WaSH in Schools Survey
for Cholera Response in Lebanon

Summary Report

November 2022

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I. Introduction

To support the Cholera Integrated Prevention, Preparedness and Response Plan for Lebanon, the MEHE with support from UNICEF conducted a WaSH in Schools Survey to assess the WaSH situation in public and semi-private schools in Lebanon to ensure an evidence-based, targeted response.

II. Methodology

To assess the situation in schools within a short time frame, a phone survey was conducted with 1,332 (of the intended 1,755) schools across Lebanon, distributed among the eight governorates, including 1,109 public schools (83% of the total sample), 96 semi-private schools and 127 public vocational / technical vocation and education training (TVET) schools.

III. Key Findings

Overall

Analysis of the survey results highlights that schools in Akkar district are by far at the highest risk of cholera transmission, followed by those in West Bekaa, Tripoli, Saida, Zahle and Minieh–Danniyeh. The risk of cholera transmission was estimated based on the status of the WaSH facilities and services in schools, such as improperly functioning water system or inadequate treatment, uncontrolled sewage from a containment facility, student and school staff exposure to sewage, unprotected water source used for drinking, lack of functional handwashing facilities, and absence of staff trained on cholera prevention and reporting of suspected cholera cases.

This is a preliminary analysis with limited testing.

Rehabilitation

Of the 1,332 assessed schools, 41% reported receiving rehabilitation within the past 10 years (approximately equally distributed among the eight governorates: 61% of schools in Beirut were rehabilitated, as were roughly 45% of those in Bekaa, Mount Lebanon, South, Baalbeck-Hermel and the North), while **55% of the surveyed schools in different governorates did not undergo any rehabilitation** during the same period; 53 schools (4%) are due to be rehabilitated, including maintenance of WaSH facilities. Of the schools requiring rehabilitation, 14% are in Beirut, 7% in Mount Lebanon, 6% in Baalbeck El Hermel, 4% in Bekaa, 2% in Akkar and the North and 1% in the South. No schools in Nabatiyeh expect to undergo rehabilitation.

Water Treatment in Schools

The data show that challenges in securing access to safe and drinkable water occur in all governorates. Some **38% reported that their school does not take any action to treat the main water source to ensure it is safe to drink**. Most schools (723) depend on treating water by filtration; 282 schools treat water by chlorination; 51 schools use ultraviolet disinfection; only 4 schools reported using reverse osmosis or ultrafiltration. In all, 14 schools stated that they have a treatment system but that they do not know how it works, while 18 schools stated that they use other systems.

As for the status of the water treatment systems: 53% of the schools report that the system is operational. The main challenges the schools face with regard to water treatment systems are the absence of maintenance and, in particular, the need for consumables; 40% of the schools stated that their water treatment system is not operational, and 51% stated that their system needs maintenance and rehabilitation.

Solid Waste and Wastewater Disposal

Nearly 90% of the schools interviewed reported that solid waste was disposed on a daily basis. A large percentage of schools (60%) reported having a wastewater containment facility, with the majority reporting no visible leakages. Additionally, 93% stated that the status of sewage and odors from the containment facility at their school was controlled and students and school staff were never exposed to sewage. However, in 24% of schools in Beirut, students and school staff were in direct contact with wastewater.

Of the minority who did observe leakages, 42% reported that sewage and odors from the network is in direct contact with students and school staff, which indicates an urgent situation for these schools and a need for a solution. Overall, 64% of schools in Akkar, 40% in Baalbeck, 33% in Beirut, 41% in Mount Lebanon and 67% in Nabatieh reported exposure to leakage from sewage networks.

Hygiene

Of the 1,332 schools interviewed, 95% reported that there are handwashing facilities at the school. The main hygiene materials available at the handwashing facility in most schools are water, soap, and paper towel. It is important to highlight that some schools in Akkar, Bekaa, Mount Lebanon and Nabatiyeh reported not having any of these hygiene materials.

Regarding the availability of water and soap in private spaces to manage menstrual hygiene, 71% of the schools interviewed reported that they have such facilities equipped. Among the remaining 29%, the highest percentages are located in Mount Lebanon (47%) and Baalbeck-Hermel (37%). Additionally, 72% reported that there are covered bins for the disposal of menstrual hygiene materials in girls' toilets.

Water Sources for Handwashing and Drinkable Water

Of the 1,332 assessed schools, 96% reported having a source of water for handwashing.

Among all the governorates, the most common source of water for handwashing is a piped water supply, which constitutes 50% of all sources (Akkar & Baalbeck-Hermel around 32%; Beirut, Bekaa, Mount Lebanon, Nabatiyeh and the North around 66% and the South 48%). The second most common source is a **protected well/spring**, which constitutes 30% among the governorates, with the highest percentages of schools depending on this source type in Akkar (51%) and Bekaa (56%). The third most common source is a **tanker truck or cart**, comprising 12%, with the highest percentage of schools depending on this source type in Baalbeck-Hermel (32%). The majority of the schools that participated in the survey did not report depending on rainwater or unprotected wells/springs for handwashing.

However, 63% of the schools reported that they have no special source of drinking water for students, justified by the fact that approximately 85%–99% of all students usually bring drinking water from home and do not depend on the school's water sources.

The sources available/provided at schools are piped water supply (49%), bottled water (22%) or protected wells/springs (22%). **It is crucial to note that 1% of the schools stated that they use unprotected wells/springs for drinking water, with the highest percentages in Akkar (3%) and Bekaa (5%).**

Some 46% reported having a special source of drinking water for teachers/personnel in the school, with the main water source (82%) being bottled water.

Gender, Inclusivity and Safe Access to WaSH Facilities

In relation to accessible drinking water, 68% (with the highest percentages in Nabatiyeh [78%] and Mount Lebanon [79%]) of the schools reported that drinking water (if not bottled water) is not accessible for students with limited mobility or vision. The remaining 32% highlighted school efforts to ensure an inclusive learning environment through the provision of inclusive facilities. With regard to access to latrines, 61% reported not having latrines available for students with limited mobility or vision. Additionally, 59% reported that handwashing facilities are not accessible for those with limited mobility or vision, with the highest percentages in Beirut (75%), Mount Lebanon (77%) and Nabatiyeh (72%).

Most schools (92%) reported that their latrines are sex-segregated; 93% reported that all latrines have doors and locks; and 85% stated that functional lighting is in place.

Health-Related Findings

Of the 1,332 schools, 88% indicated that they have a health focal point in the school. Of these, 30% have certified health personnel, and the vast majority indicated that they have received training on prevention and reporting of suspected cases of cholera.

IV. Key Recommendations

- Based on the survey results, immediately target individual schools or cadasters that are at high risk, including in Akkar, with the highest risk, followed by West Bekaa, Tripoli, Saida, Zahle and Minieh-Danniyeh.
- Conduct WaSH assessments in person including observational indicators to target responses, particularly in high-risk schools.

Recommendations on Long-Term Strategies

- MEHE to advocate for ownership and define roles and responsibilities in maintaining and repairing WaSH infrastructure at the school level.
- Discuss and facilitate a deep-dive analysis of current drinking water trends in schools and a way forward.
- Discuss and facilitate a deep-dive analysis on current wastewater networks in schools, mapping schools currently reporting leaks.
- MEHE to ensure adequate hygiene materials in schools with awareness-raising activities, including gender-specific hygiene awareness.
- Increase number of trained health focal points.
- Improve gender-inclusive and safe access to handwashing facilities for those with disabilities and vision impairment.

V. Methodology for Cholera Risk Mapping in Schools

To highlight districts most at risk to cholera spreading in schools, a scoring system has been piloted which contains 10 indicators from the WaSH in Schools Survey from 2022. The WaSH in Schools indicators are presented below with their score (Table 1).

Table 1: WaSH Scoring	
Cholera case in last 10 days	100
No source for handwashing	50
Unprotected or surface water for drinking	50
Water treatment does not work properly	50
Water treatment system does not work properly	40
Not clean toilets	10
Non-controlled sewage from containment facility	60
Leaks from sewage network in school	60
Sewage in direct contact with students and school staff	60
No staff trained on prevention or reporting on suspected case	20

Each school received a total score, and scores were aggregated at the district level. Once the district had an average score, incidences of cholera that week were used to triangulate the WaSH in Schools indicators (Table 2). This method for calculating cholera risk is referenced in the Interim Guidance Document on Surveillance from the GTFCC (Table 3). The scoring of each indicator was tested at the start of the outbreak alongside the existing cholera risk map.

Table 2: Cholera Risk Analysis		
District	**Score**	**Level**
Akkar	231	3
Baalbek	75	1
Hermel	0	1
Beirut	0	1
Rachaya	0	1
West Bekaa	120	2
Zahle	95	1
Aley	65	1
Baabda	55	1
Chouf	79	1
Metn	64	1
Jbeil	0	1
Kesrwane	52	1
Bent Jbeil	0	1
Nabatieh	0	1
Hasbaya	0	1
Marjaayoun	65	1
Bcharre	0	1
Batroun	84	1
Koura	71	1
Minieh-Danniyeh	90	1
Tripoli	106	2
Zgharta	63	1
Jezzine	0	1
Saida	103	2
Sour	0	1

Table 3: Cholera Risk Scale				
1	**2**	**3**	**4**	**5**
0-100	101-200	201-300	301-400	401-500

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