ANNEX VI - HOUSING

A. HOUSING SITUATION

1. In 2001, it was estimated that Sri Lanka had 9.6 million building units of which 4.6 million or 87 percent were used as dwellings. 1.12 million building units (around 12 percent of all building units in the country) are located in administrative divisions along the Sri Lankan coast which was affected by the tsunami. While the Sri Lankan census classifies around 29 percent of all dwellings in the country as "temporary" (based on the use of non-durable construction materials), Hambantota District in the south has a much higher share of temporary houses (38 percent). There is considerable home ownership in the country with only 13 percent of houses occupied by tenants. In some districts 84 to 90 percent of houses are owner occupied. In terms of dwelling size, Sri Lanka has fairly large houses with 62 to 67 percent of the houses having 3 to 6 rooms and almost 95 percent of houses having two rooms or more. Between 60 to 80 percent of all houses have electricity connections (except in Ampara, Hambantota and Puttalam where the figure is less than 60 percent), around 90 percent have access to water supply and 80 percent have sanitation facilities.

2. A general picture of a typical house along the affected coast would be as follows: generally one floor, on ground structure using shallow foundations with walls made from cement or burnt brick; mostly wooden roof support structures with tiles or cement asbestos roofing sheets. Most had some form of septic tank for disposal of human waste, an electricity connection and access to some form of protected or safe drinking water. However, a large part of what is commonly called "temporary or fishermen's houses" were more modest with unfinished floors, *wattle* and *daub* (mud), wood plank or palm leaf walls and simple roofing, without in-house toilets, water and/or electricity.

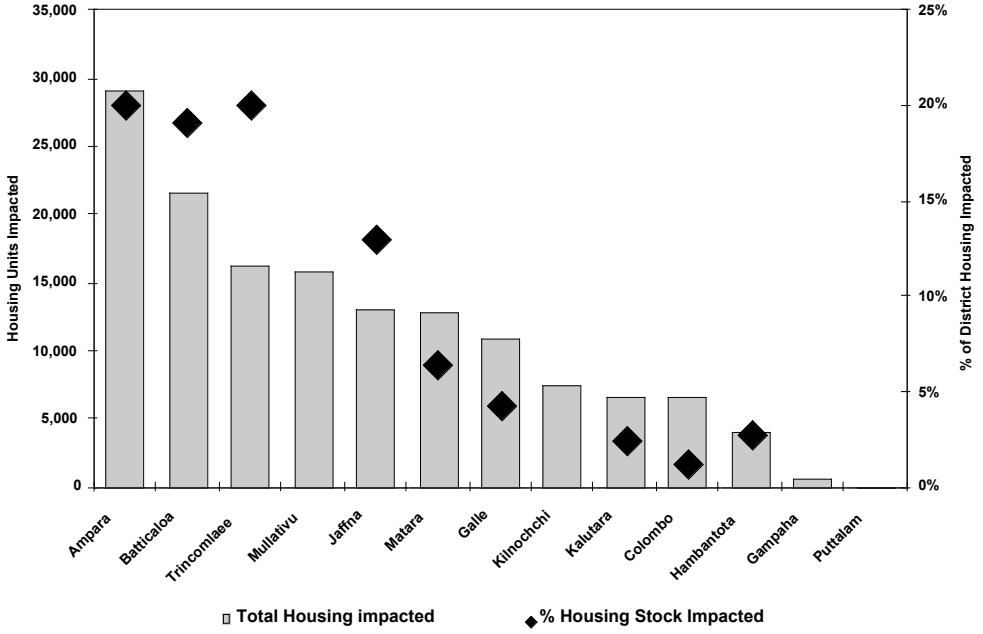
B. DAMAGE OVERVIEW

Housing Stocks Destroyed and Damaged

3. The tsunami surge destroyed about 99,478 houses and damaged 46,292 (Source: CNO. *Note: these numbers have fluctuated over the past two weeks*). The damaged houses form about 13 percent of the housing stock of the coastal divisions of the affected districts. Most of the affected housing units were within 500 meters of the coast. The surge was recorded at 15 to 20 feet (5 to 6.5 m) in most of the East, North East and parts of the Southern coast. Most of the places penetrated by the tsunami had a land elevation less than 2 to 3 m above the mean sea level. On the south and south east costs, there were large tracts of the coastline where there are sand dunes which were not at all penetrated by the tsunami surge. The following chart shows the housing stocks in the coastal belt and the total damage in housing by district. The worst affected areas are Ampara and Tricomalee where around 20 percent of the district housing stock was affected. The other districts with significant damage are Batticaloa (19 percent), Matara (7 percent), Galle (4 percent) and Kalutara and Hambantota (3 percent each). The impact on housing stocks in

the Puttalam, Mullativu and Kilnochchi districts can not be made as data are not available. At the time of this assessment, figures on the numbers of temporary or permanent building affected are not available.

Housing destroyed or damaged by the tsunami



C. DAMAGE ESTIMATES AND RECOVERY NEEDS (See Table 1)

4. Damage estimates are prepared using a model of high and low value of the houses in the various districts along the coasts. Since the housing stock is composed of temporary and permanent housing, temporary housing was valued at 35 percent of the permanent house based on fact that most temporary housing are much poorer construction and do not have the basic services. The highest values were used for Colombo and Galle and all other places had lower value. Moreover, since most of the affected housing stock was built over a long time period, the value was depreciated by 30 percent. All these value figures were derived from discussions with local architects, quantity surveyors and also comparing the costs of model homes presented on the web. Using the above method, the net damage to housing is estimated between LKR 32 and 36 billion ($289 million to $322 million). These estimates are confined to housing damage and do not include commercial properties such as those affected in the coastal cities. The recovery needs are estimated between $410 million and $460 million. Table 1 presents a overview by affected district.

Table 1: Housing Damage* and Replacement Estimates

Province	District	Destroyed Houses	Damaged Housing	Destroyed Houses	Damaged Housing	Destroyed Houses	Damaged Housing	Total Estimated Replacement Costs			
								Rs. Million		*US $ Million*	
		Nos.	*Nos.*	*Low Unit Rates (Rs.00's)*		*High Unit Rates (Rs.00's)*		*Low Estimates*	*High Estimates*	*Low Estimate*	*High Estimate*
Northern	Jaffna	12,000	1,114	4,160	1,456	4,640	1,624	5,154	5,749	46.6	52.0
	Killinochchi	3,400	4,250	3,900	1,365	4,350	1,523	1,906	2,126	17.2	19.2
	Mullaitivu	10,585	5,270	3,900	1,365	4,350	1,523	4,848	5,407	43.8	48.9
Eastern	Trincomalee	5,974	10,394	3,900	1,365	4,350	1,523	3,749	4,181	33.9	37.8
	Batticaloa	15,939	5,665	3,900	1,365	4,350	1,523	6,989	7,796	63.2	70.5
	Ampara	29,097	-	3,640	1,274	4,060	1,421	10,591	11,813	95.8	106.8
Southern	Hambantota	2,303	1,744	3,640	1,274	4,060	1,421	1,060	1,183	9.6	10.7
	Matara	7,188	5,659	4,160	1,456	4,640	1,624	3,814	4,254	34.5	38.5
	Galle	5,407	5,628	4,160	1,456	4,640	1,624	3,069	3,423	27.7	30.9
Western	Kalutara	3,100	3,668	3,900	1,365	4,350	1,523	1,710	1,907	15.5	17.2
	Colombo	4,170	2,521	5,200	1,820	5,800	2,030	2,627	2,930	23.8	26.5
	Gampaha	292	307	3,900	1,365	4,350	1,523	156	174	1.4	1.6
N.Western	Puttalam	23	72	3,120	1,092	3,480	1,218	15	17	0.1	0.2
Total		99,478	46,292					45,688	50,960	413.1	460.8

* Based on the above and factoring for depreciation and nature of housing, we estimate damage to housing between LKR 32 to 35 billion ($289 to 323 million).

D. RECONSTRUCTION AND RECOVERY STRATEGY

Critical Issues

5. *Dispersed nature of reconstruction*: This disaster has impacted 13 districts along the northern, eastern and southern coastlines. Damage ranges in intensity within and among the different districts. Reconstruction efforts will therefore have to be coordinated and monitored over multiple jurisdictions with varying institutional, human and physical infrastructure capabilities.

6. *Conflict and Regional Sensitivities*: In areas affected by the long conflict, reconstruction activities involving any form of resettlement, if not locally rooted have the potential to affect ethnic ratios further exasperating already tense situations. Moreover, because the tsunami damage has affected neighboring communities (and houses) differently and as recovery assistance will be targeted only to the affected families, tensions between those receiving special assistance and those not part of such programs may become a major issue. This suggests the need for alternate programs to reach the conflict affected families at the same time.

7. *Beneficiary identification*: With around 235,000 families displaced and currently living under a range of arrangements from living with hosts (such as family and friends) and in several welfare camps, it is obvious that finalization of a list of affected families and individuals will be a daunting task. It is possible that some families may be left out of the initial lists. Therefore, the preparation of an as accurate as possible list of reconstruction beneficiaries and a system for appeal for inclusion and procedures for removal from the list need immediate attention.

8. *Supporting decentralization*: Reconstruction over the dispersed locations provides an opportunity for Sri Lanka to deepen its on-going decentralization efforts and further assisting the affected people in interacting with the tier of government which is closest to them. Moreover, this huge task also provides a learning and strengthening opportunity for the provincial and local levels of government. Therefore, reconstruction activity should be designed and implemented at the lowest tier of government which is competent for that particular activity. This will allow for locally appropriate solutions and enable a range of sub-national structures to channel and monitor funds and ensure that they are used to get the best local advantage.

9. *Coastal conservation zone*: Acknowledging the need to reduce risk from wave damage and protect coastal ecology, it is imperative to bring a quick resolution to the question of "no development" zones of 100 to 300 meters along the coast. *Left pending, this issue poses the single most critical threat to the entire recovery and reconstruction process*. Among others, the main areas of concern are: (i) the status of the fishing communities which have lived for decades close to the beach and whose livelihoods depend on their location; (ii) the economic and financial cost as well as feasibility of ever successfully implementing and sustaining such a policy; and (iii) the effectiveness of ever being able to successfully manage the political, legal, administrative and logistical requirements associated with such a policy. In our opinion, to be effective, the implementation of a blanket "no development zone" would require intense preparation and extensive public consultations along the entire 800 kilometer coastline. Both of these would require considerable time and resources. Given the intense pressure for rapid reconstruction in the post-disaster situation it is advisable to explore alternative ways in which the objectives of minimizing risk and protecting the coastal ecology can be achieved. A pragmatic approach would be to appoint a committee consisting of regional, district, local authorities, and the local community to determine *high priority no-construction zones*. These localized areas are relatively easy to identify based on the extent of damage caused by the tsunami. For example, in the South there are only a handful of specific areas where there is nominal distance between the coastal road and the sea. In such areas, there has been considerable damage. The committee should be empowered to conduct transparent consultations with affected residents before considering these specific areas for declaration as "no construction zones". In these zones, relocation would be facilitated following widely known principles. If there is political ownership for this approach, the entire process could be completed within a month.

10. *Transparency and accountability in reconstruction*: All reconstruction formulation, as well as implementing modes and procedures, will have to be designed to be as transparent as possible. Absence of such transparency will affect the success of all reconstruction efforts. Of particular concern are the listing of beneficiaries, arrangements for and actual disbursement of assistance and the monitoring of reconstruction progress. To ensure accountability, for each component of the reconstruction process, precise responsibilities will have to be assigned and made widely known. Needless to say, fiscal transparency and accountability are of utmost importance.

E. APPROACH TO HOUSING RECONSTRUCTION

10. The geographical spread and varying localized scale of this disaster demand the encouragement of support to multiple parallel reconstruction responses as outlined below.

11. *Household driven housing reconstruction*: Experience from Gujarat and Turkey (rural) as well as Colombia and Mexico in post-disaster reconstruction indicates that, to the extent possible, the most feasible and sustainable option is *in-situ* reconstruction managed by affected households assisted by a combination of cash grants and access to loans. Sri Lanka's own experience with housing reconstruction after large scale flooding in the Southern Province (where around 17,000 houses are currently being assisted through cash grants) and lessons learned during the preparation of the World Bank supported North East Housing Reconstruction Project (NEHRP) and its related pilot project, support the rationale and feasibility for adopting such an approach. Affected families in eligible locations will be provided a phased payout of cash grants (different grant amounts for completely damaged and partially damaged houses) and assisted to opt for additional housing loans if they so desire. The timing, pace, content and extent of reconstruction will be managed by individual families who will be provided relevant information on possible house type plans, construction costs and techniques, and access to demonstration units. Locally-based civil society organizations will be invited to become involved in enabling the progressive housing reconstruction process and in the interface between households, local governments, building material suppliers and locally-based micro and small scale building contractors. In addition to being the method preferred by individual households, the approach described above revives local economies through the creation of jobs for locally-based skilled and unskilled labor in schedules best suited to the patterns of local labor demand. In addition, becoming actively involved in and having control over the reconstruction of one's own home is in itself an important part of healing post-disaster trauma.

12. *Community centered relocation and resettlement in select locations: It* is quite clear that in select locations (such as in the "no construction" areas described above) it will not be advisable to reconstruct affected housing *in-situ*. Moreover, in some locations reconstruction may require the use of more centralized and larger scale building contractors with limited involvement of affected families. Under such circumstances, relocation of the affected community may become necessary. In such cases, the guiding principles will be, to the extent possible, to keep affected communities intact while at the same time providing for individual families and or sub-sets of the community to opt out of such initiatives. In addition, renters and families without tenure will be treated on par with owners who have clear titles.

13. While implementing the above, the following operating principles will be applied:

a. <u>In all relocation/resettlement cases:</u> Affected communities will have to be actively involved in the confirmation of new locations, and provide inputs in layout and infrastructure design. This process must be facilitated by a civil society organization of the community's choice.

b. In cases of new sites where families are assigned land plots: In addition to following the process mentioned in A (above), the preferred method will be for households to manage and supervise house construction as described above.

c. In case of new sites where flats or mass scale construction is required: In addition to following the process mentioned in A (above), community input will be essential in building type, floor plan type selection and involvement in supervision construction.

14. *Assistance to vulnerable groups*: Elderly, disabled, female-headed households and/or households who express inability to manage cash grants or cash grants plus loans will be assisted through select civil society organizations in the management of the housing reconstruction process. Such households will not be isolated, but to the extent possible, but will be encouraged to remain with their original communities.

15. Streamlining regulation of the housing construction process: Three issues are critical: (i) There are very high chances that considerable numbers of affected families may have lost their official documents proving their ownership/tenure status. This situation may be compounded by the fact that in some districts (e.g., Matara) the land registry buildings and their records have been affected. In such cases, a mechanism needs to be put in place to ensure that this does not unduly delay reconstruction; (ii) concise, clear and simplified building codes applicable to the reconstruction process need to be developed, adopted and widely disseminated; and (iii) an accelerated process for the issue of building permits /permissions needs to be institutionalized at the appropriate local, district, and provincial government levels.

16. Assistance to affected local and municipal councils: In all affected coastal locations, local and municipal councils have traditionally not had the requisite institutional capacity and the wherewithal to effectively manage growth. This disaster has compounded the problem. As part of the recovery process, these units of local government will be assisted to develop and mainstream consultative and inclusive recovery strategies including local area redevelopment plans. Resources for the design, rehabilitation and/or reconstruction of local infrastructure such as internal minor roads, pathways, solid waste management and street lighting will also be required.

17. *Construction sector facilitation*: The localized nature of the tsunami has not severely impacted the overall construction sector. However, three issues are critical: (i) as reconstruction activity has momentum, it is quite possible that availability of skilled labor may pose problems. Initiatives will be required to support the training of skilled construction workers (such as masons, carpenters, plumbers and electricians) through the existing vocational training institutional network and through civil society inputs such as on-the-job training on reconstruction sites; (ii) the country will require assistance to facilitate construction materials and equipment supply chains (*e.g*., import tariffs/duties, policy support for housing component production systems); and (iii) a well developed and appropriate environmental management response for sand mining and lime production is essential.

F. RECOVERY STRATEGY

Immediate Policy Decisions

18. The following immediate policy decisions are necessary:

- *Beneficiary identification*: A clear national system of identifying affected families and who are eligible for receiving assistance is required. The system has to be fair, accurate, verifiable and able to be monitored.
- *Assistance Policy:* Questions such as: (a) who will be eligible for government and public support (will everyone affected be assisted or will there be means testing?); (b) how will donor and NGO support be incorporated; (c) what mechanisms will be put in place to allow donors to pool resources and/or "top up" assistance to affected families; (d) how will affected renters and tenants be assisted?.
- *"No development zone"*: Any blanket "No development zone" will impose multiple critical impacts. A policy is required which scientifically studies localized risk assessment with considerations for: land elevation; social; economic and financial implications; possibilities for realistic and sustainable enforcement; and extensive consultations with affected property owners.
- *Donor Coordination*: damage to the housing sector has attracted the attention to a wide range of international and national donors. To avoid duplication of efforts and wastage, it is necessary for the government to put coordination systems for efforts in this sector.

Short Term Recovery (3-15 months)

19. To be effective, formal reconstruction efforts need to commence as soon as possible. We envisage this to be structured as preliminary activities; rural *in-situ* construction and urban construction without any major resettlement. It is expected that at least 10 percent of all housing should be completed during this period.

Preliminary Activities

- Registration of all affected families
- Formalization and public announcement of beneficiary families
- Consultation with families on mode and nature of reconstruction
- Formalization of partnerships with international and national NGOs and public announcement of the nature of their involvement in reconstruction and their respective geographical areas of work

Rural In-situ Construction

- Dissemination of housing and construction technology alternatives
- Temporary shelter for owner-managed
- Community infrastructure construction
- Commencement of household-driven and managed reconstruction
- Facilitation of housing reconstruction process through NGOs and local governments

- Contractor housing construction

Urban Construction Without Resettlement
- Community infrastructure rehab or reconstruction
- Commencement of household driven and managed reconstruction
- Facilitation of housing reconstruction process through NGOs and local governments
- Contractor housing construction

Medium to Long Term Priority (15-60 months)

20. During this period, all activities started in the previous phase will need support and facilitation. In addition, the more complex areas – such as the resettlement of areas where future development is deemed to be risky – would begin reconstruction activities. The overall period would be around 45 months.

Preliminary Activities
- Continued dialogue with and facilitation of families who have commenced reconstruction
- Consultations with communities and families regarding the mode and nature of construction
- Planning and design of settlements and housing to be resettled with inputs from beneficiary communities and families

Rural In-situ Construction Continued
- On-site and related linking infrastructure construction
- Temporary shelter for household managed
- Household-driven and managed construction
- Facilitation of housing reconstruction process through NGOs and local governments
- Contractor housing construction with household supervision

Urban Construction Without Resettlement
- Community infrastructure rehab or reconstruction
- Household-managed and driven reconstruction
- Facilitation of housing reconstruction process through NGOs and local governments
- Contractor housing construction with household supervision

Urban Construction With Resettlement
- Consultation (and agreement) with community and households on the proposed relocation sites
- Community infrastructure construction
- Household-managed and driven construction
- Facilitation of housing construction process through NGOs and local governments

- Contractor housing construction supervised by community