

# Natural Calamity - Storm in the Sundarbans: A Geo-Historical Study

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The primitive men used the forests and the caves as shelter from the danger of dangerous wild animals and natural hazards. Evolution transformed the cave men into modern men. With the help of modern science and technology human race became powerful. Tremendous labour and intelligence transformed the human race ultra into ultra-modern from modern. But the human race has totally failed in preventing natural hazards. Today's ultra-modern human race is as helpless as the cave men in the face of natural calamity. Storm, drought, flood, earth quake, etc. are marked as natural disasters. The civilized human beings used the wind power to produce electricity. They built dams on rivers to produce electricity. They made roadways, river ways, and airways available. They have made the world heaven in terms of enjoyments. Rivers have changed their courses due to obstructions in their path. Excess deposits of alluvium have taken out the navigability of rivers. Disastrous floods are the reaction of those rivers to all these manmade changes. Loss of immense man power, economical loss, and loss of forests are some example of losses due to natural calamity. Civilized human race has found no way to escape storms or floods, although they are responsible for these calamities.

The questions that is; arises Is the Earth safe anymore? Can the human race be tension-free from these natural disasters? These some of are the points to think about. The human race has entrapped itself in trying to control Nature. Last decade has been marked as, 'the decade of natural calamities.' The Earthquake in north Iran, volcanic eruptions in the Filipinnes and Alaska, floods in Texas and in Bangladesh, cholera epidemic in Peru, drought in Africa and in California, hurricane in Hawaii- Iniki island, cyclone in Baleswar in Orissa, earthquake in Latur and Bhuj, flood in West Bengal, and the recent Tsunami on Asian coasts have proved the helplessness of the human race in confronting nature.

The land of the Sundarbans (88° 51' 91°30' East and 21°3' - 22°30' North) is not static. The causes of this are depression of lands, earthquake, tidal waves and cyclones. Though it is nearer to the Bay of Bengal, but it's weather is not extreme. The air is moist through half of the year due to monsoon. Summer lasts from June to September.<sup>1</sup> October to November is the time of cyclones. The time of winter season is from November to February. The climate remains clam in this period. The northwester with thunder storm occurs in the months of April to May. Hailstorms may occur sometimes. Sometimes there are Sudden drops in temperature because of nor'westers. This type of weather lasts from February to May in the Sundarbans. Normal speed of the Nor'wester is 60 to 70 K.M./hour but sometimes the speed increases to 160 to 180 K.M./hour. The collision of cold dense wind from the Bramhaputra-Surma with the moist wind of the Bay of Bengal creates the nor'wester. The climate of this region has now started to fluctuate. The fluctuation of water levels, temperatures and wind flow are changing the whole topology. The course of rivers, sizes of sand dunes among other things, also changes with it. Forests also suffer in all this and forests are also disappearing due to the calamities. Its favourable latitudes -longitudes the presence of water bodies and forests are responsible for the temperature and rainfall of this region. Small changes in temperature and rainfall leave impact upon soil texture and environment. The temperature of this region is 30° to 35° in June and 16° to 20° in December. Average rainfall of this region is 180 to 190 c.m./year.

If the wind of any region becomes hot suddenly, then this hot wind becomes light and starts to go upward. Then comparatively thick and cold wind rushes to this place to maintain air-pressure. The speed of the wind from anticyclone area to cyclone area is very high. The strong wind flow is called cyclone. The meaning of cyclone is cyclonic wind. Henry Piddington used this term 'cyclone in 1948 for the first time. This word is derived from the Latin word 'Kyklos' meaning folds like the snakes. The course of cyclonic wind is like the folds of snakes. So this wind is called cyclone. Many geologists think that the earth's rotation is the cause of this course wind. This rotation maintains a rule. It is anti clockwise in northern hemisphere and clockwise in Southern hemisphere. This wind reaches the centre of depression with a bending motion.<sup>2</sup>

Cyclone are of two types according to its latitude. Namely -

- i) Middle Latitude Cyclone.
- ii) Tropical Cyclone.

Cyclones are of three types according to their nature and flowing power.

- i) Middle Latitude Cyclone
- ii) Tropical Cyclone
- iii) Tornadoes

In the middle latitude section of two hemisphere, ( $30^{\circ}$  to  $65^{\circ}$ ) the face to face collision of hot light air with heavy-cold air creates the middle latitude cyclone. Tropical cyclones appear between  $0^{\circ}$  to  $30^{\circ}$  in both hemispheres. This is a devastatingly powerful storm with a speed of 250 to 300 k.m./hour. These cyclones occur mainly in the Indian Ocean in the month of October.<sup>3</sup>

There are several reasons behind cyclone. The Sundarbans region is situated on the tropical cyclone belt. Its latitude is between  $0^{\circ}$  to  $30^{\circ}$  north ( $21^{\circ} 30'$  north to  $22^{\circ} 30'$ ). The water temperature of the western parts of the oceans evaporation, wind-flow and latent heat are maximum in the tropical belt. These are the causes of cyclone. The conditions for the occurrence of cyclones are - i) The temperature of water level of the Sea must be above  $27^{\circ}$  ii) Coriolis Force must be very effective. iii) Other disturbing situations must be there. All these factors create a cyclone. The cyclone matures in some phases.<sup>4</sup> Now I am going to discuss the tropical cyclone along with the cyclone of the Sundarbans.

This devastating tropical cyclone occurs mainly in the coastal and inland areas. As the speed of the storm increases, the height and number of ocean currents increase too. The wind started to blow towards the centre of depression and the right side creates a great number of currents. The partial movement of currents may increase the water level 2 to 4 meters high. The height of currents decreases from the middle of cyclone to the outer portion of the cyclone and wave length increases. At the tail of the cyclone, a large spate starts to grow. This spate of water causes rains in the coastal area. The hurricane destroys the man power, flora and fauna of a large area. This cyclone is known by different names in different parts of the world. It is called hurricane in the north Atlantic and the Pacific zone, tornado in the west pacific zone, willy willy in Australia, Baguio in the Philippines and cyclone in the Indian Ocean. The history of the Sundarbans documents the miserable natural calamities of this region. Cyclones, tidal waves, floods, earth quakes, heavy rainfall have made life miserable in this area. These calamities leave a deep impression upon the economy. It takes a long time to recover from this situation.

A chart is given below to describe the natural calamities in that area. This area is affected by flood, storm, earth quake, drought from a long time. But the local dwellers continue their struggle for living. The main devastating natural calamities are presented here to understand the loss (1582-1994).<sup>5</sup> Chart-1

year	Natural Calamity						
1582	Cyclone	1862	Cyclone	1897	Earthquake	1942	Famine
1688	Cyclone	1864	Cyclone	1898	4Times Cyclone	1943	Cyclone
1707	Cyclone	1865	Famine	1899	Cyclone	1948	Cyclone
1737	Cyclone	1867	Cyclone & Flood	1900	Flood	1956	Cyclone
1742	Cyclone	1868	flood	1901	4 Times Cyclone	1960	Cyclone
1762	Earthquake	1869	Cyclone & Flood	1904	2Times Cyclone	1961	Cyclone
1770	Famine	1871	Flood	1907	2Flood	1962	Cyclone
1791	Famine	1877	Cyclone	1909	Cyclone	1965	Cyclone
1823	Flood	1878	Cyclone	1913	2 Times Cyclone	1966	Flood
1830	Cyclone	1880	Cyclone	1916	2 Times Cyclone	1968	Severe Cyclone
1832	Cyclone	1881	Cyclone	1917	Cyclone	1970	Cyclone
1833	Cyclone	1882	Cyclone	1919	Cyclone	1973	Cyclone & Flood
1834	Flood	1883	Cyclone	1921	Famine	1976	Flood
1839	Cyclone	1884	Cyclone	1922	Cyclone	1978	Flood
1840	Cyclone	1885	Flood	1927	Cyclone	1981	Cyclone
1842	Earthquake	1887	2Times Cyclone	1928	Cyclone	1982	Cyclone
1844	Cyclone	1888	3 Times Cyclone	1932	Severe Cyclone	1985	Cyclone
1848	Cyclone	1889	2 times Cyclone	1934	Severe Cyclone	1988	Severe Cyclone

1850	Cyclone	1890	Flood	1935	Severe Cyclone	1991	Cyclone
1852	Cyclone	1893	Cyclone	1936	Severe Cyclone	1994	Cyclone
1856	Flood	1894	Cyclone	1937	Severe Cyclone		
1858	Cyclone	1895	Earthquake	1940	Cyclone		
1859	2 times Cyclone	1896	5 Five Cyclone	1941	Cyclone		

Chart-1

The information of this chart show how the local people struggle and how the calamities affects the natural vegetation, land and human life. Some of these cyclones are described below:-

According to vastness and devastating power, the cyclone and earth quake of 30<sup>th</sup> September 1737A.D. had a deep effect upon the Sundarbans. The Howrah district is not commonly a cyclone-prone area. But the places nearer to the sea are sometimes affected by the cyclones. The cyclone of 1737 first attacked the Howrah district and then it was scattered in the sundarbans. The Bay of Bengal was the centre of this cyclone. This cyclone comes with a dangerously strong wind and heavy rainfall. This cyclone had thrown away many ships, boats and any other 20 thousand water vehicles. This cyclone had snatched the lives of about 30 thousand people and other sources say 30 lakh lives were taken by this storm, and also innumerable number of animals was reported dead.<sup>6</sup>

A terrible earth quake and cyclone of 2<sup>nd</sup> April 1762 had affected the sundarbans terribly affected. The water level rose up to 4-6 meters. The coastal regions became flooded. This locality faced a number of great losses to its manpower and cattlestock. As a result, the area of this locality could not expand. But people continued to set up their home in this region in spite of natural calamities. Actually natural calamities are the curse of this area.<sup>7</sup> Another devastating cyclone had attacked 24Pgs through Sagardwip in the 21<sup>st</sup> May of 1833. Dangerous tidal waves appeared due to the storms. This area was wiped out totally. Many lives were taken in it. One Island named 'Ekmone Stone' was divided into two in the south eastern part of Sagardwip and one half disappeared. This cyclone had snatched the lives of 50 thousand people of the Sundarbans. A strong earth quake attacked the Sundarbans on 11<sup>th</sup> Nov. 1842. Its centre is believed to have been at any place of 24Pgs or Jessore. A large number of lives was lost; some ports of the Sundarban region were totally ruined in these tremors. In 1885 large parts of the Sundarban area went under the water due to tidal waves. Only 786 square mile area of land was above the sea level at that time. 5<sup>th</sup> October of 1864 is a memorable day in the history of the Sundarbans and Bengal. The centre of the cyclone was nearer the Andaman. This cyclone started to blow from North to West and attacked Balasore in Orissa first. Then it started to move in the eastern part and attacked the coastal region of Midnapore and thus it spread over all sundarban after attacking 24Pgs, Sagardwip and Kakdwip.<sup>8</sup>

LSSO Malley assumed that 33 thousand people had died in that cyclone. According to another source, 50 thousand people were dead.<sup>9</sup> According to Dampier's report; Sagardwip was totally destroyed in this cyclone. The situation after flood and storm was very difficult due to the dearth of potable water and food. Cholera, dysentery, small pox had broken out as epidemic in large areas. Famine had added a terrible dimension to all this. Another cyclone and waves had attacked the Sundarbans in 1869 many people and cattle were died due to flood in the low land. The scarcity of potable water became acute. The most devastating cyclone of 16<sup>th</sup> October in 1942 had crossed all the previous limits. This 25-minute cyclone had taken the lives of 30 thousand people. The aged civilian Ashoke Mitra recalled that, the messenger of dead had made the total area blank by ruining all grains and trees with his death stick. The skeletons, bones, skulls were scatters upon the vast sands.<sup>10</sup>

As the coastal plain of Bengal is situated in the tropical belt, cyclone is its daily mate. Thunder-storms attacks this region very often. The dwellers are also scared about it. They have to live with shaking hands with death. 10% of the total number of cyclones has originated in the Bay of Bengal. A gulf of these cyclones eventually became deadly. The agriculture and the overall economy of this region were totally destroyed by these storms. They had to rebuild their houses again and again. They are not able to leave the place as they have no other option. It is important to know the view of common people about these storms too. According to Environmentalist, 'Individual organization of stimuli for the purpose of cognition and recognition.'<sup>11</sup> The experience of cyclone is very common to the coastal people. The local people don't fear storms. Though storms make their lives miserable sometimes it begins to be normal after a while.

We can form an opinion from the above discussion. We collect the information about economical loss and loss of lives. But the cyclones left a great impression upon the environment. Tidal waves affected the

civilization fields. Fields became saline and invalid for agriculture. Cyclone has a great impact upon human minds. Tropical cyclone destroyed the grains, water supply system and communication. The storms can create a severe problem in the basic structure and rules of a society that it changes according to its needs. These problems can be seen mainly in an agrarian society. The cyclones and the destruction they bring affect the production, distribution and consumption processes. Social welfare projects stop for sometimes and the profit based market system becomes aggressive.

The social bonding grows stronger after the storms. People come altogether to meet the loss but it also hampers the social relations. Experience says that, may welfare societies under political groups come to serve the destitute. As the local people depend upon mixed livelihood, they are unable to solve the local problem that emerged due to cyclones. Thus prominent political polarization creates political disadvantages in the cyclone affected region. According to the psychologists, the affected people face three types of problem. i) Psychotics or Mental problem. ii) Somatic or physical problem.iii) Sociotism or the fear of losing social condition. Storm can change the basic socio-economic features of a person. Poor farmers, fishermen think that storm is created by the Will of God. God is the creator and he is the destructor also. So they bear no malice against God. They all pray to God to appease him. People literally believe that, cyclones are impetuous.

Though the government helps the victims, it cannot remove their pain. The governmental aids reach the victims, through-many political channels. Thus, the rehabilitation process becomes political. This aiding system has a negative side also. Victims are not able to decide what they actually want. The political parties and governmental civilians take decisions on behalf of the victims. A storm victim cannot express his desire of rehabilitation. Government proposes that. So government becomes more active after the storm stops. The welfare of the victims or the actual rehabilitation process becomes secondary. So sometimes the over zealous measures of nation become more cruel than the destruction of the storm.

## References

1. Majumder R.C. - History of Bengal, Vol. 3, Calcutta, 1981, p-136.
2. Khullar D.R. A Comprehensive Geography, Kolkata, 2005, P- 239)
3. Chowdhuri Kamal, - Chobbish Parganas Uttor,Dakshin, Sunderban, Calcutta, 1999, p-39
4. Mitra kalpana, Sen Jyotirmay- Physical Science, Part. 2, 2004, p-115
5. Mondal Ajit - (Edited) Paschinbanga Zilla South 24 Parganas, Calcutta, 2000 p- 425
6. Singh Savindra, Climatology, Allahabad, 2005, p-248
7. Ibid, p- 395 Chowdhuri Kamal
8. O' Malley L.S.S.,Bengal District Gazatteers, Midnapore, Calcutta, 1995, (reprint), p-115)
9. Singh savindra, Climatilogy, Allahabad, 2005, P 248)
10. Mitra A. Towards Independence: 1940-1947, 1991, pp 110-113)
11. Burton I.R., Kates W., and White G.F., The Environment of Hazards, New 1978, PP. 106-107

**Diligence is the mother of good fortune.**

**~ Benjamin Disraeli**