05. Housing Sector

Organization Responsible

Level of Responsibility	Name of Ministry/Agency/Institution
Ministry	Ministry of Public Administration Ministry of Provincial council and Local Government Ministry of Housing and Construction Ministry of Disaster Management
Department/ **Institute**	National Housing Development Authority (NHDA) Condominium Management Authority (CMA) National Disaster Relief Service Center (NDRSC)
District	District Secretariat NHDA District Office
DS Division	Divisional Secretariat Local Authority NHDA Technical Officer National Disaster Relief Service Center (NDRSC)
GN Division	Grama Niladhari

The Housing Sector in Sri Lanka

Housing Unit

The following 3 conditions should be satisfied in order to consider a building unit as a housing unit;

i. It should be a place of dwelling of human beings.
ii. It should be separated from other places of dwelling.
iii. It should have a separate entrance.

Under this definition any building or a part of building or any structure whether permanent or temporary such as huts, shanties, sheds etc., which are in fact used as place of residence were regarded as housing units.

Type of Structure

Single house. A single house stands by itself and is not attached to another unit as in a twin house, flats etc. Units constructed of interior materials such as cadjan, discarded wooden planks etc. not be classified into this category.

Attached house/Annex. If there are two or more housing units constructed as one building, each housing unit could be considered as an attached house/annex. If a building is separated into two or more housing units and if two housing units are constructed attached to one another as a one building (twin houses) then each housing unit would be considered as an attached house/annex. In housing schemes, where housing units are attached to one another (either in twos or even more) would be considered as an attached house/annex. Flats are not considered here. If there is a housing unit is a part of a building and adjoining part is occupied by a business premises then the housing unit is an attached house/annex.

Flat. This category consists of all flats and apartments. The structure of each unit is considered as a flat.

Row house/Line room. Row houses are situated adjoining to one another in a row and usually constructed with a similar pattern. Line rooms refer to the type of labourers accommodation found in estates as well as similar units in other areas, and all houses found in a row adjoining each other.

Hut/Shanty. This refers to the poorest type of houses generally constructed of inferior or waste materials, e.g., Shanties in urban areas and small units constructed of cadjan, palmyrah or straw, discarded wooden planks or metal sheets, etc.

Type of Housing Unit

The classification was made on the basis of the principal materials used in the construction of the wall, roof and floor.

Permanent. In general, where the materials used were of the durable type like bricks, cement, tile, asbestos sheets etc. the units were classified as permanent.

Semi-permanent. Where a mixture of durable and non-durable materials have been used, the units have been generally classified as semi-permanent.

Improvised. Where the walls and roof were made of cadjan, palmyrah or other inferior or non-durable material the units have been classified as improvised.

Source: Concepts and Definitions of key items used in the Census of Population and Housing 2001

http://www.statistics.gov.lk/PopHouSat/PDF/p3%20Concepts%20and%20Definitions.pdf

Concepts and Definitions

Housing Sector

The housing sector is composed of the different types of dwellings or houses used by the people as their residence including the structures, their contents and the premises outside of the houses. They may be owned or rented by the resident of the house. Generally, housing assets are mostly private in ownership. *Hotels and guest houses which provide temporary housing for tourists and other visitors are not included in this sector. They should be assessed separately under the tourism sector.*

Damages

In the housing sector, damages are valued as the cost of:

- **a)** repair of partially damaged houses and other related assets; and
- **b)** replacement of totally destroyed houses and other related assets.

Physical assets related to all types of dwellings or housing facilities include structures (housing units), premises (garages, fences), common areas and facilities (elevators, generators, gardens, swimming pools), and the contents inside the individual dwellings or houses such as furniture, appliances and other valuables (like antiques, books, computers, etc.).

Damages are measured in physical terms for which the monetary repair or replacement value is subsequently estimated.

Losses

Losses are the values of foregone revenues or income due to the change in economic flows (income and expenditures) during the period of recovery and reconstruction following the disaster. They are the current value of goods and

services that were not and/or will not be produced over a time span due to the disaster until full recovery is attained.

Losses in the housing sector will include:

- Foregone income from housing rents, fees and other related sources of income which will last until the housing units are repaired.
- Cost of unforeseen expenditures like temporary shelters, equipment, etc. to be used while the housing units are under repair or reconstruction.
- Costs involved for the demolition or removal of debris, etc.

Losses will take place during the entire period of recovery and reconstruction of the sector and may stretch even beyond the year that the disaster occurred. It is expressed in monetary value at current prices.

The cost of repair or replacement that will be borne by the individual owners of the housing units will be part of the private losses. On the other hand, if the cost of temporary shelters, removal of debris, etc. will be shouldered by the government, their total value should be considered as public in nature. It is assumed that the assets in the housing sector are private in ownership.

In conducting a post-disaster damage and loss assessment in the housing sector, the following steps are normally followed for every disaster-affected district.

Steps in Undertaking Post-Disaster Damage and Loss Assessment in the Housing Sector

Step 1. Collect and/or validate the baseline data for each of the disaster-affected District

Baseline information must be compiled and validated at the national, provincial or district levels before the field assessment or, if possible, prior to the occurrence of disaster. The following classification of housing units, based on the classification of housing units in Census of Population and Housing, will be used in assessing the housing sector.

Table 1. Classification of housing units in Sri Lanka

Type of Housing Unit	Type of principal material of unit housing unit		
	Wall	**Roof**	**Floor**
Type 1. Permanent	Brick/Cabook/Cement blocks/ Stone/Pressed soil blocks	Tile/Asbestos/Concrete/ Metal sheets	Cement/Terrazzo/Tile Granite/Wood
	Mud	Tile/Asbestos/Metal sheets	Cement
Type 2.	Brick/Cabook/Cement	Tile/Asbestos/Metal	Mud

Semi-permanent	blocks/ Stone/Pressed soil blocks	sheets	
	Brick/Cabook/Cement blocks/ Stone/Pressed soil blocks	Cadjan/Palmyrah/Straw/ Metal sheets	Cement/Mud/Wood
	Mud	Tile/Asbestos/Metal sheets	Mud/Wood
	Mud	Cadjan/Palmyrah/Straw	Cement/Mud/Wood
	Plank/Metal sheets	Tile/Asbestos/Metal sheets	Cement/Mud/Wood
	Plank/Metal sheets	Cadjan/Palmyrah/Straw	Cement
Type 3. Improvised	Cadjan/Palmyrah/Straw	Any material	Any material
	Plank/Metal sheets	Cadjan/Palmyrah/Straw	Mud/Wood/Sand

Source: Concepts and Definitions of key items used in the Census of Population and Housing 2001

http://www.statistics.gov.lk/PopHouSat/PDF/p3%20Concepts%20and%20Definitions.pdf

Based on the classification of housing units above, the table below must be completed for each district for the baseline information in the online system.

Table 2. Baseline information of housing in a District

Name of District:							
Housing Classification	**Total Number of Houses**	**Number of Houses for Rent**	**Average Rent per Month**	**Average Number of Occupants**		**Average Period (in Months)**	
				Female	**Male**	**Construction**	**Repair**
Type 1. Permanent							
1 floor							
2-3 floors							
4-5 floors							
More than 5 floors							
Type 2. Semi-Permanent							
1 floor							
2-3 floors							
4-5 floors							
Type 3. Improvised							
1 floor							
2-3 floors							

Notes in filling out Table 2:

- *Type 1 housing units will include flats, apartments and condominiums which could be more than 5 floors.*
- *Type 2 housing units are assumed to be able to support a maximum of 5 floors.*
- *Type 3 houses which include shanties are assumed to consist mostly of 1 floor only and on exceptional cases a maximum of 3 floors.*
- *The 'Houses for rent' refers to the number of houses (as part of the total number of houses) that are rented out.*

- *The 'Average number of occupants' refers to the number of people who live in each type of housing unit by sex.*

The average replacement and repair costs of the assets in the housing sector can be enumerated in the following table.

Table 3. Baseline information for the related costs of various types of housing units

District					
Housing Classification	**Average Replacement Cost (LKR/sqm)**	**Average Repair Cost (LKR/sqm)**			**Average Value of Contents (LKR)**
		Roof	**Wall**	**Floor**	
Type 1. Permanent					
1 floor					
2-3 floors					
4-5 floors					
More than 5 floors					
Type 2. Semi-Permanent					
1 floor					
2-3 floors					
4-5 floors					
Type 3. Improvised					
1 floor					
2-3 floors					

Notes in filling out Table 3:

- *The 'average replacement cost' refers the value in Money Value in constructing a replacement of the pre-disaster housing unit per square meter (sqm).*
- *The 'average repair cost' refers the value in Money Value normally spent to repair the various parts of the housing units per square meter.*
- *The 'Average Value of Contents' is a rough estimation of the value of the assets inside each type of the housing unit.*
- *All costs should be based on the pre-disaster existing values.*

Step 2. Estimate damages and losses

With the baseline information, field assessment should be undertaken in the affected districts after a disaster.

✓ *Step 2.1. Estimate the damages and losses to housing units in a district*

During the field visit, direct interviews local official and with the affected people should be conducted where repair and replacement costs should be estimated for the affected assets. Assessment of the housing sector can be started at the GN level and aggregated at the Division level. The data entry in the online system should, however, be at the District level. It is assumed that houses are privately owned. The

value of damages and losses in the housing sector can be summarized in the following table which will appear in the online reporting system.

Table 4. Damage and loss assessment of the housing sector in a District

District					
Estimated Damages					
Totally Destroyed Houses					
Housing Classification	**Destroyed Houses**		**Total Square Meters Destroyed (sqm)**	**Per cent of House Contents Value Affected (%)**	**Damages (LKR)**
	Total Number	**Per cent of total for rent**			
Type 1. Permanent					
1 floor					
2-3 floors					
4-5 floors					
More than 5 floors					
Total					
Type 2. Semi-Permanent					

1 floor					
2-3 floors					
4-5 floors					
Total					
Type 3. Improvised					
1 floor					
2-3 floors					
Total					
TOTAL					

Partially Damaged Houses							
Housing Classification	**Damaged Houses**		**House parts Affected (in sqm)**			**Per cent of House Contents Value Affected (%)**	**Damages (LKR)**
	Total Number	**Per cent of total for rent**	**Roof**	**Wall**	**Floor**		
Type 1. Permanent							

1 floor							
2-3 floors							
4-5 floors							
More than 5 floors							
Total							
Type 2. Semi-Permanent							
1 floor							
2-3 floors							
4-5 floors							
Total							
Type 3. Improvised							
1 floor							
2-3 floors							
Total							
TOTAL							

TOTAL DAMAGES							
Estimated Losses							
Housing Classification	**Number of Houses**		**Types of Losses**			**Losses (LKR)**	
	Totally Destroyed	**Partially Damaged**	**Foregone income from rent (LKR)**	**Average cost of cleaning debris (LKR)**	**Average unexpected expenses (LKR)**	
Type 1. Permanent							
1 floor							
2-3 floors							
4-5 floors							
More than 5 floors							
Total							
Type 2. Semi-Permanent							
1 floor							
2-3 floors							

4-5 floors						
Total						
Type 3. Improvised						
1 floor						
2-3 floors						
Total						
TOTAL LOSSES						

Summary of Damages and Losses					
Housing Classification	**Number Totally Destroyed**	**Number of Partially Damaged**	**Damages (LKR)**	**Losses (LKR)**	**Total Damages and Losses (LKR)**
Type 1. Permanent					
1 floor					
2-3 floors					
4-5 floors					
More than 5 floors					

Total					
Type 2. Semi-Permanent					
1 floor					
2-3 floors					
4-5 floors					
Total					
Type 3. Improvised					
1 floor					
2-3 floors					
Total					
GRAND TOTAL					

Notes in filling out Table 4.

- *The values in the baseline information are used in estimating damages. For example:*
  - *The total value of damages for **totally destroyed** Type 1 houses = (The total square meters damaged from Type 1 houses) X (The average replacement cost in square meters) + (The number of totally damaged Type 1 houses) x (The % value of the destroyed house contents) X (Average value of house contents).*
  - *The total value of damages from **partially damaged** Type 1 houses = (The total square meters of house parts that were partially damaged in Type 1 houses) X (the average repair cost in square meters for the damaged part/s of the house) + (The number of partially damaged Type 1 houses) X (the % value of the house contents affected) X (Average value of house contents).*

- *The estimation of the housing units that were destroyed or damaged will be based on the field visit of the assessment team. The baseline information on the average cost of repair for the various parts (roof, wall and floor) of the housing unit will be used.*
- *The 'per cent of total for rent' will be the ratio of houses that are for rent that were damaged or destroyed over the total number of houses that were damaged or destroyed.*

- *The "Per cent of House Contents Value Affected (%)" is the percentage of the value of house contents for each type of housing unit. The average value of house contents for each type of housing unit is found in the baseline table.*

- *The Grand Total refers to the total number of houses affected and the total value of destroyed and damaged houses.*

- *For the losses, foregone income will be losses from the non-payment of rent for the houses that were destroyed. This can be derived by:*
  - *Losses = (The number of houses for rent that were totally destroyed) X (the average reconstruction period in months) X (the average rent per house per month) + (The number of houses for rent that were partially damaged) X (average repair period in months) X (the average rent per house per month). The average rent per month for each type of housing unit and the estimated reconstruction and repair periods in months are in the baseline information. The number of affected houses for rent must be gathered from the field.*

- *The cleaning up of debris is usually done by household owners especially after flooding. Since this cost may vary with the magnitude of a disaster from area to area, the assessment team should estimate the cost of cleaning by the house owners. The cost of government clearing operations outside the houses should not be included here.*
- *Unexpected expenses should be gathered from the field.*

✓ *Step 2.2 Summarize damages and losses of the sector at Province level*

Once the table for each affected District has been filled out, the information should be used to summarize the damages and losses at the province level as shown in the table below.

Table 5. Summary of damage and losses in the housing sector in the Province

Province					
Housing Classification	**Number of Totally Destroyed**	**Number of Partially Damaged**	**Damages (LKR)**	**Losses (LKR)**	**Total Damages and Losses (LKR)**

District 1					
Type 1. Permanent					
Type 2. Semi-Permanent					
Type 3. Improvised					
TOTAL					
District N					
Type 1. Permanent					
Type 2. Semi-Permanent					
Type 3. Improvised					
TOTAL					
GRAND TOTAL					

✓ *Step 2.3. Summarize damages and losses in the housing sector at the national level*

The following table will be used for the national summary.

Table 6. Summary of damage and losses in the housing sector nationwide

Housing Classification	Number Totally Destroyed	Number of Partially Damaged	Damages (LKR)	Losses (LKR)	Total Damages and Losses (LKR)

Province 1					
Type 1. Permanent					
Type 2. Semi-Permanent					
Type 3. Improvised					
TOTAL					
Province N					
Type 1. Permanent					
Type 2. Semi-Permanent					
Type 3. Improvised					
TOTAL					
GRAND TOTAL					

Step 3. Analyze the impacts of the damages and losses to the economy and affected population

The assessment team must be able to analyze potential impacts to the people and the economy, among others, if the sector is not restored immediately. The following are some of the issues that should assessed, among others:

- ***The possible impacts on the welfare of the people.*** Living conditions, housing, health, education, access to services and resources.
- ***Economic impacts***. Business productivity (decline in output and income);

reduction in employment; increase in prices; food supply; etc.

- ***Government services.*** Reduction in provision of services in education; health; security; administrative matters; etc.
- ***Added risks.*** The additional hazards and risks brought about by the disaster like the creation on new landslide-prone areas; epidemics; etc.
- ***Environment.*** The potential environmental risks like oil spills, destruction of watershed areas; etc.
- ***Gender and other cross-cutting issues and concerns.*** The potential impacts to vulnerable groups like women, children, elderly, indigenous peoples, etc.

Step 4. Identify the recovery strategies and estimate the recovery and reconstruction needs

The post-disaster needs must be based on a framework where policies and strategies are coherent and integrated. After analyzing the potential effects and impacts if no assistance will be provided to the sector, the aggregate needs of the sector must be estimated.

✓ *Step 4.1. Identify recovery and reconstruction strategies*

After the consolidation of the field assessment, the assessment team must identify or recommend the policies and strategies for the recovery and reconstruction for the sector. The following are some of the general policies and strategies that could be considered, among others.

- ***Tax breaks to business firms***. Exempting firms from paying certain taxes for a certain period, like temporary reduction in the collection of value-added tax, building permits and other related fees; temporary elimination of import duties on essential items required as inputs to recovery operations; etc.
- ***Credit.*** A credit scheme with soft terms, like low interest rate with longer repayment periods, which can provide firms the resources to buy machinery and equipment that will normalize operations.
- ***Equity.*** In some special cases, the government may opt to provide equity in private firms instead of subsidy or credit or tax exemptions.

The following strategies can be adopted for the post-disaster recovery and reconstruction activities:

- ***Building Back Better (BBB).*** Recovery activities based on BBB principles will promote longer-term disaster risk reduction and management. BBB principle should look at the how to make infrastructure and facilities safer from future disasters like stronger engineering design, the advantages of resettlement of facilities in disaster-safe areas instead of rebuilding in the same disaster-prone areas, etc.

- ***Focus on the most vulnerable and socially disadvantaged groups such as children, women, and the disabled.*** Recovery programming should give priority to those that will benefit the most vulnerable groups, including women, female-headed households, children, the poor, and take into account those with special needs.

- ***Community Participation and Use of Local Knowledge and Skills.*** The participation of the community in all process (identification, planning, design and implementation) of recovery activities will help ensure the acceptability of projects and optimize the use of local initiatives, resources and capacities.

- ***Coordinated and coherent approaches to recovery.*** The effective coordination among all involved agencies should be established based on uniformity of policies, flexibility in administrative procedures, etc. In some instances, a special new agency may be needed to oversee, coordinate and monitor complex disaster recovery programs.

- ***Efficient use of financial resources.*** Fund sources from the national budget and the international donor partners that are suited for the recovery activities should be identified. Assistance to the recovery of the private sector, if any, should be clearly outlined.

- ***Transparency and accountability.*** The overall plan and implementation of projects for recovery must be transparent, especially to those affected, through open and wide dissemination of information on all aspects of the recovery process. An effective monitoring system must be established.

✓ *Step 4.2. Identify, estimate and prioritize recovery and reconstruction needs*

Recovery needs are intended to bring back normalcy to all affected areas and sectors as soon as possible while reconstruction needs are generally long-term in nature (3 years or more) and are intended to 'build back better' from the ruins of a disaster. The sector assessment team must identify and prioritize their recovery and reconstruction projects based on their impact assessment.

✓ *Step 4.3. Summarize the estimated needs and draft the implementation schedule*

Based on the prioritized recovery and reconstruction needs, a summary should be created by the assessment team enumerating the post-disaster projects for the recovery and reconstruction with a rough general schedule of implementation outlining at the very least the activities, timing and budget required. The following table can be used.

Table 7. Summary of needs

Name of Project	Estimated Budgetary Requirement	Total

	(LKR)			(LKR)
	Year 1	Year 2	Year N	

Step 5. Draft the post-disaster damages, losses and needs (PDNA) report of the sector

With all the information gathered using the previous steps, a report can be drafted by the assessment team which will be the inputs of the sector in the overall recovery and reconstruction plan. The draft sector report should be submitted to the DMC for consolidation.