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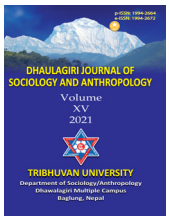

Inhabiting the World's Largest Tropical Delta: Understanding Human-Environment Relationship from a Century-Long Archaeological Quest in Bangladesh

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Abstract

Due to the exceptionally rich tropical resource, the Lower Ganges-Brahmaputra basins have attracted people of diverse ethnic and geographical backgrounds for millennia. So far 524 protected sites in present Bangladesh indicate the busy human occupation in the world's largest delta at least from 5th century BCE. Although systematic archaeology began in the 1870s there is still a paucity of knowledge about past human land use and livelihood strategies across this area, which is especially prone to floods, cyclones, and river migrations. Here we attempt a systematic survey of human-environment interactions in ancient deltaic Bangladesh. Revisiting the fragmentary information from archaeological records and epigraphic references produced through over a century-long archaeological legacy, this study is the first attempt at a synthesis of the changing relationships between ancient people and their environment elements including land, water bodies, flora and fauna.

Keywords: Bengal Delta; riverine agriculture; tropical landscape; palaeoecology; human-environment relationship; Bangladesh

Introduction

Bengal, which is the largest tropical delta of the world, is surrounded by the Indo-Himalayan, Indo-Burma and Indo-Chinese ecological regions. Encompassing India's West Bengal province and the entire landmass of the independent country of Bangladesh, the delta currently support over 250 million people. With annual average rainfall up to 3000 mm, the Lower Ganges, Brahmaputra and Meghna river basins of this land support a highly diverse flora and fauna spanning the transnational zone between South and Southeast Asia, and comprising c. 3813 species of vascular plants, 1952 species of invertebrates, 653 species of fish, 49 amphibians and reptiles, 690 species of birds, and 121 species of mammals (Hasan et al., 2014; Irfanullah, 2011; IUCN Bangladesh Country Office, 2002; Khan et al., 2015). Due to these great natural resources, fertile cultivation lands and tropical forests (Meher-Homji, 2001), Bengal attracted human colonization, culture exchange and maritime activities for millennia (Bhattacharyya, 1977; Siddiq and Habib, 2017).

Pre-Neolithic stone tools (Roy, 2009; Roy and Ahsan, 2000) and megalithic archaeological records (Hoque, 2009) are found across most of the upland divisions of the delta. In the lower deltaic plain, chronometric dates from archaeological layers suggest early human habitations from the first millenium BCE (Alam and Salles, 2001, p. 227; Hu et al., 2020, p. 1095). Overall, a total of 524 archaeological sites are currently protected by the Department of Archaeology of Bangladesh (DoA, 2020). Yet, there is still

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paucity of knowledge about ancient peoples' survival techniques and livelihoods. However, although tropical conditions such as flooding and river migration certainly take place (Dewan et al., 2017; Goodbred et al., 2014; Richardson and Thorne, 2001; Sincavage et al., 2018) as well as inadequate research methods put severe limitations on our understanding of the nature of the archaeological resource, by combining geoarchaeology (Akanda et al., 2015; Hu et al., 2020) and archaeobotany (Rahman et al., 2020) with the systematic survey of epigraphic records (Khan, 2007) it is possible to reveal vital information about ancient land use and interactions between ancient humans and this extraordinary riverine land.

Hence, in presenting a summary of over a century-long archaeological quest in (present-day) Bangladesh, the objective of this study was to collate archaeological and epigraphic data, first to enhance our understanding of ancient land use, land type, agriculture and resource exploitation; and second, to comprise a resource for future applied studies. In general, we aimed to improve the synthesis of archaeological-epigraphic data with the fragmentary knowledge of human-environmental relations in ancient to early medieval Bengal. This knowledge is of importance to glean the first concise ideas about ancient peoples' subsistence and environment challenges in a manner that can help inform a more sustainable approach to environmental archaeology in Bangladesh.

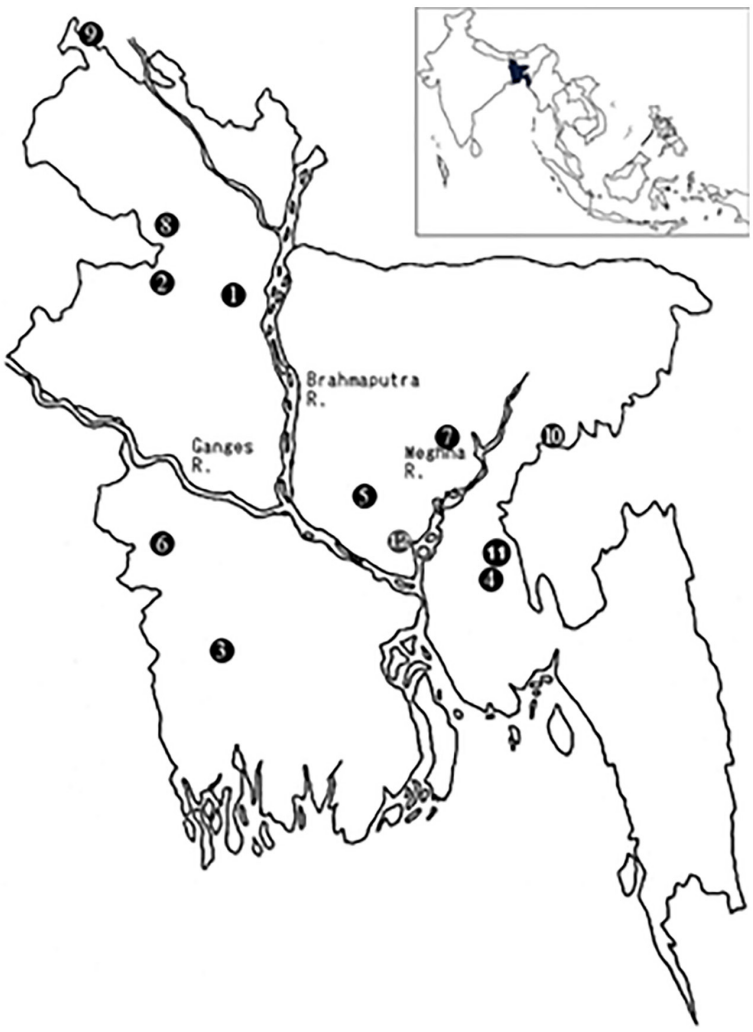

Figure 1: List of archaeological locations mentioned in the text : 1) Mahasthangarh; 2) Paharpur; 3) Bharat Bhayna; 4) Mainamati; 5) Savar-Harish Chandra Vita cluster; 6) Titudaha-Kalupol Rajar Vita cluster; 7) Wari-Bateshwar; 8) Birampur-Nawabganj cluster; 9) Bhitargarh; 10) Chaklapunji; 11) Lalmai Hills; and 12) Vikrampura.

Methods

Archaeological records and epigraphical references were data-mined from reports in Bangla and English languages published since 1882. Focus was placed on compiling the following kinds of evidence from these: ancient subsistence, settlement patterns, land management system, plant and animal species exploited, and paleo environmental data. The distribution of the more significant riverine archaeological locations in Bangladesh is shown in Figure 1. Given that only a few of the documented sites have been radiocarbon dated; we suggest caution when it comes to attempting to reconstruct settlement and environmental histories.

Background of archaeology in the Delta

The beginning of archaeology in the Bengal Delta was contemporary to the early disciplinary archaeological practice in Europe. Following the establishment of the Archaeological Survey of India (ASI) in 1861, its first director general Alexander Cunningham conducted systematic archaeological excavation in the northern part of Bangladesh in 1879, with a conclusion saying that the large urban centre Mahasthangarh with a naval harbour was in fact the 3rd century BCE town of *Pundavardhana*, mentioned by the famous traveller Hieun Tsang (Cunningham, 1882). Despite of emerging attention to the newly discovered Indus Valley Civilization, systematic archaeological excavations continued to be a concern in different part of Bengal in the later period of British India, given the excavations of 177 cells, central shrine, several votive *stupas* and many functional structures at Paharpur complex from 1923-1934 (Dikshit, 1938), and new excavations at many other sites including Bharat Bhayna of the south-western Bangladesh (Dikshit, 1938). During World War II, the accidental discovery of the Mainamati ruins in southeast Bangladesh was the final legacy of colonial archaeology – at least 18 monumental and

settlement sites were brought under protection following a rapid survey.

Collection of copper and stone inscriptions was also primary focus in colonial antiquity study, and about a hundred copperplates were recorded from Bengal, including more than 70 land-grant copperplates from the territory of present Bangladesh (Khan, 2007). This provided invaluable data about socio-political and environment in ancient and early medieval delta.

Following the colonial rule, extensive surveys and excavations at around 50 religious and habitation sites in Mainamati region was a major legacy of 24 year-long Pakistan period. Rich archaeological assemblages including copper plates (Dani, 1966), terracotta and baked clay seals and sealing, bronze and stone sculptures, hundreds of coins of 4th-6th century Gupta, 7th century Shashanka, 7th century Khadga, 7th century Harikela dynasty as well as gold and silver coins of the Abbasid Caliphs (Rashid, 2012) revealed that east and southeast Bengal witnessed busy human colonization, cultural exchange and maritime business since 3rd century CE.

Despite political and economic problems, the volume of archaeological research increased after Bangladesh gained independence in 1971. Over the last few decades, the Department of Archaeology of Bangladesh has completed tens of projects, including excavations at the World Heritage Site of Paharpur from 1981 to 1993 (Miah et al., 2001); extensive surveys and excavations in the coastal region of south-western Bangladesh since 1985; excavations at urban and religious centres of the Savar-Harish Chandra Vita cluster throughout the 1990s; surveys and excavations in the Titudaha-Kalupol Rajar Vita cluster throughout 2015-2017 (Alam, 2018); and excavations at Bharat Bhayna since 1985 (Alam, 1989).

As an academic discipline, archaeology was introduced in Bangladesh in 1989 with the establishment of the Department of Archaeology at Jahangirnagar University (JU). In a short period of time, the academic staff from JU conducted some significant projects including excavations at Wari-Bateshwar near the confluence of the Old Brahmaputra and Meghna rivers (Rahman and Pathan, 2012) and Birampur-Nawabganj cluster in the north Bangladesh (Sen, 2015a, 2015b). Research at Wari-Bateshwar since 2000 has revealed that the region was a trade hub since the 5th century BCE, connecting the delta with Southeast Asia and Roman trade routes (Rahman and Pathan, 2012). The results of the excavations from 2004 to 2014 in the Birampur-Nawabganj cluster suggest that throughout the 6th-13th century CE the northern part of Bangladesh continued to flourish, often associated with crucial socio-religious changes (Sen, 2015b, 2014).

The Bangladesh-France joint archaeological expeditions at Mahasthangarh since 1993 has generated one of the richest assemblages of archaeological material in Bangladesh (Alam and Salles, 2001). This includes semi-circular ring stones, bronze mirrors, Northern Black Polished Wares (NBPW), Rouletted Wares, stamped wares, Sunga Terracotta figurines, terracotta plaques, terracotta rings, typical Gupta seals, copper and iron objects, stone and glass beads, a silver punch-marked coins hoard, cast copper coins, coins of the Kushana, Gupta and Islamic periods. The finds further confirm cultural continuation and the deep history of a monetary economy and exchange network in the Lower Ganges-Brahmaputra Basin from the 3rd century BCE to the medieval period (Ahmed, 1981; Alam and Salles, 2001).

The excavations at the habitation site Bhitargarh in the northernmost part of Bangladesh made further significant contributions to archaeological practice in Bangladesh (Jahan, 2012; Saifuzzaman and Shamsuddin, 2011). With the remains of several temple complexes, this rampart-fortified site developed around 7th-8th century CE and was connected to a trade network linked to Sikkim, Bihar and West Bengal of India, Nepal and China (Jahan, 2011; Jahan, 2012; Jahan, 2018).

Additionally, although recorded as surface finds, the large number of Pre-Neolithic fossil wood tools from multiple locations on the Tertiary and Pleistocene lateritic terraces raised further questions about earlier human colonization of the region (Chakrabarti, 2001; Roy, 2009; Roy and Ahsan, 2000).

Land cultivation and human-environment relationships in ancient Delta

At present a total of 524 sites are under list of protection by the Department of Archaeology of Bangladesh, less than four percentages of these can be categorized as habitation sites while rest are architectural remains of religious centres, tombs and administrative centres of ancient elites. Of these 524 sites, radiometric dating has been conducted for just three (i.e., Wari-Bateshwar, Mahasthangarh, and Vikrampura) (Alam and Salles, 2001; Hu et al., 2020; Rahman et al., 2020). Of these dates, the OSL and radiocarbon dating from Wari-Bateshwar confirms human occupation in the region at around 3.2ka BP (Hu et al., 2020). With the yields of rich agricultural practices (Rahman et al., 2020) and maritime commercial exchanges, the region witnessed the emergence of multiple urban and commercial centres between the 5th century and 3rd century BCE (Alam and Salles, 2001; Hu et al., 2020; Rahman and Pathan, 2012). Within a millennium, the whole Lower Ganges-Brahmaputra-Meghna basin was cultivated and colonized by human groups, as attested by the presence of large religious and urban centres (Table 1).

Table 1: List of notable archaeological locations in Bangladesh and their associated river basins.

Site	Type	Earliest occupation	Research year	River basin	District	References
Chaklapunji	Prehistoric location	Pre-Neolithic (?)	1997 – ongoing	Sutang	Habiganj	(Roy and Ahsan, 2000)
Sitakunda	Prehistoric location	Pre-Neolithic (?)	1886	Sandwip Channel, Bay of Bengal	Chit-tagong	(Chakrabarti, 2001)
Chhagalnaiya	Prehistoric location	Pre-Neolithic (?)	1963	Feni River	Feni	(Chakrabarti, 2001)
Lalmai Hills	Prehistoric location	Pre-Neolithic (?)	1989-2009	Gomati	Comilla	(Roy, 2009)
Jaintapur	Megalithic monu-ments	Post-Neolithic	1960-2010	Boro Gang	Sylhet	(Hoque, 2009)
Wari-Bateshwar	Rampart urban set-tlement	5th century BC*	2000 – ongoing	Arial Kha	Narshing-di	(Rahman et al., 2020)
Mahasthangarh	Urban center	4th century BC*	1928 – ongoing	Korotoya	Bogura	(Alam and Salles, 2001)
Bathbhita	Monastery	2nd century BC	2004-2005	Nabaganga	Magura	(Hossain, 2013)
Patharghata cluster	Rampart urban center	1st century CE	1979; 2004-2005	Tulsiganga	Joypurhat	(Ferdousi et al., 2012)
Baigram	Religious center	4th century CE	1930	Jamuna	Dinajpur	(Khan, 2007, p. 6)
Bihar Dhap	Religious sanctuary	4th century CE	1879-1880; 1979-1986	Gangani-Nagar	Bogura	(Bhuiyan, 2012)
Bharat Bhayna	Shrine	5th century CE	1922; 1985; 2000-2001	Buri-Bhadra	Jessore	(Alam, 1989)
Mainamati	Urban religious and commercial center	6th century CE	1945-1957	Gomati	Cumilla	(Dani, 1966; Rashid, 2012)
Rupban Mura	Shrine	6th century CE	2000 – ongoing	Gomati	Cumilla	(Rashid, 2012)
AnandaVihara	Royal monastery	7th century CE	1979-1982	Gomati	Cumilla	(Rashid, 2012)
Birampur-Nawab-ganjcluster	Settlement mounds and shrines	7th century CE	2004-2014	Jamuna and Januneshwari	Dinajpur	(Sen, 2015a, 2015b)
Paharpur	Royal monastery	8th century CE	1923-1934; 1981-82; 1984-85; 1988-91	Jamuna	Naogaon	(Cunningham, 1882)
HaludVihara	Monastery	c. 8th century CE	1976-2001	Jamuna and Tulshiganga	Naogaon	(Miah et al., 2001)
Bhitargarh	Rampart urban set-tlement	8th century CE	2010 – ongoing	Talma-Karatoya	Pancha-garh	(Jahan, 2012; Saifuzzaman and Shamsuddin, 2011)
Savar-Harish-chandra Vita cluster	Habitation and reli-gious centers	8th century CE	1925-1926; 1989-1995	Dhaleshwari	Dhaka	(Hoque et al., 1996)
SitakotVihara	Monastery	8th century CE	1968-1973	Nalsisa	Dinajpur	(Rahman, 2012)
Dalijhara Vita	Settlement mound	8th century CE	2018 – ongoing	Buri-Bhadra	Jessore	(Alam, 1989)
Charpatra Mura	Shrine	10th century CE		Gomati	Cumilla	(Rashid, 2012)
Vikrampura	Religious and com-mercial center	12th century CE	2009 – ongoing	Meghna	Munshi-ganj	(Rahman et al., 2020)
KalupolRajar Vita cluster	Settlement mound	-	2016-2017	Chitra	Chuadan-ga	(Alam, 2018)
Barobazar	Urban center	13th century CE	1989-2009	Bhairab	Jessore	(Alam, 2012)

Yet, natural calamities such as cyclones, floods, earthquakes, and particularly river migration were significant threats to human settlements (Dewan et al., 2017; Richardson and Thorne, 2001). As an example, the densely populated habitation and manufacturing centre at Wari-Bateshwar was eventually abandoned because of low energy flood events, changes in the alluvial environment and fluvial migration at around 1.8 ka BP (Akanda et al., 2015; Hu et al., 2020).

Among the agricultural products deep-water rice appeared to be the most important grain, given that cultivated rice was evolved in the region (Catling, 1992, pp. 173–212). A 2nd century BCE Brahmi inscription from Mahasthangarh also supports the importance of rice, describing that rice (paddy) and oil were distributed from estate granaries during famines (Bhanderkar, 1931; Dani, 1964; Tinti, 1996). Archaeobotanical analysis at Wari-Bateshwar and Vikrampura (Rahman et al., 2020) revealed a healthy agricultural system with the cultivation of native and imported crops including a large variety of cereals, millets, pulses, oils and other economic crops (Table 2).

exotic species such as horse, donkey and camel (Table 2). Hundreds of terracotta plaques from Mahasthangarh, Paharpur and Mainamati display different types of plants including grasses, shrubs, flowers and economic trees. Aquatic species particularly dominate the terracotta plaques –given that about 3166 specimens from the Early Historic to the Pre-Medieval period were depicted with the imageries of aquatic plants and animals including fish and invertebrates (Uddin and Rezowana, 2020).

Additionally, at least 77 land-grant and land-purchase copperplate inscriptions from different parts of Bangladesh (Khan, 2007) also provide valuable information about the variegated layers of human-environmental interactions from the 4th century CE to 12th century CE, along with the description of common flora and fauna (Table 2). The spatial organization of particular rural settlements (Figure 2), as well as clear feature of the boundary specifications of a rural space, was often isolated from one another by inherited family water bodies such as lakes, ponds and tanks, associated within a given space (Sanyal and Ghosh, 2019, p. 138). A variety of cultural and natural

Table 2: Common crops, economic plants and animals in ancient Bangladesh from 5th century BCE to 13th century CE.*

	Plants
Native crops	Rice (*Oryza*spp.); browntop millet (*B. ramosa*); foxtail millet (*S. italica*); kodo millet (*Paspalum*sp.); pearl millet (*P. glaucum*); mung bean (*V. radiata*); moth bean (*V. aconitifolia*); rice bean (*V. umbellata*); black gram (*V. mungo*); jungle mat bean (*V. trilobata*); horse gram (*M. uniflorum*); grass pea (*L. sativus*); lentil (*L. culinaris*); broad bean (*V. faba*); mustard (*B. juncea*); sesame (*S. indicum*); sugarcane (*Saccharum*sp.)
Exotic crops	Barley (*H. vulgare*); oat (*A. sativa*); sunflower (*Helianthus* sp.)
Fruits and economic plants	Mango (*Mangifera* sp.); banana (*Musa* sp.); jackfruit (*A. heterophyllus*); breadfruit (*A. altilis*); coconut (*C. nucifera*); betel nut (*A. catechu*); silk cotton (*C. pentandra*); tree cotton (Gossypium); tala palm (*B. flabellifer*); wild date palm (*P. sylvestris*); Bengal quince (*A. marmelos*)
Others	Sacred fig (F. reigiosa); mahua (M. longifolia); amalaki (E. myrobalam); myrobalan (Terminalia sp.); lotus (N. nucifera); grass; shrub; fern
	Animals
Native mammals	Rhesus macaque (*M. mulatta*); graylangur (*Semnopithecus spp.*); elephant (*E. m. indicus*); rhinoceros (*R. unicornis*); bear (*M. ursinus*); tiger (*P. t. tigris*); deer (*A. axis*); hare (*L. nigricollis*); mongoose (*H. edwardsii*); boar (*S. s. cristatus*); cattle (*B. t. indicus*); buffalo (*B. bubalis*); goat (*C. hircus*); sheep (*O. aries*); dog (*C. familiaris*)
Exotic mammals	Horse (*E. caballus*); donkey (*E. asinus*); camel (*C. bactrianus*)
Birds	Harrier (Accipitridae); swan (*Cygnus* sp.); duck (*Anatidae* spp.); peafowl (*P. cristatus*); chicken (*G. gallus*)
Fish	Rui (*Labeorohita*); catla (*Catlacatla*); ilish (*Tenualosailisha*); climbing perch (*Anabas sp.*); shrimp
Other	Tortoise (Geoemydidae); cobra (*N. naja*); python (*Python* sp.); snail; conch; termite

* after (Dani, 1966; Fleming, 2010; Islam, 2012; Rahman et al., 2020; Sanyal and Ghosh, 2019; Uddin and Rezowana, 2020, 2012).

Besides the domesticates, a rich biodiversity was also inseparably connected with common life, beliefs, art and architecture in ancient Bengal –as witnessed in a large number of *in situ* terracotta plaques ranging between 7th to 15th century CE (Uddin and Rezowana, 2020, 2012). The *in situ* terracotta plaques from the 8th century CE World Heritage site Paharpur display motifs of about 80 animal species (Uddin and Rezowana, 2012), including

landmarks comprised an important part of rural settlement organization. The landscape of a particular rural area was categorized by different land types, related to the natural condition, utility and cultivation status (Table 3).

Table 3: Land type and landmarks described in 4th-12th century land-related copper-plate inscriptions from Bangladesh.*

Land type	Natural landmark	Cultural landmark
Hillock; lowland; wetland; marshy land; grassland; pastureland; dry land; fallow land	River; embankment; lake; pond; large trees; forest	Crematorium; market place; public road; border-road; cattle track; boat-parking stations; temple; shrine

*after (Dani, 1966; Fleming, 2010; Islam, 2012; Khan, 2007; Mills, 1993; Sanyal and Ghosh, 2019).

(Table 1). However, monsoonal precipitation, frequent river flooding and migration of the Ganges, Brahmaputra and Meghna, appeared to have major impacts for the continuation of settlement at a certain place (Akanda et al., 2015; Dewan et al., 2017; Hu et al., 2020; Sen, 2015a; Sincavage et al., 2018). It is notable that only the Brahmaputra River has alternated between Meghna, Old Brahmaputra and Jamuna rivers several times since about 18ka BP (Goodbred et al., 2014; Sincavage et al., 2018). Many oxbow lakes and scattered abandoned channels all over the country also indicate frequent river migrations (Richardson and Thorne, 2001).

The majority of prehistoric find spots in Bangladesh are located on the Tertiary and Pleistocene lateritic terraces in the northeast, central and south-eastern border lands (Ahmed 1979, 1981; Ahmed et al. 2000; Ahsan 2007; Khan 2017; Rahman 2007). The Tertiary hills and Pleistocene

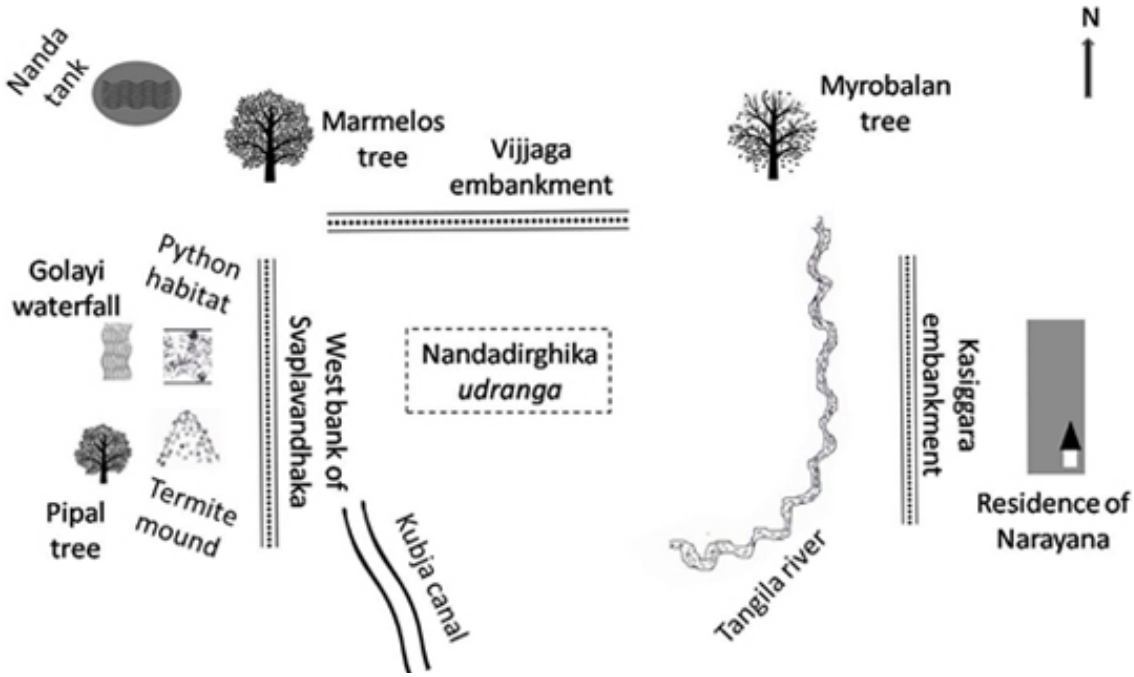

Figure 2: Different landmark and geo-environment of Nandairghika settlement described in the 9th century Jagjibanpur copper-plate from Rajshahi-Malda region (after (Sanyal and Ghosh, 2019, p. 143). Not in scale.

Synopsis of the data

With its abundance of natural resources and agricultural lands the Bengal Delta was favourable to intense human occupation and activity from c. 3.2ka BP (Hu et al., 2020). Throughout the 5th century BCE to 15th century CE the region experienced human migrations and socio-religious changes, and long-distant cultural contacts with the wider world including southeast and central Asian territories, and the Mediterranean (Alam and Salles, 2001; Bhattacharyya, 1977; Rahman and Pathan, 2012; Rashid, 2012; Siddiq and Habib, 2017). It appeared that due to available agricultural land, easy irrigation and favourable transport networks, most settlements were established near perennial rivers uplands were likely flood-free and therefore possible habitable environments for humans prior to 3ka BP. In contrast, the floodplain landscape witnessed dense human habitations from the 5th century BCE. Throughout 4th, 7-8th, and 12-13th century CE, there were several waves of state formations, urbanization and international commercial activities (Alam and Salles, 2001; Hoque et al., 1996; Jahan, 2018; Sen, 2015b; Siddiq and Habib, 2017) far beyond the agriculture-based lifestyle of the majority.

It can be posited that people in the past preferred flood-free lands near rivers and wetlands for their permanent settlements and utilized the nearby alluvial plains for crop cultivation. In this way, they were able to avoid cyclical flooding events but still able to take advantage of nearby terrestrial and aquatic resources (Meher-Homji, 2001). Notably, beyond the exploitation of regular subsistence, aquatic resources were deeply associated with socio-culture, art and architecture (Uddin and Rezowana, 2020).

Both archaeological (Rahman et al., 2020) and epigraphic (Bhanderkar, 1931) records signify the importance of agricultural harvest, particularly the rice. It is argued that deep-water rice was evolved in the Lower Ganges-Brahmaputra basin, given that the region still accounts for about 60 per cent of Asia's deep-water rice and probably three-quarters of the pulses and millets, including imported species (Rahman et al., 2020), indicate a sustainable agricultural system. Yet, due to flood and cyclone-related natural calamities, food crises appear to have been present in ancient Bengal at different times, as witnessed from the mentions of famine in the Brahmi inscription of Mahasthangarh (Bhanderkar, 1931).

Besides the natural water resources, artificial water sources of various categories also formed important support for rural settlements (Khan, 2007; Sanyal and Ghosh, 2019). Rural settlements often were deeply associated with their surrounding aquatic space –in most cases water bodies served as boundaries, isolating one rural space from another. The ponds and large water tanks were named after their owners –indicating their special status as owners of water bodies. Likewise, the numerous references to floral, faunal and topographical features are components in understanding the complex network of interactions between rural social groups and the different layers of environmental and ecological set up of a given locality (Fleming, 2010; Mills, 1993; Sanyal and Ghosh, 2019).

At present a few protected archaeological sites in Bangladesh are habitation sites, with very limited information concerning subsistence practices and environmental interactions (DoA, 2020). Most of the recorded archaeological sites in Bangladesh are mere architectural remains, constructed with bricks and representing ancient elites or religious activities. On the other hand, about 80% people in Bangladesh still live in rural areas, often with traditional housing constructed from easily accessible plant materials including bamboo, straw, grass, jute stuck, reads and mud. Bamboo walled houses, mud-walled houses and timber houses are still the most common (Ahmed, 1994). Accepting this scenario archaeological record would answer partly the paucity of knowledge about the common housing and livelihood in ancient Bengal.

Despite the negative impact of colonial scholarship, nationalistic plea, and poor research methods with inadequate scientific application, some recent research show that there is still ample scopes for environmental archaeology in this tropical delta (Akanda et al., 2015; Hu et al., 2020; Rahman et al., 2020). Yet, extreme lack of logistical and technological support is still a reality. Although the disciplinary archaeology has been introduced in only four universities so far, there is a growing interest for archaeology in Bangladesh. Hence, the glimpse of human-environment interaction data of this comprises a resource for future archaeological studies in the country.

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Rifat Ur Rahman: Conceptualization, Formal analysis, Investigation, Methodology, Software, Validation, Visualization, Writing - original draft
Abu B. Siddiq: Conceptualization, Formal analysis, Investigation, Methodology, Supervision, Visualization, Writing - original draft, Writing - review & editing.

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