



# Contextualization of Post-Disaster Assessment according to National Needs

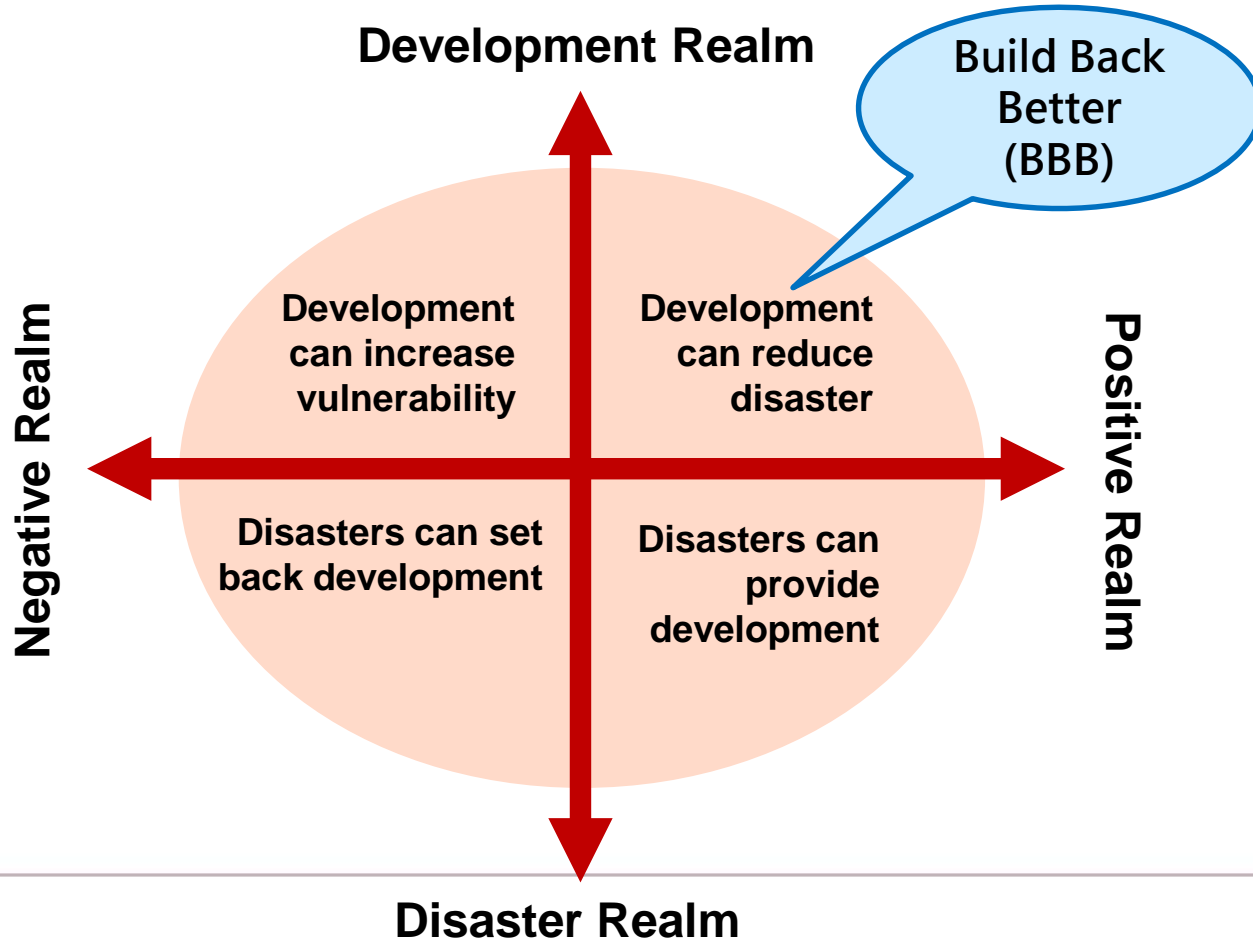
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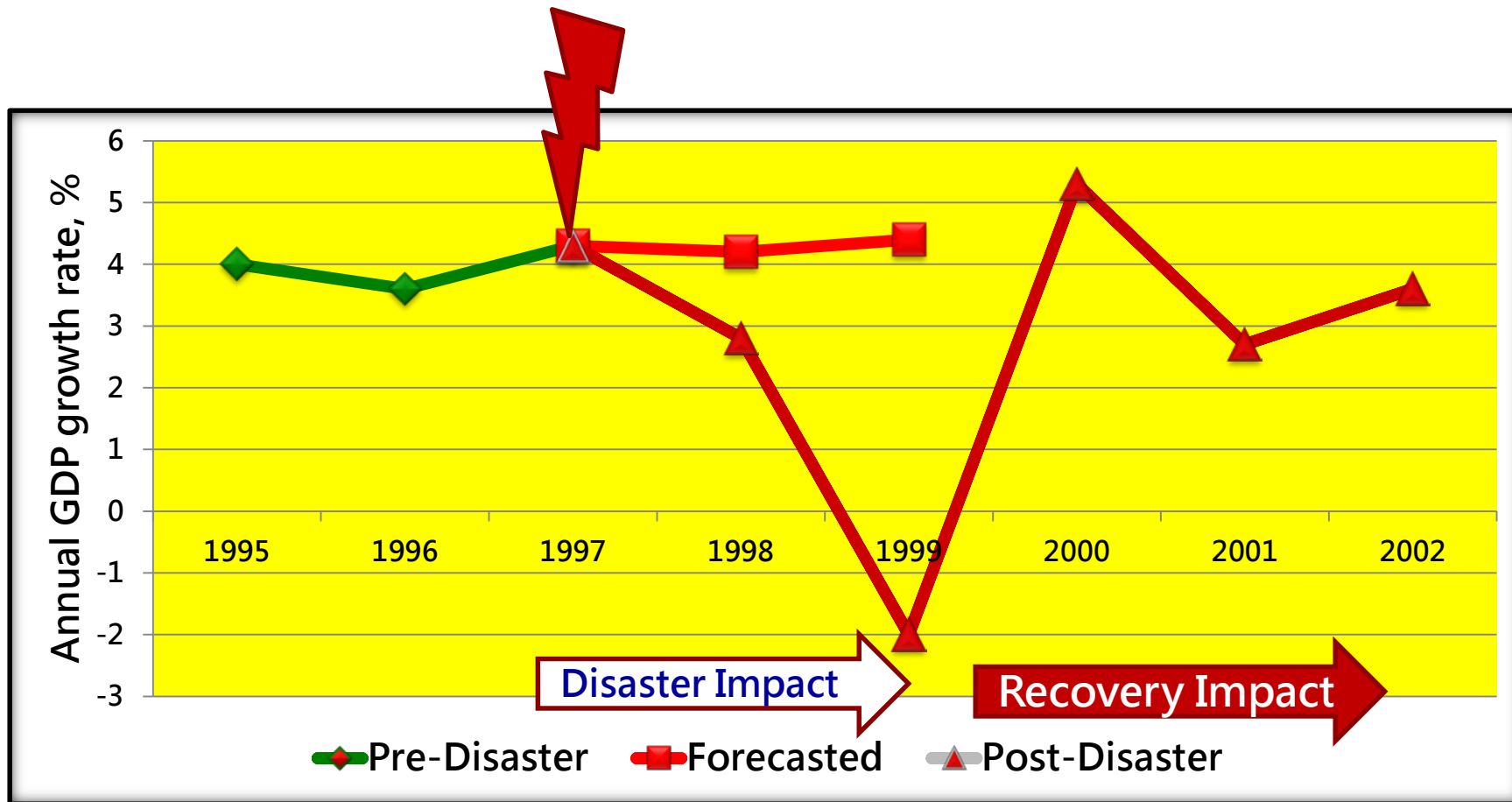
# Resilient Recovery at ADPC



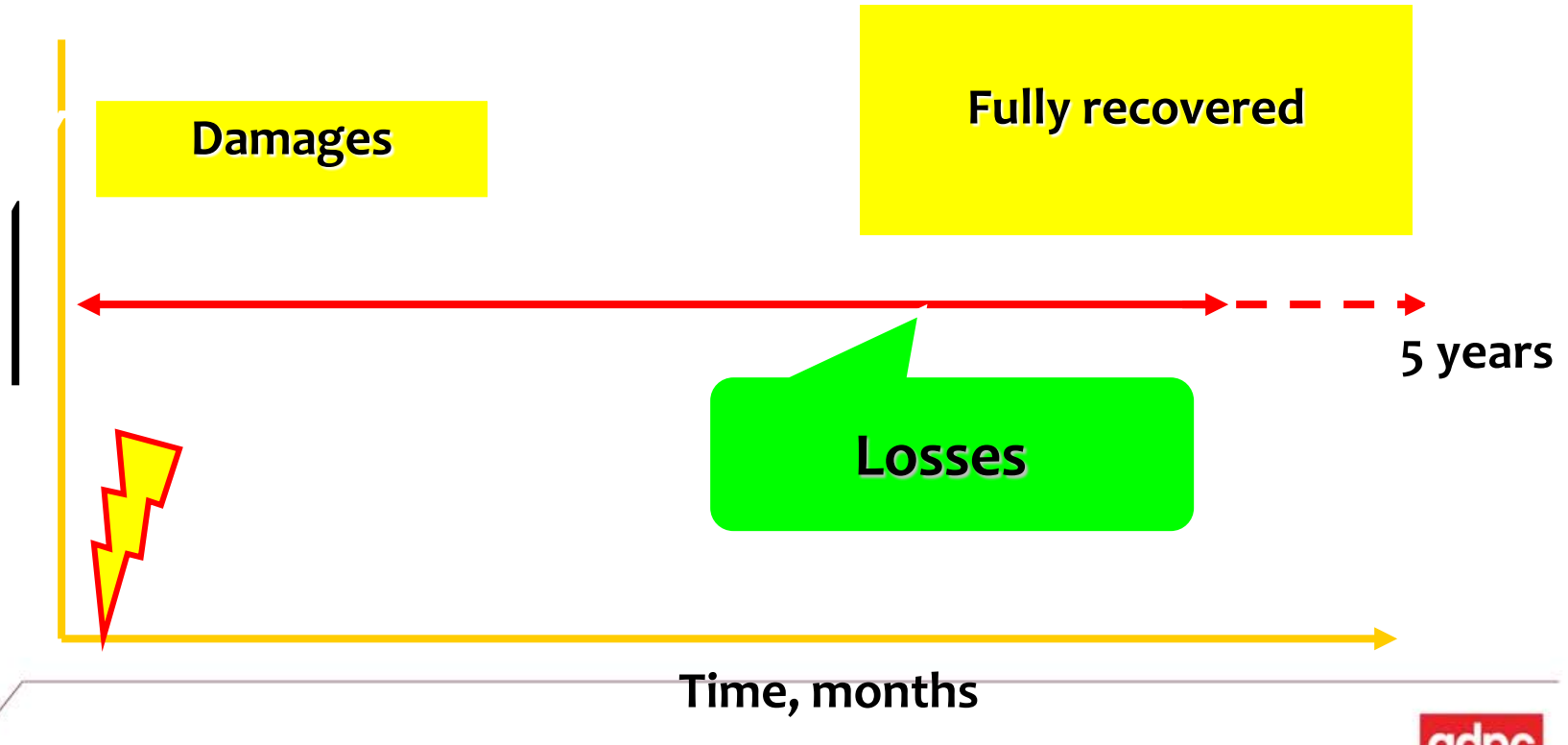
# Disaster & Development



# Honduras GDP Performance before and after hurricane Mitch



## Timeframe



# Disaster Risk Reduction and Management Assessments

## 1. Hazard & Risk Assessment

- Pre-disaster undertaking
- Used for planning, investment programming, mitigation measures, administrative regulations

## 2. Rapid Damage & Needs Assessment

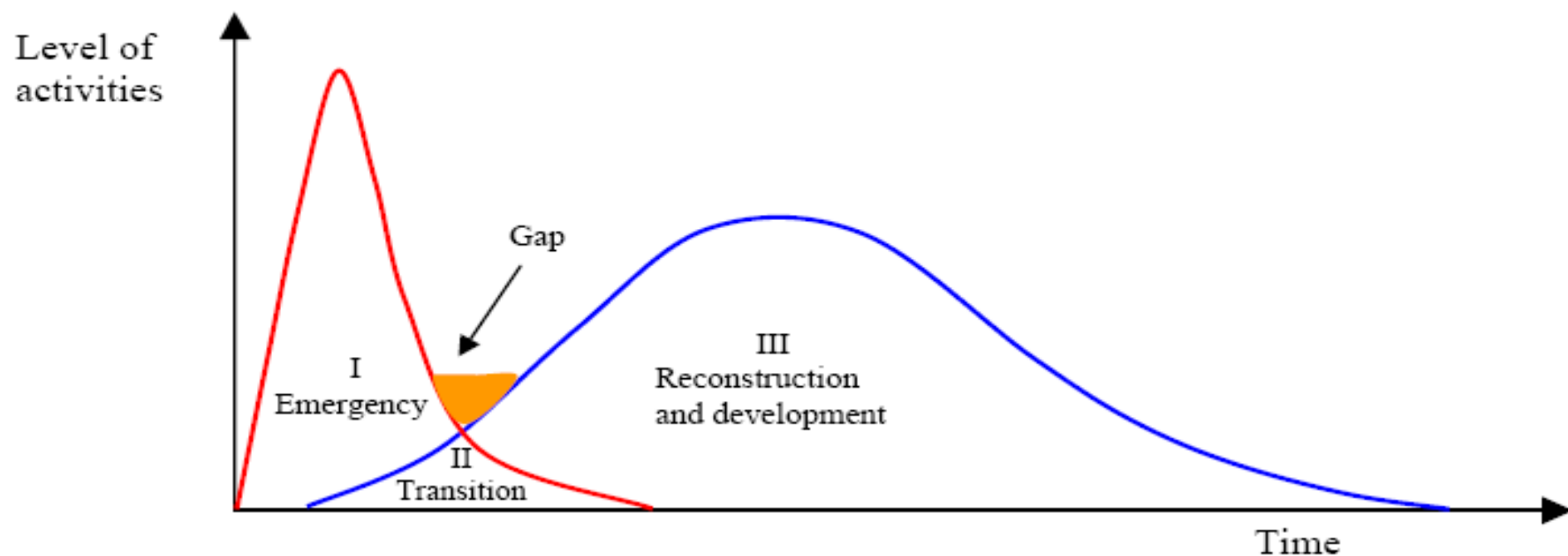
- Post-disaster undertaking – just after the disaster
- Used for emergency response activities

## 3. Post Disaster Needs Assessment (PDNA)

- Post-disaster undertaking – after the emergency situation has stabilized
- Used for recovery planning

# Timing of PDNA

**Figure 1 Implementation phases of post-disaster reconstruction**



# Before & After: Thailand Flood, 2011



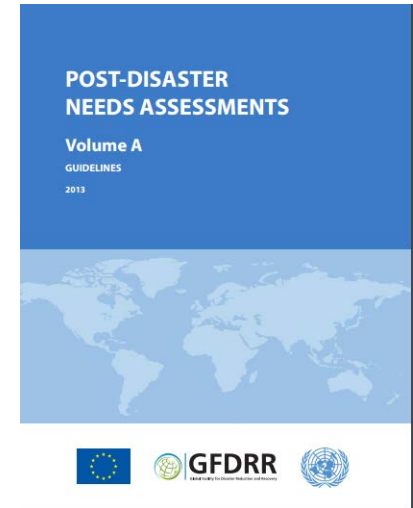


# Why Post-Disaster Needs Assessment?

- Recovery is defined as *“the restoration of facilities, production, and living conditions of disaster-affected population, including efforts to reduce disaster risk factors”*
- The purpose of **Post-Disaster Needs Assessment (PDNA)** is to estimate the financial requirements to achieve a return to normalcy in the life of the affected population and in their socio-economic development process after a disaster.

# What is Post-Disaster Needs Assessment?

- The PDNA is a **multi-sectoral** and **multidisciplinary** structured approach for assessing disaster *effects* (damages, losses and others), *impacts* and *needs* that will lead to the development of a recovery and reconstruction plan.
- Normally undertaken **after the emergency** phase or during the time when the post-disaster emergency operations are winding down and longer-term recovery is about to start.
- Assessment is **done by sectors** such as agriculture, industry, trade and services and the corresponding sub-sectors under them.
- Needs **experts** like engineers, economists, finance specialists, statisticians, etc. who have knowledge on the valuation and estimation of damages, losses and needs in a certain sector.



<http://www.recoveryplatform.org/pdna/>

# Evolution of Post-Disaster Needs Assessment

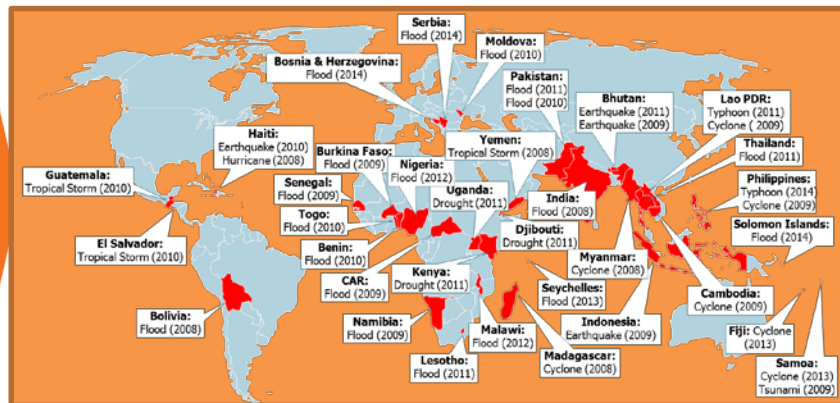
Assessment methodology developed by ECLAC in 1970s

Adapted for Global use by WB as (DaLa)

Strengthened by UNDG through social analysis and impacts on human development and recovery initiatives

PDNA - common integrated approach that combines context, effects, impacts and recovery strategy 2008-

Country specific Adaptation 2008-2015

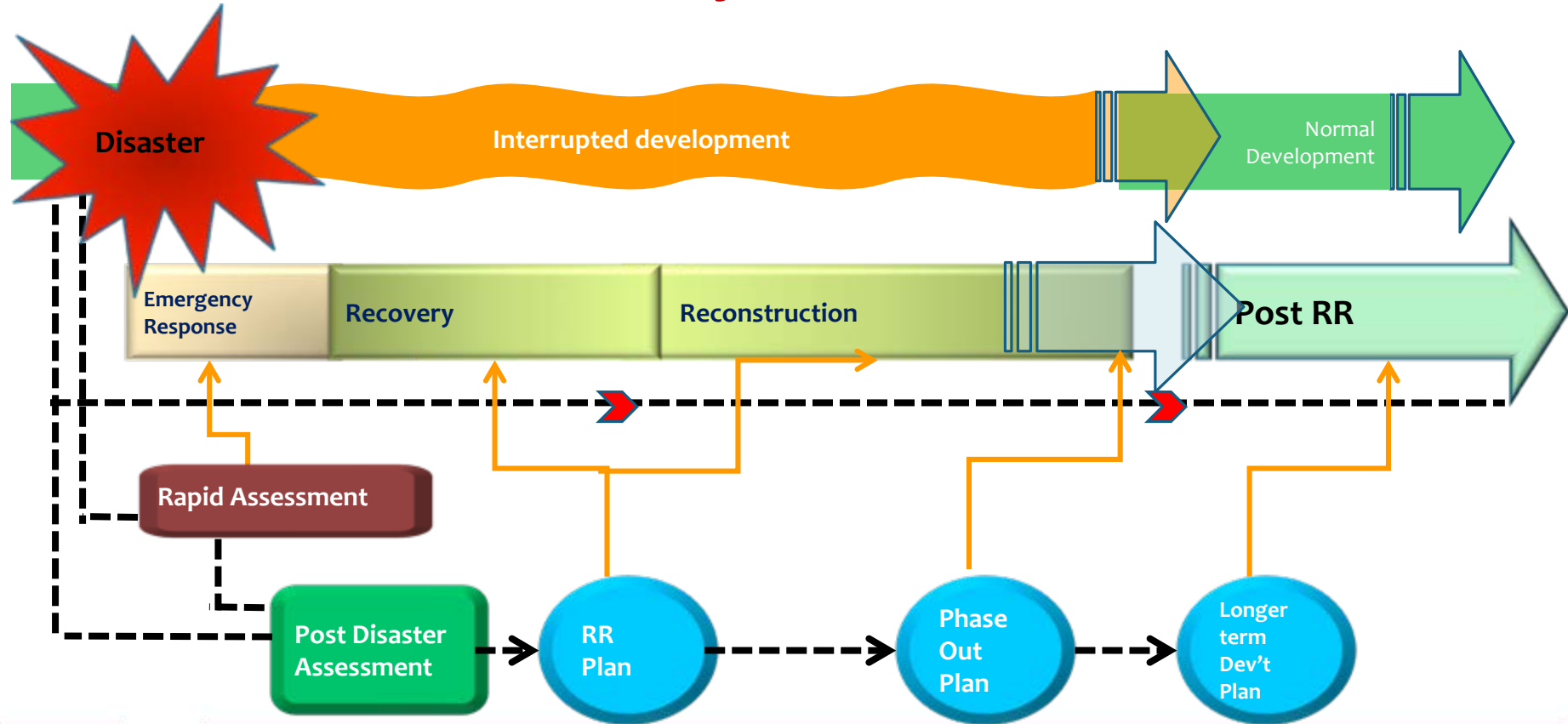


# What is Post-Disaster Needs Assessment?

- Due to the magnitude of major disasters, the PDNA is a NOT expected to be accurate in terms of the estimation of damages and losses.
- It aims to quickly provide decision-makers with:
  - ✓ The general effects caused by the disaster (damages and losses)
  - ✓ The impacts on the people and the economy if no immediate actions are taken (socio-economic impacts within and outside the disaster-affected areas)
  - ✓ The initial estimate of the financial needs for recovery
  - ✓ The information that will guide in the development of recovery framework and plans in cooperation with with local and international development partners
- PDNA is a balance between speed and accuracy

# Value Addition of Damage and Loss Assessment

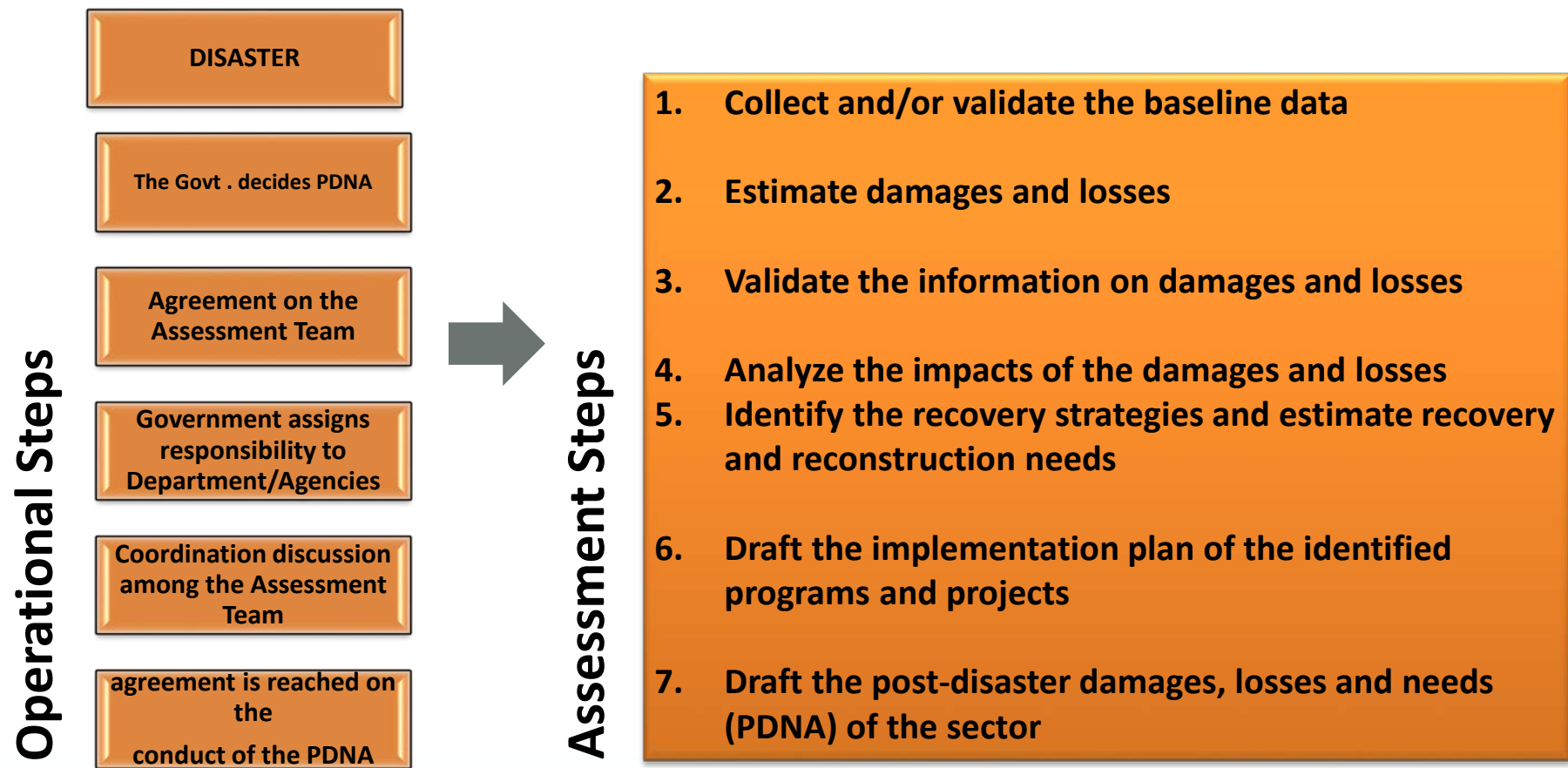
## Resilient Recovery and Reconstruction



# The Core Elements of PDNA

- 1. Pre Disaster context and baseline information**
  - The basis for estimating damages and losses and other effects
- 2. The estimation of disaster effects (damages, losses and cross-cutting issues)**
  - Field investigation and validation
- 3. The assessment of disaster impacts**
  - The analysis of long-term consequences
- 4. Determining sector recovery needs**
  - The financial requirements
- 5. Developing the Recovery Strategy and Framework**
  - The policies and implementation arrangements of the recovery plan

# Step by Step Methodology for PDNA



## Examples of damage and losses from previous PDNAs in Asia

Disaster	Damage (USD Millions)	Losses (USD Millions)	Total (USD Millions)
Typhoons Ondoy and Pepeng, the Philippines (2009)	1451.7	2931.3	4383.0
Typhoon Ketsana, Cambodia (2009)	58.1	73.9	132.0
Floods, Thailand (2011)	20667.3	26071.8	46739.2 *
Earthquake, Bhutan (2011)	24.5	(not assessed)	24.5
Typhoon Haima, Lao PDR (2011)	44.1	22.1	66.2
Earthquakes West Sumatra, Indonesia (2009)	2060.5	233.9	2294.4



# Flood 2011 - Summary of Damage and Losses

Sub Sector	Disaster Effects			Ownership	
	Damage	Losses	Total	Public	Private
<b>Infrastructure</b>					
Water Resources Management	8,715	–	8,715	8,715	–
Transport	23,538	6,938	30,476	30,326	150
Telecommunication	1,290	2,558	3,848	1,597	2,251
Electricity	3,186	5,716	8,901	5,385	3,517
Water Supply and Sanitation	3,497	1,984	5,481	5,481	
<b>Production</b>					
Agriculture, Livestock and Fishery	5,666	34,715	40,381	–	40,381
Manufacturing	513,881	493,258	1,007,139	–	1,007,139
Tourism	5,134	89,673	94,808	403	94,405
Finance and Banking	–	115,276	115,276	74,076	41,200
<b>Social</b>					
Health	1,684	2,133	3,817	1,627	2,190
Education	13,051	1,798	14,849	10,614	4,235
Housing	45,908	37,889	83,797	–	83,797
Cultural Heritage	4,429	3,076	7,505	3,041	4,463
<b>Cross Cutting</b>					
Environment	375	176	551	212	339
<b>TOTAL</b>	<b>630,354</b>	<b>795,191</b>	<b>1,425,544</b>	<b>141,477</b>	<b>1,284,066</b>

Unit: in Thai baht,  
millions

Source: DALA estimates, NESDB, and Ministry of Industry.

Note: Losses for each sector include higher expenditures due to floods.

# Flood 2011 - Total Needs for recovery and reconstruction

Sub Sector	Needs			Needs			
	Public	Private	Total	~6 mths	6-24 mths	> 24 mths	Total
<b>Infrastructure</b>							
Water Resources Management	54,075	15,000	69,075	3,023	15,462	50,590	69,075
Transport	23,583	–	23,538	6,866	14,376	2,296	23,538
Telecommunication	2,026	2,052	4,078	1,675	1,422	980	4,078
Electricity	5,625	–	5,625	899	3,037	1,689	5,625
Water Supply and Sanitation	5,633	–	5,633	2,997	2,635	–	5,633
<b>Productive</b>							
Agriculture, Livestock and Fishery	4,570	–	4,570	3,425	1,125	20	4,570
Manufacturing	–	854,356	854,356	172,640	668,045	13,671	854,356
Tourism	3,218	2,186	5,466	4,343	1,123	–	5,466
Finance and Banking	234,520	176,919	411,439	170,140	187,907	53,392	411,439
<b>Social</b>							
Health	2,318	–	2,318	1,128	870	319	2,318
Social	20,700	–	20,700	13,300	7,400	–	20,700
Education	13,343	–	13,343	8,045	5,298	–	13,343
Housing	5,110	46,870	51,980	14,990	12,510	24,480	51,980
Cultural Heritage	7,514	2,640	10,153	6,183	3,971	–	10,153
<b>Cross Cutting</b>							
Environment	6,181	2,004	8,184	3,724	1,619	2,841	8,184
<b>TOTAL</b>	<b>388,431</b>	<b>1,102,027</b>	<b>1,490,458</b>	<b>413,378</b>	<b>926,801</b>	<b>150,278</b>	<b>1,490,458</b>
<b>Private needs</b>				304,012	681,587	116,428	1,102,027
<b>Public needs</b>				109,366	245,214	33,850	388,431
as % post-flood revenues				5.5	10.8	1.4	

Unit: in Thai baht,  
millions

# The PDNA Sectors (WB-EU-UN)

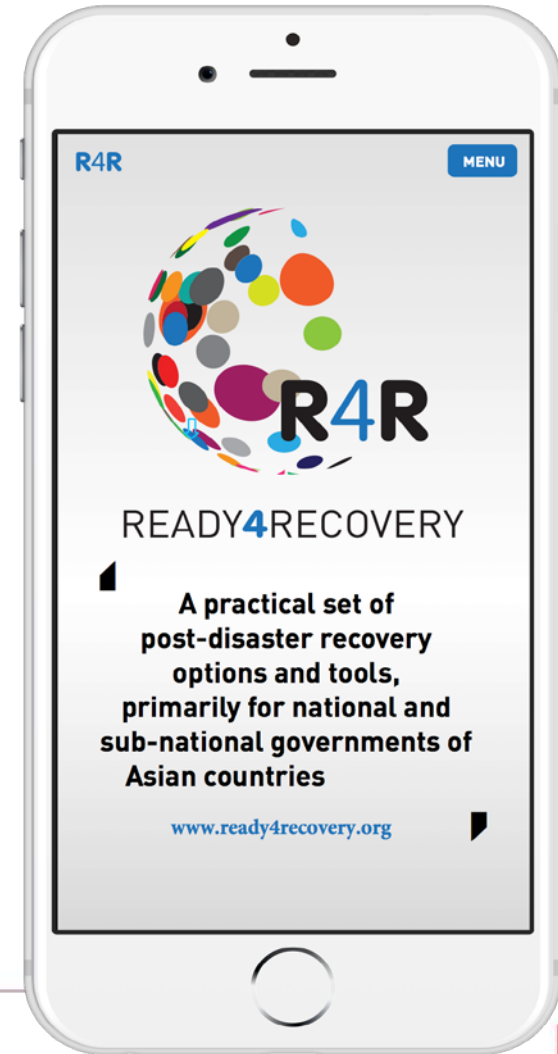
The Social Sectors	The Infrastructure Sector	The Productive Sector	Cross-cutting Sectors/Themes
• Housing	• Transportation	• Agriculture	Employment and livelihoods
• Education	• Water & Sanitation	• Commerce	Disaster Risk Reduction (DRR)
• Health	• Telecommunications	• Tourism	Environment
• Culture	• Community Infrastructure	• Manufacturing	Governance
			Gender
			HIV/AIDS
			Age

# Ready for Recovery



READY4  
RECOVERY

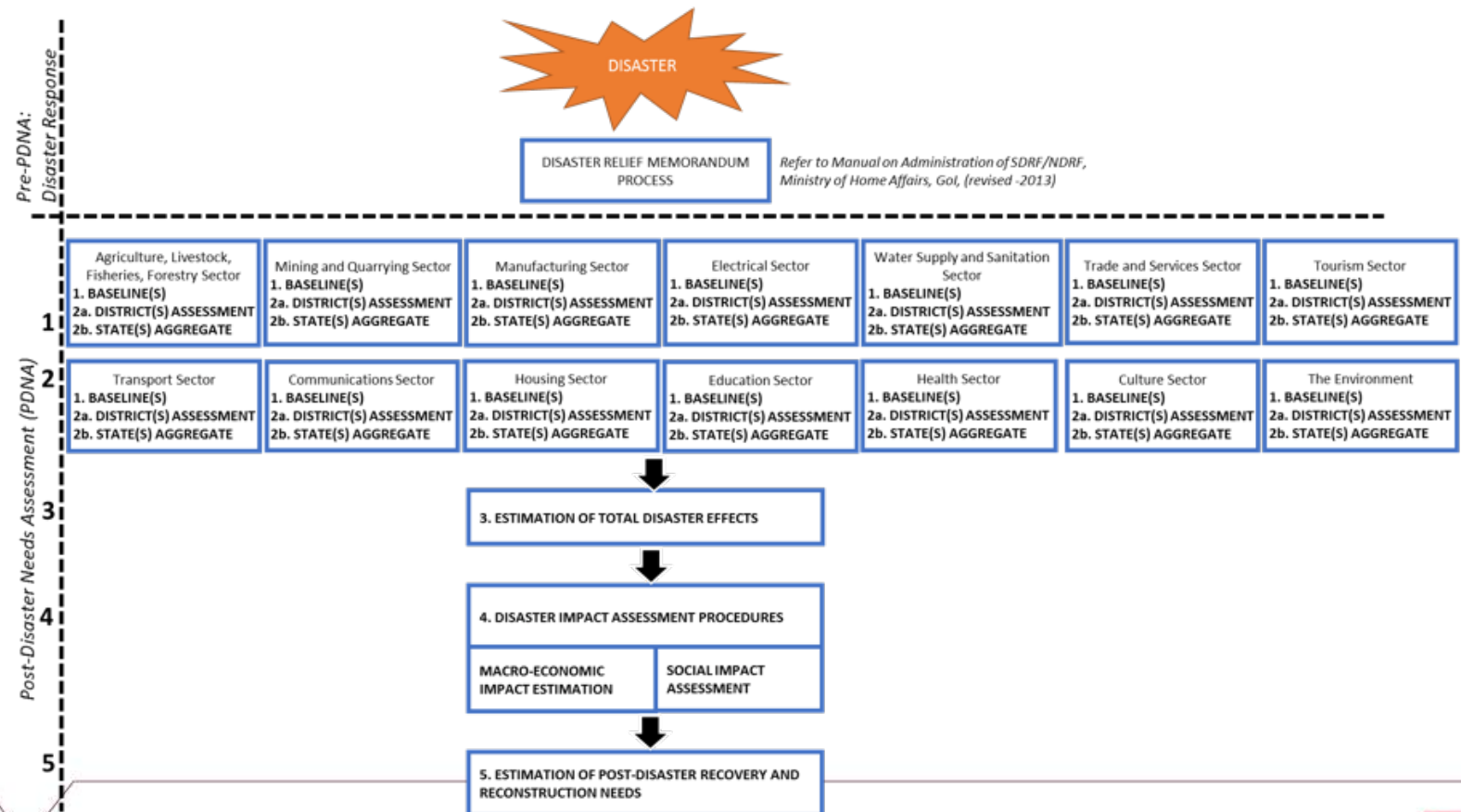
[www.ready4recovery.org](http://www.ready4recovery.org)



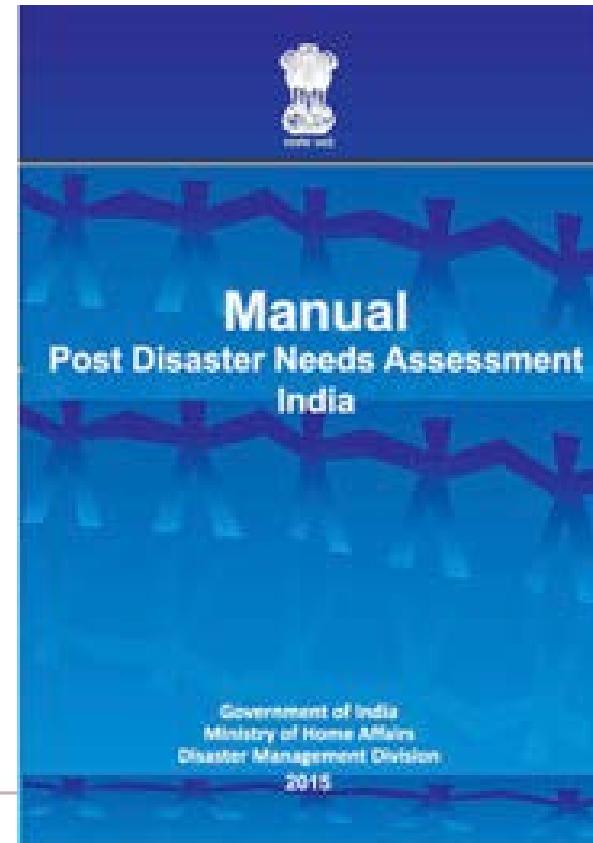
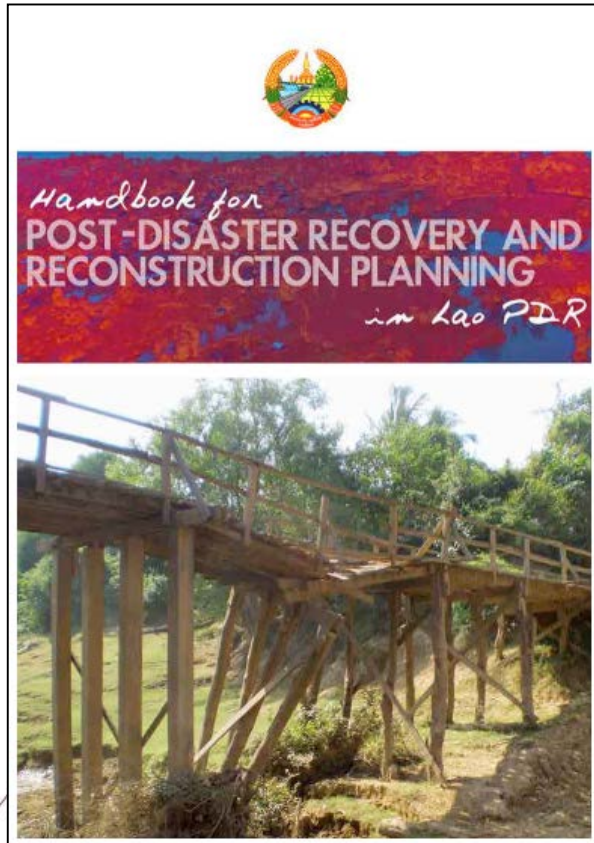
# Contextualization of PDNA in Countries

- Consultations and analysis of existing mechanism
- Adaptation of standard formats into country context
- Sector guidelines
- Standard Operating Procedures (SOP)
- Methodology for formulating recovery and reconstruction plans
- Training package
- Training program at national and local levels
- Pool of sector specialists trained on PDNA
- PDNA portal
- Online system

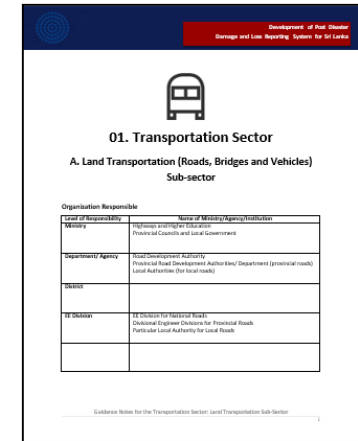
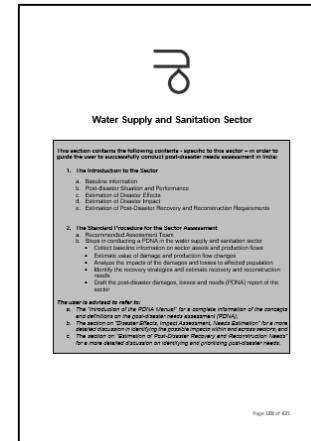
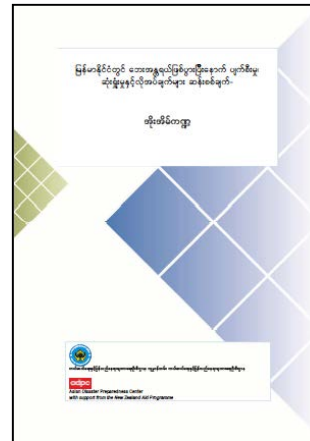
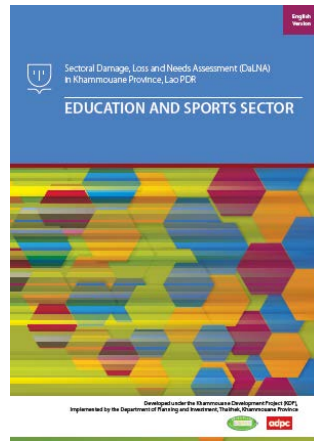
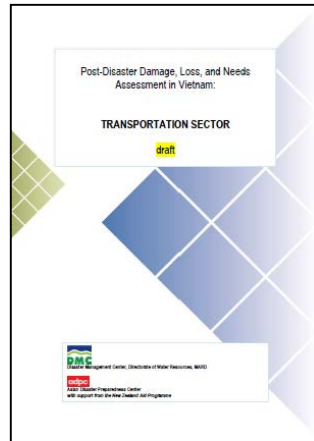
# Sectors for Assessment



# PDNA Handbook



# Sector Guidance Notes on Damage, Loss and Needs Assessment





# Sector Standard Formats

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							

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					

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

District					
Estimated Damages					
Housing Classification	Totally 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					

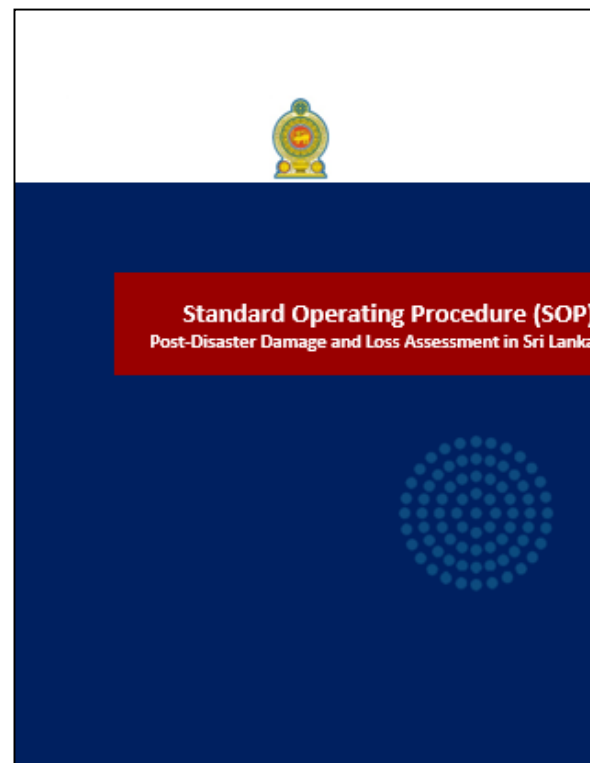
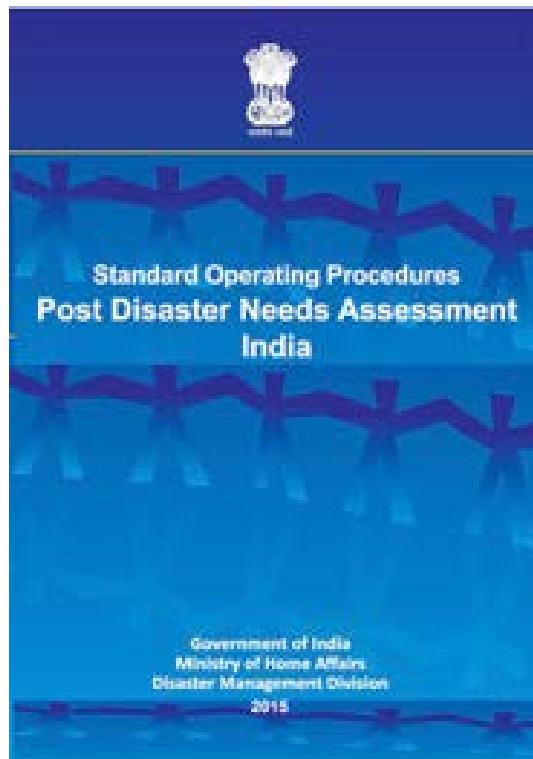
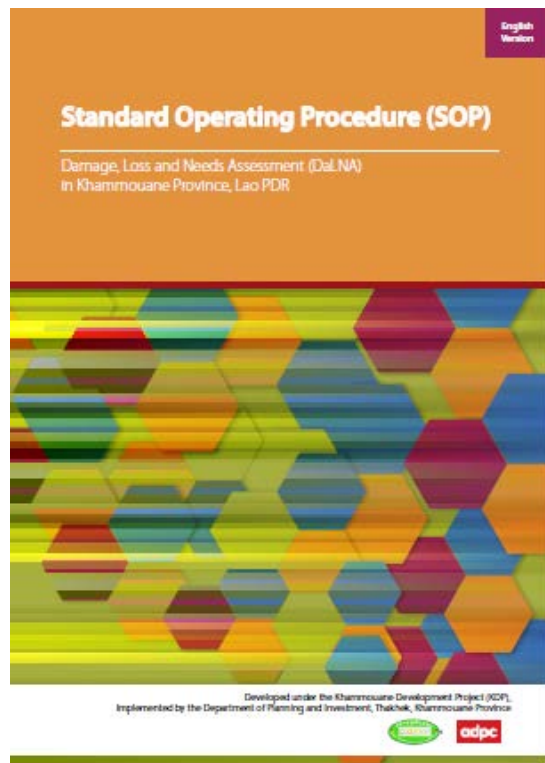
Table 5. Summary of damage and losses in the housing sector in the Province

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					

Table 7. Summary of needs

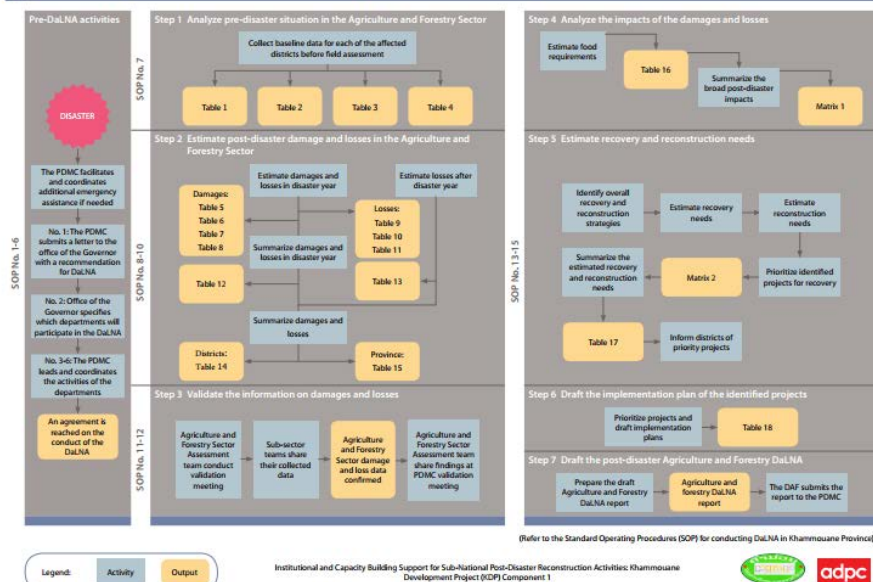
Name of Project	Estimated Budgetary Requirement (LKR)			Total (LKR)
	Year 1	Year 2	Year N	

# Standard Operating Procedures



# Post Disaster Charts for Sectors

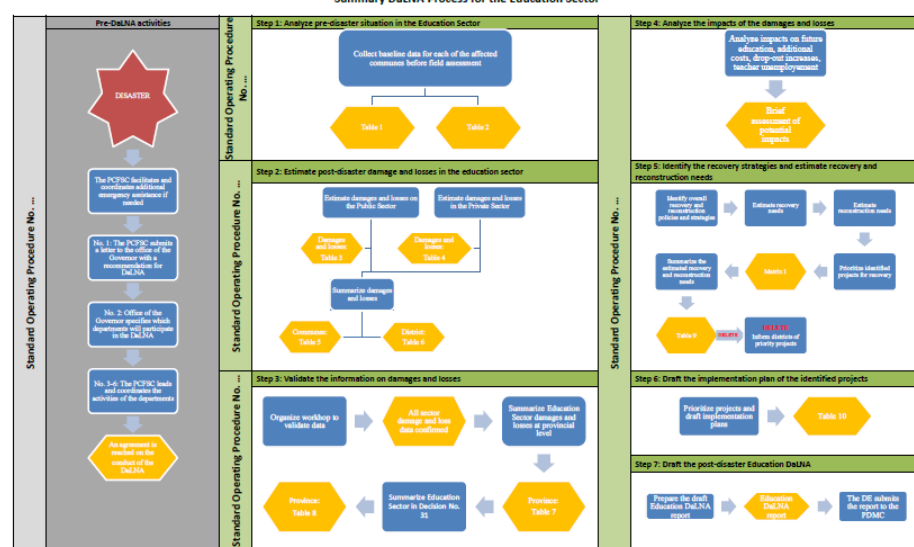
## Summary DaLNA Process for the Agriculture & Forestry Sector



Institutional and Capacity Building Support for Sub-National Post-Disaster Reconstruction Activities; Khammouane Development Project (KDP) Component 1

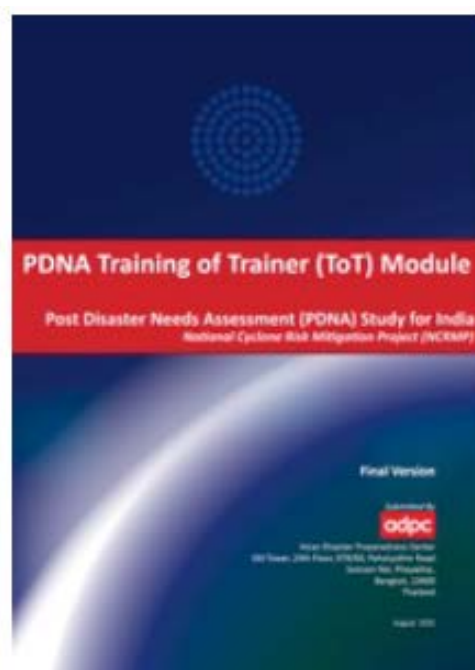
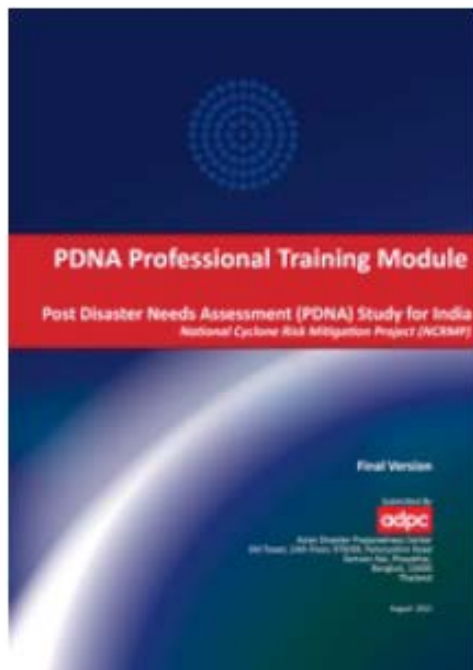


## Summary DaLNA Process for the Education Sector



"Strengthening Disaster Risk Reduction Capacity in Selected ASEAN Countries"

# PDNA Training Modules



# Trainings

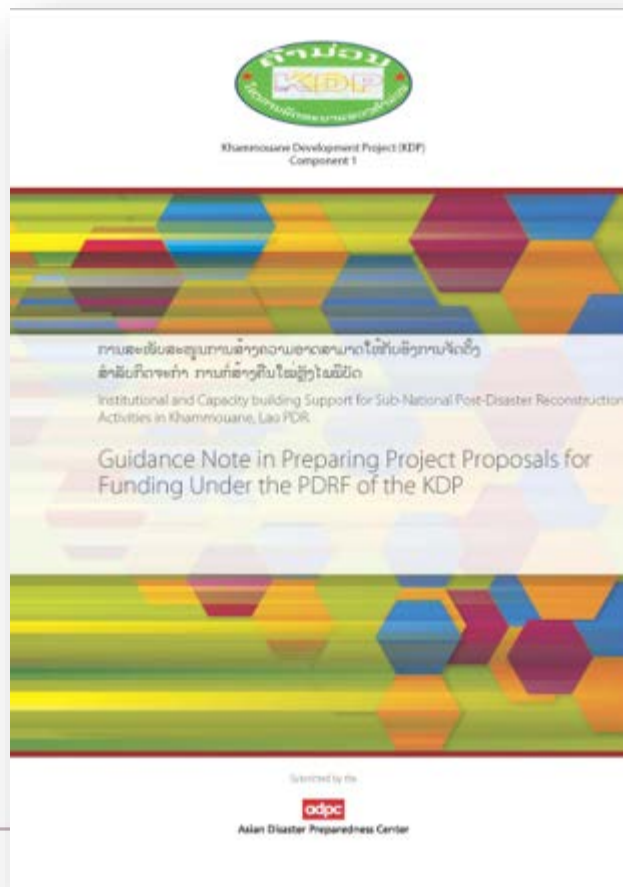




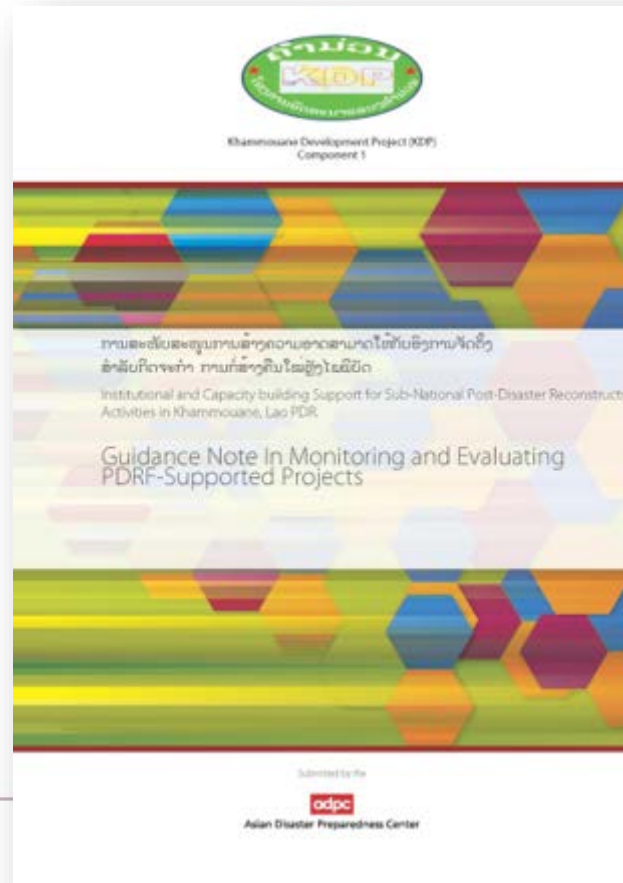
# General Guidelines on Planning, Budgeting and Financing Post-Disaster Recovery and Reconstruction Activities



# Post-Disaster Recovery Project Proposal Guidelines

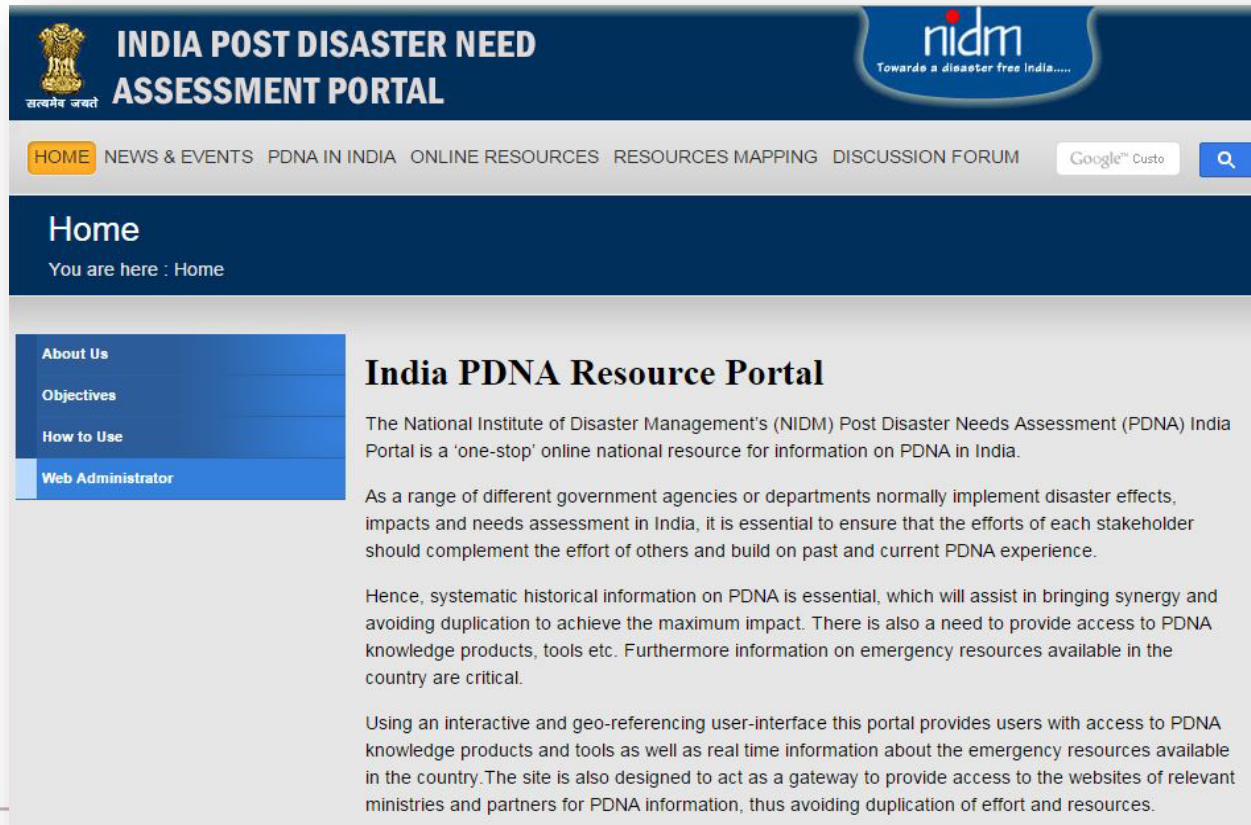


# Post-Disaster Recovery Project Monitoring and Evaluation Guidelines

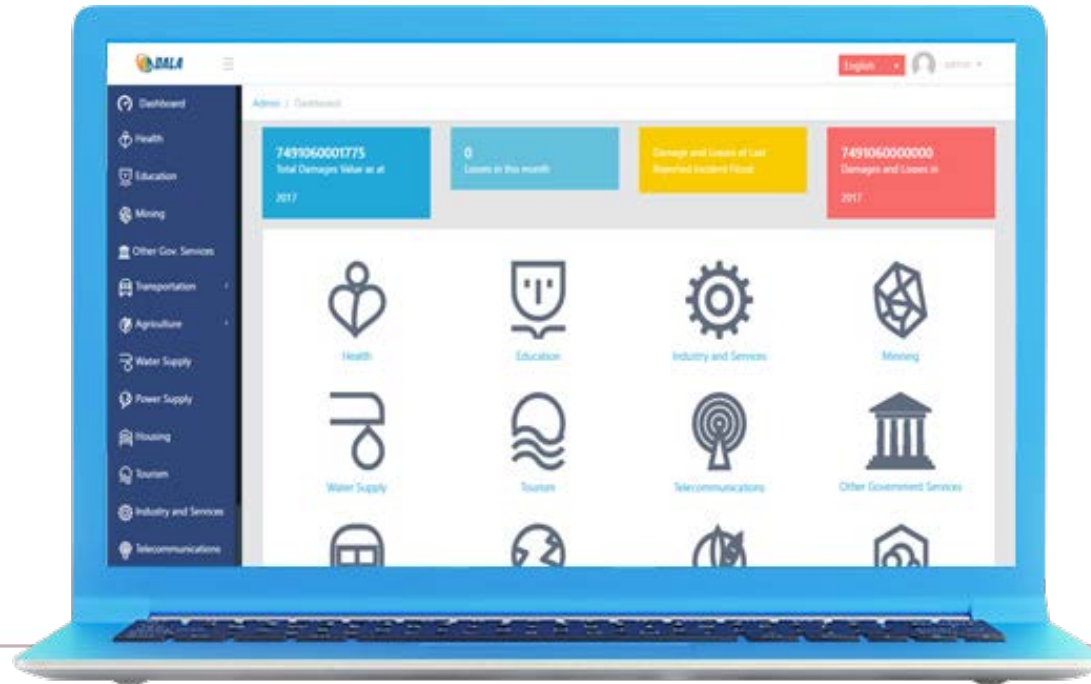




# Web-Based Portal



# Sri Lanka Online Disaster Damage and Loss Reporting System



# www.adpc.net/pdna

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## Technical Services Post-Disaster Needs Assessment and Recovery



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### Introduction

ADPC's technical assistance on post-disaster damage, loss and needs assessment and development of recovery plans is to reduce disaster and climate risk impacts on communities and working with governments, development partners and key stakeholders.

Since the devastating earthquake in August 2011, ADPC has supported national recovery planning in Asia. Post-disaster assessment involves the timely and accurate identification and needs across different sectors such as transportation, health, and agriculture. The assessment also aims to re-establish basic public services to normalize the socio-economic



<http://www.adpc.net/pdna>