

# Post-Tsunami Housing in Kanyakumari District, Tamil Nadu-Gender Related Concerns

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## **Abstract**

*The tsunami of 26, December, 2004 affected the villages located on the coastline of Kanyakumari District of Tamil Nadu. There was tremendous loss of life, infrastructure, houses, changes in the livelihood pattern and socio-economic conditions of the fisherfolk. The governments, both Central and State along with Non-Governmental Organizations (NGOs) reacted positively to the situation. The tsunami has delivered a crushing blow to women. The women who were relocated by tsunami faced a number of problems in the relief camps and temporary shelters. Even in the newly constructed houses, the women faced gender-specific problems. This article describes the Post-tsunami housing programme in Kanyakumari District and the specific problems faced by women due to relocation based on survey data. Primary data was collected from 100 women and Garrett ranking techniques was administered to analyse their problems in different phases of relocation. The Garrett's ranking results indicate that lack of appropriate dresses in the relief camps, inadequate living area in the temporary shelters and small size of the kitchen in the new houses were found to be the main problems of the respondents. The study also highlights the importance of gender sensitive housing programme to ensure that needs of women and girls are to be given due attention during post-disaster.*

**Key words:** Fisherfolk, housing, post-tsunami, gender

## **Introduction**

A massive earthquake of 9.3 on the Richter scale that shook the Indonesian Coast at 6.30 a.m. (IST) on 26<sup>th</sup> December, 2004, formed huge tsunami tidal waves and hit the Indian Coast between 8.15 a.m. to 11.15 a.m. Next to

Nagapattinam, which is the worst affected district of Tamil Nadu, the coastal habitations along the coast of Kanyakumari District were severely affected (Report, Government of Tamil Nadu, 2006). Fishermen have been

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devastated losing their near and dear ones, homes, possessions and livelihood. Kanyakumari district recorded 801 deaths (Kanyakumari District Collectorate, 2005). Intrusion of sea water, accumulation of carcasses and consequent post disaster activities resulted in untold miseries among the people. As an immediate relief, people were shifted to camps, organized in public places and subsequently accommodated in temporary shelters, constructed by the Government and NGOs. The Government, NGOs and Philanthropist distributed food and household supplies and provided medical care to the tsunami survivors. After a period of one to one and a half years, they were accommodated in the newly constructed houses. In any disaster, women have been found to be vulnerable as they belong to the weaker and sub-ordinate groups. Women were reported to be neglected in receiving food and other essential supplies (P.S. Choo, 2005). So there is a need to recognize their specific needs in relief and rehabilitation plans of any post – disaster.

### **Objective of the Study**

This article focuses on the experiences of women fisherfolk in relief camps, temporary shelters and newly built houses and tries to suggest women friendly measures that could be followed in any post-disaster.

### **Literature Review**

The tsunami had destroyed a large number of houses and properties of

fishermen which resulted in relocation. This had created some problems to the fishermen in general and women in particular. Several studies were done on this topic.

The pregnant and lactating mothers were affected more by intolerable heat in temporary shelters, besides inadequate attention to vaccination and scanning (Mercy, 2005). The aftermath of the tsunami increased the workload of women survivors since many people were injured and minimal help only reached the women to rebuild their livelihood (Choo, 2005). Women survivors have become targets of verbal and physical harassment and sexual abuse in relief camps and settlements (Janaki, 2006). Sudharshan Rodriguez (2007) had observed that the relocation does increase the problem related to caste and non-fishing communities and there have been some reported cases of this in Tamil Nadu. Radha and Velmayil (2008) had reported that recanalisation brought blossoms in seven tsunami affected families as the women in those families delivered new babies. The infants diminished the gloom that existed in the hearts of the fisherfolk. Lack of privacy affected the women particularly. Families with relatives residing in better conditions sent their children, particularly the girls to their relative's homes to ensure their safety (Pavananthi et al 2008)

### **Methodology Study Area**

Kanyakumari, the smallest district in Tamil Nadu, with a land spread of 1,684sq.km, is studded with 42 marine fishing villages. The district ranks first, among the 13 maritime districts of the State in terms of marine fisherfolk population (Tamil Nadu Marine Fisherfolk Census, 2000). The tsunami of 2004 had battered 33 coastal villages of the district. The present study has chosen four worst affected villages viz. Colachel, Melamanakudy, Mandaikadu Puthur and Kottilpadu to examine the experiences of women related to post-tsunami housing. In all the four sample villages, Kottar Social Services Society (KSSS), the Non-Governmental Organization (NGO) in collaboration with International Non-Governmental Organizations (INGO) and District Administration have worked in all the phases of reconstruction.

### Sources of Data

This article is based on both primary and secondary data. Primary data was collected from 100 women who were relocated after tsunami in the four sample villages i.e. 25 from each village. Secondary data was collected from journals, books and electronic media. Garrett ranking technique was used to analyse the problems faced by women in relief camps, temporary shelters and new settlements.

### Results and Discussion

#### I. Damage of Houses in Kanyakumari District

The tsunami has damaged 2953 houses fully (Kanyakumari District Collectorate, 2005) and 3965 partially [Kanyakumari Rehabilitation Resource Centre (KKRC), 2005] in the district. High population density in narrow strips of coastal land and the location of houses closer to the high tide line led to damage of many houses in the district.

**Table No. 1 Damaged Houses in Sample Villages**

Sl. No.	Name of the Village	Number of fully damaged houses	Number of partially damaged houses	Total houses of the Village (pre-tsunami)
1	Melamanakudy	255 (51.65)	200 (46.70)	743
2	Colachel	326 (17.81)	814 (44.48)	1830
3	Kottilpadu	251 (43.65)	140 (24.35)	575
4	Mandaikadu Puthur	101 (19.96)	150 (29.64)	506

Sources: Kanyakumari District Collectorate, Nagercoil Marine Fisherfolk Census, 2000.

Figures in parenthesis indicate percentage of houses damaged houses to total houses.

From Table No.1 it is observed that Melamanakudy recorded 51.65 per cent

of fully damaged houses, followed by 43.65 per cent in Kottilpadu, 19.96 per

cent in Mandaikadu Puthur and 17.81 per cent in Colachel. Even in terms of partially damaged houses Melamanakudy ranks first (46.70 per cent), followed by Colachel (44.48 per cent), Mandaikadu Puthur (29.64 per cent) and Kottilpadu (24.35 per cent). The field study revealed that river beds of Manakudy estuary and Pazhayar River and the A.V.M. channel which passes through Colachel, Mandaikadu Puthur and Kottilpadu are in low level from the sea. So the tsunami waves easily entered the water bodies and caused large scale destruction. Further, coastal topographic slope and absence of vegetation led to more vulnerability in the sample villages.

## II. Experience of Women in the Relief Camps

Immediately after the disaster, the victims were accommodated in schools, colleges, and marriage halls, places of worship and community halls. Food packets, dresses, drinking water, emergency medicines, toilet facilities etc. were provided. Commodities like

rice, milk, vegetables, dhal, edible oil, soap, text book, mat, bed sheet etc. were supplied by the District Administration, NGOs and other civil society organizations till they moved out either to temporary shelters or to their original homes.

The duration of stay in the relief camps by the respondents varies from two weeks to four weeks, Forty-two per cent of them stayed for two weeks, 33 per cent for three weeks and 25 per cent for four weeks. Life in the relief camps had been a source of continued trauma for women. The Garrett's ranking technique was used to rank the opinion of the respondents about their experiences in the relief camps.

$$\text{Garrett Rank} = \frac{100(R_{ij} - 0.5)}{N_j}$$

$R_{ij}$  = Rank given for the item by the  $j^{\text{th}}$  individual

$N_j$  = Total ranks given by the  $j^{\text{th}}$  individual

**Table No. 2 Garrett's Ranking Results- Experience of Women in the Relief Camps**

Sl. No.	Opinion of the Respondents	Scores for the number of Respondents					Garrett's Score	Mean Score	Rank
		I	II	III	IV	V			
1	Inadequate toilet facilities	1769.76	1691.20	1150	293.36	33.60	4937.92	49.38	III
2	Lack of appropriate dresses	3637.84	1775.76	1100	185.28	13.44	6712.32	67.12	I
3	Poor lighting	1573.12	1691.20	1450	277.92	28.56	5020.80	50.21	II
4	Water Problem	1671.44	2029.44	650	370.56	36.96	4758.40	47.58	IV

5	Physical and verbal abuse	1179.84	1268.40	650	416.88	55.40	3570.56	35.71	V
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**Source:** Calculated from survey data

As per the Garrett's rank, lack of appropriate dresses was the main problem faced by the respondents in the relief camps. They were provided saree alone without other garments including sanitary towels. Poor lighting was the next problem mentioned by the respondents. Girls and women were afraid of going to the toilets in the nights since the areas near the toilets were inadequately lit. Inadequate toilet facilities and water problem led to lot of hardship for women. There were incidences of physical and verbal abuse since the idle men frequently drink and play cards near the bathrooms. Women silently coped with sexual and physical harassment by men, particularly near the toilets. (TISS, 2005)

### III. Experience of Women in Temporary Shelters

Temporary shelters were constructed by the Government and NGOs to house the displaced persons who were accommodated in the relief camps. The Government had spent Rs.2.52 crores for the construction of temporary shelters. A total of 4088 shelters were constructed in 40 locations, of which 3002 by the District Administration and 1086 by the NGOs (Kanyakumari District Collectorate, 2006). These shelters were provided with common kitchens, wash areas, community shelters, bathroom and toilet facilities. Life had been miserable in the shelters especially during summer and rainy seasons.

**Table No.3 Temporary Shelters in Sample Villages**

Sl. No.	Name of the Village	No. of shelters Constructed		
		Government	NGO	Total
1	Melamanakudy	360	-	360
2	Colachel	40	315	355
3	Kottilpadu	358	-	358
4	Mandaikadu Puthur	110	-	110
	Total	868 (73.37)	315 (26.63)	1183 (100)

Source: KRCC, 2005

Figures in parenthesis indicate percentage to total

Table No.3 indicates that in the sample villages 1183 shelters were constructed with electrification, flooring, water and toilet facilities. Of

the total shelters 73.37 per cent were constructed by the Government and 26.63 per cent by NGO viz. Kottar Social Service Society. The temporary shelters had failed to meet women's

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essential needs for shelter, health and security. The women survivors of tsunami had suffered from traumas like loss of family members and property, displacement and insecurity, fear of physical and verbal violence etc.,

Women had complained about the lack of privacy in the shelters. They did not have separate toilets or bathing

facilities. In many shelters, they had to walk a long distance to reach the toilets and had become targets of verbal and physical abuse. Fifty-five per cent of the respondents expressed that their experience in temporary shelters was worse than that of tsunami.

**Table No. 4 Garrett's Ranking Results- Experiences of Women in Temporary Shelters**

Sl. No	Nature of Problem	Score for the number of Respondents					Garrett's Score	Mean Score	Rank
		I	II	III	IV	V			
1	Inadequate living area	6292.48	1775.76	350	77.20	5.04	8500.48	85.00	I
2	Prone to contagious disease	589.92	1691.20	1100	478.64	35.28	3895.04	38.95	IV
3	No privacy for girls and women	688.24	2452.24	1550	231.60	30.24	4952.32	49.52	III
4	Physical and Verbal abuse	196.64	591.92	1100	447.76	67.20	2403.52	24.04	V
5	Inadequate and long - distance of toilet	2064.72	1944.88	900	308.80	30.24	5248.64	52.49	II

**Source:** Calculated from survey data

The Garrett's ranking results indicate that inadequate living area was the main problem experienced by the respondents. Normally 2 to 3 families of fisherfolk used to live in a single house together. The temporary shelters, having a single room of less than 100 square feet size lack adequate provisions (Mercy, 2006). Next problem reported was long distance of toilet. On an average one toilet was shared by 10 to 12 families. Since the toilets were far away, girls and women were afraid to use them in the evening hours. There was no privacy for the

women since the single room had to be used for all the purposes by all the family members. Decline in privacy and security of women in the intermediate shelter as compared to pre-tsunami houses was highlighted by UNDP Report, 2008. The respondents had been frequently affected by urinary infection, sun burn and contagious diseases like chicken pox, measles during summer and cold, cough and fever during rainy days due to poor quality of the shelter. Human Rights Foundation, a Chennai board NGO observed that women suffered

disproportionately from infections and diseases (Shiela Royappa, 2005) Life in the temporary shelter is very difficult during hot summer and rainy seasons. (Lal Mohan, 2005). Santosh Srinivasan (2005) observed the widespread prevalence of chicken pox among the infants and children as they spend most of their time inside the shelter. The women were overburdened with the responsibility of taking care of sick in the family. Physical and verbal abuse was also reported. In some shelters girls were misused by their own fathers these girls were shifted to the hostel run by the nuns in Melamanakudy. TISS (2005) reported the existence of sexual abuse in temporary shelters.

#### IV. Experience of Women in New Settlements

The Government of Tamil Nadu announced the plan of reconstruction of houses for the tsunami victims. The magnitude of post-tsunami rehabilitation forced the Government to engage NGOs in the construction of permanent houses on public-private partnership mode. The Government laid out the terms and conditions for the willing NGOs and International Non-Governmental Organizations (INGOs) to carry out their activities in the allotted villages. Houses were constructed in both old and new sites. No forced relocation was observed in the study. The Kanyakumari District Administration had acquired a total area of 90.83 acres at the cost of Rs.5,31,79,804/=. The houses were constructed by the INGOs/ NGOs whereas the infrastructural facilities were provided by the Government.

**Table No. 5** *Details of Land Acquired and Houses Constructed in the Sample Villages*

Sl. No	Name of the Village	Name of the NGO/ INGO	Number of Houses			Extent of land acquired (in acres)	Total Cost of land (Rs.)
			In-site	Ex-site	Total		
1	Melamanakudy	KSSS – Caritas Swiss	58	197	255	10.58	511913.00
2	Colachel	KSSS – Caritas India	72	254	326	25.00	Government Poramboke Land
3	Kottilpadu	KSSS – Caritas India & Matha Amirthanantha Matt	-	224	251	5.80	10370287.00
4	Mandaikadu Puthur	KSSS – Caritas India	-	101	101	4.25	3806201.00
	Total		130	803	933	45.63	19288401.00

Source: Kanyakumari District Collectorate, 2006.

Table No.5 reveals that the District Administration had acquired 45.63 acres of land, of which 25 acres were poramboke land and 20.63 acres were bought at the cost of Rs.19288401/= in the sample villages. A total of 933 houses were constructed, of which 130 were in old places and 803 were in new places.

There was mixed response among the respondents about the facilities in the permanent houses. Seventy-five per cent of the respondents live in 1300sq.ft plat per head in 3 sample villages viz. Melamanakudy, Mandaikadu Puthur and

Colachel, whereas it is 650sq.ft in Kottilpadu due to paucity of land. The total carpet area of the houses varies from 350-400sq.ft, consisting of 2 rooms, one drawing room, one kitchen and a toilet attached bathroom. In Melamanakudy the toilets are located outside the house. The respondents who lived in congested huts and small size tiled houses (44 per cent) were happy and satisfied about the new houses whereas 56 per cent of them were not satisfied since they had lived in big houses.

**Table No.6 Garrett Ranking Results- Experience of Women in New Settlements**

Sl. No	Opinion about new house	Scores for the number of respondents							Garrett's Score	Mean Score	Rank
		I	II	III	IV	V	VI	VII			
1	Inadequate carpet area	2871.87	1956.99	989.56	550	286.56	34.05	8.73	6697.76	66.98	II
2	Small size of the kitchen	2772.84	2702.51	685.08	650	191.04	61.29	3.72	7066.48	70.66	I
3	Unhappy about toilet inside the house	2076.63	1141.80	1294.04	900	238.8	81.72	6.79	5739.78	57.40	III
4	Boundary wall reduces social bondage	594.18	1118.28	1674.64	850	382.08	136.20	6.79	4762.17	47.62	IV
5	Long distance to church	198.06	745.52	1446.28	700	405.96	136.20	19.40	3632.02	36.32	V
6	Long distance to hospital	598.18	652.33	532.84	850	382.08	156.63	23.28	3191.34	31.91	VII
7	Poor quality of construction Material	792.24	745.52	989.56	500	501.48	74.91	28.13	3631.84	36.31	VI

From Table No.6 it is understood that small size of the kitchen was found to be the main problem for the respondents followed by inadequate carpet area,

toilet inside the house, boundary wall, long distance to the church, poor quality of construction material and long distance to hospital. Fisher communities



are tight knit social units in which families depend on and support each other (Chandrasekara Naidu, 2005) but the boundary wall reduces the social bondage, expressed by the respondents of Melamanakudy.

#### IV. Summary of Findings

Several studies reveal that more women died than men in the tsunami. The plight of the women survivors was no better after tsunami also. Their life in the relief camps and temporary shelters had been a source of concern since enough attention was not given to their specific needs. Lack of appropriate dresses was the main problem faced in the relief camps, while inadequate living area was the main problem experienced in the temporary shelters. Though, not free from problems, life in new settlements is better. The respondents has remembered with gratitude the humanitarian deeds of NGOs, Philanthropists, local people, Government and other institutions during the crisis when they were helpless and hopeless. The respondents who had lived in congested huts and small size tiled houses (44 per cent) were happy and satisfied about the new houses whereas 56 per cent of them were not satisfied since they had lived in big houses. Small size of the kitchen was found to be the main problem of the respondents in the new houses. Though the government and other players in the relief and rehabilitation process had given attention to the

needs of women, there existed a gap between policy and practice.

#### V. Conclusion and Recommendations

This study reveals that despite massive efforts on the part of the government and NGOs, there exists a gap between expectations and fulfillments. Adequate attention was not given to the women in the relief and rehabilitation efforts. Their safety, security and freedom of movement had been threatened. Shortage of basic facilities like sufficient space, water, light, toilet etc. had made their life miserable in relief camps and temporary shelters. Even in the permanent houses their struggle continues due to some inconveniences. To address the reissues, the study recommends the following:

- Local women based organizations understand the needs and vulnerabilities of the local women than outsiders. So their involvement is mandatory to ensure that the specific needs of women are met in the assessment, planning and implementation stages of relief and reconstruction programmes.
- The respondents who want to extend the house should be given housing loan at minimum rate of interest which will solve the problem of inadequate living space and small size of kitchen.
- Women with self confidence and self esteem can take control of their own lives and decrease their vulnerability in times of disasters.

So, empowerments of women through disaster training, media campaign and income generation projects are needed. This will reduce women's subordination and meet their needs in disasters. The NGOs should organise the skill development programmes after identifying the needs of the women in accordance with their local environment.

- The Self Help Group women, youth and children must be encouraged to strengthen the coastal defences through the establishment of bio-shield to protect the coastline from erosion. Indira Hirway and Subrangru Goswami (2007) reported that the fishing village of Thirunal Thoppu in Tamil Nadu was saved from tsunami waves due to the dense growth of mangroves on the coast. The mangroves generated by the Forest Department should be maintained and improved by the local people.
- The disaster management committee of the villages should disseminate the acquired knowledge to diagnose the abnormality of the sea, rescue the people and give first aid in times of disaster to the villagers.
- There had been rumours of tsunami twice after occupying the new houses. They had to run with children and elders for safety which puts them under stress. The Early Warning System (EWS) which had been set up under

United Nations Development Programme (UNDP) in the villages should disseminate the warning only after careful scrutinisation. Proper maintenance of the EWS is necessary to fulfill the purpose.

Natural disaster cannot be totally prevented; However, Early Warning Systems, planning and preparedness of the coastal community would help in minimizing the destruction. Further, gender sensitive relief and rehabilitation programmes should be evolved to respond appropriately to the specific needs of women.

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