

CLIMATE IMPACT IN COASTAL BANGLADESH: CASE
STUDY FROM MONPURA ISLAND

SUMMARY OF PRESENTATION

ABSTRACT TRANSLATION INFORMATION REFERENCE

Climate Impact in Coastal Bangladesh, Protecting Children, Adolescents and Youths: Case Study from Monpura Island

1. Climate change and Coastal Bangladesh

IPCC predicted that 1 meter raise in sea level will inundate 17 % coastal land. UNEP (United Nation Environment Program) predicted that 1.5 meters sea level rise by 2030 will inundate 16 % total land mass effecting 15 million people. It is said that there are only 5 to 10 % of world cyclone being happened in this area but caused 80 % of the world cyclone damages. Already severe drinking water crisis has been observed due to salinity intrusion which is more than 7 to 10 ppt, while tolerance limit is 2 ppt (Wahid Polash 2015). It is predicted that it will be close to 2.3 dS/m at the end of 2030 (Innovator 2012). About 11% of total land will be permanently inundated over the next century (Nasreen Mohal, Zahirul Haque Khan, Nazibur Rahman, IWM, 2006).

For the last 40 years, the discharge of sediment-laden freshwater into the Bay of Bengal through the Bangladesh part of the Sundarbans Mangrove Forests (BSMF) has been reduced due to a withdrawal of water during the dry period from the Farakka Barrage in India. The result is two extremes of freshwater discharge at Gorai, the feeding River of the BSMF Landsat Satellite data from the 1970s to 2000s revealed a non-significant decrease in the forestlands of total Sundarbans by 1.1% which for the 6017 km² BSMF is equivalent to 66 km². In another report from around the same time, the estimated total forestland loss was approximately 127 km² Landsat images and GIS data from 1989 to 2010 at the extreme northern part of Khulna and Chandpai Ranges revealed the formation of a large number of small rivers and creeks some time before 2000 that reduce the 443 km² forestland by 3.61%, approximately 16 km², and decreasing H. fomes by 28.75% and total tree cover by over 3.0%. (Abdul Aziz 1 and Ashit Ranjan Paul: 2015). Sundarbans, the Ramsar site will be lost due to high salinity and permanent inundation from projected sea level rise by 2100 (Nasreen Mohal, Zahirul Haque Khan, Nazibur Rahman, IWM, 2006)

Salinity has badly affected agriculture in the area and farmers now cannot grow vegetables due to extreme salinity. In total, 93 upazilas of 18 southwestern districts are affected by salinity in different degrees. Of them, Khulna and Satkhira are among the worst hit districts. The problem continues to worsen, with around 20 million people of the coastal region already affected, according to Soil Resource Development Institue. (The Daily Star, 2013). About 53% of the coastal areas are affected by salinity (S. A. HAQUE , 2006) . A comparative study between salinity survey in 1973 and 2000 showed that about 0.170 million ha (20.4%) new land is effected by different degree of salinity during last three decades (Hossain, M.A.)

2. Climate Change Impact on Children

Bangladesh's children are most vulnerable to climate change as some 1.31 million of them fell sick in six years due to onslaught of several natural disasters. Climate change impact also hampered the education of the children as some 1.08 million of the victims could not go to school in that period. Children, aged 0 to 17, in Dhaka division are the worst victims of the climate change impact. Out of the total 1.31 million victims, some 48.56 per cent children fell sick due to the impact of flood, 12.15 per cent for water-logging, 12.14 per cent due to cyclone, 6.77 per cent for drought, 5.33 per cent due to thunderstorm and 15.05 per cent for other seven kinds of calamities during the survey period. According to the survey, the children from Dhaka division were the worst sufferers of the natural disasters as some 21.70 per cent of them fell sick during 2009 and 2014 period followed by Rajshahi division 15.44 per cent, Sylhet division 13.77 per cent, Barisal division 13.24 per cent, Chittagong division 12.75 per cent, Rangpur division 12.14 per cent and Khulna division 10.96 per cent. Among the age groups, the 5-12 years of old are the most vulnerable as 54.24 per cent of the total 1.31 million children are affected by different types of sickness due to the impact of disasters, while 25.13 per cent get sick from the 0-4 years of age group and the rest 20.63 per cent from the age group of 13-17 years. Meanwhile, the fates of the affected children are not better as most of them don't get treatment from the registered and experienced doctors after their sickness. The statistics showed that only 19.70 per cent of the victims receive treatment from the MBBS doctors. Among the 1.08 million children, 37.17 per cent pupils failed to attend school for 8-15 days, 36.65 per cent for 1-7 days, 21.36 per cent for 16-30 days and 4.83 per cent for 31 days or more due to the impact of the natural disasters. Among them, the students of Barisal division are the most affected by the natural disasters as highest 24.56 per cent pupils from this region could not go to school, while the rate in Dhaka division was 18.58 per cent, Sylhet division at 18.34 per cent and Khulna division at 7.15 per cent. ("Bangladesh Bureau of Statistics: Bangladesh disaster-related statistics 2015: Climate change and natural disaster perspectives".)

3. Climate Change Impact on Manpura Island

In Manpura every family has a record of some kind of migration or relocation of their household(s) in last two generations. Some families have moved six to seven times due to this erosion. On an average every family have moved on 5.3 times in their lifespan. 15% from Hajirhat of Manpura have found to be migrated permanently years unions (Rezwan Siddiqui: 2014). Comparative study of the years 1973, 1980, 1989, 1997 and 2010 revealed that Manpura island is under the process of erosion and the total area gradually decreased from 148.15 sq.km, 132.11 sq.km, 128.90 sq.km, 120.89 sq.km to 113.71 sq. km respectively. According to this study, total land loss of Manpura island is 34.44 sq. km for last 37 years and major erosion took place on the northern shore line. The island also lost its 400 hectares of land in its southern extremity over the historic period (Kazi Farhed Iqbal and Md. Shahjahan Ali).

About 20 villages and 10 bazars have been gone under water completely. Even the main town of Manpura is in vulnerable situation, since the river is just about 300 yard far for the main town (Media Reports).

4. Demand to Save Manpura

i) Information about the WDB works must be open for all and there must be a complaints response mechanism, ii) Tender and purchase process of WDB must be transparent, iii) WDB must be accountable to the local people and local elected bodies/local administration, iv) If needed, army can be deployed to ensure smooth and speedy works.