



Stories from the Field

**Building Environmentally Friendly Community Infrastructure:
Multi-Purpose Community Centre, Batticaloa District**
*Project for Rehabilitation of Community Infrastructure, Improvement of Livelihoods and
Empowerment of Women in the Northern and Eastern Provinces (RCI)*



New community centre built using Mud Concrete Blocks is now nearing completion.

The *Project for Rehabilitation of Community Infrastructure, Improvement of Livelihoods and Empowerment of Women in the Northern and Eastern Provinces (RCI)* is a community infrastructure development project, contributing towards the sustainable rehabilitation and reconstruction of the conflict affected Northern and Eastern Provinces. Funded by the Government of Japan and implemented by UN-Habitat, it is assisting communities to overcome the hardships caused by the lack of basic services, whilst rebuilding human capital and empowering women.

Implemented in the districts of Kilinochchi, Mullaitivu and Mannar in the North and Batticaloa in the East, the key project interventions include the construction of community centres, preschools and rehabilitation of internal access roads and storm water drainage systems. The RCI project is built upon the ongoing “Project for Rehabilitation of Community Infrastructure and Facilities in the Conflict Affected Areas in Northern Province” (RCIF), also funded by the Government of Japan and implemented by UN-Habitat in Kilinochchi and Mullaitivu from 2013 – 2015.

The community centre in Mahilavedduwan Grama Niladhari (GN) division is constructed with funding from the RCI project. A unique feature of this community centre is the use of ‘Mud Concrete Blocks’, an eco-friendly building material for wall construction.

Mahilavedduwan GN division is located in Batticaloa district in the Manmunai West Divisional Secretariat (DS) Division. The primary livelihood of the community is agriculture, with some residents engaged in animal husbandry and fishing. The village has a population of 1,803 people consisting of 518 families. It is located 15 km from the Vavunatheevu main road and about 22km from the nearest town of Manmunai West. This GN division consists of four main villages.



Mahilavedduwan GN was affected by the three decades of conflict in Sri Lanka. From the 1990's to 2006, families faced multiple displacements. The village suffered significant damage and destruction to its infrastructure, economy and environment. Many families were forced to move to town areas and live with host families or in Internally Displaced Persons (IDP) camps to escape the fighting. In 2008, when people resettled in the village, the lack of basic infrastructure facilities created serious difficulties. The GN is particularly vulnerable as it has 72 differently abled persons and 80 female headed households. Several Government and donor funded programmes have provided large scale infrastructure support to the village including a road connecting the village to the tourist town of Kalkudah. The RCI project, commencing in 2014 April, recognised that investment in community infrastructure facilities can help achieve the twin goals of assisting people to have access to basic facilities while encouraging their resettlement in their villages of origin.



New community centre under construction with Mud Concrete Blocks.

To identify the priority infrastructure needs of the village, a Settlement Improvement Planning (SIP) workshop was conducted by UN-Habitat in June 2014. The Mahilavedduwan community identified several urgent needs including water supply schemes, introduction of new livelihoods, construction of houses as well as a multi-purpose community centre. The community centre was selected as the priority requirement for funding by the RCI project. As the village had no common building, the residents held their meetings and events outdoors, most often under a tree, creating numerous difficulties particularly during the monsoon rains.



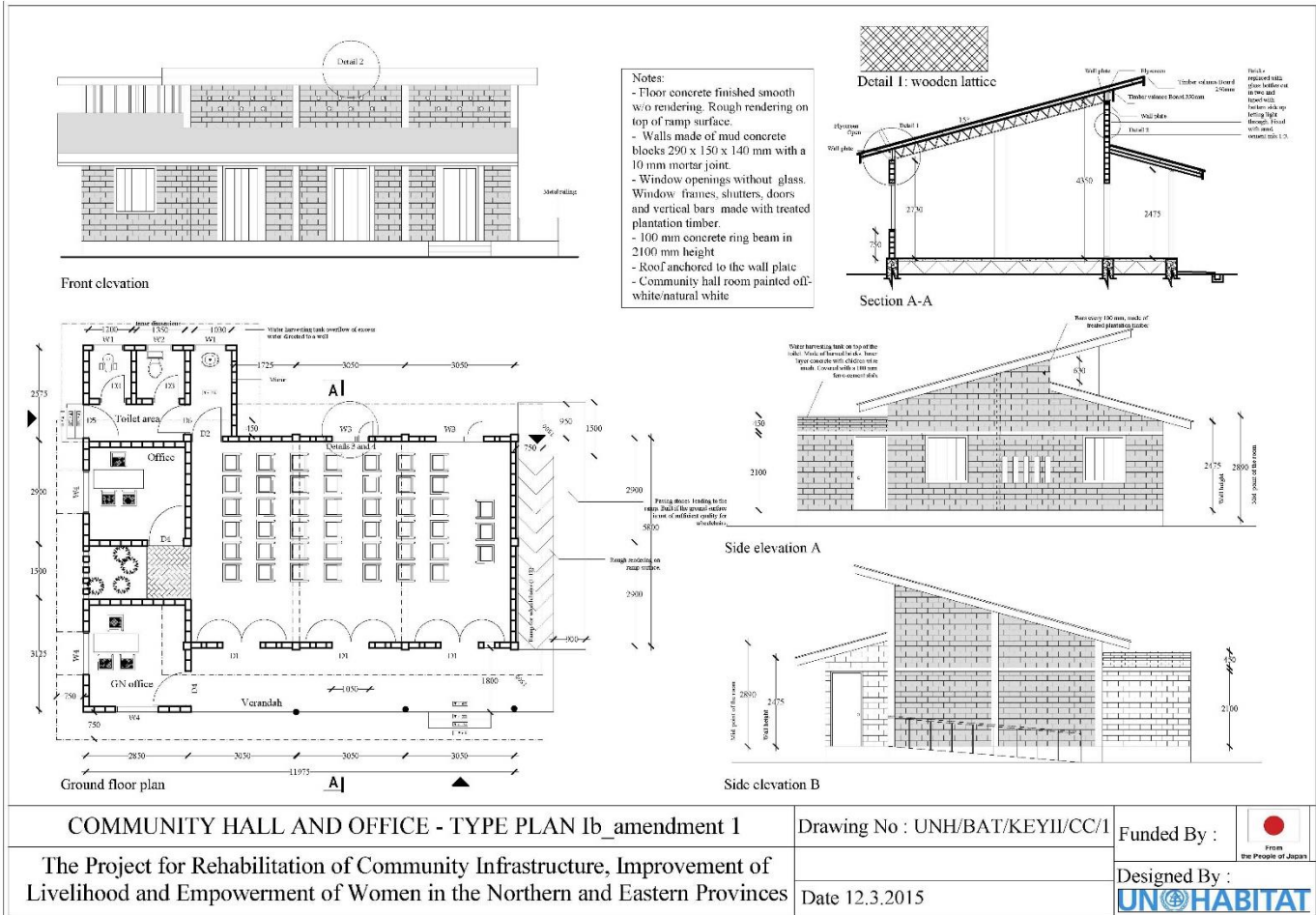
The residents had to hold meetings outdoors as they had no community centre.

Community Centres form the main hub of villages in Sri Lanka. They are used for community gatherings, village level administration and to disseminate public information. They are the central location for community members to meet one another socially while Community Based Organizations (CBOs) and women's groups organise their activities in the premises. Community Centres are also used for public meetings and for Government officials to meet community members to discuss village development issues. In addition, the Government health sector uses Community Centres to conduct health clinics.

As UN-Habitat follows a participatory process in implementing its programmes, the construction of the community centre was handed over to a community based organisation in the area. Following a rigorous selection process, the Mahilavedduwan Rural Development Society (RDS) was selected as the organisation to manage the construction process. The construction work of the building commenced in September 2014. Total funding of LKR.2,948,800 was provided by the Government of Japan in several instalments, with release based on the physical progress of work. The RDS was responsible for the hiring of skilled construction workers and purchase of building materials with guidance from UN-Habitat. The planning and implementation of the project was driven by the community in close coordination with the Government Officers and UN-Habitat. The Divisional Secretary assisted the community to regularize the land ownership from the state land reservation.



From the beginning of the project, consultations were held to ensure participatory planning with the community. Four type plans were prepared by UN-Habitat for selection by the community. The community members selected “Design 1B” (see attached type plan) with a square area of 1,225 square feet. The plan was then modified to suit their specific needs. The community centre includes a main hall of 600 square feet, two office rooms of 100 square feet each, toilets, and a 180 square foot veranda. Once complete, the building will include a plumbing system and electrical wiring. The construction has now reached lintel level and two instalments have been provided for the sum of LKR.1,621,400.



A new, environmentally friendly technology ‘Mud Concrete Blocks’ introduced by the Moratuwa University, are being used to build the walls. Training programmes have been conducted by UN-Habitat for local masons and brick makers in collaboration with the researchers of Moratuwa University, who frequently monitor the production to ensure the quality and stability of the mud concrete masonry work.



Mud concrete technology is both cost effective and environmentally friendly. Having been subjected to rigorous laboratory and field testing, it is proven to be of good strength with the ability to withstand extreme weather conditions. Mud concrete blocks can be manufactured at community/household level, using available gravel and soil mixed with cement. As the cement proportion varies with the soil composition, initial testing of soil is important to prepare high quality blocks. However, the composition of native soil can be adjusted by adding gravel, sand or clay to reach the suitable proportion. Curing of mud concrete blocks is not necessary as the soil mix contains sufficient water to harden the cement. This is an added advantage when operating



in areas where water is scarce. After keeping the blocks under a polythene sheet for about a week, they are ready to be used to build walls. Placing the blocks on a hard, level surface ensures a smooth surface while mould oil or grease mixed with diesel is applied to the mould to reduce friction when removing the block.

Buildings built with mud concrete blocks offer improved thermal comfort over those built using cement blocks or burnt bricks. Other advantages of using this technique includes reduced consumption of cement and sand, and the ability to produce the blocks by unskilled persons without the need of a machine. Walls, built properly using this material are aesthetically pleasing, eliminating the need for costly plaster. The researchers of Moratuwa University have initiated the process of obtaining a patent for the “Mud Concrete Block” from the National Intellectual Property Office under Intellectual Property Act No 36 of 2003.

The Mahilavedduwan Community Centre construction work is now in progress and will be completed in mid-2015. Proper setting out, removal of top soil, recycling of construction debris and reusing excess mortar have been followed as good construction practices. “This opportunity helped us to work more cohesively with the community and with the DS office and created a bond among RDS and the community. We are very grateful to the donors for giving us financial support and to UN-Habitat for guiding us to produce such a useful and sustainable building” The Mahilavedduwan Rural Development Society Secretary stated.

The community of Mahilavedduwan and the Rural Development Officer (RDO) are working closely on this initiative, from the selection of the CBO to monitoring the construction work. The RDO checks the expenditure statements so that the payments can be released to the RDS on time. The Grama Niladhari Officer monitors the physical progress and assists UN-Habitat by organizing regular review meetings at community level.

“This project has ensured maximum community participation from planning to implementation. It is building the capacity of the community organisations in our area. CBOs have enhanced their leadership and book keeping skills. This will help them to implement other development projects in the future” the Rural Development Officer stated.

“As this community centre is in a central location, residents from all four villages of this GN division will benefit” the Mahilavedduwan Grama Niladhari Officer stated.

Once completed, the community centre will be used by the Grama Niladhari and Samurdhi Officers to conduct their official duties. The main hall will be used for community meetings, meetings by the community organisations as well as meetings with Government officials and NGOs. Once a week, the centre will be used by midwives to run health clinics. The RDS and WRDS under the supervision of the GN will attend to the cleaning and maintenance of the building while the Manmunai West Divisional Secretariat will be responsible for the long term management and sustainability of the building.

The RCI project is being implemented in over 90 villages in the North and East and will run from April 2014 – March 2016 while the RCIF project will end in 2015. In total, the two projects will support the construction of 47 community centres, 40 preschools, 130 kilometres of internal roads and 16 kilometres of storm water drainage.



Construction work at lintel level.