WASH EMERGENCY ASSISTANCE IN JORDAN SCHOOLS

REPORT ON ACTIVITIES FROM PHASE I:

ASSESSMENT OF WASH FACILITIES IN SCHOOLS

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GENERAL SITUATION

On-going military operations in Syria and the further deterioration of the security situation continue to force Syrians flee their country to neighboring countries such as Jordan. Many primary schools in Jordan cited significant excess in number of Syrian students enrolled in the Jordanian education system. Consequently, the increasing number of Syrian students attending the schools has caused an overburden to the public schools and hence an overload on the available Water, Sanitation and Hygiene (WASH) facilities.

In response to the crisis, UNICEF and JEN endorsed a project titled "WASH Emergency assistance in Jordan Schools" in February, 2013 for a planned period of seven months, from 1st March to 1st October, 2013. Thus, the project aims to improve the conditions of WASH facilities in some public schools in Jordan. The project objectives will be achieved by assessing the capacity of schools' WASH facilities, renovating some of those WASH facilities in addition to conducting hygiene promotion activities in the selected schools in five governorates in Jordan where there is a concentration of Syrian families settled in host communities in these cities.

This report highlights the different activities undertaken under the 'Assessment' stage of the project. The report describes the general context in which the project operates, the methodology utilized and finally concluded with the main findings of the schools assessment.

Together with conclusion, the report not only aims to describe the gaps in schools' facilities, but it is also encourages the decision-makers in government and international organizations to act on the findings, and furthermore, to develop projects or humanitarian interventions that specifically focus on creating opportunities for Syrian refugees as well as host communities in Jordan.

BACKGROUND

Since March 2011, the Government of Jordan has maintained an open border policy to host Syrians seeking refuge and safety from the Syrian conflict. According to UNHCR statistics[1], the total number of persons of concern residing in Jordan has reached 296,967, with 242,162 refugees already registered and 54,805 awaiting registration with UNHCR. Syrian refugees in the host communities are largely settling throughout Jordan, with a concentration in northern governorates, hosting more than 120,000 in northern region. This puts an increased strain on existing resources and on the coping capacity both of refugees and host communities[2]

A major limitation to water, sanitation and hygiene (WASH) delivery of services to refugees and host communities alike is the overall water shortages in Jordan. In host communities outside the camps, an estimated number of 120,000 peoples are staying within host communities, relatives and others[3]. Given the increasing influx of new arrivals, UN agencies have not yet been able to reach all the pockets of refugees in

[1] UNHCR. (Jan-June 2013). *Syria Regional Response Plan.*

[2] UNHCR. (Jan-June 2013). *Syria Regional Response Plan* .

[3] UNHCR. (Jan-June 2013). *Syria Regional Response Plan.*

Jordan or even within the established camps, namely among new arrivals that arrive in great numbers, for whom so many needs remain unmet or partly met, particularly among the refugees living in urban settings.

In this situation, one important risk to refugee and host communities is the threat to public health, resulting from poor hygiene practices and overloaded sanitation systems, which could easily lead to an increase in morbidity and mortality rates and to a spread of water-borne diseases and epidemics.

In the education context, the Jordanian government is accepting Syrian students' refugees in public schools. Due to the increasing numbers of students attending Jordanian schools, water access, poor hygiene and number of latrines are becoming a real concern for the Government of Jordan and international organisations. Hence, students' enrolment and attendance depend on functional, hygienic and sufficient WASH facilities. A low attendance rate for girls in particular is due to either lack of WASH facilities and/or bad conditions[4].

According to MOE's school list provided in December, 2012, 474 schools were selected from big list of school based on the number of Syrian students. These schools located in several governorates of Jordan where the majority of Syrian refugees are in dire need for urgent humanitarian assistance. Due to the limited fund, JEN and UNICEF are willing to select 150 schools as a first stage for immediate WASH emergency intervention. Additional schools for the second phase will be renovated once funds secured. The selection of schools will be based on predefined criteria whereas the indicators and standards are applicable to the specific settings of JEN and UNICEF activities, but closely correspond to those of the SPHERE (2004) and have clear linkages to the pursuit of the Millennium Development Goals. Once renovated and hygiene promotion activities are provided, these schools can become oases of physical and psychological peace for Syrian children who have experienced what no children should have. Jordanian students will also benefit from this project.

ASSESSMENT OBJECTIVES

i. Conduct a participatory assessment of 474 public primary schools in Amman, Maan, Mafraq, Zarqa & Irbid to identify the real WASH needs in these schools;
ii. Design and develop a database to store data in Management Information System (MIS);
iii. Enter data and generate reports & worksheets;
iv. Map the assessed schools as per the specified priority areas.

[4] UNHCR. (Jan-June 2013). *Syria Regional Response Plan.*

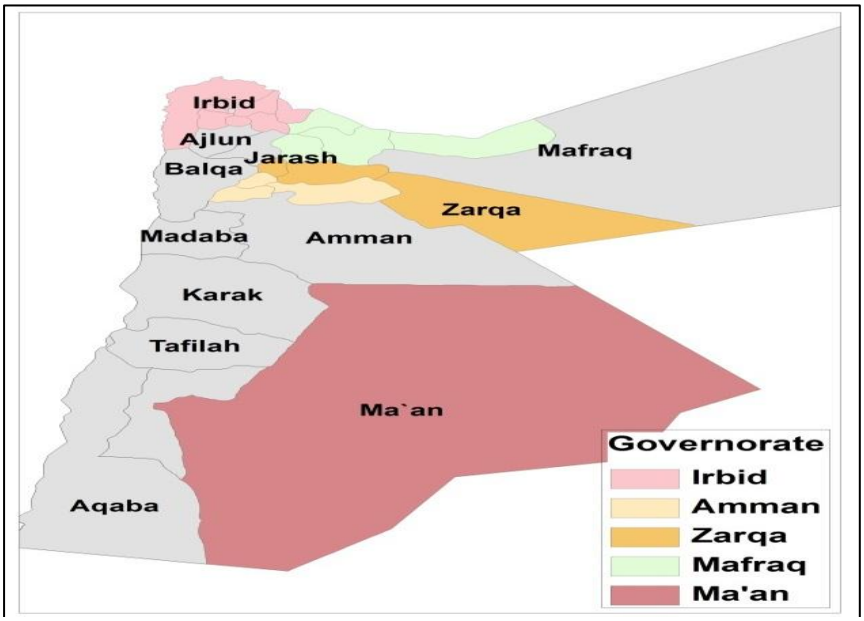

Figure 1: Location of Assessments

ASSESSMENT METHODOLOGY

- **Time frame**

The assessment process was done in two stages: the first stage began on 30th of December,2012 and was completed in the end of February 2013. The second stage of assessment started on 25th of March, 2013 and completed in the end of April, 2013. Average 15 schools per day were visited. There was nearly one month in the first step until starting assessment for Amman, Zarqa and Maan after completion Irbid and Mafraq assessment due to the process of obtaining MOE authorization.

- **Assessment tools**

✓ List of 474 schools targeted for assessment in 22 districts in 5 governorates

✓ Assessment Questionnaire Form covers six key areas:

1) General school information;
2) Latrine facilities;
3) Water system;
4) Water quality;
5) Waste disposal and sewage system; and lastly
6) Hygiene and health practices.

Each area is assessed through a specific set of questions and definitions to evaluate the corresponding indicator.

✓ Field work and data collection carried out by 9 surveyors/enumerators, supervised by 2 team leaders.

✓ Interviews with school headmasters/ headmistresses and staff of Directorates of Education

✓ Data collection was carried out by the surveyors/enumerators who had visited each school site and conducted interviews with the school headmasters, filled and completed the assessment forms by physically verifying the conditions of school facilities. Each form, once completed, was signed by the school headmaster as well as stamped to ensure data authentication.

✓ A random field evaluation visits were made by three staff members of JEN (project officer, engineer and project coordinator) to verify the credibility of the information in the questionnaire. This process took one week to visit ten schools each day. UNICEF made visit to randomly 50 schools to assure data quality.

- ✓ Two levels of data verification were implied to screen the errors and reduce discrepancy to the minimum; the first step was done by data entry team and the second step was done by database verification commands to control the data entry and reduce data conflictions.

- **Sample selection**

The sampling included all schools in the 22 districts of 5 Governorates addressed as hosting high population of Syrian refugees' students by the Government of Jordan. A list of schools was prepared by MoE and UNICEF with consideration to the geographical distribution of schools across targeted districts.

The list of schools was provided by the Ministry of Education (MOE) in collaboration with UNICEF for schools that host a considerable number of Syrian refugee students. The original list consists of 474 schools and after the assessment has been done, schools have been classified under the four categories based on the condition of those schools.

Governorate	District	Total	Governorate	District	Total
Amman	Al Qweismeh	13	**Mafraq**	Al Khaldeya	2
	Amman	156		Bal'ama	2
	Marka	22		Mafraq	27
	Sahab	16		Sabha	2
	Wadi Alseer	8		Sama Serhan	14
Amman Total		**215**	Mafraq Total		**47**
Irbid	Bani obaid	8	**Zarqa**	Al Hashmya	5
	Irbid	55		Alghowayreyah	1
	Ramtha	60		Barkh	1
	Tayybeh	1		Edlail	3
	Wastiyyeh	6		Rusaifah	14
Irbid Total		**130**		Zarqa	48
Ma`an	**Ma'an**	**10**	Zarqa Total		**72**
Ma`an Total		**10**	Grand Total		**474**

Table 1: Distribution of surveyed schools per districts

- **Assessment Process**

The Questionnaire Form was developed in collaboration between JEN and UNICEF. The Ministries of Education endorsed the questionnaire for field survey. Arabic version was utilized in field to ensure the transparency, better understanding and communication in collecting the data between the schools administration and surveyors.

The authorization for Mafraq and Irbid assessment was given by MOE in November, 2012. Another authorization for Amman, Zarqa and Maan was approved in the beginning of February, 2013. Prior to field work, JEN communicated with DOE directors to request the facilitation of assessment.

Field work and data collection carried out by 9 surveyors supervised by 2 team leaders distributed over five governorates. An authorized staff from related DoEs accompanied the surveyors to facilitate their task.

The list of selected schools for the assessment was provided by UNICEF. Database design and reporting are based on schools' national-ID (which is a unique number across Government of Jordan). This had facilitated tracking schools information by JEN, UNICEF and MoE. The database was designed using Microsoft Access embedded with SQL interface. Five data-entry staff members started entering data from the completed assessment forms. Data entry was performed consecutively with data collection.

The assessment was physically completed on 30th April, 2013. The DoEs nominated qualified staff members to accompany surveying teams to assist them and guide them to schools location. UNICEF verification process showed that there are minor comments on the survey which would not affect the analysis results.

- **Data Analysis**

The main focus of this assessment is to determine and evaluate conditions of WASH facilities in schools hosting Syrian refugee students. The questionnaire has built to cover general indicators and specific WASH indicators. Below are these two categories:

A) General Indicators
   1- Number of Jordanian students
   2- Number of Syrian students
   3- Gender
   4- Number of children with disability
   5- School community (rural or urban)

B) Specific WASH Indicators
   6- Latrine sufficiency and condition Water source and storage capacity adequacy and condition
   7- Water quality
   8- Waste disposal and sewerage system
   9- Hygiene promotion

EXECUTIVE SUMMARY

- **General Condition of Schools**

The Syrian students represent 5.37% of the total number of students in the assessed schools (Table 6). The headmaster indicated that the number of Syrian students enrolled in schools in Jordan is increasing as the situation in Syria is keep deteriorating and more Syrian are crossing to Jordan. (Figure 2) shows the gender status in assessed schools and (Table 22) shows the number of disabled students in assessed schools per governorate

- **Water Adequacy/Sufficiency**

Only 7% of the assessed students get equal or more than 10 liters per day of drinking and multi-use water (Table 8). Most of the schools do not have enough water storage tanks to sustain sufficiency of water as the water supply in Jordan depends on ration system to manage the limited resources. Normally, water supply in Jordan is twice a week as an average; therefore additional water tanks are needed to cover the periods between public water supply.

- **Water Fountains and Taps**

The conditions of 18% of Water Fountains were evaluated inefficient, requiring rehabilitation, extension and repair (Table 9). Although the percentage of inefficient fountain is low, the taps in water fountain, the

existing taps, are in bad condition with leakage that require repair. This will contribute to more healthy and hygienic taps and will save water. Good quality taps should be considered to ensure sustainable and durable operation

- **Water Quality**

Results are based on information gathered from schools' headmasters rather than from water quality testing. Water quality of 1% schools appeared 'bad' while 9% appeared 'moderate' (Figure 9). On the other hand, the MoH test showed that 2% of surveyed schools have bad water results while 20% of the headmasters had not acquired any MoH results (Figure 10). Therefore the MoH test could not be included in the study because a considerable number of schools do not keep records for their test results.

- **Latrines**

4.5% of the schools have bad condition latrines or they do not have latrine at all, while 27% of the schools have moderate condition of latrine. this evaluation were made based on the condition of floors, walls, seats, doors, water pipes, drainage pipes, ceilings and washbasins (Table 20) . Most of interior fittings inside the latrines are damaged or dysfunctional. Latrine rehabilitation should cover all mentioned above.

100% of the schools have adequate condition of teachers' latrine and was considered 'good' as no damages that affect the general service of latrine were noticed.

- **Gender**

The gender issue is very sensitive in Jordan society as it considered a conservative society. 164 of surveyed schools are mixed gender, however only 62 schools have separate latrines for boys and girls. This issue needs to be considered 'upgrade activity' in parallel with rehabilitation activities. The survey shows (Table 15) that 115 out of 130 girl schools, 81 out of 180 boy schools and 109 out of 164 mixed schools do not have adequate seats (seat for 65 boy or less, seat for 35 girl or less, seat for 50 mixed gender or less).

Governorate	Boys	Girls	Mixed	Grand Total
Amman	86	59	70	215
Irbid	48	42	40	130
Ma`an	3		7	10
Mafraq	16	8	23	47
Zarqa	27	21	24	72
Grand Total	**180**	**130**	**164**	**474**

Table 2: Schools gender of assessed schools

Governorate	Number of Girls	Number of Boys	Total number of students	Percentage of girls
Amman	92164	74881	167045	55%
Irbid	41202	32368	73570	56%
Ma`an	2149	2172	4321	50%
Mafraq	8268	6462	14730	56%
Zarqa	32774	29314	62088	53%
Total	**176557**	**145197**	**321754**	**55%**

Table 3: Number and percentage of Jordanian Boys and Girls in each Governorate

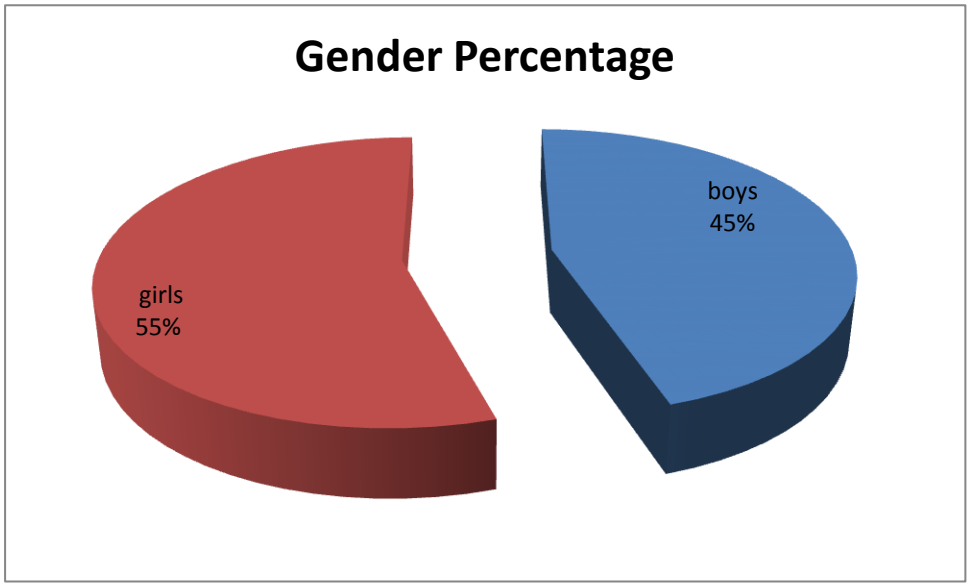

Figure 2: Percentage of Boys and Girls in assessed schools

Governorate	Number of Girls	Number of Boys	Total	Percentage of girls
Amman	4289	4187	8476	51%
Irbid	3026	2411	5437	56%
Ma`an	139	217	356	39%
Mafraq	491	751	1242	40%
Zarqa	944	813	1757	54%
Total	8889	8379	17268	51%

Table 4: Number and percentage of Syrian Boys and Girls in each Governorate

- **Number of shifts in Schools**

The schools were distributed into single and double shifts; 98% of the schools are single shift while 2% is double shift.

Governorate	No. of shifts		Grand Total
	1	**2**	
Amman	209	6	215
Irbid	128	2	130
Ma`an	10		10
Mafraq	45	2	47
Zarqa	72		72
Grand Total	**464**	**10**	**474**

Table 5: Number of Shifts in school per Governorate

- **Waste Disposal and Sewerage Systems**

70% of assessed schools are connected to the public sewerage system (Table 25). 5 schools out of 474 are neither connected to the public sewage nor have septic-tank, and 11 schools are not connected to the public sewerage and have bad septic-tank (Table 28).

8% of septic-tank in bad or moderate condition, although the percentage is not big but it is crucial for the hygiene environment of schools; therefore, the maintenance of septic-tank is considered item in schools rehabilitations (Table 26)

Overall waste disposal and drainage systems in 474 schools require rehabilitation and repairs, particularly in Ma'an Governorate (Figure 12).

- **Hygiene Promotion**

Children in 474 schools (97%) confirmed that they do receive hygiene promotion messages and practices through the school curriculum (Table 33). Yet, 14% of school staff has not received any training about hygiene promotion whereas 86% of school staff had been previously trained (Table 34).

Printed advocacy materials such as posters and messages on hygiene promotion are so important in schools to raise children awareness on hygiene practices and behavioral change. 89% of the schools received posters and messages.

ASSESSMENT FINDINGS AND RESULTS

- **Syrian students in Schools**

The boys represent 49% of total Syrian students and the girls represent 51%. It is expected that the number of Syrian children will increase by the new academic semester in September, 2013 as the situation in Syria deteriorates. This issue was also addressed by the headmaster during the assessment mission.

Ma'an and Irbid governorates represent the highest presence of Syrian students and practically in Ramtha and Wasiteyya districts, and the capacity of Jordanian schools is not designed to handle more than 10% increasing; therefore more attention is needed for these areas in coming renovation.

Government	Total No. of Students	Total of Syrian students	Percentage of Syrian students
Amman	167045	8476	5.07%
Irbid	73570	5437	7.39%
Ma`an	4321	356	8.24%
Mafraq	14730	1242	8.43%
Zarqa	62088	1757	2.83%
Grand Total	**321754**	**17268**	**5.37%**

Table 6: Percentage of Syrain students per government

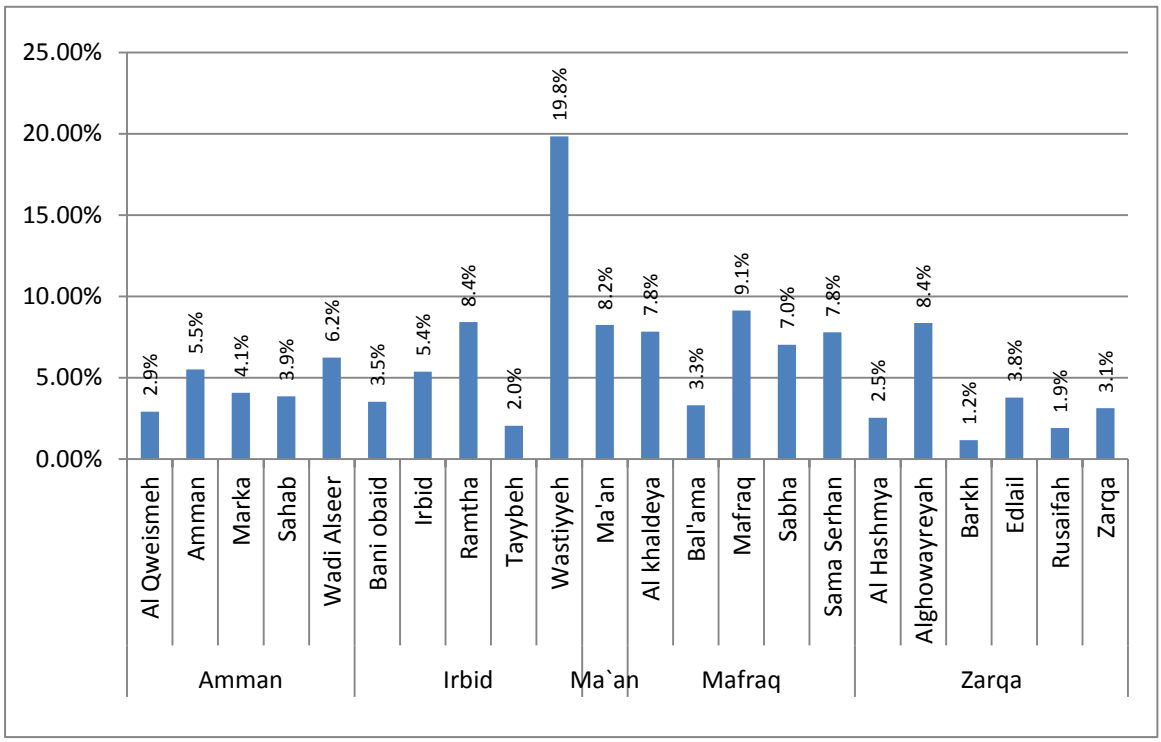

Table 7: Percentage of Syrian students per district

Through the spatial analyses, it has been noticed that the Syrian students are concentrated in two areas: north of Amman and north east of Irbid governorate. The schools in those area need to consider them high important even with low rank of damage because it is predicted that the number of students will increase dramatically

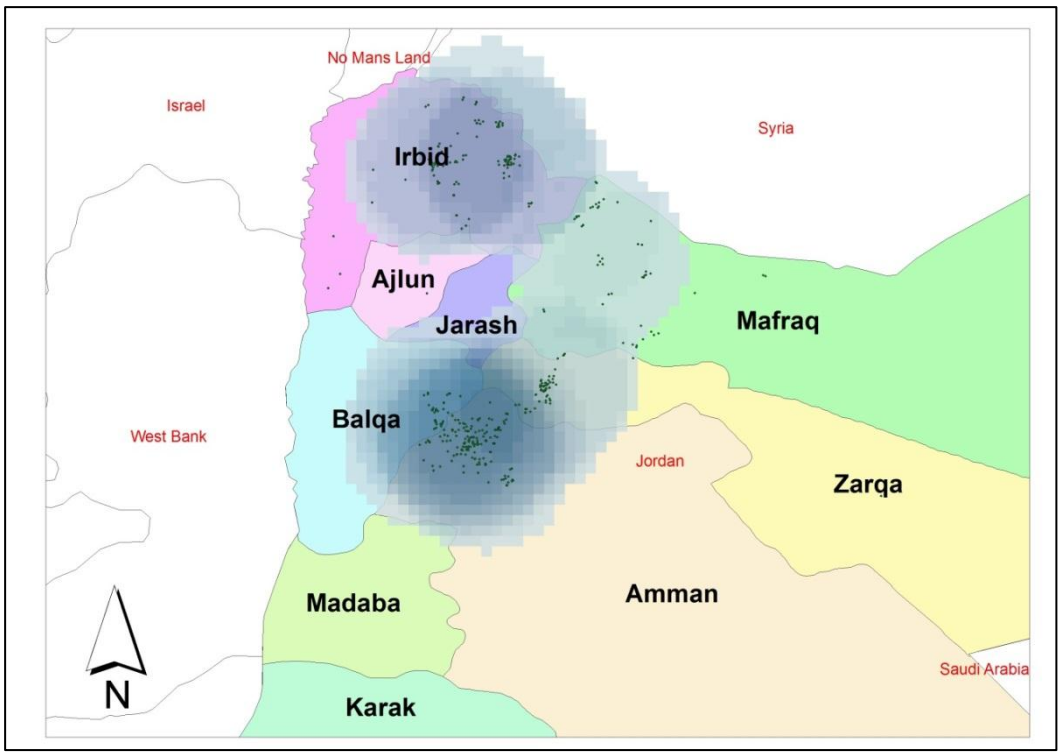

Figure 3: Density of Syrian students

The schools were prioritized into 4 categories;

1- WASH facilities have serious defects that affect the safety of the user, these schools need an immediate intervention to rebuild the latrine facilities
2- WASH facilities have considerable defects affecting water, sanitation and hygiene environment of the school and need immediate intervention to rehabilitate or maintain the latrine facilities.
3- WASH facilities have defects requiring minor repairs and maintenance that can be handled by the school
4- WASH facilities are in acceptable condition with minimal need for improvement

The future projects for priority-level 3 will influence the same community (students' families) of priority-level 2 because priority-level spatial zone 2 and 3 are almost the same; therefore and in term of community, it is recommended to make one project for priority-level 3 to organize the efforts and reduce duplicated costs.

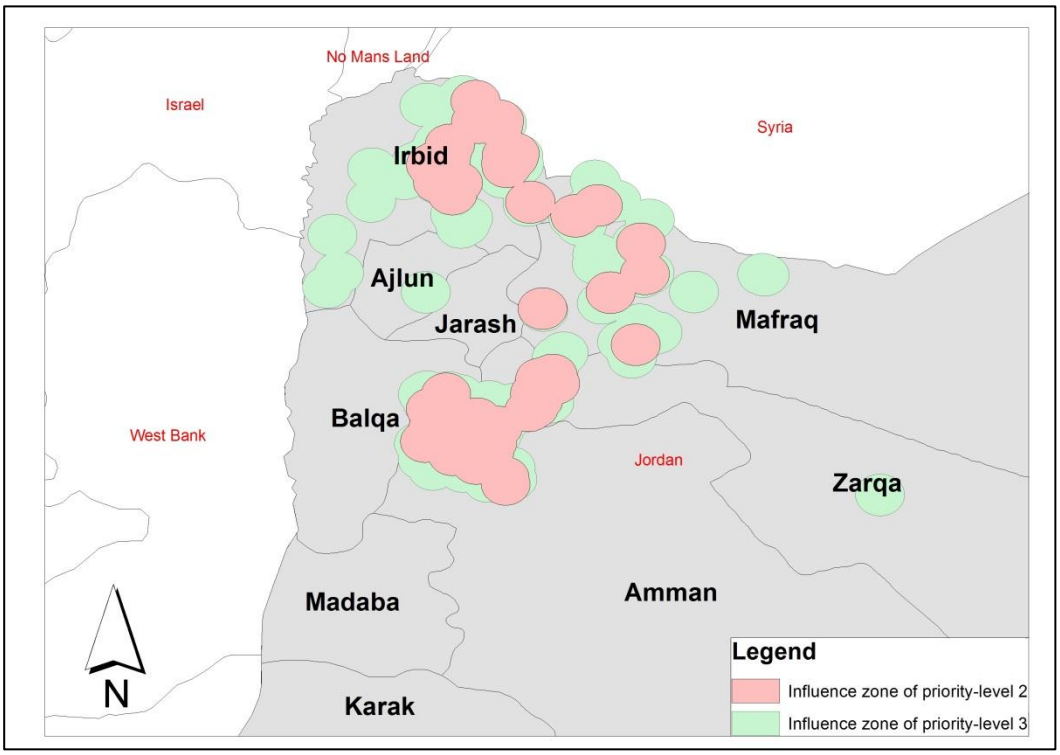

Figure 4: Influence zone of priority-levels

- **Water Source**

The usage of water in schools can be classified into three types of usage: drinking, flushing and cleaning the school facilities. Therefore, it is important that the water availability is sustainable to ensure drinking for students and hygienic environment. The assessment shows the following facts about the schools hosting Syrian students:

- ✓ 3 schools out of 474 are not connected to public water source and dependent on tankers to get water, and there is 1 school which depending on resources from neighboring owner other than tankers or public source.
- ✓ 171 schools have shortage in water delivery although they are connected to public water and using tankers to cover the shortage.
- ✓ Students in 93% of the assessed schools receive water of less than 10 liters per day. The expansion of water storage capacity is an important demand due to ration distribution of water in Jordan.
- ✓ The water fountain in 18% of the assessed schools considered 'bad' or 'not available'.
- ✓ 86% of assessed schools receive water 4 times per month while 14% is varied from zero to eight times.

Governorate	Less than 10 liters per student	Equal or More than 10 liters per student	Grand Total
Amman	206	9	215
Irbid	111	19	130
Ma`an	7	3	10
Mafraq	45	2	47
Zarqa	71	1	72
Grand Total	**440**	**34**	**474**

Table 8: Water quantity per student in assessed Schools

The spatial location of schools in which students get less than 10 liter of water, shows the areas that need attention to follow up with water authority in term of water supply. The study use 7 km as radius to locate the highlighted area.

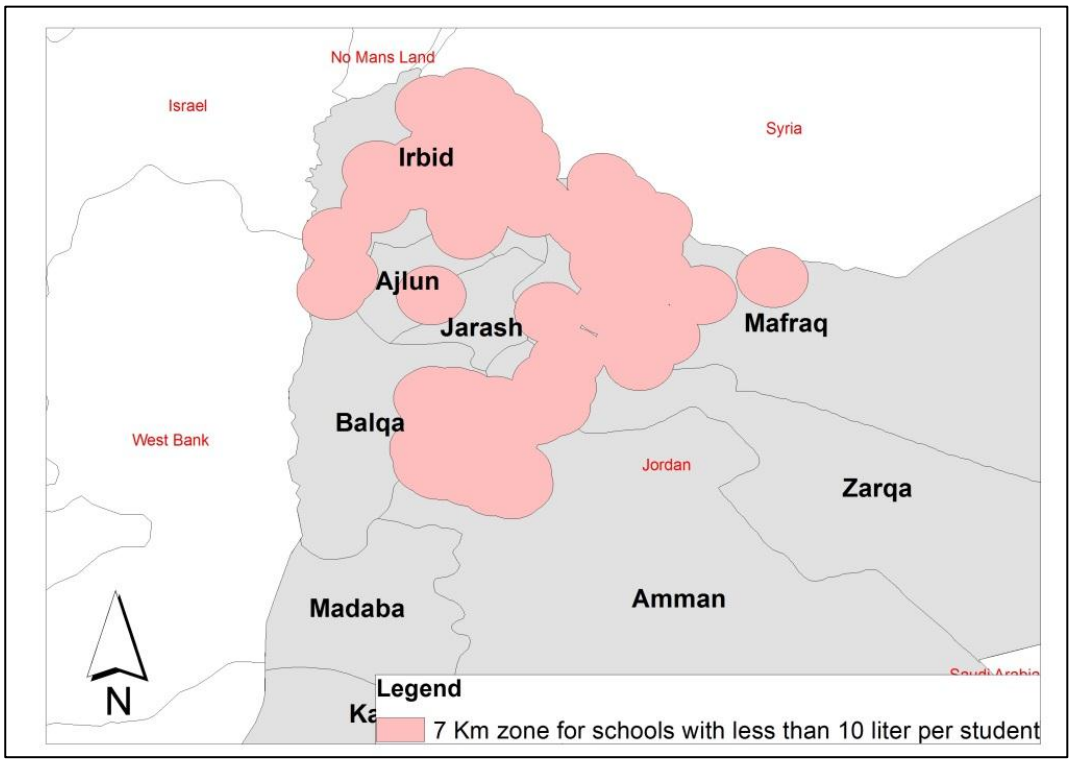

Figure 6: Buffer zone for schools with less than 10 liter for student

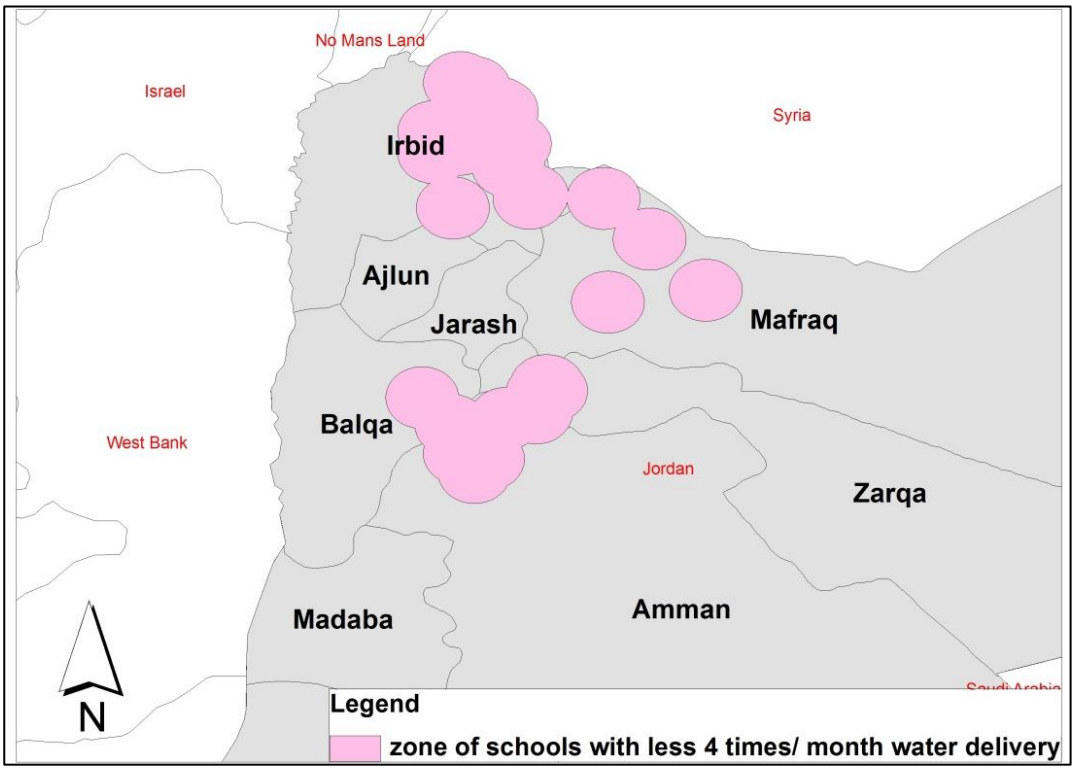

Figure 5: schools with less than 4 times/ month water delivery

Governorate	Fountain condition			Grand Total
	Good	**Bad**	**Not Available**	
Amman	179	30	6	215
Irbid	110	17	3	130
Ma`an	1	9		10
Mafraq	43	4		47
Zarqa	56	15	1	72
Grand Total	**389**	**75**	**10**	**474**

Table 9: Water fountain in assessed schools

Governorate	Public Water delivery per month									Grand Total
	0	**1**	**2**	**3**	**4**	**5**	**8**	**12**	**30**	
Amman		4	4	1	200		6			215
Irbid	2	6	10	4	106	1	1			130
Ma`an					9				1	10
Mafraq	1			3	38		5			47
Zarqa	3	3	2	2	57		4	1		72
Grand Total	**6**	**13**	**16**	**10**	**410**	**1**	**16**	**1**	**1**	**474**

Table 10: Water delivery in assessed Schools

The overall condition of water facilities and utilities in assessed schools is measured by summing up the weighting of the following indicators:

Item	Weight
Water Source	30
Liter per student	30
Tankers per week	5
Fountain condition	30
Accessibility of disabled to water fountain	5
Total	**100**

Table 11: items weights for water utility evaluation

The below table shows how the water utility ranked based on overall weight

Weight	Evaluation
Less than 50	Good
Equal or more 50 – Less 65	Moderate
Equal or more 65 - Less 80	Bad
Equal or more 80	Very bad

Table 12: evaluation scale of water utility

It is noticeable that the water system/supply is an issue in the surveyed schools. The effect of this issue can be decreased by: expanding the capacity of water storage, maintaining the internal network to reduce

water losses, increasing the awareness of water conservation in schools and finding alternative source of water for schools.

governorate	Overall water condition				Grand Total
	Good	Moderate	Bad	Very bad	
Amman	179	28	8		215
Irbid	112	14	3	1	130
Ma`an	4	3	3		10
Mafraq	42	3	2		47
Zarqa	56	12	3	1	72
Grand Total	**393**	**60**	**19**	**2**	**474**

Table 13: overall condition of water utility

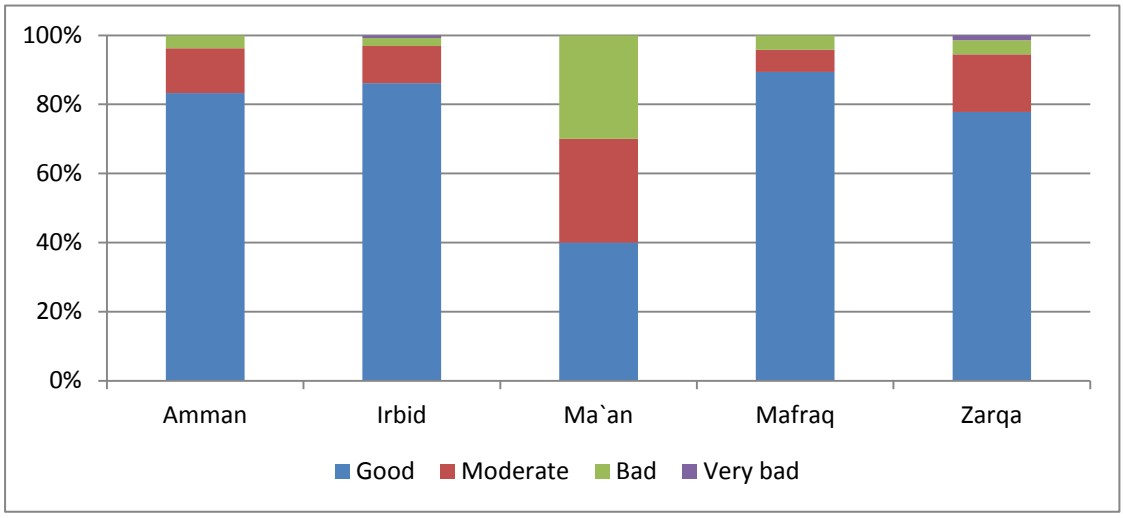

Figure 7: difference in overall condition of water utility

- **Water Quality**

The water quality is very important issue as contaminations and water- borne diseases may severely affect the students' health. Throughout the assessment process, the surveyors were asking the administrative staff about their opinion about the water in terms of odor, color and test. No test has been done by the surveyors to check the water quality.

The assessment came up with 90% of the assessed schools have 'good' water quality while 8% and 2% have 'moderate' and 'bad' water quality, respectively. Although bad and moderate quality percentage is almost 10%, it still represents a high number in terms of hygiene and general health.

Governorate	Good	Moderate	Bad	Grand Total
Amman	201	14		215
Irbid	116	13	1	130
Ma`an	8		2	10
Mafraq	41	5	1	47
Zarqa	61	9	2	72
Grand Total	**427**	**41**	**6**	**474**

Table 14: Quality of Drinking Water in assessed Schools per Governorate

The location of schools with bad or moderate is very important to diagnose the affected area and determine if there is pollution or contamination

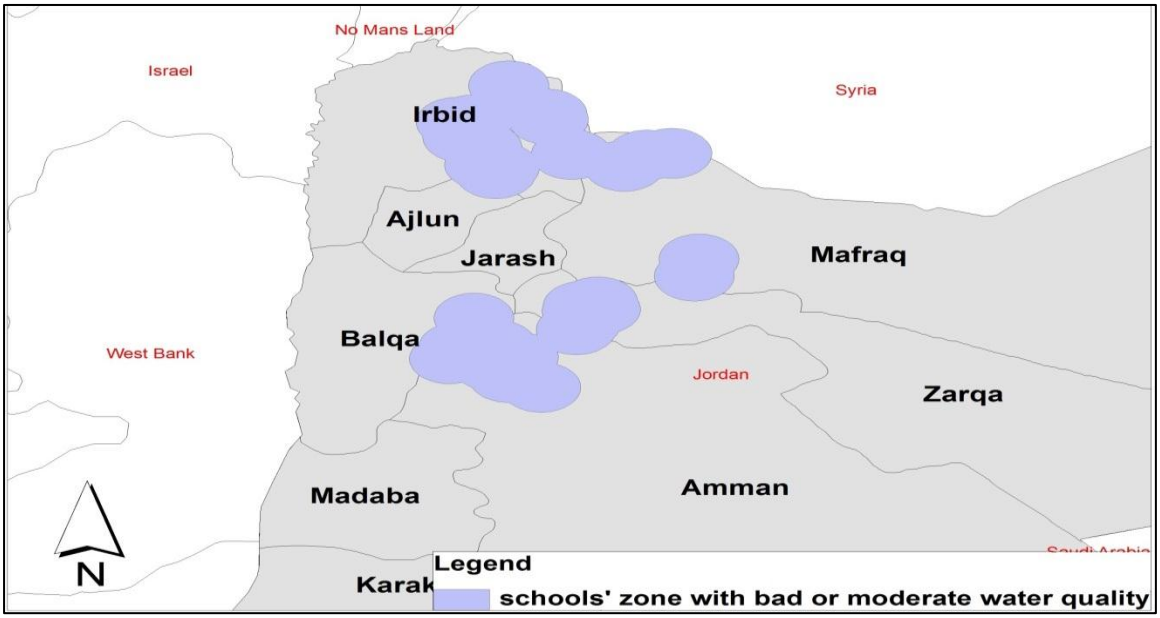

Figure 8: schools' zone with bad or moderate water quality

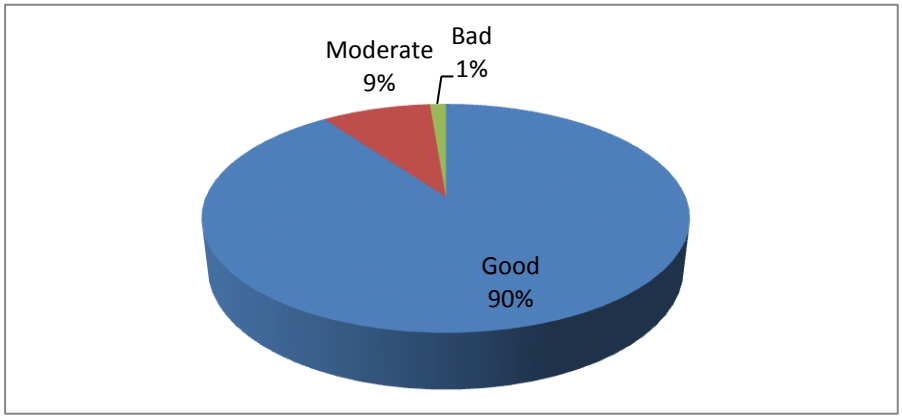

Figure 9: Water quality in assessed schools

In terms of water quality control and although the MoH is checking the water quality, many schools (20%) did not keep a record for the test results of MoH, the assessment show that only 7 out of 310 schools which have test records are with bad test results. These schools need to study their cases deeply in case of water contamination in external or internal net work

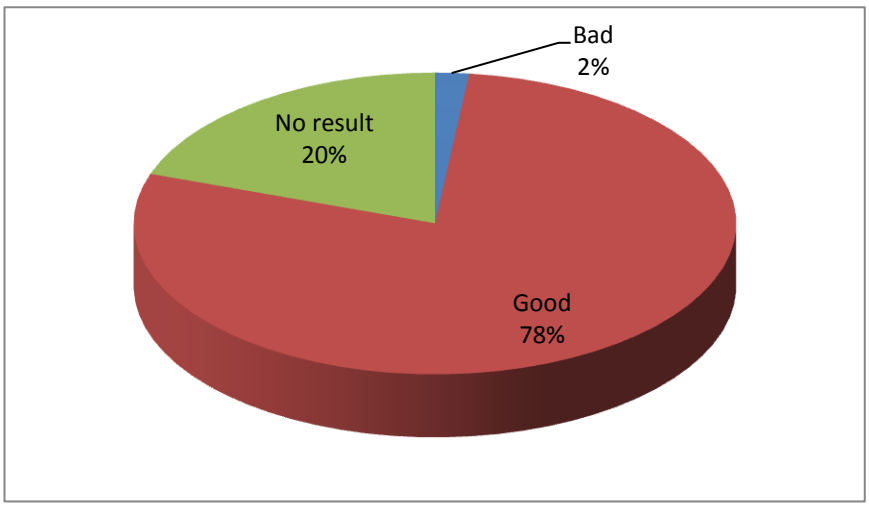

Figure 10: MoH results of Drinking Water quality in assessed schools

- **Latrines**

In order to get a holistic study about the latrine facilities, the following parameters were considered in the analysis, these parameters are essential for efficient and sufficient latrine facilities;

1. Number of students per seat

   The rational number of students per seat depends of the gender of student's schools: 35 student per latrine in girls' school, 65 students per latrine in boys school and 50 in mixed school. The matrix below shows a general view to the number of schools that have student per seats issue.

Governorate	Gender	No. of school	Number of Boys schools with more 65 students per seat	Number of Mixed schools with more 50 students per seat	Number of Girls schools with more 35 students per seat
Amman	Boys	86	34	0	0
	Mixed	70	0	47	0
	Girls	59	0	0	54
Amman Total		**215**	**34**	**47**	**54**
Irbid	Boys	48	25	0	0
	Mixed	40	0	24	0
	Girls	42	0	0	35
Irbid Total		**130**	**25**	**24**	**35**
Ma`an	Boys	3	2	0	0
	Mixed	7	0	4	0
Ma`an Total		**10**	**2**	**4**	**0**
Mafraq	Boys	16	4	0	0
	Mixed	23	0	14	0
	Girls	8	0	0	6
Mafraq Total		**47**	**4**	**14**	**6**
Zarqa	Boys	27	16	0	0
	Mixed	24	0	20	0
	Girls	21	0	0	20

Governorate	Gender	No. of school	Number of Boys schools with more 65 students per seat	Number of Mixed schools with more 50 students per seat	Number of Girls schools with more 35 students per seat
Zarqa Total		**72**	**16**	**20**	**20**
Grand Total		**474**	**81**	**109**	**115**

Table 15: Students per seat in assessed schools

For boys' schools, we found that the number of students per seat in 45% of assessed schools is more than the baseline number (65 students per seat)

Governorate	Gender	Number of Schools	Number of Boys schools with more 65 students per seat
Amman	Boys	86	34
Irbid	Boys	48	25
Ma`an	Boys	3	2
Mafraq	Boys	16	4
Zarqa	Boys	27	16
Grand Total		**180**	**81**

Table 16: Boy students per seat in assessed schools

For Mixed schools, we found that the number of students per seat in 66% of assessed schools is more than the baseline number (50 students per seat)

Governorate	Gender	Number of Schools	Number of Mixed schools with more 50 students per seat
Amman	Mixed	70	47
Irbid	Mixed	40	24
Ma`an	Mixed	7	4
Mafraq	Mixed	23	14
Zarqa	Mixed	24	20
Grand Total		**164**	**109**

Table 17: Mixed students per seat in assessed schools

For Girls' schools, we found that the number of students per seat in 88% of assessed schools is more than the baseline number (35 students per seat).

Governorate	Gender	Number of Schools	Number of Girls schools with more 35 students per seat
Amman	Girls	59	54
Irbid	Girls	42	35
Mafraq	Girls	8	6
Zarqa	Girls	21	20
Grand Total		**130**	**115**

Table 18: Girls students per seat in assessed schools

2. General physical condition of the latrine building

The physical condition of the school was evaluated through the condition of wall, floor, seats, doors, water pipes, drainage pipes ceiling and washbasin. The below table is the sub-weights to evaluate the latrine condition of students and teacher:

Sub-category	Floor	Walls	seats	doors	water pipe	drainage pipes	ceiling	washbasin	Total
Weight	10	10	15	10	15	15	10	15	100

Table 19: weight of latrine items for physical evaluation

For students' latrine and as in table below, the percentage of bad latrine is 4% and the moderate is 27% while the good represents 69%. The moderate latrine condition is the latrine may potentially stop working without maintenance in near future. The latrines of teachers are in good condition in the assessed schools.

Governorate	Good	Moderate	Bad	Not Available	Grand Total
Amman	167	43	4	1	215
Irbid	73	50	7		130
Ma`an	4	3	3		10
Mafraq	31	11	5		47
Zarqa	52	19	1		72
Grand Total	**327**	**126**	**20**	**1**	**474**

Table 20: Physical condition of schools per governorate

3. Girls/ Boys separate latrine in mixed schools

The percentage of not separate latrine schools is 62% in mixed schools. Culturally and ethically, this percentage is high. Building partitions or separate latrines is recommended in future action for those schools

Governorate	No	Yes	Total
Amman	47	23	70
Irbid	22	18	40
Ma`an	4	3	7
Mafraq	10	13	23
Zarqa	19	5	24
Grand Total	**102**	**62**	**164**

Table 21: Number of separate latrine in mixed schools

4. There is at least one seat for students with disability

The number of students with disability is very low in the assessed schools, however this parameter need to consider in each school in case of attendance students with disability in future. Through the assessment we found that 151 schools are with disabled children while 83 school only contain latrine for disabled

Government	Schools with disabled students	Schools with latrine for disabled	Sum of disabled students	Total number of students	% of disabled students
Amman	76	34	225	167,045.00	0.13%
Irbid	37	25	89	73,570.00	0.12%
Ma`an	2	5	3	4,321.00	0.07%
Mafraq	10	3	20	14,730.00	0.14%
Zarqa	26	16	115	62,088.00	0.19%
Grand Total	**151**	**83**	**452**	**321,754.00**	**0.14%**

Table 22: disabled students in assessed schools

The overall condition of latrines is measured by adding up the weighting of the combination of eight indicators as bellow:

	Criteria	Weight
1	No. of students per seat/ girls	30
2	No. of children per basin	15
3	General condition of student latrine	30
4	No. of disabled seats	3
5	Fittings for disabled	2
	sub-Category Weight	80
6	No. of teachers per seat	8
7	No. of teachers basin	4
8	General condition of teachers latrine	8
	sub-Category Weight	20
	Category Weight	**100**

Table 23: weights of categories and sub-categories for latrine evaluation

The assessment revealed that about 17% of the assessed schools need immediate intervention and 44% need to be considered in future plan of repair while 39% are in good condition.

Governorate	overall Latrine condition				Grand Total
	Good	Moderate	Bad	Very Bad	
Amman	92	95	28		215
Irbid	44	53	32	1	130
Ma`an	3	2	5		10
Mafraq	27	16	3	1	47
Zarqa	17	43	12		72
Grand Total	**183**	**209**	**80**	**2**	**474**

Table 24 Overall Condition of Latrines in assessed schools per Governorate

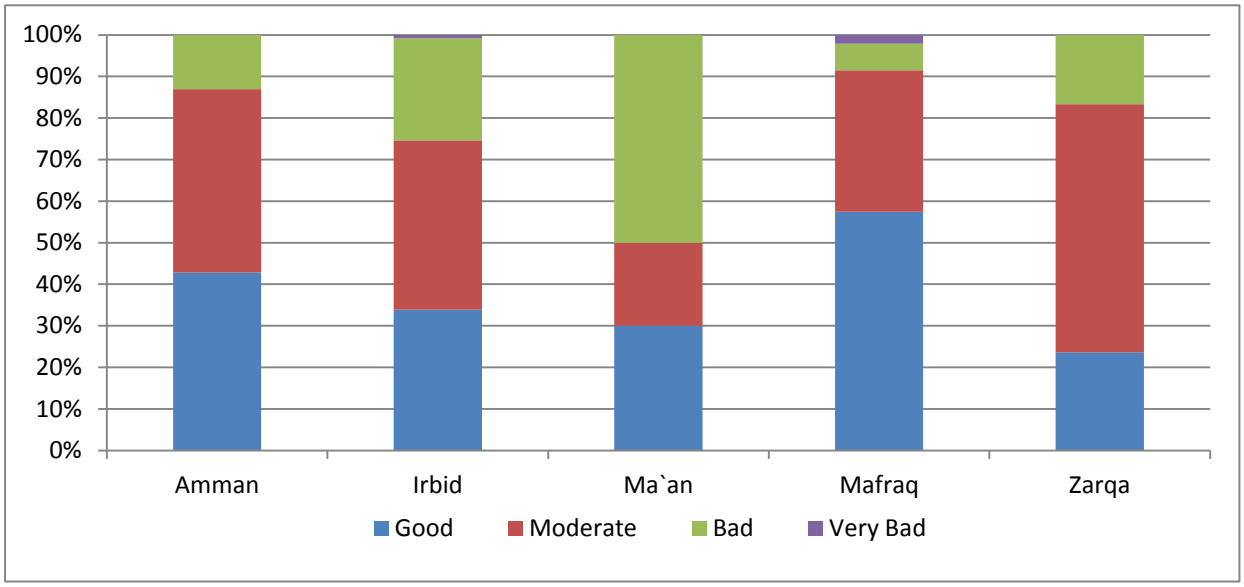

Figure 11: Difference in overall condition of latrine per governorate

- **Waste Disposal & Sewerage Systems**

The waste disposal is an important issue to keep school hygienic. Failing in waste collection, waste disposal and improper sewage system may result in waste water puddles which collect insects and diseases; therefore we focused in the assessment on the following parameters to evaluate the waste disposal and sewer condition;

1. Connection to public system/ septic-tank condition/ internal network

The assessment show that 30% of the schools are not connected to the public sewage system and 68% with bad or not available septic tank. 16% of schools do not have internal network or with bad network, these schools need attention and quite urgent intervention because the unavailability of internal network means many unhygienic and environmental problems. There are 16 schools neither connected to public system nor have efficient septic-tank, these schools have important environmental and hygienic issue and need to follow up.

Governorate	Connecting to public sewer		Grand Total
	No	Yes	
Amman	29	186	215
Irbid	63	67	130
Ma`an	1	9	10
Mafraq	39	8	47
Zarqa	11	61	72
Grand Total	**143**	**331**	**474**

Table 25: number of connected schools to public sewer

Governorate	Septic-Tank Condition				Grand Total
	Good	Moderate	Bad	No septic-tank	
Amman	23	4	2	186	215
Irbid	52	11	7	60	130

Ma`an	2		1	7	10
Mafraq	36	4	2	5	47
Zarqa	11	4	2	55	72
Grand Total	**124**	**23**	**14**	**313**	**474**

Table 26: condition of septic-tanks in assessed schools

Governorate	Internal network				Grand Total
	Good	Moderate	Bad	Not available	
Amman	130	48	36	1	215
Irbid	78	31	21		130
Ma`an	1	4	5		10
Mafraq	35	9	3		47
Zarqa	45	15	12		72
Grand Total	**289**	**107**	**77**	**1**	**474**

Table 27: condition of internal network in assessed schools

Governorate	Schools not connected to public sewer		Grand Total
	Bad Septic-Tank	Not Available Septic-Tank	
Amman	2	2	4
Irbid	5	2	7
Ma`an	1		1
Mafraq	2	1	3
Zarqa	1		1
Grand Total	**11**	**5**	**16**

Table 28: condition of septic-tank in not connected schools to public sewer

The overall condition of latrines is measured by adding up the weighting of the combination of four indicators as below:

No.	Criteria	Weight
1	public network	20
2	Internal Network	60
3	septic-tank	10
4	available container	10
	Total	**100**

Table 29: criteria weight to evaluate the sewage condition

The overall condition of sewage and waste disposal system is considered acceptable; as 79% are classified as ‘good’ and 13% are classified as ‘moderate’ while only 8% are ‘bad’ or ’very bad’.

Governorate	Overall Sewage System				Grand Total
	Good	Moderate	Bad	Very Bad	
Amman	176	23	15	1	215
Irbid	94	22	8	6	130
Ma`an	5	3	2		10
Mafraq	41	3	2	1	47
Zarqa	59	8	5		72
Grand Total	**375**	**59**	**32**	**8**	**474**

Table 30: overall condition of sewage system

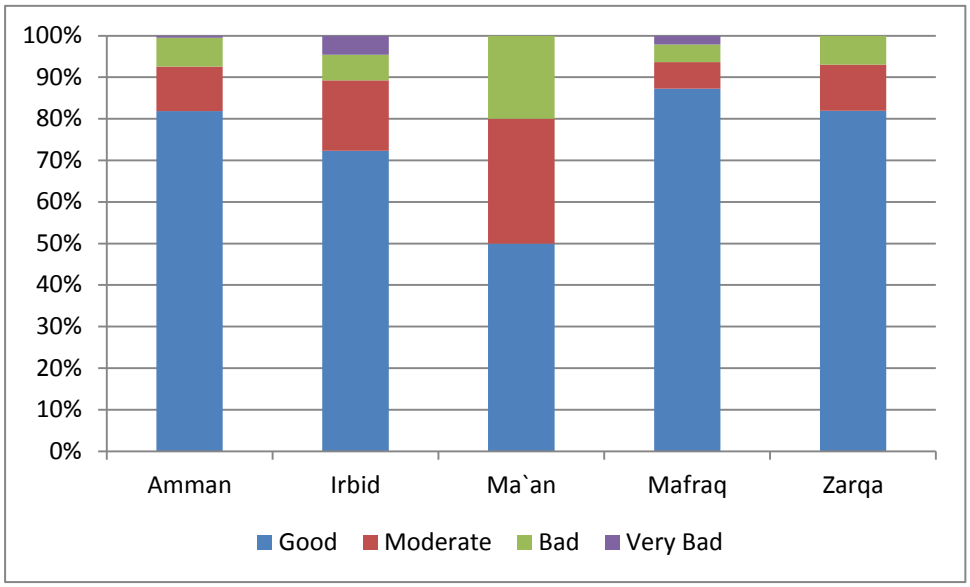

Figure 12: Overall condition of sewage system per governorate

- **Hygiene Promotion**

The following parameters were taken into consideration in the survey to ensure comprehensive study to the hygiene conditions in schools:

1. Hygiene curriculum, trained staff on health awareness and events to raise health awareness.
   This indicator shows that only 2% of the assessed schools do not have hygiene and health practices promotion a part of the school's curriculum, and 14% of schools does not have trained staff on health education. On the other hand all schools except 9 do not perform events to raise health awareness. This gives good indication of the availability of teaching fundamental in term of hygiene.

Government	Hygiene Curriculum		Grand Total
	No	Yes	
Amman	2	213	215
Irbid	5	125	130
Ma`an	2	8	10
Mafraq		47	47
Zarqa	2	70	72
Grand Total	**11**	**463**	**474**

Table 31: availability of Hygiene curriculum

Government	Trained staff		Grand Total
	No	Yes	
Amman	44	171	215
Irbid	7	123	130
Ma`an		10	10
Mafraq	4	43	47
Zarqa	9	63	72
Grand Total	**64**	**410**	**474**

Table 32: availability of trained staff

Government	Events to raise health awareness		Grand Total
	No	Yes	
Amman	4	211	215
Irbid	1	129	130
Ma`an		10	10
Mafraq	3	44	47
Zarqa	1	71	72
Grand Total	**9**	**465**	**474**

Table 33: availability of events for hygiene awareness

2. Teaching guide to raise health and hygiene awareness and availability of soap.
   The assessment shows that 11% schools do not have or have been provided with teaching guides like posters and leaflets urging the students about the importance of hygiene awareness. On the other side, the soap is not available in 64% of the assessed schools.

Government	Teaching guide		Grand Total
	No	Yes	
Amman	10	205	215
Irbid	14	116	130
Ma`an	4	6	10
Mafraq	13	34	47
Zarqa	9	63	72
Grand Total	**50**	**424**	**474**

Table 34: Availability of teaching guides

Government	Availability of Soap		Grand Total
	No	Yes	
Amman	146	69	215
Irbid	64	66	130
Ma`an	7	3	10
Mafraq	23	24	47
Zarqa	61	11	72
Grand Total	**301**	**173**	**474**

Table 35: Availability of soap

The overall condition of Hygiene promotion is measured by adding up the weighting of the combination of four indicators as bellow:

No.	Criteria	Weight
1	Hygiene curriculum	7.5
2	Trained staff	7.5
3	Awareness Events	15
4	Teaching guide	15
5	Number of Hygiene sessions	10
6	Hygiene committee	7.5
7	Availability of soap	15
8	Hygiene disease	5
9	Distribution of Hygiene kits	7.5
10	Condition of Canteen	10
	Total	**100**

Table 36: weights of categories and sub-categories for Hygiene promotion

The hygiene kits is any material that keep the children safe from diseases like hand towel, tooth brush, tooth paste and personal soap.

The overall results shows that the hygiene situation in 10 out of 474 assessed schools is 'moderate' while only 2 considered as 'bad' in term of hygiene promotion.

Governorate	Overall hygiene promotion			Grand Total
	Good	Moderate	Bad	
Amman	209	6		215
Irbid	130			130
Ma`an	10			10
Mafraq	44	2	1	47
Zarqa	69	2	1	72
Grand Total	**462**	**10**	**2**	**474**

Table 37: Overall Hygiene promotion

PRIORITIZATION OF SCHOOLS BASED ON WASH FACILITIES

The questionnaire was categorized into six categories and each category has been divided into important criteria or parameters which has been chosen by JEN and approved by UNICEF. Each criterion was weighted depending on the importance of this criterion among other criteria. Some criteria were divided in sub-criteria to be more specific in criteria weight, the table below show how the criteria and sub-criteria

Final School evaluation	Category weight
General information Category	15
Latrine Facility Category	20
Water System Category	20
Water Quality Category	15
Sewage system Category	15
Hygiene promotion Category	15
Final evaluation	100

Table 38: Evaluation Categories

No.	Criteria	Criteria weight
	General Information Category	
1	Level	10
2	Location	3
3	Gender	10
4	Building owner	2
5	No of students	15
6	No of shifts	15
7	No of disabled student	10
8	Number of Syrian students	35
	Category Weight	**100**
	Latrine Facility Category	
	Students' Latrine Sub-Category	
1	No of children per seat	30
2	No of children per basin	15
3	General condition of student latrine	30
4	No of disabled seats	3
5	Fittings for disabled	2
	Sub-Category Weight	80
	Teachers' Latrine Sub-Category	
1	No of teachers per seat	8
2	No of teachers basin	4
3	General condition of teachers latrine	8
	sub-Category Weight	20
	Category Weight	100
	Water System Category	
1	water source	30

2	Liter per student	30
3	Tankers (m3)per week	5
4	water fountain	30
5	Water points for disables	5
	Category Weight	100
	Water Quality Category	
1	Water Quality	40
2	water treatment	20
3	Result	40
	Category Weight	100
	Sewage system Category	
1	public network	20
2	Internal Network	60
3	septic-tank	10
4	available container	10
	Category Weight	100
	Hygiene promotion Category	
1	Hygiene curriculum	7.5
2	Staff trained	7.5
3	Events for awareness	15
4	Teaching guide	15
5	How many session	10
6	Hygiene committee	7.5
7	Soap	15
8	Hygiene disease	5
9	kits distributed	7.5
10	canteen hygienic	10
	Category Weight	100

Table 39: Evaluation Criteria and Sub-Criteria

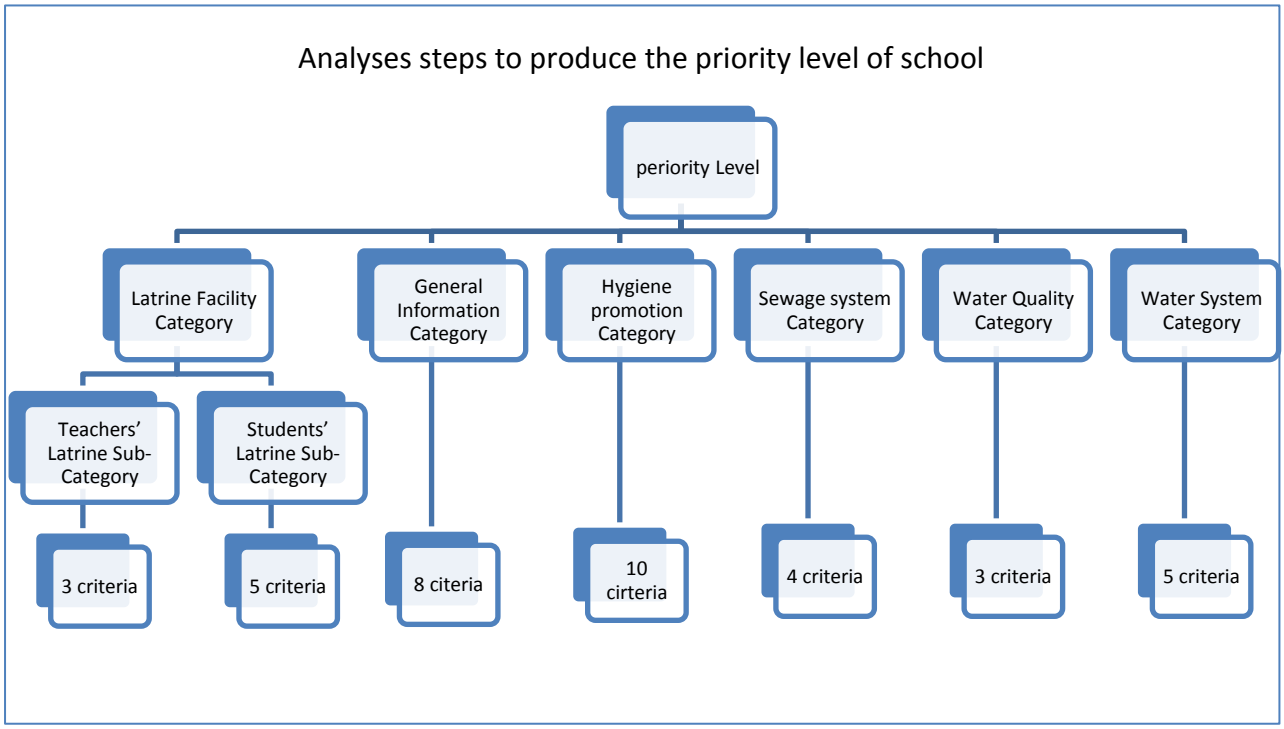

Figure 13: Analyses steps for periority level of school

Based on the scores of the criteria above, the schools were classified into 4 classes as shown in the below table:

Description	Priority Level	Score of weight
WASH facilities have serious defects that affect the safety of the user, these schools need an immediate intervention to rebuild the latrine facilities	1	70-100
WASH facilities have considerable defects affecting water, sanitation and hygiene environment of the school and need immediate intervention to rehabilitate or maintain the latrine facilities.	2	40-70
WASH facilities have defects requiring minor repairs and maintenance that can be handled by the school	3	20-40
WASH facilities are in acceptable condition with minimal need for improvement	4	0 -20

Table 40: Description of priority level

Accordingly, the assessment categorizes and prioritizes the total of 368 schools as follows:

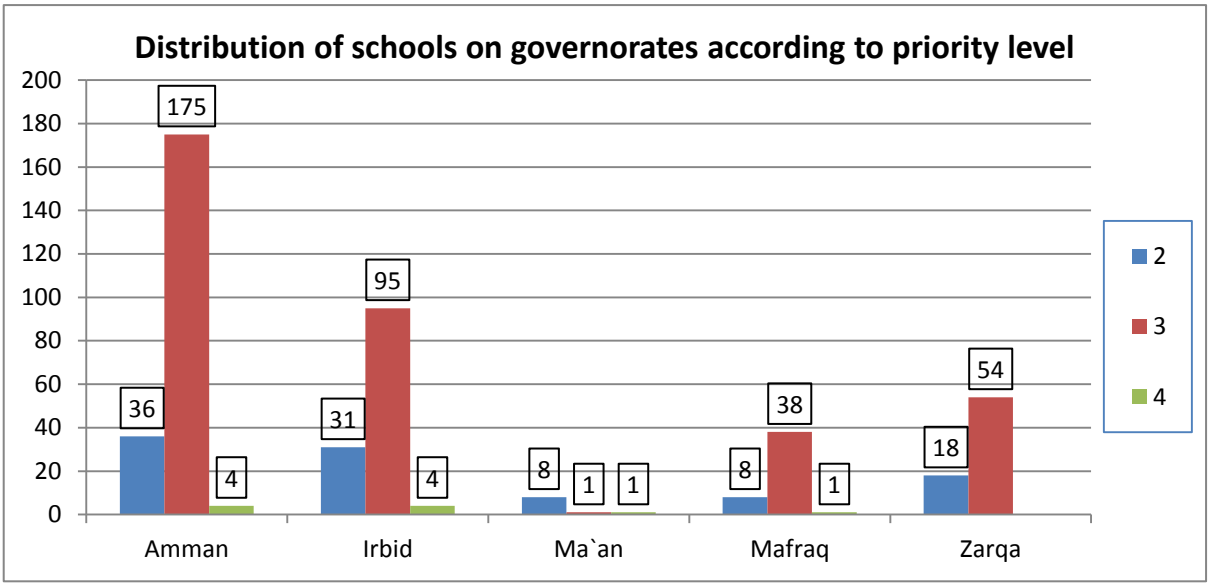

Table 41: Distribution of schools according to priority level

CHALLENGES AND CONSTRAINS

- ✓ Most schools welcome assessment visits by JEN's engineers although few headmasters had not allowed JEN's engineers to enter schools or take pictures despite MOE's authorization letter. However, the problem could be solved by the DOE's facilitation and cooperation whose intervention was valued.

- ✓ In the beginning of assessment process, the access to schools by JEN's engineers was limited due to examination and school holiday. It caused a slight delay to the assessment completion.

- ✓ The originally provided list of schools did not include national IDs. Therefore, it was very time-consuming to compare the updated list of schools with the number of Syrian students at a later stage. Taking into consideration that many schools have similar names, keeping the national IDs with any data is essential in terms of data management. Thus, it is highly recommended to inform other organizations being engaged in school rehabilitation about the importance of including school's ID in order to facilitate identification of any possible overlapped interventions.

- ✓ Discrepancies occurred in numbers of Syrian refugee students due to continuous movements such as returning to Syria and DOE transferal among schools with different capacities. For instance, a school in Qasabat Irbid was listed as receiving Syrian students in December, 2012. However, assessment conducted early February, 2013 found out that there were no Syrian students as DOE has transferred those students to another school. Two months later, the school has also accepted some Syrian students due to overcrowd of the other school. Thus, it is inevitable that the number of Syrian students in some schools fall below that in assessment result during rehabilitation phase.