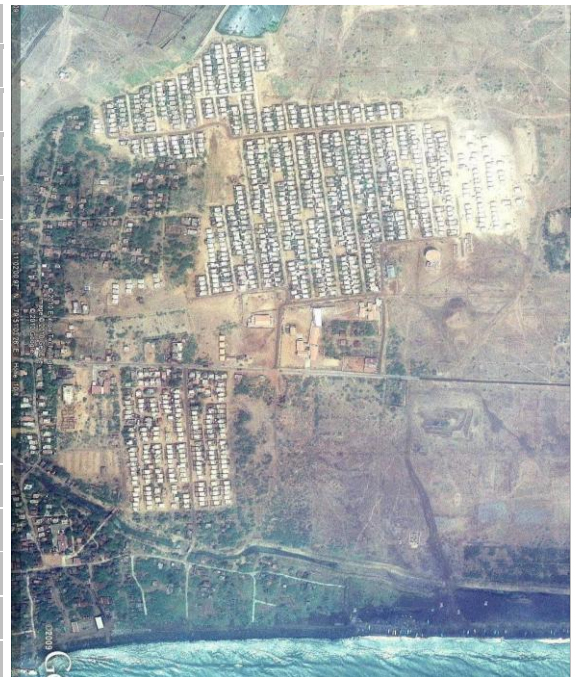


Project **Sustainable Reconstruction Initiative in
Tsunami Affected Villages in Nagapattinam,
Tamil Nadu, India**

Country	India
Region/town	Nagapattinam – Tamil Nadu
GIS data (WGS 84)	11°01'59"N / 79°50'58"E
Project type	Reconstruction
Typology	Individual housing
Approach	SIFFS (a fishermen's trade union) functions as a service NGO and manages the construction activity with own staff. High levels participation of communities in planning, implementation, monitoring and quality control.
Beneficiaries	Tsunami Victims
Climate	Hot/humid
Special constraint	Tsunami / Cyclone prone
Start / end of project	2005 / 2009
Country GNP	USD 4,164/cap



Partners

Organization (donor)	Swiss Solidarity / Swiss Red Cross,
IO/NGO partners	SIFFS-India (implementation) / SKAT, Switzerland (technical backstopping) / IIDS, India (coordination)
GO partners	Govt. of Tamil Nadu, India

Context to project

Initial Situation	During the Tsunami of 26 th December 2004, Tamil Nadu was the worst affected among Indian states. Nagapattinam was the district that suffered the most in Tamil Nadu. Tarangmbadi and Chinnankudi were among the fishing villages of Nagapattinam district that encountered extensive loss of life, property and livelihood. The Tsunami killed as many as 304 people in Tarangambadi and 904 houses were fully damaged. In Chinnankudi 137 houses were completely destroyed. This village suffered 48 deaths.
Goals, Beneficiaries	The overall goal of the project was to reconstruct the Tsunami affected villages of Tarangambadi and Chinnankudi of Nagapattinam district through construction of permanent shelters and community infrastructure facilities.
Implementations / Results	The list of beneficiaries for 1069 houses was finalized through socio-economic and settlement surveys and mutual consultation with village panchayath and the district administration. The beneficiaries were given option to select their house design from 7 different model houses built in the village and given the option to do individual customization. Since the plots were allotted before starting construction, the beneficiaries themselves assisted in supervising the construction of their houses. All 1069 houses were built and occupied. Beneficiaries are highly satisfied and show ownership.



Reference data (comparative)

Land plot (per house unit)	111.60 m2	Garden	Approx. 40 m2
Ground floor area (incl. walls)	37.40 m2	Accessible roof veranda (incl. walls)	37.40 m2
Occupants max.	6 persons	Occupants min.	2 persons
Total house area	37.40 m2	Surface / occupant	6.2 m2/cap
House volume (outside dimension)	150 m3	Volume / occupant	25 m3/cap
Number of rooms	3 rooms	Occupant / room	0.5 cap/room
Heated area	n.a.	Heated area/occupant	n.a.
Cost /unit	5700 USD	Cost/occupant	950 USD/cap
Cost/m2	152.4 USD/m2	Cost/m3	38 USD/m3
Total housing cost	5700 USD*	Self help (beneficiaries)	n.a.
community development projects cost	136766 USD	Comm. Dev. cost/occupant	34 USD/cap

N.b.: the data given above indicates an average of the 7 different house designs



Approach to results

Initial Situation

After initial days of relief work, govt. with support of non-govt. agencies constructed temporary shelters for the homeless. SIFFS also built 350 thatched individual temporary shelters in Tarangambadi village (in walking distance to the relocated reconstruction of the village in a zone 500 meters of the coastal sea line).

Approach

Learning from the experiences of past public housing projects and committed to giving due respect to people's needs, SIFFS took up the project with the aim to built homes, not just houses. It was understood that if the houses were not built according to the villagers' needs, it would be yet another disaster involving colossal wastage of money and time.

Through a series of planning and brain storming sessions, SIFFS devised a strategy that took into consideration people's needs, aspirations, life styles, and socio-cultural norms as an important component. Houses were conceptualized as customized products having cultural, economic, technical and political dimensions. Ensuring community participation was the core of the approach. While meeting the livelihood requirements of the community and safeguarding them against future calamities, SIFFS incorporated the following elements to ensure a human dimension in its project:

- Ensuring the participation of the house owners right from the design stage through the entire construction process.
- Taking into account people's needs while planning their houses
- Ensuring a feeling of ownership of the houses by house owners.

Problems/Constraints

The negotiations on the list of beneficiaries of the a habitat reconstruction project turned out to be a long drawn process in which traditional panchayath, the critical decision making forum for the fishing villages played a major role. A set of criteria for beneficiary selection was drawn up based on (1) the guidelines in the Government Order and (2) the results of the settlement study which showed the details of house ownership before tsunami including the type of houses.

The concept of model houses emerged as part of an effort to involve people in designing their own houses. The model houses, as expected a at the concept stage, provided much needed 'touch and feel' effect, thus encouraging the families to get seriously involved in the designing process.

For SIFFS, a fishermen's organization, this was the first foray into construction. The issues and challenges that the habitat construction process faced had been many. Creating space for all stakeholders to voice their opinion had necessitated resolving conflicting demands – the administration wanted speedy delivery, the community wanted immediate resolution of conflicts, observers sought strict adherence to quality standards. Further, introducing a social perspective in the minds of the technical team was met with some difficulty.

An owner-driven construction implementation approach was tested out during project implementation. The idea was to give the beneficiaries increased tasks and responsibilities in construction issues. For reasons of management, construction quality and timely delays this approach was not found feasible.

The most important issue facing SIFFS had been the delay in handing over houses. The initial land filling work, customizing houses to meet individual needs, shortage of quality labour force and lack of prior experience of SIFFS were some of the reasons for the delay.

Lessons learned

Active participation of beneficiaries from the beginning of the design stage of the project to the end of the project is very important to make better results of higher ownership feeling and satisfaction. Prior allotment of plots before starting construction is an important factor for getting these results.

Evaluation

An independent evaluation was carried out by Swiss Solidarity in 2009. The Tarangambadi intervention was seen as a very successful project serving as a model for future reconstruction schemes



Legal framework

Politically attached to	Nagapattinam District in Tamil Nadu State.
Type of ownership	Ownership certificate (Patta) issued in the joint names of husband and wife of each house by the Revenue Department of Govt of Tamil Nadu.

Construction information

Construction

Structure	Foundations	RCC footings along with ground beams of 23x35 cm, designed for 2-storey building
	Walls or columns	Poste and beams system, RCC columns 23x23cm size, fillings brick masonry 23 cm
materials	Facade	Cement plastering, painted
	Roof	Walkable RCC slab along accessible via external stair-case
	Earthquake protection	Incorporated in design of buildings
	Floor surface	PCC with cement flooring
	Walls	Machine moulded bricks of standard size
	Doors	Wooden frames and doors
	Windows	Wooden frames with glass windows
	Ceiling	RCC slab with cement plaster
	Thermo insulation	n.a.
	Roofing	RCC slab 12 cm, with T beams
watsan	Water	Public water tanks and taps in common spaces set up by the Govt for drinking and cooking purposes. Hand pumps in individual plots set up by beneficiaries for other requirements.
	Toilets	External or inbuilt pour flush toilets, connected to septic tanks.
	Waste water	Soak pits provided in individual plots
	Rain water	Provided rain water pipe from the terrace and a soak away chamber
equipment	Heating system	n.a.
	Electricity connection	Individual connections to each house provided
	Telephone connection	Not Provided
	Cooking facilities	Kitchen Place provided without chimney. Kerosene stoves are used in most houses

Urban planning

Distance to	Health center	From relocated Settlement (0.5 km), from in-situ (50 m)
	Education facilities	A kindergarten near by new settlement and High school is 1.5 km from new settlement and 800 m from in-situ
	Income activities	1 km
	Public transport	100m for local transport

For further information

Involved SHA construction group consultants	
Other involved SHA consultants	
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