

## B.12 Sri Lanka - 2007 - Conflict returns

### Case study: Core shelter

#### Project type:

Transitional shelter construction

#### Disaster:

Civil conflict in Sri Lanka

#### No. of houses damaged/ people displaced:

520,000 families displaced by the end of 2006;  
238 houses in Karukamunai, the community  
where the NGO was working

#### Project target population:

Over 300,000 people displaced in 2006;  
213 of these families targeted

#### Occupancy rate on handover:

100%, with 83.5% of families making adaptations  
to their shelter after moving in

#### Shelter size

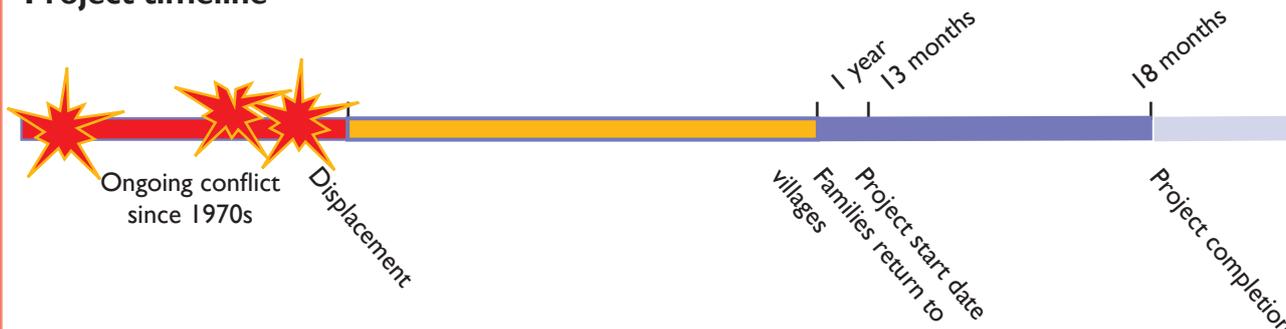
18.6 m<sup>2</sup>



### Summary

This project built core shelters for families returning to their villages after being displaced by conflict. The construction was owner driven, allowing families to later expand the shelter as their circumstances allowed and for the same initial costs as less durable 'semi-permanent' shelters. Expansion and adaptation of the shelters happened very early on among the majority of beneficiary households.

### Project timeline



### Strengths and weaknesses

- X Families were able to quickly adapt the core shelters to their own needs. Much emphasis was placed on beneficiaries' own capacities.
- X 'Sweat equity' provided income for some community members. Income from this was used to buy materials for shelter improvements.
- X Use of community networks reduced the challenges

involved in monitoring and supporting the project from a distance.

- Smaller-sized core shelters can be appropriate for some communities.
- Clearly-defined written 'contracts' between the NGO and each beneficiary household reduced the potential for mismanagement of expectations.



Core shelter under construction



Completed core shelter

## Before the project

The district of Karukamunai, in north-east Sri Lanka, had been on the front line of the fighting between the Sri Lankan government and the Liberation Tigers of Tamil Elam rebels for many years. Families from the area had been displaced to camps near the large port town of Batticaloa during the heightening of hostilities in 2006.

In July 2007 many displaced families returned to their villages to find many of their homes destroyed or in disrepair. The majority of the previous housing stock had been constructed from mud-brick and palm-thatch roofs, and had often fallen apart due to the weather, lack of maintenance or encroachment by elephants.

Previous to this project, the government had insisted upon a 500 ft<sup>2</sup> foundation. In many cases the beneficiaries did not have the personal resources to complete the larger shelter immediately, or had expected other NGOs or the government to provide them with the shelter extension.

The district was very isolated, which made direct monitoring of the project difficult. It also forced the NGO to adopt a relatively hands-off approach, and greater responsibility for construction quality and completion was allocated to the beneficiaries themselves. At the same time, the NGO was under pressure to show results in a short period of time. This was partly expressed as the wish of the local government, but also in recognition of the short time before the next rainy season.

The community had a large capacity for self-build work and a knowledge of carpentry and masonry, and was also eager to finish the work quickly.

## Selection of beneficiaries

Effective coordination among the shelter actors resulted in the allocation of the nine different Grama Niladarai administrative areas to different specific agencies. Within the one administrative area assigned to the NGO, the local authorities supplied a list of names of 238 eligible households. Of these, 213 were able to give the NGO staff the necessary confirmation of loss of housing and tenure of the land.

## Land rights / ownership

Each beneficiary household had to show the location and remains of their destroyed house as proof of tenure. This was then confirmed by the local authorities, although time constraints did not permit the NGO to make further investigation. Confirmation was hindered by the large number of families who had lost documents during the displacement.

## Technical solutions

Analysis showed that there would be little difference in costs between a semi-permanent shelter of the style used during earlier tsunami responses, and a core shelter made with permanent materials. After research and discussions in the communities, the NGO also came to the conclusion that a smaller (18.6m<sup>2</sup>) core shelter would be acceptable to the communities, as long as there were obvious demonstrations of the design's adaptability and expandability. In group meetings with the communities the core shelter version was chosen.

The core shelter has a fully enclosed space, as well as a veranda area that can also be enclosed. Technical drawings were provided to demonstrate basic possible variations

to expand it in different directions (front, side). Specific features were incorporated to give the walls greater durability (stabilisation and curing of the building blocks) and greater resistance to cyclones and heavy rains (steel bar reinforcement of wall pillars, roof trusses, binding of trusses to walls, use of J-hooks for the roofing sheets, overhang of roof to protect walls from rain, adequate foundations, raised flooring). Where possible, the raised floors were built using recovered materials from the destroyed houses.

The beneficiaries used a variety of materials when building extensions, ranging from building blocks to plastic sheeting and palm thatch. It was estimated that the construction of each shelter would take about three weeks, including the one week needed for curing the building blocks.

***'It's nearly the same size as our previous house, but with a good door and window'.***

## Implementation

A local school was designated as a central storage area for all the materials being brought in by the NGO, and a storekeeper was employed from the local community. Each family was required to sign a contract with the NGO, which clearly stated the responsibilities of the NGO and those of the beneficiaries.

The NGOs delivered the materials (apart from the locally sourced river sand) and gave small grants, provided at different stages of completion, to cover labour costs. The beneficiaries were responsible for taking the materials from the central distribution site, for



More than 80% of the families used personal resources or their own time and effort to upgrade their core shelters.

organising the construction and for quality assurance, both of the shelters and of any subsequent additions. The NGO also distributed instructions on proper methods of block-making and technical drawings of model designs for the shelters.

The NGO loaned work tools for each community to share, with the intention that each family would take their turn with them and then pass them on, or would sign them out and give them to hired masons. In practice the method of sharing the tools devised by the community members was more informal, but did not produce complaints.

During initial community discussions, the NGO explained that they would consider giving extra support

to those members of the communities who fell into categories of vulnerability, but that this extra help might be limited to providing materials for the floor filling and extra funding for the work of floor compaction (all other construction needs were already taken care of through the provision of the materials and the grants for labour). In the end, few members of the community came forward with such requests.

As a complementary programme, the NGO provided repairs of pre-existing toilets and also identified a partner for the provision of new toilets where needed.

#### Logistics and materials

Because of the isolation of the location, the ongoing conflict, and the lack of local suppliers, the NGO

provided all materials, apart from locally sourced sand. All other materials were procured in Trincomalee, the nearest large port. The majority of the timber was coconut timber taken from sustainably managed sources. The beneficiaries were given small grants to pay for the transportation of materials from the central distribution site.

#### After the project

More than 80% of the families used personal resources or sweat equity to start the process of improving their shelters. Some members of the community were also able to gain livelihood opportunities by doing masonry or construction work for other members of the community. The isolation of the location and the damage to the economy caused by the conflict meant that there was little other competition for employment among members of the community.

Material	Quantity
Cement 50 kg bag	26
River sand (tractor load)	4
20mm aggregate (metal)	0.3m <sup>3</sup>
Gravel (existing debris could be used)	1.3m <sup>3</sup>
10mm diameter steel reinforcement	2
6mm diameter mild steel reinforcement	3.7m
Binding wire	0.2kg
Wall plate 50mm x 100mm	15m
Ridge plate 50mm x 100mm	7.5m
Tie beam 75mm x 125mm	3.7m
Prop 75mm x 125mm	1m
Rafter 50mm x 100mm	44m
Reaper 25mm x 50mm	60m
Soligram	10 litres
28-gauge corrugated iron sheet, 2.4m long	20 sheets
Tar sheet 0.9m wide	3.4m
Ridge tiles	20
L-hook with nut & washer, 75mm	6kg.
Nails 100mm	2kg
Nails 50mm	2kg
10 mm diameter bolt and nut, 150mm	2
10 mm diameter bolt and nut, 100mm long	6
Door 0.9m x 1.8m with frame, including ironmongery and fixing	1
Window 0.9m x 1m with frame, including ironmongery and fixing	1



A durable upgrade of a core shelter