in policy, standards and staff training, as shown in Table 3.2.

National WASH in Schools standards are in place, and hygiene education is implemented in a majority of districts. The quality and supply of existing facilities as challenges to successful programming are directly related to the demand for school WASH at the school and individual levels. Demand for WASH facilities will be low if users do not believe that practising sanitation and hygiene is important, but also if they do not feel comfortable using the facilities. The issue of quality addresses the need for improved cleanliness, and gender- and disability-appropriate facilities at the school level. Supply and quality of facilities can be approached in tandem through improved training on operation and maintenance, along with providing new facilities.

The enabling environment at the national level is conducive to WASH in Schools programming, with the exceptions of a specified budget and low acceptance of children with disabilities. Local governments are responsible for allocating funds to schools and determine whether WASH should be included within the district budget. Local governments and communities must be included in advocacy and awareness campaigns on children with disabilities and WASH in Schools.

TABLE 3.2 Bottleneck analysis of WASH in Schools, Malawi

Category	Determinant	Indicators	Metric/source of Information	Stoplight evaluation of existing situation
Policy and enabling environment	Social norms	Teachers and government officials express that WASH in Schools is a priority	KIIs with teachers and national ministry officials	School WASH is a priority at the national level but varies at the school level
		Children have been taught good WASH behaviours and recognize their importance	FGDs with students	Hygiene education is part of the national curriculum
		School culture is non-discriminatory	FGDs and KIIs with teachers and education specialist in country	Stigma against persons with disabilities is evident
	Policy framework	School WASH standards are in place and contain stipulations for equity	National Sanitation Policy, and School Health and Nutrition Guidelines	Standards are in place and include stipulations for equity
		Mechanism to enforce policy has been established	Ministry of Education strategy	Enforcement strategy is in place but without funding for implementation
	Budget/expenditure	Adequate budget is allocated for WASH in Schools at the national and local levels	KII with Ministry of Education officials	No specific budget allocated at the national level for WASH in Schools
	Availability of essential inputs	% of schools that have functioning water points on or near premises, or have another source of safe water	Ministry of Education school WASH assessments	An estimated 82% of schools have access to water, 62% have access to water specified to be safe for drinking
	Monitoring of WASH in Schools	Effective monitoring is taking place, with data management at the national level	KII with primary education advisers	Enforcement strategy is in place but without funding for implementation

Key

- In place and functioning well
- In place but not fully functioning
- Non-functional or not in place

Category	Determinant	Indicators	Metric/source of Information	Stoplight evaluation of existing situation
Supply	Existence of functioning WASH in Schools infrastructure	% of schools that have functioning latrines	Ministry of Education school WASH assessments	23% of schools have latrines in acceptable quantity and quality
		% of schools that have latrines that conform to international standards of privacy	School observations	Latrines offer sufficient privacy for girls in the majority of visited schools, but school urinals do not
		% of schools that have functioning hand-washing facilities with soap	Ministry of Education school WASH assessments	19% coverage of hand-washing facilities and minimally available soap
	Availability of human resources	% of schools with teachers trained in hygiene education or staff dedicated to hygiene curriculum	BIOM and CAAW WASH in Schools situation assessments	A majority of schools report teaching hygiene curriculum
		Presence of human resources required for operation and maintenance	KIIs with teachers/ principals, FGDs with parents/community	Access to skilled workers for operation and maintenance varies by district
	Equitable geographical access	Geographical disparities between urban and rural areas or different sub-national regions	Ministry of Irrigation and Water Development	Rural areas are less likely to have access to clean drinking water in schools
	Budget for operation and maintenance	School-level funding is available for infrastructure, maintenance and materials	KIIs with teachers and local government officials	No allocation of funding for school WASH at the school/ local levels
Demand	Mechanisms for operation and maintenance	School-level system is in place to maintain cleanliness and usability of WASH infrastructure	KIIs with teachers and school administrators; FGDs with students	No systems at school for maintaining cleanliness of latrines
	Desire for use	School WASH improvements are requested at the local level	FGDs with students and KIIs with district official and head teachers	Need/want for improved WASH facilities varies from school to school

Category	Determinant	Indicators	Metric/source of Information	Stoplight evaluation of existing situation
Quality	Gender-appropriate facilities	% of schools that have separate, private and gender-appropriate toilets	Ministry of Education reports and school observations	Latrines are separate but do not address the needs of female students regarding menstrual hygiene
	Facilities appropriate for children with disabilities	% of schools that have WASH infrastructure accessible to children with disabilities	Ministry of Education reports and school observations	Less than 20% of schools have disability-friendly facilities
	Status of environmental sanitation	% of schools with clean school grounds	School observations	Consistent latrine use and solid waste disposal and collection are a challenge
	Status of WASH facilities	% of schools with clean latrines and maintained hand-washing facilities	Ministry of Education reports and school observations	Data are not collected at the national level; schools visited had poor maintenance of facilities overall

Equity dimensions

The Ministry of Education, Science and Technology places importance on expanding equitable access to education and to providing WASH facilities in schools. The Education Sector Implementation Plan for 2009–2013 emphasizes the need for improving education quality, as well as school governance and management.

The sector faces several challenges from equity perspectives, such as the urban-rural divide, gender equity and meeting the needs of children with disabilities. These groups were identified as experiencing inequities in accessing school WASH facilities in Malawi.

Urban-rural disparities

Malawi has experienced school WASH disparities for both urban and rural populations. Overcrowding in urban schools and the low number of female teachers are growing

challenges in primary schools. Rural schools have an average enrolment of 649 students, peri-urban average enrolment is 1,009, and urban schools have an average enrolment of 1,077 students. Enrolment varies, however, and observation of school facilities exposed the stretched resources and poor maintenance that occur in urban schools (MOEST May 2009). During key informant interviews, urban-school headmasters expressed the difficulty in maintaining facilities in schools that have more than 3,000 students enrolled.



Students in an overcrowded classroom in urban Lilongwe.

Photo credit: Loida Erhard © 2011



A typical primary school urinal in Malawi.

Photo credit: Loida Erhard © 2011

The sheer number of students in some urban schools hinders facilities maintenance because of extensive use throughout the day. Urinals for girls and boys have been added to alleviate congestion at school latrines, but the current design is not suitable for female students due to the lack of privacy.

High enrolment can strain resources in Malawian schools, and the lack of classrooms generally takes priority when funding becomes available for improvements. Interviews with students and head teachers highlighted the fact that many schools close for weeks during the rainy season because there is not enough space for all students. During the dry season, classes are held under trees.

Rural schools face their own challenges, including lack of teaching staff, particularly female teachers. In the capital city of Lilongwe, there are approximately 2,000 female teachers and 300 male teachers. In the rural district of Mulanje, there are roughly 400 female teachers and 1,000 male teachers (EMIS 2009). The gender imbalance of teachers in rural and urban areas has significant implications for female students.

Gender

Ministry of Education Science and Technology 2009 EMIS data reported that the proportion of girls reaching the final year of primary school is 38 per cent, a significant reduction from 50 per cent in 2008. Similarly, the school survival rate for male students dropped from 59 per cent in 2008 to 41 per cent in 2009. Beginning at the sixth year of primary school, which is also the age when girls begin to reach menarche, the drop-out rate for female students becomes much higher than the rate for male students. Figure 3.4 shows details of the comparative drop-out rates for girls and boys.

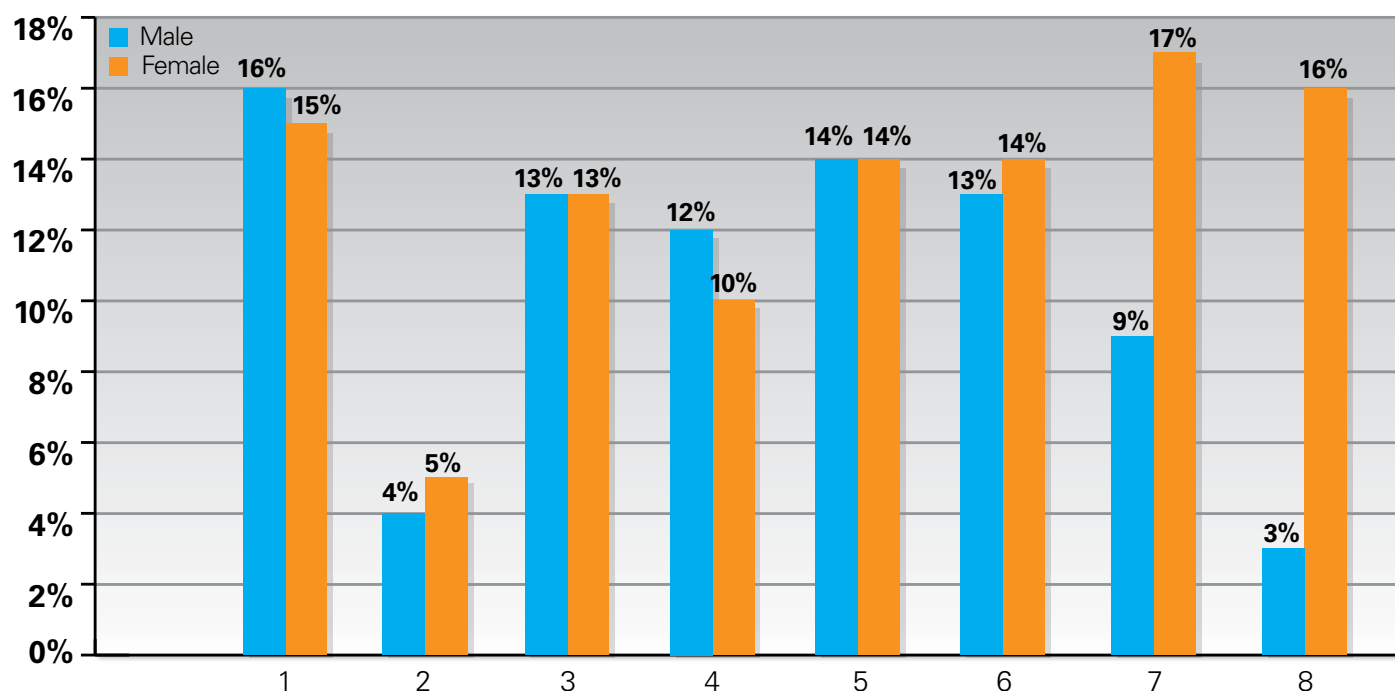
Poor access to school water, sanitation and hygiene education has been identified as one of the factors that affect girls' drop-out and retention rates. UNICEF Malawi conducted a study more than a decade ago to investigate why girls were



A primary school student in a rural area of Malawi.

Photo credit: Loida Erhard © 2011

FIGURE 3.4 Primary school drop-out rates, Malawi, 2009, by %



Source: EMIS 2009.

dropping out despite efforts to improve girls' education (Chimombo, et al., 2000). The report noted that female students "need more time and privacy to take care of themselves. This is not always possible if the girls have to queue for the toilet. As a result, girls may get discouraged with the situation at the school and decide to remain home where they are more comfortable especially during menstruation periods."

Focus group discussions and personal interviews in 2011 reaffirmed the results of the study conducted in 2000. One student in Nkhatabay District shared her challenges in managing menstrual hygiene in school with the current case study, and spoke about spotting on her uniform:

"Other learners had noticed. I felt so ashamed and embarrassed that I could not return to school until my period was over." Other times, she stated, she would simply leave school during the day and would not come back because she did not have access to water to clean herself or a place to change. She would miss class time due to the lack of WASH facilities, and when she would arrive back at school, the class would have already moved on to a new topic. Because of this, "I could not do well no matter how hard I tried, and could not answer any of the questions during the oral exams. I would peep at the other students' work to try to pass the written tests."

In addition, the disproportionate number of female teachers located in urban areas left the majority of girls attending rural schools without a female role model or someone with whom they feel comfortable speaking about menstrual hygiene management.

To support girls' education, the Mother Groups Program was created and implemented in schools by the Ministry of Education, Science and Technology along with supporting NGOs. Mother Groups are community-based clubs that mobilize mothers and other female figures in the community to help support girls in school. These groups have participated in addressing the issue of female dropout and absenteeism. The Mother Groups are community organized and can vary considerably in their involvement with schools, as well as in their ability to raise funds and give educational information on menstrual hygiene management.

Disabilities

The Government of Malawi defines children with “special educational needs” as “those with sensory impairments, learning difficulties, behavioural difficulties and physical or health impairments, all of whom require special measures to ensure their inclusion within schools.” Numerous national policies and initiatives have taken into account the inclusion of persons with disabilities. In particular, the National Policy on Equalization of Opportunities for Persons with Disabilities was enacted in 2006, and the National Sanitation Policy of 2008 maintains that “each school should have provision for pupils with disabilities as the situation determines.” The Ministry for Persons with Disabilities and the Elderly is in place to incorporate strategies for inclusive practice into the national development plan.

Comprehensive legislation in Malawi supports the inclusion of children with disabilities, but there are little data to evaluate the impact of these policies. The 2008 National Status Report on School WASH conducted by the Ministry of Education, Science and Technology stated, “Currently the sanitary facility situation for school children with disabilities is not known, but expected to be poor.” Lack of national data on disability-friendly water, sanitation and hand-washing facilities in schools prevents a clear understanding of the situation on the ground.

According to the 2008 national census, there are approximately half a million people with disabilities in Malawi. Forty-six per cent of the population is under age 15, which is considered to be school-going age (NSO and ICF Macro 2011). Roughly calculated, this means that an estimated 125,000 children with disabilities should be attending school, but Ministry of Education, Science and Technology data account for enrolment of only 3,000 students with special education needs and disabilities (EMIS 2009).

For the 3,000 students who have disabilities, the barriers to attending school are extensive, including a lack of transportation and cultural beliefs that families who have children with disabilities are ‘cursed’. Interviews with children, their guardians and teachers identified these barriers and the obstacles to accessing school WASH facilities as challenges they face daily in school.

The current designs and maintenance of school WASH facilities do not take children with disabilities into consideration (MOEST August 2009). Sanitation facilities have narrow doorways that do not allow children in wheelchairs to enter without crawling on the latrine floor. Stairs or rocky pathways also lead to difficulty in entering or reaching the latrine. Many of the current designs for inclusive sanitation are wheelchair-based and do not take into account students without wheelchairs or different types of disability.

Interviews with students also introduced the importance of cleanliness for their access and comfortable use of latrines. When facilities were dirty, this forced students to touch the urine or faeces inside, practise open defecation or wait until they were home. When asked what would make using the latrines easier, the overwhelming answer given by students with special education needs and disabilities was to have a clean latrine and a raised pedestal to sit on to avoid touching the ground. Without these components in place, children with disabilities are unable to independently access water or sanitation during their full 6- to 7-hour day at school. Minimal research has been performed on the outcomes of this situation, but it can be assumed that being deprived of water, sanitation and hygiene for most of the day leads to negative health and educational outcomes.

During the key informant interviews with students with disabilities and their guardians, many students gave examples of restricting their drinking and eating in order to avoid using school facilities. Teachers also spoke of the need to stop class so they can assist students with disabilities to use the latrine, thus disrupting the whole class. Excerpts from the interviews are included below:

“My parents told me to stop drinking water or porridge during the school day so that I do not need to use the latrine at school. It is dirty and so I will wait to use the latrine when I go home.”
(Student Grade 6)

“When I need water or to use the latrine at school I ask my brother or a friend to help me. If no one is there then I will wait until there is someone there.” (Student Grade 5)

“My friend has to lift me out of the chair and place me in the latrine.” (Student Grade 5)

Access to sanitation is emphasized in the literature as the main access issue for children with special education needs and disabilities, and access to water and hand-washing facilities is often neglected. Figure 3.5 shows examples of piped and borehole water sources that are commonly seen in schools. Both sources are difficult to access for children with disabilities and do not allow them to drink or wash their hands without assistance.

FIGURE 3.5 Variations in school water sources, Malawi

Piped water at a primary school (*left*) and a primary-school borehole



Photo credit: Loida Erhard © 2011

Although supportive, the current national guidelines and policies created for children with special learning needs and disabilities have not significantly increased access to schools or facilities for these children. According to the Ministry of Education, Science and Technology estimates, the additional cost for including latrines that ensure access for all students is an additional US\$100 per school, or US\$0.15 per student, at a total cost of US\$546,000. Specific strategies and resources are needed to address this issue and incorporate inclusive designs and considerations for all students in Malawian schools.

The National Sanitation Policy statement that “each school should have provision for pupils with disabilities as the situation determines” leads to different interpretations of the guidelines and overall poor implementation at the school level. Varying levels of implementation were observed during school visits to six districts throughout Malawi and emphasized in the 2008 National WASH in Schools Report. Clear guidelines are necessary for correct implementation of inclusive WASH facilities.

Recommendations for Malawi

Recommendations for improving equity and access in Malawi are based on the six points of action established by the Call to Action for WASH in Schools, a collaboration between key stakeholders around the world.

Increase investment in WASH in Schools:

- Develop income-generating activities to support WASH initiatives at the school level. Income-generating activities could include school gardens, crafts and community farming.
- Allocate a specific budget to WASH in Schools at the national and district levels.
- Operation and maintenance of school WASH facilities should be allocated a percentage of the budget from 'Direct Support to Schools' funding, the main national funding source for primary education.*

Engage those who set policies:

- Increase empowerment of and advocacy for students with disabilities at the community and local government levels. Advocacy campaigns can include parents, guardians and other students to champion the rights of students with disabilities.
- Advocate for improvement of school WASH facilities for girls at the national, district and local levels based on available evidence of WASH in Schools impact on girls' education.

Involve multiple stakeholders:

- Encourage involvement of parents and the community in improving WASH in Schools, for example, by building locally made facilities.
- Build school-level management capacities through teacher trainings on how to address challenges that arise in operation and maintenance of school WASH facilities. This training should include how to ask for help or support from the community, donors and districts. It should also offer simple solutions that can be implemented at the school level to provide and maintain facilities.
- Include the school administration and communities in decisions regarding WASH in Schools at the local level.
- Link Community-Led Total Sanitation and sanitation marketing programmes at the household level to the construction of school facilities.*
- Develop local contractors' capacities through training that is linked to the sanitation service providers that are conducting sanitation marketing at the household and school levels.*

Demonstrate quality WASH in Schools projects:

- Utilize innovative strategies, such as district-wide competitions on school WASH/school health, to motivate WASH in Schools implementation.
- Share best practices to help inform the creation of guidelines to promote inclusive education and gender equity in schools at the national and local levels.

Monitor WASH in Schools programmes:

- Increase school-level accountability for maintenance and use of WASH in Schools facilities, and involve children in the maintenance and cleanliness of school facilities.
- Increase local government accountability for WASH in Schools. Encourage monitoring of school performance by district inspectors and provide additional support when needed.
- Include additional WASH in Schools indicators in the Education Management Information System, such as hand-washing facilities, hygiene behaviours and functionality of existing facilities.
- Improve planning, monitoring and evaluation of school WASH with an increased role for primary education advisors, school health and nutrition coordinators, and school inspectors.*

Contribute evidence:

- Coordinate with local universities to make existing data available and usable, and to develop sustainable designs for school WASH facilities.
- Collect information on children's experiences pertaining to gender and disability issues in schools.
- Ensure exchange of accurate data from schools to national government stakeholders through improved data management systems.

* *Recommendations from UNICEF Malawi.*

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4

Philippines



Philippines country snapshot

Household access to improved water ¹	93%
Household access to improved sanitation ¹	74%
School access to improved water ²	62%
School access to improved sanitation ^{2(*)}	54
School hand-washing facilities coverage	N/A
Hand-washing with soap practice among schoolchildren	N/A
Primary education net enrolment ratio ³	92%
Secondary education gross enrolment ratio ³	82%
Gender Inequality Index ⁴	75
Number of primary schools nationwide ⁵	38,176

1. % population, JMP 2012. 2. Elementary schools, BEIS 2010. (* Adjusted pupil-to-toilet-bowl ratio.) 3. UNESCO 2011. 4. Rank out of 156 countries, UNDP 2011. 5. BEIS, Department of Education 2010.

Abstract

The Philippines has a strong policy environment in regard to education, water and sanitation. For WASH in Schools, the most important policies and guidelines are the Department of Education's 2010 *Educational Facilities Manual* and those for the Essential Health Care Program. Based on the 'Fit for School' framework, the Essential Health Care Program comprises daily group hand washing, daily group tooth brushing and biannual deworming. It has proved to be a great success and is being expanded throughout the country.

The state of WASH in Schools varies throughout the Philippines and shows large sub-national disparities. The northern part of the country has higher rates of education, and better water and sanitation coverage, whereas the southern areas have lower rates for both. Recommendations for WASH in Schools include continuing the expansion of the Essential Health Care Program so that more children can benefit in both education and health.

Background

Due to its geographical location in the far east of South-East Asia, the Philippines has had a long history of interaction with multiple cultures from around the globe. During the period of Spanish colonization, schools were religion-based and only for wealthy men, often only of Spanish descent. Educational opportunities expanded, however, with the Educational Decree of 1863, which sought to establish at least one primary school per town, for both boys and girls. Education was intended to be free, but according to the Department of Education, it was actually "inadequate, suppressed, and controlled."

During the American period of colonization, from 1898–1935, there were marked increases in educational opportunities. World War II and the Japanese invasion delayed independence until 4 July 1946. Education systems continued to grow in the Philippines, undergoing multiple changes over time. The current Department of Education and structure were established in 2001, with the goal “to provide the school age population and young adults with skills, knowledge, and values to become caring, self-reliant, productive and patriotic citizens” (DepEd 2010).

Methods

Fieldwork for the Philippines included a literature review, policy analysis, analysis of secondary data, school observations, key informant interviews and focus group discussions. Statistics for the secondary data analysis came from multiple sources, including the Basic Education Information System (BEIS) for the 2009/10 school year; the National Demographic and Health Survey 2008 (NSO and ICF Macro 2009); and the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP) 2012.

Key informant interviews (KIIs) were conducted with school principals and government officials in the Department of Education, the government body responsible for WASH in Schools; 17 interviews were completed. A total of 18 focus group discussions were conducted with male and female students, teachers, and members of the parent-teacher associations and local government units.

Policy and enabling environment

There are a multitude of policies and guidelines in the Philippines that relate to water and sanitation as it pertains to households. At the school level, the most important policies and guidelines for WASH in Schools are the Essential Health Care Program and the Department of Education’s 2010 *Educational Facilities Manual*. The Department of Education is the government body responsible for WASH in Schools.

The Essential Health Care Program

The Essential Health Care Program is a partnership between the Philippine Department of Education, Fit for School Inc., UNICEF and local government units. The programme is implemented in approximately 19 per cent of elementary schools and benefits nearly 2 million children in 23 provinces. It includes three basic interventions: group hand washing with soap, group tooth brushing with fluoride toothpaste and biannual deworming. Hygiene materials for the programme cost US\$0.60 per child per year. It has been well-received by teachers and students, and success thus far has led to efforts by the Department of Education and partnering organizations to expand it throughout the country (*for details, see the ‘Fit for School in the Philippines’ text box, pages 44-45*).

FIGURE 4.1 Tooth brushing and hand washing as part of the Essential Health Care Program, Philippines



Photo credit: Alexandra Fehr © 2011

WASH in Schools guidelines

There are two sets of standards established by the Government of the Philippines that address WASH facilities: (1) the Department of Education's *Educational Facilities Manual*, 2010; and (2) the Presidential Decree 856, 1975. The Presidential Decree 856 is the national Code on Sanitation and contains specific requirements for schools. The two guidelines differ in requirements, including pupil-to-toilet-bowl ratios, as shown in Table 4.1.

The decree, for example, suggests one toilet bowl for every 30 girls, whereas the *Educational Facilities Manual* suggests one toilet bowl for every 50 girls. Included in the *Educational Facilities Manual*, but not Presidential Decree 856, is the Accessibility Law (Batas Pambansa Bilang, or BP, 344), which requires educational institutions to build facilities that are accessible to and usable by all students, especially those with disabilities.

TABLE 4.1 Comparison of national guidelines on WASH in Schools facilities, Philippines

Department of Education <i>Educational Facilities Manual</i>	Presidential Decree 856
<p>Boys</p> <p>1 detached urinal per 50 pupils, or 1 metre urinal trough per 100 pupils</p> <p>Boys' toilet seat (water closet) 1 seat per 100 pupils</p> <p>1 seat designed for pupils with disabilities (BP 344)</p>	<p>Boys</p> <p><i>Below 50</i>: 1 toilet bowl, 1 urinal, 1 lavatory</p> <p><i>50–100</i>: 2 toilet bowls, 1 urinal, 2 lavatories</p> <p><i>Every additional 100</i>: 1 toilet bowl, 1 urinal, 1 lavatory</p>
<p>Girls</p> <p>Girls' toilet seat (water closet) 1 seat per 50 pupils</p> <p>1 seat designed for pupils with disabilities (BP 344) lavatory – 1 lavatory to 1 toilet seat</p>	<p>Girls</p> <p><i>Below 30</i>: 1 toilet bowl, 1 lavatory</p> <p><i>30–100</i>: 2 toilet bowls, 2 lavatories</p> <p><i>Every additional 50</i>: 1 toilet bowl</p> <p><i>Every additional 100</i>: 1 lavatory</p>

Sources: DepEd 2010; Presidential Decree 856, 1975; and Batas Pambansa Bilang 344.

Responsibility for applying these policies and guidelines is found at all levels of government and in the community, as described in Table 4.2. The Department of Education is the main government body responsible for WASH in Schools, predominantly setting the policies and guidelines. Important to note is the absence of the Department of Health in WASH in Schools. There is no institutionalized engagement between the Department of Education and the Department of Health in regard to WASH (as evidenced by the varying WASH in Schools standards); the Department of Health works at the household and community levels, while the Department of Education is responsible for school-level health. Different responsibilities for WASH in Schools fall on all those involved, from the national Government to the students who are responsible for cleaning the facilities and being leaders in their classes.

TABLE 4.2 Roles and responsibilities for WASH in Schools stakeholders, Philippines

Key stakeholders	Roles and responsibilities
Department of Education	<ul style="list-style-type: none"> • The leading government department responsible for WASH facilities and projects at schools • Designs and constructs WASH facilities, through the Physical Facilities and Schools Engineering Division
Regional government*	<ul style="list-style-type: none"> • Applies Department of Education standards at the local level • Helps determine financial priorities • Monitors implementation at the regional level
Schools Division Office	<ul style="list-style-type: none"> • At the provincial and city levels, this office consolidates and validates BEIS data from schools • Works with the Division Engineer and Division Physical Facilities Coordinator to determine construction and/or repairs of schools, based on BEIS data
Local government units^	<ul style="list-style-type: none"> • Work with schools/principals to secure increased funding for school projects • Provide financial or labour counterpart to receive increased funding for WASH projects • Connect community water source to school
Parent-teacher associations	<ul style="list-style-type: none"> • Build comfort rooms within classrooms (typically including a toilet and sink) • Connect water from school grounds to comfort rooms • Support WASH in School needs, e.g., comfort room repairs
Principals	<ul style="list-style-type: none"> • Communicate school needs to local government units and parent-teacher associations • Advocate for additional funding for WASH facilities and projects • Write proposals for increased funding • Help establish the school budget, allocating specific funds for WASH in Schools
Teachers	<ul style="list-style-type: none"> • Organize students to practise good hygiene behaviours • Ensure access to hygiene materials • Teach WASH curriculum
Students	<ul style="list-style-type: none"> • Clean comfort rooms • Are leaders in encouraging healthy behaviours among classmates

Sources: Interviews with WASH in Schools stakeholders, government officials and school administrators, and review of government guidelines.

* This refers to the regional offices of the Department of Education. There is no formal 'regional government' as part of the Philippines' government structure, except in the Autonomous Region in Muslim Mindanao and the Cordillera Autonomous Region.

^ Unlike other government agencies in the Philippines, the Department of Education is not devolved, so the national Government is still responsible for the local education sector. The local school board is the mandated body for the engagement of the local government unit and school sector.

Monitoring

School data are collected and monitored through the BEIS, which includes indicators for number of students per grade and classroom, number of desks and number of teachers, among many others. BEIS data are collected from the regional to the school level and disaggregated by gender, and the monitoring system has effectively contributed to decision making. The Department of Education classifies school divisions into 'red' or 'black' zones based on the BEIS data. Through this system, it prioritizes budget and resource allocations. In 2006, for example, the Department of Education identified high-need locations by using BEIS data to determine pupil-to-teacher ratios across the Philippines. By doing this, it was able to recognize significant disparities between regions and placed more than 7,000 new teachers in locations with the greatest need (UNESCO 2010).

WASH in Schools indicators include water sources used by each school and the number of students per toilet bowl for each school. BEIS data, however, do not include the functionality of facilities or the quantity and quality of water available. There are also no indicators regarding the availability of renewable materials (e.g., toilet paper, sanitation supplies) or WASH practices, such as hand washing. Without such indicators, it is difficult to assess the true state of WASH in Schools, for facilities or behaviour.

Funding and prioritizing WASH in Schools

A paramount challenge to providing equitable WASH in Schools access is that water and sanitation are not often a top priority, at any level, when there is limited funding. There is no specific allocation for WASH from the Government, so schools must use their 'maintenance and other operating expenses' fund for WASH-related needs. At the school level, principals explained during interviews that the water bill alone absorbed a near majority of this fund. Little money was left for other expenses, including WASH facilities maintenance and repair. When asked how they prioritize limited funds, WASH was rarely the first consideration. After paying the electric and water bills, the majority of principals mentioned physical facilities, such as classrooms and fences, and test materials.

Funding mechanisms in the Philippines leave school principals with the responsibility for lobbying to raise funds for numerous projects. Principals must write proposals to the local government unit and work with

Fit for School in the Philippines



The Essential Health Care Program (EHCP) implemented by the Philippine Department of Education benefits nearly 2 million schoolchildren. EHCP is based on a framework developed by the non-governmental organization Fit for School Inc., which works closely with government departments, private partners and development agencies, including UNICEF, to support the programme. Since 2009, Fit for School Inc. and Deutsche Gesellschaft für Internationale Zusammenarbeit (German Society for International Cooperation) have worked together to strengthen capacities in the health and education sectors, and to provide technical expertise and start-up materials to select schools.

EHCP focuses on three components: daily group hand washing, daily group tooth brushing and biannual deworming. The cost for materials is very low, at less than US\$0.60 per child per year.

A multi-year study is under way to assess the programme's impact on schoolchildren. Data from the intervention were analysed as part of the WASH in Schools equity research, with a focus on gender, family size and socio-economic status (using television ownership as a proxy indicator), and the findings are promising. After the first year, children at schools that participate in EHCP missed fewer school days, were less likely to have moderate or severe soil-transmitted helminth (worm) infections and benefited from a reduced PUFA index, which measures the severity of tooth decay by assessing pulpal involvement, ulceration, fistula and abscess. In addition, students in EHCP had a greater increase in body mass index (BMI).

All students in EHCP schools were 40 per cent less likely to have an increase in PUFA than those in schools without the programme. When assessed for gender, girls were found to benefit more than boys. Among girls in intervention schools, 7 per cent had an increase in PUFA,

the parent-teacher associations to fund school needs, including building and maintaining classrooms and WASH facilities. There is no training for principals on writing proposals, and many expressed frustration over finding time for writing and advocacy. Potentially exacerbating inequitable access, students at schools with principals who have better proposal-writing capacities were likely to have better access to school WASH facilities.

WASH in Schools coverage

Philippine children are well educated on sanitation and hygiene topics. Health, sanitation and hygiene messages are incorporated into the curriculum at all grade levels. In the younger grades, students are taught the importance and proper techniques of hand washing and tooth brushing. Focus group discussions revealed that most students could identify how and when to wash their hands, as well as understand other health and hygiene messages. These topics are taught in health and science classes, and used in English language classes as examples. Older students continue to receive education on hygiene, sanitation and health, including reproductive health and menstrual hygiene management.

The situation of WASH in Schools varies greatly throughout the country. As shown in Figure 4.1, on page 46, approximately one third of primary and secondary schools have access to water through a local pipe; 19 per cent of primary and 9 per cent of secondary schools do not have access to any water (BEIS 2010). The quality and quantity of water available are missing from this data, therefore, it is not possible to determine the percentage of schools with a sufficient amount of safe water.

The average pupil-to-toilet bowl ratio is 54 to 1 across the country, but there are wide disparities from region to region. In Region I, located on the northern island of Luzon, there are 29 students to every toilet bowl. In the Autonomous Region in Muslim Mindanao in the south, an average of 181 students use one toilet bowl (BEIS 2010). These ratios also vary substantially within regions.

Much like the case with water sources, BEIS data provide only the existence of toilet bowls, not their functionality. Based on observations in many places, it is likely that the actual pupil-to-toilet-bowl ratio is much higher than recorded in the system.

compared to 14 per cent of girls in schools without the programme. Seven per cent of boys in the intervention group and 8 per cent of boys in the control group had an increase in PUFA.

All students in EHCP schools were 60 per cent less likely to have a moderate or heavy worm infection than those in the control schools. Further, all children – boys and girls, those with big and small families, and those with or without a television – benefited equally from the deworming intervention. After one year, 17 per cent of students in the programme had a moderate or heavy worm infection, compared to 32 per cent of students without EHCP.

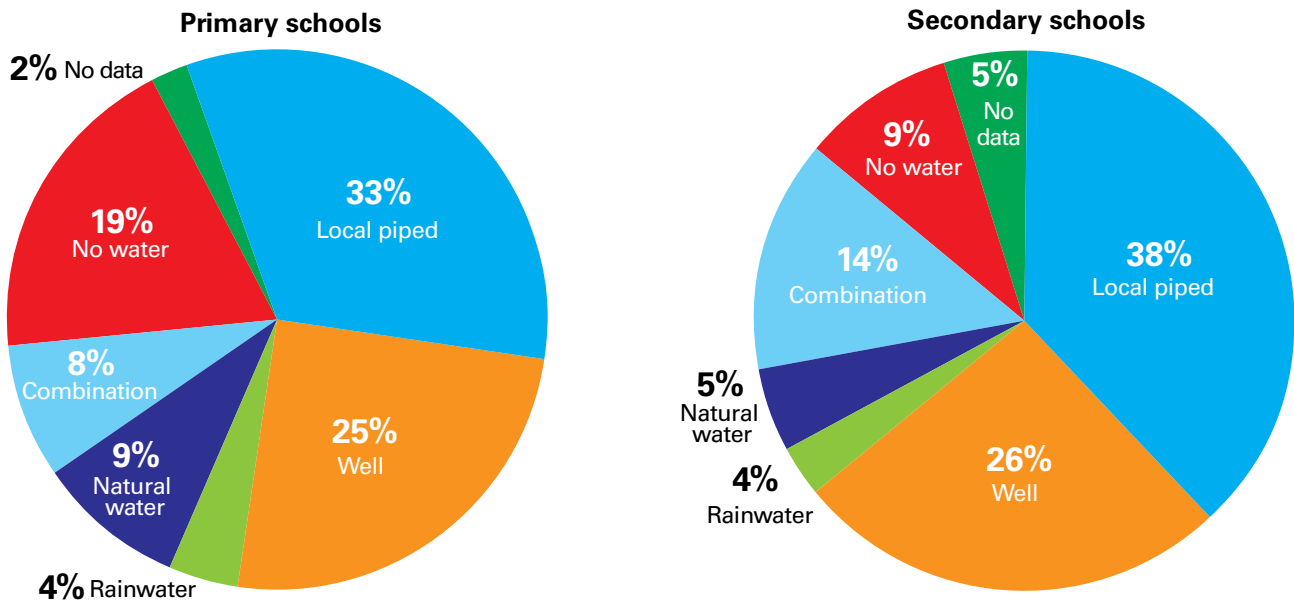
Students in the intervention group had a significantly greater increase in BMI (1.5 per cent) than students in the control group, who had no change in BMI. The study found a difference in the impact of the programme related to the wealth indicator: Students without a television at home benefited slightly more than those with a television.

During the 2009/10 school year, students in EHCP schools missed an average 27 per cent fewer days (3.2 days) than their peers without the intervention (4.4 days). Girls who participated in the intervention missed 36 per cent fewer days (2.8 days) than girls in the control schools (4.4 days). Boys in the intervention missed 18 per cent fewer days (0.8) than boys in the control, though this difference was not statistically significant.

Increased research has strengthened the growing evidence that WASH in Schools programming has a positive impact on children's health and education. In schools with EHCP, all students, regardless of gender or socio-economic status, participate in activities and benefit from the interventions in the Fit for School framework. From an equity perspective, girls and children coming from poorer families benefit even more in many health indicators. Due to its documented success, the Essential Health Care Program is continuing to expand throughout the Philippines.

Sources: Fit for School Inc.; and Monse, et al., 2011.

FIGURE 4.1 Types of primary and secondary school water sources, Philippines, by %



Source: BEIS 2010.

The majority of elementary schools in the Philippines have ‘comfort rooms’, spaces within the classroom that have a toilet and, often, a sink. The construction of comfort rooms, as well as securing the funds for construction, is the responsibility of parent-teacher associations, so the quality and style vary greatly. In some schools, the comfort room walls do not reach the ceiling. According to students in the focus group discussions – both boys and girls – this was often a problem. Students were concerned that the class would be able to hear or smell any actions that took place in the comfort rooms. Due to this lack of privacy, many students avoid using the comfort rooms at school, preferring to wait until they go home to use the toilet.

The photographs in Figure 4.2 show variations in elementary school comfort rooms. The room on the left lacks a true door and the walls do not reach the ceiling, leading to privacy concerns for the students. The room in the middle has a door and walls that reach the ceiling. The comfort room on the right has a ceiling; a large window provides light but reduces privacy.

FIGURE 4.2 Variations in elementary school comfort rooms, Philippines



Photo credit: Alexandra Fehr © 2011

The BEIS does not provide data on hand-washing facilities or behaviours. Schools that are participating in the Essential Health Care Program have hand-washing facilities, and teachers in these schools supervise children's hand washing at least once a day, frequently more often. As with the comfort rooms, hand-washing facilities are built by the parent-teacher associations and vary by school. These facilities are often constructed from local materials, including bamboo pipes and plastic water bottles. The photographs in Figure 4.3 show a sample of variations.

FIGURE 4.3 Variations in elementary school hand-washing facilities, Philippines



Photo credit: Alexandra Fehr © 2011

Bottlenecks

The bottleneck analysis is a visual representation of the challenges and barriers prohibiting equitable access to WASH in Schools. Indicators are organized into four categories: (1) policy and enabling environment; (2) supply; (3) demand; and (4) quality.

Among the most successful components of WASH in Schools in the Philippines is the level of knowledge on WASH and health among the students and teachers. Teachers were trained in WASH and taught the students WASH and health messages in multiple subjects and at every grade. Students, in turn, knew the proper techniques and times for washing hands. In the visited schools, students kept the in-classroom facilities' clean on an equitable, rotating schedule. Communal toilets at larger schools, however, are often not as clean or well maintained; there are also reports of students cleaning the communal toilets as a form of punishment.

The policy environment is also very strong, and guidelines exist to promote the adequate number and design of school WASH facilities. WASH in Schools was recognized as very important by the government officials interviewed and at almost every school visited. Schools had limited funding, however, and it was not sufficient to meet all their needs. When forced to prioritize school budgets, WASH was often deemed a lower priority than other needs such as classroom repair and test materials.

Funding is a bottleneck to WASH in Schools by way of operation and maintenance. At many schools, teachers purchased cleaning supplies with their own money, and principals struggled to fund necessary repairs to WASH facilities. Regional disparities produce another bottleneck due to vast differences in income, educational attainment, water and sanitation, and, especially, access to WASH in Schools.

Lack of a dedicated budget and low levels of enforcement of existing national policy and guidelines are large bottlenecks for WASH in Schools. Although national policies have components addressing all students' needs, including girls and students with disabilities, many schools do not provide the necessary services and facilities. Without adequate funding or enforcement of guidelines, it is likely that these needs will continue to be unmet.

TABLE 4.3 Bottleneck analysis of WASH in Schools, Philippines

Category	Determinant	Indicators	Metric/source of information	Stoplight evaluation of existing situation
Policy and enabling environment	Social norms	Teachers and government officials express that WASH in Schools is a priority	KIIs with teachers and government officials	WASH is recognized as important, but there are other priorities
		Children have been taught good WASH behaviours and recognize their importance	FGDs with students	Children are knowledgeable about WASH behaviours and their importance
		School culture is non-discriminatory	FGDs with students, teachers and parents; KIIs with principals	Teachers are trained in equity issues and promote non-discrimination
	Policy framework	School WASH standards are in place and contain stipulations for equity	Department of Education's <i>Educational Facilities Manual 2010</i>	WASH guidelines include stipulations for equity
		Mechanism to enforce policy has been established	KIIs with principals	Principals said there is no enforcement of WASH in Schools policies; WASH in Schools is not among key result areas or performance indicators for school or education managers at all levels
	Budget/expenditure	Adequate budget is allocated for WASH in Schools at the national and local levels	KIIs with principals and government officials	No specific funding for school WASH construction or the provision of WASH facilities is available from the Government; school principals had to raise extra money
	Availability of essential inputs	% of schools that have functioning water points on or near premises, or have another source of safe water	BEIS; KIIs with principals; school observations	Many water points are non-functional and there are problems with seasonal availability of water
	Monitoring of WASH in Schools	Effective monitoring is taking place, with data management at national level	BEIS	BEIS monitors existence of WASH facilities but not functionality or quality

Key

- In place and functioning well
- In place but not fully functioning
- Non-functional or not in place

Category	Determinant	Indicators	Metric/source of information	Stoplight evaluation of existing situation
Supply	Existence of functioning WASH in Schools infrastructure	% of schools that have functioning latrines	BEIS; KIIs with principals; school observations	Observations showed most latrines as functional, but no national data are available
		% of schools that have latrines that conform to international standards of privacy	School observations; KIIs with principals; FGDs with students	Latrines are built by parent-teacher associations and vary by school
		% of schools that have functioning hand-washing facilities with soap	School observations; KIIs with principals; FGDs with students	Schools in the Essential Health Care Program have functioning hand-washing facilities, but schools often did not provide soap
	Availability of human resources	% of schools with teachers trained in hygiene education or staff dedicated to hygiene curriculum	KIIs with principals and government officials	All schools teach hygiene curriculum
		Presence of human resources required for operation and maintenance	KIIs with teachers and principals; FGDs with parents and community	Varied by school
	Equitable geographical access	Geographical disparities between urban and rural areas or different sub-national regions	BEIS; KIIs with principals; school observations; reports	Significant disparities between sub-national regions
	Budget for operation and maintenance	School-level funding is available for infrastructure, maintenance and materials	KIIs with teachers and local government officials	Budget for maintenance and other operating expenses is available but insufficient for many repairs and is not specific for WASH (without enforcement of policies, operation and maintenance funds are rarely used for WASH)

Category	Determinant	Indicators	Metric/source of information	Stoplight evaluation of existing situation
Demand	Mechanisms for operation and maintenance	School-level system is in place to maintain cleanliness and usability of WASH infrastructure	KIIs with teachers and school administrators; FGDs with students	Rotating cleaning schedules are present at many schools, especially small schools and schools with access to water, but operation and maintenance is poor in many schools, particularly large schools with facilities outside the classroom
	Desire for use	School WASH improvements are requested at the local level	KIIs with teachers, school administrators and government officials	Principals actively advocate for improved WASH facilities at their schools
Quality	Gender-appropriate facilities	% of schools that have separate, private toilets	BEIS; school observations; Department of Education's <i>Educational Facilities Manual 2010</i>	One comfort room per classroom in elementary schools, separate facilities in secondary schools
	Facilities appropriate for children with disabilities	% of schools that have WASH infrastructure accessible to children with disabilities	Department of Education's <i>Educational Facilities Manual 2010</i> ; school observations; KIIs with principals	Varied by school
	Status of environmental sanitation	% of schools with clean school grounds	School observations	Grounds are generally well kept and part of cleaning rotation
	Status of WASH facilities	% of schools with clean latrines and maintained hand-washing facilities	Observations	There are no data available for this indicator, but observed schools generally have clean latrines; where there are hand-washing facilities, functionality and/or maintenance vary

Equity dimensions

Education and equity, particularly gender equity, are focus areas for the Government of the Philippines. All children are strongly encouraged to attend primary school, and no school fees are required. Access to school water, sanitation and hygiene remains inequitable for the country's children, however, and is particularly affected by regional disparities and inequities in regard to children with disabilities.

Although this case study does not focus on gender as a separate equity issue, it is important to note that WASH-related challenges affect school-going girls and boys differently. Overall, girls have a higher rate of enrolment and attendance than boys in both primary and secondary school (World Bank data for 2008, as available online in 2011). Focus group discussions clarified that this is due to boys working outside the home to generate family income.

The discussions also revealed that sanitary pads are readily available and affordable for most girls. However, schools do not provide a way for women and girls to dispose of used pads. Girls said they would sometimes go home during the day to maintain hygiene while menstruating. More often they would wrap their used sanitary pads and carry them in their school bags to dispose of later. This caused the girls a lot of disgust, and they were anxious that someone would find out what they were carrying.

Regional disparities

A variety of equity issues relate to geography and climate, particularly in water-scarce and disaster-prone regions. The Philippines is hit, on average, by 20–25 typhoons a year, causing flooding and mudslides that affect millions of people. These natural disasters disrupt school and damage the infrastructure required for adequate school WASH, so children have less access to safe water and sanitation.

Rural areas have lower water and sanitation coverage, as well as lower rates of educational attainment, as shown in Table 4.4. The quality of facilities varies greatly between urban and rural schools, as well. In urban areas, more than 70 per cent of students attend schools that have basic facilities, e.g., blackboards and toilets, but only approximately 50 per cent of students in rural schools attend schools with these facilities (UNESCO 2010).

TABLE 4.4 Urban-rural differences in water and sanitation coverage and school attendance, by %

Indicator	Urban	Rural
Household water¹		
Piped	61.0%	25.0%
Other improved	32.0%	67.0%
Unimproved	7.0%	17.0%
Household sanitation¹		
Improved	79.0%	69.0%
Shared	17.0%	16.0%
Unimproved	1.0%	3.0%
Open	3.0%	12.0%
Median years of school completed²		
Males	8.7%	5.4%
Females	9.1%	5.7%

1. % population, JMP 2012. 2. NSO and ICF Macro 2009.

Access in some areas is affected by armed conflict. Many of the factors that can lead to disparity are found within the same region, exacerbating inequities in general and school WASH in particular. Details on water-scarce and conflict-affected regions are discussed below.

Water-scarce regions. Water scarcity is a significant problem. In April 2011, the National Anti-Poverty Commission issued a list of 455 'waterless' municipalities in the Philippines. The distinction of being labelled waterless is based on criteria including the percentage of the population having access to safe water (less than 50 per cent), poverty rates and incidence of waterborne diseases (Streams of Knowledge 2011).

The amount of water to which a municipality has access to affects WASH conditions at schools affiliated with that municipality. Children attending schools in municipalities with little water have less access to WASH facilities than children from schools in municipalities with greater water coverage. There is a statistically significant positive correlation between the number of households without water in a municipality and the pupil-to-toilet-bowl ratio of the affiliated school. The more households in a municipality without water, the higher the pupil-to-toilet-bowl ratio (BEIS 2010, NHTS 2010).

Focus group discussions with parent-teacher associations and local government units showed that water shortage was a major concern and a challenge to securing school WASH. Rural schools reported periodically having to limit use of comfort rooms when water was scarce, causing schoolchildren (particularly boys) to urinate outdoors. As one teacher said, "During the dry season, we have a one hectare comfort room," referring to the land around the school.

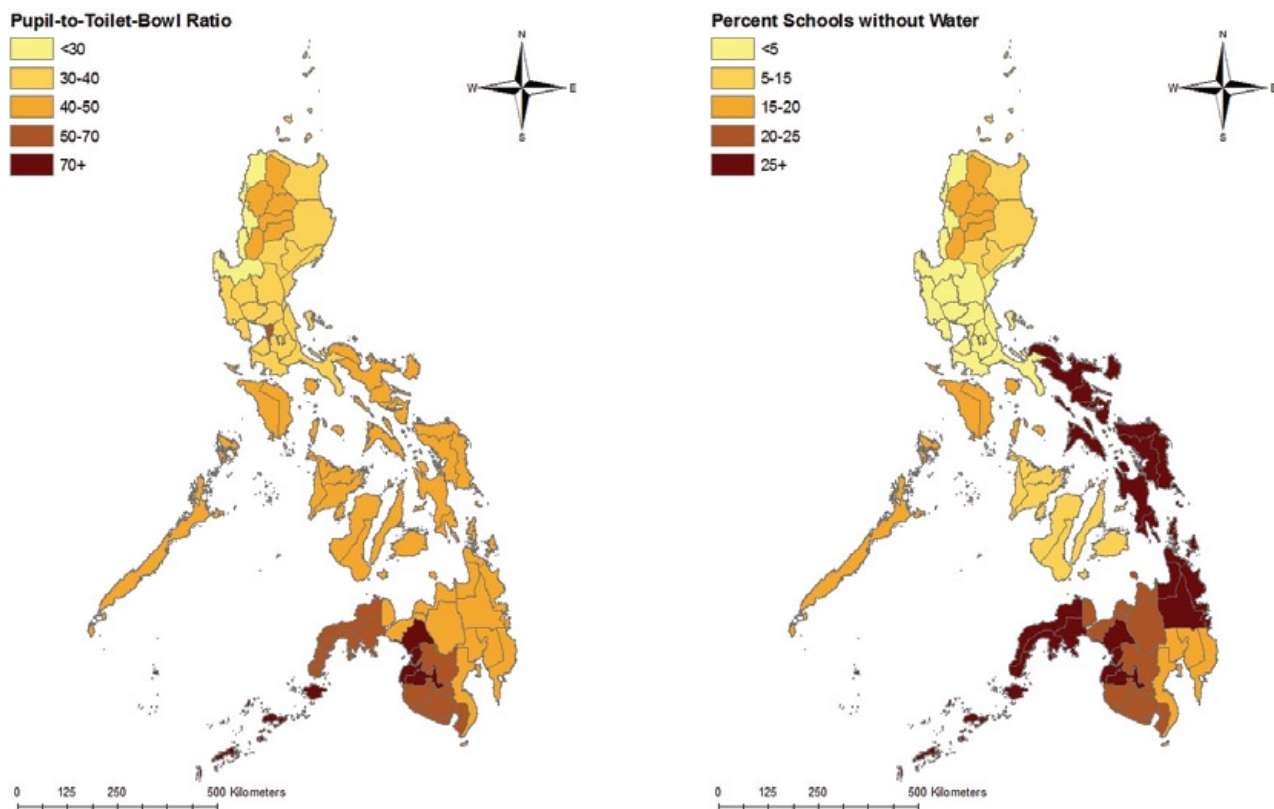
When water is scarce, students either fetch water from other sources or bring water from home for use in the comfort rooms. Water transport can be problematic for children who live far from the school, and water scarcity at school often means scarcity in the greater community. Water scarcity at schools is also intensified by financial problems and geography. Many schools and communities are located in areas that are difficult to access and have limited funding to build water systems.

Conflict-affected regions, particularly the Autonomous Region in Muslim Mindanao. The southern island of Mindanao has been plagued for years by widespread poverty and armed conflict between government forces and the Moro Islamist Liberation Front separatist group. The fighting has displaced more than 100,000 people, including school-aged children.

The Autonomous Region in Muslim Mindanao (ARMM), located on the island of Mindanao, is the poorest region in the country. Mindanao Island, especially ARMM, has much lower education rates and WASH coverage in households and in schools than the rest of the Philippines. For instance, the median number of school years completed in ARMM is 3.2 for men and 3.8 for women. The mean number of years completed for all other regions is 6.3 for men and 6.9 for women (NSO and ICF Macro 2009).

WASH in Schools indicators, such as pupil-to-toilet-bowl ratio and percentage of schools without water, show great differences between regions, as illustrated in Figure 4.4. ARMM has a pupil-

FIGURE 4.4 Elementary school pupil-to-toilet-bowl ratio and % of schools without water, per region, Philippines



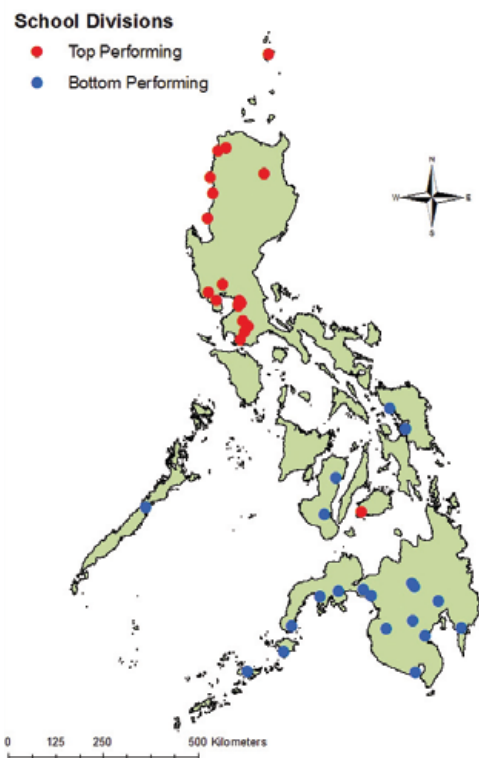
Source: Map created by Alexandra Fehr based on BEIS data.

to-toilet-bowl ratio of more than 150 in elementary schools and more than 300 in secondary schools. The percentage of schools without water is also highest in ARMM, where nearly 40 per cent of elementary schools and more than 20 per cent of secondary schools do not have water.

The 187 Department of Education school divisions were ranked according to Philippine Education for All indicators in 2005 (UNESCO 2005). There are marked regional differences between the top- and the bottom-performing divisions, as illustrated in Figure 4.5. All but one of the top 20 divisions were found in the northern regions of the country; all of the bottom-performing divisions were found to be in the central and southern regions.

There are also statistically significant differences in school WASH indicators between the top- and bottom-performing school divisions, as shown in Table 4.5. The top-performing school divisions have an average pupil-to-toilet bowl ratio of 38 to 1, while the bottom divisions have a ratio of 108 to 1. Further, less than 1 per cent of the top-performing school divisions did not have access to safe water. Nearly one third of schools in the bottom divisions did not have access to safe water.

FIGURE 4.5 Top- and bottom-performing school divisions, Philippines



Source: Map created by Alexandra Fehr based on EFA data.

TABLE 4.5 WASH differences between top- and bottom-performing school divisions

	Top-performing school divisions	Bottom-performing school divisions	P-value
Mean student-to-toilet-bowl ratio	38	8,108	0.0125
Mean percentage of schools without water	<1%	31%	< 0.0001

Source: Data derived from BEIS and EFA.

Disabilities

The Government of the Philippines recognizes the rights of children with disabilities and established the Special Education Division (SPED) to ensure fulfilment of every child's right to an educational program that is suitable to his or her needs. As noted in the *Educational Facilities Manual*, SPED encompasses "children and youth with special needs corresponding to elementary and secondary education that require modifications of school practices, curricula, programs, special services and facilities. These include children and youth who are gifted/talented, fast learners, and those with disabilities."

The Department of Education estimates that 13 per cent of Philippine children, or 5.5 million, have special needs. It is estimated that 4.8 per cent of these children were provided with appropriate services at school during 2004/05. There are 4,034 SPED classes in the country, mainstreamed into public schools, in private schools or at separate centres. However, there is great regional variation in access: Central Luzon, for example, has 1,052 SPED classes, while ARMM only has 5.

Enrolment of children with special needs nearly doubled between 1994 and 2004, from approximately 8,000 to nearly 16,000. According to Philippine law and national guidelines, all schools should have at least one toilet for boys and one for girls that is designed for children with special needs. Monitoring data, however, do not collect this information specifically, so the number of appropriate toilets and hand-washing stations for children with disabilities is unknown. There is the potential that many children do not have access to WASH facilities at school.

It is also unknown how much of an impact WASH in Schools has on the enrolment and attendance of students with disabilities, as well as the impact of WASH on their overall health. For example, are there children with disabilities who do not attend school regularly due to a lack of adequate WASH facilities at school? Do children with disabilities limit their intake of food or water? Data are urgently needed to answer these questions

Recommendations for the Philippines

Recommendations for improving equity and access in the Philippines are based on the six points of action established by the Call to Action for WASH in Schools, a collaboration between key stakeholders around the world.

Increase investment in WASH in Schools:

- Establish a specific method for allocating a portion of the national budget towards WASH in Schools, including funds for operation and maintenance of facilities.

Engage those who set policies:

- Increase dialogue on WASH in Schools between different levels of government and between different government agencies (e.g., Department of Education and Department of Health).
- Ensure guidelines for WASH in Schools facilities address the needs of all students, including girls and students with disabilities.

Involve multiple stakeholders:

- Include the school administration and communities in decisions regarding WASH in Schools at the local level.
- Provide training for school principals so that they are better able to solicit government funds for WASH in Schools facilities.
- Garner greater private support for WASH in Schools, for example, by mainstreaming WASH in Schools in the Adopt-a-School programme.

Demonstrate quality WASH in Schools projects:

- Continue to expand the Essential Health Care Program.
- Ensure that school sanitation facilities are equipped with receptacles so that girls may dispose menstrual hygiene materials properly.
- Ensure that WASH in Schools facilities are appropriate for all students, including girls and students with disabilities, and are based on students' experiences.
- Ensure greater privacy measures for school sanitation facilities, for example, walls that reach from floor to ceiling.
- Improve access to water and sanitation as a key to optimizing the impacts of the Essential Health Care Program, especially for girls and children with disabilities.

Monitor WASH in Schools programmes:

- Include additional WASH in Schools indicators in the Basic Education Information System, such as hand-washing facilities and behaviours, and functionality of existing school facilities.
- Develop and implement tools for school-level assessment of WASH conditions to be used for planning, action and resource mobilization.

Contribute evidence:

- Use WASH in Schools data to better inform decision makers; data can be used to identify and prioritize schools with the most need.

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5

Timor-Leste



Timor-Leste country snapshot

Household access to improved water ¹	68%
Household access to improved sanitation ¹	47%
School access to improved water	N/A
School access to improved sanitation	N/A
School hand-washing facilities coverage	N/A
Hand-washing with soap practice among schoolchildren	N/A
Primary education net enrolment ratio ²	76%
Secondary education gross enrolment ratio ²	45%
Gender Inequality Index ³	N/A
Number of primary schools nationwide ⁴	975

1. % population, JMP 2012. 2. UNESCO 2011. 3. Rank out of 156 countries, UNDP 2011. 4. EMIS, Ministry of Education 2010.

Abstract

Timor-Leste became an independent nation in May 2002. Since then, it has been working to strengthen its policy environment, as well as national infrastructure, and to promote equity throughout the country. Education, and water and sanitation, have improved during the past decade, but there is still much to be done.

WASH in Schools is also improving, but implementation faces many challenges, particularly in regard to operation and maintenance and monitoring. In regard to equity, there are large urban-rural disparities, as well as issues that particularly affect girls. Recommendations for improving WASH in Schools include strengthening and finalizing standards and providing more support at the school level.

Background

After centuries of colonization under Portugal, Timor-Leste was occupied by Indonesia from 1976 until 1999. The period was one of harsh political oppression and human rights abuses, but a campaign to “win the hearts and minds” of the Timorese began in the 1980s and resulted in economic development, and construction of infrastructure and schools – commodities previously only accessible to the upper class.

In 1999, an overwhelming 78 per cent of the population of East Timor voted in favour of independence from Indonesia. Fighting broke out immediately afterwards, and the pro-Indonesian militia, supported by the Indonesian military, conducted a “scorched earth” campaign. This led to the destruction of the country’s

infrastructure, including many water systems and schools. Peacekeeping troops soon arrived, and the country was led by the United Nations Transitional Administration in East Timor for the next two-and-a-half years.

On 20 May 2002, Timor-Leste became an independent country. Uprisings of political violence, however, have continued to occur, and as a result, the infrastructure needed for WASH in Schools has been damaged or destroyed. In 2006, a large-scale outbreak of violence disrupted schooling, destroyed infrastructure and displaced more than 100,000 people (Robinson 2011).

Methods

Fieldwork for Timor-Leste included a literature review, policy analysis, school observations key-informant interviews and focus group discussions. Available data for secondary analysis included the Demographic Health Survey (2010), reports from the WHO/UNICEF Joint Monitoring Programme for Water and Sanitation (2012) and limited data from the Education Management Information System (EMIS). In total, 30 interviews were conducted with government officials in the Ministries of Education and Health, locally based international NGOs, school headmasters and the chief of a parent-teacher association. Twenty-three school observations were completed, and 13 focus group discussions with students were conducted.

Policy and enabling environment

Due to its recent independent status, the policy environment in Timor-Leste is still developing. The National Water Policy is in draft form, and the National Sanitation Policy was signed and passed in 2012. There are currently no policies that specifically address school WASH, nor are there approved guidelines or rules to dictate WASH in Schools infrastructure. The Government of Timor-Leste, however, has been working with UNICEF and other stakeholders to develop guidelines that will serve as a minimum standard for all schools and stakeholders working with schools.

Three ministries are involved in policies and guidelines related to WASH in Schools: the Ministry of Education, the Ministry of Health and the Ministry of Infrastructure. The Ministries of Education and Health hold responsibilities at the school level, and the Ministry of Infrastructure holds responsibility at the community level. The Ministry of Education provides school funding; each school is allotted US\$1 per student per month to cover all school needs, including WASH. Teachers are responsible for monitoring and collaborating with the parent-teacher association and the greater community on maintenance of the WASH facilities.

National policies

National Development Plan. The first National Plan for Timor-Leste focuses on poverty reduction and economic growth that is “equitable and sustainable, improving the health, education, and well-being of everyone in East Timor.” The plan calls for improvements in water and sanitation infrastructure throughout the country, and there is a significant focus on improving the state of education and schools. The National Development Plan actively promotes equity – especially gender and social equity – throughout all sectors.

Draft National Water Supply Policy. The National Water Policy is currently in its third draft. The overall management of all water resources in Timor-Leste is the responsibility of the Directorate of Water Resources Management. The National Directorate of Water and Sanitation Services is the main organization responsible for the delivery and management of all public water supplies, including monitoring and evaluation. In regard to school WASH specifically, the policy states that the Ministry of Education Directorate of Infrastructure, “constructs, operates and maintains all water supplies for G-RDTL [Government of the Democratic Republic of Timor-Leste] funded educational institutions within the institution’s boundary. It also ensures compliance with the appropriate laws, regulations and guidelines promulgated by the Ministry of Infrastructure.”

“Water is a fundamental human necessity for life, access to it is important for peace, security, health and a shared prosperity.”

– National Water Policy, Timor-Leste

National Sanitation Policy. The National Sanitation Policy was signed and approved on 11 January 2012. The policy addresses the need for sanitation facilities to be gender-separated and appropriate for the needs of women and girls, and for students and staff with disabilities. The Ministry of Education is responsible for WASH in Schools requirements, including planning, development and management of sanitation and hygiene facilities; establishing the school sanitation and hygiene curriculum; promoting children's education on improved sanitation and hygiene; and providing training for teachers and staff.

Operation and maintenance

The Ministry of Education is responsible for the overall operation and maintenance of school WASH facilities, along with the headmaster or an appointed school authority, such as the security guard. Case study interviews revealed that the parent-teacher association also takes on much of the responsibility for facilities maintenance in many schools. Maintenance and operation of school WASH facilities is a substantial issue, however, because inadequate funds often lead to neglect by those responsible.

Other non-governmental stakeholders also frequently neglect operation and maintenance. This creates a challenge to implementing WASH in Schools and was commented upon by nearly every headmaster interviewed during school visits. Several schools had WASH facilities provided to them by UNICEF or other stakeholders, such as the Australian Agency for International Development or Plan International, but these schools were often unequipped to maintain the facilities. If a pipe broke, for example, schools lacked the financial resources to purchase a new pipe, as well as the knowledge to repair complex infrastructure that is often made of imported parts. WASH facilities could go unused for an indefinite amount of time, simply due to problems in operation and maintenance.



Many schools in Timor-Leste lack funds for facilities operation and maintenance. But three government ministries are working with UNICEF to develop guidelines that aim to improve WASH in Schools conditions. A primary school in Viqueque District is shown above.

Photo credit: Alexandra Fehr © 2011

Data availability and quality

Another substantial challenge to implementing WASH in Schools is the lack of quality data. Data are available at the national level and, less frequently, at the district level from several sources, including the DHS, the World Bank, National Census and JMP. Data are most often collected at the household or population levels, however, and do not include information exclusively at the school level. Quality issues for EMIS data, which are collected at the school level, prevent the system from providing an accurate description of WASH in Schools.

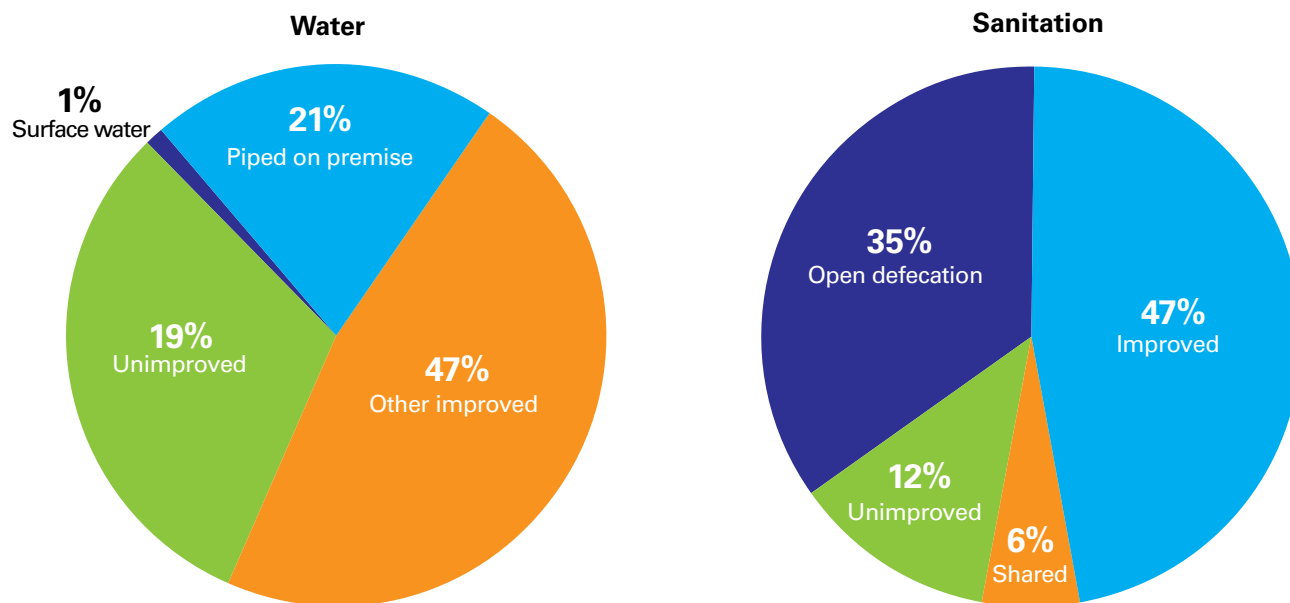
The lack of reliable data is particularly problematic when WASH in Schools stakeholders, including the Government, United Nations agencies and NGOs, choose locations to implement programmes. If a programme location is based on need, accurate data are required to decipher which areas should be prioritized. Basing programmes on inadequate data can exacerbate equity issues.

WASH in Schools coverage

Education is a top priority of the Government. The national constitution of Timor-Leste guarantees every citizen the right to education, and pledges to promote a system of public, free universal and compulsory basic education. Significant achievements have been made in school attendance since 2000. As of 2010, the national-level net primary school attendance ratio was 71 per cent for the total population – 70 per cent for boys and 72 per cent for girls. The national secondary school attendance ratio was 45 per cent, with 43 per cent for boys and 48 per cent for girls (NSD, MOF and ICF Macro 2010).

The percentage of households using improved water sources and sanitation facilities has also increased. Access to improved sanitation increased from 32 per cent of the total population in 2000, to 50 per cent in 2008. In 2010, 68 per cent of the population had access to an improved water source, and only 1 per cent relied on surface water; 47 per cent of the population used an improved sanitation facility and 35 per cent practised open defecation, as shown in Figure 5.1 (JMP 2012).

FIGURE 5.1 Water and sanitation coverage, Timor-Leste, 2010, by % of population



Source: JMP 2012.

Many studies have suggested that the percentage of the population with access to improved water sources is less than reported, due to frequent breakdowns in supply systems. A review of rural water supply systems conducted prior to and cited in the National Water Policy indicated that 50 per cent of systems are not functional, and that households that rely on them may not have access to an improved water source (Hamel 2009, Kamtukule 2008).

Observations and interviews indicated that some communities would cut or block the water supply to the school when it came from the community, especially during times when water was scarce. This led to many arguments over water rights and to the purposeful destruction of school water supplies.

WASH in Schools

Minimal data are available to determine the current state of WASH in Schools. EMIS data depicting the number of toilets per school are available, but the quality is unreliable.

Schools face many challenges in regard to WASH. As an official from the Ministry of Education said in an interview, "There are challenges in school WASH from the top level all the way down." These challenges include funding and capacity, and appear at both the national and local levels. As previously discussed, there are currently no national guidelines for school WASH, and there is minimal information on the status of WASH or health at schools.

"There are challenges in school WASH from the top level all the way down."

– Ministry of Education official, key informant interview, 2011

Teachers' capacities are also an issue. Many teachers do not have a background in education and were found to be struggling to use interactive educational tools such as the WASH in Schools game 'Snakes and Ladders'. Teachers also had difficulty with completing monitoring sheets to use for the EMIS. This is especially problematic for data collection because much of the process relies on teachers' input. These limitations present challenges to creating a child-friendly and equitable learning environment, and to providing adequate WASH facilities, as well as preventing or mitigating inequities.

In 2007, the national Government spent 1 per cent of the gross national product on primary education (UNESCO 2010). According to interviews, funding was distributed to schools in the amount of US\$1 per child, per month. Funds were given to schools, but nothing was specifically allocated to WASH programmes or facilities. Because schools had many needs, e.g., building maintenance, school supplies, test materials and desks, WASH was often not a priority and the sector was left with limited to no funding.

The state of WASH facilities in Timorese schools varies considerably, as illustrated by the photographs in Figure 5.2. Several schools, especially in rural areas, do not have WASH facilities at all, while other schools have new WASH facilities that meet international standards, i.e., they are gender-separated, clean, maintained and have a water source.

FIGURE 5.2 Variations in school latrines, Timor-Leste

Makeshift latrine at a rural school (left) and gender-separated, cement latrines with hand-washing station and water



Photo credit: Alexandra Fehr © 2011

'Water in school toilets' is the term used by the EMIS and is the proxy indicator for water availability at school. It means that there is water in the basin next to the latrine itself; this water is used for flushing, cleaning the facilities and personal cleansing. Of note, only one district, Dili – the capital – had more than 50 per cent of schools with water in the toilets at the time data were collected (see Figure 5.3).

Access to reliable and safe water is a challenge for all components of life in Timor-Leste. The country has marked dry and wet seasons, leaving areas without rain for months at a time. Exacerbating this problem is a lack of infrastructure. Due to economic constraints and a recent history of political violence, the country lacks much of the infrastructure needed to pipe water to homes or to schools, especially in rural areas.

The lack of water causes many problems at the school level. Interviews and focus group discussions revealed that students spend class time collecting water from the nearest source. Activities such as cleaning facilities, hand washing and drinking water did not take place when water was scarce. Water is prioritized for use in the school feeding programme, but it will often not be collected for needs beyond food preparation.

Observations found that latrines were sometimes locked and that no hand washing took place during the dry season. Figure 5.4 shows a child-friendly and well-built WASH facility. At the time of observation, however, the facility was locked. The headmaster of the school explained that this was due to a lack of water: "Once we have water, we can open the latrines," he stated.

Bottlenecks

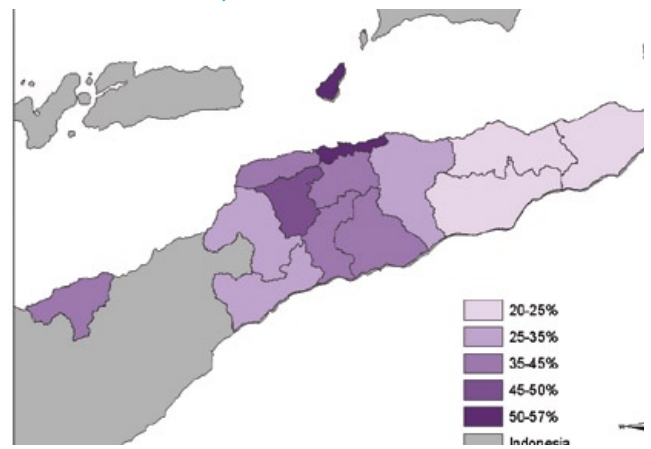
The bottleneck analysis is a visual representation of the challenges and barriers prohibiting equitable access to WASH in Schools. Indicators are organized into four categories: (1) policy and enabling environment; (2) supply; (3) demand; and (4) quality.

A finding at most schools observed was that teachers are either trained in, or very aware of, issues of equity among students. Most principals and teachers placed equity and the treating of all students as equals as a top priority. One principal explained his view as: "All children are equal. Same uniform. Same food. Same education. All children are considered the same and have equal access to WASH."

The main bottlenecks to WASH in Schools in Timor-Leste include the enforcement of policy at the school level, effective monitoring and a lack of funding for facilities and maintenance of existing facilities. As previously discussed, the policy environment in Timor-Leste is new and growing. WASH in Schools has been briefly addressed in the National Water Policy and draft of the National Sanitation Policy. However, there are currently no specific guidelines or policies regarding WASH in Schools, and therefore, no formal mechanism to enforce these.

Monitoring is a substantial challenge and bottleneck to WASH in Schools in Timor-Leste. Currently, monitoring at the school level consists of counting the number of toilets available for boys and for girls and the number of toilets that have water. Functionality is not assessed, only presence, so the number of functioning toilets is unknown. Funding for monitoring activities is insufficient, and teachers are inadequately trained to conduct monitoring at the school level. Without proper monitoring, the situation of WASH in Schools at the school level is unknown. This prevents the national Government and WASH in Schools stakeholders from being able to address challenges or to determine where there are places in need, as well as knowing when there has been improvement.

FIGURE 5.3 Schools with water in toilets, Timor-Leste, by %



Source: EMIS 2010.

"Once we have water, we can open the latrines."

– Primary school headmaster, Timor-Leste

FIGURE 5.4 WASH facility locked due to lack of water, Timor-Leste



Photo credit: Alexandra Fehr © 2011

Funding is another bottleneck to adequate WASH in Schools. Funding to schools is limited in general, and there is no funding specifically allocated to WASH. A lack of funding makes it difficult for schools to build new WASH facilities when needed, or to maintain their existing WASH facilities. Many schools have had to rely only on NGOs and other organizations to build and maintain their WASH facilities.

TABLE 5.1 Bottleneck analysis of WASH in Schools, Timor-Leste

Category	Determinant	Indicators	Metric/source of information	Stoplight evaluation of existing situation
Policy and enabling environment	Social norms	Teachers and government officials express that WASH in Schools is a priority	KIIs with teachers and government officials	Some schools recognize WASH as important, but there are other priorities
		Children have been taught good WASH behaviours and recognize their importance	FGDs with students	Children are marginally knowledgeable about WASH behaviours and their importance
		School culture is non-discriminatory	FGDs with students; KIIs with principals	Teachers are trained in equity issues and promote non-discrimination
	Policy framework	School WASH standards are in place and contain stipulations for equity	KIIs with school principals and government officials	WASH guidelines are not in place at time of writing
		Mechanism to enforce policy has been established	KIIs with principals and government officials	Principals said there is no enforcement of WASH in Schools policies
	Budget/expenditure	Adequate budget is allocated for WASH in Schools at the national and local levels	KIIs with principals and government officials	No specific government funding for WASH in Schools; principals had to raise extra money
	Availability of essential inputs	% of schools that have functioning water points on or near premises, or have another source of safe water	KIIs with principals; FGDs with students; school observations	Many water points are non-existent or non-functional and there are problems with seasonal availability of water
	Monitoring of WASH in Schools	Effective monitoring is taking place, with data management at national level	KIIs with government officials and school principals	EMIS data exist but are of poor quality and do not assess functionality or quality of WASH facilities

Key

- In place and functioning well
- In place but not fully functioning
- Non-functional or not in place

Category	Determinant	Indicators	Metric/source of information	Stoplight evaluation of existing situation
Supply	Existence of functioning WASH in Schools infrastructure	% of schools that have functioning latrines	KIIs with principals; school observations	Even if latrines exist, many are non-functional
		% of schools that have latrines that conform to international standards of privacy	School observations; KIIs with principals; FGDs with students	When latrines exist, many are separated for boys and girls and are private
		% of schools that have functioning hand-washing facilities with soap	School observations; KIIs with principals; FGDs with students	Most schools do not have hand-washing facilities with water or soap
	Availability of human resources	% of schools with teachers trained in hygiene education or staff dedicated to hygiene curriculum	KIIs with principals	Many teachers do not have the materials and references to teach WASH curriculum
		Presence of human resources required for operation and maintenance	KIIs with teachers and principals; FGDs with parents and community	Many schools do not have the human resources or funding for maintenance and operation
	Equitable geographical access	Geographical disparities between urban and rural areas or different sub-national regions	EMIS; KIIs with principals; school observations; reports	There are regional disparities and disparities between urban and rural schools
	Budget for operation and maintenance	School-level funding is available for infrastructure, maintenance and materials	KIIs with teachers and local government officials	Schools are underfunded and do not have specific funds for WASH
Demand	Mechanisms for operation and maintenance	School-level system is in place to maintain cleanliness and usability of WASH infrastructure	KIIs with teachers and school administrators; FGDs with students	Varied by school and availability of water
	Desire for use	School WASH improvements are requested at the local level	KIIs with teachers and school administrators	Schools generally wanted to improve their facilities and have positive learning environments

Category	Determinant	Indicators	Metric/source of information	Stoplight evaluation of existing situation
Quality	Gender-appropriate facilities	% of schools that have separate, private toilets	School observations; KIIs with principals and students	When latrines exist, many are separated for boys and girls and are private
	Facilities appropriate for children with disabilities	% of schools that have WASH infrastructure accessible to children with disabilities	School observations; KIIs with principals	Schools were not equipped for students with disabilities
	Status of environmental sanitation	% of schools with clean school grounds	School observations	Varied by school, but generally well kept
	Status of WASH facilities	% of schools with clean latrines and maintained hand-washing facilities	School observations; KIIs with principals; FGDs with students	Few schools had latrines or hand-washing facilities, and those that did were often dirty or not functioning, frequently from a lack of water for cleaning – many clean facilities were only clean because they were locked and unused due to no water access

Equity dimensions

Timor-Leste is very focused on equity among all its citizens. Equity in such dimensions as gender, economics and political processes is a large component of national plans and policies, including the policies for water and sanitation. Current issues regarding WASH in Schools, however, create unequal learning environments for children, particularly the disparities between urban and rural populations. Urban areas, especially the capital city of Dili, disproportionately benefit from improvements in water and sanitation, and in education. Gender is also an equity dimension creating unequal learning environments. Boys and girls have similar enrolment rates, but female-specific issues impose further challenges for girls.

Urban-rural disparities

Inequities between urban and rural areas exist in more areas than just WASH in Schools. In regard to wealth, for example, 58 per cent of the urban population was in the highest wealth quintile, compared to 9 per cent of the rural population, in 2008. Further, 24.6 per cent of the rural population was in the lowest wealth quintile, while only 5 per cent of the urban population was in this category (NSD, MOF and ICF Macro 2010).

Those residing in urban areas have higher rates of primary and secondary school attendance, as well as markedly higher rates of improved water and sanitation coverage, as shown in Table 5.2. Among urban households, 88 per cent have access to an improved water source, compared to 57 per cent of rural households. In regard to sanitation, 66 per cent of urban households use an improved facility. Among rural households, 35 per cent use an improved sanitation facility and 43 per cent practise open defecation.

TABLE 5.2 Urban-rural inequities in primary and secondary school attendance, and household water and sanitation coverage, Timor-Leste, by % of population

	Urban	Rural
School attendance		
Elementary school	78%	69%
Secondary school	59%	41%
Water coverage		
Improved source	88%	57%
Unimproved source	12%	43%
Sanitation coverage		
Improved source	66%	36%
Unimproved source	34%	64%
Open defecation*	13%	43%

*Also included in 'unimproved source'. Source: NSD, MOF and ICF Macro 2010.

These disparities between urban and rural access to water and sanitation services are also evident within schools. Headmasters acknowledged differences in access to resources and government oversight. One headmaster of a rural school echoed the opinion of many others: "When the construction is finished, the government hands over the facilities to the school and community and never checks again."

A common theme expressed by rural school headmasters was government neglect: The Government did not know about the state of the school, nor did it send anyone to monitor conditions. In the most remote rural schools, headmasters stated that the Government did not provide any kind of WASH facility or overall facility support to the schools "outside of town." The physical geography of the country exacerbates these inequities. The mountainous interior makes building infrastructure more difficult, and many communities in rural areas are left without improved water sources.

According to administrators at visited schools in Dili, schools are visited regularly by Ministry of Health officers to check students' and teachers' general health, and to monitor the state of WASH facilities. Urban schools outside of the city also receive government attention in the form of health checks and monitoring facilities through interviews. Students in rural schools are disadvantaged in not only missing regular health screenings, but also in not benefiting from school WASH facilities monitoring.

Another common finding in the focus group discussions with children was that many students come to school without knowledge of how to use latrines, especially in the rural areas, where nearly half the population practises open defecation. When latrines were available to students, those who did not know how to use them would either urinate behind the latrine structure or go in the field around the school.

This equity issue is further exacerbated by the lack of a consistent and standardized WASH curriculum in Timor-Leste. A WASH curriculum



At a rural school, the only toilet is made of branches and does not have an adequate door, leading most of the students to avoid using it.

Photo credit: Alexandra Fehr © 2011

exists at the national level, but according to interviews, the information has not been well disseminated to rural areas. Those schools that were aware of the curriculum reported a lack of training and reference materials. Children who do not have a toilet or hand-washing facility at home are at a further disadvantage because it is difficult to learn proper WASH behaviours at school.

Gender

There are large gender discrepancies in primary school enrolment in Timor-Leste. Based on the net intake rate in primary education for 2008, for example, only 52 per cent of boys and 49 per cent of girls begin their primary schooling (UNESCO 2011). According to interviews and discussions, both boys and girls frequently have household responsibilities that interfere with school: Girls are responsible for helping with household chores, and boys are responsible for income-generating work outside the home. Even though boys and girls have similar enrolment rates, girls face additional gender-specific challenges, particularly menstrual hygiene management, that cause inequitable learning environments.

A study conducted in 2011 by Bee, Saneamentu no Ijiene iha Komunidade (BESIK), the Australian Government-funded rural water supply and sanitation programme in Timor-Leste, found that many girls do not attend school during menstruation. The reasons for this were varied, but most were related to a lack of WASH facilities at school; there are often not clean, private or suitable latrines, nor are there places to wash. For girls who use sanitary pads, there is no method for disposal, and for girls who use cloths, there is no water or space for them to wash and dry their cloths. For all girls there is often a lack of private, gender-separated facilities, which leads to feelings of insecurity (BESIK 2011).

Recommendations for Timor-Leste

Recommendations for improving equity and access in Timor-Leste are based on the six points of action established by the Call to Action for WASH in Schools, a collaboration between key stakeholders around the world.

Increase investment in WASH in Schools:

- Allocate a specific budget to WASH in Schools at the national level, including funds for operation and maintenance of facilities.

Engage those who set policies:

- Finalize WASH in Schools guidelines and distribute to all stakeholders and schools.
- Ensure guidelines for WASH in Schools facilities address the needs of all students, including girls and students with disabilities.
- Create realistic standards or provide a strategic plan to achieve new guidelines in resource- and water-poor settings.

Involve multiple stakeholders:

- Encourage better collaboration and communication between communities and schools, especially in regard to water rights.
- Increase stakeholder participation in policy dialogue regarding WASH in Schools.

Demonstrate quality WASH in Schools projects:

- Increase technical capacity and awareness of the need for WASH in Schools facilities.
- Improve distribution of hygiene education curriculum material to schools in appropriate language of instruction.

Monitor WASH in Schools programmes:

- Train teachers on proper EMIS monitoring techniques to increase quality of WASH in Schools data.
- Monitor functionality and maintenance, not just presence, of WASH in Schools facilities.

Contribute evidence:

- Use WASH in Schools data to better inform decision makers; data can be used to identify and prioritize schools with the most need.

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rapidly increasing enrolment, resources are further stretched. Challenges in the national education system have emerged, including inadequate access to school WASH facilities and limited teaching staff. In 2006, the Ministry of Education and Sports conducted a nationwide assessment of facilities, which highlighted specific gaps in access to water, sanitation and hygiene infrastructure in schools. The ministry and UNICEF have addressed this issue through education programmes and building new infrastructure. Additional work is necessary to achieve equitable access for all students.

Methods

This case study used qualitative and quantitative data collection to evaluate the level of equitable access to WASH in Schools in Uganda. During three months of research, access to school WASH was investigated at the national, district and school levels. An extensive analysis was conducted on national policies and legislation regarding inclusive education, particularly as they apply to WASH access in schools. Research literature and grey documents available in Uganda were also reviewed.

Semi-structured interviews were held with representatives of six non-profit organizations and with 16 national or district officials. All participants in the interviews were directly involved with establishing or implementing inclusive school WASH policy. Interviews were also conducted with 21 head teachers. Five informal focus group discussions were held with primary school students aged 7–17 and were separated by gender.

A purposive sampling technique was used to identify schools for visitations and collecting observational data on WASH facilities.

Policy and enabling environment

The Government of Uganda has enacted national legislation and established policy related to WASH in Schools. The Ministry of Education and Sports has developed detailed guidelines that include requirements for children with disabilities and girls. It is responsible for providing school WASH facilities, with support from numerous national ministries. The following are examples of critical policies and guidelines for WASH in Schools:

The 1935 Public Health Act – requires latrine accommodation to be provided in all buildings, and gives power to local authorities or medical officers to enforce sanitation and water guidelines.

The Basic Requirements and Minimum Standards: Indicators for Education Institutions – schools are required to address the needs of children with disabilities in facility designs; standards include separate sanitation facilities for male and female learners and staff, and those with disabilities.

Memorandum of Understanding for Sanitation – an agreement between the Ministry of Health, the Ministry of Education and Sports, and the Ministry of Water and Environment, this document states that sanitation in schools is under the responsibility of the Ministry of Education and Sports. No clear responsible party, however, is designated for the provision of water to schools.

There are two main types of funding for school facilities in Uganda. The Universal Primary Education Grant is available to all schools, for use in covering the operational costs. This grant is based on student enrolment. The School Facilities Grant covers costs for new classrooms, latrines, furniture, teachers' housing and other school-related facilities. It is awarded to districts determined to have the most need, according to the district average of either the classroom-to-student ratio or the student-to-latrines ratio. Due to limited funding, the School Facilities Grant is not awarded to all schools, and the calculated district averages do not always portray accurate need from each district. Economists working with UNICEF have suggested that a more equitable distribution of funds could be established. Because district averages can hide disparities within districts, they recommend covering a certain percentage of schools in a district that are not reaching national standards.

The national policy for universal primary education states that schools cannot require money from students, except in urban areas with piped water and electricity, in which case a small sum is collected from students

to cover the cost of utility services. Local governments at the district level are responsible for allocating funds in their budget for schools. These allocations are dependent on the need identified by the district-level government, as well as the advocacy conducted by school district officials and authorities for individual schools. Once a school has received WASH hardware, it is the school's responsibility to operate and maintain the facilities.

TABLE 6.1 Roles and responsibilities for WASH in Schools, Uganda

Key WASH stakeholders	Roles and responsibilities
Ministry of Education and Sports	<ul style="list-style-type: none"> • Develops national guidelines and standards for school water, sanitation and hygiene • Provides schools with sanitation and hygiene education
Ministry of Water and Environment	<ul style="list-style-type: none"> • Responsible for providing water to communities (schools are considered to be part of the community)
Ministry of Health	<ul style="list-style-type: none"> • Responsible for enforcing the Public Health Act (all buildings/ institutions must have adequate sanitation facilities) • Provides health education to schools
Local government ministries	<ul style="list-style-type: none"> • Apply national standards at the local level • Help determine financial priorities • Monitor at the regional level
Schools	<ul style="list-style-type: none"> • Organize students for hygiene behaviours • Ensure access to hygiene materials

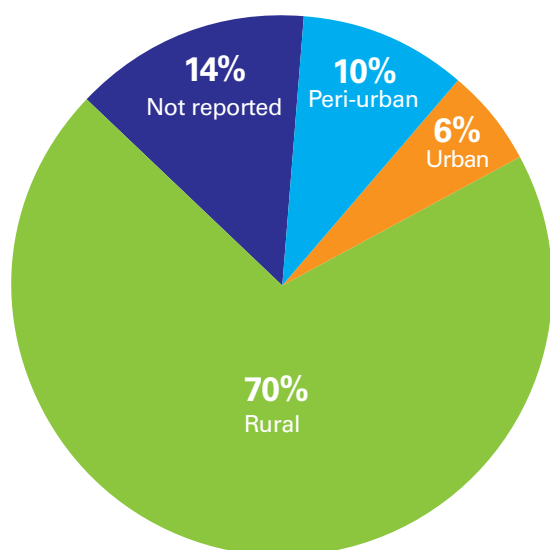
The political environment in Uganda is favourable for equitable access to safe water, sanitation and hygiene facilities in schools. There are numerous comprehensive national water and sanitation policies in place, as well as school guidelines and standards that explicitly include gender and disability, among other dimensions of equity. Despite the challenges of low funding and enforcement, progress has been made in WASH coverage, as well as the formation of new national standards and guidelines for WASH in Schools.

The lack of clearly defined responsibilities in the Memorandum of Understanding for Sanitation for each national ministry involved in school WASH is problematic and leads to overlap in the provision of services. The draft School Health Policy specifies national-level responsibilities regarding WASH and is awaiting approval from parliament. Current legislation includes the necessary components for equitable access to WASH facilities, but it has minimal dissemination at the local government level and implementation has proved to be challenging at the ground level.

WASH in Schools coverage

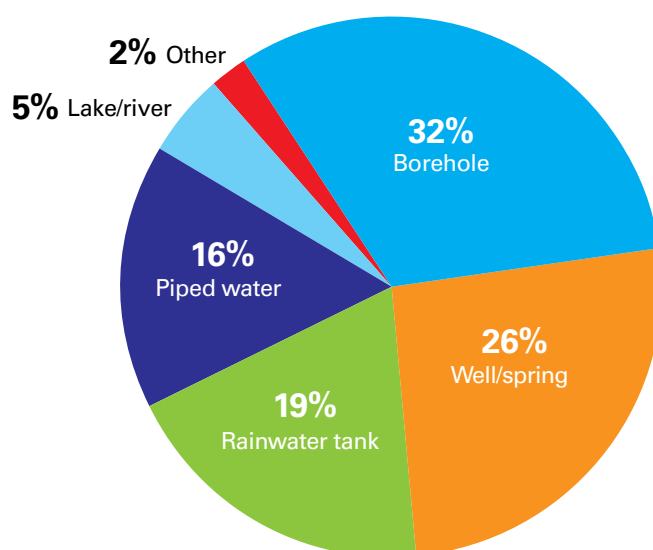
There are an estimated 18,000 primary schools in Uganda, with approximately 60 per cent located in rural areas. In rural areas, an average primary school will use a borehole, well or spring for its water source. The primary design for latrines is a pit latrine with separate facilities for female and male students. In urban schools, the main water source is generally piped water, and latrine facilities can be either pour-flush or pit latrines (MOES 2010a). Details on locations and water sources for primary schools are shown in Figures 6.1 and 6.2, respectively.

FIGURE 6.1 Location of primary schools, Uganda, by %



Source: MOES 2009.

FIGURE 6.2 Water sources for primary schools, Uganda, by %



Source: MOES 2009.

A comprehensive study on WASH in Schools was completed by the Ministry of Education and Sports in 2006. In 2010, the ministry released a monitoring report that evaluated school WASH status in 17 of the country's 117 newly reorganized districts. The report highlighted progress, including a 15 per cent improvement in safe water coverage. It also exposed obstacles, such as poor maintenance and rampant vandalism that affect access and utilization of current school facilities (MOES 2010a).

Coverage rates in schools are high, at 96 per cent for water and 83 per cent for sanitation. The current definition of coverage, however, does not take into consideration safe drinking water, broken facilities or seasonal availability. The 2010 Ministry of Education and Sports report found that only 33 per cent of primary schools provided clean, safe drinking water for their students and 73 per cent of schools did not have access to hand-washing facilities or soap. According to EMIS data from 2006, 80 per cent of latrines in the northern and eastern regions were found to have wet, dirty floors and faeces smeared on the walls.

Case study visitations to schools in 2011 confirmed that there are wide differences in terms of quality and access. Although the national Basic Required Minimum Standards for schools require water sources to be located within 500 metres of a school, some water sources were found to be at least 1 kilometre away from school property.

Inadequate maintenance of WASH infrastructure was also evident. School visits and interviews with staff introduced the issue of vandalism of school property by surrounding communities. Urban and peri-urban schools encountered members of surrounding communities entering school grounds and damaging or stealing facilities, or improperly using latrines. Vandalism makes it difficult to maintain hardware and supplies, such as taps or soap, where they are regularly stolen and schools cannot afford to replace them. The responsibility of cleaning latrines is generally given to students. When cleaning was not completed, other students, particularly girls and students with disabilities, had difficulty using the latrines.

Abandoned filled latrines were common on school property due to the lack of consistent emptying services. The Construction Management Unit, Ministry of Education and Sports, has set guidelines for sanitation facilities, including their distance from classroom blocks. Latrines are generally placed in the optimum spaces on the school site. When emptying services are not available, however, new latrines must be built in suboptimal locations further from classrooms and school staff supervision.

The challenges noted above have made it increasingly difficult for schools to maintain their WASH programmes and enable students to practise proper sanitation and hygiene. The photographs in Figure 6.3 document three examples of these issues.

FIGURE 6.3 Abandoned school latrines, poor maintenance and vandalized school property (from left to right), Uganda



Photo credit: Loida Erhard © 2011

Finances and WASH management

There is no current funding source that is allocated specifically for WASH in Schools, and resources are allotted to schools based upon their most pressing needs. Because WASH is not generally seen as a priority, improvement in coverage of hand-washing facilities and soap will not increase without a separate funding source or an overall increase in school funding.

In 1997, the Economic Policy Research Centre, Kampala, found that only 35 per cent of funds released from the central Government to schools were reaching the intended beneficiaries. A new 'Direct Support to Schools' system now allocates funding to specific school bank accounts. This system has encountered logistical barriers and is in need of increased capacity and infrastructure at the school level, but it has allowed schools to take responsibility for their own needs.

The national student-to-latrine ratio is 61 students per latrine, but this number varies considerably by region. In the Karamoja Region, for example, the student-to-latrine ratio reaches more than 100 students per latrine. In 2010, the Ministry of Health collected national data on the student-to-latrine ratio and found that only 4 out of 117 districts were reaching the national standard of one latrine to 40 students, as shown in Figure 6.4.

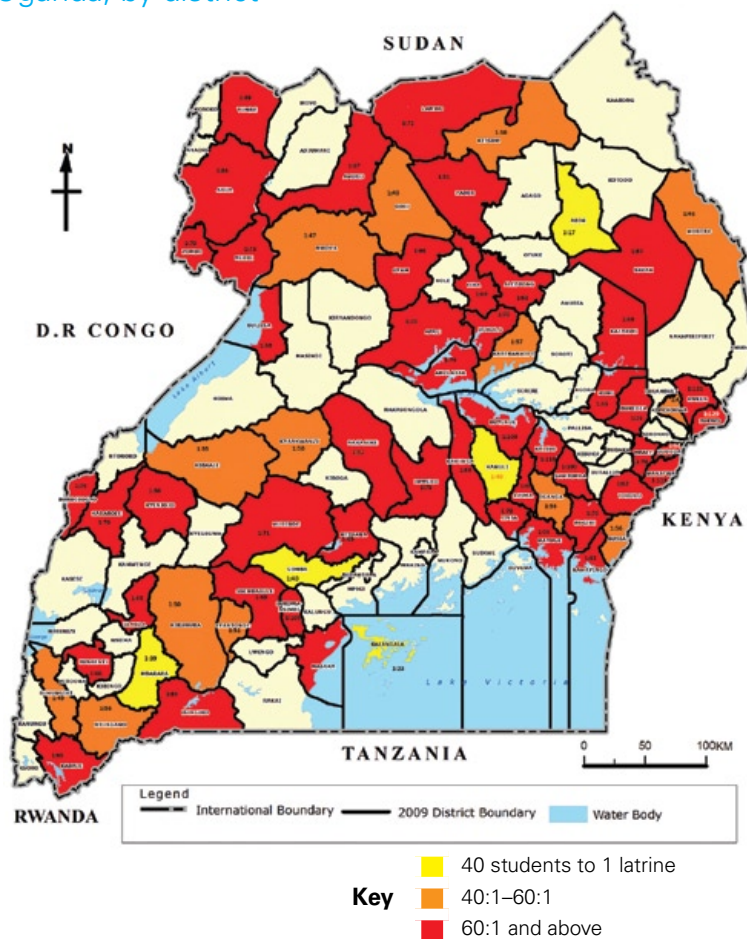
Reaching the national standard for student-to-latrine ratios

The poor access to sanitation facilities is due, in part, to the lack of emptying services for pit latrines. Once latrines have been filled, schools that cannot provide emptying services have no option but to abandon the structures and invest significantly more resources into building a new pit latrine.

Overall, lack of access to water was identified by teachers and ministry officials as the most pressing WASH issue that schools are facing. Approximately 1,500 schools rely solely on rainwater collection tanks throughout the school year (MOES 2010a). The tanks are easily broken or vandalized, and even when functioning properly, they are only useful during the rainy season.

Another common barrier to water access identified by teachers was borehole sharing with the surrounding community. Without community involvement in organizing proper management of the borehole, conflicts arise between the school and community members when both groups are using the water source concurrently. Children and teachers reported that when children come to the borehole unattended in the morning, community members will push them to the back of the line, thus increasing the wait time and leading to missing valuable class time. In some rural areas where strict gender roles are still in place, girls have been given the primary responsibility for fetching water.

FIGURE 6.4 Primary school student-to-latrine ratios, Uganda, by district



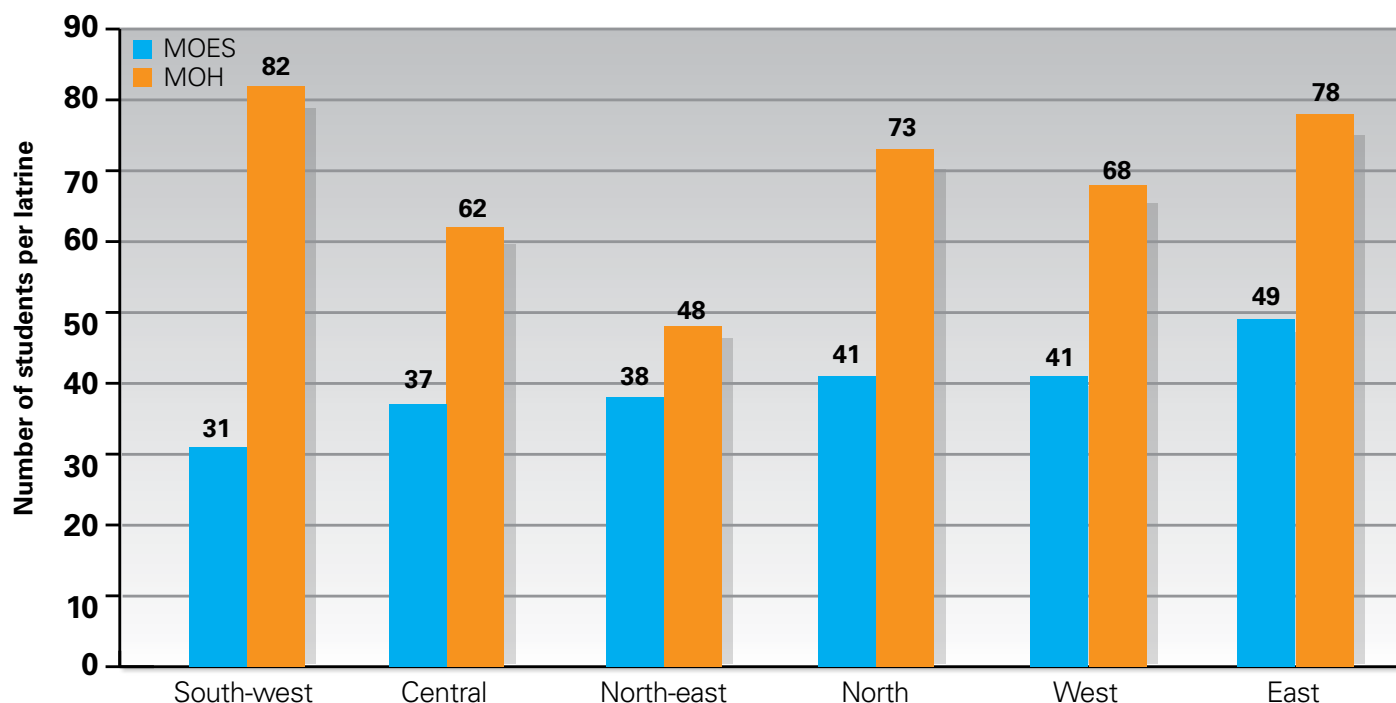
Source: Derived from MOH, Government of Uganda, 2011, and United Nations Office for the Coordination of Humanitarian Affairs, 2010.

Data collection and management

There is a wide range of data available from the Government of Uganda, but data collection is challenging and schools are not visited consistently. During case study interviews, district officials cited the lack of transportation as the main challenge in collecting data and also mentioned difficulties in sending district-level data back to the national ministries.

A comparison of data collected by the Ministry of Education and Sports and the Ministry of Health highlights the obstacles in achieving accuracy. In 2011, both ministries collected regional data on school student-to-latrine ratios, but the results were considerably different, as shown in Figure 6.5.

FIGURE 6.5 Comparison of Ministry of Education and Sports and Ministry of Health regional data on school student-to-latrine ratios, Uganda



Source: MOES 2011, MOH 2011.

Bottlenecks

The bottleneck analysis is a visual representation of the challenges and barriers prohibiting equitable access to WASH in Schools. Indicators are organized into four categories: (1) policy and enabling environment; (2) supply; (3) demand; and (4) quality.

Key areas where work needs to be done in Uganda were identified through discussions with national-, district- and school-level WASH in Schools experts. The bottleneck analysis identified policy, guidelines and sanitation coverage as strengths in the country's WASH in Schools programming, as shown in Table 6.2. The Government of Uganda has created comprehensive standards for school WASH and will need to identify effective strategies to implement these policies at scale.

The quality of existing facilities is directly related to demand for WASH at the school and individual level. The issue of quality has been a challenge to establishing successful WASH in Schools programmes. Improving quality will need to address cleanliness and appropriate designs for gender- and disability-friendly facilities at the school level. These issues can also be addressed by providing new facilities in tandem with improved training on operation and maintenance.

The enabling environment at the national level is favourable for WASH in Schools programming, with the exception of allocating specific funding. Local governments are responsible for allocating funds to schools and determine whether WASH should be included within the district budget.

TABLE 6.2 Bottleneck analysis of WASH in Schools, Uganda

Category	Determinant	Indicators	Metric/source of information	Stoplight evaluation of existing situation
Policy and enabling environment	Social norms	Teachers and government officials express that WASH in Schools is a priority	KIIs with teachers and national ministry officials	School WASH is a priority at the national level, but commitment varies at the school level
		Children have been taught good WASH behaviours and recognize their importance	FGDs with students	Hygiene education is part of the national curriculum
		School culture is non-discriminatory	FGDs with students; KIIs with teachers and education specialist in country	Non-discriminatory culture is in place in schools
	Policy framework	School WASH standards are in place and contain stipulations for equity	Basic Requirements and Minimum Standards for schools, among other national policies	Standards are in place and include stipulations for equity
		Mechanism to enforce policy has been established	National Public Health Act	Enforcement strategy is in place but without funding for implementation
	Budget/expenditure	Adequate budget is allocated for WASH in Schools at the national and local levels	KII with Ministry of Education officials	No budget allocated at the national level specifically for school WASH
	Availability of essential inputs	% of schools that have functioning water points on or near premises, or have another source for safe water	Ministry of Education and Sports school WASH assessments	An estimated 96% of schools have access to water, but it is not specified to be safe for drinking
	Monitoring of WASH in Schools	Effective monitoring is taking place, with data management at the national level	KIIs with district education and health officers	Enforcement strategy is in place, but lack of funding has led to poor implementation

Key

- In place and functioning well
- In place but not fully functioning
- Non-functional or not in place

Category	Determinant	Indicators	Metric/source of information	Stoplight evaluation of existing situation
Supply	Existence of functioning WASH in Schools infrastructure	% of schools that have functioning latrines	Ministry of Education and Sports school WASH assessments	More than 83% of schools have latrines, but conditions vary and latrine emptying is a challenge
		% of schools that have latrines that conform to international standards of privacy	School observations	Latrines offer sufficient privacy for girls in the majority of visited schools
		% of schools that have functioning hand-washing facilities	Ministry of Education and Sports, and Ministry of Health school WASH assessments	27% coverage of hand-washing facilities and minimally available soap
	Availability of human resources	% of schools with teachers trained in hygiene education or staff dedicated to hygiene curriculum	Ministry of Education and Sports curriculum; KIIs with teachers; FGDs with students	A majority of schools report teaching hygiene curriculum
		Presence of human resources required for operation and maintenance	KIIs with teachers/principals; FGDs with parents/community	Access to skilled workers for operation and maintenance varies by district
	Equitable geographical access	Geographical disparities between urban and rural areas or different sub-national regions	Ministry of Water and Environment	Rural schools have lower access to water sources
	Budget for operation and maintenance	Funding exists at school level for infrastructure, maintenance and materials	KIIs with teachers and local government	No allocation of funding for school WASH at the school/local levels
	Demand	Mechanisms for operation and maintenance	School-level system is in place to maintain cleanliness and usability of WASH infrastructure	KIIs with teachers and school administrators; FGDs with students
Desire for use		School WASH improvements are requested at the local level	FGDs with students; KIIs with district official and head teachers	Need/want for improved WASH facilities varied from school to school

Category	Determinant	Indicators	Metric/source of information	Stoplight evaluation of existing situation
Quality	Gender-appropriate facilities	% of schools that have separate, private and gender-appropriate toilets	Ministry of Education and Sports reports; school observations	Latrines are separate but do not address the needs of female students regarding menstrual hygiene
	Facilities appropriate for children with disabilities	% of schools that have WASH infrastructure accessible to children with disabilities	Ministry of Education and Sports reports; school observations	No information on special-needs-friendly facilities
	Status of environmental sanitation	% of schools with clean school grounds	School observations	Inconsistent latrine use and solid waste disposal
	Status of WASH facilities	% of schools with clean latrines and maintained hand-washing facilities	Ministry of Education and Sports reports; school observations	Data are not collected at the national level; schools visited had poor maintenance of facilities overall

Equity dimensions

Gender

The lack of WASH facilities that meet the female students' needs is one issue identified by the case study analysis of current literature and data on gender parity and equity in Ugandan schools. Programmes to address this issue should take students' experiences into account and make sure that the design and maintenance of facilities, as well as availability of water, create a comfortable and conducive learning environment for girls.

The Government of Uganda has taken numerous steps towards integrating gender equity into the development agenda, particularly in regard to girls' education. Its strategies include establishing the Ministry of Gender, Labor and Social Development, the National Action Plan for Women, the National Gender Policy, the Gender desk at the Ministry of Education and Sports, and the National Strategy for Girls' Education.

The emphasis on gender at the national level has accomplished a number of goals set by the Ministry of Education and Sports regarding gender parity. Girls' primary school enrolment, drop-out rates and repetition rates are now comparable to their male counterparts (MOES 2010b, EMIS 2009). Actions have still not been taken, however, to address specific gender disparities in the school environment such as classroom participation, performance and lack of access to school WASH facilities. The lack of access to water, sanitation and hygiene facilities in schools, particularly access to privacy and water for menstrual hygiene management, has been highlighted as creating an uncomfortable learning environment in previous research (Muhwezi 2003, Bharadwaj and Patkar 2004) and in case study interviews with teachers and female students.



Primary-school girls in Kampala.

Photo credit: Loida Erhard © 2011

A common misconception regarding girls' education is the belief that girls in primary school are not of menstruating age and, therefore, education and facilities for menstrual hygiene management are not necessary in primary schools. Girls typically reach menarche, however, between age 11 and 13, which is the same age range for students in the last years of primary school. Additionally, with the launch of universal primary education in 1997, many older girls have gone back to school. This trend increases the number of students who reach menarche while in primary school.

Lack of access to facilities for menstrual hygiene management has been noted by female students, teachers and others as a determining factor for absenteeism and discomfort for female students. Research conducted by the Forum for African Women Educationalists, for example, reported that female students are more likely to be absent in schools with inadequate access to water or separate toilet facilities (FAWEU 1994). During focus group discussions for this case study, a head teacher in Kotido District stated, "When girls have their menstruation, they will go home, and sometimes they will not come back to school."

The Ministry of Education has set national standards requiring schools to have gender-separated latrines and a "washing room/facility for the girl child." Among the few schools that had a girls' washroom, however, the average washroom-to-user ratio was 1:270 (MOES 2010a). During focus group discussions, girls reported that they did not feel comfortable using these washrooms because it was a signal to other students that they were menstruating.

Although government data indicate that emergency sanitary pads were provided for students in 66 per cent of schools, 96 per cent of primary schools and 81 per cent of secondary schools did not provide bins for disposal of sanitary pads (MOES 2010a). During school visits conducted for this case study, a majority of schools did not have any pads available or extra uniforms for female students. In addition, the lack of disposal facilities in schools discourages students from changing pads and requires them to carry soiled pads until they are able to find a suitable area to dispose of them.

Female students also expressed varying levels of discomfort using school sanitation facilities due to privacy and cleanliness issues. As explained by Sarah, a student at P6, Kasese District, "I do not feel comfortable using the latrine at school during my period because there is no door, and I know that people can bother me inside."

The Girls' Education Movement (GEM) is a non-profit organization, based in Kampala, that works with UNICEF to improve girls' education through school-based clubs. GEM clubs teach menstrual hygiene management and other life skills. The programme has proved to be successful, in schools that fully implement the clubs and have motivated leadership, by decreasing absenteeism due to menstruation and bringing back girls who had dropped out.

Participation in the programme is determined by individual schools and local communities, and GEM clubs are not nationally implemented. Although not all of the clubs are fully functional or reach the mandate set by the Girls' Education Movement due to lack of leadership or capacities for creating a successful club, the programme has shown great promise and provides a template on how to move forward to improve menstrual management in schools.

Disabilities

Disability and illness have accounted for roughly 10 per cent of dropouts among all students at the primary school level in Uganda. About 17 per cent of children who have never attended school did not attend because of a physical or mental disability, according to the most recent data available (UBOS and ORC Macro 2001). Details on student dropout and attendance are shown in Tables 6.3 and 6.4.

TABLE 6.3 Factors for student dropout at the primary school level, Uganda, by % of survey respondents, ages 6–18

Reason for dropout*	Boys	Girls
Costs for school fund, uniform, books and supplies	58%	51%
Labour needed outside of school	9%	16%
Failed exams and did not want to repeat	11%	10%
Child's perception that she or he had enough schooling	28%	21%
Disability or illness	11%	9%
School too far away	3%	3%
Travel to school unsafe	3%	3%
Poor school quality	1%	2%
No secondary school available	3%	6%
Number of study participants	400	360

* More than one response was possible.

Source: UBOS and ORC Macro 2001.

TABLE 6.4 Factors in children never having attended school, Uganda, by % of survey respondents, ages 6–18

Reason for never attending school*	Boys	Girls
School too far away	22%	26%
Labour needed outside of school	14%	24%
Costs	24%	23%
Disability	16%	18%
Too young	18%	17%
Number of children who participated in study	246	272

* More than one response was possible.

Source: UBOS and ORC Macro 2001.

The lack of distinction between illness and disability noted in Table 6.3 created difficulties in fully understanding the number of children with special education needs who drop out of school or are unable to attend. Moreover, there was no information on the reasons for children with disabilities dropping out of school and whether the lack of access to facilities is a determining factor in school attendance. The Government of Uganda has since taken an inclusive approach to incorporating special education needs into development and education policies at the national level.

Starting in 1983, the Ministry of Education and Sports has been working to provide support to children with disabilities, parents, teachers and other service providers. During restructuring in 1999, the ministry established the Department of Special Needs Education/Guidance and Counselling. The Persons with Disabilities Act (2006), National Policy on Disabilities (2006) and the Basic Minimum Required Standards for

Schools (2010) all make provisions for eliminating discrimination against persons with disabilities and require designs that are accessible for children and adults.

The number of special needs pupils enrolled increased from 183,537 in 2007 to 204,352 in 2009 (EMIS 2009, ESARO 2011). Despite the considerable amount of national policy and guidelines in place, access to facilities – specifically WASH in Schools – is low and does not meet the needs of the growing number of children with disabilities attending Ugandan schools.

In 2010, the Ministry of Education and Sports conducted a monitoring exercise in 120 schools and found that approximately 20 per cent of visited primary schools acquired special-needs-friendly latrines that included ramps and rails. There is no current nationally representative data, however. Facilities designed for children with disabilities are focused primarily on sanitation, and no information on access or improved designs for hand-washing facilities or water sources is available.

Case study observations of school facilities concluded that implementation of facilities for students with disabilities is minimal. Students with disabilities and their guardians stated in interviews that teachers and parents discourage children with disabilities from attending school because of the lack of facilities. Even in schools with ‘improved’ facilities, many designs do not necessarily address the needs of children with disabilities. Designs for sanitation, water and hand-washing facilities must take into account students’ experiences and be constructed with their needs in mind. Figure 6.6 shows an example of a latrine with rails that are placed too high to be used comfortably by a child with physical or motor disabilities.

The knowledge gap on the factors that cause children with disabilities to drop out from school needs to be addressed. Teachers and government officials have stated that the lack of access to facilities is exceedingly uncomfortable and leads to poor learning and health outcomes for these children. With the aim of the Ministry of Education and Sports to provide equal educational opportunities to all children with disabilities, the enforcement of existing policies needs to improve, and specific guidelines and designs need to be taken into account.

Regional disparities

Uganda is noted for its geographical diversity, which includes rainforests and semi-arid plains. There are distinct issues of WASH in Schools access unique to each regional area. In particular, the north-eastern subregion of Karamoja, which has seven districts and a population of approximately 950,000, according to the 2002 census, has experienced inequities due to the overall scarcity of water and children’s minimal participation in education. Karamoja is highly drought-prone and lacks surface water, such as protected springs, and also has low numbers of shallow wells or deep boreholes, as illustrated in Figure 6.7.

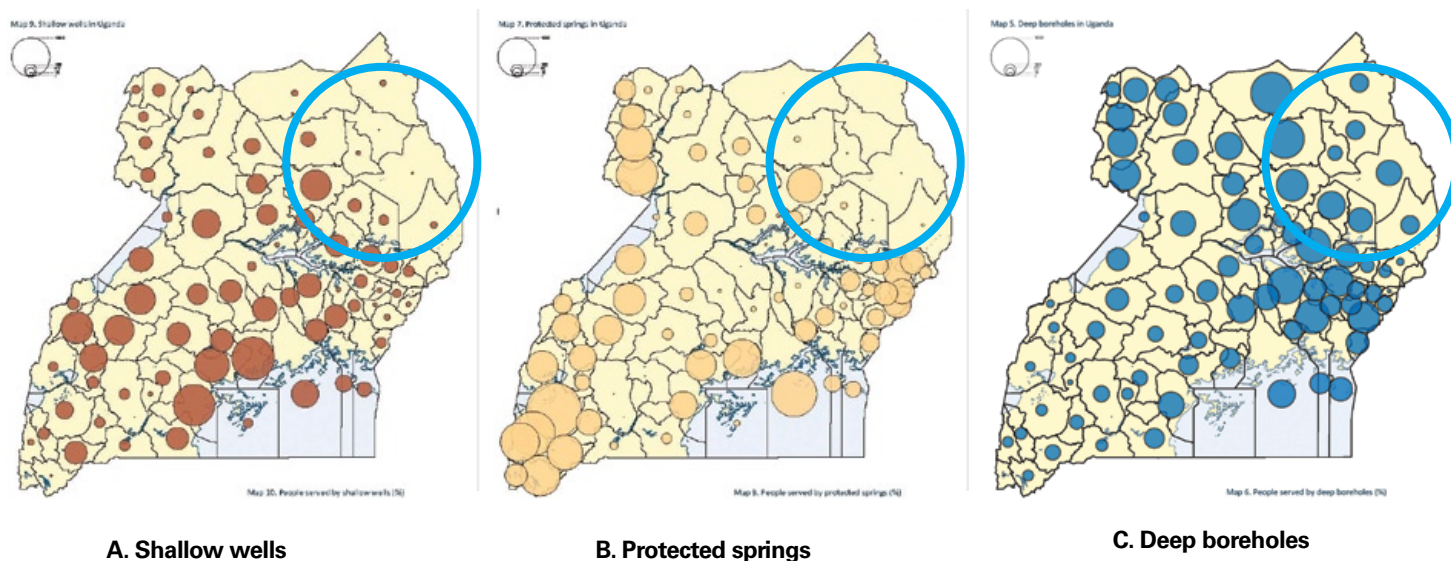
The Karamojong people are considered to be semi-nomadic agro-pastoralist and face numerous economic, security and social challenges. The complexity of the Karamojong people must be taken into account when examining their equity of access to school WASH. Compared to the national average of water coverage at 68 per cent, the Karamoja subregion coverage ranges from 17 per cent in Kotido District to 31 per cent in Napkapiropirit. Figure 6.7 highlights the scarcity of water sources within Karamoja. Shallow wells, boreholes and protected springs are sparse, and the limited amount of water available for the Karamojong’s livestock is a contributing factor to their traditional nomadic movements.

FIGURE 6.6 Disability-friendly latrine in rural Uganda



Photo credit: Loida Erhard © 2011

FIGURE 6.7 Karamoja subregion, within circled areas, north-eastern Uganda



Source: DOWD 2010.

Many male children in this area are kept out of school to maintain livestock and support the family income. To address this issue, mobile classrooms, which are recreational kits that include learning and teaching materials, are distributed among the communities. These 'schools' are not structurally equipped to include water and sanitation facilities, and every student must bring her or his own drinking water to school.

National household survey and census data provide insight into the scale of the educational and structural disadvantages that the Karamojong face. Eighty-five per cent of Karamojong pastoralists aged 17–22 have fewer than two years in school, compared with a national average of more than six years, and 67 per cent of females and 53 per cent of males do not have any formal education (UNESCO 2010, UBOS and Macro International 2007). Consequently, the districts located within Karamoja are the five worst-performing districts, in terms of repetition rates and leaving exam scores (UNICEF WASH Section 2009).

Insufficient capacity of local government bodies and other issues lead to overall inequities in access to water, sanitation and education. Strong national policies are in place to address these issues, but new strategies must be created to successfully implement policies and to reduce inequities in this population.

Recommendations for Uganda

Recommendations for improving equity and access in Uganda are based on the six points of action established by the Call to Action for WASH in Schools, a collaboration between key stakeholders around the world.

Increase investment in WASH in Schools:

- Allocate a specific budget to WASH in Schools at the national level, including funds for operation and maintenance of facilities.
- Develop income-generating activities to support WASH initiatives at the school level. These activities could include school gardens, crafts and community farming.
- Promote soap making in schools for income generation and for use in school WASH programmes. Locally sourced ingredients can be used to provide soap for an affordable and sustainable school WASH programme.

Engage those who set policies:

- Increase empowerment of and advocacy for students with disabilities at the community and local-government levels, with campaigns focused on the rights of persons with disabilities.
- Update government standards for school sanitation facilities and ensure that WASH in Schools guidelines address the needs of all students, including girls and children with disabilities.
- Include provisions for privacy, as well as appropriate infrastructure for students with disabilities, in WASH in Schools guidelines.

Involve multiple stakeholders:

- Implement combined community WASH and school WASH interventions for continuity of hygiene messaging.
- Encourage involvement of parents and community members in improving school WASH, for example, by building locally made WASH in Schools facilities.

Demonstrate quality WASH in Schools projects:

- Improve distribution of hygiene education curricula to schools in an appropriate language of instruction.
- Increase awareness of the need for proper maintenance of WASH in Schools facilities and enhance technical capacities for operation and maintenance.

Monitor programmes:

- Increase the ability of districts to extend data collection to remote schools, for example, by providing improved transportation.
- Create a systematic approach to data collection, including gender- and disability-specific indicators.
- Increase enforcement of existing policies by establishing mechanisms to hold districts and schools accountable. This can be done by monitoring funding allocations to districts, as well as monitoring coverage at the local level.

Contribute evidence:

- Develop appropriate designs for WASH in Schools facilities based on the students' actual experiences. Pilot innovative facility designs for girls and students with disabilities.
- Collect information on children's experiences in schools pertaining to gender and disability issues.

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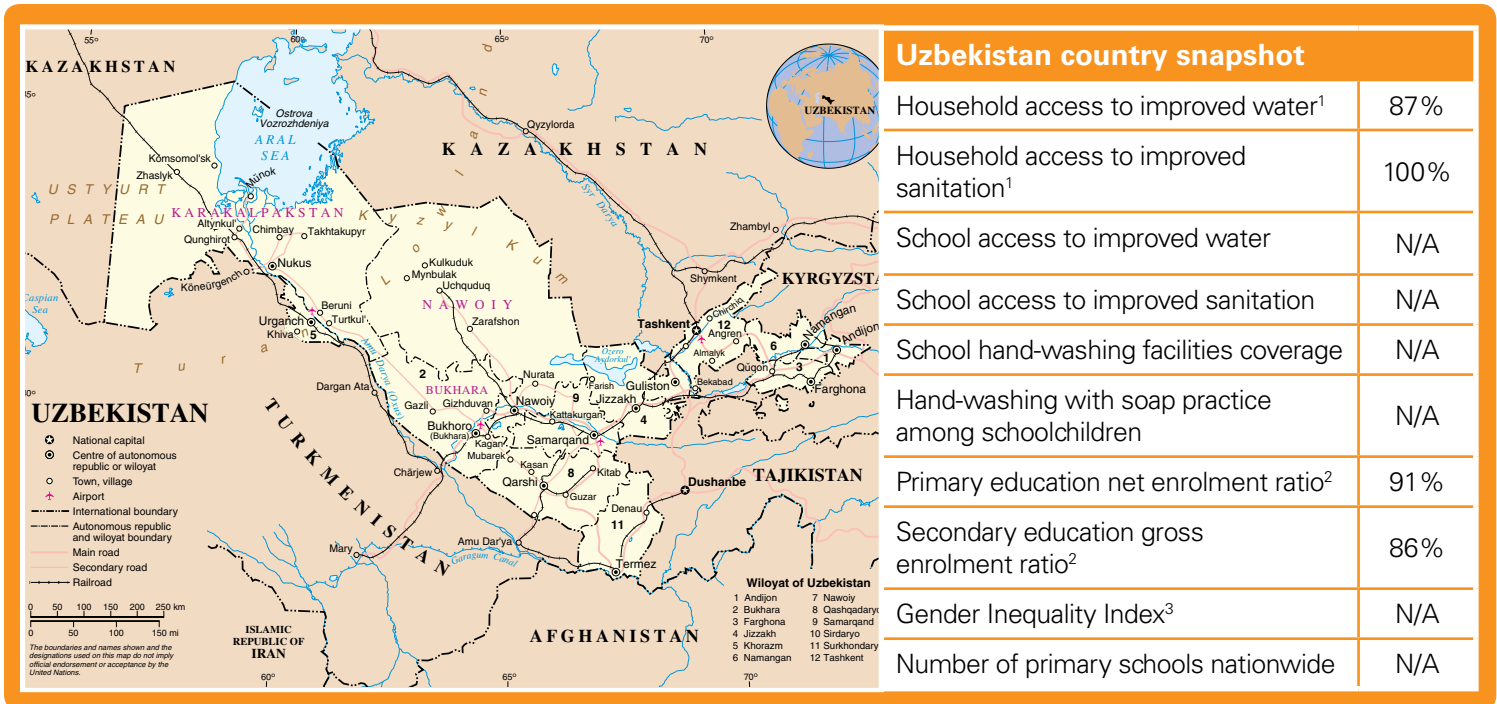
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7

Uzbekistan



1. % population, JMP 2012. 2. UNESCO 2011. 3. UNDP 2011

Abstract

Reported water and sanitation coverage in Uzbekistan’s schools is exceptionally high relative to other low-income countries. A majority of schools report access to an improved water source, and nearly all have access to sanitation on school grounds. National policies regulating water and sanitation, however, are focused on large systems rather than small-scale infrastructure.

National policy for WASH in Schools is limited, and specific data are not consistently collected at the national level. The country’s regulatory environment is robust, however, and the potential to expand WASH in Schools monitoring is strong.

Findings of this case study indicate that equity in WASH in Schools access is affected by regional and gender-based disparities. School sanitation infrastructure provides insufficient privacy for girls of secondary-school age, and menstruating girls are confronted with a disproportionate obstacle to a comfortable learning environment.

Rural schools and schools within the Aral Sea region have limited access to WASH, which may be further obstructed by water scarcity and the deterioration of centralized infrastructure. These schools are additionally excluded from government oversight of WASH in Schools because national policy omits standards for basic infrastructure such as pit latrines.

Background

Uzbekistan has undertaken concerted efforts, since its independence from the Soviet Union in 1991, to improve the educational environment for students across the country. Government investments in education and educational reform have been high compared to other Central Asian countries. The School Education and Development Program, 2004–2009, included large-scale repair and reconstruction of infrastructure nationwide, as well as investment in training for teachers (World Bank 2011). Although thousands of schools have been rehabilitated, sanitation and hygiene infrastructure was not repaired.

Water scarcity in Uzbekistan is comparable to many countries in the Middle East and North Africa, with only 533 cubic metres of renewable resources available per capita per year. Overuse of water resources has resulted in the near-depletion of the inland Aral Sea. In the state of Karakalpakstan, for example, supplies were transported in 2008 from other areas to provide sufficient water for residents and make it possible for them to stay in the region (World Bank 2010). Development of the water, sanitation and hygiene sector – and improvements to WASH access in schools – have increasingly been approached within the context of water scarcity.

In 2011–2012, a comprehensive situation assessment of WASH in Schools was conducted by the Ministry of Public Education, the Republican Center for Social Adaptation of Children and UNICEF. Data collected for the assessment provide the first thorough picture of water, sanitation and hygiene access in schools across Uzbekistan (MOPE, RCSAC and UNICEF 2012).

Overall, the quality of data collection and analysis remains unreliable, making it difficult to address development objectives, including access to WASH in Schools.

Methods

This case study evaluates equity in school water, sanitation and hygiene in Uzbekistan and consisted primarily of a desk review. Documents from the Government and international aid agencies were collected and combed for data.

In addition, 12 key informant interviews were conducted with UNICEF staff and other experts working in local and international NGOs and aid agencies. One interview was conducted with a Department of Education representative in the western province of Navoi. Interviews were also held with school administrators and teachers at four schools in the province, in conjunction with structured observation at those schools. The Department of Education office in Navoi Province facilitated these visits in urban, peri-urban and rural schools.

Policy environment for WASH in Schools

Uzbekistan has worked steadily to develop significant legal reforms in the water supply and sanitation sector. Water-related legislation confers responsibility for drinking-water supplies and quality to the national Government – within the framework of such policies as the Constitution of the Republic of Uzbekistan, the 1993 Law on Water and Water Use, and the 1997 Law on Natural Monopolies (World Bank 2010).



Children walk to school in the early morning, through the town of Bukhara in Central Uzbekistan.

Photo credit: Stephanie Ogden © 2011

Local governments hold responsibility for providing water and sanitation access to schools and other public institutions within their administrative territories. School administrations are accountable for maintaining WASH facilities on school grounds. Specific responsibilities for WASH in Schools are outlined in Table 7.1.

TABLE 7.1 Roles and responsibilities for WASH in Schools, Uzbekistan

Key WASH stakeholders	Roles and responsibilities
Ministry of Education	Provides national funding for schools, including infrastructure, repairs and materials
Department of Sanitation and Epidemiological Surveillance, Ministry of Health	Monitors the sanitary conditions of schools and acts as a regulatory body
Uzbekistan Communal Services Agency	Formulates state policy on water supply and sanitation services
Local government (local self-governing bodies)	Responsible for providing water, sanitation and other communal services to the greater community, including schools and public institutions (via local water service providers)
School administrations	Responsible for cleanliness, maintenance and repair of WASH infrastructure at schools

Source: Djalalov 2001, SanPiN Uzbekistan and key informant interviews with Department of Education Navoi Province and UNICEF team.

Guidelines for water quality, sanitation and hygiene facilities, and the general sanitation conditions in schools, are provided and enforced by the Department of Sanitation and Epidemiological Services, Ministry of Health, via the Sanitary Rules and Norms (SanPiN). These guidelines stipulate that potable water, sanitary facilities of specific dimensions for boys and girls, and hand-washing facilities must be provided at various points on school grounds. Although the rules and norms are detailed, specifications are not readily amenable or adaptable to schools that do not have centralized water access.

According to the most recently available public expenditure record, from 2005, Uzbekistan spends 9.8 per cent of its total gross domestic product on education. This is high relative to other countries assisted by the Organisation for Economic Co-operation and Development, which spend an average of 4.9 per cent of their total gross domestic product on education, and very high relative to Central and Eastern Europe and the Commonwealth of Independent States (CEE/CIS) and other low-income countries.

Recent analyses of teacher shortages and student achievements show that a majority of government funds for education are allocated to teachers' salaries (Narolskaya, et al., 2010). Remaining funds are apportioned to learning materials and school maintenance, among other school needs. Interviews with NGO representatives, Department of Education officials and school administrators suggest that insufficient school-level funds are a major barrier to ensuring a comfortable learning environment. These shortages adversely affect maintenance and improvement of school WASH facilities, as well as other essential services such as heating for classrooms during winter.

WASH in Schools coverage

The WASH in Schools situation assessment, 2011–2012, was commissioned by UNICEF and conducted by the Republican Center for Social Adaptation of Children, under advisement of the Ministry of Public Education (MOPE, RCSAC and UNICEF 2012). The study includes a sample of nearly 200 schools, randomly chosen throughout Uzbekistan's 13 provinces. Data from this assessment provide a comprehensive description of WASH access in schools. An overview is shown in Table 7.2 and key data are summarized below.

TABLE 7.2 Water and sanitation access in a sample of schools across Uzbekistan

	Total	Urban	Rural
School access to centralized water sources	74.0%	93.0%	66.0%
% of schools that report use of water trucking	16.4%	6.6%	20.5%
School access to improved sanitation*	100.0%	100.0%	100.0%

n = 207 schools

* According to the JMP definition: "An improved sanitation facility is one that hygienically separates human excreta from human contact."

Source: MOPE, RCSAC and UNICEF 2012 (unpublished data).

A majority of schools in Uzbekistan report access to an improved water source, and nearly 75 per cent report access to a piped water supply. This suggests that access to piped water is exceptionally high compared to the rest of the CEE/CIS region. The functionality and regularity of those supply systems, however, may not have been considered in the survey methodology. Many schools reported that water is not available daily, and most schools use diverse sources, including wells, surface water and water transport from other regions.

In access to water, regional differences, and disparities between urban and rural schools, are marked. Ninety-three per cent of urban schools, but only 63 per cent of rural schools, had access to piped water. In the western Aral Sea regions of Bukhara, Djizak and Horezm, less than 60 per cent of schools reported access to piped water. These regions also suffer from a shortage of alternative water sources, including lack of fresh groundwater (World Bank 2010). Groundwater and surface water in Uzbekistan are vulnerable to contamination by high concentrations of agricultural run-off, due to intensive cotton monoculture. One third of the population is estimated to use drinking water that does not meet quality standards (UNICEF Uzbekistan 2004).

Although access to centralized water appears to be high, 80 per cent of schools use potentially unimproved sources such as well water, spring water or surface water. The Government ensures schools have supplies through water delivery, and more than 20 per cent of schools reported that they transported water from other areas. The sustainability of transport is low, however, and schools may face severe challenges as climate change exacerbates total water scarcity.

Nearly all schools report access to a school latrine or centralized sewage. A majority, particularly in rural areas, use pit latrines of Soviet design constructed prior to 1990. These latrines are identical and adjacent for boys and girls; are placed 20–100 metres from the school building; and have no exterior doors or doors to separate squat holes. (The author was not permitted to take pictures at schools.)



Scenes from a Hygiene Promotion and Deworming Week in the Ferghana Valley region, where UNICEF has piloted the initiative in three provinces.

Photo credit: Stephanie Ogden © 2011

Hygiene education is conducted for primary-school students as part of the 'Healthy Lifestyles and Basics of a Healthy Generation' curriculum. Although the curriculum is not mandatory, almost all schools reported participating and had designated at least one staff member to be in charge of the curriculum.

Providing basic hand-washing facilities in schools without centralized water remains challenging, particularly regarding the severely cold winters. School infrastructure does not ensure that water is warm enough for children's use or that it does not freeze. In addition, urine that falls on pit latrine slabs freezes and creates slippery conditions surrounding the pits (Samwel and Gabizon 2009). As a result, wintertime use of school sanitation facilities is lower than use during warmer seasons, and use of hand-washing facilities during cold weather is nearly negligible.

Limited access to WASH in Schools may elevate the risk of parasite infection among schoolchildren in some regions. Because the presence of intestinal parasites is closely linked with poor hygiene and sanitation, prevalence is often used as an indicator for conditions and behaviours. A 2007 survey among schoolchildren in the Ferghana Valley region of Uzbekistan notes that more than 75 per cent of schoolchildren were infected with one or more type of intestinal parasite (Gungoren, et al., 2007).

Prevalence rates above 20 per cent necessitate treatment via mass drug administration, according to World Health Organization guidelines. Although deworming programmes have commenced in the Ferghana Valley as a result of recent follow-up surveys (UNICEF Uzbekistan 2011), such high prevalence of intestinal parasites suggests that the hygiene and sanitation conditions surrounding children at home or at school are insufficient. Reinfection is likely to occur among schoolchildren until hygiene and sanitation are improved.

Bottlenecks

The bottleneck analysis is a visual representation of the challenges and barriers prohibiting equitable access to WASH in Schools. Indicators are organized into four categories: (1) policy and enabling environment; (2) supply; (3) demand; and (4) quality.

Due to widespread infrastructure, dedicated public investment in education and a strong regulatory environment, Uzbekistan is well placed to efficiently and effectively improve equitable access to WASH in Schools nationwide. The bottleneck analysis matrix, Table 7.3, describes the conditions that are in place and functioning well, and identifies those that are currently unmet. These unmet conditions are considered to be the primary barriers to equitable WASH in Schools access.

The monitoring and regulatory environment is strong, which affords Uzbekistan the potential to implement effective and cost-efficient monitoring of WASH in Schools. The current environment, however, appears to discourage schools from reporting WASH needs to local and national government. Furthermore, reliable data collection continues to be a challenge. As a result, lack of data has precluded an accurate understanding of WASH in Schools that can inform decision-making and ensure efficient improvements.

Although the policy environment is in place, few provisions have been made for equitable access to WASH in Schools. Basic supply is high, and a majority of schools have access to water and sanitation facilities; barriers are most evident in the quality of these facilities and services. Ongoing dilapidation of existing infrastructure and a lack of monitoring of school WASH systems contribute to low overall quality of WASH in Schools services. Addressing these barriers to quality may most efficiently improve the overall condition of WASH in Schools access.

Funding for WASH in Schools is bundled into the overall education budget, rather than allocated specifically. In order to allocate funding at the school level, administrators and local governments must prioritize WASH infrastructure above other school needs – and overall funding is insufficient to meet all of these necessities. Funds are therefore not allocated for the purchase, maintenance or repair of WASH facilities, or for providing students with consistent supplies of soap.

Furthermore, lack of dialogue on such topics as reproductive health and menstrual hygiene compromises the amount and quality of information. Programmes for these areas are therefore likely to develop, if at all, without a thorough baseline understanding.

Efficient improvements in WASH in Schools can be achieved by increased data collection and monitoring; improved discussion of topics that are considered to be taboo; and greater financial investment at the national and local levels, particularly towards operation and maintenance of existing facilities.

TABLE 7.3 Bottleneck analysis of WASH in Schools, Uzbekistan

Category	Determinant	Indicators	Metric/source of information	Stoplight evaluation of existing situation
Policy and enabling environment	Social norms	Teachers and government officials express that WASH in Schools is a priority	KIIs with teachers, national and local government officials	Although water access is valued, latrines and hand washing are not
		Children have been taught good WASH behaviours and recognize their importance	WASH in Schools situation assessment; KIIs with research team	Hygiene knowledge among children is high, but behaviours are not enforced
		School culture is non-discriminatory	KIIs with UNICEF education team; literature review	Children with disabilities are largely excluded from community schools
	Policy framework	School WASH standards are in place and contain stipulations for equity	National Sanitary Rules and Norms (SanPiN)	Standards are in place but have no stipulations for equity
		Mechanism to enforce policy has been established	KIIs with Department of Education officials and school administrators	Enforcement mechanisms are strong though funding for consistent monitoring may be lacking
	Budget/expenditure	Adequate budget is allocated for WASH in Schools at the national and local levels	KIIs with UNICEF education team; educational assessment	No budget allocated at the national level specifically for school WASH
	Availability of essential inputs	% of schools that have functioning water points on or near premises, or have another source of safe water	WASH in Schools situation assessment	An estimated 70% of schools have access to an improved water source on or near school grounds
	Monitoring of WASH in Schools	Effective monitoring is taking place, with data management at national level	KIIs with UNICEF education team and Department of Education official	No data on WASH in Schools are currently collected or managed at the national level

Key

- In place and functioning well
- In place but not fully functioning
- Non-functional or not in place

Category	Determinant	Indicators	Metric/source of information	Stoplight evaluation of existing situation
Supply	Existence of functioning WASH in Schools infrastructure	% of schools that have functioning latrines	WASH in Schools situation assessment	More than 90% of schools have latrines
		% of schools that have latrines that conform to international standards of privacy	WASH in Schools situation assessment; limited school observations	A majority of school latrines lack doors to the exterior and doors to separate squat holes
		% of schools that have functioning hand-washing facilities with soap	WASH in Schools situation assessment; limited school observations	It is unclear how many schools have functioning hand-washing facilities; few schools appear to have soap at hand-washing points
	Availability of human resources	% of schools with teachers trained in hygiene education or staff dedicated to hygiene curriculum	WASH in Schools situation assessment; KIIs with research team	A majority of schools report teaching hygiene curriculum
		Presence of human resources required for operation and maintenance	KIIs with school administrators and local government official	Responsibilities for operation and maintenance are not well defined at the school level; technical capacity and materials are insufficient
	Equitable geographical access	Geographical disparities between urban and rural areas or different sub-national regions	WASH in Schools situation assessment	Regional disparities in WASH in Schools access are marked; however, this is acknowledged by the national Government
	Budget for operation and maintenance	School-level funding is available for infrastructure, maintenance and materials	KIIs with teachers and local government officials	No allocation of funding for school WASH at the school/local levels
Demand	Mechanisms for operation and maintenance	School-level system is in place to maintain cleanliness and usability of WASH infrastructure	KIIs with teachers and school administrators; FGDs with students	Responsibilities are defined, but action may be inadequate
	Desire for use	School WASH improvements are requested at the local level	FGDs with students and KIIs with district official and head teachers	Need/want for improved WASH facilities varied from school to school

Category	Determinant	Indicators	Metric/source of information	Stoplight evaluation of existing situation
Quality	Gender-appropriate facilities	% of schools that have separate, private toilets	School observations; FGDs with girls	Latrines are separate but do not provide sufficient privacy for girls
	Facilities appropriate for children with disabilities	% of schools that have WASH infrastructure accessible to children with disabilities	School observations; KIIs with UNICEF education team	Few facilities have taken children with disabilities into account
	Status of environmental sanitation	% of schools with clean school grounds	School observations; KIIs with school administrators	Solid waste collection on school grounds and pit emptying of latrines remain a challenge – schools largely manage these functions privately
	Status of WASH facilities	% of schools with clean latrines and maintained hand-washing facilities	School observations	Data are not collected; observation suggests that latrines are generally unclean and that there are few hand-washing facilities

Equity dimensions

Findings suggest that access to WASH in Schools is subject to regional disparities. Rural schools and schools within the Aral Sea region of western Uzbekistan have disproportionately low access to sufficient and safe water sources compared to schools in urban and eastern regions of the country. Furthermore, WASH systems in schools without centralized water and sewage access are effectively excluded from government oversight. National policies are almost exclusively focused on large-scale infrastructure and stipulate too few provisions for basic infrastructure such as pit latrines.

At the school level, students have insufficient access to safe, private sanitation, which disproportionately affects girls of menstruating age. Lack of dialogue and curricula that cover reproductive health and menstrual hygiene may further reduce girls' capacity to engage in proper menstrual hygiene management.

Regional disparities

Areas without access to centralized water. There are two marked regional disparities related to water and sanitation access in Uzbekistan: (1) Rural schools have less access to improved water and sanitation than urban schools. (2) Schools in the western regions, nearest to the Aral Sea, have disproportionately limited WASH access compared to those in the rest of the country.

Although rural-urban and regional disparities in access are common in low-income countries, the significance of these disparities in Uzbekistan is twofold. Schools in rural areas and in the Aral Sea region are more likely to suffer from seasonal water insecurity and to use contaminated drinking water. Furthermore, schools without centralized water and sewage access are omitted from the policy and monitoring environment that should ensure sanitary and hygienic standards. The lack of monitoring may result in schools that appear to have centralized water and sewage access but, due to decaying infrastructure, do not actually have functional access.

The nationwide situation assessment of WASH in Schools reports that a majority of urban and rural schools have centralized water access, but rural schools depend on multiple sources. Nearly all rural schools report that they use well water, surface water or water transport – many in addition to the use of centralized water access. Due to extensive cotton production and use of agrochemicals, groundwater and surface water are at high risk for contamination with agricultural run-off. Students in rural schools that access water from surface and groundwater face an elevated risk of drinking contaminated water. The types of water sources utilized by urban and rural schools are shown in Table 7.4.

TABLE 7.4 Types of water access in urban and rural schools, Uzbekistan

Type of access	Urban % of total schools surveyed	Rural % of total schools surveyed
Centralized water	93%	66%
Artesian well and handpump	21%	26%
Well (groundwater)	6%	21%
Surface water	18%	35%
Water transport	6%	20%

n = 207 schools

Source: MOPE, RCSAC and UNICEF 2012 (unpublished data).

The Aral Sea region comprises Bukhara, Horezm and Navoi Provinces, and the Republic of Karakalpakstan, and is home to approximately 17 per cent of Uzbekistan's population. Schools and households in this area suffer a disproportionate lack of WASH access, due to increasing water scarcity. The Amu-Darya River and Syr-Darya River, which feed the Aral Sea, have been dammed and channelled since the 1960s to provide irrigation for agriculture. As a result, the Aral Sea has been reduced to less than a quarter of its original volume, leaving the surrounding communities with depleted surface water and groundwater.

Although millions of dollars of international aid have been allocated to mitigate ecological disaster, water insecurity is likely to continue to increase. Drought and upstream overuse of the Amu-Darya River left Karakalpakstan at a severe water deficit in 2001, 2006 and 2008. Water had to be trucked in from neighbouring regions to ensure the population's survival (World Bank 2010).

Schools in the Aral Sea region report a lower rate of centralized water access than schools in the other regions of Uzbekistan, as well as a greater reliance on groundwater and artesian wells, as shown in Table 7.5. Nearly 20 per cent of the region's schools rely on water trucking from nearby regions (MOPE, RCSAC and UNICEF 2012), which increases vulnerability to scarcity during times of drought or during annual dry seasons. Water transfer is also relatively expensive, creating an additional financial burden for schools and local governments.

Studies conducted in Horezm suggest that degradation of water quality in the Aral Sea region has led to adverse health effects, particularly among children. An estimated one in four people in Horezm are exposed to faecal contamination of their drinking water, while more than 10 per cent are exposed to excessive nitrate levels. A concurrent study of diarrhoeal disease revealed that children under age 5 in the region suffer from diarrhoea at a higher rate than the global median (Herbst 2006).

TABLE 7.5 Types of water access in Aral Sea region* and other schools, Uzbekistan

Type of access	Aral Sea region	All other regions
Centralized water	69%	82%
Groundwater (artesian)	35%	22%
Groundwater (well)	30%	17%
Water trucking	17%	16%

* Including Bukhara, Horezm and Navoi Provinces, and the Republic of Karakalpakstan.

Source: MOPE, RCSAC and UNICEF 2012 (unpublished data).

Although overall access to water in schools is high compared to many other low-income countries, regional disparities in Uzbekistan have a particular significance with respect to WASH in Schools. As in other countries in the region, the Soviet era left a legacy of legislation and organization proficient in maintaining large infrastructure but ill-adapted to providing small-scale services (World Bank 2010). Areas without centralized water and sewage access are excluded from the policy environment that enables government oversight, as well as funding for maintenance and repair.

National water and sanitation policy convey the expectation of flush systems and centralized sewage by omission of policy recommendation for other systems. This preference for centralized sewage is present in reports produced by the development sector as well. One report states, "Use of pit toilets not only creates an unsanitary environment around a household but also poses a major risk of ground water contamination" (UNICEF Uzbekistan 2004).

The vast majority of rural school sanitation systems are pit latrines or ventilated improved pit latrines, and centralized sewage is not currently realistic. Past attempts to construct pour-flush systems in arid regions have largely failed, and school latrines were abandoned as a result of insufficient water to operate the pour-flush systems (interview with UNICEF education officer). Extending centralized water-supply and sewage infrastructure into water-scarce regions by transferring water from resource-rich areas would require extensive capital investment not easily recovered through tariffs (World Bank 2010). Sanitation in these regions is therefore likely to continue to be characterized by pit latrines or other waterless technology.

Rural schools and schools without access to centralized WASH infrastructure are also excluded from the pool of potential government funding for maintenance and repair. During implementation of the School Education Development Program 2004–2009, for example, millions of dollars of government funds were allocated to schools for rehabilitation of infrastructure. Repair of centralized water and sewage infrastructure was included, but pit latrines were not, and the condition of pit latrines was not monitored.

Latrines in schools without centralized sewage have continued to decline while the national government reserves funds until universal upgrade to large-scale infrastructure is possible. Latrine repairs are seen as a wasted, intermediary cost, leaving the majority of schools with sanitation infrastructure that needs maintenance and repair to achieve sanitation access standards.

"The Soviet-era legacy lives on in expectations among utilities and citizens, that communal services should be reliable and affordable, meaning virtually free, which would require heavy subsidization."

– World Bank 2010

Basic hand-washing facilities are equally overlooked. Although schools with centralized water and sewage systems have sinks inside school toilets, those with latrines are observed to be much less likely to have hand-washing facilities near the latrines, or at all. Basic hand-washing infrastructure, in the form of traditional *umuvalniki*, must be manually filled with water. Because latrines are placed at a distance from the school building, administrators report challenges to ensuring that *umuvalniki* are consistently filled, and many schools were observed to have no hand-washing facilities in use.

Strong school leadership is needed to ensure that basic hand-washing facilities are provided and maintained, and that water does not freeze and is sufficiently warm for children's use.

Gender

The Ministries of Public Education and Higher Education are confident that gender equity in the educational system has been sufficiently achieved. However, the gender equity component from the child-friendly schools principles will still be included in the new Principles of Quality Basic Education in order to continue to monitor gender parity.

The Soviet design standards for school latrines are still predominant in the majority of schools, however, and don't provide sufficient privacy for girls, particularly those of secondary school age. Evidence also shows that a notable portion of school latrines are unsanitary. An analysis of factors related to helminthic infection in three provinces found that 35 per cent of latrines were covered in faecal matter (UNICEF Uzbekistan 2011).

Observation of school latrines, conducted in 2008 by women's committees affiliated with Women in Europe for a Common Future, suggest that school latrines are in unhygienic condition, with bad odours and flies, and are a "threat to children's health" (Samwel 2009). Unsanitary conditions increase the risk of faecal transmission of intestinal parasites and other diseases, particularly for secondary-school girls who need to use the latrine regularly during menstruation.

Although health education and hygiene are taught as part of the optional curriculum 'Basics for a Healthy Generation', many issues of reproductive health, including menstrual health and hygiene, are excluded from the national curriculum as inappropriate. No data are currently available that describe the knowledge of secondary-school girls regarding menstruation and menstrual hygiene management. Although girls may receive sufficient education at home, it is likely that limited access to private, clean sanitation facilities at schools – coupled with limited hygiene education – present a particular disadvantage to secondary-school girls in Uzbekistan. They may have neither the conditions to manage menstrual hygiene, nor the education and enabling environment to request that those conditions be put in place.

Recommendations for Uzbekistan

Recommendations for improving equity and access in Uzbekistan are based on the points of action established by the Call to Action for WASH in Schools, a collaboration between key stakeholders around the world.

Increase investment in WASH in Schools:

- Increase government and NGO investment in maintenance and repair of existing water systems and sanitation facilities in schools.

When creating materials for the instruction of reproductive health and sex education in Uzbekistan, "many words have to be avoided entirely, and euphemisms used."

– UNFPA Representative, Uzbekistan
(personal communication)

Engage those who set policies:

- Update government standards for school sanitation facilities. Ensure that guidelines for WASH in Schools address the needs of all students, including privacy, particularly for girls, and appropriate infrastructure for children with disabilities.
- Encourage realistic WASH in Schools policies and guidelines that consider arid regions and schools without centralized water and sanitation facilities. These policies should include regulation and monitoring mechanisms, as well as funding for appropriate technologies.

Demonstrate quality WASH in Schools projects:

- Ensure greater privacy measures for school sanitation facilities, particularly for girls of secondary-school age, including individual stalls with lockable doors.
- Ensure that hand-washing facilities are present in schools and that their use is monitored.

Monitor WASH in Schools programmes:

- Increase monitoring of WASH in Schools infrastructure and extend existing monitoring to include basic facilities such as pit latrines. Monitor functionality, not just presence, of infrastructure.

Contribute evidence that provides a solid base for informed decision making:

- Encourage data collection for the Education Management Information System and information exchange between WASH in Schools stakeholders and decision makers.

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8

General Conclusions

The case studies in this publication analyse the status of WASH in Schools at the national, sub-national and local levels in Kyrgyzstan, Malawi, the Philippines, Timor-Leste, Uganda and Uzbekistan. Although they describe specific successes and challenges to equitable provision, several observations are relevant across all six countries. Conclusions that can be drawn from the case studies as a whole are presented in this section.

Overall lack of access masks specific inequities. In resource-limited countries, issues of equitable access often appear to be nested within limited access in general. Because governments do not have enough funds to provide schools with universal access to WASH, many groups are excluded. This exclusion is frequently due to the general shortages of provision, and it can be remedied by increasing overall access. Vulnerable groups, however, are disproportionately excluded from WASH in Schools, and existing inequities are exacerbated by the overall lack of access.


Data are not consistently gathered or used effectively. WASH facilities and hygiene practices in schools are not accurately evaluated in many contexts and, sometimes, not measured at all. Inadequate and inconsistent monitoring, data collection and management, and limited use of data to inform policy, are underlying constraints to equitable WASH in Schools access.

The first step towards improving provision and access is through a systematic understanding of what is occurring in schools. Even in contexts where the culture of monitoring WASH in Schools is strong, evidence suggests that data are conflicting or are not utilized to their full extent. Because the depth of the problem and its implications are not well understood, the lack of water, sanitation and hygiene education in schools is often neglected at the national and international levels.

Adequate funding must be provided for maintenance. Investments in operation and maintenance of WASH in Schools facilities may dramatically improve usability. A majority of students cited lack of cleanliness as a major barrier to the use of school latrines. Regular maintenance to ensure cleanliness of latrines can significantly support equitable access.

Lack of adequate and clean facilities is a barrier to girls' education, as well as equitable access. Girls of secondary-school age, particularly those who have reached menarche, face consistent challenges in all studied countries. Girls report that a lack of clean, private facilities discourages them from using school latrines. Avoidance of school latrines often takes the form of dehydration or physical discomfort, which may have additional health risks and impede educational outcomes.

Menstruating girls are forced to use latrines more frequently, but girls universally agree that school facilities are inadequate: There is insufficient privacy, lack of cleanliness makes extended use of latrines unpleasant, and there is no place to wash menstrual cloths or dispose of sanitary pads. In countries where separate facilities are present, some girls report that they are ashamed to use them because it is a signal to others that they are menstruating. While girls in Kyrgyzstan and Uzbekistan, Timor-Leste and the Philippines attend school during their menstruation despite a lack of facilities for menstrual hygiene management, and at risk to their health, girls in Uganda and Malawi frequently report that they miss up to five days of school per month.



Facilities must be more fully accessible for children with disabilities. WASH infrastructure intended for children with disabilities has become more prevalent in schools worldwide, and many policies include consideration for children with disabilities. At the school level, however, designs for WASH facilities and local implementation of designs, such as handrails and ramps, frequently appear to be insufficient to meet their needs.

Facilities that are 'accessible' to children with disabilities often include disability-friendly toilets, but water sources, hand-washing stations and soap frequently remain out of reach. In addition, children with disabilities are more likely to touch the floors and walls of latrines where faecal matter is often present, so accessible hand-washing stations are essential to protect them from increased rates of intestinal disease.

Disparities in access to WASH in Schools frequently occur along regional boundaries. Schools that are already isolated, whether by geography, remoteness or status of ethnic minorities, are more likely to have inadequate access to WASH in Schools. Lack of access increases the disadvantages already present for these students and is a compounding factor in creating an unhealthy educational environment, in turn perpetuating a cycle of poverty and neglect.

Strong policies are a good start but not enough to overcome every barrier. Progressive policies and policy environments do not necessarily result in more equitable access to WASH in Schools. Barriers and bottlenecks commonly identified in the six case study countries include:

- Lack of appropriate budgeting for WASH in Schools at the national and local levels.
- Lack of priority given to WASH in Schools at the implementation level, despite political commitment.
- Lack of accountability for the provision of WASH services and facilities in schools at the national, local and school levels.
- The taboo of sanitation as a topic of open concern at all levels.

Persistent barriers to the inclusion of all students in WASH in Schools access are also attributed to lack of training for teachers and administrators that would allow them to embrace a diverse population of students and accommodate their various needs.

9

Recommendations

The analysis described in this report provides a framework for evaluations in other countries. Country programmes can and should engage in similar studies of equity in WASH in Schools access within their own countries. A bottleneck analysis can be used to determine particular challenges and the most effective steps towards improving access. Gender, disability and regional disparities are equity dimensions that appear to be prevalent across country contexts, and country programmes and governments should take particular care to include these dimensions in their country-specific analyses.

Equitable access to WASH in Schools can be improved globally by addressing the common challenges described in this study. Recommendations for overall WASH in Schools policy and implementation are based on the framework established by the global Call to Action in 2010 and are described below.

Increase investment in WASH in Schools. National and local governments should allocate specific budgets for WASH in Schools within their jurisdictions. Governments, non-governmental organizations and schools should increase investment in operation and maintenance of existing WASH facilities. The international development sector and governments should increase funding commitments to operation and maintenance as part of their overall WASH and education budgets.

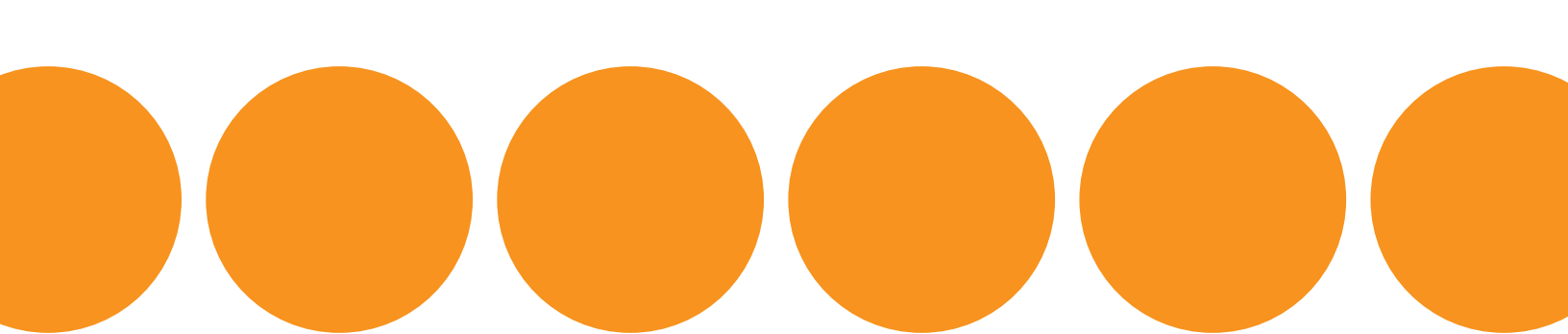
Engage those who set policies. Policies and standards for school WASH should be realistic and appropriate for low-income and resource-scarce settings. National policies should consider the needs of all students and include specific provisions for privacy, as well as appropriate infrastructure for girls and students with disabilities. Dialogue on WASH in Schools should be improved between different levels of government, as well as service providers.

Involve multiple stakeholders. Strengthen the relationships between communities and schools, as well as community support for and monitoring of WASH in Schools. Involve parents and communities in maintaining and cleaning facilities through direct support or community monitoring. Include relevant stakeholders in policy dialogue regarding WASH in Schools, and give greater voice to the actual experience of students and communities in the development of policies and guidelines.

Demonstrate quality WASH in Schools projects. WASH facilities constructed in schools should be appropriate for all students, including girls and students with disabilities. Designs for these facilities should consider the particular needs of girls of menstruation age. School toilets should have sufficient provisions for privacy as well as waste disposal mechanisms for sanitary napkins or sinks for washing reusable cloths. Girls should not be forced to identify themselves as menstruating by using facilities specific to menstrual hygiene.

Designs and implementation of designs for WASH in Schools facilities for children with disabilities should be based on student experience. Access for children with disabilities should furthermore be conceived beyond latrine access and should ensure access to water sources, hand-washing stations and soap.

Hygiene education should be taught appropriately and adaptively in all schools, and curriculum should be appropriate for low-resource settings. Hygiene practices encouraged in the standardized curriculum should be realistic for schools with minimal water access. Furthermore, hygiene education curriculum materials should be distributed to schools in the appropriate language of instruction.



Monitor WASH in Schools programmes. Government monitoring of WASH facilities and practices in schools should be increased. WASH facilities should be included in EMIS data where these information systems are in place, and quality of data collection should be ensured. Surveys of WASH facilities should be conducted by local governments and aggregated to the national level in contexts where Education Management Information Systems are not yet existent.

Monitoring of WASH in Schools facilities should include indicators for functionality of infrastructure. Monitoring should also be extended to basic facilities and infrastructure to regulate their cleanliness and maintenance, particularly where the construction of large-scale systems is unrealistic.

Appropriate accountability should be assigned for the cleanliness and functionality of school WASH systems, at the school level, as well as within national and local governments. In particular, effort must be taken to establish mechanisms at the school level to ensure the cleanliness of sanitation facilities so that school toilets are both utilized and able to contribute to student health.

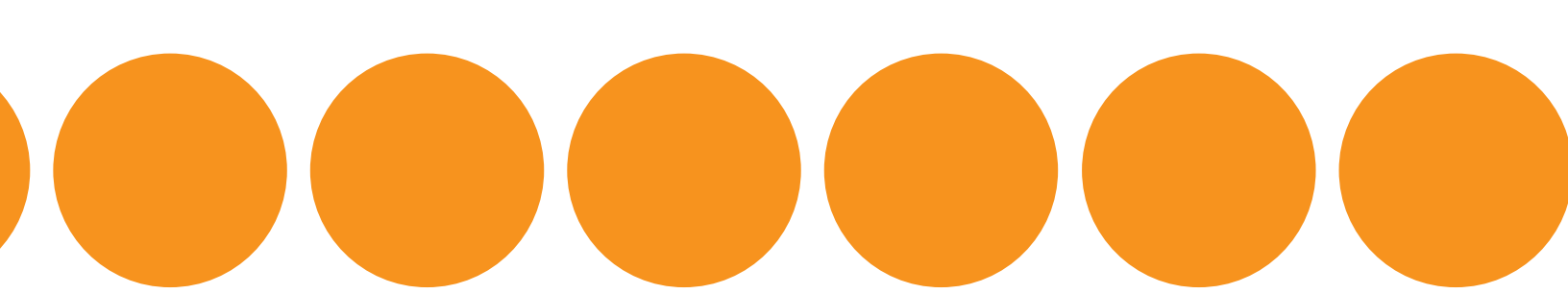
Contribute evidence that provides a solid base for informed decision making. National governments should engage in thorough data collection with respect to WASH in Schools. Data collection should include existence *and* functionality of facilities, as well as knowledge, attitudes and behaviour of students and teachers.

Data should be well managed at the national level, shared with WASH in Schools stakeholders and decision makers, and used to identify schools and areas of most urgent need.

School-aged children around the world can benefit from equal access to WASH in Schools. As further research increases our understanding of exclusion, the disproportionate burden on vulnerable and excluded children can be lifted more effectively – and the goal of providing healthy school environments for all children comes ever closer.

Abbreviations

ACTED	Agency for Technical Cooperation and Development
ARMM	Autonomous Region in Muslim Mindanao
BEIS	Basic Education Information System
BESIK	Bee, Saneamentu no Ijiene iha Komunidade (East Timor Rural Water Supply and Sanitation Program)
BMI	body mass index
CAAW	Central Asian Alliance for Water
CEE/CIS	Central and Eastern Europe and the Commonwealth of Independent States
DHS	Demographic and Health Surveys
DMFS	decayed, missing, filled surfaces (teeth)
DOWD	Directorate of Water Development (Uganda)
EFA	Education for All
EHCP	Essential Health Care Program
EMIS	Education Management Information System
FAWEU	Forum for African Women Educationalists Uganda
FGD	focus group discussion
GEM	Girls' Education Movement
JMP	WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation
KII	key informant interview
MICS	multiple indicator cluster survey
MOES	Ministry of Education and Sports (Uganda)
MOEST	Ministry of Education, Science and Technology (Malawi)
MOF	Ministry of Finance
MOH	Ministry of Health (Uganda)
MOPE	Ministry of Public Education (Uzbekistan)
N/A	not available
NGO	non-governmental organization
NSC	National Statistical Committee (Kyrgyzstan)
NSO	National Statistical Office (Malawi); National Statistics Office (Philippines)
PUFA	pulpal involvement, ulceration, fistula and abscess (index for oral health)
RCSAC	Republican Center for Social Adaptation of Children (Uzbekistan)
SanPiN	Sanitary Rules and Norms
SPED	Special Education Division (Philippines)
UBOS	Uganda Bureau of Statistics
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WASH	water, sanitation and hygiene
WHO	World Health Organization



This comparative study on 'Equity of Access to WASH in Schools' was developed by the Center for Global Safe Water at Emory University and UNICEF. Extensive research in each country – Kyrgyzstan, Malawi, the Philippines, Timor-Leste, Uganda and Uzbekistan – was conducted in collaboration with UNICEF country offices and their partners.

The six case studies describe various dimensions that contribute to equitable or inequitable access across regions, cultures, gender and communities. Presented together, they contribute to the broader understanding of inequities in access to WASH in Schools.

By expanding the knowledge base on WASH in Schools and equity, we aim to help build the capacity to fulfil our vision of bringing safe water, improved sanitation and hygiene education to schoolchildren across the globe.

For more information on WASH in Schools and the 'Equity of Access' study, contact Matthew Freeman, mcfreem@emory.edu, or Murat Sahin, msahin@unicef.org.



Water, Sanitation and Hygiene for Schoolchildren in Emergencies

A GUIDEBOOK FOR TEACHERS



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