

DEPARTMENT OF HISTORY

**I M A HISTORY I SEMESTER CORE – I : SOCIAL AND CULTURAL HISTORY OF
INDIA UPTO 1206 A. D(18MHI11C)**

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Geography on the History of India

The following points highlight the eight major effects of geography on the history of India.

The effects are: 1. Different Local Zones, Political and Cultural Units 2. The Thar Desert Rendered Indian Defence Difficult 3. Isolation of India 4. Neglect of Defence 5. Preservation of Primitive Indian Culture 6. Impact of the Climate 7. Absence of Strong Naval Power 8. Development of Fine Arts.

Effect # 1. Different Local Zones, Political and Cultural Units:

The varied physical features of the sub-continent of India have led to the formation of different local zones, political and cultural units. On account of the difference in the physical features and natural barriers, India has come to be divided into different political and cultural units.

The northern India, the Deccan Plateau, Peninsular plains and the Ghats-all possess special political and social characteristics of their own, which are quite distinct from each other. The Aryan civilization could not exercise much influence on the Deccan. In the Far South the non-Aryans language, customs, and ideas continued to dominate.

Effect # 2. The Thar Desert Rendered Indian Defence Difficult:

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The Thar desert which lays in between the plains of Indus Valley and the Ganges has also greatly effected the course of the Indian history. As the Thar desert separates these two regions into two different units, the Indian Defence was rendered weak. This greatly benefited the foreign invaders who came to India through the north-western mountain passes.

As the bulk of the Indian regions were separated through this region by the great desert, the resources of northern India could not be fully pooled up against the foreign invaders. In view of the limited resistance offered to them the invaders won a number of decisive victories and reached as far as Delhi.

Effect # 3. Isolation of India:

India has been separated from the rest of the world by Himalayan in the North and sea on the three other sides. As a result India lived in isolation and evolved her own style of life and development. No doubt, some of the foreign cultures and civilizations found their way into India through the northern passes but their influence was very limited.

Effect # 4. Neglect of Defence:

The separation of India from the rest of the world by natural barriers gave to the people of ancient India a sense of security and they completely ignored the defence of the country. In fact they never paid any attention to the security of their frontiers. This inevitably resulted in a number of invasions on India from across the border. This neglect of military was responsible for the enslavement of the country by the foreigners.

Effect # 5. Preservation of Primitive Indian Culture:

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The access to certain areas has been so difficult that they have remained completely cut off from the rest of the country. The vast sandy deserts, the un-penetrable forests and high ranges of mountains have provided shelter to the primitive tribes who were driven away from the plains.

As these areas could not be easily approached the wild primitive tribes continued to evolve their own culture, which is in existence even today. Some of the prominent primitive tribes which exist even today include Bhils, Kols, Santhals, Gonds, etc. These tribes succeeded in maintaining their primitive characteristics only because of the difficult terrains of their area.

Effect # 6. Impact of the Climate:

The climate of the country has also exercised great influence on the course of Indian history. The tropical climate has been greatly responsible for the failure of the Indians to resist the foreign invaders from the cold regions.

The hilly terrains of the south made the people of Maharashtra and Rajputana sturdy. The people living in these areas had to work hard to earn their livelihood and they developed qualities of warriors.

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These people strongly resisted all the attempts to deprive them of their liberty. This is mainly due to the physical conditions prevailing in this region that the Marathas and the Rajputs were able to offer a tough resistance to the rulers of Delhi.

The variety of the climate prevailing in the different parts of the country has also exercised tremendous influence on the course of history. While rich and flourishing towns had existed in abundance in Uttar Pradesh, Bengal and Bihar due to good rainfall, famines has greatly stood in the way of the setting up of similar towns in Rajasthan and Deccan.

The rivers which flow from the Himalayas through the year have greatly contributed to the prosperity and development of the plains, which would have otherwise made India a desert. The fertility and the consequent richness of the people of the plains invited foreign invaders to India.

Mahmud Ghaznavi and Muhammad Ghori attacked this region several times and took huge quantities of gold, silver, diamond, and other valuable articles whenever they attacked this region. This region also continued to be the field of all political and cultural activities and number of Important empires rose and fell here.

The prosperity and richness of the region has also made the people peace-loving and luxurious. The persons of the Vindhya mountains have been responsible for the division of the country into two distinct parts—North and South. This natural division has been responsible for two separate histories of the north and south. This has also to a large extent kept South India immune from the political turmoil of the north.

Effect # 7. Absence of Strong Naval Power:

Though India has a long coast extending over 3,000 miles, she never maintained a strong Navy for its defence. No doubt, India carried on cultural and commercial pursuits and established a contact with the outside world through seas, but it never thought of political domination over those regions.

A number of Indians inspired by the spirit of enterprise and adventure went to the neighbouring island, like Burma, Java, Sumatra Malai etc. to spread the Indian culture.

The ancient rulers of the south also gave every possible encouragement to the development of Navy. But all these activities were guided by peaceful motives and no need was felt for the creation of strong naval force. In fact the Indian rulers realised the difficulties of establishing overseas empire and concentrated mainly on military ambitious within India.

Effect # 8. Development of Fine Arts:

The geography of India also exercised tremendous influence on the lives and habits of the people. In view of abundance of wealth and other resources in the country the Indians not only developed the habit of staying at home but also became ease living.

These richness and fertility of the Indian soil provided the people with plenty of leisure and they devoted their attention to the promotion of art and literature. The Vedic literature is one of the most valuable treasures of our country.

The arts and crafts also made remarkable progress. The relics of the Mauryan and Gupta period are the best specimens of architecture, sculpture, painting, etc. of that period. In the domain of literature the most outstanding work produced during the ancient times were the Arthashastra of Kautilya and dramas of Kalidas.

Two of the world renowned universities Taxila and Nalanda also flourished in the Northern parts of the country. These universities attracted students from various foreign countries also. As most of the Indians were free from the worldly worries, they naturally spent much time pondering over the problems of life and death and developed a speculative frame of mind.

This accounts for the predominance of the spiritualism in Indian culture. Again it was only the Northern parts which were subject to foreign invasions and influence. The South, which was not easily accessible to the foreign invaders continued to be promoter of the Indian civilization and culture.

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Sources

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- Literary and Archaeological records are the two main categories that give evidences of Ancient Indian History.
 - The literary source includes literature of Vedic, Sanskrit, Pali, Prakrit, and other literature along with other foreign accounts.
 - The archaeological source includes epigraphic, numismatic, and other architectural remains.
 - The archaeological explorations and excavations have opened the great landscapes of new information.

Indian Literary Sources

- The ancient Indian literature is mostly religious in nature.
- The *Puranic* and Epic literature are considered as history by Indians, but it contains no definite dates for events and kingdoms.
- The effort of history writing was shown by a large number of inscriptions, coins, and local chronicles. The principles of history are preserved in the *Puranas* and Epics.
- The *Puranas* and epics narrate the genealogies of kings and their achievements. But they are not arranged in a chronological order.
- The Vedic literature contains mainly the four Vedas i.e. *Rigveda*, *Yajurveda*, *Samaveda*, and *Atharvanaveda*.
- The Vedic literature is in a different language called as the Vedic language. Its vocabulary contains a wide range of meaning and is different in grammatical usages. It has a definite **mode of pronunciation** in which **emphasis** changes the meaning entirely.
- The Vedas give reliable information about the culture and civilization of the Vedic period, but do not reveal the political history.
- Six *Vedangas* are the important limbs of Vedas. They were evolved for the proper understanding of the Vedas. The *Vedangas* are –
 - *Siksha* (Phonetics)
 - *Kalpa* (Rituals)
 - *Vyakarna* (Grammar)

- *Nirukta* (Etymology)
- *Chhanda* (Metrics) and
- *Jyotisha* (Astronomy).
- *Vedanga* has been written in the precepts (*sutra*) form. This is a very precise and exact form of expression in prose, which was developed by the scholars of ancient India.
- *Ashtadhyayi* (eight chapters), written by **Panini**, is a book on grammar that gives excellent information on the art of writing in *sutra* (precepts).
- The later Vedic literature includes the *Brahmanas*, the *Aranyakas*, and the *Upanishads*.
- *Brahmanas* gives a description of Vedic rituals.
- *Aranyakas* and *Upanishads* give speeches on different spiritual and philosophical problems.
- *Puranas*, which are 18 in numbers give mainly historical accounts.
- **The *Ramayana* and the *Mahabharata*** are epics of great historical importance.
- The Jain and the Buddhist literature had been written in *Prakrit* and *Pali* languages.
- Early Jain literature is mostly written in *Prakrit* language.
- Prakrit language was a form of Sanskrit language.
- Pali language was a form of Prakrit language which was used in Magadha.
- Most of the early Buddhist literature is written in Pali language.
- Pali language reached to Sri Lanka through some of the Buddhist monks where it is a living language.

- Ashokan edicts had been written in *Pali* language.
- Mahavira and Buddha are considered as the historical personalities (equivalent to the God). They have created Jain and Buddhist religious ideology respectively.

Ancient Books

- The Buddhist books are called as *Jataka* stories. They have been given some historical importance because they are related with the previous births of the Buddha. There are more than 550 such stories.
- The historic information mentioned in *Jaina* literature also help us in reconstructing the history of different regions of India.
- The *Dharmasutras* and the *Smritis* were the rules and regulations for the general public and the rulers. It can be equated with the constitution and the law books of the modern concept of polity and society. For example, *Manusmriti*.
- *Dharmashastras* were compiled between 600 and 200 B.C.
- *Arthashastra* is a book on statecraft written by Kautilya during the Maurya period. The book is divided into 15 parts dealing with different subject matters related to polity, economy, and society.
- The final version of *Arthashastra* was written in the 4th century B.C.
- Kautilya acknowledges his debt to his predecessors in his book, which shows that there was a tradition of writing on and teaching of statecrafts.
- *Mudrarakshasha* is a play written by **Visakha datta**. It describes the society and culture of that period.

- *Malavikagnimitram* written by **Kalidasa** gives information of the reign of Pusyamitra Sunga dynasty.
- **Bhasa** and **Sudraka** are other poets who have written plays based on historical events.
- *Harshacharita*, written by **Banabhatta**, throws light on many historical facts about which we could not have known otherwise.
- **Vakpati** wrote *Gaudavaho*, based on the exploits of Yasovarman of Kanauj.
- *Vikramankadevacharita*, written by **Bilhana**, describes the victories of the later Chalukya king Vikramaditya.
- Some of the prominent biographical works, which are based on the lives of the kings are –
 - *Kumarapalacharita* of Jayasimha,
 - *Kumarapalacharita* or *Dvayashraya Mahakavya* of Hemachandra,
 - *Hammirakavya* of Nayachandra
 - *Navasahasankacharita* of Padmagupta
 - *Bhojaprabandha* of Billal
 - *Priihvirajacharit* of Chandbardai
- *Rajatarangini*, written by **Kalhana**, is the best form of history writing valued by modern historians. His critical method of historical research and impartial treatment of the historical facts have earned him a great respect among the modern historians.

- The *Sangam* literature is in the form of short and long poems consisting 30,000 lines of poetry, which arranged in two main groups i.e. *Patinenkilkanakku* and the *Pattupattu*. It describes many kings and dynasties of South India.
- The *Sangam* was the poetic compilation by a group of poets of different times mainly supported by chiefs and kings.
- The *Sangam* literature was composed by a large number of poets in praise of their kings. Some kings and events mentioned are also supported by the inscriptions.
- The *Sangam* literature generally describes events up to the 4th century A.D.
- **Herodotus** was dependent upon the Persian sources for his information about India.
- Herodotus in his book *Histories* (written in many volumes) describes about the Indo-Persian relations.
- A detailed account of the invasion of India by Alexander was written by **Arrian**.
- The Greek kings send their ambassadors to *Pataliputra*. Megasthenes, Deimachus, and Dionysius were some of them.
- **Megasthenes** came in the court of Chandragupta Maurya. He had written about the Indian society and culture in his book called as '*Indica*'. Though the original work has been lost, but it had been frequently quoted in the works of later writers.
- A book '*Periplus of the Erythrean Sea*' written by an anonymous Greek author who settled in Egypt on the basis of his personal voyage of Indian coast in about A. D. 80 gives valuable information about the Indian coasts.
- In the second century A. D., **Ptolemy** had written a geographical treatise on India.

- The Greek writing about India, however, is based on secondary sources. They were ignorant of the language and the customs of the country and hence their information is full of errors and contradictions.
- Many Chinese travelers visited India as Buddhist pilgrims from time to time; three important pilgrims were –
 - Fa-Hien (Faxian) – visited India in 5th century A.D.
 - Hiuen-Tsang (Xuanzang) – visited India in 7th century and
 - I-Tsing (Yijing) – visited India in 7th century.
- Hiuen-Tsang had given valuable account about Harshavardhana and some other contemporary kings of Northern India.
- Fa-Hien and Hiuen-Tsang traveled many parts of the country and they have given an exaggerated account of Buddhism during the period of their visit.
- Hiuen-Tsang mentioned Harsha as a follower of Buddhism while in his epigraphic records, Harsha mentions himself as a devotee of Siva. Such contradictions may be considered due to the fact of multi-religious nature of Indian rulers, which might confuse a foreigner.
- Al-Biruni gave important information about India. He was Arab scholar and contemporary of Mahmud of Ghazni.
- Al-Biruni studied Sanskrit and acquired knowledge of Indian society and culture through literature. Therefore, his observations are based on his knowledge about Indian society and culture, but he did not give any political information of his times.

Archaeological Sources

- The archaeological sources played an important role in constructing or/and reconstructing the history of a region.
- The archaeological source of Indian history is only about two centuries old.
- The archaeological source enhanced our knowledge about our past and also provided important materials, which we could not have been obtained otherwise.
- Up to 1920, Indian civilization was considered to have begun about 6th century B.C. However, the excavations at *Mohenjodaro*, *Kalibangan*, and *Harappa* prove its antiquity to be of 5,000 B.C.
- Prehistoric artifacts found in the excavations have shown that human activities had started here as early as about two million years ago.
- Epigraphy and Numismatics are the important branches of the study of history, which has greatly enhanced the knowledge of India's past.
- **Epigraphy** is the study of inscriptions and **Numismatic** is the study of coins, medals, or paper money.
- Coins are an important numismatic source that tells us about the Indo-Greek, Saka-Parthian, and Kushana Kings.
- Inscriptions of Ashoka and Samudragupta provide valuable information about social and political status of the people of that period.

- The study of these inscriptions reveals the world about Ashoka's views on *dharma* (religion) and conquests of Samudragupta.

Archaeological Monuments

- The temples and sculptures display an architectural and artistic history of the Indians from the Gupta period up-to recent times.
- During the Gupta period, the large caves i.e. *Chaityas* and *Viharas* were excavated in the hills of Western India.
- The Kailasa Temple of Ellora and *Rathas* at Mahabalipuram have been carved out of rocks from outside.
- The excavations of the cities of Mohenjodaro and Harappa prove the antiquity of Indian culture and civilization, which are more than two thousand years old.
- The historic sites such as Kalibangan, Lothal, Dholavira, and Rakhigarhi are the contemporary of Mohenjodaro and Harappa civilizations.
- The Harappan civilizations cover the area of Gujarat, Maharashtra, Haryana, Punjab, Rajasthan, and Uttar Pradesh (in India).
- The Dark Age of Indian history was the period between 1500 and 600 B.C. This is known as Dark Age because not much is known about this period.
- The archaeological discoveries of Black-and-Red Ware, Painted Grey Ware, Malwa, and Jorwe cultures have filled the chronological gaps as well as covered the geographical extent.

- Some of the important points that Archaeological discoveries display are –
 - Indians had domesticated sheep and goat and started agriculture about 8,000 years ago and Iron metal came in regular use about 1,600 B.C.
 - The tradition of rock paintings in India is proved to be more than 12 thousand years old.
 - Tools and remains found in the Kashmir and Narmada valleys show that the human activities started in the subcontinent as early as two million years ago.

Inscriptions

- The inscriptions are the most important and reliable sources of Indian history.
- Inscriptions are the contemporary documents those are free from later interpolations as it is impossible to add something to it at a later period. Therefore, it comes in the original form as it was composed in and engraved.
- The manuscripts were written on soft materials like birch bark, palm leaf, paper etc. They became fragile in a course of time and were frequently required to be copied and at the time of copying, some irrelevant additions were made and some errors tend to creep in. Therefore, they are not considered as a reliable source of information about history.
- The script of the inscriptions also helps the historian in many ways.
- The **Harappan** seals depict the earliest system of writings, however, they could not be decoded yet.
- The Ashokan inscriptions are claimed to be the earliest one of the systems of writing. Ashoka's inscriptions are found written in four scripts.

- ***Kharoshthi*** script was used in Pakistan region, which is written from right to left and is evolved on the *Varnamala* (alphabet) system of the Indian languages.
- ***Brahmi*** script was used for the rest of the empire from Kalsi in the north in Uttaranchal up to Mysore in the south.
- **Palaeography** is the study of development of the scripts.
- The epigraphic studies started in the late 18th century.
- *Brahmi* script was adopted by the rulers after Ashoka and continued for succeeding centuries.
- The *Brahmi* script kept modifying century after century, which led to the development of most of the scripts of India, including *Tamil*, *Telugu*, *Kannada*, and *Malayalam* in the south and *Nagari*, *Gujarati*, *Bangla*, etc. in the north.
- The modifications in the letters of the script have made it possible to ascertain the time period in which the inscription was written.
- In 1837, **James Prinsep** completed the chart of *Ashokan* alphabets.
- The inscriptions of Ashoka had been recorded in different years of his reign and are known as edicts because they are in the form of the king's order or desire
- The edicts of Ashoka prove that he (Ashoka) was a benevolent king concerned with the welfare of not only his subjects, but also of the whole humanity.
- Inscriptions of the Indo-Greeks, '*Saka-kshatrapas*' and '*Kushanas*' adopt Indian names after two or three generations. These inscriptions illustrate that they were also engaged in social and religious welfare activities like any other Indian kings.

- **Junagarh Rock** inscription of Rudradaman was written in the mid of 2nd century A.D. It was an early example of an inscription written in Sanskrit; however, Sanskrit became prominent since the Gupta period.
- Pillar inscription of Allahabad describes the achievements of Samudragupta.
- The epigraphs of the Gupta period started trends of giving the genealogy of kings with the account of their conquests and achievements. This became a trend of the subsequent dynasties to give a list of their predecessors and mention mythology of their origins.
- The *Aihole* inscription of the Chalukya king Pulkeshin-II describes a dynastic genealogy and achievements.
- The Gwalior inscription of Bhoja also gives a full account of his predecessors and their achievements.

Numismatics

- Numismatics is considered as the second most important source for reconstructing the history of India after inscriptions.
- Coins are mostly found in the hoards while digging field or constructing a building, making a road, etc.
- Coins found in systematic excavations are less in number, but are very valuable because their chronology and cultural context can be fixed precisely.
- Earliest coins are known as the *punch-marked* coins. They are made of either silver or copper. In addition to this, some gold punch-marked coins were also found, but they are very rare and their authenticity is doubtful.

- The Indo-Greek coins were also made up of silver and copper and rarely in gold.
- The *Kushanas* issued their coins mostly in gold and copper, rarely in silver.
- The *Guptas* issued their coins mostly in gold and silver but the gold coins are numerous.
- The punch-marked coins that bear (only) symbols on them are the earliest coins of India. Each symbol is punched separately, which sometimes overlap the other.
- Punch-marked coins have been found throughout the country, starting from Taxila to Magadha to Mysore or even further south. They do not bear any inscription or legend on them.
- The **Indo-Greek coins** depict beautiful artistic features on them. The portrait or bust of the king on the obverse side appear to be real portraits and on the reverse, some deity is depicted.
- The information about *Saka-Parthians* kings also came through their coins.
- The *Kushanas* issued mostly gold coins and numerous copper coins, which are found in most parts of north India up to Bihar.
- The *Vima Kadphises* coins bear the picture of Lord Siva standing beside a bull illustrate the Indian influence from the very beginning.
- The king calls himself *Mahesvara* i.e. devotee of Siva in the depiction on coins. Kanishka, Huvishka, and Vasudeva etc. all have this depiction on their coins.
- Kushana coins depicted many Indian gods and goddesses along with many Persian and Greek deities.

- The Guptas had succeeded Kushanas in the tradition of imprinting coins. They completely had been *Indianized* their coinage.
- The kings are portrayed engaged in activities like hunting a lion or rhinoceros, holding a bow or battle-axes, playing a musical instrument, or performing *Ashvamedha yajna*.

Prehistoric Cultures in India – Paleolithic, Mesolithic, Neolithic, Chalcolithic, Iron Age

The term Prehistoric refers to a time frame before we began to write. Because of this, there is no written proof of its existence. The prehistoric cultures in India is studied through existing artworks, pottery, tools, and other physical things found at archaeological sites. There are three ages in total namely – Stone Age, Bronze/Copper Age, and Iron Age. The Stone age was 2.6 million ago and lasted till 3300BC. The Bronze and Iron Age eventually followed. These stages were almost 8000 years long in total. They have their own characteristics and tools making them different from each other.

Prehistoric Cultures in India

Prehistoric cultures in India has five parts – Paleolithic Period, Mesolithic Period, Neolithic Period, Chalcolithic Period, and Iron Age. The first three are part of the stone while Chalcolithic is another name for the Bronze Age. These periods are the first part of Ancient Indian History. Let's take a look at the distinctive features of each of this division to understand Indian History better.

Paleolithic Period – 2 million BC – 10,000 BC

This was the earliest period of human evolution in India. The man was a hunter at this age. They were dependent on hunting to fill their stomachs. They used sharp tools to hunt and for other activities as well. Agriculture was not a part of this age. A man was a hunter and a food gatherer in this period. The archaeologists suggest that humans lived in caves, ate roots and fruits, and hunted. It is part of the stone age and is further divided into three parts – the Lower Paleolithic Period, the Middle Paleolithic Period, and the Upper Paleolithic Period.

Lower Paleolithic Period – up to 100,000 BC

Bori in Maharashtra is the earliest lower paleolithic site in India. Their habitat was mainly caves and rock shelters. Bhimbetka rock shelters in Madhya Pradesh is a prominent example of their habitat. It became a world heritage site in 2003. Another important feature is that they lived near water bodies as the stone was accessible there. Most of their hunting tools like axes made of Limestone and used for skinning, digging, and cutting of animals. Some of the important Lower Paleolithic Sites in India are – Belan Valley of Mirzapur, Didwana in Rajasthan, Narmada Valley, and Soan Valley.

Middle Paleolithic Period – 100,000 BC – 40,000 BC

Most of the features of this age are similar to the lower paleolithic period. The evidence of using fire was first in this period. The tools for hunting changed from using axes to using flakes. They were more pointed and sharp in appearance. They were also lighter, thinner, and smaller in size. Some of the important and earliest Middle Paleolithic sites are – Narmada River Valley, Tungabhadra River Valley, and Luni Valley.

Upper Paleolithic Period – 40,000 BC – 10,000 BC

This period saw the emergence of Homo Sapiens. The culture of this period is called the Osteodontokeratic culture which had tools made up of bones, teeth, and horns. This also included fishing tools rather than just hunting tools. This period was very short, some say it was 1/10 of the total Paleolithic Period. The paintings in Bhimbetka Rock shelters are from this period. Some of the important and earliest sites of the Upper Paleolithic Period are – Belan, Son, Chota Nagpur plateau, Maharashtra, and Orissa.

Mesolithic Period – 10,000 BC – 8000 BC

This period is also a part of the stone age. Though the hunting and food gathering continued in this period, the domestication of animals was seen for the first time. Major climate took place during this period, the weather became more warm and humid. The rainfall increased and varieties of flora and fauna grew in this period. Cattles and dogs were kept as pet animals mainly the tools were very small during this time thus called microliths.

Backed blade, core, point, triangle, lunate, and trapeze were some of the microliths of this period. Painting in many of the rock shelters is from this period. Adamgarh, Madhya Pradesh has the earliest evidence of animal domestication. Langhnaj in Gujarat and Moharana Pahara in Uttar Pradesh have the earliest evidence of burial of the dead. The first human colonization of the Ganga plains is from the Mesolithic period too. Some of the important and earliest sites of the Mesolithic period are – Brahmagiri, Narmada, Vindhya, Gujarat, and UP.

Neolithic Period – 8000 BC – 4000 BC

This is the last period of the Stone Age. This period was the beginning of Agriculture in India. The lifestyle of humans changed from nomadic to a settled one. These people had common right

over the property and made circular houses of mud and reed. These were the food producers, and ragi, horse gram, cotton, rice, wheat, and barley were some prominent crops of this period.

They were interested in Art and Pottery as well. The tools made of bones and stones were present for farming. This was also the start of using clothes to cover the human body. Intentional disposal of the dead started in this period. Some of the important and earliest Neolithic Sites in India are – Mehrgarh, Inamgaon, Hullar, Burzahom, Gufkral, Chirand, and Utnur.

Chalcolithic Period – 4000 BC – 1500 BC

It is the first Metal Age of India. It is part of the Bronze and Copper Age. The tools of this period were of low-grade metals. It was mainly famous for farming communities. Hunting was still an occupation in addition to fishing and farming. Animals including sheep, buffalo, goats, cattle, and pigs served as food to these people. The rice cropping pattern and cotton farming developed in this period. Some of the main crops were barley and wheat, lentil, bajra, jowar, ragi millets, green pea, green and black gram.

The houses were rectangular with mostly one room and were of mud and cow dung. Black and Red pottery were prominent during this time. Humans were buried under the house with their ornaments. These people were colonizers and settled near hills and rivers mostly. The Harappan culture was part of this period. Some of the important and earliest Chalcolithic Periods are – Brahmagiri Navada Toli, Chirand, Mahishadal, and more in different regions of the country.

Iron Age – 1500 BC to 600 BC

The Painted Grey Ware culture and the Northern Black Polished Ware were the most prominent culture of this period. This period marked the arrival of the Aryans (Vedic Period). The

Janapadas were the realms of this period and gave rise to 16 Mahajanapadas. These were the 16 kingdoms of ancient India. The smelting of iron to make tools and weapons marks the start of this period. This was the start of civilization and the emergence of states in the country.

Ochre Colour Pottery and worship of statues began in this period. The idea of a white painting called Ahar-Banas is from this period as well. The idea of using ceramic to make pots began here only. The religion division like Jainism and Buddhism comes from the Iron Age as well. The first civilization on the banks of the river Ganga after the Indus Valley was by Mahajanapadas. This period ended with the rise of the Mauryan Empire. Some of the important Iron Age sites in India are – Malhar, Dadupur, Raja Nala Ka Tila, Lahuradewa, Kosambi and Jhusi, Allahabad.

This article covered everything about the prehistoric ages and cultures in India. As mentioned above – there were five periods mainly which were distinct from one another in many ways. The three basic age divisions are further divided into India into five. But they all are important to study with an eye for detail. The UPSC Mains always asks subjective questions thus candidates must be familiar with the topic thoroughly.

This article will guide you ages wise with details like – timeline, cultures, lifestyle, and more. The History and Anthropology paper has this topic as part of their syllabus. If you are planning to opt for one of these as your UPSC Optional Subject, then you must give this article a read. It is completely based on facts and is easy to understand. It should not take a lot of time to read and remember the basics.

Indus Valley Civilisation

The **Indus Valley Civilisation (IVC)** was a [Bronze Age civilisation](#) in the northwestern regions of [South Asia](#), lasting from 3300 BCE to 1300 BCE, and in its mature form from 2600 BCE to 1900 BCE.^{[1][a]} Together with [ancient Egypt](#) and [Mesopotamia](#), it was one of three early civilisations of the [Near East](#) and [South Asia](#), and of the three, the most widespread, its sites spanning an area stretching from northeast [Afghanistan](#), through much of [Pakistan](#), and into western and northwestern [India](#).^{[2][b]} It flourished in the basins of the [Indus River](#), which flows through the length of Pakistan, and along a system of perennial, mostly monsoon-fed, rivers that once coursed in the vicinity of the seasonal [Ghaggar-Hakra river](#) in northwest India and eastern Pakistan.^{[1][3]}

The civilisation's cities were noted for their urban planning, baked brick houses, elaborate drainage systems, water supply systems, clusters of large non-residential buildings, and new techniques in handicraft ([carnelian](#) products, seal carving) and metallurgy (copper, bronze, lead, and tin).^[4] The large cities of [Mohenjo-daro](#) and [Harappa](#) very likely grew to containing between 30,000 and 60,000 individuals,^{[5][c]} and the civilisation itself during its florescence may have contained between one and five million individuals.^{[6][d]}

Gradual [drying](#) of the region's soil during the 3rd millennium BCE may have been the initial spur for the urbanisation associated with the civilisation, but eventually weaker monsoons and reduced water supply caused the civilisation's demise, and to scatter its population eastward and southward.^{[7][8]}

The Indus civilisation is also known as the **Harappan Civilisation**, after its [type site](#), Harappa, the first of its sites to be excavated early in the 20th century in what was then the [Punjab](#)

[province](#) of [British India](#) and now is Pakistan.^{[9][e]} The discovery of Harappa and soon afterwards Mohenjo-daro was the culmination of work beginning in 1861 with the founding of the [Archaeological Survey of India](#) during the [British Raj](#).^[10] There were however earlier and later cultures often called Early Harappan and Late Harappan in the same area; for this reason, the Harappan civilisation is sometimes called the **Mature Harappan** to distinguish it from these other cultures.

By 2002, over 1,000 Mature Harappan cities and settlements had been reported, of which just under a hundred had been excavated,^{[11][f][12][13][g]} However, there are only five major urban sites:^{[14][h]} Harappa, Mohenjo-daro ([UNESCO World Heritage Site](#)), [Dholavira](#), [Ganeriwala](#) in [Cholistan](#), and [Rakhigarhi](#).^{[15][i]} The early Harappan cultures were preceded by local [Neolithic](#) agricultural villages, from which the river plains were populated.^{[16][17]}

The [Harappan language](#) is not directly attested, and its affiliation is uncertain since the [Indus script](#) is still undeciphered.^[18] A relationship with the [Dravidian](#) or [Elamo-Dravidian](#) language family is favoured by a section of scholars like leading Finnish Indologist, [Asko Parpola](#).^{[19][20]}



The Indus Valley Civilisation is named after the [Indus river system](#) in whose [alluvial plains](#) the early sites of the civilisation were identified and excavated.^{[21][j]} Following a tradition in archaeology, the civilisation is sometimes referred to as the *Harappan*, after its [type site](#), [Harappa](#), the first site to be excavated in the 1920s; this is notably true of usage employed by the Archaeological Survey of India after India's independence in 1947.^{[22][k]}

Fringe [Aryan indigenist](#) writers like [David Frawley](#) use the terms "Sarasvati culture", the "Sarasvati Civilisation", the "Indus-Sarasvati Civilisation" or the "Sindhu-Saraswati Civilisation", because they consider the [Ghaggar-Hakra river](#) to be the same as the [Sarasvati](#),^{[23][24][25]} a river mentioned several times in the [Rig Veda](#), a collection of [ancient Sanskrit](#) hymns composed in the second millennium BCE.^{[26][27][28][29][1]} Recent geophysical research suggests that unlike the Sarasvati, whose descriptions in the Rig Veda are those of a snow-fed river, the Ghaggar-Hakra was a system of perennial monsoon-fed rivers, which became seasonal around the time that the civilisation diminished, approximately 4,000 years ago.^{[3] [m]} In addition, proponents of the Sarasvati nomenclature see a connection between the decline of the Indus civilisation and the rise of the [Vedic civilisation](#) on the Gangetic plain; however, historians of the decline of the mature Indus civilisation consider the two to be substantially disconnected.^{[32][n]}

The Indus civilization was roughly contemporary with the other riverine civilisations of the ancient world: [Egypt](#) along the [Nile](#), [Mesopotamia](#) in the lands watered by the [Euphrates](#) and the [Tigris](#), and [China](#) in the drainage basin of the [Yellow River](#) and the [Yangtze](#). By the time of its mature phase, the civilisation had spread over an area larger than the others, which included a core of 1,500 kilometres (900 mi) up the alluvial plain of the Indus and its tributaries. In addition, there was a region with disparate flora, fauna, and habitats, up to ten times as large, which had been shaped culturally and economically by the Indus.^{[33][o]}

Around 6500 BCE, agriculture emerged in [Balochistan](#), on the margins of the Indus alluvium.^{[5][p][34][q]} In the following millennia, settled life made inroads into the Indus plains, setting the stage for the growth of rural and urban human settlements.^{[35][r]} The more organized

sedentary life in turn led to a net increase in the birth rate.^{[51][s]} The large urban centres of Mohenjo-daro and Harappa very likely grew to containing between 30,000 and 60,000 individuals, and during the civilization's florescence, the population of the subcontinent grew to between 4–6 million people.^{[51][t]} During this period the death rate increased as well, for close living conditions of humans and domesticated animals led to an increase in contagious diseases.^{[34][u]} According to one estimate, the population of the Indus civilization at its peak may have been between one and five million.^{[36][v]}

The Indus Valley Civilisation (IVC) extended from Pakistan's [Balochistan](#) in the west to India's western [Uttar Pradesh](#) in the east, from northeastern Afghanistan in the north to India's [Gujarat](#) state in the south.^[23] The largest number of sites are in [Gujarat](#), [Haryana](#), [Punjab](#), [Rajasthan](#), [Uttar Pradesh](#), [Jammu and Kashmir](#) states in India,^[23] and [Sindh](#), [Punjab](#), and [Balochistan](#) provinces in Pakistan.^[23] Coastal settlements extended from [Sutkagan Dor](#)^[37] in Western Baluchistan to [Lothal](#)^[38] in Gujarat. An Indus Valley site has been found on the [Oxus River](#) at [Shortugai](#) in northern Afghanistan,^[39] in the [Gomal River](#) valley in northwestern Pakistan,^[40] at [Manda](#), [Jammu](#) on the [Beas River](#) near [Jammu](#),^[41] India, and at [Alamgirpur](#) on the [Hindon River](#), only 28 km (17 mi) from Delhi.^[42] The southernmost site of the Indus valley civilisation is [Daimabad](#) in Maharashtra. Indus Valley sites have been found most often on rivers, but also on the ancient seacoast,^[43] for example, Balakot,^[44] and on islands, for example, [Dholavira](#).^[45]

The first modern accounts of the [ruins](#) of the Indus civilisation are those of [Charles Masson](#), a deserter from the [East India Company](#)'s army.^[47] In 1829, Masson traveled through the [princely state](#) of Punjab, gathering useful intelligence for the Company in return for a promise of clemency.^[47] An aspect of this arrangement was the additional requirement to hand over to the

Company any historical artifacts acquired during his travels. Masson, who had versed himself in the [classics](#), especially in the military campaigns of [Alexander the Great](#), chose for his wanderings some of the same towns that had featured in Alexander's campaigns, and whose archaeological sites had been noted by the campaign's chroniclers.^[47] Masson's major archaeological discovery in the Punjab was Harappa, a metropolis of the Indus civilization in the valley of Indus's tributary, the [Ravi river](#). Masson made copious notes and illustrations of Harappa's rich historical artifacts, many lying half-buried. In 1842, Masson included his observations of Harappa in the book *Narrative of Various Journeys in Baluchistan, Afghanistan, and the Punjab*. He dated the Harappa ruins to a period of recorded history, erroneously mistaking it to have been described earlier during Alexander's campaign.^[47] Masson was impressed by the site's extraordinary size and by several large mounds formed from long-existing erosion.^{[47][w]}

Two years later, the Company contracted Alexander Burnes to sail up the Indus to assess the feasibility of water travel for its army.^[47] Burnes, who also stopped in Harappa, noted the baked bricks employed in the site's ancient masonry, but noted also the haphazard plundering of these bricks by the local population.^[47]

Despite these reports, Harappa was raided even more perilously for its bricks after the [British annexation of the Punjab](#) in 1848–49. A considerable number were carted away as [track ballast](#) for the [railway lines](#) being laid in the Punjab.^[49] Nearly 160 km (100 mi) of railway track between [Multan](#) and [Lahore](#), laid in the mid 1850s, was supported by Harappan bricks.^[49]

In 1861, three years after the dissolution of the East India Company and the establishment of [Crown rule in India](#), archaeology on the subcontinent became more formally organised with the founding of the [Archaeological Survey of India](#) (ASI).^[50] [Alexander Cunningham](#), the

Survey's first director-general, who had visited Harappa in 1853 and had noted the imposing brick walls, visited again to carry out a survey, but this time of a site whose entire upper layer had been stripped in the interim.^{[50][51]} Although his original goal of demonstrating Harappa to be a lost Buddhist city mentioned in the seventh century CE travels of the Chinese visitor, [Xuanzang](#), proved elusive,^[51] Cunningham did publish his findings in 1875.^[52] For the first time, he interpreted a Harappan [stamp seal](#), with its unknown script, which he concluded to be of an origin foreign to India.^{[52][53]}

Archaeological work in Harappa thereafter flagged until a new viceroy of India, [Lord Curzon](#), pushed through the [Ancient Monuments Preservation Act 1904](#), and appointed [John Marshall](#) to lead the ASI.^[54] Several years later, [Hiranand Sastri](#), who had been assigned by Marshall to survey Harappa, reported it to be of non-Buddhist origin, and by implication more ancient.^[54] [Expropriating](#) Harappa for the ASI under the Act, Marshall directed ASI archaeologist [Daya Ram Sahni](#) to excavate the site's two mounds.^[54]

Farther south, along the [main stem](#) of the Indus in [Sind](#) province, the largely undisturbed site of [Mohenjo-daro](#) had attracted notice.^[54] Marshall deputed a succession of ASI officers to survey the site. These included [D. R. Bhandarkar](#) (1911), [R. D. Banerji](#) (1919, 1922–1923), and M.S. Vats (1924).^[55] In 1923, on his second visit to Mohenjo-daro, Banerji wrote to Marshall about the site, postulating an origin in "remote antiquity," and noting a congruence of some of its artifacts with those of Harappa.^[56] Later in 1923, Vats, also in correspondence with Marshall, noted the same more specifically about the seals and the script found at both sites.^[56] On the weight of these opinions, Marshall ordered crucial data from the two sites to be brought to one location and invited Banerji and Sahni to a joint discussion.^[57] By 1924, Marshall had become

convinced of the significance of the finds, and on 24 September 1924, made a tentative but conspicuous public intimation in the *Illustrated London News*:^[21]

"Not often has it been given to archaeologists, as it was given to [Schliemann](#) at [Tiryns](#) and [Mycenae](#), or to [Stein](#) in the deserts of [Turkestan](#), to light upon the remains of a long forgotten civilization. It looks, however, at this moment, as if we were on the threshold of such a discovery in the plains of the Indus."

Systematic excavations began in Mohenjo-daro in 1924–25 with that of [K. N. Dikshit](#), continuing with those of H. Hargreaves (1925–1926), and [Ernest J. H. Mackay](#) (1927–1931).^[55] By 1931, much of Mohenjo-daro had been excavated, but occasional excavations continued, such as the one led by [Mortimer Wheeler](#), a new director-general of the ASI appointed in 1944.

After the [partition of India](#) in 1947, when most excavated sites of the Indus Valley civilisation lay in territory awarded to Pakistan, the Archaeological Survey of India, its area of authority reduced, carried out large numbers of surveys and excavations along the Ghaggar-Hakra system in India.^{[58][x]} Some speculated that the Ghaggar-Hakra system might yield more sites than the Indus river basin.^[59] By 2002, over 1,000 Mature Harappan cities and settlements had been reported, of which just under a hundred had been excavated,^{[60][12][61][62]} mainly in the general region of the [Indus](#) and Ghaggar-Hakra rivers and their tributaries; however, there are only five major urban sites: [Harappa](#), [Mohenjo-daro](#), [Dholavira](#), [Ganeriwala](#) and [Rakhigarhi](#).^[62] According to a historian approximately 616 sites have been reported in India,^[23] whereas 406 sites have been reported in Pakistan.^[23] However, according to an archaeologist, many Ghaggar-Hakra sites in India are those of local cultures; some sites display contact with Harappan civilization, but only a few are fully developed Harappan ones.^[63]

Unlike India, in which after 1947, the ASI attempted to "Indianise" archaeological work in keeping with the new nation's goals of national unity and historical continuity, in Pakistan the national imperative was the promotion of Islamic heritage, and consequently archaeological work on early sites was left to foreign archaeologists.^[64] After the partition, Mortimer Wheeler, the Director of ASI from 1944, oversaw the establishment of archaeological institutions in Pakistan, later joining a UNESCO effort tasked to conserve the site at Mohenjo-daro.^[65] Other international efforts at Mohenjo-daro and Harappa have included the German *Aachen Research Project Mohenjo-daro*, the *Italian Mission to Mohenjo-daro*, and the US *Harappa Archaeological Research Project (HARP)* founded by [George F. Dales](#).^[66] Following a chance flash flood which exposed a portion of an archaeological site at the foot of the [Bolan Pass](#) in [Balochistan](#), excavations were carried out in [Mehrgarh](#) by French archaeologist [Jean-François Jarrige](#) and his team.^[67]

Chronology

Main article: [Periodisation of the Indus Valley Civilisation](#)

The cities of the Indus Valley Civilisation had "social hierarchies, their writing system, their large planned cities and their long-distance trade [which] mark them to archaeologists as a full-fledged 'civilisation.'"^[68] The mature phase of the Harappan civilisation lasted from c. 2600–1900 BCE. With the inclusion of the predecessor and successor cultures – Early Harappan and Late Harappan, respectively – the entire Indus Valley Civilisation may be taken to have lasted from the 33rd to the 14th centuries BCE. It is part of the Indus Valley Tradition, which also includes the pre-Harappan occupation of Mehrgarh, the earliest farming site of the Indus Valley.^{[17][69]}

Several periodisations are employed for the periodisation of the IVC.^{[17][69]} The most commonly used classifies the Indus Valley Civilisation into Early, Mature and Late Harappan Phase.^[70] An alternative approach by Shaffer divides the broader Indus Valley Tradition into four eras, the pre-Harappan "Early Food Producing Era," and the Regionalisation, Integration, and Localisation eras, which correspond roughly with the Early Harappan, Mature Harappan, and Late Harappan phases.^{[16][71]}

Pre-Harappan era: Mehrgarh

Mehrgarh is a Neolithic (7000 BCE to c. 2500 BCE) site in the Balochistan province of Pakistan,^[80] which gave new insights on the emergence of the Indus Valley Civilization.^{[68][v]} Mehrgarh is one of the earliest sites with evidence of farming and herding in South Asia.^{[81][82]} Mehrgarh was influenced by the Near Eastern Neolithic,^[83] with similarities between "domesticated wheat varieties, early phases of farming, pottery, other archaeological artefacts, some domesticated plants and herd animals."^{[84][z]}

Jean-Francois Jarrige argues for an independent origin of Mehrgarh. Jarrige notes "the assumption that farming economy was introduced full-fledged from Near-East to South Asia,"^{[85][z][aa][ab]} and the similarities between Neolithic sites from eastern Mesopotamia and the western Indus valley, which are evidence of a "cultural continuum" between those sites. But given the originality of Mehrgarh, Jarrige concludes that Mehrgarh has an earlier local background," and is not a "'backwater' of the Neolithic culture of the Near East."^[85]

Lukacs and Hemphill suggest an initial local development of Mehrgarh, with a continuity in cultural development but a change in population. According to Lukacs and Hemphill, while there is a strong continuity between the neolithic and chalcolithic (Copper Age) cultures of Mehrgarh,

dental evidence shows that the chalcolithic population did not descend from the neolithic population of Mehrgarh,^[101] which "suggests moderate levels of gene flow."^{[101][ac]} Mascarenhas et al. (2015) note that "new, possibly West Asian, body types are reported from the graves of Mehrgarh beginning in the Togau phase (3800 BCE)."^[102]

Gallego Romero et al. (2011) state that their research on lactose tolerance in India suggests that "the west Eurasian genetic contribution identified by Reich et al. (2009) principally reflects gene flow from Iran and the Middle East."^[103] They further note that "[t]he earliest evidence of cattle herding in south Asia comes from the Indus River Valley site of Mehrgarh and is dated to 7,000 YBP."^{[103][ad]}

The Early Harappan Ravi Phase, named after the nearby Ravi River, lasted from c. 3300 BCE until 2800 BCE. It is related to the Hakra Phase, identified in the Ghaggar-Hakra River Valley to the west, and predates the Kot Diji Phase (2800–2600 BCE, Harappan 2), named after a site in northern Sindh, Pakistan, near Mohenjo-daro. The earliest examples of the Indus script date to the 3rd millennium BCE.^{[105][106]}

The mature phase of earlier village cultures is represented by Rehman Dheri and Amri in Pakistan.^[107] Kot Diji represents the phase leading up to Mature Harappan, with the citadel representing centralised authority and an increasingly urban quality of life. Another town of this stage was found at Kalibangan in India on the Hakra River.^[108]

Trade networks linked this culture with related regional cultures and distant sources of raw materials, including lapis lazuli and other materials for bead-making. By this time, villagers had domesticated numerous crops, including peas, sesame seeds, dates, and cotton, as well as animals, including the water buffalo. Early Harappan communities turned to large urban centres

by 2600 BCE, from where the mature Harappan phase started. The latest research shows that Indus Valley people migrated from villages to cities.^{[109][110]}

The final stages of the Early Harappan period are characterised by the building of large walled settlements, the expansion of trade networks, and the increasing integration of regional communities into a "relatively uniform" material culture in terms of pottery styles, ornaments, and stamp seals with Indus script, leading into the transition to the Mature Harappan phase.^[111]

According to Giosan et al. (2012), the slow southward migration of the monsoons across Asia initially allowed the Indus Valley villages to develop by taming the floods of the Indus and its tributaries. Flood-supported farming led to large agricultural surpluses, which in turn supported the development of cities. The IVC residents did not develop irrigation capabilities, relying mainly on the seasonal monsoons leading to summer floods.^[113] Brooke further notes that the development of advanced cities coincides with a reduction in rainfall, which may have triggered a reorganisation into larger urban centers.^{[114][ae]}

According to J.G. Shaffer and D.A. Lichtenstein,^[115] the Mature Harappan Civilisation was "a fusion of the Bagor, Hakra, and Kot Diji traditions or 'ethnic groups' in the Ghaggar-Hakra valley on the borders of India and Pakistan".^[116]

By 2600 BCE, the Early Harappan communities turned into large urban centres. Such urban centres include Harappa, Ganeriwala, Mohenjo-daro in modern-day Pakistan, and Dholavira, Kalibangan, Rakhigarhi, Rupar, and Lothal in modern-day India.^[117] In total, more than 1,000 cities and settlements have been found, mainly in the general region of the Indus and Ghaggar-Hakra Rivers and their tributaries.^[60]

Cities

A sophisticated and technologically advanced urban culture is evident in the Indus Valley Civilisation, making them the first urban centre in the region. The quality of municipal town planning suggests the knowledge of [urban planning](#) and efficient municipal governments which placed a high priority on [hygiene](#), or, alternatively, accessibility to the means of religious ritual.^[118]

As seen in Harappa, Mohenjo-daro and the recently partially excavated [Rakhigarhi](#), this urban plan included the world's first known urban [sanitation](#) systems: see [hydraulic engineering of the Indus Valley Civilisation](#). Within the city, individual homes or groups of homes obtained water from [wells](#). From a room that appears to have been set aside for bathing, [waste water](#) was directed to covered drains, which lined the major streets. Houses opened only to inner [courtyards](#) and smaller lanes. The house-building in some villages in the region still resembles in some respects the house-building of the Harappans.^[119]

The ancient Indus systems of sewerage and drainage that were developed and used in cities throughout the Indus region were far more advanced than any found in contemporary urban sites in the Middle East and even more efficient than those in many areas of Pakistan and India today. The advanced architecture of the Harappans is shown by their impressive dockyards, [granaries](#), warehouses, brick platforms, and protective walls. The massive walls of Indus cities most likely protected the Harappans from floods and may have dissuaded military conflicts.^[120]

The purpose of the citadel remains debated. In sharp contrast to this civilisation's contemporaries, [Mesopotamia](#) and [ancient Egypt](#), no large monumental structures were built. There is no conclusive evidence of palaces or temples – or of kings, armies, or priests. Some structures are thought to have been granaries. Found at one city is an enormous well-built bath

(the "[Great Bath](#)"), which may have been a public bath. Although the citadels were walled, it is far from clear that these structures were defensive.

Most city dwellers appear to have been traders or artisans, who lived with others pursuing the same occupation in well-defined neighbourhoods. Materials from distant regions were used in the cities for constructing seals, beads and other objects. Among the [artefacts](#) discovered were beautiful glazed [faïence](#) beads. [Steatite](#) seals have images of animals, people (perhaps gods), and other types of inscriptions, including the yet un-deciphered [writing system of the Indus Valley Civilisation](#). Some of the seals were used to stamp clay on trade goods.

Although some houses were larger than others, Indus Civilisation cities were remarkable for their apparent, if relative, [egalitarianism](#). All the houses had access to water and drainage facilities. This gives the impression of a society with relatively low [wealth concentration](#), though clear social levelling is seen in personal adornments. [\[clarification needed\]](#)

Archaeological records provide no immediate answers for a centre of power or for depictions of people in power in Harappan society. But, there are indications of complex decisions being taken and implemented. For instance, the majority of the cities were constructed in a highly uniform and well-planned grid pattern, suggesting they were planned by a central authority; extraordinary uniformity of Harappan artefacts as evident in pottery, seals, weights and bricks; presence of public facilities and monumental architecture; heterogeneity in the mortuary symbolism and in grave goods (items included in burials). [\[citation needed\]](#)

These are the major theories: [\[citation needed\]](#)

- There was a single state, given the similarity in artefacts, the evidence for planned settlements, the standardised ratio of brick size, and the establishment of settlements near sources of raw material.
- There was no single ruler but several cities like Mohenjo-daro had a separate ruler, Harappa another, and so forth.
- Harappan society had no rulers, and everybody enjoyed equal status.^[121]^[better source needed]

Technology

Further information: [Indian mathematics § Prehistory](#)

The people of the Indus Civilisation achieved great accuracy in measuring length, mass, and time. They were among the first to develop a system of uniform weights and measures.^[dubious – discuss] A comparison of available objects indicates large scale variation across the Indus territories. Their smallest division, which is marked on an ivory scale found in [Lothal](#) in Gujarat, was approximately 1.704 mm, the smallest division ever recorded on a scale of the [Bronze Age](#).^[citation needed] Harappan engineers followed the decimal division of measurement for all practical purposes, including the measurement of mass as revealed by their [hexahedron](#) weights.^[citation needed]

These [chert](#) weights were in a ratio of 5:2:1 with weights of 0.05, 0.1, 0.2, 0.5, 1, 2, 5, 10, 20, 50, 100, 200, and 500 units, with each unit weighing approximately 28 grams, similar to the English [Imperial ounce](#) or Greek uncia, and smaller objects were weighed in similar ratios with the units of 0.871 . However, as in other cultures, actual weights were not uniform throughout the area. The weights and measures later used in [Kautilya's Arthashastra](#) (4th century BCE) are the same as those used in [Lothal](#).^[123]

Harappans evolved some new techniques in [metallurgy](#) and produced copper, [bronze](#), lead, and [tin](#).^[citation needed]

A [touchstone](#) bearing gold streaks was found in [Banawali](#), which was probably used for testing the purity of gold (such a technique is still used in some parts of India).^[116]

Arts and crafts

Various sculptures, seals, bronze vessels [pottery](#), gold jewellery, and anatomically detailed figurines in [terracotta](#), bronze, and steatite have been found at excavation sites.^[124] The Harappans also made various toys and games, among them cubical [dice](#) (with one to six holes on the faces), which were found in sites like Mohenjo-daro.^[125]

A number of gold, terracotta and stone figurines of girls in dancing poses reveal the presence of some dance form. These terracotta figurines included cows, bears, monkeys, and dogs. The animal depicted on a majority of seals at sites of the mature period has not been clearly identified. Part bull, part zebra, with a majestic horn, it has been a source of speculation. As yet, there is insufficient evidence to substantiate claims that the image had religious or cultic significance, but the prevalence of the image raises the question of whether or not the animals in images of the IVC are religious symbols.^[126]

Many crafts including, "shell working, ceramics, and agate and glazed steatite bead making" were practised and the pieces were used in the making of necklaces, bangles, and other ornaments from all phases of Harappan culture. Some of these crafts are still practised in the subcontinent today.^[127] Some make-up and toiletry items (a special kind of combs (kakai), the use of [collyrium](#) and a special three-in-one toiletry gadget) that were found in Harappan contexts

still have similar counterparts in modern India.^[128] Terracotta female figurines were found (c. 2800–2600 BCE) which had red colour applied to the "manga" (line of partition of the hair).^[128]

A handful of realistic statuettes have been found at IVC sites, of which much the most famous is the lost-wax casting bronze statuette of a slender-limbed Dancing Girl adorned with bangles, found in Mohenjo-daro. Two other realistic statuettes have been found in Harappa in proper stratified excavations, which display near-Classical treatment of the human shape: the statuette of a dancer who seems to be male, and a red jasper male torso, both now in the Delhi National Museum. Sir John Marshall reacted with surprise when he saw these two statuettes from Harappa.^[129]

When I first saw them I found it difficult to believe that they were prehistoric; they seemed to completely upset all established ideas about early art, and culture. Modeling such as this was unknown in the ancient world up to the Hellenistic age of Greece, and I thought, therefore, that some mistake must surely have been made; that these figures had found their way into levels some 3000 years older than those to which they properly belonged ... Now, in these statuettes, it is just this anatomical truth which is so startling; that makes us wonder whether, in this all-important matter, Greek artistry could possibly have been anticipated by the sculptors of a far-off age on the banks of the Indus.^[129]

These statuettes remain controversial, due to their advanced techniques. Regarding the red jasper torso, the discoverer, Vats, claims a Harappan date, but Marshall considered this statuette is probably historical, dating to the Gupta period, comparing it to the much later Lohanipur torso.^{[130][131]} A second rather similar grey stone statuette of a dancing male was also found about 150 meters away in a secure Mature Harappan stratum. Overall, anthropologist Gregory

[Possehl](#) tends to consider that these statuettes probably form the pinnacle of Indus art during the Mature Harappan period.^[130]

Seals

Stamp seals, some of them with [Indus script](#); probably made of steatite; [British Museum](#) (London)

Thousands of [steatite](#) seals have been recovered, and their physical character is fairly consistent. In size they range from squares of side 2 to 4 cm ($\frac{3}{4}$ to $1\frac{1}{2}$ in). In most cases they have a pierced boss at the back to accommodate a cord for handling or for use as personal adornment.

Seals have been found at [Mohenjo-daro](#) depicting a figure standing on its head, and another, on the [Pashupati seal](#), sitting cross-legged in what some^[who?] call a [yoga](#)-like pose (see image, the so-called *Pashupati*, below). This figure has been variously identified. Sir John Marshall identified a resemblance to the Hindu god, Shiva.^[132]

A harp-like instrument depicted on an Indus seal and two shell objects found at Lothal indicate the use of stringed musical instruments.

A [human deity with the horns, hooves and tail of a bull](#) also appears in the seals, in particular in a fighting scene with a horned tiger-like beast. This deity has been compared to the Mesopotamian bull-man [Enkidu](#).^{[133][134][135]} Several seals also show a man fighting two lions or tigers, a "[Master of Animals](#)" motif common to civilizations in Western and South Asia.^{[135][136]}

Trade and transportation

Further information: [Lothal](#) and [Meluhha](#)

The Indus civilisation's economy appears to have depended significantly on trade, which was facilitated by major advances in transport technology. The IVC may have been the first

civilisation to use wheeled transport.^[137] These advances may have included [bullock carts](#) that are identical to those seen throughout South Asia today, as well as boats. Most of these boats were probably small, flat-bottomed craft, perhaps driven by sail, similar to those one can see on the Indus River today; however, there is secondary evidence of sea-going craft. Archaeologists have discovered a massive, dredged canal and what they regard as a docking facility at the coastal city of [Lothal](#) in western India ([Gujarat](#) state). An extensive canal network, used for irrigation, has however also been discovered by H.-P. Francfort.^[138]

Harappan burnished and painted clay ovoid Vase, with round carnelian beads. (3rd Millennium – 2nd Millennium BCE)

During 4300–3200 BCE of the [chalcolithic](#) period (copper age), the Indus Valley Civilisation area shows ceramic similarities with southern [Turkmenistan](#) and northern Iran which suggest considerable mobility and trade. During the Early Harappan period (about 3200–2600 BCE), similarities in pottery, seals, figurines, ornaments, etc. document intensive caravan trade with [Central Asia](#) and the [Iranian plateau](#).^[139]

Archaeological discoveries suggest that trade routes between [Mesopotamia](#) and the Indus were active during the 3rd millennium BCE, leading to the development of [Indus–Mesopotamia relations](#).^[140]

Boat with direction-finding birds to find land.^[141] Model of [Mohenjo-daro](#) seal, 2500–1750 BCE.

Judging from the dispersal of Indus civilisation artefacts, the trade networks economically integrated a huge area, including portions of [Afghanistan](#), the coastal regions of [Persia](#), northern and [western India](#), and [Mesopotamia](#), leading to the development of [Indus-Mesopotamia relations](#). Studies of tooth enamel from individuals buried at Harappa suggest that some residents

had migrated to the city from beyond the Indus Valley.^[142] There is some evidence that trade contacts extended to [Crete](#) and possibly to Egypt.^[143]

There was an extensive maritime trade network operating between the Harappan and Mesopotamian civilisations as early as the middle Harappan Phase, with much commerce being handled by "middlemen merchants from [Dilmun](#)" (modern [Bahrain](#) and [Failaka](#) located in the [Persian Gulf](#)).^[144] Such long-distance sea trade became feasible with the development of plank-built watercraft, equipped with a single central mast supporting a sail of woven rushes or cloth.^[145]

It is generally assumed that most trade between the Indus Valley (ancient Meluhha?) and western neighbors proceeded up the Persian Gulf rather than overland. Although there is no incontrovertible proof that this was indeed the case, the distribution of Indus-type artifacts on the Oman peninsula, on Bahrain and in southern Mesopotamia makes it plausible that a series of maritime stages linked the Indus Valley and the Gulf region.^[146]

In the 1980s, important archaeological discoveries were made at [Ras al-Jinz \(Oman\)](#), demonstrating maritime Indus Valley connections with the [Arabian Peninsula](#).^{[145][147][148]}

Agriculture

According to Gangal et al. (2014), there is strong archeological and geographical evidence that neolithic farming spread from the Near East into north-west India, but there is also "good evidence for the local domestication of barley and the [zebu](#) cattle at Mehrgarh."^{[83][af]}

According to Jean-Francois Jarrige, farming had an independent origin at Mehrgarh, despite the similarities which he notes between Neolithic sites from eastern Mesopotamia and the western Indus valley, which are evidence of a "cultural continuum" between those sites. Nevertheless,

Jarrige concludes that Mehrgarh has an earlier local background," and is not a "'backwater' of the Neolithic culture of the Near East."^[85] Archaeologist [Jim G. Shaffer](#) writes that the Mehrgarh site "demonstrates that food production was an indigenous South Asian phenomenon" and that the data support interpretation of "the prehistoric urbanisation and complex social organisation in South Asia as based on indigenous, but not isolated, cultural developments".^[149]

Jarrige notes that the people of [Mehrgarh](#) used domesticated wheats and [barley](#),^[150] while Shaffer and Liechtenstein note that the major cultivated cereal crop was naked six-row barley, a crop derived from two-row barley.^[151] Gangal agrees that "Neolithic domesticated crops in Mehrgarh include more than 90% barley," noting that "there is good evidence for the local domestication of barley." Yet, Gangal also notes that the crop also included "a small amount of wheat," which "are suggested to be of Near-Eastern origin, as the modern distribution of wild varieties of wheat is limited to Northern Levant and Southern Turkey."^{[83][ag]}

The cattle that are often portrayed on Indus seals are humped [Indian aurochs](#), which are similar to [Zebu](#) cattle. Zebu cattle is still common in India, and in Africa. It is different from the European cattle, and had been originally domesticated on the Indian subcontinent, probably in the [Baluchistan region](#) of Pakistan.^{[152][83][af]}

Research by J. Bates et al. (2016) confirms that Indus populations were the earliest people to use complex multi-cropping strategies across both seasons, growing foods during summer (rice, millets and beans) and winter (wheat, barley and pulses), which required different watering regimes.^[153] Bates et al. (2016) also found evidence for an entirely separate domestication process of rice in ancient South Asia, based around the wild species *Oryza nivara*. This led to the local development of a mix of "wetland" and "dryland" agriculture of local *Oryza sativa*

indica rice agriculture, before the truly "wetland" rice *Oryza sativa japonica* arrived around 2000 BCE.^[154]

Language

See also: [*Substratum in Vedic Sanskrit*](#), [*Harappan language*](#), and [*Origins of Dravidian peoples*](#)

It has often been suggested that the bearers of the IVC corresponded to [proto-Dravidians](#) linguistically, the break-up of proto-Dravidian corresponding to the break-up of the [Late Harappan](#) culture.^[155] Finnish Indologist [Asko Parpola](#) concludes that the uniformity of the Indus inscriptions precludes any possibility of widely different languages being used, and that an early form of Dravidian language must have been the language of the [Indus people](#).^[156] Today, the [Dravidian language](#) family is concentrated mostly in [southern India](#) and northern and eastern [Sri Lanka](#), but pockets of it still remain throughout the rest of India and Pakistan (the [Brahui language](#)), which lends credence to the theory.

According to Heggarty and Renfrew, Dravidian languages may have spread into the [Indian subcontinent](#) with the spread of farming.^[157] According to David McAlpin, the Dravidian languages were brought to India by immigration into India from [Elam](#).^[ah] In earlier publications, [Renfrew](#) also stated that proto-Dravidian was brought to India by farmers from the Iranian part of the Fertile Crescent,^{[158][159][160][ai]} but more recently Heggarty and Renfrew note that "a great deal remains to be done in elucidating the prehistory of Dravidian." They also note that "McAlpin's analysis of the language data, and thus his claims, remain far from orthodoxy."^[157] Heggarty and Renfrew conclude that several scenarios are compatible with the data, and that "the linguistic jury is still very much out."^{[157][ak]}

Ten [Indus characters](#) from the northern gate of [Dholavira](#), dubbed the [Dholavira Signboard](#), one of the longest known sequences of Indus characters

Between 400 and as many as 600 distinct Indus symbols^[165] have been found on [seals](#), small tablets, ceramic pots and more than a dozen other materials, including a "signboard" that apparently once hung over the gate of the inner citadel of the Indus city of Dholavira. Typical [Indus inscriptions](#) are no more than four or five characters in length, most of which (aside from the Dholavira "signboard") are tiny; the longest on a single surface, which is less than 2.5 cm (1 in) square, is 17 signs long; the longest on any object (found on three different faces of a mass-produced object) has a length of 26 symbols.

While the Indus Valley Civilisation is generally characterised as a literate society on the evidence of these inscriptions, this description has been challenged by Farmer, Sproat, and Witzel (2004)^[166] who argue that the Indus system did not encode language, but was instead similar to a variety of non-linguistic sign systems used extensively in the Near East and other societies, to symbolise families, clans, gods, and religious concepts. Others have claimed on occasion that the symbols were exclusively used for economic transactions, but this claim leaves unexplained the appearance of Indus symbols on many ritual objects, many of which were mass-produced in [moulds](#). No parallels to these mass-produced inscriptions are known in any other early ancient civilisations.^[167]

In a 2009 study by P.N. Rao et al. published in [Science](#), computer scientists, comparing the pattern of symbols to various linguistic scripts and non-linguistic systems, including DNA and a computer programming language, found that the Indus script's pattern is closer to that of spoken words, supporting the hypothesis that it codes for an as-yet-unknown language.^{[168][169]}

Farmer, Sproat, and Witzel have disputed this finding, pointing out that Rao et al. did not actually compare the Indus signs with "real-world non-linguistic systems" but rather with "two wholly artificial systems invented by the authors, one consisting of 200,000 randomly ordered signs and another of 200,000 fully ordered signs, that they spuriously claim represent the structures of all real-world non-linguistic sign systems".^[170] Farmer et al. have also demonstrated that a comparison of a non-linguistic system like [medieval heraldic signs](#) with [natural languages](#) yields results similar to those that Rao et al. obtained with Indus signs. They conclude that the method used by Rao et al. cannot distinguish linguistic systems from non-linguistic ones.^[171]

The messages on the seals have proved to be too short to be decoded by a computer. Each seal has a distinctive combination of symbols and there are too few examples of each sequence to provide a sufficient context. The symbols that accompany the images vary from seal to seal, making it impossible to derive a meaning for the symbols from the images. There have, nonetheless, been a number of interpretations offered for the meaning of the seals. These interpretations have been marked by ambiguity and subjectivity.^{[171]:69}

Photos of many of the thousands of extant inscriptions are published in the *Corpus of Indus Seals and Inscriptions* (1987, 1991, 2010), edited by [Asko Parpola](#) and his colleagues. The most recent volume republished photos taken in the 1920s and 1930s of hundreds of lost or stolen inscriptions, along with many discovered in the last few decades; formerly, researchers had to supplement the materials in the *Corpus* by study of the tiny photos in the excavation reports of Marshall (1931), MacKay (1938, 1943), Wheeler (1947), or reproductions in more recent scattered sources.

[Edakkal Caves](#) in [Wayanad district](#) of [Kerala](#) contain drawings that range over periods from as early as 5000 BCE to 1000 BCE. The youngest group of paintings have been in the news for a possible connection to the Indus Valley Civilisation.^[172]

Religion

The religion and belief system of the Indus Valley people have received considerable attention, especially from the view of identifying precursors to deities and religious practices of [Indian religions](#) that later developed in the area. However, due to the sparsity of evidence, which is open to varying interpretations, and the fact that the Indus script remains undeciphered, the conclusions are partly speculative and largely based on a retrospective view from a much later Hindu perspective.^{[173][174]}

An early and influential work in the area that set the trend for Hindu interpretations of archaeological evidence from the Harappan sites^[175] was that of [John Marshall](#), who in 1931 identified the following as prominent features of the Indus religion: a Great Male God and a Mother Goddess; deification or veneration of animals and plants; symbolic representation of the phallus ([linga](#)) and vulva ([yoni](#)); and, use of baths and water in religious practice. Marshall's interpretations have been much debated, and sometimes disputed over the following decades.^{[176][177]}

[Swastika](#) seals of Indus Valley Civilisation in [British Museum](#)

One Indus Valley seal shows a seated figure with a horned headdress, possibly [tricephalic](#) and possibly [ithyphallic](#), surrounded by animals. Marshall identified the figure as an early form of the Hindu god [Shiva](#) (or [Rudra](#)), who is associated with [asceticism](#), [yoga](#), and [linga](#); regarded as

a [lord of animals](#); and often depicted as having three eyes. The seal has hence come to be known as the [Pashupati Seal](#), after [Pashupati](#) (lord of all animals), an epithet of Shiva.^{[176][178]} While Marshall's work has earned some support, many critics and even supporters have raised several objections. [Doris Srinivasan](#) has argued that the figure does not have three faces, or yogic posture, and that in [Vedic literature](#) Rudra was not a protector of wild animals.^{[179][180]} Herbert Sullivan and [Alf Hiltebeitel](#) also rejected Marshall's conclusions, with the former claiming that the figure was female, while the latter associated the figure with *Mahisha*, the Buffalo God and the surrounding animals with [vahanas](#) (vehicles) of deities for the four cardinal directions.^{[181][182]} Writing in 2002, [Gregory L. Possehl](#) concluded that while it would be appropriate to recognise the figure as a deity, its association with the water buffalo, and its posture as one of ritual discipline, regarding it as a proto-Shiva would be going too far.^[178] Despite the criticisms of Marshall's association of the seal with a proto-Shiva icon, it has been interpreted as the [Tirthankara Rishabhanatha](#) by [Jains](#) and [Vilas Sangave](#).^[183] Historians such as [Heinrich Zimmer](#) and [Thomas McEvilley](#) believe that there is a connection between first [Jain](#) Tirthankara Rishabhanatha and the Indus Valley civilisation.^{[184][185]}

Marshall hypothesised the existence of a cult of Mother Goddess worship based upon excavation of several female figurines, and thought that this was a precursor of the Hindu sect of [Shaktism](#). However the function of the female figurines in the life of Indus Valley people remains unclear, and Possehl does not regard the evidence for Marshall's hypothesis to be "terribly robust".^[186] Some of the [baetyls](#) interpreted by Marshall to be sacred phallic representations are now thought to have been used as pestles or game counters instead, while the ring stones that were thought to symbolise *yoni* were determined to be architectural features used to stand pillars, although the possibility of their religious symbolism cannot be eliminated.^[187] Many Indus

Valley seals show animals, with some depicting them being carried in processions, while others show [chimeric creations](#). One seal from Mohenjo-daro shows a half-human, half-buffalo monster attacking a tiger, which may be a reference to the [Sumerian myth](#) of such a monster created by goddess [Aruru](#) to fight [Gilgamesh](#).^[188]

In contrast to contemporary [Egyptian](#) and [Mesopotamian](#) civilisations, Indus Valley lacks any monumental palaces, even though excavated cities indicate that the society possessed the requisite engineering knowledge.^{[189][190]} This may suggest that religious ceremonies, if any, may have been largely confined to individual homes, small temples, or the open air. Several sites have been proposed by Marshall and later scholars as possibly devoted to religious purpose, but at present only the [Great Bath](#) at Mohenjo-daro is widely thought to have been so used, as a place for ritual purification.^{[186][191]} The funerary practices of the Harappan civilisation are marked by fractional burial (in which the body is reduced to skeletal remains by exposure to the elements before final interment), and even cremation.^{[192][193]}

Around 1900 BCE signs of a gradual decline began to emerge, and by around 1700 BCE most of the cities had been abandoned. Recent examination of human skeletons from the site of Harappa has demonstrated that the end of the Indus civilisation saw an increase in inter-personal violence and in infectious diseases like [leprosy](#) and [tuberculosis](#).^{[194][195]}

According to historian [Upinder Singh](#), "the general picture presented by the late Harappan phase is one of a breakdown of urban networks and an expansion of rural ones."^[196]

During the period of approximately 1900 to 1700 BCE, multiple regional cultures emerged within the area of the Indus civilisation. The [Cemetery H culture](#) was in [Punjab](#), [Haryana](#), and [Western Uttar Pradesh](#), the [Jhukar culture](#) was in [Sindh](#), and the [Rangpur culture](#) (characterised by Lustrous Red Ware pottery) was in [Gujarat](#).^{[197][198][199]} Other sites

associated with the Late phase of the Harappan culture are [Pirak](#) in [Balochistan, Pakistan](#), and [Daimabad](#) in [Maharashtra](#), India.^[111]

The largest Late Harappan sites are Kudwala in [Cholistan](#), [Bet Dwarka](#) in [Gujarat](#), and [Daimabad](#) in [Maharashtra](#), which can be considered as urban, but they are smaller and few in number compared with the Mature Harappan cities. Bet Dwarka was fortified and continued to have contacts with the [Persian Gulf](#) region, but there was a general decrease of long-distance trade.^[200] On the other hand, the period also saw a diversification of the agricultural base, with a diversity of crops and the advent of [double-cropping](#), as well as a shift of rural settlement towards the east and the south.^[201]

The pottery of the Late Harappan period is described as "showing some continuity with mature Harappan pottery traditions," but also distinctive differences.^[202] Many sites continued to be occupied for some centuries, although their urban features declined and disappeared. Formerly typical artifacts such as stone weights and female figurines became rare. There are some circular [stamp seals](#) with geometric designs, but lacking the [Indus script](#) which characterised the mature phase of the civilisation. Script is rare and confined to potsherd inscriptions.^[202] There was also a decline in long-distance trade, although the local cultures show new innovations in [faience](#) and glass making, and carving of stone beads.^[203] Urban amenities such as drains and the public bath were no longer maintained, and newer buildings were "poorly constructed". Stone sculptures were deliberately vandalised, valuables were sometimes concealed in [hoards](#), suggesting unrest, and the corpses of animals and even humans were left unburied in the streets and in abandoned buildings.^[204]

During the later half of the 2nd millennium BCE, most of the post-urban Late Harappan settlements were abandoned altogether. Subsequent material culture was typically characterised

by temporary occupation, "the campsites of a population which was nomadic and mainly pastoralist" and which used "crude handmade pottery."^[205] However, there is greater continuity and overlap between Late Harappan and subsequent cultural phases at sites in [Punjab](#), [Haryana](#), and western [Uttar Pradesh](#), primarily small rural settlements.^{[201][206]}

"Aryan invasion"

In 1953 Sir [Mortimer Wheeler](#) proposed that the invasion of an Indo-European tribe from Central Asia, the "[Aryans](#)", caused the decline of the Indus Civilisation. As evidence, he cited a group of 37 skeletons found in various parts of Mohenjo-daro, and passages in the Vedas referring to battles and forts. However, scholars soon started to reject Wheeler's theory, since the skeletons belonged to a period after the city's abandonment and none were found near the citadel. Subsequent examinations of the skeletons by [Kenneth Kennedy](#) in 1994 showed that the marks on the skulls were caused by erosion, and not by violence.^[207]

In the [Cemetery H culture](#) (the late Harappan phase in the Punjab region), some of the designs painted on the funerary urns have been interpreted through the lens of [Vedic literature](#): for instance, peacocks with hollow bodies and a small human form inside, which has been interpreted as the souls of the dead, and a hound that can be seen as the hound of [Yama](#), the god of death.^{[208][209]} This may indicate the introduction of new religious beliefs during this period, but the archaeological evidence does not support the hypothesis that the Cemetery H people were the destroyers of the Harappan cities.^[210]

Climate change and drought

See also: [Bond event](#) and [4.2 kiloyear event](#)

Suggested contributory causes for the localisation of the IVC include changes in the course of the river,^[211] and [climate change](#) that is also signalled for the neighbouring areas of the Middle East.^{[212][213]} As of 2016 many scholars believe that drought, and a decline in trade with Egypt and Mesopotamia, caused the collapse of the Indus Civilisation.^[214] The climate change which caused the collapse of the Indus Valley Civilisation was possibly due to "an abrupt and critical [mega-drought and cooling 4,200 years ago](#)," which marks the onset of the [Meghalayan Age](#), the present stage of the [Holocene](#).^[215]

The [Ghaggar-Hakra](#) system was rain-fed,^{[216][all][217][am]} and water-supply depended on the monsoons. The Indus Valley climate grew significantly cooler and drier from about 1800 BCE, linked to a general weakening of the [monsoon](#) at that time.^[113] The Indian monsoon declined and aridity increased, with the Ghaggar-Hakra retracting its reach towards the foothills of the Himalaya,^{[113][218][219]} leading to erratic and less extensive floods that made inundation agriculture less sustainable.

Aridification reduced the water supply enough to cause the civilisation's demise, and to scatter its population eastward.^{[220][221][114][ae]} According to Giosan et al. (2012), the IVC residents did not develop irrigation capabilities, relying mainly on the seasonal monsoons leading to summer floods. As the monsoons kept shifting south, the floods grew too erratic for sustainable agricultural activities. The residents then migrated towards the Ganges basin in the east, where they established smaller villages and isolated farms. The small surplus produced in these small communities did not allow development of trade, and the cities died out.^{[222][223]}