

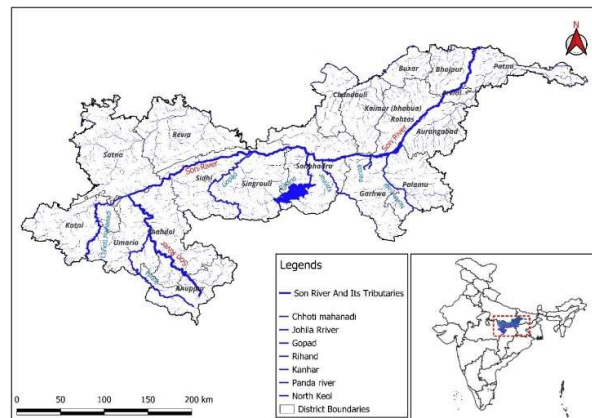
Archaeology of Lower Son Valley: Recent Investigations

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Introduction

The Lower Son Valley falls under the geological division of Middle Ganga plain. Ganga plain is divided into three sub-divisions: Upper, Middle and Lower. The boundary of Middle Ganga Plain comprised of India-Nepal border in the north to Vindhyan-Rohtasgarh-Chhotanagpur plateau in the south to Prayagraj-Faizabad Rail Line in the west to Bihar-Bengal border in the east.

The River Son originates in the Amarkantak hills of Maikal range at an elevation of 600 m in Madhya Pradesh and then flows through the north of Kaimur plateau of Vindhya ranges. After flowing through the parts of Madhya Pradesh, Uttar Pradesh, Jharkhand, and Bihar states, it joins the Ganga River on its southern bank near Patna. The River Son is one of the important River of India with its numerous tributaries like Chhoti Mahanadi, Johila, Gopad, Rihand, Kanhar, Panda and North Koel rivers etc.



Map 1: Son river and its tributaries

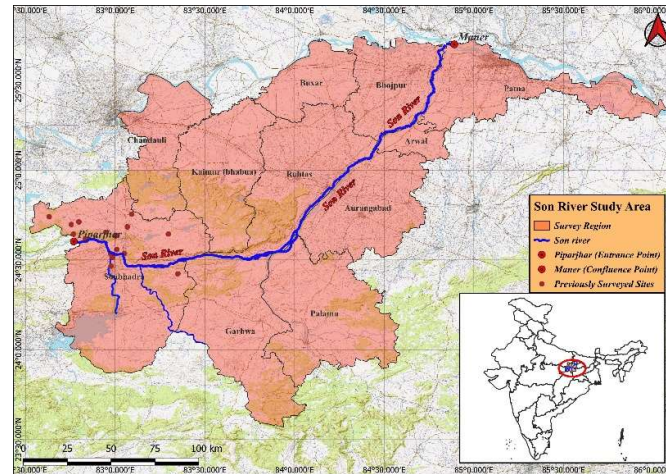
The study of the archaeology of the Son River Valley is significant in context of Indian prehistory. It is admitted on all hands that with the advent of the Neolithic Stage, human groups started a new way of life in permanent settlements. This led to all sided growth of culture in the much faster pace particularly noticeable in the material cultural aspect, which finally paved way for the development of civilization. The cultural sequences unearthed at different sites of the Valley demonstrate an apparent cultural continuity from the earliest period. The pioneering archaeological surveys in the Son valley in the 1970s has clearly revealed that this valley had been occupied at least intermittently during the Lower Palaeolithic, Middle Palaeolithic, Upper Palaeolithic, Mesolithic, Neolithic and ahead.

In context of the Upper and Middle Son Valley, extensive archaeological and geological research has been conducted, which led to the findings of lithic assemblages from Lower Palaeolithic to microlithic, numbers of fossilized faunal remains and ash deposits. The work in Middle Son Valley indicates the continuous occupation in the area.

But, in terms of the Lower Son Valley, only a few archaeological explorations have been conducted (*IAR*: 1977-78), by the Banaras Hindu University, University of Allahabad, Uttar Pradesh State Archaeology Department, Deen Dayal Upadhyaya Gorakhpur University, Directorate of Archaeology and Museums, Patna, Patna

University, KPJRI (Kashi Prasad Jayaswal Research Institute), Patna, Bihar Heritage Development Society, Patna and others, resulting in the discovery of lithic assemblages ranging from the Lower Palaeolithic to microlithic. But, despite the presence of lithic assemblages, no systematic attempt has yet been made to study the Lower Son Valley.

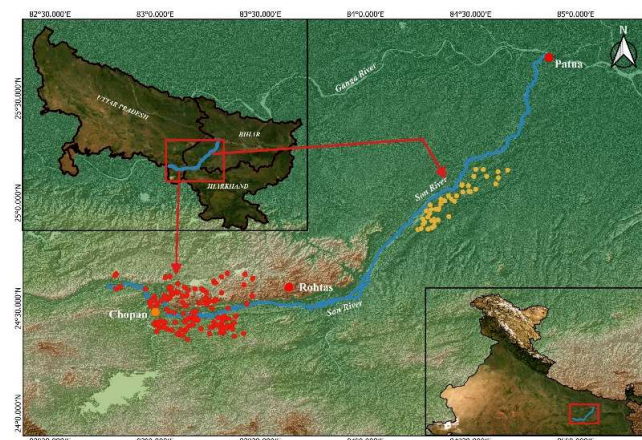
The present study area, the Lower Son valley is very significant from the perspective of archaeology and geological research. In this context, the author along with her team conducted archaeological investigations in Lower Son Valley i.e., from Piparjhar in Sonbhadra to the meeting place of River Son with River Ganga under the ICHR Project in Archaeology. Though the survey revealed numerous sites, few are discussed here.



Map 2: Study area (Lower Son Valley)

Nawner: This site is located in Obra block of Aurangabad district, about 11.6 km north east of Dehri on Son, on the right bank of the Son River. This is a large mound, significantly damaged by agricultural activities, erosion from a stream of the Son River, and partial encroachment by villagers. Towards the river, a wall made of bricks—probably part of an ancient fortification is still visible. A high density of potsherds of various shapes, dating from the Kushana to the Medieval period has been recorded. At the eastern edge of the mound stands a *chaturmukhi shivlinga*. A broken, ornamented stone pillar is also present within the village.

Belkhara: Belkhara is located in Karpi Block of Arwal District, Bihar. It lies about 10 km from the right bank of the river Son. The village is situated on a highly elevated archaeological mound that has been extensively disturbed by modern habitation and digging activities. Exposed sections of the mound reveal embedded potsherds, which are predominantly red ware.



Map 3: Explored Sites, Lower Son Valley

Umga Sun Temple: The sun temple at Umga is located in Umga hills, Madanpur Block, Aurangabad district, Bihar. Basically, it is a temple complex, may be called Umga Temple Complex, built in Nagara architecture, with several stone temples carved in a distinctive style. Square granite blocks are used to

build the temple, which housed the deities of Lord Ganesha, Sun god, large *Shivlingas*, Umangeshwari devi temple, Futalki Math and a temple at the top. It is very interesting to note that in this area of lower Son Valley of Aurangabad three major sun temples are located at Umga, Deo, Deo Baranak.

Deo- Sun Temple: The sun temple at Deo is located in Deo Block, Aurangabad, Bihar. This temple dates back to the 8th century CE. The temple is architecturally unique as its main entrance is oriented towards the West (setting sun), unlike most Hindu temples that face East (rising sun).

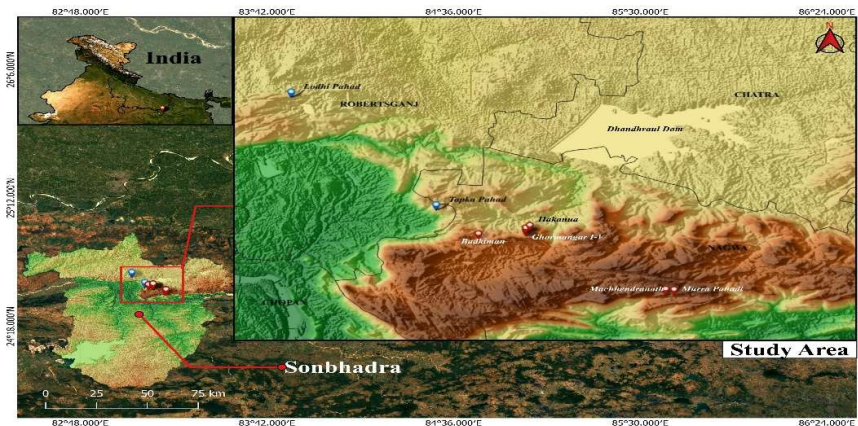


Picture 1: Sun Temple, Umga and Deo

Garwan I: The site is located approximately 2 km southwest of the Garwan village settlement and 6 km north-east from the famous Amila Dham temple in Nagwa block. The site lies in a plateau region characterized by flat terrain on the top of hills. A variety of microlithic tools have been discovered here, including flakes, flaked cores, blade and bladelets, scrappers and side scrappers. The raw material used for tool-making is mainly chert, along with a few specimens of chalcedony and agate.

Rock Art Paintings (Based on Survey in Sonbhadra district, Uttar Pradesh)

Sonbhadra lies within the Eastern Vindhyan Basin, which is divided into Lower Vindhyan and Upper Vindhyan sequences. The Lower Vindhyan is represented by the Semri Group, while the Upper Vindhyan comprises the Kaimur, Rewa, and Bhandar Groups. Most of the rock shelters in Sonbhadra occur within the Kaimur Sandstone Formation, where prolonged weathering and erosion of the sandstone have produced prominent escarpments, cliffs, and rock overhangs that provide suitable natural shelters for rock art. The porous nature of sandstone allows pigments such as hematite (red ochre) to penetrate microscopic pores, improving their adhesion and long-term preservation.



Map 4: Distribution of Rock Shelter sites, District Sonbhadra

General Characteristics of Rock Art in Sonbhadra: The paintings are executed mainly in different shades of red, accounting for approximately 99% of the documented figures (Pratap, 2024), while white and black pigments occur less frequently. Black-painted motifs are assigned to the earliest phase of the rock art sequence (Tewari, 1990). Hematite (red ochre) appears to be the principal pigment. At present, there is no direct evidence for the use of organic binders (such as animal fat, plant resin, or blood serum) in the Sonbhadra rock paintings, and further scientific analyses are needed to confirm their presence or absence. The rock art depicts a wide range of subjects, including anthropomorphic figures, animals, hunting scenes, dancing groups, ritual activities, horse riders, geometric designs, and symbolic motifs. These are some sites which the author and the team have surveyed.

Tapka: Lauva village is situated in Robertsganj Block of Sonbhadra district, Uttar Pradesh. The village lies approximately 20 km southeast of Robertsganj and is located between Arauli and Churk villages. It is connected to Robertsganj through rural roads, providing access to administrative, educational, healthcare, and market facilities.



Picture 2: Rock Shelter Site: Tapka, District Sonbhadra

The shelter measures approximately 13 m in length with an average width of 2.3 m. The Tapka rock shelter represents a newly documented rock art site that enriches the already significant cultural and archaeological landscape of Sonbhadra district, a region renowned for its rich concentration of prehistoric rock art. Rock paintings are distributed continuously along the entire length of the shelter wall, while a few motifs are also preserved on the ceiling, indicating extensive use of the shelter by prehistoric communities. The preservation of paintings on both the walls and ceiling enhances the archaeological significance of the site and provides valuable evidence of prehistoric artistic expression and cultural activities.

The rock paintings were executed using natural mineral pigments, primarily red ochre, along with white and black pigments. The principal motifs include anthropomorphic (human) figures, horse riders, hunting scenes, stylized animals, birds, botanical motifs, and geometric designs. Together, these motifs offer valuable evidence of the cultural, ecological, and artistic traditions of the prehistoric communities that occupied the rock shelter. The presence of superimposed paintings, where one motif has been painted over another, indicates that the shelter was used repeatedly over an extended period and that the paintings belong to multiple phases of artistic activity. Archaeological investigations at the rock shelter have yielded a lithic assemblage comprising chert blades, chalcedony blades, and blade cores.

Lodhi Pahadi: This rock shelter is located opposite the District Magistrate (DM) Office in Robertsganj, Sonbhadra district, Uttar Pradesh. Paintings are preserved on

both the vertical rock wall and the ceiling, indicating extensive use of the shelter as a surface for artistic expression. The painted panel consists of a diverse assemblage of motifs, including animal figures, anthropomorphic representations, plant-like motifs, geometric designs, and symbolic elements. The paintings are executed in different shades of red and dark pigments, reflecting the use of natural mineral colours by prehistoric artists. Several motifs overlap one another, demonstrating superimposition and indicating that the shelter was painted during multiple phases of occupation.

Archaeological investigations recovered numerous microlithic artefacts from the slope immediately below the rock shelter. The lithic assemblage includes cores, flakes, and blades, representing different stages of stone-tool manufacture and use. The presence of cores indicates on-site tool production, while the flakes and blades reflect activities related to hunting, food processing, and other daily tasks.

Badkimand Rock Shelter: The Badkimand rock shelter is located near Churk village in the Robertsganj block of Sonbhadra district, approximately 1 km northwest of the Churk police station. At present, the painted surface is poorly preserved. Only one anthropomorphic figure is identifiable in red colour, while other markings appear fragmentary and indistinct. A few cup-mark-like depressions are also visible on the wall. The shelter shows clear evidence of recent human activity. Soot deposits, ash, and food remains were observed on the floor, suggesting that the space is occasionally used for cooking and informal gatherings. Modern graffiti and names written with charcoal have also been noted on the painted surface, further affecting the preservation of the original rock painting.

Ghormangar (GMR) Pahadi Rock Shelter Group: The Ghormangar Pahadi Rock Shelter Group is located approximately 3 km southeast of Lauva village, near the Sati Mata Temple, in Nagwa Block, Sonbhadra district, Uttar Pradesh. The Ghormangar hill contains five natural rock shelters situated at different locations on the hillside. For systematic documentation, they have been designated as RS-I, RS-II, RS-III, RS-IV, and RS-V. The shelters vary in size, orientation, and state of preservation.



Picture 3: Rock shelter Site- Ghormangar-III, District Sonbhadra

Hakanua Pahad Rock Shelter: This rock shelter is located on the left side of Ghormangar Pahadi in the Robertsganj Block of Sonbhadra district, Uttar Pradesh. The shelter is situated on the right slope of Hakanua Hill, occupying a naturally protected position that overlooks the surrounding landscape.

It is a relatively large natural rock shelter, although only a limited number of paintings are currently visible. A substantial portion of the painted surface has been obscured by calcite deposition (patination), which has significantly reduced the visibility and clarity of the motifs. Despite this deterioration, several figures can still be identified. The discernible motifs include animal figures, groups of anthropomorphic figures with raised arms, and a large animal, probably representing a buffalo.

A seasonal rain-fed stream flows close to the shelter, providing a reliable source of water that would have enhanced the suitability of the site for prehistoric occupation. Archaeological exploration recorded microlithic artefacts approximately 100 m east of the shelter, including a microblade and flake tools. These artefacts indicate the use of stone-tool technology in the vicinity served as an important locus of human activity.

Machhendranath Rock Shelter Group: The Machhendranath Rock Shelter Group is located near the Vijaygarh Fort area in the Robertsganj Block of Sonbhadra district, Uttar Pradesh. The locality comprises two natural rock shelters, designated as Machhendranath RS-I and Machhendranath RS-II for the purpose of systematic documentation. Both shelters preserve evidence of prehistoric human occupation in the form of rock paintings and associated archaeological remains.

- **Machhendranath RS-I:** The painted panel is dominated by geometric designs, leaf-like (botanical) motifs, and animal outlines, indicating a preference for stylized and symbolic representations rather than naturalistic depictions. Most of the figures are executed in dark red pigment, suggesting the use of naturally available mineral colours, most likely red ochre.
- **Machhendranath RS-II:** Machhendranath Rock Shelter–II (RS-II) is located in the same locality. At present, the shelter is occupied by a resident sadhu, resulting in continuous human use of the site. Repeated burning of fires within the shelter has produced thick soot deposits on the rock surface, which have obscured much of the painted panel, significantly reduced the visibility of the prehistoric motifs and accelerated the deterioration of the rock art.
- **Machhendranath Lithic:** The lithic scatter site is located at the foothills of Machhendranath Pahadi in the Robertsganj Block of Sonbhadra district, Uttar Pradesh. Its strategic position at the base of the hill, in close proximity to a perennial water source, would have made it an attractive location for repeated prehistoric occupation and stone-tool manufacturing activities. The recovered assemblage includes blades, cores, scrapers, and unfinished artefacts, representing different stages of stone-tool production and use. The presence of unfinished artefacts and cores suggests that the locality functioned as a lithic manufacturing or workshop area, where stone tools were produced and subsequently used or transported to nearby habitation sites. The artefacts are manufactured from a variety of high-quality raw materials, including chert, agate, and carnelian etc.

Murra Pahadi: Murra Pahadi is located near Machhendranath, on the left slope of the hill in the Robertsganj Block of Sonbhadra district, Uttar Pradesh. The paintings are preserved on both the vertical wall and the ceiling of a small natural rock shelter. The restricted dimensions of the shelter suggest that the paintings, particularly those on the ceiling, were most likely executed from a reclining or crouched position, demonstrating the adaptability and determination of the prehistoric artists in utilizing the available rock surfaces. The principal composition consists of a group hunting scene, one of the

most significant themes in prehistoric rock art. The scene depicts a large animal surrounded by several anthropomorphic figures, creating a dynamic representation of collective hunting.

Chronology of Rock Art Paintings

The chronology of Indian rock art has long remained one of the most debated and challenging issues in archaeological research. Establishing the age of rock paintings is difficult because they are rarely associated with materials that can be directly dated, and most chronological interpretations rely on indirect evidence such as superimposition, stylistic analysis, archaeological context, and comparisons with dated sites.

Archibald Carlisle, one of the first scholars to study Indian rock paintings, considered them to belong to the Stone Age, recognizing their considerable antiquity. In contrast, J. Cockburn initially regarded the paintings as only a few centuries old, he later revised his opinion and proposed a much earlier prehistoric date. D. H. Gordon assigned the earliest Indian rock paintings to around 700 BCE, whereas Manoranjan Ghosh dated many of the paintings to between the 4th and 10th centuries CE, suggesting that a substantial portion of the rock art belonged to the early historic and medieval periods.

Scholars such as V. S. Wakankar, R. K. Verma, V. N. Misra, and Y. Mathpal argued that the earliest paintings may date to the Late Pleistocene–Early Holocene, based on stylistic characteristics, superimposition sequences, archaeological associations, and comparisons with prehistoric cultural deposits. At the same time, they acknowledged that many rock shelters were repeatedly used over thousands of years, resulting in later additions during the Mesolithic, Chalcolithic, Iron Age, and even the Historic period.

At present, no universally accepted absolute dating technique is available for determining the precise age of most Indian rock paintings. As a result, the major relative dating approaches used in rock art studies include; superimposition analysis, stylistic analysis, iconographic analysis, subject matter analysis, comparative studies, associated archaeological evidence etc.

In the present study, the chronology of the documented rock shelters has been interpreted using these relative dating approaches. Based on the chronological frameworks, particularly the stylistic classification proposed by Wakankar & Brooks (1976), the rock paintings documented during the present survey have been tentatively assigned to the Mesolithic, Neo–Chalcolithic, and Early Historic, and Medieval period.

Ethnographic Overview of the Study Area and Tribal Communities of Sonbhadra

The Sonbhadra region is inhabited by several tribal and indigenous communities, including the Agariya, Baiga, Bhuiya, Chero, Gond, Kharwar, Kol, and other traditional groups. These communities have maintained a close and enduring relationship with the surrounding forest environment.

Agriculture remains the primary occupation among the tribal communities of Sonbhadra. Cultivation is often supplemented by animal husbandry, wage labour, and forest-based activities to meet household needs. The surrounding forests provide a wide range of resources, including wild fruits, edible plants, medicinal herbs, fuelwood, and other non-timber forest products. These forest resources continue to contribute significantly to household subsistence, traditional healthcare practices, and seasonal livelihood activities.

Traditionally, tribal communities depended on seasonal streams, natural springs, and forest water channels for their water requirements, particularly during forest-related

activities such as collection of forest produce, grazing, and agricultural work. These natural water sources formed an important part of their traditional ecological adaptation to the local landscape. At present, most villages have access to piped drinking water supply systems through government initiatives.

Traditional hunting practices continue to form an important part of the cultural memory and ecological knowledge of several tribal communities in Sonbhadra, although their actual practice has declined considerably. Hunting was traditionally carried out collectively in groups, both during the daytime and occasionally at night. Field observations indicate that community members often carry traditional implements such as bows and arrows, spears, and axes while entering forest areas, particularly when taking livestock for grazing. During such activities, encounters with wild animals may occasionally lead to opportunistic hunting. However, hunting is no longer a regular practice due to strict wildlife protection laws, conservation regulations, and concerns regarding legal consequences. Axes serve multiple purposes within daily life, including the collection of fuelwoods for household consumption and, in some cases, for sale in local markets as an additional source of income.

The Karma festival is one of the most significant cultural celebrations among several tribal communities of Sonbhadra. The festival is closely associated with nature worship and community identity. As part of the ritual, a branch or pole of the Siddha/Karam tree is ceremonially collected from the forest and planted in the courtyard of the household or community space. During the celebration, men and women participate together in traditional group dances accompanied by indigenous musical instruments. Singing and dancing continue throughout the night as part of the ritual observance, strengthening social bonds and preserving cultural traditions. A traditional fermented beverage prepared from Mahua (*Madhuca longifolia*) flowers is also consumed during the festivities and holds cultural significance within community gatherings.

Ethno-Archaeological Significance: The surviving traditions and practices of tribal communities in Sonbhadra provide valuable ethno-archaeological insights for interpreting prehistoric cultural remains, particularly rock art. Elements such as communal dancing, traditional hunting practices, use of bows, arrows and other weapons, ritual significance of sacred trees, and dependence on forest resources offer meaningful analogies for understanding selected motifs represented in the rock paintings of the region. These living cultural practices help bridge the gap between archaeological evidence and present-day traditional knowledge systems.

Traditional medicinal knowledge continues to be preserved among certain sections of the tribal communities of Sonbhadra, particularly among middle-aged and elderly individuals, generally above 45 years of age. The knowledge of herbal medicine is primarily transmitted through oral traditions, passing from one generation to the next within families and local communities. Experienced healers, traditional practitioners, and elderly community members continue to identify and use medicinal plants for treating a variety of common ailments, including fever, cough, dysentery, skin diseases, wounds, fractures, and snakebite. Their practices are based on accumulated traditional experience, knowledge of local flora, and understanding of plant properties.

However, the transmission and practice of this traditional knowledge system are gradually declining. During field interactions, many younger members of the community expressed a preference for allopathic (“English”) medicine due to its wider availability, convenience, and perception of providing quicker relief. As a result, fewer young people are actively learning traditional healing practices from elders, creating a risk of gradual loss of this valuable indigenous knowledge.

Despite these challenges, traditional medicines like *harad*, *bahera*, *anantmool*, *bhang*, *jamun goolar*, *katha* etc. continues to play an important role in the healthcare practices of remote villages, particularly in areas where forest resources remain easily accessible and modern medical facilities are limited. The preservation and documentation of this knowledge are essential not only for safeguarding tribal cultural heritage but also for understanding sustainable relationships between local communities and their natural environment.

Archaeological and Cultural Significance of the Lower Son Valley

The Lower Son Valley represents a highly significant archaeological landscape, characterized by a long sequence of human occupation and cultural development. The discovery of diverse lithic assemblages ranging from the Lower Palaeolithic to the Microlithic period, along with a rich record of fossilized faunal remains, demonstrates the antiquity and ecological importance of the region. These archaeological discoveries provide valuable insights into prehistoric human adaptation, technological development, and interaction with the surrounding environment.

The valley has yielded evidence of Palaeolithic, Mesolithic (Microlithic), and Neolithic settlements, along with several fossil-bearing localities. The presence of such diverse archaeological remains highlights the continuity of human occupation through different cultural phases. Considering the favourable environmental conditions, availability of water resources, raw materials, and natural resources, the Lower Son Valley holds considerable potential for the discovery of further archaeological evidence related to the Palaeolithic, Mesolithic, Neolithic, Northern Black Polished Ware (NBP), and Iron Age periods.

The region is also rich in natural resources, including iron ore and other mineral deposits, which may have been utilized by prehistoric and historic communities inhabiting the Lower Son Valley. The availability of these resources likely influenced settlement patterns, technological practices, and economic activities of ancient populations.

Beyond its archaeological importance, the Lower Son Valley is significant for ethno-archaeological research due to the presence of several tribal communities, including the Chero, Agaria, Bayar, Kharwar, Ho, Dhakar (Toria), Panika, and other indigenous groups. These communities preserve valuable traditional knowledge related to ethno-medicine, ethno-veterinary practices, forest resource utilization, traditional technologies, and cultural traditions. The study of these living traditions provides important comparative perspectives for interpreting archaeological remains and understanding past human behaviour.

The Lower Son Valley also holds importance in relation to ancient routes and sacred pilgrimage locations (*Tirtha-sthan*), reflecting its historical, cultural, and religious significance. The combination of archaeological remains, natural resources, tribal traditions, and ancient cultural landscapes make the Lower Son Valley a region of exceptional importance for multidisciplinary research encompassing archaeology, palaeo-environmental studies, anthropology, and heritage conservation.

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