



PUBLIC BUILDINGS

Project		Education (Two Public Schools: Secondary and Primary)	
Project name		Rehabilitation and retrofitting of two schools in South Lebanon, in Maarake	
Country	Lebanon	 Secondary school  Primary school	
Region/town	Maarake-South Lebanon		
Project type	Maintenance, rehabilitation and retrofitting		
Typology	Two Public schools		
Approach	Self-help and reinforced seismic structures		
Beneficiaries	By children's school		
Climate	Hot, humid		
Special constraint	Earthquake		
start / end of project	2011 / 2012		
Country GNP	USD		

Partners

Organization: Swiss confederation/ Swiss agency for Development and cooperation SDC

Context to project

Initial Situation:

Due to their location on seismic faults, the primary and secondary public schools of Maarake have suffered heavy damages in the building structure caused by the seismic activity in 2008 which led to a partial closure of the primary school. Also both buildings basically suffer from lack of maintenance.

Goals, Beneficiaries:

The project aims improving the learning environment in these schools, rendering it safe, child-friendly, with adequate situation facilities.

Implementations/Results:

To deal with all the damages caused in those schools including all water and sanitation works, safety and accessibility and general refurbishing.



Reference data (comparative)

Land plot	5000 m2	Number of blocks:	2 Blocks
Classes/rooms per blocks:	24 classrooms(secondary school) 36 classrooms(primary school)	Number of units	4floors/block
latrines	20(secondary school) 16(primary school)		
Area (incl. walls)	primary school: 320 m2 1st Basement 900 m2 G.F. 840 m2 1st floor 840 m2 2nd floor	Area (incl. walls)	secondary school: 920 m2 1st Basement 920 m2 G.F. 920 m2 1st floor 920 m2 2nd floor
Total surface	2900 m2	Total surface	3680 m2
Volume (outside dim.)	12000 m3(primary school) 13000 m3(secondary school)		
cost/beneficiary	235.330 USD/beneficiary (primary school) 260.000 USD/beneficiary (secondary school) 73.000 USD consultant and supervision.		
Total cost	568.330 USD		

Approach to results

Initial Situation:

The SDC contributions includes technical assistance and funding for the retrofitting works which will be contracted to engineering consultants and rehabilitation works in collaboration with the engineers unit at the Ministry of education and Higher education.

The project was sensitive to the opinions and request of school administration and focused on quality execution of construction and followed per-planned specifications.

Approach:

The project was based on two sets of work items, the normal maintenance and rehabilitation(of all interior and exterior damages) and the improved elements(earthquake studies and works related to comfort as isolation and protection). Both focused on practical aspects more than esthetics aspects.

Different types of improvements lead to better results as the improvements related to functionality of school facilities, to safety, to sanitation facilities, accessibility to disabled children, reduce disaster risks, esthetics and making the schools more child-friendly.

Problems/Constraints:

A part of the first building has collapsed, and a lot of damages were in both buildings as cracks in walls and humidity, all buildings suffer from lack of maintenance and especially the seismic damages.

Lessons learned :

To have rigid new constructions with earthquake studies to all buildings and especially public buildings that performs against seismic activity.

Evaluation:

After all rehabilitations and retrofitting to these two schools, their have been more safe and accessible to children with adequate sanitation facilities.



Legal framework

Political attachment:

SDC works in collaboration with the Lebanese government and provides support to humanitarian actors.

The support from Swiss government among other donors will help Lebanese authorities to deal with the damages.

Type of ownership:

An engineering consultant firm was contracted to study and supervise the project controlled by another architectural consultant firm from SDC office.

Construction information

cost repartition **USD**

Excavation work	2.900
Concrete work	165.000
Masonry work	12.300
Finishes	142.000
Doors and Windows work	34.000
Thermal and moisture protection work	45.550
Water supply installation	23.400
Electrical work	4.800
Drainage installation	4.900
Preliminary	15.500
VAT 10%	45.030
Planning schools	73.000

Total

**568.330
USD**

Urban planning

Distance to :	Villages:	Both schools are located in the village.
	Public transport:	-

For further information

Involved SHA construction group consultants	
Other involved SHA consultants	
Author / Contact:	
Recommended Institutions:	
Recommended partners:	
Recommended books/reports:	
Relevant other projects (links):	



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Federal Department of Foreign Affairs FDFA
Swiss Agency for Development and Cooperation SDC

Humanitarian Aid construction group

Relevant illustration