

GIS Mapping of the Buddhist Relics of Hazara Division, Pakistan

Shakirullah^{a,*} , and Muhammad Zahoor^b 

^a Associate Professor, Department of Archaeology, Hazara University Mansehra, Pakistan.

^b PhD Scholar, Department of Archaeology, Hazara University Mansehra, Pakistan.

Abstract: The cultural activities of the Hazara region can be traced back to the early Stone Age in Pakistan, although systematic and planned archaeological investigations throughout the region in the pre- and post-independence period were scantily available. During the colonial period, there were certain efforts, largely targeted at removing treasures from Buddhist monuments and other archaeological sites. For paying attention to the culturally rich and fertile land of the Hazara Division, the Hazara University (Mansehra) got the credit to establish the Department of Cultural Heritage and Tourism Management in 2006, which later (in 2008) grew into the School of Cultural Heritage and Creative Technologies comprising of five teaching departments (i.e., Archaeology, Architecture, Art & Design, Tourism & Hospitality, and Conservation. The Department of Archaeology made serious efforts to map up the cultural relics of the Hazara region with the help of many national and international funding agencies. The current research focusses on the GIS mapping of the rich Buddhist heritage of the present eight districts of Hazara division namely, Haripur, Abbottabad, Mansehra, Batagram, Torghar, Kohistan Lower, Kohistan Upper, and Kolai Palas. The GIS technology allows for the spatial analysis of Buddhist relics' distribution. This analysis revealed patterns of religious activities, trade routes, and cultural diffusion. By overlaying GIS data with historical records, researchers can develop new theories and insights into the dynamics of ancient civilizations in the region. GIS mapping of these relics will help develop the tourism industry by making it easier for travellers and tourists to locate and study these assets of archaeological and historical interest.

Keywords: GIS Mapping, Buddhist Relics, Hazara, Mansehra.

Introduction

Systematic archaeological investigations were rarely attempted in the region in the pre-and were certain efforts, largely targetted at removing treasures from Buddhist monuments and other archaeological sites. In the early decades after the independence, scholars merely touched Buddhism on the surface but produced no comprehensive study of the region. The situation changed after the Pakistani Japanese excavation at Zar Dheri, which helped highlighting the importance of the Hazara region amongst the Buddhist archaeology scholars. In the same period, the establishment of Hazara University was of paramount significance in this regard. The first Vice-chancellor was an archaeologist, Prof. Ihsan Ali, who planned a series of comprehensive surveys that laid the foundation for any later project, including the present one. The Department of Archaeology,

Hazara University, never stopped mapping and documenting the cultural relics of the Hazara with the help of many national and international funding agencies (Shakir *et al.* 2021, 2023) (Fig. 1). The current research focusses on the GIS mapping of the rich Buddhist heritage of the eight districts of the Hazara region.

Statement of the Problem

The ancient Urasa, modern Hazara, also known as Pakhli in history, along with Gandhara and Uddiyana, was one of the great centres of Buddhism (Marshall 1945: 137-246). Pakhli was another prominent centre of Buddhism and Buddhist art at the time when Buddhism was at its peak. Because of its proximity to Kashmir, the Hazara region absorbed influence from Tibet and Kashmir. Due to its location on the ancient Silk Routes, the people who travelled along these

* Corresponding author: Shakirullah ✉ shakirkhan04@gmail.com

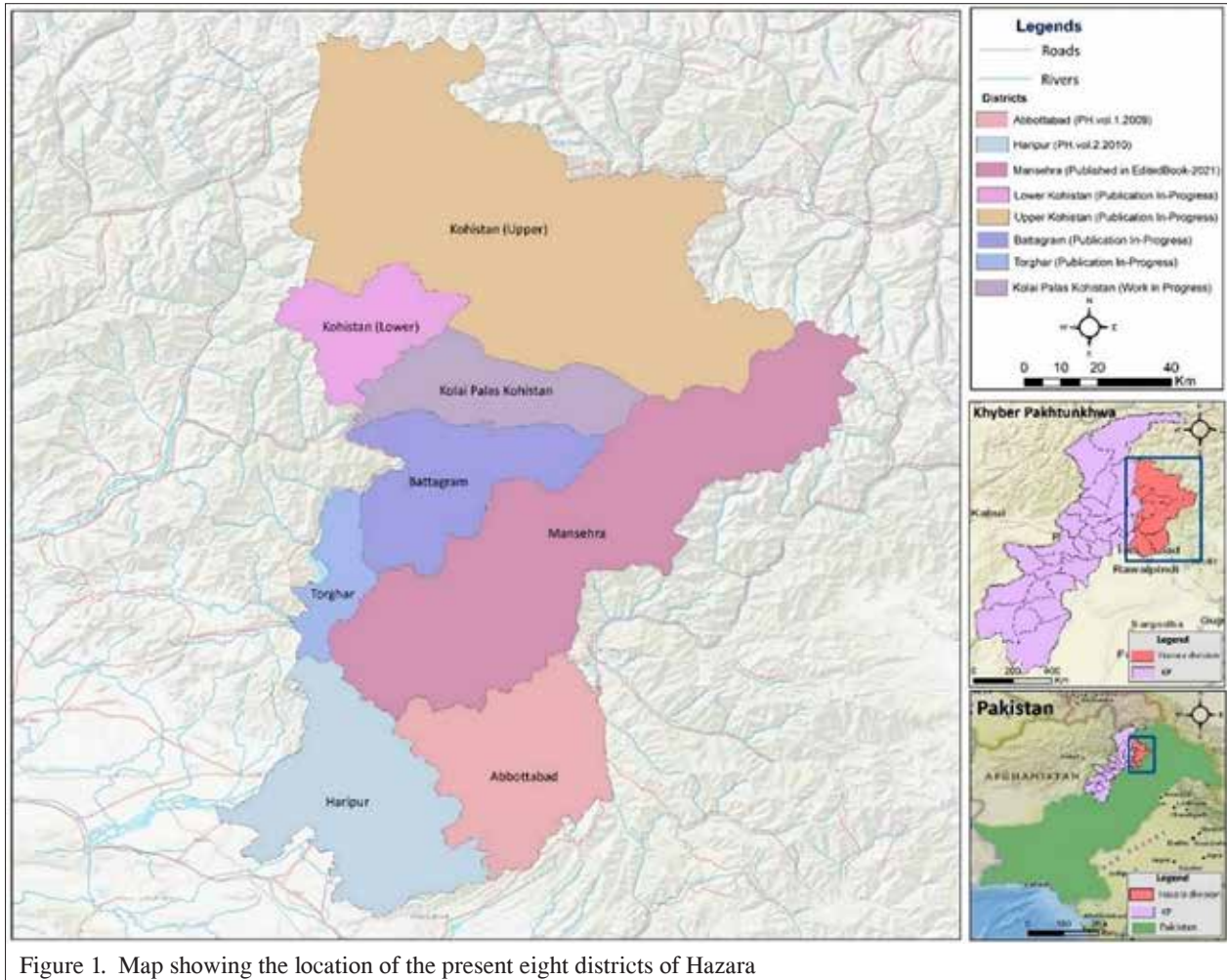


Figure 1. Map showing the location of the present eight districts of Hazara

routes must have had a significant influence on the region, bringing their artistic elements blended with local art. Although some sporadic work was done in the past, little attention was paid to studying this region. Due to the rich Buddhist heritage of Hazara, it was thought important to conduct a mapping of the Buddhist remains across the eight districts of Hazara.

Methodology

Since 2006, the Department of Archaeology, Hazara University Mansehra, has been trying to document the archaeological sites throughout the region and as part of the team, the present researchers made an attempt to map up the total Buddhist relics of Hazara region. Many of the

sites, especially those in the vicinity of the districts Mansehra, Battagram, Tor Ghar, Kohistan Lower, Kohistan Upper, and Kolai Palas were surveyed to confirm the coordinates of the sites. Apart from a few sites in the districts of Abbottabad and Haripur, most of the sites or their possible location were identified and confirmed through Google Earth Pro software. A list of the sites and their coordinates in each district was created through Microsoft Excel. For the creation of each district map, sites were categorized in Microsoft Excel and these lists were used to create maps through the application of arc-GIS software.

As a result of many archaeological expeditions conducted by the Department of Archaeology, Hazara University (Mansehra), large number of Buddhist ruins were documented throughout the

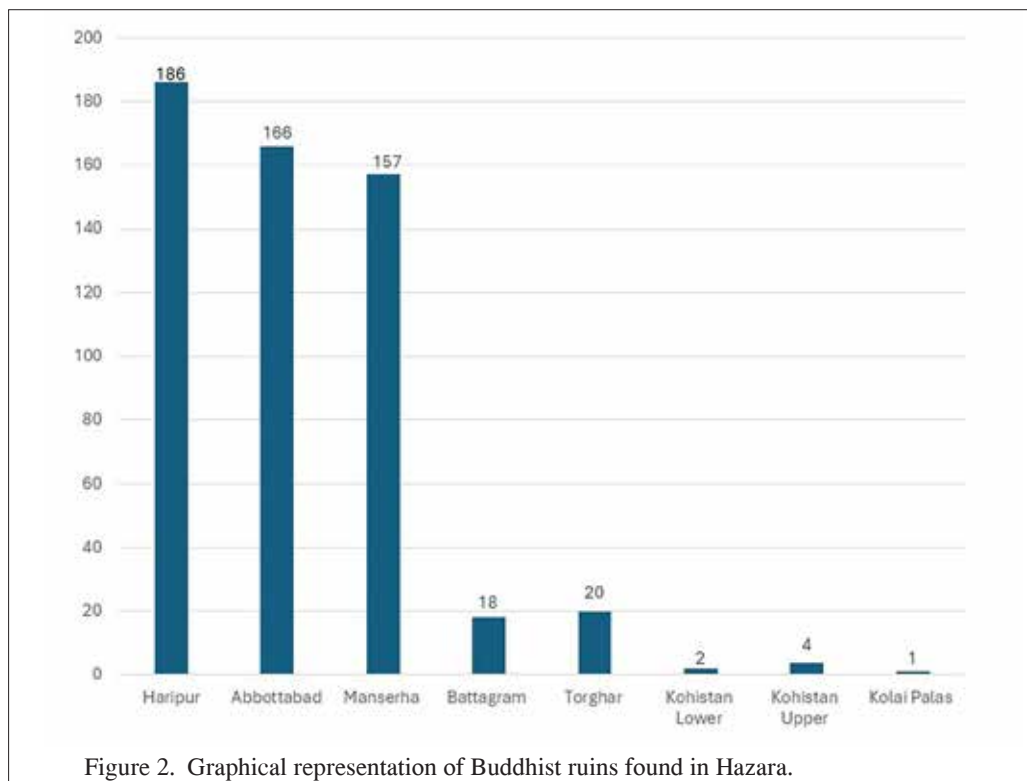
Hazara division. Among those, the high ratio was observed in the districts Haripur, Abbottabad, and Mansehra as shown in the graph (Shakir *et al.* 2023) (Fig. 2).

Buddhist Ruins in District Haripur

Haripur is one of the eight districts of the Hazara division. It lies east of the Indus and forms the northeastern part of the present Khyber Pakhtunkhwa. The district, which is roughly 610 metres above sea level, is located between north latitudes $33^{\circ} 44'$ and $34^{\circ} 22'$ and east longitudes $72^{\circ} 35'$ and $73^{\circ} 15'$. Out of all the districts in the province, it has the highest Human Development Index. Due to insufficient research and excavations, a significant portion of the archaeological history of District Haripur is still unknown despite its historical value. Eden Johnson's 1964 pioneering archaeological research and Farid Khan's subsequent research pushed its cultural history back to the prehistoric period. Notably, Garh Mauriyan, next to Sarai Saleh, was discovered in 1988–1989 by the Department of Archaeology

and Museums, Government of Pakistan, exposing a sizable Buddhist complex. The archaeological excavation at the location revealed the bases of primary stupas, votive stupas, a monastery, chapels, and a temple. Additionally, various discoveries were made, including stone and stucco sculptures, pottery, and a multitude of small artefacts, as documented by Mian Syed Qamar (1990: 95-154).

An excellent collection of artefacts associated with structural remains dating from the first to third centuries CE were discovered during the salvage excavation at Panian, located about seven kilometres from Haripur on the Haripur-Hasan Abdal Road. In 2003, the Directorate of Archaeology and Museums of Khyber Pakhtunkhwa conducted the initial extensive archaeological investigation in Haripur. However, the team faced challenges in documenting every archaeological site within the region. Consequently, commendation is due to the Department of Archaeology, Hazara University, for successfully revealing previously undiscovered archaeological



treasures, not only in the Haripur district but also in the other two districts of Hazara. Both explorations resulted in the documentation of 186 Buddhist sites (Ali *et al.* 2009; Shakir *et al.* 2021). The names of the sites that were documented in the first phase of exploration were mentioned in the exploration report, but the coordinates were missing the precise location of the sites. In the present research, an attempt was made to trace and map the Buddhist relics of the district. For this purpose, many sites were revisited by the research team to get coordinates and a few of them were traced using computer software like Google Earth Pro, etc. The GIS-based map of the sites in the district is shown below (Fig. 3).

Buddhist Ruins of District Abbottabad

District Abbottabad is situated in the modern Khyber Pakhtunkhwa Province of Pakistan. The districts of Mansehra, Muzaffarabad, Rawalpindi, and Haripur are the districts that border Abbottabad on the north, east, south, and west, respectively. It is located 101 kilometres from Rawalpindi, 217 kilometres from Peshawar, and 84 kilometres from Kohala Bridge. Founded by Major James Abbott, who took control of the region following the annexation of Punjab in 1853, Abbottabad, a British settlement, served as the headquarters for the Hazara district later elevated to a division. Major James Abbott, the first Deputy Commissioner, established his headquarters in

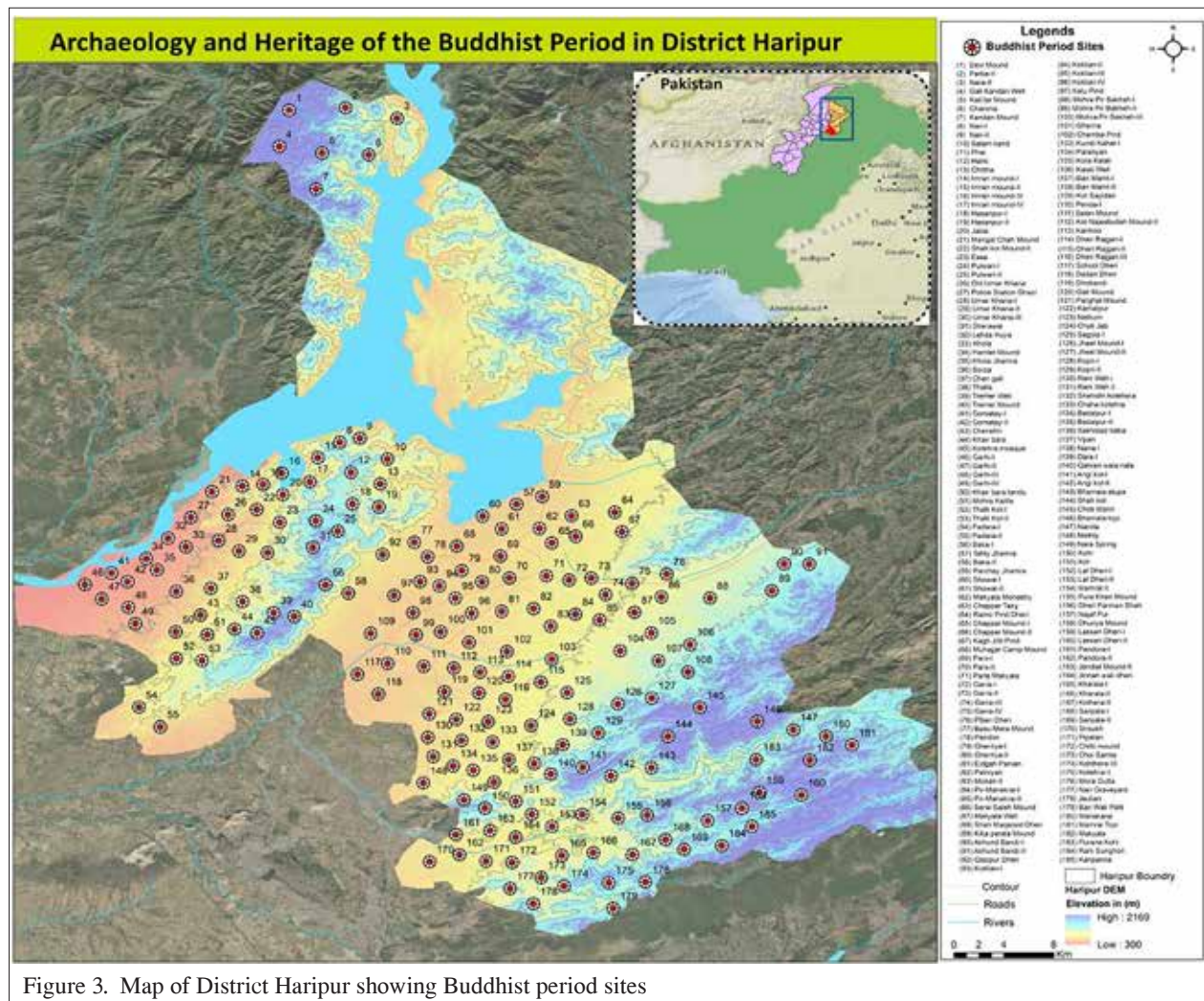


Figure 3. Map of District Haripur showing Buddhist period sites

this area. Over the years, Abbottabad retained its significance as a crucial military cantonment and sanatorium, playing the role of the second division's headquarters within the Northern Army Corps brigade. During the 19th century, the area was a battleground between the native Muslim people and the invading Sikhs of the Punjab. From 1818 to 1875, the Sikhs governed the region, constructing forts at Haripur, Nawan Shehr, and Mansehra; gurudwaras, and new cities. Haripur was the seat of administration during the Sikh rule until 1853. The military garrison was relocated to Abbottabad in 1853. Later, in 1875, Abbottabad was designated as the third tehsil of District Hazara (the previous two being Haripur and Mansehra) (Hazara Gazetteer 1883-84: 86-90).

This area is represented by most of the extant buildings in Abbottabad. During the data collection, some ruins of the Sikh and Hindu religious buildings were also documented, in addition to colonial architecture. Saint Luke's Church, Lockheart and city courts, Burn Hall school, and college building, and Hindu temples at Nawan Shehr and Gurudwara are among the few noteworthy buildings in Abbottabad. Unfortunately, rapid and unplanned urbanization and encroachment, insufficiency of institutions, and regulations addressing cultural asset safeguarding have contributed to the quick destruction of the cultural heritage in the area.

In 1980, Swynnerton claimed to have found the earliest hand axes at Thandiani, east of Abbottabad that show the beginning of cultural activities in Hazara and traces back the history of the district to the Stone Age. The discovery of grave culture sites in the district also confirmed the invasion of the Indo-Aryan in Hazara (Ali *et al.* 2009).

The documentation of about 166 sites during archaeological explorations belonging to the Buddhist period confirmed the existence of a significant Buddhist society established by the Mauryan king Ashoka in the district (Fig. 4).

Buddhist Ruins of District Mansehra

Mansehra, positioned east of the Indus River, stands as one of the most noteworthy districts

in Khyber Pakhtunkhwa Province of Pakistan. Nestled at an altitude of 1,227 meters above sea level (hereafter asl), it is situated within the coordinates of 34° 14' to 35° 10' north latitude and 72° 55' to 74° 6' east longitude, as documented by Watson (1907: 221-232). Renowned for its scenic beauty and cultural abundance, Mansehra is commonly referred to as *Takht-i Hazara* (or the throne of Hazara). Covering an area of 4,579 square kilometres, the district borders the following areas: Abbottabad and Haripur districts to the south; Shangla and Buner districts to the southwest; Kohistan, Batagram, and Diamir districts to the north; and Swat district to the west. Mansehra has always functioned as a crossroads for different cultures and civilizations because of its unique strategic location. This is the meeting point that connects first the Karakorum Highway (which links Taxila to the upper Indus River), and the second and third highways (running east and linking Gilgit with Kashmir via Kaghan and Babusar Pass). Consequently, Ashoka utilised this location to engrave his rock edicts in the middle of the third century BCE (Dani 1986: 45-75).

Professionals and scholars from all over the world have expressed interest in the region due to its rich archaeological potential. In 1920, Hargreaves visited to Hazara to make replicas of the Ashokan Rock Edicts in Mansehra while he was the Superintendent of the Archaeological Survey of India, Frontier Circle. Hargreaves made several important discoveries during his journey, one of which being the well-known Zar Dheri site, which is situated on the right side of the Karakoram Highway about 3 km northwest of Shinkiari and 20 km north of Mansehra. Hargreaves's account of his visit preserves a great deal of the discovery of Buddhist remains.

According to Hargreaves, the Zar Dheri stupa was believed to have emerged from an elevated platform measuring 88.3 x 26.6 metres, featuring a southern entrance. The expansive site covered a substantial area, extending 120 metres in the north-south direction and 80 metres in the east-west direction. During Hargreaves' exploration, the stupa's base measured 55 metres in diameter, while its top had a diameter of 16.6 metres. The construction of the monastery to the north of the

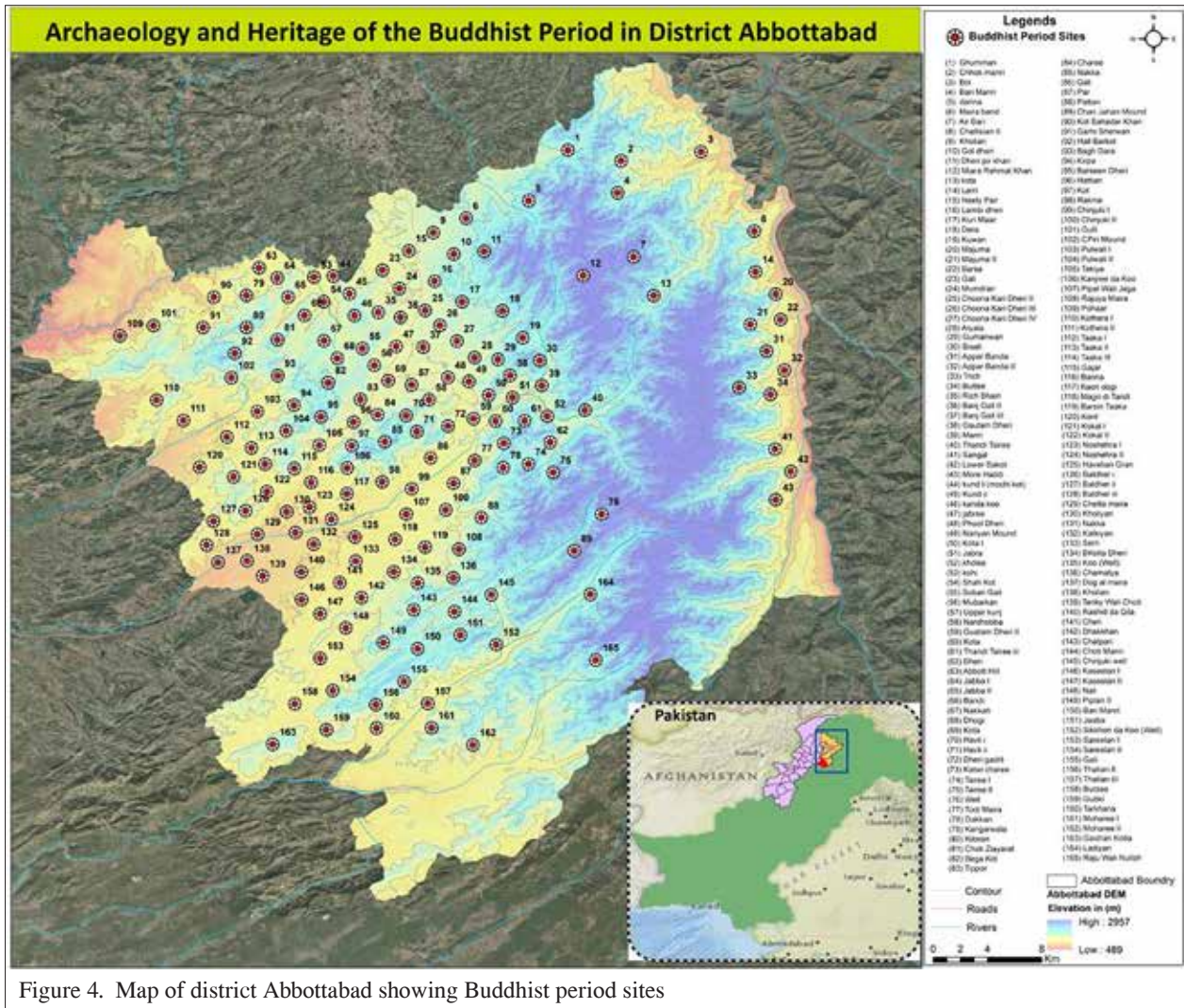


Figure 4. Map of district Abbottabad showing Buddhist period sites

stupa utilized large bricks, although it lacked the artistic refinement observed in some structures in Taxila (Hargreaves 1923:96-97).

Hargreaves also records Kot Sir Kap, which is located less than a mile east of Zaro Dheri. This place consisted of two modest chambers built of rubble masonry, evoking memories of the old buildings at Takht-i-Bahi and Jamal Garhi. The mythical heroes Raja Rasalu and Raja Sirkap are credited with creating this mound, according to local folklore (Hargreaves 1923:96-102).

A.D.H. Bihar, in 1994, showed keen interest in the archaeological remains of the area. Recognizing the lack of awareness among the locals regarding the significance of their cultural heritage, he endeavoured to raise awareness. In a

detailed analysis, Bihar stated that Zar Dheri was likely the source of a gold relic model that was on display at an Indian art exhibition held in London from May 24 to June 25, 1978, put on by Messrs. Spink & Sons. In his story, he also mentioned a great deal of other places and urged more study in the field (Bihar 1996). The Hazara Gazetteer of 1884 received significant updates by H.D. Watson, who not only revised the Gazetteer but also enriched it with additional details covering geography, natural features, flora and fauna, demographics, major tribes, religion, languages, customs, traditions, economic conditions, revenue, and administration. Watson's efforts provided a comprehensive overview of the region (Watson 1907).

Shama Habib conducted an in-depth investigation into Asokan Rock Edicts at Mansehra, categorizing them into two main groups: Rock Edicts in Brahmi and Kharoshthi. The latter was further subdivided into Minor Pillar Inscriptions, Pillar Edicts, and Kharoshthi Rock Edicts. Her study included a thorough analysis of the Asokan Rock Edicts found in Mansehra along the Karakoram Highway (Habib 2001).

Saifur Rahman Dar also showed interest in the archaeological remains along the Silk Routes. He gave a brief account of important locations, including the Buddhist complex Zar Dheri, the mediaeval city of Pir-Manakrai, Zaro Dheri, and Pishora, all located in or close to Mansehra (Dar 2006).

From 1995 to 1999, Zar Dheri excavations were carried out by the Tokyo National Museum's Archaeological Mission to Pakistan in association with the Department of Archaeology and Museums. Numerous artefacts were discovered during these digs, including pottery, iron utensils, bone fragments, and sculptures made of schist stone with Kharoshthi aksharas that showed the Buddha in various stances. In 2002, Abdul Azeem discussed antiquities from Zar Dheri, comparing some statues with those from Gandhāra and Udiyāna. Noteworthy sculptures included ZRD-37, depicting the Buddha in abhaya mudra, ZRD-60 with the Buddha standing, and ZRD-75 showing three male worshippers, similar to those found in Butkara-I and Saidu Sharif (Azeem 2002). Abdul Samad thoroughly described the Lingam Temple located about 10 km north of Mansehra on the Karakoram Highway, emphasizing the adaptation of Islamic architectural elements in Hindu temple construction (Samad 2008).

The Department of Archaeology, Hazara University (Mansehra), conducted excavations at two Buddhist period sites: Bado Dheri, revealing a unique stupa, and Zar Dheri, where mineralogical analysis of schist stone confirmed its source for producing stone sculptures (Shakir & Hameed 2019: 50-215; Shakir *et al.* 2021: 137-143, 2022).

Despite these discoveries, many remained undiscovered until the establishment of the Department of Archaeology at Hazara University in 2006. Since then, the department has recorded

and documented 157 Buddhist sites in the region (Fig. 5).

Buddhist Ruins of District Batagram

District Batagram is located at latitude 34.40 and longitude 73.1 and is bounded on the north by Kohistan District, on the east by Mansehra District, on the south by the Kala Dhaka of Torghar District, and on the west by Shangla District. The district is divided into two tehsils, Batagram and Allai.

Archaeological discoveries in the area have sparked interest in the Batagram ruins. It has been reported that ancient cemeteries at these locations have been demolished in quest for artefacts and riches. A catalogue of the 18 Buddhist sites recently reported by the authors as a part of the investigation team (Fig. 6). The GIS map showed that most of the sites were interconnected and located near the river Indus.

Buddhist Ruins of District Torghar

Torghar is situated within the coordinates of 34°32' to 34°50' N and 72°48' to 72°58' E, bordered by Agror to the east, Tanawal to the south, Buner to the west, and Batagram to the northeast. The Torghar range stretches north to south for approximately 25 to 30 km, reaching an elevation of 8,000 feet above sea level. Commonly known as Chagharzai due to its proximity to the Chagharzai territory of Buner District, the district's Martung tehsil is located on the other side of the Indus River.

The northern border of Torghar is marked by the Indus River, which then turns south. The Swatis occupy the remainder of the range, while the Yusufzais live on the western slopes between the river and the range's crest. The Black Mountain, also known as Torghar, is distinguished by a long, narrow ridge with steep passages and tall peaks.

Recently, a catalogue of 20 Buddhist sites (Fig. 7) has been reported in Torghar. A GIS map indicates that the majority of these sites are interconnected and located around the Indus River.

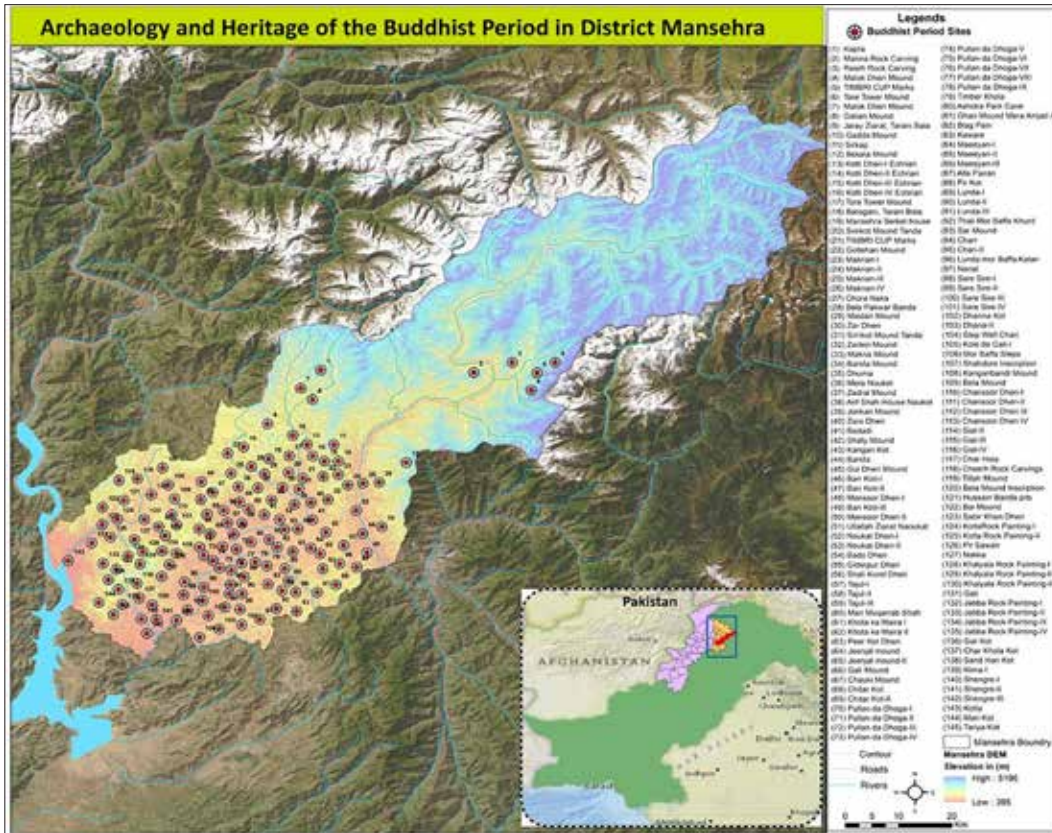


Figure 5. Map of District Mansehra showing Buddhist period sites

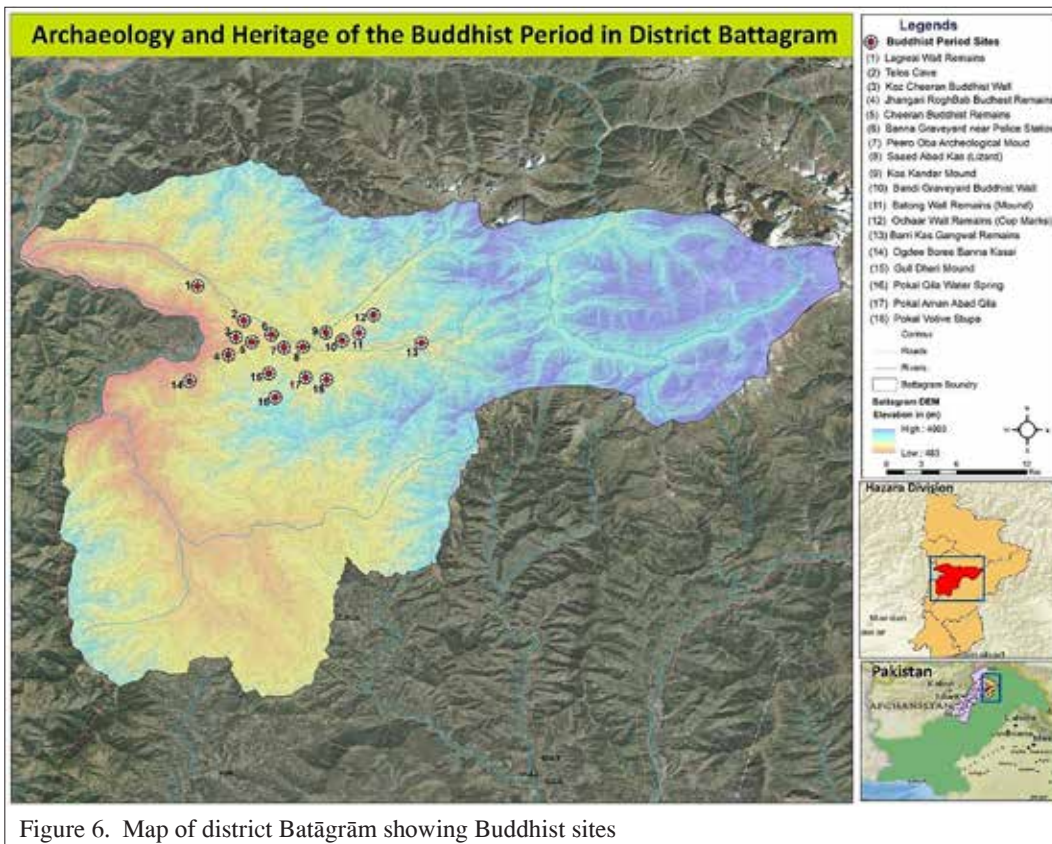


Figure 6. Map of district Batāgrām showing Buddhist sites

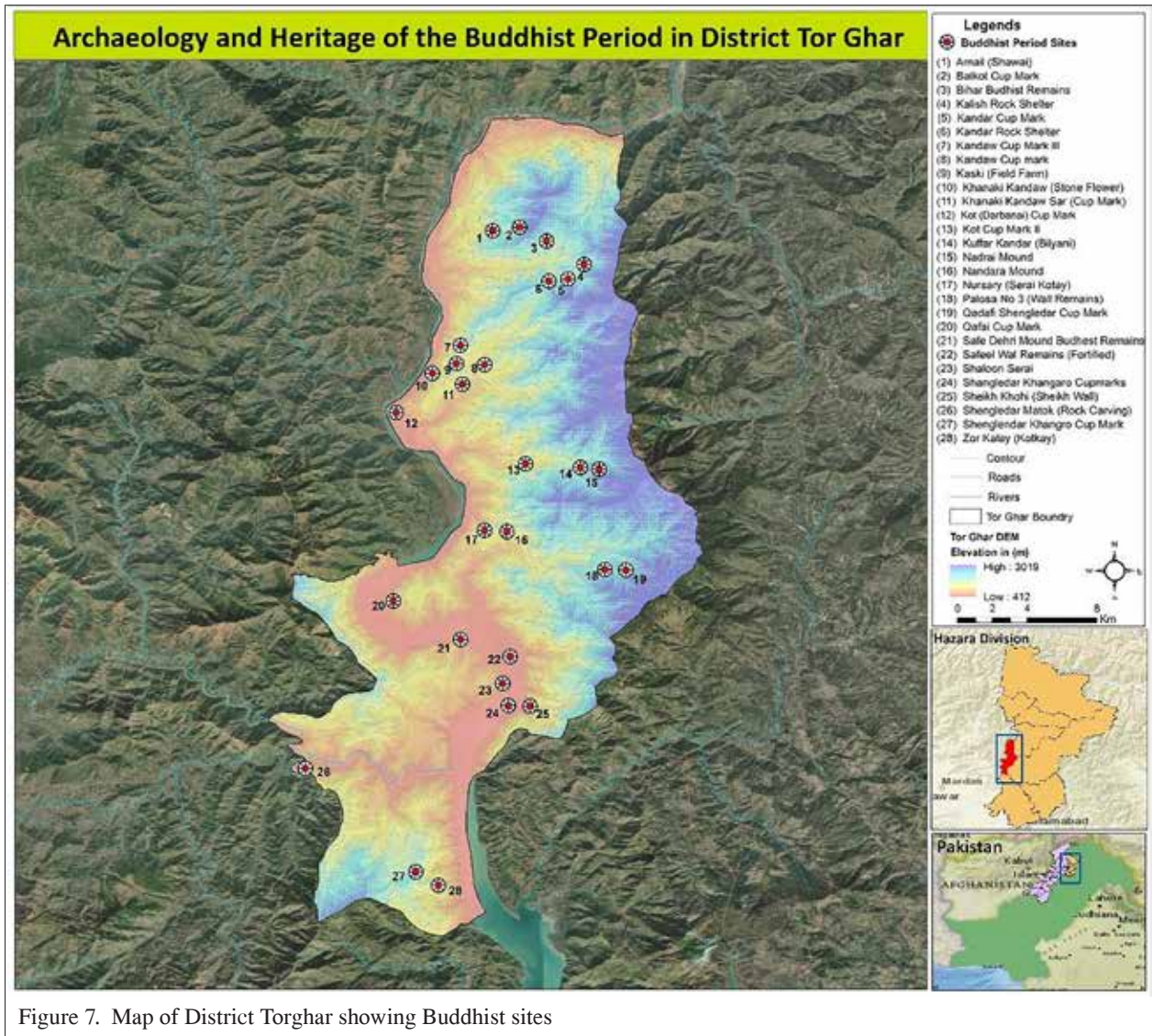


Figure 7. Map of District Torghar showing Buddhist sites

Buddhist Ruins in District Kohistan Lower

The Lower Kohistan District is located in the Hazara Division of Khyber Pakhtunkhwa province. Pattan is the district headquarters of Lower Kohistan. The district is divided in Upper and Lower Kohistan districts in 2014. Lower Kohistan was divided in two tehsils at the time: Palas and Pattan. Palas tehsil was created a distinct district in 2017 and named Kolai Palas, while Ranovali Bankhad previously part of Pattan tehsil was made a separate tehsil in 2018.

The present survey was carried out first in the district lower Kohistan. Most of the district was badly affected by the recent flood in 2022 that damaged roads, electricity, and other communication systems. Due to the unavailability of roads, the present survey became hard and more time-consuming. The present survey ended with the discovery of many early Islamic and Hindu period sites and only two Buddhist period sites. The profile of all Buddhist period sites with exact locations is given below (Fig. 8).

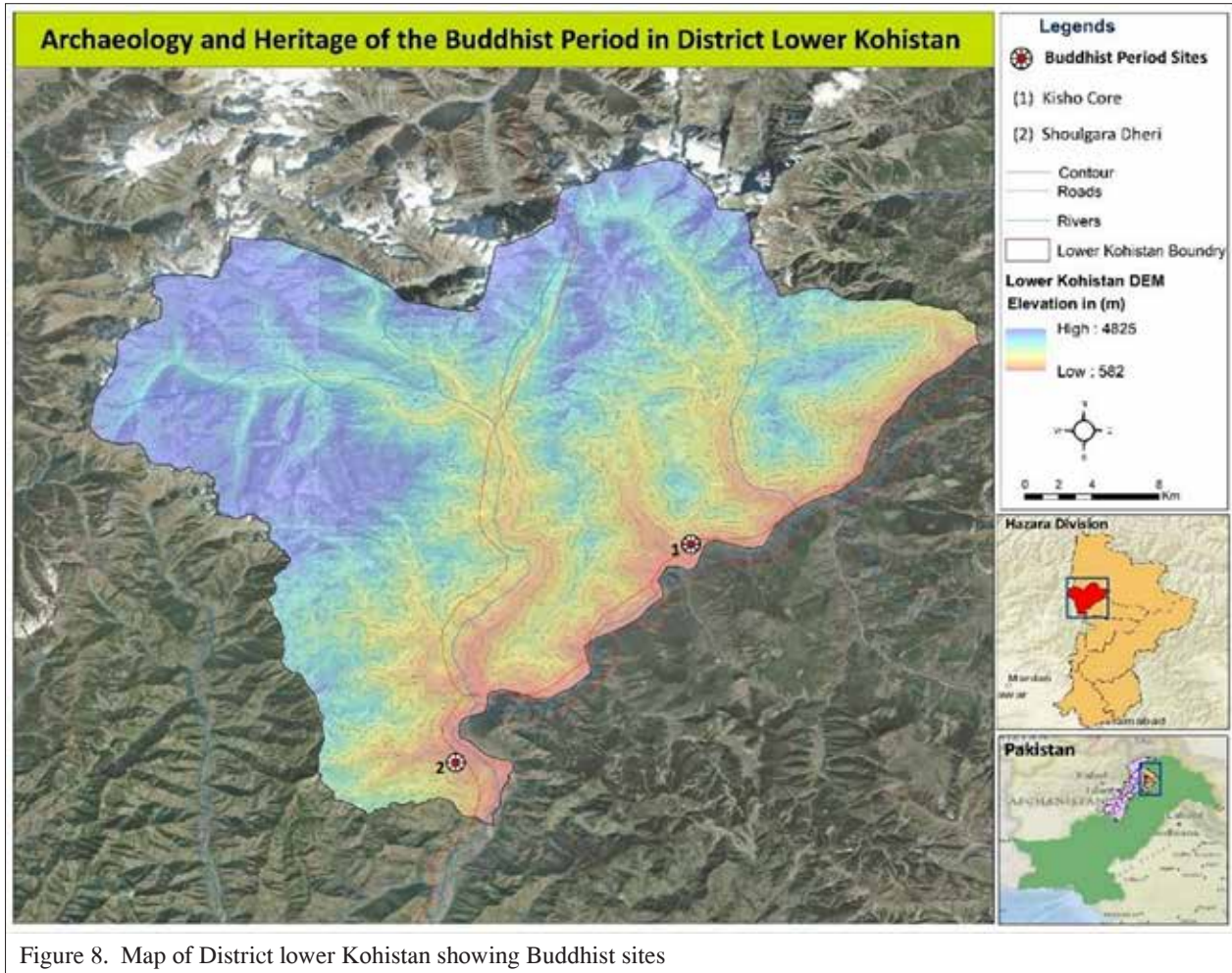


Figure 8. Map of District lower Kohistan showing Buddhist sites

Buddhist Ruins of District Kohistan Upper

The district spreads out across mountains and mountainous agricultural areas. The Pushtun community dominates the district's west, but it is also home to several other Dardic peoples such as the Khadiawal, Kayali, Shina, Kohistani, and Torwalis. Buddhist remains of the district are shown in figure 9.

Buddhist Ruins of District Kolai Palas

Kolai Palas is a recently created district of Hazara Division. It remained a subdivision of the Kohistan district until it became a district in 2017. Dardic peoples who speak Kohistani languages dominate

the region. Originally, these societies practised an animistic religion comparable to the old Vedic faith, but they were converted to Islam over time. Due to lack of roads, the present survey was hard and more time-consuming and ended with the discovery of some early Islamic, Hindu periods and a single Buddhist period site. The profile of all Buddhist period sites with exact locations is given below in figure 10.

Conclusion

The Hazara region, nestled in the heart of Pakistan, is a land imbued with a rich tapestry of history and culture. Among its most captivating historical treasures are the Buddhist relics that serve as

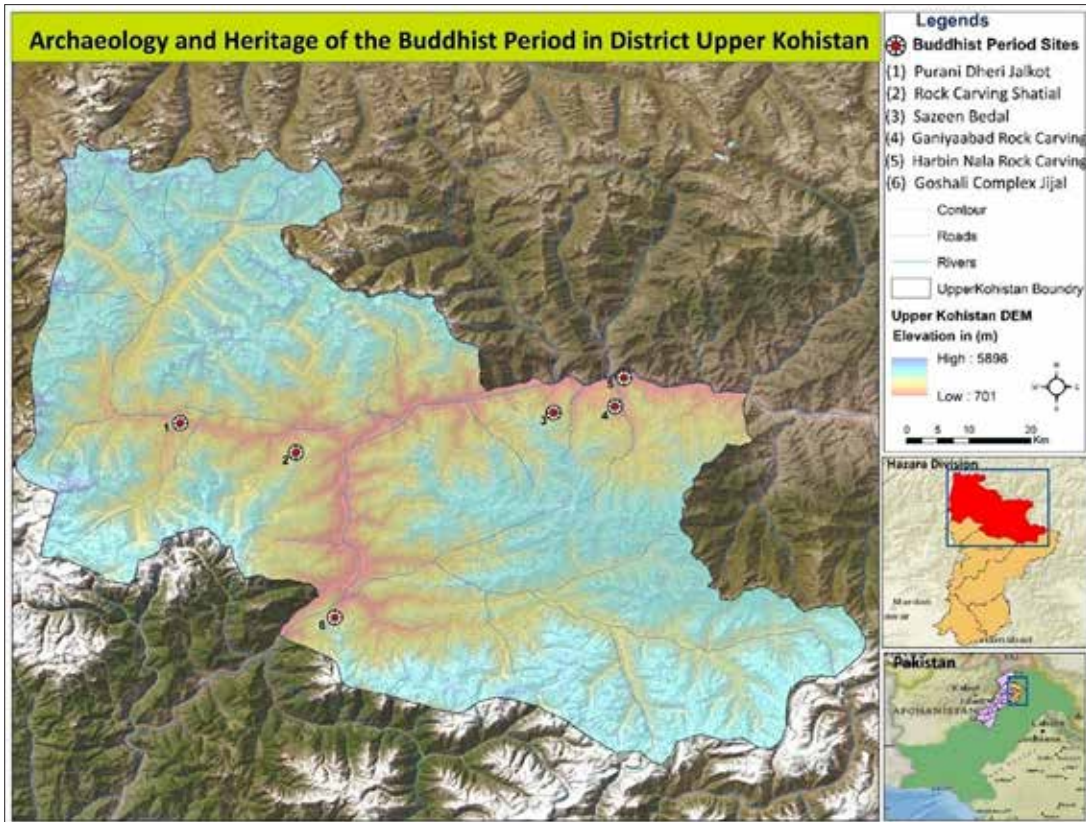


Figure 9. Map of District Upper Kohistan showing Buddhist sites

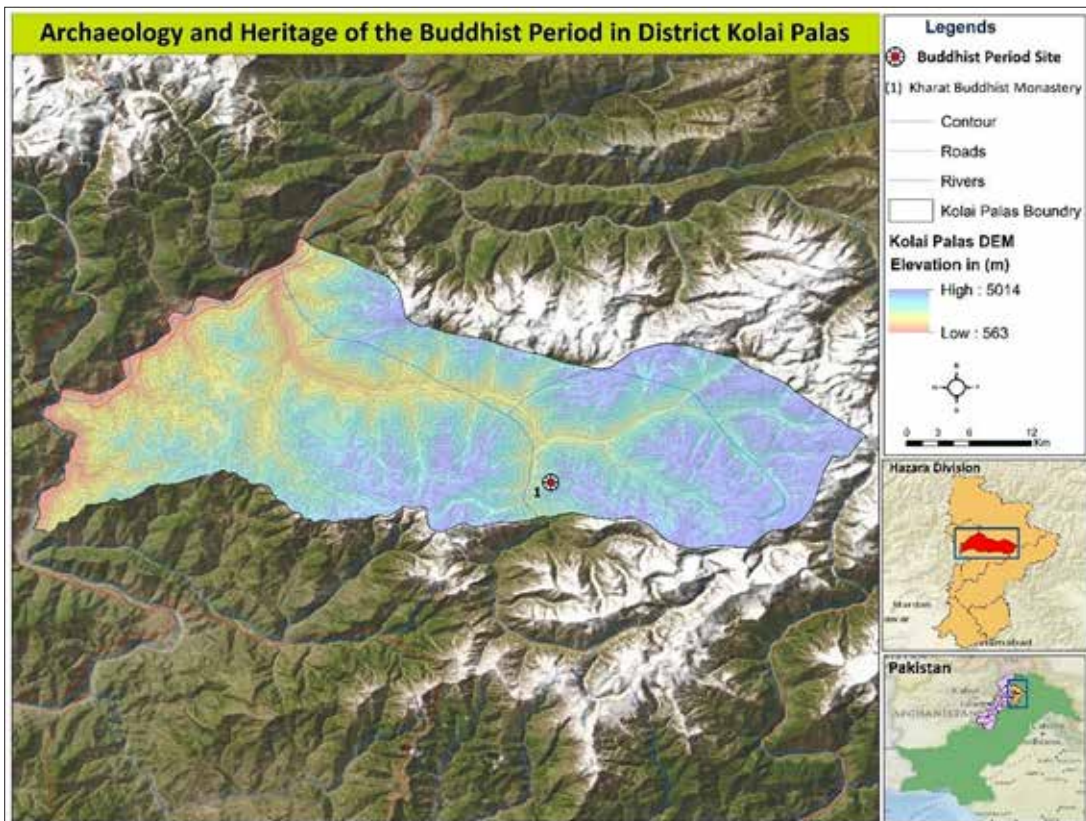


Figure 10. Map of District Kolai Palas showing Buddhist site

a testament to the region's ancient spiritual significance. These relics, scattered across the landscape, reflects the presence of Buddhism and its heritage sites in the region ranging from the third century BCE to fifth century CE. The integration of Geographic Information Systems (GIS) technology in mapping these relics is pivotal in preserving and understanding this cultural heritage. The present work makes an attempt to map up the Buddhist relics of the region. GIS technology ensures that this invaluable heritage is not lost in time. Moreover, GIS mapping has the potential to boost tourism, stimulate economic growth, and enhance educational opportunities in the region. As we delve deeper into the digital age, the integration of GIS mapping in the preservation of Hazara's Buddhist relics stands as a shining example of how technology can bridge the gap between the past and the future, ensuring that our cultural heritage remains vibrant and accessible for future generations.

Acknowledgement

This work was part of the NRPU-funded project of Higher Education Commission for exploration of the Hazara Division by the Department of Archaeology, Hazara University (Mansehra) for which permission was granted by the Directorate of Archaeology and Museums, Government of Khyber Pakhtunkhwa Peshawar. We gratefully acknowledge their support and encouragement. We have no words to thank Prof. Abdur Rahman for his valuable suggestions, guidance, and for making corrections in the manuscript.

References

- Ali, I., Shah, I., Hameed, A., Ashfaq, M. and Muhammad, T.
2011. Archaeological Explorations in Balakot, District Mansehra (2006–07): A Preliminary Report. *Pakistan Heritage* 2: 149-160.
- Azeem, A.
2002. Antique discovered from Zar Dheri (Shinkiari Hazara), Comparative Study of Sculptures. *Museum Journal: National Museum of Pakistan* 3: 66-67.
- Dani, A. H.
1986. *The Historic City of Taxila*. Tokyo: Centre for East Asian Cultural Studies.
1988. *Recent Archaeological Discoveries in Pakistan*. Paris: UNESCO.
- Dar, S.R. and Jan, Z.
2015. Three seasons of excavations at Pir Manakrai, Haripur: Preliminary report. *Ancient Pakistan* XXVI: 1-44.
- Dar, S.R.
2006. *Historical Routes through Gandhara (Pakistan) 200 BC-200 AD*. Lahore: National College of Arts.
Gazetteer of the Hazara District 1883-4. Lahore repr. 2000: Sang-e-Meel.
- Habib, S.
2001-2002. Ashokan Rock Edicts in Pakistan. *Ancient Sindh* 6: 87-103. Hargreaves, H. (1923). Section I: Exploration and Research, *Archaeological Survey of India, Annual Report 1922-23* Calcutta: Government of India Central Publication, 45-262.
- Hargreaves, H.
1930. *Handbook to the Peshawar Museum*, Peshawar: Central Publication Branch, Calcutta. 5-152.
- Marshall, J.
1945. *The Buddhist art of Gandhara*. First Indian edition. London: The Syndics of the Cambridge University Press, 137-246.
- Qamar, M.S.
1990. Excavation at Garh Mauryan Hazara District. *Journal of Asian Civilizations* 13 (1): 95-154.
- Shakirullah and Zahoor, M.
2023. The Uraśa State and its capital: Some notes. *Journal of Asian Civilizations* 46 (1): 49-61.
- Shakirullah
2021. *Archaeological Survey Report. District Mansehra and Haripur (Partial) Hazara Khyber Pakhtunkhwa, Pakistan*. Mansehra: Department of Archaeology, Hazara University, 50-215.

Shakirullah, Hameed, A. and Zahoor, M.

2021. Excavation at the Buddhist Site of Zar Dheri 2021: A Preliminary Report. *Pakistan Heritage* 13: 137-144.

Shakirullah, and Hameed, A.

2020. Bado Dheri Excavation 2019: A Preliminary Report *Pakistan Heritage* 12: 231-265.

Shakirullah, Jan., I. Zahoor, M. and Shah, A.

2023. *Archaeological Survey of District Batagram, Torghar, Kohistan Lower, Kohistan Upper, and Kolai Palas*. Mansehra: Department of Archaeology, Hazara University.

Shakirullah, Zahoor, M., Shah, A. and Khan, O.

2022. Mineralogical analysis of schist stone from the Buddhist Complex of Zar Dheri (Mansehra, Pakistan). *Journal of Asian Civilizations* 45 (2): 39-58.

Watson, H.D.

1907. *Gazetteer of the Hazara District*, London: Chatto & Windus