Geographical Catalogue of Archaeological Sites of the Part of South West Sundarban Coastal Tract, West Bengal, India

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Abstract

Humans are component elements of physical environment and settlement subsistent pattern of the people are govern by morphogenic evolution of landscape from the early time. Location of any archaeological site is deeply rooted with the local geography in any region, because the history of country is inseparably connected with its geography. The primitive people settled since ancient times on the natural landscape with the favorable geographical environment and sometimes adverse circumstances forced to abandon the settled areas. In this way, the traces of ancient human settlement take position in the natural landscape as archaeological remains. To understand the biodiversity, history, culture and even human behavior are needed to have a clear idea about the geographical environment of any region. Therefore, identification of archaeological remains with respect to local geographical environment is drastically significant. Temporal span of the available archaeological evidences from south west Sundarban region is pro-historic to the Pal-sen periods. The main aim of this study is a systematic arrangement of archaeological sites with a physiographic view.

Keywords:
Ancient settlement; Archaeological remains; Geographical environment;

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1. Introduction

This research work is the summarized result of archaeological, historical and geographical data’s of the entire study area, which were occupied by early peoples in the past (Fig.2). Archaeology is a discipline, which deal with human activity of the past time, whereas geology and geomorphology explain the physiographic and environmental phenomena’s of the landscape. In this situation, geoarchaeology can play a central role as a breeze between those disciplines for the better understanding of the physiographic and cultural co-relation of the archaeological sites, because human’s activities have left several fingerprints on our natural environment (Bandopadhyay&Mukhopadhyay, 2015). Each archaeological site should be judge in allied to the natural environment, because human are a component element of natural environment and their life and activities are conditioned and governed by it (Jain, 2014). Cost is a dynamic landscape and that is why coastal archaeology is highly diverse. The Sundarban region is a plain approximately 3 to 4 meter (Fig.3 & 4) above the sea level (ChattopadhyaySengupta, and Chakraborty.2005). The part of south-west Sundarban of South 24 Paragana district (Fig.1), is under the active delta of the Indian Sundarban delta system. The Indian Sundarbans delta is part of the delta of the Ganga-Brahmaputra-Meghna basin in Asia (Danda&Sriskanthan, 2011). This part of the Ganga-Brahmaputra-Meghna delta as we see it today came to be formed between 2500 and 5000 years ago by the silt carried by the river Ganges (Allison et al, 2003) as well as its tributaries. The blanket of Quaternary alluvium of the Ganga, and the Brahmaputra, and their several tributaries and distributaries conceals beneath it almost all the older rocks of the Bengal basin. Various archaeological evidences have been discovered from entire Sundarban region at the time of forest reclaims in British era. Including the area of South west Sundarban. Notable archaeological sites of this region are Mandirtala, Sapkhali, Bamankhali, Pakurberia, Pakurtala ,Lat no -6, Gobordhanpur, Buraburirtat and Surandraganjetc (Table, 1& Fig.2). The recent discovery of ancient artifacts deep in the heart of the Sunderbans in West Bengal indicates that the region had human habitation as early as the third century BC, and once again refutes the claim by colonial historians that it was the British who made the Sundarbans habitable. During an exploration carried out by the Directorate of Archaeology and Museums, Government of West Bengal, in Govardhanpur and its adjacent Uttar Surendraganj, located near the mouth of the Ganga in the interiors of the Sundarbans in South 24 Paraganas district, around 500 antiquities were found, whose dates are ranging from as early as the third century BCE to as late as the 11th century A.D (Chattopadhyay, 2015). The main aim of this study is a systematic arrangement of archaeological sites with a physiographic view because History is around is the achievement of man (Nag,et.al 2007) and the man is an intellectual element of this landscape.

2. Research Method

The present work is deeply depended on the extensive literature review for the Archaeological identification of places in the study area, especially the information’s are used from different
Field study played an important role to examining the present geographical situation of the archaeological sites and tracking GPS records. Fieldwork was conducted during winter of 2012, 2013 and 2014. Geographic information system (GIS) Technique is used for placing archaeological sites on the present map. District planning map of south 24 paragana published by National Atlas and Thematic Mapping Organization (NATMO) are used. Images are joined using mosaic tool of ‘Erdas Imagine’9.1 to get total coverage of the study area map. The ASTER (Advanced Space Borne Thermal Emission and Reflection Radiometer) elevation data with 30 m resolution (GCS WGS84) of 2011 is downloaded from the website of the Earth Explorer (http://earthexplorer.usgs.gov/) and it is also processed through ‘Erdas’, using AOI and subset tools. All unrectified raster and vector data are projected in UTM (Universal Transverse Mercator) assigning datum of WGS84 (World Geodetic Survey, 1984) using the project raster tool of ArcGIS 9.3 software to overlap these data accurately. The contours of elevation are generated using ASTER data and the spatial analyst tool of ArcGIS 9.3. Data are used from the website of central Groundwater Board (CGWB), Govt. of India (www.cgwb.gov.in), of the district of south 24 Paragana, for better understanding the general geology, geomorphology and stratigraphy of the study area. Geological Quadrangle map of Sagar (1:250,000 scale) was downloaded from the website of geological survey of India (GSI), Govt. of India (www.portal.gsi.gov.in) for preparing the general geological map of south west Sundarban part. In addition to the field survey, collecting of archaeological information and taking photographs of archaeological evidences from different museum located in the study area was also very helpful.
Figure. 1: Map of the study area – (a) location of West Bengal in India (b) District of South 24 Paragana in West Bengal (c) Part of South West Sundarban including the administrative blocks Kakdwip, Sagore, Namkhana and PatharPratima.
Table 1: Geographical Catalogue of Archaeological Sites of the Part of South West Sundarban Coastal Tract

<table>
<thead>
<tr>
<th>Name of the site</th>
<th>Identification no on map (Fig. 2)</th>
<th>Archaeological periods</th>
<th>Latitude and Longitude</th>
<th>SOI Topographical sheet no</th>
<th>Elevation A.S.L in meter</th>
<th>Morphogenic surface</th>
<th>Annual rainfall in millimeter</th>
<th>Types of soil</th>
<th>Nearest river/shoreline</th>
<th>Name of the block, district and state</th>
<th>Nearest town/city</th>
<th>Geo-archaeological Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandirtala</td>
<td>1</td>
<td>Proto-Historic to Pal.-Sen period</td>
<td>21º48º22ºN, 86º6º39ºE</td>
<td>73 C/1</td>
<td>~ 7</td>
<td>Ancient estuarine deposit (upper Holocene)</td>
<td>Deep fine clayey soil with strong salinity</td>
<td>Hooghly/Bay of Bengal</td>
<td>Sagar, South 24 Paraganas and West Bengal</td>
<td>Rudranagar</td>
<td>The site is located on the east bank of river Hooghly. Few number of Neolithic Celt, non Arya ‘Matrika’ sculpture, thousands of beads, cast copper coins, gold coins (Middyak &amp; Khanra, 2002. Chowdhury, 2009) from eroded valley of river Hooghly. The prominent landmark of Mandirtala site is a ruins of temple, which shows at its basement, a part of the foundation with well-rounded offsets, this apparently is the base of the ‘Ratha’ type temple of the Pala period (Chakraborty, 2001).</td>
<td></td>
</tr>
</tbody>
</table>
B (sites catalogue)

Sapkhali

Proto-Historic to Pal-Sen period

21°50′10″N, 86°7′4″E

73 C/1

~ 6

Ancient estuarine deposit (upper Holocene)

above 1400

Deep fine clayey soil with strong salinity

Hooghly/Bay of Bengal

Sagar, South 24 Paragana and West Bengal

Rudranagar

The site is located on the east bank of Hooghly, the place has been frequently flooded by tidal water. Murrka, portrait, copper coin, stone tools were found (Malaya, 2002).

C (sites catalogue)

Fuldubi

3

Proto-Historic to Pal-Sen period

21°47′46″N, 86°5′19″E

73 C/2

~ 3

Ancient estuarine deposit (upper Holocene)

above 1400

Deep fine clayey soil with strong salinity

Hooghly/Bay of Bengal

Sagar, South 24 Paragana and West Bengal

Rudranagar

Fuldubi is close to river Hooghly. Many numbers of stone beads, sculptures of Hindu goddess were discovered.

Fuldubi

C (sites catalogue)
E (sites catalogue)

Pakurtala
4
Proto-Historic to Pal-Sen period
21°53'37"N, 88°13'10"E
73 C/S
~ 6
Ancient estuarine deposit (upper Holocene)
above 1400
Deep fine clayey soil with strong salinity
Muriganga
Kakdwipr, South 24 Paragana and West Bengal

D (sites catalogue)

Pakurtala
4
Proto-Historic to Pal-Sen period
21°53'37"N, 88°13'10"E
73 C/S
~ 6
Ancient estuarine deposit (upper Holocene)
above 1400
Deep fine clayey soil with strong salinity
Muriganga
Kakdwipr, South 24 Paragana and West Bengal

This archaeological site is located on the east bank of river Muriganga, near the village Kalighat (14 km north) and both are paleo channels of Adiganga. Notable evidences of this place are terracotta place; small pottery vassals with basket marks; small pottery beads; terracotta vassals; semi precious stone vassals; copper coin etc. (Chakraborty 2001).
<table>
<thead>
<tr>
<th>G (sites catalogue)</th>
<th>F (sites catalogue)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rudranagar</td>
<td>Lat no – 6</td>
</tr>
<tr>
<td>Early Historic</td>
<td>6</td>
</tr>
<tr>
<td>21°43'13&quot;N, 88°6'39&quot;E</td>
<td>21°57'4&quot;N, 88°9'46&quot;E</td>
</tr>
<tr>
<td>Not available</td>
<td>Proto-Historic to Pal-Sen period</td>
</tr>
<tr>
<td>~ 4</td>
<td>Not available</td>
</tr>
<tr>
<td>Ancient estuarine deposit (upper Holocene) above 1400</td>
<td>Ancient estuarine deposit (upper Holocene) above 1400</td>
</tr>
<tr>
<td>Deep fine clayey soil with strong salinity</td>
<td>Deep fine clayey soil with strong salinity</td>
</tr>
<tr>
<td>Muriganga</td>
<td>Muriganga</td>
</tr>
<tr>
<td>Sagar, South 24 Paragana and West Bengal</td>
<td>Kakdwipr, South 24 Paragana and West Bengal</td>
</tr>
<tr>
<td>Gangasagar</td>
<td>Kakdwip</td>
</tr>
</tbody>
</table>

This archaeological site is located on the east bank of river Muriganga along an erosional surface. Terracotta sculpture of 'Yakshini', and many numbers of potteries were discovered in the depth of 2 meter from surface (Chowdhury, 2009). Terracotta sculpture of 'Matrika', different sculpture with Roman and Greek style were found from here (Chowdhury, 2009).
Figure. 2: Map showing the Identification No of Archaeological Places of the Part of South West Sundarban.

Figure. 3: Digital Elevation Model (DEM) of The Part of South West Sundarban, Source: ASTER DEM, 2011.
I (sites catalogue)

Sagar

9

Early Historic

21°39'28"N, 88°3'23"E

79 C/2

~ 4

Ancient estuarine deposit (upper Holocene)

above 1400

Deep fine clayey soil with strong salinity

Bay of Bengal

Sagar, South 24 Paragana and West Bengal

Gangasagar

Sagar is located on the side of coastal belt of Bay of Bengal. This is a broken part of ancient brick. Baked pottery oots were found from here (Maity, 2002, Chowdhury, 2009).

H (sites catalogue)

Manasadwip

8

Late Historic to early medieval

21°41'13"N, 88°7'53"E

Not available

~ 4

Ancient estuarine deposit (upper Holocene)

above 1400

Deep fine clayey soil with strong salinity

Muiriganga

Sagar, South 24 Paragana and West Bengal

Gangasagar

Site is located on the west bank of river. Different terracotta potteries, terracotta bricks (size: 12"), remains of building of Pal period were discovered from a local pond (Maity, 2002).

Bay of Bengal

Not available

~ 4

Ancient estuarine deposit (upper Holocene)

above 1400

Deep fine clayey soil with strong salinity

Muiriganga

Sagar, South 24 Paragana and West Bengal

Gangasagar

Site is located on the west bank of river. Different terracotta potteries, terracotta bricks (size: 12"), remains of building of Pal period were discovered from a local pond (Maity, 2002).
K (sites catalogue)

Gobordhanpur

11

Early Historic

21°44’58”N, 88°22’33”E

79 C/6

~ 1

Older estuarine deposit (upper Holocene)

above 1400

Deep fine loamy soil with moderate salinity

Bay of Bengal

Patharpratima, South 24 Paragana and West Bengal

Ramganga

Gobordhanpur is the most southern settlement of West Bengal state. This low elevated area has been effected by tidal floods frequently. Notable archaeological evidences of this site are gold coins Gupta era and Kushan era. Sculpture of Yakshi and ornamental architecutural objects are also recovered. Copper inscription of Domman Paul and broken part of the portrait of Buddha goddess are notable evidences that have been recovered.

J (sites catalogue)

Rakshaskhali

10

Early Historic

21°44’58”N, 88°22’33”E

79 C/6

~ 2

Older estuarine deposit (upper Holocene)

above 1400

Deep fine loamy soil with moderate salinity

Saptamukhi

Patharpratima, South 24 Paragana and West Bengal

Ramganga

The site is located on the junction of Curzon creek and Ramganga river. Notable evidences of this site are gold coins Gupta era and broken part of the portrait of Buddha goddess are notable evidences that have been recovered.
The site is located on west bank of Curzon creek, physiographically this region is estuary margin tidal or the valley flats along the margins of tidal rivers (Paul, 2011). Sculpture of goddess Bishnu and Ganesha and substantial amount of ancient potteries were found (Mandal, 2010).

The archaeological site is located in nearby area of Bay of Bengal along the sandy and muddy shoreline. Notable evidences that have been discovered are – gold coins of Shasanka and 2nd Chandragupta, terracotta dolls etc. (Chowdhury, 2009, Halder, 2007, Sahoo, 2007 and Barman, 2002).
3. Results and Analysis

From the ancient time, there is a special relation between the characteristic of human inhabitant with local environment. Such study is focused on the interaction between natural landscape and cultural landscape of the ancient peoples across the older landscape and younger landscape of the region of Bengal basin. Favorable environment always help to select the perfect area of settlement. Present part of south west south west Sundarban, which is physiographically low elevated (Fig. 3 & 4) coastal plain frequently flooded by tidal water with saline soil, this type physical hindrances is not suitable enough for human existence. But evidences of Chalcolithic to pal-sen period are found from this area also. This are the burning evidences of human existence in that period, it helped to build up human civilization with trade enriched cities as in it was nearest to sea. The people of early history and medieval history have shifted towards southeast direction (Fig. 4) to occupy the late Holocene coastal plain and delta plain landscapes and deltaic Sundarban to maintain their trade based livelihood processes adjusting with natural landscape of sea front and river front position.
4. Conclusion

Overall findings of the present research prove that the natural landscape history of Sundarban deltaic surface have been changed over the geological period in this region of Bengal basin. Gradually the local environment of the natural landscape systems have been changed over the geological time and the ancient people, who made their habitations in different parts of the land surface on the basis of their stability and also following the livelihood of different parts of the environment, they have gradually shifted from the north east to the southeast directions.

References


