

Sociology & Cultural Research Review (JSCRR)

Available Online: <https://scrr.edu.com.pk>

Print ISSN: [3007-3103](#) Online ISSN: [3007-3111](#)

Platform & Workflow by: [Open Journal Systems](#)

**THE IMPACT OF CLIMATE CHANGE ON THE CULTURAL
HERITAGE OF KHYBER PAKHTUNKHWA**

Mehrin Shahzad

BS Pakistan Studies, Shaheed Benazir Bhutto Women University,
Peshawar

mehrinshahzad206@gmail.com

Dr. Toheeda

Lecturer, Department of Pakistan Studies, Shaheed Benazir Bhutto
Women University, Peshawar

toheed236@gmail.com

Dr. Mehnaz Begum†

Lecturer Department of Sharia and Law Islamia College University
Peshawar

mehnaz@icp.edu.pk

ABSTRACT

The rich cultural legacy of Khyber Pakhtunkhwa, Pakistan, is seriously threatened by climate change. Ancient monuments, historic sites, and archaeological riches are being destroyed by rising temperatures, unpredictable rainfall, and a rise in the frequency of extreme weather events. Landslides and floods can cause damage to the region's famous Buddhist ruins, like Abba sahib china (swat), Aziz Dheri, Hund museum(Swabi),Kafirkot (Dera Ismail khan), Buner and Takht-i-Bahi, Jamal Ghari(Mardan), and temperature changes can harm the priceless treasures of the Gandhara culture. Furthermore, the customs, folklore, and indigenous knowledge of the affected populations are being undermined by migration and relocation brought on by climate change. This study highlights the critical need for conservation efforts and adaptive solutions to preserve the region's priceless history and identity by examining the damaging effects of climate change on Khyber Pakhtunkhwa's cultural heritage.

Keywords: *Climat Change, Gandhara, Takht-i-Bahi, Hund museum, cultural heritage,*

Introduction

A change in the statistical characteristics of the climate system that lasts for several decades or longer typically at least 30 years is

referred to as climate change. These statistical characteristics include variability, extremes, and averages. Climate change can be caused by human activity (e.g., altering land use or atmospheric composition) or by natural processes (e.g., variations in the Sun's radiation, volcanoes, or internal variability in the climate system). Climate change may have an effect on people's jobs, housing, safety, food production, and general health. Some populations are already vulnerable to the effects of climate change, such as those living in small island nations and other developing nations. Sea-level rise and saltwater intrusion have progressed to the extent that entire communities have been forced to relocate, while prolonged droughts are increasing the risk of famine. It is anticipated that a growing number of individuals will be displaced by weather-related events in the future. The legacy of tangible artefacts (cultural property) and intangible characteristics of a group or civilization that have been passed down from the past is known as cultural heritage. Through the use of certain methods in the present, the concept of cultural heritage provides a link between the past and the future. Cultural legacy is preserved for the benefit of future generations and passed down to these groups or societies because of the values associated with it. Complex historical processes gave rise to the idea of cultural heritage, which is continuously evolving today. Value systems that have changed over time serve as the foundation for the concepts of cultural and natural legacy. There are many individuals that acknowledge these values. There are numerous types of cultural and natural heritage as a result of the opinions developed and accepted by these diverse groups. Many things large and small make up cultural heritage. It can be seen in the buildings, townscapes, and even in archaeological remains. Culture can be perceived through natural sources as well: the agriculture and landscapes associated with it. It is preserved through books, artifacts, objects, pictures, photographs, art, and oral tradition. The food we eat, the clothes we wear, the religions we follow, and the skills we learn are where cultural heritage is found. Sometimes what makes up a culture can be touched and seen; other times it is intangible. Cultural heritage includes natural heritage, which includes biodiversity and landscapes that are important to culture. Tangible culture, which includes things like structures, landmarks, vistas, literature,

artefacts, and archives. Intangible cultural elements, including customs, language, folklore, and knowledge. A sense of place, identity, and aesthetic wellbeing are said to be imparted to local populations by cultural heritage assets, which include historical buildings, archaeological sites, monuments, as well as their collections and contents and intangible elements. Some regard these as remnants of our past. A major concern to cultural heritage sites is the fluctuation of groundwater levels. The effects of climate change on cultural heritage are manifold, including altered precipitation patterns, a rise in the frequency of catastrophic events like floods and droughts, and rising sea levels. Salt crystallization and dissolution, soil temperature, the hydrological cycle, and more frequent, heavy precipitation all contribute to erosion.

“The Impact of Climate Change on Cultural Heritage Sites”: Climate change poses a significant threat to cultural heritage sites, including floods, extreme weather, desertification, and permafrost deterioration. Climate change poses a significant threat to cultural heritage sites, including floods, extreme weather, desertification, permafrost degradation, and the decay of cultural landscapes. Cultural heritage sites are challenging to protect due to their diverse nature. Successful mitigation involves reducing carbon emissions and stress from unsustainable activities, which may exacerbate climate change’s negative effects. This paper suggests integrating environmental law provisions from heritage conservation, pollution, land use, construction, water, environmental impact assessment, and planning law to mitigate and adapt to climate change’s effects on heritage properties. The precautionary principle is of utmost importance when dealing with heritage sites (Gruber, 2014).

The Significant Cultural Heritage sites of KP

Cultural heritage, which includes conventions, practices, locations, artefacts, and values, is a representation of the lifestyles that a community has created and passed down through the generations. Cultural heritage is a strategic resource for nations and plays a critical role in the formation of public consciousness and the development of society. It is important because it fortifies the sense of community and togetherness and represents the history and identity of nations, and its preservation is essential to preserving a nation's past and present. (Chokey, 2016).

Cultural heritage has a big impact on how an identity is formed. It helps individuals and communities comprehend their own cultures, histories, and practices and promotes a sense of continuity with the past. Place identity and cultural heritage are closely associated since the former represents the unique characteristics and values of a particular community or group. Social identities, including national, local, and regional identities, are shaped by it as much as individual identities. Cultural legacies also influence multicultural and intercultural perspectives, as well as how people see themselves and other people. But sometimes it can be challenging to protect and uphold cultural history due to disagreements over place identity and the breaking of cultural bonds

Cultural heritage works to keep things as they were in the past—how people used to think, act, and celebrate. Traditions may and should be passed down to maintain the way people lived in the past. Haggis is one particular item that comes to mind. It can still teach us even though it's less popular on holidays and special days than it was when it was a mainstay of Celtic diets. Haggis can inform us about the ancient Celts' eating habits, the lengths they went to in order to eat, and the methods they employed to prepare their meals. Although haggis is prepared in an oven these days, it was traditionally cooked over an open flame for the Celts. It is significant because this recipe transmission keeps even a tiny portion of their culture alive. Largely speaking and inextricably linked to preservation, cultural heritage narrates a people's past. Each custom and artefact taken together demonstrates to us the way in which those people lived and gives us insight into our ancestors' past.

Cultural Heritage Sites in Khyber Pakhtunkhwa

Sethi House (Peshawar)

Within the ancient walled city of Peshawar stands the Sethi House, one of the twelve notable mansions. The Sethi House is close to the city's socio-cultural icons and is housed within the Sethi Mohalla, an enormous 19th-century architectural exhibition with captivating examples of spatial inventiveness and definition. Sethi Karim Bakhsh built the home. It is divided into three sections: the first floor, the basement, and the courtyard, covering an area of 33 Marla's. The main courtyard is where the fountain is located. On the house's northern side, there is a pit. Its construction started in

1835 and was eventually finished in 1884, during the subcontinent's pre-partition era, after 49 years. The structure has a particular and captivating appeal since it is a rare example of British colonial and Mughal architectural traditions. The main doors are beautifully crafted from wood. The walls and ceilings of the home are decorated with elaborate woodwork, frescoes, and stucco.

The Sethi House serves as a reminder of Peshawar's rich cultural legacy, which has evolved over ages due to a variety of factors. It is evidence of the people in the area's inventiveness and architectural talent, as well as their capacity to design structures that are both aesthetically pleasing and useful. Anybody interested in architecture and history should not miss the house; a trip to Peshawar wouldn't be complete without viewing this magnificent structure. I hope you now have a sufficient understanding of this striking Central Asian heritage style. We anticipate that the government of KPK will protect this legacy so that future tourists can discover the ruins of KPK's culture and civilization (Khan 2015).

The Museum of Peshawar

The current Peshawar Museum main hall cost Rs. 600,000, of which Rs. 30,000 came from donations provided by the people of Khyber Pakhtunkhwa and Rs. 15,000 from the Director General of Archaeology, India. The Peshawar Museum was established in 1906–07 in Queen Victoria's honor. After construction was completed, the museum opened its doors in November 1907 to exhibit the Gandharan sculptures that had been dug out of important Gandharan sites in the Mardan District, such as Shah-Ji-Ki-Dheri Peshawar, Takht-i-Bahi, and Sahri Bahlol. Afterwards, sculptures from Jamal Garhi and other Gandharan sites had also been discovered by British scholars. The two-story building featured two side aisles on the ground and first floors in addition to a main hall that blended aspects of British and Mughal architecture. Every corner of the edifice has a modest pinnacle and four elegant cupolas. Two halls, one on each side of the structure, were constructed in 1969–70 in a style resembling that of the eastern and western sections.

When the Khyber Pakhtunkhwa government established its own Directorate of Archaeology and Museums in 1992 to better safeguard and maintain the province's ancient legacy, the Peshawar Museum became a part of the Provincial Directorate (The bureau report, 2021).

Takht-i-Bahi (Mardan)

Takht-i-Bahi (Throne of Origins) was a Buddhist monastic complex that dates back to the early first century. Situated on a precipitous slope, it managed to elude multiple incursions and has remarkably persevered. Nearby are the ruins of a small fortified city from the same era, Sahri-i-Bahlol. The Buddhist remains at Takht-i-Bahi and the Neighboring City Remains at Sahri-i-Bahlol are the most notable Buddhist ruins found in the Gandharan region of Pakistan. The inscribed attribute is composed of two distinct pieces that originate from the same historical period.

Typical of Buddhist ruins, the Buddhist Ruins of Takht-i-Bahi (Throne of Origins) are a monastic complex that are superbly positioned on multiple hilltops that range in height from 36.6 meters to 152.4 meters. They date back to the early first century A.D. The buildings take up roughly 33 hectares of land. Up to the seventh century AD, the Buddhist monastery was continuously in operation. It is the most comprehensive Buddhist monastery in Pakistan and is made up of a collection of structures. Stone blocks that were locally dressed and semi-dressed and put in a mortar made of lime and mud were used to construct the buildings in the diaper style known as Gandharan patterns.

Houses have been built directly on top of the ancient ruins, and only remnants of the perimeter wall survive. The property's current boundaries are considered inadequate due to the increasing urbanization. The site is located on high hills within the Buddhist Ruins of Takht-i-Bahi, which has managed to elude successive invasions and remain remarkably well preserved. UNESCO declared Takht-i-Bahi and the nearby ruins of Sahri-i-Bahlol a World Heritage site in 1980 (Tariq, 20 (yusufzai, 2023)20).

Ranigat (Buner)

Ranigat is a well-known Buddhist archaeological site in the KP province's district Buner. Ranigat, which was once a bustling center of Gandhara civilization, is unmistakable evidence of the

region's long Buddhist history. It has been the subject of songs and stories, and it is a highly regarded aspect of folklore. Built from stone taken from nearby mountains, the ruins of a major center of Buddhist art and culture have been investigated by archaeologists for decades. The distance between the Ranigat archaeological site and Swabi city is 20 kilometers. It is easily accessible from the M1 and N35 freeways and is roughly 100 km between Peshawar and Islamabad. The large rock that the ancient people erected is the source of the city's name. The terms "Rani" and "gat," which come from two distinct languages, are combined to form the word Ranigat. The Hindi word for "queen" is "rani," and the Pashto term for "gat" is "huge rock." Thus, the translation of Ranigat is "Queen's Rock." The mentioned rock is perched atop a mountain that was perhaps previously a site of worship. One of the biggest Buddhist complexes in ancient Gandhara is Ranigat.

The Ranigat archeological site was initially explored by Sir Alexander the Great Cunningham. Later, it was also visited by I. Lowenthal (1864), H.H. Cole (1883), A. Stein (1891), and M. A. Foucher (1898), among other notable European explorers. The 4 km² of Buddhist remains date back to the second century CE (The bureau report, 2021).

Aziz Dheri (Swabi)

In the Peshawar valley is the unusual stupa and village site known as Aziz Dheri. The archeological mound at Aziz Dheri is among the biggest and richest in the region, and thousands of artifacts have been retrieved from it. It is among the most significant sites from the Buddhist era in the Gandhara area. Aziz Dheri is located roughly 12 km north of the Jrandu Bridge, a viaduct built over a canal on the main Mardan-Swabi route, and 3 km west of the settlement of Ganghu Dher. The Ghakhai and Chatra mountains bounded the region to the north, while Chanri Ghar and Garo Ghar bounded it to the northeast. The Karamar mountain range lies to the west, while the Kambela, Bagar, and Nogram mountains are located to the northeast and east. Despite being first found in 1917 by V. Nathesa Aiyar, a superintendent with the Archaeological Survey of India, Aziz Dheri has only been the subject of inquiry since 1993. The location symbolizes a rich collection of cultural artifacts and well-organized urban design for the Directorate of Archaeology and Museums KP, which has

made important discoveries in the ancient history of Gandhara. It covers an area larger than one km (Shahzad, 2020).

Kafirkot South (Dhera Ismail Khan)

Actually, there are two archeological sites near the city of Mianwali called Kafirkot, which are located 50 kilometers apart. The Tilot Kafirkot is the name of the one towards the north, and the Bolo Kafirkot is the one towards the south. Encircling both temple complexes are the remnants of defenses from what was once a notable fort overlooking the powerful Indus River. They are together referred to as the Hindu Shahi sanctuaries and are also known as the sanctuaries of Bilot and Tilot. Originally, they formed a chain that extended from Nandna on the eastern edge of the Salt Range. Prior to the collapse of the Hindu Shahi kingdom in the eleventh century, a total of eight temple complexes were erected. In 1915, the ruins of Kafirkot were first noted in the Mianwali Gazetteer, which stated that they "are an indication of the existence of a Hindu civilization of considerable importance and antiquity."

It is important to remember that Kashmir was formerly a part of the Kushan-ruled Gandharan Kingdom. As a result, the Kashmiri dynasties and the Hindu Shahis had links. The Kashmiri historian Kalhana details the Hindu Shahi Rajas, who are linked to the Kashmir kingdom by marriage alliances, in his *Rajtarangani*, a mythological and historical chronicle of the northwest Indian subcontinent, namely the rulers of Kashmir. In the Khyber Pakhtunkhwa Province's Dera Ismail Khan Region is the unremarkable tiny village of Bilot. It is situated along the Indus where the Salt Range and the Hindu Kush's most lowered peaks converge. Other than Kafirkot's location on a hill overlooking the hamlet, there is nothing particularly remarkable about the area.

Kafirkot North (Dera Ismail Khan)

The Kafir Kot Fort, which once held significant military importance, is situated near the boundary between the districts of Dera Ismail Khan and Mianwali. A highway that links Esa Khel, Lakki Marwat, and Bannu passes via the town of Kundal. You have to cross the river bridge and pass a small police checkpoint in order to exit Esa Khel Pass. While taking in the breathtaking scenery and its natural colors, there is an old trail where numerous conquerors such as the Aryans, Kushans, Ghaznavis, Mongols,

and Mughals have left endless tales. Aryans, Kushans, Ghaznavis, Mongols, and Mughals were among the many invaders that utilized this route, and they left behind innumerable legends along its old trail, which one can stroll along while admiring the stunning landscape's natural colors. There's a little mountainous area below the River Kurram on this pathway where it meets the Indus. It was known as Red Stone by the historians of the past. Buddhist This old route that leaves Mianwali leads past some amazing buildings. This tunnel leads to a high hill that ends at the top of a mountain. The ruins of the fort's large, old main gate can be found along this extremely treacherous ascent route. Every traveler who enters the gate is confronted by a plain that spans roughly 1.5 square kilometers. Several buildings with breathtaking vistas are located here and are regarded as some of the best examples of architecture. Since the stones used to create these structures were brought from far mountainous areas; they are not native. It does not appear that any regular human being could have carried those large boulders up the hill from that challenging pathway.

This architecture was also used to build the ancient temples of Nand Kot, Thatta, Katas Raj, Malot, Amba, Madi Indus, Kafir Kot, and Balut. These temples are mentioned in the books of Charles Mason, Alexander the Great, Alan Cunningham, John Wood, and Mianwali Gazetteer (1915) (teahouse, 2023).

Abba Saib China (Swat)

The Prophet China is a Buddhist site in Barikot (previously Bazira), which is often referred to as Najigram due to its close vicinity to the same-named village in Swat. It gained notoriety recently when intact fresco paintings and murals from the Kushan era of the Gandharan civilization were found at an archaeological site. The finding is significant since it added to the body of knowledge on the early Buddhist remnants in Swat. There isn't another instance of finding complete paintings in Gandhara. The discovery indicates that throughout the Kushan era, individuals in this region were employing fresco painting techniques.

Sadly, the remnants of the significant painting school that formerly existed in Swat and Gandhara have vanished. Scholars and pilgrims from throughout the globe studying Gandhara have expressed their gratitude and admiration for the amazing new evidence found at Abba'saib China (Samad 2024).

Masjid Mahabat Khan (Peshawar)

Between 1660 and 1670, the mosque was constructed atop the ancient town's tallest point. During Sikh times, hostages were frequently suspended from the minarets of the Mahabat Khan Mosque. Five individuals were hanged by the minarets each day "instead of the gallows." The elders of the refugee tribes would gather in the mosque following the Soviet invasion of Afghanistan to create a unity among the Afghans against the Soviets. The main hall of worship is accessed through five arched doors. With cusped arches in the classic Mughal style, the central arch is the largest. The central arch is surrounded by two slightly shorter uncusped arches that are built in the Central Asian and Persian styles. These arches are surrounded by smaller, similarly designed arches, and there are seven tiny arched portals situated over the top of each arch. The outermost arches are instead decorated with ghalib Kari, a network of stucco and plaster ribs that are utilized for artistic purposes on curved surfaces of the archways (Sajjad, 2024).

Hund museum (Swabi)

Situated on the right bank of the Indus River, Hund's archeological site is situated at the easternmost point of the Peshawar valley. Situated on the banks of the Indus, Hund is a major archeological site spanning approximately one kilometer. It was the final capital of Gandhara during the authority of the Hindu Shahi dynasty. Hund was once known as Udabhāṇḍapura. Few of the hundreds of antiques that have been discovered as a consequence of numerous archaeological investigations are on exhibit in the Hund museum, which was constructed for the aforementioned reason. In addition to governmental initiatives, there have been unauthorized excavations conducted at the location. During the most recent excavation, the provincial archaeology and museums directorate discovered coins, household items, and remnants of dwellings belonging to the Hindu Shahi dynasty in the Hund area of Swabi district. June 1996 saw the start of excavation at Hund, one of the most important archeological sites in Khyber Pakhtunkhwa, following an inauguration by provincial cultural secretary Arshad Sami Khan and the late archaeologist Dr. AH Dani. Built on the banks of the River Indus, Hund City was destroyed by floods. In reality, Hund is called Udabhāṇḍapura. This was Alexander's site in 327 BC. When a boat bridge was ready, one of his generals

helped him cross the River Indus in Hund. In 644 AD, the well-known Chinese pilgrim Hiuen Tsang traveled through this region. Excavations had uncovered exquisite homes, coinage, jewelry, and other household items from the Indo-Greek and Hindu Shahi eras. It was the third capital of the Hindu Shahi dynasty, after Peshawar and Charsadda. "We've also found portions of the city's perimeter walls. The museum's director stated that the government has made multiple efforts to turn the site into a tourist destination. 33 Kanals of land were purchased in 2002 in order to build the Hund Museum. And once it was, Alexander's monument was erected to honor his visit to Hund," he remarked.

The magnificent engineering know-how of the ancient people was demonstrated by the dwellings and other buildings of the Hindu Shahi and Kushana periods. They possessed gorgeous hallways and chambers, as well as staircases, layers of floors, pillar rows, and stoves. The locations where they were found had well-planned roadways and beautiful entrances. The drainage system discovered at Hund proved to be the most advanced at the time. In the past, excavations around the globe have shown such a drainage system. The museum's director predicted that in the future, the establishment would draw sizable numbers of visitors from both domestic and foreign locations. (The Bureau report, 2012).

Jamal Ghari: (Mardan)

In Pakistan's Khyber Pakhtunkhwa region, 13 kilometers from Mardan city is the historic site of Jamal Garhai. According to research, it was a Buddhist monastery during the height of Buddhism's popularity in this region of the Indian subcontinent, from the first to the fifth century AD. In addition to tourists from all around the world, this place draws a lot of scholars from national universities. The ride becomes a little challenging because of how distant it is from the main Mardan. Many initiatives are underway to prevent the site from being discovered because it is thought that many areas of the site vanished in the past. It is thought that British archaeologist Sir Alexander Cunningham first came to the ruins of Jamal Garhi around 1848. The Peshawar museum currently has some inscriptions that were discovered at Jamal Garhi on display. (Yousafzai, 2014).

The impact of Climate Change on the Cultural Heritage of Khyber Pakhtunkhwa

Risks associated with climate change for cultural assets include shifting patterns of precipitation, which can result in flooding or droughts, exceptionally powerful storms, and strong winds, as well as excessive summer temperatures and warm or extremely cold winters. Materials like stone and brick can split and fracture as a result of, among other things, landslides, and an increase in the frequency of freeze/thaw cycles, wildfires, coastal erosion, pollution and bio-infestation, and the consequent acidity and rising levels of oceans and seas. This can cause buildings to become unstable and cause damage to underwater and archaeological sites of Khyber Pakhtunkhwa.

Famous Buddhist cultural and historical landmarks in Swat have endured for more than 2,000 years, but the effects of climate change are putting them in jeopardy. These centuries-old historical sites in the charming valley are in danger because of rising temperatures, floods, rain, and other harsh weather. A serious threat to the city's cultural legacy is climate change. Historic sites are susceptible to rain and flooding. Swat is referred to as the Switzerland of Pakistan due to its picturesque landscapes and snow-capped mountains. Scholars and historians think that Suvastu, the Sanskrit name early Aryans gave to the region's magnificent river and which means "a good dwelling place," is where the contemporary name of Swat originates. The Khyber Pakhtunkhwa Integrated Tourism Development Project reports that at least 14 cultural monuments in the province ten of which were in or near Swat were damaged by the floods and heavy rains in 2022. These included the Kalam Mosque, the Swat Museum storehouse, the Amlukdara complex, the Abasahib China, the Shingardar Stupa, the Gumbatona site, the Thokardara site, the Butkara site, the Barikot Bazira site, and the Shinashah Stupa.

According to him, every aspect of life, including Swat's ancient sites, has been damaged by rain and events brought on by climate change. "The structure of the historic stupa was damaged by the heavy rains, but the Saidu Sharif Stupa was recently restored under the supervision of an Italian Archeological Mission," he explains. The Hindu Kush Mountains are at the base of the Saidu Sharif Stupa. Located at the base of a precipitous valley is a Buddhist

sanctuary. Heritage sites, according to Usman Ulasyar, were disregarded by the previous administration. Because these locations are below earth, rainwater can enter them with ease. Rainwater drainage from these sites is not possible because of technical issues with the excavation. Ulasyar proposes that proper rainwater drainage can lessen the impact. The director of Archaeology and Museums, Dr. Abdul Samad, asserts that natural calamities cannot be prevented from affecting historic sites. "The only precautions we can take are fundamental ones". (Khan, 2024).

Mardan is experiencing severe climate change:

As a result of the changing global climate, there is an increase in extreme weather events, including flash floods. Using green infrastructure significantly reduces the danger of landscaping combined with sustainable drainage systems. This strategy protects the environment flooding and water runoff. Green infrastructure is based on intelligent and increases the security of buildings and assets by preventing contaminants from entering aquatic ecosystems. Natural carbon storage outlets include trees and other plants, which take in carbon dioxide from the atmosphere and store it as biomass. (Yousafzai, 2023).

Many archeological monuments may be found in Mardan, such as the remnants of the Gandhara culture and the ancient city of Takht-i-Bahi. These locations are in danger of being destroyed because of soil erosion, landslides, and structural damage brought on by climate change. There is a significant influence of climate change on Mardan, Pakistan's cultural heritage. The region's rich cultural legacy is at danger due to rising temperatures, shifting precipitation patterns, and a rise in the frequency of extreme weather events. Temperature and humidity variations are making it difficult for museums and archives to preserve historical documents and cultural items, which puts the region's cultural legacy at danger of disappearing (UNESCO, 2019).

Jamal Garhi, a Buddhist monastery and circular stupa dating back to the fifth century CE, was similarly shaken up as other ancient sites and structures in the province. Thus, on October 26, a 7.5-magnitude earthquake caused it to lose a wall. Numerous stones from the fallen wall skidded through the monastic complex and the monk quarters, seriously damaging the entire building. "One of the

ancient walls completely collapsed from the massive earthquake," stated Mahmood Khan, an employee. Right now, we're working hard to gather up the stray stones and arrange them correctly.

The KP administration sent workers to preserve and renovate Jamal Garhi, a popular tourist destination that continues to bring in money and preserve history. To maintain the framework, further resources are still required. Mardan also witnessed the destructive effects of the earthquake at other historical monuments, where wooden supports were erected in numerous walls to save them from collapsing. Dr. Abdul Samad, Director of K-P Archaeology, states that "many historical sites and museums were affected by the earthquake." We are still completing the damage assessment. Based on the department's estimates, the official additional funding will throughout history, Jamal Garhi has sustained significant human-caused destruction in addition to natural calamities. Archaeologists claim that for decades, smugglers and relic hunters pillaged the monastery. (Hadiya, 2015).

Historic sites in Peshawar are at risk from Global warming, pollution and climate change.

The tangible legacy of the provincial capital is at danger due to urban environmental pollution, excessive temperatures and dryness. According to a recent evaluation report jointly produced by the UNDP, UNESCO, and ministry of culture and tourism, pollution has damaged various aspects of the walled city of Peshawar, including architectural features and other historic sites. Neglect and high levels of pollution and humidity were to blame for the damage done to the delicate creations like as stucco, carved and bonded brick, and beautifully carved wood in the walled city buildings. Two of the fourteen gates still stand, according to Professor Ihsan Ali, Director of Museums and Archaeology. Only a portion of the wall remains intact, and several of the old residences have also been destroyed. "Unlike cities like Mohenjo-Daro and Harrapa, Peshawar is the oldest continuously inhabited city in South Asia, making it a unique place to live." Professor Ihsan stated, "It is deserving of being considered for nomination as a Unesco World Heritage site. "The city of Peshawar has a high population density. Numerous neighborhoods have seen the construction of new homes, destroying the area's original historic character, particularly the city's old bazaars, according to another

archaeologist. The study highlights importance of including the residents of the ancient neighborhoods and bazaars in an effort to preserve historical places and buildings, as well as pushed for increasing public understanding of the importance of these monuments and buildings.

Over the course of their lives, cars, trucks, and buses emit pollutants into the air, including those produced during fuel manufacturing and vehicle operating. These vehicles encourage high gas concentrations, which raise the risk of global warming. Because there was not enough flora within the walled city to act as a filter, pollution and dust were causing damage. Environmental deterioration was also exacerbated by the walled city's inadequate sewage and drainage system and inadequate sanitary regulations. (Bureau report, 2024).

DERA ISMAIL KHAN

The area surrounding Dera Ismail Khan has recently seen terrible floods, droughts, and cyclones that have caused thousands of people to lose their lives, to be displaced, to lose their means of subsistence, and to suffer major damage to infrastructure and cultural landmarks. The incidents serve as a sobering reminder that the district is among the most susceptible in the nation to the consequences of climate change and they might indicate that in the decades to come, natural disasters will occur more frequently and with greater intensity. It is necessary to invest in climate-smart enterprises, infrastructure, and skills in addition to incorporating climate change into national strategies and policies in order to address these risks. Floods are causing damage to Kafirkot's cultural sites in the north and south. (Yahiya, 2020)

COUNCLUSION

In conclusion the Cultural heritage, which includes conventions, practices, locations, artefacts, and values, is a representation of the lifestyles that a community has created and passed down through the generations. Cultural heritage is a strategic resource for nations and plays a critical role in the formation of public consciousness and the development of society. It is important because it fortifies the sense of community and togetherness and represents the history and identity of nations, and its preservation is essential to preserving a nation's past and present. Cultural background

significantly influences identity formation, fostering continuity with the past and understanding of communities' cultures. Place identity and cultural heritage shape individual and societal identities, influencing intercultural viewpoints. However, disputes and dissolution of cultural ties can hinder preservation and maintenance. Cultural heritage enables individuals to identify with others based on their shared backgrounds, perspectives, and values, encompassing lifestyles, traditions, beliefs, art, and literature, thereby facilitating quick understanding of different communities. Largely speaking and inextricably linked to preservation, cultural heritage narrates a people's past. Each custom and artefact taken together demonstrates to us the way in which those people lived and gives us insight into our ancestors' past. The objects that are passed down to us reveal what they valued, which enhances the history that is written. Cultural heritage is essential for preserving customs, religions, and values, preventing future generations from making incorrect career decisions. Cultural identification, or the sense of belonging to a group or culture, helps transmit this heritage for future generations. It fosters a sense of unity, belonging, and understanding of ancestors' pasts and histories. Culture fosters community and understanding among members, helping children understand their parents' personalities. Cultural heritage tourism, defined by the National Trust for Historic Preservation, involves traveling to authentically represent past and present stories and people through natural, historic, and cultural resources. This deepens the next generation's responsibility for their unique culture and contributes to a sense of belonging. The research emphasize Climate change poses risks to cultural assets, including shifting precipitation patterns, flooding, droughts, storms, extreme summer temperatures, and acidification. It also causes materials like stone and brick to crack, landslides, wildfires, coastal erosion, and pollution, causing building instability and damage to and archaeological sites. Change increases extreme weather events like flash floods. Green infrastructure reduces landscaping risks and sustainable drainage systems protect the environment. It enhances building security and prevents contaminants from entering aquatic ecosystems. Natural carbon storage outlets include trees.

The research describes the need for residents of ancient neighborhoods and bazaars to preserve historic sites and buildings, urging public awareness of their significance. It also highlights the importance of financial incentives for old building owners to preserve cultural heritage. The study also criticizes Peshawar's lack of restrictions on automobile traffic, which contributes to high pollution levels and climate change. The lack of flora within the city and inadequate sewage and drainage systems further exacerbate environmental deterioration.

Khyber Pakhtunkhwa cultural heritage is seriously threatened by climate change, which could jeopardize efforts to preserve historical sites, monuments, and artifacts for future generations. Extreme weather events, sea level rise, and rising temperatures have the potential to permanently harm cultural heritage sites, displacing communities and destroying historical knowledge and cultural identity. In order to lessen these effects, recommendations include:

Carry out exhaustive evaluations and observation: Examine and track cultural heritage sites on a regular basis for vulnerabilities related to climate change. Recognize possible hazards and effects, such as erosion, flooding, and damage from severe weather.

Create adaptation strategies: Design specialized plans for each cultural heritage site that address particular issues related to climate change. Put policies in place to shield locations from erosion, flooding, and other effects of climate change in Khyber Pakhtunkhwa.

Put conservation and restoration strategies into practice: To prevent Khyber Pakhtunkhwa cultural heritage places from being harmed by climate change, employ both conventional and cutting edge conservation strategies. Repair damaged areas with materials and methods that are climate resilient.

Encourage sustainable tourism practices: Promote ethical travel that helps protect cultural assets of Khyber Pakhtunkhwa and reduces the effects of climate change. Provide environmentally sustainable tourist facilities and activities.

Encourage community involvement and education: Incorporate neighboring communities in efforts to reduce global warming and preserve cultural assets.

References

- Chakraborty, M. (2022). climate culture and peace.italy: the international centre of preservation and restoration of climate and cultural property
- (2022). climate culture and peace . italy: international centre for the study of the preservation and restoration of cultural property.
- DR Mehmood Sultan, Q. H. (2022, 12 31). CLIMATE CHANGE: ITS IMPACTS ON PAKISTAN.
- Gliberto F .and Jackson, R. (october 222). cultural heritage in the context of disasters and climate change. edinburgh: university of leeds.
- Gruber, S. (2014). The Impact of Climate Change on Cultural Heritage Sites. SSRN.
- Guilherme BA Coelho, H. E. (2020).
- Iqbal, A. (1919). balejabril. lahore : uzma qazmi publishers.
- Khalid, A. (2021). Conservation Challenges and Emerging Trends of Digital Preservation for UNESCO Architectural Heritage, Pakistan. MDPI.
- Khan, M. I. (2020). perservation of historic heritage in enrgy .
- Khan, M. I. (2020). perservation of historic heritage in enrgy department Anthrpocene: A challenge for climate compatible development. PalArch's journal of A rchaeology og egypt , 4171.
- Khan, M. S.(2015). reminiscent of a glorious past sethi mohallah peshawar youlin magazine..
- Khan, N. A. (2022). Critical Review of Pakistani Current Legislation on Sustainable Protection of Cultural Heritage. sustainability.
- Krupocin, D. (2020). The Impact of Climate Change on Cultural Security. 1-27.
- Malik, D. Z. (2023). The Importance Of Heritage Conservation, Preservation, And Restoration In Pakistan.
- Mustafa, Z. (2016). climate change and its impact with special focus in pakistan. 290.
- Nisar Ali Khan, c. n. (2022). critical review of pakistani current legislation on sustainable protection of cultural heritage. sustainability.
- Orr, S. A. (2021, july 29). Climate Change and Cultural Heritage: A Systematic Literature Review (2016–2020. pp. 343-477.

- Sajjad, W. (2024). peshawar's muhabat khan mosque, a mughal gem. arbab news.
- Saqib Raza, D. A. (2024). mural paintings from buddhist monastic complex of abba sahib china , sawat, kp. pakistan historical society.
- Schnass, M. P. (2024). the impact of climate change on cultural heritage . European Parlimentary Reserch service.
- Schorlemer, S. V. (2014). Climate Change as a Threat to Peace. PL Academic Research.
- Sesana, E. (2021, may). Climate change impacts on cultural heritage: A literature review.
- Tariq, G. (2020). takht bhai, a buddhist monastery in mardan.
- Teahouse, B. (2023). processing and presenting heritage sites the temples of kafir kot. BDG buddhistdoot global.
- Yahya, I. (2024). DI KHAN effecting by climate change shift. tribune.
- Yousufzai, N. (2024). the ruins of jamal ghari-A bhuddhist monastery. Dawn news.
- Yusufzai, M. A. (2023). Aziz dheri and the footprints of buddhism in KP.