

## The Story of a River Port

Satyesh C Chakraborty Professor (Retired)  
Indian Institute of Management, Calcutta

They had come following the footsteps of their neighbours and contributed towards the emergence of the Hooghly River Port Complex over time. The riverside marts for textile goods in Bengal were in the beginning their chosen destination and the most well known amongst these was Saptagram on the River Sarswati. But that river was nearly silted, restricting the entry of ocean going vessels. The neighbouring Bhagirathi River offered the closest alternative. The Portuguese selected a place to establish their warehouse on the Bhagirathi and that place got named as Hooghly following a corrupt derivative of the Portuguese term for warehouse. And the river came to be referred in future as the Hooghly, suggesting that it leads to the Portuguese warehouse.

The Portuguese soon lost their preference for trade because the individual owners of vessels, hard to be controlled by the Portuguese administration at Goa, found high sea piracy more profitable. That made them fearsome and hateful. In Bengal, they took up slave trade as a supplementary source of income. That also made them unpopular, fearsome and hateful. Naturally, they lost the favour of the rulers of Bengal. Then the Dutch came up the Bhagirathi to Hooghly and chose to set up their warehouse at Chinsura close to Hooghly. The operations of the Dutch were radically different from the Portuguese. They moved into the interior of Bengal, tapped the local marts and

assembled their collections at Chinsura for export. Their exports of Bengal textiles were for Indonesia where they were developing their network for local grown spices. There the Chinese shippers brought silk, in which also the Dutch merchants had great interest.

The Dutch did something new to support shipping down the Bhagirathi River, which by then was known as the Hooghly River. To provide victuals to the Dutch shippers, a big farm was developed to raise vegetables and pigs. The name of this place is Barahanagar or Baranagar. Its relevance in the later development of agriculture in Bengal is indeed profound. Market gardening by following European style of agronomy, Baranagar emerged as an interesting point of diffusion of culture.

It is believed by the geomorphologists that the estuary used by the maritime vessels to reach Hooghly or Chinsura was of the River Saraswati. No regular channel connected this estuary to the Bhagirathi River. There was only a tidal creek, which was possibly navigable only during high tide. The main flow of the Bhagirathi at that time went southeast by the Adi Ganga River from the Hastings point. The upper part of this Adi Ganga channel was later known as Tolly's Nullah after it was re-sectioned in midnineteenth century. The tidal creek joining the estuary of the Saraswati with the Bhagirathi impaired easy shipment of goods. The goods were often unloaded, during low tide, into country boats of shallower drafts to reach the main flow of the Bhagirathi. It is rumoured that the Dutch re-sectioned this tidal creek to let sea-going vessels come up the Bhagirathi.

I have not come across any record in English language about this engineering feat. But archives of the Municipality of Rotterdam mentions the existence of two Dutch institutions on the Hooghly River. One of these institutions was known a *Tank Zoll* and the other as *Bank Zol*/. the former referred to toll collection point and the other the toll depositing (bank) point. *Zoll* in Dutch means toll. If the story of re-sectioning of the tidal creek is true, then one can easily appreciate the setting up of toll collection and depositing points. It is of interest to note that the local people living on the banks of this re-sectioned creek call it *Kata Ganga*, meaning the Ganga that has been cut out and they claim that it is not holy.

We of course have supporting geomorphological data to show that the Hooghly Estuary downstream of Shibpur is quite different from the upstream section from the Hastings point. There is also a popular belief that the building that later housed the Bankshall Court was the earlier site of the Dutch Bank Zoll.

Whatever may have been the content of truth in the belief about *Kata Ganga*, may be this is how myths are built up, the impact of the Dutch trading practices on the earlier linkages between the sectors of the economy of Bengal was great indeed. The controls exercised by the political rulers and tax collectors upon the artisans got weakened. The overseas merchants emerged as bigger consumers of the products turned out by the artisans. This eventually encouraged the artisans to move to the locations where the warehouses for export collections were set up. The earlier arrangements on self-sustenance of village economies slowly collapsed. The merchants of the other European nations arriving after the Dutch got fuller advantage of this process.

On the maintenance of river-navigation, the Dutch contributions were no less important.

Discounting the belief of re-sectioning the tidal creek to link the Bhagirathi River with the estuary of the Saraswati River, the Dutch introduced signaling system to help negotiate the shoals and sharp meanders of the river. In addition, the sailing vessels to avoid running aground could get the services of the Dutch pilots on payment of fees to negotiate the shoal-infested channel safely. They had established the principle of payment of toll for service received. In the earlier days, boats were used to carry merchandise between the muddy shore and the ships. That was a slimy clumsy system. The Dutch' had constructed piers at Chinsura and Baranagar to serve as jetties to facilitate loading on and unloading from the boats. Sometime, especially during high tide. the ships could be brought to these jetties. All these facilities made navigation in the river safer and set precedence over the facilities added later. None, not even the Dutch, had impounded harbour as shelter for ships. That was a latter addition to navigation in the Bhagirathi River.

The Dutch, however, lost their interest in India-trade as the Indonesian archipelago emerged as a better possession. They withdrew from Chinsura and Baranagar as the English merchants arrived as successors. The English took full advantage of the loosening of the traditional ties of the artisans with the political administration and set up initially the sub-centres for collection of textile goods and later to gather the artisans around these sub-centres. The French merchants came on the heels of the English and

adopted the same strategy. Thus the emerging orientation of the regional network of locations of non-agricultural production centres and trading got sustained through interactions with the European trading even after the Dutch had left Bengal.

The coming of the English merchants coincided with the period of gradual decline of the Moghul rule. This was also reflected in the Moghul *subah* of Bengal. The right bank of the Bhagirathi become increasingly unsafe as smaller landlords and local administrators tried to take advantage of the falling powers of the Moghul administration to advance their respective interests. The left bank of the river appeared safer, though extremely unhygienic. For example, the safer site chosen by the English merchants to locate their establishment in Calcutta was flanked by salt marshes, the water spread area of which expanded and shrunk seasonally as also diurnally. The seasonal variation was due to rain and discharge from streams draining in and the daily ones were in response to tides. The withdrawing water left behind fishes to rot in sun and release filthy smell, which drifted into the English settlement with easterly wind. These were possibly more offensive than the methane rich smell that we now get while on the edge of this earlier marsh.

But the advantage of location and the lure of profit allowed the English merchants to ignore hygiene and to die young. The upstream point of the legendary *Kata Ganga* marked a promontory as the river took a sharp bend there. This bend is still surviving. There was a huge tamarind there, the site of which assured the sailing navigators on the approaching the trading post of Calcutta. The bend reciprocated an advantage for the English fort at Calcutta on citing the approaching vessels. All knew about the guns placed in the English fort and respected those, although not a single shot was ever fired from

these guns. After the collapse of the native rule from Murshidabad, all tacitly admitted the supremacy of the English naval power in Bengal, perhaps without enjoying it.

Hardly any investment was made to improve goods handling facilities at Calcutta till the political power over Subah Bengal came to the English merchant company at Calcutta. That happened in the second half of the eighteenth century. Piers or jetties started coming afterwards. The Dutch pilot-service continued, but with staff drawn in from the local candidates sponsored by the English administration in Calcutta. Generally speaking, the Anglo-Indians were the sponsored candidates. The calling vessels were required to pay fees to the owners for the use of the piers. Most of the owners of these jetties or piers, bearing their names, were private British merchants. There was no institution called the Port of Calcutta. That came in the second half of the nineteenth century, not as a trust held property, but administered by Commissioners appointed by the government.

There are extinct records of the English East India Company that one Mr. Eyre (eldest son-in-law of Job Charnock) had created a harbour by making the *Lal Dighi* (now located in the center of the square at BBD Bag, once known as Dalhousie Square) deeper and wider with a canal joining it with the river in the west. I do not know whether it was operated and I believe that it was difficult to do so as there was no lock gate placed on this canal. At least there is record on the existence of the lock gate. Naturally, the canal brought in silt and that induced the English administrators to keep the Lal Dighi reserved as a source of drinking water for the English settlers around it. The canal was filled up and named as Killa Ghat Road, being on the south of the then Calcutta fort. This road is now called Coilaghat Road, pretending that coal (coila in Bengali) was brought there. Coila is nothing more than a corrupt version of Killa (fort in Bengali or Hindi) and this corruption became possible, as the existence of the earlier fort was lost in the memory of the residents. The East India Company constructed the new fort (known as the Fort William) after regaining the possession of the settlement of Calcutta from the rulers of Murshidabad.

The growth of the City of Calcutta is linked to the growth of the Port of Calcutta. I should say it was just the other way round. The Port of Calcutta had always lagged behind the economic demands that propelled the growth of the city. Take for example, the situation as of 1869. The hinterland of Calcutta had before then opened up for coal mining, tea plantations, production of jute as a cash crop and railroads. The postal and telegraph services were functioning to facilitate speedy decision making by the merchants. The Managing Agents had come to operate the jute textile industries that were springing up along the bank of the Bhagirathi (i.e., the Hooghly) River. Raw jute came from eastern Bengal in country boats or on flats pulled by steamers and was unloaded at the individual jetties constructed by these mills without the help of the Port of Calcutta. The same was happening with tea from northeast unloaded at the Armenian jetty constructed by the teaexporters. In addition, industrial revolution in England promoted exports of cotton textiles and other manufactures to Assam, Bihar, Uttar Pradesh, Madhya Pradesh and Bengal through the Port of Calcutta. In fact, there was then no institution called the Port of Calcutta. Only the nucleus of the future Port of Calcutta existed under the name of Marine Establishment that was created by the East India Company as late as 1758.

By then, the Marine Establishment had a few jetties, a wharf for berthing of cargo carrying vessels, a marine yard at Kidderpore and a dry dock at Bankshall Ghat. The proposal for a wet dock was being considered. In 1869, the Suez Canal was opened up, which shortened the distance between England and India by 6500 kms. This canal gave an impetus to the use of steam vessels. The available infrastructure with the Marine Establishment proved hopelessly inadequate. The trading interests considered the Marine Establishment itself as an improper institution to carry out operational improvements and expansion of terminal facilities on the Bhagirathi River.

In 1866, the Bengal Legislative Council passed a law to form a River Trust and to make the Port a department of the Municipality under a committee of Justices. The merchants did not welcome this move and the River Trust failed to discharge service within sixteen

, months of its formation. So the Provincial Government had to take up in 1867 the construction of four screw-pile jetties with supporting sheds to keep merchandise for

import; and export. In 1869, construction two more screw-pile jetties with supporting shed started. By the demand for increase of capacity for goods handling continued. In 1870,

the institution of the Calcutta Port Trust was created with nine nominated members. After that the number of jetties increased, shore based cranes were installed, night time operations on the jetties were and the petroleum jetty at Budge Budge was built. The Port also laid railway connections between the jetties and the Indian railroad network.

The history of the Port of Calcutta is well known to most of you and does not deserve recounting on this occasion. Those interested to know in more details about the history of

installation of the diverse physical infrastructure may read the book titled as *The Port of Calcutta* written by Professor Nilmani Mukherjee or the book titled as *Port of Calcutta 125*

*Years* edited by me. I will instead try to highlight some of the special features of the port *vis a vis* the river and on the emergence of the idea of *The Hooghly River Port Complex*.

The idea behind enactment of River Trust of 1866 was that safe navigation along the river would require control under one institution. Maintenance of the river with an eye on navigability was also a matter of supreme concern, because the drafts of the steam driven vessels were likely to be greater than the earlier boats. This also required unified control over the entire length of the river. The Calcutta Port Trust as an inheritor institution has absolute authority over the entire length of the Bhagirathi River and its two banks. For construction of bridges across it, fixing lock gates to control diversion of flow of water, construction of piers, a jetty, even bathing ghats, prior permission of the Calcutta Port Trust is a mandatory requirement. Needless to mention, none can construct ports, ferryghats or open harbour for vessels to wait. Sailing vessels of all types require license from the Trust to ply on this river. That this type of absolute control was needed implies that the entire length of the Bhagirathi River already had many small to big facilities for navigation and transport of men and materials, which can be compared to a complex of port facilities. Later developments show more glaringly the elements forming the Hooghly River Port Complex controlled from Calcutta.

Calcutta Port Trust had itself carried out many works for the expansion of port facilities. For example, the impounded Dock-I at Kidderpore came in 1893. The second impounded dock at Kidderpore came in 1903. The third dock was laid in Garden Reach in 1928. Thus the hub of port operations started shifting downstream before the turn of the 19th Century. Calcutta Port Trust acquired the largest fleet of dredging vessels to maintain the channel to meet the increasing drafts of the incoming vessels. The length of these ships also increased to meet the economic needs of shipping charges for transports of merchandise in increasing bulks. The sharp bends increasingly made it difficult for the long haul ships to negotiate. The ships could avoid the bend of the river with a tall tamarind tree that I have mentioned earlier by using the King Georges Dock (now named as Netaji Subhas Dock) at Garden Reach. The same rationale led to the creation of a modern dock-complex at Haldia. Further shift of port facilities at further downstream locations are being explored. The Sagar Roads is being contemplated as the location to set up the facilities for a modern port. This shifting is unavoidable, because neither the dredgers nor diversion of water from the Ganges through the Farakka Barrage are seen quite adequate to keep the section of the channel upstream of Sagar Island suitable for the modern ships to negotiate.

Some may argue that the Port of Calcutta be closed down, because not only the river is suffering from reducing draft, the economy of the hinterland of the Port of Calcutta has also declined. But the counter argument is that India needs increasing trading ties with the overseas countries. But no other port exists on the eastern coast of India that can match the natural advantage of Calcutta. The Ganges and the Brahmaputra valleys can be most easily accessed from Calcutta, the topography being what it is. There is also no reason to believe that economy of Eastern India will never revive.

Granting the claim that a modern port must unavoidably come up at the Sagar Island, It would only be a further extension of the Calcutta Port Complex along the river. This process had started several centuries ago and would be continuing in our days. There is nothing unusual in it. What remains to be seen is how the Hooghly River Port Complex that has emerged through historical processes meet this challenge. To keep all the port

installation active by using one seaway that demands cautious guidance from pilots and concerted dredging of continual deposition of silt will certainly need centralized control. But the distance between these individual installations and the specialized nature of their designed functions would need decentralized decision making. How the Port Complex of Calcutta balances these two types of managerial culture would be an interesting point for debate. I am saying that it is a matter for debate, since the Port of Calcutta has made no mention yet of how would this issue be handled.

I do not propose to settle this debate through this lecture today. But being declared an anniversary lecture, I may be permitted to use this opportunity to highlight some points to explain why this issue of balancing the processes of decentralized decision-making within centralized control can confront the 15 Strand Road in days to come.

When the Commissioners for the Port of Calcutta were appointed or the Calcutta Port Trust was created by replacing the Marine Establishment of the earlier days, the issue of conduct of oversea trade was concerned with exercise of better control over the existing facilities and to improve these wherever and whenever required. Both required centralized decision-making and control. There was the need to add to the existing numbers of jetties, to create a dry dock and wet docks. All these required centralized control over investment. There was also the need for allocating specific berths to handled specialized goods, like tea, salt, general cargo, oil, etc. This demanded decentralized administration and decision-making.

As the demands from the economy emerged in newer shapes, bulk handling of goods also became a necessity and specialized facilities were installed, like the coal handling cranes and grain silos in the Kidderpore docks. When the constraints of navigation confronted the Port of Calcutta, attempts were made to ease the situation by keeping the mother ship anchored at Sagar and by deploying smaller vessels as daughter ships to bring in the grains. The Port of Calcutta has to its credit many such achievements. All these could be handled through centralized control. But, because of the proximity of all these facilities, the reality of decentralized decision-making at the different installations

did not hit the 15 Strand Road on the eye. There was a feeling of confidence at the Head Quarters as if everything was getting done through centralized decision making. The difference between centralized control and decentralized decision-making emerged as an issue when the Haldia Dock Complex was created.

Haldia Port Complex was necessary for two specific reasons. One was the declining draft in the river. The other appeared as a compulsion if Calcutta Port wished to continue participating in the overseas trade. The change came the shape of preference for bulk cargo handling. It reduced the need for labour deployment in preference for ever increasing mechanization of cargo handling practices. The Haldia port was designed for this purpose. It could handle coal, iron ore and POL. The coal berths in Kidderpore Dock became defunct. The petroleum refinery at Haldia gave a fillip to import of crude petroleum. The same installation could also be used for increased import of downstream products of petroleum. Although the prospect of bulk export of iron-ore from Haldia did not materialize, the gears installed for this purpose were quickly modified to deal with bulk handling of coal. Similarly the failed move for fertilizer production was compensated by bulk import of coking coal. Each one of these items of merchandise needed plants and machineries of the kind that was not available in the earlier laid complexes of the Port of Calcutta. In all such areas, the technological differences enforced division of labour between the Haldia and the old complex at Calcutta. But in the area of containerized traffic, the need for similar division of jobs and responsibilities did not happen easily.

Cargo handling by containers in the context of the production regime of India faces a problem. Most of our importers and exporters are small in size. Their one time consignments would hardly require the full use of a standard container. A standard container can accommodate consignments of several traders, if stuffing and de-stuffing is done. Therefore, unlike many of the container terminals of the economically developed countries, the Indian ports should have the necessary facilities for safe storage of small consignments, stuffing and de-stuffing of containers. Such a facility can be gainfully utilized for sustaining traffic in a river experiencing continual reduction of draft. Instead of demanding ocean liners to call

profitable if collection of containers is made in a port with deeper draft. The port complex at Haldia had initially a deeper draft and therefore could function as the collection station with large container yards. While Calcutta could have a smaller container yard, but supported by large facilities for storage of small consignments of merchandise, and staffing and de-staffing of the containers. Somehow, this arrangement was not put into use in the beginning.

at a port with inadequate draft, use of berges can be

Now that a new complex is planned at Sagar, the need for collaboration between all the port installations would be more explicit than it was when Haldia complex was initially established. With collaboration between the parts the concept of a River Port Complex will be effectively established.

profitable if collection of containers is made in a port with deeper draft. The port complex at Haldia had initially a deeper draft and therefore could function as the collection station with large container yards. While Calcutta could have a smaller container yard, but supported by large facilities for storage of small consignments of merchandise, and staffing and de-staffing of the containers. Somehow, this arrangement was not put into use in the beginning.

Now that a new complex is planned at Sagar, the need for collaboration between all the port installations would be more explicit than it was when Haldia complex was initially established. With collaboration between the parts the concept of a River Port Complex will be effectively established.