

# Tsunami Impact Statistics

Sri Lanka is one of the countries badly affected by the Tsunami – 2004 disaster. Out of the 13 districts along the coastal belt, 12 districts were affected by this disaster. According to the estimates of the Ministry of Women Empowerment and Social Welfare, about 31,000 people were killed while another 4,100 reported to be still missing. A large number of buildings were completely wiped away. Some damaged buildings are not useable. Extensive damage to the Infrastructure of these districts was badly affected disturbing the livelihood of the people. Tourism and fishing are among the mostly hit industries. Thousands of families: men, women, children got displaced. Many displaced families have been relocated in temporary camps set up in temples, schools and other religious places etc. while others have moved to the houses of their friends or relatives.

The biggest challenge that the government facing is bringing the lifestyle of the affected people to normalcy. This requires reconstruction of their damaged houses and providing them livelihood assets such as boats for affected fishing communities. Reconstruction of the damaged infrastructure facilities is another high priority need. For planning and decision making on the rebuilding the nation devastated by this disaster, it is essential to have reliable and accurate information on the impact on the lives and properties caused by the disaster.

The Department of Census and Statistics conducted a census covering all affected districts to evaluate the damages to the lives and the buildings in the affected areas. The census was conducted in two stages. All the buildings including those wiped out were listed during the stage 1 by updating the list of buildings prepared for conducting the Census of Population and Housing – 2001. In addition to the listing of buildings, some information required to the compile a set of key indicators on the damages to the buildings was also collected in the stage. Detail data collection was carried out during the stage 2. Preliminary reports presenting the information collected during the stage 1 of the census have been released for all the affected districts including those in the Northern and Eastern Provinces.

## Methodology

This census was conducted in all affected districts namely, Puttalam, Gampaha, Colombo, Kalutara, Galle, Matara, Hambantota, Ampara, Batticaloa, Trincomalee, Mulativu and Jaffna districts. Enumeration was done only in the affected census blocks of these districts,

## Dr. Amara Satharasinghe

*Deputy Director,  
Department of Census & Statistics*

and it was conducted in two stages. Sri Lanka is consisting of 9 provinces, 25 districts, 325 Divisional Secretary Divisions and about 14,000 Grama Niladhari Divisions. For the purpose of Census of Population and Housing – 2001 conducted by the Department, each GN Division was further subdivided into a few smaller areas called Census Blocks. The objective of this sub division was to ensure that the enumerator assigned for the Census Block completes his fieldwork on the final count within a given short period of time (about 6-12 hours). For urban areas, a census block included about 80 housing units while in rural and estate areas a census block included about 60 housing units.

Generally, the first step in any census taking operation is to update the list of all buildings to be enumerated and this list is used as the sampling frame for subsequent surveys. A frame consisting of all buildings for Sri Lanka was compiled for the Census of Population and Housing - 2001. This frame pertaining to the affected census blocks were updated by the field staff. This frame was revised giving due consideration to the new buildings that have been constructed and demolished after the year 2001. To provide information immediately needed for planning purposes, some key information pertaining to the buildings and the occupants was collected during the listing stage. The information collected during the listing stage is given below:

- a) Postal address before the disaster
- b) Name of the head of the household before the disaster
- c) Type of building before the disaster: Housing Unit; Living Quarter; Institute; Non Housing Unit
- d) Whether the building is still existing
- e) Present condition of the building (Completely damaged)
- f) Number of persons lived in the building before the disaster
- g) No. of persons currently living
- h) Where do the usual residents of the unit now living (Same unit, With friends/relatives; Camps etc.)
- i) Address of the occupants if living outside the unit after the disaster
- j) Economic activity of the unit before the disaster
- k) Whether the economic activities are still carried out

Detail information on the damages to the lives and buildings caused by the disaster was collected at the second stage of the census. Field staff of the department enumerated the occupants of the damaged buildings. In the case of the completely

damaged buildings attempts were made as far as possible to track where the occupants of such buildings currently living and to collect the information by visiting them.

Data collection instruments (questionnaires) were so designed that some key indicators could be compiled before the commencement of computerisation of completed questionnaires with the objective of releasing required key information soon after the data collection is over. Preliminary reports presenting the findings based on the quick manual processing of data collected at the first stage of the census have already been released. These reports have been published in the Department's website: [www.statistics.gov.lk](http://www.statistics.gov.lk)

## Preliminary findings

Several key indicators have been compiled at District, DS division and GN division levels, based on the data collected during the first stage of the census. These indicators include number of affected GN divisions, number of affected Census Blocks, number of buildings (housing and other) in the affected census blocks before the disaster, condition of building after the disaster (completely damaged, partially damaged and cannot be used, partially damaged and can be used). Indicators were compiled for housing units as well as for other types of buildings.

## GN Divisions affected by the disaster

In the affected Divisional Secretary (DS) Divisions, there are 1971 GN Divisions. Out of these GN Divisions, 32 percent has been reported to be affected. Total number of census blocks in the affected GN Divisions is 4,880. Of these census block, 2,611 i.e. 54 percent has been affected by the disaster.

## Damages to the housing units

There had been 158,011 buildings used as housing units in the affected census blocks of Sri Lanka before the disaster. Of these buildings 25 percent have been completely damaged. Another 6 percent have been partially damaged and not usable. That is, little over 30 percent of the housing units have been either completely wiped out or damaged to the extent that those cannot be used any longer. Percentage of buildings damaged but usable is 24 percent. The balance 44 percent of the buildings have not been affected.

The highest share of 49 percent, of the completely or partially damaged housing units is reported from the Eastern Province. The next highest share of 23 percent was reported from the Southern Province. Western Province and

Northern Province accounted for 15 percent and 13 percent of the completely or partially damaged housing units, respectively. In the North Western province, only Wennappuwa DS Division of Puttalam district was affected and number of housing units affected was only 54.

When compared across the district, highest number of housing units, damaged either completely or partially and unusable, was reported from the Ampara district. Total number of such buildings reported for Ampara district was 10,566. This is followed by the Batticaloa and Galle districts and the corresponding numbers were 9,905 and 6,169 units respectively.

The highest number (8,139) of completely damaged houses was reported from the Ampara district and it accounts for 21% of the housing units existed before the disaster in the affected census blocks of the district. This is followed by 7,455 housing units (19%) completely damaged in the Batticaloa district. Number of housing units completely damaged in the Galle (4,482), Mulativu (4,428) and Trincomalee (3,893) are also considerably large. The reported number of houses damaged completely in Kalutara, Matara and Hambantota districts are 2,056, 1,667 and 1,069 respectively. The lowest number (11) of completely damaged houses was reported from the Puttalam district. This is followed by Gampaha district (227 Units).

One of the requirements for settling displaced families back in their own homes is to reconstruct/repair their damaged houses. Altogether, 88,767 houses have been completely or partially (usable and not usable) damaged by the disaster. Over 12,000 housing units have been damaged in each of the Galle, Batticaloa and Ampara districts. Between 6,000 - 8,000 housing units are reported to be damaged by the disaster in the Trincomalee, Colombo, Matara, Kalutara and Mulativu Districts.

#### **Damages to buildings other than housing units**

There had been 26,179 buildings other than housing units in the affected census blocks of the Tsunami affected 12 districts. Total number of buildings either damaged completely or partially is 11,775 and it account for 45 percent of the buildings existed before the disaster. Out of these 25,385 buildings, 18 percent has been damaged completely. Another 5 percent has been partially damaged and unusable. The percentage usable partially damaged building is 21 percent.

Eastern province is the most affected district with respect to the share of completely and partially damaged buildings other than the housing units, is concerned. The share of this

indicator for the Eastern province is 40 percent. The next highest share of 36 percent is reported for Southern Province. The Western Province accounted 16 percent of the total number of completely and partially damaged buildings other than the housing units and his share for the Northern Province is only 8 percent.

When compared across districts, the highest number (1,659) of partially or completely damaged buildings other than housing units is reported from the Ampara district. This accounts for nearly 22 percent of the completely or partially damaged buildings other than housing units of the affected census blocks of the Tsunami affected district. This was followed by the Galle district. Reported number of damaged buildings was 1634 and as a percentage it was 22 percent. Between 400 to 900 such buildings have been damaged in the Batticaloa (859), Matara (670), Kalutara (565), Trincomalee (444), Gampaha (421) and Mulativu (406) districts. This damage for Hambantota (398) and Colombo (187) is reported to be less than 400 units.

Total number of buildings other housing units completely damaged is 4,853. Over 500 completely damaged buildings are reported from the Ampara (1173), Galle 992 and Batticaloa (525) districts. For all other districts, number of buildings completely damaged has been 400 or less.

#### **Damages to all types of buildings (Housing units and other)**

The total number of all types of damaged buildings (completely or partially) is 100,543. Out of this, 83,252 (83%) had been used as housing units before the Tsunami. The balance 17% had been used as other types of buildings.

There had been 184,190 buildings (all types) in the affected census blocks of the Tsunami affected districts. Out of the 184,190 buildings, 100,543 buildings, that is 55 percent had been either partially or completely damaged. Number of completely damaged buildings is 44,413 and this corresponds 24 percent of the total number of buildings in the affected census blocks. Percentage of building damaged but usable is 24 percent.

When compared across the provinces, the highest share of 47 per cent of completely or partially damaged buildings is reported from the Eastern Province. The southern province reported the next highest share of 26 per cent. The percentage of completely or partially damaged all types of buildings in the Western and Northern provinces are 15 per cent and 12 per cent respectively.

When compared across the district, the highest number (20,909) of all types of damaged buildings irrespective of whether usable or not, is reported from the Ampara district and this account for 21 percent of the all damaged buildings. This is followed

by the Batticaloa and Galle districts and corresponding percentages are 18 percent and 15 percent respectively. Percentage corresponding to the buildings damaged in all other districts together accounts for 42 percent of the all damaged buildings.

#### **Summary**

In terms of the number of damaged housing units, the most affected three districts are Ampara, Batticaloa and Galle Districts. Number of housing units damaged in these districts is 18,810, 17,405 and 12,209 respectively. Least affected districts are Puttalam (54), Gampaha (854) and Hambantota (2374). When the total number of buildings other than housing units are considered the worst affected three districts are Ampara, Galle and Batticaloa Districts. Number of such buildings damaged in these districts were 1,659, 1,634 and 859 respectively. Puttalam, Colombo and Gampaha Districts are the least affected districts with respect to this indicator. Numbers of buildings other than housing units affected in Colombo and Gampaha Districts are 187 and 421 respectively.

The buildings in the affected areas were largely housing units. It was found that there had been 150,086 housing units in the affected census blocks of Tsunami affected districts while the number of buildings other than housing units had been as low as 25,386. Possibly due to this even when the all types of affected buildings are considered the worst affected three districts are still the same as those identified with respect to the indicator: number of damaged housing units. Number of damaged all types of buildings corresponding to the worst affected districts are 20,909, 18,603 and 15,379 respectively. The least affected districts with respect to the same indicator are Puttalam, Gampaha and Hambantota and the corresponding numbers are 581,708 and 2,958 respectively.

The Census of Buildings and Persons Affected by the Tsunami – 2004 was conducted to provide much needed information on the damage of the lives and buildings caused by the Tsunami disaster. This Census was conducted only in the affected census blocks of the Tsunami affected districts. This analysis is largely limited to the affected buildings. Detail data on the other characteristics about the all types of buildings, occupants and their economic activities and dead and missing persons have been collected and are being computerized. Findings of the analysis of these data will be released once the processing of computerized data is complete. By analyzing these information together, it could be possible to assess the impact of Tsunami on the lives and buildings more accurately and reliably for the different geographical areas.

For further information, [www.statistics.gov.lk](http://www.statistics.gov.lk)