




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	Matara	
GIS data (WGS 84)	Mahamaya Girls' School	
Project type	New construction	
Typology	Primary&Secondary School	
Approach	Contracted construction	
Beneficiaries	Ministry of Education	
Climate	Hot, humid	
Special constraint	Tsunami	
Start / End of project	Dec-2008 / Feb-2010	
Country GNP		

Mahamaya Girls' School, Matara

Partners

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

Context to project

Initial Situation	Before Tsunami school was in the City of Matara, closed to the sea.
Goals, Beneficiaries	New buildings with better facilities (6 blocks) and new toilet units.
Implementations/Results	3 new blocks with 30 classrooms, 3 units with toilet, science lab, comp. room, library; 1 new blocks with assembly hall, 1 new block administration; 1 new block for canteen,

Reference data (comparative)

Land plot	7925 m2	Number of blocks	8
Total classes rooms	38(excl.computer,library, science lab aesthetic and auditorium)	Number of units	58
Beneficiary /unit	Prim & Secondary school up to grade 12	Total beneficiaries	1155 Students
Latrines	4 units: female 1 unit: administration 1 unit: principal	Other infrastructure	Administration, Canteen, Science room, Aesthetic-room, Shrine, Water tank
Ground floor (incl. walls)	1'777m2	Upper floor (incl. walls)	2'107.26m2
Total surface	3'883m2	Surface / beneficiary	3.36m2 / beneficiary
Volume (outside dim.)	14'767m3	Volume / beneficiary	12.79m3 / beneficiary
Heated surface	None.	Total cost / Total surface	292.17USD / m2
Total cost (Finalized bills 05/05/2010)	1'134'200USD (107.50) 121'926'513LKR	With additional cost	982USD / beneficiary 105'564LKR / beneficiary



Approach to results

Initial Situation

- 2004 Tsunami Existing School was heavily damaged.
- After this incident building of temporary shelters.
- Project for new school was made by UNICEF in early 2008.
- The new school site was planned 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, some items were missing. Contract was made before UNICEF team of South had possibility to correct mistakes => additional cost!
- Not enough controlling from site manager. Mistakes from construction were not corrected in time; they had to rebuild building for administration.
- Connection of water and electricity was not included in BoQ. MoE has failed to give connections on time, because access road was not started when the school was handed over. School opening is still outstanding.
- MoE did not support enough the school. For handing over of finalized school the district director was not present. We had to wait 3 month to receive the signed documents!

Lessons learned

- Small school complex 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.
- Never start a new school construction, when the infrastructure is not ready. (no access road, no electricity and water connection)

Evaluation

- Government was not able to give enough support to school.
- 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	Building work USD	837'209 73.8%
	Walls or columns	External work	296'991 26.2%
	Facade		
	Roof		
Materials	Earthquake protection		
	Floor surface		
	Walls:		
	Doors		
	Windows		
	Ceiling		
	Thermo insulation		
Watsan	Ceiling		
	Water		
	Toilets		
	Waste water		
Equipment	Rain water		
	Heating system		
	Electricity connection		
	Telephone connection		
	Cooking facilities		
Total (USD)	All School Project	1'134'200	100%

Urban planning	
Distance to :	Village 200m to village center Public transport Bus to Matara City (about 5 km) Bus and train from Matara to 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 for building A, B, C & D
 5 tanks with 1000lt



Shrine room and building A, B, C with 42 classroom



Classroom for about 40 students



Building C, B and A with all class rooms



In between building C and B



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Building A: 13 class rooms and library



Ramp for disabled students to access A & toilet



Building E: Auditorium and playground



Auditorium with approx. 260m2



Building C: 12 class -, computer room & O/L Lab



Building G: Canteen and kitchen



Building D: Male toilet



Building D: Teacher toilet