

## **RIVER, LAND AND PEOPLE OF BENGAL: COLONIAL ENCOUNTER AND ITS AFTERMATH**

**GOUTAM SARKAR\***

---

### **ABSTRACT**

**Keywords:**

Landscape;  
Water-streams;  
Prosperity;  
Exploitation;  
Future measure.

### **Abstract**

u Bengal proper is a great plain lying between the Himalayan Mountains and that part of the sea which is called the Bay of Bengal. The most prominent feature of Bengal's landscape is the existence of innumerable rivers and streams both large and small, are connected together by a marvellous network of smaller rivers and streams, most of it is flooded with water for from three to six months in the year, nevertheless its agricultural yield is so large that it maintains a very large population in a state of comfort. During colonial period the exploitation of rivers and interference with their natural regime has crossed all reasonable limits leading to their steady degeneration. For seasonal lack of enough water it fails to maintain its channel as an efficient drainage system throughout the year in present time. As a result its bed gets gradually silted up, its channel is choked and it ultimately dies. Instead of nourishing they are now threatening man's life.s to decide whether to read the document in its entirety.The Abstract

*Copyright © 201x International Journals of Multidisciplinary Research Academy. All rights reserved.*

---

**Author correspondence:**

GOUTAM SARKAR  
Assistant Professor, Stage-3,  
Sewnarayan Rameswar Fatepuria College,  
Beldanga, Murshidabad.  
Email: g9sarkar@gmail.com

---

### **I. INTRODUCTION**

Through this study I want to measure the intensity of relation between mutually dependent people and environment. Environmental history has taken great strides in the past few decades, in the global as well as the South Asian context, yet, apart from peripheral regions, such as forests and hills, ecological questions remain absent from the broader history of South Asia and many other parts of the world. This study shows the ecological changes in nineteenth and twentieth century Bengal and how human interference speed up it. In undivided Bengal, the pre-mature decline of the old rivers or sudden rise and violence of the new ones are natural features of the landscape intersected by many rivers, spill

---

\* ASSISTANT PROFESSOR,STAGE-3.

channels and sub-channels. In our Bengal the premature decline and death of old rivers or sudden rise and violence of new ones are natural features of the landscape, intersected as it is by a maze of rivers, spill channels and sub-channels. Flood discharge in the area of deposition gradually raises the margins of the active streams. As the riverbeds rise higher, the river loses connection with the headwater and languishes with some of its spill channels. But in the previous two centuries human interference hastened the decay and made it more widespread, were deforestation in the catchment areas of rivers, premature swamp reclamation, canalization and other interferences with the river and drainage system, such as the construction of marginal embankments, bandals, roads, railways and bridges, profoundly affect the regime of the rivers. This changing scenario simultaneously changed the cycle or character of people and land of Bengal. It is difficult but not impossible now to remedy the damage caused by previous centuries.

## II. AREA OF STUDY

There have no specific or particular region is selected for this study. The area of whole Bengal is fitted for study. Because, the colonial water policies were common to all over Bengal and its effects were same. And now we are facing same problem in both regions of West Bengal and Bangladesh. So my area of study is Bengal, i.e. undivided Bengal.

## III. METHODOLOGY & MATERIALS

Present study involves only secondary data collected from Govt. reports / press releases , relevant reports or researches of previous researchers, concerned experts' opinion, articles etc. Also to design this study here I used my field experience which has been gathered through watching many rivers, khals, baors, bils, etc, are dying or died. In Nadia district three glorious rivers Jalangi, Matabhanga-churni and Ichhamati are now going to die and also same to many bils, khals, etc. I have wanted to know how and when it has been started and to what extent our colonial Government is responsible for this.

## IV. PHYSICAL FEATURES OF BENGAL:

Bengal (Bengali, Bangali, Bongo or Bonggo) is a historical, geographical and ethno-linguistic region in Asia, which forms the eastern region of the Indian sub-continent, at the apex of the Bay of Bengal, which was politically divided in 1947 and the region today comprises the nation of Bangladesh and the Indian State of West Bengal, although some regions of the previous kingdoms of Bengal are now part of the neighbouring Indian states of Assam, Tripura, Bihar, Jharkhand and Orissa. The region of Bengal is natively inhabited by Bengali people who speak the Bengali language.

The region of Bengal is one of the most densely populated on Earth, with an estimated population of more than 250 million people and a population density exceeding 900/km<sup>2</sup>. Most of the Bengal region lies in the low-lying Ganges-Brahmaputra River Delta or Ganges Delta, the world's largest delta. In the southern part of the delta lies the Sunderbans- the world's largest mangrove forest and home of the Bengal Tiger.

More than one-half of Bengal consists of alluvial plain formed of silt which has been brought down by great rivers. Throughout this portion of the province, except where we approach the hills, nothing so coarse as gravel is found, the ground to a great depth consists of sand, clay and like materials; the surface, wherever it is flooded during the rainy season, constantly receives fresh deposits of mud which render the soil of inexhaustible fertility. The land we live in was built up gradually by the silt carried by the rivers mainly from the Himalayas and partly from the hills of Chhota-Nagpur and the hills situated outside western border of West Bengal.

## V. RIVER-SYSTEM OF UNDIVIDED BENGAL:

The principal rivers of Bengal are of allogenic type in the sense that they have their sources in distant hills and mountains where they are fed partly by the melting of snows and partly by rains. They flow for hundreds of miles before entering the vast plains of Bengal, which stretch in all directions, and lie almost at the base level of erosion. The Ganges (ganga), the Brahmaputra and the Meghna, the three largest river systems of India, merge together in the plains of Bengal, before entering the sea. All there have large flows in the wet

summer season and periods of low water before the rains set in. These three rivers receive between them the waters of all other streams, except the Subarnarekha in the west and the Karnaphuli and a few others flowing south of it, in the east, and go on distributing their waters through a large number of channels on their seaward march. Of the three, the Ganges is by far the most important. South and also north of its present principal channel, locally known as the Padma, its waters flow, at least part of the year, through a number of distributaries. The Bhagirathi (Ganga) is its westernmost and was at one time its principal channel, the lower reach of which was named the Hooghly by English sailors in the seventeenth century. This river is of vital importance not only to the present province of West Bengal, but also to the whole of Northern India, as on its banks stands Calcutta, the largest port of India. From the dry weather flow of the river it is evident that it is dying in its upper reach and that the conditions of its left-bank feeders, the Bhairab-Jalangi and Matabhanga are no better. Besides the Matabhanga, the Ichamati-Raimangal flows near the present boundary between West and East Bengal. It is a perennial river. East of the present boundary the only river that carries sufficient quantity of Ganges water is the Garai-Madhumati-Haringhata. Further east lies the Arial Khan which was the main channel of the Ganges before it turned east to join the Meghna. There are a number of estuaries, each resembling an arm of the sea, between the mouths of the Hughli and the Meghna. West of the Haringhata these are kept open by tidal waters and local rains. The right bank tributaries of the Bhagirathi and Hughly belong to a different river regime. They run more or less from west to east, each independent of the other, through wide alluvium-filled troughs. They are mere trickles in the greater part of the year, but with the advent of the monsoonal rains they become unaffordable, and are often subject to violent and destructive floods. The Damodar is the typical example of this type of river. The Ajay which lies further north, becomes completely a dry bed.

The North-Bengal plains are bordered on the east by the Bramhaputra (Jamuna) and on the south by the Ganges (Padma), and across them flow the Tista, Mahananda and many other streams. Before 1787 the Tista used to flow into the Ganges through the Atrai channel, and its water was also distributed through the Karatoya and Purnabhaha. Since its diversion most of the rivers of Northern Bengal have been deprived of their headwater and are now drying. The Mahananda is the only exception, but even this shows a tendency to leave its present bed through Bengal, and take to newer westerly channels. The present Tista and all the other rivers which flow east of it, the Jaldhaka-Gangadhar, belong to the same regime. They are all Himalayan rivers, and their level rises all of a sudden even 2 to 3 feet in a day and subside quickly without appreciable damage to crops resulting from this submersion.

The Bramhaputra perhaps carries more water than the Ganges. Its present course runs much to the west of its former channel, which still flows past Mymensingh town and carries some Bramhaputra water, especially in the wet summer season.

The Dhaleswari, Buriganga and Lakhya are the other important perennial streams which flow in between the Jamuna and Meghna. The winter discharges of flow of the first two are considerably lower than that of the Lakhya. Thus the Lakhya is the more steady river and has on its banks some growing industrial centres like Narayanganj.

Unlike the Ganges and Bramhaputra, the Meghna is fed entirely by rain water. The excessive rains on the southern slopes of the Meghalaya and in the Eastern Hills and Surma Valley find their way into the channel of the Meghna and make it a formidable river. The presence of a number of large alluvial lakes, locally known as haors, along the course of the Meghna tends to make the flow more uniform than that of the Ganges or Bramhaputra.

East of Meghna the only rivers of importance are the Gomti, Halda and Karnaphuli, they maintain certain amount of flow even during the dry season sufficient for the purpose of navigation by country boats and, in the case of the Karnaphuli, sufficient for maintaining the outfall even for the purpose of navigation by sea-going vessels.

## VI. LAND, RIVER AND PEOPLE: THE INTERMINGLED RELATION:

India is mainly a land of agriculture and course of civilization and culture upto the middle of 19<sup>th</sup> century may be termed as agricultural. And in comparison to that of other regions in North India a richer picture of agriculture is seen in alluvial plain land of Bengal which is washed by large number of rivers and streams as well as other water resources.<sup>1</sup> This apart from various historical records, we come to know of Bengal's industrial prosperity since remote ancient times. Consequently, agriculture industry and favourable geographical environment together turned Bengal into a land of prosperous and widespread trade and commerce centre alongside other places of India. From ancient times to the beginning of the 4<sup>th</sup> century we know much more of Bengal's prosperous trade and commerce than of its political history. Bengal is found to have trade-linked with other regions of India- as for instance Egypt and Roman Empire on the one hand and South-east Asian countries and islands, as well as China on the other.<sup>2</sup>

One of the reasons for these trade relations of Bengal with other regions of India and various foreign countries is her material prosperity. We get accounts of the richness and plenty of this wealth and prosperity of Bengal from the writings of different native and foreign writers and traders- “Fame of cotton industry of Bengal had spread far and wide much before the advent of Christ and the proofs that it had been the main industry of this country are born by writings like Arthashastra of Kautilya, Periplus of the Mary Erythrean Sea as well as accounts of Arabian, Chinese and Italian travellers and traders. Of the exported commodities from the Ganges port- Malabathrum or Tejapata occupy the first position and Ptolemy has spoken of the good quality of Malabathrum produced in the land of Kirrhadae or Kirat”.<sup>3</sup> “Purchas describes Bengal as plentiful in rice, wheat, sugar and silk and enjoying also a very wholesome air. Verthema says of Bengal- this country abounds more in grain, flesh of every kind, in great quantity of sugar, also of ginger, and of great abundance of cotton, than any country in the world”.<sup>4</sup>

So it is clear that all the time we come to know of words of praise about Bengal’s agricultural products and the wealth created by them in accounts of travellers and scholars from ancient times to the days of the colonial period. It is justly said by R.C.Dutta in his book- ‘Peasantry in Bengal’- “Bengalis one of the greatest agricultural district in the world, and her rich alluvial soil, if properly cultivated, will produce gold”. As because it was enriched by this fertile geographical environment that inhabitants of Bengal were able to produce surplus products. Our earlier statements bear the testimony to this view. It is true that all parts of Undivided or Greater Bengal were not equally fertile or prosperous in all respects. Yet largely the soil of Bengal at this level in most parts was fertile and the one of the causes of its fertility was the existence of innumerable rivers and brooks, canals and marshy land. These rivers and brooks have spread all around like spider’s web. The importance of the river system to the whole Bengal, however, depends not so much upon the number of large rivers as upon the multitude of smaller distributaries and streams, which act as irrigation channels and spread the flood water far and wide. Every depression is surrounded by a large number of channels, which fill it or drain it at different seasons of the year. From ancient time yearly floods have made land of Bengal fertile and more fertile. “The Internal commerce mostly consisted of rice and other grains, from surplus to deficit areas, salt, tobacco, betel nuts sugar and some high priced fabrics”.<sup>5</sup> This ability leads to export of its surplus produce to the regions which had scarcity of products and the area of this ability spreads beyond the border of Bengal to different parts of India as well as various foreign countries.

We know it very well that Bengal is mainly an agricultural land, the rivers were thus the principal source of economic well-being of the people and where they were still active and were performing their original functions, as in East Bengal, the people were healthy and prosperous; where they were deteriorating and their beneficial activities had been interrupted, either due to natural causes or due to human interference, as in central, western and northern Bengal, the area was progressively deteriorating both as regards health and productivity of the soil. The thousands of miles of rivers and canals are the life board of Bengal and its people. They have traditionally been the main arteries along which passengers and all type of cargoes have been transported. The waterways are integrated into the whole economy and at all levels. Walter Hamilton has justly said, “Bengal from its westernmost boundary to the sea, is watered by the Ganges, and is intersected in every direction by many navigable streams, which fall into that river, and which will be found describing along with the districts through which they principally flow. There is no district wholly destitute of internal navigation during the rains; and even during the driest season there is scarcely any part 20 miles distant from navigable river. In most of them lakes, rivulets, and water courses, communicating with great rivers, conduct boats to peasants door”.<sup>6</sup> “Owing to its admirable facility of transportation by water, the internal commerce of Bengal is very great”.<sup>7</sup> The towns and villages of Bengal had grown up along its rivers and canals. Sometimes they had been washed away or left stranded by rivers that had changed their courses.

Yet to be infected by the modern mania of economic development and continued growth and living a simple life in peace and plenty the Bengalis of earlier times were generally well contented with what they got without much exertions from the bounteous nature. Intellectually not less keen than many, they did not seem to have ever felt the necessity of being very inventive and to attempt to interfere too much with their natural environment. They often suffered because of the vagaries of nature no doubt like occasional floods or droughts but instead of trying to master it they tried to live in peace with nature by adjusting their ways of life to their physical environment. Their cropping pattern, like the cultivation of rabi or kharif crops, was also developed keeping the variation in seasonal availability of water in view. The rivers and waterways in past determine the country’s ecology, its climate, its capacity to feed itself. As the rivers deteriorate the ecology will change, in ways that cannot always be predicted. As water is used for irrigation in one place, increased salinity will render another place unfit for food production. As the rivers become more clogged with silt, they will be less able to work the monsoon flood waters, causing misery to those who have previously escaped them. And as the rivers die, so will the fish within them, depriving the people of their most important source of animal protein.

## VII. COLONIAL ENCOUNTER:

The river which today is not a roaring stream with a deep channel and sharp currents, is degenerated with the changes in the environment. For seasonal lack of enough water it fails to maintain its channel as an efficient drainage system throughout the year. As a result its bed gets gradually silted up, its channel is choked and it ultimately dies. Its economic prosperity has waned and reduced to a collection of marshes and swamps the place has become unhealthy and miasmatic and a breeding ground of diseases and epidemics.

The changed geographical environment of Bengal is a result of a long natural process. The process was only enhanced unscientifically under the British administration and care. The British came to India with the sole purpose of trading. They setup their trading posts first along the coasts, after gradually penetrated further inland along the rivers, the inland waterways, which they had to explore in their trading interests. Thus began the charting of the coastline, the estuaries and the rivers, but they did not complete it. C. Addams Williams, Superintending Engineer, P.W.D., Bengal, mentioned on his notes that “the collection and study of hydraulic data, it may be said that our records are particularly silent, we know a little concerning the hydraulics of a few of the rivers in the western delta, but when we turn eastwards we find nothing can be found, but in most cases the benchmarks to which they were referred have been destroyed.....we know very little concerning the behaviour of the rivers, alterations in tidal levels, discharges. Surface slopes or any other hydraulic data.....Until we learn the principle characteristics of our rivers by close study their conservancy cannot be placed on a sound basis”.<sup>8</sup>

During the colonial period from the second half of eighteenth century, the British administration had started to prepare survey reports on rivers, streams and water and established many districts board for controlling their scheme with own desired beneficial aspect than natives health and prosperity. “They also afforded the British capital a lucrative field for investment in the form of steamer companies (till the coming of the railways and the development of roadways). Primarily for safeguarding and increasing land revenues through irrigation and land reclamation the British also undertook excavation of canals and construction and maintenance of embankments”.<sup>9</sup> And many ‘cut offs’ have been frequently made to conserve or control the streams to their full strength but at last it had fall all in vein. “A ‘cut off’ when it occurs, is very disturbing to the regimen of the river for some distance above and below it. Owing to the sudden increase in slope, scour takes place actively and the river endeavours to re-establish the former conditions approaching equilibrium, by lengthening the bend.....This by increasing the scour throughout might be expected to be beneficial, but the scour is not confined to the bed, and the banks are vigorously attacked till the old conditions are established”.<sup>10</sup>

In this connection, we point out the notes of C. Addams Williams, Superintending Engineer, P.W.D., Bengal. The following notes on ‘The History of the Rivers in the Ganges Delta’ have been made from time to time during the last 13<sup>th</sup> years when he held charge of the Northern Drainage and Embankment Division and the South-Western Circle. The notes was, “In conclusion it may be said that an examination of the past history of the rivers shows that a good deal of damage has been done due to the want of proper control and insufficient attention to hydraulic data: the construction of railways, roads and private embankments has caused the death of many streams: new cuts have been made across the loops of rivers or between two rivers running close to one another, which have led to large changes: in some cases the supply to neighbouring streams has been cut off, while in others the main streams has been diverted: with regard to embankments, our experience has been that wherever they exist have raised problems as great if not greater than those with which they were intended raised flood levels or have led to the extinction of the rivers by causing silting and have brought about logging and severe epidemics of malaria and other diseases: it is significant that where the rivers are most active the people enjoy health and prosperity.”<sup>11</sup>

If we carefully explore the ‘notes’ of C. Addams Williams, it will be unfolded that until the 1920s, the administration could not prepared the rivers lifestyle of whole Bengal. Through these notes, the Government had been suggested by C. Addams Williams, to establish a central controlling authority with a staff of expert officers on these waterways whose duty is to keep a constant eye on the rivers and to record all matters of importance. He also hoped, it will be found useful in the future and everyone should have keep in mind the facts that “Rivers first create the land, then fertilize it and finally distribute its produce.”<sup>12</sup>

One of major epidemics, Malaria, came out (during colonial period) considerably very fast time to time in Bengal due to construct the structure for developing the country. It has been known to us that our Bengal (undivided Bengal) is very dissimilar or unique compare with all over world, here water-streams, rivers, khals, bils, are spread as a spider’s web. When we proceed or try to control their life against their natural will, in regards it breaks our system. Here I point out a quotation which was published December 21, 1907 in Indian Mirror and collected by Sir William Willcocks that “The East Indian Railways was constructed in 1853-54 and opened in 1855. The line begins in Howrah and runs through the district of Hughli, after the Bally station, almost parallel with and close to the Hughli river. The river bank being higher, the westward,

returning immediately to the river through 'Khals' natural drains. When the railway line was constructed with an insufficient and inadequate number of waterways for the sake of economy, on the west of towns and village on the river bank, the natural drainage of the Province was interfered with and obstructed."<sup>13</sup>

## VIII. CONCLUSION:

From the above lesions it is clear to us that the British administrative enterprises were not scientifically beneficent to us, it was destructive. The resulting poverty of soil, destruction of fish, introduction of malaria and congestion of the rivers had stalked the canals and banks and the country is strewn with the wrecks of useless and harmful works. The future scenario would have been changed in another grade if their (British) activities on all streams or water-body would not be dissimilar to their (streams) natural will. All works had been done only for the sake of their economic benefit, not for to our country. We have to keep in mind that rivers are designed by nature to flow freely and to regenerate as they flow. But if you constrain a river near its source, dump sewage, construction debris and industrial pollutants along the way and expect at the end that it will still be a 'living' entity, you are obviously delusional. This is precisely what the self-proclaimed protectors of Indian rivers have been over the decades.

For if the flow declines, as in already evident, no amount of back-end solutions, such as limiting the quantity of pollutants dumped in the rivers lower reaches, will save it. Although reducing the quantum of pollutants discharged into our rivers is crucial, efforts have to be in place to ensure that the flow of water is not reduced below a sustainable ability to cleanse itself. But if you stop or reduce its flow, even the mightiest of rivers will be affected. We, from common people to Govt. officials, are all careless about our environment. We think water streams or water-body is not essential to develop our life or society

### References

The main references are international journals and proceedings. All references should be to the most pertinent and up-to-date sources. References are written in APA style of Roman scripts. Please use a consistent format for references – see exa

### References:-

1. Roy, Niharranjan.----Bangalir Itihas, Adi Parba. Vols I and II. Calcutta, 1937, p-48.
2. Ibid., p-357-58.
3. Ibid., p-146-47.
4. Mukherjee, R.K.-----Indian Shipping, 1912, p- 218.
5. Ahmed, Nafis----An Economic Geography of East Pakistan, 2<sup>nd</sup> edition, London, Oxford University Press, 1968, p- 109.
6. Hamilton, Walter-----A Geographical, Statistical and Historical Description of Hindostan, And the Adjacent Countries, Vol.I, London 1820, p-4.
7. Ibid., p- 35.
8. C. Williams, Addams-----History of the Rivers in the Gangetic Delta: 1750-1918., Calcutta, 1919, Bengal Secretariat Press, p-314.
9. Biswas, Kumud Ranjan----Rivers of Bengal: A Compilation, Vol.I, Kolkata, 2001, West Bengal District Gazetteers, p- Xli.
10. Ibid., p- 56.
11. Sir Willcocks, William----Lectures on the Ancient System of Irrigation in Bengal And its Application to Modern Problems, University of Calcutta, 1930, p- 313.
12. C. Williams, Addams-----History of the Rivers in the Gangetic Delta: 1750-1918., Calcutta, 1919, Bengal Secretariat Press, p-315.
13. Sir Willcocks, William----Lectures on the Ancient System of Irrigation in Bengal And its Application to Modern Problems, University of Calcutta, 1930, p- 143.

14. Bagchi, K.----- The Ganges Delta, Calcutta University, 1944.
15. Bell, Horace. ----- Railway Policy in India.
16. Bernstein, Henry T.--- Steamboats on the Ganges: An Exploration in the History of India's Modernization through Science and Technology, Delhi, 1960 (Reprint 1987).
17. Bevan, Major H.-----Thirty Years in India.
18. Bradley-Birt, Francis.----- The Romance of an Eastern Capital.....with 30 illustration and a map.
19. Bradley-Birt, Francis.---Dacca: The Romance of an Eastern Capital. Imprint-London, 1914, 1975 and 1992, 2<sup>nd</sup> edition.
20. Buchanan, D.H.—The Development of Capitalistic Enterprise in India. New York, 1934.
21. Chaudhuri, Binay Bhushan, ed.---Economic History of India: 18<sup>th</sup> to 20<sup>th</sup> Centuries Delhi:PHISPC,2005, Vol.VIII, Part II; III (Delhi, 2008).
22. Colebrook, H.T.---Remarks on the Husbandry and Commerce of Bengal, Calcutta, 1804.
23. Datta, Rajat---Society, Economy and the Market: Commercialization in Rural Bengal, c. 1760-1800. Delhi, 2000.
24. Davidson, Edward.---- The Railways of India with an Account of Their Rise, Progress and Construction, Written on the Basis of the India Office Records. London, 1868.
25. Eastern Railway, Symphony of Progress: The Saga of Eastern Railway, 1854-2003. 2003
26. Foster, William. ed.----- Early Travels in India, 1583-1619, 1921.
27. Heber, Reginald.-----Narrative of a Journey through the Upper Provinces of India, from Calcutta to Bombay, 1824-1825, Vol. I. London: J. Murray, 1828.
28. Huddleston, G.----- History of the East Indian Railway. Calcutta: Thacker, Spink & Co., 1906.
29. Iqbal, Iftekhhar.----- The Bengal Delta : Ecology, State and Social Change, 1840-1943. London: Palgrave Macmillian, 2010.
30. Johnston, J.---- Inland Navigation on the Gangetic Rivers, Calcutta, 1947.

[1]