



# 11 - Telecommunications Sector

## Organization Responsible

Level of Responsibility	Name of Ministry/Agency/Institution
Ministry	Ministry of Telecommunication & Digital Infrastructure
Institution	Telecom operator/s
Region	SLT
Province	SLT
District	
Regional Telecom Office Area	SLT

## Concepts and Definitions

### **Telecommunications Sector**

The telecommunications sector is composed of the different types businesses engaged in the transmission of information, data, etc. using electronic systems like telephone, internet, television and other facilities. They may be owned by the government or by private individuals or corporations. It should be noted that equipment vendors, internet cafes, businesses in the repair of telecommunication equipment and other related services are not included in this sector. They are covered under the industry, trade and services sector.

### **Damages**

In telecommunications sector, damages are the cost of: a) repair of partially damaged assets and/or b) replacement of totally destroyed assets and infrastructure such as electronic equipment, satellites, structures (buildings, radio stations, etc.), vehicles and transmission system assets like poles, cables, and other stock materials or supplies.

Damages occur at the time of, or shortly after the disaster and are to be measured in physical terms for which monetary replacement values are 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 sector will include the following:

- Foregone sales due to the shut-down of the telecommunication system while the system is under repair or reconstructed after a disaster. This can include both short-term shut-down for repairs and longer-term shut-down due to reconstruction.
- Lower sales due to the decline in demand from consumers (households or companies) that have been affected by the disaster.
- Higher cost of operation which occurs when damaged systems are substituted by alternative sources have a higher unit cost of production like when electricity has to be generated from expensive generators.
- Additional expenses to clean up the debris.

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

## Steps in Undertaking Post-Disaster Damage and Loss Assessment for Telecommunication 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 table below must be completed to be used for the baseline information in the online system.

**Table 1: Baseline information on telecommunication companies**

Name of District:							
Areas Covered:	Describe below the areas covered by the assessment (Region/Province/RTOM)						
Name of Firm	Ownership		Services provided				
			Fixed			Mobile	
	Public	Private	Voice	TV	Data/Internet	Voice	Data/Internet
Company 1							
Company 2							
Company N							

Notes in filling out Table 1:

- The names of all the firms operating in the area should all be included.
- If there is a joint venture between the government and a private corporation, it can be considered a public for the purpose of damages and loss assessment.

### **Step 2. Estimate damages and losses**

With the baseline information, field assessment should be undertaken in the affected districts after a disaster. Since there is a possibility that only one firm provides the service to a number of districts and provinces, caution should be exercised to avoid double counting. The following should be noted:

- Ideally, the damages should be assessed in the district where such assets are located. However, if the assets of telecommunication firms are located in several districts and it is not possible to assess them district by district, it is recommended that the assessment of damages and losses of the firm should be accounted for in the district where the main office of the firm is located. This will enable the online system generate a report on a district level. A short note can be inserted to explain that the damages of the firms are scattered across several districts.
- On the other hand, if the main office is located outside the disaster area, the assessment team must account for the damages in the districts where the assets are located. The losses of the firm will be the aggregate income losses, higher operating costs and other unexpected expenses.

✓ Step 2.1. Estimate the damages and losses to telecommunications companies

During the field visit, direct interviews with the affected firms should be conducted where repair and replacement costs should be estimated for the affected assets of the firm/s. The officials and experts in the firm/s can estimate their respective damages more accurately. Moreover, considering that some of the damages may cover a wide area that may be inaccessible to the assessment team, the people in the firm/s can get the data quicker from their colleagues in the field.

Alternatively, the firms affected by the disaster can be given the data entry sheets of the online reporting system to enable them to provide the information required for the assessment. The assessment team will input the information provided by the firms in the data entry sheet of the online system.

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

**Table 2. Damages and losses of telecommunication firms**

District			
Name of Firm			
Services provided	Fixed: Voice, TV, Data/Internet	Mobile: Voice, Data/Internet	
Ownership	Public	Private	
Number of employees	Male	Female	Total
Number of clients affected			
Damages			
Assets	Replacement Value of Totally Destroyed	Repair Cost for Partially Damaged	Total Damages (LKR)

	Assets (LKR)	Assets (LKR)	
<b>Structures</b>			
<i>Towers</i>			
<i>Outside plant networks</i>			
<i>Submarine cables</i>			
<i>Network Equipment buildings</i>			
<i>Office buildings &amp; Land properties</i>			
<i>Workshops</i>			
<i>Warehouses</i>			
<i>Others</i>			
<b>Total</b>			
<b>Equipment</b>			
<b>Indoor equipment</b>			
<i>Customer premises</i>			
<i>Operator premises</i>			
<b>Outdoor equipment</b>			
<i>Customer premises</i>			
<i>Operator premises</i>			
<b>Warehouse inventory</b>			
<b>Power Systems</b>			
<b>Office equipment</b>			
<b>Others</b>			
<b>Total</b>			
<b>Machinery</b>			
<i>Workshop machinery and Tools</i>			
<i>Heavy machinery</i>			
<i>Others</i>			
<b>Total</b>			
<b>Vehicles</b>			
<b>Others</b>			
<b>TOTAL</b>			
<b>Losses</b>			
<b>Types of Losses</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Total (LKR)</b>
<b>Foregone income</b>			
<b>Cleaning up of debris</b>			
<b>Higher operating costs</b>			
<b>Other unexpected expenses</b>			
<b>TOTAL</b>			

Notes in filling out table 2:

- The 'Replacement Value of Totally Destroyed Assets' refers to the amount needed to replace totally destroyed assets.
- The 'Cost of Repair for Partially Damaged Assets' refers to the amount needed to repair partially damaged assets.
- The 'Total Damages' will be the sum of the total replacement value and the total cost of repair.

- The 'Reduction in Value in Output (%)' is the estimated percentage reduction of income of the firm due to the disaster within the year the disaster occurred and on the next year.
- The 'Total Losses' will be the sum of the losses for Year 1 and Year 2.
- The information for Table 2 can be derived from interviews of the officials of the firms or they can be given the said Table 2 to enable them to provide the information required for the assessment. The assessment team will input on the online system the information provided by the firms.

✓ Step 2.2. Summarize the damages and losses in the sector in a district

Based on the assessment of the firms or companies, or the reports of the companies, the damages and losses will be summarized online in the following table.

**Table 3. Summary of damages and losses in a District**

District								
Name of Firms	Year 1				Year 2		Total (LKR)	
	Damages (LKR)		Losses (LKR)		Losses (LKR)			
	Public	Private	Public	Private	Public	Private	Public	Private
Firm 1								
Firm N								
TOTAL								

Note in filling out Table 3.

- If Firm 1 is private in ownership, its damages and losses must be under the column of 'Private' otherwise 'Public'.

✓ Step 2.3. Summarize damages and losses of the sector in a province

The total estimated effects of the disaster in the province will be summarized by combining the values of damages and losses in the Districts. The following table is used in the online system.

**Table 4. Summary of damages and losses in a province**

Province								
District	Year 1				Year 2		Total (LKR)	
	Damages (LKR)		Losses (LKR)		Losses (LKR)			
	Public	Private	Public	Private	Public	Private	Public	Private
District 1								
Firm 1								
Firm N								
Total								
District N								
Firm 1								
Firm N								
Total								
GRAND TOTAL								

Note in filling out Table 4.

- It is possible that the damages of a single firm will cut across several districts. If it will be difficult to assess the firm's damages and losses by District, a single assessment can be made with reference or location to a single district. It is recommended, however, that a note should be made to explain that the damages and losses of the firm is the total for several districts.
- ✓ Step 2.4. Summarize damages and losses in the sector nationwide

A nationwide summary of the assessment will be created enumerating the damages and losses of the sector at each province. The data in the national summary should include all the information gathered by the various teams that assessed the different disaster-affected districts. The following table will be used for the national summary.

**Table 5. Summary of damages and losses nationwide**

Provinces	Year 1				Year 2		Total (LKR)	
	Damages (LKR)		Losses (LKR)		Losses (LKR)			
	Public	Private	Public	Private	Public	Private	Public	Private
Province 1								
Firm 1								
Firm N								
Total								
Province N								
Firm 1								
Firm N								
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 be 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 of 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:

1. **Building Back Better (BBB).** Recovery activities based on BBB principles will promote longer-term disaster risk reduction and management. BBB principle should look at 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.

2. **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.
  3. **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.
  4. **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.
  5. **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.
  6. **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 6. Summary of needs**

Name of Project	Estimated Budgetary Requirement (LKR)			Total (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.