

Floods and the Rural Economy of South-West Bengal, c. 1784-1793

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***Abstract:** Bengal, especially the lower portion of south-west Bengal, is one of the most flood-prone regions in the world and its backwardness has allegedly been a result of the annual ravages caused by river spills. Standing crops and habitations are submerged under water for days, and communication is disrupted and inhabitants are often forced into distress migration. Economic life becomes most uncertain. Consequently, the settlement of bandhs and pools was an important aspect of the administrative system in pre-colonial and colonial times. During the colonial period, ensuring revenue collection became the primary aim of the East India Company. Hence, by introducing the Permanent Settlement, it took an essential step and gave an institutionalized form to flood control and embankment construction. Accordingly, the Company presumed that the zamindar would sit at the apex of a new agrarian order and affirm private property, generate economic surpluses, and ensure political stability.¹*

***Keywords:** Bandh, East India Company, Embankment, Inundation, Poolbundy, Revenue, Ryot, Zamindar.*

Introduction

The passage of the Pitt's India Act in 1784 marked a sea change in the relation between the subject and the government in the early colonial period. Till 1784

there was no conscious or consistent British policy for political conquest or permanent governance of India.² H. V. Bowen has said recently that it was only after 1784 that a dedicated apparatus could monitor operations and concerns related to civil or military government or revenue of the British territorial possessions.³ The zamindars were officially recognized as landholders and the administration was sought to be arranged on a broader basis. It was a precursor to the changes in agrarian relations that came about with the Permanent Settlement, and the style of administration envisaged by the Cornwallis code. The Permanent Settlement began a period of new relationship between the state and the landholder. On the one hand the state sought to ensure punctual and full collection of its share of revenue, while on the other it institutionalized private property in land which assigned the landlords a new role in the development of landed property. Thus embankments had to be viewed in new light, not only as public institutions for which the state and the zamindar were jointly responsible, but also as appendage to private property. The point was to base both – protection of embankments and holding of private property – on legal and institutional norms.

The initiative of the British was to introduce practical revenue system on the basis of particular ownership of land. Despite the effort there was frequent shortage of revenue collection. One of the reasons was destruction of crops by excessive or unseasonal flow of water into cultivated fields. The flow of water

while it entered the fields was often very forceful. Such forceful entry was caused by the unstable nature of the water courses and contraction in space of the river bed which made water levels rise and overflow with unusual force.

Admitting this problem to be a reality the Company tried its best to collect revenue. This was an ecological issue which could affect an economic function of the state recurrently. In a country where the state was absolutely dependent on agricultural production for its revenue resources floods affected the fiscal position of the local zamindars and the state by putting a stop to the collection of revenue and by threatening the economic position of those who paid revenue. Thus it was imperative for the state to save the crops from the destruction of impatient rivers to ensure adequate land revenue collection. The simplest device for the administration was to dam the flow of water and prevent it from encroaching on the fields. It made an effort to put up protective embankments to protect crops permanently from the overflowing rivers in rainy season. The colonial administrators made running embankments for protecting the property.⁴ Thus protection of private property in land from natural causes assumed great importance and became a central issue while settling with the landlords for annual revenue.

To execute the *poolbundy* in a proper way and to ensure the revenue collection, the Company entered into the subject of protecting embankments. With this, a few obligations emerged such as a) who would be in-charge in

maintaining and repairing existing embankments, and b) who would be liable for the cost of constructing and maintaining future embankments.⁵

Embankment maintenance and repair of bandhs: authority and responsibility in Burdwan (1784-1793)

At this juncture one may consider the structure of the management, as it existed in the early colonial period, of the *bandhs* in the largest swath of territory in Southwest Bengal i.e. the Burdwan zamindari. The pools and *bandhs* of these districts had been neglected since long. This is evident from the fact that in 1789 a number of persons who had taken the responsibility of repairing the pools in 21 different parganas were not paid the full amount of money for the repairs.⁶ The pools were generally supervised by the *poolbundy* darogas of the zamindars. Thomas Marriot, the Superintendent of Poolbundy, wrote to the Board of Revenue on 6th march 1789 that he was vested with the responsibility of superintending the repairs and collection of receipts from the several persons from whom the balance was due. But he added that contrary to the orders of the Governor-General in Council he had also made the disbursement on account of *poolbundy* for the year 1787 i.e. 1194 B.S.⁷ The line of conduct for the disbursements of the funds assigned for the *poolbundy* repairs either in specie or by orders on the requirement of the farmers in the parganas was by countersigning the demands for advances upon the zamindars forwarded by the zamindari servants to their own Darogas. The *zamindar* and the superintendent

of *poolbundy* kept the charges for the repair and the receipts of the advances which served as a check upon the Daroga's accountants in the final close of the accounts.⁸

The Collector of Burdwan in 1786-87 was J. Kinloch, who was the Superintendent of Pools at the Presidency till quite recently.⁹ Kinloch had been dealing with the *poolbundy* and repairs of Burdwan for some time and thus had some acquaintance with the problems. The Board of Revenue had desired that he 'pay attention and ascertain the repairs of Embankments and whether the Rajah has taken the proper measures for keeping them in repair'.¹⁰ The Board was thus interested in keeping supervision over the zamindar through the Superintendent, who subsequently became the Collector. The home authorities, or the Court of Directors, too advised close supervision, and wrote respecting the charges of *poolbundy* or repairing the embankments of the rivers, that recommendations to the committees for revision gave them hope some reduction may be made in that Article. They advised 'great care' 'lest by an ill judged parsimony these Embankments may be so much neglected as to endanger the cultivation of the land' and enjoined that 'if the Zemindars are allowed to make the repairs themselves as you propose and which may be highly proper the committee must be very attentive, that they punctually perform that Duty'.¹¹

After communicating to the Rajah of Burdwan, J. Kinloch, an experienced *poolbundy* officer, submitted his reports and observations based on his local knowledge to the Governor General. Kinloch, being reported by the Rajah about the steps of the repair of pools and the embankments which were not implemented for the lack of fund, assured to recommend for the government advances for pool repairs of the southern pargana, especially for Mandalghat, Baliah and Bhurshut. Kinloch was convinced about the adoption of some fruitful steps to prevent abuse by the Rajah of Burdwan who was assured by a parwana not to exceed the amount of pool repairs allowed to him by his agreements.¹²

The Governor General authorised remission from revenue on account of *khalbundy* in Burdwan.¹³ However this remission was a temporary measure as more long term problems regarding the maintenance of *bandhs* and pools continued.

Burdwan had suffered from severe inundations in November 1787 and the Rajah or the zamindar made a total suspension of payment of the Kist of Assin. Already, as pointed out earlier¹⁴ the payment of the kist of Assin was in difficulty because of inundation in different parganas, though the Collector had settled with the Rajah to make good the kist.¹⁵ The Board had expressed the hope that the revenue would be realized.¹⁶

In this situation the issue of the obligation of the zamindar to the government raised some questions. To avoid the obligations, the Collector had settled with the zamindar to make good the kist of *Assin* i.e. the month of the occurrence of the floods and that preceding the month of harvest. But on 7th December the Collector stated that payment of the revenues after the calamities could not be enforced by harsh measures because it might impact an adverse effect upon the ryots. He also represented that for the safety of the revenues, the Board would prevent the zamindar from making use of frivolous pretences over deduction because it would hamper the punctual payment of each kist.¹⁷ The Governor General, as reported by the Board, that the Collector of Burdwan had taken the immediate measures for the repair of the pools, declared in Council that they cannot remit government grants for a temporary calamity as may be wanted by the ryots, but may be remitted under incumbent of the zamindars. The members of the Board like Evelyn and Mackenzie did not agree with that proposal.¹⁸ The Governor-General disapproved the total suspension of payment of the Kist of *Assin* by the Rajah of Burdwan. Therefore, the suspension of the rigorous execution of the public regulations, as the ultimate responsibility to the zamindar and the effect of the attached property, was recommended. Non payment of the kist by the stipulated period proved the displeasure of the authorities and if continued, the authority enforced the discharge of the Rajah's engagements.¹⁹ The Governor General in Council considered the sum of Rupees 60,000 made on accounts of the Pools in Burdwan as continued to the zamindar

for the year 1194 B.S.²⁰ According to the instruction of the Board, the Collector would remit the fund to the zamindar and collect the kist of assin within the stipulated period otherwise the security measures for the discharge of zamindars engagement will be reverted.²¹

The Collector instructed the zamindars of Burdwan to start repair works as soon as possible. When the zamindars requested Kinloch to take the charge, he refused to take it without the knowledge of the present state of the pools. Though experienced, Kinloch could not manage the breaches on the embankments without proper funds and later the Board funded an amount enhanced by Rs 20,000 for year 1787.²² On the recommendation of the Collector the Board remitted the funds for *poolbundy* settlements to the zamindar ought to be liable for any extra charge.²³ The Board adhered to their former opinion, of the sufficiency of the present allowance and held the zamindar responsible for any losses that could arise from the pools for not being kept in proper repair. As the Rajah declined taking charge of the pools and advances on such grounds it could tend to affect his future payments of his revenue.²⁴

The Board and the Collector had made a local investigation through other channels, but they did not interfere with the zamindar's assessment to ascertain the truth of their losses. Justifying every plea of a reduction of the Company's revenue, the Collector emphasized the importance of revenue collection –

accordingly as punctual payment in the year 1786 and 1787 with a heavy balance. The Collector also recommended that all harsh measures from the zamindars regarding revenue collection against the ryots should be suspended, the concession might be paid in case of natural calamities incumbent to afford redress. He did not intend the zamindars to exert any rigorous injunction upon the ryot for *poolbundy* revenues.²⁵ It was the opinion of the Company's government that in cases of temporary calamities it was incumbent on him to afford redress and therefore the zamindar was reminded of the directions of the Governor General in that regard. Therefore all harsh measures were to be stopped. But the adoptions of so general a policy as this was fraught with the possibility of effectually putting a stop to all further collections in the district and afford the Rajah a plausible excuse for withholding the residue of his balance. The Board advised the Collector to prevent as far as may be in his power any oppression to the ryots.²⁶ The Board appointed Mr. Thomas Mariott who usually resided at Burdwan to be superintendent of the *poolbundy*, and the Rajah of Burdwan was to continue the repairs in that district in concert with him. The responsibility for provision of necessary materials and workmen was vested in the zamindar while Mariott was instructed to take particular accounts of the expenses incurred.²⁷

The authorities in Calcutta, the Council of the Governor General and the Board, were much concerned about the measures that the zamindar adopted to repair the *bandhs* and to procure funds for that purpose. Much of that concern

centred on the plight of the poor ryots who had to ultimately pay for the *bandh* repairs. While members of the Board like Evelyn felt that the plea for relief on account of damages sustained by inundation, preferred by the ryots, should be not understood in the sense of claim for remission of rent and did not consider the Governor General's sentiments as an order, other officials like the Resident at Radhanagar and members like Mackenzie insisted on allowing the zamindar a free hand to collect rents by any preferred method.²⁸

Impact of floods on the country and on the embankments: the Company and the zamindar in Burdwan (1784-1793)

There were many ways in which the problems in Burdwan zamindari were considered especial. The rivers flowing through the Burdwan zamindari like Damodar (lower branch) and Rupnarayan (northern branch) inundated the productive mulberry lands of eastern and south-eastern Burdwan. At Radhanagar the East India Company had established an aurung for silk production and trade. But the work was hindered by the floods of above mentioned rivers which broke the pools and *bandhs*. The zamindar of Burdwan was inattentive to the repair of pools, and on 5th June 1789 G. H. Barlow the Sub-secretary to the Board of Trade transmitted information to J. H. Harrington, Secretary to the Board of Revenue, that the Governor-General in Council had been pleased to direct that agreeable to the application of the Board of Trade the Board of Revenue should issue the necessary orders to the Zamindar of

Burdwan for the repair of the Pools at Radhanagar.²⁹ The Board of Trade had communicated to the Governor-General the representation of the Resident at Radhanagar regarding the inattention of the Zamindar of Burdwan to the Repairs of the Pools of that aurung also of the importance of this work to the success of his Investment; they requested that the Zamindar may be ordered to set about it without the least delay.³⁰

They represented that the inundation of two years ago was of great detriment to the ryots. The company's silk factories both at Ghatal (Guttaul) and Khanakul (Cannacool) were preserved 'by the active humanity of the late agent', and the people in general saved themselves by retreating to high spots and climbing trees. But their cattle and the mulberry plants of many of them were destroyed.³¹

In the previous year, when the rivers were not within a cubit of their usual height, the valuable Parganas of Mandalghat (Mundelgautt), Chitwa (Chetooah), Balia (Balea), Barda (Burda), and Bhurshut (Boorsoot) had in part overflowed. The plantations of Balia and Mandalghat in particular suffered severely. Yet the zamindar had not taken measures for putting the Pools in this neighbourhood in proper repair.³² The Board of Revenue, in consequence of the Governor-General in Council's desire, directed L. Mercer, the Collector of Burdwan, 'to issue the necessary orders to the Rajah for the repair of the Pools at Radanagore'.³³

Floods and breaches of embankments had assumed the proportion of havoc in the region which extended across the modern districts of Hooghly, eastern Burdwan, and north-eastern Midnapur, all of which were within the large territorial zamindari Burdwan. In the years immediately preceding, the decennial settlement shows that floods had been an almost continuous phenomenon. It was reported that the rains had swelled the Damodar River to so great a height that it was beyond the memory of the oldest Inhabitants of the place. It was a universal calamity which was felt in this province as such.³⁴

By the end of the September and the early October the rivers like Ajay and Damodar were flooded causing havoc damage to every house and village in Burdwan. The Collector entertained a belief that maximum impact of the flood would be felt only in and around Burdwan but he was sorry to find an inconsiderable damage in comparison to the province. The Collector mentioned the parganas (Mandalghat, Bhurshut, Barda, Chitwa, Balagarh, Balia, Bayra, Renhetty), and the rivers (Damodar, Rupnarayan, Silai, Kassai, Ajay, Curry & Gomer) affected by floods. Even in the month of October, the season of harvest and plentiful crop, Burdwan town witnessed a dreadful situation by the late inundation.³⁵ The Collector wrote:

...every precaution was taken in filling up those parts which had been decayed and toward evenings every apprehension danger was over, as the swell of the river was considerably abated. In this state the Damodar remained till late on Sunday Evening when it again began to rise and early on Monday Morning the Bank gave way in every quarter. The Rapidity with which the water rose

surpluses anything of the kind know to the oldest inhabitants and the impetuously of the Torrent made every effort in preventing its force and violence of no effect. The town is totally destroyed not a vestige of a mud house remaining and even those built of Bricks are many of them fallen or so entirely damage that a longer residence become dangerous. Many people have lost their lives, and a great number of cattle have been drowned, most of the Head farmers reside in this town. They are employed at present in rebuilding their habitations and in collecting their accounts of their several Farms. The communications with the distant parts & of the District being entirely stopped from the quantity of water upon the ground the possibility exists of realizing the collections at the Sudder Cutcherry which are always conveyed by Pikes on foot until the Roads are passable.³⁶

The Collector was apprehensive that the Ryots would not be able to discharge their engagements to the zamindar even after the sustained loss by the recurrent floods. But he was convinced that the neglect or omission in paying a due attention to the pools had not jeopardised the state of revenues.³⁷

The effects of swelling of the rivers of Burdwan were felt in the northern district of Birbhum which was just across the Ajay, the river on the northern border of Burdwan. Here the torrent in many places swept off villages, inhabitants, cattle, the crops on the ground, and everything that was moveable. To repair the damages if possible, the Collector wished that the Board give him a discretional authority 'to recede a little in the ensuing month from the strict terms of the renters kistbundy, and to advance Tuccavy (loans) to the Ryotts at one percent per mensem, from the treasury of Beerbhoom as far as forty thousand Rupees, from that of Bishenpoor twenty thousand in order to relieve their Distresses and to enable them to retrieve their losses in the rubbee fussil.'³⁸

The Board in response acted on the information of Collectors of Burdwan and Birbhum and wrote to the Governor General in Council that they had allowed a suspension of payments of rents and assented to the advances of loans to the ryots.

The Board of Revenue thought of the impediments to revenue collection, but felt that as the season of winter was approaching, the prevention of intercourse by the floods with the different parganas would cease and the revenue would be realized as usual. They instructed the Collector to discourage the expectation of any remission on account of the inundation.³⁹

The change in the course of the river Damodar in the 18th century was a major event in the environmental and water history of south-west Bengal. The Collector of Burdwan observed:

...the River Damodar from the strong currents of water which came from the Hills last year has cut a ways its Banks, so much & encroached so nearly to the Dugbunds, that I thought it absolutely necessary from my having been so long employed in the Poolbundy business to address the Zamindar on the subject to prevent any bad consequence ensuing convinced if much rain should fall this year & Dobunds not erected in many places Inundation will likely take place.⁴⁰

In the above address to the Board of Revenue the term *dobund* meant the embankments built around the tanks,⁴¹ while *dugbund* means those embankments constructed along the banks of rivers. J. Kinloch, the Collector, being experienced in the matters of *poolbundy* advised the zamindar to

construct *dobunds* to prevent inundation. He also requested the Board to allow a Company servant to supervise the repairs of the dobunds that was very fruitful in the prevention of accident resulting from the encroachment of water which 'washed away the sides of the River in several places'.⁴² The pools were under the general superintendence of the government⁴³ and their repair and maintenance were done through agencies which contracted with the government for the job. Thomas Marriott, who was entrusted with the responsibility of repairing and keeping up the pools, advised the government to release money for obtaining services on contract,⁴⁴ thus we find a number of native contractors involved in the poolbundy work at Burdwan.⁴⁵

Deprived of 'local knowledge' due to sudden illness, Kinloch made a enquiry on the delay of payment of revenues delivered by the farmers either by the great loss faced by the late inundation and followed by the storm to prevent altercations between *chutia ryots* and the farmers.⁴⁶ Crommelin's observation was that the farmers of the whole pargana were in a distressed situation and crops were submerged, and so it might be power of government to grant them remission in the payment of the revenues.⁴⁷ Mentioning the outlying parts of the territory of the zamindar of Burdwan, which lie in the district of Midnapur, he observed:

The Gattaul (Ghatal) district lying immediately on the Banks of the Silai has suffered considerably from the Inundation: and all those in the same situation to the south-east must have suffered in an equal if not greater Degree, from being lower and in the neighbourhood of the Damodar and Cossai (Kasai).

The north-western Districts suffered but very considerably from the Inundation: but what may have been the consequences of the storm I cannot say. The crops were previous to that, remarkably fine and plentiful.

The silk Ryots have suffered in common with other Ryots in low situations, the loss of Habitations and some part of their property, but their mulberry plantations have been no otherwise injured than in being for a time stripped of their leaves.⁴⁸

Going by the proposal made by Thomas Marriott, the Board at Calcutta had decided to keep the pools under charge of the zamindar for their repairs, and asked for directions from the Governor General regarding the propriety of advertising for proposals for the entire Bengali year of 1194-95. They also proposed additional embankments.⁴⁹ The extent of the pools and the *bandhs* and the expenses of maintaining those were ascertained through the Collector of Burdwan, and required that the zamindar state at what annual expense he will undertake to keep in repair the pools situated in his territory.⁵⁰ The Governor General opined that no alteration could be implemented over the existing provision for the *poolbundy* of Burdwan. But at desirable condition the Board and the Collector would inform the zamindar, under the charge of pools that the provided allowance was sufficient and in case of loss or inundation of insufficiency they will be responsible. The Collector was convinced that Rajah duly performs this duty by making every necessary repair timely in the season. But the Governor General denied all additional charges.⁵¹

The government did not change its position even after the devastating floods. The Board wrote to the Council that the Collector of Burdwan having

represented for the necessity of immediate repairs to the pools in his district, whether by the instructions conveyed in the letter of the government in the month March 1787, they are to consider the allowance of Rupees 60,000 hitherto made on this account to the zamindar, continued to him for the year 1194, and tendered their opinion that they do not think it necessary that the Collector should make a circuit of his District for the purposes of ascertaining the losses sustained.⁵² They mentioned that the Governor General in Council had lately declared, that 'they cannot admit of a temporary calamity constituting any just ground of governments granting remissions on a settled & moderate Jumma, it being under such circumstances incumbent on the Zamindars, and not on government to grant such relief as may be wanted to the Ryotts.'⁵³ Thus the Board did not think any suspension was necessary. The members of the Board differed according to their own perceptions of the matter. But the government's position remained firm. While Evelyn thought that the Rajah should be indulged with a moderate time in the payment of his revenue, and that the Collector should be directed to fix the time of indulgence which he thinks the state of the country renders necessary, another member Mackenzie stated that he did not admit the inundation to be any just grounds for a suspension in the payment of the zamindars established revenues. On the contrary he thought he was reprehensible for having so long delayed the payment of the assin Kist, as his jama was moderate, and it was incumbent upon him, and not on government to afford assistance to the ryots.⁵⁴

The Rajah of Burdwan was granted Rs. 60,000 for the repair of *bandhs* and it was wholly disbursed, and a request was made to the government for further grant of Rs. 15,000. A considerable amount of money had become due to the workmen but the *bandhs* were not fully repaired. The *poolbundy* darogas had reported that 'from the sudden and unexpected rise of rivers' the newly constructed *bandhs* and the 'breaches that have been newly filled up, are again broken'. The inundation was much beyond what the government had expected and Marriott the superintendent of pools reported that any delay in the advance at this critical period might be attended with considerable detriment to the district.⁵⁵ The Board differed with the Collector regarding the propriety of making additional grants and the Council asked for a complete statement of the revenue position of Burdwan district but the local level officials remained certain about the destructive potential of the floods on the embankments.⁵⁶

Embankment maintenance and repair of 'bandhs': authority and responsibility in Midnapur (1784-1793)

Flood prevention and relief have always been related to the question of formal authority or public responsibility for the maintenance of *bandhs* and *pools*. Floods are an event of nature, but the mitigation of its effects and the possible prevention of it has always been the responsibility of either the state or the civil society. But more importantly floods affected the expectations of the state for revenue. It also impinged on the conscience of any government which thought

in terms of its subject's welfare for the reasons of its own stability. Thus floods in a way involved both the state and the subject, in a tussle of apportionment of responsibility.

In Midnapur, it was the practice of many years to lay an annual charge for repairing the *bandhs* at the time of land revenue settlement. The Company's government in 1773 had continued the charges and defrayed for the maintenance of *bandhs* according to the custom prevailing the other provinces of Bengal.⁵⁷ The decision on this issue was arrived at by the Council of Revenue after much deliberation and especially after the representation some of the farmers of Midnapur to construct the necessary banks to prevent inundation as it were determined at the revenue settlement in 1773 that the expense of *poolbundy* at Midnapur should be defrayed by government, the landholders themselves were chosen as the most proper agents. The Council of revenue noted that it was most likely that from their own interest that they would have in the work it is likely that it would be completed in a secure manner. However check will be necessary prevent over charges on account of maintenance and presentation of exaggerated accounts.⁵⁸

At the land revenue settlement of the year 1787 some of the principal zamindars of Midnapur districts refused to make a settlement upon the same terms as the previous year for particular reasons.⁵⁹ The farmers of Kasijora zamindari demanded a considerable deduction of revenue for the damages

sustained by the flood and even the collector preceded an opinion that the pools included in that zamindari was given away by the inundation preceded by drought. But the Board denied extra remission. However rupees 61,000 were remitted proportionately to the losses sustained.⁶⁰

Table 1

The amount of remission granted to farmers and zamindars was set against the revenues delivered to the government and the amount remitted to the ryots. The following table presents the pictures of these transactions.

Parganas	Remission	No of farmers	Remittance to ryots
Cossijorah & ShCossiawpore	35,000	63	7544
Cotulpore	2944	39	21,034
Darinda	900	17	1065
Midnapur	14,000	126	31,001

The inundation did not cause any such unprecedented damages. Convinced, the Collector decided to collect the old outstanding balance Rs. 64000 and adding about Rs. 6-7000 present jama. But as the soil of this parganas did not retain much water or moisture, it led to a drought situation in around 1787. Being forced by the natural calamity farmers and ryots requested the zamindar of Kasijora to cut the *bandhs* and draw water for the crops. But due to heavy rainfall on the hills located westward, Kangsabati River overflowed. The eruption of water was too violent to oppose the inundation.⁶¹ The Board sanctioned an amount of Rs. 1250 per month for *poolbundy* and entire money was for spending, only once a year, some time before the rainy season to repair and construct pools and *bandhs*.⁶²

In 1786 and in 1787, floods devastated the Midnapur district with a trail of damages followed by the violent storms and rain that created the vast torrents that rolled down from the westward side of the Midnapur, which had a hilly and undulating topography. In the month of September, the overflowing water washed away houses, cattle, men, women, children, and even tigers in the parganas such as Kasijora, Shawpore, Moynachoura, Subang, Cunder, Amercy, Dutmota, Ooterbehar, Gognapore, Narajol, and Kutubpur.⁶³ As a result the zamindars of the thirteen parganas of the Midnapur district represented their sufferings to the Collector and made a plea for a cut-off in the payment of revenue. This was particularly for the people of Moynachoura that faced great devastation, having lost their houses, cattle, and property and also their unwillingness to return to their native place. So for the repair of the pargana and furnish ryots with material for cultivation, the taqavi loan of Rs. 10000 which was demanded by the zamindars as advance seemed to the collector a very fruitful measure.⁶⁴

A taqavi loan of Rs. 5000 was demanded by the zamindar of Cundar to provide cattle and implements for the people for cultivating the *rabi* crop. After pursuing a local investigation over the losses, the Collector although being uncertain, assured that he would collect as early as possible without distressing the people. But consequently the collection was retarded apprehending the loss in the *kists* for *Assin* and *Cautic*.⁶⁵

The Collector resolved to collect revenues for the current year from the parganas that had escaped devastation and the remaining crops. Likewise he suggested recommending cultivation of the lands where the water subsided, after the second calamity including an incessant rain and high wind that damaged the remaining ripe crops. He also assured that he would take necessary step to promote a fresh cultivation and provide taqavi loans to the ryots.⁶⁶

In order to cope with the adverse conditions of flood, storm, and drought in Midnapur, the government deputed a special officer Mr. William Arthur Caldecott to Midnapur to ascertain the damage to assets that had been suffered at Midnapur.⁶⁷ In Midnapur some of the parganas suffered little or nothing from inundations of this year.⁶⁸ After investigating the plight of the parganas Caldecott proposed a general moderation of the revenue assessment without a large remission except Moynachoura and Narajol with the remission of Rs. 18,640 and Narajol with the reduction of Rs. 1632. The Governor General rejected the demand for remission at Kasijora and Midnapur and announced to distribute the remission among the ryots.⁶⁹ Caldecott's investigation for the moderation of the revenue assessment was applauded by the Board. But Mackenzie, being unsatisfied with the investigation by the collector of Midnapur, suggested that Caldecott be appointed for investigation.⁷⁰

Impact of the floods on the country and on the embankments: the Company and the zamindar in Midnapur (1784-1793)

From 1786 to 1788, extensive areas of central and eastern parts of Midnapur district were inundated and embankments were breached. Flood damaged crop and salt land. On 23rd October, 1787, the Governor General referring the damage caused by inundation, wrote to the Boards that they authorize indulgence to the renters in the suspension of the demands temporarily. For restoring the cultivation the Collector was required to ascertain the real grounds for the claims, notifying that claims for remission was not a pretention. The enquiries were to address the following points: (a) the effects of inundation on the actual crops or preventing the cultivation usual at the season; (b) the degree to which these effects may have operated on the year, beyond the former of preceding years; (c) The rents of those lands which have most suffered and the proportion of the loss upon them to the whole rent; (d) the extent of the relief granted by the zamindars, farmers and Talukdars to the ryots; and (e) proportion of the produce of the different crops to the whole revenue.⁷¹

The Collector reported to the Board complaints made by the zamindars particularly of Shawpore, Kotulpur and Midnapur and Darinda regarding the damages of crops from the drought in Assar & Sawun. He also mentioned the damages of the Decan Mehals represented by the Kasijora zamindar. The Collector himself visited the Decan Mehals to investigate the representations of the zamindars and reported that the whole of the Decan Mehals had been inundated. According to his report, these lands were so fertile that a bigha was rented for three rupees for paddy, while in the other parts of the pargana they

were rented for two rupees. Deducting 18000 bigha of inundated lands of the ‘Bazee zameen lands, Nullas, Cross bunds holes, grounds on which the ryot houses stand & about 4,500 begas’, the remaining 13,500 bigha ryot revenue lands might have gathered Rs. 40,500. Thus 13,500 bigha or Rs. 40500 was the net loss of the assets i.e. 1/3 less than was represented by the zamindars of such parganas.⁷²

Table 2

The calculations of loss and remissions based on total amount of land available, the amount of land affected by the inundation and the deductions granted to the ryot by the zamindar were presented in a tabular form for the 1786-87 floods in Midnapur:

<i>Pargana</i>	<i>Localities</i>	<i>Total amount of land</i>	<i>Average Price of land</i>	<i>Lands unaffected by calamities & ‘cantons’ not considered by Collector for remission</i>	<i>Value of lands affected</i>	<i>Grants to Ryots</i>	<i>Losses sustained and remissions granted by government</i>
Shawpore	Dihi (Dee) Canonmohone “ Suspore “ Alyghar	10,000 bighas	@Rs. 2/bigha = Rs. 20,000	½ of total lands	Rs. 10,000	Rs. 5000	Rs. 5000
Cotulpore			@ Rs. 48000 hustabood jama	½ of total lands; 2/16 brought to account	the loss is calculated at 6/16 of total lands = Rs. 18,000		Rs. 12,000

Midnapore	Dihi Angoowa Dihi Panch Coory Dihi Khaus bazaar ½ Dihi Danonsay	28,000 bighas	@ Re. 1/bigha = Rs. 28,000	Bazee zamin, Khanabari, and common lands – 4/16 of total	Rs. 21,000, being 2/3 of the 12/16 affected lands; 1/3 being accounted for.	Rs. 14,000	Rs. 12,000
Darenda							Rs. 900

Shawpore, Kotulpur and Darinda had suffered heavy sustained damage in consequent of drought. In Kotulpur the condition was so pitiful that the ryots had objected to reap the paddy and even several lands were so poor on which the cattle were put to feed. The Collector proposed to render the Midnapur pargana khas due to the refusal of Rani Shiromani for not being sufficient deductions. The Board instructed the Collector to assess the actual loss so as to allow the remission on the temporary basis and to restore the jama 'to its original standard on concluding the settlement for the ensuing year'. The Board also instructed the Collector to pay particular attention to the following points:

(a) that in allowing deductions not to submit more to the zamindars than the Collector may be satisfied that the zamindar has remitted to the ryots an equal sum; (b) that the relief is intended by the Company only for the ryots; (c) to make this intention as public as possible throughout the district and to be particularly protective towards the ryots from the exactions of the zamindars; (d) to enquire into the causes of the breaking of the pools in Kasijora and to

ascertain whether it has been occasioned by unusual force or violence of the waters, or, due to the use of the pools on the part of the zamindars, who were bound by the *Qabuliyat* to keep them in good and sufficient repairs and liable to any loss which may arise from neglect in that respect; and (e) in order guard against such accidents in future to examine from time to time into the state of the pools in the district and repair those damage. The Board was apprehensive that mischief was done to the pools in the present instance and the Collector was asked to guard against such accidents in future. The Collector was asked to explain their intentions in this respect throughout the District through advertisement or otherwise. The total loss of revenue or the remission allowed was Rs. 61900.⁷³

The floods devastated more embankments in the salt districts. To repair the embankments, Thomas Calvert the Collector of the salt districts reported in 1787 that the embankments had been thoroughly repaired for the last time at a considerable expense, amounting to Rs. 40,962. But due to 'uncommon and heavy rains' the damage needed an additional expenditure.⁷⁴

The estimate of the Tamluk salt agency was Rs. 28455, which the salt agent thought would 'effectually restore the former state of the Bunds' and 'secure the districts from being overflowed in future, ensure the preservation of the crops and renders the Khalaree (sic) grounds infinitely more profitable and convenient.'⁷⁵ The salt agent at Contai requested for funds as would be

necessary for putting the embankments of these districts into such a state of repair as would prevent the country from being overflowed and ensure the safety of the crops and the places where the salt is manufactured. The total estimate for maintenance was Rs. 32075 including an annual allowance.⁷⁶

Conclusion

By introducing the Permanent Settlement, the East India Company gave an institutionalized form to embankment conservation. New policies were accepted for this. However, in spite of change in policies, there was hardly any gain. The main cause is that the policies and techniques were not adopted according to the characteristic natural environment of Bengal, especially the south-western region. So floods continued to appear, and their long-term effect caused more harm than usual. Realising the gravity of the situation the Company was forced to form Bengal Embankment Committee to ensure revenue collection in future.

Endnotes:

¹ Ranajit Guha. *A Rule of Property for Bengal: An Essay on the idea of Permanent Settlement*, Manchester, Orient Longman Limited, 1962.

² This view is attributed to P. J. Marshall in *Problems of Empire: Britain and India, 1757-1813*, (London, 1968) in Sekhar Bandopadhyay. *From Plassey to Partition*, Orient Longman, New Delhi, 2004, p. 37.

³ H. V. Bowen. *The Business of Empire: The East India Company and Imperial Britain, 1756-1838*, Cambridge, 2005, p. 73.

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- ⁴ Rohan D'souza. *Drowned and Dammed: Colonial Capitalism and Flood Control in Eastern India*, New Delhi, Oxford University Press, 2006, p. 97.
- ⁵ Henry Leland Harrison. *The Bengal Embankment Manual: An account of the action of the Government in dealing with embankments and water courses since the permanent settlement*, Calcutta, Bengal Secretariat Press, 1875, p.2.
- ⁶ *Board of Revenue* (Misc) (henceforth BOR) Vol. 62, No. 39. Balance due to persons on account of Poolbandy for the province of Burdwan, 1194-95 B.S.
- ⁷ *BOR* Vol. 62. No. 38. Lr. from Thomas Marriott to Board of Revenue (BR), 6th March, 1789.
- ⁸ *Ibid.*
- ⁹ *BOR*, Vol. 15, no. 63 J. Kinloch, Collector Burdwan to BR, 8th May 1787.
- ¹⁰ *Committee of Revenue* (henceforth COR), Vol. 64, no. 7. Lr. from COR to J. Kinloch, Superintendent of Pools, 27th February, 1786
- ¹¹ *BOR*, Vol. 1, no.2, 1st June 1786, Extract of a General Letter from the Hon'ble the Court of Directors to the Hon'ble Governor-General in Council, 25th September 1785.
- ¹² *BOR*, Vol.6, no.3, Lr. from J. Kinloch, Collector Burdwan, to Hon'ble J. Macpherson Governor General in Council, 17th November 1786.
- ¹³ *BOR*, Vol.4,no.3, Lr. from J Macpherson Governor General in Council, to J Stables president and a member of BR, 14th September 1786.
- ¹⁴ *BOR*, Vol. 28, no. 30, Lr. from CA Bruce, acting Collector, Burdwan to BR, 6th November, 1787.
- ¹⁵ *Ibid.*
- ¹⁶ *Ibid*, no. 31, BR to J Kinloch, Collector Burdwan, 6th November 1787.
- ¹⁷ *BOR*, Vol. 29, no. 31, Lr. from Collector Burdwan to BR, 7th December, 1787
- ¹⁸ *BOR*, Vol. 29, no. 35, Minutes of BR, 7th December 1787.

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- ¹⁹ BOR, Vol. 29, no. 1. Lr. from the Governor-General in Council to BR, 14th December, 1787.
- ²⁰ BOR, Vol. 29, no. 43, Lr. from the Governor-General in Council to BR, 28th December, 1787.
- ²¹ BOR, Vol. 29, no.8. Lr. from BR to Collector Burdwan, 14th December, 1787.
- ²² BOR, Vol. 31/1, no. 29. Lr. from J. Kinloch Collector Burdwan to BR, 5th February, 1788
- ²³ BOR, Vol. 31/1, no. 32. Lr. form BR to Governor General in Council, 5th February 1788.
- ²⁴ BOR, Vol. 31/1, enclosure to no. 31 Lr. from zamindar of Burdwan BR, 5th February 1788.
- ²⁵ BOR, 31/2, no. 20 Lr. from the Collector of Burdwan to BR, 15th February, 1788.
- ²⁶ BOR, Vol. 31/2, no. 24, Lr. from BR to Collector Burdwan, 15th February 1788.
- ²⁷ BOR, Vol. 31/2, no. 1, Lr. from Governor General in Council to BR, 22nd February 1788.
- ²⁸ BOR Vol. 31/2, no. 20, 21, 22, 23 & 24. 14th to 29th February, 1788, Lr. from Collector Burdwan to BR, minute of the Resident at Radhanagar, minutes of Messrs. Evelyn and Mackenzie, Lr. to Collector of Burdwan. BOR, vol. 33, no. 7 & 8, 22nd to 25th April, 1788, Lr. from GG in C to BR, Lr. from BR to Collector Burdwan.
- ²⁹ BOR, Vol. 69, no. 1. Lr. from G.H. Barlow, to J.H. Harrington, 5th June 1789.
- ³⁰ Ibid. no. 2. Extract of a letter from the Board of Trade to BR, 29th May 1789
- ³¹ Ibid. no. 3. Extract of a letter from the Resident at Radhanagar, 21st March 1789
- ³² Ibid.
- ³³ Ibid. no. 4 BR to L. Mercer, Collector Burdwan, 5th June 1789.
- ³⁴ BOR, Vol. 26. no. 44, Lr. from Actg. Collector of Burdwan, 12th October, 1787
- ³⁵ Ibid.
- ³⁶ BOR, Vol. 28. no. 30, Lr. from Actg. Collector of Burdwan, 6th November 1787.
- ³⁷ Ibid.
- ³⁸ Ibid. no. 42. Lr. from Collector Birbhum to BR, 12th October 1787.

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- ³⁹ BOR, Vol. 28. no. 31, Lr. from BR to Collector Burdwan, 6th November 1787.
- ⁴⁰ BOR, Vol. 12, part II, no. 39. Lr. from Collector Burdwan to BR, 23rd March 1787.
- ⁴¹ *Fort William-India House Correspondence, 1782-1785, ed. By B.A.Saletor Vol. 9, Government of India, 1959. Introduction, p. x.*
- ⁴² BOR, Vol. 12 part II, no. 40 & 41, Lrs. from the zamindar of Burdwan, 23rd March 1787.
- ⁴³ BOR, Vol. 12, part II, no. 17, Lr. from BR to J Kinloch, Superintendent of Poolbundy, 27th March 1787
- ⁴⁴ Ibid.no. 42, Lrs. from Thomas Marriott.
- ⁴⁵ BOR, Vol. 62, no. 39, Lr from Thomas Marriott.
- ⁴⁶ BOR, Vol.29, no.33, Lr. from J Kinloch, Collector Burdwan, to Charles Crommelin, Resident at Guttaul, 7th December 1787.
- ⁴⁷ Ibid. no. 34, Lr. from C Crommelin, Resident at Guttaul to J Kinloch Collector, Burdwan.
- ⁴⁸ Ibid.
- ⁴⁹ BOR, Vol.12/2, no.43, Lr. from BR, to Governor General in Council, 23rd march 1787.
- ⁵⁰ Ibid. no. 44, Lr. from BR to J Kinloch, Collector Burdwan.
- ⁵¹ BOR, Vol. 12/2, no.17, Lr. from BR to J Kinloch, superintendant of poolbundy, 27th march 1787.
- ⁵² BOR, Vol. 29, no. 35, Lr. from BR to Governor General in Council, 7th December 1787.
- ⁵³ Ibid.
- ⁵⁴ Ibid.
- ⁵⁵ BOR, Vol. 41. 3rd to 20th June 1788 no. 17, 16, 18, Lr. from BR to Actg. Collector Burdwan, Lr. from Actg. Collector Burdwan to Thomas Marriott, Lr. from Actg. Collector Burdwan to BR.
- ⁵⁶ Ibid. no. 18, 27, 28 & 29, Lr. from BR to Actg. Collector Burdwan, Lr. from GG in C to BR, Lr. from BR to GG in C.

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- ⁵⁷ COR, Vol. 64, no. 8, Lr. from J Peiarce, Collector of Midnapur to Mr. Seton, Secretary COR, 27th February 1786.
- ⁵⁸ COR, Vol. 65, no. 9, Lr. from B. Aplin, Secretary Revenue department to E. Barber, Resident at Midnapur, 6th march 1786.
- ⁵⁹ BOR, Vol. 9, no. 58, Lr. from J Peiarce, Collector Midnapur to BR, 18th January 1787.
- ⁶⁰ Ibid. no. 59.
- ⁶¹ Ibid.
- ⁶² BOR, Vol. 18, no. 51, Lr. from J. Peiarce, Collector Midnapur to BR, 8th June 1787. See Appendix 1, pp. 233-234.
- ⁶³ BOR, Vol. 26, no. 51, Lr. from J Peiarce, collector Midnapur, to BR, 9th October 1787.
- ⁶⁴ BOR, Vol, 28, no. 10, Lr. from J Peiarce, collector Midnapur, to BR, 2nd November 1787.
- ⁶⁵ Ibid.
- ⁶⁶ BOR, Vol. 28/2, no. 44, Lr. from J Peiarce, collector Midnapur, to BR, 13th November 1787
- ⁶⁷ BOR, Vol. 28, no. 11, President BOR's minute, 2nd November 1787; BOR vol. 29, no. 39, Lr. from Governor General in Council to BR, 23rd November 1787.
- ⁶⁸ BOR, Vol. 30/1, no. 4&5, Lr. from J Peiarce, Collector Midnapur to BR and the report from Mr. Caldecott, 11th January 1788.
- ⁶⁹ BOR, Vol. 31/1, no. 9&10, Lr. from Governor General in Council to BR & Lr. from BR to J Peiarce, Collector Midnapur, 1st February 1788.
- ⁷⁰ BOR, Vol. 31/1, no. 24, Lr. from BR to Mr. Mackenzie, 8th February 1788.
- ⁷¹ BOR, Vol. 28, no. 12, W A Caldecott General instruction to the Collector for enquiry. 2nd November 1787.
- ⁷² BOR, Vol. 7, No. 41. Ltr from the collector of Midnapur, 11th December, 1786.
- ⁷³ Ibid.

⁷⁴ BOR, Vol. 31/II, no. 29, Lr. from Thomas Calvert, Collector Salt District, to BR, 29th February 1788.

⁷⁵ Ibid. no. 30,Lr. from W Dent, Agent Tumlook division, to T.Calvert, Collector Salt District.

⁷⁶ Ibid. no. 31,Lr. from M Hewett, Agent Contai division, to T.Calvert, Collector Salt District.