



VII.13. Sisupalgarh

INTRODUCTION

Sisupalgarh is a walled city of the early historic period, measuring over one kilometre square and representing one of the most regularly organized urban centres from that era in the subcontinent. The earthen ramparts are still well preserved and show the presence of stone and brick walls at the top of the rampart. There are eight formal brick and stone gateways, two on each side of the rampart placed at an equal distance. Near the centre of the walled city there is monumental architecture in the form of free-standing stone columns and several stone-lined reservoirs (tanks). The formal gateways of the city indicate the presence of a regular grid of roads within the urban centre, a configuration confirmed by geophysical survey and excavation.

HISTORY OF THE SITE

The original name of the site is not known and there are no inscriptions from the site itself that indicate its ancient name. The Hathigumpha inscription at Udayagiri, a cave site located eight kilometres away from Sisupalgarh, refers to a city called “Kalinganagari” which is likely to be the ancient name of Sisupalgarh given that it is the largest known archaeological site in the region. Some researchers suggest that Sisupalgarh also may be identified with Tosali, mentioned in the edicts of the Mauryan ruler Asoka at Dhauli and Jaugadh. The association of the site with Sisupal who, according to the *Mahabharata*, was slain by Krishna, is of unknown origin.

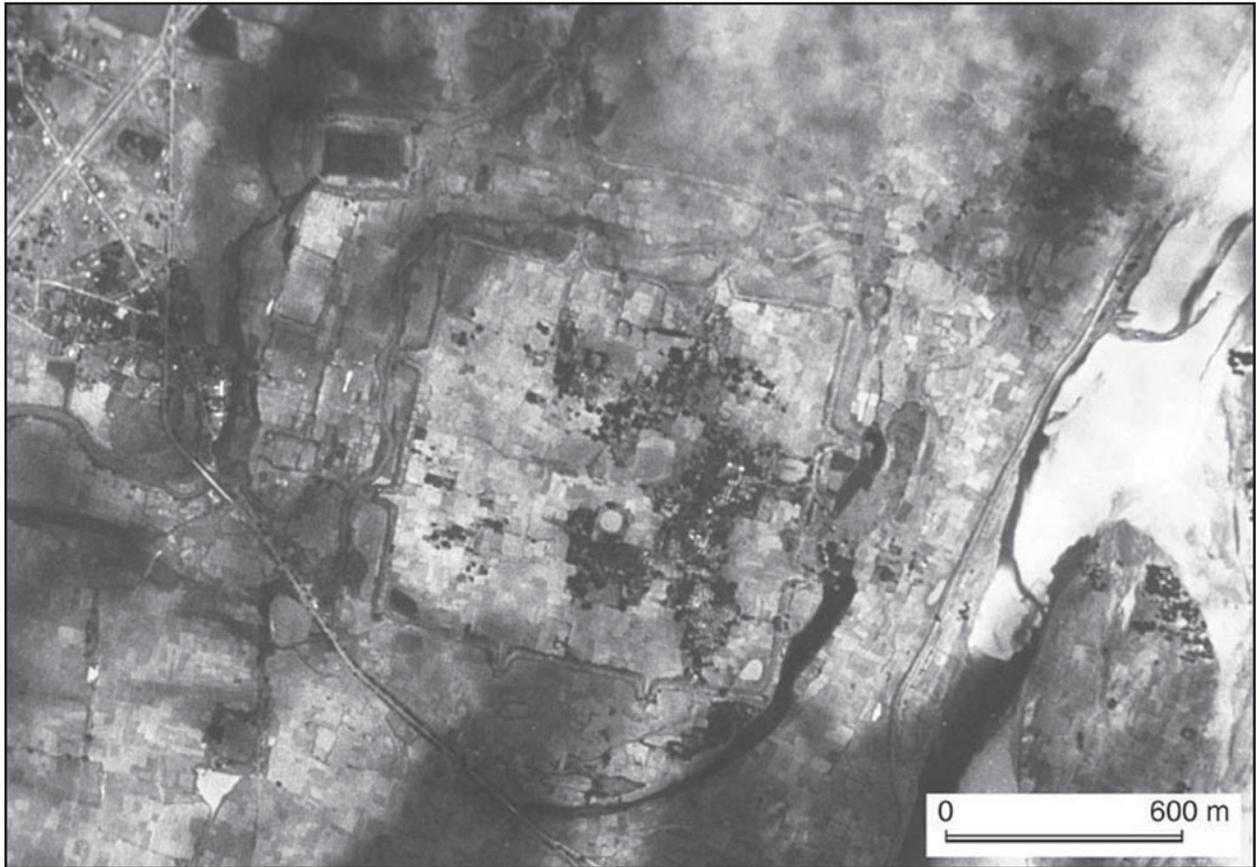


Fig. 1. Aerial view of Sisupalgarh, 1948 showing the fortification walls and gateways, with moat on northern and western sides (courtesy: Archaeological Survey of India).

REGIONAL PLACEMENT

Sisupalgarh is located on an alluvial plain between the Daya River and a gradually sloping laterite upland to the west. This laterite upland would have provided stones for construction along with timber, fuel wood, wild animals, and other forest products. The Daya river separates into two rivulets approximately 2 kilometres downstream from the walled settlement, a factor that may have provided some additional protection or riverine access to the site.

The archaeological record of Odisha as a whole includes a long trajectory of human activities including Paleolithic, Mesolithic,

Chalcolithic, and Neolithic sites (such as Golbai Sasan, located 35 kilometres southwest of Sisupalgarh), as well as towns and cities of the early historic period. Sisupalgarh is contemporaneous with the early historic cities of Jaugadh (130 kilometres southwest) and Radhanagar (65 kilometres northeast) and two significant religious establishments in the immediate vicinity. The Buddhist site of Dhauri is four kilometres southwest of Sisupalgarh, where there is a small number of caves and an Asokan inscription of the 3rd century BC. At the twin hills of Khandagiri and Udayagiri, located eight kilometres northwest of Sisupalgarh, there are numerous rock-cut caves of the early

historic period along with the Hathigumpha inscription attributed to the first-century BC ruler Kharavela.

Much of Odisha remains underexplored for the early historic period relative to other regions of south Asia. Other urban sites are known to the north (such as Tamluk and Chandraketugarh in West Bengal) and south (Dantapali in Andhra Pradesh), but no comprehensive archaeological reports have been produced for those sites. Many fortified settlements can be found in western Odisha but they similarly not been extensively investigated. Recent investigations in coastal Odisha have identified rural settlements such as Narisho (Taluka Balipatana, Dist. Khorda) and town-sized sites with formal rampart configurations similar to Sisupalgarh's, such as Talapada and Lathi. Future research at those sites will provide an opportunity to investigate regional integration of social, political, and economic activities in the Early Historic period.

Odisha also was very active in the medieval period, with substantial temple constructions accompanied by settlements at Bhubaneswar, Jajpur, Konark and Puri. During this era, fortified settlements such as Sisupalgarh, Jaugadh and Radhanagar were eclipsed by those new population centres, indicating a change of focus away from fortified settlements to the expression of political and social investment in religious and pilgrimage centres.

RESEARCH HISTORY

In 1948, the site of Sisupalgarh was excavated by B.B. Lal of the Archaeological Survey of India as one of the first research projects undertaken in independent India. Additional excavations in the northern exterior suburbs of the site were undertaken by B.K. Thapar in 1950, and a small clearing operation of the westernmost north

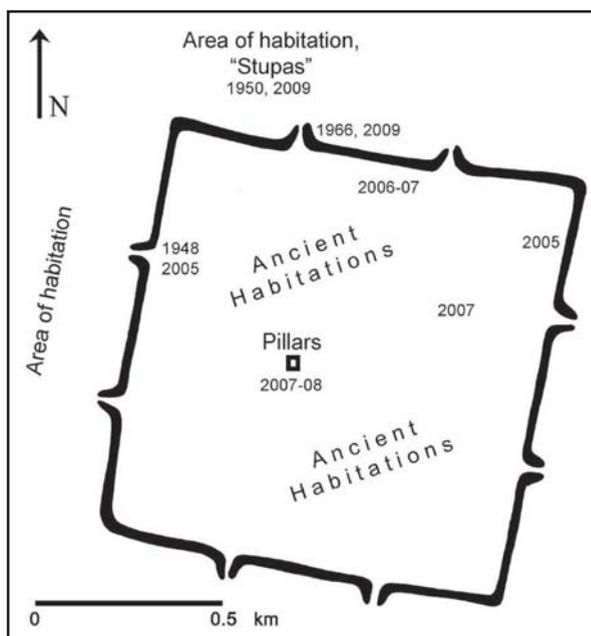


Fig. 2. Outline of the fortification walls of Sisupalgarh illustrating areas of ancient remains and years in which excavations were taken out in the various locations.

gateway was carried out by the Orissa State Department of Archaeology in 1966. Computer-design reconstructions of the monumental architecture (gateway and pillars) have been published by M. Brandtner and P. Yule. Subsequent investigations include a systematic survey programme from 2001-03 by M.L. Smith (University of California) and a joint excavation project from 2005-09 by R.K. Mohanty (Deccan College) and M.L. Smith (University of California).

CHRONOLOGY

Within the rampart, Sisupalgarh has a 5 to 6.5 metres thick cultural deposit indicative of many centuries of continuous occupation. Much of the excavation at the site has been in the uppermost two metres of the deposit because of changes in the water table that have resulted in the lowest levels of the site now being inundated. However,

concerted efforts to dig deep soundings utilizing pumps to remove the subsurface water were undertaken in 1948 and again in the more recent excavations which reached natural soil in several areas. These deep soundings have provided a complete depositional sequence of artifacts and architectural remains.

The relative dating of the site has been done on the basis of Rouletted Ware, coins, semi-precious stone beads, metal objects, and a sealing in Brahmi script which indicate that Sisupalgarh participated in regional trade in the early historic period. Radiocarbon dating has revealed that the initial occupation of the site can be identified as having taken place in the mid-first millennium BC. However, the site does not appear to have an in situ Neolithic component as compared with materials from nearby sites in Odisha such as Golbai Sasan. Excavations under the northern and western gateways of Sisupalgarh indicate that the encircling rampart of the site was placed directly over pre-existing settlements of the mid-first millennium BC, but that those settlements were already utilizing the distinctive high-fired and slipped pottery that continued in use throughout the first half of the site's occupation.

Around the 3rd-4th centuries BC there was a significant shift in manufactured goods with the appearance of low-fired pottery in medium red fabric as well as the first appearance of bricks, tiles, and terracotta ornaments. These artifact types also correspond to the upper two metres of deposits where the architectural plans of laterite-block stone and brick structures can be traced. The archaeological investigations confirm that in this era, the entirety of the walled area was full of habitation remains as seen through surface collections and the remains of architecture whenever the subsurface is probed. The occupational density of both the interior and

the exterior indicates a projected settlement size that at times likely numbered 25,000 or more individuals.

Investigations throughout the site indicate that in the subsequent latest period of occupation there was a thin (less than 10 cm) layer of early medieval pottery, a period of use that would have coincided with the shift of population away from Sisupalgarh and the development of Old Town Bhubaneswar as a religious centre less than two kilometres away.

ARCHITECTURE

Sisupalgarh is graced with monumental and domestic architecture indicative of large-scale planning, sophisticated engineering skills and a densely populated urban environment. The monumental architecture at the site consists of the encircling perimeter wall, the eight formal gateways, and the pillar structures and stone-lined reservoirs (tanks) in the centre of the site. The site's encircling perimeter wall measures 1.1 kilometre on each side, with a cross-section measuring 33 metres wide at the base and up to 9 metres above the surrounding plain. On the northern side of the site, the interior deposits reach up to the top of the rampart, indicating that this portion of the site was the longest-lived.

The early stages of rampart construction consisted of earth that had been dug out from the exterior, a process that formed a surrounding moat that is still visible on the northern and western sides of the site. On the western side of the site, this moat also joins a small tributary, the Gangua nala. Excavated cross-sections of the rampart show that it was continually augmented throughout the site's occupation with bands of laterite gravel and earthen fill that included domestic debris such as pottery and brick fragments. The upper levels of the rampart also had walls of stone and brick, although these were



Fig. 3. Monumental gateway, excavated in 1948.

not uniform throughout the site and may have been the result of neighbourhood-level restoration and civic responsibility.

The formal gateways that are visible today consist of massive laterite blocks each measuring up to 1.8 metres in length, with up to 18 layers of such blocks still preserved lining the passageways of the gates and in some cases topped with up to 27 courses of bricks. In 1948 the northernmost of the western gateways was completely exposed, revealing a main passageway 7 metres wide with two restricted entry points with door sockets, along with staircases leading to the top of the rampart. There also was a broad landing platform that led from the site's western moat to the gateway, and an ancillary passage within the gateway that would have permitted pedestrian traffic to enter the site when the main passageway was closed.

In 2009, the westernmost of the northern gateways that been previously partially cleared in 1966 was excavated. Four major construction episodes were identified, each one increasing the size and grandeur of the gateway and showing a continued investment in the city's infrastructure.

The monumental pillar area consists of monolithic laterite uprights in the centre of the site, a configuration locally known as "Solakumba" (sixteen pillars). Even by the 1940s, however, only 14 of these pillars were still visible in the two extant groups: a linear arrangement of ten pillars with a cluster of four pillars in a square at the eastern side, and four additional pillars in a random arrangement on an adjacent mound. Excavations of the pillar area in 2008-09 revealed that the 100-metre mound of the pillar area contained numerous other



Fig. 4. Another view of gateway.

broken-off pillars indicative of an apsidal arrangement. The opening of this structure was to the east, where there was also recovered one white sandstone *chandrashila* (semi-circular doorstep).

The excavations at the pillar mound also contained the remains of other structures, two of which were partially exposed. One rectilinear structure immediately northwest of and adjacent to the pillars had seven preserved courses of regularly cut laterite blocks in a configuration distinct from the site's domestic architecture and indicative of a special-purpose building (possibly a hermitage or a monastery). Another

structure on the western side of the mound was also rectilinear and consisted of three preserved courses of different-sized laterite blocks surmounted with bricks in a configuration that was similar to the site's domestic architecture (perhaps a store-house or residence).

The dating of the pillar mound is difficult to assess as the pottery that comprised the mound was all pulverized, redeposited material and there were virtually no organic remains. Only one radiocarbon date was recovered in the pillar mound area, providing a date of the second century BC for the lower levels of the monastery-like structure. Thus the final pillar configuration



Fig. 5. Monolithic pillars of laterite stone at centre of the site.

is likely to be of at least the early centuries AD if not later.

Two other areas of stone pillars also are evident in the central portion of the site. To the southeast of the main pillar group on the western exterior flank of the central bunded pond, there is one standing pillar and the stumps of at least two additional pillars that would have resulted in a square configuration. To the east of the main pillar group on a separate mound there are several pillar fragments that have been exposed by recent agricultural and building activity. These additional pillar groups indicate the presence of substantial engineering investment and architectural expertise in numerous monumental buildings at the site.

The reservoirs of the site also indicate a considerable effort of engineering and site organization. The rectilinear stone-lined reservoirs measure up to 25 metres in size, and the circular earthen-bank reservoir in the centre

of the site measures 75 x 75 metres in size. Adjacent to one reservoir is a stone trough with an elephant carving that is stylistically similar to carvings from Konark (9th century AD) indicating some continued occupation of the site; the other reservoirs could not be dated but still hold water and are used by the local villagers. In each of the four interior corners of the site there also are shallow depressions measuring up to 100 metres in size that would have collected water in the rainy season. In addition to these reservoirs there are several dozen square wells and ring wells within the rampart, similar to those found at other early historic sites but having solid rings of laterite in the upper courses. These wells probably constituted a neighborhood level of water provisioning, and some of them continue in use today.

The domestic architecture consists of house structures of varying sizes. The largest excavated domestic constructions, measuring 7.5 x 10

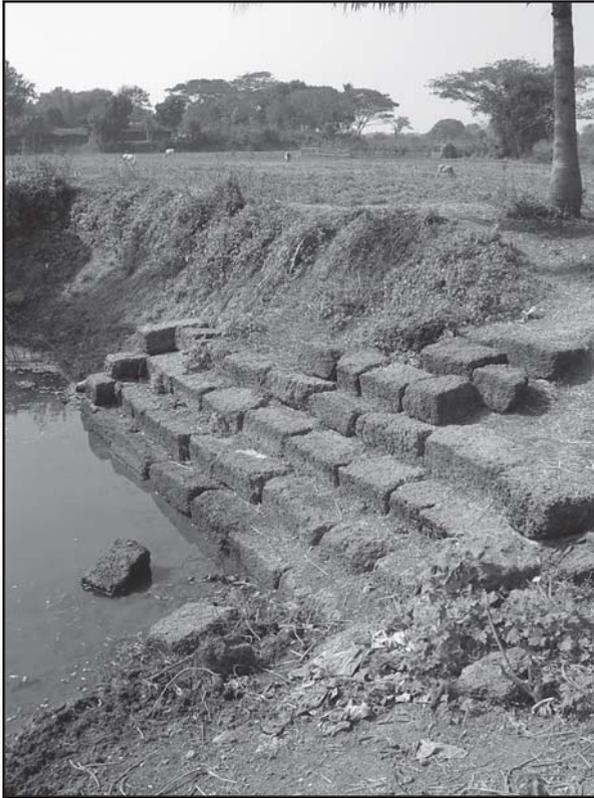


Fig. 6. Reservoir (tank) with stone steps.

metres in size, have foundations of rectilinear laterite blocks that would have been the basis for mud (pisé) walls. The rooms within these structures are arranged with a verandah facing the street. These well-made structures can be contrasted with smaller domestic structures

whose foundations were made from reused materials such as broken bricks and a variety of sizes of laterite blocks. Even in these more modest buildings the largest laterite blocks measured over one metre in size. The quarries for these blocks would have been located in the laterite upland to the west of the site at least 500 metres distant from the urban settlement. The movement and placing of these blocks, which today require eight men, indicate cooperation in home construction.

Some structures would have had tile roofs, indicating a robust architecture of walls and cross-beams that would have been made of organic material. No tile roofs have been found complete, and tiles are primarily found reused as paving material in the latest phases of occupation. Domestic structures were surrounded by empty spaces in which many activities probably would have taken place in the temperate climate of eastern India. These open spaces contained large amounts of discarded pottery and other refuse such as tiles, bricks, and laterite blocks that may have been stockpiled by the residents in anticipation of future building projects and architectural repairs.

Sisupalgarh is the most regularly laid out of the known urban centres of the Indian subcontinent. The site organization can be

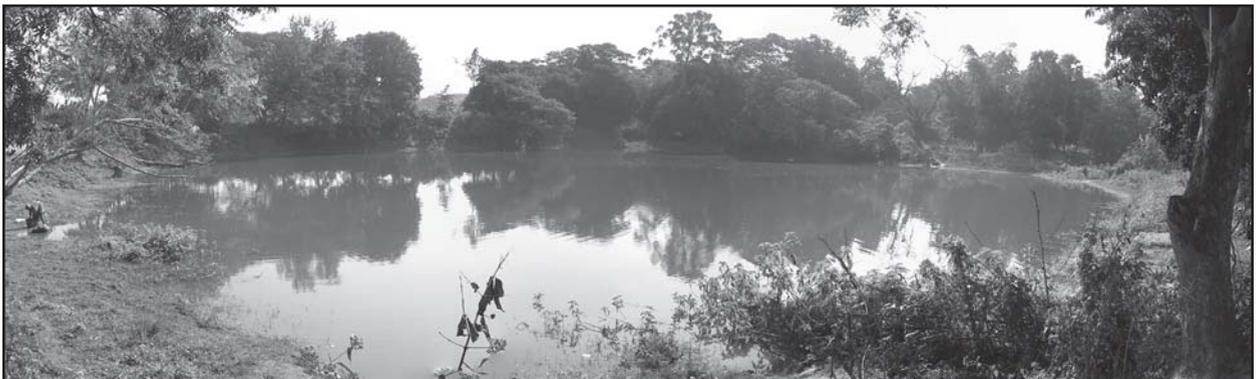


Fig. 7. Bunded pond at centre of site.



Fig. 8. Areas of ancient domestic habitation from excavations from 1948 (background) and 2005 (foreground).

compared with the text of the *Arthashastra* of Kautilya (which also dates to the early historic period, perhaps as early as the 4th century BC) and which indicates the desirable particularities of a fortified site's ramparts, gateways and avenues (Lal 2011:34-35). These descriptions tally by and large with the site of Sisupalgarh, although the site's eight gateways number fewer than the prescribed dozen of the *Arthashastra*. Geophysical surveys and excavations have confirmed that there are broad streets connecting each of the eight monumental gateways. Excavations of domestic structures within the grid plan however illustrate that there is not

always a regular orientation of the individual houses. On the western side of the site, structures were lined up alongside one of the principal streets. However, on the northern side of the site, houses appear to have been constructed with an idiosyncratic layout of size, shape and doorway placement.

Extensive "suburbs" also are evident through archaeological remains of pottery, bricks and tiles in the regions to the north and west of the site, although these areas are now covered for the most part with modern housing. Excavations in 1950 and in 2009 in the northern exterior of the rampart revealed the remains of domestic

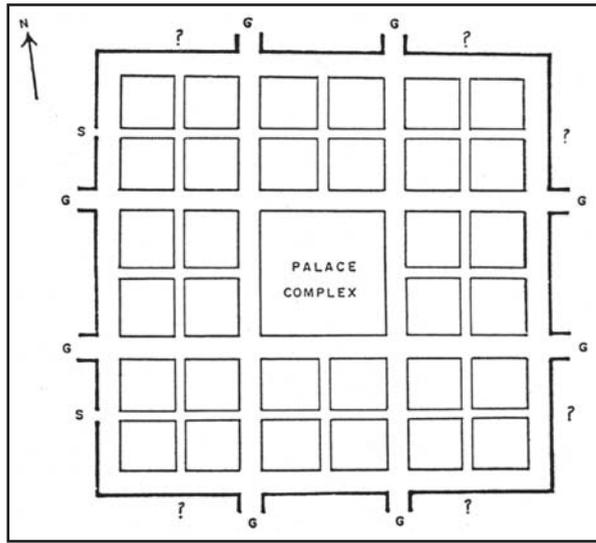


Fig. 9. Sisupalgarh: Possible layout of the site as interpreted from Arthashastra (Courtesy Archaeological Survey of India).

habitation such as trash deposition and jumbled and broken laterite blocks possibly stockpiled for construction. More importantly this exterior area was revealed to have circular, mud-topped constructions (measuring 6.5 to 10 metres in diameter) that had a stupa-like configuration. The presence of Buddhist or Jain activities also is attested through the prior recovery of sculptures in the vicinity that are now housed in the Orissa State Museum.

ECONOMIC ACTIVITIES

The inhabitants of Sisupalgarh had access to a wide variety of objects that would have been produced outside of the city, such as stone blocks, bricks, and tiles for construction. Food items also would have been brought into the city, as seen in the abundant quantities of rice and fish bones found in the excavations. Starting in the 3rd-4th centuries BC there also was an abundance of moulded terracotta ornaments such as bangles, pendants and ear ornaments that were found in the hundreds in the course

of the excavations of the domestic architecture. The excavations also revealed the presence of some wild animal remains, indicating that the surrounding regions remained forested through the first millennium BC.

The pottery of the site indicates a continuous occupation with a significant shift in production practices at the midpoint of the cultural sequence. In the initial phases of occupation, pottery was highly fired and carefully slipped including large black incurved-rim bowl forms with a pointed boss at the centre (“knobbed ware”) as well as jar forms with glossy red slip. These vessels were sometimes marked with post-firing graffiti that may have been marks of production or ownership. By around the 3rd century BC, the corpus of pottery shifted to low-fired red wares in medium sandy fabric, utilizing new designs for jars such as appliqué thumbprints and rope design, and new forms for serving vessels including ledge-rim bowls and rapidly made string-cut cups. Graffiti marks ceased and the only fine ware was Rouletted Ware, although this design has been recovered only in very small numbers.

The presence of knobbed ware and Rouletted ware indicates that Sisupalgarh was tied into a long-distance trade sphere. These wares have been found at numerous other sites along the eastern coast of the subcontinent, from Tamruk in the north as far south as Arikamedu in the south, as well as in Southeast Asia. Sisupalgarh had a monetized economy as suggested both in the regional inscription data and in the recovery of coins at the site. In the Hathigumpha inscription, Kharavela expressed the cost in coins of repairing the fortification wall after a storm. Few coins were found in the excavations, however, indicating that many transactions may have been carried out through barter or through mutual obligation. Only two



Fig. 10. Terracotta artefacts from habitation areas of Sisupalgarh including rings, bangle fragments, ear ornaments and pendants.

items with script have been found: a sealing with a few letters of Brahmi from excavations on the northern part of the site, and one Kushan gold coin with Brahmi letters indicative of a royal name from the 1948 excavations on the western portion of the site.

Artefacts indicative of regional exchange at Sisupalgarh include iron objects (nails, knives, arrowheads, sickles and other utilitarian items), copper objects (bangles, sticks, and fishhook), stone beads (agate, carnelian, jasper, and onyx) and stone querns made of materials such as chromite that are not locally available. The raw materials or the finished products themselves were likely to have come down the Mahanadi river from western Odisha. Regional production centres for pottery, bricks, tiles, terracotta ornaments and other fuel-intensive crafts must also have existed in the immediate forested hinterlands of the site but the locations of these production centres have not yet been identified.

In counterbalance to the widespread evidence of consumption, there are few signs of production in the urban sphere. On the western side of the site in the habitation area, finds of two terracotta coin-moulds and several kilos of 10-cm size crucibles along with a small proportion of mica flakes suggest the presence of some metal-working or other industrial

activity although no furnaces or other large-scale production facilities were located within the rampart walls. In a limited excavation on the northern exterior of the rampart, one metal-working hoard consisting of a single small pot of broken bangles and wire fragments indicates the stockpiling of metal for eventual re-use.

END OF SISUPALGARH'S OCCUPATION

Based on the pottery and architecture, the last major phase of occupation at Sisupalgarh appears to have ended by around the 6th-7th centuries AD, just at the time when the new ritual centre of Old Town Bhubaneswar was becoming established two kilometres to the northwest. The shift of population to Old Town probably took place over several generations, in which people elected to move closer to the new zone of ritual activity.

The uppermost and surface layers of Sisupalgarh contain pottery similar to that found at early medieval (9-11th century) sites elsewhere in the eastern subcontinent. Although there are no architectural remains of this period at the site, the presence of early medieval pottery demonstrates that some occupation continued until the present day, although in much reduced numbers. A modern village, surrounded by agricultural fields, currently occupies the northeastern and central portion of the site in which some of the residences have made use of archaeological material in their construction. This traditional habit of reusing construction material indicates a long continuity of use at this site as is the case in many other early historic settlements.

HERITAGE STATUS AND SITE CONDITION

Sisupalgarh is located on the outskirts of Bhubaneswar, the capital of Odisha state. This placement has both beneficial and detrimental

aspects. The easy accessibility of the site provides an opportunity to increase visitation and develop a tourism programme for this well-planned ancient city so that visitors may enjoy and appreciate the impressive gateways and ramparts along with the unique configuration of

monolithic pillars and other structural remains. However, the demand for housing in the outskirts of the growing city also has resulted in the conversion of many agricultural fields to housing areas, including those encompassed in Sisupalgarh's walled area.

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