06. Education Sector

Organization Responsible

Level of Responsibility	Name of Ministry/Agency/Institution
Ministry	Ministry of Education
Department	Provincial Department of Education
Zonal	Zonal Education Office
District	
DS Division	
GN Division	

Concepts and Definitions

Education Sector

The education sector is composed of the different types of educational facilities like primary and secondary schools, universities, training institutes and other facilities used by students like gymnasiums and laboratories. The assets in the education sector are normally structures, equipment and school supplies, among others. They may be owned by the government or by private individuals or corporations.

Damages

In education, damages are cost of: a) repair of partially damaged assets and/or b) replacement of totally destroyed assets and infrastructure such as:

- ***Structures or buildings*****.** School buildings, research laboratories, gymnasiums and other structures which are part of a school or university can be damaged by a disaster. They should be assessed in coordination with the school authorities.
- ***Equipment, furniture and other machinery*****.** There are various instruments used for educational purposes like laboratory and workshop equipment, computers, etc. On the other hand, there are equipment that are part of the building itself, such as elevators, security equipment, air conditioning, internal communication systems, vehicles, and others. Depending on the level of the facilities, the types of equipment and other assets may also vary from facility to facility, which may have direct implication in estimating the cost of damage in the sector. Therefore, the types of equipment, machinery, furniture and other important assets possessed and damaged in each facility should be considered.
- ***Educational materials and supplies***. Buildings used for education normally have stocks such as paper, books, chemicals, etc. Their value can be sufficiently high to warrant individual assessment. Inventories of research, art works and other collections deposited in a given institution must also be included under this heading.

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 education sector will include the following:

- ***Cost of temporary school buildings.*** The cost of temporary school buildings is a loss that must be estimated. When temporary schools are built, it will be necessary to estimate the cost of construction and related services, such as the provision of water, latrines and electric power and

the duration for which these temporary schools would function. When using rented buildings as temporary schools, the total value of rent will be part of the loss.

- ***Cost of urgent repairs of schools to be used as emergency shelter.*** Some schools may need urgent repair, water installations, latrines, etc. if they were used as temporary shelters. This should be included in the loss since this will require unexpected expenses on the part of the government.

- ***Higher costs of education****.* Government facilities may incur additional expenses (over and above the regular budget of the sector) to assist the population for any of the following reasons:
  - Extension of classes over a period of time to compensate for the delays due to the disaster which will require additional expenses like cost of training if new teachers will be hired, overtime payment, etc.
  - Supplemental feeding and subsidy on transportation costs of students and teachers, if applicable.
  - Higher electricity costs from the use of generator sets; higher cost of water supply; etc.
- ***Losses due to lower revenues.*** Revenue losses may arise from interruption of classes while school buildings are being repaired or reconstructed. The values of losses in revenues will be the pre-disaster revenues minus the estimated post-disaster revenues.

- ***Other losses such as demolition and cleanup costs*.** Aside from repair or reconstruction, a school building may require partial or total demolition and the resulting debris removed.

Losses can extend beyond the year that the disaster occurred and these should be reflected in the loss assessment for the coming year/s. Losses are expressed in monetary value at current prices.

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

Steps in Undertaking Post-Disaster Damage and Loss Assessment for Education 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 for the government sector to be used for the baseline information in the online system.

Table 1. Baseline information of educational facilities in a district

Name of District			
Type of Facilities	**Total Number**	**Average Number of Students**	
		Male	**Female**
Public Sector			
Schools			
1AB, 1C			
Type 2			
Type 3			
Pirivena			
Training institutes			
NCOE, Traninig College			
TC, CRC, RESC			
Offices			
Ministry Offices			
Provinicial Offices			
Zonal Offices			
Divisional Offices			
NIE			
TOTAL			
Private Sector			
Pre-school			
Primary School			
Secondary School			
University			
Technical Institutes			
Others			
TOTAL			

The average replacement and repair costs of the assets in education in the government sector are enumerated in the following table.

Table 2. Baseline information of unit cost of government educational facilities in a District

Name of District:								
Particulars	**Values (in LKR)**							
	1AB, 1C	**Type 2**	**Type 3**	**Pirivena**	**Training Institutes**	**NCOE, Training Colleges**	**TC, CRC, RESC**	**Ministry, Provincial, Zonal, Divisional Offices**
Average Replacement Cost								
Structures (LKR/sqm)								

1 floor structure								
2-3 floors structure								
More than 3 floors structure								
Supplies and materials (LKR/Unit)								
Books								
Desks								
Chairs								
Boards								
Table								
Others								
Equipment (LKR/Unit)								
Computers								
Aesthetic Equipment								
Sports Equipment								
Science Equipment								
Other equipment								
Average Repair Cost								
Structures (LKR/sqm)								
Roof								
Wall								
Flooring								
Supplies and materials (LKR/Unit)								
Books								
Desks								
Chairs								
Boards								
Tables								
Others								
Equipment (LKR/Unit)								
Computers								
Aesthetic Equipment								
Sports Equipment								
Science Equipment								
Other equipment								
Average Fees/ Revenue (LKR)								
Average revenue per month								
Construction/ Repair Period (in months)								
Average construction period								
Average repair period								

Notes in filling out Tables 1 and 2:

- *Types of schools: 1AB - School having Advanced Level Science stream classes; 1 C - School having Advanced Level Arts and /or Commerce streams but no Science stream; Type 3 - Schools having classes only up to grade 11; Type 3 - Schools having classes only up to grade 8; NCOE – National College of Education; TC – Teacher Centre; CRC - ; RESC – Regional English Support Center.*
- ***'Ministry, Provincial, Zonal, Divisional Offices'** refers to the offices located in the District which are owned by the Ministry of Education, Province, Zone and Division.*
- *All types of books, chairs, boards, etc. should be aggregated within 'supplies and materials'.*
- *The values of replacement and repair costs for supplies, materials and equipment should be per unit of the various types of educational facilities. For structures, replacement and repair costs are valued at Sri Lankan Rupees per square meter.*
- *The average construction period refers to the number of months for a new building to be erected.*
- *The average repair period refers to the number of months required for the repair of the structures/buildings. This can be based on past experiences.*

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 government education facilities*

The assessment must be done per district for each type of disaster-affected facility which will be summarized later into a provincial then national assessment. Once the assessment for the various facilities is completed, the information should be inputted in the online system using the table below.

Table 3. Damage and loss assessment of government education facilities in the district

Name of District:									
Destroyed Facilities									
	Type of Facility								
Particular	**1AB, 1C**	**Type 2**	**Type 3**	**Pirivena**	**Training Institutes**	**NCOE, Training Colleges**	**TC, CRC, RESC**	**Ministry, Provincial, Zonal, Divisional Offices, NIE**	**Total Number**
Number of Destroyed Facilities									
Number of Students Affected									
Male									
Female									
	Number of Destroyed Assets by Type of Facilities								
Assets	**1AB, 1C**	**Type 2**	**Type 3**	**Pirivena**	**Training Institutes**	**NCOE, Training Colleges**	**TC, CRC, RESC**	**Ministry, Provincial, Zonal, Divisional Offices, NIE**	**Total Damages (LKR)**
Structure (in sqm)									
1 floor structure									

2-3 floors structure									
More than 3 floors structure									
Value of Destroyed Structures									
Supplies and materials									
Books									
Desks									
Chairs									
Boards									
Table									
Others									
Value of Destroyed Supplies and Materials									
Equipment									
Computers									
Aesthetic Equipment									
Sports Equipment									
Science Equipment									
Other equipment									
Value of Destroyed Equipment									
VALUE OF DESTROYED ASSETS									
Partially Damaged Facilities and Assets									
Particular	**Types of Facilities**								**Total Number**
	1AB, 1C	**Type 2**	**Type 3**	**Pirivena**	**Training Institutes**	**NCOE, Training Colleges**	**TC, CRC, RESC**	**Ministry, Provincial, Zonal, Divisional Offices, NIE**	
Number of Partially Damaged Facilities									
Number of Students Affected									
Male									
Female									
	Number of Partially Damaged Assets by Type of Facilities								
Assets	**1AB, 1C**	**Type 2**	**Type 3**	**Pirivena**	**Training Institutes**	**NCOE, Training Colleges**	**TC, CRC, RESC**	**Ministry, Provincial, Zonal, Divisional Offices, NIE**	**Total Damages (LKR)**
Structure (in sqm)									
Roof									
Wall									
Flooring									
Value of Partially Damaged Structures									
Supplies and materials									
Books									

Desks									
Chairs									
Boards									
Table									
Others									
Value of Partially Damaged Supplies and Materials									
Equipment									
Computers									
Aesthetic Equipment									
Sports Equipment									
Science Equipment									
Other equipment									
Value of Partially Damaged Equipment									
VALUE OF PARTIALLY DAMAGED ASSETS									
TOTAL VALUE OF DAMAGES									
Losses									
Types of Losses	**1AB, 1C**	**Type 2**	**Type 3**	**Pirivena**	**Training Institutes**	**NCOE, Training Colleges**	**TC, CRC, RESC**	**Ministry, Provincial, Zonal, Divisional Offices, NIE**	**Total Losses (LKR)**
Foregone income									
Disaster Year 1									
Year 2									
Total									
Cleaning up of debris									
Disaster Year 1									
Year 2									
Total									
Higher operating costs									
Disaster Year 1									
Year 2									
Total									
Other unexpected expenses									
Disaster Year 1									
Year 2									
Total									
TOTAL VALUE OF LOSSES									

Notes in filling out Table 3.

- *The estimation of the assets that were destroyed or damaged will be based on the field visit of the assessment team. If a certain facility is about 80% destroyed, the assessment team should decide whether it is still repairable or be condemned as totally destroyed.*

- *The table only requires the number of a) totally destroyed assets; and b) partially damaged assets. The "Total Damages" will be automatically estimated by multiplying the number of affected assets by their respective replacement or repair costs which are in the baseline information table.*
- *The value in LKR of the totally destroyed asset are:*
    - *The value of damages for **totally destroyed** structure with 1 floor = (The number in square meters of totally destroyed structures with 1 floor) X (the average replacement cost of the structure in square meters). The average replacement costs are in the baseline table.*
    - *The same formula applies to "Supplies and Materials" and "Equipment" where the number of equipment or supply destroyed is multiplied by its replacement cost per unit.*
- *For partially damaged facilities, the principle is the same. For example:*
    - *The total value of damages from **partially damaged** pirivena with 1 floor = (The number of square meters of partially damaged roof/wall/floor) X [(the average cost of repair of the damaged part or parts per square meter). If the damaged part is the roof, it will be: (the number of square meters damaged on the roof of a pirivena with one floor) X (the average repair cost of the roof per square meter of a 1 floor pirivena). The average repair costs are in the baseline table.*
    - *For "Supplies and Materials" and "Equipment", the same principles are followed; that is (the number of equipment damaged) X (the average cost of repair of damaged equipment).*
- *It is possible for a school to have damages for repair but with totally destroyed books. The totally destroyed books should be reflected in the totally damaged part.*
- *For the losses, the assessment team must consult with the personnel of the that were affected by the disaster who are in a better position to estimate their losses.*
- *Foregone income will be due to the inability of the facility to operate or operate on a lower capacity which lowers the expected income.*
- *Other unexpected expenses can be the cost of setting up temporary schools.*
- *Losses may occur beyond the year the disaster occurred (Yr. 1).*

✓ *Step 2.2 Estimate the damages and losses to private facilities*

During the field visit, direct interviews with the affected private facilities should be conducted to gather the damages and losses and the repair and replacement costs. The officials and experts in the private facilities can estimate their respective damages more accurately. Since it will be difficult to establish a baseline for the private sector schools, a simple direct interview of private facilities should be done in assessing their damages and losses. Private school owners or officials will be directly asked about the values of their estimated damages and losses. Once the assessment for the various private facilities is completed, the information should be inputted in the online system using the table below which is similar to the one for the government sector.

Table 4. Damage and loss assessment of a private education facility

District			
Types of Educational Facilities	**Number of Affected Educational Facilities**	**Number of Affected Students**	
		Male	**Female**
Pre-school			
Primary School			
Secondary School			
University			
Technical Institutes			

Others						
TOTAL						
Breakdown by Type of Educational Facility						
Type of Schools and Assets	**Estimated Replacement Cost (LKR)**	**Estimated Repair Cost (LKR)**	**Total Damages (LKR)**	**Estimated Losses (LKR)**		**Total Losses (LKR)**
				Year 1	**Year 2**	
Pre-school						
Pre-school 1						
Structure						
Supplies and materials						
Equipment						
Total						
Pre-school N						
Structure						
Supplies and materials						
Equipment						
Total						
Total						
Primary School						
Primary school 1						
Structure						
Supplies and materials						
Equipment						
Total						
Primary school N						
Structure						
Supplies and materials						
Equipment						
Total						
Total						
Secondary School						
Secondary School 1						
Structure						
Supplies and materials						
Equipment						
Total						
Secondary School N						
Structure						
Supplies and materials						
Equipment						
Total						
Total						
University						
University 1						
Structure						
Supplies and materials						
Equipment						
Total						
University N						
Structure						

Supplies and materials						
Equipment						
Total						
Total						
Technical Institutes						
Technical Institute 1						
Structure						
Supplies and materials						
Equipment						
Total						
Technical Institute N						
Structure						
Supplies and materials						
Equipment						
Total						
Total						
Others						
Structure						
Supplies and materials						
Equipment						
Total						
GRAND TOTAL						

Notes in filling out Table 4.

- *If a certain type of educational facility is totally destroyed, the corresponding value of damages should be under 'replacement cost'. If partially damaged, the value of damaged should be under the 'repair cost'. The information should be gathered from the officials of the affected educational facilities.*

✓ *Step 2.3. Summarize the damages and losses in the sector in a District*

Based on the assessment of the public and private facilities, the damages and losses will be summarized online in the following table.

Table 5. Summary of damages and losses in the education sector in a District

District							
Public Sector							
Facilities and Assets	**Total Number Affected**	**Total Number of Students Affected**		**Total Damages (LKR)**	**Losses (LKR)**		**Total Losses (LKR)**
		Male	**Female**		**Year 1**	**Year 2**	
1AB, 1C							
Type 2							
Type 3							
Pirivena							
Training Institutes							
NCOE, Training Colleges							
TC, CRC, RESC							
Ministry, Provincial, Zonal, Divisional Offices, NIE							
TOTAL							

Private Sector							
Facilities and Assets	**Total Number Affected**	**Total Number of Students Affected**		**Total Damages (LKR)**	**Losses (LKR)**		**Total Losses (LKR)**
		Male	**Female**		**Year 1**	**Year 2**	
Pre-schools							
Primary Schools							
Secondary Schools							
Universities							
Technical Institutes							
Others							
TOTAL							

TOTAL DAMAGES AND LOSSES				
Ownership	**Damages (LKR)**	**Losses (LKR)**		**Total (LKR)**
		Year 1	**Year 2**	
Public Sector				
Private Sector				
TOTAL				

- ✓ *Step 2.4. Summarize damages and losses in the education sector in the Province*

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

Table 6. Summary of damage and losses in the education sector in a province

Province							
Public Sector							
Facilities and Assets	**Total Number Affected**	**Total Number of Students Affected**		**Total Damages (LKR)**	**Losses (LKR)**		**Total Losses (LKR)**
		Male	**Female**		**Year 1**	**Year 2**	
District 1							
1AB, 1C							
Type 2							
Type 3							
Pirivena							
Training Institutes							
NCOE, Training Colleges							
TC, CRC, RESC							
Ministry, Provincial, Zonal, Divisional Offices, NIE							
Total							
District N							
1AB, 1C							
Type 2							
Type 3							
Pirivena							
Training Institutes							

NCOE, Training Colleges							
TC, CRC, RESC							
Ministry, Provincial, Zonal, Divisional Offices, NIE							
Total							
TOTAL							

Private Sector							
Facilities and Assets	**Total Number Affected**	**Total Number of Students Affected**		**Total Damages (LKR)**	**Losses (LKR)**		**Total Losses (LKR)**
		Male	**Female**		**Year 1**	**Year 2**	
District 1							
Pre-schools							
Primary Schools							
Secondary Schools							
Universities							
Technical Institutes							
Others							
Total							
District N							
Pre-schools							
Primary Schools							
Secondary Schools							
Universities							
Technical Institutes							
Others							
Total							
TOTAL							

TOTAL DAMAGES AND LOSSES IN THE PROVINCE				
Ownership	**Damages (LKR)**	**Losses (LKR)**		**Total (LKR)**
		Year 1	**Year 2**	
Public Sector				
Private Sector				
TOTAL				

Note in filling out Table 6:

- *District N represents the last District affected.*

✓ *Step 2.5. Summarize damages and losses in the education sector at the national level*

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 7. Summary of damage and losses in the education sector nationwide

Public Sector

Facilities and Assets	Total Number Affected	Total Number of Students Affected		Total Damages (LKR)	Losses (LKR)		Total Losses (LKR)
		Male	Female		Year 1	Year 2	
Province 1							
1AB, 1C							
Type 2							
Type 3							
Pirivena							
Training Institutes							
NCOE, Training Colleges							
TC, CRC, RESC							
Ministry, Provincial, Zonal, Divisional Offices, NIE							
Total							
Province N							
1AB, 1C							
Type 2							
Type 3							
Pirivena							
Training Institutes							
NCOE, Training Colleges							
TC, CRC, RESC							
Ministry, Provincial, Zonal, Divisional Offices, NIE							
Total							
TOTAL							

Private Sector

Facilities and Assets	Total Number Affected	Total Number of Students Affected		Total Damages (LKR)	Losses (LKR)		Total Losses (LKR)
		Male	Female		Year 1	Year 2	
Province 1							
Pre-schools							
Primary Schools							
Secondary Schools							
Universities							
Technical Institutes							
Others							
Total							
Province N							
Pre-schools							
Primary Schools							
Secondary Schools							
Universities							
Technical Institutes							
Others							
Total							
TOTAL							

TOTAL DAMAGES AND LOSSES NATIONWIDE				
Ownership	**Damages (LKR)**	**Losses (LKR)**		**Total (LKR)**
		Year 1	**Year 2**	
Public Sector				
Private Sector				
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.

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.