Water, Sanitation and Hygiene in Schools
Knowledge, Attitudes and Practices Survey

December 2016
The “Water, Sanitation and Hygiene in Schools; Knowledge, Attitudes and Practices Survey” was funded by the Government of Australia (DFAT) and conducted by the Ministry of Education and Higher Education, the United Nations Children’s Fund office in the State of Palestine, and Alpha International, in 2015-2016.

Special thanks to the Ministry of Education and Higher Education, especially to Dr. Mohammad Rimawi, Dr. Taisser Al-Shorafa, Mr. Amjad Ehmedat and Ms. Sahar Al Khateeb; to UNICEF, especially Dr. Gregor von Medeazza, Rana Harbawi, Carol Awad, Mariane Mathia, Catherine Weibel, Monica Awad, Eman Aqeel and Pierre Fourcassie; to the Australian Representative Office in Ramallah, especially Paul Roche and Tawfik Hamed; and to Alpha International, especially Ghada El-Araj and Jamal Hasan, for making this survey and report possible.

Deep appreciation goes to our donor the Government of Australia for supporting this survey.

Translation: Mary Khouri and Ibrahim Al- Agha
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<tr>
<td>GHD</td>
<td>Global Handwashing Day</td>
</tr>
<tr>
<td>KAP</td>
<td>Knowledge, Attitudes and Practices</td>
</tr>
<tr>
<td>MoEHE</td>
<td>Ministry of Education and Higher Education</td>
</tr>
<tr>
<td>MoH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>OECD</td>
<td>Organization for Economic Cooperation and Development</td>
</tr>
<tr>
<td>SoP</td>
<td>State of Palestine</td>
</tr>
<tr>
<td>PCBS</td>
<td>Palestinian Central Bureau of Statistics</td>
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<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
</tr>
<tr>
<td>UNRWA</td>
<td>United Nations Relief and Works Agency for Palestine Refugees in the Near East</td>
</tr>
<tr>
<td>WASH</td>
<td>Water, Sanitation and Hygiene</td>
</tr>
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<td>WWD</td>
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Personal and public hygiene are considered the principal gateway to sound health. We will be unable to trigger a qualitative change in the health of communities if personal and public hygiene are not at the best of levels. This topic is of particular importance when speaking about the school environment, and its role with a positive or negative impact on the students’ health and their behavior, in the activation or suppression of their latent capabilities, and the launching or amplification of those capabilities. It is difficult to have students acquire health skills and behaviors in an unhealthy school environment, or in a school that does not believe in comprehensiveness while dealing with students as a goal and means for development.

The Ministry of Education and Higher Education is proceeding in the reform of education in its various components, including “the school environment”, which the ministry seeks to be an environment that promotes learning and health, and that stimulates reflection and innovation, within the sphere of building partnerships with all relevant institutions. The investment in the personal and public hygiene areas, whether in terms of knowledge, behavior, infrastructure, and the required information system, contributes to the achievement of that goal.

The importance of carrying out the water, sanitation, and school health survey lies in the provision of the rehabilitation needs for water, sanitation, and hygiene facilities, in addition to the determination of gaps in knowledge, trends, and hygiene practices among school students and employees, to develop the necessary plans, programs, and interventions in this sector. This would enable the achievement of qualitative accomplishments that can contribute to the building of sound health behaviors and practices.

Based on this, we thank UNICEF and the Government of Australia for its support in carrying out this survey, and its implementation of many joint programs and projects in support of the education sector in Palestine, and for caring about the health of students in all areas.

Dr. Muhammad Al-Rimawi

Director General of School Health
KAP REPORT- WASH- INTRODUCTION

Fulfilling every child’s right to safe drinking water, adequate sanitation and hygiene remains a major challenge for policy makers, school administrators and communities in many countries around the world.

The child-friendly schools (CFS) model, which has emerged as UNICEF’s signature programmes, means to advocate for, and promote quality education for every girl and boy, so that all children can achieve their full potential. The CFS approach to education guarantees all children the right to schools that are safe and protective, that offer safe drinking water, hand-washing facilities and clean, safe toilets. In child-friendly schools, children learn about hygiene and how to protect themselves and their families from infectious diseases. The access water, sanitation and hygiene (WASH) in schools improves health, boosts attendance and achievement, promotes gender equality and benefit communities.

One of the barriers in securing the rights of children to safe drinking water, adequate sanitation and hygiene at school is the lack of coverage data. Surveys not only help us identify the needs of children, but can help increase the perceived importance of WASH in Schools among policymakers and donors, and serve as a call to action.

This is why UNICEF, in coordination with the Ministry of Education and Higher Education (MoEHE) commissioned a Knowledge, Attitudes and Practices (KAP) survey on WASH in governmental schools, which was conducted in the State of Palestine (SoP) in 2015.

This report presents the findings of the study, while providing a section comparing the results to those of a baseline KAP survey conducted in 2011.

More than one million children are enrolled in school in the State of Palestine. The vast majority of them attend governmental schools, which make up 73 percent of the total number of schools in Palestine (2,085 out of 2,856).

Great strides have been made to safeguard the well-being of Palestinian children in schools in the West Bank and the Gaza Strip. An increasing number of students now have access to safe drinking water; sanitation facilities separated for girls and boys; and education for good hygiene. However, the report underlines the fact that more needs to be done. A number of toilets, handwashing facilities and drinking water points are still inadequate, despite an increasing number of facilities in schools. Lack of cleanliness, soap, toilet paper, sanitary pads and door locks remain a challenge, at a time when Palestinian students are increasingly provided with high levels of information on hygiene.

Donors, including Australia, have generously supported the efforts led to equip an increasing number of Palestinian schools with the minimum standards for WASH. This report helps further define the WASH situation in schools and the needs of students, while promoting the necessity for sustained investment.

Schools can be powerful agents of change in society. As citizens, parents, policymakers and government representatives, we all have a role in making sure that every child receives the benefits of WASH in Schools.
The children themselves can take action, participating as agents of change for their friends, their siblings, their parents and their community. Like teachers and other members of their communities, they have helped to promote positive behavior and attitude change for improved hygiene and water conservation through adolescent initiatives.

New generations of Palestinian children are growing, and services are needed to respond to this growth. Having a healthy generation that stands up for its health and for a clean environment is crucial. We have to start by planting the seeds of awareness on safe water handling, adequate sanitation and life-saving hygiene practices, as well as by promoting ownership of public facilities to keep them well maintained.

While significant progress has been achieved, much remains to be done. This is something we can all work together on, so that Palestinian children can raise even more clean hands.

June Kunugi
Special Representative
State of Palestine
United Nations Children Fund
EXECUTIVE SUMMARY

In 2015 and in coordination with the Ministry of Education and Higher Education (MoEHE), UNICEF embarked on conducting the knowledge, attitudes and practices (KAP) survey related to water, sanitation and hygiene (WASH) in Palestinian government schools in the SoP. A pre-survey was conducted in 2011 to establish a baseline for WASH KAP in schools. The 2015 survey reflects changes in the availability of WASH infrastructure in schools, as well as hygiene education activities and the participation of teachers, parents and students in such activities. It also reflects changes in knowledge, attitudes and practices of students related to hygiene behavior.

The 2015 statistically representative survey sample included 381 of the originally 411 sampled schools of 2011. The reasons for the drop in the sample size in 2015 is due to school closures, transfers or changes in grade levels. The survey targeted basic and secondary schools in all educational directorates in the West Bank and Gaza. The sample ensured the coverage of schools located in urban and rural areas in addition to a few government-run schools located in camps. Both male and female teachers and students were covered in the survey. A total of 762 teachers were interviewed in addition to 3810 students from 4th, 7th and 10th grades.

Similar to the 2011 pre-survey, the 2015 post-KAP survey interviewed principals, teachers and students with one-to-one questionnaires specifically directed to each sub-group. The school questionnaire was directed towards the principals who were sometimes assisted by a teacher to reflect the status of the WASH infrastructure and the availability and adequacy of WASH facilities in their school. Teachers’ surveys reflected hygiene related activities in the school, teachers’ involvement and teachers’ needs to improve hygiene education. The students’ questionnaire mainly assessed the knowledge, attitudes and practices of students related to WASH. The 2015 KAP survey also included three focus groups with girls on menstrual hygiene management, which was not addressed in the 2011 baseline survey.
This 2015 survey shows an overall improvement in terms of WASH in schools. An increasing number of students in Palestine now have access to safe drinking water, sanitation facilities separated for girls and boys, and education for good hygiene. However, the survey also underlines the fact that more needs to be done. Too many schools are still inadequately equipped with toilets, handwashing facilities and drinking water points, despite an encouragingly increasing number of such facilities in schools compared to 2011. Lack of cleanliness, soap, toilet paper and sanitary pads remain a challenge, at a time when Palestinian students are increasingly provided with high levels of information on hygiene.

**General school environment and resources**

In 2015, schools cater on average for 404 students with about 13 classrooms per school and 29 students per class. Differences are apparent between the West Bank and Gaza where schools and classes are more crowded. The average number of students per class was highest in government-run schools in Gaza camps (40.9). None of the West Bank schools included in the survey had afternoon shifts while more than 40% of those in Gaza did. The average number of students per school was highest in girls’ secondary schools in Gaza (744) and lowest in co-educational basic schools in the West Bank (210).

On average, one teacher caters for 18 students: 17 students in the West Bank and 23 students in Gaza. Urban, basic schools had the highest student-to-teacher ratios (21). These ratios are slightly lower than those of 2011.

All schools have at least one cleaning staff. In Gaza, the ratio of students to one cleaning staff (445:1) is more than double that of the West Bank (211:1). One cleaning staff caters for more students in urban, basic, girls schools. There is also a variation in the ratio of students to cleaning staff by directorate. In Jerusalem, one cleaning staff caters for 106 students, while in Khan Younes, one cleaning staff caters for 553 students.

Most schools have a fence fully or partially surrounding them. The school surroundings were generally clean except around camp-based schools; in which 37% of the schools were observed to have solid waste and stagnant water in their surroundings. Generally, schools and classrooms are structurally in good conditions as observed by the researchers and as reported by the principals. More than 97% of school yards and classrooms were observed to be clean with waste bins available.

**WASH infrastructure**

Toilets, handwashing facilities and drinking water points are still evidently inadequate in SoP–schools, according to MoEHE and international WASH guidelines. Despite the drop in the student-to-toilet and student-to-handwashing facility ratio in 2015 compared to 2011, the ratios are still very high. On average, one toilet caters for 42 students in the West Bank and 71 students in Gaza and one hand-washing facility caters for 71 students in the West Bank and 130 in Gaza. The student-to-water point ratio increased in 2015 especially in Gaza, with one water point catering for 158 students. Urban, basic, boys’ schools are mostly affected by the lack of WASH resources.

As for the cleanliness in general, about 67% of all student toilets floors were observed to be clean, while 34% were considered dirty. About 76% of student toilet walls were considered clean, 19% were considered dirty and 5% were considered very dirty. WASH supplies are also still lacking in 2015. Around 80-90% of the surveyed schools did not have soap or toilet paper

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1. MOEHE (June 2015). School Environment Policy
in the students’ toilets during the field observation. However, employee facilities at the schools were adequate and clean, in general, with soap and toilet paper available. Water was reported to be generally available for all purposes, however, the consistency of water availability in Gaza was a concern.

Hygiene education at schools

In 2015, all surveyed schools had school health committees and all schools offered hygiene education at a higher rate than 2011. The percentage of schools having environment clubs also increased by about 20% between 2011 and 2015. More teachers reported participation in hygiene related education in 2015 compared to the baseline survey. More teachers in 2015 also reported being responsible for hygiene related activities outside the curriculum and being members of health committee and environment clubs in the school.

Moreover, significantly less teachers reported needing training to promote good WASH practices in their school compared to 2011. While the need for training in personal hygiene topics was more than 60% in 2011, only about 40% of the teachers reported a need for such training in 2015.

Students’ knowledge on hygiene

As per the 2015 survey, access to hygiene education is high among students as the majority reported being exposed to hygiene information in the past six months and receiving education about hygiene and cleanliness at school especially during their classes and during morning assembly. More students reported being exposed to information about hygiene in 2015 compared to 2011.

The mother or female caregiver remains the most prominent source of hygiene information for students. In 2015, more students were aware of the presence of health committees and environmental clubs in their schools. However, participation in health committees remained the same in 2015 (31%) while participation in environmental clubs increased in line with the increased presence of these clubs in schools (4.3% in 2011; 22.3% in 2015). About 89% of the students think the activities of these committees and clubs are very beneficial, which is a higher percentage of students reporting the same in 2011.

In 2015, more students reported having information about hygiene and cleanliness in their school curriculum compared to 2011. Moreover, a higher percentage of students reported having hygiene campaigns in their schools although participation in these campaigns remained the same between 2011 and 2015. However, significantly more students (90%) reported having hygiene related activities in their school at least once a week in 2015 compared to 79% in 2011. About 95% of the students were also able to link the importance of cleanliness to health in 2015. Verbal direction, posters and wall magazines remained the main mode of hygiene education activities in schools.

Students’ attitudes about hygiene in school

Overall refusal to use school toilets dropped from 43% in 2011 to 35.5% in 2015. However, the frequency of “always refusing to use toilets” was higher in 2015 compared to 2011. Refusal to use toilets was significantly higher in Gaza (46.7%) compared to the West Bank (30.9 %) and was most common in urban secondary girls’ schools. Lack of cleanliness, unpleasant smell and lack of soap and toilet paper were the most common reasons. Focus groups with girls’ on menstrual hygiene management revealed that lack of sanitary pads and lack of door locks are also some of the main challenges they face in using toilets in their school.

While more students in 2015 reported the availability of water for drinking in their school,
fewer students reported drinking water from the school faucets in 2015 with more students bringing water from home in their own bottles compared to 2011. This is, notwithstanding, in line with recommendations by the ministry to promote the use of personal water bottles.

Attitudes towards cleaning did not change between 2011 and 2015. Students mostly participate in cleaning classrooms (94.4% in 2011, 94.7% in 2015) and school grounds (93.8% in 2011, 94.4% in 2015) and fewer students help in cleaning school surroundings (60.1% in 2011, 57.3% in 2015) and drinking areas (50.0% in 2011, 44.2% in 2015). More students in 2015 reported that their parents provide support for cleaning and hygiene activities in schools (21.5% in 2011, 36.7% in 2015).

**Students’ hygiene practices**

Almost all other hygiene behaviors assessed in the survey improved in 2015 compared to 2011. In 2015, approximately all of the surveyed students (98%) reported applying what they learn in school about hygiene outside the school. More than 90% of the students surveyed reported washing their hands with soap before eating, after eating and after using the toilet.

Additionally, more students reported cleaning their teeth daily and fewer students reported never cleaning them. Almost all students (98.1%) use toothpaste and a toothbrush to brush their teeth and the remaining reported using water and a toothbrush. Furthermore, daily bathing is also more common among students in 2015 compared to 2011 baseline while the majority of students report bathing every two or three days. More students reported cleaning their hair daily (80%), changing their underwear daily (60%), clipping their fingernails once every week and never spitting on the ground in 2015. A higher percentage of students also reported washing fruits and vegetables before eating them compared to 2011.

**Future recommendations**

The MoEHE needs to continue leveraging and directing resources towards improving and/or building new WASH facilities in schools to meet the local guidelines for facility availability, as highlighted in the School Environment Policy Document of 2015. Moreover, the Ministry’s role in supervising the overall status and cleanliness of these facilities needs to be enhanced to maintain acceptable quality standards and to improve students’ attitudes towards using these facilities, particularly with regards to the use of toilets. Enhancing the availability and cleanliness of WASH facilities and supplies is also the responsibility of the school administration that can usually leverage local community support in the building of new facilities and provision of supplies.

While the Ministry has Standard Operating Procedures for water quality management, such procedures need to be applied across all schools. This entails putting a system in place that ensures regular and scheduled water quality testing, the frequency of conducting such tests, and the proper remedial procedures wherever and whenever necessary. The system should also allow for the documentation of such practices in schools, which is currently sporadic.

The high levels of hygiene education provided in schools need to be maintained in order to ensure the sustainability of adequate knowledge and proper practice of personal hygiene among students. Students’ participation in WASH related activities in their schools needs to be enhanced. Schools may consider methods of reinforcing the use of interactive and modern methodologies for promoting personal hygiene, which are already adopted by the Ministry among students instead of direct verbal instruction. Moreover, enhancing parental involvement and community participation in WASH related activities in schools is also encouraged. The application of activities related to global WASH celebrations (such as Global Handwashing Day, World Toilet Day and World Water Day) needs to be reinforced in all schools to ensure universal messages are being conveyed to all students.
1. INTRODUCTION

This report presents the findings of the Knowledge, Attitudes and Practices (KAP) survey on school water sanitation and hygiene conducted in the State of Palestine (SoP) in 2015. The report also provides a section on the comparison of the results with the baseline KAP survey conducted in 2011. This chapter presents the general background information on the educational system in the SoP, the survey coverage and methodology, and the report’s content.

1.1 Background on the educational system in the SoP

MoEHE records of 2014/2015 show that there are a total of 2,856 schools in the SoP. These schools are run by various institutions, with 73 per cent run by the MoEHE as government schools. Schools run by the United Nations Relief and Works Agency (UNRWA) constitute 12.2 per cent, mainly servicing refugee camps. Finally, the private sector (for-profit and not-for-profit institutions) supervise 14.4 per cent of them.3

Schools are either separate for boys or girls, or co-educational. Of the total schools, boys’ schools constitute 35.5 per cent, girls’ schools 33 per cent and co-educational schools 31.4 per cent. These schools serve around 1.17 million students.4

MoEHE schools are free and compulsory in the SoP until grade 10. With students entering the system at age six. Basic education is then divided into the preparatory stage (grades one to four) and the empowerment stage (grades five to ten). Secondary education includes grades 11 and 12, which can be academic or vocational. At the end of 12 years of schooling, students take the secondary school examination called the Tawjihi, which qualifies them for tertiary education.

The water, sanitation and hygiene (WASH) component is part of the curriculum for grades 7 to 10 as a separate text book, while for other grades it is integrated in other text books. Health, hygiene and environment issues at schools are handled in the MoEHE by the General Directorate for School Health. It has a representative in each of the 24 directorates of the West Bank (including East Jerusalem) and Gaza.

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3 The Palestinian Central Bureau of Statistics (PCBS) 2014/2015 Education Statistics
4 The Palestinian Central Bureau of Statistics (PCBS) 2014/2015 Education Statistics
Table 1.1: Number of Schools by Region, Stage and School Gender, 2014/2015

<table>
<thead>
<tr>
<th>Region</th>
<th>Stage</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
<th>Co-ed</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palestine</td>
<td>Total</td>
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<td>1,015</td>
<td>945</td>
<td>896</td>
</tr>
<tr>
<td></td>
<td>Basic</td>
<td>1,896</td>
<td>675</td>
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<td>696</td>
</tr>
<tr>
<td></td>
<td>Secondary*</td>
<td>960</td>
<td>340</td>
<td>420</td>
<td>200</td>
</tr>
<tr>
<td>West Bank</td>
<td>Total</td>
<td>2,144</td>
<td>721</td>
<td>720</td>
<td>703</td>
</tr>
<tr>
<td></td>
<td>Basic</td>
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<td></td>
<td>Secondary*</td>
<td>807</td>
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<td>Gaza Strip</td>
<td>Total</td>
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<td>Secondary*</td>
<td>153</td>
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</tr>
</tbody>
</table>

*: Secondary schools include schools that also have basic level grades in addition to secondary grades.

Table 1.2: Number of Students in Schools by Region, Supervising Authority, Stage and Sex, 2014/2015

<table>
<thead>
<tr>
<th>Region</th>
<th>Supervising Authority</th>
<th>Grand Total</th>
<th>Basic</th>
<th>Secondary</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td>Palestine</td>
<td>Government</td>
<td>1,171,596</td>
<td>581,095</td>
<td>590,501</td>
</tr>
<tr>
<td></td>
<td>UNRWA</td>
<td>288,515</td>
<td>143,589</td>
<td>144,926</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>110,152</td>
<td>64,788</td>
<td>45,364</td>
</tr>
<tr>
<td>West Bank</td>
<td>Government</td>
<td>542,693</td>
<td>263,563</td>
<td>279,130</td>
</tr>
<tr>
<td></td>
<td>UNRWA</td>
<td>50,026</td>
<td>20,699</td>
<td>29,327</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>91,990</td>
<td>53,464</td>
<td>38,516</td>
</tr>
<tr>
<td>Gaza Strip</td>
<td>Government</td>
<td>486,897</td>
<td>243,369</td>
<td>243,528</td>
</tr>
<tr>
<td></td>
<td>UNRWA</td>
<td>238,489</td>
<td>122,890</td>
<td>115,599</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>18,172</td>
<td>11,324</td>
<td>6,848</td>
</tr>
</tbody>
</table>
1.2 The 2015 Knowledge, Attitudes and Practices (KAP) Survey on School Water, Sanitation and Hygiene

The 2015 Knowledge, Attitudes and Practices (KAP) Survey on School Water, Sanitation and Hygiene (WASH) replicates the baseline survey conducted in the SoP in 2011. The pre-KAP survey on WASH in schools provided a baseline for developing WASH through school interventions and identified the needs for rehabilitation and building of new WASH facilities in government schools, as well as gaps in knowledge, attitudes and hygiene practices of school students and staff. It provided quantitative and qualitative data on water, sanitation and hygiene in MoEHE schools. The study covered the West Bank (which includes Area C), including East Jerusalem, and the Gaza Strip. However, the survey is limited to government schools.

The objectives of the Post-KAP study survey were to measure the current status in:

- The availability and utilization of WASH facilities in government schools in the SoP, with consideration given to health-related issues;
- The water, sanitation and hygiene related knowledge, attitudes and practices of female and male students in government schools in the SoP;
- The role and participation of female and male teachers in WASH-related knowledge creation, attitudes and practices in government schools in the SoP;
- Whether the needs of female and male teachers have been addressed in relation to promoting good WASH practices;
- Girls’ (before and at menstrual age) specific needs and attitudes towards WASH facilities and Menstrual Hygiene Management.

Accordingly, the key research questions are as follows:

1. What is the extent and quality of availability of water and sanitation facilities, and associated practices in Palestinian government schools?
2. What is the level of WASH knowledge amongst students attending Palestinian government schools?
3. What are the hygiene practices of students in Palestinian government schools, in relation to such factors as toilet usage, hand-washing and environmental cleanliness?
4. What is the nature and extent of student, school personnel, parent and community participation in water, sanitation and hygiene education and activities?
5. What are the needs of teaching personnel in relation to strengthening the WASH knowledge and practices of students?
6. What are girls’ (before and at menstrual age) specific needs and attitudes towards WASH facilities and Menstrual Hygiene Management and why do girls refrain from using WASH facilities in school?

The results from the survey are then compared with the results of the pre-KAP survey, to assess the changes between 2011 and 2015.
Methodology

Sample design

Initially, the 2015 KAP survey was to be conducted in the same schools as of the 2011 baseline survey. The same sample used in the baseline survey of 2011 consists of a statistically valid and representative sample of 411 schools that was determined by the MoEHE, according to the methodology of the Palestinian Central Bureau of Statistics (PCBS). The sample included 762 teachers and 3810 students. Particular variables were taken into consideration, including coverage of:

(a) The Gaza Strip, the West Bank (including Area C) and East Jerusalem,
(b) Primary and secondary schools,
(c) Girls’, boys’ and co-educational schools,
(d) Grade level (grades four, seven and 10 were surveyed).

However, in the implementation of the 2015 KAP survey, the following changes were encountered:

- 3 schools from Gaza were closed,
- 5 schools have school gender changed (female to male or male to female),
- 13 schools did not include 4th, 7th or 10th grades (some of them changed to secondary and others included grades 1 to 3 only),
- 5 schools from the West Bank were located in areas where a permission is needed to enter and only residents of those areas were allowed access,
- 4 schools were under construction during the data collection process.

These schools were excluded from the sample. The final number of targeted schools in the 2015 KAP survey was 381, and is still statistically representative.

To ensure adequate representation, students were selected randomly from the school registry list of the grades included in the survey. Student respondents were between the ages of nine and 17 (most of students in grade four were between nine and 11, students in grade seven were between the ages of 12 and 14 and students in grade 10 were between ages 15 and 17). A set of two teachers per school were selected, one of them from the school’s health committee and the other randomly chosen.

Survey instruments

The instruments used in the survey included three questionnaires, which were also used in the pre-survey:

- **School questionnaire**: assessed the water, sanitation and hygiene situation in selected schools. The school questionnaire included basic information about the school: its grades; the number of students, teachers, staff and cleaning personnel; the work of the hygiene committee; the condition of infrastructure; water availability and quality; toilet availability, quality, condition and use; cleanliness; hygiene education; and washing facilities. The school
questionnaire was administered to the school principal, who was sometimes assisted by a teacher responsible for WASH activities in the school. Direct observations on the general state of the school facilities were conducted by the field researcher.

- **Students’ questionnaire:** served to investigate the knowledge attitudes and practices of students. The students’ questionnaire included questions about their knowledge of hygiene; their sources of information on hygiene; their use of toilets in the schools and their opinions of the toilets’ condition; and their hygiene practices. The data was collected by administering the questionnaire through one-on-one interviews.

- **Teachers’ questionnaire:** served to investigate the knowledge and practices of teachers. The teachers’ questionnaire included questions mainly about school hygiene activities; teaching WASH topics in schools and teachers’ perceptions of the school’s cleanliness and availability of WASH facilities. The data was collected by administrating the questionnaire through one-on-one interviews.

In addition to the three questionnaires, direct observation of the school facilities and their surroundings was conducted to report on the actual physical conditions of the schools. Three focus groups were also conducted in the West Bank and Gaza Strip with female students from 7th to 10th grade on menstrual hygiene management in schools. All tools used for the survey are available as Annexes to this report.

**Survey implementation**

A pilot survey was conducted using a sample of 18 students and 4 teachers in 2 schools in the West Bank and the Gaza Strip. The following were the general comments, lessons learnt and suggestions for improvement prepared as a results of the pilot testing:

- The questionnaire was described as being long. However, the research team did not reduce the length to avoid impacting the comparison with the 2011 baseline survey;

- It was very difficult for the younger grades (mainly 4th grade) to recall the activities and the knowledge they gained over the past six months. One of the main reasons for this was that there were not many activities in the previous six months, which included the end of the previous year, the school summer vacation and the beginning of the school year.

The research team in the main office reviewed the collected questionnaires and found them acceptable except for a few cases where the student did not understand the term “water treatment”. This meant that in the actual data collection, the data collectors should ensure that the students understand water treatment before seeking a response.

Generally, the questionnaire was acceptable and qualified to be used in the actual data collection.

The data collection started on November 5th, 2015 and was concluded by mid December 2015. The data collection was conducted by 45 field workers (32 in the West Bank and 13 in the Gaza Strip).
Survey coverage

Survey sample by location

A distinction is made in the sample between urban, rural and refugee camp government schools. Out of the 381 schools surveyed, 257 are located in urban areas, 117 in rural areas and 7 in camps. Table 1.3 represents the number of schools, teachers and students interviewed by school location.

Table 1.3: Survey interviews by location (2015)

<table>
<thead>
<tr>
<th>Interview results</th>
<th>West Bank</th>
<th>Gaza</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>urban</td>
<td>rural</td>
<td>camp (government run schools)</td>
</tr>
<tr>
<td>Schools interviewed</td>
<td>155</td>
<td>113</td>
<td>2</td>
</tr>
<tr>
<td>Teachers interviewed</td>
<td>310</td>
<td>226</td>
<td>4</td>
</tr>
<tr>
<td>Students interviewed</td>
<td>1,550</td>
<td>1,130</td>
<td>20</td>
</tr>
</tbody>
</table>

The refugee camp sample is very small, mainly due to the fact that there are few governmental schools in the camp areas. In refugee camps, UNRWA is the main service provider for education. Basic education in particular is almost exclusively managed by UNRWA. UNRWA schools service students up to grade 9 (and sometimes exceptionally up to grade 10). Therefore the MoEHE runs secondary schools in the camps throughout the SoP.

Survey sample by directorate

The number of sampled schools in the West Bank by directorate (Table 1.4) ranged from three in Jericho to 32 in Ramallah. The small sample sizes in Jericho and Tubas directorates were due to the fewer number of schools in those directorates: 20 in Jericho and 41 in Tubas.

Only seven schools in East Jerusalem were sampled as there are few schools in Jerusalem that are supervised by the Palestinian MoEHE. This is because East Jerusalem, while being part of the State of Palestine under international law, was unilaterally annexed by Israel in 1967 and is under Israeli control; the majority of Palestinian children in East Jerusalem are enrolled in schools supervised by the Israeli municipality.
### Table 1.4: Survey interviews by directorate (2015)

<table>
<thead>
<tr>
<th>Directorates</th>
<th>Number of schools interviewed</th>
<th>Teachers interviewed</th>
<th>Students interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>West Bank</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Jenin</td>
<td>20</td>
<td>40</td>
<td>200</td>
</tr>
<tr>
<td>2 Qabatia</td>
<td>16</td>
<td>32</td>
<td>160</td>
</tr>
<tr>
<td>3 Tubas</td>
<td>6</td>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td>4 Tulkarm</td>
<td>21</td>
<td>42</td>
<td>210</td>
</tr>
<tr>
<td>5 Nablus</td>
<td>25</td>
<td>50</td>
<td>250</td>
</tr>
<tr>
<td>6 South Nablus</td>
<td>14</td>
<td>28</td>
<td>140</td>
</tr>
<tr>
<td>7 Qalqilia</td>
<td>15</td>
<td>30</td>
<td>150</td>
</tr>
<tr>
<td>8 Salfeet</td>
<td>11</td>
<td>22</td>
<td>110</td>
</tr>
<tr>
<td>9 Ramallah</td>
<td>32</td>
<td>64</td>
<td>320</td>
</tr>
<tr>
<td>10 Jericho</td>
<td>3</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>11 Jerusalem</td>
<td>7</td>
<td>14</td>
<td>70</td>
</tr>
<tr>
<td>12 Jerusalem Suburbs</td>
<td>12</td>
<td>24</td>
<td>120</td>
</tr>
<tr>
<td>13 Bethlehem</td>
<td>20</td>
<td>40</td>
<td>200</td>
</tr>
<tr>
<td>14 Hebron</td>
<td>22</td>
<td>44</td>
<td>220</td>
</tr>
<tr>
<td>15 North Hebron</td>
<td>17</td>
<td>34</td>
<td>170</td>
</tr>
<tr>
<td>16 South Hebron</td>
<td>19</td>
<td>38</td>
<td>190</td>
</tr>
<tr>
<td>17 Yatta</td>
<td>10</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td><em>Gaza</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 North Gaza</td>
<td>18</td>
<td>36</td>
<td>180</td>
</tr>
<tr>
<td>19 East Gaza</td>
<td>26</td>
<td>52</td>
<td>260</td>
</tr>
<tr>
<td>20 West Gaza</td>
<td>20</td>
<td>40</td>
<td>200</td>
</tr>
<tr>
<td>21 Middle Area</td>
<td>14</td>
<td>28</td>
<td>140</td>
</tr>
<tr>
<td>22 Khanyounis</td>
<td>13</td>
<td>26</td>
<td>130</td>
</tr>
<tr>
<td>23 East Khanyounis</td>
<td>9</td>
<td>18</td>
<td>90</td>
</tr>
<tr>
<td>24 Rafah</td>
<td>11</td>
<td>22</td>
<td>110</td>
</tr>
</tbody>
</table>
Survey coverage by School type

The sample adopted was stratified by school gender as reflected in (Table 1.5). A total of 154 boys’ schools (103 in the West Bank and 51 in Gaza), 144 girls’ school (105 in the West Bank and 39 in Gaza) and 83 co-ed schools (62 in the West Bank and 21 in Gaza) were included in the survey.

Table 1.5: Survey interviews by school

<table>
<thead>
<tr>
<th>Interview results</th>
<th>West Bank</th>
<th></th>
<th>Gaza</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>girls</td>
<td>co-educ.</td>
</tr>
<tr>
<td>Schools interviewed</td>
<td>103</td>
<td>105</td>
<td>62</td>
</tr>
<tr>
<td>Teachers interviewed</td>
<td>206</td>
<td>210</td>
<td>124</td>
</tr>
<tr>
<td>Students interviewed</td>
<td>1,030</td>
<td>1,050</td>
<td>620</td>
</tr>
<tr>
<td></td>
<td>51</td>
<td>39</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>102</td>
<td>78</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>510</td>
<td>390</td>
<td>210</td>
</tr>
</tbody>
</table>

Figure 1: Sample size by region and school gender
**Survey coverage by school level**

Both basic and secondary schools were included in the survey (Table 1.6). As described above, basic schools include grades one to 10. Grades 11 and 12 constitute secondary level education. However, very few schools teach grade 11 and 12 only; most often, they teach grades one to 12 (or sometimes grades five to 12). In the survey therefore, ‘secondary schools’ is not used solely to describe secondary level classes but rather the schools that include grades up to grade 12.

Table 1.6: Survey interviews by school level (2015)

<table>
<thead>
<tr>
<th>interview results</th>
<th>West Bank</th>
<th>Gaza</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Basic</td>
<td>Secondary</td>
</tr>
<tr>
<td>Schools interviewed</td>
<td>154</td>
<td>116</td>
</tr>
<tr>
<td>Teachers interviewed</td>
<td>308</td>
<td>232</td>
</tr>
<tr>
<td>Students interviewed</td>
<td>1,540</td>
<td>1,160</td>
</tr>
</tbody>
</table>
2. CHARACTERISTICS OF SCHOOLS, TEACHERS AND STUDENTS

2.1 School characteristics

The following indicators represent the status of the schools included in the survey:

- Mean number of classes per school: 13.2
- Mean number of students per class: 29.3
- Mean number of students per school: 404.5

In the SoP, the mean number of classes per school is 13.2 and it is significantly higher in Gaza (17.05) compared to the West Bank (13.35). The mean number of classes per school is highest in girls’ secondary schools in Gaza (19.9) and lowest in co-educational schools in the West Bank (9.1) as shown in Table 2.1.

The mean number of students per class in the SoP is 29.3. Similar to the mean number of classes per school, the mean number of students per class is higher in Gaza (38.75) compared to the West Bank (27.9) and is highest in government-run schools in Gaza camps (40.9). Such numbers indicate overcrowded classrooms when compared with the Organization for Economic Cooperation and Development (OECD) for 2004, which has an average 21.5 students per class in primary public schools and 23.8 students per class in lower secondary public schools. Overcrowded classrooms are also more common in urban compared to rural schools.

The mean number of students per school in the SoP was found to be 404 in 2015 compared to 411 students in the 2011 baseline survey. Overcrowded schools are more common in urban compared to rural schools especially in Gaza secondary schools. The mean number of students per school is highest in girls’ secondary schools in Gaza (744) and lowest in co-ed basic schools in the West Bank (210).

Schools sometimes work in two shifts, morning and afternoon shifts to be able to accommodate more students. School buildings sometimes are comprised of two independent schools with different principals, teachers, staff and students. In the 381 schools surveyed in 2015, none of the West Bank schools had afternoon shifts while more than 40% of the schools in Gaza had afternoon shifts as shown in Figure 2.

![Figure 2: Percentage of schools with morning and afternoon shifts](image-url)
Table 2.1: Mean number of classes per school, of students per class and of student per school (2015)

<table>
<thead>
<tr>
<th>Background characteristics</th>
<th>Mean number of classes per school</th>
<th>SoP</th>
<th>West Bank</th>
<th>Gaza</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>location</td>
<td>Basic</td>
<td>Secondary</td>
<td>Basic</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>13.7</td>
<td>15.6</td>
<td>12.0</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>11.3</td>
<td>12.6</td>
<td>10.1</td>
</tr>
<tr>
<td></td>
<td>Camp (Government run Schools)</td>
<td>14.3</td>
<td>11.8</td>
<td>NA</td>
</tr>
<tr>
<td>School type</td>
<td>Boys' school</td>
<td>12.9</td>
<td>12.6</td>
<td>11.7</td>
</tr>
<tr>
<td></td>
<td>Girls school</td>
<td>13.6</td>
<td>15.0</td>
<td>12.4</td>
</tr>
<tr>
<td></td>
<td>Co-educ. School</td>
<td>11.9</td>
<td>12.6</td>
<td>9.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Background characteristics</th>
<th>Mean number of students per class</th>
<th>SoP</th>
<th>West Bank</th>
<th>Gaza</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>location</td>
<td>Basic</td>
<td>Secondary</td>
<td>Basic</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>32.7</td>
<td>30.4</td>
<td>28.7</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>27.0</td>
<td>24.3</td>
<td>24.8</td>
</tr>
<tr>
<td></td>
<td>Camp (Government run Schools)</td>
<td>40.9</td>
<td>26.0</td>
<td>NA</td>
</tr>
<tr>
<td>School type</td>
<td>Boys school</td>
<td>32.1</td>
<td>27.2</td>
<td>28.7</td>
</tr>
<tr>
<td></td>
<td>Girls school</td>
<td>31.9</td>
<td>28.4</td>
<td>28.5</td>
</tr>
<tr>
<td></td>
<td>Co-educ. School</td>
<td>27.2</td>
<td>20.5</td>
<td>22.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Background characteristics</th>
<th>Mean number of students per school</th>
<th>SoP</th>
<th>West Bank</th>
<th>Gaza</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>location</td>
<td>Basic</td>
<td>Secondary</td>
<td>Basic</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>467.4</td>
<td>484.9</td>
<td>357.2</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>324.4</td>
<td>315.2</td>
<td>256.9</td>
</tr>
<tr>
<td></td>
<td>Camp (Government run Schools)</td>
<td>583.3</td>
<td>315.8</td>
<td>NA</td>
</tr>
<tr>
<td>School type</td>
<td>Boys school</td>
<td>433.2</td>
<td>356.6</td>
<td>349.1</td>
</tr>
<tr>
<td></td>
<td>Girls school</td>
<td>449.5</td>
<td>443.2</td>
<td>360.0</td>
</tr>
<tr>
<td></td>
<td>Co-educ. school</td>
<td>353.2</td>
<td>249.3</td>
<td>210.6</td>
</tr>
</tbody>
</table>
2.2 Availability of teachers

The mean number of teachers ranges between 17 in rural basic schools to 23 in basic government schools in camps. Urban secondary schools have the highest mean number of teachers (27) compared to 20 teachers in secondary schools in rural areas. Girls basic and secondary schools have more teachers compared to boys and co-educational schools as shown in Table 2.2.

Table 2.2: Mean number of teachers by locality and school gender

<table>
<thead>
<tr>
<th>Background characteristics</th>
<th>Mean number of teachers for Basic school</th>
<th>Mean number of teachers for Secondary school</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td>location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>8.9</td>
<td>11.9</td>
</tr>
<tr>
<td>Rural</td>
<td>7.7</td>
<td>9.4</td>
</tr>
<tr>
<td>Government schools in Camp</td>
<td>6.0</td>
<td>16.7</td>
</tr>
<tr>
<td>School type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>18.4</td>
<td>1.5</td>
</tr>
<tr>
<td>Girls</td>
<td>0.1</td>
<td>20.6</td>
</tr>
<tr>
<td>Co-ed</td>
<td>2.1</td>
<td>15.4</td>
</tr>
</tbody>
</table>

The student-to-teacher ratio reflects the workload of teachers in schools. It is also used as a proxy for the attention that a child is likely to receive in the classroom. Student-to-teachers ratio was found to be higher in Gaza (23.1) compared to the West Bank (17.1). Urban, basic schools had the higher student-to-teacher ratios (20.9 and 20.7 respectively). The student to teacher ratio ranged from 13 to 25 by district and was highest in Gaza districts in addition to Hebron and Yatta in the West Bank.

Female teachers surveyed constitute around 59% of the surveyed teachers. More than 70% of the teachers are 31-50 years of age and more than 84% of them have more than 5 years of teaching experience. Girls’ schools have 100% female teachers. In boys schools, the majority of the teachers are male but about 9% of the teachers are female. In Co-ed schools, the majority of teachers are female (78.9%).
Figure 3: Student-teacher ratio in the SoP

Figure 4: Student-teacher ratio by directorate

Figure 5: Characteristics of teachers
2.3 Availability of cleaning staff

In Gaza, the ratio of students to cleaning staff (445:1) is more than double that of the West Bank (211:1). As reflected in Figure 6, one cleaning staff caters to more students in schools located in camps and urban areas, as well as basic and girls schools.

![Figure 6: Student-to-cleaning staff ratio](image)

There is also a wide variation in the ratio of students to cleaning staff by directorate. In Jerusalem, one cleaning staff caters for 106 students while in Khan Younes, one cleaning staff caters for 553 students.

![Figure 7: Student-to-cleaning staff ratio by directorate](image)
2.4 Students characteristics

The survey covered both male and female students almost equally in both the West Bank and Gaza. The survey also ensured a representation of all three grade levels targetted by the survey, namely grades 4\textsuperscript{th}, 7\textsuperscript{th} and 10\textsuperscript{th}. The majority of students had parents educated to the secondary and tertiary levels. Most students lived in medium sized households with 5-8 individuals in the same house. Larger household sizes of more than 9 individuals were more common in Gaza compared to the West Bank.

![Figure 8: Students’ background characteristics by parent educational level](image)

*Figure 8: Students’ background characteristics by parent educational level*

![Figure 9: Students’ background characteristics by region](image)

*Figure 9: Students’ background characteristics by region*
3. SCHOOL HYGIENE ENVIRONMENT

3.1 General environment

School surroundings

Almost all surveyed schools have a fence fully (87.9%) or partially present (11.3%) surrounding the school premise. The surroundings of the schools were free of solid waste at around 78% of the surveyed schools. Schools in the West Bank were reported to have solid waste around them more than in Gaza. The presence of rubbish around the school was most common in camp-based schools (37.5%). Additionally, 5% of the schools were found to have stagnant water in their surroundings, particularly in camp areas (37.5%). About 92% of the schools have paved roads surrounding them; more so in the West Bank (96.3%) compared to Gaza (82%).

![Figure 10: Conditions of school surroundings by locality](image)

Schools’ structural condition

The structural status of the school building was observed to be very good (52.5%) to good (36.7%). Very few schools were seen as being in a bad structural condition. However, 8.4% were reported to be in moderate structural conditions, especially those in urban and camp areas.

These observations were echoed by the principals who thought schools were in a good condition with regards to safety, cleanliness and stairs as shown in Table 3.1. On average, 76% of principals reported that schools are in a good condition physically in terms of safety, with a lower percentage in Gaza (69%) compared to the West Bank (79%). Almost 90% of principals thought their schools were clean and 83% thought that the stairs were in good condition.
### Table 3.1: Schools’ structural conditions

<table>
<thead>
<tr>
<th></th>
<th>Safety</th>
<th>Cleanliness</th>
<th>Stairs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>West Bank</td>
<td>Gaza</td>
<td>Total</td>
</tr>
<tr>
<td>Good condition</td>
<td>78.9%</td>
<td>69.4%</td>
<td>76.1%</td>
</tr>
<tr>
<td>Partially suitable condition</td>
<td>18.1%</td>
<td>25.2%</td>
<td>20.2%</td>
</tr>
<tr>
<td>Bad condition</td>
<td>3.0%</td>
<td>5.4%</td>
<td>3.7%</td>
</tr>
</tbody>
</table>

### Classrooms

Classrooms were reported to be in good conditions on all aspects including safety, cleanliness, lighting and ventilation and windows as shown in Figure 11. Classroom size (area) was suitable as 81% of the principals reported having adequate areas. More than 80% of principals also reported availability of tables and chairs.

*Figure 11: Conditions of classrooms according to principals*
3.2 Sources of drinking water

Water sources, storage and treatment

The main source of water at the surveyed schools (93.3%) in the West Bank is the public water network. The situation in Gaza is very different as 84% of the schools surveyed get water hauled by tank trucks from MoEHE and UNICEF, private vendor, or from other humanitarian aid organizations.

About 35% of West Bank schools reported that water is treated at the school compared to only 12.6% of Gaza. Adding chlorine was the most common water treatment method reported by these schools (86.2%), followed by using a water filter (10.1%), letting the water sit and settle (4.6%) and boiling (0.9%). However, 57% of the schools reported that they are not adequately equipped to treat water for safe drinking with a significantly higher percentage of schools in Gaza (83%) reporting that compared to the West Bank (46%).

About 14% of the schools reported not having water available from the main source in the past two weeks; more so in Gaza schools (21.6%) compared to the West Bank (10.5%). Additionally, 82.7% of Gaza schools reported not having available water a few times in the past six months compared to 66.5% of West Bank Schools. About 92% of schools in the West Bank reported having tanks at the schools that can store water for at least one week. However, only 25% of Gaza schools reported having such tanks. Almost all of those who have tanks reported they are mostly plastic (66%), with mostly wide openings (65%), well-covered (99%) and clean (100%). Additionally, 95% of the schools reported washing or cleaning these tanks from the inside by emptying and washing them once a semester (67%) or once a year (25%), with West Bank schools reporting more frequent cleaning compared to Gaza schools.

Availability of water for different purposes

Water was reported to be available for different purposes by more than 90% of the schools. Schools that reported inadequate water availability were mostly in Gaza.

Figure 12: Availability of water at schools for different purposes
**Water quality**

About 77% of the schools reported that the water is tested at their school mostly once a year (59%) or once every six months (25%). Samples are collected by the Ministry of Health (MoH) mostly in the West Bank (79%) while in Gaza both the MoH (52%) and MoEHE (50%) collect samples for testing. The MoH is the major body responsible for testing the water as reported by 78% of the surveyed schools. However, in Gaza, 36% of the schools reported that the MoEHE is also responsible for water testing. In West Bank schools, samples are mainly taken from the faucets (73%), while in Gaza samples can be taken directly from faucets (47%) or from tanks (44%).

More than 70% of principals don’t know the exact tests conducted. However, 76% of West Bank principals said that the water tested complies with standards set by the Palestinian Water Authority, while only 51% of principals in Gaza reported the same. It is worth noting that about 42% of principals in Gaza do not know the results of the water tests. If results did not comply with the standards, 69% of the schools take action themselves to improve the water quality, instead of involving other institutions such as the MoH (43%), MoEHE (42%) and the local authority (39%). Observation of schools shows that 98% of schools had seemingly clean water available (based on lack of smell or color).

The student-to-water point ratio varies greatly between the West Bank and Gaza with about 50 students per water point in the West Bank and more than triple in Gaza (158). The range across districts is also high, from 31 students per water points in Qalqilia to 204 in Rafah. Urban, basic boys’ schools had higher ratios compared to others. Overall, the numbers do not meet, however, the MoEHE guidelines of having a maximum of 30 students for every water point.5

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Figure 13: Student-to-water point ratio

More than 90% of the water points were observed to be safe and suitable for children in size, height and faucet type.

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3.3 Sanitation facilities

Availability of student toilets

All surveyed schools have toilets. 80% of co-education-basic schools in Gaza have separate toilets for male and female students. On average, there are 8.5 toilets for students in each school, 8.1 in the West Bank and 9.6 in Gaza. Toilets are located at an average distance of 21 meters from the classroom. Overall, these numbers do not meet the MoEHE guidelines highlighted in the school environment policy, which suggest having one toilet for every classroom. The average number of classrooms per school is 13.2 and the average number of toilets is 8.5. The student-to-toilet ratio is higher in Gaza with more than 71 students for every toilet compared to about 42 students for every toilet in the West Bank (Figure 14). Student-to-toilet ratios are higher in urban, basic boys schools compared to others. While the MoEHE does not currently have specific guidelines for the student-to-toilet ratio, these numbers are higher compared to WASH standards for low cost environments and the former MoEHE school health and environment guidelines of 2003 which were used in the 2011 KAP survey.

Toilets conditions

More than 90% of all toilets were seen to have no or very few insects. About 78% of the toilets were observed to be (mostly) well-lit. It is however important to note that 14.8% of the toilets in the West Bank were reported to be not adequately lit with a range of 0-50% between districts. About 79% of the toilets were reported to be clean and mostly free of smell.

In general, about 67% of all student toilets floors were observed to be clean while 26% were considered dirty and 8% were considered very dirty. As for staff toilets, more than 97% of them were observed to be clean. About 76% of student toilet walls were considered clean, 19% were considered dirty and 5% were considered very dirty. About 90% of staff toilet floors were considered clean and 99.7% of the walls were also clean.

All schools reported cleaning their toilets daily. Toilets are maintained once a semester for 34% of the schools, once a month for 16% of the schools, once a year for 16% and based on need for 23% of the schools.

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6 Ministry of Education (June 2015): School Environment Policy
7 World Health Organization- 2009: Water, sanitation and hygiene standards for schools in low-cost settings
**Female students’ toilets**

More than 80% of principals stated that all girls use the toilets at the school with urban schools reporting the lowest usage (74%). When asked about why not all girls may use toilets at the schools, the most prominent responses were that the girls psychologically do not feel comfortable using the school toilet (53%) and having insufficient number of toilets causing overcrowding (20%). Most principals agree (93%) that girls that do not use toilets at the school have to wait until they get home to use the toilet. Overall, 84.5% of all principals agree that female toilets are in a good condition. However, a significant gap exists between the West Bank (92.1%) and Gaza (63.4%). As for cleanliness, 90% of principals stated that the toilets are clean with no significant differences between the West Bank and Gaza. However, it is worth noting that 20% of camp-based schools agree than toilets are unclean and unsafe. On average, 32% of all school reported having an inadequate number of toilets with a significant difference between Gaza (56.7%) and the West Bank (23.7%). About 20% of Gaza schools and 20% of camp based schools reported not having water in female toilets.

Almost all female toilets were observed to have doors of which about 10% had no locks or had locks located at an unsuitable height for younger girls. There was no toilet paper in more than 91% of the schools and 16% of the toilets had no waste baskets.

**Male students’ toilets**

On average, 92% of principals reported that all male students use the toilets with a lower percentage in Gaza (86%) compared to the West Bank (95%). Both lack of cleanliness (44%) and overcrowding (44%) were the main reason listed for boys not using the toilets at the schools. Psychological reasons, lack of door- locks and the preference of European toilets. According to principals, male students who do not use toilets at the school wait until they go home.

More principals in the West Bank believe that male toilets are in a good condition (84.7%) compared to Gaza (73.2%). About 21% of schools in Gaza believe that toilets are unclean. Safety of male toilets was more of a concern at camp-based schools compared to others (16%). More than 41% of Gaza principals reported not having adequate male toilets compared to 30% in the West Bank. Inadequacy was reported at a higher rate in rural, secondary and co-ed schools. Water unavailability was not an issue as more than 93% of principals reported that water is available.

Almost all male toilets were observed to have locks. About 12% of the toilets observed had door locks located at an unsuitable height for younger boys. About 94% of male toilets observed did not have toilet paper, 50% did not have waste baskets, more so in Gaza (68%) compared to the West Bank (44%).

**Availability of staff toilets**

There are toilets for staff at all surveyed schools. The mean number of toilets for teachers is 2.5 per school. Almost all schools that have male and female employees reported having separate toilets. All female employee toilets were observed to have doors and more than 65% had toilet paper and more than 90% had waste baskets. Similarly, almost all male employee toilets had doors, 55% of them were observed to have toilet paper and 86% had waste baskets.
Adequacy of toilets according to principals

About 74% of the principals reported adequacy of male students' toilets with no significant gap between the West Bank and Gaza. Similarly, 75% of principals reported adequacy of female students' toilets. However, adequacy of female toilets was significantly lower in Gaza (61%) compared to the West Bank (80%). Adequacy of male toilets was lowest in Salfit and adequacy of female toilets was lowest in South Hebron District as depicted in the chart below.

Employee toilets were reported to be 81.4% adequate for males, and 83.1% for females with no significant differences between the West Bank and Gaza. Camp-based schools reported the least employee toilet adequacy (60%). Adequacy of employee toilets was lowest in South Hebron district (50%) for males and in Jerusalem district for females.

According to teachers adequacy of female employee toilets was least in co-ed schools (33.7%). As for adequacy of male employee toilets boys' schools had the lowest adequacy.

3.4 Handwashing facilities

There are 5.9 hand-washing facilities in each school with an average of 7.5 in Gaza and 5.2 in the West Bank. The student-to-handwashing facility ratio is 88.8 on average but is almost double in Gaza compared to the West Bank (Figure 16). These ratios are well above the MoEHE guidelines\(^9\) of having one hand-washing facility for every 30 students. The ratio is higher in urban, basic, boys' schools compared to others. The range across districts is 46 in Jericho to 149 in West Gaza directorate.

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More than 70% of handwashing facilities were located inside the bathrooms while the rest were located outside very close by. At co-educational schools, about 75% of handwashing facilities were separate for boys and girls and the remaining were shared.

Handwashing facilities for boys and girls were generally observed to be usable and undamaged. About 9% of handwashing facilities for boys and 5% of those for girls were considered usable but leaking water. About 85% of boys’ schools and 72% of co-ed schools did not have soap bars or liquid soap at male handwashing facilities. Similarly more than 66% of the schools did not have soap bars or liquid soap at female handwashing facilities. Educational material were generally unavailable at these facilities. Almost 94.5% of handwashing facilities had water available.

More than 86% of handwashing facilities for female staff had bars of soap or liquid soap but 89% of them did not have educational material about hygiene. Similarly, more than 82% of male handwashing facilities had soaps bars or liquid soap but about 88% did not have educational material.

### 3.5 Waste disposal

About 93% of school dispose of solid waste through the municipality or local authorities. Burning solid waste is a common practice in rural areas with 10% of schools reporting to do so. However, the range among districts spans between 0 and 67% in Yatta. About 8% of the school were observed to burn solid waste. About 57% of the schools reported that janitors and students participate in collecting solid waste at the school and 99% reporting collecting it on daily basis. About 97% of the school yards observed were clean or very clean with waste baskets available. Similarly, 97% of the schools surveyed had classrooms that were observed to be clean or very clean and almost all schools had waste bins in the classroom.

About 94% of schools clean classrooms on daily basis with the remaining cleaning them on a weekly basis. Similarly, 96% of the schools clean their yards on a daily basis. Solid waste is collected from classrooms and offices on a daily basis in almost all schools (99%).

More schools in Gaza (84%) are connected to a sewer network compared to the West Bank (27%) where toilet water is discharged to cesspits.
Conclusions

- Availability of WASH facilities for male and female students including toilets, handwashing facilities and drinking points at schools is still suboptimal and does not meet local and international recommended standards.

- While principals reported continuous supervision and cleaning of WASH facilities, the observed conditions of WASH facilities indicate the need for more direct attention and supervision of cleaning staff and student behavior.

- Lack of soap and toilet paper in schools raise public health concerns. There is a need to investigate and address the underlying causes of their lack of availability.

- Although water is generally available in Palestinian schools, some concerns are raised, particularly in Gaza.

- There are no clear and consistent methods for testing and managing water quality at the school level. Not all schools report that their water is tested. For those who report their water quality to be tested, there is lack of consistently with regards to the authority responsible for such testing, whether the results are communicated to the school and whether follow-up action is taken or not. Maintaining water quality at the school is currently a random act overseen mainly by the school administration.
4. SCHOOL HYGIENE AND HEALTH RELATED ACTIVITIES

4.1 School sanitation and hygiene education

All schools offer education about hygiene and environmental health. Speeches given in the morning, teacher instruction, posters and competitions were the most commonly used methods among schools to reinforce awareness of hygiene and environmental health. Competitions, books, games and video programs were less reported methods in hygiene education. According to 39% of principals, health and environmental education is provided on daily basis in their schools while 48% of them stated that they offer such sessions on a weekly basis. The remaining schools offer such education sessions on a monthly basis.

Figure 17: Methods used to reinforce hygiene and environmental health awareness at the schools in the SoP

Figure 17: Methods used to reinforce hygiene and environmental health awareness at the schools in the SoP
Almost all schools surveyed (99.2%) have health committees with no significant difference between the West Bank and Gaza. On the other hand, only 53.3% of the surveyed school reported having an environmental club with Gaza schools having a significantly higher percentage (81.1%) compared to West Bank schools (41.9%) as shown in Figure 18.

![Figure 18: Availability of school health committees and environment clubs at schools in the SoP](image)

Analysis of the type of activities shows that there is an overlap and similarity in the activities carried out by health committees and environment clubs in schools, as shown in Table 4.1. Teachers reported that school cleaning campaigns, hygiene campaigns and activities during the morning assembly were the most common types of activities carried out by both entities in the school.

<table>
<thead>
<tr>
<th>Activities carried out by the school health committee during the past year</th>
<th>Activities carried out by the school environment club during the past year</th>
</tr>
</thead>
<tbody>
<tr>
<td>School cleaning campaigns</td>
<td>91.0%</td>
</tr>
<tr>
<td>Activities during the morning assembly</td>
<td>80.5%</td>
</tr>
<tr>
<td>Preparation of wall posters</td>
<td>71.7%</td>
</tr>
<tr>
<td>Carrying out hygiene campaigns</td>
<td>69.9%</td>
</tr>
<tr>
<td>Education seminars about hygiene at school</td>
<td>67.6%</td>
</tr>
<tr>
<td>Taking care of the school garden</td>
<td>60.2%</td>
</tr>
<tr>
<td>Monitoring the water and sanitation conditions</td>
<td>53.9%</td>
</tr>
<tr>
<td>Peer education</td>
<td>40.8%</td>
</tr>
<tr>
<td>Organizing local community meetings</td>
<td>27.3%</td>
</tr>
<tr>
<td>Open day</td>
<td>21.7%</td>
</tr>
<tr>
<td>Field visits</td>
<td>16.2%</td>
</tr>
<tr>
<td>Others</td>
<td>10.0%</td>
</tr>
<tr>
<td>Advocacy with local authorities</td>
<td>7.8%</td>
</tr>
</tbody>
</table>
More than 95% of principals stated that male and female students participate in activities to keep the schools clean. School health committees are the entities mainly responsible for hygiene and sanitation education. However, teachers, field health educators and students are also involved in the process.

Topics conveyed in hygiene and sanitation messages include personal hygiene, proper hand-washing, proper use of toilets, proper oral hygiene and proper waste disposal in addition to other topics.

Figure 19: Messages conveyed by the school on hygiene and sanitation

![Graph showing the percentage of messages conveyed by the school on hygiene and sanitation topics. The topics include personal hygiene, proper hand-washing, proper use of toilets, oral and dental hygiene, proper waste disposal, health hazards, water storage, water treatment, cleanliness of public facilities, and others. The graph shows that personal hygiene and proper hand-washing are the most discussed topics.]
The availability of a field health officer working at the directorate and supervising the school was reported by 73.5% of the principals, with Gaza schools having a higher percentage (78.4%) compared to West Bank schools (71.5%). Camp located schools had the highest percentage (87.5%) and girls’ schools (79.9%) had a higher percentage compared to boys’ schools (65.6%).

Is there a school health field employee who works at the school?

Educational posters about personal hygiene were mostly observed in the schools followed by handwashing posters and sanitation posters. Most posters were located in the classrooms and in the school yard. No educational posters regarding hygiene, handwashing or sanitation were observed in 16% of the schools.
4.2 Teachers’ involvement with hygiene-related activities

About 63% of the teachers reported being involved in hygiene related activities outside the school curriculum during the past six months. Cleaning campaigns, morning assembly activities, educational activities and hygiene campaigns were some of the examples of such activities.

Slightly more than 50% of the teachers surveyed are involved in coordinating a health committees or environmental club at school with a higher frequency in Gaza compared to the West Bank. Of the teachers surveyed, 64% reported being members of the school health committee with a higher percentage in the West Bank compared to Gaza. Fewer teachers (30%) are involved in school environmental clubs with more teachers reporting being members of such clubs in Gaza compared to the West Bank.
Science teachers had the highest involvement in coordinating health committees compared to teachers teaching other subjects. It is evident that teachers surveyed in Gaza reported having received more training in health, hygiene and environment related topics. More teachers in the West Bank reported not receiving any training.

Figure 23: Training topics received by teachers

About 74% of the surveyed teachers reported that there is information about cleanliness and hygiene in their curriculum and 93% reported that there are activities carried out by the school about these topics. School cleaning campaigns and activities during the morning assembly were the most commonly reported activities among teachers.

About 80% of the teachers reported being involved in activities to promote cleanliness among students in the schools. Those who reported not participating in such events mainly stated that they were not instructed by their supervisors to participate (41%), they thought it was the responsibility of the health committee (35%) or reported not having adequate time to participate (31%).

As for the topics of education provided, about 88% of the teachers reported educating their students in topics related to the benefits of personal hygiene and 76% reported educating students about health in general. Proper hand-washing was addressed by 74% of the teachers in the past six months. Other topics included: healthy eating habits (66%), environmental health (47%) and worm infections (22%).
Those who reported not being involved in educating students reported that the reasons were:

- The curriculum does not include such topics (54.2%)
- The teachers are not trained in these topics (21%)
- The is not enough time (25%)

School teachers and health committees are the most active in providing such education. As for the availability of resources for WASH education, most traditional resources such as instructions, textbooks and posters, booklets and stickers were reported to be available for more than 60% of the teachers. However, it is worth noting that about 50% of the teachers reported not having the adequate knowledge of the topics addressed. Additionally, non-traditional and modern educational resources such as videos, slides and educational games on the topics were not adequately available compared to other resources.

![Figure 24: Topics addressed by teachers involved in hygiene education](image-url)

![Figure 25: Participation of various stakeholders in hygiene related education](image-url)
More than 70% of teachers believe they have a responsibility in maintaining school cleanliness. Moreover, about 80% of the teachers agree they could help in supervising and monitoring the status of school toilets. The majority of teachers surveyed (86%) agree that it’s the full responsibility of the government to support water and sanitation facilities in schools. About 53% of teachers agree that parents and students should not bear the responsibility of supporting the cost of cleaning toilets at the schools, 16% were neutral and 31% disagree.

Social and school based activities are seen to be important for reinforcing hygiene and health by 94% of the teachers. About 8% of the teachers agree that the school janitors are the only ones responsible for school cleanliness while a majority of 88% disagrees.

When asked about the best approaches to improve hygiene practices among students, 80% of the teachers in Gaza favored having competitions among students and around 70% suggested having practical presentations on the topics, involving parents, peer education and recognizing students for their hygiene and cleanliness. In the West Bank, peer education was the most preferred method (70%) followed by involving families (65%) and having competitions among students (59%).

Teachers mostly said that the availability of sufficient resources for WASH education and providing them with incentives would encourage them to participate in such activities in the future.
A significant 42% of the teachers stated that they still needed training programs in WASH related education. Health and environmental health topics were mostly requested for such training.

As for resources needed by teachers, more teachers requested educational games compared to other resources. Posters, videos, brochures and stickers were also requested as important resources for such education. When asked to provide recommendations on how to improve WASH in schools, teachers mostly suggested giving them more time to educate children on such topics, to provide specific education opportunities in such topics for school janitors and to provide them with resources to support maintaining the cleanliness of the school. Resources do not have to be monetary as some teachers suggested not only supplementing the hygiene budget but the possibility of providing schools with hygiene products directly.
not have to be monetary as some teachers suggested not only supplementing the hygiene budget but the possibility of providing schools with hygiene products directly.

Figure 29: Top three recommendations by teachers to improve school WASH

Figure 30: Resources need by teachers for WASH education
4.3 Parental and student involvement with hygiene related activities

About 67% of principals stated that they invite parents to participate in enhancing WASH awareness at least once a month. Around 54% of principals also invite the local community to participate once a month. Moreover, 69% of principals stated that fathers participate in improving and supporting awareness of school sanitation and hygiene while 31% stated that fathers never participate in such activities. No significant difference are noted in the level of participation between the West Bank and Gaza. Lack of participation greatly varies by district with Jenin having the highest percentage of principal’s 75% stating no participation of fathers in such activities. Mothers’ involvement in such events is slightly higher with 73.5% of principals confirming their participation in these events. Mothers’ participation was highest in urban, basic, girls’ schools and in Jerusalem suburbs district. The frequency of mothers’ participation was also higher compared to fathers’.

West Bank schools (58%) had community committees responsible for school hygiene and sanitation, more than Gaza Strip schools (39%). Camp-based schools (63%) and Co-ed schools (64%) had the highest availability of such community health committees. About 97.5% of the schools who stated having such committees said that students, their guardians and local community members are members of such committees. These committees mostly meet once (56%) or twice (23%) a month according to principals.

Despite the fact that all schools principals reported having a school health committee, only 81.4% of students in the West Bank and 92.2% of those in Gaza are aware of having such committees. A similar pattern is observed with environmental clubs. As for students’ involvement, about 16% of the students surveyed reported being members of school health committees or environmental clubs. However, participation in activities carried out by these entities is still suboptimal with about 30.6% participating in activities organized by the health committee and 22% participating in activities organized by the environment club.
Conclusions

• All surveyed schools have health committees and more schools are reporting having environment clubs as well, especially in Gaza.

• All Palestinian schools surveyed offer hygiene education with the majority offering such education sessions at least on a weekly basis. More than 80% of the teachers reported being involved in hygiene and cleanliness education.

• Verbal instructions and posters are the most common method used for hygiene education. The use of more practical, child friendly and interactive methods and activities is less common.

• To improve the WASH situation in schools, teachers recommended educating janitors in WASH related topics, providing WASH supplies for the schools and freeing up some of their time to concentrate on hygiene education. As for the resources needed for WASH education, teachers recommended the provision of educational games, posters, videos and brochures.

• While most schools reported inviting parents to participate in school events related to WASH education, participation is suboptimal and varies across districts.

• While all schools reported having health committees, and a significant percentage have environment clubs, it was noted that not all students, particularly boys, are aware of the presence of such committees and clubs at their schools. Students’ participation in activities organized by these committees and clubs is still below 30%.
5. STUDENTS’ KNOWLEDGE OF PROPER HYGIENE HABITS

5.1 Access to hygiene education

About 98% of the surveyed students reported to receive guidance about cleanliness and hygiene in school. Students mainly receive information about cleanliness and hygiene during morning assembly and during their classes. Recess time, school activities and sport activities were less common times for receiving such information among students. 40% of the students reported being exposed to hygiene education twice a week, 31% on daily basis and 19% on weekly basis.

Information is provided mostly verbally according to 90% of the students. Posters and magazines were reported as a source of information for 47% of the students followed by competitions (25%) and books (16%). Almost 94% of the students reported having information about hygiene and cleanliness in the school curriculum with no significant difference among grade levels.

More than 96% of the students have reported seeing, reading or hearing information about personal hygiene and cleanliness in the past six months. Parents and teachers are the most prominent sources of information about hygiene for both male and female students. They were also considered the best sources of information for students. Television and school health committees, textbooks and school activities are also common sources of information for about 40% of the students. Principals and counselors were not reported to be common sources of such information.

Figure 32: Topics of hygiene education received by students

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Figure 33: Students’ sources of information about hygiene

About 87% of all students surveyed reported that a school hygiene campaigns was organized at their schools and about 56% of the students reported participating in such campaigns.

Only 31% of the surveyed students know about the World Water Day and of those 46% celebrate that day at their schools. More than 50% of the students who reported celebrating World Water Day at their school said that they participated in that celebration. Such celebration takes the form of speeches and announcements mostly as reported more than 85% of the students in addition to having plays which were also the most preferred celebration activities reported by the students. Songs and performances in addition to cleaning classrooms and school grounds were also common activities.

Figure 34: Common and preferred activities of celebrating World Water Day
More girls (64%) know about Global Hand-washing Day (GHD) compared to boys (46%). Of those reporting knowing about it, 60% celebrate the day at their schools and 67% of them reported participating in such celebrations. Plays (drama) were the most preferred form of GHD celebrations.

Personal hygiene was the most common topic that students reported needing information and instructions about and the need for education on personal hygiene was significantly higher among female students compared to male students. Proper hand-washing, health hazards, oral health and hygiene and proper waste disposal were also commonly needed topics by about 40% of the students.

![Bar chart showing students' hygiene education needs by gender](image)

**Figure 35: Students’ hygiene education needs by gender**

### 5.2 Knowledge of diarrhoea causes

Students surveyed knew at least one cause of diarrhoea. More than 93% of the students were able to list one cause correctly. While school characteristics did not have a significant effect on student knowledge, it might be worth noting that 100% of students from schools in camps were capable of listing at least one cause. Eating contaminated food was the most commonly listed cause, followed by not washing hands with soap and eating unwashed fruits and vegetables. Those who were unable to list any cause occurred more frequently among 4th grade students. The majority of the students were able to list 2-5 causes of diarrhoea. At the directorate level, Salfeet, Nablus and South Nablus students stood out as the least knowledgeable of diarrhoea causes.
5.3 Knowledge of hand-washing with soap and its importance

Knowledge about when hand-washing with soap is necessary was very common among students. Almost all students were able to identify at least one situation that required washing hands with soap and more than 84% were able to identify 1-5 occasions most commonly, before eating, after eating and after using the toilet. The importance of hand-washing with soap was also recognized by the students. Almost all students identified at least one reason for the importance of hand-washing with soap. More than 50% of the students were able to list two reasons why hand-washing with soap is important. About 81% of students believe hand-washing with soap is important for preventing illnesses in general, but only 30% related the importance of hand-washing with soap with the prevention of diarrhoea. 75% think washing hands with soap is for the purpose of keeping hands clean and about 20% wash hands for religious beliefs.

When asked directly about the importance of handwashing with soap in specific situations almost all students reported that washing hands with soap before eating, after eating, after using the toilet and after playing is important for them.
5.4 Knowledge of proper toilet use

About 98% of the students were able to provide at least one advice on proper toilet use and about 69% were able to provide 2-4 proper toilet use advice. The top three advices named were: Washing hands with soap after using the toilet, flushing toilets with water after use and not throwing toilet paper on the floor.
5.5 Knowledge of cleanliness importance

For students, cleanliness is considered important for health reasons (94.5%) more than any other including smell (42.7%), family social status (38.8%), appropriateness (34.9%) or religious beliefs (4.2%). Results disaggregated by grade level show that there are no significant differences in the perception about the importance of cleanliness for health reasons and smell. However, fewer students in 4th grade identified the status of the family in the community as important for cleanliness. No significant difference were noted when considering other background characteristics of the students.

Students are also aware of their role in managing waste in the school. When asked about their contribution to school cleanliness, 88% of the students identified with not throwing solid waste on the school grounds.

Conclusions:

• Access to hygiene education is high among the surveyed students as the majority reported being exposed to hygiene information in the past six months. They receiving education about hygiene and cleanliness at school especially during their classes and during morning assembly.

• Mothers and teachers are the most common sources of information about hygiene and cleanliness for both female and male students. Fathers play an important role in providing such information for boys.

• While the majority of students reported that there were hygiene campaigns at their schools, only half of them reported participating in such campaigns. More students celebrated Global Handwashing Day than World Water Day in their schools. However, celebrations were reported in only about 50% of the surveyed schools.

• The majority of students exhibited good knowledge of the importance of cleanliness and hand-washing with soap. Students were also knowledgeable about proper toilet use, although not comprehensively.

• Most students were also knowledgeable of at least one cause of diarrhoea and almost 80% were able to list 4 causes.
6. STUDENTS’ ATTITUDES TOWARDS PROPER HYGIENE HABITS

6.1 Attitudes towards use of school toilet facilities.

Using school toilets whenever needed was reported by 64.5% of students. However, refusal to use school toilets was reported by 35.5% of students; of which 14.4% of them reporting always refusing about 6% refusing to use them often and 15.5% reporting refusal sometimes. Refusal to use toilets was significantly higher in Gaza (46.7%) compared to the West Bank (30.9%). Refusal to use toilets was more common among females in urban, girls-only and secondary schools. Refusal to use toilets ranged from as low as 10% in Tubas up to 72% in Jerusalem and Jerusalem suburbs.

Lack of cleanliness and unpleasant smell were the most common reasons for refusal to use school toilets as reported by 74% and 63% of the students respectively. Lack of toilet paper and lack of soap were the other reasons noted by about 20% of the students. Lack of privacy was not a common concern with less than 2% reporting refusal to use toilets due to it. About 6% of the students said that they do not need to use the toilets.

About 97% reported defecating or urinating inside the school toilets. The 3% who reported otherwise, stated that the lack of cleanliness and unpleasant smell were the main reasons. The lack of privacy and toilets being out of order were less likely reasons. About 85% of the students who have not used school toilets to urinate or defecate said they do so at home mostly. About 5% use the toilets of a nearby mosque or church. Concerns can be raised by a 4% of students who reported urinating or defecating around the school or behind the toilets building.
6.2 Attitudes towards drinking water at school

Water was reported to be always available for drinking by about 79% of the students. About 65% of the students obtain drinking water from water faucets at the school and about 32% report bringing water with them from home. Less than 1% purchase water bottles from the school and less than 2% report never drinking at school. About 56% of the students use their hands to drink and about 30% of the students use their bottles; 5% of the students drink directly by mouth, and about 6% use their own cups made of plastic or other material.

6.3 Attitudes about hand-washing with soap

About 95% of the surveyed students reported using the schools’ hand-washing facilities. Those who reported not using them stated the uncleanliness of the handwashing facilities and/or them being out of order as the main reasons. Lack of water and being far from classrooms, over-crowding and the absence of soap were also reasons that the students mentioned.

6.4 Attitudes about cleaning of school facilities

Student’s participation in cleaning their school is mostly displayed in cleaning classrooms and school grounds, with more than 94% of the students reporting that they help in cleaning these areas. Students’ participation in cleaning the school surroundings is also evident but at a lower percentage (57.3%). Cleaning drinking areas and hand-washing areas was also common among about 40% of the students.

Figure 41: Students’ attitudes towards cleaning school facilities

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes (always or sometimes)</th>
<th>No, never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you help in cleaning drinking areas?</td>
<td>56.4%</td>
<td>13.6%</td>
</tr>
<tr>
<td>Do you help in cleaning toilets?</td>
<td>86.8%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Do you help in cleaning classrooms?</td>
<td>94.7%</td>
<td>38.8%</td>
</tr>
<tr>
<td>Do you help in cleaning hand washing areas?</td>
<td>94.4%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Do you help in cleaning school grounds?</td>
<td>57.3%</td>
<td>43.5%</td>
</tr>
<tr>
<td>Do you help in cleaning the surrounding environment?</td>
<td>44.2%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>
Conclusions

- Using school toilets whenever needed was reported by 64.5% of students. However, refusal to use toilets at schools is common among 35% of the students who stated the lack of cleanliness and unpleasant smell as the main reason for their refusal. Lack of toilet paper and soap were also common reasons.
- About 65% of the students drink from water faucets available in the school by using their hands and the remaining reported using their water bottles.
- The majority of students use hand-washing facilities at the school.
- The majority of students participate in cleaning school grounds and their classrooms. Additionally about 50% of the students participate in cleaning the school surrounding.
7. STUDENTS HYGIENE PRACTICES

7.1 Common hygiene practices

Almost all of the surveyed students (98%) reported applying what they learn at school about hygiene outside the school. Slightly more girls than boys reported application of hygiene knowledge. General practices applied by students include handwashing with soap, bathing, cleaning teeth, washing fruits and vegetables before eating them, clipping and cleaning fingernails, using sanitary toilet correctly and not eating or drinking contaminated food.

The chart below represents the percentage of students reporting hygiene related behaviours disaggregated by gender. Practices related to personal hygiene were more common among students while practices related to the cleanliness of the spaces around them were significantly lower as around 2% of the students reported not throwing waste on the ground and maintaining house cleanliness.

Figure 42: Common hygiene and cleanliness behaviours practices by students in the SoP
7.2 Hand-washing practices

About 70% of the students reported washing their hands after going to the bathroom. More girls (73.4%) reported washing hands after using the bathroom compared to boys (65.6%). Female students (70.9%) also reported washing their hands before eating; more than boys (59.1%). However, more male students (50%) reported washing their hands after playing compared to female students (39.5%).

Regional differences were also apparent as more students in the West Bank reported washing hands after using the bathroom and before eating compared to Gaza. Gaza students washed hands after playing (52%) more than West Bank students (42%).

A larger percentage (38%) of the students surveyed reported washing their hands 4-6 times in the past 24 hours and another 18% reported washing hands from 7-9 times daily. About 16% reported washing their hands 1-3 times only and about 28% reported washing their hands more than 10 times in the past 24 hours.

7.3 Bathing practices

Students in the SoP bath mostly every two days (41%) and every three days (26%). About 21% of the students reported bathing daily and 12% of the students reported bathing once a week with slightly more males reporting that as compared to females.

![Figure 43: Frequency of bathing among students in the SoP](image)

Bathing daily was more common among male students from secondary schools and was highest in Jericho district with about 60% of the students reporting that.
7.4 Brushing teeth

More than 50% of the students surveyed clean their teeth daily. The percentage of female students (59.4%) cleaning their teeth daily is higher than that of male students (42.4%).

Brushing teeth daily was lowest at camp-based and boys schools. An additional 18% of the students reported brushing their teeth on most days and another 26% reported brushing their teeth on some days. Only 4% of the students reported never brushing their tooth which is a more common practice among boys (5.6%) compared to girls (3.1%). Never brushing teeth was also most common among students whose male and female guardians had no formal education (15.6% and 14.1% respectively).

Almost all students (98.1%) use toothpaste and a tooth brush to brush their teeth and the remaining reported using water and a toothbrush. More students brush their teeth in the morning (71.4%) compared to cleaning teeth before going to sleep (65.7%) and after eating (45.1%)

![Figure 44: Frequency of cleaning teeth among students in the SoP](image)

7.5 Discussion of hygiene behaviours with others

For both male and female students sharing information about hygiene occurs mostly with the mother (89.4%) followed by the father (48%) and then the sisters (33.1%) and brothers (24.6%).

Personal hygiene topics such as washing hands on all needed occasions, bathing, clipping nails and cleaning teeth were more frequently discussed with family members compared to any other topic.
Figure 45: Percentage of students discussing hygiene practices with family members by topic

### 7.6 Other hygiene behaviours

#### Washing fruits and vegetables before eating them

79% of students reported washing fruits and vegetables always. Boys (74.5%) were less likely to wash them always compared to girls (83.4%). An additional 20% of students reported washing them often or sometimes. Only 1.2% of the students reported never washing fruits and vegetables before eating them and this practice was more common among male students (1.6%) compared to female students (0.8%).

#### Cleaning hair

Most Students (87.1%), especially girls (90.6%) tend to clean their hair and take care of their head on daily basis. Another 10% reported doing so every two or three days and 2% on weekly basis.

#### Clipping fingernails

Most students 82.8% report clipping their fingernails weekly. About 5% report clipping them every 3 days and almost 8% report clipping them every two weeks with no significant difference between male and female students.

#### Not spitting on the ground

Spitting on the ground appears to be a common practice among male students primarily. More than 90% of the female students reported never having to spit on the ground which is significantly higher than their male counterparts (57%).
Covering the nose and mouth when coughing or sneezing

Almost all students reported covering the nose and mouth when coughing or sneezing. More than 72% of them do so always with more female students (80.5%) reporting that compared to male students (63.9%).

Changing underwear

62.1% of all students reported changing underwear on daily basis compared to 20.5% who reported changing them every two days and 13.2% who reported changing them every three days. Changing underwear on daily basis is double among female students (81.9%) compared to male students (41%). About 4% of the students reported changing underwear once a week. These students were younger boys from basic schools.

No major significant differences were noted in the above health behaviors among students in the West Bank and Gaza.
Conclusions

- While knowledge of the importance of handwashing with soap in essential situation such as before eating and after using the toilet was common among about 90% of the students, practicing hand-washing in these situation was reported by 70% of the students. Knowledge is higher than actual practice and students may be inclined to reporting the correct practice when in fact they do not practice it.

- Cleaning teeth with a brush and toothpaste is a common practice among students but only 50% clean them on daily basis.

- The majority of students bathe every two to three days, more than 80% take care of their hair daily and about 60% change underwear daily and clip their nails weekly.

- Most students wash fruits and vegetables before eating them, 80% of which do so always.

- Almost all student reported covering their mouth when coughing and sneezing but about 30% do not do so always.

- Spitting on the ground is a common practice among more than 40% of male students and is not common among female student.
7.7 Menstrual hygiene practices among girls

Three focus groups were conducted in Nablus, Ramallah and Gaza to identify common hygiene practices at school and challenges faced by girls during menstruation. Menstrual hygiene management in schools was integrated as a new element in the 2015 KAP study in order to unpack the reasons that may cause higher refusal rates to use school toilets among girls in comparison to boys, and also to start seriously addressing the often disregarded issue of menstrual hygiene. Each focus groups was conducted with 10-12 girls from 7th to 10th grade and were moderated by female researchers from Alpha International. A total of 33 girls participated in these focus groups which took place in December 2015.

Situation of Bathrooms

Most girls reported that toilets at their schools were not clean, had a bad smell and lacked the minimum standards for toilets. Common themes among all three focus groups were:

- Lack of privacy because of the absence of door locks
- Lack of cleanliness, wet floors and bad smell
- Lack of toilet paper and soap
- Lack of safety because toilets are located outside the school building

Water availability was a concern in the Gaza focus group while others noted that water is available but the flow was weak (no pressure).

Girls reported that janitors are mainly responsible for cleaning the toilets. Toilets are open from the morning until the end of the school day but some girls mentioned that toilets are sometimes not open in the early morning and they are closed early before the end of the school day because the janitors want to finish work early.

The ideal toilet for girls should be a European toilet (not oriental), with hand-washing basins, clean, smells good, has waste bins, and has toilet paper and soap all the time. Girls also noted that toilets should be safe with door locks and closed from the sides and ceiling and should be well-lit. Water should be available all the time and cabinets with all sanitary needs for girls should be provided. Some girls also mentioned that an ideal bathroom should have mirrors, stepping rugs and colored walls.

Using toilets in the school

Almost all surveyed girls reported using toilets in the schools. However, almost all girls agreed that they avoid using the toilets and use them only when necessary and they would rather wait to go home. Girls prefer not to go alone, either for safety reasons because toilets are not close to the classrooms, or to stand by the door because of the lack of locks, or to help one-another when they have their period. Girls are generally allowed to go to bathrooms during recess or during the 5-minute breaks between classes. They are not generally allowed to go during classes, but they all agree that when they insist on going to the toilet they are allowed to, even during classes.
**Menstrual hygiene practices**

Most girls agree that the common sources of information for menstrual hygiene management is the mother, older sister, counselor or school health committee teacher. Friends were also a source of information. Most girls said they can identify other girls having their period at school because they look stressed, or have pain in the stomach or back or visit the toilets more often.

When faced with the scenario of having their period unexpectedly at the school, responses varied among girls including:

- Seeking help from a close friend to get sanitary pads
- Going to the counselor or the health committee supervisor and ask for sanitary pads
- Managing to use toilet paper so that no one notices.

Girls reported disposing of the sanitary pads in different ways:

1. Directly throwing them in the trash especially when they do not have toilet paper or plastic bags
2. Wrapping them with toilet paper or the pad cover and throwing them
3. Wrapping them with black plastic bag and throwing them
4. Girls reported that some girls flush them in the toilet causing them to clog.

Some girls also reported unsanitary practices by “other” girls like throwing sanitary pads on the floor. These behaviours were raised as a concern when sometimes the toilets are shared with younger girls who are negatively affected by seeing these pads.

The challenges faced by girls in schools during menstruation include:

- Lack of sanitary pads: girls have to go and ask for pads from the counselor or school health teacher or from friends. In Ramallah focus group, girls mentioned that they can buy pads from the school canteen but that option was not mentioned by girls in the other focus groups.
- Lack of door locks: girls do not feel comfortable going to the toilet alone.
- Toilets are far from the classroom: girls do not feel safe going alone and prefer going less often or wait until recess to have their friends accompany them.
- Girls face problems cleaning blood stains from their clothes because of lack of water (mainly in Gaza) and lack of soap or because wash-basins are located outside the toilets and they feel embarrassed.
- Girls suffer from pain and stress during menstruation.
- Girls agree that the best way to handle the above challenges is to go to the school counselor or health committee teacher and seek help. Other suggestions to deal with challenges during periods included:
  - Having separate bathrooms for older and younger girls.
  - Having sanitary cabinets with all needs such as soap, toilet paper, sanitary pads and plastic bags for proper disposal of sanitary pads available in the toilets.
• Having washbasins inside bathrooms not outside to help clean blood stains whenever necessary.
• Having water available at all times.
• Ensure that waste bins are available and have them with covers and plastic bags inside for cleanliness and easier collection.
• Having door locks inside the toilets to ensure privacy when going to the bathroom.
• Having pain killers available at the school with the counselor or health committee teacher for managing pain during menstruation.
• Having constant supervision over toilets to ensure that cleanliness is maintained at all times.

Conclusions

• While the majority of surveyed girls reported using toilets at the school, all were in agreement that they do so only when they have to and prefer not to go because of lack of cleanliness, unpleasant smell, lack of privacy and lack of toilet paper and soap. They also prefer not to go alone.
• Girls are allowed to access to toilets throughout the school day although more preferably during recess and between classes. Access to toilets may not be optimal in the early morning and during the last period before the school day ends.
• All girls were able to identify proper menstrual hygiene management behaviours but also reported witnessing occasions of improper handling of sanitary pads in school toilets.
• Challenges faced by girls during menstruation at school include the lack of sanitary pads, lack of privacy in toilets and dealing with the stress related to pain or blood stains on their garments.
• Most girls identified ways to deal with these challenges and preferred seeking help from the female school counselor or health committee coordinator.
• Girls also recommended continuous maintenance and supervision over the cleanliness of school toilets and having the necessary supplies needed for general hygiene and specifically for menstrual hygiene management.
8. PRE /POST WASH ANALYSIS

This section provides a comparison of the results of the 2015 WASH KAP survey with the baseline conducted in 2011.

8.1 Overall school environment

During field observations, more schools in 2015 were observed to be free of solid waste inside and around the school. Significantly more schools had paved roads around them in 2015 compared to 2011. It is, however, worth noting that camp-based schools have been observed to have the worst surrounding environment with more than 37% of them having rubbish and stagnant water in their surroundings. Camp schools also have the lowest percentage in terms of paved roads surrounding them.

![Figure 47: Overall school environment assessment through direct observation in 2011 and 2015](image)

According to principals, the structural conditions of the schools were better in 2015 in terms of safety and the conditions of the stairs. More than 99% of the school principals thought their schools were clean with no changes between 2011 and 2015. More principals in 2015 reported classrooms to be in good condition on all aspects compared to the baseline survey.
8.2 Availability of WASH facilities

While student-to-handwashing facility ratio showed a slight improvement in 2015 compared to 2011, the ratio is still sub-optimal and does not meet MoEHE guidelines. In Gaza, the ratio of students to hand-washing facility actually increased in 2015. Field observation showed that the availability of soap is a concern and actually dropped in 2015 for a large percentage of schools as 67% of female and 82% of male hand-washing facilities lack soap.

Student-to-toilet ratio also slightly dropped in 2015 compared to the 2011 baseline with one toilet serving 42 students in the West Bank and 71 students in Gaza. Almost all male and female toilets had doors. Field observation showed that the conditions of the toilets did not improve compared to the baseline. Toilet paper availability in these toilets dropped in 2015 compared to baseline with 94% of male toilets and 51% of female toilets having no toilet paper. About 15% of female toilets and 55% of male toilets do not have waste baskets and more than 21% of the toilets observed were not clean and smelled bad.

Student-to-water point ratio was higher in 2015 compared to 2011 and the situation is of greater concern in Gaza compared to the West Bank. Gaza has triple the number of students (158) served by each water point at school compared to the West Bank.
Figure 49: Changes in the availability of WASH facilities in the SoP between 2011 and 2015

Figure 50: Percentage of schools with no toilet paper and soap
Water availability for all purposes improved in 2015 while sources of water and water treatment in schools remained the same between 2011 and 2015. Water availability improved as only 13% of principals reported not having water in the past two weeks compared to 20% reporting the same in 2011. Similarly less principals reported not having water at the school in the past six months.

Availability of water storage tanks in schools remained the same in 2015. More than 99% of principals reported having those tanks covered compared to only 86% at the time of the baseline. The use of plastic tanks increased and the use of metal tanks decreased. All surveyed principals reported having clean water storage tanks compared to 95% at baseline. More principals reported that tanks are washed from the inside compared to the baseline and the frequency of cleaning tanks once a semester also increased. No significant changes were noted in the methods of cleaning. More schools reported testing water in 2015 compared to the baseline.

8.3 Hygiene related education at schools

All surveyed schools have school health committees and all schools continue to offer hygiene education. Significantly more schools reported offering such education on daily basis in 2015 compared to 2011. The percentage of school having environment clubs also increased by about 20% in 2015 compared to 2011.
More teachers also reported participation in hygiene related education in 2015 compared to the baseline with a less percentage of them reporting needing incentives to participate in such activities. Additionally, more teachers also reported being responsible for hygiene related activities outside the curriculum and being members of health committee or environment clubs at the school in 2015.

The availability of resources for teachers to conduct WASH education was also better in 2015 compared to the baseline. Moreover, significantly less teachers reported needing training to promote good WASH practices at the school compared to 2011. While the need for training in personal hygiene topics was more than 60% in 2011, only 40% of the teachers reported a need for such training in 2015. Using, storing and preserving water were the most requested topics for teacher training.
8.4 Students’ knowledge, attitudes and practices about hygiene

Students’ knowledge

More students (96%) reported being exposed to information about hygiene in 2015 compared to 2011 (87%). The mother or female caregiver remained the most prominent source of hygiene information for students. In 2015, more students are aware of the presence of health committees and environmental clubs at their schools. However, participation in health committees remained the same while participation in environmental clubs increased in 2015 in line with the increased prevalence of such clubs at schools. About 89% of the student think the activities of these committees and clubs are very beneficial, which is a higher percentage of students reporting the same in 2011.

In 2015, more students reported having information about hygiene and cleanliness in their school curriculum in 2015 compared to 2011. Moreover, a higher percentage of students reported having hygiene campaigns in their schools although participation in these campaigns remained the same between 2011 and 2015. However, significantly more students (90%) reported having hygiene related activities at their school at least once a week in 2015 compared to 79% in 2011. Verbal direction, posters and wall magazines remained the main mode of hygiene education activities at schools. More students are able to link the importance of cleanliness to health reasons in 2015.

In 2015, about 93% of students were able to identify at least one cause for diarrhoea with the majority identifying two to four causes. Similar to 2011, more than 90% of students were able to identify the need for hand-washing with soap before eating and after using the toilet. Students were also knowledgeable about proper toilet use.
Students’ attitudes

Overall refusal to use school toilets dropped from 43% in 2011 to 35.5% in 2015. However, the frequency of “always refusing to use toilets” was higher in 2015 compared to 2011. In 2015, refusal to use toilets ranged from as low as 10% in Tubas up to 72% in Jerusalem and Jerusalem suburbs. Reasons for refusal to use toilets did not change from 2011 to 2015. Bad smell, lack of soap and lack of toilet paper were the most common reasons, although the percentage of students reporting these reasons dropped in 2015 compared to 2011.

While more students in 2015 report the availability of water for drinking at the school, fewer students reported drinking water from the school faucets in 2015 with more students bringing water from home in their own bottles compared to 2011.

Attitudes towards cleaning did not change between 2011 and 2015. Students mostly participate in cleaning classrooms and school grounds and fewer students help in cleaning school surroundings and drinking areas. Only a small percentage of students reported helping in cleaning toilets. More students in 2015 reported that their parents provide support for cleaning and hygiene activities in schools.

Students’ practices

In 2015, 98% of the students reported applying or practicing what they learn about hygiene and cleanliness outside the school.

The percentage of students cleaning their teeth daily increased from 41% in 2011 to 51% in 2015. Moreover, the percentage of students reporting never cleaning their teeth also dropped in 2015. Both results indicate that there is improvement in the practice of cleaning teeth among students. Similarly, slightly more students report washing fruits and vegetables before eating them and less students report never doing that.

All hygiene behaviors assessed in the survey improved in 2015 compared to 2011. More students reported bathing and changing underwear daily, cleaning their hair daily, clipping their fingernails once every week and never spitting on the ground.

![Figure 55: Hygiene practices among students between 2011 and 2015](image-url)
Conclusions:

- Overall, surveyed schools in 2015 were rated as being structurally very good and school grounds and their surroundings were cleaner in general as compared to 2011.
- WASH infrastructure availability is still not optimal in 2015. Neither toilets, hand-washing facilities nor drinking points are adequate at schools.
- WASH supplies are still lacking in 2015 as a large percentage of schools reported not having soap and toilet paper.
- Water availability for all purposes improved and more schools reported testing the quality of water in 2015 as compared to 2011, although there are no uniform procedures for testing water quality.
- All schools offer hygiene education to students and significantly more schools are offering it on daily basis in 2015 than in 2011.
- All surveyed schools have health committees and more schools have environment clubs in 2015.
- Teachers’ participation in health committees, environment clubs and in providing hygiene education to students increased in 2015 as compared to the 2011 baseline. Significantly less teacher reported needing training in hygiene related topics in 2015. The availability of resources for hygiene education was also better in 2015 than in 2011.
- Parental participation and student participation in hygiene activities at the school did not change in 2015 except for students’ participation in environment clubs, which increased.
- Access to hygiene education and information and knowledge of hygiene related topic remains high among students in 2015.
- Refusal to use school toilets dropped between 2011 and 2015, but is still significant.
- Use of personal water bottles for drinking is more common in 2015.
- Almost all personal hygiene practices among student improved in 2015 as compared to 2011, but there is still room for further improvement.
9. RECOMMENDATIONS

9.1 WASH infrastructure and supplies

- There continues to be a clear need to increase the number of available toilets, hand-washing facilities and drinking faucets in schools. It is therefore suggested that the MoEHE budgets and leverages donor support to accommodate the building of new WASH facilities in government schools.

- At the school level, it is recommended that the principals should play a greater role in leveraging community support to build, enhance and maintain existing WASH facilities.

- MoEHE’s 2015 school environment policy documents need to be shared with principals to enhance their capacity in identifying and addressing WASH related gaps in their schools. Continuous follow-up regarding the communication and application of this policy needs to be embedded within the MoEHE work plan to ensure compliance and to identify areas where corrective action is necessary.

- An investigation of the reasons underlying the lack of WASH supplies needs to be conducted. Once identified, these reasons need to be addressed. While budgetary concerns can be one of the underlying reasons, principals need to plan and budget for WASH supplies in their annual school budget and could leverage in-kind community support for the provision of these supplies. Other reasons related to students’ behavior need to be addressed through continuous education and follow-up.

- While there are no clear local guidelines for the number of cleaning staff based on the number of students, the data shows that in Gaza there is a need for increasing the number of cleaning staff, especially in basic girls schools. Standards for selecting, training and supervising cleaning staff in schools are also necessary.

- Enhance supervision over the cleanliness of WASH facilities in schools, district and ministry levels and provide incentives and recognitions for schools maintaining exemplary cleanliness standards of WASH facilities to create momentum among schools to compete in WASH related standards.

- Increasing the water storage capacity in schools in Gaza to ensure the consistency of water availability as it was still a concern in 2015.

- Water quality management in schools needs to be unified across all government schools and communicated to the school administration. While the guidelines and instructions may be available at the ministry and at the district level, the application of these procedures and the communication to the school administration needs to be enhanced.

- Guidelines for corrective action if water testing results did not meet national standards for water quality need to be well defined and communicated to the school administration.

9.2 WASH activities in schools

- Maintain the high level of hygiene education offered in schools by maintaining and enhancing the activities of health committees and environmental clubs in schools.

- Maintain the high level of teachers’ participation in hygiene education and continue providing the necessary resources for such education. More focus should be given on the
use of interactive activities in which students are directly involved in learning.

- Define a clear mandate for health committees and environmental clubs so that their activities are not overlapping.

- Provide WASH education for janitors.

- While instructions to celebrate global WASH related events such as World Water Day and Global Hand-washing Day are generalized to all schools, the MoEHE needs to provide constant reminders and follow-up to ensure that activities are carried out at the school level and to utilize these occasions to enhance hygiene knowledge and practice among students.

- Enhance parental and student participation in WASH related activities at the school by having joint parent-student events more frequently at the school, or utilize other occasions where parents are present at the school to address hygiene education. Schools can also coordinate with local community organizations to enhance community participation in WASH related education in schools.

- Enhance menstrual hygiene management at school by providing schools with the necessary resources including education for teachers and counselors on providing proper support for girls since they were the preferred support system expressed by girls.

9.3 Students knowledge attitudes and practices

- Maintain the high level of hygiene knowledge currently prevalent among students by keeping them constantly engaged in hygiene education and WASH related activities at the school and employing more interactive methods for offering such education.

- Enhancing supervision over the situation of toilets can significantly impact students’ attitudes towards toilet use.

- Continue promoting the use of personal water bottles for drinking.

- Continue promoting and enhancing personal hygiene practices among students and recognize students for personal hygiene.

- Making sanitary pads available at schools for adolescent girls.

- Activate the role of counselors in WASH related education and activities.

- Involve students in a design competition for WASH facilities.

- Ensure WASH facilities are age-appropriate and separate facilities for younger students from those for older students especially at girls’ schools.