Chapter seven
MAIN FINDINGS AND CONCLUSION
The ancient and medieval ports of Goa played an important role in the maritime history of Goa. The strategic location of Goa and its resources have boosted maritime activities since earliest times.

The present thesis has made an attempt in reconstructing the urban maritime history of Goa with particular reference to the port-capitals of Chandrapur, Gopakapattana and Ella which had served as emporia of maritime trade and commerce. The aims and objectives as mentioned in Chapter 2 of the thesis have been successfully achieved through the use of appropriate sources and methodology.

Review of literature shows that there are many standard works on urbanisation and maritime history which are of great merit but there are no studies giving an exact account of events based on field work and interpretation of place names. In view of the importance of the city, on one hand, and lack of support study, on the other, a detailed survey was found necessary.

In the thesis, we have so far discussed that urbanisation is a gradual complex process of movement of people from a rural settlement to an urban agglomeration and an effective change brought in its morphology and way of life as a result of its interdependent entities such as ecological setting, political stability, technological advancement, economic development, social awareness and cultural growth.

In this study of urbanisation the city structure, functions, pattern and nature of forces involved in its creation and maintenance are dealt with.

First and foremost different terms used for the city such as pur, (fortified city) and pattana (commercial city). Thus we have Chandrapur, Gopakapattana
indicating some hierarchical and functional variations among them, as urban centres did not grow in isolation but in response to changing situations.

Did the three port capitals constitute an urban settlement and how did they function is the major question dealt with in the thesis.

Chapters 3,4,5,6, deal with the factors leading to the emergence of a maritime city from the 4th to the 15th century A.D.

Chapter 3 shows that the geo-physical setting of Goa and the port-capitals in particular played a key role in selecting an appropriate site for the rise and growth of an urban settlement. The rich natural resources of the hinterland and advanced skills of the rural population at large provided them with the necessary resources for sustenance. The river system, fertility of the soil, climatic conditions were used as a necessary resource base to support an expanded population. This could be the reason why Goa was frequently targeted by rulers who wanted to control it.

Chapter 4, deals with the political apparatus which provided social stability essential for the maritime forces to grow and prosper. The administrative structure was very complex; it was centralised, hereditary, segmented and feudal. There was local state formation and several steps were taken to allocate plots of arable land to the people of their region through land grants. They were given the freedom to use the land, dig wells, cultivate and irrigate fields and the ruling elite provided irrigation to improve the yield.

The efforts of the Bhoja, Shilahara and Kadamba rulers led to an increase of production through land grants and irrigation. These policies contributed to the development of many Brahman settlements. The Kadamba, Shilahara rulers encouraged trade activities which resulted in the emergence of many inland and coastal towns. The construction of temples by the rulers is a symbol of their sovereignty and an impetus to the establishment of large urban settlement. Efforts
to encourage agriculture through better irrigation facilitated trade activities. The rulers linked their capital with all important port towns of western India and overseas.

Sources both epigraphic and literary mention the foundation of towns by rulers and various flood control measures enabled settlements to be established as a hinterland.

Chapter 5 deals with the economic resources available for sustaining non-agricultural population. The rulers made efforts to accelerate rural expansion by granting lands, accommodating more and more people, establishing *brahmapuris* and temples. The system of granting land to Brahmans, temples and other officials contributed to the cultivation of fallow virgin lands and increased crop production. Many canals, wells, tanks were dug to ensure supply of water and enable large population to settle in such areas. Improved irrigational techniques increased agricultural productivity.

Surplus production encouraged development of market centres for the distribution and mobilisation of resources. Exchange centres emerged as nodes among clusters of rural settlement. They developed a closer symbiotic relationship with the hinterland. Cities functioned not only as a centre of local trade but also developed into centres of interregional trade. These were linked further to the rural areas and at the upper level to *pattana*. Technological advancement in agricultural techniques, knowledge of irrigation methods, construction of monuments, wood and stone carvings of stone images led to the further development of the city.

Chapter 6 shows how urbanisation accelerated with the rise of religious institutions, emergence of devotional cults, temples and educational institutions. They received endowments in gold, money, land to bring various socio-economic groups into bhakti and in turn legitimise their sovereignty. They offered free education and accommodation to pilgrims and scholars from far and wide and

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as a result markets emerged around them. This attracted itinerant traders and merchants and gave a boost to their commercial opportunities. This diaspora of population in the city lead to acculturation, assimilation and segmentation of the society.

**Port-Capitals**

**Chandrapur**

**Present State of Knowledge**

Chandrapur is situated on the banks of the Kushavati River, a tributary of Zuari. It lies approximately 9 kms. to the east from Margao. It is bounded to the west with St. Jose de Areal, to the east by Kushavati river to the North by Curtorim and Macazana and South by Paroda and Mulem. It is located near the confluence of the three rivers locally called *Teen Mukha* namely Zuari, Sanguem and Kushavati.

It is known by other names like Sindabur (Arabs), Shivapur (Copper Plate of Konkan Maurya) and Chandrapur which is said to have originated from Chandragupta Maurya as the Mauryan Empire extended as far as Karnataka during the 3rd century B.C. and Goa was part of it. Some suggest that it was founded by Chandraditya, son of Chalukya King Pulakeshi II in the 7th century A.D.

Epigraphical evidences in the Shiroda Copper Plate of Devaraja Bhoja records a grant issued from Chandraura during his 12th regnal year. The Shivapur Plate of Konkan Maurya Chandravarman records the donation of land to a *Mahavihara* situated in Shivapur during his 2nd regnal year. The Kharepattana plates of Rattaraja suggest that Aiyaparaja won victory over the ruler of Chandrapura. The Kadambas of Goa acquired control by 11th century A.D. and Jayakeshi I shifted his capital at Gopakapattana. In 1326, the Delhi Sultan Allauddin Khalji destroyed Gopakapattana and once again the Kadambas re-established themselves at Chandrapur but were once again defeated by Muhammed bin Tugalaq in 1327.
Excavation conducted by Rev Henry Heras in 1930 and Dr. S.R. Rao (A.S.I.) in 1974 revealed red ware, copper nails, spouted vessels and bowls, gold coins with trishul, Gajalakshimi, Nandi bull, Saptamatrika panel, Jain Tritankara Satavahana coins and bricks, remains of fortification wall and structural remains of the temple complex. Based on the clues provided by earlier excavations, late Dr. J.V.P. Rao conducted excavation at Chandor from 2000 to 2003. The result of the excavation revealed three phases of the temple structure built during different periods.

With this historical and archaeological setting extensive field survey, top sheet interpretation, place names, oral sources have been combined to get an idea of the city structure and its settlement patterns.

Results:

Selection of the site
The city was located at the south at the sharp bend of the river Kushavati naturally protected by the surrounding hills and the river system. It receives the heavy force of the monsoon and is navigable up to 30 kms. inland from the sea. The fertile low lying land, rice and coconut plantations around the fortification shows the area to be low lying and flooded during the monsoon season.

Moat and fortification
The city of Chandrapur was well planned. It was well protected by mud wall fortifications. The core section of the fortification had brick walls and the exterior was strengthened by laterite stones. It was covered by the earthen ramp raised on the interior and exterior side of the wall. The construction method and the material used are very similar to the III and IV enclosure fortification walls of the later Kadambas of Hangal. The plan of the citadel is more or less similar to the Kheta fort.
This area is known as Cotta meaning fort. The length and breath of the fortification is visible in few patches at the site. (ref. ch.4.pl.6a) On the exterior side there is a moat that was fed by the River Rishi and on the other side River Kushavati. Similar feature of feeding the moat is noticed at the fort of Banavasi by the River Varada. Outside the moat is Bairwaddo representing a ward outside the moat. Besides, names given to agricultural land such as *coliche morod* or *follieache morod* provides evidences of a ditch in front of the field just near the moat.

There is another fortification wall providing access to the fortified city from the river side. Thus there are two forts one within the other but built during different periods probably during the time of the Bhojas and Kadambas.

**City lookout post**

The city had a natural lookout post at *tinmukham* and Guirdolim and at the main fort at *bairmorod* and at the top of the Cavorim hills.

**Gates**

The city had one gate in the village named Kouddi or Cavorim which in Konkani means gate near the Holy Cross Chapel. This gate was probably the entrance to the old fortified city of the Bhojas (ref. ch.7. pl.1) and the other at Cotta near Santiago Chapel. In this chapel, St. James the Apostle is mounted on horse back showing Kshatriya status and protecting the gate.

**Palace:**

Within the fortified settlement the royal personnel and high officials probably settled in the area known as *Raiavor*. Close to this area where the *mand* for Musoll dance is laid is *Rasol* meaning a place of public assembly probably, the high officials from their royal residence would give orders to the people to carry on their duties in the city. (ref. ch.4.pl.6b)
Streets

The city had a single street which was 3 m. wide extending from the port to the entrance of the city gate with settlements facing the road. (ref. ch.5.pl.11a) A feature similar to the ports of Dabhol, Jayagad, Rajapur, Kharepatan and Sangameshwar.

Mammurichi tembi: An area called as Mammurichi tembi in Giridolim would probably suggest an area where the battle between Shasthadeva and Mammuri the North Konkan, Shilahara took place.

Temples

Temples of Chandranath at Paroda, Santeri or Shantadurga, Mahadeva temple and excavated Shiva temple were established to the south, north, east and west of the city. A ward named deviya waddo is located just behind the mand close to the temple which would suggest an area meant for the temple servants who probably travelled from Shiroda. (ref.ch.7.pl.2)

Market

Place called Hatiwadi was probably a centre of local trade which later developed into specialised markets. For example, Kambli hatta, market for cattle in Bharatpur, Rajasthan during the 9th century. There was a dockyard for the high and low groups called Vodhli Bosti and Bosti. Areas such as Hampri morod (Abyssinians) Khan Khazan, (Muslim) and Moali (Arabs or Persians) were probably occupied by foreign merchants.

Occupational Groups

Religious settlements, for example Jain matha and settlements of low caste group such as Maram bhatt or basket weavers who were required for all religious and administrative functions of the city as musicians and announcers, Locondola (ironsmith), Teliwaddo (oilmen), Marambhat (basket weaver), Sonar bhat (goldsmith), Rendrawaddo (toddy tapper), Moddvol (washerman) and Kammarcondi (blacksmith) were located outside the city walls.
Jain Basti

The finding of the Jain Tritankara, the name given to the River Rishi and the donation of land to a Mahavihara situated in Shivapur according to the Shivapur Plate of Konkan Maurya Chandravarman provides clues of the presence of Jains at Chandor. (ref ch.7.pl.3)

Tanks

Tanks such as Guhalatolio, Godeamtoloi, Chamatoloi and Voilem tolem and Jitlem spring were located around the periphery of the fortified city.

Gopakapattana

Present State of Knowledge

Gopakapattana is situated at the mouth of the Siridão creek in the Zuari estuary at long 73°51’36 East and 15°24’40 North in the Tiswadi taluka of the Goa State. It is approximately 10 kms. South-East of Panjim with an area of 145 sq.kms. It is bounded by Pali-Talaulim in the west, Neura in the East, Karmali in the North and Agashi in the South. It is known by other names such as Govapuri, a word which originally might have been derived from Gomanchal mentioned in the Puranas, Gopaka, according to the Kudatari copper plate of Viravarmadeva.

The Copper Plate of Jayakeshi I of the Kadamba dynasty mentions that the capital was shifted from Chandrapur to Gopakapattana around 1049 A.D. The finding of Roman amphorae and sherds of pottery from the Pilar tank at Gopakapattana reveal contacts with the Roman world during the Satavahana times. Epigraphic sources such as the Kolhapur Copper Plate of Gandarditya says that Jatiga I founder of the Kolhapur house of Shilaharas was in control of the Gomant fort by the middle of the 10th century which led them to believe that the port along the Gomant fort was held by the Shilaharas and that Govapuri might have been an Hanjaman, a commercial settlement of Arabs.
Jayakeshi I took over Goa in 1050 A.D. and made it his capital. His copper plate presently at Lisbon says that the Kadambas had trade contacts with at least fourteen countries that Jayakeshi was ready with numberless vessels to sail through the seas.

In one of his charters Gopakapattana is described as a beautiful and pleasing city, with abundant happiness of which surpasses the paradise of Indra, that Jayakeshi appointed Sadano, grandson of Muhamud, a merchant of Tajji origin who had rescued his grand father in a shipwreck to be his prime minister. Sadano established a migiguti to look after destitutes which was to be maintained by profit of the harbour.

Guhalladeva in the Kadaroli inscription is described as “The great lord of the best of cities” During the reign of Jayakeshi II Goa Kadambas attained great heights of prosperity and proclaimed himself as Konkan Chakravarti and Shivachitta Permadi as “lord of the western Ocean or Paschimasamudriadhipati”

In 1312 Malik Kafur, general of Allauddin destroyed the capital thereby shifting the capital to Chandrapura. The maritime aspect of Gopakapattana has been reflected in the memorial stones housed at the A.S.I. Old Goa showing scenes of naval battles with ships on it. Gopakapattana is known to have a great network of roads, canals, tanks grinders and temples of Durgadevi, Chamunda, Gaddgeshwar, Kalbhairava, Santeri, Vanadevta and Kshetrapal.

The discovery of the 5 km. long port wall stretching from Kharrosai to Mascarenhas waddo to Agassaim is submerged at several places and also buried under sand. According to oral sources, the port wall was 7 feet high.

Inside the wall there were at least three navigational channels and a protective docking system which sheltered around 100 ships according to oral sources. The channel had enough water for small boats to ply. Artefacts collected
from Gopakapattana in the form of coins, sculptures, capitals, lintels, emblem, medicinal bowls, pottery throw light on past human activities on this site.

NIO on shore explorations and trial excavations at Gopakapattana revealed three laterite walls which are running perpendicular and parallel to the river Zuari, In one of the wall several bastion, are noticed at regular intervals and six stone steps leading towards the shore. Six steps are attached to the main wall but due to seepage of water further excavation was not possible.

In order to confirm the traditional approach extensive field work, detailed observations, interpretation of place names, toposheet interpretation, inscriptive evidences have been consulted for a better approach to understand the port city of Gopakapattana.

Results

Structural Remains
The walls parallel to the Zuari river at the inter tidal zone at Gopakapattana with cross walls and internal bastions at regular interval and steps outside the wall noticed in three places raises the following questions.(ref. ch.5.pl.13 b)& (ref. ch.2.pl.7b)

Is it a Port wall, Concealed wall or Break water wall?
Here it is necessary to understand the nature of the river flowing and the nature of the tides.

Gopakapattana is located on the left bank of the river Zuari at the sharp bend of which point the river from the north-western direction takes an easterly turn and at this bend of the river the city was built. A glance at the toposheet of 1964 would expect the location of the city to be to the south where the area is
enclosed on three sides by the rivers Cumbiriua, Zuari and Rio de Bati. thus forming a nature gifted moat.

Toposheet interpretation reveals presence of salt pans all along the western part of the city. (ref.ch.5.pl.5e) Also interpretation of place names such as Morgādu, (Sandy soil) derived from Kādu, Bati, (Spathe of arecanut), Batye, (Sand banks), Bhattika, Bhati, related to cashew making, Sila Bhati (Shilaharas Batipattana), Malwada (low ground) and Saleri (salt pans) shows the area as low-lying and therefore should be underwater at least partly during the monsoon due to the overflowing of the river Rio de Bati.

The location of the river Bati is at the point where it is possible to take the water from the river Zuari to the moat. As the channel, Rio De Bati that cuts the river and the moat is at the point where the river water comes with maximum force and has to take suddenly an easterly direction. (ref. ch.7.pl.4) If therefore a channel is cut in the same direction as that of the source of the water the water easily and at the maximum can get into the moat. In fact the orientation of the channel is in line with the course of the river flowing with maximum force.

Secondly when the river from the north-west flows with maximum force before taking an easterly turn, it will directly strike the river bank causing damage. This threat was prevented by providing channels as an outlet for the gushing waters into the moat.

Thirdly the channel is narrow at the bottom and wide at the top. The channel that connects the river provides necessary water from the river. Thus in order to prevent enemies from knowing the exact source of water supply to the moat, it must have been concealed by walls.
Fortification walls

- Place name such as Udi, Dandi meaning bastion, to the south, Dugrem meaning fortified area and Agassaim to the East, Madsai and Kharrasai to the west. Here the suffix sai means an area of defence or bastion and north was protected by the hills.

- The wall is not shown in the toposheet of 1964 (Appendix XVII)

- According to the locals the wall was 7 feet high built to protect the land.

- The perpendicular walls and steps leading to the shore side are probably support walls to retain the main wall which is built in alluvial soil. In the recent years, probably due to lack of support, the wall is not visible, except during low tide.

- Several bastions in one of the wall excavated by the NIO shows that it cannot be a port wall but a breakwater wall or a concealed wall.

- Settlement of Kshatriyas at Raut waddo, Mercurem.

- Pir waddo, near Dando. Pir meaning Muslim probably speaks of settlement of the Muslims in this area as well as Mayata which may refer to Nauvyata meaning settlement of the Arabs.

- The general phenomenon to locate site of landing places is where the harbour would be kept undisturbed.

- The tides cause changes in the water. Thus at low tide if the level is not sufficient for anchorage of ships, artificial arrangement is required. For example, at Lothal, the wall break water phenomenon was used to...
diminish the destructive power of the waves, and an enclosed area to keep uniform level water for the safe and steady anchorage of vessel.

- A separate canal was necessary to replace leakage and foul water from docks in case of inland ports. If such a canal was not provided by a natural branch of a particular navigable river near the landing place, an artificial outlet canal had to be drawn.

The city is located amidst the hills of Maina, Bambolim, Curca, Gouli Moula and Pilar providing considerable protection to the city from outside attacks as well as provided natural look out post for the defence of the city and navigation

City look out post
The city lookout post was located at the Gauxim, Pilar, Maina, Talaulim hillock giving a view of the city and the entire island of Tiswadi. (ref. ch.3.pl.3)

City Gate
The city had northern gate at Satximkot leading to Ella, southern gate at Tarir, Dakshi Bhat, Agassim, leading the earlier capital of Chandrapur, western gate at Santan, Talaulim leading to Bondir, Calapur and eastern gate at Neura leading to Ella.

Moat
The city was well defended by a moat running from Satximkot via Gauncim-Bati-Maina-Gauli Moula-Talaulim joining the river Rio de Bati and the Zuari which is seen even today. (ref. ch.7.pl.5)

Roads
The city had three roads, Rajbidi or Royal road, Dakti bidi or Small road and a highway for traders which passed from Tarir on the banks of the Zuari through Durgem-Sulla bhat-Pilar-Gauncim-Satximcot, Maina to Ella, Brahmapuri and the upghat region. The existence of dovornem along this route confirms its existence since ancient times.
Reservoirs were located around the periphery of the fortified city. For example, Kuzmorayachem tallem, Gandagopala tank and Chamunda tank.

Ancient wells
Wells were dug and springs from Gauxim, Zoricho waddo, Goali Moula and Maina hillock supplied fresh water to the city. The site which is said to have housed the palace site has seven wells located very close to one another.

Recently a couple of wells are found by us during explorations especially located along the trade routes. Bagrachi bai, Kalvantachi bai, Devichi bai, Bhamon bai, some unidentified wells located along the trade route to Ella.

Ancient Temples
The city had temples of Santeri/Shantadurga, Chamundeshwari, Goveshwar, Navdurga, Carambolim Brahma, Somnath located to the north, south, east and west of the city as guardian deities.

Inscription speaks of a pilgrimage made by Guhaladeva to the temple of Sri Somesvara from his capital Chandrapura. But hardly had he reached half way the mast of his ship broke and he had to make his way to the nearest port of Goa. Muhamud who lived at this port of Goa came to his rescue. The question arises as to whether Sri Somesvara was from Somnath in Saurashtra or is it the ancient temple of Somnath located at Agassaim. As the time taken to travel from Chandrapur to Gopakapattana is for one day.

Which is the Chamunda Tank?
The identification of the location of the Chamundeshwari tank by the N.I.O., A.S.I. and other scholars, as being below the Pilar hillock does not hold true with the discovery of the Chamundeshwari tank by my guide and me at the Zuari
waddo which is called as Vargaonkaniche tallem by the Hindu community as the deity Chamunda was shifted to Vargaon near Bicholim and Saibiniclhem tallem by the Catholic community as it is located at the site of the Chapel of Queen of Angels. (ref.ch.6.plate.18)

Religious and Educational settlements such as Brahmapuri were located in the suburbs along with the habitations of different occupations that supported the city population. (ref.ch.6.pl. 9) This can be identified from names of places and wards of the surrounding villages such as Kumbarjua, Markuri, Neura, Sutarwaddo Mestawaddo, Sonarbhat, Tariwaddo etc.

There are doubts by scholars with regard to the present location of the port site. These doubts to some extent can be cleared by the following suggestions offered by us.

Is the Port site located at Bati, Bondir?

- The site of Bondir, Bati is located inland on the left banks of the river *Rio De Bati* (ref.ch.5.pl.13.c)

- It is located within the tidal reaches of the river.

- The ward name Sila Bati is probably related to Shilaharachi Ballipattana Our lady of Bon Voyage or Boa Viagem or Bori Doria Iatrechi Saibinn (ref. ch. 7. pl.8)

- Located at St Ann’s Church, Talaulim worshipped by the *tarvotis* or sailors states that the ships came upto Talaulim.

- Oral sources, speak of ships docking at Bati, Bondir. The word Bondir meaning a port.
- The existence of the Guiira bhat. relating to the settlement of the Jains who were regarded as traders is located close by.

- The Sovorai vaddo probably meaning the 6th king named after Jayakeshi I as he founded his capital.

- Existence of Kalvantachi bai at Modsai to the west which according to Arthashastras city planning should be located to the west.

- Through this port of Bati access was also possible to ports of Calapur, Raibander and Ella via Talaulim.

Is the Port site located at Tarir Agassaim? (ref.ch.5.pl.13.d)

- The trade route with dovornem running from Tarir, Agassim via Durgem-Sulla Bhat- Pilar- Gauxim- Satximkot, Maina-Ella used by the locals even today. Also connects other villages of Dongri and Carambolim (ref.ch.5.pl.11.c,d,e)

- The existence of caves along the route at Sulla Bhat and Pilar.

- The copper plate of Jayakeshi I records grant of the deserted village of Laghu Morambika situated in the territory of Gopaka-dvipa connected to Ganvadak to an officer named Chhadama showing connection of Laghu Morambi village to Gauvxim.

- Existence of the temple, Goveshwar on the Pilar hillock.

- Provision of water on route in the form of wells at Pilar, Gauxim, Satxim Kot, Maina (ref.ch.7.pl.9a,b,c) and Gandagopala tank probably located close to the Pilar hillock.
- Place name Neura called Nauvrak meaning place where ships dock. Also meaning Nauvittaka or Navyata, settlement of Arab merchants. Place name Agassim probably named after a Muslim.

- Existence of the Bhandari Community at Markuri or Mencurem near Tarir, Agassim who are originally toddy distillers but were very skilful navigators having big boats and were employed as sarangs or as crew on ships. They were perhaps guards of the royal treasury (bhandagarika). They proudly connect themselves with the royal families of Satavahanas and Kadambas.

- Place name Mandur derived from Mand/Mandi/Mandapikas meaning market in north India and Ur meaning village.

- Pether at Carambolim derived from Peth/Penth/Pentha meaning market.

- Guhaladeva’s pilgrimage to the temple of Sri Somesvara from his capital Chandrapura and breaking of the mast of his ship and being rescued by Muhammad at the nearest port of Goa shows presence of Arab settlement located near Agassaim.

**Oil Grinders**

There are three huge basalt stones which is claimed by scholars to be oil grinders. (ref.ch.5 pl.5d)

- They are hollow on top and has a small hole below without any link between the two thus if oil had to be extracted there should have been an outlet for the crushed kernel to leave its oil.

- Oil extraction was not done in stone grinders but in wooden ones.
The area is lateritic and the stone is of basalt which is found in the ghat region.

**GandaGopala tank or Khazan land?**

The Copper Plate Inscription of Tribhuvanamalla throws light on the contribution of Kelima who acquired the title Gandagopala. He was victorious in a number of battles, founded a charitable institution at Gopaka, constructed tanks called Gandagopala tank, established a settlement of 12 Brahmins from different parts of the country and protected them. Accordingly a survey was made to find the exact location of the GandaGopala tank (ref. ch.5.pl.3)

- A minister who protected the king and its surrounding was given the title Danda Gopala and not Ganda Gopala as given in the inscription.

- Also the tank is located close to the place called Dugrem meaning wall probably used for protection.

- The so called identified Ganda Gopala tank is not a tank but agricultural land with *kan* or ears to let out water into the fields which came from the spring at Zoricho waddo and Gauxim hillock for the *vaigan* season. (ref.ch.7.pl.10)

- It is safer to identify the Ganda Gopala tank at Sulfa Bhat across the Neura road near the Pilar hillock as it is on route to the Brahmapuri or settlement of the Brahmans as established by him as well as shown in the top sheet of 1964 of its existence.

**“Missing Link” of Rajbid**

- There were a lot of heritage walks conducted to find the missing link of the royal road from the port to Ella. Field visit and interviews with the locals helped in the discovery of the missing trade route and highway for traders which passed from Tarir on the banks of the Zuari through
Durgem-Sulla bhat-Pilar-Gauncim-Satximcot, Maina to Ella, Brahmapuri and the upghat region. The existence of dovornem and wells along this route confirms its existence since ancient times.

- The Degamve grant of Shivachitta states that the street of Jayakeshi’s capital was completely filled with palanquins of pandits constantly passing by. This confirms the ancient route used by pandits travelling from the Brahmapuri at Ella to the capital.

**Ella**

**Present State of Knowledge**

The third ancient capital of Goa located to the north of the Tiswadi Island on the banks of the Mandovi estuary very close to the mouth of the three rivers namely Mhadei, Cumbarjua and Khandenar. It is situated between 15° 27 N latitude and 73° 53 E longitude about 2 miles to the north of the ancient city of Gopakapattana and 6 miles to the east of Panjim.

The river Mandovi was selected in comparison as it is more navigable than Zuari. This is evident even today from the existence of a ferry service across the river. Ella, once a hub of commercial activities, especially of horse trade, today, is a pilgrimage centre for all the religions of the world, also inhabited by the descendants of some original settlers, who can be identified from their surnames, for example, Elekar.

The destruction of the port city of Gopakapattana due to various reasons led to the transfer of capital in 1440 to the village of Ella. Which probably originated from the name of the guardian deity of Ella called Durga or Ellama.
The methodology of interpreting the available information of the site has helped in redefining the extent of the city, its features, activity areas, demarcation of the sensitive areas thus enabling us to re-construct and interpret the evolution of the city of Ella during the Vijayanagara-Bahamani and Adilshah rule.

City look out post

The city was located amidst the three hills which served as a lookout post. To the east, on the hill where the chapel of Nossa Senhora de Monte is located one gets a good view of the whole city and its suburbs. It is said that on this site the Muslims housed their artillery, which was used against the forces of Albuquerque when he captured Goa.

Towards the west, there is a hill called Monte de Boa Vista (hill of good view), where the Church of the Cross of Miracles is located. It offers a picturesque view of not only the city but also the harbour.

City Gate

The city gate was located at the site of the Church of Nossa Senhora de Serra. The gate was vaulted and had towers which could be used for the purpose of defence in case of emergency. It was through this gate that Muslims would go to the suburbs and through which many of them escaped during the capture of Goa.

At the site of St. Catherine Chapel there was a gate through which the Portuguese entered the Adilshahi city. The chapel has a slab on the wall with the legend of the Governor Alfonso de Albuquerque entering the city and conquering it from the Muslims in 1510. This was the chief place of embarkation and landing called fish bazaar. (ref.ch.4.plate 7a,b)

Right at the end of the road to Gandaulim, where it meets Cumbarjua canal is Porta de Sao Braz which is one of the surviving gates of the outer fortifications of the city which was more than 18 kms long.
Mosque
The city had a mosque which was located at the present site of the ruins of the College of St. Paul. Even today there is a mosque near the site with settlements of some migrant Muslim families located around the college remains.

Temple
To the south of the city, a small reservoir of water called *tirtha* of Brahmapuri attracted pilgrims from different parts of India in the month of *shravan*. Close to the *tirtha*, the ruins of the temple of Shiva were located on which the Church of Santissima Trinidad, (the church of the most holy trinity) was built. (ref.ch. 7. plate 12)

To the north east of the city at the site of St. Cajetan Church bordering the quay there is a well or tank with a small opening with regard to this. There are various opinions some say that it was a sacred tank of the Hindus and as a result a cross does not stand in this church.

Even people try to acquire water from it others say that it was the work of the architect who in order to make the foundation deeper dug it but this cannot be accepted as the church was built in the 17th century. In my opinion the controversial Adilshah gate was probably the temple gate and the tank could be the sacred tank located towards the east.

Defence Area
On the holy hill to the west was the Church of Our Lady of Rosary. The façade has an appearance of a turret of a fortress having openings in the walls to sight the invading enemies. On the right side of the turret is a small marble stone inscription in Portuguese that testifies the fact that Alfonso de Albuquerque assisted the reconquest of Goa from this point

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Arsenal
The Adilshah Arsenal was located at Ribeira Grande traced to the time before the capture of Goa by Albuquerque. The extent of this arsenal was considerable. As the spoils which the Portuguese found on its capture of docks consisted of 40 large ships, 26 brigs, a large number of fustas or pinnacles, in its magazines 40 heavy guns, 55 pieces of ordnance called falcons, 200 muskets, a large quantity of powder, pitch naphtha, oil, steel, iron, copper, cannon balls with a variety of other articles.

Market
The main road where transactions would take place was called Rua Direita. Goods, shops of jewellers, goldsmiths, crafts were sold here. The custom house was called Mandavi. Here Mand refers to small shops put up when ships arrive on the dock which probably how the river Mandovi got its name.

Palace
To the west of Rua Direita was Terreiro do Sabaio which contained some buildings of the city at the site of the Cathedral. According to Andrea Corsair, the Adilshah, city was not more than a mile, the ramparts encircling the city was not very high but were surrounded by a ditch always filed with water. The wall towards the north extended from the custom house to the Arsenal, which lay at the other extreme. To the east, the wall extended upto the foot of the hill of Senhora de Monte, to the west, it stretched as far as the Arsenal, to the south, it reached the site of the church of Nossa Senhora de Serra, The citadel had a gate or a double gate called Bacaes which led to the suburbs.

The palace of Adilshah was located close to the quay with garden full of aromatic plants. It was spacious with magnificent saloons and porticos supported by columns of carved wood. In front of the palace the vast open square was known as Terreiro de Sabyo. Close by was a large tank meant for recreation of the kings of Bijapur. A little distance from the tank was a well shaded spot where
they enjoyed the evening breeze. There were private buildings which were single
storied, but spacious and commodious.

Population
The city population consisted of Muslims, non Muslims and merchants from
foreign lands. It had an excellent port located on the banks of the Mandovi visited
by traders from Mecca, Aden, Ormuz, Cambay and Malabar who traded in horses
which were in demand in the Deccan. This was guarded by a captain along with
his military. Nobody was permitted to enter the city without a pass and proper
details including his distinguishing marks.

Conclusion
The port cities of Chandrapur, Gopakapattana and Ella represent the climax of
urban development in Goa in the ancient and early medieval times. The inter-play
of various factors such as the geo-physical setting, economic resources, political-
administrative and military advantages has contributed to the rise, growth as well
as decline of the port cities.

The present thesis has reconstructed the three major phases of urbanisation
at the ports of Goa based on archaeological, literary, oral evidences along with
another tool of interpretations based on place names. It has collected,
documented, translated afresh and interpreted inscriptions, coins, sculptures and
monuments to provide useful clues and suggestions for future research in the area
of study.

The thesis has reconstructed the cities in terms of its layout and function
that has not been worked on, written and well studied by any scholar till today.
What ever has been written is more comprehensive rather than analytical and
scientific to give a picture of the city planning.
The present work has given a lot of attention in understanding the site's geo-physical setup as to why they are located where they are? How were they planned, constructed and designed? What structures and features are available to term them as 'Urban', who controlled them? How were they controlled, what relations existed between the city and the hinterland? How did they sustain? what impact did they create on Goan society and culture.

It has challenged the existing position of interpretations put forth by earlier scholars on Goa's history of ancient and medieval period by reinterpreting it in the light of new evidences and methodology to offer a better understanding of the study area. It has discovered and identified the missing link of the trade route, tanks which were not properly identified, a no of wells located along the trade route giving evidences of a well planned settlement of the city population, the actual port site, and the existence of a fortification and moat.

It has adopted the archaeological technique of X.R.D analysis of ancient pottery to find out maritime contacts at the port capitals.

It has provided suggestions and evidences to solve some of the existing confusions in placing mis-interpreted events and sites in the area of study.

Various events such as dating dynastic rule and genealogy have been cleared by relying on epigraphic sources.

The technique of boat building and navigation along with local terminology has also been taken up in the present study.

Thus the present research provides a firm datum line on the basis of which the A.S.I can excavate the habitation site in order to reconstruct the history of the cities in its totality.
Plate I: Kouddi (gate) at Cavorim, Cotta
Plate II: Deviya waddo at Cotta
Plate III: Site of the Jain Basti at Cotta
Plate IV: Direction of the river flowing at Gopakapattana
Plate V: Moat at Gopakapattana
Plate VI: Wells at a) Gauxim, (Devichi bai) b) Gopakapattana, (Bahmonachi bai or Devichi Bai) c) Bagnachi Bai) d) Bati (Kalvantachi Bai)
Plate VII: Navdurgechem Tallem
Plate VIII: Our Lady of Bon Voyage, Talaulim
Plate IX: a) Satximcotta, b) well at Satximcott c) linking road to Ella
Plate X: Channel supplying water to the fields from the so called Gandagopala tallem
Plate XI: Unidentified structural remains at Talaulim as shown in toposheet
Plate XII: a) Gajalakshmi panel b) Saptamatrikas c) Serpent deity
Map 1: City Planning of Chandor

1. Guhatolio
2. Devlantoi
3. Jain matha
4. Chamatolio
5. Godeamtolio
6. Temple site
7. Site of Hindu temple
8. Santiago chapel
9. Fortification
10. Moat
11. Gate
12. Mamurichi tembi
13. Raj bid
14. Deviya waddo
15. Foliechem morod
16. Raiavor
17. Bair morod

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