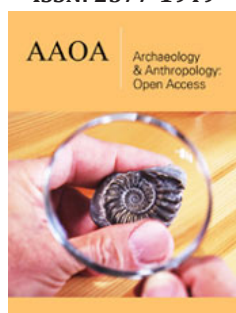


Burial Archaeology: Harappan Graves in India and Need of a Policy Document

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Abstract

The paper reviews the mortuary archaeology of the Harappan civilization and evaluates various natural and anthropogenic processes responsible for the destruction of graves. Since the first excavation at Mohenjo-daro in 1921-22, numerous Harappan sites have been excavated and a number of sites have gone into oblivion. Who were the ancestors and where are the descendants of Harappans remains a subject of discussion. With time new methods of excavation and scientific approaches are being introduced to reveal maximum data. By the time the branch of burial archaeology with an emphasis on ancient DNA is fully developed, we need to have the graves to be investigated to know who were Harappans and where have they migrated? A policy document for selected excavation, conservation of the finds, protection of the sites, heritage awareness, public outreach programs, and local community participation, besides a sustainable approach towards sites, is needed.


Keywords: Harappan graves; Burials; Cemetery; Skeletons; Conservation

Introduction

Burials are an important cultural component of the past that conveys the commemorative and symbolic behaviour of human society. Cemeteries may or may not be located close to habitations but are crucial to the transmission of social memory. Graves are also one of the major sources for understanding the socio-economic lifeways of a community. Grave goods not only throw light on the material culture of ancient peoples but also exhibit their spiritual culture, belief system, place in the society (hierarchy), dietary pattern, pathology, culture-contact, migration, and origin. In other words, the burials have greater value in understanding a shared ancestral origin and the deep-rooted death rituals. The graves and mortuary practices enlighten our understanding of a greater diversity of past cultural, behavioural, ecological, and historical phenomena [1]. Burials carry ritualised human remains and heavy symbolic behaviour of human society [2]. It offers a great source for understanding the concept of life after death, ancestral worship, nature of the dead, mode of disposals, burial architecture, health, wealth, gender, mortality rate, migration pattern, and socio-economic condition of society. The skeleton characterizes the life history, dietary history, lifestyle, ancestry, violence and trauma, and provides other key biological feature to construct the demographic profile of a group of populations [3]. Harappan graveyards hold the records of the mortuary tradition and life history of India's first urban society. The ancestry of the Harappan people is still obscure, tracing their origin and migration has been a subject of research for years. DNA studies of ancient skeletons have come into vogue in recent years, the papers on Ancient DNA from a skeletal find at Rakhigarhi [4,5] have generated pace in the studies of the Harappan graves. The Harappan cemeteries are generally located outside the habitational settlements. Locating those and relating them to habitation has been an ongoing process and comparatively later exercise. Thus, it is important to record the grave goods in detail to classify the grave to a particular period until the AMS dates are obtained from the bone. In the last hundred years, more than 2000 sites have been discovered and only a handful of sites are known to have graves. Unlike habitation sites which are over the surface, graves are made under surface thus the challenge in identification after millennia of abandonment. Many of the graves have been

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noticed due to natural erosional processes or as accidental finds. In the last two decades, a number of Harappan graves have been excavated, which has the potential to add scientific knowledge to our existing understanding of 1st urbanization. This paper has three parts. The first section presents a brief review of the Harappan burials and gives a background to the nature and general features of the burial types, grave goods and location patterns. The second section outlines the various processes responsible for the burial destruction. The third proposes a model for safeguarding burials and how burial sites could promote heritage with public participation.

Harappan Burial Archaeology

The Harappan/Indus-Saraswati civilization is well known for its sophisticated town planning, civic architecture, public and private sanitation amenities, graded urban centres, robust socio-economic-political systems, writing system, standardized weights, seals, metallurgy, lapidary activities etc. They had large networks of cities/towns/villages that prospered in an area of over two million square km covering present-day south-eastern Afghanistan, Baluchistan, Sindh, Cholistan, Punjab of Pakistan, and Indian provinces of Punjab, Haryana, Rajasthan, Gujarat, and Western Uttar Pradesh [6]. Important Harappan metropolises such as Harappa, Mohenjo-daro, Dholavira, Rakhigarhi, Kalibangan, Bhirana, Lothal, Ganweriwala are considered the regional centres of the Harappan civilization [6,7]. Three different cultural phases have been identified: Early Harappan (3300-2600 BCE), Mature Harappan (2600-1900 BCE), and Late Harappan (1900-1700 BCE) [7,8]. Harappans followed a simple burial and offered day-to-day utilitarian grave goods devoid of individual extravagant gigantic tombs or monuments unlike the Egyptians or Mesopotamians [9].

Harappan burials

Grave goods were offered in graves of all phases of the Harappan civilization. Each phase has developed its own burial patterns albeit with continuity of certain traditions and variations of burial customs over a period of time. The location for cemeteries used to be at designated places a little away from the habitation area. The graves were more organized than discrete. The cemeteries have been discovered by the major Harappan cities and towns. So far about 30 sites are known with primary or secondary burial(s) of different forms. The largest concentration of burials has been recorded from the Indus basin, dried Ghaggar-Saraswati basin, Yamuna River basin, and various parts of Gujarat. Prabhakar [10] observed three important burial clusters from 18 urban Harappan sites: (1) Baluchistan and Sindh with the practice of post-cremation urns, (2) Punjab, Rajasthan, Haryana, and Uttar Pradesh represent with extended inhumation and multiple burial practices, and (3) Gujarat shows multiple burial patterns and more burial diversity in the Kachchh region.

Previous works

The Harappan burial findings are reviewed by a few scholars [9-17]. Brief summaries are also done by Dibyopama et al. [18] and Bal [19]. Burials are reported from the site of Harappa [9,20-

24], Mohenjo-daro [20,21,25,26] Chanhudaro [27], Rupar [28] [29], Chandigarh [30], Kalibangan [31-34], Tarkhanwala Dera [35,36], Rakhigarhi [37-40], Shinde et al. [4,6], Farmana [41-44], Dholavira [45,46], Lothal [47,48], Sohar Damb [49], Sahi Tump [50] and Allahdino [51]. Early Harappan burials are known from Mehi and Dabar-kot [50], Sukagen-dor [52,53], Nagwada [54], Santhali [17], Surkotada [55,56] and the recently excavated site of Juna Khatiya in Kutch, Gujarat (S.V. Rajesh and G.S. Abhayan: personal communication 2021). The Late Harappan burials are known from Harappa Cemetery H [21-23], Bhagwanpura [57], Bedwa [58], Puthi Seman and Bhorgarh [59] and Dher Majra [60]. Excavations at all the above-mentioned sites have provided crucial information on the nature and characteristic features of the burial customs.

Early Harappan burials

The origin of the systematic Indian burial can be traced back to the Mesolithic burials of Langhanaj (Gujarat), Ganga plain and the early agricultural society of Baluchistan, Vindhya, and Aravalli [61]. In south Asia, Mehrgarh has seen the earliest evidence of domestication, agriculture, and settled life along with several cultural features including burial practices. Burials are found in Mehrgarh right from Period-I dated to 7000-5300 BCE, which is considered as prelude to the early Harappan burial cultures. Mehrgarh has yielded 318 graves from all nine phases [62]. The burial goods consist of seashell bead ornaments, perforated natural shells, lapis lazuli, turquoise, calcite, anklets, headbands, dentalium beads, Mother of pearl pendant, rounded lapis lazuli beads, copper beads, Neolithic axe, and clay figurines. The early Harappan phase in Gujarat has yielded burials with and without grave goods. Ajithprasad [17] has discussed the regional variation in terms of burial pits, architecture, potteries, and associated burial goods amongst the early Harappan/Chalcolithic burials concentrated in Kachchh and North Gujarat. Double burials are not an uncommon feature. Burials found at Surkotada cemetery were of a unique type, evidenced by oblong pits covered with a capstone devoid of any human skeleton. Similar burial practices were also observed at Dhaneti in Kachchh with large stone slabs as capstones covering the burial pit and a heap of rubbles or cairn packing over the burial. The urn burials were a common burial type and contain fragments of human bone remains. The pot burials with shell bangles and painted potteries are found from Suktagen-dor, Dabar-kot, Periano-ghundai and Moghul-ghundai [52] and Juna Khatiya (S.V. Rajesh and G.S. Abhayan: personal communication 2022).

Mature Harappan burials

The Mature Harappan phase achieved various forms of urban development in sectors like town planning, civic and domestic architecture, economic activity, art, craft and technological advancement, production activity, a pattern of subsistence and consumption, cultural influence, and long-distance trade network. The prosperity of the Harappan can also be seen in the increasing numbers of burial goods and the complexity of mortuary practices compared to the early Harappan phases. The cemetery became an integral part of city planning. Standardization is marked in

terms of the nature of burial arrangement, better planning, layout, and burial architecture. The majority of the cemetery sites are known from the urban-suburban sites in the Indus-Ghaggar and Hakra river basins. Several primary burials were found to contain complete skeletal remains, and the dead bodies were placed in a pit in a supine position-oriented north-south direction. The secondary burials were recorded with a few bones. The symbolic burials lack skeletal remains but were found with pottery and ornaments [63]. The burial pits are rectangular or oval in shape and contain extended inhumation with skeletal remains with grave goods such as pottery and other funerary objects [64]. The pots were placed close to the head and the pit was filled with clay. Most of the burials were offered with varying numbers of pottery possibly according to the deceased individual choice of a collection of pottery or the economic condition of the family. Some burials have yielded burial architecture such as a rectangular-shaped pit laid with Harappan mud bricks, containing up to 70 pots (eg. Rakhigarhi). Such burials are attributed to influential individuals. A couple was found in a mudbrick lined pit with a thin layer of nodular calcium carbonate laid floor at Lothal. This grave had offerings of pottery [47]. Burials of this phase are well known from the site of Kalibangan, Rakhigarhi, Farmana, Rupnagar, Harappa, Mohenjo-daro, Lothal, Dholavira and many other sites (Table 1) In Harappa Cemetery R 37 “with rare exceptions, the bodies were extended from north to south, the head towards the north, and lay in graves each large enough to contain an average of fifteen to twenty pots, occasionally as many as forty” [65]. The grave goods consisted of pottery, various personal ornaments: toiletries objects, and some exotic items. Cases of pot burials show mixed bone remains of one or more individuals in the same pot.

Late Harappan burials

During the late Harappan phase people spread to new regions which gave birth to several regional cultures. Burial traditions of the late phase have been known from the Cemetery-H culture in Punjab, sites in the Ganga Yamuna doab and the dried riverbed of Saraswati. The overall burial types of the late and post Harappan phase at Bhagwanpura, Puthi Seman, Bedwa have shown extended inhumations in the supine or flexed position, facing left or right, and post-cremation pot-burials are unique to this period [10].

Cemetery-H

The Cemetery-H culture at Harappa originated in the Upper Indus River valley and spread to the different parts of Punjab and other neighbouring areas. Exploration in the Cholistan regions has reported 50 sites [66]. Cemetery-H has been divided into two stratum i.e., Stratum-I and Stratum-II. The Stratum-II pit burials were found with grave goods, whereas the Stratum-I had pot burials. Some of the individuals are found with only fragments of bones. The earlier excavations in the Cemetery-H revealed urn and inhuman burial in an extended position with head approximately towards the northern direction [21,67]. The post-Harappan culture such as Gandhar Grave culture [68], Painted Grey Ware culture [69,70] and the Copper Hoard culture might have some connection or continuity of the late Harappan burial traditions.

Sinauli

There have been a few claims that later Harappanians moved to the Ganga Yamuna doab region. Sinauli/Sanauli, a cemetery site attributed to having late Harappan tradition [71] is now interpreted as an Ochre Colour Pottery culture site (discoveryplus. in 9th Feb 2021). The inhabitants of the site could have been in contact with the Copper Hoard culture as an antenna sword and some anthropomorphic copper objects were recovered from some burials [10]. The site lies on the bank of Hindon river, a tributary of Yamuna, and located in the Baghpat district of western Uttar Pradesh. Sharma et al. [71] excavated 116 burials of which 52 were extended burials, 35 were secondary burials and 29 were symbolic burials. The burials were placed in a northwest-southeast orientation. The Sinauli burials are classified into three categories: 1. Primary burials; the body laid in a supine position and head facing east, 2. Secondary burials with fractional skeletal remains, and 3. Symbolic burials with only grave goods and the absence of human bones [70]. Some of the inhuman burials contain double burials or two male adults possibly brought to the site from elsewhere and rituals were performed at the site [71]. There is the representation of two urn burials, each having parts of three skeletons. The burials potteries of Sinauli consisted of bowls, jars, dish on stands, and pottery lid mounted with ox or bull figurines [14]. The Sinauli burials have also been reported with findings of copper objects, semi-precious stone beads, steatite, faience, gold beads, gold bangles, and also evidence of animal sacrifice along with the human burials [13,14,72]. The site was re-excavated under the directorship of Sanjay Manjul in 2018-19. This season exposed nine more burials and reported three chariots, evidence of wooden coffins, antenna swords, daggers, copper helmets and burial potteries among the material culture [73].

General features of Harappan burial types

Based on burial findings at Harappa and Mohenjo-daro, Sir John Marshall [20] categorised the burial remains into three types as - 1. Complete burial, 2. Fractional burial and, 3. Post cremation burials. Nath et al. [61] categorised them into four types: (i) primary internment either interred in supine or flex position (ii) fractional (iii) cremation and (iv) disposal in cinerary urn or ossuary. Primary burials are those which yield complete skeletal remains in a pit or build structures. Secondary burials or fractional burials are found with partial skeletal remains. Perhaps they practiced disposing of the body on a surface for a particular time period and then collect the designated bone remains for secondary burial. Symbolic burials are found only in the form of grave goods or without the physical remains of the dead. Compared to the Harappan demography, the number of burials reported is very limited. Also, the sizes of the cemeteries are smaller. There is every possibility that Harappans practiced cremation, about which we do not have archaeological evidence.

Burial offerings

The general features of the Harappan burials show variation based on their age and sex as adult individuals were offered pottery

and ornaments, however, infants and children were not offered the same. Female burials were observed with shell bangles on the left hand and some with copper or bronze mirror or some with steatite anklets [9]. Twenty-one skeletons at Mohenjo-daro were found with personal ornaments, shell and copper bracelets, finger-rings, faience beads, and a few skeletons were also recorded with vertebrate of an animal and shell inlay. Findings of painted ceramics are common and offered with a painted dish, water jar and bowl [20]. Graves at Harappa were found with personal ornaments worn by the dead such as shell bangles, necklaces, anklets of steatite or paste beads, copper finger-ring and earring. A few burials carried toiletries objects; handled copper mirrors, mother-of-pearl shells, and antimony sticks [20]. The cemetery R 37 belongs to the mature Harappan phase, which recorded impressions of wooden coffins and a few excavated burials were also accompanied by seashells, antimony rods, and bronze mirrors [65,74]. The Harappans offered a few precious metals as grave goods, whereas gold and other precious stone beads remained in circulation in society. The Harappan burial customs strengthened the significance of jewellery and symbols to define social and religious identity among the living [7]. burials have also been found associated with animal bones, including cattle and domestic dogs [21].

Location pattern of Harappan cemetery

The place for the grave was an essential feature of the regional town planning of the major urban cities and sub urban centres. There was a difference in the location of Harappan burials in the urban and rural settlements. The major Harappan cities planned their cemetery outside the fortification wall however the smaller towns and villages preferred to keep it within their habitation areas. In the smaller and rural sites such as Nagwada and Santhali in North Gujarat, graves were located within the settlement area. However, in the case of the major cities such as Harappa, Rakhigarhi, Dholavira, Lothal, Kalibangan, Farmana, and other major urban sites the cemetery was placed outside the city fortification at a varying distance according to the available space and social concerns of the contemporary belief system [17] (Table 1). The general location pattern of the cemetery shows that distance is based on the local belief system, regional geology and geomorphology, location of water bodies, easy accessibility, availability of the common space, and security of the graveyards. It is important to note here that most of the cemeteries have been observed close to some forms of water bodies which suggest that rituals were conducted on the banks of natural or artificial lakes or rivers.

Table 1: Location pattern and distance of cemeteries.

Site Name	Number of Burials	Direction	Distance from Habitation	Remarks
Rupar	16	West	49m	Inside habitation
Harappa R 37	44	South-West	150m	Outside habitation
Surkotada	4	North-West	300m	Outside the settlement area
Lothal	21	North-West	300m	Inside habitation
Kalibangan	34	South-West	300m	Outside habitation
Dholavira		West	300m	Outside habitation
Rakhigarhi RGR-1	53	North-East	300m	Outside habitation
Rakhigarhi RGR-2		North	750m	Outside habitation
Farmana	78	North-West	900m	Far away from the settlement

Nature of Destructions

Many of the discovered Harappan sites have been lost to the waves of development. For an ex. Stein [75] discovered 51 sites in the dried Saraswati River, most of which are no longer traceable, rather have been destroyed or encroached upon. Sites earlier excavated by the Archaeological Survey of India including protected and partially preserved are equally facing the onslaught. Natural and anthropogenic elements are responsible for the destruction of cemeteries, graveyards and burials too.

Natural elements

The erosional process is aggravated by the various geological processes, water, wind and gravity. Rainwater or running water often exposes buried graves and wind causes soil erosion in arid and semi-arid climates. Bone remains decompose faster due to soil moisture, temperature, bacteria, fungi, and other micro-organisms. Most of the Harappan sites in northwest India and southern-central Pakistan suffer from either moderate or high soil salinity

due to their closer proximity to the Arabian coast. Vats [21] had rightly observed that the Harappan soil has developed soil acidity which corroborates with the presence of lime in soil (about 4%). Ammonium salt, chlorides and sulphates in the percolating water equally decompose the organic materials. Both actions have adverse effects on the preservation of skeletal and other organic remains. The hot and humid climate equally degrades the genetic materials and hardly leaves any suitable sample for ancient DNA extraction. Besides, natural disasters such as earthquakes and floods also destroy archaeological sites.

Anthropogenic elements

Currently, India is going through a phase of rapid development leading to large-scale land clearing and digging, that has made archaeological sites more vulnerable. The process of destruction is ideally anthropogenic and inter-related with population increase, urbanization, and rapid advancement in mechanised agriculture. Several developmental projects such as the construction of dams,

roads, industrialization, new housing projects, and mining are destroying sites. This also promotes sand-soil-gravel lifting and mining. This has led to a number of archaeological sites being turned up, that includes Harappan habitation and cemetery sites in northwest India. Improved construction technology has

proved disastrous for archaeological sites with the inclusion of new sophisticated bulldozers and mechanical diggers, dynamite, metal detectors, power saws, and drills [76]. People's curiosity and inquisitive nature towards the exposed burials also damage skeletal remains (Figure 1).

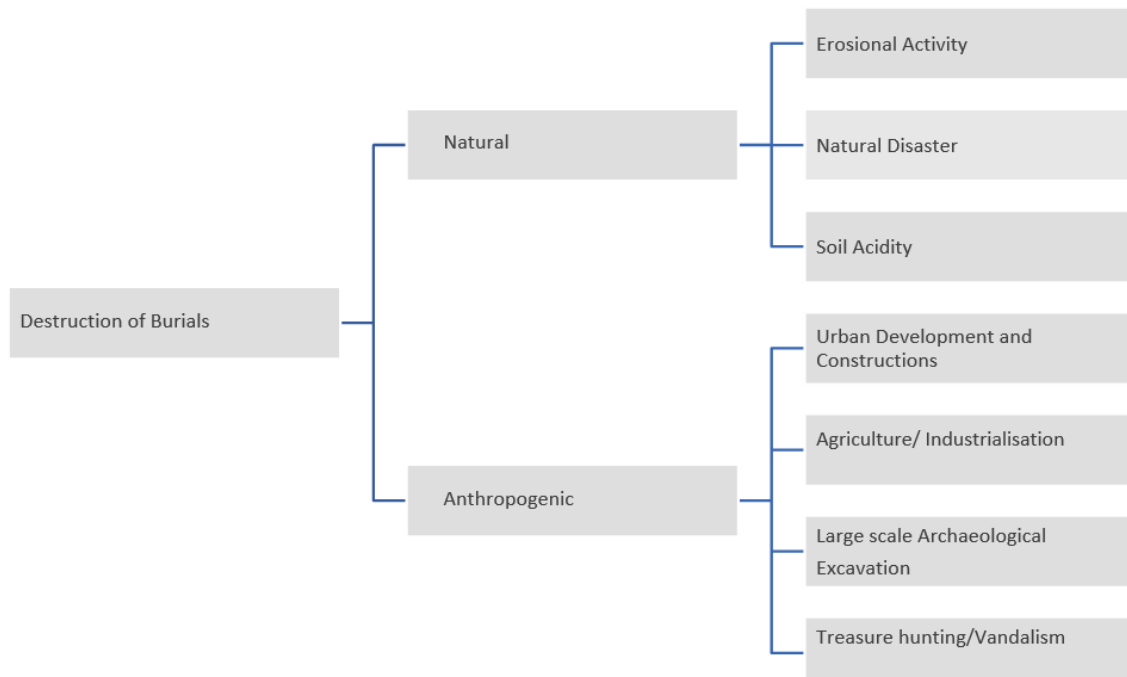


Figure 1: The various process of burial decay.

Treasure hunting

The exploitation of archaeological sites and the sale of antiquity is a global phenomenon affecting the existence of archaeological sites and their conservation [76]. An international organization Global Heritage Fund (GHF) working for the protection of endangered sites in the developing world, states "It [Rakhigarhi] is one of the largest and oldest Indus sites [in Haryana state of India] in the world which is facing threat due to development pressures, insufficient management and looting" [77]. The instance of looting and illicit antiquity export to Europe has been reported from the Mehrgarh site in Pakistan [78]. With time there has been increasing demand for Harappan antiquities for their archaeological, historical, museological, scientific, touristic, and antiquarian value. The most commonly collected items consist of Harappan seals, painted pottery, terracotta objects, copper objects, semi-precious stone, faience, steatite beads, shell objects etc. The e-world has not only educated the people about south Asia's 1st urbanization but has got the eyeballs of antique dealers rolling. The Harappan items have been traded, illicitly excavated, robbed, smuggled, and exported to the international market. Since goods from the grave are considered to carry spirits in many parts of the world, antique dealers pray for the objects easily.

Large-scale archaeological excavations

Over the last few decades, more and more Harappan graves have been excavated (Table 2 & Figure 2). Many a time the reasons

cited for excavation have been private land, salvage archaeology, rapid industrialization and developmental projects. Such rationale often leads to excavation within a set time frame increasing our counts of excavated burials than the scientific knowledge about the same. Large-scale burial excavations have several disadvantages, as the moment skeletal remains get exposed to the surface, they deteriorate rapidly due to environmental weathering conditions. Several samples get damaged due to a lack of suitable sampling techniques, trained professionals, and conservation methods. Human remains are often recovered in fragmentary condition, and they get crumbled on the way during transportation. Both archaeological laboratories equipped with climate control facilities and trained bioanthropologists are a few in the country. This leads to piling of unattended skeletal remains in the repositories for years. The International Committee for the Management of Archaeological Heritage (ICAHM) 1990 Charter; Article 6 rightly asserts that 'Archaeological heritage should not be exposed by excavation or left exposed by excavation if provision for its proper maintenance and conservation cannot be guaranteed'. Understanding the origin of the Harappan has been the focus since the civilization was first discovered in 1920s. Skeletal remains and scientific studies of the same hold the key. Archaeological Sciences have yet to come up with a set protocol to extract the ancient DNA from a culture that is 5000 years old in the Indian subcontinent environment. However, Harappan grave excavations in numbers have caught the eye of archaeologists. Already numerous burials are destroyed under

ploughs and constructions. The number of burials is limited for study in the future. Perhaps a better option is to excavate selected graves and let the rest be preserved for future researchers. Today we have not confirmed the ancestry of the Harappan people but most

of the on-going research has the objective to trace the ancestors. By the time we have developed methodology and protocols to answer this, we might have dug most of the known skeletal finds.

Table 2: Excavated Harappan burials; *: number is based on the skeletal remains and not on complete individual skeleton.

Site	Year of Excavation	No. of Excavated Burials/Individuals	Reference
Mohenjo-daro	1924-31, 1945-46	46	Guha & Basu [88], Kennedy [12]
Harappa Area G	1927-29	20	Vats [21]
Harappa R 37	1937-41	64*	Sastri [67]
Harappa R 37	1946	10*	Wheeler [22]
Harappa Cemetery H	1946	3	Wheeler [22]
Stratum-I			
Lothal	1954-1963	21	Rao [47]
Rupnagar	1954-55	16	Sharma [29]
Ran Daliyo	1958-59	1	IAR [28]
Kalibangan	1960-69	34	Sharma [34]
Harappa R 37	1966	16*	Mughal [23]
Surkotada	1971-72	4*	Joshi [55]
Nagwada	1986-90	2	IAR [28]
Harappa R 37	1986-94	18	Kenoyer & Meadow [9]
Dholavira	1989-2003	2*	Bisht [45]
Rakhigarhi	1998-2000	11	Nath et al. [61]
Sinauli	2005-06	116	Sharma et al. [71]
Harappa Cemetery H	2007	2	Kenoyer & Meadow [9]
Stratum-I			
Farmana	2007-2009	78	Shinde [42]
Rakhigarhi	2013-2016	53	Shinde et al. [6]
Sinauli	2018	9	Manjul & Manjul [73]
Juna Kathiya	2019	26	Ahmedabad Mirror March 12, 2019

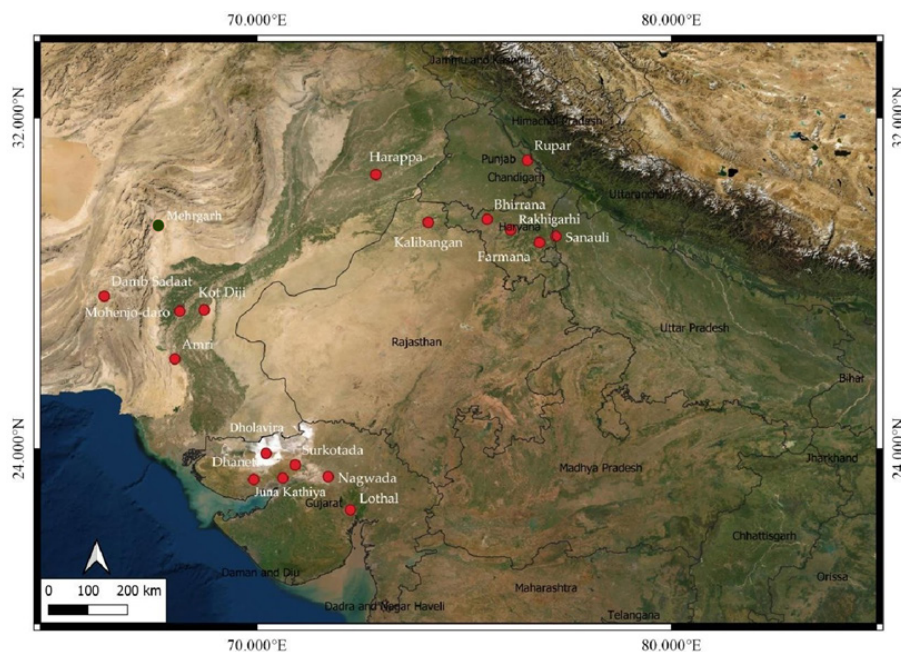


Figure 2: Harappan sites with graves.

Sustainable Heritage and Harappan Burial

Sustainable heritage maintains a balance between growth and cultural development while raising awareness about the importance of heritage conservation for maintaining our identity [79]. In contemporary times, there is an increasing interest to consider culture as the fourth pillar of sustainability [80] given that it can deliver economic, social and environmental dimensions of sustainable development and promote heritage conservation. Cultural objects and artefacts of the past have the potential for knowledge transmission. In the same vein, several simple living communities are known to have carried forward the Harappan legacies in various cultural forms. For instance, communities like the Bhils and the Nagas have unique traditions of usage of shell bangles and cowries. Nagas practice both secondary burials and pot burials [81]. Genetic connections have also been made with the northwest Indian ethnic communities such as Ror, Gujjar, Jat and Kamboj and their association with the Indus civilizations has also been referred to [82]. Two important values of the cultural heritage are intrinsic and instrumental, however, in recent years instrumental value is given more stress due to its importance for social and economic development [83]. The values that are applicable to the burial are (a) Social and Cultural (b) Scientific and (c) Economic values. The social and cultural values are the underlying belief system and respect for the ancestor and ancestral sites. The scientific values are evaluated from the various scientific studies on the skeletal remains such as isotope, ancient DNA and palaeopathology studies based on biological anthropology. The economic values could be assessed based on an antiquarian and academic value of the burial architecture with that of burial goods.

The majority of archaeological discoveries are linked to local public knowledge, later contributing to new knowledge, however, the archaeological knowledge transformation and interaction with the locals have not been given due attention in India [84]. All the more, the archaeological discoveries are mostly published in English. This imparts little knowledge to the local populations who speak native languages. The public knowledge and perceptions about a site are based on the archaeological news they get from various sources of popular media. Later is often altered or exaggerated for publicity. At times, graves, in particular, are kept away from the knowledge of the public due to the cultural stigma attached to it. Perhaps, public awareness campaigns, popular notes, short stories, news and writings in the regional/vernacular languages will help the scenario in the following mentioned spheres:

- I. The story of each Harappan site and surrounding communities' customs, cultural practices, and artistic expressions and values are unique. A combination of archaeological mounds, excavated areas, cemetery areas and rural village landscapes can create a historic environment as a public place to visit and learn about their heritage.
- II. Specific burial museums or open-air site museums can be created in order to facilitate knowledge about how the Harappans treated the dead and how the burials help us

understand their beliefs with regard to life and after life. Other interesting aspects such as types of burial, ancient mortuary practices, procedures of scientific excavation, recording, location pattern of the sites, the process of conservation and preservation of burial remains along with its comparison to modern mortuary practices and associated worldview could connect to the local communities better.

III. Museums would encourage the promotion of cultural heritage and through a community museum, the local communities will be encouraged to preserve their tangible and intangible heritage.

IV. Innovative educational modules, public lectures, workshops, short stories, movies, documentaries, social media campaigns would generate interest and a sense of pride among the locals.

V. The Harappan burials have been found with several interesting artefacts. Replicas, models, souvenirs, art objects, teaching aids, and mementos should be done for institutions and the public at large.

To popularize knowledge on burials, separate galleries, graphic panels, or story boards can be added to existing museums and site museums. All the above measures will popularise the subject, boost tourism, and will play a role in curtailing private antiquities collections.

Suggestions for safeguarding burials

Graves embody the memory and knowledge of our ancestors and are thereby a paramount feature for heritage conservation and promotion. However, burial and cemetery sites are often neglected as these buried features are less appealing in comparison to monumental heritage. Therefore, awareness among the communities will be elemental in preserving the burial sites. In 1990 in the ninth general assembly, The International Council on Monuments and Sites (ICOMOS) charter for archaeological heritage management identified a broad range of archaeological heritage and suggested cooperation among the government, academic, private, public enterprise and the general public along with essential participation from the local cultural and indigenous groups to safeguard the living traditions [85]. Safeguarding the Harappan burials would involve the following measures:

- I. Heritage awareness among the locals needs to be encouraged so that neither they nor archaeologists destroy their heritage.
- II. The desire and fascination of archaeologists for frequently excavating graves needs to be curtailed and excavations should preferably focus on non-invasive technology to locate burials. With growing technology-based platforms, various geophysical methods such as ground-penetrating radar, electrical resistance, electromagnetic and magnetic methods should be used to identify and document the burial outline, depth, orientation, and some precise information [86,87].

III. Data collection protocols need to be set for Harappan burial excavations, sample collections, recording, and their scientific analysis.

IV. Adequate contextual soil and associated samples should be collected at the time of excavation to save the site from repeated excavations.

V. There is a need for fully image-based digitalized modelling and recordings of the burials.

Conclusion

Graves have been disinterred right from the inception of archaeology. It becomes controversial, in double measure when Harappan and pre-Harappan graves are found albeit neither the size of the land will increase nor the number of burials of the past. The fascination of exhuming graves after graves for the sake of excavation or for antiquity is dispossessing our knowledge of pasts. One of the reasons for locating the cemetery outside the habitation areas in the Mature and Late Harappan phases could be that people realised the potential risks of diseases and contamination of ground water. Simultaneously, they might have faced a dearth of space within the cities. The space issues could also be a rationale for preferring cremation or other forms of fractional burials during the mature and late Harappan times. At present, the Harappan burials have no ownership, and the relationship to the graves is far from people's memory. There is every possibility that in future ownership will be established and claimed. Taking a leaf from the issues which the Oceanic and Egyptian worlds are facing (natives finding their identity being finagled) for the reason that in past archaeologists have excavated grave sites time and again for antiquity and skeletal remains than for any rational understanding of the cultural or evolutionary process (which could very well be done with representative finds), more scientific rigour is required. The Harappan culture and heritage is the predecessor of several protohistoric, early historical, and historical cultures therefore this heritage belongs to all and sundry. By the time the Harappan identity and legacies are recognised, their graves and mortuary goods should exist in context for validation. Archaeological sites and ancient human remains are limited resources and part of our glorious past, thus these precious archaeological remains and their paucity and infrequency required to be realised and respected by the excavator else the future will relegate the archaeologists for playing with the mortal remains. Safeguarding the buried archaeological heritage for the future and careful recovery of material remains from a few than excavating the number of burials should be preferred [88,89].

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