




Projects library of the specialized group for construction

PUBLIC BUILDINGS

Project	Education (school) UNICEF secondment	
Project name	Post Tsunami School Project in Sri Lanka	
Country	Sri Lanka	
Region/town	Koggala-Galle	
GIS data (WGS 84)	Martin Wickramasinghe	
Project type	New construction	
Typology	School	
Approach	Contracted construction	
Beneficiaries	Ministry of Education	
Climate	Hot, humid	
Special constraint	Tsunami	
Start / End of project	Oct-2008 / Aug-2009	
Country GNP		

Partners

Organization (donor)	UNICEF
IO/NGO partners	
GO partners	Ministry of Education (TERM)

Context to project

Initial Situation	Before Tsunami old school buildings on Matara Road closed to the sea.
Goals, Beneficiaries	New construction with better facilities for tsunami affected students.
Implementations/Results	New School on bare land with vegetation and electrical line across property.

Reference data (comparative)

Land plot	8082.5m2	Number of blocks	9
Classes/rooms per blocks	11 and 1 Computer room	Number of units	26
Beneficiary /unit	Primary and Secondary School up to grade 10	Total beneficiaries	380 Students
Latrines	2 blocks: female / male 2 blocks: staff / Principal	Other infrastructure	Administration, Canteen, Science room, Aesthetic-room, Shrine, Water tank
Ground floor (incl. walls)	1402.45m2	Upper floor (incl.walls)	577.52m2
Total surface	1980m2	Surface / beneficiary	5.21m2/ beneficiary
Volume (outside dim.)	8355m3	Volume / beneficiary	21.99m3 / beneficiary
Heated surface	None.	Total cost / Total surface	239.7USD / m2
Total cost (amended)	474'662.25USD (107.50)	With additional cost	1'249USD / beneficiary
Contract value 26/10/09	51'021'867.31LKR		134'269LKR / beneficiary



Approach to results

Initial Situation

- 2004 Tsunami Existing school was completely destroyed.
- After this incident building of temporary shelters.
- Project for new school was made by UNICEF in early 2008.
- The new school site was not planned so closed to the sea to make it safer than before.

Approach

- UNICEF Project called "Tsunami recovery Projects" , implemented by:
UNICEF Team: CMU (Construction management unit) in Colombo and UNICEF team in Galle with two persons (Construction Project Manager, SDC and a National Civil Engineer. They were responsible for controlling, supervising and payments of bills.
Consultant/ Architect: Kahawita de Silva & Associates (Pvt) LTD.
Contractor: Sathuta Builders (Pvt) LTD.

Problems/Constraints

- BoQ from Consultant was not perfect, lot of items were missing. Contract was made before UNICEF team of South had possibility to correct mistakes => additional cost!
- Lack of feedback from site managers to HQ of Contractor and Consultant
- Not enough controlling from site manager. Mistakes from designs were not corrected in time (F-building roof had to be redone)
- Contractor failed to follow time management of construction =>lack of material supply and workers on site are effect that final finishing date had to be extended.
- Connection of water and electricity was not included in BoQ. MoE has failed to give connections on time => Finished School was 5 month without electricity and water!

Lessons learned

- Small school complex like MWMV in a village gives better result than big school in town.
- More time for revising of plans and BoQ by UNICEF would give a better result.
- A flat land plot is much more effective (less cost and easier to construct) than land plot in hilly areas.

Evaluation

- Government was not able to give support to all small schools. It was a possibility of closing the school without support from UNICEF
- Future of education for this area is secured.

Legal framework

Political attachment

Type of ownership

- Ministry of Education (Government)



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Construction information		cost repartition
Construction		
Structure	Foundations Walls or columns Facade Roof Earthquake protection	
Materials	Floor surface Walls: Doors Windows Ceiling Thermo insulation	
Watsan	Ceiling Water Toilets Waste water Rain water	
Equipment	Heating system Electricity connection Telephone connection Cooking facilities	
Total (US\$)	All School Project	474'622 100%

Urban planning		
Distance to :	Village Public transport	2 km to village center Bus to Habaraduwa Train to Matara and Galle and Colombo

For further information

Involved SHA construction group consultants	Felix Veith Construction Project Manager SDC, Galle-Office UNICEF
Other involved SHA consultants	Henri Stalder Construction Management Specialist SDC, Colombo Head-office UNICEF
Author / Contact:	Manjula Dabere Project Engineer UNICEF, Galle-Office
Recommended Institutions:	Ministry of Education (MoE), Colombo
Recommended partners:	Consultant: Kahawita de Silva & Associates (PvT) LTD, Koggala-site-office and Head-office Colombo Contractor: Sathuta Builders (PvT) LTD, Koggala-Office and Colombo Head-office
Recommended books/reports:	
Relevant other projects (links):	



Humanitarian Aid construction group

Relevant illustration



Main Entrance with building D, C and Water tower



Rain water harvesting system
8 tanks with 1000lt



Shrine room



Classroom for about 40 students



Name board of the school and Principal



Playground for students and block A, C, Shrine room



Humanitarian Aid construction group



Building A: Administration, Principal and Staff



Secondary classroom max. 40 students (44m2)



Building D: Science Lab (70 m2)



Classroom with new school furniture from UNICEF



Building C: Classroom First Floor



Building E: Canteen and kitchen



Building G: Male toilet



Building F: Aesthetic room and toy room