

Introduction

Global Scenario

As per the Emergency Data Base (EM-DAT) maintained by the Centre for Research on the Epidemiology of Disasters (CRED), Leuven which is the most credible international data base on disasters, the year 2007 had witnessed as many as 414 disasters events globally, in which 10 or more people were reported killed or 100 or more were injured. This is 5% more than the yearly average of disasters recorded during 2000-2006. Further in 2007, 133 countries were affected by disasters, more than 16,000 were killed, 211 million people were affected and economic loss to the tune of 74.99 billion US\$ was caused by these disasters. While natural disasters in 2007 affected more countries, the loss of lives and number of people affected as well as economic damages were lower than the yearly average of 2000-2006 (Table 1.1). This is primarily due to the fact that a single disaster event of Indian Ocean Tsunami of December 2004 had cost colossal loss of lives, livelihoods and damages.

Table 1.1: A Brief on Natural Disasters in 2007

Indicators	Year 2007	2000-2006 yearly average
No of country-level disasters	414	394.7
No of countries affected	133	116.3
Number of people killed	16,487	73,946
Number of people affected	211 million	234 million
Economic damages (US\$)	74.99 billion	81.86 billion

Among the natural disasters impacted at global scale, the floods and induced landslides caused maximum damage. In 2007, their numbers were considerably larger i.e. 229 against 191 - the yearly average of 2000-2006; the numbers of victims were almost doubled i.e., 177.9 vs. 95.6 Millions; economic loss was also much larger i.e. 24517 vs. 18517 Million US \$.

Cyclones/storms were next to the floods in terms of the frequency and magnitude. In 2007, the numbers of cyclones/storms were 105 slightly less than 107 which is the yearly average of 2000-2006; the number of victims were 23.98 Million against 41.18 the yearly average; the economic loss of 29558 was lower than the yearly average of 53895 Million US\$. This disparity in economic loss could be seen primarily due to the contributions from the hurricane Katrina to the yearly average 2000-2006. Overall, drought and earthquake had considerably lower incidence as well as impacts in 2007 than the yearly average of 2000-2006 (Table 1.2).

Table 1.2: Major disaster groups in 2007 compared to the 2000-2006 average

Disasters	2007 Occurrence	2000-2006 average	Victims 2007 (Million)	2000-2006 average (Million)	Damage2007 (US\$ M)	2000-2006 average (US\$M)
Floods, landslides... (Hydrological)	229	191	177.9	95.6	24517	18517
Cyclone, Storms (Meteorological)	105	107	23.98	41.18	29558	53865
Drought, Heat-Cold (Climatological)	54	57	8.05	8.9	4597	10495
Earthquake (Geo-physical, volcano)	26	39	1.2	4.6	16312	7514
Total	414	394	211	234	74985	90391

In 2007, EMDAT had classified countries in terms of two categories. One was a set of those countries that were the worst affected in terms of the number of people killed. The second was a set of other countries in terms of number of people affected due to the natural disasters. Among the top five countries worst affected in terms of number of people killed, Bangladesh and India occupied first two positions, while Pakistan was on fourth position. Other two were China PR and Korea DPR. On the other hand, China PR was ranked one in terms of number of people affected due to the natural disasters followed by India and Bangladesh (Table 1.3).

Table 1.3 : 5 Most affected countries

Country	No of people killed	Country	No of people affected (million)
Bangladesh	5635	China PR	120,11
India	2236	India	38,14
China PR	1161	Bangladesh	22,93
Pakistan	911	Zimbabwe	2,12
Korea DPR	610	Philippines	2.02

Further, disasters were ranked in terms of the number of people killed. Among the top ten disasters of 2007, Cyclone Sidr which had the landfall in Bangladesh was ranked one. Sidr killed more than four thousand people, followed by Bangladesh floods of July-August 2007 and July floods of India, which killed 1110 and 1103 people respectively. Cyclone Yemyin in June 2007 and subsequent floods & landslides brought Pakistan to number eighth and again on ninth positions followed very closely by the second wave of July floods in India.

Table 1.4 : Top Ten Natural Disaster

Event	Country	People killed
Cyclone Sidr, November	Bangladesh	4234
Flood, July-August	Bangladesh	1110
Flood, July-September	India	1103
Flood, August	Korea, DPR	610
Heat wave, July	Southern Europe	567
Flood, June-July	China, PR	535
Earthquake, August	Peru	519
Cyclone Yemyin, June	Pakistan	242
Floods and landslides, June	Pakistan	228
Flood, July	India	225
Total	9373	

In overall top ten rankings, India appeared thrice, while Bangladesh and Pakistan appeared twice (Table 1.4).

Incidence of Natural Disasters in South Asia

In 2007, South Asia, as a region, led the world in terms of the number of people killed by the natural disasters. More than 16,000 people killed by natural disasters worldwide, more than 50% were from South Asia. Among South Asian countries, Bangladesh alone had got 5635 people killed, while there were 2236 deaths in India due to the natural disasters.

In fact, 2007 witnessed 49 incidences of natural disasters in South Asia, which is just 12 percent of the disasters that struck worldwide. But 12 percent disasters caused more than 50% of the casualties. With regards to the incidence of natural disasters, floods recorded having highest frequency 40 out of 49 followed by cyclone and drought along with heat and cold waves.

The frequency of floods in 2007 was much higher i.e. 40 against the yearly average of 27.1. Cyclone Sidr and the phenomenal increase in the frequency as well as magnitude of floods were the main components of South Asian disasters in 2007 (Table 1.5).

Among 55.7 million victims of disasters in the South Asia region during the year, 53 million (more than 95%) were due to the floods, followed by 2.6 million due to cyclone (4%). Floods and cyclone put together contributed to 99% of the disasters victims in 2007.

It is also important to highlight that flood victims in 2007 were more than 50% of the yearly average of 35 million. Floods in 2007 impacted the largest number of people, while drought and earthquake had marginal impacts (Table 1.6).

To be precise, natural disasters in 2007 killed 9718 people in South Asia. 58% of them belonged to Bangladesh, followed by India

(26%), Pakistan (9%), Afghanistan and Nepal (3% each), and Sri Lanka (1%). Two cyclones (Sidr & Yemyin) and different flood waves contributed largely to these casualties (Fig 1.1).

Table 1.5: Incidence of disasters in South Asia

Occurrence	Year:2007	Average (Year:2000-06)
Floods (Hydrological)	40	27.1
Cyclone (Meteorological)	5	9.6
Drought, Heat & Cold waves (Climatological)	4	5.3
Earthquake (Geo-physical)	-	6.1
Total	49	48.6

Table 1.6: Victims of disasters in South Asia

Occurrence	Year:2007	Average (Year:2000-06)
Floods (Hydrological)	53 Million	35 Million
Cyclone (Meteorological)	2.6 Million	11 Millions
Drought, Heat Cold waves (Climatological)	0.1 Million	0.1 Million
Earthquake (Geo-physical)	-	2.2 Million
Total	55.7 Million	38.3 Million

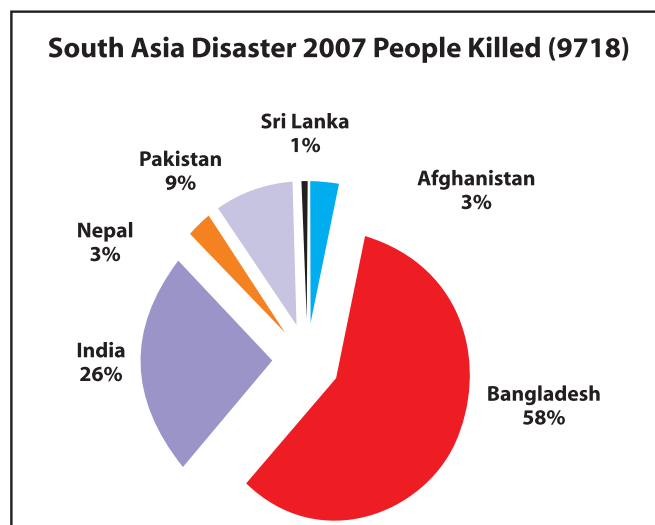


Figure 1.1: Country-wise number of people killed by natural disasters in 2007 in South Asia

Economic Losses

Comprehensive data on damage and loss due to disasters in South Asia are not available from any source. EM-DAT has estimated losses only in respect of cyclones and flood for five countries of South Asia, namely Bangladesh, India, Pakistan, Nepal and Sri Lanka. As per this estimate Bangladesh suffered maximum loss of USD 2414 million, followed by Pakistan (USD 1947 million), India (USD 376.15 million), Nepal (USD 2.4 million) and Sri Lanka (USD 0.5 million). Cyclone accounted for loss of USD 3920 million and flood USD 841.7 million. But these may be gross under estimation of the damages as India alone is reported to have spent an amount of USD 1 billion on account of disaster response and relief, which covered only part of losses due to disasters. Earlier a study conducted by the World Bank it was revealed South Asian countries may be losing between 2.5 to 7.6 percent of their GDP and between 12.15 to 66.03 per cent of their revenue on account of disasters, which are huge losses by any standard¹. Surely there are huge data gaps which need to be addressed in a comprehensive manner. Every type of disaster irrespective of its size and magnitude in every country of South Asia should be covered in the estimation of damage and losses due to disasters. This would be attempted in the South Asia Disaster Reports of 2008 onwards.

2007 South Asian Disasters: Trends and Implications

Hydro-meteorological disasters dominated the disaster scenario globally as well as in South Asia. Floods had approximately 180 million victims worldwide; 53 million (approximately 30%) were from South Asia. Cyclone had 24 million victims globally; 2.6 million were from South Asia (more than 10%). Alarming, South Asia contributed more than 50% of the disaster death globally.

An analysis of 2007 disaster events of South Asia reconfirms the vulnerability profile of the region. While disasters at global as well as regional level followed the same trends in terms of the types, frequency as well as magnitude, their impacts were much more severe in South Asia than anywhere else. South Asia also saw some of the new shocks like Avian Influenza. Bangladesh and India were particularly affected.

Subsequent chapters have captured the incidence of natural disasters in particular South Asian countries, dealt at length how these disasters were responded and brought into fore the achievements and shortcomings in preparedness, response, relief, rehabilitation and recovery and analyzed the valuable lessons learnt from the disasters of 2007.

Reference:

1. Emergency Data (EM-DAT) base of Centre for Epidemiology of Disasters, Leuven, Belgium
2. Country Reports, Newspapers and other sources
