Volume IX 2020-21
Journal *of* History
ISSN 2321-0834

Retracing a Colonial Disaster: An Environmental History of the Calcutta Cyclone on 5th October, 1864

Gourab Dasgupta
Ph.D Research Scholar
Centre for Adivasi Studies, Vidyasagar University

Abstract

The effect of the Calcutta Cyclone on the 5th of October, 1864 was not only limited to the areas of Calcutta but it also resulted in heavy damages and destructions on the coastal districts like Medinipur, 24-Parganas and some portion of Hooghly and others which wreaked havoc on human lives and property. The livelihood and the way of life was totally disrupted. Especially the natives were worst sufferer. The Colonial Government's unplanned construction policies in riverine areas and coastal regions exacerbate the risk and threat of this natural calamity. To deal with these situations the British government took up various relief measures, though there was an interest exploiting the inhabitant. Due to lake of adequate action by the Government, fatal diseases stepped into the storm hit areas, which resulted in a large number of deaths in post cyclonic period. Thus, a natural calamity was transformed into a man-made hazard.

Keywords: 5th October 1864 Calcutta Cyclone, Meteorology, Yearly flood and the tropical cyclones, Coastal region of Bengal

Introduction

Any sensible person, irrespective of his or her knowledge of the Darwinian and Coleridgian view of nature, will ostensibly admit that the material possessions of the human civilizations including their tremendous technological inventions and advancements are nothing but trifles to the destructive forces of Nature. However, at the same it is also equally important to note that precautionary measures are such things which alone can give a narrow escape to the human civilizations from any mighty disaster. By way of scientific and technological advancement, often by using or sometimes damaging natural resources, people have been able to add luxuries to their everyday lives. Parallel to the advancement of human society from time immemorial, nature has repeatedly hit it in different ways, and as an intelligent being, we have learned from it, though it has been overlooked repeatedly in many ways. The stubborn attitude

of the people towards nature has brought enough danger to the future. The relationship between humans and the environment or various natural hazards, such as floods, cyclones, snowstorms, earthquakes, etc., are not new. Such diverse climate characteristics have frequently shaped the social and cultural process. We need help from environmental history to grasp those processes. These studies will inform policymakers how much human activities as well as their policies tell upon nature and boost the vulnerability to the natural disaster. In this way policymakers will learn from historians to enact future strategies and avoid the deterioration of the climate. The major weakness of this work is not a *longue duree* (long term) study of cyclonic phenomenon that occurred almost every year in the coastal districts of Bengal but an extensive study on a particular cyclonic event. This study attempts to address the most powerful cyclone hazard that occurred in Bengal on 5th October 1864 and illustrated the extent of the devastation and the effect on livelihoods. It also discussed the role of the British government that had dealt with this disaster. Only a few years ago, J. Donald Hughes raised a valid question as to whether the damage caused by the hurricane depends solely on the strength of the storm. His response was explicitly in negative by observing the city of New Orleans, Louisiana, in the Mississippi Basin, where hurricanes, Katrina, Rita, etc., had occurred.[1] In the same way, this study will analyze the human factors behind the devastation of the 1864 Calcutta Cyclone, rather than its storm. Was the 'Calcutta Cyclone' of 5th October 1864 limited to the British capital of Calcutta or extended to remote districts? If it reaches the remote district then what was the intensity in those areas? Is this natural disaster solely responsible for the damages and loss of life or could the colonial admiration be blamed for such disastrous calamity? Or is this the fact that the way human beings have been using the land and water of nature contribute in altering the landscape of coastal area and increase the risk and vulnerability. How did the presence of various diseases in the post-cyclonic phase make the situation more frightening? This research is attempting to address these interrelated questions. In the last decades of the twentieth century, the historical study of Climatology, Oceanography, and Meteorological History are sub-themes of environmental history woven by environmental historians. They have constructed new historical discourses on the environmental point of view that seek to encompass various natural processes influencing the relationship between man and nature. The explanation for forming a cyclone is that it is a natural process by heating water with a sea surface temperature greater than 26°C in oceans that generates a powerful circular storm is based on low atmospheric pressure, strong winds and heavy rains.[2] Recent studies have argued that human activities and their effect on climate and the environment have increased the risk of formation and destruction of the tropical cyclone. Climate change, which has a deep association with increasing sea surface temperatures, which can easily lead to the formation of cyclone vortexes, rising sea levels that reduce the distance from the inland to the point of origin and cause the storm to intensify rapidly, and the loss of forest land that increases the risk of storms in inlands by removing natural guards. In their reports, a number of eminent historians referred to the Calcutta Cyclone of 5th October 1864, but did have little information. In his research, Aravinda Samanta (1997) studied the relationship between annual tropical cyclone hazards and the inhabitants of the cyclone-prone coastal area of Bengal and explored the sustainable potential that formed the

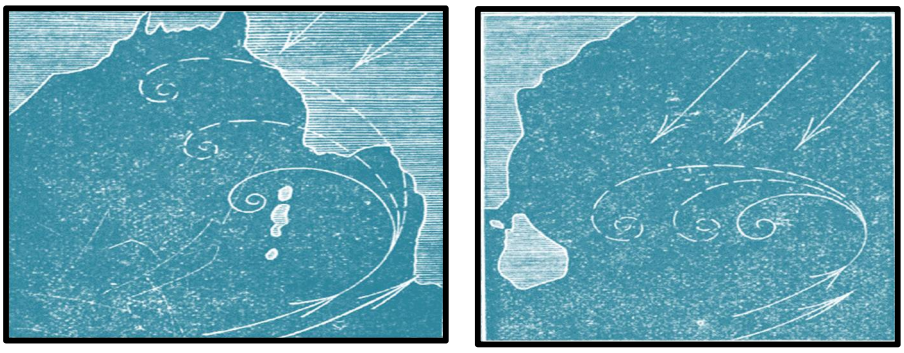
unique living identity of British Bengal's coastal regions.[3] In his research, Ranjan Chakaraborty (2012-13) referred to the Cyclone of 1864 in the context of the review of the Cyclone hazard of 1737.[4] Benjamin Kingsbury cited this calamity in the understanding of exploring the history of the Bengal Cyclone of 1876 in his book, *An Imperial Disaster* (2018).[5] These studies clearly reveal the horrific nature of the Cyclone which made its landfall on 5th October, 1864 and its devastating effects on the vast regions of the then undivided Bengal.

The East India Company, a private commercial organization, came to India to fulfill their commercial interests and later seized political power by eliminating the Mughals and other regional powers. In those days, Bengal became one of the most interesting places for its economic and commercial prosperity for the British and other colonial powers. Using the advantages of disunity of native powers, the British Company is tightening its grip to rule on Bengal by conspiracy and dishonesty. By using and clearly altering various natural components such as numerous rivers, fertile soils, deep forests, virgin quarries, etc. the British laid the deep roots of colonial rule in India. From the early days of the colonial rule, the British officials tried to study various regional natural phenomena in order to maintain their economic exploitation. In order to secure their colonial interest, various geological and meteorological investigations have been undertaken by the British in India. Since the beginning of the nineteenth century, and especially in later decades, they have made some decisive efforts. The 1864 Calcutta cyclone and the other three cyclones of November 1867, September 1872, and October 1874 had a significant impact on the development of Indian climate studies in the latter decades of the nineteenth century.[6] Huge death rates, money wastage, and the destruction of resources as a gigantic result of this disaster, the British Government has perceived the need for a Meteorological Observatory. Following this hazard, the British Government appointed a committee in 1865 to develop a tropical cyclone warning scheme. Following the recommendation of this Committee, the first Cyclone Warning Center was established in Calcutta the same year. In 1875 the Indian Meteorological Department was founded in Calcutta.[7] Moreover, two other environmental issues, drought, and famine caused by monsoon rain failures in 1866 and 1871 sparked efforts. Even before the 19th century, various experiments were carried out by the British, especially the employees of the East India Company involved in the Indian Ocean trade. In the nineteenth century, it was Henry Piddington (1797-1858), the President of the Calcutta marine Courts, who first trustfully studied tropical storms in Bay of Bengal. In 1848 he used the word 'Cyclone' for the first time, the Greek word means 'the serpent's coil' to describe this storm. His classic book, *'The Sailor's Horn Book for the Law of Storm'* and a series of memories published in the *journal of the Asian Society of Bengal* during 1838-1858, dealing with an in-depth study of the nature of tropical cyclones.[8] After Piddington, a professor of Presidential College, saw his enthusiastic impression on the field of meteorology, named Henry Francis Blandford (1834-1893) closely reported the 1864 cyclone and in 1867 he took the post of Meteorological reporter to the Government of Bengal. He was appointed head of the Meteorological Department of India, after gaining extensive knowledge and experience about various cyclones and other natural phenomena in 1874.[9]

Volume IX 2020-21
Journal *of* History
ISSN 2321-0834

The Cyclone: The countries of India, Bangladesh, Sri Lanka bordering the Indian Ocean have faced the most serious cyclonic threats in the world. Particularly "in the northern Bay of Bengal where the unique combination of a large astronomical tide, a funneling coastal configuration, low flat terrain and frequent severe tropical storms occasionally produce storm surges that kill thousands of people."[10]

***Picture* 1: Formation and progression of Cyclone in Indian Ocean**.



Source: Report on the Calcutta Cyclone of the 5th October, 1864, p. 104

The Cyclone vortex was formed at noon on 2nd October to the west of northern Andaman.[11] The Chief Engineer of the Government of Bengal Colonial Beadle asserted that the origin of the gale latitude was 19º degrees Kyouk Phyoo and about a hundred miles west of the Arracan coast.[12] From this point the gale dashed towards the west and suddenly turned to the north. From this point, the gale drifted westward into longitude 89º and suddenly turned its course to the north. It first stroked Bengal's coast near Hidglee and Balasore Road.[13] From midnight on October 4th, the Cyclone demonstrated its massive rule over the coastal districts.[14] When it touched the plains, its violent might was felt quickly in the areas. From the southern Hidgelee of the Medinipur district, the cyclone vortex turned slightly to the northeast and ran across the bank of the Hooghly River. Cyclone vortex ran a few miles from Calcutta City. From here it ran north and flowed into the middle of Nadia district.

***Picture* 2: Course of 5th October 1864 Calcutta Cyclone.**

Source: *An Investigation into the Nature and Cause of the Great Hurricane that passed over Calcutta*, on the 5th October, 1864, p. 116.

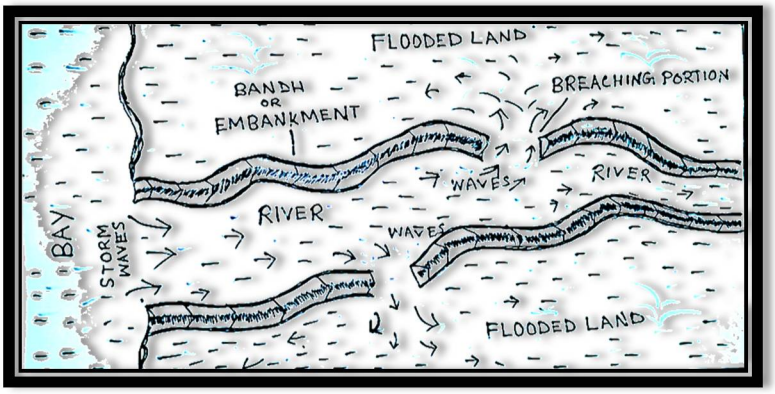
It crossed the Ganges near Rampur-Boulia and flowed towards the district of Pabna and Bagura. From here it went to the eastern wards, finally extending and exuding near Garo hill. The cyclone was about 100 miles wide. The storm was extended from the north-eastern side of Pabna-Rajsahi to the south-western part of Balasore and from south-west side of Bankura, Birbhum, and 24 Parganas to the south-east.

Not only the gust of wind with heavy rain, but the massive 1864 cyclone was also remarkable for the destructive storm-wave coming from the sea and hitting the coastal region. The height of the many rivers had risen dramatically. Adjacent to the Hooghly, Rasulpur, and Rupnarayan rivers and up to Mathabhanga, the waves floated. The different height of the storm-wave had varied in different regions. In Hidgelee the wave breached the great Sea dyke and it extended from the Suvarnarekha to the Rasulpur River. Near the Bay, its height was 4.6 inches, and at Rasulpur, it reached its highest point. At Cowcolly, the wave rose 16 feet and 6 feet 4 inches above the top of the bank, while at Tamluk, the water overtopped the embankments at a considerable height and recorded a depth of eight and a half feet. In Goonput (Modern Junput) and Dowlatpore, the wave height was measured consecutively by 11 feet 6 inches and 30 feet and 3 inches.[15] The wave at Diamond Harbor was 11 feet high and 3 miles inland. However, it stroked through Hooghly's channel, where the gigantic form of wave appeared, causing huge damage on both sides.

The main reason for the destruction of the 1864 cyclone was the sudden inundation of the storm wave. The damage occurred in the countryside of Medinipore, 24-Pargana, and Hooghly district, basically by breaching sea-dykes and embankments. Many rivers overflowed and breached the embankments in Medinipur district due to the coming of storm-wave through the wide mouth of the lower stream and rising intensity in narrow upper regions. The river Rasulpur, Haldi, the estuary of Hooghly and KoilaKhal, and the Rupnarayan inundated the vast region of the adjacent lands of Kanthi, Tamluk, Cowcolly, and Kolaghat to the Metalled road.[16] On the other hand, the Calcutta area faced a rapid rise in the water level of the Hooghly river by a storm wave that entered from the wide mouth of the Hooghly River where its width was twice that of Calcutta. As a result, the extra pressure of water did not exclude its free flow by breaching it. Strong embankments abetted to increase the intensification of the wave, which led to terrible consequences in the river.

Volume IX 2020-21
Journal *of* History
ISSN 2321-0834

***Picture* 3. The process of arriving of the storm waves through the river channel against the normal current and flooding the country by the breaching Embankments**



Source: Picture is drawn by author.

It would not be merely accepted that the damage caused by this cyclone in different regions was due solely to natural causes, behind which there was a long unplanned colonial activity by the British authorities. The commercial importance of the coastal region of Bengal has always been a very suitable site for traders. Numerous rivers had made the region highly fertile by deposition of silt and sediments. In the pre-British era, few zone came under the cultivated by clearing swampy and marshy land. The native *Zamindars* (the landlords) of the regions took the responsibilities to construct the embankments (*phulbandi* or *bandh)* to protect habitations and crops from flood without altering the landscape of the region. But it was the British who changed the landscape of the region by taking over large areas of land under cultivation in order to fulfill colonial interests. Annual floods and tropical cyclones were the main causes of severe crop damage to the British. In order to avoid crop damage and sustain economic exploitation, the British have adopted the strategy of building large embankments across the rivers and the sea in the lower and coastal regions of Bengal. From the later decades of the eighteenth century, British engineers and officials followed that strategy of heavy building in river and coastal areas. It was in 1782 that the plan for the great sea dyke began on the coast of Bengal. But these building policies had failed by breaching or overtopping the *bandh* or embankment by the annual cyclones of 1823, 1831, 1832, 1833, 1840, 1848, 1850, 1851, etc.[17] Until 1823 these embankments were under the charge of salt agents, but from now on the responsibility of the Civil Surgeon was taken over to give more control to the government. They faced severe economic losses in repairing them and feed local people. The unplanned construction policies of the colonial rulers have hindered the free flow drainage system in the region, which has caused unwanted flooding of water by medium monsoon or cyclone rains, or by breaching the *bandh*. The official and engineers supported this fact: *'...once this was removed, the Engineer had to provide protection against the direct action of the sea; hence the difficulties were increased a hundred-fold.'*[18] Construction of river embankments across river banks has had an adverse effect on the river environment. Concerning the bank of

the Hooghly River, British experts warned about the safety of Calcutta. With banks rising and long depositing silt and sediments in the river bed, the river became narrower and shallower, increasing the risk of flood hazard.

Destructions: In the morning of October 5, a heavy, fugitive cloud with a storm from the north-east had strolled through the sky of Calcutta. The region of Calcutta faced the destruction of the cyclone from ten to four o'clock.[19] From morning to evening, the cyclone became more dangerous and disastrous. The breakfast hour came, but the situation had deteriorated as the day progressed. At eleven o'clock, the wind had barely come from the north but had veered to the east. Half an hour later, the gust of wind was blowing from almost the east. The massive storm and heavy rain cloud that touched the height of the tree increased the violence. The 'great and devastating' hurricane was reached at noon.[20] According to the newspaper, The Englishman, the hurricane's greatest fury was experienced from about South-East at about 3.15 and 3.30 p.m., when the barometer at 28.40.[21] It was 3:45 p.m. when the storm-wave struck the town of Calcutta. The highest strength of the cyclone appeared to be the most destructive of the next hour. After the destruction of the storm wave, the tide caused high water at 4.37 p.m. followed, so it appeared that the storm wave was almost 1 hour ahead of the tide.[22] At 4:30 p.m. The wind had flowed to the south, the barometer gradually began to rise, and by 7 or 8 p.m. The weather was relatively moderate, with the wind in the southwest, and it was fine by midnight.[23]

Calcutta, the early capital of British India, was one of the epicenters of this cyclone. The northern part of the town of Calcutta was the worst affected by the gale of the cyclone. After six hours of the disastrous impact of the cyclone, the landscape of the city was completely changed, witnessing an immense destruction and dissolution of life and property. '*After the storm had passed away, Calcutta was so utterly quiet and dashed and broken, that it could be linked to nothing so well as to a city of the dead',* the columnist, who was an eye witness to this cataclysmic event, described the damage caused by the cyclone in the capital city in *Cambridge Chronicle and Journal, Saturday, 26 November 1864* in the words, *'The proud 'City of Palaces' has indeed been laid low, but alas! Not Calcutta only; for, with in a hundred miles, not one house has escaped.'* In terms of population, the area was comparatively populated, so the level of damage was much higher than any other. In November, 1923 an article on 5th October, 1864 Cyclone by an old lady was published in *Statesman* newspaper. After sixty years of residence in Calcutta the old lady believed that she never saw this kind of dreadful cyclone before.[24] In terms of population, the area was relatively populated, so the level of damage was much higher than any other area. In November 1923 an article about 5th October 1864 Cyclone was published in the Statesman newspaper where an old lady was interviewed. After sixty years of residence in Calcutta, the old lady believed that she had never seen this terrible cyclone before. She also said that *'...by God's blessing our old building stood firm while many substantial ones were greatly injured.'*[25]

The loss of life and property of the natives was much higher than that of the British people lived in Calcutta. According to the police report, 92 European houses had been destroyed and more than 2,000 homes had been damaged while no counts had been

attempted for the destruction of native huts.[26] For the sake of financial prosperity, the convenience of living in a *pucca* house meant that the British people were not faced with much damage except for some windows, *jhilmils* and roof sheds. On the other hand, the marginalized natives were confronted with the dire consequences of storm, rain, and flood. In addition, the native houses of *Kutcha* were wiped out across the area for miles after miles. The *Hurkaru* described that the situation in the native portion of the town had become so deplorable that those people who had immediately tried to repair broken houses for shelter had been evacuated to think of another heavy rain shower, and the sound of the coming terrible gale might have killed the relatives and friends of those who had already succumbed. The giant trees have been laid down everywhere.[27] The logs and the limbs of the trees were lying down here and there like a wounded giant and blocked the roads for many days. The collapse of valuable and large trees in the city and in Botanical Gardenhas caused considerable economic and environmental damage.[28] Thousands of telegraphic wires and pillars were mutilated. Twisted street lights were left across the roads. The trains were canceled and some of them deliberately stopped at their destination. Vehicle passengers were scared, ran here and there. The entire communication system remained collapsed. In his book, *'Bapreki Bhyanak Ashwine Jhar',* the poet, Kailaschandra Bandyopadhyay, eyewitness and sufferer of the disaster, skillfully pointed out the destructiveness and the human sufferings from the impact of this cyclone. In these words he penned: *'Oh mother!! Please rescue us from massive storm. The trees are fallen, the houses are collapsed and the people are killed– wailing all around*, *See mother!! All creatures are scared, there are no way to survival. The storm destroyed the earth, there is no record of number people who have drowned. '*[29]

Many tanks in Calcutta and its suburban areas were contaminated and affected public health in this region. From the main roads to the city's small lanes, all sunk. It had appeared like a flowing river on the road. According to the *Report on Calcutta Cyclone*, the low-lying area of Garden Reach and the large portion of Maidan had been flooded and three feet of deep-water had swept over the Strand Road. Calcutta had frequently been discussed during the British rule in the absence of a proper drainage system and long-term planning. The lack of urban planning of the British authorities has undoubtedly increased the risk of such sudden calamity for the inhabitants of Calcutta.

The floating vessels, from the native ship to the giant ships, were all severely damaged or destroyed by this storm wave. Various ships and boats sink in the river or Bay. In Calcutta port, 195 ships were standing on this day and 23 of them remained unhurt in the next day. On the other hand, 97 and 39 of the ships were severely and slightly damaged and 36 of the ships were completely destroyed or drowned.

***Picture* 4: Picture shows the damages and destruction in water by storm wave of 5th October Calcutta Cyclone.**

Source: This photo has collected from The British Library, http://www.bl.uk/onlinegallery/onloineex/apac/other/largeimage68393.html.

The *Azemia*, the *Govindpore*, the *Lady Franklin*, the *Lew Chew*, the *Ville de St. Pierre*, the *Vespasian* etc. huge ship were sunk in Calcutta. The *Baron Renfrew* and the *Allay* passenger ship were both submerged near Diamond Harbour. The *Allay* started its journey from Calcutta to Mauritius on the 4th of October, with 335 emigrants and few crews. But the storm wave was on its way near Diamond Harbor. The consequences were so horrible that only 22 emigrants and 7 crew members survived. Both *Burmah Mail* and *Persia* sink in Sandhead. In the case of the passenger stemmer *Persia* only two stuffs survived. The storm wave force was so great that Hospital ship the *Bentinck* reached the high embankment from water to its new address. In the same way, the stemmer *Bengal* was found the next day in the high and dry land of Shalimar Point, where it remained visible for two or three months. It was estimated, after the Cyclone, approximately two million sterling losses had incurred in the shipping industry. But Mr. R. Stewards and others have calculated that the damage amount is not more than one million sterling. There was a loss of Rupees 57,000 reported in Howrah alone.

However, the number of losses, the actual amount should not be calculated until the value of the native losses had been estimated. There were hardly any reports of damage to native vessels engaged in private or passenger travel and fishing or boating in the various rivers or in the Bay. The writer of *Blackwall Frigates* stated that thousands of Dingees, Cargo Wallahas, and other native ships had been destroyed by the storm. It is easy to understand that the native owner of the boats and the poor also suffered a greatly. The native poet Kailash Chandra Bandyopadhyay wrote in his book that there was no report of the damage done to the native ships that were sinking in the Ganges. In the same context, another writer and eyewitness, Mahesh Chandra De, wrote that millions of ships and native vessels were broken and destroyed here and there. The shipmen weep for their heavy losses. In the case of inland communication, during this period, people in coastal areas were mainly dependent on native bots. In times of crisis, such as annual floods and

storms, these native boats played an important role in managing the situation. In this sense, the loss of private boats to the inhabitant was inseparable.

The maximum number of deaths reported from the Medinipur District due to the destruction of the October 5th Cyclone. According to the immediate report, *A Brief History of the Cyclone at Calcutta and the vicinity, 5th October 1864* identified a total of 20,065 deaths.[30] However, a much higher number of deaths than this immediate report was reported in subsequent reports on this subject. In 1866, after two years of calamity, a report was published by J.E. Gastrell and Henry F. Blanford had a total death toll of more than 33,012 people in this district alone after the immediate effect of this cyclone. They also estimated that nearly twenty thousand deaths were attributed to the indirect effects of the cyclone alone.[31] The southern and eastern portions of the district had dealt with the most severe cyclone than any other portion of the district. Northern Hidgelle, the area that was severely affected. The Parganas of KasbaHidglee, Par Bissian, Erinch, Ghoomghur, Aurunganugger, Doroo Dummun, Mysaudul, Cassimnugger, Teraparah, Gomai, and Tamluk was confronted with the most brutal of the cyclone. The southern part of Hidgelle, such as Pargunnas, to the south of the Rasulpur River, Bahareemoth, and the western part of Peechabonne Khal, was such an extreme loss of life. The native faced the cruelest gale of the storm and the brutality of the sudden inundation of the storm. This short but inexplicable episode caused a great deal of damage to the entire area. In an instant, the entire region was transformed into a mortuary. The dead bodies were cluttered everywhere. After a few hours of confusion, all that remained was a frightening and devastating situation in the county, and the poor victims had to face indescribable, incalculable, but enduring heavy losses. They've lost family members and relatives. They had lost their home and their last shelter. They were worried about the scarcity of food, they had no clean water to drink. Thousands of cattle were crushed to death by the walls of the same roof as their master. They had nothing to leave. Like humans, the other creatures, like birds, have lost their abode and even their mate.

There was no proper account that claimed the actual state of destruction of 5th October. In fact, it was impossible for anyone to describe it in a tiny paper. However, with a deeper explanation of some small and grass root-level incidents, the nature of the consequences of the incidents would be understood. From Rasulpor to Kukrahati, and especially in the Kedgeree area, a huge number of deaths had reported. There was no family here whose relatives had not died in this cyclone. Only in the Kedgeree police station where 1,585 deaths have been reported. In Goomghur, ¾ of the total population deaths reported. Saratram Pradhan, who was Nayeb of Dorodoomnan, a few years ago of this cyclone, counted the region with 15,000 inhabitants, but after the cyclone, the population dropped by 5000. In this description, it is easily realised how powerful the cyclone was. He also described the incident of *dacoity* that took place near Nandigram, in which case 32 witnesses had been chosen, but after the cyclone, only two persons had been identified and a further thirty had not been found.

In Hooghly district, the extent of the devastation by this cyclone had appeared in more or less way. The storm felt in the most severe form in the eastern and southern portions. The villages near the river Hooghly had suffered extensively from the

inundation. Samuel R. Elson, a pilot of the Hooghly Branch, gave a heart-broken description of his experience on his trip to the river on 8 October. He said that the devastation had become so cruel as far as the Hooghly point from Calcutta across the river. The roof of the house, the furniture, the corpse, and the carcass floating everywhere. In Ulberia, the storm wave sweeps the markets and the houses.[32] The town of Serampore had received extensive damage. The part of Howrah, Upper Mundleghat, also faced serious damage, and nearly, 2500 people were died.

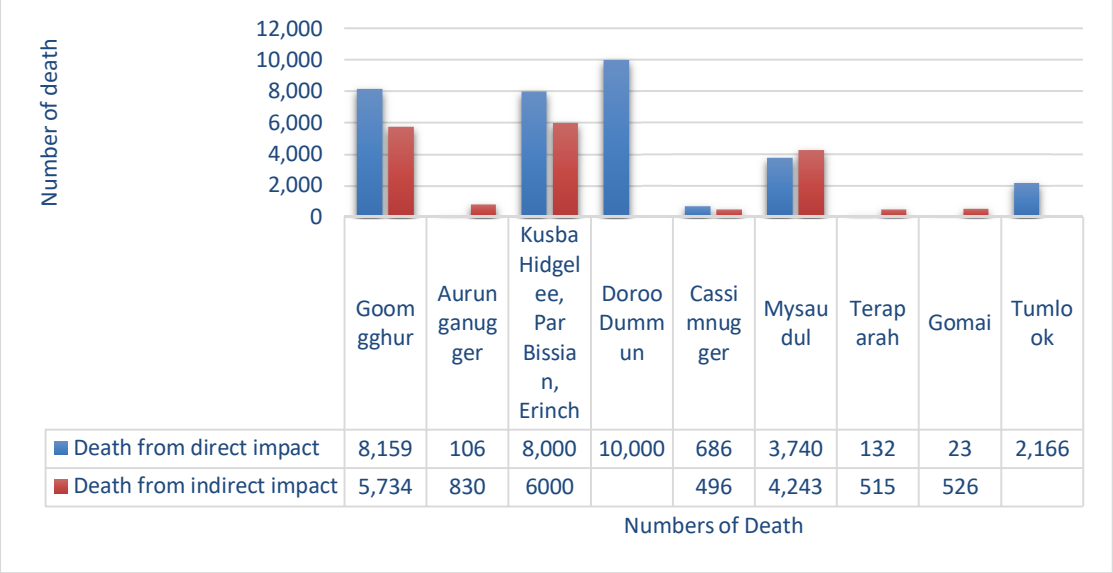
After the Medinipur District, if any of the areas most affected by this cyclone was the 24-Parganas District. Because the southern part of the district is located on the shores of the Bay of Bengal, the influence of gale on the north-western part of the area has been strongly felt. Not only had the gale of the cyclone but also the storm wave of the sea formed a heavy flood that struck most of the country. As a riverine area, the Cyclone had felt a double attack in the area. According to Mr. Windle, the height of the storm wave was 12.7 ft. in Diamond Harbor. He described that after gaining fury, the storm wave hit the 8th ft. embankment and flowed over 4.58th ft. high. The wave is running over the height of 3 ft. of the Metalled Road, said Mr. Verner. Several villages completely drowned. The wave was so strong in this area that it created a great flood-like situation over a 3-mile area along the river. It flowed higher (6th ft.) than the height of a human being.[33] Captain Lewis, an employer of Government Hospital Ship *Bentick,* described in his account that *'The Bentinck was drawing 20 feet the time, and was lifted over the river embankment 4 feet above high-water mark.*'[34] In terms of damage, the region was in no way inferior to all other major disaster zone. People were faced with irreparable losses. It was easily understood that the real situation was worse than the description of the governmental account. The cyclone caused a great casualty in Sagardip. It was once felt that about 90 percent of the total inhabitant on the entire island had died. Out of about 6000 people, 1500 people were able to save their lives somehow. Which means a total of two-thirds of the total population had died. In his letter, H. L. Dampier, Commissioner of the Nadia Division, to Secretary of the Government of Bengal stated that '*Sagor Island is literally denuded of every hut and village; 90 percent of population are drowned.*' On this issue the Gastrell and Blanford described that *'the population previous to the cyclone was 5,625 of these but 1,488 survived, of whom 802 only were men. The loss of life was therefore 4,137 souls, or rather more than 73 percent.'*[35] The houses, barns were completely reduced to rubble. Very few organisms existed on the island after the disaster. A heartbreaking description had been written in *A Brief History of the Cyclone in that word: 'The few human beings that escaped were saved either by climbing up trees, or by floating on the roof of their houses, which the wave swept on to the main land and carried inlands many miles.'*[36] There were numerous sources highlighted the misery conditions. According to *The Blackwall Frigates, 'At Saugor Island every hut was swept away and only a few natives saved themselves by climbing trees, the sea covering the land to the depth of 16 feet.'*[37] Not only humans but various creatures also faced life challenges. Large number of cattle, wild animal, and birds were destroyed. *There are no jackals, dogs, or vultures to do the duty of scavengers.*[38] At Sundarbans thousands of inhabitant and innumerable wild animals were drowned[39] and nearly 7000 cattle died in this calamity, and 80 percent of the total livestock was destroyed in the entire district. In this

district, more than 12,000 people were died due to the storm and storm wave. According to Mr. Payne a missionary, who was engaged in the relief distribution in this district, there were 80 percent of the people died who lived in 1 k. m. near the riparian tract and 30 to 40 percent people died who lived in the other villages.

Post-cyclone period: To deal with the situation various actions had taken by the Government, local officials, and many native gentlemen. Very few immediate efforts had been made to reduce suffering. It took a couple more weeks for the initial relief to arrive. Even though the sufferer had to wait a few days in the cold weather to get essential items like food, drinks, and clothes. Dirty drinking water, bad food that was the fertile cause of disease, was not as distressing to the people as it was to the mental pain of losing their relatives by inundating. A few days later, the consequences of the cyclone were silently struck more horribly and durably. As an acute effect of the November 5th October cyclone, a cholera epidemic broke out in the Medinipur, 24-Parganas, and Howrah districts. Besides Cholera, people were plagued by various diseases, especially Dysentery, Diarrhea, and Fever. It was Fort Mornington and Paroolpara (Parulpara), on the north bank of the Rupnarayan River, where the first outbreak of cholera had occurred. After one month, it spread to Darro, Mysadul (Mahisadal), Goomghur, Erinch, Khejuri, Hidglee, and even Diamond Harbor with great violence. For the district of Medinipur, Mr. Montresor reported that a large number of villages, almost all villages, had been depopulated by terrible diseases such as cholera and smallpox. A small village with a population of 150, where 40 people had died, Mr. P. Dickens also said that almost every village suffered from a fearful illness caused by an increase of cholera.[40] The post-cyclonic period posed a greater threat to the victims of the region. Initially, the short-lived but terrible form of the cyclone attacked the people to a great extent but a more severe consequence waited for the people. In Gomai, Teraparah, Mysaudal, where more people died because of illness than the destruction of the gale or the flood. In Gomai 23 people were drown and 526 people had died from diseases. In Mysaudal, 3,740 people died for the former reason, while a total of 4,243 died for the latter. In Teraparah132 and 515 people died consecutively due to storm waves and illnesses. On the other hand, 686 people died in a direct cyclonic effect and nearly 500 people died of illness in later months.[41]

Volume IX 2020-21
Journal *of* History
ISSN 2321-0834

***Table 1*: Mortality due to 5th October 1864 Calcutta Cyclone in Mednipur District.**



***Source*:** *Report on the Calcutta Cyclone of the 5th October, 1864*, Military Orphan Press, Calcutta, 1866, pp.130-132.

The Superintendent of Cowcolly Light House, gave a stinging description of that *'...the unfortunate inhabitants are dying in scores every day, from a diseases very similar to cholera, brought on by using the water of this place. Every tank, pond and well is stagnant with decaying matter, both animal and vegetable, besides being filled with salt water. I cannot accurately state what the loss of life has been by the cyclone and inundation, but I am afraid the fatal malady has carried of more. There is utter desolation everywhere. Scarcely a human being to be seen. The paddy, now ripe, is left in the fields for cattle to destroy. When I have asked any of them the reason of this, the answer always was, who is to cut?'*[42] The Southern Hidglee was one of the most storm-hit regions where Colonial Short observed, after a few months, that after the cyclonic period, the vast area submerged in the water, people were totally helpless, when their need was most felt, they had no food or proper drinking water. The water of many tanks had polluted by saltwater, fallen trees, and the debris of the villages. At a session of heavy cold weather, the clothes and shelter required more, but they had nothing left.[43]

The Post-cyclonic situation of 24-Parganas district became so terrible and dreadful by occurrence of starvation, famine and of various diseases. In his autobiography, Sivnath Sastri (1847-1919), a social reformer and active Brahmonist, mentioned the horrible cyclone of 1833 in lower Bengal and, following the calamity, deadly cholera devastated the region that caused thousands of deaths. Within ten days, he had lost his grandparents and his grandmother.[44] The same consequence reappeared after twenty-one years. He vividly described the terrible experiences of the 1864 storm on his way to the native village from Calcutta.[45] The official saw hundreds of dead bodies lying near Diamond Harbour. There was no single drop of sweet water in the region. According to Babu Hem Chandra Kar, the Deputy Magistrate and Deputy Collector of Diamond Harbor, *'A part*

of the Diamond Harbour road has been nearly blown off, and as we pass we see nothing but dead bodies floating on two sides of the road from Rajahat to the utmost limit of the Diamond Harbour Sub-Division. Something terrible has happened, and, unless Government kindly grants some sort of relief without delay, the case will be worse."[46]Out of four thanas of this sub-division, nearly eleven thousand inhabitants or one-third of the total population had died by the destruction of the cyclone, whereas more than four thousand of victims deceased by cholera in Sultanpurthana alone.[47]

Most of the area of the *Sagar Island* had suffered from the destruction of the Cyclone. As a result, numerous casualties had occurred. Lots of wealth was destroyed. Although an estimate of the loss of public property was made, it was impossible to put any calculation on the amount of the destroyed private property. The most important thing about this disaster was that more distress was felt later than the time of Cyclone on October 5, 1864. The death toll from food shortages, drinking water, and the wrath of various diseases was much higher in later days than the direct attack by the Cyclone on 5 October. Due to the lack of clean water, people were forced to drink contaminated water that caused some deadly diseases, such as cholera, in the regions. The river and the ponds were filled with the saltwater of the sea. The lack of food was another reason for the great suffering of the masses.

Relief Work: After the cyclonic period, it was the British authority's greatest challenge to reducing hardship and suffering by distribution of relief to the victims in marginal areas. Some European and native gentlemen immediately collected money. Two relief committees were set up in Kanthi and Tamluk under local officials. A public meeting was held in Calcutta to raise £30,000 for relief.[48] In those days, the people of the villages depended heavily on the rivers and the tanks for their drinking water. The gale of storm and storm wave has altered the condition of the region. It ruined the tanks and filled them with salted water. The problem of drinking water became so terrible to the sufferers. The condition had deteriorated to such an extent that they had been forced to inhibit their thirst with dirty water in starvation. It damaged crops throughout the field and devastated the paddy in the barn. They didn't have anything left. A heartbreaking incident reported from Diamond Harbor where thousands of storm-affected people who were completely starving, they did not get any food even after two days of the storm, had come to Mr. Eraser's salt *Golahs* for salt.[49] Few officials feared that the scarcity of food and water would lead to an epidemic situation in the entire region.

The damage to Sagar Island was so great, but the British relief effort in this area was not satisfactory. For the relief work, the British have taken a few strange measures to deal with the situation. At first, the officials ordered to stop relief to the able person. They have only provided relief to women and children. From an ethical point of view, this kind of relief policy posed a serious question to the benevolent authority of the British in India. In this difficult situation, the value of labor has become high. The need for labor increased in the repair or construction of the house and the clearing of the spoils and the arrangement of food and water or the enclosure of the embankments. Without any payment the victims who were involved in the work were paid with food only. On the other hand, the labors were appointed by the PWD for the repairing the government

embankments were paid about two and half *annas* which was lesser at this time of crisis than the before. In same time, the prosperous people of the area paid up to six *annas* per day to a labor for repairing their house.[50] V.H. Schalch, the police commissioner Schalch, Calcutta, believed that the labour value had increased in the post-cyclonic period. According to him, in this condition, the standard of living of people developed by the growing value of labour. He mentioned that even unskilled labourers like kulli, who usually carry heavy goods, agree to work for ten *annas* per day.[51] It was assumed from the various official sources that the labour value had increased after the cyclone, but he wrongly pointed out that the standard of living had increased in post-cyclone days. In fact, in a disastrous condition, it was not easy to meet the sudden growing demand for labour, because the workers who were living below the poverty level, and when they lost everything, basically skilled labourers, were trying to develop their condition in their own way. There were hardly any poor people who did not suffer from scarcity of food or drink or a need for shelter. Few mud houses were probably standing and almost demolished in the entire region. Comparatively well-off native families were able to afford to pay for the repair of their home, so they had no choice but to pay higher wages with food for daily labour. In this way, however, some surplus money came into the hands of the poor, which helped at least a little in the crisis.

But the role of the Bengal Government in this matter was inadequate. The officials faced challenges to get labor for repairing Government embankments, cleaning roads or cremating corpses and carcasses, or clearing embranchments and debris from tank. In fact, the policy of the British Government was associated to refrain from paying extra labor. They were not inclined to provide any relief even without public health and emergency work in crisis. To repair the government embankments in Medinipur, Hooghly and 24-Parganas, the British authority ordered that the labourers be hired from the nearer villages by providing only food and in some places, P.W.D provided works with a small amount of money to natives which was not enough to reduce sufferings from the crises.[52] In order to keep their financial exploitation perennial and stable, the Government had repaired river embankments across a vast area of lower Bengal with low cost and hard labour in return for relief in times of crisis, while their financial exploitation from that region has continued in the future.

Conclusion: Any fatal environmental hazard could hinder or hamper the political and economic progress. There was no way to avoid this kind of danger. Only we could reduce the hardship and distress by adopting coherent measures and cautions. By experience from previous calamities, we need to sketch proper plan and blueprint, otherwise more dangerous impact waited for near future. The 5th October 1864 Calcutta cyclone was one of the worst catastrophes in the history of natural hazard in British Bengal. In term of damage the impact was greatest in the coastal districts of Medinipur, 24-Parganas, Hooghly. Three-way attacks of the Cyclone bring the terrible consequence to the public. No doubt, the unplanned and extravagant water controlling policy of the British increased the consequence of this natural disaster. Late but more adverse effect of this cyclone arose from rising of various diseases like Cholera, Dysentery, Small pox and Fever. Indifferent attitude of the British authority towards the relief and proper arrangements increases the peoples' sufferings. The number of mortalities reported due to sicknesses

became same or sometime more as the direct impact of the cyclone. To the end, I think, a quotation from a report of a correspondent, published in *Cambridge Chronicle and Journal* on 26 November 1864, may serve as a conclusion:

'*The great storm of 1864 will become a matter of world history. It was a day I shall never forget.*'[53]

Notes and References

[1]J. Donald Hughes: 'New Orleans: An Environmental History of Disaster' in Angela Mendonca, Ana Cunha and Ranjan Chakrabarti (eds.): Natural Resources, Sustainability and Humanity. Dordrecht, *Springer Science+Business Media,* 2012. pp. 17-18.

[2] Kazuyoshi Kikuchi and Bin Wang: 'Formation pf Tropical Cyclones in the Northern Indian Ocean Associated with Two Types of Tropical Intraseasonal Oscillation Modes' in *Journal of the Meteorological Society of Japan*, 2010 Vol.88, No.3, P. 475. DOI:10.2151/jmsj.2010-313

[3]Arabinda Samanta: 'Cyclone Hazards and Community Response in Coastal West Bengal. An Anthropo-Historical Perspective' in *Economic and Political Weekly*, 1997, Vol. 32, No. 38, pp. 2424-2428, Stable URL: http://www.jstor.org/stable/4405871Accessed: 02-11-2015 08:09 UTC

[4]Ranjan Chakrabarti: 'The Kolkata Cyclone/Earthquake of 1737. Random Scribbles in *Vidyasagar University Journal of History*, 2012-13, Vol.1, p. 10.

[5] Benjamin Kingsbury: *An Imperial Disaster: The Bengal Cyclone of 1876*. New York, Oxford University press, 2018, p. 28

[6]Tirthankara Ghosh: 'Historicizing Earthquakes and Cyclones: Evolution of Geology and Clownology in Colonial India' in *Indian Historical Review*, September2019, vol. 46(1), pp. 10-11.

[7] L.S. Rathore, M. Mohapatra and B. Geetha: 'Collaborative Mechanism for Tropical Cyclone Monitoring and Prediction over North Indian Ocean' in M. Mohapatra, B.K. Bandyopadhyay, L.S. Rathore (eds.): Tropical Cyclone Activity over the North Indian Ocean*,* New Delhi, Springer, 2017, pp. 3-4.

[8]Porathur V Joseph: 'Tropical cyclone hazards and warning and disaster mitigation systems in India' in *Sadhana*, August 1994, vol. 19, part 4, p.551.

[9] 'Henry Francis Blanford, F.R.S (1834-93)' in *Nature*, June 1934, vol. 133, p. 824. https://doi.org/10.1038/133824c0

[10] Neil L. Frank and S.A Husain: 'The Deadliest Tropical Cyclone in History?' in *Bulletin American Meteorological Society,* June1971, vol. 52, no.6*,* p.438.

[11] J.E. Gastrell and Henry F. Blanford: *Report on the Calcutta Cyclone of the 5th October, 1864*. Calcutta, Military Orphan Press, 1866. p.11.

[12]*A Brief History of the Cyclone at Calcutta and vicinity, 5th October 1864.* Calcutta, Military Orphan Press, 1865. p.1.

[13]*Annual Report on the Administration of the Bengal Presidency for 1864-65*. Calcutta, The Bengal Secretariat Office, 1865. p. 155

[14]Sweta Dutta: A Social History of the Natural Calamities in Colonial Bengal (1770-1943), PhD thesis, Jadavpur University, Kolkata, 2013, p. 127.

[15]*A Brief History*, *Op. Cit.* p.7

[16]W.W. Hunter: *Statistical Account of Bengal.* London, vol.-iii, Trubner & Co., 1876. pp.219-221

[17] Henry Leland Harrison: *The Bengal Embankment Manual*. Calcutta, The Bengal Secretariat Press, 1875. p. 31-32.

[18] Ibid. p. 31.

[19]*A Brief History*, *Op. Cit*. p.2.

[20]*Cambridge Chronicle and Journal*, Saturday, 26 November 1864, p.6.

[21]*The Englishman*, Saturday, 12 November, 1864, p.3.

[22]Gastrell, *Op. Cit.* p.122.

[23]*The Englishman*, Saturday, November 12, 1864, p.3.

[24]*Statesman*, November 23, 1923.

[25] Ibid.

[26] Basil Lubbock: The *Blackwall Frigates*. Boston, Charles E. Lauriat Co, 1922. p.145.

[27]*The Englishman*, Saturday, November 12, 1864, p.3.

[28] Dr. Thomas Anderson (1866): 'Notice of the effects of the Cyclone of 5th October 1864 on the Botanic Garden, Calcutta' in *Transactions of the Botanical Society of Edinburgh*, December 2010, vol. 8 no.1-4, 366-375, DOI: 10.1080/03746606609468596 link: http://dx.doi.org/10.1080/03746606609468596

[29]Kailaschandra Bandyopadhy: *Bapreki Bhyanak Ashwine Jhar.* Calcutta, Sil and Brothers, 1271(Bengali calendar). p.1

"Mahajhar bhayetarakara go nistar!
Tatritatri dayamayi janani ebar !!
Jhartejebrikhajata, pray sab halahata, grihadi pare tabat, lokehahakar !!
Arodekho go bhavani, jharatekampitaprani, pranrakhkharupainapaiprani !
Tahejharsamakal, dharakarerasatal, dubaye kata maril, sankhyanahi tar!!"

[30]*A Brief History*, *Op. Cit.* p.6

[31]Gastrell: *Op. Cit.* p. 132-133.

[32] Samuel R. Elson: 'Personal Memories and Reminiscences of the Calcutta Cyclone of 5th October 1864' in *Bengal Past and Present: Journal of the Calcutta Historical Society,* January 1908, vol. 2, No. 1, p. 123.

[33]Gastrell: *Op. Cit*. p. 120.

[34]Ibid. p. 36.

[35]Ibid. p. 135

[36]*Annual Report,* p. 159

[37]Basil Lubbock: *Op. Cit.* p. 143.

[38]*A Brief History,* p.56

[39] Basil Lubbock: *Op. Cit.* p. 143.

[40]Gastrell: *Op. Cit*. p. 126.

[41] Ibid. p.126-127.

[42]Gastrell: *Op. Cit.* p.126.

[43]Ibid. p.128.

[44] Shree Shivnath Sastri: *Atmacharit*. Calcutta, Prabasi-Karyalaya, 1325 (Bengali Calcander). p.6

[45] Ibid. p. 88-93.

[46]*Brief History,* p. 41

[47]Gastrell: *Op. Cit.* p. 136

[48]Hunter: *Op. Cit.* pp.225-226

[49]*Annual Report. Op. Cit.* p. 160

[50]*Brief History*, p. 80.

[51]Ibid, p. 95.

[52] Ibid.

[53]*Cambridge Chronicle and Journal*, 26 November, 1864, p.6.