

Component-I (A) – Personal details:



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Subject: **Indian Culture**

Production of Courseware
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Paper : **Economic History of India**
(from the Earliest Time to 1707 AD)

Module : **Ports of East coast of India**

ज्ञानं विद्यानं विमुक्तये



The banner has a decorative geometric border and lists the members of the Development Team. It includes the Pathshala and MHRD logos at the top.

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Component-I (B) – Description of module:

Subject Name	Indian Culture
Paper Name	Economic History of India (from the Earliest Time to 1707 AD)
Module Name/Title	Ports of East coast of India
Module Id	IC / EHI / 36
Pre requisites	
Objectives	It aims to understand Maritime Trade of Ancient India with reference to ports of East Coast and Trade and Cultural contacts
Keywords	Maritime Trade / Ancient India / Trade and culture / East Coast / Ports

E-Text (Quadrant-I) :

1. Introduction

The Ocean played a significant role in the lives of the coastal people. The exploration of marine resources along the Indian coast dates back to the times of prehistoric man. Even the Neolithic and Megalithic people used the sea. In India, ports were developed, and overseas trade was possible, because of the existence of sheltered bays and creeks along the coastline. In overseas trade and commerce, the ports on the east and west coasts of India have played a vital role since the 3rd millennium BCE. In this paper, the ports of the east coast of India and their maritime contacts are briefly discussed.

2. Ports of West Bengal

Tamralipti was a *Dronimukha* as it was located at the confluence of the sea and the Rupanarayana River. Tamralipti has been identified with presentday Tamluk in the Midnapore district of West Bengal. Ptolemy and Hiuen Tsang have mentioned that sailors and merchants who were landing at Tamralipti, which was located on the bank of navigable River Ganges, could also sail in the Ganges up to Champa, Pataliputra and Varanasi. During the reign of Asoka (273-232 BCE), Indian missionaries sailed to Ceylon passing through Tamralipti port. Prince Mahendra made his journey from Pataliputra to Tamralipti and on to Ceylon. Asoka, the emperor, also travelled up to Tamralipti to see off Sanghamitra carrying a branch of Bodhi tree to Ceylon by ship. The Chinese traveller Fa-Hien had noticed the maritime activities as well as Buddhist settlements at Tamralipti, and he had left for China via Ceylon from Tamralipti. Hiuen Tsang who came to India during the reign of Harshavardhana (606-647 CE) visited Tamralipti port and learnt here for the first time about Ceylon and the perils of the Southern voyage. I-tsing arrived at Tamralipti in 673 CE by the sea route from China. Archaeological Survey of India carried out excavations at Tamralipti, which unearthed copper coins and terracotta figurines of the Sunga period (2nd century BCE). Rouletted ware and other objects such as sprinklers indicate the overseas contact of Tamralipti with the

Romans. Among the ancient structural remains of Tamralipti (2nd-3rd century CE) a brick built stepped tank shows the prosperity of Tamralipti. A considerable number of silver and copper coins bearing Buddhist symbols have been discovered in the midst of debris from the crumbling banks of the river Rupanarayana.

Chandraketugarh is situated on the River bank of Vidhyadhari, a channel of the River Ganga in the 24 Parganas district of West Bengal. It was a flourishing port during the 1st to 4th century CE. Chandraketugarh has been identified with Ptolemy's Gange. The Asutosh Museum of Calcutta University excavated Chandraketugarh and adjoining sites in 1955-66. The excavations brought to light NBPW sherds, grey ware, stone beads and punch mark coins with ship motif. The other findings include Rouletted ware, semiprecious stone beads, grey bowls and dishes, terracotta figurines datable to the Gupta period and post Gupta period. A number of Kharoshti inscriptions have been found on the pots, plaques and seals from the excavations of Chandraketugarh and their decipherment suggest that certain communities migrated from the North-western region to lower West Bengal. The finding of Kharoshti-Brahmi inscriptions in Thailand and Bali implies that traders of lower West Bengal had contacts with Thailand and Bali regions. The semiprecious stone beads found at the excavations of Chandraketugarh and Ban Don Ta Phet of Thailand are similar, and it is believed that beads were items of trade from Chandraketugarh to Southeast Asia. Similarly, lead ingots have been found at Chandraketugarh, and an identical lead ingot has been found in Karbi province of Thailand. The excavation findings suggest that Chandraketugarh was a flourishing port from 4th century BCE to Post Gupta period.

The other ports of Bengal coast were such as Satgaon and Sonargaon which had overseas contacts with Ceylon, Java and Sumatra. The archaeological excavations at Pandu Rajar Dhobi situated in the floodplains in Burdwan district yielded terracotta figurines, spindle whorls, pottery of Crete and Egypt and a steatite seal with pictographic and hieroglyphic signs that are considered to be of Mediterranean origin.

3. Ports of Odisha

The ports of Odisha, namely Nanigaina (Puri), Katikardama (Kataka or Cuttack), Kannagara (Konarak) and river mouths Manada (Mahanadi), Tyndis (Brahmani), Dosaron (Baitarani ?), Adams (Subarnarekha ?), Minagara (Jajpur ?), Kosamba (Pipili or Balasore) and Paloura have been mentioned in Ptolemy's Geography (150 CE). However, the other ports of Odisha, namely Manikapatna, Che-li-ta-lo-Ching, Kalingapatnam and Khalkatapatna, are not referred to by Ptolemy although they also played a dominant role in the maritime history of Odisha over the centuries. Palur (Paloura) is located close to the 'point of departure' (apheterion) and ships bound for Khryse. It is suggested that the 'point of departure' is situated at the southern tip of Chilika Lake at Kantiagarh from where ships sailed to Southeast Asian countries. Hiuen Tsang (7th century CE) the Chinese pilgrim visited Odisha and referred to Che-li-ta-lo-Ching as a flourishing port. Chhatragarh has been identified as Che-li-ta-lo-Ching on the banks of Chilika Lake. Further, the *Brahmanda Purana*, (10th century CE) mentions that Chilika Lake was a port where ships took shelter and sailed to Java, Malaya and Ceylon. Manikapatna is another port of Odisha located on the Chilika Lake. The excavations have unearthed Rouletted ware, Knobbed ware, stamped ware and other pottery, a Kharosthi inscription on a potsherd, Puri-Kushana coins which are datable to the early historical period. The later period findings from Manikapatna include a large quantity of Chinese celadon and Porcelain

sherds, egg white Arabic glazed ware, and Ceylonese and Chinese coins etc. These findings suggest that Manikapatna had maritime contacts with Sri Lanka, China and other countries in different periods of history. Khalkatapatna is situated 11 km east of Konark on the left bank of the River Kushabhadra in Puri district. Excavations carried out at Khalkatapatna by the Archaeological Survey of India in the year 1984-85 have revealed the existence of a brick jelly floor which probably served as a loading and unloading platform. Chinese Celadon ware, Chinese porcelain with blue floral design on a white background and egg-white glazed ware, besides glazed chocolate ware of Arabian origin were found during the excavation. A group of four to five ringwells have been found in the habitation area. Besides celadon ware and Chinese porcelain, the other findings from excavations are one complete, and one fragment, of Chinese copper coin with a legend in Chinese characters and these coins, are datable to circa 14th century CE. The contact of Odisha with Africa and Arabian countries can be understood from the depiction of a giraffe on Konark temple. The single culture finding from the site suggests that Khalkatapatna served as a port between 12th and 14th centuries CE during the Imperial Ganga period.

4. Ports of Andhra Pradesh

Andhra Pradesh, located in the central part of the east coast of India, has a 600 km long coastline with a long maritime history. The Chicacole grant of King Indravarman and the Narasingapalli plates of King Hastivarman of the Eastern Ganga dynasty refer to Kalinganagara, the capital city situated near the seashore. Kalingapatnam, the ancient port city of Kalinga, located at the mouth of the River Vamsadhara, has yielded megalithic Black and red ware. Further, explorations by the Archaeological Survey of India brought to light Rouletted ware, Knobbed ware, red slipped ware, a number of Gupta period gold coins, a stupa made of bricks, a brick wharf, a number of Gupta period gold coins and habitation remains of 3rd century BCE. The findings from the site prove that Kalingapatnam served as port right from the early historical period to the early medieval period.

Dantapura is situated on the southern bank of River Vamsadhara. Ptolemy referred to Dantapura and mentioned the apheterion immediately to the south of Palur, where the vessels bound for the Malay Peninsula halted. The excavations at Dantapur unearthed the ruins of brick structures, a number of brick stupas and pottery including Northern Black Polished Ware (NBPW), Rouletted ware, Knobbed ware, grey ware, dull red ware and red slipped ware spread over a large area. The Buddhist and the Jaina texts mention that the seaborne trade of Kalinga with overseas countries continued from Dantapura port. Moreover, Dantapura port had trade contacts with Tamralipti and Burma, Ceylon and the Far East and East Indies countries.

Salihundam was a trade and cultural centre since 3rd century BCE. The excavations conducted by the Archaeological Survey of India at Salihundam brought to light stupas, *viharas*, Tantric Buddhist images, coins including punch marked coins, (Puri-Kushana, Satavahana, and Romans) and potsherds with Brahmi scripts. The other pottery recovered was Rouletted ware and Red Polished Ware. Two conches found in the monastic precincts which are inscribed as '*Salipataka*' probably suggest the ancient name of Salihundam. The finding of Roman coins of Tiberius (14-37 CE) indicates that the port had trade relations with the Romans and navigators and traders frequented Salihundam. Salihundam flourished continuously from 3rd century BC to 8th century CE. The discoveries of Salihundam resemble

with the findings of Arikamedu, Nagarjunkonda, Sisupalgarh, and Hastinapur. Moreover, the Buddhist images of Salihundam are reminiscent of Gandhara features.

Dharanikota, located inland, was a flourishing port of Andhra Pradesh. The excavations carried out by the Archaeological Survey of India at Dharanikota, and the findings include NBP ware, Rouletted ware, Arretine ware, black and red ware, amphorae and potsherds with Brahmi inscriptions, glass earrings, bangles, objects, copper and lead coins. The presence of various types of pottery, Roman amphorae, Roman coins and double mast ship motif Satavahana coins testify to its contacts with other parts of the world. Dharanikota was located away from the sea, but ships could reach Dharanikota by a rock-cut navigation channel connected with the River Krishna. The depth and width of the channel was 5 m and 20-25 m respectively. The presence of a warehouse and wharf on the bank of River Krishna suggest that Dharanikota was an inland port. The donative inscriptions found in the Buddhist caves of western India indicate that the Roman traders were residing at Dhanyakataka (Dharanikota). Several excavations, which were carried out at Dharanikota suggest that Dharanikota was an inland port and that a Buddhist centre flourished from 4th century BCE to 14th century CE.

Kottapatnam in the Nellore district of Andhra Pradesh served as a port from the early centuries of the Christian era. Ptolemy refers to Kottapatnam as Kottis. Unlike Dharanikota, Kottapatnam was connected by an artificial channel, which was dug probably for berthing of ships in the inland waters. Rouletted ware, Roman glass pieces, stamped ware, Caolin pottery, Chinese Porcelain and glazed ware and a Chinese coin with a square hole datable to the Ming dynasty were found during the explorations of Kottapatnam. These findings indicate that Kottapatnam continued as a port between 3rd century BCE and 15th century CE. Explorations were carried out at Kottapatnam in 2012 in view of undertaking under water surveys. During the field work, a single holed stone anchor was found in the agricultural land close to the lagoon. The size of the stone anchor of Kottapatnam suggests that it was used for small crafts.

Motupalli, in the Prakasam District of Andhra Pradesh, served as a port from the beginning of the Christian era to the late medieval times. The inscriptional evidence denotes that during the rule of the Satavahanas, Kakatiyas, Reddys and Vijayanagars, Motupalli was a port. The discovery of Rouletted ware and stamped ware suggests that Motupalli served as a port during Early Historical Period. The inscription of Ganapatideva, the Kakatiya ruler on a pillar in the premises of a temple at Motupalli states that the lives of both foreign and Indian mariners were treated as being as valuable as that of the ruler Ganapatideva himself. Motupalli had trade contacts with China, Sri Lanka, Burma, Sumatra, Java and Borneo. Motupalli was the medieval port of Andhra Pradesh, and coins of Rajaraja Chola, Chinese coins of the Ming dynasty, celadon ware and iron objects have been found from Motupalli. In the famous '*AbhayaSasana*' (charter of security) issued by king Ganapatideva 1244-45 CE, the contents throw a welcome light on the care taken by the rulers of Andhra to encourage maritime trade.

5. Ports of Tamil Nadu

The 1076 km long coastline of Tamil Nadu forms part of the Coromandel Coast of the Bay of Bengal and the Indian Ocean. Alagankulam, Arikamedu, Karaikadu, Kaveripattinam, Korkai,

Mahabalipuram (Mamallapuram), Nagapattinam, Periyapattinam, Vasavasamudram were the ancient and medieval ports of Tamil Nadu which have played a significant role in the maritime trade of India. The author of the *Periplus of the Erythraean Sea* (60-100CE) mentions Poduca or Poduke as the emporium along the Coromandel coast, which has been identified as Arikamedu, Kaveripattinam as Camara and Mahabalipuram as Sopatma, where as Ptolemy has identified it as 'Podouke'.

During the heyday of the Roman trade, Arikamedu had large trading networks from around 3rd century BCE onwards, and inland centres supplied agricultural and industrial products for the purpose. Rouletted ware, semiprecious stone beads, amphorae, Arretine pottery with stamped letters, Roman clay lamps and Egyptian faience bowls which were imported from different parts of the Mediterranean region were found during the excavations of Arikamedu. Even, a warehouse and dyeing rooms have been noticed during excavations. The warehouse is 135 x 8 m in dimension and lay bare in the northern sector of the port. It is oblong in plan and opens into the river. From the excavation, it is clear that the warehouse was constructed on the foreshore of the estuary and nearer to the water level. The floor of the warehouse was at higher level, which facilitated draining out the floodwater and the walls were reinforced to keep water out. It is interesting to note that the main walls of the warehouse were built on rough foundations of bricks sunk on rubble soling.

Arikamedu was again excavated between 1989 and 1992 by Vimala Begley and others; the findings very well established the fact that Arikamedu was occupied around the 2nd century BCE and the maritime contacts between India and the Mediterranean world continued from this era onwards. The findings also provided inputs on the nature of maritime trade and contacts of the Romans with other early historical ports of India. Arikamedu was developed as an industrial centre where pottery, semi-precious stone beads and glass beads, textiles were manufactured, and large quantities of waste materials of beads have been recorded during excavations. Though the southern and northern sectors had industrial activities, the marketplace was in the south centre, and the port and settlement of foreign traders were located in the northern sector. The excavations of Arikamedu revealed many structures and artefacts which suggest the maritime contacts between India and the Mediterranean world.

During the Sangam period (3rd century BCE - 3rd century CE) Kaveripattinam or Poompuhar served as a port. Kaveripattinam or Poompuhar has been mentioned as 'Khaberi's Emporium' by Ptolemy. The Sangam texts (3rd century BCE - 3rd century CE) provide an account of the port city of Poompuhar, its harbour, sailors, merchants and merchandise, etc. Further, these Tamil Sangam texts state that big ships entered the port without slacking their sails and poured out on the beach precious merchandise brought from overseas. Poompuhar port was visited by the vessel of Ceylon, Malay, Arabia and other countries. *Yavana irukkai* of Poompuhar was known as the colony of the Roman traders. The archaeological excavations of Poompuhar brought to light a brick wharf, warehouse, and a water reservoir which are datable to the early centuries of the Christian era. The wharf of Poompuhar has located in Kilayur village about 2 km away from the shore on the north side of the Kaveri stream. The excavated wharf platform measures (18.28 x 7.62 m). The location of the wharf indicates that it was close to the high tide water line and berthing of boats was taking place during the high tide. The Tamil work *Manimekhalai* mentions that Poompuhar lost its importance because the city was submerged in the sea. The fisherfolk of Poompuhar cite a location in the sea which is known to them as *Kariappar*, where they

suspect submerged buildings of the Poompuhar port. The maritime archaeological explorations along the Poompuhar coast yielded habitation remains such as brick structures, ring wells, pottery, beads, etc.; some of the remains are found along the shore during low tide and submerged at high tide. Some remains are also found in the sea. All these findings indicate that Poompuhar port was submerged either because of the advancement of the sea or coastal erosion.

Korkai on the Tamil Nadu coast served as a port during the rule of the Pandyans. Ptolemy has mentioned Korkai as Kolchi. Korkai was famous for pearl fishing. During the Pandyan rule, pearl fishing was a source to generate revenue for the kingdom. The Korkai site which stood at the seacoast once upon a time is presently more than 5 km inland. After the sea receded from Korkai, a new seat of pearl fishery which arose on the coast was Kayal along the Tamil Nadu coast. Kayal and Thondi were two other important ports of Tamil Nadu. These ports were famous for exporting pearls and spices to other countries and imported horses from the Arab countries. During the Roman period, Alagankulam was a flourishing port. It is said that the Roman ships laden with their wine amphorae and other goods come to Alagankulam. The excavations of the site yielded Roman amphorae, sherds of Arretine ware, Rouletted ware, Roman coins, etc. It appears that boats loaded with cargo reach Alagankulam in the River Vaigai whereas ships anchored in the sea. Sri Lanka was easily reachable from Alagankulam.

Mahabalipuram was the principal port of the Pallavas in the 7th and 8th centuries CE. During the rule of King Narasimha Varma I (630-668 CE), Mahabalipuram was an important port and an entrepot for the Indian and foreign traders mainly from China and Southeast Asian countries. It is suggested that Roman coins of Theodosius (4th century CE) have been found in Mahabalipuram which shows maritime trade contacts with the Roman world. The epigraphical sources point out that the Pallava kings had trade connections with Sri Lanka, China and Southeast Asia. The Buddhist monk Vajradanthi and the ambassador of the Pallava kingdom sailed to China from the port of Mamallapuram. Sihmavarman, the Pallava king, led two expeditions from Mamallapuram. The Tamil work *Kadal Mallai* mentions that ships loaded with precious goods come to Mahabalipuram port. The Pallava kings constructed a number of temples at Mahabalipuram to beautify the city, because of her strategic location. The Olakkaneswar temple, which is situated on a hilltop in Mahabalipuram, served as the lighthouse, and the view of the fire used to guide the mariners during night navigation. But Mahabalipuram lost its importance once the centre of power shifted from the Pallavas of Mahabalipuram to the Cholas of Thanjavur.

Periapattinam is situated 20 km south east of Ramanathapuram. Periapattinam has been mentioned in the 10th century CE inscription and is named Pauthiramanikkapattinam. Marco Polo and Ibn Battuta, who landed at Periapattinam, have referred to them as Pattan and Fattan respectively. The explorations and excavations of Periapattinam brought to light copper coins of the Pandya, Chola, Madurai Sultanate and one Chinese coin. Moreover, a number of Chinese celadon ware mostly of Longuan type and porcelain has been reported from the site which is datable to the 13th to 14th centuries CE.

Archaeological evidence and literary sources suggest that ports of the east coast of India date back to the two centuries before the birth of Buddha. Lighthouses, warehouses and wharves have been located at Poompuhar, Arikamedu, Dharanikota, Chilika and

Mahabalipuram on the east coast of India. The structures found on the east coast of India are datable from the early historical period to the historical period, and their study provides the duration of their use, abandonment and causes of the decline of port site.

6. Summary

The finding of varieties of pottery, punch-marked and Roman coins, Brahmi and Kharoshti inscriptions along the ports, trade centres and Buddhist settlements of the east coast of India suggest that traders, Buddhist monks and religious leaders used to set sail together to the foreign countries and this trend continued till the advent of modern shipping. Further, it has been noticed that after the decline of one port because of particular reasons another seaport used to develop in the nearby region because the geographical setting of the Indian Peninsula has supported the development of seaports all along its coastline. However, all the ports have not been studied nor located therefore a systematic onshore exploration is the need of the hour to understand the complete maritime contacts of India through the ages.

