

Disaster in Bangladesh: Revisiting the Archaeological Evidences

(From earliest times to c. 1800 CE)

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Abstract: Bangladesh, a nation-state emerged in 1971 has a long history of fighting against natural forces since the remote antiquities. During 18th-20th centuries the area was part of Bengal, a toponym used by the British. Due to its location, geo-physical features and climate natural challenges like flood, earthquake etc. are common phenomenon in the life of the people living in Bangladesh. Textual records of the last three century have frequent references of such events. But research on the subject centered on the period before the 1800 CE is scant. This paper attempts to analyze those events which may be termed as disaster. We will use the archeological evidences as primary source. In the last six decades, archeologists have unearthed a large volume of information related to the pre-modern past of Bangladesh, which have been published in the form of excavation reports, research articles and book chapters. The archaeological data will be crosschecked with epigraphic, literary and contemporary geological researches to get a cursory view on history of disaster in Bangladesh from the earliest time to c. 1800 CE. To be more focused, we will limit out discussion to the spatial boundary of present day Bangladesh.

Key Words: Bengal Delta, Flood, Earthquake.

Bangladesh, a nation-state that emerged in 1971, has a long history of struggling against natural forces since remote antiquity. During the 18th-20th centuries, the region was part of Bengal,¹ a toponym used by the British colonial administrators. Geologically, Bengal is the largest delta in the world with a vast river network spreading across it like a fishing net. It is bounded by Pleistocene hills on three sides with only the southern side opening into the Bay of Bengal. Due to its location, geophysical features and climate, natural challenges like floods, earthquakes etc. are common phenomena in the life of the people living in this delta. Textual records from the last three centuries frequently refer

to such events. However, research on these disasters before 1800 CE remains scant. This paper attempts to analyze those disasters using archeological data as the primary source. In the last five decades, archeologists of Bangladesh have unearthed a large volume of information related to the pre-modern past of Bangladesh, which has been published in the form of excavation reports, research articles, and book chapters. The archaeological data will be crosschecked with epigraphic, literary, and contemporary geological research to get a cursory view of the history of disaster in Bangladesh from the earliest times to c. 1800 CE. To be more precise, this discussion will be confined within the spatial boundary of present-day Bangladesh.

Defining the Concept of ‘Disaster’

Disaster is a concept that has gained popularity in academia as well as in the popular mind in the last three decades, largely due to the increase in natural calamities occurring around the world caused by gradual global warming. The etymological origin of the word can be traced to French *désastre* (1560s) and Italian *disastro*, meaning ‘ill-starred’. The word is attributed to anything that is ruinous or of a distressing nature, particularly, an unexpected or catastrophic misfortune.² Focusing on natural forces in these events is not irrational. Biswas and Base argue that, “the prefix “natural” was a label superimposed on a disaster that was “embedded in socio-economic and political processes.”³

Priya Ranja Trivedi and Tanuja Trivedi identified disaster as the calamity of a natural or human-made hazard ... that caused negative impact on society or the environment. They defined hazard as a situation that can cause a certain level of threat to life and health.⁴ A disaster can be defined as any event that involves at least one victim of circumstances like an accident, fire, or explosion. This definition extends to mass killings and wars. However, many scholars consider the flood in Noah’s time as the first disaster.⁵ Damon P. Coppola remarks that disasters happen ‘when a hazard risk is

realized'. The realized hazard must devastate the response capability of a community.⁶ The International Federation of Red Cross and Red Crescent Societies' (IFRC) definition is: "Disasters are serious disruptions to the functioning of a community that exceed its capacity to cope using its own resources. Disasters can be caused by natural, man-made and technological hazards, as well as various factors that influence the exposure and vulnerability of a community."⁷

The prevailing law in Bangladesh identifies disaster as any event created by climate change or human beings, resulting in serious damage to the livelihood and living pattern of the people as well as the flora and fauna of the affected areas. The legal framework classifies six types of incidents, both man-made and natural, as disasters among which the first one includes natural events like cyclones, tornados, excessive rain, floods, river erosion, earthquakes, long-term water logging, etc. It includes high tides in the sea, tsunamis, fires, explosions, chemical and nuclear radiation or pandemic events like influenza, bird flu, anthrax, diarrhea, cholera, etc.⁸ The National plan for disaster risk management of Bangladesh has adopted a similar definition.⁹ The national policy formation most probably followed the earlier documents.

Methodology and Primary Sources

Archaeology is the study of human past on the basis of material evidences. It helps us in two significant aspects: (a) analysis of technology and the transformation process of culture, and, (b) the evidences on the environment and ecology. As a result, recent trends in historical research have put emphasis on material objects, and collecting archaeological data has increased. Therefore, archaeology today is much more vocal than the written texts in the historiography of the pre-modern phase.¹⁰

Sociologists, anthropologists, geologists and even disaster management specialists have confined their focus on the issue within the chronological bracket of the last three

centuries limiting their scope within this chronological framework. Keeping in mind the conceptual framework discussed above, I hereafter intend to present a survey of the archaeological data, which may shed a little light on the subject. The article is narrative in nature, aiming to create an overview of floods, earthquakes, cyclones, and storms that caused a disastrous situation in the life of people living within the spatial boundary of present-day Bangladesh based on archaeological evidence. As mentioned in the title, the chronological boundary will be up to c. 1800 CE.

The archeological excavations carried out in the last four decades are the primary sources of this research. They are published in the form of journal articles, book chapters, and seminar papers, as well as in the form of official and technical reports. However, many of these official records might not have been published for general readers. I have followed the historical methods to present a thematic description of disasters in Bangladesh. This article is a descriptive one in nature. The main challenge of this study is the absence of historical texts related to the natural and human-made calamities that took place in our country. As a result, in a few cases, the present author acknowledges his limitation to present additional information and interpretations.

Earthquake

The Bengal delta and its adjacent areas experienced several devastating earthquakes in the last few decades. Among these, two should be specially mentioned: the Indian Ocean earthquake followed by a tsunami in 2004 and the Nepal earthquake in 2015. The latter one originated near the primary 'frontal thrust between the subducting Indian Plate and the overriding Eurasian Plate'.¹¹ Bengal is a potential region for devastating earthquakes due to its close proximity to active faults in northeastern India.¹² But before the last century, there was no recorded list documenting the earthquakes of Bengal during the pre-modern period.¹³

Edris Ali and Dale Dominey-Howes prepared a catalogue of the earthquakes that happened in the Bay of Bengal region between 180 BCE and 2012 CE. A total of 562 earthquakes were listed in their catalogue.¹⁴ The following list includes the earthquakes that took place within the jurisdiction of Bangladesh, West Bengal, or bordering areas from the earliest time to 1800 CE, the period under consideration:

No.	Year	Location	Lat.	Long.
1	c. 810BCE	India, Assam	26.1	92.56
2	c. 535-530 BCE	India, Assam	26.1	92.56
3	645	India, Assam	26.1	92.56
4	825-35	India, Assam	26.1	92.56
5	1440-70	Bangladesh	25.15	90.0
6	1642	India, Assam	26.1	92.56
7	1649	India, Assam	26.1	92.56
8	1663	India, Assam	26.1	92.56
9	1664	Bangladesh	25	90
10	1676	Bangladesh	22.22	91.48
11	1696	India, Assam	26.1	92.56
12	1737	India, Kolkata	22.3	88.2
13	1762	Bangladesh, Chittagong	22	92
14	1762	India, Kolkata	22.3	88.2
15	1764	Bangladesh and India, on the bank of the Ganga	24	88
16	1775	Bangladesh, Dhaka	23.38	90.25
17	1787	Bangladesh	24.26	89.43

Source: Dominey-Howes, 'A Catalogue of Earthquakes between 810 BC and 2012 for the Bay of Bengal', *Nat Hazards*, 81, 2016, pp. 2031-2102.

Three great earthquakes that shook the eastern part of the subcontinent are missing in this table- a) The Earthquake of 1181 CE and the Nepal Earthquake of 1255 CE.¹⁵ For the period up to the twelfth century CE, no written record

containing any description of earthquakes is available to historians and geographers. But recent archaeological excavations in Paharpur and Mahasthangarh revealed evidences of large-scale cracks and collapse in the structural remains. Cracks in the foundation of the structure may have a connection with the great earthquake of 1255 CE. However, the Earthquake of 1548 which originated from somewhere in Assam or Nagaland –was a devastating one. It caused numerous ground fissures and liquefaction in Assam, Sylhet, Tripura, and the Meghna floodplains.¹⁶ The French-Bangladesh joint excavation in the Mazar area of Mahasthangarh exposed several pieces of evidence that indicate the site and its surrounding areas have been distressed by earth shake. J.F. Salles, the leader of the joint excavation team observed:

... only the very upper layers were affected by the shock, but serious damages seem to have resulted in the abandonment of the plateau for a rather long time, maybe centuries. The evidences of earthquake could be ascertained of the small brick-walls—, in the latest reconstruction of the rampart wall and the ‘pillared building’. A couple of the pillar-bases were ‘twisted’ and show many breaks in the courses of bricks probably as an effect of the collapse of the roof (remains of beams and tiles), and the western wall tumbled down to the west, that is opposite to the direction of the shock as a consequence of the pressure on the walls.¹⁷

Paleo-seismologist Bruno Helly opined that the epicenter of this earthquake was likely located in the northwest, eastern, or central Himalayan hills.¹⁸ In 1255 CE, an earthquake was recorded in Nepal, which destroyed religious and residential structures of Kathmandu, leaving one-third of the inhabitants of this Himalayan city dead. We may assume that the earthquake in Nepal might have affected the northern part of Bengal. The impact of this earthquake was so devastating that bases of several structures were severely cracked.

Madhabgaon, another site located in Kaharol Upazila, Dinajpur unearthed a Brahmanical temple with *nava-ratha* style. Excavation revealed evidences of a palaeo-seismic incident. Several marks in the form of fracture, twisting, slanting etc were noticed in different parts and components of the entire edifice. Sen and his team's conclusion lean towards the probability that such damage happened due to the devastating earthquake that took place in Nepal in 1255 CE. It probably left its footprint in different areas of North Bengal

The earthquake of 1649 CE was a devastating one. The mountainous regions of Sylhet and Chittagong were severely shaken. The earthquake of 1787 CE caused shifts in the river course. Shifts in the course of the Brahmaputra as well as the Karatoya or Tista resulted from the earthquake. It caused severe damage to structures and changes in the topography of the affected area. Edward Gulston translated the description of the event from a Persian record and sent it to Reverend Mr. Hirst. It recorded that Muhammad Asad Chowdhry was the landlord of the Pargana Diang. In a place called Bareeah of that Pargana, a deep creek of ten-twelve cubits in width was created due to this earthquake. The houses of the farmers were overflowed. The residential house of the Fauzdar of Goyparah was cracked and a natural fountain was created inside the house. The sardar of the salt workers informed that a salt-producing island named Akl'poorah was leveled 'with the water on its east side, and on the north and south, the ground opened up from 5 to 7 cubits in width, and sunk like a pit to the depth of 10 cubits'.¹⁹

Several other damages were also reported in the letter sent to Kolkata. 12 *doan* of land totally sunk into the waters of the Halda River. In Dohazary, the brick built residence of Sheer Zaman Chan had sunk. The house of Santeeran of Dahraimpur and the house of the tax collector Houda had

collapsed; a strong building of the Islamabad fort also got destroyed.²⁰

In the 1760s, Jean-Baptiste Chaverlier saw the house of a wealthy man in Assam. But the decoration was very ordinary and the roof was made of straw. The cause explained by the local resident was that ‘frequent earthquakes in the land did not allow the construction of a stone one’.

The evidences mentioned above show that Bengal was an earthquake-prone area throughout its history. However, we do not find any written documents on earthquakes and their impact on Bengal till the eighteenth century CE. Our assumption is proven by archaeological excavations and modern seismic research. Earthquakes were probably one of the causes of shifts in river courses. But we do not hear about any such events before the eighteenth century. It also caused damage to residential houses as well as public monuments like mosques, forts, etc. As we have mentioned earlier, the fort of Islamabad was damaged by the earthquake of 1782. Change in topography was another impact of earthquakes. Even in this case, we don’t possess any well-documented instances before the beginning of the 18th century.

Flood

The earliest record of a flood caused by excessive rainfall and the state’s response comes from Minhaj, the thirteenth-century court historian of Delhi. He documented that Sultan Ghiyasuddin Iwaz Khalji constructed an embankment extending from Lakhnawati to the city gate of Lakhanor on one side and as far as Diw-kot on the other. The embankment spanned a distance of ten days’ travel. ‘During the rainy season, the whole of that tract became inundated and that route was filled with mud-swamps and morass; and if it were not for these dykes, it would be impossible [for people] to

carry out their intentions, or reach various structures and inhabited places except by means of a boat.²¹ The statement clearly shows that there was an attempt on the part of the Sultan to make life easier during the excessive rain and save the local people from the effect of flood. It also underscores the rulers' broader role in controlling natural forces. The kingdom of Lakhnauti was severely affected by frequent floods caused by the neighboring mighty rivers. Hagiological literature titled *Risalat-us-Shuhada*, compiled by Pir Muhammad Sattari gives us an account of the flood. Shah Ismail Gazi, a contemporary sufi-saint tamed the ravaging river named Chuttiah Puttiah, which passed through Lakhnauti. It became flooded in the rainy season and created great loss of life and property. The ruler tried his best to keep it within bounds by commissioning engineers and handicraftsmen and using resources of every kind. Such continuous efforts proved fruitless for seven consecutive years. However, during the rainy season, all the efforts turned into futile exercise and the floods caused great loss of life and wealth. After that, with the notice from the sultans all the people assembled on a certain day and threw earth into the river. The Sultan himself threw a basket of earth. But in the end, the great Sufi Shah Ismail Ghazi suggested constructing a bridge. It was done accordingly and the river was tamed.²² The exact location of the capital city and the kingdom of Lakhnauti mentioned above is still a debatable issue in history.

It was mentioned earlier that the *Dharmamangala* depicted a devastating flood. Such instances were depicted in the *Mahuapala* of *Purbabangagitika*. A section of the *pala* titled '*Jalparba O Durviksa*', i.e. flood and famine, was added where the hero was Chand. Early in the morning he was called by

his mother to wake up quickly. She ordered Chand to go to his crop field and raise the 'ail' (embankment) to protect the crops. She worried that excessive rain may cause flood, which may inundate their farming land. Later on, the fear and assumption based on earlier experience of the mother turned out to be true and the entire crop was destroyed.²³ The fierce floods described in the text are evident through archeological excavations carried out in other parts of Bengal.

Evidences at Domile-Hasarpara, Nawabganj, Dinajpur

Domile-Hasarpara, a site located in the Domile of Nawabganj upzila, Dinajpur, contains a cluster of Buddhist viharas. The site was excavated by a group of archaeologists from Jahangirnagar University. The monastic settlement was connected spatially and chronologically with another site called Khairghuni where small mounds with temples, shrines and stupas have been identified. The settlements are separated by an abandoned channel of Tulshiganga River. Swadhin Sen is of the opinion that flood and the shift in river course of adjacent two rivers caused abandonment of these settlements.²⁴ Sen also rejected the established assumption of having human settlement in Varedri area in flood free zone because excavation at Chakai, Birampur, Dinajpur revealed that the stupa-shrine found in Bowalar Mandap Mound indicates that the edifice was built 'on the bank of a river within the flood zone.'²⁵

Evidences at Paharpur, Naogaon

Paharpur Buddhist Vihara *alias Sompura Mahavihara*, another site located in Naogaon district was declared a world heritage site by UNESCO in 1985. The site has gone through several excavations in the last century and a large crucified central temple surrounded by 177 residential rooms of the *vikshu* in square shape has been unearthed. Swadhin Sen and Md. Shafiqul Alam have presented a provisional stratigraphy of the excavation done in the central shrine. Of

the proposed 11 levels, three levels (level II, level IV and level III) were affected by flood. The earliest evidence of flood is found in the Level II. In this level, a deposit was found which represents a low to medium energy overbank flood-borne facies. Probably this flood might have destroyed the habitations and buried the remains. Level IV of the site contains the marks of the second event of flood in Paharpur (trench PAH 1). Particular types of ring stands were recovered from this trench. More than 15 ring stands were recovered from 30-40 cm thick sandy deposit in a 1 sq. m. area. These were found in a disorganized way without any particular positioning. The excavators think that they had been dumped before an episodic flood. This homogeneous and massive deposit is most possibly not a result of anthropogenic activity. Level III contains a deposit of six to eight cm thick silty sand that covers the floor as well as the deposit of charcoal and ash. The presence of such deposit leads the researcher to conclude that a low-intensity short-term sheet flood affected the area after an event of fire.²⁶ The site being located on a dynamic alluvial plain of flood zone in Barind tract, probably experienced such floods created by rivers like Tista, Choto Zamuna, Kata Zamuna etc. Absence of written sources on this specific site led us to make such assumptive conclusions.

Evidences at Bagerhat: Historic Khalifatabd

Recent archaeological evidences found in the residence of Khanjahan (r.), of Bagerhat, Bangladesh, show that seasonal flood devastated the site more than once. Structures were built above those layers of architectural remains destroyed by the previous flood.²⁷ In the same site, the excavators unearthed a wall directed towards the southwest that was abandoned due to the damage caused by flood. The wall also belonged to the contemporary phase of Khanjahan. They remarked that, “a deposit of gray sandy silt laid on it when later period structures were discovered. These layers bear

evidence of destruction and abandonment.”²⁸ The site went through several floods caused by the River Bhairab.

Evidence at Barobazar, Jhinaidah

Barobazar is a medieval site located on the north bank of the dried-up Bhairab River in Kaliganj upazila, Jhinaidah district in the southwestern part of Bangladesh. The archaeological sites of Barobazar represent the medieval city of ‘Muhammadabad’. The Department of Archaeology of Bangladesh exposed 14 sites by systematic excavations and restored them. Apart from these, exploration conducted in the city and its surroundings has traced some other existing sites.

The development and the political status of the city is still a debatable issue in the historical and archeological research of Bangladesh.²⁹ Md. Shafiqul Islam, the lead and the most experienced excavator of the site, proposed three possible explanations for the decline of the city. These are: (a) loss of navigability of the river Bhairab; (b) an epidemic disease that took a very heavy toll on life, and, (c) the non-Muslim administrator during the Mughal rule did not find the place suitable as the seat of administration and shifted his seat. Alam tends to go with the first two causes which indicates that probably there was an epidemic which caused the citizens living in and around to leave the place. The arrangement of graves is very unusual in this settlement. Despite having a regular cemetery, people buried their relatives within the boundary of the nearby mosques. This pattern strongly recommends a condition of severe disaster. The site also experienced more than one flood which resulted in the abandonment of the settlement that may have caused the final decay of this habitation.³⁰ All these are assumptions by an archeologist working on the site. But a proper scientific archaeological survey, documentation and large-scale excavation are desideratum for a better understanding of the ecological scenario of the site.

Archaeological data mentioned above clearly shows that Bangladesh, from its earliest times, has been facing natural disasters like floods and earthquakes. Evidence of cyclones, typhoons or tornadoes is not being found in any site of Bangladesh. We have seen that Swadhin Sen in his research questioned the narrative that human settlement in the northern part of Bengal was in the flood free zone. But recent excavations in different sites of Dinajpur compel us to rethink such generalized conclusions. Several sites were located near the adjacent area which was not free from flooding. Another natural challenge is earthquake, which still knocks us at regular intervals. Excavations at Paharpur, Dinajpur, and Mahasthangarh show that people living in this spatial boundary were not safe from this natural disaster. Even the southern Barobazar bears evidences of flood. The present research is a humble effort to make a sketchy account about the dynamics that actively played or participated in the happening of such situations.

Notes and References

- 1 'Bengal' in historical sense existed in pre-1947 in the name of Bengal Presidency. At present, major parts of that administrative unit spread over the nation-state Bangladesh and the Indian states of *Paschimbanga* (West Bengal), few areas of Tripura, Assam, Bihar, Odhisa and Jharkhand.
- 2 <https://www.etymonline.com/word/disaster> (accessed on 7 November 2022).
- 3 Tirthankar Roy, *Natural Disasters and Indian History*, (New Delhi: Oxford University Press, 2012); Sugata Bose, *The New Cambridge History of India Peasant Labour and Colonial Capital: Rural Bengal Since 1770*, (Cambridge: Cambridge University Press, 1993).
- 4 Priya Ranja Trivedi and Tanuja Trivedi, *Future Disasters*, (Delhi: Jananda Prakashan in association with the Global Open University Nagaland (India), 2010), p. 1.

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- 5 *Ibid.*
- 6 Damon P. Coppola, *Introduction to International Disaster Management*, (Oxford: Butterworth-Heinemann, 2020).
- 7 <https://www.ifrc.org/our-work/disasters-climate-and-crises/what-disaster#:~:text=Disasters%20are%20serious%20disruptions%20to,and%20vulnerability%20of%20a%20community> (accessed on 20 August, 2024).
- 8 Disaster Management Act, 2012 (Act no 34, 2012) https://legislative.portal.gov.bd/sites/default/files/files/legislative.portal.gov.bd/page/5a6bca14_6a2e_44e4_b155_c8147d1edd65/23.%20Disaster%20Management%20Act%2C%202012.pdf (accessed 2 March 2023).
- 9 *National Plan for Disaster Management (2021-2025) Action for Disaster Risk Management Towards Resilient Nation* (draft), (Dhaka: Ministry of Disaster Management and Relief, 2020).
- 10 Carla Sinnapoli and T.R. Trautmann, 'In the Beginning There Was Word: Excavating the Relations between History and Archaeology in South Asia', *JESHO*, XLV, 2002, pp. 492-523.
- 11 Dominey-Howes, 'A Catalogue of Earthquakes between 810 BC and 2012 for the Bay of Bengal', *Nat Hazards*, 81, 2016, pp. 2032-33.
- 12 J.R. Choudhury, 'Earthquake-Tsunami: The Threat Looms', *Independent Weekend*, (Dhaka: Free Press, 2005); Nibas Apu and Urmi Das, 'Tectonics and Earthquake Potential of Bangladesh: A Review', *International Journal of Disaster Resilience in the Built Environment*, September 2020 www.researchgate.net/publication/344341784_Tectonics_and_earthquake_potential_of_Bangladesh_a_review (accessed 2 March 2023) .
- 13 John Milne, *A Catalogue of Destructive Earthquakes, A. D. 7 to A. D. 1899*, (London, British Association for Advancement of Science, Seismological Committee, 1912).
- 14 Dominey-Howes, 'A Catalogue of Earthquakes between 810 BC and 2012 for the Bay of Bengal', *Nat Hazards*, 81, 2016, pp. 2031-2102.

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- 15 R.N. Iyengar, D. Sharma and J.M. Siddiqui, 'Earthquake History of India in Medieval Times', *Indian Journal of History of Science* 34(3), January 1999, pp. 181-237; S. N. Sapkota , L. Bollinger , Y. Klinger , P. Tapponnier , Y. Gaudemer and D. Tiwari, 'Primary Surface Ruptures of the Great Himalayan Earthquake in 1934 and 1255', *Nature Geoscience*, 6(1), January 2013, 71-76, DOI: 10.1038/ngeo1669.
 - 16 R.N. Iyengar, D. Sharma and J. M. Siddiqui, 'Earthquake History of India in Medieval Times', *Indian Journal of History of Science*, 34(3), 193; S. N. H. Rizvi, *East Pakistan Gazetteers, Sylhet*, Dhaka: Government of the People's Republic of Bangladesh, 1970.
 - 17 J.F. Salles, 'Mahastahan', in Abdul Momin Chowdhury and Ranabir Chakravarti (eds.), *History of Bangladesh*, Vol. 1, 2018, p. 256.
 - 18 Bruno Helly is an archaeologist specializing in paleo-seismology over the Mediterranean area. B. Helly presented a paper on the Mahasthan earthquake at the International Symposium "The 2001 Bhuj Earthquake and Advances in Earthquakes Science" organized by the Institute of Seismological Research, Raisan, Gandhinagar - Gujarat (22-24 Jan. 2011).
 - 19 J.F. Salles, 'Mahastahan', 2018, pp. 253-54.
 - 20 *Ibid.*
 - 21 Mihaj us Shiraj, *Tabakat-i-Nasiri*, translated by Major H.G. Raverty from original Persian manuscripts, Vol. I, Calcutta: The Asiatic Society, 2010 (3rd reprint, 1st published 1881), p. 587.
 - 22 Abdul Karim, *Social History of the Muslims in Bengal (Down to A.D. 1538)*, (Chittagong: Baitushsaraf, 1985), pp. 84-85.
 - 23 Sukhamay Mukhapadhyay, *Mymensinggitika*, (Kolkata: Bharati Book Store, 1996, 4th edition), pp. 36-38.
 - 24 Swadhin Sen, 'Northwestern Bangladesh: Archaeological Exploration', in Abdul Momin Chowdhury and Ranaabir Chakravarti (eds.), *History of Bangladesh*, Vol. 1, 2018, pp. 319-50.

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- 25 *Ibid.*, pp. 326-27; Swadhin Sen, 'Interpreting Transformation of Material Culture with Reference to Stratigraphy: Report on the Excavation at Bowalar Mandap Mound, Birampur, Dinajpur, Bangladesh', *Pratna Samiksha, New Series* 5, 2014, pp. 16, 20.
- 26 Swadhin Sen and Md. Shafiqul Alam, 'Paharpur' in Abdul Momin Chowdhury and Rana abir Chakravarti (eds.), *History of Bangladesh*, Vol. 1, 2018, pp. 360-69.
- 27 A K M Sayfur Rahama, Urmila Hasan and Afroza Khan Mita, 'Bagerhat', in Abdul Momin Chowdhury (ed.), *History of Bangladesh Sultanate and Mughal Periods (c. 1200 -1800 CE)*, (Dhaka: Asiatic Society of Bangladesh, 2020), p. 430; A.K.M. Syfur Rahman and Afroza Khan Mita, 'Early Medieval and Medieval Settlements on the Littoral and Active Part of a Delta: An Archaeological Study of the Southwestern Part of Bangladesh' in Swadhin Sen, Supriya Varma and Bhairabi Prasad Sahu (eds.), *The Archaeology of Early Medieval and Medieval South Asia Contesting Narratives from the Eastern Ganga-Brahmapurta Basin*, (London and New York: Routledge Taylor and Francis Group, 2023), pp. 154-93.
- 28 *Ibid.*
- 29 Latest research shows that the settlement was initiated by and named after Sultan Nasiruddin Mahmud Shah. Probably Mahmudabad mint was introduced by Nasiruddin Mahmud Shah in the middle of the fifteenth century and the settlement continued till the fall of the Hussain Shahi dynasty, see, Sahidul Hasan, "The Making and Remaking of Geopolitical and Cultural Units in Bengal (13th to 18th Centuries)", unpublished PhD thesis, (Dhaka: University of Dhaka, 2024), pp. 302-320.
- 30 Md. Shafiqul Alam (compiled), *Muhammadabad Medieval City of Barobazar, Jenaidah*, (Dhaka: Department of Archaeology, Ministry of Cultural Affairs, Government of the People's Republic of Bangladesh, 2020), p. 155.