

PHYSICAL DAMAGE ASSESSMENT OF PRIVATE SCHOOLS

IN RESPONSE TO THE BEIRUT PORT
EXPLOSIONS

October 2020



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PHYSICAL ASSESSMENT OF PRIVATE SCHOOLS

RESPONSE TO THE DAMAGES INCURRED BY THE BEIRUT PORT EXPLOSIONS

October 2020

PARTNERS



United Nations Educational, Scientific and Cultural Organisation (UNESCO)



Rebuilding Heritage, Culture and Education #ForBeirut



Ministry of Education and Higher Education (MEHE)



Frontline Engineers

CREDITS & ACKNOWLEDGEMENTS

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UN-HABITAT LEBANON

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EXECUTIVE SUMMARY

The Port of Beirut explosions which took place on 4 August 2020, situated within the boundaries of the Municipality of Beirut (MoB), resulted in the devastating loss of life, injury and the destruction of vast tracts of urban fabric within the municipality and beyond.

Based on initial assessment undertaken by the Ministry of Education and Higher Education (MEHE), and according to UNESCO, within a 20km radius of the blast, around 80 per cent of schools experienced moderate damage and 20 per cent sustained heavy damage. At the request of MEHE, UNESCO was asked to coordinate school related assessments and lead rehabilitation efforts of damaged schools in Beirut and Mount Lebanon.

UN-Habitat contributed to this undertaking, by leading with technical support from Frontline Engineers, a detailed physical damage assessment covering 113 private schools affected by the blast. In addition to quantifying the extent of damages to assessed schools, this included summarizing main findings according to a developed vulnerability index of assessed schools, completing a bill of quantities and cost estimates for each school assessed, and enabling a comprehensive overview of the needed rehabilitation of damages incurred.

Among the 113 private schools included in this assessment: 39 were fully assessed with new Bill of Quantities (BoQs) produced; 11 conducted their own damage assessment through engineering companies; 48 were found to have started or completed the rehabilitation of works; 9 schools were not reachable, and 6 had no damages at all.

Out of 50 schools still in need of rehabilitation, 12 schools were classified as severely damaged, 19 schools were moderately damaged and 19 suffered minor damages. The combined estimated repair costs of these 50 schools is nearly USD 2,500,000. Out of the 50 schools, 17 are considered to be highly vulnerable¹ and have a total estimated rehabilitation cost of around USD 600,000.



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¹ Establishments that are considered less capable in terms of physical, financial and human resources.

INTRODUCTION

BACKGROUND AND CONTEXT

On 4 August 2020, a series of explosions took place at the Port of Beirut causing widespread casualties and severe physical damage across Greater Beirut. Over 200 people were killed, 6,000 were injured, hundreds of thousands directly impacted and tens of thousands of buildings and homes incurring damages ranging from minor to major, and some rendered totally destroyed.

The Port of Beirut is located in close proximity to multiple key districts of what constitutes the centre of the city – downtown Beirut – adorned by historic landmarks, sites and streets, vibrant commercial, social and residential districts, alongside several vulnerable and dense urban neighbourhoods. According to MEHE initial assessment, at least 163 public and private schools were damaged by the explosions – affecting over 70,000 students and 7,600 teachers. Furthermore, 20 technical and vocational education and training schools were damaged, impacting around 7,300 students. Such extensive damages have not only impacted the commencement of the new academic year, in addition to COVID19-, but will further negatively compound the pre-existing socio-economic crisis in the country, including depriving Lebanese and non-Lebanese students enrolled in these schools of their right to education.

According to UNESCO and based on initial assessment undertaken by the Ministry of Education and Higher Education (MEHE) thus far, around 80 per cent of schools have experienced moderate damage and 20 per cent have sustained heavy damage, within a 20km radius of the blast.

PURPOSE

The main purpose of the assessment was to ascertain the extent of damages to 113 identified private schools impacted by the Beirut Port explosions. The assessment further analysed the extent of damages to the identified private schools, while highlighting those that are most vulnerable and in need of immediate intervention and support.

This assessment complements the efforts already undertaken by MEHE and UNESCO. The latter being called upon by MEHE to lead the coordination of efforts to assess and rehabilitate schools among education partners to avoid duplications and ensure compatibility of interventions. UN-Habitat was subsequently requested by UNESCO to complete a detailed physical damage and cost estimate assessment of 113 private schools affected by the blast.

METHODOLOGY

The assessment involved an onsite evaluation of damages and losses caused by the Beirut Port explosions. The detailed assessment recorded the extent of damage, what can be replaced, restored or salvaged with the aim of providing detailed cost estimates allowing for a prioritized rehabilitation of damaged schools.

The assessment methodology included three stages:

- Pre-assessment stage – 1 week
- Assessment stage – 2 weeks
- Post-assessment stage – 2 weeks

PRE-ASSESSMENT STAGE

The pre-assessment stage involved two main elements: planning and preparation. This stage aimed to define how to conduct the field inspection, identify the specific sites to visit, organize the on-site survey, identify the type of data to be collected, and the data collection methodology.

UN-Habitat started by analysing the received information from UNESCO and MEHE and produced a

location map of the 113 schools alongside their CERD reference². Previously completed rapid and thorough damage assessments, pictures, bill of quantities and testimonies were compared against the number of students, the proximity of the schools to the blast, the construction type and date – in order to determine priorities and arrange the site visits schedule.

All schools on the list were contacted to obtain further necessary information to complete the assessment exercise and to schedule site visits. Schools that had already completed a damage assessment exercise were asked to share the produced reports to verify their quality and alignment with the rest of the assessment exercise. Some of these schools were not willing to share the assessment findings or BoQs. At this stage, schools that had already started or completed rehabilitation were excluded from the next steps of the assessment exercise. Based on this criteria, 50 out of 113 schools remained to be assessed.

To conduct the physical assessment in a timely manner, UN-Habitat worked with Frontline Engineers³ to train architect and engineer volunteers who formed

² Centre for Educational Research and Development, provided by MEHE and UNESCO

³ A non-profitable organization that provides engineering and architectural consulting services to governmental and non-governmental organizations.

part of the teams conducting the field assessments. These volunteers were divided into sub-teams, each included a team leader, senior and junior architects and engineers of different expertise (civil, mechanical, electrical...).

UN-Habitat and Frontline Engineers adopted a unified assessment methodology and bill of quantities template (Appendix 1) to ensure consistency. A training and orientation session targeting all the field sub-teams was carried out and applied on a pilot school.

ASSESSMENT STAGE

The assessment or implementation stage, which involved the field inspection, started after completing the planning and preparation phase. The outcomes of this phase included written records and photographs. The sub-teams conducted field visits to all the schools and assessed and documented all damages using a paper and pen approach.

Within this approach, the surveyor used a paper and pen to collect data and to assess damage in the field, using the developed templates. In the case of schools that provided reports, surveyors added their observations and notes to the reports. The collected data covers all damages and needed information within each school.

Knowing that some schools had completed emergency repairs and rehabilitation works, this assessment focused only on the damages that were still apparent and did not document the damages and items already repaired.

POST-ASSESSMENT STAGE

After the assessment stage, the collected data was digitized, cleaned and examined to extract relevant information. This step was crucial to draw connections between damage and other important data that may not be available or obvious at the time of the field assessment. After data verification, results were analysed to understand how they can feed into the reports.

In order to prioritize the schools that are in most need of rehabilitation, UN-Habitat added two layers of information to the estimated cost of rehabilitation: (1) the level of damages; and (2) a vulnerability index for each school.

The level of damage allows to identify the extent of damage affecting each individual school, divided into four categories:

- No damage – the school was not affected by the Beirut Port explosions
- Minor damage – the school was minimally affected allowing most facilities of the school to remain operational

- Moderate damage – the school was moderately affected to an extent where several facilities are unusable and not functional
- Major damage – the school was heavily affected, where most of the facilities are out of order or will become out of order if not rehabilitated rapidly

VULNERABILITY INDEX

The vulnerability index⁴ is a ranking of each school's vulnerability with a score of 1 being the least vulnerable to 3 being the most. It is calculated through a scoring exercise using the below criteria:

- Schools that are not-for-profit or semi-private, i.e., charge lower school fees to children/families;
- Schools that operate in multiple shifts and have crowded classrooms;
- Schools with high number of students vs. the number of classrooms and teachers;
- Schools that cater for students who sit for national official examinations (e.g. Grade 9 Brevet and Grade 12 Baccalaureate diplomas);
- Schools that cannot operate without rehabilitation (partial or full) and thus unable to provide education services to children;
- Schools in localities with multiple deprivations including: large populations of out-of-school children; high levels of child labour; early marriage; children with experience of violence (including negative disciplinary actions); families with children with disabilities in low income quintile living under poverty line; households with unsafe water and lacking sanitary facility;
- Schools that serve most vulnerable children and youth, including Syrian and other refugees from low-income households, girls, those from poor female-headed households, children with disabilities, etc.;
- Schools that support and encourage participation of vulnerable students and girls in education, sports/recreational and cultural activities.

The last step of this stage is the report write up. A general report is produced, incorporating all the general findings in one document, along with detailed individual reports for each school detailing the individually collected information for the school.



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⁴ Developed by UN-Habitat, and endorsed by UNESCO to prioritize schools in most need.



الوقوف مقابل منزل
9 ق-ط-م
PAID PARKING
9A.M. - 4P.M.
11B

MAIN CHALLENGES

The main challenges encountered include:

- Several schools already hired engineering professional/companies to assess the damages without prior coordination with MEHE;
- Some schools already started or completed repairs/rehabilitation of damages without prior coordination with MEHE;
- Incomplete information (contact numbers, coordinates) provided concerning some schools;
- Incorrect information, including schools which were not affected by the explosions;
- Lack of cooperation from some schools that were not officially informed of the assessment in advance and refused to either cooperate or share information on previous assessment/status of repairs.



MAIN FINDINGS

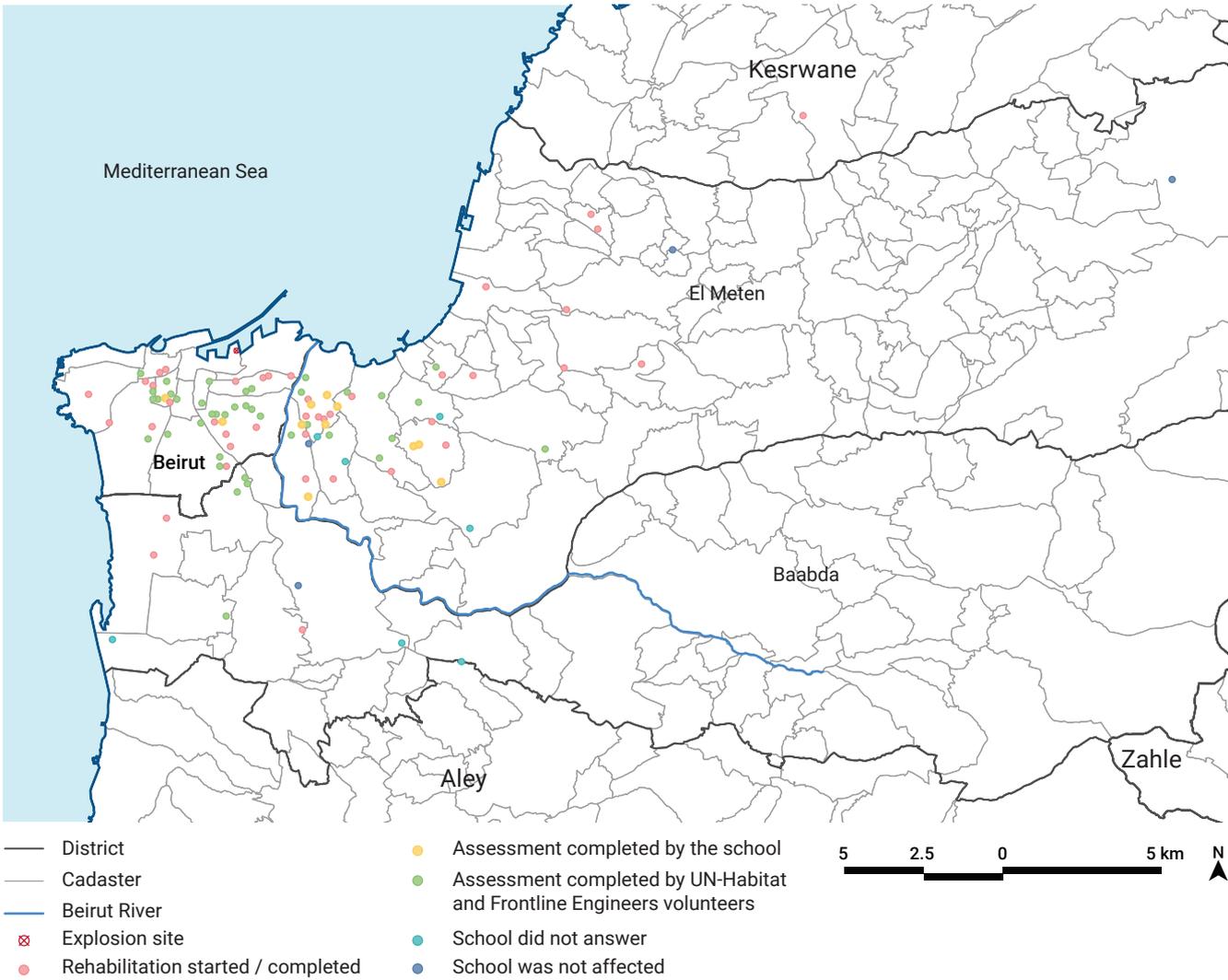
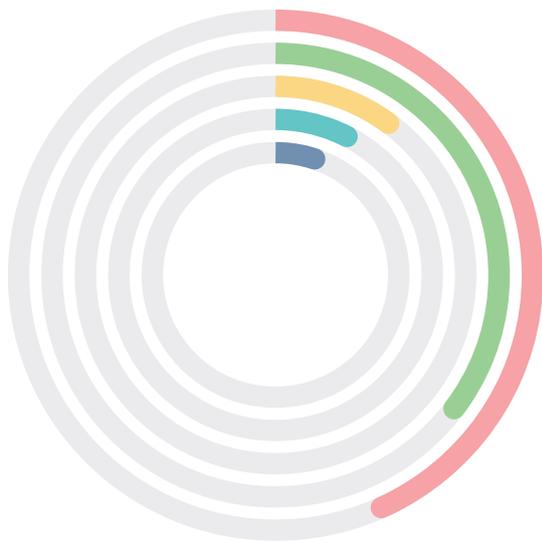


Figure 1 Locations and assessment results of the 113 private schools in and around Beirut



- 43%** Rehabilitation started / completed
- 35%** Assessment completed by UN-Habitat and Frontline Engineers volunteers
- 10%** Assessment completed by the school
- 7%** School did not answer
- 5%** School was not affected

Figure 2 Status of rehabilitation of the 113 schools at the time of assessment

From a total of 113 assessed schools: 6 schools were found to have sustained no damages (not affected); 9 schools were not available/accessible for the assessment exercise (no answer); 98 schools sustained varying levels of damage, out of which 48 had started or completed rehabilitation (rehabilitation started/completed); 11 had completed a damage assessment and produced a detailed BoQ on their own (assessment

completed by school); and 39 were assessed through this exercise with new BoQs produced (assessment completed by volunteers).

Therefore, at the time of assessment, 50 schools were identified as still in need of some level of rehabilitation, the majority of these schools are located in Beirut and Bourj Hammoud, the two most affected municipalities.

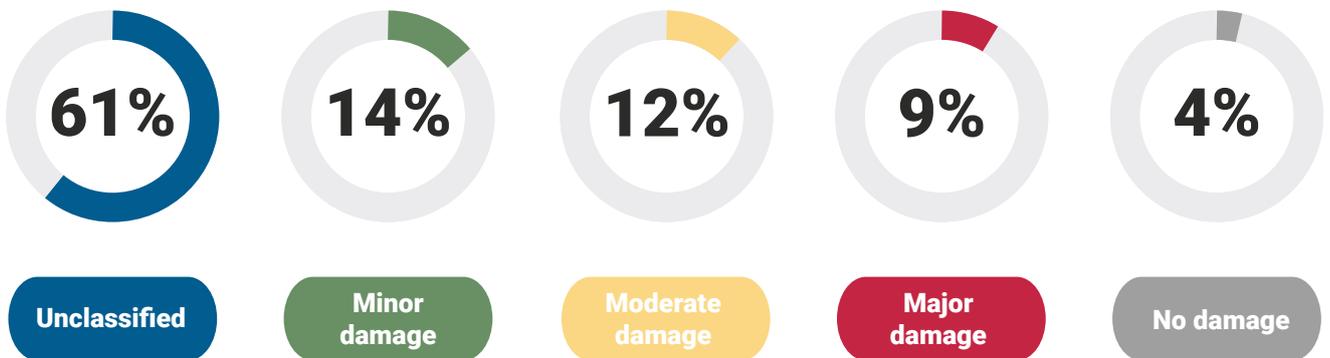


Figure 3 The level of damages sustained by the 113 schools at the time of assessment



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The 50 schools that need rehabilitation incurred various levels of damages: 19 have minor damage, 19 moderate damage and 12 major damage.

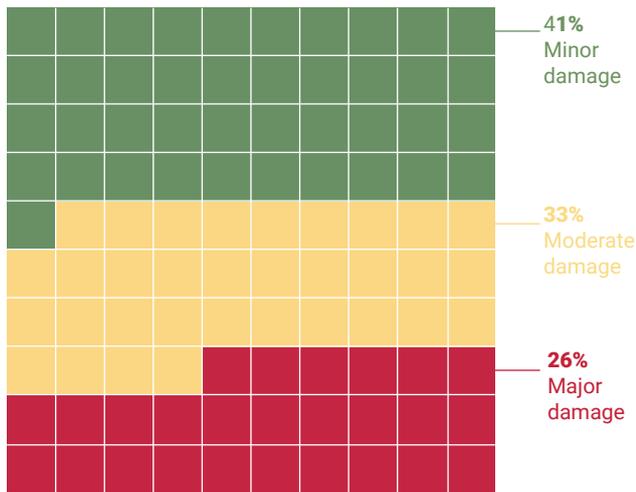


Figure 4 The level of damages sustained by the 50 schools still identified in need of rehabilitation at the time of assessment



Classified according to the estimated cost of repairs, 24 school have incurred damages estimated at lower than USD 20,000 per school, 19 schools have incurred damages estimated between USD 20,000

and 100,000 per school and 7 have incurred damages estimated above USD 100,000, with College des Freres in Gemmayze sustained the most damages at an estimated cost of USD 675,000.

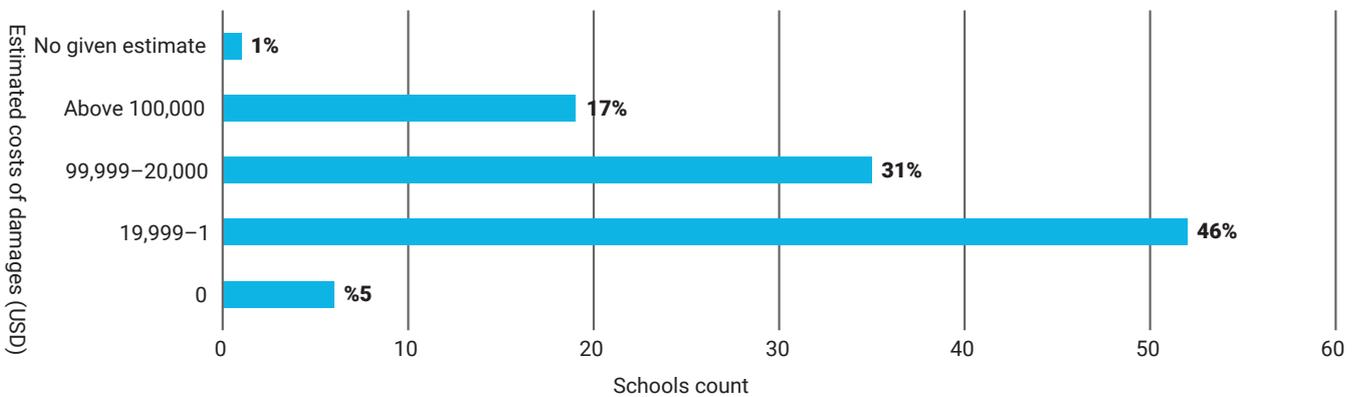


Figure 5 Estimated costs of damages incurred by the 113 schools

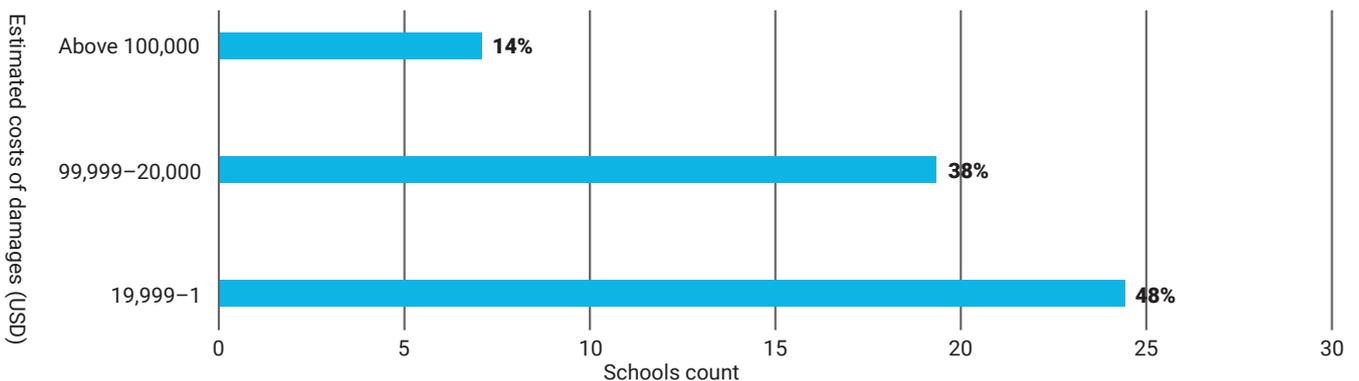


Figure 6 Estimated costs of damage incurred by the 50 schools in need of rehabilitation

The BoQ was divided into three parts:

- Part 1 – Civil, Structural & Architectural works
- Part 2 – Mechanical engineering services
- Part 3 – Electrical engineering services

The most recurrent type of damage observed was civil, structural and architectural at 90 per cent, with electrical engineering services and mechanical damages at 7.16 per cent and 2.66 per cent respectively.

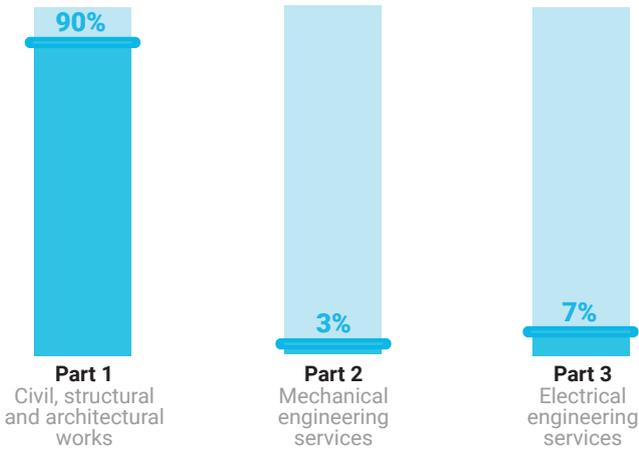


Figure 7 Percentage of types of damages incurred across the 39 assessed schools

Out of the 50 schools that are still in need of rehabilitation, 10 schools are considered as not vulnerable, 23 are moderately vulnerable and 17 are highly vulnerable. Out of the 17 highly vulnerable schools, the types of

damages incurred are: 9 minor damage, 7 moderate damage, 1 major damage. A full ranking can be found in Appendix 2, where the level of damage per school and ranked vulnerability score is also indicated.

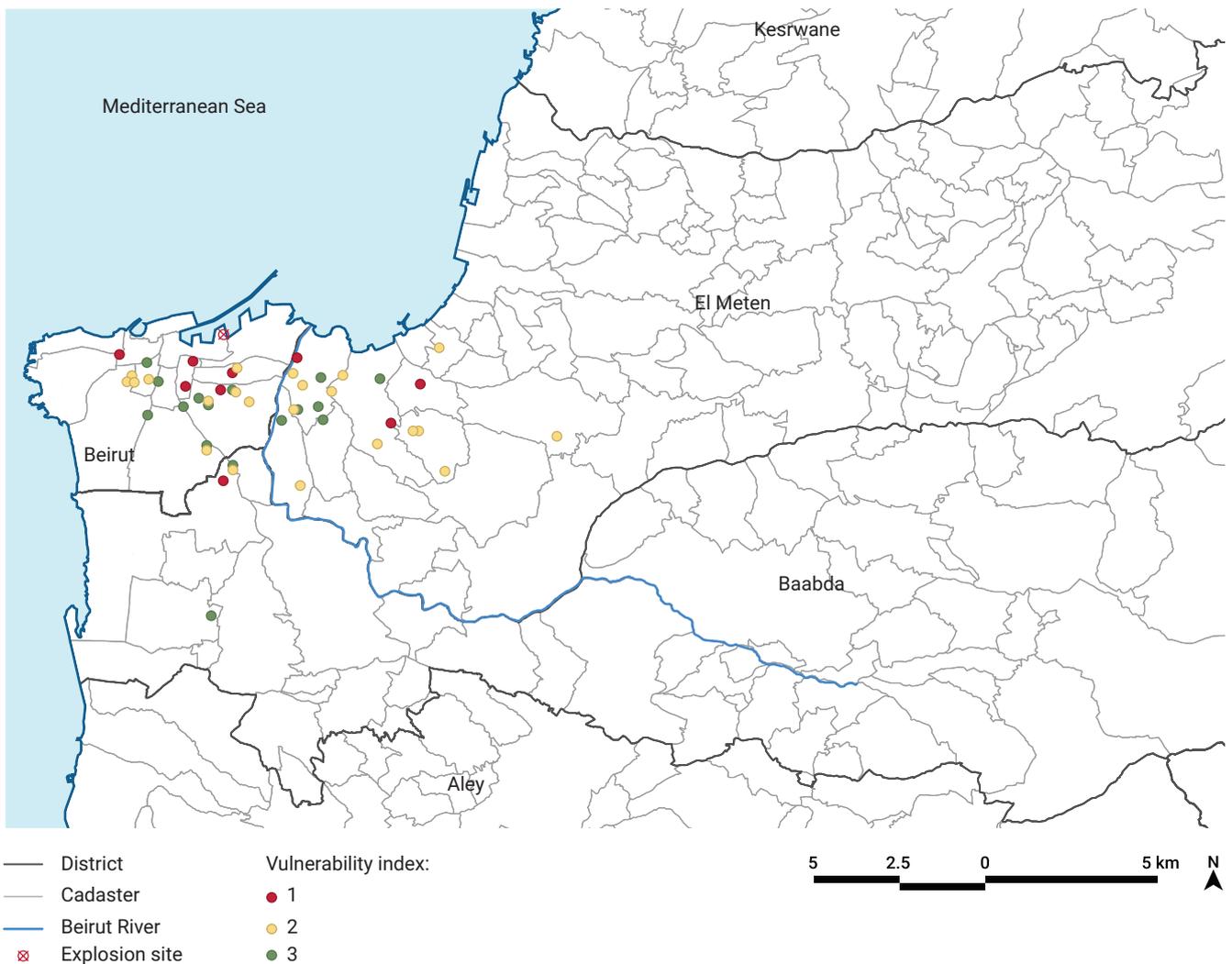


Figure 8 Vulnerability map of schools assessed (3,2,1 in ascending order from least vulnerable to most)

NEXT STEPS

- Presentation and dissemination of report following validation by MEHE, highlighting the needs of the most vulnerable identified schools, amongst relevant actors and coordination fora.
- Identification of remaining private schools affected by the blasts but not included in UN-Habitat's assessment and agreement on the way forward.
- Sharing of report and BOQs with interested actors willing to fund rehabilitation work.
- Launching rehabilitation works in private schools that still have not started or completed their rehabilitation works.
- Follow up with schools and partners on status and progress of rehabilitation works and sharing relevant updates with MEHE.



APPENDICES

APPENDIX 1: BILL OF QUANTITIES TABLE OF CONTENTS

GENERAL PREAMBLES

GENERAL SUMMARY

PART 1 CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS

Item No.	Description
1.	SITE PREPARATION AND DEMOLITION
1.1	Demolishing and Removal of Debris
2.	EXTERNAL WORKS
2.1	Excavation, Backfilling and Earthworks
2.2	Base Course
2.3	Precast Concrete Pavement and Curb
2.3.1.a	Precast Concrete Tiles
2.3.2	Interlocking Tiles
2.3.3	Stone Tiling for Passage
2.3.4	New Curbstone
2.3.5	Wheel Stopper
2.4	Existing Walkways
2.5	Planting
2.5.1	Plant Trees
2.5.2	Agricultural Works
2.5.3	Grass
2.6	School Fences with Related Gates
2.6.1	New Fence - Type 1 (Concrete & Steel with Entrance gates)
2.6.2	New Fence - Type 2 (Steel):
2.6.3	New fence - Type 3 (Steel Beta Fence Prefab):
2.6.4	New Fence - Type 4 (Chain Link)
2.6.5	Rehabilitate Existing Fence - Type 5 (Strengthening and Rehabilitation)
2.6.6	Rehabilitate Existing Fence - Type 6 (Extension with Rehabilitation)
2.6.7	Rehabilitate Existing Fence - Type 7 (Steel Fences with Rehabilitation)
2.6.8	Rehabilitate Existing Fence - Type 8 (Chain Link Fences with Rehabilitation)
2.6.9	Rehabilitate Existing Fence (Solid + Steel + Upper Chainlink) - Type 9
2.7	Recycling Area
2.7.1	Recycling Room
2.7.2	Recycling Containers
2.8	Traffic Sign Boards
2.9	Ramp for External Existing Sidewalk
2.10	Rehabilitate Asphalt Paving
2.11	Flagpole
3.	CONCRETE WORKS
3.1	Cast in Place Concrete
3.1.1	Plain Concrete
3.1.2	Reinforced Concrete Footings, Tie Beams, Columns and Walls Drop - Parapete - Slab on Grade
3.1.3	Reinforced Concrete Slabs
3.1.4	Hollow Concrete Slab (Ribbed Slab)
3.1.5	Reinforced Existing Columns and Beams
3.1.6	Internal and External Stairs
3.1.7	Ramp for Handicapped
3.1.8	Slab on Grade For External Playgrounds
3.1.9	Precast Concrete Benches
3.1.10	Rehabilitation of Playground Slabs (External Playground):
3.1.11	EPOXY DOWELS
3.2	Stamped Concrete

4. **MASONRY**
 - 4.1 Hollow or Solid Concrete Blocks and Clostra
 - 4.2 Exterior Stone works
 - 4.2.1 New Natural Stone Facades
 - 4.2.2 New Natural Stone Plinth
 - 4.2.3 New Natural Stone for External Works
 - 4.2.4 Rehabilitate Natural Stone Facades
5. **METAL WORKS**
 - 5.1 Metal Fabrications
 - 5.1.1 Steel Work for openings (Doors and Windows)
 - 5.1.2 Rehabilitate and Maintain the Existing Steel Work (Burglar Proof Protection + Opening)
 - 5.1.3 Steel Louver
 - 5.1.4 Roof Opening Cover
 - 5.1.5 Galvanized Wire Mesh Protection
 - 5.1.6 Steel Ramp
 - 5.1.7 Scaffolding Steel for Water Tank
 - 5.1.8 Electric Steel Rolling Shutter
 - 5.1.9 New Steel School Sign Boards
 - 5.1.10 Steel Ladder (New)
 - 5.1.11 New Steel Sheds
 - 5.1.12 New Steel Sheds - Brick Tiles at Roof
 - 5.1.13 Rehabilitate Existing Steel Shed Works
 - 5.1.14 Metal Handrail Works
 - 5.1.15 Rehabilitate and Maintain Steel Handrail
6. **WOOD WORKS**
 - 6.1 Joinery Works
 - 6.1.1 Timber Cupboard For New Kitchens
 - 6.1.2 Timber Cupboard
 - 6.1.3 Timber Stage
 - 6.1.4 Rehabilitate the Existing Timber Stage with Steps and Add New part to Existing Timber
 - 6.2 Bathrooms Partitions
7. **THERMAL AND MOISTURE PROTECTION**
 - 7.1 Roof Waterproofing
 - 7.2 Polyurethane Waterproofing for Wet Areas
 - 7.3 Insulate the New and Old Basements Walls
 - 7.4 Green Roof
 - 7.5 Expansion Joints
 - 7.5.1 New Expansion Joints
 - 7.5.2 Rehabilitate the Existing Expansion Joints
8. **DOOR AND WINDOWS**
 - 8.1 Wooden Doors and Windows
 - 8.1.1 Timber Doors for Classrooms and Teaching Places
 - 8.1.2 New Timber External Shutters (Louvers)
 - 8.1.3 Rehabilitate the Existing Timber Doors:
 - 8.1.4 Rehabilitate Timber External Joinery Works Windows and Shutters
 - 8.2 Aluminum Doors and Windows
 - 8.2.1 New Aluminum Panels (Double Glass)
 - 8.2.2 New Aluminum Panels (Single Glass)
 - 8.2.3 New Aluminum Internal Door
 - 8.2.4 Rehabilitation Existing Glazed Aluminum Panels
 - 8.3 Aluminum Composite Panel
 - 8.4 Master Key
9. **FINISHES**
 - 9.1. Cement Plaster
 - 9.1.1 New Internal and External Plaster Works
 - 9.1.2 Repair of Existing Plaster (Internal - External) (Cracks,...)
 - 9.1.3 Rehabilitate All Windows Ornaments Sunbreakers and the like

- 9.1.4 Rehabilitation of all existing Balustrade Parapets (Historical)
- 9.2 Tiling Works
 - 9.2.1 Full Mass Colored Ceramic for Floors
 - 9.2.2 Glazed Colored Ceramic for Walls
 - 9.2.3 New Tiles
 - 9.2.4 Repair of Existing Ceramic Tiles with Similar and Clean All (Floors and Walls)
 - 9.2.5 Repair existing broken floor tiles and skirting (all types) and reinstall by new, similar to existing for all rooms and corridors
 - 9.2.6 Tile Repair in classrooms
 - 9.2.7 Rehabilitate Existing Stair Treads and Riser
 - 9.2.8 Threshold Tiles (Doors, Marble Topping)
 - 9.2.9 Clean and Rub the Existing Floor Tiles and Skirting
 - 9.2.10 Clean the Existing Decorative Wall Tiles
 - 9.2.11 Colored P.V.C. Flooring for KG Classrooms
 - 9.2.12 Colored P.V.C. for Covered Indoor KG Playgrounds
 - 9.2.13 Anti Shock Rubber Flooring
- 9.3 Ceiling Works
 - 9.3.1 Metal Sheet Strips Suspended Ceilings:
- 9.4 Gypsum Works
 - 9.4.1 Gypsum Board Suspended Ceiling:
 - 9.4.2 Partitions (Walls)
- 9.5 Painting
 - 9.5.1 Wall and Ceilings Paint Works
 - 9.5.2 Outside Walls Paint (Old and New Walls and Ceilings)
 - 9.5.3 Paint Damp proof Colorless Layer Unleaded on Facades and Supply a Guarantee for Five Years
 - 9.5.4 Maplexine, Monocouche or Santex Works
 - 9.5.5 External Tyrolen Plaster/Water Proofing (Complete surface to be covered)
 - 9.5.6 Epoxy Flooring
- 10. **SPECIALTIES**
 - 10.1 Bathrooms Accessories:
 - 10.1.1 Paper Roller Holder
 - 10.1.2 Soap Dispenser
 - 10.1.3 Paper Holder Box
 - 10.1.4 Mirror for Lavatories
 - 10.1.5 Handicapped Bathroom Accessories
 - 10.2 Classroom Specialties
 - 10.2.1 White Teaching Boards
 - 10.2.2 Educational Panels Inside Classrooms
 - 10.2.3 Signage
 - 10.3 Resin Work
 - 10.3.1 Drinking Basin
 - 10.3.2 Lavatory Countertop
 - 10.3.3 Laboratory furniture (All Types - Biology - Physics - Chemistry - Science ...etc)
 - 10.3.4 Kitchen Counter
 - 10.3.5 Canteen Counter
 - 10.4 Round Corner Protector on Aluminum Core
 - 10.4.1 Corner Guards
 - 10.4.2 Guard Protection For Column (KG Playground)
 - 10.5 Internal Curtains
 - 10.6 Floor Guide Signage
 - 10.7 Sound Insulation Board with Protection on Walls
- 11. **EQUIPMENT**
 - 11.1 EQUIPMENT ATHLETIC COURTS (BASKET BALL NET, BACKBOARD AND SUPPORTS)
 - 11.2 Vaccum Cleaner Machine for Vinyl

PART 2 MECHANICAL ENGINEERING SERVICES

Item No.	Description
1.	GENERAL TECHNICAL REQUIREMENTS
2.	BELOW GROUND DRAINAGE
2.1	Sanitary, Rain Water and Pipe Work Installation (below ground)
2.2	Manholes Pits
2.3	Submersible Pump
2.4	Neutralization Pit
3.	SANITARY, WASTE & RAIN WATER PIPE WORK INSTALLATION
3.1	Drainage System inside the Building
3.2	Floor Drain
3.3	Drain Cover
3.4	Channel Drain
3.5	Roof Vent Cap
4.	PIPED SYSTEMS (LIQUIDS)
4.1	Cold & Hot Water Piping Inside Building
4.2	Potable Water Piping
4.3	Water Tanks
4.4	Drinking Water Tank
4.5	Electrical Water Heater
4.6	Heat Exchanger with Back-Up Electric Heater
4.7	Solar Panels
4.8	Circulation Water Pumps
4.9	Booster Pumps
5.	GENERAL BOILER PLANT
5.1	Boiler
5.2	Heating Water Pumps
5.3	Heating Water Pipes
5.4	Aluminum Radiators
5.5	Control Panel
5.6	Fuel Storage Tanks
5.7	Flow and Fill Pipework
6.	VENTILATION
6.1	Duct Work
6.2	Fans
6.3	Air Outlets
7.	FIRE PROTECTION
7.1	Portable Fire Extinguisher
7.2	Automatic Fire Extinguisher
8.	WATER TREATMENT
8.1	Treatment and water purification station
9.	SANITARY FIXTURES
9.1	W.C. for Kids
9.2	W.C. For Non Kids
9.3	Lavatories for Kids in the K.G.
9.4	Lavatories for Non Kids
9.5	Urinal
9.6	Self Close Taps on Kids & Students Lavatories
9.7	Wall Type Self Close Taps on Drinking Basins
9.8	Kitchen Sink Accessories
9.9	Taps for Lab Sinks
9.10	Lavatories Resin Accessories
9.11	Showers Tray
9.12	Eye Wash

- 9.13 Janitor Sink

- 10. **THERMAL INSULATION**
- 10.1 For Hot Water PPR Pipes (without Jacketing)
- 10.2 For Hot Water PPR Pipes (with Jacketing)
- 10.3 For Heating Black Steel Pipes (without Jacketing)
- 10.4 For Heating Black Steel Pipes (with Jacketing)

- 11. **GAS SERVICES**
- 11.1 Copper Pipe Works
- 11.2 Propane/Butane Cylinder Tank
- 11.3 Gas Accessories

PART 3 ELECTRICAL ENGINEERING SERVICES

Item No. Description

- 1. **BASIC ELECTRICAL REQUIREMENTS**
- 1.1 Fixing and Repairing

- 2. **DISTRIBUTION, SUBDISTRIBUTION AND FINAL BRANCH CIRCUIT PANELBOARDS**
- 2.1 Electrical Distribution Panel Boards
- 2.3 Automatic Transfer Switches (ATS)
- 2.4 Computer Lab Panel Board (Rehabilitation)

- 3. **CONDUITS, WIREWAYS, SUPPORTING SYSTEMS AND RELATED ACCESSORIES**
- 3.1 Low Voltage Distribution Braces Connection and Electrical Cables

- 4. **WIRING DEVICES AND DISCONNECTS**
- 4.1 Disconnecting Switches
- 4.2 Electrical Sockets
- 4.5 Electrical Devices / Accessories

- 5. **GENERAL LIGHTING INSTALLATIONS**
- 5.1 Lighting Fixtures

- 6. **EARTHING SYSTEM**

- 7. **LIGHTNING PROTECTION**

- 8. **FIRE ALARM SYSTEM**

- 9. **TELEPHONE SYSTEM**

- 10. **DATA SYSTEM**

- 11. **UNINTERRUPTIBLE POWER SUPPLY (UPS)**

- 12. **CCTV SYSTEM**

- 13. **SOLAR SYSTEM**

- 14. **BELL SYSTEM**

- 15. **CONVEY EQUIPMENTS - LIFTS**
- 15.1 LIFTS - Rehabilitation

APPENDIX 2: LIST OF PRIVATE SCHOOLS AND INDIVIDUAL SUMMARY REPORTS FOR THE AFFECTED PRIVATE SCHOOLS POST-BEIRUT PORT EXPLOSIONS

- No contact information available*
- School did not answer*
- School was not affected
- Rehabilitation started / completed*
- Assessment completed by the school*
- Assessment completed by UN-Habitat and Frontline Engineers volunteers

* The estimated damage cost was provided by the private schools and was not the result of UN-Habitat's physical damage assessment.

CERD	School name	Estimated damage cost (USD)*	Level of damages	Vulnerability index	Number of students	Number of teachers
8815	New Diaa الضياء الجديدة - برج الراجحة	4,667	-	-	237	11
8524	Dar al Oloum al Wataniya دار العلوم الوطنية - جديدة الملق	6,667	-	-	300	12
7279	Saint Gregoir-Jamhour مدرسة سان غريغوار - جمهور	2,000,000	-	-	3,204	319
7278	Collège des Dominicaines de ND de la Délivrande	1,500	-	-	566	62
7259	Collège des Saints Cœurs - Ain Najm	2,416	-	-	2,433	240
7272	Antonine Sisters School (Hazmieh and Jamhour)	42,000	-	-	1,815	194
7223	The Lebanese Family العائلة اللبنانية	10,667	-	-	282	11
7253	Antonines-Dekwane الانطونيات - الدكوانة	16,676	-	-	321	45
8531	Children Academy أكاديمية الاطفال	52,000	-	-	7	5
8623	Rawdat Larisa روضة لاريسا	-	No Damages	-	16	3
5710	College des Soeurs de Sainte Therese	-	No Damages	-	71	8
7295	Collège de la Sagesse - Brasilia	-	No Damages	-	1,922	284
7393	Ecole Maronite Saint Joseph	-	No Damages	-	397	39
7470	راهبات الوردية الملق Rahibat al Wardiye	-	No Damages	-	773	90
7480	مار منصور لراهبات البزسون Ecole Saint Vincent des Sœurs de la Charité de Ste J.A. Besançon - Baskinta	-	No Damages	-	52	15

5028	Mesrobian مسرؤبىان	35,000	-	-	-	461	54
8284	Beirut National School بيروت الوطنية	4,667	-	-	-	315	38
5019	Ali Bin Abi Taleb Elementary School ابتدائية علي بن ابي طالب	9,240	-	-	-	542	37
5017	Omar Bin al Khatab عمر بن الخطاب	4,356	-	-	-	212	40
7169	College Notre Dame	3,728	-	-	-	957	108
8380	College Patriarcal الكلية البطريركية	3,400	-	-	-	482	67
7244	College Saint Hripsimiantz	4,650	-	-	-	362	50
7018	Ecole des Trois Docteurs	690,000	-	-	-	173	28
7011	Sayidat al Nasira سييدة الناصرة	1,500,000	-	-	-	1,641	191
7022	Grand Lycee غراند ليسيه	500,000	-	-	-	3,387	328
7265	College des Peres Antonins المعهد الانطوني	10,000	-	-	-	2,193	183
7387	L>Athénée De Beyrouth	20,000	-	-	-	1,244	149
7031	Collège Ste-Anne des Soeurs de Besançon	141,000	-	-	-	763	72
7125	Makased ثانوية خديجة الكبرى	7,050	-	-	-	506	68
8049	Collège Louise Wegmann	12,000	-	-	-	589	125
7394	Collège mariste Champville	6,935	-	-	-	3,608	305
7119	Collège Protestant Français	300,000	-	-	-	1,723	190
8824	Collège Protestant Français Montana	725	-	-	-	202	61

7002	أبناء مار يوسف Abnaa Mar Youssef	25,000	-	-	267	13
7005	الجيل بلا دنس Al Haabal Bila Danas	52,000	-	-	138	17
7042	"Beirut Baptist School مدرسة المعمدانية الانجيلية المصيطة	100,000	-	-	1,272	192
7014	Greater Beirut Evangelical School مدرسة بيروت الانجيلية الكبرى	100,000	-	-	346	38
7164	Christian Teaching Institute (CTI) معهد التعليم المسيحي	-	-	-	595	91
7105	Ecole Saint Vincent	113,000	-	-	676	84
5033	Ecole Saint Vincent Bourj Hammoud	74,918	-	-	535	32
7236	Mekhitarist Fathers School	12,568	-	-	107	21
7093	Ecole Notre Dame des Anges رعية سيدة الملائكة	38,500	-	-	568	61
7037	College Patriarcal	55,700	-	-	241	35
7035	Ecole Saint Joseph de L'Apparition	56,000	-	-	787	74
7395	Ecole Val Per Jacques	18,110	-	-	2,441	199
7094	Ecole Marguerite-Marie	19,020	-	-	524	63
5065	مار مارون - البوشرية Mar Maroun- Bouchrieh	15,000	-	-	15	3
7006	الارمنية الانجيلية المركزية العالية Armeninan Evangelical School	160,000	-	-	332	52
7030	الاهليو - ميناء الحص Ahliyo - Mina al Hosen	75,000	-	-	577	89
7039	ثانوية بيروت العربية Beirut Al Arabiya Secondary School	50,743	-	-	82	29

7122	البيادر - بيروت Al Bayader	100,000	-	-	795	102
7126	ليسيه فردان Lycee Verdun	850,000	-	-	1,695	176
7152	ثانوية الزقي السريانية Al Taraqi	5000	-	-	307	28
7153	مار تكتلا Mar Takla	15,000	-	-	302	17
7160	الناصرى الانجيلية Al Nasiri	25,000	-	-	213	28
7207	مانور هاوس ديكرات Manor House	10,000	-	-	238	27
7255	القادي الاقدس - البوشرية Al Fadi al Akdas	7,000	-	-	362	30
8210	المدرسة الانطونية الدولية Antonines International School	15,000	-	-	3,037	274
8439	ولسبرينغ - المتحف Wellspring	52,000	-	-	909	197
8618	دار الطفل اللبناني Dar al Tofl al Lobnani	52,000	-	-	87	31
8202	ابي بكر الصديق Abi baker al Sidik	36,210	-	-	157	26
7389	سيده لورد - انطلياس سيده لورد - انطلياس	1,580	-	-	520	41
7396	سيده النجاة - الزلفا Sayidat al Najat	200	-	-	554	59
7233	College de la Providence	181,600	Major Damages	2	498	76
7246	Institut moderne du Liban	55,000	Major Damages	2	311	43
5026	مار يوسف المجانية Mar Youssef	52,000	Moderate Damages	3	124	14
5005	سيده الانتصار	52,000	Moderate Damages	3	781	43

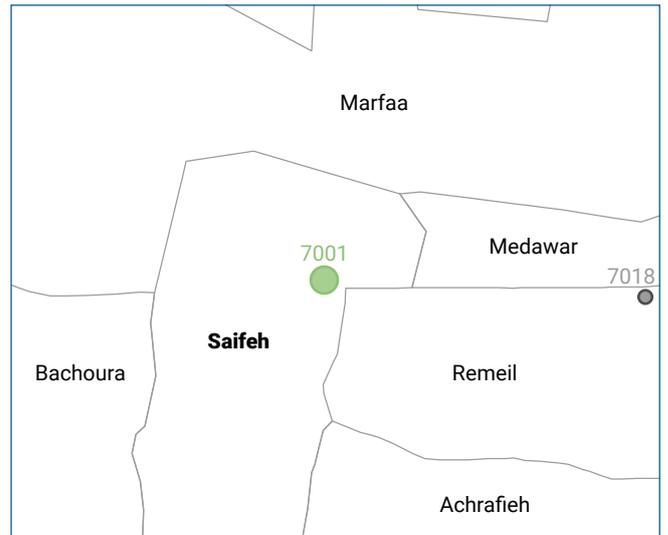
7245	Collège de la Sainte Famille Française - Fanar العائلة المقدسة الفرنسية	43,050	Moderate Damages	2	2,192	240
7028	دار الحنان Dar al Hanan	17,250	Moderate Damages	2	43	6
7155	Collège des Sœurs Antonines- Bourj Hammoud	17,000	Moderate Damages	2	877	84
7150	Saint Agnes School الغيبس	10,000	Minor Damages	2	116	29
5061	برج حمود الأهلية Bourj Hamoud Al Ahliya	9,715	Moderate Damages	3	284	25
7247	سيدة جبل الكرمل Sayidat Jabal al Karmal	4,000	Minor Damages	2	1,605	121
7166	Lycee Notre Dame Du Perpetuel Secours - Section St. Maxime	2,350	Minor Damages	2	249	28
7001	القلب الأقدس - الفرير College du Sacre Coeur - Freres Gemmayze	675,215	Major Damages	1	1,321	129
7003	الحكمة College de la Sagesse	301,434	Major Damages	1	575	95
7004	الشارة الأرثوذكسية Annunciation Orthodox School Beirut	265,724	Major Damages	2	903	188
7027	Kulliyat al Banat - Makased	157,011	Major Damages	3	-	-
7023	ثابوية القديس يوسف راهبات القلبيين الأقدسين College des saints-coeurs Sioufi	121,611	Major Damages	2	1,972	197
5008	مار منصور راهبات المحبة Mar Mansour	100,551	Moderate Damages	3	531	27
7097	ثابوية خالد بن الوليد Khaled Bin Al Walid	65,610	Moderate Damages	3	407	91

7017	Collège des Filles de la Charité - Maison centrale ثانوية راهبات المحبة	61,836	Major Damages	2	1,122	100
7146	راهبات سيدة السلام - الدورة Rahibat al Salam	60,809	Moderate Damages	2	409	58
7044	إليت - المحيطة Elite - Msaytbeh	57,431	Moderate Damages	1	423	56
7016	College Saint Sauveur	53,310	Minor Damages	3	412	42
7019	زهرة الاحسان Zahrat al Ihssan	51,758	Major Damages	1	954	168
7142	Armenian Evangelical Shamlan Tatikian High School	46,832	Major Damages	2	270	28
7012	سان شارل Saint Charles	43,853	Major Damages	2	132	18
7013	ثانوية علي بن ابي طالب Ali Bin Abi Taleb	43,248	Moderate Damages	3	205	39
7034	الاء الوطنية - كركول الدروز Ikhah National School	38,313	Moderate Damages	2	584	62
7104	المدرسة الأرمنية الانجيلية " (Armenian Evangelical School(college"	35,168	Moderate Damages	1	131	41
7241	College des Soeurs des Notre Dame des Apotres	32,191	Moderate Damages	2	1,556	129
7178	الحكمة - عين الرمانة Sagesse Ein Remeneh	22,155	Minor Damages	1	146	43
8672	القدوس يوحنا الرسول Apostle John School	21,985	Minor Damages	1	20	4
7263	Collège des Sœurs Antonines - Mar Doumith	19,451	Minor Damages	2	1,545	149
7120	ليسيه عبد القادر Lycee Abdelkader	18,593	Moderate Damages	2	1,597	158
8628	افنس - قرن الشباك Aventis School	17,399	Minor Damages	3	103	10
5032	قلب يسوع- النبعة Ecole de Sacre Coeur	16,835	Minor Damages	3	216	14

7168	Ecole Notre Dame du Perpetuel Secours الداخمة سيده المعونة	16,123	Moderate Damages	2	321	28
7227	Collège de la Sagesse Saint-Maron - Jdeideh	10,677	Major Damages	1	849	149
5548	السنابل - الريجة Sanabel	10,225	Minor Damages	3	414	29
7398	السان جورج - الزلقا College Saint Georges - Zalka	9,878	Minor Damages	2	517	63
7036	المدرسة المعنبة Al Madrassah Al Maaniah	9,533	Minor Damages	2	536	43
7038	لبنان الاخضر Green Lebanon	8,344	Moderate Damages	2	63	19
5066	مار يوحنا المعمدان - البوشرية Mar Youhana al Maamadan - Bouchrieh	5,890	Minor Damages	3	252	33
8674	اي.بي.اي - الكوالة Ecole a Programme Individualise	4,229	Minor Damages	3	49	13
8798	روضة دار الامانة والتنمية Rawdat Dar al Amana wal Tanmiya	4,194	Moderate Damages	3	218	14
7061	Kasr Al Thakafa - School	4,152	Minor Damages	3	100	17
7092	Lycee de Musee مدرسة ليسانس المتحف	3,564	Minor Damages	2	273	28
7082	ابن رشد Ibn Roshod	3,237	Minor Damages	3	41	13
7242	مار جورجس - البوشرية Saint George Assyrian School, Sed El Boushrieh	3,048	Minor Damages	1	136	12
7154	مؤسسة الشرق الثانية Lycee d'Orient	3,035\$	Minor Damages	3	60	10

FRERES AL KALB EL AKDASS

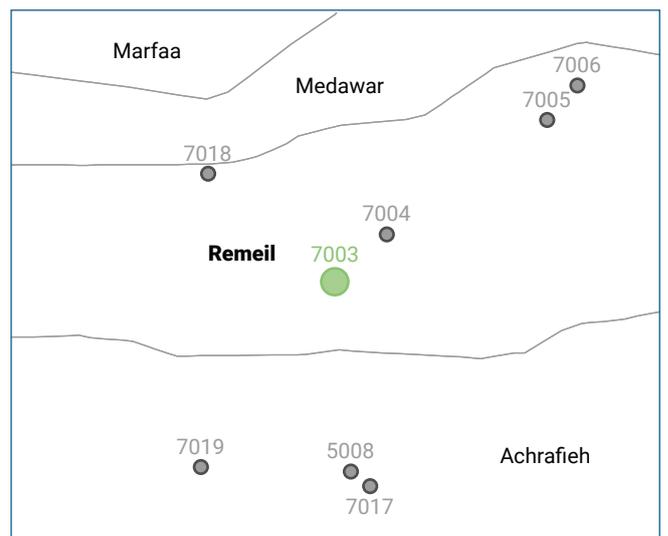
-  **CERD number:** 7001
-  **Number of students:** 1,321
-  **Number of teachers:** 129
-  **Level of damage:** Major
-  **Types of damage:** Civil, structural and architectural; mechanical; and electrical
-  **Estimated rehabilitation cost:** USD 675,215
 - Civil, Structural and Architectural Works (USD 625,794)
 - Mechanical Engineering Services (USD 5,400)
 - Electrical Engineering Services (USD 44,021)



Location of assessed school

COLLEGE DE LA SAGESSE

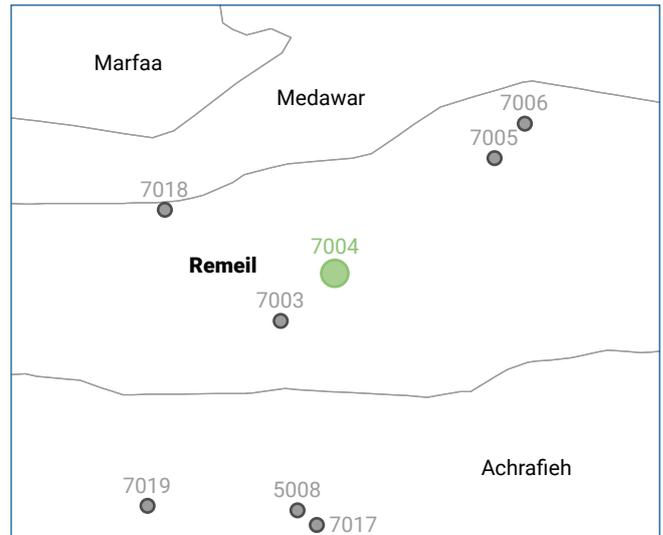
-  **CERD number:** 7003
-  **Number of students:** 575
-  **Number of teachers:** 95
-  **Level of damage:** Major
-  **Types of damage:** Civil, structural and architectural
-  **Estimated rehabilitation cost:** USD 301,434
 - Civil, Structural and Architectural Works (USD 301,434)



Location of assessed school

ANNUNCIATION ORTHODOX SCHOOL BEIRUT

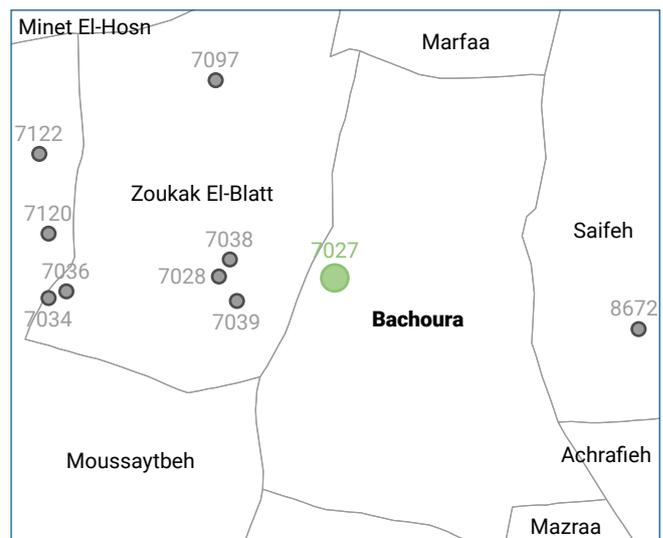
-  **CERD number:** 7004
-  **Number of students:** 903
-  **Number of teachers:** 188
-  **Level of damage:** Major
-  **Types of damage:** Civil, structural and architectural; mechanical; electrical
-  **Estimated rehabilitation cost:** USD 265,724
 - Civil, Structural and Architectural Works (USD 182,298)
 - Mechanical Engineering Services (USD 50,720)
 - Electrical Engineering Services (USD 32,706)



Location of assessed school

KULLIYAT AL BANAT – MAKASED

-  **CERD number:** 7027
-  **Number of students:** -
-  **Number of teachers:** -
-  **Level of damage:** Major
-  **Types of damage:** Civil, structural and architectural
-  **Estimated rehabilitation cost:** USD 157,011
 - Electrical Engineering Services (USD 870)



Location of assessed school



COLLEGE DES SAINTS-COEURS SIOUFI



CERD number: 7023



Number of students: 1,972



Number of teachers: 197



Level of damage: Major

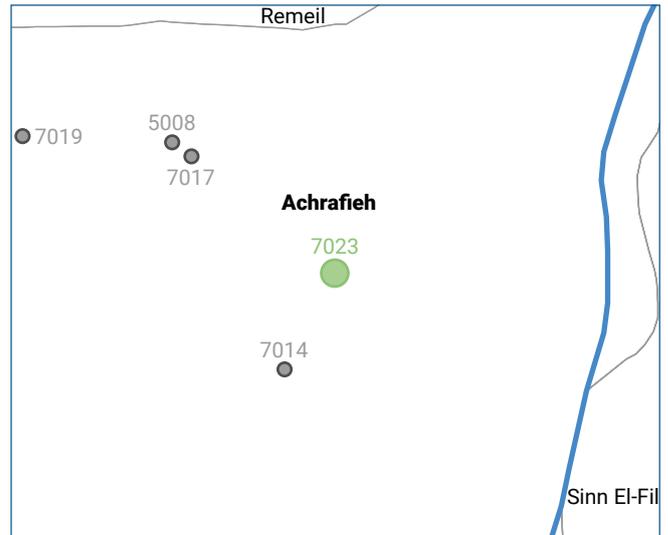


Types of damage: Civil, structural and architectural; mechanical; and electrical



Estimated rehabilitation cost: USD 121,611

- Civil, Structural and Architectural Works (USD 120,500)
- Mechanical Engineering Services (USD 50)
- Electrical Engineering Services (USD 1,061)



Location of assessed school

MAR MANSOUR



CERD number: 5008



Number of students: 531



Number of teachers: 27



Level of damage: Moderate

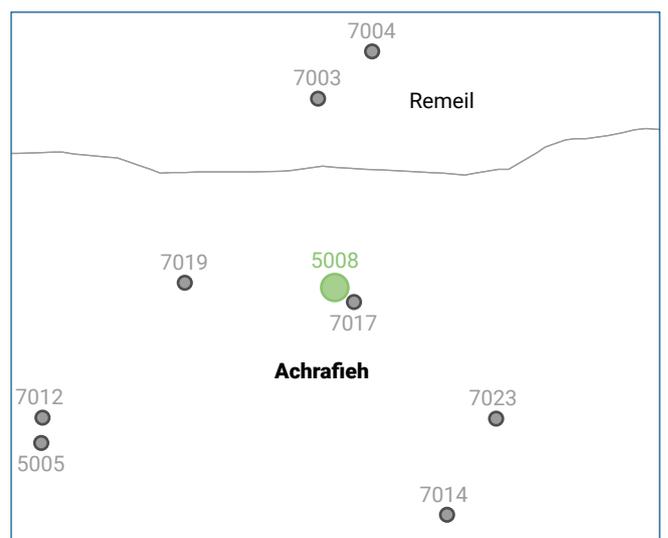


Types of damage: Civil, structural and architectural; mechanical; and electrical



Estimated rehabilitation cost: USD 100,551

- Civil, Structural and Architectural Works (USD 93,739)
- Mechanical Engineering Services (USD 240)
- Electrical Engineering Services (USD 6,572)



Location of assessed school

KHALED BIN AL WALID

 **CERD number:** 7097

 **Number of students:** 407

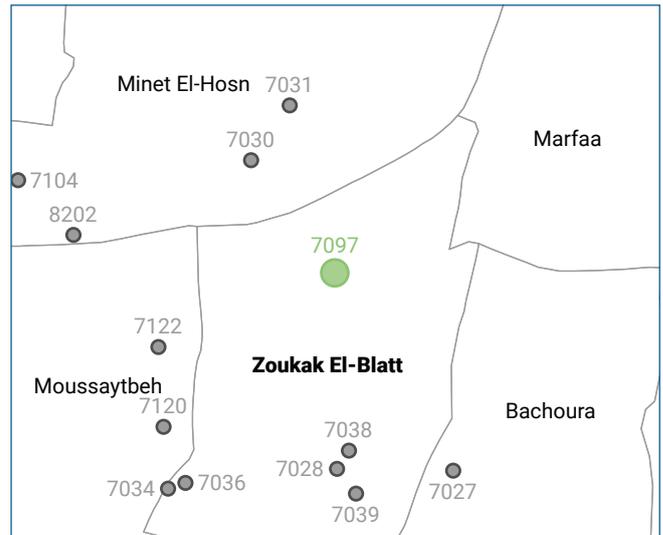
 **Number of teachers:** 91

 **Level of damage:** Moderate

 **Types of damage:** Civil, structural and architectural; mechanical; and electrical

 **Estimated rehabilitation cost:** USD 65,610

- Civil, Structural and Architectural Works (USD 63,700)
- Mechanical Engineering Services (USD 250)
- Electrical Engineering Services (USD 1,660)



Location of assessed school

RAHIBAT AL SALAM

 **CERD number:** 7146

 **Number of students:** 409

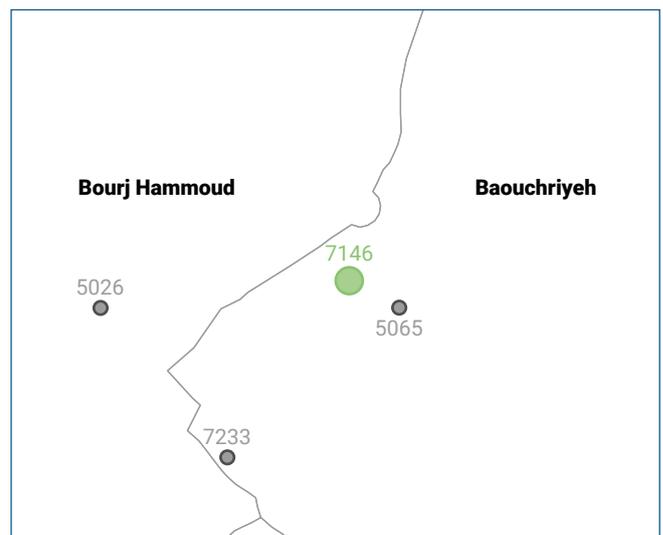
 **Number of teachers:** 58

 **Level of damage:** Moderate

 **Types of damage:** Civil, structural and architectural; electrical

 **Estimated rehabilitation cost:** USD 60,809

- Civil, Structural and Architectural Works (USD 58,920)
- Electrical Engineering Services (USD 1,889)



Location of assessed school



ELITE - MSAYTBEH

 **CERD number:** 7044

 **Number of students:** 423

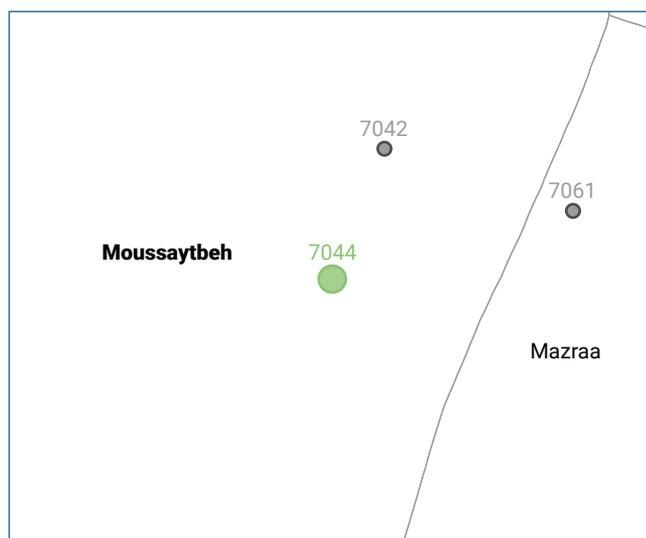
 **Number of teachers:** 56

 **Level of damage:** Moderate

 **Types of damage:** Civil, structural and architectural; and electrical

 **Estimated rehabilitation cost:** USD 57,431

- Civil, Structural and Architectural Works (USD 32,018)
- Electrical Engineering Services (USD 25,413)



Location of assessed school

COLLÈGE SAINT SAUVEUR

 **CERD number:** 7016

 **Number of students:** 412

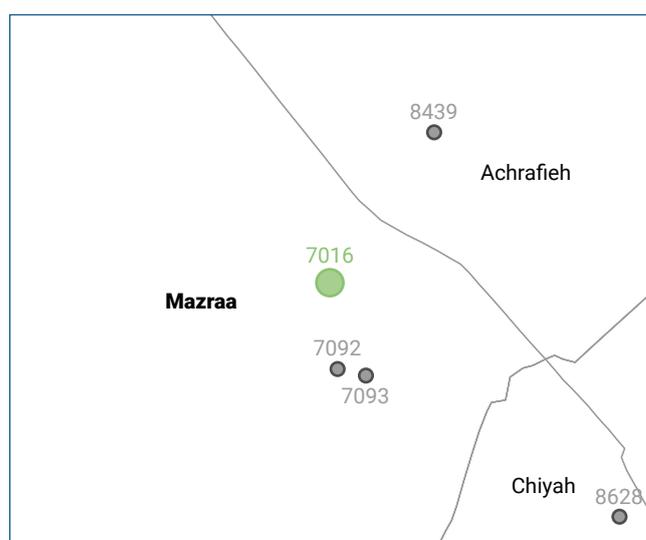
 **Number of teachers:** 42

 **Level of damage:** Minor

 **Types of damage:** Civil, structural and architectural

 **Estimated rehabilitation cost:** USD 53,310

- Civil, Structural and Architectural Works (USD 53,095)
- Mechanical Engineering Services (USD 25)
- Electrical Engineering Services (USD 190)



Location of assessed school

ZAHRAT AL IHSAN

CERD number: 7019

Number of students: 954

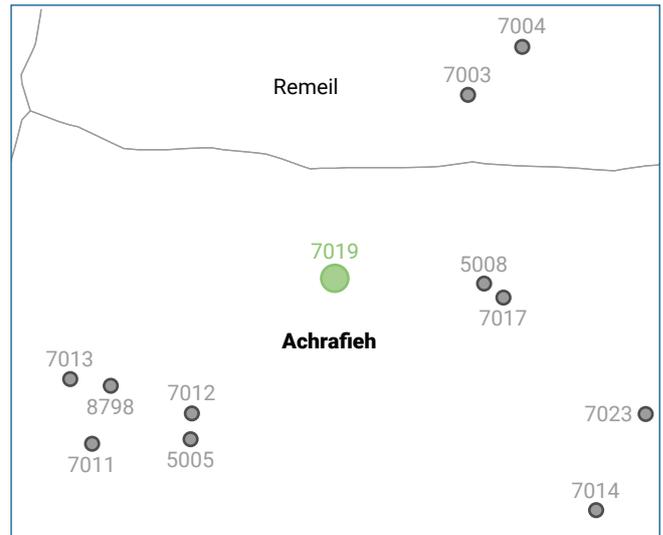
Number of teachers: 168

Level of damage: Major

Types of damage: Civil, structural and architectural; mechanical; electrical

Estimated rehabilitation cost: USD 46,832

- Civil, Structural and Architectural Works (USD 44,052)
- Mechanical Engineering Services (USD 120)
- Electrical Engineering Services (USD 2,660)



Location of assessed school

ARMENIAN EVANGELICAL SHAMLIAN TATIKIAN HIGH SCHOOL

CERD number: 7142

Number of students: 270

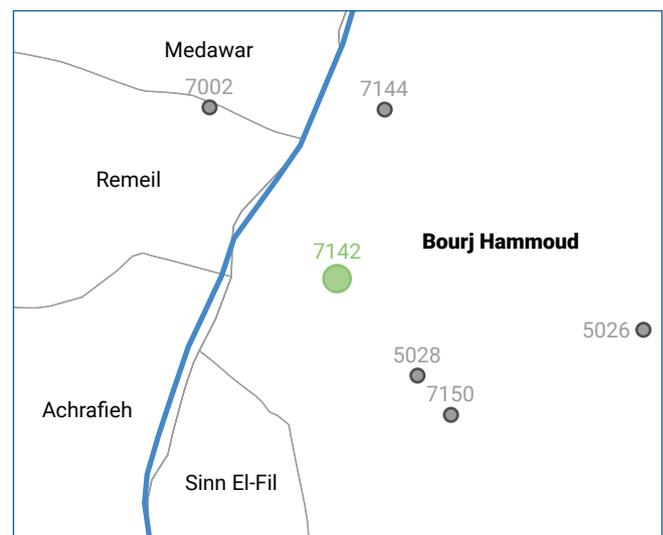
Number of teachers: 28

Level of damage: Major

Types of damage: Civil, structural and architectural; mechanical; electrical

Estimated rehabilitation cost: USD 46,832

- Civil, Structural and Architectural Works (USD 44,052)
- Mechanical Engineering Services (USD 120)
- Electrical Engineering Services (USD 2,660)

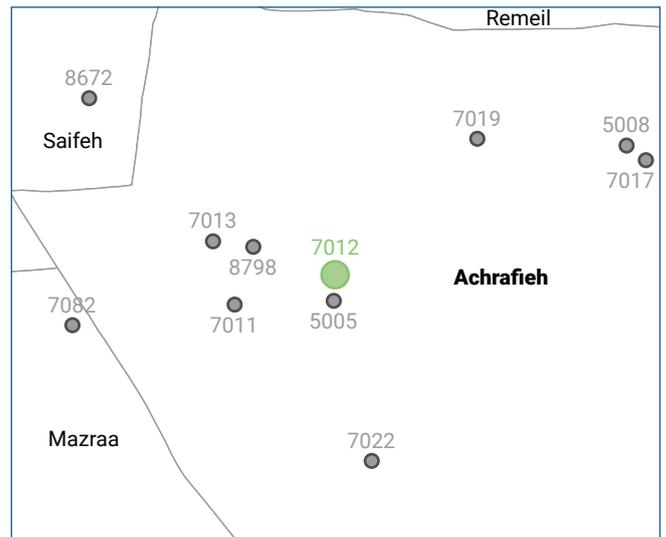


Location of assessed school



SAINT CHARLES

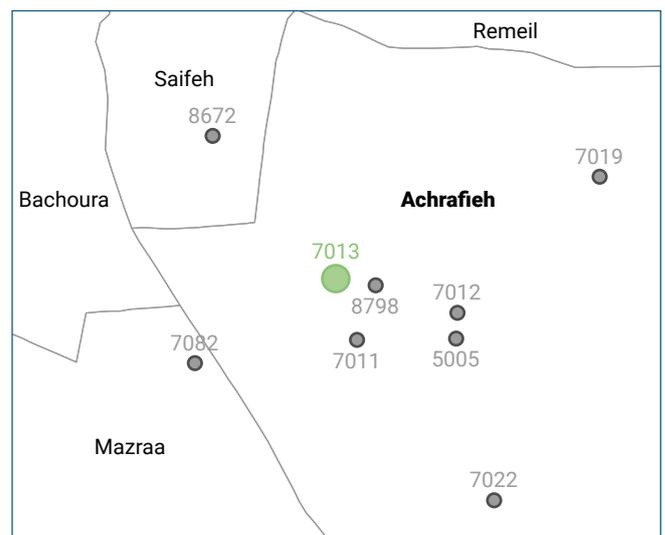
-  **CERD number:** 7012
-  **Number of students:** 132
-  **Number of teachers:** 18
-  **Level of damage:** Major
-  **Types of damage:** Civil, structural and architectural; mechanical, electrical
-  **Estimated rehabilitation cost:** USD 43,853
 - Civil, Structural and Architectural Works (USD 43,368)
 - Electrical Engineering Services (USD 485)



Location of assessed school

ALI BIN ABI TALEB

-  **CERD number:** 7013
-  **Number of students:** 205
-  **Number of teachers:** 39
-  **Level of damage:** Moderate
-  **Types of damage:** Civil, structural and architectural; and electrical
-  **Estimated rehabilitation cost:** USD 43,248
 - Civil, Structural and Architectural Works (USD 41,402)
 - Electrical Engineering Services (USD 1,846)



Location of assessed school

VAHAN TEKEYAN

 **CERD number:** 7144

 **Number of students:** 103

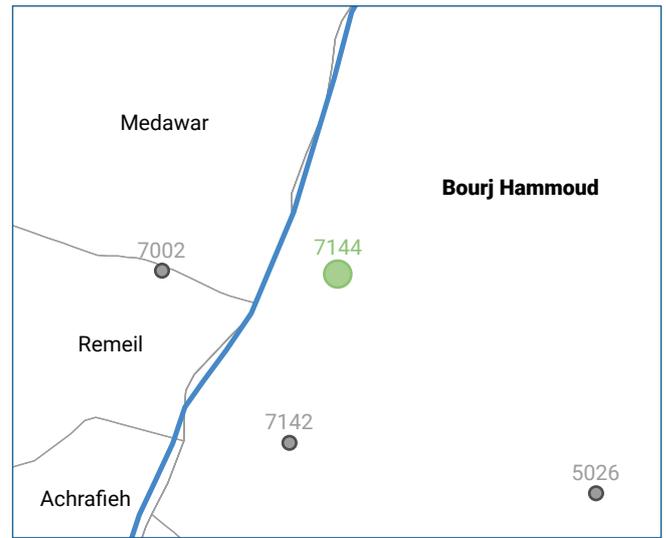
 **Number of teachers:** 23

 **Level of damage:** Moderate

 **Types of damage:** Civil, structural and architectural; mechanical; electrical

 **Estimated rehabilitation cost:** USD 41,532

- Civil, Structural and Architectural Works (USD 41,331)
- Mechanical Engineering Services (USD 175)
- Electrical Engineering Services (USD 26)



Location of assessed school

ARMENIAN EVANGELICAL SCHOOL (COLLEGE)

 **CERD number:** 7104

 **Number of students:** 131

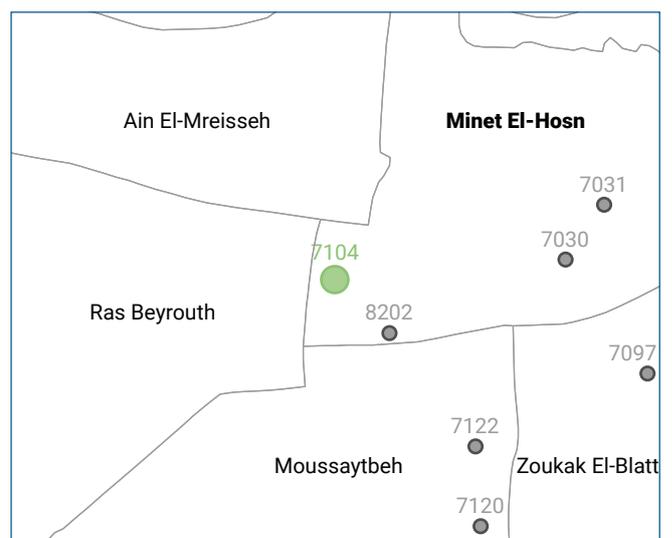
 **Number of teachers:** 41

 **Level of damage:** Moderate

 **Types of damage:** Civil, structural and architectural

 **Estimated rehabilitation cost:** USD 35,168

- Civil, Structural and Architectural Works (USD 35,168)

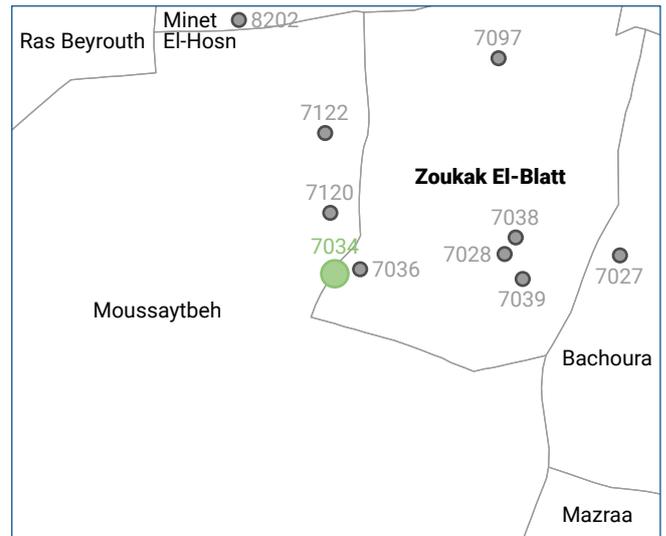


Location of assessed school



IKHAA NATIONAL SCHOOL

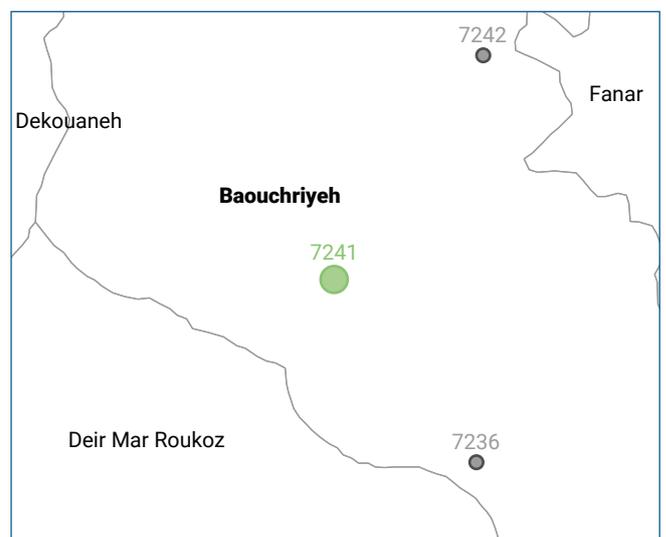
-  **CERD number:** 7034
-  **Number of students:** 584
-  **Number of teachers:** 62
-  **Level of damage:** Moderate
-  **Types of damage:** Civil, structural and architectural; and electrical
-  **Estimated rehabilitation cost:** USD 38,313
 - Civil, Structural and Architectural Works (USD 37,716)
 - Electrical Engineering Services (USD 598)



Location of assessed school

COLLÈGE DES SOEURS DE NOTRE DAME DES APOTRES

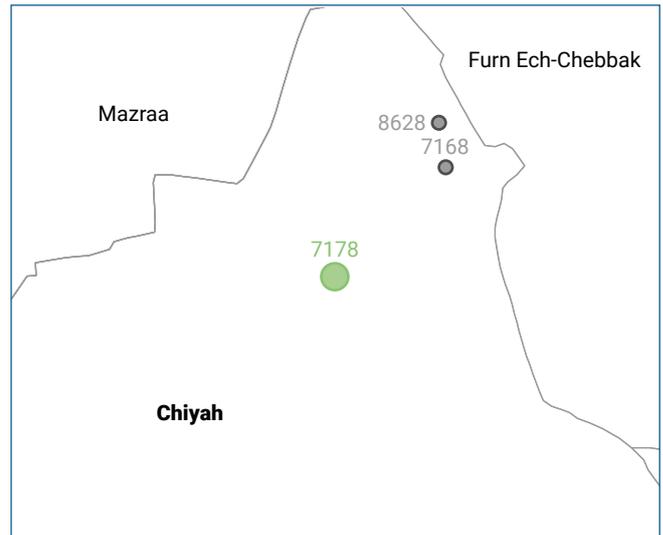
-  **CERD number:** 7241
-  **Number of students:** 1,556
-  **Number of teachers:** 129
-  **Level of damage:** Moderate
-  **Types of damage:** Civil, structural and architectural; electrical
-  **Estimated rehabilitation cost:** USD 32,191
 - Civil, Structural and Architectural Works (USD 31,239)
 - Electrical Engineering Services (USD 952)



Location of assessed school

SAGESSE EIN REMENEH

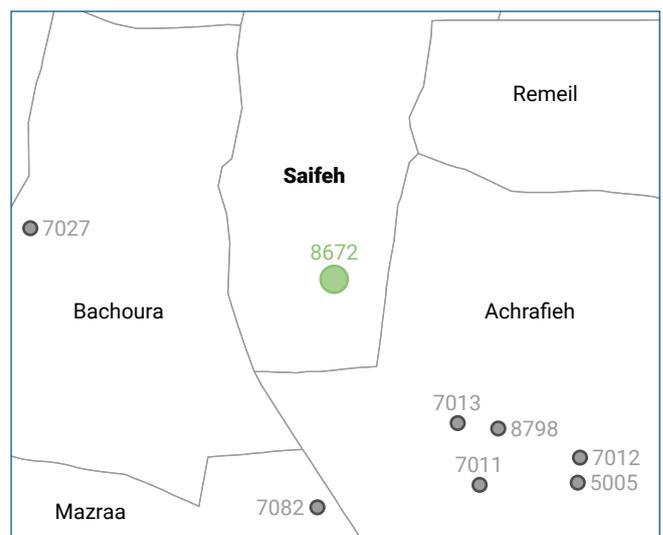
-  **CERD number:** 7178
-  **Number of students:** 146
-  **Number of teachers:** 43
-  **Level of damage:** Minor
-  **Types of damage:** Civil, structural and architectural
-  **Estimated rehabilitation cost:** USD 22,155
 - Civil, Structural and Architectural Works (USD 22,155)



Location of assessed school

APOSTLE JOHN SCHOOL

-  **CERD number:** 8672
-  **Number of students:** 20
-  **Number of teachers:** 4
-  **Level of damage:** Minor
-  **Types of damage:** Civil, structural and architectural
-  **Estimated rehabilitation cost:** USD 21,985
 - Civil, Structural and Architectural Works (USD 21,985)



Location of assessed school



COLLÈGE DES SOEURS ANTONINES – MAR DOUMITH

 **CERD number:** 7263

 **Number of students:** 1,545

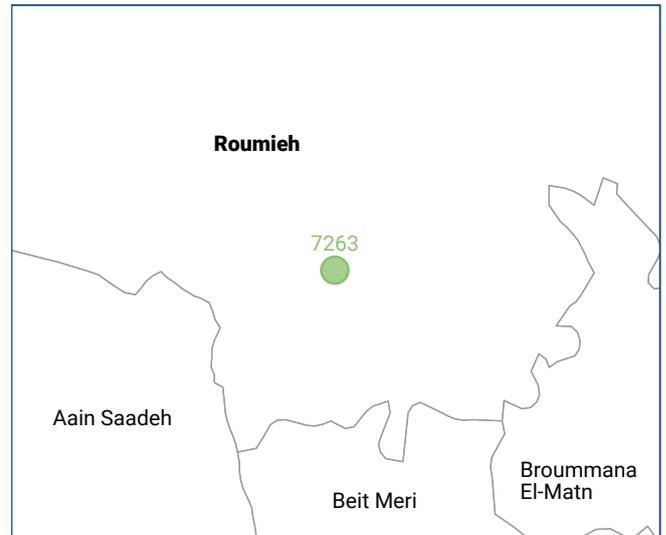
 **Number of teachers:** 149

 **Level of damage:** Minor

 **Types of damage:** Civil, structural and architectural; electrical

 **Estimated rehabilitation cost:** USD 19,451

- Civil, Structural and Architectural Works (USD 6,951)
- Electrical Engineering Services (USD 12,500)



Location of assessed school

LYCEE ABDELKADER

 **CERD number:** 7120

 **Number of students:** 1,597

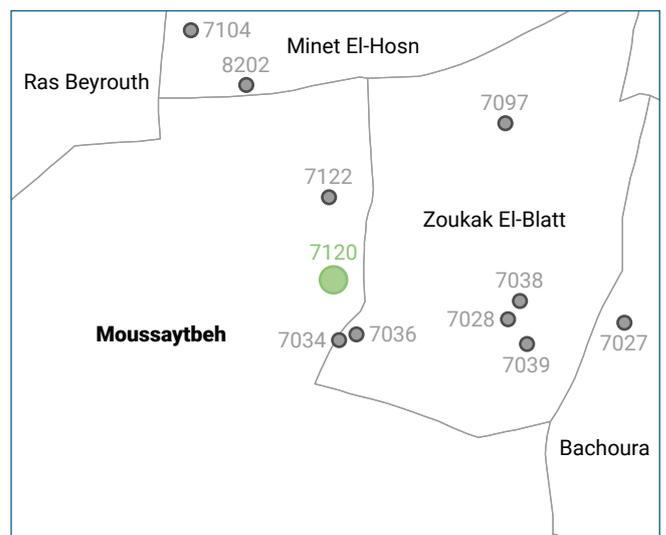
 **Number of teachers:** 158

 **Level of damage:** Moderate

 **Types of damage:** Civil, structural and architectural; and electrical

 **Estimated rehabilitation cost:** USD 18,593

- Civil, Structural and Architectural Works (USD 16,423)
- Electrical Engineering Services (USD 2,170)



Location of assessed school

AVENTIS SCHOOL

 **CERD number:** 8628

 **Number of students:** 103

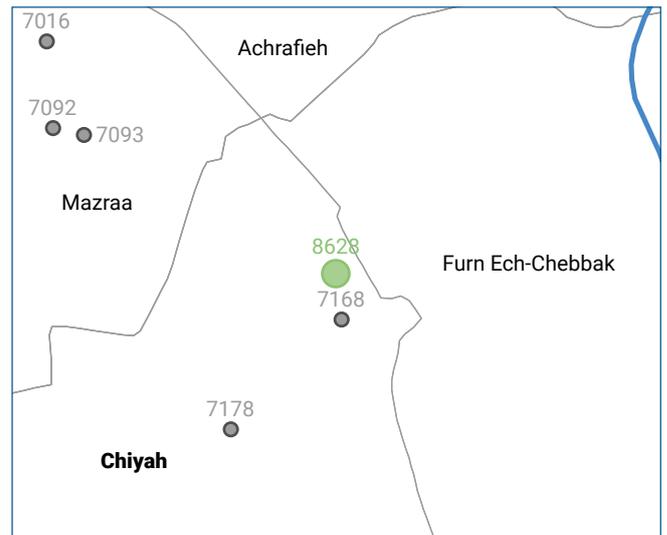
 **Number of teachers:** 10

 **Level of damage:** Minor

 **Types of damage:** Civil, structural and architectural; electrical

 **Estimated rehabilitation cost:** USD 17,399

- Civil, Structural and Architectural Works (USD 17,249)
- Electrical Engineering Services (USD 150)



Location of assessed school

ECOLE DE SACRE COEUR NABAA

 **CERD number:** 5032

 **Number of students:** 216

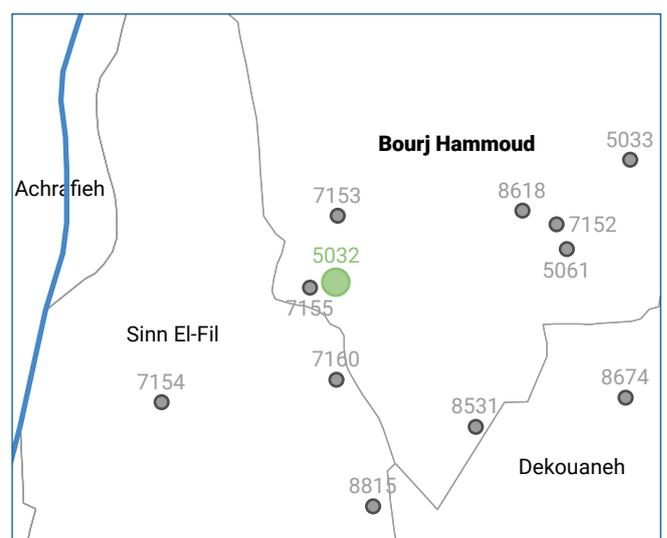
 **Number of teachers:** 14

 **Level of damage:** Minor

 **Types of damage:** Civil, structural and architectural

 **Estimated rehabilitation cost:** USD 16,835

- Civil, Structural and Architectural Works (USD 16,835)

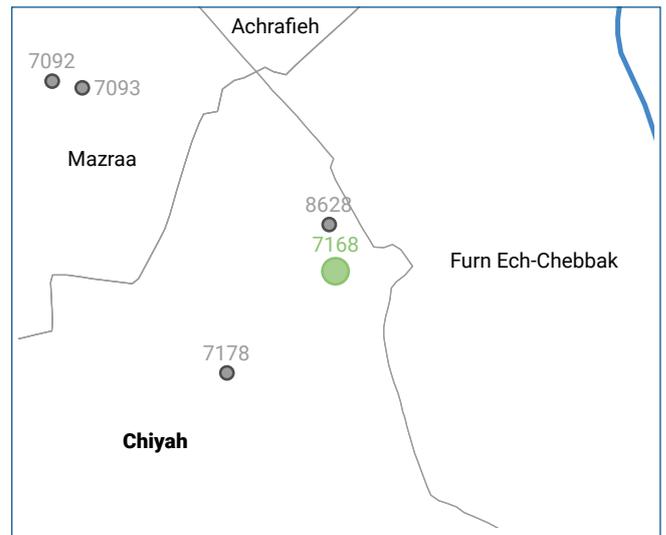


Location of assessed school



ECOLE NOTRE DAME DU PERPETUEL SECOURS

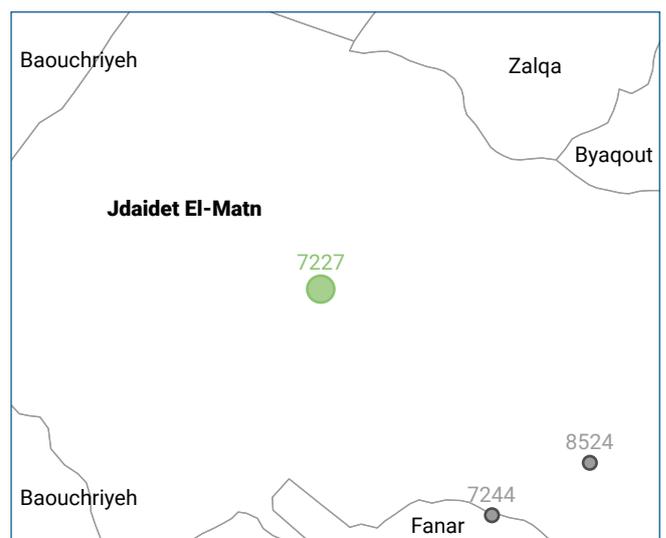
-  **CERD number:** 7168
-  **Number of students:** 321
-  **Number of teachers:** 28
-  **Level of damage:** Moderate
-  **Types of damage:** Civil, structural and architectural
-  **Estimated rehabilitation cost:** USD 16,123
 - Civil, Structural and Architectural Works (USD 16,123)



Location of assessed school

COLLÈGE DE LA SAGESSE SAINT-MARON - JDEIDEH

-  **CERD number:** 7227
-  **Number of students:** 888
-  **Number of teachers:** 172
-  **Level of damage:** Major
-  **Types of damage:** Civil, structural and architectural
-  **Estimated rehabilitation cost:** USD 10,677
 - Civil, Structural and Architectural Works (USD 10,677)



Location of assessed school

SANABEL

 **CERD number:** 5548

 **Number of students:** 414

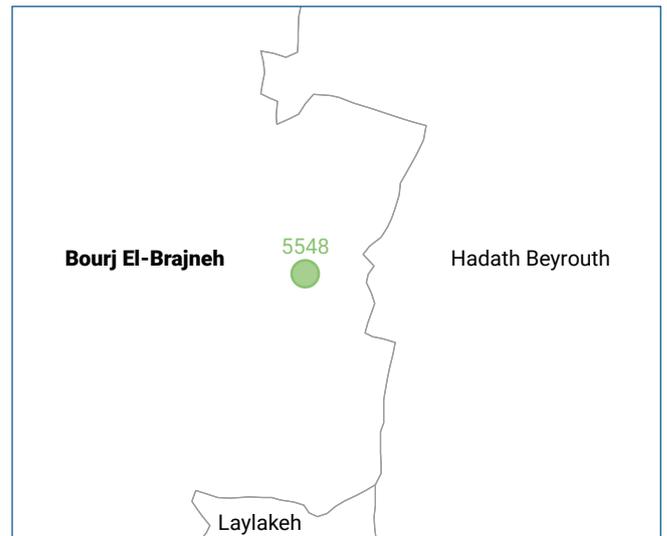
 **Number of teachers:** 29

 **Level of damage:** Minor

 **Types of damage:** Civil, structural and architectural

 **Estimated rehabilitation cost:** USD 10,225

- Civil, Structural and Architectural Works (USD 10,225)



Location of assessed school

COLLEGE SAINT GEORGES ZALKA

 **CERD number:** 7398

 **Number of students:** 517

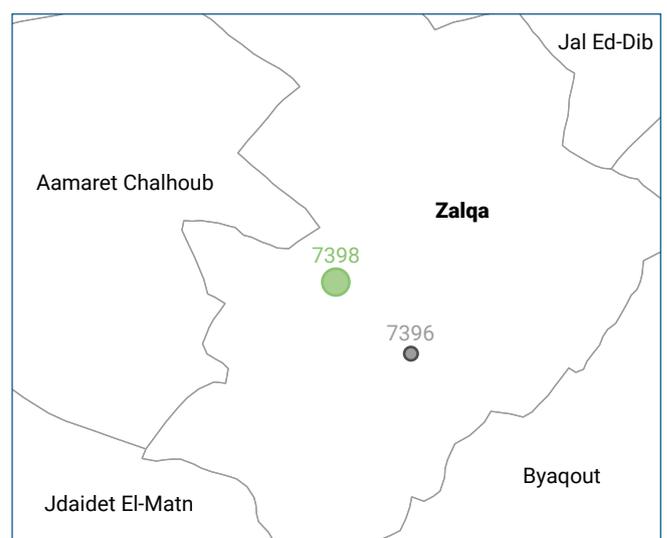
 **Number of teachers:** 63

 **Level of damage:** Minor

 **Types of damage:** Civil, structural and architectural; and electrical

 **Estimated rehabilitation cost:** USD 9,878

- Civil, Structural and Architectural Works (USD 9,815)
- Electrical Engineering Services (USD 63)

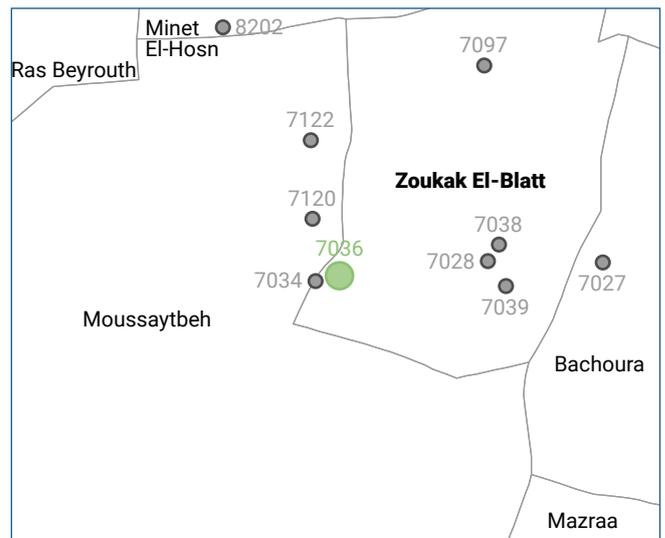


Location of assessed school



AL MADRASSAH AL MAANIAH

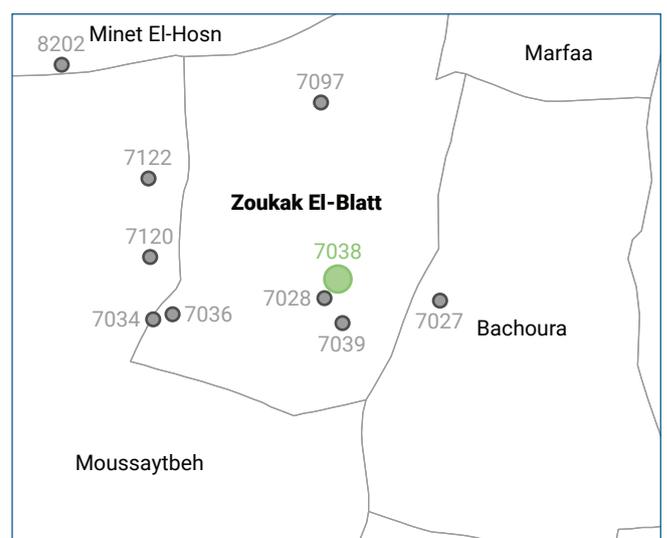
-  **CERD number:** 7036
-  **Number of students:** 536
-  **Number of teachers:** 43
-  **Level of damage:** Minor
-  **Types of damage:** Civil, structural and architectural
-  **Estimated rehabilitation cost:** USD 9,533
 - Civil, Structural and Architectural Works (USD 9,533)



Location of assessed school

GREEN LEBANON

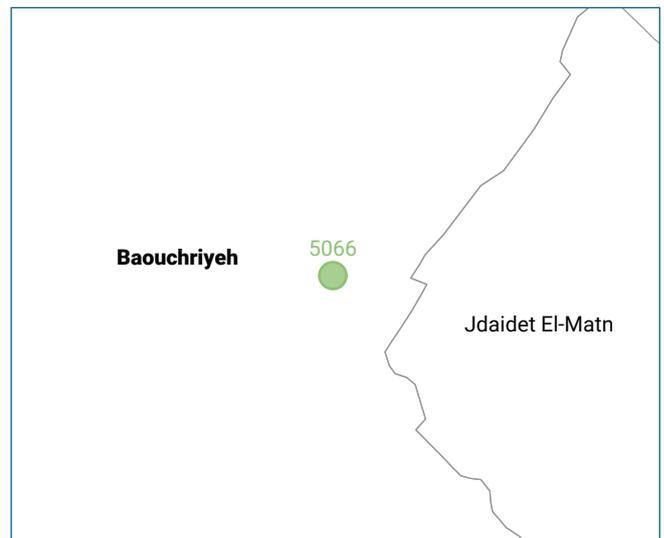
-  **CERD number:** 7038
-  **Number of students:** 63
-  **Number of teachers:** 19
-  **Level of damage:** Moderate
-  **Types of damage:** Civil, structural and architectural; and electrical
-  **Estimated rehabilitation cost:** USD 8,344
 - Civil, Structural and Architectural Works (USD 8,324)
 - Electrical Engineering Services (USD 20)



Location of assessed school

MAR YUOHANA AL MAAMADAN – BOUCHRIEH

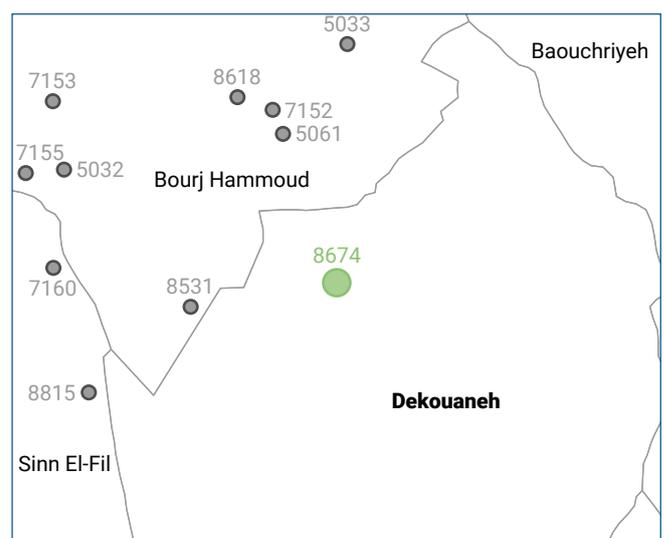
-  **CERD number:** 5066
-  **Number of students:** 252
-  **Number of teachers:** 33
-  **Level of damage:** Minor
-  **Types of damage:** Civil, structural and architectural
-  **Estimated rehabilitation cost:** USD 5,890
 - Civil, Structural and Architectural Works (USD 5,890)



Location of assessed school

ECOLE A PROGRAMME INDIVIDUALISE

-  **CERD number:** 8674
-  **Number of students:** 49
-  **Number of teachers:** 13
-  **Level of damage:** Minor
-  **Types of damage:** Civil, structural and architectural; electrical
-  **Estimated rehabilitation cost:** USD 4,229
 - Civil, Structural and Architectural Works (USD 4,189)
 - Electrical Engineering Services (USD 40)



Location of assessed school



RAWDAT DAR AL AMANA WAL TANMIYA

 **CERD number:** 8798

 **Number of students:** 218

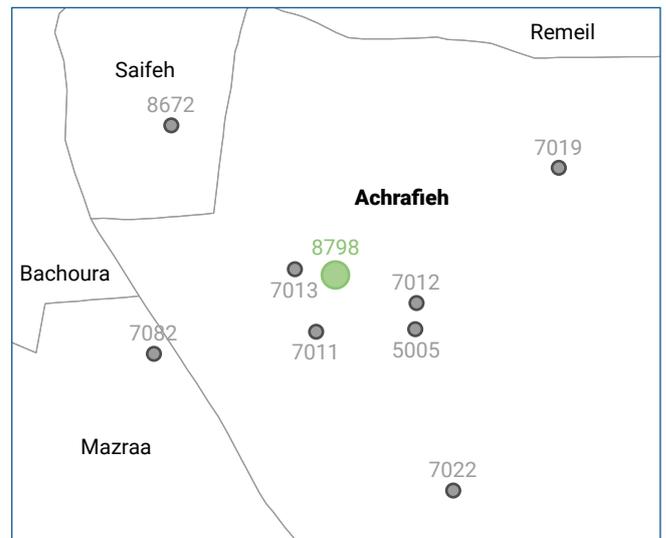
 **Number of teachers:** 14

 **Level of damage:** Moderate

 **Types of damage:** Civil, structural and architectural

 **Estimated rehabilitation cost:** USD 4,194

- Civil, Structural and Architectural Works (USD 4,194)



Location of assessed school

KASR AL THAKAFA – SCHOOL

 **CERD number:** 7061

 **Number of students:** 100

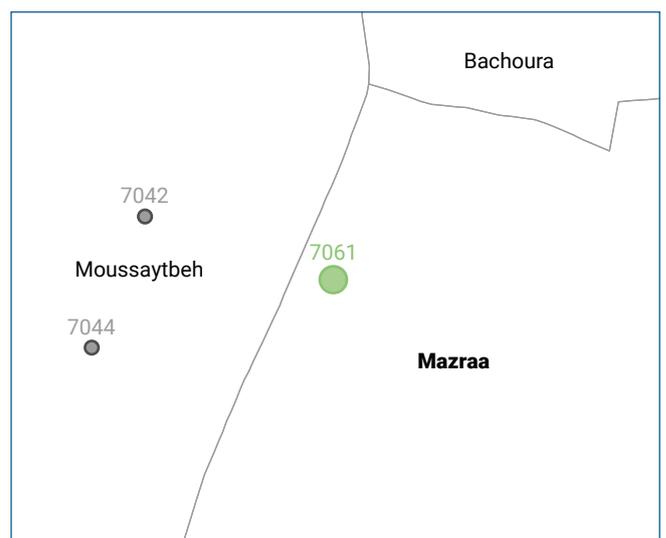
 **Number of teachers:** 17

 **Level of damage:** Minor

 **Types of damage:** Civil, structural and architectural

 **Estimated rehabilitation cost:** USD 4,152

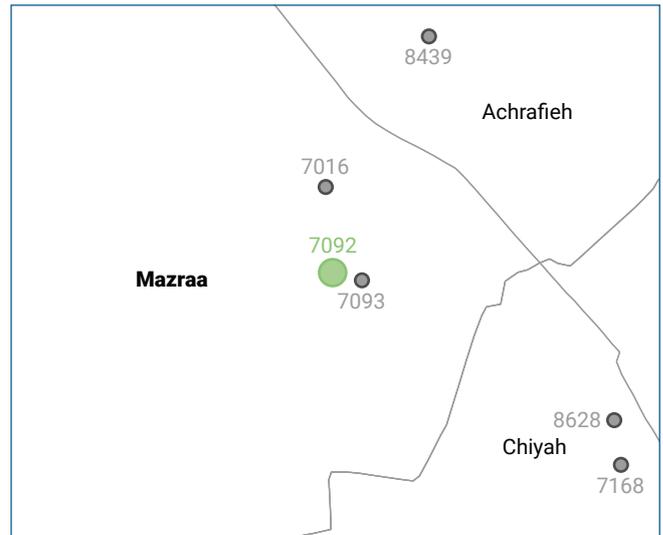
- Civil, Structural and Architectural Works (USD 4,152)



Location of assessed school

LYCEE DE MUSEE

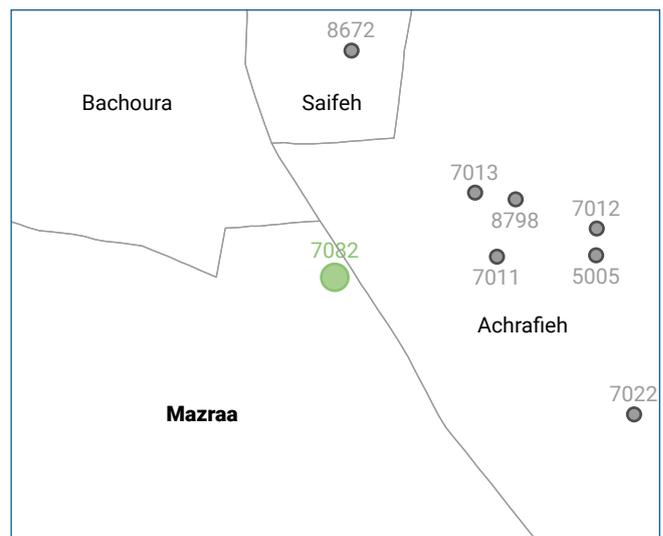
-  **CERD number:** 7092
-  **Number of students:** 273
-  **Number of teachers:** 28
-  **Level of damage:** Minor
-  **Types of damage:** Civil, structural and architectural
-  **Estimated rehabilitation cost:** USD 3,564
 - Civil, Structural and Architectural Works (USD 3,564)



Location of assessed school

IBN ROSHOD

-  **CERD number:** 7082
-  **Number of students:** 41
-  **Number of teachers:** 13
-  **Level of damage:** Minor
-  **Types of damage:** Civil, structural and architectural; and electrical
-  **Estimated rehabilitation cost:** USD 3,237
 - Civil, Structural and Architectural Works (USD 3,197)
 - Electrical Engineering Services (USD 40)



Location of assessed school



SAINT GEORGES ASSYRIAN SCHOOL – BOUCHRIEH

 **CERD number:** 7242

 **Number of students:** 136

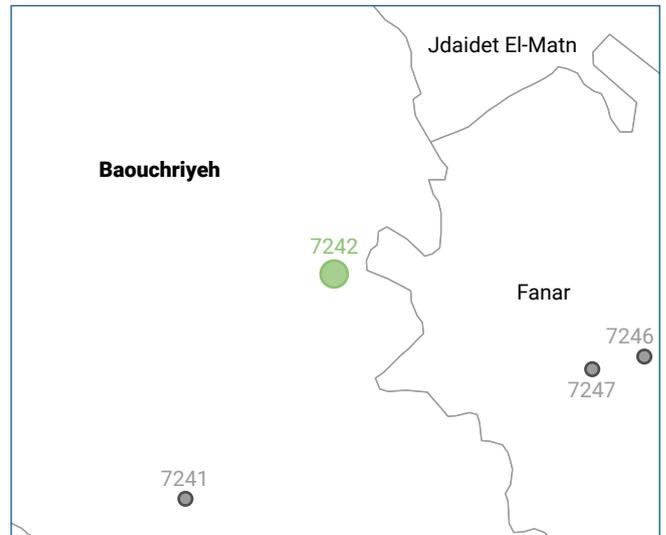
 **Number of teachers:** 12

 **Level of damage:** Minor

 **Types of damage:** Civil, structural and architectural

 **Estimated rehabilitation cost:** USD 3,048

- Civil, Structural and Architectural Works (USD 3,048)



Location of assessed school

LYCEE D'ORIENT

 **CERD number:** 7154

 **Number of students:** 60

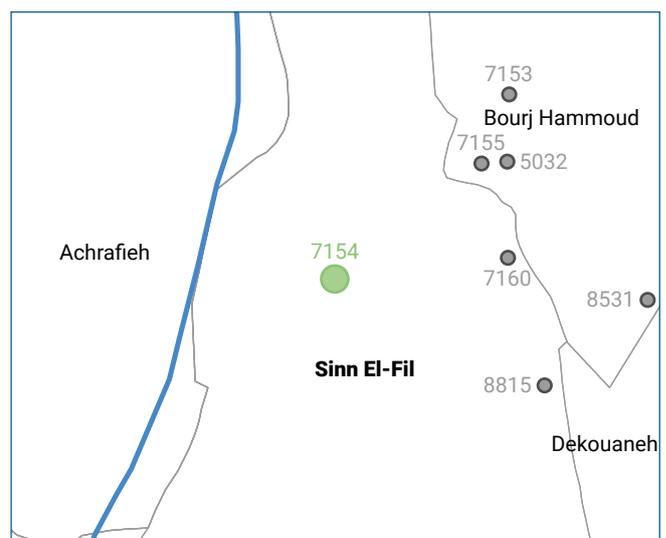
 **Number of teachers:** 10

 **Level of damage:** Minor

 **Types of damage:** Civil, structural and architectural

 **Estimated rehabilitation cost:** USD 3,035

- Civil, Structural and Architectural Works (USD 3,035)



Location of assessed school

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