Vadnagar: A Thriving Composite Township of Historical Times

Abhijit S. Ambekar<sup>1</sup>, Ananya Chakraborty<sup>1</sup>, Grace Ann Varkey<sup>2</sup>, Roshan Ranjith<sup>1</sup>, Sejal S. Gotad<sup>1</sup>, Disha Seth<sup>1</sup> and Janakraj Rajpurohit<sup>1</sup>

- 1. Excavation Branch V, Archaeological Survey of India, 3rd Floor, VUDA Bhawan, Near L and T Circle, Karelibaug, Vadodara, Gujarat 390 018, India (Email: abhijeetasi@gmail.com; chakrabortytinni@gmail.com; rosh.tutu23@gmail.com; sejal.gotad18 @gmail.com; dishaseth9@gmail.com; janak66577@gmail.com)
- <sup>2</sup>. Directorate of Archaeology and Museum, Gandhinagar, Gujarat 382 017, India (Email: varkeygann@gmail.com)

Received: 09 August 2022; Revised: 05 October 2022; Accepted: 30 November 2022 Heritage: Journal of Multidisciplinary Studies in Archaeology 10 (2022-23): 61-81

Abstract: The excavation at Vadnagar revealed continuous human habitation from the mid-8th century BCE to the present, highlighting the town's exceptional, uninterrupted evolution. This extended period of settlement is rare in India, with few sites demonstrating similar continuity. The town, historically known as Anandpur, underwent several name changes, including Chamatkarpur, Anartapur, Vriddhanagar, and Vadnagar. Vadnagar's long-standing role as a thriving urban center is evident from its defensive structures, masonry remains, and a diverse cultural assemblage, which includes evidence of skilled craftsmanship, particularly in shell work, showcasing the town's aesthetic and technical expertise. Vadnagar not only linked various urban centers within Gujarat but also facilitated connections with other regions of India. The findings illustrate Vadnagar as a composite township, characterized by its cultural diversity and the coexistence of multiple religions, reinforcing its significance as a vibrant and enduring urban hub.

\_\_\_\_\_\_

*Keywords*: Anandpur, Elliptical Structure, Taranga, Rajagala, Shell, Sikotar, Indraprastha

#### Introduction

The ancient township of Vadnagar (23°47′ N, 72°38′ E) located in Mehsana district, in the northern region of Gujarat state has been known by various names such as *Vriddhanagar*, *Anandpur*, *Anartapur*, *Chamatkarpur* and *Nagar*. Situated 12 km north of Visnagar taluka and 8 km south of Kheralu taluka, this place is well-connected by road and rail transport, lying 110 km from the Ahmedabad airport. Commencing from Mehsana towards Taranga, a metre gauge rail line was passing through this town earlier, which has now converted been into broad gauge. The main area of present-day Vadnagar is surrounded by a brick-built fortification (comprising partly of stone) covering an area of 1 km east-west and 700 m north-south.

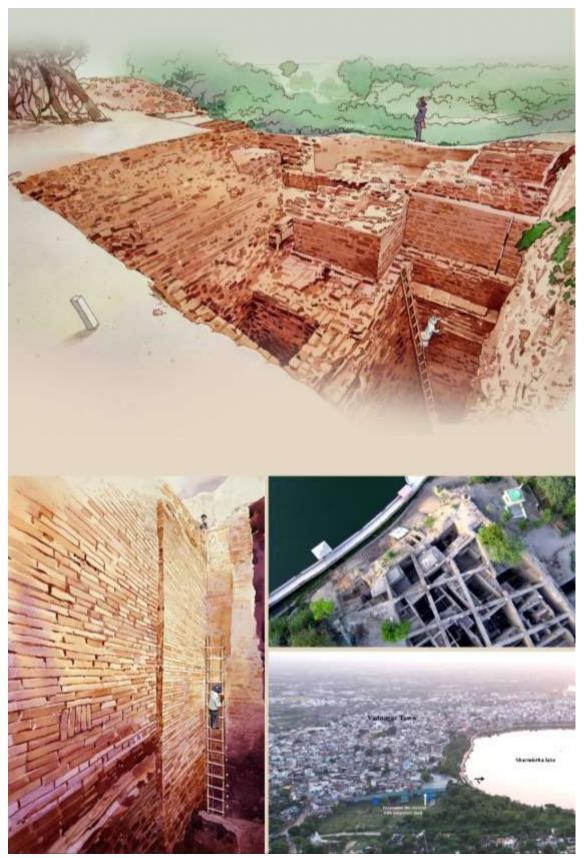


Figure 1: Vadnagar, a thriving composite township of historical times

The fortification wall of the northern segment is built in a semi-circular fashion aligning with Sharmistha Lake. Medieval records such as *Ain-e Akbari* by Abul Fazl mention that this city had many *pagoras* surrounded with lakes. There is evidence that the town extended beyond fortified area in later periods. There were six entrances made for this town namely Arjunbari gate in the north, Nadiol and Amtol gates on the western periphery, Ghaskol and Pithori gates in the south and Amarthol Darwaza in the east.

## **Epigraphical Records**

While digging deep into the etymological source of the Vadnagar town, multiple names based on epigraphical, textual and mythological records have been found, with 'Vadnagar' as the name formally coming into record during the last two to three hundred years. Beginning with the oldest name of *Chamatkarpur* (mentioned in the *Nagarkhand of Skandapurana*) various other names including *Anandpur*, *Nagar*, *Anartapur* and even *O Nan To Pulo* (as mentioned by Xuan Zhang) can be considered as the names of ancient Vadnagar. In the *Nagarkhand* of *Skandapurana*, there is a mention of *Chamatkarpur*, a settlement named after the king Chamatkar. The copper plate grants of Vallabhi-Maitraka kings are the primary sources of information about the kings and their land holdings, including even the economic and political setup of the state. There is mention about names such as *Anandpur*, *Nagar* and *Anartapur* found in the copper plates of Valabhi-Maitraka. Incidentally, the Solanki king Kumarpal's inscription of 1152 CE at Arjunbari gates also mentions the name *Anandpur* designating Vadnagar (Ambekar *et al.* 2019).

The above-mentioned inscriptions are instrumental in drawing several conclusions. Firstly, the settlement of Vadnagar seems to have had a continued prosperous existence with inscription mentioning the splendour of the place and Anandpur as an important centre of the Solanki dynasty. It can even be considered as an important seat of religion as a number of inscriptions talk about the construction of temples by various patrons. To conclude, the settlement had a continuous epigraphical record dated from 600 to 1300 CE. The name of *Anandpur* can be further stretched back to 400 years i.e. to the early-Kshatrapa phase based on the two sealings bearing the legend *Anandpur rajño* unearthed from the Kshatrapa level deposit of Vadnagar excavation.

#### Excavation

The excavation at Vadnagar spanning for eight consecutive field seasons from 2014-2022 by the Archaeological Survey of India have brought to light an unbroken sequence of seven successive cultures commencing from the pre – Rampart period (pre-2<sup>nd</sup> century BCE) till present. The present township is perched upon the thick cultural deposit of about 24 m. Such an accumulation of cultural deposits at Vadnagar is attributed to the continuous habitation for around 2750 years. The results of excavation have shed light onto the fact that the first settlers of Vadnagar had built a pre – defence settlement. While the first and foremost defence system was introduced in the form of a (earthen) rampart. It seems to have covered the same area of the later

brick-built fortification wall (introduced by the successive period) which infers that from early period itself this was a large sized settlement. During later period, the defence system of this town was strengthened by constructing a strong brick fortification wall on the hard bed of (earthen) rampart with subsequent additions and restorations spanning over five cultural periods. The evidence of excavation are suggestive of the fact that this town emerged as a major shell manufacturing centre, which began since the earliest level and flourished with the gradual passage of time (Ambekar *et al.* 2019) (Figures 1, 2 and 3).



Rampart & Moat First defense structure of Vadnagar is the rampart which is roughly 18-30 m broad and seems to have covered the same area of the present fortified township. Black soil deposition indicates marshy environment on the periphery of the rampart and fortification wall. It is formed due to water accumulation for longer period in the ditch (mont).

Figure 2: Cultural Sequence, Vadnagar

Figure 3: Rampart and Moat, Vadnagar

# **Religious Structures**

**Buddhist Remains at Vadnagar:** There are historical records of Chinese pilgrims travelling to India to study more about the Buddha, Buddhism and this Buddhist association of Vadnagar has been known to archaeologists and historians through Xuan Zhang's travel records 'Si Yu Ki'. He visited India in 640 CE; first came to

Bharugaccha (Bharuch), then Malwa, Atali, Kheta, Vallabhi, Anandpur (Vadnagar) and Saurashtra in the south and then proceeded to *Gurjaradesa* in the north.

Xuan Zhang's account elaborates the life, culture and state of Buddhism in Gujarat. It is as reflected in his mention "O-nan-to-pu-lo identified as Anandpura, this country is about 2000 Li in circuit and the capital about 20 Li. The population is dense, the establishment rich. There is no chief ruler but it is a part of Malava. There are some ten samgharamas with less than 1000 priests. They study the little vehicle (Hinayana) of the Sammatiya School. There are several tens of Deva temples and sectaries of different kinds frequent them". The travel record of Xuan Zhang is validated through findings from the excavations (Majumdar, 1960).

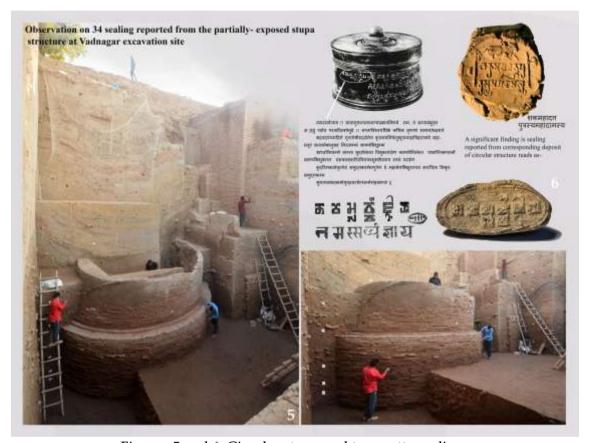
In fact, the finding of a Bodhisattva image in 1992 provided the first concrete evidence for Vadnagar's association with Buddhism. In view of this evidence, the Directorate of Archaeology & Museums, Government of Gujarat undertook the excavation at Vadnagar in year 2005-06 from 2006 – 12.



Figure 4: Ghaskol monastery, Vadnagar

**Excavation at Ghaskol Locality and Evidence of Monastery:** The most significant discovery at the site is a Buddhist monastery which is located within the fortified area consisting of an open courtyard in the centre surrounded by cells on all four sides. Associated findings of monastery: votive stupa, in front of the monastery, on both sides of the stepped entrance, architecturally two different types of stupas - circular and square have been uncovered. Among the antiquities associated with Buddhism from the monastery complex are a red sandstone broken head of Buddha and a crescent shaped grey stone plaque depicting the tale of a monkey offering honey to

Buddha. Fragments of typical bowls of Black Polished Ware bearing inscribed Brahmi legends like *devakarasya*, *shakasya* and *dhama* in them have also been found (Rawat, 2011) (Figure 4).



Figures 5 and 6: Circular stupa and terracotta sealings

Circular Stupa Remains along the Sharmishtha Lake at Ambaghat Locality: The half-portion of a Stupa structure which is circular on plan has been partially exposed from the horizon of Period III (1st – 4th century CE) at a depth of 11.50 m and excavated uptill 16.80m. This partially exposed structure comprises of two segments – lower segment in the form of a base has been made of 47 brick courses, while the super-structure (anda) is made of 27 brick courses. The height of the structure measures 5.20m and its half-portion has a diameter of 6.70m. The shape of this brick stupa is identical to stupa of rock-cut caves at Sana, Amreli and Kanheri caves datable to the early centuries of Common Era (Figure 5). A significant finding is a sealing reported from corresponding deposit of circular structure reads as - शक महदरापुत्रस्य महदामस्य ("Śaka Mahadatya-putrasya Mahadāmasya").

34 Sealings Reported from the Partially Exposed Stupa Structure: The finding of 34 terracotta sealings depicting नमस्राव्यंज्ञाय (Namassarvagyāya) has been reported from this partially exposed circular Stupa structure (Figure 6) at the Ambaghat locality along the Sharmishtha Lake, which are significant. After deciphering the letters, it matches with the first word found in one of the ancient relic caskets of Devnimori (Mehta,

1966), Aravalli district, North Gujarat (the relic casket reported from inside the *Mahastupa*). The sealings seems to have been a form of offering as the term नमसर्वज्ञाय Namassarvagyāya) has been used as an epithet invoking the omniscient.



Figure 7a: Elliptical structure and stupa

# Significant Findings Associated with Buddhism from South-western Corner of Kotha-Ambaji Lake (Adjacent to Anaj Godown, Outside the Fortified Area)

Elliptical Structure and Stupa: An elliptical structure, similar to the ones reported from Rajgir, Besnagar, Sravasti and Gopika Cave in the Nagarjuni Hill has been unearthed here at Vadnagar. H. Sarkar (1966) in his book 'Studies in early Buddhist architecture' has opined that elliptical structures having entrance porch in their longer axis have been reported from Besnagar and Sravasti (5th century BCE – 1st/2nd century CE). While the former belonged to Vaishnava sect, the latter can be assigned to Buddhism. Further, he stated that some of these elliptical structures were probably used as congregation while others were used as shrine. From the Pali literature, it can be inferred that a structure known as mandalamala generally used for public gathering was also elliptical in shape. The elliptical structure of Vadnagar has a longer axis measuring 12.60 m having an entrance-like feature on its northern side. The pradakshinapatha or circumambulatory passage found around the inner part of the structure seemed to

have been enlarged during the later period (early phase of Period IV), suggesting a probable increase in the number of worshippers. During this period, mouldings with lime-plaster have been found provided on the outer side of the eastern part of structure. Adjacent to this structure, a circular stupa having a diameter of 3.17 m and 1.5 m in height has been correlated with the earlier phase of this elliptical structure. Whereas, the square platform (memorial stupa) measuring 2 m x 2 m with a 40 cm wide area at the centre (receptacle hub), enclosed by the enclosure wall was built during the later phase of elliptical structure. Both these stupas belonging to different cultural periods are located on the north-eastern side of the elliptical structure (Figure 7).

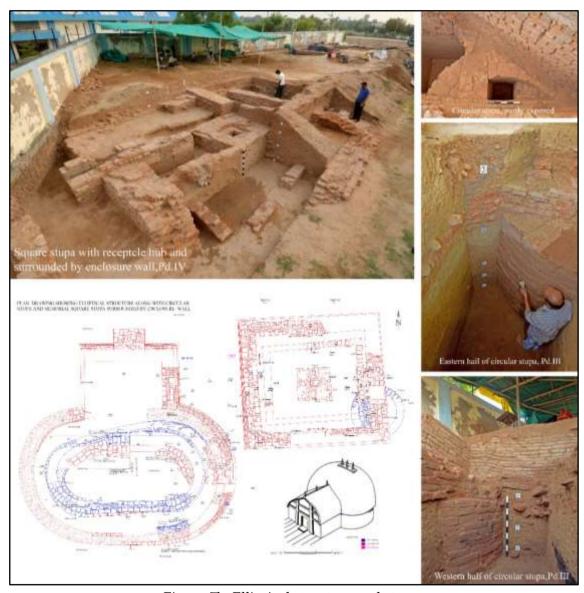


Figure 7b: Elliptical structure and stupa

**Skeleton in Seated Posture:** A rare type of burial has been exposed on the north – western part of the square platform. It comprises of an intact, well-preserved skeleton

buried in a seated cross-legged posture within a pit. The head facing towards north is straight, with the right hand placed on the lap while the left hand found raised up to the chest level, possibly resting on a wooden stick (*danda*) which has perished. The antiquity of this *Samadhi* type of burial can be datable to probably 9<sup>th</sup>-10<sup>th</sup> century CE onward, presumably when the square memorial stupa was no longer in usage (Figure 8). It is mention-worthy that this type of burial has been reported till date only from three other historical sites namely Balathal, Tripuri & Adam (Nath, 2016).



Figure 8: Skeleton in seated posture

# Taranga

One of the largest Buddhist sites of late historical period in North Gujarat vis - á - vis western part of India: Another significant site of religious nature near Vadnagar is Taranga, which a large Buddhist settlement of late historical period in the Western part of India where Buddhism survived up to  $14^{th}$  century CE. Vadnagar was the nearest town from where logistic support would have been received by the Buddhist monks residing in Taranga hills (around 30kms north of Vadnagar). Interesting feature noticed in Taranga is the conversion of natural rock-shelters into dwelling places for monks. The excavation and exploration in and around *Taran Dharan Mata* temple (Taranga) covering an area of three hillocks namely— Samasidor, Dhagolia and Jogida has reported: (Figure 9).

- Fourteen stone platforms (evidences of terraced system/retaining wall)
- Fifty-one rock-shelters converted into dwelling places
- o Two stupas housed within prayer halls and a stupa on the peak of Dhagolia hill
- A brick structure resembling vihara

- Stone steps
- Stone built check dams on the seasonal rivulet
- o Prayer hall built during different phases
- Forty votive stupas

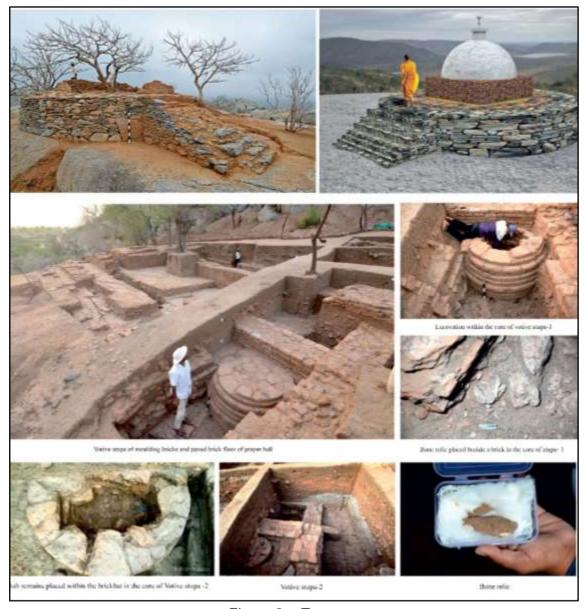


Figure 9 a: Taranga

Generally, it has been observed that the Buddhist monks preferred to settle in an area of natural setting which was not much far away from the town or on the traversing route. Taranga being close to Vadnagar – a major trading centre was at a vantage point for monks practicing Buddhism (Ambekar *et al.* 2020). Taranga findings have similarity to the ancient remains located in the rocky hill of Rajagala Archaeological Reserve, Sri Lanka where caves converted into dwellings have been reported. As many as 50 such dwellings scattered in Taranga hills have been identified. The dwelling units of monks

who were residing in this monastery were established as a 'Meditation Monastery' similar to the *Vanavasa* type monasteries. These remains are situated in Ampara district of the Eastern province of Sri Lanka. The site of Rajagala is spread over 1025 acres of land consisting of more than 700 archaeological remains of the Prehistoric and Historic periods. These archaeological remains include rock shelters (which were converted into caves by adding stone structures), stupas, memorial stupas, monasteries etc (Ganvir, 2018).

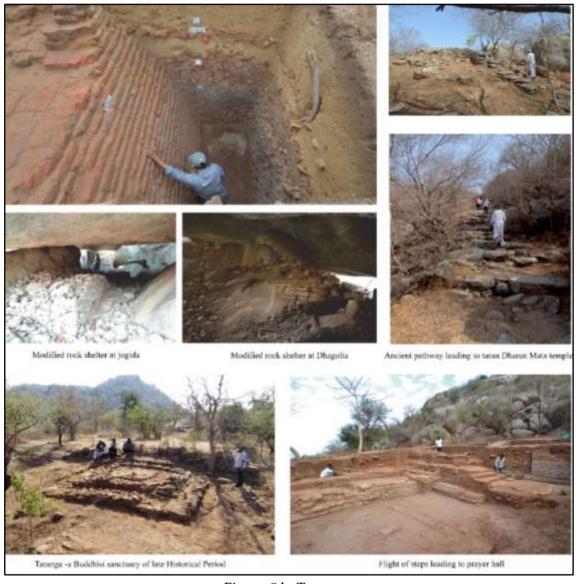


Figure 9 b: Taranga

# Other Important Cultural Findings of Vadnagar

**Shell:** Contrary to previous assumption of a hiatus noticed in shell craft activities during the post-Harappan times, excavation at Vadnagar has brought forth evidence showing the continuity of shell objects (including bangles, beads, pendants etc.) manufacture using the same technology during early Historical period in Gujarat vis –

a – vis India. It has also brought about the evolution in design and pattern of shell bangles from simple to intricate. The excavation result reveals that shell manufacturing was a thriving commercial activity that was in vogue up to  $14^{th}$  –  $15^{th}$  century CE (Figure 10).





Figure 9 c: Taranga

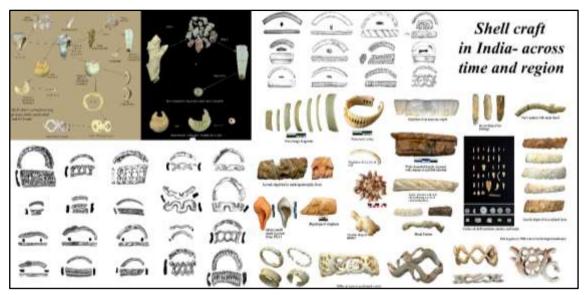


Figure 10: Shell

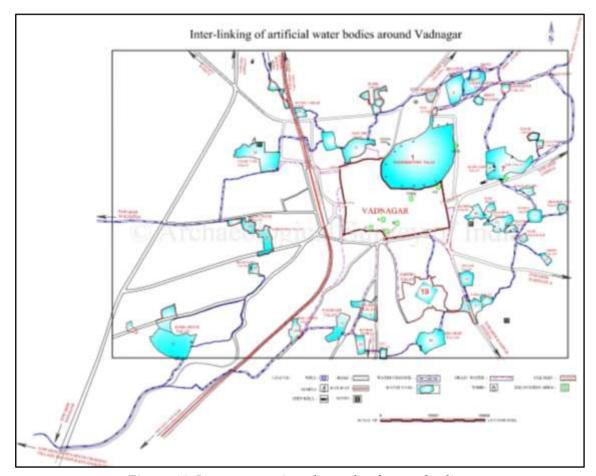


Figure 11: Inter-connecting channels of water bodies

The detailed qualitative and quantitative analysis of shell findings has indicated the large-scale utilization of the marine gastropod *Turbinella pyrum* also referred to as the sacred conch shell for the manufacture of shell bangles, beads, etc. along with cowries.

Turbinella pyrum shells were procured from the Gulf of Kachchh as chief raw material for the shell industry. Shell objects were not only used locally but were traded to neighbouring parts of *Anarta* region. Presence of cowries (cowrie hoard reported) indicates their probable usage as currency besides coinage in the trade exchange networks. The overall evidence of shell comprising both shell bangles, beads and shell working debitage from Vadnagar is highly significant for revealing the presence of a flourishing shell industry during the Historic till the early medieval period (Ambekar *et al.* 2019).



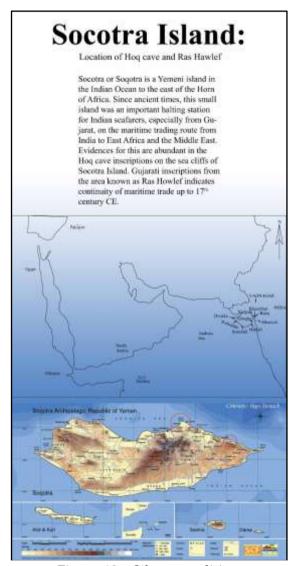


Figure 12: Glass Bead -Long distance trade

Figure 13a: Sikotar tradition

**Numismatic Assemblage:** The numismatic data from Vadnagar excavation points towards a monetised settlement throughout two millennia. It also brings forth hitherto ignored lead coinage belonging to  $4^{th}/5^{th}$  centuries CE (assigned to Period IV of cultural sequence of Vadnagar). The symbols depicted on them, which belong to *Shaivite* and *Vaishnavite* faiths, suggest their strong presence at the site. At the same time, finding of

sealings belonging to the Buddhist faith indicates a presence of a multi-faith, possible a cosmopolitan heterogeneous society at Vadnagar in ancient times. The finding of a gold coin which is in circular shape (16.22mm in diameter) weighing 3.39gm; a preliminary comparative study with coin catalogue reveals that this coin (known as *dinar*) probably belonged to Mamluk Sultanate of Egypt (mid-15<sup>th</sup> century CE). This finding is of immense archaeological importance as it indicates a long-distance cultural contact.

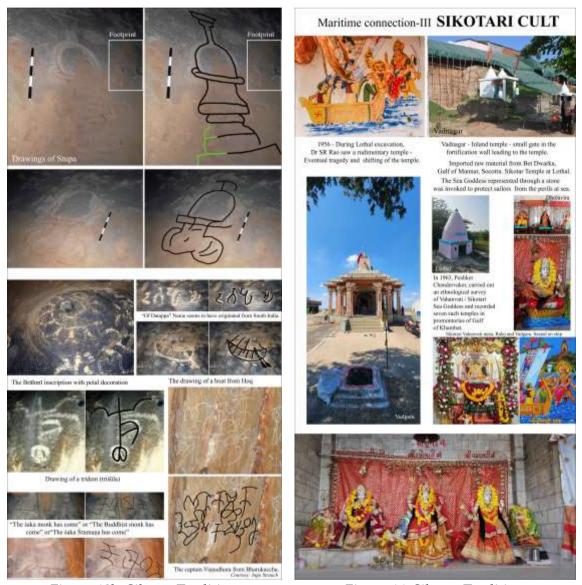


Figure 13b: Sikotar Tradition

Figure 14: Sikotar Tradition

### Resilience

Another significance of Vadnagar is how it harboured the knowledge of water conservation system which seems to have been prevalent amongst the inhabitants of the town, and helped them to sustain even during intermittent immensely arid phases. It has been observed that, the major cities were abandoned in the post-Gupta era in the

Indian scenario. The reason cited is immense aridity throughout. However, in Vadnagar a totally different picture emerges, showing prosperity in material cultural and structural remains is evident. This is due to the knowledge of water conservation that saved the town from abandonment (Figure 11). A major noticeable feature is identification of seismic activity in the section of one of the trenches on the northern side, along the Sharmistha Lake. After Kalibangan (Harappan town), Vadnagar is second such site where evidence of past earthquake that affected settlers have been reported and thoroughly documented. However, unlike Kalibangan, Vadnagar was never abandoned and remained occupied throughout. It shows human resilience with adaption in Vadnagar, assessing human hazard interaction and their resilience to natural disasters (Ambekar, 2022).

## **Long Distance Trade**

When it comes to long distance trade, quite an interesting picture emerges with the finding of Indo-Pacific glass beads from excavation at Vadnagar. These are monochrome, drawn glass beads, which was a common trade item in the ancient world and are also known as the *Trade-wind* beads (Francis, 2002). Indo-Pacific beads are generally oblate, disc and tubular in shape, as they are hand cut from glass tubes, which makes them asymmetrical in nature. These beads were found in large numbers from East African coast, occasionally in the Persian Gulf, over the Indian subcontinent, throughout South-east Asia, north and south of China, Korea and Japan (Abraham, 2016).

Furnace drawn technique is being used for 2,500 years in India. Recent studies happening in the inland areas have yielded many sites with Indo-Pacific beads like Kopia in Uttar Pradesh, where there are evidences of manufacturing. Vadnagar being an inland site has also provided evidences of Indo-Pacific beads which in quantity constitute about 50% of the entire beads reported from the site. Indo-Pacific beads have been reported from the excavation between the horizons of Rampart period (Period II), Kshatrapa period (Period III, 1st – 4th century CE) to Gaekwad Period (till Period VII) in Vadnagar. The presence of those beads throughout these periods denotes the well-established trade link Vadnagar had with other bead trading and manufacturing sites in India from about 2nd century BCE onward to 17th -18th century CE (Figure 12).

#### Sikotar Tradition

The excavation at Vadnagar reported Indo-Pacific glass beads, extensive use of marine shells for manufacturing of shell objects and Torpedo sherds. These indicate long-distance maritime trade network. In this context, evidence of *Sikotar Mata* temple at Vadnagar is of much significance. *Sikotar Mata*, is worshipped as a sea-faring goddess, by several communities in Gujarat who engage in maritime trade and make offerings to her before venturing out into the sea. The term *Sikotar* is especially noteworthy since it is believed that this name was derived from the island of Socotra. Socotra or Soqotra is a Yemeni island in the Indian Ocean located to the east of the Horn of Africa (Figure 13).

For nearly 2000 years this small island was an important halting station for Indian seafarers, especially from Gujarat, on the maritime trading route from India to East Africa and the Middle East. Evidences for this are abundant in the Hoq cave inscriptions on the sea cliffs of Socotra Island. Inscriptions from the area known as Ras Howlef refer to the Gujarati people as *navikas* (sailors). At least two inscriptions reported from Hoq cave mentions sailors/merchants from Bharuch and one from the port of Hathab near Bhavnagar. On the Indian mainland, sailors constructed temples of *Sikotar Mata* all along the sea coasts of Gujarat and even in some inland cities. Through passage of time the *Sikotar Mata* goddess took the form of *Ambe* (Durga) but the vehicle of this goddess remained as a boat; and she continued to be symbol of navigation (Ambekar, 2021) (Figure 14).

## Vadnagar: Cultural Evolution

The post-independence era witnessed extensive field works carried out by the Archaeological Survey of India, State Departments of Archaeology, and various universities. As a result, vast number of archaeological sites were reported and a few of them were brought under excavation. During the field season 1953-54, Vadnagar in North Gujarat was excavated under the aegis of The Maharaja Sayajirao University of Baroda, Vadodara. The objective was to study the chronology of Red Polished Ware (RPW). After a hiatus of 40 years, excavation in Vadnagar was again taken up by Directorate of Archaeology & Museum, Government of Gujarat from the years 2006-12. This time the objective was to find a Buddhist settlement in Vadnagar. It was only in the year 2014, that the Archaeological Survey of India, Excavation Branch –V, Vadodara took up excavation in Vadnagar, with the objective to find the cultural chronology and associated cultural assemblage and to help create an Experiential Museum at Vadnagar. Under the Archaeological Survey of India, excavation has been conducted for continuous eight field seasons till 2022.

The excavation revealed human habitation from mid – 8th century BCE till date. These findings uncovered a unique aspect of the town: an uninterrupted extensive human habitation and cross-cultural evolution that sustained itself and continues till date. Such a long period of human habitation is exceptional in the Indian scenario with very few sites claiming similar uninterrupted continuity. During excavation, from the basis of structures and artefacts unearthed, it can be said that from the earlier times the people of Vadnagar lived in brick houses. In later periods, they built new houses on top of the older ones maintaining the old plumb line. The (earthen) rampart defence system built in 2nd century BCE was reinforced in successive periods with brick and then stone. The fort wall that we see today is standing on the ancient (earthen) rampart. This means that the area covering the fort wall was as big in the early periods as it is today and this kind of futuristic vision and planning is a marvellous feature of human survival.

On basis of the artefacts unearthed, the chronology of seven cultural periods was formulated. Starting from the first, till the seventh period, we see successive

progression of quality and quantity of craftsmanship in shell, glass, stone and ivory objects etc. Monetization and trade also expands. The one constant is agriculture along with animal husbandry that helped to sustain the people of Vadnagar. The artefacts and structures excavated reveal the presence of a multi-faith, possibly a cosmopolitan heterogeneous society at Vadnagar that records the co-existence of different cultural elements like Buddhist monasteries (1st century CE), temples & high raised brick platform, reading of Jain text *Kalpasutra* in public (6th century CE) and Indo-Islamic architecture (14th – 17th century CE). This shows that Vadnagar was a melting pot of different socio-religious and cultural milieu reflecting the true spirit of Indian ethos in every time period.

One of the reasons for this continued sustenance and growth is the knowledge of water harvesting system of Vadnagar. The requirement for building a complex water harvesting system of artificial lakes with inter-connected canals stems from the fact that ancient Vadnagar (similar to other cities) also faced the vagaries of nature. The climate seasonality study (Indian summer monsoon or ISM) taken up at Vadnagar has revealed a good ISM phase and arid/hyper-arid phases. The phases of aridity led the people to first build artificial lakes along with inter-connected canals, then step-wells, finally wells inside or on edges of the lakes. Such unique invention and its innovative construction and planning were known to the people of Vadnagar since Harappan times as noticed at Dholavira. They used this inherent knowledge as a response to the adverse climatic and geographical situation prevalent in various time-periods to allow sustenance of life and cultural continuity.

# **Major Features**

- Scientific dates (AMS) have confirmed that the antiquity of Vadnagar can be stretched back up to 750 BCE (2750 BP) contemporary to the *Mahajanapadas* / later Vedic period.
- o The uniqueness of Vadnagar is in its continuous human occupation of more than 2700 years. One of the oldest living towns in India.
- The first defence structure in the form of rampart datable to 2<sup>nd</sup> century BCE can be considered as the earliest defence structure from Gujarat. Vadnagar excavation has reported a continuous defence structure of 2200 years.
- $\circ$  The entire town was protected since 2<sup>nd</sup> century BCE, except the northern segment along the Sharmistha Lake. This segment has been found to have been fortified from the 3<sup>rd</sup> / 4<sup>th</sup> century CE onwards.
- o Vadnagar has been identified as a shell manufacturing centre, which bridged the gap between shell technologies of the Harappan people with later settlements.
- o Finding of Indo-Pacific beads (drawn, monochrome beads measuring less than 6mm in size) from 2<sup>nd</sup> century BCE − 17<sup>th</sup> /18<sup>th</sup> century CE, its distribution covers the area from South-east Asian countries and those located in the eastern coast of Africa.

- o Findings of Indo-Pacific glass beads, extensive use of marine shells for manufacturing of shell objects and Torpedo shreds, indicate long-distance maritime trade network. In this context, evidence of Sikotar Mata temple at Vadnagar and finding of Diva-Dandi from Ralaj and Vadgam (Khambat) has shed new light over the maritime connections along the western coast of ancient India. Gujarat's sea coast was active in long-distance sea faring trade from early periods. And as a mark of respect for the sea and for the protection of sailors/merchants during sea voyage, a tradition of offering prayers had become known. Socotra, a major halting station might be an inspiration for lending its name to a newly formed goddess Sikotar Mata.
- Study of ancient DNA matches the present population with a skeleton reported from 2<sup>nd</sup> /3<sup>rd</sup> century CE levels.
- o The finding of an elliptical structure is rare in Indian archaeology. An elliptical structure, similar to the ones reported from Rajgir, Besnagar, Sravasti and Nagarjuni Hill has been unearthed here at Vadnagar.
- o Dishasuchakyantra (circular structure showing cardinal directions)-The excavation on the eastern bank of Sharmishta Lake has exposed a massive structure comprising of three brick platforms and more than 21 chambers of different dimensions. The entire complex of religious nature is built during the post-Kshatrapa phase with auxiliary structures of later period added to the platform. Subsequently, accesses were made to the platforms by providing steps and one of the accesses has the base step in the form of chandrashila. From the deposit of Solanki phase, a circular structure of 2 m diameter made of bricks of exceptional size (wedge shaped, rectangular and square) with a set of three deep groove lines has been exposed. This circular structure comprises of 20 bricks, with 12 bricks at the centre, surrounded by 8 wedge shaped bricks. It is worth mentioning that the number 8 is considered to be auspicious in Buddhist and Hindu religions. The structure has engraved cardinal directions of north, south and west, although east is unclear. The letter changes its directions based on the position of the viewer.
- o A skeleton in seated posture (possible *swayam-samadhi/Tapascharya* posture) is also a unique find from Vadnagar.
- $\circ$  Finding of 34 terracotta sealings from a partially exposed structure the letters match with the first word found in one of the relic caskets of Devnimori datable to  $3^{rd}/4^{th}$  century CE.
- Unique water conservation system major factor for the continuous habitation shows that the city was never abandoned.
- Identification of seismic activity in one of the trenches, along the Sharmistha Lake shows that Vadnagar endured nature's fury yet continued with resilience (8<sup>th</sup> / 9<sup>th</sup> century CE).

- After Kalibangan (Harappan town), Vadnagar is second such town, where excavations reveal palaeo-seismic evidence. But unlike Kalibangan, Vadnagar was never abandoned.
- Vadnagar exhibits an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design.
- Lineage continuity verified by scientific DNA analysis.
- Shell bangle, beads, pendant and manufacturing waste etc. highlighting craftmaking technology.

## Vadnagar: Comparison with Other Regions

Reaffirmation of the identification of Anandpur (as Vadnagar) found mentioned in the copper plate grants (Maitraka of Vallabhi), travel records of Xuan Zhuang, inscriptions with reference to Vadnagar and through subsequent excavation have been successful. Despite the prevailing adverse environmental conditions throughout various periods, Vadnagar could sustain itself. The local inhabitants of Vadnagar understood the importance to harvest rain water, develop various water-conservation methods to overcome adverse climatic conditions and also to raise the water table for future sustainability. This observation is validated by identifying 36 interlinked artificial water bodies that are still active within a 3 km perimeter of Vadnagar. While comparing the uniqueness of Vadnagar with other excavated historical sites across India, it has been noticed that there are only two excavated sites – Rajghat (Kashi) and Indraprastha (Purana Qila) (IAR, 1960-70 & 1994-95) which boasts of a similar continuous habitation of around 2700 years (note: Indraprastha is no longer a habituated settlement). Moreover, the numerous scientific dates (AMS dates) from different horizons of Vadnagar excavation have cemented its claim of an uninterrupted cultural centre. All in all, what emerges is a picture of a thriving composite township of historical times, heterogeneous in nature, for it had all the major religions cohabiting within it.

# Acknowledgements

We express our deep gratitude to Mr. Ganesh Jawarikar, Ms. Madhuri Jain, Mr. Mukeshji Thakor and Mr. Vipul Rana. Thanks to Prof. Anindya Sarkar for his contribution for the text. Thanks to Dr. Ingo Strauch for sharing the significant details on Socatra study. Thanks to our institution, Archaeological Survey of India, for entrusting with the Vadnagar excavation project.

#### References

Abraham, S. A. 2016. Glass beads and glass production in early South India: Contextualizing Indo-Pacific bead manufacture. *Archaeological Research in Asia*, 6, 4–15.

- Ambekar, A. 2021. Recently reported Sikotara Mata Temple at Vadnagar and Diva Dandi from Vadgam Kham Bhat. *Heritage: Journal of Multidisciplinary Studies in Archaeology*, Department of Archaeology, University of Kerala, Thiruvananthapuram, Kerala, 374–383.
- Ambekar, A. 2022. Continuous human habitation at Vadnagar (Gujarat) for 2500 years:

  A rationale for artificial water bodies. *Puratattava No. 52*. The Indian Archaeological Society, New Delhi, 52, 112–120.
- Ambekar, A. S. 2019. Excavation report on Vadnagar (Field Season 2016-2019). Unpublished. Archaeological Survey of India. New Delhi.
- Ambekar, A. S., A. D. Mukharjee and P. Maitee. 2019. The conch shell bangle industry through the ages at ancient Vadnagar: Preliminary observations. *Archaeo+Malacology Group Newsletter -February* 2019. ICAZ. Oxfordshire.
- Ambekar, A. S., A. Kulkarni, G. A. Varkey, A. Dandekar, R. Naik, A. Chakraborty, G. Jawarikar, and P. R. Prajapati. 2020. Excavation report on Taranga (field season 2017-18 and 2018-19). Unpublished. Archaeological Survey of India. New Delhi.
- Francis Jr., P. 2002. *Asia's maritime bead trade: 300 BC to the present*. University of Hawaii Press, Honolulu, 19–26.
- Ganvir, S. and H. Dalavi. 2018. Preliminary report on Rajagala Archaeological Research Project 2018–19. *Journal of Indian Ocean Archaeology*, 13–14.
- IAR. 1969-70. *Indian Archaeology A Review 1969-70*. Archaeological Survey of India. New Delhi.
- IAR. 1994-95. *Indian Archaeology A Review 1994-95*. Archaeological Survey of India. New Delhi.
- Majumdar, M. R. 1960. *Historical and cultural chronology of Gujarat (From earliest times to 942 A.D.)* Maharaja Sayajirao University of Baroda.
- Mehta, R. N. 1966. Excavation at Devnimori (A report of the excavation conducted from 1960–1963). Department of Archaeology and Ancient History, Faculty of Arts, M. S. University of Baroda, Gujarat.
- Nath, A. 2016. Excavations at Adam (1988–1992): A city of Asika Janapada. Vol. I. Archaeological Survey of India, New Delhi.
- Rawat, Y. S. 2011. Recently found ancient monastery and other Buddhist remains at Vadnagar and Taranga in North Gujarat, India. *Bujang Valley and Early Civilisations in Southeast Asia*, Department of National Heritage, Ministry of Information, Communication and Culture, Malaysia, 209–242.
- Sarkar, H. 1966. *Studies in early Buddhist architecture of India*. Archaeological Survey of India, Munshiram Manoharlal Oriental Publishers, Nai Sarak, Delhi.