

## **Pre-Urban Harappan Phase in Gujarat: An Assessment \***

**Rajesh S.V. & Abhayan G.S.**

Assistant Professors

Department of Archaeology, University of Kerala  
Kariavattom Campus, Thiruvananthapuram, Kerala, India  
Email:rajeshkeraliyan@yahoo.co.in; abhayangs@gmail.com

### **Abstract**

*The Urban Harappan Phase (c. 2600-1900 BCE) was evolved from various regional Chalcolithic cultures emerged in different parts of the Greater Indus region between c. 5000-2600 BCE. In Gujarat, the earliest evidence for the regional Chalcolithic communities occurs around c. 3900 BCE at Loteshwar. Archaeological investigations till date resulted in the discovery of 30 Pre-Urban Harappan sites in different regions of Gujarat. The present paper discusses the features of the Pre-Urban Harappan Phase in Gujarat with the help of material data available from these sites.*

**Keywords:** Pre-Urban Harappan, Gujarat, Excavation, Exploration, Ware, Tradition, Culture, Assemblage

### **Introduction**

The term Pre-urban Harappan represents the period which precedes the Urban or Mature Harappan period at sites like Mohenjo Daro, Harappa, Chanhudaro, Dholavira and Kalibangan (Possehl, 1992: 118). The term Pre-Urban Harappan is roughly equivalent to the terminologies Pre-Harappan, Proto-Harappan, Antecedent Harappan, Early Harappan and Regionalization Era. The terms Antecedent Harappan or Proto-Harappan, which are used to represent the early occupation at Kalibangan, are not properly defined. The term Pre-Harappan is commonly applied to represent those material remains which are found stratigraphically below the Mature Harappan cultural relics. According

---

\* Acknowledgement: Sincere acknowledgements are due to the University of Kerala for its constant support. The authors are thankful to Prof. P. Ajithprasad, Prof. K. Krishnan, Prof. K.K. Bhan, and Prof. V.H. Sonawane, Department of Archaeology and Ancient History, the Maharaja Sayajirao University of Baroda for their help and support. We are also thankful to the institutions like Gujarat State Archaeology Department, Archaeological Survey of India, KSKV Kachchh University, and Deccan College Postgraduate and Research Institute, Pune for their support in various stages of this piece of work.

to Mughal (1970: 5-6; 1990: 181), the term Pre-Harappan is misleading because it creates the impression that chronological gap exists between the Pre-Harappan period of the first half of the third millennium BCE and the Mature period of Harappan culture belonging to the latter half of the third millennium BCE (middle of the fourth millennium BCE). Therefore, based on radiocarbon dates and commonalities and differences in artefacts, Mughal used the term Early Harappan to represent materials found stratified below the Mature Harappan remains at Kot Diji, Amri, Kalibangan and in the pre-defence levels of Harappan and related material discovered at other sites assignable to the first half of the third millennium BCE. Similarly, the formative early period of the Indus Civilization (c. 5500-2600 BCE) is denoted by Shaffer (1992) as the Regionalization Era. In the Regionalization Era, the inhabitants of the Greater Indus Valley and adjacent areas developed their subsistence systems, technological know-hows, interregional interaction networks, and social hierarchies essential for the emergence of urban state-level society (Kenoyer, 1991, 1994).

### **Pre-Urban Harappan Phase in Gujarat**

Till the second half of the 1980s, there was very little evidence for the Pre-Urban Harappan sites in Gujarat. But the excavations and explorations in different regions of Gujarat in the following period, relative and absolute dates from various sites, and reanalysis of ceramics from previously excavated sites provided evidence for the existence of various cultures/traditions mainly represented by the ceramics known as Anarta tradition, Padri Ware, Early Harappan Burial/Pre-Urban Harappan Sindh Type Pottery, Pre-Prabhas Assemblage, Reserved Slip Ware, and Black and Red Ware. Except the Pre-Urban Harappan Sindh Type Pottery, none of the ceramic types of this period from Gujarat showed clear technological and stylistic similarities to the Pre-Urban Harappan ceramics or later ceramics of the Indus Valley proper (Sonawane and Ajithprasad, 1994; Ajithprasad, 2002). In Gujarat, Pre-Urban Harappan phase can be dated between c. 3900-2600 BCE. Material remains from various sites show that regional cultures/traditions in Gujarat during this period, maintained interaction networks with one another as well as with cultures in the Indus Valley proper (Bhan, 1994; Kenoyer, 1997; Kenoyer and Meadow, 2000; Ajithprasad, 2002; Possehl, 2002).

### **Pre-Urban Harappan Sites in Gujarat**

Archaeological excavations and explorations of various organizations like Archaeological Survey of India, State Archaeology De-

partment – Gujarat, The Maharaja Sayajirao University of Baroda – Vadodara, University of Kerala – Thiruvananthapuram, Deccan College Postgraduate and Research Institute – Pune, Bombay University, Krantiguru Shyamji Krishna Verma Kachchh University, University of Pennsylvania - USA, and Spanish Council for Scientific Research – Barcelona resulted in the discovery of thirty Pre-Urban Harappan sites in Gujarat (Table 1). South Gujarat has not revealed any Pre-Urban Harappan sites till date. The majority of the sites are reported from North Gujarat (14), followed by Kachchh (11) and Saurashtra (5), respectively. Among the 30 reported sites, 13 are excavated to various degrees (Figure 1). Details of the excavated sites are given in the following paragraphs.

### **Prabhas Patan/Somnath**

The archaeological site at Prabhas Patan/Somnath, locally known as Naghera in the Gir Somnath district, was first reported in 1938 by Father Heras of Bombay University. The excavations at the site in 1955-56 and 1956-57, by the Department of Archaeology, Saurashtra and the Maharaja Sayajirao University of Baroda, under P.P. Pandya and B. Subbarao, respectively revealed six periods beginning from Post-Urban Harappan to Medieval. To understand the cultural chronology of the site, re-excavations were conducted in 1971-72, 1975-76 and 1976-77 at the site by the Department of Archaeology, Saurashtra and Deccan College Postgraduate and Research Institute, Pune under J.M. Nanavati and H.D. Sankalia. The site revealed a sequence of five cultural periods datable from 3000 BCE - 600 AD. The importance of the site lays in the fact that for the first time it unveiled the existence of two regional Chalcolithic traditions in Gujarat, namely Pre-Prabhas Assemblage (3000 - 2500 BCE) and Prabhas Ware (2300 - 1750 BCE) (IAR 1955-56, 1956-57; Nanavati et al., 1971; Dhavalikar and Possehl, 1992; Rajesh et al., 2018).

### **Surkotada**

In 1970-71 and 1971-72, J. P. Joshi of Archaeological Survey of India undertook excavations at Surkotada in Kachchh district, Gujarat, which brought to light remains of Urban Harappan artefacts of a period divisible into three sub-periods namely, Period IA, Period IB and Period IC (Joshi, 1990). The site also revealed Pre-Urban Harappan Sindh type pottery from some of the burials (Joshi, 1990). Based on the radiocarbon dates, Period IA can be dated to 2888-2045 BCE, Period IB to 2391-2036 BCE and Period IC to 2135 to 1684 BCE (Possehl,

1994). This fortified settlement consists of a citadel, lower town, and a cemetery to the south-west. The most discussed point about Surkotada is the occurrence of a few bones of the so-called horse (?). At Surkotada, the cemetery is located 300m northwest of the citadel. Four graves were excavated at the site, and they were pot burials and secondary in context. The ceramics of these graves comprised of Harappan Red Ware, painted Black on Red Ware, and Cream Slipped Ware with paintings. On the basis of pottery from the cemetery and radiocarbon dates, Possehl (1997: 81-87) chronologically placed the cemetery of Surkotada to the later portion of Pre-Urban Harappan (Amri/Nal or KotDijian) or the transition between the Pre-Urban Harappan and the Urban Harappan (IAR 1970-71, IAR 1971-72, Joshi, 1966: 62-69, 1972a: 21-35, 1972b: 98-144, 1979: 59-64, Joshi, 1990, Bokonyi, 1997: 297- 307, Meadow and Patel, 1997: 308-315).

In 2015, researchers from University of Kerala visited Surkotada and while returning, remains of a human skull were noticed outside the boundary of this protected site, on the wayside. During close observation, a highly disturbed and exposed human skeleton was noticed along with 4 bowls and 2 pots. It was also observed that the disturbed 'burial pit' was plastered with lime. Some of the bones were 'in situ' in nature. The probable reconstruction was done afterwards on the basis of bone placement and collection sequence. The skeleton was in crouched position, lying on the left side, with folded legs and facing the south side. The head was on the eastern side and the leg on western side. The right hand rested a little further from the body. The AMS dating of a sherd (bulk sherd organics) from the associated burial pottery yielded the date 4590+/-30 BP (Cal BCE 3378 to 3331) as per the report from Beta Analytic Inc., USA. Based on this date, the present Surkotada burial and associated burial pottery can be dated to the second half of the fourth millennium BCE, i.e., Pre-Urban Harappan Phase (Mushrif-Tripathy et al., 2018).

### **Nagwada**

During 1985-86 to 1989-90, the Maharaja Sayajirao University of Baroda carried out excavations at the Harappan settlement locally known as Godh in the Nagwada Village of the Surendranagar district. The 1m thick deposit revealed four structural levels of the Harappan period divisible into two Periods IA (layer 5) and IB (layer 1-4). A few burials, both inhumation and symbolic, represented Period IA and the ceramics associated with the burials showed affinity to the Pre-Harappan pottery from Amri, Nal and Kot Diji. The first phase of structural

activity in the site was marked by post-holes that went into natural soil in the fifth layer. Rectangular structures made of undressed stones were observed in the second phase and rectangular structures of moulded mud bricks represented the third phase. Rectangular structures constructed out of rubble stones were observed in the fourth phase. Classical Harappan ceramics were less in quantity in comparison to the Anarta pottery; white painted Black and Red Ware was also encountered. The site revealed the evidence for craft activities like shell working and stone bead making. An inscribed steatite seal/pendant, terracotta sealing, female figurine, agate weights, gold beads and copper celts were the noteworthy findings. The  $2\sum 14C$  date for the Period IB is 2470-2033BCE (IAR 1985-86, 1986-87, 1987-88, 1988-89, 1989-90; Hegde et al., 1988: 55-65, 1990: 191-195; Ajithprasad and Sonawane, 2011).

### **Dholavira**

Dholavira, excavated in 1989-90 to 2004-2005 by R.S. Bisht of the ASI, is one among the five largest Harappan cities in the subcontinent and is located in the Bhachau taluka of the Kachchh district. Ruins of the site are spread over an area of about 72 hectares on the Khadir Island. Two seasonal water channels, Manhar and Mansar, are flowing on the south and north of the walled settlement. The site is remarkable for its exquisite planning, monumental structures, aesthetic architecture, efficient water harvesting system and funerary architecture (Bisht, 2015).

The excavator identified seven stages of cultural change at the site. The first settlement that was raised at the site in stage I was a fortress now lying buried in the citadel mound and in stage II, a residential area was added to the north of the walled settlement. Stage III was the most creative and important phase during which the fortress was made into a formidable castle and another walled subdivision, viz. bailey, was added to it from the west. In the north, the residential area of stage II was cleared of its structures for carving out a ground. Further north, an extensive walled town, i.e., the middle town, was founded. Reservoirs were created on the south, west and north of the built-up divisions. An outer fortification was also constructed during this stage. During stage III, the settlement was damaged by a natural catastrophe and repairs were undertaken and the lower town was added. Stage IV belonged to the Classical Harappan phase and almost all the salient features of the city planning were maintained along with the monumental structures such as the gateways, fortification, and drainage system. Stage V is

characterised by the general decline, particularly in the maintenance of the city, was followed by temporary desertion of the site. The Stage VI is a state of transformed Harappan Culture, i.e., the Post-Urban Harappan phase. Domestic buildings were laid out in a different planning and probably, after a century the Post-Urban Harappans of Stage VI abandoned the settlement. The newcomers of stage VII did not use the Classical Harappan ceramics. They built their houses in the circular form and no planning as such was followed. The site was never occupied once the people of Stage VII left (Bisht, 2015).

The funerary structures which were found in a cemetery that lay to the west of the city are also remarkable for the density of structures. The excavations also brought to light the existence of large tumuli, which were circular in the plan and these hemispherical structures were made of mud bricks. The site has yielded an inscription widely known as the signboard made up of ten large-sized signs of the Indus script and a fragment of a large slab engraved with three large Indus signs. Apart from the huge amount of Chalcolithic pottery, human and animal figurines, chert blades, stone weights, copper objects, steatite seals, terracotta sealings, beads of semiprecious stones, and drill bits were also unearthed from the site. According to the excavator, the seven cultural stages of Dholavira can be dated between 3500 - 1700 BCE (Bisht, 1989a: 397-408, 1989b: 265-272, 1991: 71-82, 1994, 1997: 107-120, 1998-99: 14-37, 2000: 11-23, 2004: 35-48, 2006: 283-338, 2010: 75-76; 2015; IAR 1989-90, 1990-91, 1991-92, 1992-93, 1993-94, 1996-97, 1997-98, 1998-99, 1999- 00, 2000-01).

### **Padri**

During 1990-91 to 1995-96, Deccan College, Pune excavated the Chalcolithic mound at Padri, locally known as Kerala noDhoro, located in the Talaja taluka of the Bhavnagar district. The site revealed a four-fold cultural sequence, i.e., the Pre-Urban Harappan (Padri Ware), Urban Harappan (Phase I and II), Post-Urban Harappan and Early Historic. Period I was represented by the remains of a mud pressed structure, Padri Ware, Sorath Harappan sherds, and steatite beads. The 14C dates for the Pre-Urban Harappan phase at Padri go back to the fourth millennium BCE (3800 BCE). The Urban Harappan period yielded a large amount of fine painted and coarse pottery, which is similar to Rangpur IIB and Rojdi B, and 14C date for the uppermost levels of this Phase is 2300 BCE. Period III yielded ceramics akin to Rangpur IIC, and Early Historic period was marked by Red Polished Ware (IAR 1990-91, 1991-92, 1993-94, 1995-96; Shinde, 1991: 87-89, 1992a:79-

86, 1992b: 55-66, 1998: 173-182, 2006: 151-158; Shinde and Kar, 1992: 105-110; Shinde and Thomas, 1993: 145-147; Pathak, 1992: 87-89; Bhagat, 2001; Shirvalkar, 2008; Rajesh, 2011).

### **Loteshwar**

In 1990-91, the Maharaja Sayajirao University of Baroda, and in 2009-10, under the direction of P. Ajithprasad of the Maharaja Sayajirao University of Baroda and Marco Madella of CSIC, Barcelona, Spain, carried out excavations at Loteshwar in the Sami taluka, the Patan district. The site, locally known as Khari-no-Timbo, is located on a high sand dune close to the left bank of Khari Nadi, tributary of the Rupen River. The excavation revealed a habitation deposit of 1.8 m in thickness divisible into two periods. Period I belong to the Mesolithic culture and Period II to the Harappan-affiliated Chalcolithic culture. Period I was represented by a 1 m thick habitation deposit of microlith-using community. The occupational debris of the Microlithic period included both geometric and non-geometric tool types, lithic debitage, grinding/pallet stones, hammerstones, and animal bones. One human skeleton belonging to this period was unearthed from one of the trenches. The Chalcolithic period was represented by the Anarta pottery, a few Harappan sherds, blades, beads, bangle pieces of shell and copper, copper punch (?), grinding/pallet stones, hammerstones, terracotta pellets, terracotta female figurine (?), and spindle whorls. No structural remains were unearthed from the site and an important feature noticed at the site was the occurrence of a large number of pits, which were dug during this period. Their size is about 2 m in diameter and 0.5 m to 2 m in depth in diameter, and they were filled with ash, charcoal, pottery, animal bones, and microliths. This period also revealed one human burial. The earliest <sup>14</sup>C date for the Mesolithic occupation at the site is 7300 BCE and the Chalcolithic deposit can be dated between 3700 - 2200 BCE (IAR 1990-91; Mahida, 1992, 1995: 85-87; Patel, 1992; Brahmabhatt, 2000; Ajithprasad, 2002: 129-158; Yadav, 2005; Patel, 2008: 123-134, 2009: 173-188; Rajesh, 2011; Rajesh et al., 2013b: 10-45).

### **Moti Pipli**

In 1992-93, the Maharaja Sayajirao University of Baroda conducted an excavation at Moti Pipli in the Radhnapur taluka of the Banaskantha district. The site locally known as Shakatri Timbo is situated next to a large inter-dunal depression known by the name Shakatri Talav. The excavation at the site of 600 m × 120 m in size yielded a 90 cm thick habitational deposit of the Mesolithic, Harappan-affiliated



Chalcolithic, and Historic periods. The Chalcolithic period has a deposit of about 50 cm, and it was concentrated in the southern part of the mound. No structural remains were unearthed from the site. The ceramics from the site include Gritty Red Ware and Fine Red Ware of the Anarta tradition, Black and Red Ware and the Pre-Harappan Burial pottery similar to those from Amri, Nal, Kot Diji, and Balakot. Other antiquities found in the excavation constitute copper/bronze nail, folded strip of copper, fish hook, chert blades, beads of chalcedony, steatite, lapis lazuli, terracotta, shell and faience, terracotta lumps, and triangular cakes. The artefacts of late Early Historic (5th - 6th centuries CE) and late Medieval period were also unearthed from the site in a limited quantity (IAR 1992-93; Majumdar and Sonawane, 1996-97: 11-17; Majumdar, 1999, 2006: 159-166).

### **Santhli**

In 1993-94, the Maharaja Sayajirao University of Baroda carried out an excavation at Santhli, locally known as Gachi no Thumdo (Santhli II), in the Radhanpur taluka of the Banaskantha district. The site measuring 120 m × 90 m revealed a 40 cm habitation deposit belonging to two cultural periods. Period I at the site is Mesolithic, having a 25–30cm deposit and Period II is Chalcolithic of a 10-15cm cultural deposit. Mesolithic artefacts of geometric and non-geometric nature, including lunates, triangles, trapezes, crescents, points, backed blades along with blade cores, flake cores and lithic debitage, were excavated from the site. A number of small pieces of flat sandstone slabs or pallet stones were also unearthed from the site. This level also yielded a large quantity of skeletal remains of the animals. Period II was represented by a few ceramic sherds, stone and shell beads, shell bangles, and two inhumation burials. One of them was a double burial and associated with five ceramic vessels of different shapes. The second burial was of a child, also associated with a few vessels. The noteworthy feature of the site is the lone presence of Pre-Urban Harappan Burial pottery types (IAR1993-94; Majumdar, 1999; Ajithprasad, 2002: 129-158).

### **Datrana**

During 1993-94 and 1994-95, the Maharaja Sayajirao University of Baroda and in 2010-11 under the direction of P. Ajithprasad of the Maharaja Sayajirao University of Baroda and Marco Madella of CSIC, Barcelona, Spain, carried out excavations at Datrana (Mounds II, IV and V) in the Santalpur taluka of the Banaskantha district. The spread of artefacts consisting of stone blades, lithic debitage and a few potsherds covered an area of about 50 hectares. Mound IV, locally known



as Hadkwalu Khetar, revealed a total habitation deposit of 75–90 cm incorporating two cultural periods, Period I being Mesolithic and Period II being Chalcolithic. The Chalcolithic period was represented by long crested ridged blades, prismatic blade cores, stone beads and rough-outs, copper punch point, and ceramics. The ceramics from the mound include Pre-Prabhas, Anarta and Pre-Urban Harappan Sindh Type pottery. The occurrence of the Anarta and Pre-Urban Harappan Sindh Type pottery in the upper level close to the surface indicates that the Pre-Prabhas pottery-using community were the earliest Chalcolithic inhabitants at the site. Datrana V, locally known as Patelno Khetar, revealed a cultural deposit of 70 - 90 cm belonging to the Mesolithic and Chalcolithic periods. The Chalcolithic deposit of 15 - 20 cm thick revealed Pre-Urban Harappan Sindh Type pottery and long chalcedony blades. Datrana II, locally known as Ravechi Matano Timbo, revealed a single period of the Chalcolithic occupation. The habitation deposit in this mound was confined to pits of different dimensions; the large stone with a diameter of about 2 m and a depth of 1 m, while the smaller ones measured about half a meter. The pits yielded Sorath Harappan pottery analogous to the Rojdi A and B types. One of the pits yielded a number of Lustrous Red Ware bowls and dishes. Most of the pottery recovered from another pit was of the Anarta tradition. Another interesting find was that of a pottery kiln stacked with Sorath Harappan pottery (IAR 1993-94; Ajithprasad, 2002; Rajesh et al., 2013:181-209; Rajesh et al., 2018).

### **Mathutra**

In 1994-95, Abhijit Majumdar of the Maharaja Sayajirao University of Baroda conducted a trial excavation at Mathutra I (Madhavya no Timbo). The excavation in the northern part of the mound revealed that the spread of pottery was mainly on the surface except disc bases of bowl and pot and a grinding stone that were found buried in the trench. The shreds showed affinity to the Pre-Urban Harappan Burial pottery. The excavation at the centre of the mound revealed three vessel bases associated with human teeth. The surface finds from the site include Anarta pottery and Post-Urban Harappan ceramics (Majumdar, 1999).

### **Ranod**

Vaharvo Timbo in the Ranod village is a large oblong sand dune by the side of a very large inter-dunal depression on its north-east. There are three sand dunes and Vaharvo Timbo is the largest and richest among these in terms of artefacts exposed on the surface. A few potsherds found in the surface collection were un-diagnostic and non-

descript. Although too fragmentary, they are closer to the Anarta pottery of North Gujarat. Besides, a number of animal skeletal remains, especially long bones and horn-cores of wild bovinds and cervids, were found at the site. Many of the bones showed silicification suggesting substantial antiquity. During 2011-12, under the direction of P. Ajithprasad of the Maharaja Sayajirao University of Baroda and Marco Madella of CSIC, Barcelona, Spain, carried out an excavation at the site. The excavation revealed artefacts of the Mesolithic period and an Early Harappan child-burial. Pre-Urban Harappan Sindh type ceramics were used as burial goods (Mushrif-Tripathy et al., 2014: 45-51; Madella et al., 2018).

### **Dhaneti**

Dhaneti is an Early Harappan Burial site located in the Bhuj taluka of the Kachchh district, Gujarat. The site was excavated in 2016-17 and 2017-18 by the Maharaja Sayajirao University of Baroda. Extended inhumation and symbolic pot burials are reported from the site. The pot-burial seems to have an elaborate oval plan with an east-west oriented oblong pit at the centre of a stone circle. The burial goods from the site include vessels similar to Pre-Urban Harappan Sindh type ceramics, Classical Harappan pottery, Reserved Slip Ware and shell bangles. The Reserved Slip Ware unearthed from the burials of Dhaneti are not reported from the Early Harappan ceramic assemblages of the Indus Valley proper. This site can be relatively dated between c.3000 to 2600 BCE (Ajithprasad, 2018).

### **Juna Khatiya**

The Department of Archaeology, University of Kerala in association with KSKV Kachchh University conducted excavations at Juna Khatiya, probably the largest Pre-Urban Harappan (c. 3200-2600 BCE) cemetery discovered so far in India, in Khatiya village in Lakhpat taluka of Kachchh district. The site measuring close to 16 hectares was discovered in 2016 by a team of archaeologists from the University of Kerala. More than five hundred suspected burials have been identified at the site based on surface indicators. An area of around 50x50m was excavated horizontally in 2019-20 (Location 1 and Location 2) and 2020-21 (Location 3) and unearthed more than 75 burials of various characteristic features. Many burial structures are disturbed by erosion, soil removal, canal construction and agricultural activities. The majority of the burials are made of sandstone blocks. The shape of the burial structures varies from rectangular to oval or circular. The size of

the stones and construction style are drastically different in these burials. The burial goods include large number of ceramics, shell bangles, beads of shell, faience, and steatite, and a few stone blades (Gadekar et al., 2021).

### **Pre-Urban Harappan Cultures/Ceramic Traditions in Gujarat**

The Pre-Urban Harappan period in Gujarat was represented by cultures/traditions namely, Anarta Tradition, Padri Ware, Pre-Prabhas Assemblage, Unique Ceramics of Surkotada, Pre-Urban Harappan Sindh Type Ceramics, Reserved Slip Ware, and Black and Red Ware.

**Anarta Tradition:** A few ceramics of the Anarta tradition were encountered during the excavations of Lothal in 1955-62 (Rao, 1979, 1985) and Surkotada in 1970-72 (Joshi, 1990) and at Lothal it remained unnoticed for a long time while at Surkotada though not in the name of Anarta, its presence was noticed by the excavator. These ceramics were also present at Zekhda in North Gujarat (Momin, 1983). The Anarta ceramics were first recognized as a regional Chalcolithic ceramic type in 1985 during the excavations at Nagwada, where it was found along with the Urban Harappan artefacts (Hegdeet al., 1988). Its independent existence was noticed at Loteshwar (Khari no Timbo) in 1990-91 by The Maharaja Sayajirao University of Baroda (Mahida, 1992; Sonawane and Ajithprasad, 1994) (Figure 2). Later excavations in various sites like Moti Pipli (Majumdar and Sonawane, 1996-97; Majumdar, 1999), Datrana (Ajithprasad, 2002), Shikarpur (Bhan and Ajithprasad, 2008, 2009), Kanmer (Kharakwal et al., 2012), Dholavira (Shinde, 1998; Bisht, 2000), and Bagasra (Sonawane et al., 2003) showed its presence. The explorations in various parts of Gujarat showed its presence in more than 100 sites (Ajithprasad and Sonawane, 1993; Majumdar, 1999). The ceramics of Anarta tradition include Gritty Red Ware, Fine Red Ware, Coarse Red Ware, Burnished Red Ware, Burnished Black/Gray Ware, Black and Red Ware, and Reserved Slip Ware. The vessel shapes include pots, basins, dishes, lids and dish on stands. The majority of the vessels are hand/turn table made and are slipped and burnished on both surfaces. The designs on the sherds include pre-firing incisions and painted designs (Ajithprasad, 2002; Yadav, 2005; Rajesh et al., 2013). Ajithprasad and Sonawane (2011) points out that some of the Anarta vessels in form and the scheme and style of painted decorations share common features with the Pre-Urban Harappan ceramics from Jalilpur (Mughal 1970), Ravi Phase ceramics from Harappa (Kenoyer and Meadow, 2000), Pre-Urban Harappan levels at Kalibangan (Lal et al. 2003; Lal et al. 2015), Bhirana (Rao et al. 2003, Rao et

al. 2004), Girawad (Shinde et al. 2008), and Baror (Sant et al. 2005). Bhan (2010) also suggested some similarities in decorations and vessel shapes of Anarta tradition and ceramics of Rehman Dheri (Durrani, 1988; Durrani et al., 1991), Siah II (de Cardi, 1965), Karela-1 (Dangi, 2009), and Kheima Kheri-2 (Dangi, 2009). Similarly, some similarities are noticeable in the Anarta ceramics and Padri Ware in certain shapes and decorative patterns (Shinde and Kar, 1992; Sonawane and Ajithprasad, 1994; Shinde, 1998; Bhagat, 2001; Ajithprasad, 2002; Shirvalkar 2008). Though there are similarities in certain vessel shapes and decorative patterns, differences also exist between the two. At Padri, the majority of the Anarta vessel shapes are absent and the surface treatment of most of the vessels are also different. Though some ceramics from Ghaggar basin look similar in shape to Anarta ceramics, many a times fabric and surface treatment of the same is different. As per the chronometric dates from Loteshwar (Ajithprasad, 2002; Patel 2008, 2009), Bagasra (Sonawane et al., 2003; Chase, 2007), Surkotada (Joshi, 1990), Kanmer (Kharakwal et al., 2012), Lothal (Rao, 1979, 1985), and Nagwada (Hegde et al., 1988), Anarta tradition can be dated in between c. 3900 BCE to 1600 BCE (Rajesh et al., 2013).

**Padri Ware:** The Padri Culture, identified in the 1990s from the excavations at Padri Gohilini village, includes the ceramic types like Padri Ware (thick and thin variety), Pink Slipped Painted Ware, White Lustrous Ware, Bichrome Ware, Red Painted Ware, Plain Handmade Ware and White Painted Ware (Figure 3). The Padri Ware was also found occurring in eleven explored sites in Bhavnagar district (Rajesh 2011). Shinde and Kar (1992) and Sonawane and Ajithprasad (1994) found some similarities in the painted ceramics of Anarta Tradition found in Loteshwar in North Gujarat and Padri Ware. Shinde (1998), based on the observations of Padri Ware made by Bisht, mentions some resemblance between Bichrome Ware at Padri and ceramics found in the Pre-Urban Harappan levels at Dholavira. Shirvalkar (2008) found similarities in the making technique, painted decorations, paint colour, and vessel shapes like bowls, basins and globular pots of Padri Ware and Anarta ceramics. Some vessel types of Anarta tradition show similarities to Padri Ware in certain vessel shapes like medium sized pots with flaring rim and constricted neck, hand/turn table making, painted decorations and paint colour. At the same time lot of differences are also present. The Anarta vessels like Red Ware pots with mat surface, blunt carinated basins and sharp carinated bowls are absent in Padri Ware. Incised decorations are present on Anarta ceramics while they

are completely absent in the Padri Ware. Based on chronometric and relative dates, the Padri Ware can be dated between c. 3800-1600 BCE (Rajesh, 2011; Rajesh and Krishnan, 2017).

**Pre-Prabhas Assemblage:** The Pre-Prabhas assemblage, first reported from Prabhas Patan/Somnath, consists of handmade ceramics, chalcedony blades with crested guiding ridges, faience and steatite beads, and fragment of clay plaster with reed impressions. Archaeological work in north Gujarat revealed the presence of this assemblage together with Pre-Urban Harappan Sindh ceramics at Datrana XI; along with Anarta and Pre-Urban Harappan Sindh ceramics at Datrana IV (Figure 4), and along with Anarta pottery at Datrana V. Explorations in Kachchh during 2016 also revealed the presence of Pre-Prabhas Assemblage together with Anarta ceramics and Pre-Urban Harappan Sindh Types at Janan (Gadekar et al., 2018, Rajesh et al. 2018). The ceramics of this assemblage is characterised by handmade pottery including Redware, Incised Red Ware, Black and Red Ware and Gray Ware and vessel shapes in the same include wide mouthed jars, deep/shallow basins, flat bottomed basin with flaring sides and incised rims (IAR 1971-72; Dhavalikar and Possehl, 1992). The diameter of the rims of the vessels from the site indicated the presence of medium sized vessels in the site. Miniature and big vessels are completely absent there. Only four sherds from the site showed the presence of one pre-firing perforation on each of them. The majority of the vessels from the site are slipped on both surfaces, and burnishing is also visible on both the surfaces of many vessels. The decorations on the ceramics are pre-firing geometric and natural incisions and impressions. These decorations are confined to the external surface of the ceramics, and a noteworthy feature of the assemblage is the complete absence of painted decorations. Apart from Somnath in Saurashtra, Datrana IV, V, and XI in North Gujarat and Janan in Kachchh, none of the sites in Gujarat revealed the presence of Pre-Prabhas ceramics, which are totally different from the ceramics of other Chalcolithic cultures/traditions. A few incised ceramics from the Mesolithic levels at Langhnaj (Sankalia, 1965) show certain similarities with the ceramics of Pre-Prabhas Assemblage. Ceramics with some similarities to the pre-Prabhas incised Red Ware fabric and incised decorations are reported from Bagor (Ajithprasad, 2010; Rajesh, 2011). Based on the radiocarbon dates, the Pre-Prabhas Assemblage in Gujarat can be dated from c. 3300 to 2600 BCE. (Rajesh et al., 2013, 2018).

**Unique Ceramics of Surkotada:** Exploration of Surkotada in 2015

by the Department of Archaeology, University of Kerala resulted in the discovery of a unique set of ceramics (Figure 5) in association with a burial. Two bowls and two pots were kept near the head and two bowls were kept near the knee of the skeleton. The hand or slow wheel made vessels are coarse in nature. These red ware vessels have smoke clouding on the surfaces. Among the two pots, one has some similarities to the pots of Anarta tradition. The vessels are devoid of decorations except shallow grooves near the rim margins of bowls. Based on bulk sherd organics dating of Beta, the unique burial pottery from Surkotada can be dated to the second half of the fourth millennium BCE (Cal BCE 3378 - 3331), i.e., Pre-Urban Harappan Phase (Mushrif-Tripathy et al., 2018).

**Pre-Urban Harappan Sindh Type Ceramics:** This kind of pottery was first reported during the cemetery excavations at Surkotada in 1972 (Joshi 1990) (Figure 6) and its first systematic study was conducted at Nagwada in 1985 (Ajithprasad, 2002: 144). Both inhumation and symbolic burials were noticed in Period IA of Nagwada. Red Ware, Pinkish Buff Ware and Grey Ware represented the symbolic burials (Majumdar and Sonawane, 1996-1997: 16). The major shapes in this group are large bulbous pot with narrow flat base, a short and straight neck and flat rim, flasks or beaker shaped vases with sides converging into a narrow opening, beakers with slightly flaring rim, dish on stand with upturned rim, dish with no carination and shallow bowls (Ajithprasad, 2002: 145). The bulbous pot is painted at the rim with a thick dark band and at the shoulder with horizontal and wavy lines. Pipal leaf motif on one of the large pots is an important feature. These burial ceramics resemble the vessels recovered from the Pre-Urban Harappan levels at Kot Diji, Amri, DambBhuti, Nal, and Balakot (Hegde et al., 1988: 58; Ajithprasad, 2002: 145). The subsequent excavations at Santhli, Datrana, and Moti Pipli in North Gujarat also revealed these ceramics along with Anarta pottery. At Datrana, in the upper levels, it was also found associated with Pre-Prabhas assemblage. Ajithprasad et al. (2011) also reported these ceramics from Warodra, Shapur and Lohij in Saurashtra. Burial sites such as Juna Khatiya, Dhaneti and Janan in Kachchh also revealed the presence of these ceramics. The relative time-period assigned to these burial ceramics is c. 3200 BCE to 2600BCE.

**Reserved Slip Ware:** The term reserved slip refers to a particular kind of surface treatment given to the pre-fired ceramics by applying two slip layers to the surface of the vessel and later by skilfully removing



the upper slip through gently combing the surface, thus leaving two contrasting colours, in either a straight or a wavy line pattern. There are different kinds of this ceramic; “Glazed” Reserved Slip Ware, “Unglazed” Reserved Slip Ware, and Periano Reserve Ware (Shinde et al., 2008: 85). Glazed Reserved Slip Ware was characterized by a well-defined, glossy and hard surface layer, whereas the surface of Unglazed Reserved Slip Ware is matt and soft (Krishnan et al. 2005: 692). Periano Reserve Ware, which is totally different from the Glazed and Unglazed Reserved Slip Ware, was first identified at Periano Ghundai by Fairservis. The surface treatment of this ware includes the application of sandy clay coating or a slip on the surface of the leather hard vessel to give the appearance of a very smooth exterior surface over which broad wavy and horizontal parallel grooves in low relief are executed (Shinde et al. 2008: 85). Glazed and Unglazed Reserved Slip sherds are reported from both Pre-Urban Harappan and Urban Harappan sites in Gujarat and its main concentration is in the Kachchh region. At Juna Khatiya, Dhaneti (Figure 7), and Dholavira it was found associated with Pre-Urban Harappan Sindh Type ceramics. The shapes of this ware include beakers, bottles, pots, dishes, and dish on stand. At this stage of research, it is very difficult to pinpoint the authors of this ware. In Gujarat, it can be dated between 3200 - 1900 BCE.

**Black and Red Ware:** Black-and-Red Ware ceramics are reported from most of the Chalcolithic sites in Gujarat, and it was first reported from Rangpur (Dikshit, 1950: 18-19), a Sorath Harappan site. In the Pre-Urban Harappan Phase, the Black-and-Red Ware ceramics (Figure 8) are found associated with Pre-Urban Harappan Sindh Type pottery, Pre-Prabhas Assemblage, and ceramics of Anarta Tradition. There were certain similarities and dissimilarities in the shape and fabric of Black and Red Ware in different periods and cultures/traditions. In Chalcolithic Gujarat, chronologically, it can be roughly placed between 3200 – 1000 BCE (Rajesh et al., 2016).

### **Origin of Pre-Urban Harappans in Gujarat**

There are different views among the scholars working in Gujarat regarding the origin of the Pre-Urban Harappan regional Chalcolithic cultures/traditions of Gujarat. Due to certain similarities in vessel types or decorative patterns, few researchers connected them with the cultures/traditions found outside Gujarat (Bhan, 2010); few researchers discussed the similarities they shared with other contemporary cultures (Shinde, 1998; Ajithprasad, 2002; Shirvalkar, 2008) and some researchers proposed the concept of indigenous origin and changes over

time (Shirvalkar, 2008). But there is no clear-cut evidence to support either the indigenous or outside origin theories.

### **Origin from Early Food Producers in Gujarat**

The earliest probable agricultural or food processing people of Gujarat may have been the Mesolithic/Microlith-using communities. The Mesolithic/Microliths yielding sites in Gujarat are more than 700 in number, and many of the sites in Gujarat were found not suitable to explain the linear model of cultural change. Certain sites showed the independent existence of microlith-using people. In a few sites of Gujarat, the Mesolithic period, which precedes the Chalcolithic period, is dated between 7000 BCE to 3500 BCE. In some sites, microliths are found associated with various phases of Harappan culture and few sites showed the presence of microliths even in the Early Historic period. Sites like Loteshwar, Moti Pipli, and Datrana IV showed the independent existence of microlith-using communities prior to the Chalcolithic level/occupation and the archaeological remains collected from the sites include microliths, broken sandstone grinding stones, and faunal remains from the Mesolithic levels. Many sites showed an unclear gap between the Mesolithic and the Chalcolithic occupations (Rajesh, 2011).

### **Inferences from Technological Knowhow**

At Loteshwar, the blades collected from the Mesolithic and Chalcolithic levels were devoid of crested ridge guiding technique (Brahmbhatt, 2000). Similarly, crested ridge blades were not reported from the Mesolithic levels of any of the excavated sites in Gujarat. The earliest evidence for the crested ridge blades in the Chalcolithic context of Gujarat occurs in Datrana IV (c. 3300-2600 BCE), where it was found occurring along with Pre-Prabhas ceramics, Anarta ceramics, and Pre-Urban Harappan Sindh Type. Similar kinds of blades were also reported from Somnath along with Pre-Prabhas ceramics and Harappan like pottery (Dhavalikar and Possehl, 1992). Hence, from the available data, one can infer that introduction of the crested guided ridge blade technique in Gujarat is the result of the contact between Pre-Urban Harappans in Sindh and regional Chalcolithic cultures/traditions in Gujarat.

The Pre-Urban Harappan Sindh type ceramics collected from various parts of Gujarat were made using hand/slow wheel /fast wheel. At the same time, the vessels of regional Chalcolithic traditions/cultures like Anarta, Pre-Prabhas, and Padri were made using hand or

slow wheel/turn table. This reveals the differences in the technological know-how of Pre-Urban Sindh Harappans and Regional cultures/traditions in Gujarat. Similarly, ceramics collected from the excavations at Datrana IV is crudely made in comparison to other regional Chalcolithic types and constitutes as the most fragile ceramic type from Chalcolithic Gujarat. The vessel shapes of the same are also very different from those in the Sindh region or reported from any other parts of the Indian subcontinent. The Chalcolithic population of Datrana IV had their own technique of bead making and it appears to be different from that of the Sindh region.

### **Beginning of Cultural Contacts**

All the available data till date suggest that the contacts between the Pre-Urban Harappans of Sindh and Regional Chalcolithic cultures/traditions in Gujarat began approximately around c. 3200-3000 BCE (Majumdar, 1999; Ajithprasad, 2002). At the same time, the chronometric dates obtained from the Pre-Urban Harappan levels at Loteshwar (Ajithprasad, 2002; Patel 2008) and Padri (Shinde, 1998; Ajithprasad, 2002) go back to 3900 BCE and 3800 BCE, respectively. These dates make one propose that the existence of regional cultures/traditions in Gujarat is datable to nearly 700 years before the beginning of their cultural contacts with Pre-Urban Harappans of the Sindh region. Probably, the Pre-Urban Harappan Chalcolithic population at Loteshwar had no contact or very minimal contact with the Pre-Urban Harappans of the Sindh region and this can be inferred from the material evidence from the site. The site has not yielded a single Pre-Urban Harappan Sindh Type ceramic.

### **Flimsy Deposits vs Seasonal Encampments**

Due to the presence of very flimsy deposits at many of the Chalcolithic sites in North Gujarat, they are termed as seasonal encampments of pastoral communities (Bhan, 1994, 2009; Patel, 2009). At the same time, there is no evidence to prove the arrival of these people from anywhere else in Gujarat or other parts of the Greater Indus region. If the pastoral nomads were to arrive from some other region, similar artefacts should have been reported from other places in the Greater Indus region in good quantities. Similarly, the moving communities have all the chances of developing contacts with other cultural communities so easily that it could have led to the diversity in material culture within the particular site. If one keenly observes the material remains from Loteshwar, it becomes obvious that the material remains of the site have not changed over a period of 1500 years of Chalcolithic occupa-

tion. Based on the AMS and conventional C14 dates from Loteshwar, Patel (2008, 2009) suggests a probable gap of nearly 1500 years. The studies of Patel (2008, 2009) indicate that the Mesolithic/Microlith-using communities and the Chalcolithic population at the site are two different groups. If one goes through the dates and the context (mainly pits) of dated material, it becomes very clear that the samples were not collected systematically from regular intervals; instead they are randomly collected from various contexts and depths. Therefore, in the flimsy deposit which represent approximately 5000 years of human habitation, even small gaps in the sampling for chronometric dates can create errors of hundreds or thousands of years.

### **Inferences from Domestication of Animals**

Based on the analysis of faunal remains from Loteshwar, Patel (2009) suggests the possibilities of the appearance of domesticated cattle during the Chalcolithic period contrary to the remains of wild cattle in the aceramic Mesolithic period. Due to the availability of small sized cattle bones similar to those from the Late Neolithic and Chalcolithic levels at Mehrgarh (Jarrige et al., 1995) along with large wild cattle bones at Loteshwar by the first half of the fourth millennium BCE and difficulties in identifying the direct cultural interaction between the Mehrgarh region and North Gujarat, Patel (2009) suggests the necessity to explore the possibility of Loteshwar being a local cattle domestication centre. According to Patel (2009), wild sheep and goat are completely absent in Mesolithic and Chalcolithic levels and its domestic varieties are available at the site in later Chalcolithic levels and it may have been brought to the site probably from areas to the Northwest. It implies that the domestication of animals and the introduction of ceramics are the distinguishing features of the Chalcolithic period at Loteshwar where the local tradition of stone tool production, food processing, and food habits continue from the Mesolithic period with some addition. The introduction of domesticated sheep and goat at the site during the later levels of the Chalcolithic period may indicate the beginnings of cultural contacts in the later period between the regional Cultures and Classical Harappans.

### **Indicators of Cultural Interactions**

The evidence for the beginning of cultural contacts between the Chalcolithic communities and Mesolithic communities of Gujarat with that of their contemporary cultural tradition in the Sindh region are available towards the end of the 4th millennium BCE approximately. In the beginning, the regional Chalcolithic cultures/tradition that

evolved from the Mesolithic communities of Gujarat around c. 4000 BCE probably had an independent existence and had some contacts with the Mesolithic/Microlith-using communities within the nearby areas, although, the evidence for these contacts is scanty. Similarly, ceramic types from Santhli (Majumdar, 1999) and Mathutra (Majumdar, 1999) suggest evidence of earlier contact with the Sindh region (Pre-Urban Harappan). By c. 3200 BCE, there is clear evidence for the contacts between different regional cultures and cultures of the Sindh region. The initial stage of Datrana reveals cultural materials of the Pre-Prabhas regional Chalcolithic tradition of Gujarat (Ajithprasad, 2002). Whereas at Santhli, Mathutra, and Juna Khatiya, only Pre-Urban Harappan Sindh Type ceramics are found (Majumdar 1999). The final phase of Datrana has a mixture of both regional and Pre-Urban Harappan materials (Ajithprasad, 2002). The absence of chronometric dates from these sites blocks its further interpretation. It is possible that major contacts and cultural integration between the Gujarat region and Indus region occurred at a later stage. However, the Gujarat region had Chalcolithic communities prior to the arrival of people from the Indus region. This is supported by the presence of settlements dating prior to 3200 BCE like Loteshwar (Patel 2008, 2009). The Padri Ware showed similarities to ceramics of Anarta tradition from Loteshwar (Shinde, 1998; Bhagat, 2001; Shirvalkar, 2008). At the upper levels of the Chalcolithic period at Datrana, the Pre-Prabhas pottery is found associated with the Pre-Urban Harappan Sindh Type ceramics and Anarta ceramics (Ajithprasad, 2002). At Moti Pipli, Anarta ceramics are found associated with the Pre-Urban Harappan artefacts (Majumdar and Sonawane, 1996-97). At Dholavira, there was a fortified settlement during this period (Bisht, 2000) and probably both regional Chalcolithic and Pre-Urban Harappan ceramics are present in the ceramic collection (Shinde, 1998). The cultural dynamics of Dholavira during this phase is unclear due to very limited published data. At Somnath, the Pre-Prabhas ceramics were found along with ceramics similar to Pre-Urban Harappan Sindh Type (Dhavalikar and Possehl, 1992). The evidence from the explored sites around Somnath (Ajithprasad et al., 2011) indicates the probabilities of the presence of Pre-Urban Harappan ceramics at Somnath. Pre-Urban Harappan ceramics were also unearthed from Surkotada (Joshi 1990), Dhaneti (Ajithprasad, 2018), and Juna Khatiya (Gadekar et al., 2021). Apart from this, many of the sites showed the presence of Black and Red Ware and Reserved Slip Ware. From the above discussion it appears that the beginnings of

cultural contacts between the regional Chalcolithic cultures of Gujarat and Sindh Type ceramics within them may be dated to the close of the fourth millennium BCE.

### **Prerequisites for Contact**

The probable reasons which led to the cultural contacts between Pre-Urban Harappans of Sindh and Regional Chalcolithic communities may be many including the movement of people in search of pastoral lands, search for raw material resources, understanding arts and crafts, new markets for finished products, agricultural lands, to acquiring private property (?), religious beliefs and rituals (?), expansion of territory, bride/groom and workers. The evidence for many of the aforesaid parameters is unclear. Gujarat is well known for its grasslands, majority of which are located in the arid zones such as North Gujarat and Kachchh. Apart from the green grass, the availability of freshwater from inter-dunal depressions may have attracted the pastoral nomads within and outside of Gujarat. Similarly, the fertile black cotton soil in Saurashtra and other parts of Gujarat may have attracted the agricultural communities and the people in search of agricultural fields and private properties. Gujarat coast is famous for the marine shell and probably was a source for this raw material. Gujarat is also known for the mines of semi-precious stones which were used to produce beads. The availability of different raw materials and finished products like shell bangles, beads and various ceramics of different cultures and traditions from various sites within and outside Gujarat clearly show that regional cultures/traditions in Gujarat, during the Pre-Urban Harappan period, had interaction networks with one another as well as with cultures in the Indus Valley proper (Bhan, 1994; Kenoyer, 1997; Kenoyer and Meadow, 2000; Ajithprasad, 2002; Possehl, 2002).

### **Impact of Contact**

The probable impacts of contact with the Pre-Urban Harappans of the Sindh region led to the introduction of the crested ridge blade making technique and the use of the fast wheel for pottery production. Another result of these contacts may be the integration of various regional cultures/traditions of different parts of Gujarat into the Harappan cultural sphere.

### **March towards Integration**

Towards the end of the Pre-Urban Harappan Phase, i.e., c. 2600 BCE, the regional Chalcolithic Anarta Tradition and Padri Culture integrated into the Classical Harappans whose predecessors started the



cultural contacts with the indigenous communities of Gujarat by the end of the fourth millennium BCE. During this period, the material evidence for the cultural contacts becomes clearer. The Pre-Prabhas assemblage, which existed in the Pre-Urban Harappan Phase at Datrana IV and Somnath, did not continue during the Urban Harappan phase and the reason for their decline is not clear. The Reserved Slip Ware and Black and Red Ware technique continued during the Urban Harappan Phase. The evidence for the integration can be inferred from the data recovered from the excavations at Loteshwar (Ajithprasad, 2002, Yadav, 2005), Bagasra (Sonawane et al., 2003; Bhan et al., 2004; Chase, 2010), Shikarpur (Bhan and Ajithprasad, 2009), Padri (Shinde, 1998; Bhagat, 2001; Shirvalkar, 2008), and Nagwada (Hegde et al., 1988). The earliest evidence from Loteshwar (c. 3700 BCE) in North Gujarat (Patel, 2008) show the independent existence of Anarta tradition at the site for about 700 years. Around 3200-3000 BCE, the Anarta ceramics are found along with the Pre-Prabhas Assemblage and Pre-Urban Harappan Sindh Type ceramics at Datrana IV (Ajithprasad, 2002), and Pre-Urban Harappan Sindh Type ceramics at Moti Pipli (Majumdar and Sonawane, 1996-97; Majumdar, 1999), Nagwada (Hegde et al., 1988), and Mathutra (Majumdar, 1999), which perhaps continued up to the beginning of Urban Harappan period. At the beginning of the Urban Harappan phase, Anarta pottery is the dominant ceramic type at Bagasra (Sonawane et al., 2003) and in the next phase Classical Harappan ceramics became prominent, while at Shikarpur (Bhan and Ajithprasad, 2009) though Anarta ceramics appear in the first phase it is lesser in quantity compared to Classical Harappans. At Nagwada (Hegde et al., 1988), which is dated to the late phase of the Urban Harappan period, Anarta ceramics are the dominant variety (around 85%) (Bhan, 1994), while other Classical Harappan artefacts are also present. Some of the sites of this period also showed the presence of Black and Red Ware and Reserved Slip Ware ('glazed' and 'unglazed'). While considering the Padri Ware, which was found associated with the Sorath Harappan ceramics at Pre-Urban Harappan levels at Padri continues during the Urban Harappan period.

### **Conclusion**

On the basis of aforesaid archaeological data, it is logical to propose that the regional Chalcolithic people of the Pre-Urban Harappan Phase within the Gujarat region may have evolved from the Mesolithic/Microlith-using people settled here approximately by the beginning of the 4th millennium BCE. These Chalcolithic people produced pottery

and stone tools in their own style and domesticated animals. It is very likely that after a long period of existence in isolation they may have come into contact with the Pre-Urban Harappans, and gradually around 2600 BCE they integrated under the Classical Harappan culture. Period around c. 2600 BCE, shows a sudden increase in the number of settlements and the prevalence of urban characteristics in the Gujarat region as in other parts of the Greater Indus region, and this period marks the beginning of Urban Harappan Phase.

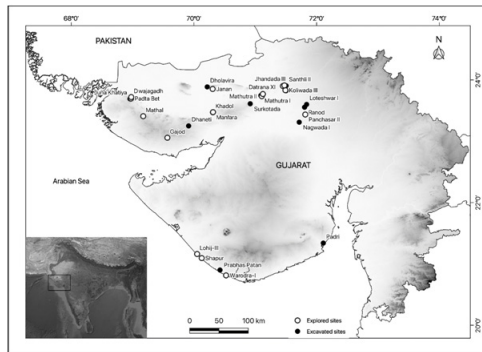


Figure 1: Reported Pre-Urban Harappan Sites in Gujarat

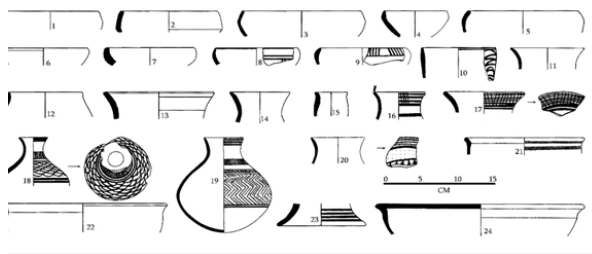


Figure 2: Anarta Ceramics from Loteshwar (Courtesy: Ajithprasad 2002)

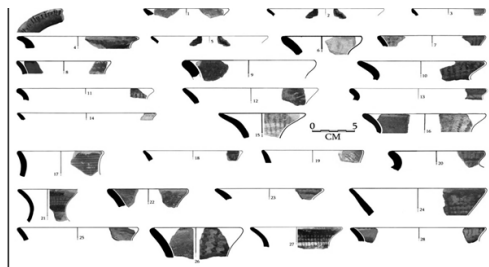


Figure 3: Ceramics from Padri (Courtesy: Shirvalkar 2008)

## Pre-Urban Harappan Phase in Gujarat

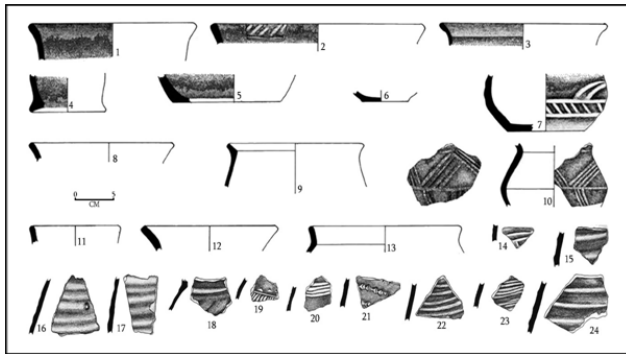


Figure 4: Pre-Prabhas Ceramics from Datrana IV (Courtesy: Ajithprasad 2002)

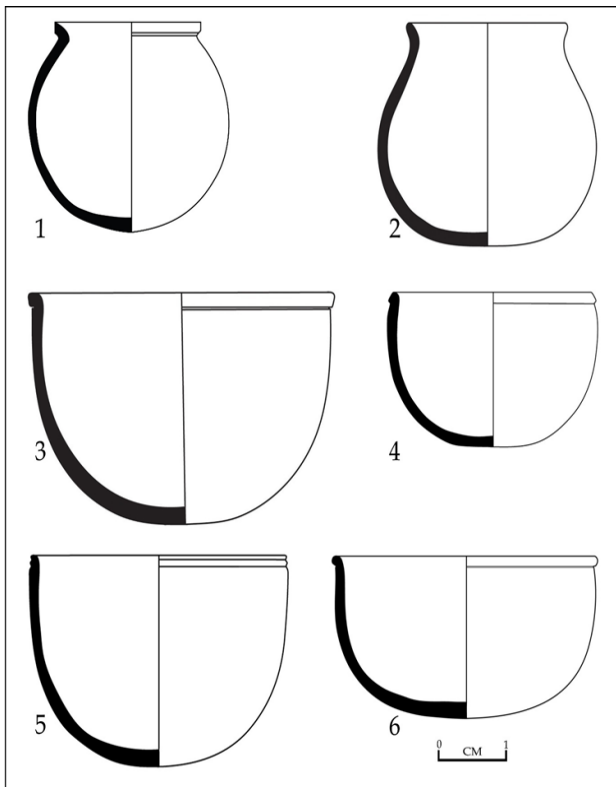


Figure 5: Unique Ceramics from Surkotada (Courtesy: University of Kerala)

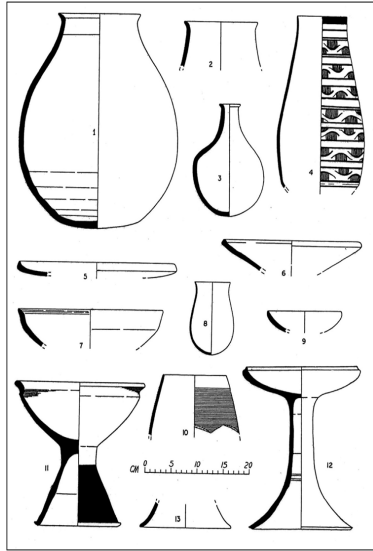


Figure 6: Pre-Urban Harappan Sindh Type Ceramics from Surkotada (Courtesy: Joshi 1990)

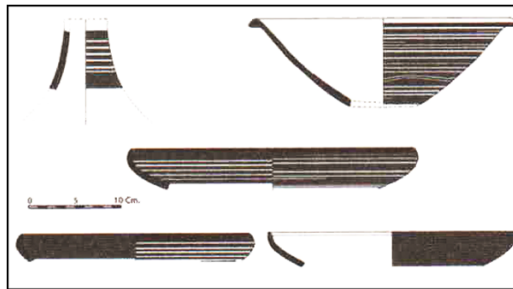


Figure 7: Reserved Slip Ware from Dhaneti (Courtesy: Ajithprasad 2018)

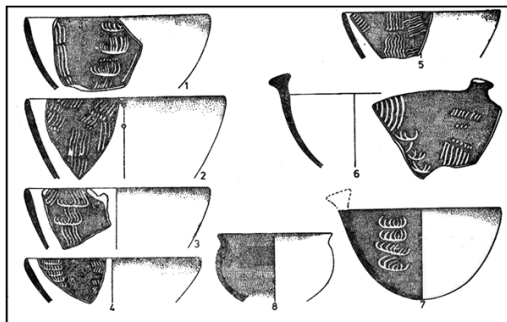


Figure 8: Black and Red Ware from Nagwada (Courtesy: Ajithprasad 2002)

Table 1: List of Reported Pre-Urban Harappan Sites in Gujarat

Sl. No.	Site	Village	Taluk	District	Size	Period/	Latitude	Longitude	References
1	Padri (Kerala no Dhoro)	Padri	Talaja	Bhavnagar	340x210=7.14	Culture*	21° 20' 21" N	72° 06' 32" E	Shinde 1992a, 1992b, Shinde et al. 1992
2	Prabhas (Somnath)	Prabhas Patan	Pa-tan-Veraval	Gir Somnath	600x150=9	PW, SH, LSH, EH	20°54'00" N	70°25'30" E	Nanavati et.al. 1971, Ghosh 1989
3	Warodra-I	Warodra	Pa-tan-Veraval	Gir Somnath	10x10=.01	PP, P, LSH, LRW, EH	20° 48.75'N	70° 31.41'E	Ajithprasad and Sonawane 2011
4	Lohij-III (Devariya Nagari)	Lohij	Mangrol	Junagadh	150x100=1.5	PUHSP	21° 9.66'N	70° 3.1'E	Ajithprasad and Sonawane 2011
5	Shapur (Puncha Hira niKhetar)	Shapur	Mangrol	Junagadh	220x140=3.08	PUHSP, EH, M	21° 5.65'N	70° 7.56'E	Ajithprasad and Sonawane 2011
6	Dholavira	Dholavira	Bhachau	Kachchh	850x850=72.25	PUHSP, P	23° 53' 10" N	70° 13' 00" E	Joshi et al. 1984, Bisht 1989a, 1991, 1994, 2004, 2015
7	Surkotada	Sanva	Rapar	Kachchh	140x100=1.4	PUHSP, A, CH, BRW, SH, LSH	23° 36' 41.1 N	70° 55' 02.7" E	Possehl 1980, 1999, Joshi et al. 1984, Joshi 1990

8	Janan	Janan	Bhachau	Kachchh	200x150=3	PUHSP, A, CH, SH, BRW	23° 51' 08.48" N	70° 18' 16.95" E	Rajesh et al. 2018
9	Juna Khatiya	Khatiya	Lakhpat	Kachchh	400x400=16	PUHSP, PP, A, CH	23°41' 28.71" N	68°57' 24.24" E	Gadekar et al. 2021
10	Dhaneti matano Saran)	Dhaneti	Bhuj	Kachchh	225x200=4.5	PUHSP	23° 15' 01" N	69° 54' 47" E	Ajithprasad 2018
11	Gajod (Juno Gam)	Gajod	Bhuj	Kachchh	10x10=.01	PUHSP, CH	23°03'26" N	69°34'01" E	Jadeja et al. in Press
12	Mathal	Mathal	Nakhatrana	Kachchh	100x100=1	PUHSP	23°24'29.43" N	69°10'22.52" E	Ajithprasad 2018
13	Padta Bet	Khatiya	Lakhpat	Kachchh	50x50=.25	PUHSP	23°41'47.23" N	68°58'24.17" E	Rajesh and Abhayan 2019
14	Dwajagadh	Banu Rakhali	Lakhpat	Kachchh	60x60=.36	PUHSP	23°43'13.69" N	68°58'40.10" E	Rajesh and Abhayan 2019
15	Manfara (Nakaliyo)	Manfara	Bhachau	Kachchh	50x50=.25	PUHSP	23° 28' 19.0" N	70° 18' 32.1" E	Ajithprasad Personal Communication
16	Khadol (Khari no Khanda)	Khadol	Bhachau	Kachchh	100x100=1	PUHSP	23° 28' 28.4" N	70° 18' 38.7" E	Ajithprasad Personal Communication
17	Datrana XI (Sutaria no Thumdo)	Datrana	Santalpur	Patan	9x65=.62	PUHSP	23°45'59.6"N	71°07'21.5"E	Ajithprasad and Sonawane 2011
18	Koliwada III (Bajaniya-no-Thumdo)	Koliwada	Radhanpur	Patan	40x30=.12	PUHSP, PP	23°49'54.8"N	71°29'27.8"E	Ajithprasad and Sonawane 2011



Pre-Urban Harappan Phase in Gujarat

19	Jhandada III (Bhamaria Thumdo)	Jhandada	Santalpur	Patan	36x22=-.79	M, PUHSP	23°54'02.1"N	71°27'01.0"E	Ajithprasad and Sonawane 2011
20	Santhli II (Ghachiyawado)	Santhli	Radhanpur	Patan	96x65=-.62	PUHSP, LSH	23°54'16.7"N	71°30'09.6"E	Majumdar 1999, Ajithprasad and Sonawane 2011
21	Loteshwar I (Khari no Timbo I)	Loteshwar	Sami	Patan	135x135=1.82	M, PUHSP	23°36'01.8"N	71°50'11.8"E	Bhan 1994, Ajithprasad and Sonawane 2011, Rajesh et al. 2013
22	Mathutra I (Madhvya no Timbo)	Mathutra	Santalpur	Patan	40x30=-.12	M, A, CH	23°44'42.7"N	71°05'23.1"E	Ajithprasad and Sonawane 2011
23	Moti Pipli (Shakatri Timbo)	Moti Pipli	Radhanpur	Patan	255x120=3.06	PUHSP	23°49'24.9"N	71°30'01.8"E	Bhan 1994, Ajithprasad and Sonawane 2011
24	Santhli IV (Navod no Thumbo)	Santhli	Radhanpur	Patan	10x10=-.01	PUHSP, A, CH	23°54'36.7"N	71°28'30.6"E	Majumdar 1999, Ajithprasad and Sonawane 2011
25	Datrana IV (Hadkawala Timbo)	Datrana	Santalpur	Patan	700x500=35	M, PUHSP	23°46'14.7"N	71°07'26.2"E	Ajithprasad and Sonawane 2011; Rajesh et al. 2018

26	Datrana (Vadkiwalukhetar-I)	Datrana	Santalpur	Patan	100x70=70	M, PP, A, PUHSP	23°46'12.6"N	71°07'25.5"E	Ajithprasad and Sonawane 2011; Rajesh et al. 2018
27	Ranod (Vaharvo Timbo)	Ranod	Sami	Patan	250x210=5.25	M, PP, A	23° 33' 17.05" N	71° 48' 12.01" E	Madella et al. 2018; Mushrif-Tri- pathy et al. 2014: 45-51
28	Mathutra II (Vadii- alavadi no Thumdo)	Mathutra	Santalpur	Patan	10x.08=008	M, PUHSP	23°44'02.1"N	71°06'20.2"E	Ajithprasad and Son- awane 2011
29	Panchasar II (Harthar no Timbo)	Panchasar	Sami	Patan	250x200=5	PUHSP, SH	23°26'09.3"N	71°48'54.3"E	Ajithprasad and Son- awane 2011
30	Nagwada I (Ghod)	Nagwada	Dasada	Surendranagar	140x110=1.54	M, PUHSP, LSH, LRW, BRW	23°18'38.8"N	71°42'59.6"E	IAR 1984- 85, Ajith- prasad and Sonawane 2011

\* M: Mesolithic/Microlithic, A: Anarta, PW: Padri Ware, PP: Pre-Prabhas, PUHSP: Pre-Urban Harappan Sindh Type Pottery, BRW: Black and Red Ware, CH: Classical Harappan, SH: Sorath Harappan, P: Prabhas, LSH: Late Sorath Harappan, LRW: Lustrous Red Ware, EH: Early Historic, M: Medieval

## References

- Ajithprasad, P and V.H. Sonawane. 1993. "Harappan Culture in North Gujarat: A Regional Paradigm", Paper Presented at the Conference on *Harappans in Gujarat: Problems and Prospects*. Pune: Deccan College.
- Ajithprasad, P, Rajesh S. V. and B. Sharma. 2011. "Archaeological Explorations in the Saurashtra Coast of Junagadh District, Gujarat". *Occasional Paper 10: Linguistics, Archaeology and the Human Past* (27-70). Toshiki Osada and Akinori Uesugi (Eds.). Kyoto: Research Institute for Humanity and Nature.
- Ajithprasad, P. 2002. "The Pre Harappan Cultures of Gujarat". In S. Setter and R. Korisetter (Eds.). *Indian Archaeology in Retrospect, Volume II, Protohistory- Archaeology of the Harappan Civilization* (129-158). New Delhi: Manohar Publishers and distributors.
- Ajithprasad, P. 2010. "The Pre-Prabhas Pottery and the Early Chalcolithic Cultural Developments in North Gujarat". Paper Presented at the *Bhuj Round Table, International Conference on Gujarat Harappans and Chalcolithic Cultures*. Research Institute for Humanity and Nature, Kyoto, Gujarat State Department of Archaeology, Gandhinagar and Institute of Rajasthan Studies, JRN Rajasthan Vidyapeeth, Udaipur.
- Ajithprasad, P. 2018. "Early Harappan Burials and Kachchh". *History Today*, 19: 21-33 and Plates 4-5.
- Ajithprasad, P. and V. H. Sonawane. 2011. "The Harappa Culture in North Gujarat: a Regional Paradigm". In T. Osada and A. Uesugi (Eds.). Occasional Paper 12 (*Linguistics, Archaeology and the Human Past*): 223-269. Kyoto: Research Institute for Humanity and Nature.
- Bhagat, S. 2001. *A Study of the Harappan Pottery Tradition in Saurashtra (with Special Reference to Padri and Tarsara, Bhavnagar District, Gujarat)* (Unpublished Ph.D. Thesis). Pune: Department of Archaeology, Deccan College Post-Graduate and Research Institute.
- Bhan, K. K. 1994. "Cultural Development of the Prehistoric period in North Gujarat with Reference to Western India". *South Asian Studies*, 10: 71-90.
- Bhan, K. K. 2009. "Review of Prehistoric Culture of Gujarat and Need to Develop Accurate Settlement Gazetteer". In *International Symposium in India (2009) Changing Perceptions of Japan in South Asia in the New Asian Era: The State of Japanese Studies in India and Other SAARC Countries* (325-354). Kyoto: International Research Center for Japanese Studies.
- Bhan, K. K. 2010. "Review of Prehistoric Pottery from Gujarat". *Bhuj Round Table, International Conference on Gujarat Harappans and Chalcolithic Cultures*. Research Institute for Humanity and Nature, Kyoto, Gujarat State Department of Archaeology, Gandhinagar and Institute of Rajasthan Studies, JRN Rajasthan Vidyapeeth, Udaipur. Bhuj.

- Bhan, K. K. and P. Ajithprasad. 2008. "Excavations at Shikarpur 2007-2008: A Coastal Port and Craft Production Center of the Indus Civilization in Kutch, India". <http://www.harappa.com/goladhoro/:1-9>.
- Bhan, K. K. and P. Ajithprasad. 2009. "Excavations at Shikarpur, Gujarat 2008-2009". <http://www.harappa.com/goladhoro/:1-9>.
- Bhan, K.K., V.H. Sonawane, P. Ajithprasad and S. Pratapachandran. 2004. "Excavations of an Important Harappan Trading and Craft Production Center at Gola Dhoro (Bagasra) on the Gulf of Kutch, Gujarat, India", *Journal of Interdisciplinary Studies in History and Archaeology*, 1 (2): 153-158.
- Bisht R.S. 1989a. "A New Model of the Harappan Town Planning as Revealed at Dholavira in Kutch: A Surface Study of its Plan and Architecture". In Bhaskar Chatterjee (Ed.), *History and Archaeology (Prof. Sankalia Felicitation Volume)* (397-408). New Delhi: Ramanand Vidya Bhawan.
- Bisht, R. S. 1989b. "The Harappan Colonisation of Kutch: An ergonomic Study with Reference to Dholavira and Surkotada". In Krishna Deva and Lallanji Gopal (Eds.). *History and Art* (265-272). Delhi: Ramanand Vidya Bhawan.
- Bisht, R. S. 1991. Dholavira: "A New horizon of the Indus Civilization". *Puratattva* 20: 71-82.
- Bisht, R. S. 1994. "Urban Planning at Dholavira: A Harappan City". *Seminar on the City and the Stars: Cosmic Urban Geometrics of India*. New Delhi: Indira Gandhi National Centre for the Arts.
- Bisht, R. S. 1997. "Dholavira Excavations: 1990-94". In J. P. Joshi, D. K. Sinha, S. C. Saran, C. B. Mishra and G. S. Gaur (Eds.). *Facets of Indian Civilization - Recent perspectives – (Essays in Honour of Prof. B. B. Lal): Vol. I (Prehistory and Rock-Art, Proto History)* (107-120). New Delhi: Aryan Books International.
- Bisht, R. S. 1998-99. "Dholavira and Banawali: Two different Paradigms of the Urbis Forma". *Puratattva*, 29: 14-37.
- Bisht, R. S. 2000. "Urban Planning at Dholavira: A Harappan City". In J. M. Malville and L. M. Gujral (Eds.). *Ancient Cities, Sacred Skies: Cosmic Geometrics and City Planning in Ancient India* (11-23). New Delhi: Aryan Books International.
- Bisht, R. S. 2004. "Dholavira and Kachchh in Integrated Tourism Development". In A. Maira (Ed.) *Heritage Tourism-Exploring the Future (Seminar on Heritage Tourism)* (35-48). Gandhinagar: Government of Gujarat.
- Bisht, R. S. 2006. "Harappans and the Rigveda". In D. P. Sharma and M. Sharma (Eds.), *Early Harappan and Indus-Sarasvati Civilization*. Vol. II (283-338). New Delhi: Kaveri Books.
- Bisht, R. S. 2010. "Does Dholavira Sheds New Light on the Antiquity of the Buddhist Stupa Architecture?". In I. A. Khan, R. Barret and R. Trivedi

## Pre-Urban Harappan Phase in Gujarat

- (Eds.). *Abstracts - International Seminar on Buddhist Heritage*, Gujarat (January 15-17, 2010) (75-76). Vadodara: The Maharaja Sayajirao University of Baroda and Government of Gujarat.
- Bisht, R. S. 2015. *Excavations at Dholavira* (1989 to 2004-2005). New Delhi: Archaeological Survey of India.
- Bokonyi, S. 1997. "Horse Remains from the Prehistoric Site of Surkotada, Kutch, Late 3rd Millennium B. C". *South Asian Studies*, 17: 297-307.
- Brahmbhatt, R. M. 2000. *Morphological Analysis of Flakes Artifacts from Loteshwar, North Gujarat: A Preliminary Study*. (Unpublished M.A. Dissertation). Vadodara: Department of Archaeology and Ancient History. The Maharaja Sayajirao University of Baroda.
- Chase, B. A. 2007. *Meat Provisioning and the Integration of the Indus Civilization: A Perspective from Gujarat (India)* (Unpublished PhD Thesis). Madison: University of Wisconsin.
- Chase, B. A. 2010. "Social Change at the Harappan Settlement of Gola Dhro: A Reading from Animal Bones". *Antiquity*, 84: 528-543.
- Dangi, V. 2009a. "Archaeology of the Ghaggar Basin: Settlement Archaeology of Mehamb Block, Rohtak, Haryana, India". *Occasional Paper 8: Linguistics, Archaeology and the Human Past*. Kyoto: Indus Project, Research Institute for Humanity and Nature.
- Dangi, V. 2009b. "Recent exploration in the Chautang Basin ( Jind District, Haryana)". In T. Osada and A. Uesugi (Eds.) *Occasional Paper 9: Linguistics, Archaeology and the Human Past* (73-163). Kyoto: Indus Project, Research Institute for Humanity and Nature.
- De Cardi, B. 1965. "Excavations and Reconnaissance in Kalat, West Pakistan: The Prehistoric Sequence in the Surab Region". *Pakistan Archaeology*, 2: 86-182.
- Dhavalikar, M. K. and G. L. Possehl. 1992. "The Pre-Harappan Period at Prabhas Patan and the Pre-Harappan Phase in Gujarat". *Man and Environment*, XVII (1): 72- 78.
- Dikshit, M. G. 1950. "Excavations at Rangpur: 1947". *Bulletin of the Deccan College Post-Graduate and Research Institute*, XI (1): 3-55.
- Durrani, F. A. 1988 "Excavations in the Gomal Valley: Rehman Dheri Excavation Report" No.1. *Ancient Pakistan*, 6: 1-232.
- Durrani, F. A., I. Ali and G. Erdosy. 1991. "Further Excavations at Rehmandheri, 1991". *Ancient Pakistan* 7: 61-151.
- Gadekar, C. S.V. Rajesh, G. S. Abhayan, B. P. Sharma, et.al. 2018. "Typo-Technological Analysis of the Lithic Assemblage from Janan- a Pre-Urban Harappan Site in Kachchh, Gujarat". *Man and Environment*, XLIII (1): 6-15.
- Gadekar, C., S. V. Rajesh, G.S. Abhayan, B.P. Sharma, et.al. 2021. "Early Harappan Interaction Between Sindh and Gujarat, as Evidenced by Lithic Tools". *Journal of Lithic Studies*, 8 (1): 1-17.

- Ghosh, A. 1989. *An Encyclopaedia of Indian Archaeology* (Vol. I and II), New Delhi: MunshiramManoharlal Publishers Pvt. Ltd.
- Hegde, K.T.M., V.H. Sonawane, D.R. Shah, K.K. Bhan, et.al. 1988. "Excavation at Nagwada 1986 and 87: A preliminary Report". *Man and Environment*, XII: 55-65.
- Hegde, K.T.M., V.H. Sonawane, K.K. Bhan, P. Ajithprasad and K.Krishnan. 1990. "Excavation at Nagwada – 1987-88 A Preliminary Report". *Adaptation and Other Essays; Proceedings of the Annual Conference of IAS, ISPQS and IHCS -1988* (Research Publications VI) (191-195). Santiniketan: Visva-Bharati.
- Heras, S. J. H. 1938. "A Proto-Indian Sign from Vala". *The Quarterly Journal of the Mythic Society*, XXVIII (3): 141-143.
- IAR. 1955-56. Ghosh, A. (Ed.). 1956. *Indian Archaeology 1955-56 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1956-57. Ghosh, A. (Ed.). 1957. *Indian Archaeology 1956-57 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1970-71. Deshpande, M. N. (Ed.). 1974. *Indian Archaeology 1970-71 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1971-72. Deshpande, M. N. (Ed.). 1975. *Indian Archaeology 1971-72 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1984-85. Tripathi, R. C. (Ed.). 1987. *Indian Archaeology 1984-85 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1985-86. Joshi, J. P. (Ed.). 1990. *Indian Archaeology 1985-86 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1986-87. Joshi, M. C. (Ed.). 1992. *Indian Archaeology 1986-87 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1987-88. Joshi, M. C. (Ed.). 1993. *Indian Archaeology 1987-88 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1988-89. Joshi, M. C. (Ed.). 1993. *Indian Archaeology 1988-89 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1989-90. Mahapatra, S. K. (Ed.). 1994. *Indian Archaeology 1989-90 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1990-91. Mahapatra, S. K. (Ed.). 1995. *Indian Archaeology 1990-91 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1991-92. Singh, B. P. (Ed.). 1996. *Indian Archaeology 1991-92 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1992-93. Shankar, A. (Ed.). 1997. *Indian Archaeology 1992-93 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1993-94. Bisht, R. S., C. Dorje and A. Banerji (Ed.). 2000. *Indian Archaeology 1993-94 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1995-96. Menon, K. G. (Ed.). 2002. *Indian Archaeology 1995-96 – A Review*. New Delhi: Archaeological Survey of India.

## Pre-Urban Harappan Phase in Gujarat

- IAR. 1996-97. Menon, K. G. (Ed.). 2002. *Indian Archaeology 1996-97 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1997-98. Menon, K. G. (Ed.). 2003. *Indian Archaeology 1997-98 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1998-99. Misra, R. C. (Ed.). 2004. *Indian Archaeology 1998-99 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 1999-00. Rajeev, C. B. (Ed.). 2005. *Indian Archaeology 1999-00 – A Review*. New Delhi: Archaeological Survey of India.
- IAR. 2000-01. Rajeev, C. B. (Ed.). 2006. *Indian Archaeology 2000-01 – A Review*. New Delhi: Archaeological Survey of India.
- Jarrige, C., J.F. Jarrige, R. H. Meadow and G. Quivron (Eds.). 1995. *Mehrgarh Field Reports 1974-1985 From Neolithic Times to the Indus Civilization*. Pakistan: Department of Culture and Tourism, Government of Sindh.
- Joshi, J. P. 1966. "Exploration in Northern Kutch". *Journal of Oriental Institute* 16 (1): pp. 62-69.
- Joshi, J. P. 1972a. "*Fresh Light on the archaeology of Kutch*". S. B. Deo (Ed.) *Archaeological Congress and Seminar Papers* (21-35). Nagpur University.
- Joshi, J. P. 1972b. "Exploration in Kutch and Excavation at Surkotada and New Light on Harappan Migration". *Journal of Oriental Institute*, 22 (1-2): 98-144.
- Joshi, J. P. 1979. "The Nature of Settlement at Surkotada". In D. P. Agrawal and D. K. Chakrabarti (Eds.). *Essays in Indian Proto History* (59-64). Delhi: B. R. Publishing Corporation (Published on behalf of The Indian Society for Prehistoric and Quaternary Studies).
- Joshi, J. P. 1990. "Excavations at Surkotada 1971-72 and Exploration in Kutch". *Memoirs of the Archaeological Survey of India*, No. 87. New Delhi: Archaeological Survey of India.
- Joshi, J.P., M. Bala and J. Ram. 1984. "The Indus Civilization: A Reconsideration on the Basis of Distribution Maps". In B.B. Lal and S.P. Gupta (Eds.), *Frontiers of the Indus Civilization: Sir Mortimer Wheeler Commemoration Volume* (511-530). New Delhi: Books and Books.
- Kenoyer, J. M. 1991. "The Indus Valley Tradition of Pakistan and Western India". *Journal of World Prehistory* 5 (4): 331-385.
- Kenoyer, J. M. 1994. "The Harappan State: Was It or Wasn't It?". In J. M. Kenoyer (Ed.). *From Sumer to Meluha: Contributions to the Archaeology of South and West Asia in Memory of George F. Dales, Jr.* Vol. 3. Wisconsin Archaeological Reports: 71-80. Madison: Department of Anthropology, University of Wisconsin-Madison.
- Kenoyer, J. M. 1997. "Trade and Technology of the Indus Valley: New Insights from Harappa, Pakistan". *World Archaeology*, 29: 262-280.
- Kenoyer, J. M. and R. H. Meadow. 2000. "The Ravi Phase: A New Cultural



- Manifestation at Harappa (Pakistan)". In M. Taddei and G. de Marco (Eds.). *South Asian Archaeology 1997* (55-76). Rome: ISIAO.
- Kharakwal, J.S., Y.S. Rawat and T. Osada (Eds.). 2012. *Excavation at Kanmer 2005-06 – 2008-09, Kanmer Archaeological Research Project – An Indo-Japanese Collaboration*. Research Institute for Humanity and Nature, Kyoto/Gujarat State Department of Archaeology, Gandhinagar/ Institute of Rajasthan Studies, JRN Rajasthan Vidyapeeth, Udaipur.
- Krishnan, K., I. C. Freestone and A. C. Middleton. 2005. "The Technology of 'Glazed' Reserved Slip Ware – A Fine Ceramic of the Harappan Period". *Archaeometry*, 47 (4): 691-703.
- Lal, B.B., J.P. Joshi, B.K. Thapar and Madhu Bala. 2003. *Excavations at Kalibangan: The Early Harappans* (1960-1969). Memoirs of the Archaeological Survey of India
- Lal, B.B., J.P. Joshi, M. Bala, A.K. Sharma and K.S. Chandran 2015. *Excavations at Kalibangan: The Harappans* (1960- 69), part 1. Memoirs of the Archaeological Survey of India no. 110. New Delhi: Archaeological Survey of India.
- Mahida, B. 1992. *Chalcolithic Settlements of North Gujarat (A Study of the Regional Tradition in the Rupen Estuary)* (Unpublished M.A. Dissertation). Vadodara: Department of Archaeology and Ancient History, The Maharaja Sayajirao University of Baroda.
- Mahida, B. 1995-96. "Loteswar: A Chalcolithic Regional Ceramic Tradition Site of North Gujarat". *Journal of the Oriental Institute*, XLV: 85-87.
- Majumdar, A and V. H. Sonawane. 1996-1997. "Pre Harappan Burial Pottery from Moti-Pipli: A New Dimension in the Cultural Assemblage of North Gujarat". *Pragdh*
- Majumdar, A. 1999. *A Ceramic Study of the Harappan Burials from North Gujarat* (Unpublished Ph.D. Thesis). Vadodara: Department of Archaeology and Ancient History, The Maharaja Sayajirao University of Baroda.
- Majumdar, A. 2006. "Early Harappans in Gujarat". In D. P. Sharma and M. Sharma (Eds.). *Early Harappan and Indus-Sarasvati Civilization*. Vol. I (159-166). New Delhi: Kaveri Books.
- Meadow, R. H. and A. Patel. 1997. "A Comment on "Horse Remains from Surkotada" by Sandor Bokonyi. *South Asian Studies*, 17: 308-315.
- Momin, K. N. 1983. "Excavation at Zekhda". *Puratattva*, 12: 120-125.
- Mughal, M. R. 1970. *The Early Harappan Period in the Greater Indus Valley and Northern Baluchistan* (c. 3000 – 2400 B.C.). (Unpublished Ph.D. Thesis). Pennsylvania: University of Pennsylvania.
- Mushrif-Tripathy, V., P. Ajithprasad, M. Madella, J. L. Mateos, et.al. 2014. "Osteological Study of Human Skeleton Excavated from Vaharvo Timbo, District Patan, Gujarat". *Man and Environment*, xxxix (1): 45-51.



## Pre-Urban Harappan Phase in Gujarat

- Mushrif-Tripathy, V., S. V. Rajesh, G. S. Abhayan, B. P. Sharma and P. Ajith-prasad. 2018. "Anthropological Analysis of Pre-Urban Harappan Human Skeletal Remains from Surkotada in Kachchh District, Gujarat, India". *Bulletin of the Deccan College*, 78: 35-44.
- Nanavati, J. M., R. N. Mehta and S. N. Chowdhary. 1971. *Somnath-1956 (Monograph I)*. Ahmedabad and Vadodara: Department of Archaeology, Gujarat State and The Maharaja Sayajirao University of Baroda.
- Patel, A. K. 1989. *Vertebrate Archaeofauna from Nagwada: A Preliminary Study* (Unpublished M.A. Dissertation). Vadodara: Department of Archaeology and Ancient History, The Maharaja Sayajirao University of Baroda.
- Patel, A. K. 2008. "New Radiocarbon Determinations from Loteshwar and Their Implications for Understanding Holocene Settlement and Subsistence in North Gujarat and Adjoining Areas". In E. M. Raven (Ed.). *South Asian Archaeology 1999* (Proceedings of the Fifteenth International Conference of the European Association of South Asian Archaeologists, held at the Universiteit Leiden, 5-9 July, 1999) (123-134). Groningen: Egbert Forsten.
- Patel, A. K. 2009. "Occupational Histories, Settlements, and Subsistence in Western India: What Bones and Genes can tell us about the Origins and Spread of Pastoralism". *Anthropozoologica*, 44 (1): 173-188.
- Patel, B. 1992. *The Reappraisal of Chalcolithic Culture in North Gujarat*. (Unpublished M.A. Dissertation). Vadodara: Department of Archaeology and Ancient History, The Maharaja Sayajirao University of Baroda.
- Pathak, V. S. 1992. "Buffalo-Horned Human Figure on the Harappan Jar at Padri-A Note". *Man and Environment*, XVII (1): 87-89.
- Possehl, G. L. 1980. *Indus Civilization in Saurashtra*. New Delhi: B. R. Publishing Corporation.
- Possehl, G. L. 1992. "The Harappan Civilization in Gujarat: The Sorath and Sindhi Harappans". *Eastern Anthropologist*, 45 (1-2): 117-154.
- Possehl, G. L. 1994. *Radiometric Dates for South Asian Archaeology* (An Occasional Publication of the Asia Section): 1-122. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.
- Possehl, G. L. 1997. "The Date of the Surkotada Cemetery: A Reassessment in Light of Recent Archaeological Work in Gujarat". In J. P. Joshi, D. K. Sinha, S. C. Saran, C. B. Mishra and G. S. Gaur (Eds.). *Facets of Indus Civilization – Recent Perspectives- (Essays in Honour of Prof. B. B. Lal)* Vol. I (81-87). New Delhi: Aryan Books International.
- Possehl, G. L. 1999. *Indus Age: The Beginnings*. Philadelphia: University of Pennsylvania Press.
- Possehl, G. L. 2002. "The Early Harappan". In K. Paddayya (Ed.). *Recent Studies in Indian Archaeology* (112-128). Delhi: Munshiram Manoharlal.

- Rajesh, S. V. 2011. A Comprehensive Study of the Regional Chalcolithic Cultures of Gujarat (Unpublished PhD Thesis). Vadodara: Department of Archaeology and Ancient History. The Maharaja Sayajirao University of Baroda.
- Rajesh, S. V. and G. S. Abhayan. 2019. *Archaeological Excavations at Juna Khatiya (2018-2019): An Early Harappan Cemetery in Kachchh District, Gujarat, Western India*. 48th International Annual Conference on South Asia (17-20 October, 2019). Madison – Wisconsin.
- Rajesh, S. V., C. Gadekar, P. Ajithprasad, G. S. Abhayan, et.al. “Pre-Prabhas Assemblage in Gujarat. An Assessment based on the Material Culture from Somnath, Dadrana and Janan”. In Dennys Frenez, Gregg Jamison, Randall Law, Massimo Vidale and Richard H. Meadow (Eds.) *Walking with the Unicorn. Social Organization and Material Culture in Ancient South Asia. Jonathan Mark Kenoyer Felicitation Volume* (499-521). Oxford: Archaeopress.
- Rajesh, S. V., K. Krishnan, P. Ajithprasad and V. H. Sonawane. 2013. “Evaluating the Anarta Tradition in the Light of Material Culture from Loteshwar and other Sites in Gujarat”. *Man and Environment*, XXXVIII (2):10-45.
- Rajesh, S. V., Krishnan, K., Ajithprasad, P., and Madella, M. 2013. “Pre-Prabhas Assemblage from Gujarat, Western India”. *Heritage: Journal of Multidisciplinary Studies in Archaeology*, 1: 181–209.
- Rajesh, S. V., P. Sukumaran and K. Krishnan. 2016. “Scenario of Chalcolithic Site Surveys in Gujarat”. *Pakistan Heritage*, VII: 1-34.
- Rajesh, S.V. and K. Krishnan. 2017. “Roots of Sorath Harappans: A Study Based on the Re-analysis of Ceramics from Padri and Its Surroundings in Gujarat, Western India”. In Manmohan Kumar and Akinori Uesugi (Eds.) *Harappan Studies: Recent Researches in South Asian Archaeology. Vol. 2.* (83-101). New Delhi: Aryan Books International..
- Rao, L.S., N.B. Sahu, P. Sahu, U.A. Shastry and S. Diwan 2003. “Unearthing Harappan Settlement at Bhirrana”. *Puratattva*, 34: 20-24.
- Rao, L.S., Nandini, B. Sahu, P. Sahu, S. Diwan and U.A. Shastry 2004. “New Light on the Excavation of Harappan Settlement at Bhirrana”. *Puratattva*, 35: 60-68.
- Rao, S. R. 1979. “Lothal: A Harappan Port Town, 1955-62”. *Memoirs of Archaeological Survey of India, No. 78. Vol. 1.* New Delhi: Archaeological Survey of India.
- Rao, S. R. 1985. Lothal: A Harappan Port Town, 1955-62. *Memoirs of Archaeological Survey of India, No. 78. Vol. 2.* New Delhi: Archaeological Survey of India.
- Sankalia, H. D. 1965. Excavations at Langhnaj: 1944-63 (Part I) *Archaeology*. Poona: Deccan College Postgraduate and Research Institute.
- Sant, U., T.J. Baidya, N.G. Nikoshey, N.K. Sinha, et.al. 2005. “Baror - A New Harappan Site in Ghaggar Valley - A Preliminary Report”. *Pura-*

*tattva*, 35: 50-59.

- Shaffer, J. G. 1992. "The Indus Valley, Baluchistan, and Helmand Traditions: Neolithic Through Bronze Age". In E. Ehrich (ed.). *Chronologies in Old World Archaeology* (441-464). Chicago: University of Chicago Press.
- Shinde, V and S.B. Kar. 1992. "Padri Ware: a New Painted Ceramic Found in the Harappan Levels at Padri in Gujarat". *Man and Environment*, XVII (2): 105-110.
- Shinde, V. 1991. "A Horn-Headed Human Figure on a Harappan Jar from Padri, Gujarat". *Man and Environment*, XVI (2): 87-89.
- Shinde, V. 1992a. "Excavations at Padri- 1990-91: A preliminary Report". *Man and Environment*, XVII (1): 79-86.
- Shinde, V. 1992b. "Padri and the Indus Civilization". *South Asian Studies*, 8: 55-66.
- Shinde, V. 2006. Padri: "The Early Harappan Site in Gujarat". In D. P. Sharma and M. Sharma (eds.). *Early Harappan and Indus-Sarasvati Civilization*. Vol. I: 151-158. New Delhi: Kaveri Books.
- Shinde, V. and E. Thomas. 1993. "A Unique Harappan Copper Fish Hook from Padri, Gujarat". *Man and Environment*, 18: 145-147.
- Shinde, V., T. Osada, M.M. Sharma, A. Uesugi, et.al. 2008. "Exploration in the Ghaggar Basin and excavations at Girawad, Farmana (Rohtak District) and Mitathal (Bhiwani District), Haryana, India". In T. Osada and A. Uesugi (Eds.). *Occasional Paper 3: Linguistics, Archaeology and the Human Past* (77-158). Kyoto: Indus Project, Research Institute for Humanity and Nature.
- Shinde, V., T. Osada, Manmohan Kumar and A. Uesugi. 2008. "A Report on Excavations at Farmana 2007-08". *Occasional Paper 6: Linguistics, Archaeology and the Human Past* (1-116). Kyoto: Indus Project, Research Institute for Humanity and Nature.
- Shinde, V. 1998. "Pre-Harappan Padri Culture in Saurashtra: The Recent Discovery". *South Asian Studies*, 14: 173-182.
- Shirvalkar, P. 2008. *Pre-and Early Harappan Cultures of Saurashtra with Special Reference to Gulf of Cambay Region*. (Unpublished Ph.D. Thesis). Pune: Deccan College Post Graduate and Research Institute.
- Sonawane, V. H. and Ajithprasad, P. 1994. "Harappan Culture and Gujarat". *Man and Environment*, XIX (1-2): 129-139.
- Sonawane, V.H., P. Ajithprasad, K.K. Bhan, K. Krishnan, et.al. 2003. "Excavations at Bagasra 1996-2003: A Preliminary Report". *Man and Environment*, XXVIII (2): 21-50.
- Yadav, M. 2005. *A Typological Study of Chalcolithic Ceramic Assemblage from Loteshwar, North Gujarat* (Unpublished M. A. Dissertation). Vadodara: Department of Archaeology and Ancient History, The Maharaja Sayajirao University of Baroda.