
UNIT 4 THE NEOLITHIC PHASE*

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4.0 OBJECTIVES

In this Unit, you will learn about:

- the beginning of agriculture in different parts of the Indian subcontinent;
- the development of pastoralism and the transition from hunting-gathering to agriculture;
- Neolithic cultures in their regional setting in India;
- learn the significance of the site of Mehrgarh; and
- learn about the Ashmounds as a specific feature of the South Indian Neolithic culture.

4.1. INTRODUCTION

This Unit will present the details about the definition, nature and characteristics of the Neolithic culture. The focus will be on the Indian Neolithic.

Neolithic was a very important stage of the history of human culture when humans were no longer dependent entirely on nature but had started to exploit nature to

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their own advantage. The long association of humans with nature enabled them to distinguish some plants and animals which they could manipulate according to their needs. They tamed some animals and kept them in pens and took the responsibility of producing plant food by cultivating some useful varieties. They needed to clear the forest and till the soil for agriculture. From nomads the people became settled in villages, New tool types made with new techniques emerged. Though new subsistence strategies of the domestication of plants and animals emerged, old modes like hunting and gathering of food continued.

4.2 CHANGES IN CLIMATE AND SUBSISTENCE

Prehistory is divided into various cultural periods such as the Palaeolithic, Mesolithic, Neolithic and the Chalcolithic. Among these phases, the Neolithic period succeeded the Palaeolithic and Mesolithic, and preceded the Chalcolithic period. In the Palaeolithic and Mesolithic periods, humans did not produce food. They did not domesticate animals and cultivate plants. They gathered naturally available plant food such as tubers, fruits, leaves and nuts, trapped fish and hunted wild animals. We are not certain if the people of the later part of the middle and early part of the Upper Palaeolithic were involved in any horticultural practices such as planting of seedlings or if they became friendly with animals. The social organization in the prehistoric period was influenced by the hunting-gathering mode of production. Since the amount of food gathered through hunting and gathering was limited and it had to be consumed immediately, smaller bands consisting of a few people existed in this period, although large congregations would have existed in the areas that had a lot of resources.

Several cultural changes began to occur around the beginning of the Holocene in some parts of the world, leading to the development of Neolithic cultures. Major shift in climate, in many parts of the world, is suggested during the transition from the Late Pleistocene to Holocene, after the end of the Ice Age. Warm climate began to set in across the world, leading to changes in the nature of animal and plant populations and their distribution. These environmental changes influenced the Neolithic cultures and determined the ways of life of the Neolithic people to some extent. However, people made certain conscious cultural decisions to modify their life-ways in the changing climate conditions.

The Neolithic cultures were pastoral and farming cultures, but without the knowledge of metal implements. They used polished stone tools, lithic tools, and pottery. In the Neolithic period, humans started to cultivate plants and domesticate animals. They began to effectively modify, control and manage the natural resources to their advantage. These measures increased their food security, but at the same time, altered their ways of life. Since they domesticated animals and plants, they had to settle at a place permanently or for a specific period of time, to take care of the animals and plants. Their economic responsibilities increased; they were engaged, at least to a limited degree, in the management of plants, pastures, animals and irrigation. They practiced selective breeding of plants and animals and had developed a good knowledge and understanding of the environment. However, the advent of Neolithic does not necessarily mean that people stopped hunting animals and gathering of plant foods. They continued to hunt wild animals, gathered plant foods and were involved in fishing to supplement their diet, since the consumption of diverse food resources catered to their physical needs and effective survival.

4.3 NEOLITHIC CULTURE

The term 'Neolithic' was first used by Sir John Lubbock in his book titled *Prehistoric Times*, published in 1865. He was the first Baron of Avebury (b. 1834- d. 1913) in England. By adding the concept of Neolithic Age to the cultural historical sequence, he sought to refine the Three Age system (Stone Age, Bronze Age and Iron Age), which had been proposed by C. J. Thomsen in the 1830s.

The term '*neo*' means new, and '*lithic*' means stone. Unlike the Palaeolithic (Old Stone Age) period, people in this period began to use polished stone tools and axes, often called **celts**. The Neolithic tools appear more refined than the crude flaked stone tools of the Palaeolithic period (Figure 4.1).

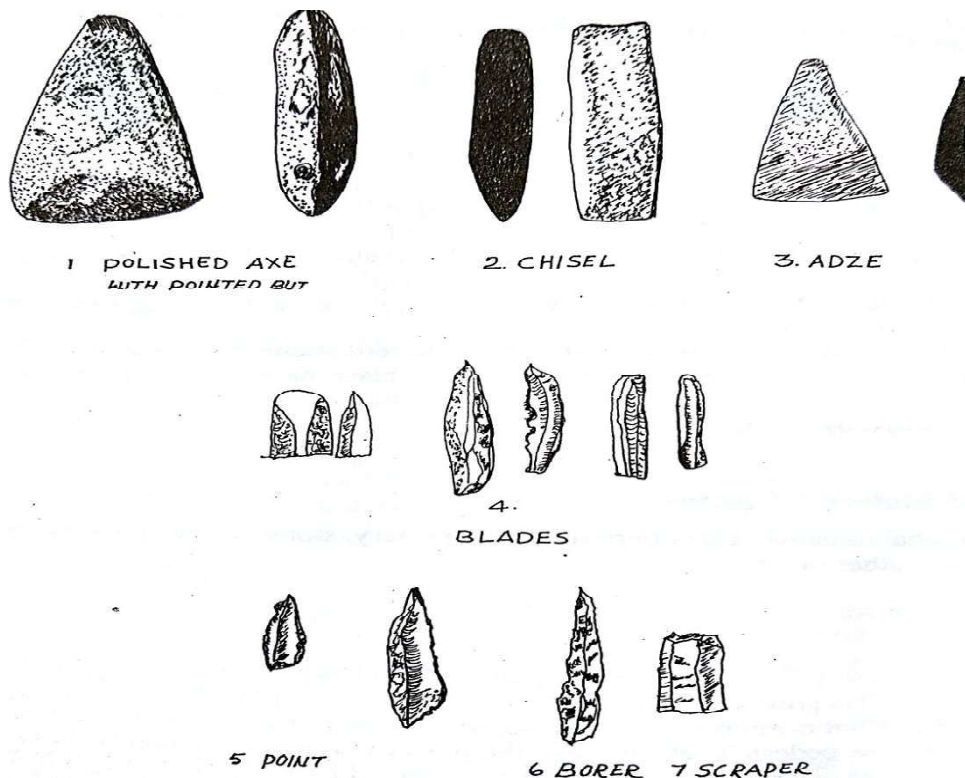


Fig. 4.1: Neolithic Blade and Stone Tool Industry in South India. Source: EHI-02, Block 3.

They needed more diverse variety of tools since they were involved in different types of activities. Generally, Palaeolithic tools have rough or finely flaked surfaces. Sometimes, the natural context (rolled pebble surface) was retained while flaking. This would serve as a butt end for a more comfortably handling of the tools during their use. Not much evidence is available for the polishing of tools in the Palaeolithic period. In the Neolithic period they polished some of the stone tools. However, they continued to use flaked and unpolished tools as well. The concept of Neolithic has undergone a lot of change over the years. Now, it denotes early pastoral and farming village communities that did not use metal.

4.3.1 The Concept of Neolithic Revolution

The agro-pastoral cultural developments of the early Holocene were labelled as '**Neolithic Revolution**' by V. Gordon Childe in 1941. The Neolithic and Chalcolithic cultures were treated as food producing economies by him. The idea of Neolithic Revolution refers to the origin of agriculture, animal

domestication and a settled way of life. It indicates the transformation of society from a food gathering (hunting-gathering) economy to a food producing (agro-pastoral) economy. The idea of revolution pertaining to the Neolithic way of life signifies a major transformation in human cultural adaptation.

Miles Burkitt identified the Neolithic culture with polished tools, animal and plant domestication. Thus, the 'Neolithic' does not denote the use of new tools (Figure 4.2) alone, but also new modes of adaptation and ways of life.

The introduction of domestication of plants and animals led to the production of a large quantity of grains and animal food. The food that they produced had to be stored and hence, pottery-making emerged. They had to settle in open areas away from caves and thus, houses were built. Large villages developed and permanent residences were built. Settlements were fenced since the cattle and sheep had to be protected. These activities gradually led to food surplus and craft specialization. Because of the food security more people could settle in the villages. Hence, the cultural developments of this period are termed as Neolithic Revolution.

The surplus food production was one of the main factors for the development of early urban cultures at a later context. It allowed for the development of various crafts, urban formations and early states in the succeeding Bronze Age.

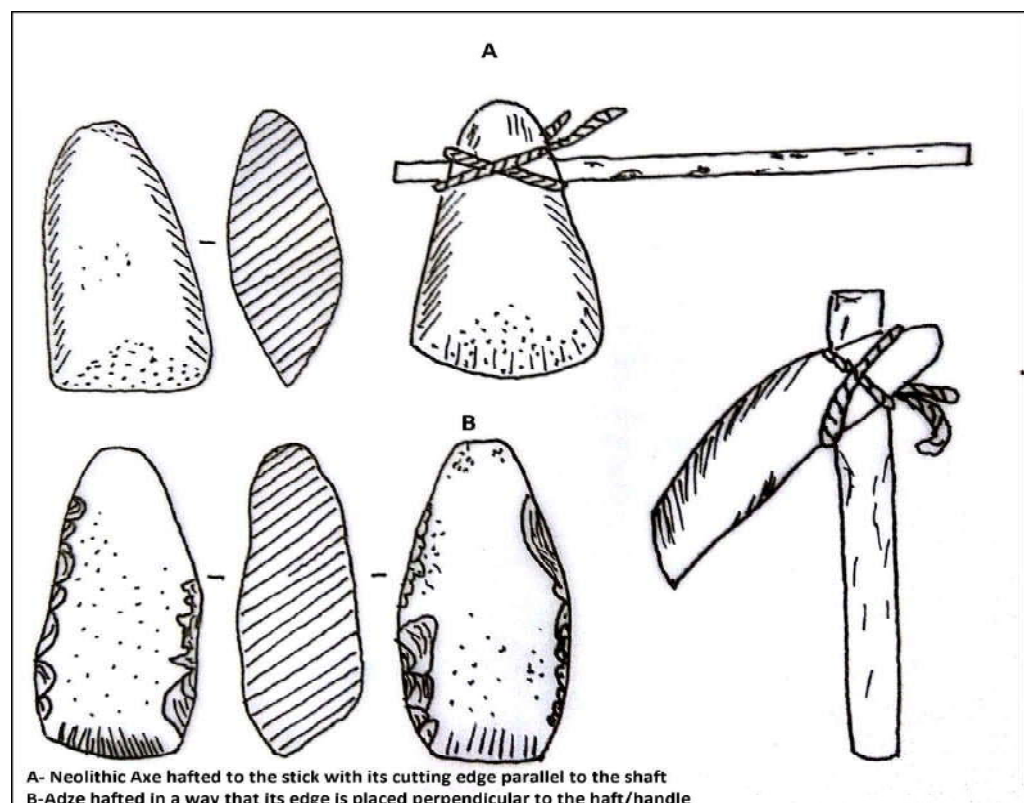


Fig. 4.2: Neolithic tools. Source: Man-002, Block 7, Unit 1.

4.3.2 Debate about the Transition from Hunting-Gathering to Agriculture

Various explanations have been offered regarding the origins of farming. V. Gordon Childe argued that farming began in the Fertile Crescent (South-west Asia) due to climatic changes. Geomorphological and climatic factors contributed to the formation of oases separated by vast swathes of desert. These oases attracted

animals, humans and plant concentrations. It was this close contiguity between them that perhaps led to early domestication.

Robert Braidwood challenged this notion of climatic changes and has argued for a slow, gradual evolution of food production. Farming began in nuclear zones, those areas that had abundant animal and plant species. Change to domestication of plants and animals occurred because the culture had reached a stage when it became receptive to this change. Thus, transition to agriculture was largely due to a combination of factors such as changes in human nature and environmental circumstances.

Population dynamics has been considered as the main causal determinant in the origins of farming by Lewis R. Binford. Agriculture was a response to demographic tensions. Population pressures in certain sedentary groups around 9000 BCE in the Near East led to a more intensive exploitation of natural resources, making transition to agriculture possible.

Kent Flannery believed that the beginning of agriculture was a long-drawn process rather than an event. According to him, the seasonal movement of hunter-gatherers was scheduled in such a way that they could exploit different plants and animals in different eco-zones. They, thus, had access to a broad spectrum of economy rather than a few plants and animals. Certain plants like maize and wheat developed into hybrid varieties and could be grown at different times of the year. Thus, the old pattern of hunting and gathering was replaced by a subsistence pattern based on prolonged stay and food production.

According to one school of thought, culture is seen as an adaptation to natural environment. However, culture should be seen partly as an adaptation to the environment and partly as the result of conscious decision making by humans along with various social and cultural factors. Trevor Watkins argued that the old notions of economy-based transformation gave way to 'culture and cognition' based transformation of societies. He argued that the Epi-Palaeolithic people came together in the first large permanent communities to form extensive settlements which only later needed to be fed by farming. Here the argument is not that agriculture developed as a sudden invention or event, but as a gradual process, as a necessity to feed a large group of people. Trevor Watkins suggested that the small-scale band-level societies in the Epi-Palaeolithic Levant became large co-resident communities. Agriculture and animal domestication developed later. He suggested that social and cultural factors were more important than the economic necessities and people gave much more stress on living in large communities leading to the development of farming.

Therefore, Neolithic revolution was, in fact, a long-drawn process, aided by social and cultural factors, and also environmental conditions. It was not a simple one-time invention or episode, as imagined by a few.

4.3.3 Neolithic in Global Context

The conventional conception of Neolithic period as the beginning of agriculture and animal domestication, permanent settlements and introduction of ceramics at a specific point of time (or as a package) might not be considered as valid. These cultural traits, sometimes together and sometimes in isolation, developed in various parts of the world. All the Neolithic communities were not fully

sedentary and some of the communities were semi-sedentary and adopted nomadic practices as well.

Early evidence of Neolithic is found from the Fertile Crescent region covering the Nile Valley of Egypt, Israel, Palestine, Syria and Mesopotamia; the Indus Region and the Ganga Valley of Indian subcontinent; China and Meso-America. By about 10,000-5,000 BCE agriculture and pastoralism emerged in many parts of the world, leading to several cultural developments. Although agriculture has early beginnings in many parts of the world, South-west Asia has the earliest evidence of the development of agriculture and animal domestication. The region of Israel, Palestine and Syria (Levant), and Turkey and Iraq witnessed early development of Neolithic villages around the ninth millennium BCE.

4.3.4 Neolithic and Contemporary Cultures

The Neolithic culture is seen as a major turning point in human history. However, not all regions of the world witnessed the Neolithic culture. Neolithic ways of life appeared earlier in regions such as South-west Asia, Egypt, Europe, Meso-America, north-western part of India, Ganga Valley in India and China and it appeared very late in many other regions. Within India, the Neolithic culture first appeared in north-western parts of India. In Kashmir, south India and eastern India they appeared at a later stage. Some regions of India did not witness Neolithic cultures at all, and the Mesolithic culture was directly succeeded by Iron Age culture, for example in Tamil Nadu and Kerala.

All the Neolithic cultures of India had a more or less similar degree of cultural adaptation. Neolithic cultures of India were contemporary with Harappan, Chalcolithic and microlith-using hunter-gatherers. Thus, it should be noted that Neolithic cultures of India were not isolated cultural units. In fact, except for the use of copper, not much difference is noticed between the Chalcolithic cultures and Neolithic cultures.

Check Your Progress Exercise 1

- 1) Discuss in brief the concept of Neolithic Revolution.

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- 2) Discuss the main features of the debate about the transition from hunting-gathering to agriculture.

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4.4 NEOLITHIC CULTURES OF INDIA

The Neolithic cultures mark the end of the Stone Age. Neolithic of India constitutes an important phase. A Neolithic celt was found in India in 1842 by Le Mesurier in the Raichur district of Karnataka, and later by John Lubbock in 1867 in the Brahmaputra valley of upper Assam. Extensive explorations and excavations have yielded immense amount of material about the Neolithic cultures of India. One thing to note about Indian Neolithic is that Neolithic cultures in India did not develop everywhere at the same time, nor did they end simultaneously. There were regional variations too. For example, there is no evidence of plant cultivation in the north-east despite the sites yielding 'Neolithic' tools. In the Kashmir valley the Neolithic cultures do not seem to have evolved out of the preceding Mesolithic cultures like everywhere else. In terms of plant crops, wheat and barley were predominant in Mehrgarh in Baluchistan, but rice was important in the central region around Prayagraj. The south Indian Neolithic is unique in the sense that it has ash mounds, with the evidence of millet cultivation. Thus, each of these regional Neolithic traditions seem to have been conditioned by local, ecological conditions and need to be studied separately. Broadly, however, we can say that the Neolithic of India was a farming and pastoralism based sedentary/semi-sedentary village culture.

Now let us discuss the clusters of Neolithic sites that are found in different parts of India. The Neolithic sites of the Indian subcontinent or South Asia are divided into various regional cultural groups. They are:

- 1) North-western region – The areas of Afghanistan and Pakistan.
- 2) Northern region – The region of Kashmir.
- 3) The Vindhyan hills and the Ganga valley – Vindhyan region of Prayagraj, Mirzapur and the Belan river valley.
- 4) Mid-Eastern Ganga valley region – The area of northern part of Bihar.
- 5) Central Eastern region – Including the Chhota Nagpur area with Odisha and Bengal region.
- 6) North-eastern region – Assam and the sub-Himalayan region.
- 7) Southern region – Peninsular India, mainly Andhra, Karnataka and parts of Tamil Nadu.

We will be presenting the main features of these regional traditions individually.

4.4.1 The Neolithic Culture of North-Western Region

The Neolithic culture of north-western region covers those areas which are now in Pakistan and Afghanistan. This region has evidence for early domestication of wheat and barley, and animals. It is one of the earliest regions of the world which has given combined evidence of plant and animal domestication. On the peripheries of Central Asia, this region has the natural occurrence of bread wheat and spelt wheat. *Aegilops tauschii*, one of the ancestral species of wheat, had its natural habitat in this region. Thus, the practice of cultivation might have emerged in this region independently.

The caves in northern Afghanistan have evidence of Mesolithic hunter-gatherers exploiting wild sheep, cattle and goat. Wheat cultivation began in Central Asia

and its adjoining regions. The Kacchi plains are located between the dry mountains and the Indus plains. The smaller valleys of this region with alluvial deposits were ideal for cultivation and animal domestication. The important Neolithic sites of this region are Mehrgarh in the Kacchi plains, Kili Gul Muhammad in the Quetta valley, Rana Ghundai in the Loralai valley and Anjira in the Surab valley. All these Neolithic sites are in Pakistan. Other important sites are Gunlan, Rehman Dheri, Tarakai Qila and Sarai Khola.

Case Study: Mehrgarh

Mehrgarh, on the bank of river Bolan, is an important site located in the Kacchi plains, about 150 km from Quetta in Baluchistan. This site covers an area of 200 ha. The site has given evidence of pre-ceramic Neolithic up to the Harappan culture.

The first cultural period of the Neolithic culture at Mehrgarh dates from *c.* 7000 to 5500 BCE. It is a pre-pottery Neolithic culture. The semi-nomadic, pastoral groups began to settle at this place. These people used polished stone axes, querns, microliths and bone tools. They did not use pottery, but cultivated six-row barley, emmer and einkorn wheat, and domesticated sheep, goat and cattle. Seeds of plum, dates and *jujube* were found at this site suggesting gathering activities of the inhabitants. Bones of *gazelle*, swamp deer, antelopes indicate that they hunted wild animals too.

They built their houses with mud and buried the dead in between the houses. Goat bones have been found near the bodies in the burials. They have also placed ornaments. The houses measured 2 m. × 1.8 m in size. Grinding stones, blades have been found. Blades show evidence of bitumen suggesting the use of hafting. Handmade female figurines have been recovered from the site. The houses appear like storage compartments and perhaps they were used for storing grains. They used ornaments of sea shell, limestone, turquoise beads, lapis lazuli and sandstone. Turquoise from Nishapur mines of Iran, Lapis Lazuli from Badakshan of Afghanistan, and shell from the coastal regions suggest long distance interactions of the Neolithic people of Mehrgarh. The period II at Mehrgarh dates from *c.* 6500 BCE to 4500 BCE and the Period III, from *c.* 4800 BCE to 3500 BCE. In Period II, from *c.* 5000 BCE, evidence for the cultivation of cotton and grapes was observed. This period has evidence of pottery. Terracotta figurines, glazed faience beads have been found. More frequency of the use of ornaments was noticed among the women. Evidence of long-distance trade is noticed as revealed by the use of Lapis Lazuli. Houses increased in size; ivory working is also evidenced. Sickles appeared in this period. Period III has wheel made pottery with paintings depicting human and floral designs. More burials were noticed in this period indicating population increase. Traces of copper working are also found in Period III. The village was abandoned after the rise of Mature phase of the Indus civilization.

Significance of Mehrgarh – Periods I to III provide the earliest evidence of the transition from hunting-gathering to animal domestication and agriculture. Barley seems to have been the most important crop. Significantly, wild, transitional and cultivated varieties of barley have been found. This makes this region of north Baluchistan, a natural habitat zone of wild barley, and Mehrgarh a part of the nuclear area of barley

domestication. Wheat has also been found. Though the evidence regarding this region being a natural habitat for wild wheat is uncertain, the fact remains that Mehrgarh people were domesticating wheat. There is plenty of evidence for the transition to animal domestication at the site. The lower levels of Period I were dominated by the remains of wild animals. The decreasing size of cattle and sheep bones through the levels indicates that their domestication was under way. By the end of Period I, bones of wild animals decreased, while bones of domesticated cattle, sheep and goat increased. Cattle predominate. In the succeeding period III, sheep, goat bones predominate.

The site of Mehrgarh is important because it has given the earliest and most comprehensive evidence of domestication of cattle, sheep, goat, wheat and barley; the first combined evidence of its kind in the world.

Kili Gul Muhammed

The Neolithic site of Kili Gul Muhammed is in the Quetta valley of Pakistan. This site has revealed three cultural periods. The Neolithic occupation at this site dates from c. 5500 BCE to 4500 BCE, later than that of Mehrgarh. People built wattle-and-daub and mud houses. They domesticated cattle, sheep and goat. Basket marked pottery and black-on-red ware pottery, with painted designs similar to Mehrgarh, occur in the Periods II and III of this site. This site has evidence of nomadic pastoralism. Microliths have been recovered.

4.4.2 The Neolithic Culture of Northern Region (Kashmir)

The sites of northern Neolithic culture are found in Kashmir. The Neolithic culture of Kashmir region was contemporary with the Harappan civilization. Recent research has placed the beginning of the Neolithic culture in this region around the late fourth millennium BCE. Excavations at Burzahom, Gufkral and Kanispor have revealed significant materials belonging to Neolithic culture. Burzahom and Gufkral have also revealed Megalithic and Early Historic phases.

Burzahom

Burzahom was an important site of this culture. Two cultural periods have been identified at this site. In the Neolithic period, people lived in pit-houses (subterranean dwellings, about 4 m in depth) in order to escape from the extreme cold weather of the Kashmir region. The pit houses were oval in shape, and they were broader at the bottom and narrower on the top. Post-holes which were used for constructing a thatched roof structure were found around the pit houses. The houses were accessed by ladders and steps. They produced coarse handmade pottery. Storage pits were found near the dwellings. They used tools such as stone axes, chisels, adzes, pounders, mace-heads, points and picks. They used scrapers for working on animal skins. Awls were used for stitching the skins into clothes to adjust to the cold weather. Harpoons, needles and arrow heads made of bones were used. A stone depicting engraved image of a hunting scene, the sun and a dog has been found from this site.

These people were involved in hunting, fishing and also limited agriculture. Evidence of grain storage has been found. A perforated harvester with decoration has been found at Burzahom. Period II has agate and carnelian beads; Kot Diji phase patterns depicting a horned deity is an important find. A burial at this site

produced a wild dog bone and antler horn. Seeds of wheat (*Triticum sp.*), barley (*Hordeum vulgare*), common pea (*Pisum arvense L.*) and lentil (*Lens culinaris*) have been recovered from the excavations. The domesticated animals include cattle, sheep, goat, pig, dog and fowl. Wild animal bones of red deer, Kashmir stag, ibex, bear and wolf suggest that they hunted wild animals too for their subsistence.

Gufkral

The site of Gufkral has evidence of three cultural phases. Settlement started at this site around 3000 BCE and evidence of pit dwellings has been found. Bones of sheep, goat, deer, ibex, wolf and bear suggest their dependence on pastoralism and hunting. Polished stone tools, querns, horn tools and steatite beads reveal information about the material culture. The site is dated to c.1300 BCE.

The Neolithic culture of Kashmir is considered to have had connections with the East-Asian Neolithic culture of the Yang Shao phase. Stone knife-harvesters with perforation recorded at Kashmir valley have parallels in north and central China with Yang Shao and Lung Shan complexes and the Jomon phase of Japan and Korea. The Kashmir Neolithic has some distinctive characteristics such as pit dwellings, use of 'harvesters', bone tools made on antlers, dog burials and the use of red ochre on dead bodies.

4.4.3 The Neolithic Culture of the Vindhyan Hills, the Belan and the Ganga River Valleys

The Belan river valley witnessed one of the earliest Neolithic occupations in India. The river Belan flows at the northern edge of the Vindhyan and the Kaimur hills. This river is a tributary of the river Tons which joins the Ganga near Prayagaraj (UP). This region has a rich environment, since it falls in the monsoon area. It has several wild animals and wild rice species. Transition from food gathering to food production is noticed in this region. The sites of Chopani-Mando, Koldihwa, Lehuradeva and Mahagara in the Ganga valley are the important excavated sites of this region. These sites have given evidence of wattle-and-daub houses, post-holes, microlithic tools, querns, pestles and underfired hand-made ceramics. The principal ware is 'corded ware' or cord impressed ware which includes bowls and storage jars. The people were engaged in farming and animal husbandry. Bones of cattle, sheep, goat, deer, turtles and fish have also been recovered. At Mahagara, evidence of domesticated rice has been found. This is in the form of carbonised grains as well as rice husks embedded in the pottery.

Evidence of rice cultivation from Neolithic sites of Central India is mired in controversy. While some scholars believe that this evidence from Koldihwa puts it at par with China in terms of chronology, others believe that the dates need to be re-examined. One possibility that has been suggested is that rice cultivation may have travelled along with the migrants from South China to Central India. Some, however, argue that Central India was an independent centre of rice cultivation.

4.4.4 The Neolithic Culture of Mid-Eastern Ganga Valley Region

Chirand (on the banks of the river Ghagra in district Saran), Chechar, Senuwar (near Sasaram) and Taradip have produced evidence for settlements dating from

about 2000 BCE. Senuwar has produced evidence of cultivated rice, barley, field pea (*Pisum sativum*), lentil and millets. The site of Chirand has produced evidence of mud floors, pottery, microliths, polished stone axes and terracotta human figurines. Several bone tools have also been noticed at these sites. People at Chirand lived in circular and semicircular houses with wattle-and-daub walls; post holes have been found. Plant remains of rice, wheat, barley, *moong* and lentil have been recovered from this site. Perhaps double cropping system existed. Terracotta figurines of humped bull, birds, and snakes, bangles and beads and slingstones have been unearthed.

The Neolithic sites of this region also have evidence for transition to the Chalcolithic as revealed at Sohagaura, Imlidih Khurd, Chirand, Chechar and Senuwar. The introduction of copper seems to have occurred around the second half of the third millennium BCE in this region.

4.4.5 The Neolithic Culture of Central-Eastern Region

The Neolithic sites are found at many places in the region of West Bengal and Odisha. Birbhanpur is an important Neolithic site of this region. The eastern Indian Neolithic sites have evidence of shouldered axes, pointed-butt celts, and chisels. Kuchai, Golbaisasan and Sankarjang are some of the important Neolithic sites of this region. These cultures show similarities with the Neolithic complexes of east and Southeast Asia. Mace heads, pounders, coarse red ware, cord impressed pottery, floors, postholes and bones have been found. At Pandu Rajar Dhibi Neolithic culture had emerged from Mesolithic context.

4.4.6 The Neolithic Culture of North-Eastern India

The hills of Assam and North Chachar, the Garo and Naga hills are high rainfall areas. Marakdola, Daojali Hading and Sarutaru are the Neolithic sites of Assam region. Shouldered celts, ground axes of round type and cord-impressed or paddle-impressed pottery with quartz inclusions are the common finds.

In north-eastern India, the Neolithic culture belongs to a slightly later period. This region today has evidence for shifting cultivation, cultivation of yams and taro, building stone and wooden memorials for the dead, and the presence of Austro-Asiatic languages. This region shows cultural affinities with Southeast Asia.

4.4.7 The Neolithic Culture of South India

The Neolithic cultures of South India are found mainly in Andhra Pradesh, Karnataka and north-western part of Tamil Nadu. Kupgal, Budihal, Kodekal, Kudatini, Sanganakallu, T.Narsipur, and Brahmagiri are the Neolithic sites of South India. In Tamil Nadu the site of Paiyyampalli has produced evidence of Neolithic culture. More than 200 Neolithic sites have been identified as part of the Neolithic complex of South India. The sites are found near the granite hills with water sources. They occur in the river valleys of Godavari, Krishna, Penneru, Tungabhadra and Kaveri. Sanganakallu, Kodekal, Budihal, Tekkalakota, Brahmagiri, Maski, T.Narsipur, Piklihal, Watkal, Hemmige and Hallur in Karnataka; Utnur, Pallavoy, Nagarjunakonda, Ramapuram and Veerapuram in Andhra Pradesh; and Paiyyampalli in Tamil Nadu are the notable sites.

Some of the early Neolithic sites have ash mounds. Cow dung was periodically burnt for a long period of time. These sites might have acted as cattle pens and the cow dung was burnt periodically for various reasons. Utnur and Pallvay in Andhra Pradesh; Kodekal, Kupgal and Budihal in Karnataka are the ash mound sites. Since the cow dung was burnt repeatedly, the ash is vitrified and looks like volcanic ash. Soft ash and decomposed cow dung layers are also noticed. The evidence of habitation in the form of houses and burials are found around the ash mounds. They buried the dead people within the houses.

Ashmounds

Neolithic culture of South India is the most extensive one among the regional Neolithic traditions of India. It covers Karnataka, Andhra Pradesh and Tamil Nadu. Ashmounds are a distinctive feature, albeit a problematic one, of some of the South Indian Neolithic sites. A well over a hundred sites have been discovered in southern Deccan constituting the districts of Bellary, Raichur, Bijapur, Gulbarga and Belgaum in north Karnataka; Kurnool, Mahbubnagar, Anantpur districts of Rayalseema region of Andhra Pradesh.

Detailed investigations conducted at the ash mound site of Budihal in north Karnataka, by Professor K. Paddayya, have revealed that ash mounds were functioning as regular, Neolithic pastoral settlements. They are an example of adaptation of a food producing community to semi-arid climatic conditions, hilly terrain, not suitable for plant cultivation. Several interpretations have been put forward regarding the ash deposits. Early workers based their interpretations on the basis of local legends which considered these ash mounds as cremation grounds of *Rakshasas* or demons of the *Mahabharata*. Second view regarded them as geological deposits of *kankar* formations or volcanic ash. Another set of views saw them as physical remains of mass *sati* conducted by women in the medieval period who had lost their husbands in the wars between the Vijayanagara kingdom and Delhi Sultanate. Another view regards them as ash deposits associated with industrial activity like iron smelting, gold smelting, brick making, pottery making etc. It was Robert Bruce Foote who noticed the closeness of these ash mounds to the Neolithic settlements and called them Neolithic in character. F. R. Allchin's excavations at Utnur in Mahbubnagar district in the 1960s confirmed Foote's conclusions. He, however, believed them to be cow pens, and distinguished them from human settlement sites. His conclusions are based on the evidence of cattle hoof impressions and stockade preparations found at Utnur. He argued that ash mounds represent several stages in the making. In each formation, the surface was levelled, stockades were made, cattle were penned, cow dung was collected and burnt leading to the formation of ash deposits. The dung was not accidentally burnt as claimed by Foote but intentionally burnt. This was part of the Neolithic fire cult meant to promote the fertility of the cattle herds. Extensive horizontal excavations at the site of Budihal led Professor K. Paddayya to question Allchin's differentiation of the ash mounds from settlement sites. He felt that they, indeed, were cattle penning areas, though ash mounds should be regarded as full-fledged pastoral settlements having cultic significance. His investigations revealed that ash mound sites like Budihal were larger and more conspicuous than the smaller sites in the region. Budihal was probably functioning as a congregational hub similar to the present day cattle fairs. Significant socio-cultural transactions may have taken place here. The

extensive chert workshop found at the site indicates that chert artefacts, blades could have been exchanged or traded on these occasions.

Source: K. Paddayya, 2000-01. The Problem of Ashmounds of Southern Deccan in Light of Budihal Excavations, Karnataka. *Bulletin of The Deccan College Post-Graduate and Research Institute* 60/61: 189-225.

The Neolithic people of South India had an agro-pastoral economy. They had domesticated cattle (*Bos indicus*), buffalo (*Bubalus bubalis*), sheep (*Ovis aries*), goat (*Capra hircus aegagrus*), pig (*Sus scrofa cristatus*), dog (*Canis familiaris*) and fowls (*Gallus sp.*). Cattle were their main source of economy. Terracotta figurines of cattle have also been found.

The Neolithic people cultivated plants mainly millets, pulses and legumes. Evidence of the cultivation of finger millet (*Eleusine coracana*), kodo millet (*Paspalum scrobiculatum*), horse gram (*Dolichos biflorus*), green gram (*Vigna radiata*), black gram (*Phaseolus mungo*) and hyacinth bean (*Dolichos lablab*) is present. Barley (*Hordeum vulgare*) and rice (*Oryza sativa*) have been found at very few sites.

The Neolithic people mainly used polished stone axes and lithic blades, choppers, knives, scrapers and other tools. Copper and bronze artefacts are found in the later context. They used querns for grinding grains, built thatched houses, and used handmade grey and brown burnished ware. A few of the pottery had painted designs, but they are very limited in number.

The site of Budihal (Hunsgi valley) is in Karnataka. This ash mound settlement site has given evidence of child burial, cattle butchering place, houses and human burials. Evidence of water harvesting has been identified.

4.5 SOCIAL ORGANIZATION AND BELIEF SYSTEM

The evidence for understanding the social organization of the Neolithic people is very limited. People began to live in sedentary and semi sedentary settlements. They perhaps had tribe level social organization. The idea of land and plant ownership emerged, as they domesticated plants and animals. The presence of small houses may suggest nuclear families. The ceramics and beads suggest the improvement in material cultural production. People had demarcated certain territories. The dead were buried within the houses and sometimes, animal burials are also found. They suggest the adoption of certain rituals and the worship of the dead. They may have worshipped the natural forces. Evidence of art objects is limited; the terracotta images of cattle suggest some fertility cult.

Check Your Progress Exercise 2

1) Mark '×' for wrong answer and √ for the right answer:

i) Burzahom has evidence of pit houses. ()

ii) Mehrgarh may have been one of the independent centres of animal and plant domestication in the world. ()

iii) Kashmir Neolithic sites show possible evidence of contacts with the Neolithic sites of West Asia and China. ()

- iv) The South Indian Neolithic sites have evidence of rock bruising nearby and human burials within the houses. ()
- v) The shouldered celts do not show resemblance with Southeast Asian materials. ()
- vi) The north-eastern Indian Neolithic sites show no evidence of contacts with Southeast Asia. ()
- vii) Cord marked pottery is a characteristic feature of the Vindhyan-Ganga valley Neolithic sites and also evidence of rice is not found here. ()

2) Fill in the blanks

- i) The Neolithic cultures saw..... (gradual, sudden) development of agriculture and pastoralism in a few parts of the world.
- ii) The earliest evidence of plant domestication is found in (Epi-Palaeolithic/Chalcolithic) cultures in the region around (Israel, Pakistan).
- iii) One school of thought, which is against the adaptive notion of culture, argues that settled life in south-west Asia began in the pre-Neolithic period, indicating (cultural factors/environmental) playing a major role in the Neolithic developments.
- iv) Catal Huyuk and Jarmo are, respectively, in (Turkey/Iran) and (Iraq/Syria).

4.6 SUMMARY

This Unit has presented details about the definition, nature and characteristics of the Neolithic cultures. The transition from hunting-gathering to food-producing, in fact, brought about important changes in social and cultural development. The foundations for the earliest Indian villages were laid in the Neolithic times.

India witnessed the Neolithic cultures in different parts. The Neolithic culture of the north-western part of the Indian subcontinent at Mehrgarh has produced the earliest evidence of plant and animal domestication. Kashmir Neolithic sites have evidence of pit dwellings. These sites show contacts with the Harappan sites and the cultures of East Asia and West Asia. The Belan valley Neolithic sites have cord-marked pottery and produced evidence for transition from hunting-gathering to agriculture. The sites of Vindhyan hills and the mid-Ganga valley are slightly later in date and show evidence of plant and animal domestication. The sites of eastern and north-Eastern India show traits of shouldered axes often noticed in Southeast Asia. Cord marked and paddle impressed potteries are found at these sites. The Neolithic sites of South India have ash mounds in the early stages and evidence of plant and animal domestication is found.

4.7 KEY WORDS

AMSL : Above Mean Sea Level.

Anthropomorphic : Human related.

Epi-Palaeolithic	: It refers to the end of the Palaeolithic period.
Holocene	: The recent age that began around 11,500 years BP.
Hunting-gathering	: A mode of subsistence. Hunting, collecting and trapping of animals, birds, molluscs and fish. Gathering of plant foods such as fruits, nuts, leaves, stems and roots.
Nomadic	: Moving from place to place.
OSL dating	: Optically Stimulated Luminescence Dating.
Pleistocene	: The first epoch of the Quaternary period. It succeeded the Pliocene and preceded the Holocene age.
Proto-Neolithic	: The cultures that preceded the Neolithic culture.
Sedentism	: It refers to the permanent settlement of people at one place or year-long residence at a specific location.
Semi-sedentary	: Migrant communities living at a site in a specific season of the year.
Shifting Cultivation	: Burning of forest and undertaking cultivation at the plot. The area of cultivation is shifted to the next plot, after one season of cultivation.
Wattle-and-Daub	: A type of house walls in which the wooden frames are covered with mud. The traces of these walls are found sometimes when these walls are burnt accidentally, leaving behind the impression of the wooden frames. The Neolithic sites have produced remains of such houses.
Ice Age	: The Ice Age began about 2.6 million years ago when the Pleistocene age began. It ended with the Pleistocene age.
Zoomorphic	: Animal related.

4.8 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress Exercise 1

- 1) See Sub-section 4.3.1
- 2) See Sub-section 4.3.2

Check Your Progress Exercise 2

- 3) i) (✓) ii) (✓) iii) (✓) iv) (✓)
v) (×) vi) (×) vii) (✓)
- 4) i) gradual, ii) Epi-Palaeolithic, Israel,
iii) cultural factors, iv) Turkey, Iraq

4.9 SUGGESTED READINGS

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