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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
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



Secondary school



Primary school

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.

Implementations/Results:

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

Goals, Beneficiaries:

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

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Reference data (comparative)

Land plot 5000 m2 Number of blocks: 2 Blocks
Classes/rooms per blocks: 24 classrooms(secondary Number of units 4floors/block

school)

36 classrooms(primary

school)

latrines 20(secondary school)

16(primary school)

Area (incl. walls) **primary school:** Area (incl. walls) **secondary school:**

320 m2 1st Basement 920 m2 1st Basement

 900 m2 G.F.
 920 m2 G.F.

 840 m2 1st floor
 920 m2 1st floor

 840 m2 2nd 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. 568.330 USD

Approach to results

Total cost

<u>Initial Situation:</u> 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.

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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

568.330 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

Urban planning

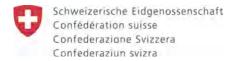
Total

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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Relevant illustration