## Eyen More

## RAISING CLEAN HANDS

Advancing Health, Learning and Equity through WASH in Schools











**Joint Call to Action** 



#### **Acknowledgements**

Thanks are due to all the WASH in Schools partners who participated in the development and publication of *Raising Even More Clean Hands: Advancing Health, Learning and Equity through WASH in Schools*.

We wish to thank the following for their support of WASH in Schools and their contributions to this publication: Matthew Freeman, Emory University; Sarah Fry, FHI 360; Bella Monse, GIZ; Dan Abbott, Sarah Bramley and Seung Lee, Save the Children; Therese Dooley, Tiya Habachy, Greg Keast, Catherine Rutgers, Murat Sahin, Yodit Sheido and Peter van Maanen, UNICEF; Elynn Walter, WASH Advocates; Louisa Gosling, Shamila Jansz, Thérèse Mahon, Yael Velleman and Jane Wilbur, WaterAid; Lotika Paintal, Water Centric; Mark Duey and Erin Wright, Water For People; and Hazel Jones, WEDC.

This valuable assistance contributed greatly to the quality and completeness of the Joint Call to Action for WASH in Schools.

For more information about this publication and the Joint Call to Action, please contact Murat Sahin, msahin@unicef.org.

Raising Even More Clean Hands: Advancing Health, Learning and Equity through WASH in Schools, 2012

Cover photos (clockwise from top left): © UNICEF/INDA2009-00541/Pranav Purushotham; © Elias Assaf, Water For People, 2011; © UNICEF/NYHQ2006-2910/Giacomo Pirozzi; © UNICEF/MGLA2007-00886/Jim Holmes; © Susan Warner, Save the Children, 2012

## Even More

## RAISING CLEAN HANDS

Advancing Health, Learning and Equity through WASH in Schools

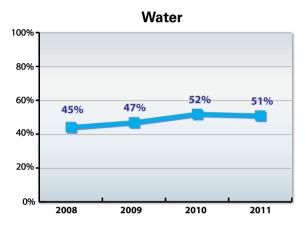
### **Contents**

1	Summary: Call to Action for WASH in Schools	2
2	About WASH in Schools	. 6
3	WASH in Schools Improves Children's Health	8
4	WASH in Schools Boosts School Attendance and Achievement	. 12
5	WASH in Schools Promotes Equity  Equity from the Gender Dimension  Equity from the Inclusion Dimension	. 1/
6	WASH in Schools Reaches Families and Communities	20
7	Six Points of Action for WASH in Schools	24
	Maintain the Momentum	29
	Endnotes	30

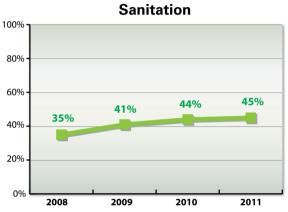
# Call to Action Summary: For WASH in Schools

Fulfilling every child's right to water, sanitation and hygiene education remains a major challenge for policymakers, school administrators and communities in many countries. Although steady progress has been made to safeguard the well-being of schoolchildren, almost half of all schools in low-income countries still lack access to water and sanitation facilities.

## WASH in Schools coverage: Of the surveyed low-income countries that have data available, almost half of all schools do not have access to WASH facilities



% of schools with adequate water sources, average data from 51 least developed countries and other low-income countries



% of schools with adequate sanitation facilities, average data from 49 least developed countries and other low-income countries

Source: UNICEF, 'Water, Sanitation and Hygiene Annual Report', 2011.

The lack of quality data on WASH in Schools coverage is a significant barrier to identifying children's needs, establishing and carrying out effective programmes, and monitoring progress. Although more countries are responding to UNICEF surveys on access to water in primary schools, many have not defined minimum standards for WASH in Schools. In many cases, national education monitoring systems do not include access to WASH in Schools as an indicator, therefore, the quality of data on coverage and access remains questionable. It is not unusual to find that a national monitoring system considers

a school to be providing adequate access to sanitation, even though 300 children are using one latrine hole.

As policymakers, government representatives, citizens and parents, we all have a role in making sure that every child receives the benefits of WASH in Schools. By applying experience gained over the past decade, we can bring programmes to scale and sustain them to improve health, advance learning and enable children to serve as agents of change for their siblings, their parents and the community at large.

More than 60 organizations have joined together to renew their commitments and create a more cohesive group to support and advocate for WASH in Schools. We call on decision makers and concerned stakeholders to join in this collaborative effort and support WASH in Schools – so that all children have the opportunity to go to a school with access to safe water, child-friendly sanitation facilities and hygiene education.

#### **Six Points of Action for WASH in Schools**

Because every child has the right to be in a school that provides safe water, sanitation and hygiene education, we call for renewed commitments to:

#### 1. Set minimum standards for WASH in Schools.

Adopt national, regional and local standards for WASH in Schools, based on UNICEF-World Health Organization guidelines. The minimum standards for WASH in Schools should be specific to each context. These standards should be the basis for national action plans that aim to reach all schools within a concrete time frame and should allow for gradual improvements to facilities and hygiene practices.

### 2. Monitor WASH in Schools coverage through Education Management Information Systems (EMIS).

Advocate for the inclusion of WASH in Schools indicators in EMIS. Analyse data annually and use the findings for advocacy and better resource allocation. Support the compilation of data on coverage and practices at the global level to attract attention and funding to WASH in Schools.

#### 3. Engage with at scale WASH in Schools programmes.

Contribute to the bigger picture by bringing individual or small-scale projects into cooperative initiatives that effectively reach more schools. Gradual improvements to facilities and hygiene practices require less investment in operation and maintenance and can be sustained with local resources. Steady progress is key to establishing sustainable, at scale programmes for WASH in Schools. These programmes include budget lines for capital improvements, operation and maintenance of WASH facilities, and recurrent costs such as purchases of soap and materials for personal cleansing.

#### 4. Involve multiple stakeholders to support WASH in Schools programmes.

Community members, civil society advocates, members of the media, students, school staff, local and regional authorities, non-governmental organizations, faith-based groups, public-private partnerships, and ministries of education, water, health and finance, as well as donors, can all support planning and action for WASH in Schools.

#### 5. Contribute evidence on the impact of WASH in Schools programmes.

Local and global academic communities have expertise that can support the design of WASH in Schools programmes and chart their impact. Generating and sharing evidence will provide WASH in Schools advocates with a powerful tool to attract attention and funding to the sector.

#### 6. Raise the profile of WASH in Schools programmes.

Adapt global and regional publications, advocacy materials and knowledge for the local context and disseminate them widely. Encourage members of the community to participate in customizing global WASH in Schools experiences to local settings. The process can begin with translating *Raising Even More Clean Hands* into multiple languages. Local organizations can join the advocacy by endorsing a customized publication with their logos.



#### **Afghanistan calls partners to action for WASH in Schools**

Afghanistan is enrolling millions of new students in school. The number of girls and boys in general education rose from 2.3 million in 2002 to 6.2 million in 2008, with an estimated 10 million children to be enrolled by 2014. But less than half of Afghanistan's schoolchildren have access to safe water, and only 40% of schools have separate sanitation facilities for boys and girls.

The arrival of more students makes increased investment in school water, sanitation and hygiene even more urgent. To help secure funding to meet students' needs, a Call to Action was jointly issued in 2010 by the Afghan Ministries of Education, Public Health, and Rural Rehabilitation and Development, along with UNICEF and the World Health Organization.

The Call to Action aims to engage policymakers at all levels, involve stakeholders from multiple sectors and monitor WASH in Schools. "I am confident that this initiative will raise general awareness on the importance of WASH in Schools," said Minister of Rural Rehabilitation and Development Jarullah Mansoori, adding that it will "encourage our Government and partners to take necessary actions aiming at covering all schools with WASH facilities by 2015."<sup>2</sup>

#### CASE STORY Indonesia

## National conference in Indonesia highlights WASH in Schools

'Handling Sanitation and Securing Water Supply' was the theme of Indonesia's 3rd National Conference on Water and Sanitation, held in October 2011. The conference in Jakarta brought together more than 1,000 representatives of organizations from across the vast archipelago.

Attendees were focused on re-examining government commitments and renewing efforts to achieve the United Nations Millennium Development Goals for the WASH sector. The importance of increasing investment in school water, sanitation and hygiene was among the issues on the agenda.

Fasil Zalah, Indonesia's Vice Minister of Education, emphasized the need for investing in schools to safeguard children's health by providing proper water and sanitation. He also noted that the national rehabilitation plan – which aims to cover 250,000 classrooms by the end of 2013 – requires standardization of WASH facilities. The plan includes mainstreaming hygiene promotion and sanitation as part of in-service teachers' training, as well as teaching hygiene within the regular primary school curriculum.<sup>3</sup>



## WASH in Schools

Water, sanitation and hygiene education in schools – WASH in Schools – provides safe drinking water, improves access to clean sanitation facilities and promotes lifelong health. WASH in Schools enhances the well-being of children and their families, and paves the way for new generations of healthy children.

WASH in Schools significantly reduces hygiene-related disease; increases student attendance and learning achievement; and contributes to dignity, inclusion and equity. These attributes serve as a base for ongoing development and economic growth.

Every child's right to education is secured by the Convention on the Rights of the Child, which establishes equal opportunity as the fundamental principle in making primary school compulsory and available to all. WASH in Schools helps fulfil the universal right to health and education, and it has widespread recognition for its role in achieving the United Nations Millennium Development Goals – particularly those related to increasing access to primary education, reducing child mortality and advancing gender equality, as well as the targets for improving water and sanitation.

The Call to Action for WASH in Schools supports global efforts and a common vision: a world where all children go to school and all schools provide a safe, healthy and comfortable environment where children grow, learn and thrive.

#### WASH in Schools creates a cycle of opportunity





A primary-school student in Sierra Leone has learned healthy hygiene habits and is sharing them with his classmates.

#### Among its many benefits:

- WASH in Schools provides healthy and secure school environments that can protect children from illness, abuse and exclusion. Because children who are healthy and well nourished can fully participate in school and gain maximum benefits, WASH in Schools helps ensure they receive a quality education. Quality education, in turn, leads to better health and nutrition outcomes, especially for girls.
- WASH in Schools encourages children's pride in their schools and communities. It enables children to become agents of change for improving water, sanitation and hygiene practices in their families and among their neighbours.

- WASH in Schools is an investment in schoolchildren and the health of future generations. It helps children realize their full potential and prepares them for a healthy adult life.
- WASH in Schools promotes equity.
   All children are equal in their right to access WASH facilities, and all children gain benefits through the improved hygiene practices promoted by WASH in Schools programmes. By providing gender-separated toilets, students are assured of privacy and dignity, a particularly important factor for girls' school attendance. By providing inclusive and accessible facilities, children with special needs are able to attend school and further contribute to the development of their society.

# WASH in Schools Improves Children's Health

WASH in Schools programmes are a first step towards ensuring a healthy learning environment. Schools with quality WASH programmes can lessen the spread of disease.

## The burden of disease is high among children

Children suffer a disproportionate share of the WASH-related disease burden, particularly in developing countries. Among all children under age 14, more than 20% of deaths and years lived with illness are attributable to unsafe water, inadequate sanitation or insufficient hygiene.<sup>4</sup>

successful in school, they are the underlying causes of malnutrition and stunting.

Poor sanitation and hygiene in schools also affects the wider community. Children who pick up infectious agents in settings such as schools can bring home microbes that may lead to 50% of household members becoming infected.<sup>7</sup>



Four Vietnamese girls join hands as they learn about hygiene for school and home.

In developing countries, it is estimated that 47% of children 5–9 years old are infested with soil-transmitted worms.<sup>5</sup> Chronic hookworm infestations can reduce children's physical growth and delay their intellectual development. Children suffering from intense whipworm infections may miss twice as many school days as their infection-free peers.<sup>6</sup> Worm infestations and diarrhoea not only rob children of the opportunity to attend and be

## WASH in Schools is effective in combating disease

Improving WASH conditions in schools helps prevent infestation with soil-transmitted worms, of which 100% of annual cases worldwide are attributable to inadequate sanitation and insufficient hygiene.<sup>8</sup> A comprehensive programme to improve school water, sanitation and hygiene in Kenya resulted in a nearly 50% reduction in diarrhoeal illness.<sup>9</sup>

Deworming services that are supported by hygiene education help children avoid reinfection, and proper water and sanitation facilities protect children from re-exposure. The impact of worm reduction programmes in schools has been remarkable. In Kenya, a deworming programme among primary schoolaged children reduced absenteeism by at least 25%, with the largest gains for the youngest children who suffered the most ill health.<sup>10</sup>

When children and staff in day-care centres and primary schools wash their hands properly, diarrhoea cases can be reduced by more than 30%. 11 A detailed analysis of studies conducted in educational facilities.

in developed countries, indicates that good hand-washing practices can reduce the frequency of respiratory infections among school populations by 16%.<sup>12</sup> In addition, a separate study shows a 53% lower rate of diarrhoea among children under 15 years old in households that had hand-washing soap in the home.<sup>13</sup>

#### Soap makes a difference

Good hand-washing practices must be supported with consistent access to water and adequate supplies of soap.

Many schools need to address the issue of soap supplies. An evaluation in India shows that hand washing before eating was far more frequent in school districts with WASH in Schools programmes than in control districts. But less than 2% of children used soap during hand washing, severely cutting its effectiveness. An assessment of School Sanitation and Hygiene Education pilot programmes in Burkina Faso, Colombia, Nepal, Nicaragua, Viet Nam and Zambia reveals that availability of soap was a major problem in most schools. This jeopardized the effort to promote use, resulting in a low proportion of students washing their hands with soap. 15

Where schools are having trouble keeping soap on hand, administrators are finding creative solutions, including liquid soap; soap bars attached to a rope and washcloth; tippy taps, containers that dispense just enough soapy water for a single hand washing; 16 or use of ash as an effective substitute.

Events such as Global Handwashing Day highlight the role soap plays in good hygiene practices and attract attention to the importance of soap supplies in schools. Celebrated annually on 15 October, more than 1 million schools and nearly 110 million children participated in Global Handwashing Day 2011.



#### **Working together for healthy schools in Central America**

Mi Escuela Saludable (My Healthy School), the SWASH+ programme in Central America, brings together parents, teachers and students who are working to improve water, sanitation and hygiene conditions at approximately 300 schools that are attended by more than 40,000 students.

Each quarter, Water For People and its partners in both government and non-governmental organizations travel to project sites in El Salvador, Guatemala, Honduras and Nicaragua. There, they exchange ideas and learn from successes with the goal of increasing the impact and adoption of WASH in Schools best practices.

In Guatemala, the 'Hygiene Classroom Corners' methodology makes hygiene education exciting for students and provides them with incentives to learn. This programme has proved to be effective and is being replicated in other countries in the region. In Honduras, Water For People works with parent-teacher associations to maximize local involvement. Parents become central to the implementation process when they manage funds, prepare financial reports and supervise construction.<sup>17</sup>





#### **Global Handwashing Day: More than a day**

Global Handwashing Day was first celebrated in 2008 and provides an opportunity for schoolchildren to reach out to their communities with the life-saving message of hand washing with soap. On 15 October each year, playgrounds, classrooms, community centres and public spaces are filled with activities to encourage hand washing and behaviour change.

In 2011, more than 100 million children in 1 million schools participated in these celebrations across all five continents. Because Global Handwashing Day reaches so many children, governments, the private sector and non-governmental organizations have used the events to launch long-term behaviour change programmes.<sup>18</sup>

CASE STORY Kenya

#### **Tracing the impact of WASH in Schools in Kenya**

In Kenya's Nyanza Province, a safe water and hygiene programme supplied 45 public primary schools with clay pots for safe water storage. The schools were also provided with a year's supply of water disinfectant, 200-litre plastic water tanks with taps for hand washing and soap. Two teachers from each school received educational materials on water treatment, safe storage and good hand-washing practices for use in the classroom. They formed safe water clubs with students, who were encouraged to share the information with their parents.

An evaluation of the programme in nine schools found that student hand washing in Grades 4–8 improved and increased. Absenteeism declined by 35%, while absences in neighbouring schools without the intervention increased by 5%. Among the effects in the surrounding community, household soap ownership increased from 74% to 90%, and 25% of parents and guardians reported changing their hand-washing behaviour because of what they learned from their child. In addition, parents of children in the safe water clubs were almost twice as likely to report using the water treatment than parents whose child was not a club member.<sup>19</sup>

CASE STORY
European
Region

#### uropean The Parma Declaration

The Parma Declaration on Environment and Health was issued on 11 March 2010 by ministers and representatives from the member states in the World Health Organization European Region. Ministers from several European countries and representatives from the United Nations Economic Commission for Europe, the United Nations Environment Programme and WHO collaborated to acknowledge the links between health and the environment, and to create a time frame for achieving public health goals.



© Andrew Mills, UNICEF Kyrgyzstan, 2011

The Parma Declaration set the foundation for efforts to reach the goals established in the 2004 Children's Environmental and Health Action Plan for Europe. Primary among these goals is access to safe water and sanitation. The declaration commits the ministers and representatives to provide every child with access to safe water and sanitation in homes, educational centres, health-care institutions and recreational settings by 2020.<sup>20</sup>

# WASH in Schools School Attendance and Achievement

Health and education work in synergy. Schools with improved water and sanitation facilities attract and retain more students and teachers. Nutrition deficiencies, diarrhoea and worm infestations are all related to inadequate water, sanitation and hygiene – and all affect school participation and learning.

WASH in Schools protects health, and it fosters social inclusion and individual self-respect. Clean and accessible facilities empower all students to attend school, especially girls and children with disabilities, and they make it possible for female teachers to provide more time in the classroom. Children could gain an estimated 443 million school days every year through improved water and sanitation facilities and reduced diarrhoeal illness.<sup>21</sup>

WASH in Schools initiatives promote school attendance:

 In China, an expanded hand-washing programme in primary schools provided free soap continuously and participating schools selected a 'student hand-washing champion'. The expanded programme resulted in a 42% reduction in absenteeism, with students missing 54% fewer days compared to those in schools without the intervention.<sup>22</sup>

- In Egypt, an intensive campaign to promote hand hygiene in 30 primary schools reduced absenteeism caused by laboratory-confirmed influenza by 50%, influenza-like illness by 40%, diarrhoea by 30% and conjunctivitis by 67%. <sup>23</sup> The programme included guidebooks, activities, posters, songs, games, drama and contests all with the objective of having children wash their hands with soap at least twice a day while they are at school.
- In Colombia, children in primary schools in Bogotá who reported proper hand-washing behaviours in school facilities were 20% less likely to be absent than those in schools without good hygiene practices.<sup>24</sup>





Hand washing offers lifelong benefits for a Haitian girl whose school was rebuilt with new WASH facilities after the earthquake.

Children's mental and physical development is protected when the spread of disease is stopped. Failing to curb the spread of disease threatens children's cognitive development<sup>25</sup> and allows a recurrent cycle of missed school, poorer school performance and increased poverty.

## Safeguarding cognitive development

WASH-related diseases, including diarrhoea and worm infections, are major causes of mental stunting in children. Hookworm, whipworm and flatworm infections present a significant risk of anaemia, which can lead to developmental and behavioural disturbances that diminish a child's ability to learn. Worm infections also keep children from getting to school at all.

An evaluation of a deworming programme in western Kenya demonstrates that the worm burden in children contributed to 25% of overall school absenteeism. The World Health Organization estimates that more than 200 years of schooling have been lost to wormassociated absenteeism. The average IQ loss per worm infection is 3.75 points. This represents 633 million virtual IQ points lost among people who live in low-income countries. 27

In Jamaica, for children age 9–12 with worm infections, absenteeism was more frequent and they sometimes attended school only half as much as their uninfected peers. Treatments for schoolchildren with whipworm infections produced significant improvements in their short- and long-term memory. Nine weeks after treatment, those who were previously infected performed as well as the uninfected children.<sup>28</sup>

These examples highlight the need for prevention and treatment. Because 100% of soil-transmitted worm infestations are attributable to inadequate WASH conditions, <sup>29</sup> improving WASH in Schools programmes is imperative.

Safe water, sanitation and hygiene are major factors in protecting children from worm infections, diarrhoea and other illnesses. The evidence is clear that WASH in Schools can have a positive impact on school attendance, ratio of girls to boys attending school and educational achievement. By providing access to WASH facilities and encouraging behaviour change with students' participation, the burden of disease can be lifted – and children's opportunities expand.





The Essential Health Care Program (EHCP) implemented by the Philippine Department of Education is an outstanding example of at scale action to promote children's health and education.

Three group activities – washing hands daily with soap, brushing teeth daily with fluoride toothpaste and deworming twice a year – are the core of this national programme. The purpose is to lower rates of diarrhoea, respiratory infections, worm infections and severe tooth decay. These hygiene-related, high-impact diseases keep children from attending school, hinder their academic achievement and reduce their quality of life.

EHCP embraces simplicity, scalability and sustainability, based on a framework developed by the non-governmental organization Fit for School Inc. The Philippine Department of Education allocated a budget for the programme, and as a result, it has scaled up rapidly, reaching about 2 million children in 2011.

EHCP has also generated strong evidence on impact, through a comprehensive, longitudinal health outcome study, conducted in collaboration with national and international universities. After just one year, an evaluation of the intervention and control schools shows that the rates of school days missed; malnutrition, as measured by below-normal body mass index (BMI); worm infections; and tooth decay were significantly reduced among children in the intervention schools.

Clearly defined responsibilities facilitate cooperation between government agencies active in education and health. Implementation is led by the national Department of Education, supported by

### The Essential Health Care Program: Results compared to control schools after one year

Indicator	Reduction, by %
Days of absence in 2009	27.3%
Below-normal BMI (thin)	20.4%
Heavy worm infection	47.2%
Opportunities for tooth decay	38.5%

Source: GIZ, 'Fit for School First Year Evaluation', 2010.

school-based management. School heads ensure implementation in their respective schools, and teachers supervise the daily activities. The responsibility of school health personnel is limited to initial training and regular programme monitoring. Funding is provided by local government units, most commonly through their health budgets.

Hygiene materials cost less than 60 cents per child, per year, for soap, toothpaste and a toothbrush. The low cost ensures that long-term public commitment goes far beyond a traditional approach based on donations and corporate sponsorship. Deworming drugs are provided by the Philippine Department of Health.

Parent-teacher associations are highly engaged, further contributing to sustainability. Along with involvement in initial construction, maintenance and upgrading of group hand-washing facilities, they participate in the regular programme monitoring. The self-evaluation process motivates and guides parent-teacher associations on how to improve and maintain quality. Collected information is encoded in an online monitoring system, making each school's performance transparent.

International partners are supporting EHCP's success in the Philippines and helping to build capacities that will make it possible to adopt the approach in other countries. Since 2009, AusAID, Deutsche Gesellschaft für Internationale Zusammenarbeit (German Development Cooperation, or GIZ), Fit for School Inc. and UNICEF have contributed to development of guidelines, manuals, films and templates that facilitate implementation.<sup>30</sup>



# WASH in Schools Equity

Discrimination is widespread in school environments, reflecting the inequities in society. Some children, particularly adolescent girls and children with disabilities, are excluded due to inadequate facilities. Others are discriminated against due to perceptions of being unclean.

Children also face discrimination in daily school activities, and may be excluded from or carry an

unfair burden in shared tasks such as cleaning toilets or fetching water.

Equal access to water and sanitation facilities in schools can significantly enhance the quality of children's educational experience. There are many important dimensions of equal access, two of which, gender and inclusion, will be discussed in this publication.



## Equity from the Gender Dimension

Girls are particularly vulnerable to dropping out of school, partly because many are reluctant to continue their education when toilets and washstands are not private, not safe or simply not available. When schools have appropriate, gender-separated facilities, an obstacle to attendance is removed.<sup>31</sup>

In Bangladesh and India, innovative projects demonstrate that menstrual hygiene can be incorporated into broader WASH in Schools interventions. Training and information for peer groups of children and female teachers show how women and girls can be empowered through improved menstrual hygiene management.

WASH in Schools supports girls' education by providing:

- Appropriate hygiene facilities. It is a fundamental premise of WASH in Schools that girls who have reached puberty and female school staff who are menstruating need privacy. Providing female students and staff with private and safe facilities for menstrual hygiene management enables them to be in school more often.
- Protection from harassment and violence in toilets. WASH in Schools provides toilets and hand-washing facilities that are located in convenient, safe locations, and separated for boys and girls. This encourages healthy hygiene practices and can protect girls from being assaulted. In a survey of schoolgirls in South Africa, more than 30% reported having been raped at school. This often happened in school toilets, particularly those that were isolated from the protective school environment.<sup>32</sup>



Students in Bangladesh discuss menstrual hygiene management with their teacher.

- Knowledge for students, teachers and school administrators about the physical changes adolescents experience. Schools play an important role in enabling open discussions where older children feel free to talk about issues such as menstruation. Because many children start school late and repeat grades, adolescence begins when they are still in lower primary school. Therefore, this type of education should be ageoriented rather than determined by grade level.
- Equitable responsibilities. School WASH clubs encourage students to participate in taking care of latrines and hand-washing stations, and in providing safe water where necessary. Club members create rotating lists of responsibilities, sharing sanitation- and water-related chores among both boys and girls. This fosters pride and ownership, and it counteracts the belief that these tasks are only for women and girls or particular social groups.



## Menstrual-hygiene-friendly school toilets in Nepal

Across Nepal, WaterAid and its partners are working with schools to provide gender-separated toilets for girls and boys. In a menstrual hygiene management study conducted in 2009, more than half of the girls reported being absent from school at some time during menstruation. The main reason cited was the lack of privacy for cleaning and washing, mentioned by 41% of respondents.

Sabina Roka, a 15-year-old student at Simle School, previously had to use the boys' toilets because there were no separate toilets for girls. She explains that during menstruation: "We didn't have anywhere to go and change our pads. After each lesson there is a bell and then we have to go to the next class. If you aren't there in time you miss the class and so when we had our period we often had to attend one class and then miss the next."

At Sabina's school, and others, WaterAid has built gender-sensitive toilets and provided training in menstrual hygiene management for students and staff. "We really struggled before and it's hard to compare then and now as there is so much improvement," Sabina reported. "We feel very happy that we don't need to miss classes anymore and that we can carry on with our studies."

Data show that of Nepal's 28,000 community schools, only 64% have toilets and only 8.7% provide separate facilities for girls. In 2011, the Government of Nepal responded to this issue by pledging US\$15 million to increase the number of gender-separated toilets in schools.<sup>33</sup>



The amount of time girls spend fetching water has a significant effect on their school attendance. In Ghana, a study of Demographic and Health Surveys from 1993–2008 shows that a 15-minute reduction in collection time increases the proportion of girls attending school by 8%–12%.<sup>34</sup>

Girls who can take advantage of opportunities for education are better able to protect themselves from exploitation and illness, and are more likely to develop skills to contribute to society.<sup>35</sup> The more access girls have to education, the less likely they are to marry before the age of 18.<sup>36</sup>

If they become mothers, they are more likely to raise healthy, well-nourished and educated children. In addition, women who have been to school are less likely to die during childbirth; each additional year of education is estimated to prevent two maternal deaths for every 1,000 women.<sup>37</sup> Research also shows that for every 10% increase in female literacy, a country's economy can grow by 0.3%.<sup>38</sup>

## Equity from the Inclusion Dimension

Children with disabilities are also vulnerable to dropping out of school. An analysis of surveys from 14 developing countries finds that children with disabilities, age 6–17, are much less likely to have enrolled in or attend school than their peers. The results indicate this situation creates a vicious cycle of low educational attainment and subsequent poverty. But one powerful way to reduce the likelihood that children with disabilities will live in poverty as adults is to ensure that they go to school.<sup>39</sup>

Access to education is also hindered by inadequate policies and standards that do not include the needs of disabled children; a lack of disability awareness and skills among teachers; and negative attitudes about disability among school staff and children. Accessible WASH facilities are a key to school attendance for children with disabilities.

Effective WASH in Schools programmes seek to remove barriers by promoting inclusive design – user-friendly, child-friendly facilities that benefit all users, including adolescent girls, small children and children who are sick or disabled. Toilets and washstands, for example, need to be customized to fit children's smaller size, and WASH facilities that are traditionally designed for the 'average' child must consider the fact that children have a wide range of abilities and needs.

WASH in Schools raises awareness about inclusive education and seeks to enhance the accessibility of child-friendly facilities and services. The benefits of inclusive facilities can be shared by the entire school community. The most cost-effective way to improve access for all children is to incorporate accessibility into the design from the outset, rather than making expensive changes later.



More schools in Indonesia, as in other countries, are adding accessible sanitation facilities.

To make sure facilities are accessible, it is essential to involve children with disabilities in the design process.

The cost of making inclusive facilities is minimal compared to the costs of exclusion. In Ethiopia, research shows that building an accessible latrine can add less than 3% to the overall expense of school construction. The latrine designs include an access ramp, additional space, wider doors, handrails and raised toilet seats.<sup>40</sup>

# WASH in Schools Reaches Families and Communities



In Sri Lanka, these members of a Children's Brigade encourage proper hygiene in school and the community.

Two-and-a-half billion people live without access to proper toilet facilities and more than 780 million do not have access to safe water. Poor WASH conditions and practices particularly affect children and are the primary cause of diarrhoea. More than 800,000 children under age 5 die each year due to diarrhoea, more than the number who die due to AIDS and malaria combined. This is a global crisis, and WASH in Schools can help.

Schools can serve as an effective entry point to implementing community-based WASH programmes and putting public health policies into action. Direct engagement with students, along with interventions to reach parents and others in the community, can lead to the adoption of good WASH behaviours and improved health. Although some studies have pointed to challenges in reaching parents with WASH in Schools technologies, others have found evidence of households adopting facilities and practices that originated in schools. The key is to promote simple messages and low-cost approaches through schools.

Teachers are influential. They are often community leaders and help develop students' capacities to become community role models. Schools are contained environments where behaviours can be taught and monitored by teachers. Improvements in school infrastructure and training materials can empower teachers and increase their influence.

Parents involved in school-based projects can also become stronger agents of change within the community. In Honduras, for example, Mi Escuela Saludable<sup>45</sup> (My Healthy School) provides training for rural parent-teacher associations. Participating associations learn how to manage WASH in Schools funds, contract skilled labour, purchase materials and supervise construction projects, including sanitation facilities and hand-washing stations. Traditionally, the majority of members are women, so the strategy puts mothers in charge of local development and empowers them to develop other types of projects without outside assistance.

## Children can lead change in communities

WASH in Schools promotes children's involvement in community WASH programmes through environmental health clubs, drama groups, peer-to-peer education and student focus groups at a very low cost with high impact.

Children are fast learners and adapt their behaviours more easily than adults. Children are also effective role models. They may question existing practices in their households and choose to demonstrate good hygiene. What they learn at school is likely to be passed on to their peers and siblings, and to their own children if they become parents.

Malawi's Safe Water Clubs were launched in 11 schools in the Neno District. The Safe Water Clubs promote the importance of clean water, good hygiene and improved sanitation by creating songs, dramas and games to share with other students and their communities. As a result of students

thiopia

bringing the safe water message to their homes and families, the community clinic reported a 35% decrease in diarrhoeal disease cases in 2007.46

School-Led Total Sanitation, an approach to eliminate open defecation in schools and their surrounding communities, capitalizes on the role of children as promoters of sanitation and hygiene. In 2006, the Government of Nepal and UNICEF began implementing this complete package of programming, which begins with children at school and extends throughout the community.

Through participatory approaches, motivational tools, flexibility for innovation and building ownership at the local level, School-Led Total Sanitation is accelerating latrine coverage across Nepal – where it has reached more than 500,000 people, with more than 1,000 settlements declared open-defecation free. Based on this success, the approach was incorporated in the Nepal Sanitation Master Plan, and the Government is replicating the programme in all 75 districts.<sup>47</sup>

#### Parents and children share in good hygiene

When Save the Children built a community-based school in Honche Bite, Ethiopia, in 2008, the hand-washing station was constructed from local materials and served as one of eight water points in the community. Students learn how to wash their hands regularly, as part of Save the Children's school health and nutrition programme, so they can stay healthy, attend school and learn while they are there.

Students such as Kamesa, age 11, are involved in the child-to-child activities to help teach their peers and families about health-related topics at school and in the community. Kamesa's father, Urgise Kebeda, is chair of the Honche Bite parent-teacher association and shares his son's interest in good health.



As the father and son walked back home after school, Mr. Kebeda noted: "Generally, kids help us become better families [because of what they are learning at school]. For instance, little kids, as young as 3 years old, are now washing their hands and older kids are teaching younger ones to wash their hands after they use the latrine."

Families are also keeping garden plots at home as children share what they are learning about the importance of a balanced, nutritious diet. $^{48}$ 



#### WASH must be sustained in schools during emergencies

During emergencies, displaced people often seek shelter in schools. Although it is essential that schools are able to provide safe havens for communities, this use can displace children from their education and over-utilize WASH facilities.

Preparedness measures should begin with installation and repair of permanent school facilities. These measures also need to include plans for providing additional, temporary WASH facilities in schools to accommodate a population surge if a crisis occurs. In addition, plans should be in place for cleaning and repairing permanent facilities after people who are temporarily sheltered leave the building. Temporary learning spaces in camps or other locations outside of schools must also be supported with temporary WASH facilities.

#### Mali's national plan supports WASH in Schools

To help protect children's health, the Government of Mali has developed a national strategic plan for promoting hygiene education in schools. UNICEF, along with CARE, Save the Children and WaterAid, is supporting Mali's national education, sanitation, water and health services to provide an estimated 60% of schools with appropriate facilities.

Funding from international partners – including Dubai Cares, the Government of Belgium, Wavin water distribution group, the Dutch foundation Aqua for All and Danone Waters company, based in Japan – supports WASH in Schools projects that are making a difference for children and their families across Mali. 49

CASE STORY



#### WASH in faith-related schooling

The Faith in Water Workshop held in the United Kingdom, 5–7 July 2009, explored cooperative ways to strengthen WASH in Schools and environmental education through faith-based schools. As noted in the conclusion of one paper presented at the conference:

"Good sanitation and hygiene habits and the protection of environment are values common to all Faiths. So are many of the values developed in the life-skills and value-based education approaches. With globally about 64% of schools being faith-related, there are unique opportunities and benefits from linking spiritual learning with learning on water, sanitation, hygiene and the environment, and the improvement of water and sanitation facilities in schools. Materials on designs, strategies, approaches and results are widely available ... what remains is their adjustment and use in faith-based education and the development of school water, sanitation and hygiene education programmes as part of the education systems of individual faiths." <sup>50</sup>

#### Cambodia: Point-of-use water treatment reaches communities through schools

Water quality interventions have a greater impact on reducing sickness and death from diarrhoea than previously thought, according to an increasing body of evidence. This is particularly true when interventions are applied at the point of use, such as at schools and households, and combined with improved water handling and storage.

In Cambodia, a study of ceramic-filter use shows that the filters removed bacteria contaminants effectively for at least three to four years. These easy-to-use filters cost less than US\$10 and can be built and installed using locally available materials. The filters are introduced in schools, along with catchy music videos and puppet shows to teach good hygiene practices. Schoolteachers act as distributors, selling the filters in their communities and earning extra income.

Michael Sampson, founder of the non-profit organization Resource Development International, explained that "filter ownership empowers the Cambodians to solve their own problems – helping themselves and building their self-esteem." More than 100,000 Cambodian households now use the filters.<sup>51</sup>

# Points of Action Six for WASH in Schools



This colourful latrine at a kindergarten in Namibia provides ventilation and a hand-washing stand.

The goal of the Call to Action is to ensure that all schools provide hygiene education programmes, access to safe water and well-maintained, child-friendly sanitation facilities.

We have proof of the impact of WASH in Schools. We have guidelines on the essential components and best practices. We know how to make WASH in Schools interventions more effective and sustainable.

This is a call to immediate action, renewed commitment and increased investment in WASH in Schools. The fundamental goal is to increase access to improved and sustainable services throughout the world. Urgent action is needed to protect the health of all children, to encourage them to fully participate in educational opportunities, and to support their abilities to contribute to the sustainable development of nations.

Because every child has the right to be in a school that provides safe water, sanitation and hygiene education, we call for renewed commitments to:

- 1. Set minimum standards for WASH in Schools. Adopt national, regional and local standards based on UNICEF-World Health Organization guidelines.<sup>52</sup> The minimum standards for WASH in Schools should be specific to each context. These standards should be the basis for national action plans that aim to reach all schools within a concrete time frame and should allow for gradual improvements to facilities and hygiene practices.
- 2. Monitor WASH in Schools coverage through Education Management Information Systems (EMIS). Advocate for the inclusion of WASH in Schools indicators in EMIS. Analyse data annually and use the findings for advocacy and better resource allocation. Support the compilation of data on coverage and practices at the global level to attract attention and funding to WASH in Schools.
- 3. Engage with at scale WASH in Schools programmes. Contribute to the bigger picture by bringing individual or small-scale projects into cooperative initiatives that effectively reach more schools. Gradual improvements to facilities and hygiene practices require less investment in operation and maintenance and can be sustained with local resources. Steady progress is key to establishing sustainable, at scale programmes for WASH in Schools. These programmes include budget lines for capital improvements, operation and maintenance of WASH facilities and recurrent costs such as purchases of soap and materials for personal cleansing.
- 4. Involve multiple stakeholders to support WASH in Schools programmes. Community members, civil society advocates, members of the media, students, school staff, local and regional authorities, non-governmental organizations, faith-based groups, public-private partnerships, and ministries of education, water, health and finance, as well as donors, can all support planning and action for WASH in Schools.

- 5. Contribute evidence on the impact of WASH in Schools programmes. Local and global academic communities have expertise that can support the design of WASH in Schools programmes and chart their impact. Generating and sharing evidence will provide WASH in Schools advocates with a powerful tool to attract attention and funding to the sector.
- 6. Raise the profile of WASH in Schools programmes. Adapt global and regional publications, advocacy materials and knowledge for the local context and disseminate them widely. Encourage members of the community to participate in customizing global WASH in Schools materials to local settings. The process can begin with translating *Raising Even More Clean Hands* into multiple languages. Local organizations can join the advocacy by endorsing a customized publication with their logos.

## CASE STORY India

## **WASH in Schools monitoring in India: Working towards harmonization and alignment of data**

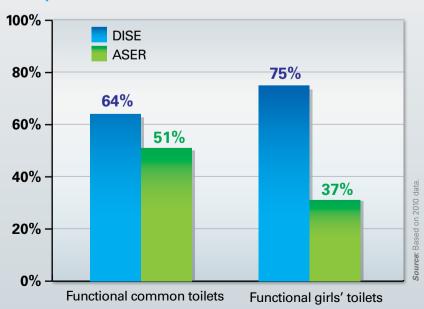
The Government of India has promoted significant developments in policy and practices to support WASH in Schools. Reaching all of its 1.3 million schools with adequate water, sanitation and hygiene education, however, remains a challenge. One major bottleneck to universal access has been the lack of a comprehensive monitoring and reporting system that provides consistent data. This results in inadequate information for making effective decisions regarding the availability, use, functionality, and operation and maintenance of facilities. Reliable data on hygiene education and hand washing with soap are negligible, further undermining WASH in Schools programme success.

There are three major sources for WASH in Schools data in India: the District Information System for Education (DISE), which contributes to the Government's database; the Annual Status of Education Report (ASER), an independent civil society initiative; and the Management Information System administered by the Ministry of Drinking Water and Sanitation. Data presently capture coverage and functionality, but there are inconsistencies across the three data sets and none takes into account hygiene education, handwashing practices and availability of hand-washing facilities. There are also differences in the definitions

of indicators, leading to a lack of coherence and hindering a true picture of the WASH in Schools situation.

The Department of Education and the Ministry of Drinking Water and Sanitation are working with UNICEF to address these issues and to include key qualitative WASH indicators in the EMIS, including hygiene behaviours. This will improve alignment and harmonization of data at the national and sub-national levels, with clear definitions of indicators, and improved methods of data collection and analysis for better decision making. <sup>53</sup>

### WASH in Schools coverage in India: Two monitoring systems tell different stories



## Take action: How you can support WASH in Schools

Advocates are found across sectors in many different roles. Individuals and groups, governments and donors, larger agencies and smaller organizations are all vital to improving, expanding and sustaining WASH in Schools programmes. An outline of actions for WASH in Schools champions includes:

## Government officials and policymakers support WASH in Schools when you...

- Advocate for WASH in Schools programmes in parliament, public forums and seminars.
- Lobby for setting minimum standards, allocate a budget for WASH in Schools, and monitor coverage and progress.

## FRESH framework and entry point for WASH in Schools

Focusing Resources on Effective School Health (FRESH) provides a framework for the essential elements of a successful school health and nutrition programme. FRESH was first outlined at the 2000 World Education Forum in Dakar and aims to:

- Increase the access and use of health and nutrition services by school-age children. These services often include deworming and micronutrient supplementation, along with other interventions that respond to needs in a particular area.
- Increase access to safe, gender-segregated and child-friendly WASH facilities in schools.
- Promote lifelong healthy behaviours through skills-based and child-focused health, hygiene and nutrition education.
- Ensure health-related school policies and support at all levels, from schools and communities to the national level.

The FRESH framework provides a strong entry point for WASH in Schools advocates to engage with the education and health sectors.<sup>54</sup>

- Increase communication and cooperation between ministries or departments of health, education, water, rural development, nutrition, finance and other relevant offices.
- Include WASH in Schools programmes in education sector policies and funding.
- Promote equity by targeting resources to reach the most underserved populations, improving the curriculum and providing accessible facilities for girls and boys, as well as equipment for menstrual hygiene management.

## The private sector and foundations support WASH in Schools when you...

- Provide funding for programmes that are national, sustainable and include government participation.
- Share your knowledge on the importance of WASH in Schools with other corporations, foundations and philanthropists.
- Form partnerships with non-governmental organizations, local governments or local communities to support schools that are in need of safe water, sanitation facilities and hygiene education.
- Provide the funding or materials necessary for health interventions, such as deworming treatments, as part of a holistic WASH in Schools programme.

## Non-governmental organizations support WASH in Schools when you...

- Make WASH in Schools a priority on your agenda, including internal and external advocacy across sectors.
- Work in coordination with multiple stakeholders to ensure that WASH in Schools programmes are at scale and sustainable.
- Encourage children of all ages to participate in WASH in Schools activities and become agents of change for healthier habits in their homes and communities, as well as their schools.



### Journalists and the media support WASH in Schools when you...

- Increase coverage in print, television, radio and social media such as blogging, Facebook and Twitter.
- Reach broad audiences by using statistics and covering stories from WASH in Schools programmes in a compelling way.

## Religious leaders support WASH in Schools when you...

- Promote sustainable WASH in Schools programmes for faith-based, private and government schools in your community.
- Encourage participation of students, teachers and community members in all aspects of a WASH in Schools programme, including planning, construction, operation and maintenance, behaviour change, monitoring and evaluation.
- Educate congregations on the health, education and economic benefits of improved WASH in Schools.

 Promote gender equity through WASH in Schools, including girls' education and attendance, as well as separate sanitation facilities for boys and girls.

#### Teachers support WASH in Schools when you...

- Integrate WASH in mainstream subjects such as math, science and reading.
- Educate students about proper toilet use and hand washing, including washing hands before meals and after toilet use, and supervise daily WASH activities.
- Inform students about the changes they will go through during adolescence, and provide space for girls and boys to talk about menstruation and learn about menstrual hygiene.
- Encourage students to consistently use, operate and maintain school WASH facilities.
- Support children in taking an active role in keeping up hygiene practices, both in school and at home.



Improved school taps provide clean drinking water for primary school students in Myanmar.

## School administrators support WASH in Schools when you...

- Work with parents and government officials to generate funds for keeping WASH in Schools facilities functioning and clean at all times.
- Work with teachers to continuously promote hygiene.

- Ensure that soap and water are always available at hand-washing stands.
- Include supervision of WASH activities in teachers' responsibilities and performance evaluations.

#### Households support WASH in Schools when you...

- Participate and contribute to WASH in Schools programmes, for example, by donating soap or contributing to the cost of maintaining facilities.
- Construct WASH facilities at home and encourage children to use them properly.
- Promote healthy hygiene practices at home and in your neighbourhood.

## Community members support WASH in Schools when you...

- Join parent-teacher associations and school management committees, where you can advocate for protecting children's health through WASH in Schools.
- Participate in and contribute to the installation, operation and maintenance of WASH facilities in schools.
- Encourage children's regular school attendance, especially for girls, throughout your community.
- Contribute to recurrent costs of WASH-related supplies such as soap and toilet paper.

#### Students support WASH in Schools when you...

- Participate in WASH in Schools activities such as school health clubs and encourage other students to join you.
- Help keep your WASH facilities clean and well maintained – and tell a teacher or administrator if something is broken.
- Promote healthy hygiene at home and in the community by sharing the lessons you learned at school with your siblings and friends.

## Maintain the Momentum

Since *Raising Clean Hands* was published in March 2010, the momentum has been building among WASH practitioners to invest in and prioritize WASH in Schools programming, and the Call to Action has celebrated several milestones.

Global launches took place at the Humanitarian Aid Development Conference in Dubai, World Water Week in Stockholm and the Academy for Educational Development in Washington, DC. Networking meetings to support the Call to Action were organized in The Hague and at Emory University and the University of North Carolina. *Raising Clean Hands* was also a focus during the South Asian Conference on Sanitation and the African Conference on Hygiene and Sanitation.

The WASH in Schools mapping site, www.washinschoolsmapping.com, was created jointly by the partners and launched in January 2012. This resource is dedicated to documenting and sharing best practices and effective strategies, as well as funding and knowledge sources to support governments in their efforts to improve WASH in Schools.

More than 60 organizations have joined together to create a more cohesive group to support and advocate for WASH in Schools worldwide. Strategies have been refreshed, with a focus on reaching key stakeholders – policymakers, implementers, researchers and other potential contributors – as we encourage national governments to:

- Set standards for WASH in Schools and develop a time frame for programmes.
- Monitor WASH in Schools through the Educational Management Information System.
- Develop and implement at scale WASH in Schools programmes to reach all schools.

The Call to Action will continue to reach out to education, health, nutrition and WASH partners, as well as the private sector. We seek to nurture a community of practice for organizations, institutions and individuals, to share our experiences with success and to explore solutions to the challenges.

It is the right of every child to be healthy and to learn with dignity. In partnership with those who are dedicated to the health and education of children, we are committed to an ambitious but imperative vision: every child goes to a school that provides safe water, proper sanitation and hygiene education – a school where they will grow, learn and thrive.



### **Endnotes**

- United Nations Children's Fund and World Health Organization, 'Water Sanitation and Hygiene Standards for Schools in Low-Cost Settings', WHO. Geneva. 2009.
- Walther, Cornelia, 'Raising Clean Hands in Afghanistan's "WASH" Friendly Schools', United Nations Children's Fund, Kabul, 16 September 2010, www.unicef.org/wash/afghanistan\_56057.html.
- 🧣 UNICEF Indonesia, 'Finding Solutions to Indonesia's Water, Sanitation and Hygiene Challenges', Jakarta, 2011.
- 4 Prüss-Üstün, Annette, et al., 'Safer Water, Better Health: Costs, benefits and sustainability of interventions to protect and promote health', World Health Organization, Geneva, 2008. p. 8.
- 5 Hall, Andrew, et al., 'A Review and Meta-Analysis of the Impact of Intestinal Worms on Child Growth and Nutrition', *Maternal and Child Nutrition*, vol. 4, supplement 1, April 2008, pp. 118–236.
- World Health Organization, Report of the Third Global Meeting of the Partners for Parasite Control: Deworming for health and development, WHO, Geneva, 2005, p. 15.
- Aiello, Allison E., Elaine L. Larson and Richard Sedlak, 'Personal Health: Bringing good hygiene home', *American Journal of Infection Control*, vol. 36, no. 10, Supplement, December 2008, pp. S152–S165.
- Prüss-Üstün, Annette, et al., 'Safer Water, Better Health: Costs, benefits and sustainability of interventions to protect and promote health', World Health Organization, Geneva, 2008, p. 10.
- Freeman, Matthew C., et al., 'Assessing the Impact of a School-Based Water Treatment, Hygiene and Sanitation Programme on Pupil Absence in Nyanza Province, Kenya: A cluster-randomized trial', Tropical Medicine and International Health, vol. 17, no. 3, March 2012, pp. 380–391.
- Miguel, Edward, and Michael Kremer, 'Worms: Identifying impacts on education and health in the presence of treatment externalities', Econometrica, vol. 72, no. 1, pp. 159–217.
- 11 Ejemot, Regina I., et al., 'Hand Washing for Preventing Diarrhoea', Cochrane Database of Systematic Reviews, no. 1, article no. CD004265, 8 July 2009, pp. 1–44.
- 12 Rabie, Tamer, and Valerie Curtis, 'Handwashing and Risk of Respiratory Infections: A quantitative systematic review', *Tropical Medicine* and *International Health*, vol. 11, no. 3, pp. 258–267.
- Luby, Stephen P, et al., 'Effect of Handwashing on Child Health: A randomised controlled trial', *The Lancet*, vol. 366, no. 9481, 16 July 2005, pp. 225–233.
- Mathew, Kochurani, et al., 'The Sustainability and Impact of School Sanitation, Water and Hygiene Education in Southern India', UNICEF and IRC International Water and Sanitation Centre, New York and Delft, Netherlands, 2008, p. 16.
- 15 United Nations Children's Fund and IRC International Water and Sanitation Centre, 'School Sanitation and Hygiene Education Results from the Assessment of a 6-Country Pilot Project', UNICEF and IRC, New York and Delft, Netherlands, May 2006, pp. 5, 15–16.
- 16 For a study on sustaining soap supplies in Kenya, see: Saboori, Shadi, Alex Mwaki and Richard D. Rheingans, 'Is Soapy Water a Viable Solution for Handwashing in Schools?', Waterlines, vol. 29, no. 4, October 2010, pp. 329–336.
- 17 Duey, Mark, Water For People, 2012, unpublished
- 18 Global Handwashing Day, www.globalhandwashingday.org.
- 19 O'Reilly, C. E., et al., 'The Impact of a School-Based Safe Water and Hygiene Programme on Knowledge and Practices of Students and Their Parents: Nyanza Province, western Kenya, 2006', *Epidemiology & Infection*, vol. 136, no. 1, January 2008, pp. 80–91.
- 20 WHO Regional Office for Europe, 'Parma Declaration on Environment and Health', World Health Organization, Copenhagen, 11 March 2010, www.euro.who.int/en/what-we-do/event/fifth-ministerial-conference-on-environment-and-health/documentation/parma-declaration-on-environment-and-health.
- 21 Hutton, Guy, and Laurence Haller, 'Evaluation of the Costs and Benefits of Water and Sanitation Improvements at the Global Level', World Health Organization, Geneva, 2004, p. 29.
- 22 Bowen, Anna, et al., 'A Cluster-Randomized Controlled Trial Evaluating the Effect of a Handwashing-Promotion Program in Chinese Primary Schools', American Journal of Tropical Medicine and Hygiene, vol. 76, no. 6, 2007, pp. 1166–1173.
- 23 Talaat, Maha, et al., 'Effects of Hand Hygiene Campaigns on Incidence of Laboratory-Confirmed Influenza and Absenteeism in Schoolchildren, Cairo, Egypt', Emerging Infectious Diseases, vol. 17, no. 4, April 2011, pp. 1–16.
- 24 Lopez-Quintero, Catalina, Paul Freeman and Yehuda Neumark, 'Hand Washing Among School Children in Bogotá, Colombia', American Journal of Public Health, vol. 99, no. 1, January 2009, pp. 94–101.
- Bethony, Jeffrey, et al., 'Soil-Transmitted Helminth Infections: Ascariasis, trichuriasis, and hookworm', The Lancet, vol. 367, no. 9521, 6 May 2006, pp. 1521–1532.
- 26 Abdul Latif Jameel Poverty Action Lab, 'Mass Deworming: A best-buy for education and health', *Policy Briefcase*, no. 4, Massachusetts Institute of Technology Department of Economics, Cambridge, Mass., October 2007, p. 1.
- 27 World Health Organization, Report of the Third Global Meeting of the Partners for Parasite Control: Deworming for health and development, WHO, Geneva, 2005, p. 15.

- 28 World Health Organization, 'Prevention and Control of Schistosomiasis and Soil-Transmitted Helminthiasis', WHO Technical Report Series, no. 912, Geneva, 2002, pp. 8–9.
- 29 Prüss-Üstün, Annette, et al., 'Safer Water, Better Health: Costs, benefits and sustainability of interventions to protect and promote health', World Health Organization, Geneva, 2008, p. 8.
- 30 Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), unpublished study.
- 31 Pearson, Joanna, and Kate McPhedran, 'A Literature Review of the Non-Health Impacts of Sanitation', Waterlines, vol. 27, no. 1, January 2008, pp. 48–61.
- 32 Prinsloo, Sakkie, 'Sexual Harassment and Violence in South African Schools', South African Journal of Education, vol. 26, no. 2, 2006, pp. 305–318.
- 33 McClenaghan, Maeve, 'Spending a Penny Schools, female toilets and increased GDP in Nepal', *The Guardian*, 14 June 2010, www.guardian.co.uk/ journalismcompetition/schools-female-toilets-nepal, accessed 26 June 2012; and WaterAid, 'The State of School Sanitation in Nepal: District-wise (girl) students' access to sanitation in community schools', Kathmandu, August 2011.
- 🔧 🚜 Nauges, Céline, and Jon Strand, 'Water Hauling and Girls' School Attendance: Some new evidence from Ghana', World Bank, 26 May 2011, p. 25.
- 35 United Nations Children's Fund, The State of the World's Children 2004: Girls, education and development, UNICEF, New York, December 2003, pp. 48, 51.
- 36 International Center for Research on Women, 'Child Marriage and Education: Too young to wed Education & action toward ending child marriage', ICRW, Washington, DC, 2006, p. 1.
- 37 United Nations Children's Fund, The State of the World's Children 2004: Girls, education and development, UNICEF, New York, December 2003, pp. 19–20.
- 38 Brocklehurst, Clarissa, 'The Case for Water and Sanitation: Better water and sanitation make good fiscal and economic sense, and should be prominent in PRSPs and budget allocations', Sector Finance Working Papers, no. 11, UNDP Water and Sanitation Programme, Nairobi, November 2004, p. 5.
- 39 Filmer, Deon, 'Disability, Poverty, and Schooling in Developing Countries: Results from 14 household surveys', World Bank Economic Review, vol. 22, no. 1, 2008, pp. 141–163.
- Jones, Hazel, 'Inclusive Design of School Latrines: How much does it cost and who benefits?', *Briefing Note 1*, Water, Engineering and Development Centre, Loughborough University, Leicestershire, UK, July 2011, pp. 1–3.
- 41 World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation, *Progress on Drinking Water and Sanitation: 2012 Update*, UNICEF and WHO, New York and Geneva, 2012, p. 2.
- 42 United Nations Children's Fund, 'Pneumonia and Diarrhoea: Tackling the deadliest diseases for the world's poorest children', UNICEF, New York, June 2012, p. 8.
- 43 Onyango-Ouma, W., J. Aagaard-Hansen and B. B. Jensen, 'The Potential of Schoolchildren as Health Change Agents in Rural Western Kenya', Social Science & Medicine, vol. 61, no. 8, 2005, pp. 1711–1722.
- See, for example: Freeman, Matthew C., and Thomas Clasen, 'Assessing the Impact of a School-Based Safe Water Intervention on Household Adoption of Point-of-Use Water Treatment Practices in Southern India', American Journal of Tropical Medicine and Hygiene, vol. 84, no. 3, 2011, pp. 370–378; and Rheingans, R., et al., 'Can a School-Based Water, Sanitation and Hygiene Intervention Catalyze Changes in Household Behaviors and Environment? Evidence from a randomized trial in western Kenya', Paper presented at the International Research Colloquium of the Network to Promote Household Water Treatment and Safe Storage, Dublin, 21–23 September 2009.
- 45 Duey, Mark, 'Empowering PTAs in Honduras', Water For People, Denver, Colo., 28 September 2009, http://support.waterforpeople.org/site/News2?id=5781, accessed 11 June 2012; and SWASH+, 'Central America', www.swashplus.org/Pages/CentralAmerica.aspx, accessed 2 September 2012.
- Population Services International, 'Learning about Safe Water in Neno District, Malawi', PSI, Washington, DC, 2009, p. 1.
- 47 Shrestha, Namaste Lal, 'Nepal: School-led total sanitation (2009)', in Equity and Reaching the Most Marginalised: Selected innovations and lessons learned from UNICEF programmes, United Nations Children's Fund, New York, February 2011, pp. 22–24.
- 48 Save the Children, 'Ethiopia: School Health and Nutrition WASH success story', 2012, unpublished.
- 49 Degen, Guy, 'National Plan for the Promotion of Water and Sanitation under way in Mali', United Nations Children's Fund, Soufouroulaye, Mali, 19 August 2010, www.unicef.org/infobycountry/mali\_55643.html.
- Mooijman, Annemarieke, and Christine Sijbesma, 'Faith in Water: Water supply, sanitation and hygiene facilities and related education in faith-based schools', IRC International Water and Sanitation Centre, July 2009, p. 11.
- 51 Pontius, Nancy, L., 'Ceramic Filters for Drinking Water Improving Health in Cambodia', U.S. Department of State, Washington, DC, 21 October 2008, www.america.gov/st/develop-english/2010/December/20081021162025abretnuh0.7395594.html, accessed 26 June 2012; and United Nations Children's Fund, 'UNICEF Handbook on Water Quality', UNICEF, New York, 2008.
- 52 United Nations Children's Fund and World Health Organization, 'Water Sanitation and Hygiene Standards for Schools in Low-Cost Settings', WHO, Geneva, 2009.
- Thakkar, Mamita Bora, et al., 'India: Methodologies and Challenges for Monitoring WASH in Schools', in Case Studies from the WASH in Schools Distance-Learning Course, United Nations Children's Fund, New York (forthcoming in 2012).
- 54 Save the Children, 'School Health and Nutrition Program Update', 2011.





















School of Public Health & Health Services

THE GEORGE WASHINGTON UNIVERSITY



German Toilet Organization

















sustainable sanitation alliance

































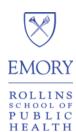






















































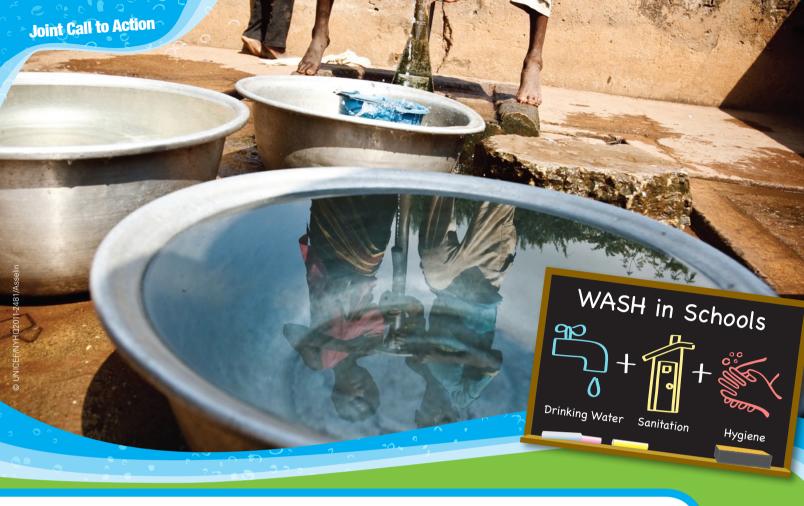












"Water and sanitation to date is considered the second biggest cause of all child deaths, and a major contributor to the high dropout rates and absenteeism in primary school ... Dubai Cares believes that schoolchildren are agents of change to reach the wider community and the school acts as the physical focal point for change. When we strengthen this important institution, we are strengthening communities."

- Her Excellency Reem Al Hashimy, Minister of State, United Arab Emirates

"Good sanitation and hygiene can increase school performance and reduce absenteeism – especially among adolescent girls – thereby contributing to their empowerment and equality."

- Ban Ki-moon, United Nations Secretary-General

"AusAID recognizes that health and education are two vital areas for development in the region [Gaza and the West Bank]. Improving water and sanitation facilities in schools not only has a direct impact on better health for children, but it also improves school attendance, especially for girls."

- Catherine Walker, First Assistant Director General, AusAID

"No matter where you live – be it Boston or Bamako – schools are the foundation of strong communities. ... If we are serious about improving child health, achieving universal primary education, ensuring gender equity, and stimulating economic development, we need to be serious about providing safe water, sanitation, and hygiene education in schools."

- María Otero, Under Secretary for Democracy and Global Affairs, United States