DAMAGE AND LOSS FOR CYCLONE Sidr IN BANGLADESH

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Abstract

Bangladesh is one of the poorest countries in the world, which is suffering by different kinds of natural hazard like flood, cyclone, storm surge etc. every year (UNEP, 2001). During 1980 to 2000, cyclone caused death of 2.5m people worldwide, of which 60 percent were in Bangladesh. (Coast Truest, 2007). However, on 15 November 2007, Cyclone SIDR (Given name) has stroked the coast of Bangladesh. It moved through inland, destroying infrastructure, causing numerous deaths, disrupting economic activities, and affecting social conditions, especially in the poorer areas of the country. It is reported jointly by GOB, World bank, EC and other national-international NGO's that the total 3,406 death, estimated damage and loss 1.7 billion (US$). By understanding the vulnerability, a 5-pillared comprehensive risk management framework is proposed for future adaptation.

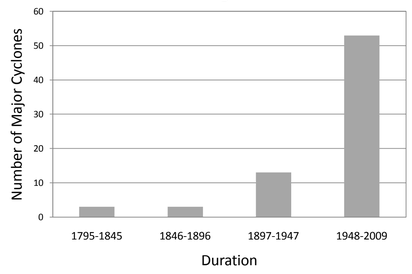
1. Introduction

Bangladesh is already overwhelmed with many problems like high population density (953 per sq.km), land scarcity, food security, human health, illiteracy, and so forth. Moreover, Bangladesh is ranked as the most climate-vulnerable country in the world (World Bank, 2005). The UN Inter-Governmental Panel on Climate Change also reported that both frequency and intensity of cyclones in the Bay of Bangle would increase more and more. It is documented that over a period of 100 years, 508 cyclones have affected the Bay of Bengal region, of which 17% made landfall in Bangladesh (GOB, 2008). By following the historical way, on 15 November 2007, Cyclone SIDR (Given name) has stroked brutally the coast of Bangladesh. It has made a huge amount of damage and loss for this poor country. It also brings the issue to rethink about the disaster readjust risk management framework.

2. Trend of Cyclone in Bangladesh

The historical trend of cyclone is showing that cyclone is common in Bangladesh but the last decade amount of frequency is quite high (Figure-1). The death associate with is higher than other hotspot countries of the world. (Ali , 1999).

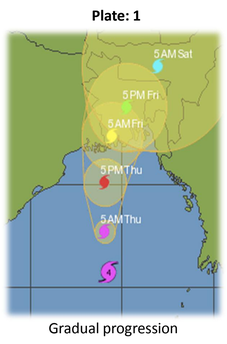
Figure: 1



3. What is Sidr?

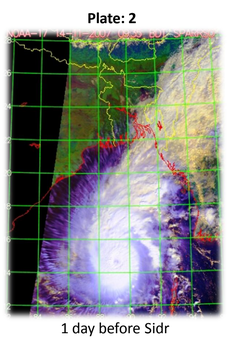
It is a category 4 cyclone – code-named Sidr – came ashore in Bangladesh on 15 November 2007. Wind speeds reached 225 km/h; some waves were eight metres high. It was the highest level of cyclone after 1991 (GOB, 2008). The following figures are showing the path of the cyclone sidr, gradual progression, 1 day before sidr and day of sidr.

Plate: 1



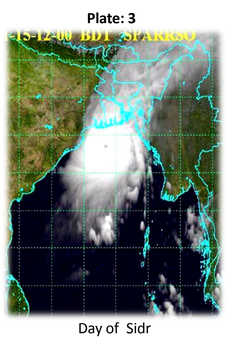
Gradual progression

Plate: 2



1 day before Sidr

Plate: 3

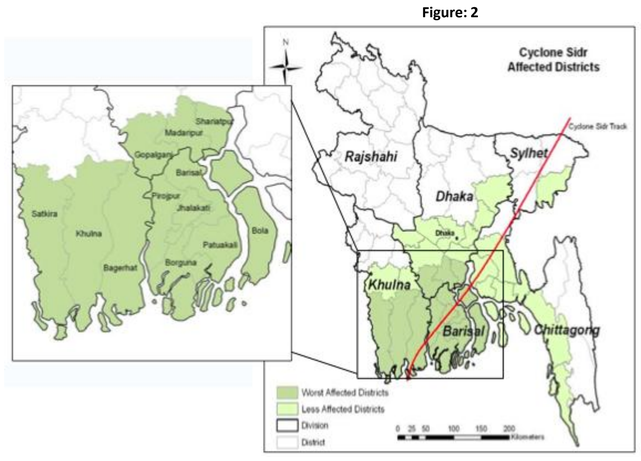


Day of Sidr

4. Affected Area by Sidr

Within 6 administrative division, the super cyclone had affected 3 of them, namely Barisal, Khulna, and Dhaka and others also partially affected. The figure showing that 12 worst affected districts, six districts are in Barisal, three in Khulna, and three in Dhaka (GOB, 2008, Coast trust, 2007).

Figure: 2



5. Method Used for Assessment

The study is based on available online secondary materials. The damage and loss was assessed by following the Damage and Loss Assessment (DaLa) method with necessary customization and simplification. It was developed in the 1970s by the United Nations (UN-ECLAC). It allows to access disaster impact on overall economy of the affected country as well as on household level (GOB, 2008). For doing that a Joint Damage Loss and Need Assessment (JDLNA) team was formed by combining government, donor, local, national and international NGO's.

6. Sector Wise Damage and Loss

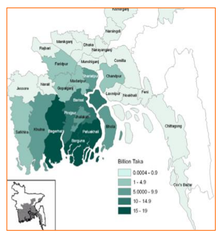
The total damage and losses caused by the cyclone to be estimated by JDLNA team as US$ 1.7 billion or Bangladesh Taka (BDT) 115.6 billion. The damage and loss was respectively 69% and 31% (GOB, 2008). The following table-1 is showing sector wise damage, loss and the figure-3 is showing most affected districts.

Table:1

Sectors	Disaster effects (US$ million)		
	Damage	Loss	Total
Infrastructure	1,029.9	30.9	1060.8
Social sectors	65.0	21.1	86.0
Productive sectors	25.1	465.0	490.1
Cross cutting issues	6.1	0.0	6.1

Source: GOB (2008)

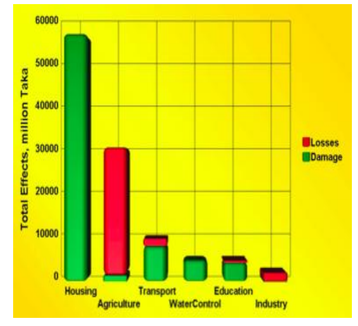
Figure: 3



7. Most Affected Important Sectors

The most affected individual sectors, in order of decreasing magnitude of total effects, were housing (BDT 57.9 billion), agriculture (BDT 30.2 billion), transport(BDT9.7 billion), water resource management and control (BDT 4.9 billion), and education (BDT 4.7 billion) (GOB, 2008).

Figure: 4



Source: GOB (2008)

8. Damage of Housing

Most of the damage to the housing sector was concentrated in the districts of Barguna, Jhalokathhi, Bagerhat, Pirojpur, Patuakhali, and Shariatpur.. It was identified as the highest damage sector (figure- 5).

Figure: 5

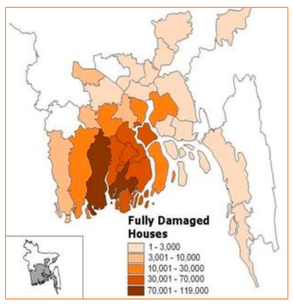


Plate: 4

10. Damage of Roads

Sidr damaged an estimated 8,075 km of roads in 11 districts. Barguna was the most affected one (figure 6). Moreover, about 25% of the national inland water transport navigation aids were disrupted by the disaster.

Figure: 6

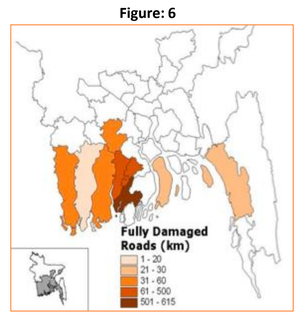


Plate: 7

9. Damage and Loss in Agriculture

Approximately, 2.2 million farming families have been affected by Sidr. The loss of production in all crops refers to an estimated 1.3 million metric tons, of which 63% (0.8 million metric tons) is *aman rice.* Sidr also made huge damage and loss for livestock's, fisheries.

Figure: 5

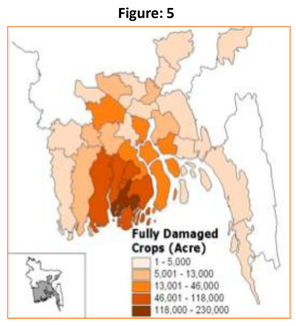


Plate: 6

11. Damage of Educational Institutions

Total 9,655 educational institutions have been fully or partially destroyed in 19 of the 30 cyclone affected districts. And in the twelve badly affected districts 76.6% school, college, madrasa were either fully or partially damaged, another 16% were fully damaged (figure 8).

Figure: 8

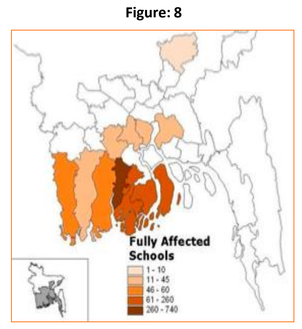


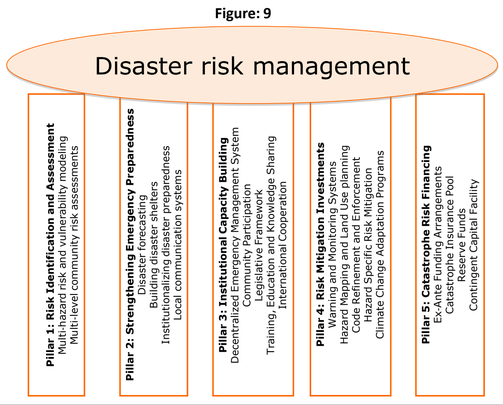
Plate: 8

Source: GOB (2008), Coast Trust (2007).

12. Disaster Risk Management Framework

The super cyclone sidr has made devastating damage for the whole country. The only way to move from disaster to resilience is better risk management (figure 9). It will make sure for better adjustment with the changing situation which is evident in different type of international certified best practice .

Figure: 9



13. Conclusion

Almost every year, Bangladesh experiences disasters of one kind or another as like tropical cyclones, storm surges, river erosion, floods and droughts. It causes heavy loss of life and property; increase vulnerability of the development activities. It is clearly understandable by looking on the damage and loss, which has made by the super cyclone SIDR. The international and nation scientific predictions suggested that Bangladesh has to face disaster incidents always with other problems as well. However, perfect adaptation of risk management measures would only be the way to move from risk to resilience.

14. References

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Dedicated to:
It is dedicated to the people of Bangladesh who lost their life and those who are still fighting to survives. Also added the people and agencies are providing continuous supports to Bangladesh for disaster risk management

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