

Settlement Pattern of Ancient Ports of Western Maharashtra – An Archaeological Perspective

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Abstract

The western coast of Maharashtra seems to be cut-off from the rest of the region because of the geographical blockade by the Western Ghats, also known as the Sahyadri mountain range, which covers an area of 1,60,000 square kilometers in a stretch of 1600 kilometers parallel to the western coast of India. However, the natural passes along the Western Ghats created the routes of exchange between the coast and the Deccan Plateau. This led to rise of a number of ports along the western coast of Maharashtra right from the ancient times. In this paper, an attempt is made to study the settlement pattern of the early ports of the western Maharashtra.

Keywords: *Archaeology, History, Konkan, Maharashtra, Sahyadri, Western Ghats*

Geo-ecological Settings:

Settlements of ports in ancient times were largely determined by the geo-ecological settings. The western coast of Maharashtra, often referred as the Konkan, covers the estuaries of the river Narmada and the river Tapti as well as the coastal belt of the Konkan (**Fig. 1**). Its altitude varies from almost 0 to 100 meters above mean sea level (AMSL), except for the hilly portion near the Sahyadri range. The coastal plain is about 50 kilometers in width in the north and narrowing down towards the south upto 30 kilometers in width. It has a rugged hilly topography, which is more rugged in the south than in the north. The coastal plain is divided by the Thana creek into two parts: the north Konkan and the south Konkan. The rugged profile of the Konkan is shaped by the outliers of the Sahyadris which at several places often reaches out to the sea as headlands, and this makes land transport in the coastal region very difficult.

Konkan receives heavy rains with an annual average of 200 centimeters, and this together with steep slope causes severe soil erosion

in the region. The area has a number of small but rapid flowing rivers and streams which running through the Sahyadri ranges fall into the Arabian Sea (Fig. 2).

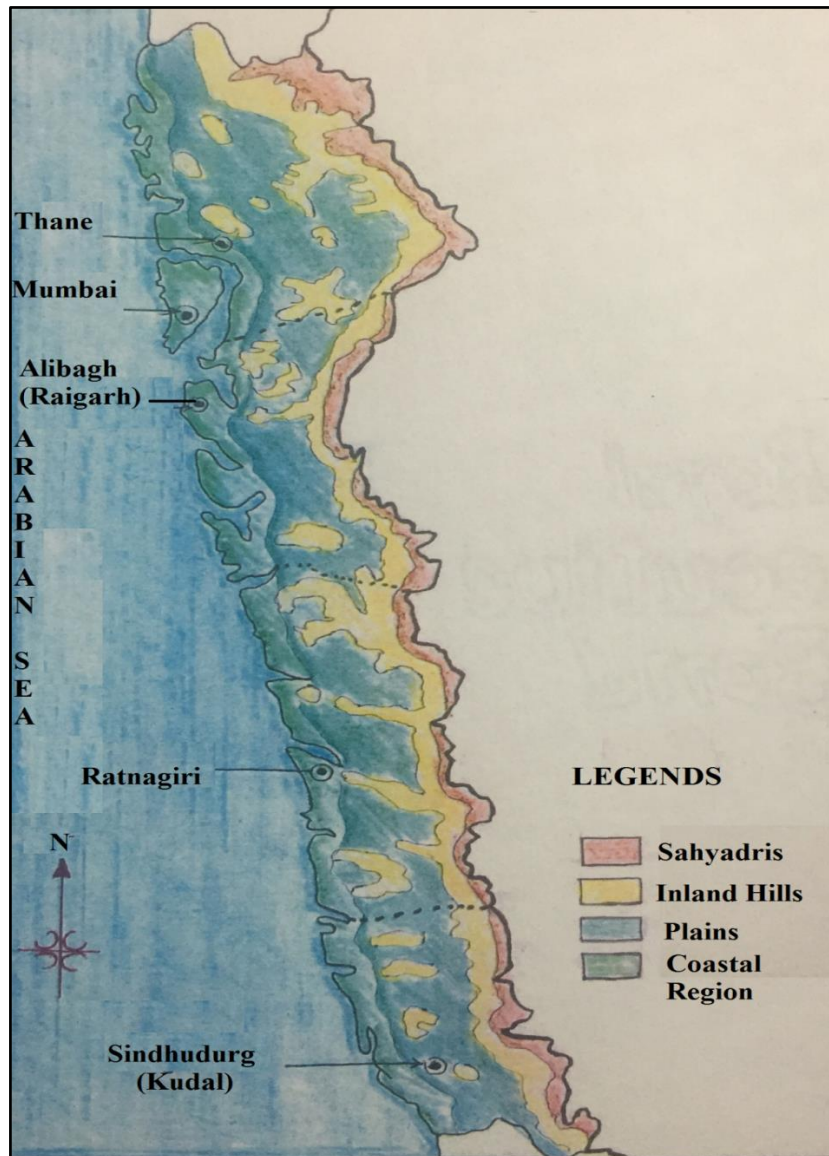


Fig. 1: Physical Features of the Western Coastal Region
(Adapted from Sarang, G., 2010)

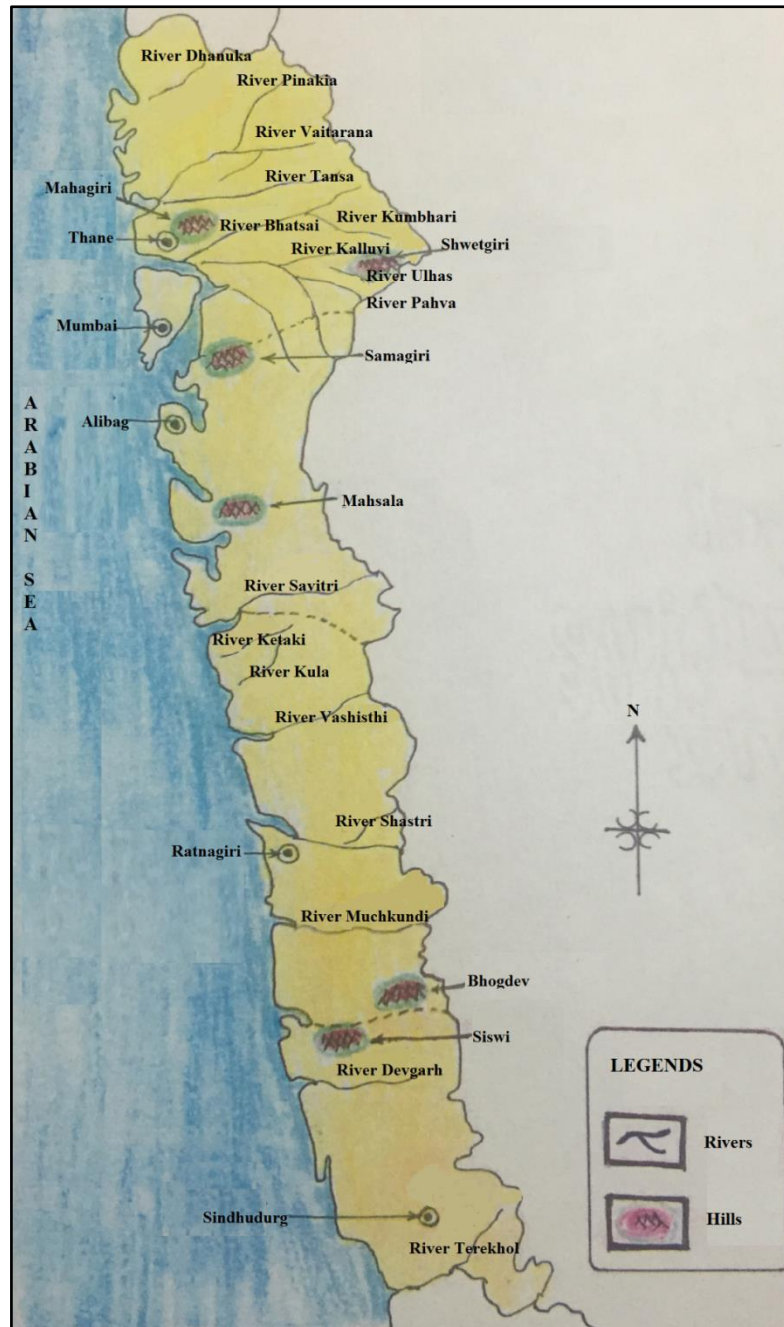


Fig. 2: Hill Ranges and Rivers of the Western Coastal Region
 (Adapted from Sarang, G., 2010)

Resource Potential:

The resources that are available in a region and could be exploited economically to satisfy human needs constitute the resource potential of

that region. The geo-ecological settings as well as resources of Maharashtra in general and the western coast of Maharashtra in particular offer several advantages that facilitated the settlement of ports on the western coast.

1. **Navigation:** The coastal plains of Maharashtra are drained by a number of short but fast flowing rivers having sharp bends, such as the Vashishthi, Savitri, Shastri, Kundalika, Amba, Ulhas, and Vaitarna (**Fig. 3**). These rivers originate from the Sahyadris. They flow through narrow and deep ravines, seldom covering upto 60 kilometers, and finally fall into the Arabian Sea. (Imperial Gazetteer of India, II, 1909:143-4). Due to their sudden sharp turns, navigation beyond 30 kilometers, from the mouth of these rivers, is a challenge. Consequently, the harbours are positioned on the estuaries as they provide safe anchorage for the ships.



Fig. 3: A coastal river (Vashishthi) having sharp bends

2. **Anchorage:** The coastal plain rivers deposit the eroded material, which they bring along with them, in their lower reaches, particularly in their estuarine tracts. As a result, the estuaries not only provide fertile tracts but also they are able to offer safe anchorage to the ships.

3. **Harbour potential:** The west coast also provides tidal inlets and creeks, some of which enter inland upto 50 kms. (Imperial Gazetteer of India, II, 1909:110). Generally, every safe creek and estuary was a potential harbour site. However, their success depended on their connectivity with the hinterland. It is important to note here that the success of the harbours fluctuated due to other factors such as the silting up of inlets or the opening up of new routes. For instance, the Bassein creek was navigable upto Bhiwandi and Kalyan in the seventeenth century but this is not possible now due to silting. Similarly, the silted channel on which Sopara is located now was navigable over a long distance. The Thana creek was also navigable all the way through its course.
4. **Irrigation:** The coastal plain rivers are not suitable for irrigation as they are not perennial. They contain passable water only during the monsoon season and during the rest of the year, they have a very low water levels and sometimes they even become dry (Joshi and Bopardikar, 1972:48).
5. **Soil:** The north Konkan possesses a patch of alluvial soil, separated from the inland by the Kaldurg ranges, in north-south direction (Deshpande, 1948:161). In the South Konkan, laterite soil covers a large area, and because laterite is poor in retaining moisture, the region is agriculturally poor (Brown and Dey, 1955:687). Consequently, we notice that most settlements are located along the alluvial river valleys (Deshpande, 1948:183).
6. **Precipitation:** Rains in the Konkan coast are confined to south-west monsoon, from June to October. Rainfall averages between 190 to 250 cms and between 100 and 175 cms in the south Konkan and north Konkan respectively (ibid.:159). Post-south-west monsoon, rest of the year, the region is dry, though some rains are caused in the east by the withdrawing north-east winds.
7. **Climate:** The climate is generally hot and humid. The mean daily temperature in coastal belt is above 22°C throughout the year with relatively high humidity. Rice is well suited to this climate and is grown in the coastal plains.

8. **Minerals:** Iron ore is found in South Konkan's lateritic region. There are also references to the extraction of gold near Phondaghat at the foot of the Sahyadris (Imperial Gazetteer of India, II, 1909:153), especially in the neighbourhood of the harbour of Malvan.
9. **Miscellaneous:** Other resources that could be trapped from the region were pearls, coconut, salt, dry fish, and oil from coconut, sesamum, and groundnut (Das, 1969:169). Chert, dolerite dykes, crypto-crystalline silica and quartzite could be also exploded in the north Konkan region to manufacture tools.

Settlement Analysis:

Though the Konkan coast appears to be cut-off from the rest of Maharashtra because of the barrier made by the Western Ghats, the passes along the Western Ghats provided the routes of exchange between the coast and the plateau. As recently as the late 20th century, products were brought from beyond the Western Ghats to the coast on pack animals and as headloads and were exchanged for coastal produce.

Prehistoric settlements

It was K.R.V. Todd who first started a systematic survey of the prehistoric sites in the Konkan region. The first Palaeolithic discovery from the region was made by Todd (1932: 35–42) at Worli Point, Kandivli, Mumbai. This was a surface site from where he collected Acheulian stone tools. Later, he also discovered Mesolithic tools at a number of sites in Mumbai and Salsette (Ibid.: 1939:257–272, 1950: 4–17). Much later, it was S. C. Malik (1959, 1963) who carried forward further investigations in the area and discovered handaxes at Ghodbundar and Nala Sopara. Guzder (1975) also carried out her study of Stone Age cultures of the coastal Maharashtra region and discovered Palaeolithic sites around Malvan in southern Konkan.

Joshi and Bopardikar (1972: 47–57) also explored the region around Kolaba and Ratnagiri districts. They located Mesolithic cave sites at Pachad in Raigadh district and Hatkhamba in Ratnagiri district. Lower and Middle Palaeolithic finds were made at surface sites in Mahad in Raigadh district. After a gap of about three decades, A. R. Marathe (2006: 1538-1544) reported surface finds of two early Acheulian cleavers from a laterite cave at Susroni in Palshet (17°26'N, 73°15'E), 12 km south of

Guhaga, on the banks of a small perennial stream, near a waterfall, at a height of 85 m above mean sea level (AMSL) and 2 km inland from the Arabian Sea shore. It is important to note that several minor streams originate on the lateritic plateau and meet the main stream near Palshet; and finally drain into the Arabian Sea. An excavation was carried out at the site and 54 artefacts were discovered, containing handaxes, cleavers, picks, choppers, scrapers, flakes, and cores. Marathe reports that the cave was occupied by early man during the early Late Pleistocene (approximately earlier than 90 Ka BP) when the sea level was slightly higher than that today. He has also reported surface finds of a few early Acheulian choppers and a cleaver from a cave at Mandavkarwadi in Palshet. However, despite genuine works of several scholars ever since the discovery of the first Palaeolithic site by Todd (1932: 35–42) at Kandivli in Mumbai, Marathe's discovery of the Late Acheulian cave occupation is the only convincing discovery on the long coastline of Konkan. The Konkan region, with limited surface finds, seems to be archaeologically poor as far as the prehistoric settlements are concerned.

The Konkan region seems to be not preferred by the Prehistoric humans for their settlements, and this could be due to lack of perennial rivers and streams and acute shortage of water during the six months before the monsoon season. This would have made the estuary water saline.

Proto-historic and Early Historic settlements

For similar reasons, no protohistoric site, representing Megalithic or Chalcolithic cultures, have been noticed so far in the Konkan, though, we do notice Harappan and Late Harappan settlements in Gujarat on the west coast. There are encouraging evidences of the Early Historic settlements from the west coast of Maharashtra, which included both North Konkan and South Konkan. The *Periplus* refers to the several harbours from the Konkan region (**Fig. 4**).

North Konkan

The Mahabharata refers to north Konkan as *Aparanta* (Drona parva.9.40; Sabha parva.47.24) and the sacredness of *Surparaka* (Sopara), the *tirtha* (Aranyaka parva. 118.8). However, the Ramayana does not refer to any settlement in the west coast. The fifth rock edict of Asoka also refers to the people of *Aparantaka*. According to the Mahavamsa (XII.5) and the Dipavamsa (VIII.7), Ashoka sent missionaries to Aparanta after the Third

Council. In *Arthasatra* (II.11.90), Kautilya refers to the fine quality cotton cloth of Aparanta. Milindapanho (II: 121) refers to a special grain called *kumudabhandika* which was harvested within a month and was eaten by slaves and workers, while rice took about five or six months to ripe.

Sopara:

The first archaeological evidence of an Early Historic settlement from the west coast of Maharashtra comes from Sopara which yielded fragments of the eighth and ninth As'okan edicts (Chakraborti 1966:101; Chakravarti 1956-57:107-8). Excavations at Sopara have yielded the remains from the Satavahana period (Contractor 1957:47), and a brick *stupa* which is dated to the second century CE (Journal of the Bombay Historical Society, 1939:187). Mahavamsa (VI .46,47) suggests that King Vijaya, who led the first settlement of Sri Lanka, boarded the ship from Sopara. Sopara, along with another key harbour city, Bharuch, continued to flourish in the Satavahana period. Bharuch was a key city, in the whole scheme of exchange network. Located at the northern tip of the west coast, it acted as a connecting center for the settlements of the Deccan as well as northern India, such as Ujjain, Vidisha and Mathura (Chakraborti, 1966).

Kalyan

The *Periplus* also mentions about yet another market town named Kalliena (Kalyan) and highlights the importance of foreign trade in the region by talking about the underlying rivalry between the rulers of Barygaza and Kalliena to capture the foreign trade. The *Periplus* mentions "*Kalliena (Calliena), which in the time of the elder Saraganes (probably Satakarni I) became a legal mart; but since it came under Sandanes (perhaps a viceroy of Nahapana) (the trade) has been much hindered, and Greek ships which by chance enter these places are sent under guard to Barugaza*" (Huntingford, 1980:sec.52).

Donors from Kalyan are also often referred in the epigraphical records of the western Deccan. Early Historic Red Polished Ware have been reported from archaeological field explorations in Kalyan (Indian Archaeological Review (IAR), 1957-58:67).

Kalyan lies at the centre of the Ulhas basin, which makes it an attractive agricultural zone. In addition, Kalyan is strategically located to dominate three natural passes - the Thalghat (19°40'N 73°29'E), also called as Thul Ghat or Kasara ghat, near the modern town of Kasara; Naneghat (19.3064°N 73.6799°E), which facilitates a trade route between

Kalyan and Junnar, and Bhorthat. These passes had been the major routes of exchange between the Konkan coast and the plains of the Deccan plateau (Deshpande, 1948:177).



Fig. 4: Locations, names and routes of the *Periplus of the Erythraean Sea* (1st century C.E.)

(Source: https://commons.wikimedia.org/wiki/File:Map_of_the_Periplus_of_the_Erythraean_Sea.jpg last accessed on 1st June, 2012)

Chaul

Towards the south of Mumbai, the *Periplus* refers to yet another harbour of Semylla (modern Chaul). It is located on the right bank of the river Kundalika and at the top of the Roha creek, thereby making it a useful harbour (da Cunha, 1876-7:57).

South Konkan

The *Periplus* refers to the several harbours from the south Konkan region. These harbours are near the mouths of the rivers. It seems that due to the poor agricultural potential of the lateritic soils in the southern region of the Konkan, settlements are confined to fertile zones beside the mouths of the rivers. For example, Mandagora (Bankot) on the mouth of the river Savitri river, Palaepatme (Dabhol) on the northern bank of the Vashishti River, Malizigara (Rajapur) at the mouth of a creek, Byzantium (Vijayadurg), and Turannoboas (Malvan) situated in a bay.

Buddhist Cave Sites near Konkan Harbour Sites

Within a radius of few kms from the harbour sites of both north Konkan and south Konkan, innumerable Buddhist cave sites are found. In the North Konkan region, within a radius of few kms from the harbour sites of Sopara, Kalyan and Chaul, there are about several Buddhist caves, such as, Kanheri, which alone has more than 100 caves; Magathana (6 km. south-west of Kanheri). On the outskirts of the Magathana village, the Poinisar rock cut caves are found. Next to these caves, in a small hamlet known as *Devi-ka-para*, loose stone artefacts with Buddhist symbols discovered. Several of these artefacts are dated to the sixth-seventh centuries C.E., however, it is suggested that some of the artefacts are from much earlier date (Dikshit, 1942:500-4); Maandapeswar; Marol; and Kondivate (1.5 km. to the north of Marol). Kondivate is suggested as the earliest *chaitya* in the western Deccan region (Dehejia, 1972:153).

In the South Konkan region, similarly, Buddhist caves are also located near the harbour sites in the south Konkan region. For instance, at Bankot, two small groups of Buddhist caves are located at Kol across the river Savitri (Burgess, 1885: 74). At Kuda 45 to 60 m. above sea level and looking down on the Rajapur creek, 26 Buddhist caves have been found (Burgess and Indrajai, 1976, reprint: 3). At Mhar, 45 kms to the south-east of Kuda, 28 Buddhist caves have been found on the Savitri river (Fergusson and Burgess, 1880:209).

Concluding Remarks

The geo-ecological settings as well as resources of Maharashtra in general and the western coast of Maharashtra in particular offer several advantages that facilitated the settlement of ports on the western coast, North Konkan as well as South Konkan, right from the ancient times. Although the Konkan coast appears to be cut-off from the rest of Maharashtra because of the barrier made by the Western Ghats, the passes along the Western Ghats provided the routes of exchange between the coast and the plateau. The modern city of Mumbai, also often referred as the financial capital of India, is a testimony to the geographical advantages of the region. In this research paper, an attempt to study the settlement pattern of the ancient ports of the western Maharashtra region. The study suggests that in the background of the lack of archaeological excavations in the region, settlement pattern studies can help in broadly understanding the nature and functions of ancient sites.

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