



Projects library of the specialized group for construction

**PUBLIC BUILDINGS**

Project	<b>Education (school) UNICEF secondment</b>		
Project name	<b>Post Tsunami School Project in Sri Lanka</b>		
Country	<b>Sri Lanka</b>		
Region/town	<b>Galle</b>		
GIS data (WGS 84)	<b>Ginthota Maha Vidyalaya</b>		
Project type	<b>New construction / Reconstruction and Renovation</b>		
Typology	<b>Secondary School</b>		
Approach	<b>Contracted construction</b>		
Beneficiaries	<b>Ministry of Education</b>		
Climate	<b>Hot, humid</b>		
Special constraint	<b>Tsunami</b>		
Start / End of project	<b>Oct-2008 / Jan-2010</b>		
Country GNP		Ginthota Maha Vidyalaya, Galle	

**Partners**

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

**Context to project**

Initial Situation	Before Tsunami ca. 200students / after Tsunami 1400 students
Goals, Beneficiaries	New buildings with better facilities (4 block) and new toilet..
Implementations/Results	1.phase: 3 new blocks with 30 classrooms, 2 units with toilet, science lab 2.phase: 1 new block with 2 science labs, 3 units for art / music / dance and 4 old blocks with assembly hall, administration, canteen, library

**Reference data (comparative)**

Land plot	7925m2	Number of blocks	10
Classes/rooms per blocks	30(excl.computer,library, science lab aesthetic, administrative, canteen.	Number of units	53 ( incl. toilets)
Beneficiary /unit	Secondary school up to A/L	Total beneficiaries	1040 Students
Latrines	2 units, female & male 1 unit, Teacher 1 unit, Principal	Other infrastructure	Administration, Canteen, Science room, Aesthetic-room, Shrine, Water tank
Ground floor (incl. walls)	2'328m2	Upper floor (incl. walls)	2'655m2
Total surface	4'985m2	Surface / beneficiary	4,79m2 / beneficiary
Volume (outside dim.)	17'266m3	Volume / beneficiary	16.6m3 / beneficiary
Heated surface	None.	Total cost / Total surface	191.63USD / m2
Total cost (Finalized bills 05/05/10)	955'264USD (107.50) 102'690'821LKR	With additional cost	918.5USD / beneficiary 98'741.2LKR/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 2007.
- 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/ Architecte: 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 designs were not corrected in time.
- Management of principal of the school was very poor, maintenance of school was not possible and some of new installation was damaged after very short time!
- MoE support during the preparation of project was not good. Before starting the construction big problems with population. With UNICEF starting of the construction the problems could be resolved.

### 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 area.

### Evaluation

- Government was not able to give a good support to all schools.
- Future of education for this area is secured.

## Legal framework

### Political attachment

### Type of ownership

- Ministry of Education ( Government )



Construction information		cost repartition
<b>Construction</b>		
<b>Structure</b>	<ul style="list-style-type: none"> <li>Foundations</li> <li>Walls or columns</li> <li>Facade</li> <li>Roof</li> <li>Earthquake protection</li> </ul>	
<b>Materials</b>	<ul style="list-style-type: none"> <li>Floor surface</li> <li>Walls:</li> <li>Doors</li> <li>Windows</li> <li>Ceiling</li> <li>Thermo insulation</li> </ul>	
<b>Watsan</b>	<ul style="list-style-type: none"> <li>Ceiling</li> <li>Water</li> <li>Toilets</li> <li>Waste water</li> <li>Rain water</li> </ul>	
<b>Equipment</b>	<ul style="list-style-type: none"> <li>Heating system</li> <li>Electricity connection</li> <li>Telephone connection</li> <li>Cooking facilities</li> </ul>	
<b>Total (USD)</b>	<b>All School Project</b>	<b>955'264 100%</b>

Urban planning		
<b>Distance to :</b>	Village	200m to village center
	Public transport	Bus to Galle ( about 5 km ) Bus and train from Galle to Matara 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 (CMU)
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):	



Relevant illustration



Playground and main buildings D and E



Rain water harvesting system  
6 tanks with 1000lt



Shrine room



Classroom for about 40 students (45m<sup>2</sup>)



Playground 1<sup>st</sup> Phase in building D and C



Building C with Home science room (68m<sup>2</sup>)





## Humanitarian Aid construction group



Building C : Toilet for males



Building C : Toilet for disabled children



School board with the construction team on site



Rebuild auditorium for the school



Auditorium in 2<sup>nd</sup> Phase (225 m2)



2<sup>nd</sup> Phase: New building B, 4 renovated buildings



Renovated building G: Male toilet



Finalized 2<sup>nd</sup> phase: auditorium, administration Canteen, library and 2 computer rooms