

Pashtun Indigenous Knowledge and Resilience

Mitigating Climate Change in Northern Pakistan

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ABSTRACT

Indigenous knowledge and resilience are embedded in the prevailing culture of traditional societies. This study aims to investigate the Pashtun culturally embedded indigenous knowledge and resilience to climate change. The Pashtun indigenous knowledge is culturally entrenched and guides them socio-culturally to mitigate the worst impact of climate change. It is revealed Pashtun indigenous knowledge and resilience are rooted in their culture and social structure. Their folk literature, metaphors, poetry, traditions, cultural capitals, social organizations, and colonial history are key elements to understanding the different aspects of Pashtun's traditional wisdom and resilience to climate change. Pashtun social structure (such as kinship bonds, brotherhood, and reciprocity) and cultural institutions (such as Jirga) also strengthen their resilience to bounce back from the worst impact of climate change. Indigenous knowledge, socio-cultural institutions, and resilience collectively help them to face the worst impact of climate change. Pashtun have bad memories of colonial exploitation and Pakistan's exploitative policies; hence, they do not trust state initiatives, and they rely on their traditions to counter the worst impact of climate change.

Keywords: Indigenous knowledge, Pashtun culture, climate change, resilience, socio-cultural mitigation, folk literature, metaphors, poetry, traditions, cultural capitals, social organizations, colonial history, kinship bonds, brotherhood

Introduction

Climate change impacts indigenous communities across the globe (Shaffril, Ahmad, Samsuddin, Samah, & Hamdan, 2020; Khan, Khan, & Kamal, 2024). Indigenous communities are more vulnerable and have no access to sophisticated technology and effective state institutions to face the worst impacts of climate change. Climate change directly affects natural

resources like water, land, domesticated animals, and crops, on which indigenous communities depend, resulting in the displacement of these communities from their native places (Figueroa, 2011). This displacement results in the loss of their livelihood resources. Additionally, changes in the rain cycle and ecosystems have badly affected indigenous communities worldwide (Abate & Kronk, 2013).

Pashtun indigenous people in South Asia remained a colony of the British and faced their worst exploitative policies (Yousaf, 2019). In post-colonial times, Pakistan continued the policies of its predecessor and exploited their natural resources, which reinforced poverty in this region. The British and Pakistan, in colonial and post-colonial times, adopted different administrative policies and presented Pashtun communities as wild and uncivilized people to the outside world. Colonial history and Pakistan's exploitative policies in this region make them more vulnerable to climate change. Colonial history, conflicts, and climate change intersect their vulnerability.

The article also explores the Pashtun indigenous community's traditionally entrenched indigenous knowledge about climate change and focuses on the Pashtun indigenous resilience to mitigate climate change. This study also examines how climate change intersects their marginality as a minority ethnic group in this region.

Theoretical Framework

This research article focuses on the impact of climate change on indigenous communities and how they respond to climate change. The Indigenous Standpoint Theory allows the conduct of research in the prevailing socio-cultural context (Nakata, 2007). This distinct form of analysis integrates and advances the cultural knowledge and experiences of indigenous scholars. Indigenous Standpoint Theory produces more in-depth, culturally inclusive knowledge (Nakata, 2007). Additionally, this theoretical framework allows us to focus on the cultural interface and indigenous agency, as well as the responses

of indigenous people towards climate change. Hence, this framework provides theoretical insight to this study, and this research article focuses on the traditions, indigenous knowledge, and resilience of Pashtun indigenous people.

Methodology of the Study

This study follows the methodological rules and technicality required to ensure reliability and validity. According to the nature of this research and expected data, the qualitative paradigm was adopted. The purposive sampling technique was used to collect data from relevant people who are suffering due to climate change and facing natural disasters in their native towns. The data was collected from different age groups, both men and women. I conducted 6 months of fieldwork and collected data from the merged districts of Khyber Pakhtunkhwa—previously called Federally Administered Tribal Areas (FATA)—, the northern Khyber Pakhtunkhwa, Swat and Kalam Valley. I conducted 50 interviews, 30 from age 50 and above, to understand changes in climate in the last four decades and 20 from young men and women. The data was collected through in-depth interviews to draw a clear picture of the research problem. Themes are analyzed in the light of primary data and theoretical framework to link it with the broader literature on the issue at hand.

Origin of Pashtun and their Way of Living

The origin of Pashtun is a debatable issue in the available literature, and no single theory has been agreed upon regarding their origin. However, the Semitic race theory is a dominant theory suggesting that the Pashtun are

descendants of one of the original 12 tribes of Israel. (Pelevin, 2021). Alternative perspectives propose that the Pashtun are linked to Aryan tribes or Indo-European groups (Khan & Ahmed, 2013).

Pashtuns live in Afghanistan and Pakistan. They live in Balochistan and Khyber Pakhtunkhwa provinces and in recently merged districts—previously called the Federal Administer Tribal Areas (FATA)—inside Pakistan. They have limited land and live in mountainous and difficult terrain. They are reliant on natural resources. Pashtun lands are rich in natural resources; however, both during the colonial and post-colonial periods, these resources were exploited by the British and Pakistan. As a result, the majority of Pashtun live under the poverty line due to the exploitative policies of the British and Pakistan in this region.

Figure 1
Pashtun Indigenous People



Note. Photograph taken by the author during fieldwork.

Their colonial history and the current policies of Pakistan have reinforced poverty in this region (Nichols, 2010). Due to poverty, they migrated to countries such as the United States, Europe,

and the Middle East. The migrated Pashtun earn a livelihood to support the remaining family members who live in their native towns. They have also internally migrated to urban centers of Pakistan, such as Karachi, Lahore, and Islamabad, as well as to other countries in search of a livelihood. The majority of migrated Pashtun are doing demanding jobs for which they lack the necessary skills. The ruling states, Britain and Pakistan, exploited their resources, but they did not extend formal educational institutions to their homeland.

The geographical location of Pashtun connects Central Asia with the East and West. The British used this region for trade between China, Western Asia, and Europe (Mohammad, Thomas, & Tabassum, 2016). Gandhari (present-day Pakistan) used this region to connect the city of Taxila with Afghanistan. The area also experienced multiple Muslim invasions as Muhammad Ghaznavi, Muhammad Ghori, Ranjit Singh, and the Turks attacked the subcontinent through the Khyber Pass. However, the Pashtun region was invaded by many foreigners, but the British ruled it for decades. The British colonial administration significantly influenced their socio-cultural values and exploited their natural resources (Hanifi, 2016).

In 1849, The British came into direct contact with the Pashtun and attacked this region for strategic interest (Khan, 2020). Initially, the British adopted the policy of non-interference in the indigenous tribal Pashtun land. However, during the viceroyship of Lansdowne and Elgin (between 1887 and 1898), the British replaced

Figure 2

Pashtun Indigenous community going for Ashar (collective community work)



Note. Photograph taken by the author during fieldwork.

the policy of non-interference with the Forward Policy. The local indigenous Pashtun resisted this policy, and consequently, the British called them uncivilized and wild people. Hence, the colonial administration implemented the closed border policy in Pashtun tribal areas—now known as merged districts of Khyber Pakhtunkhwa or northern Pakistan.

Under the closed border policy, the British established several tribal agencies, enclosed by a chain of posts and military garrisons. The closed border policy called for Pashtun customs and traditions to rule the region (*Riwaj*) (Tripodi, 2016). This became an excuse for the British to deny reforms and build institutions in the Pashtun areas. The British introduced inhumane and oppressive laws under the Frontier Crimes Regulations (FCR), a special set of British rules applicable in the Pashtun tribal areas. Under the FCR, they denied residents legal representation, the right to present evidence, and the right to appeal.

They also misinterpreted their culture and presented them as a violent ethnic group in the literature produced in colonial times. The colonial and post-colonial administrations bribed the local strongmen and *Jargaees* (members of Pashtun *Jirga*). Political Agent (PA), the administrative head of the British, manipulated their *Jirga* and local customs. Under the frontier crime regulation, they adopted the policy of collective responsibility and punished the whole tribe for the crime of a single person. Pakistan also adopted the same policy when the British left this region. Recently, in 2018, international pressure led the Pakistan government to extend constitutional rights to the tribal districts of Pashtun society. However, the people of merged districts have still been deprived of their civil and political rights. The government of Pakistan blames their culture and tribal traditions for the violence in this region.

However, violent social engineering by the British and, later on, Pakistan has slowed down the Pashtun cultural evolution and economic development. They are still dependent on conventional farming and domestic animals for their livelihood. The British and Pakistan exploited their culture and natural resources. These colonial and post-colonial times policies imposed extreme poverty and increased the ratio of migration of Pashtun from their native land (Amin-Khan, 2012). Moreover, climate change has directly affected Pashtun indigenous pastoral communities because they depend on natural resources. However, they are self-reliant; the

state does not provide help to these indigenous communities.

Pashtun indigenous tribal people are farmers or herdsman, or combinations of both, although several groups are renowned for specialized occupations. Agriculture, primarily grain farming and animal husbandry, is the most important economic activity in Pashtun society. The most common sources of livelihood in this region are agriculture, trade, minerals, and domesticated animals. In addition to raising stock, nomads and some farmers engage in the business of local indigenous products. They resolved their disputes through Jirga in the light of their tribal customs and traditions (Advocate & Sajid, 2013).

Pashtun Indigenous Knowledge, Indigenous Resilience, and Climate Change

Indigenous knowledge is embedded in the local culture and reflects their indigenous resilience (Přivara, & Přivarová, 2019). Indigenous communities support each other and give collective responses to natural disasters. The Pashtun indigenous community preserves and strengthens its social organizations and traditional practices to help each other during disasters or starvation (Ullah, Nihei, Nafees, Zaman, & Ali, 2018). Pashtun indigenous knowledge and resilience are entrenched in their culture, social structure, and traditions. Indigenous knowledge and resilience evolve in light of their experiences with the local environment and climate (Ullah, Nafees, Khurshid, & Nihei, 2019). They depend on their wider social networks and traditions in times

of climate change-induced disaster. The social structure of Pashtun society and their cultural values enable them to face the worst impact of climate change (Khan & Shah, 2021).

Figure 3

Pashtun Indigenous community Ashar (collective community work) to clear the road after heavy snow.



Note. Photograph taken by the author during fieldwork.

Indigenous communities have limited financial resources and are ill-equipped to deal with emergencies such as flooding or forest fires (Bayer, 2017). Furthermore, remote indigenous communities are at an even greater risk because external emergency responders may be too far to mitigate the impacts of dangerous situations. Winter season or monsoon rains damage their roads, impacting the delivery of supplies like fruits to markets, timbers for buildings, and gasoline for vehicles. They made their roads with the help of their communities. In the colonial and post-colonial periods, developmental projects had not been extended to the Pashtun tribal belt. The legacies of colonialism in economic, social, environmental, and educational systems have further heightened their vulnerability to climate

change. The indigenous Pashtun community works to renew and continue their culture by utilizing their socio-cultural capital to face the worst impact of climate change. In this regard, one of the elder community members stated:

“We made these roads with the help of our community, and we collectively came to build a road, and we culturally called it an Ashar.”
(Individual interview, 29 August 2024)

The socio-cultural capital and social structures help them to cope with adverse situations (Almedom, Brensinger, & Adam, 2016). Pashtun's social structure and cultural values guide all their social interactions, especially in crisis. They have strong cultural values and live in a collective structure that helps them to support each other and face the worst impact of climate change. In Pashtun society, supporting other fellow Pashtun when they need help is appreciated. They have extended and joint family systems where they are culturally bound to support each other. In this regard, one of the community members stated that

“It is highly appreciated by people who help people in crisis in Pashtun culture. The flood affects the homes and crops, but our people who work abroad support those families whose crops are affected by heavy rain.”
(Gul, individual interview, 25 July 2023)

Pashtun culture establishes general principles that define culturally approved behavior (Gioli, Khan & Scheffran, 2013). It guides interaction among clans, tribes, and families under commonly held norms and regulates all aspects of

individual, social, and political life. Cooperation and support for each other in difficult times are highly appreciated in the prevailing culture of Pashtun society. It is considered a *Sharam* (shame, humiliation, embarrassment) if someone does not support their fellow Pashtun or community, especially during disasters (Islam, Tamanna, Noman, Siemens, Islam, & Islam, 2022). Pashtun also has strong organizations like *Jirga* that resolve disputes or develop a consensus over issues that affect the community. The scarcity of resources due to climate change fuels conflicts among the local populations (Lieven, 2020). *Jirga* resolves these conflicts that arise due to scarcity of water or grazing land. The social structure of Pashtun reinforces reciprocity and *khair khaigarah* (to support each other), uniting Pashtun people to help each other and face challenging situations.

Pashtun Social Organizations, Socio-cultural Capitals and Resilience to Climate Change

As mentioned above, climate change impacts indigenous communities across the world. Rains have decreased by 40% in Pakistan. The World Food Programme classifies both rainfall-related and snowmelt-related droughts as current threats, owing to the same warming conditions in the Hindu Kush Mountains affecting Pakistan. (Caney, 2015). Pashtun indigenous communities are more likely to experience the adverse effects of climate change in several ways, including alterations to their diets due to changing ecosystems and demographic shifts, disruptions to transportation routes, impacts on their cultural

practices, and challenges in accessing essential resources and services, such as clean drinking water and grazing land for domesticated animals. (Norton-Smith, Lynn, Chief, Cozzetto, Donatuto, Redsteer, & Whyte, 2016). They face these challenges alone and rely on their socio-cultural institutions in the absence of effective state institutions. In this regard, one of the pastoral community members of Pashtun society states:

“Changes in the rain cycle affect grazing land; we face problems finding food for our domesticated animals. Our pastoral people, dependent on domesticated animals, left this profession. However, we support those who cannot economically survive due to climate change.” (Ali Kochay, individual interview, 9 Sep 2023)

Pashtun are famous for their tribal traditions, strong social bonds, and reciprocity (Tainter & MacGregor, 2011). They live in joint or extended families and must help each other. They collectively provide psychosocial support to each other in troublesome times and spend days with relatives in times of misfortune. Pashtun tribal values reinforce this collectivist structure and discourage individual liberty. It is everyone in the family's responsibility to support all members of the joint or extended family economically. They also support people outside the family or close kin, especially in times of need. Culturally, it is highly appreciated and prestigious (*izzatmand*) to support fellow Pashtuns or relatives (Alam, 2021). Expectations of reciprocity go beyond psychosocial and financial support. Pashtun people also support each other during disasters based on

tribal loyalties. It causes social humiliation for them when they do not support members of their tribe. One of the community members stated:

“My home was destroyed in the recent monsoon flood, and I do not receive any financial support from the government. My relatives supported me, and I built one room for my children.” (Gul, individual interview, 11 Sep 2023).

Reciprocity, a major cultural value, sustains them during times of socio-economic crisis. For this reason, despite being abandoned by the state, they rely on their social structure. Mutual aid is essential after natural disasters to make bridges or supply lines. Individuals do not have sufficient resources to bear the financial burden that arises after climate change, so they pool their resources. They give food, money, or cattle to each other to face the worst impact of climate change (Bustamante, Ramos, Jacoba, La Penia, & Gabriel, 2022). Reciprocity buffers economic vulnerabilities. It also helps them psychologically because they can face challenging situations with the collective support of their community. It is the responsibility of women and men in every household to reciprocate when they receive gifts or money in difficult times. They are socially bound by reciprocity, and old women try to remember the families from whom they got help. It is not necessary to return what they received, but they incur an obligation. They may support each other in any form, but they are bound to offer support in times of crisis. Reciprocity is vital to Pashtun survival in the absence of state help.

Figure 4

Hujra is a common place where Pashtun sit together to gossip or discuss issues with each other.



Note. Photograph taken by the author during fieldwork.

Pashtuns are economically dependent on agriculture or domesticated animals. Some of them seasonally migrated from the northern mountainous region to the lowlands in the winter seasons. Climate change affects the migration pattern. The farmers do not have advanced technology to face the adverse effects of climate change. They work collectively in fields to assist each other in farming (Steele, 2020). They are culturally bound to work together where they need the help of fellow Pashtuns. In Pashtun culture, the concept of *Ashar* (collective work) emphasizes mutuality, especially in harvesting, building houses, and collective community work (Mohyuddin & Khan, 2015). The entire community spares one person from each family to help another community member harvest crops or build a house. Climate change affects their homes and roads, and they collectively work to rebuild those pathways for local transportation. The community member stated:

“The recent flood affected our roads, and we all collectively work on building it again without state help.” (Arshad, individual Interview, 25 Sep 2023)

They also come together to work collectively in times of natural or man-made disasters. *Ashar* gives them the strength to survive in difficult situations. Culturally, *Ashar* compels them to help each other during difficult times. For example, the Pashtun indigenous communities work together to solve water shortages that often occur because of global warming or a shortage of rainfall. They work collectively to build bridges after the floods. The seasonally migrated Pashtun or other indigenous groups come together and start a journey towards low land. They come together to face challenging situations. Climate change affects the grazing land, and they face problems accessing food for their animals (Abdullah, Khan, Pieroni, Haq, Haq, Ahmad, & Abd_Allah, 2021).

The importance of mutual aid or Achar (collective work) is reflected in Pashtu literature. They appreciate those who support others during disaster. For instance, there is a Pashtu tappa (typical Pashtun poetic literature considered the oldest and integral part of the Pashto folk literature) that acknowledges those who support others: *haze pa harcha kunda kege aw saray hagha day che pa hawara kunda sheena* (when the husband dies, only his wife suffers, but when an honourable man dies, it affects the whole community) (Hartung, 2017).

Pashtun Indigenous Knowledge of Climate Change

As mentioned above, climate change poses critical implications for Indigenous cultures and livelihoods, including the transfer and use of Traditional Knowledge (TK), also known as Indigenous Knowledge (IK) (Rehman, Ahmad, & Khan, 2021). Certain elements of Traditional Knowledge that are threatened by climate change may include, but are not limited to, weather and climate indicators (ability to predict weather or seasonal forecasts) and ways of learning. Climate change affects plants, herbs, and grazing land of animals. Intergenerational knowledge transfers can be disrupted by climate change in the event of an extreme emergency, such as floods, fires, droughts, etc., that result in relocation, evacuation, or death of community members. The unpredictable change in weather causes damage to the socio-cultural fabrics and displaces the local community from their native town (Rahman, Ullah, Ali, Aziz, Alam, Sher, & Ali, 2022). In this regard, one of the community members stated:

“We collectively come together before the beginning of monsoon season and clean the pathways of water. It is based on our indigenous knowledge to evacuate the pathways and prepare and alert our community members about the monsoon season.” (Gul, individual interview, 23 Sep 2023).

Pashtun are vulnerable to the impacts of climate change because of their close dependency

on and connection with the natural environment for their culture, health, and livelihoods (Matthew, Halle, & Switzer, 2002). Pashtun, like other tribal groups, have an emotional attachment to their land and places, but climate change compels them to leave their native land. They face difficult social and economic conditions that may be exacerbated by climate change. As mentioned above, historically, the Pashtun tribal society faced the worst repression and draconian laws of the British, which continued during the post-colonial era in Pakistan. Both misinterpreted Pashtun culture and demeaned their cultural identity. The British portrayed Pashtun to the outside world as a martial race and demeaned their collective cultural identity and socio-cultural capital (Ashraf, 2018). Pashtun exploitation by the colonial authority and disregard for their indigenous wisdom intersect Pashtun marginality to climate change. The voices of indigenous communities are often absent in efforts to mitigate climate change. A community member stated:

“Historically and also in the present time, state policies exploited our resources and demeaned our cultural identity. They presented us as an uncivilized people, but they failed to achieve the trust of people.” (Darvash, individual interview, 25 Sep 2023)

The Pakistani state has failed to initiate effective policies to counter the worst impact of climate change on Pashtun indigenous communities. Additionally, Pashtuns do not trust states, as they still have memories of British colonialism and Pakistan’s exploitative policies.

They try to avoid state intervention because state policies do not properly address their problems, and they seek solutions through their own cultural institutions. These institutions have the potential to make them resilient to climate change. Indigenous mechanisms are used to face the worst impact of climate change while supporting resilience to cope. These Pashtun Indigenous mechanisms are entrenched in their cultural values and social structure.

Climate Change and Pashtun Marginality as an Ethnic Group

Tribal vulnerability varies and is affected by interacting and complex historical, political, and social factors, such as differential access to resources, poverty, and different ways of accessing (Ali, 2022). The existing historical context of colonial trauma, discrimination, neglect, and Pakistan's exploitative policies collectively intersect with Pashtun's marginality to climate change. A strong cultural identity is an essential element of indigenous resilience to socio-cultural and environmental problems. Pashtun have been exposed to outside cultures and colonial states over different eras, yet their strong ethnocentric attitude has helped to protect their cultural identity (Ingalls & Mansfield, 2017). They have preserved their distinctive identity despite changing social, economic, and cultural conditions. Pashtun people have resisted societal changes that are perceived to be against the specific cultural identity of the local inhabitants. The famous poet Hamza BaBa said, If the Pashtun adversaries believe Pashtu is the language of hell, I will go to the heaven along with my language

(waye aghyar che dozakh jaba da, za ba janat da pakhtu sara zam).

Historically, the powerful states attacked their culture, but they have preserved their cultural identity through Indigenous resilience (Lieven, 2023). Pashtun people disgraced or ridiculed those who worked in the interest of colonial forces. They also mocked those who adopted the cultural values of outsiders or supported invaders. Those who imitate the language or culture of other people (xenocentrists) face public ridicule, thus discouraging assimilation and preserving Pashtun cultural values and identity. Jokes and mockery are used to express cultural identity in times of conflict. They can also serve as mechanisms for defusing tension. Their strong cultural identity compels them to help each other. Pashtun people have experienced the impact of climate change, and it has directly affected their socio-cultural values. Proverbs, literature, and social movements reflect and reinforce Pashtun's resilience in culturally grounded ways. Their sociocultural values, social organization, and indigenous knowledge collectively help them to face the worst impact of climate change.

Conclusion

This research essay focuses on the Pashtun indigenous resilience to climate change. It is revealed that Pashtun's socio-cultural capital strengthens the Indigenous resilience of Pashtun people to face the adverse effects of climate change. Strong social bonds and kinship ties unite them to face difficult situations that arise due to climate change. Pashtun social organizations

and *Lashker* help them transcend adversity. Pashtu literature, poetry, and jokes reflect and strengthen Indigenous resilience to face the adverse effects of climate change. This essay is limited to Pashtun Indigenous resilience and masculine worldview. Pashtun women face significant adversity and have the additional challenge of depending on their male family members due to climate change. In Pashtun society, women are confined to indoor activities and cannot freely participate in outside realms. It is also important that focusing on resilience doesn't downplay the significant, ongoing challenges. Indeed, the dependence of Pashtun

people on their societal institutions could make them reluctant to develop more advanced, formal institutions. In addition to reducing economic disparities, measures are needed to address the historical traumas that Pashtun Indigenous peoples faced and revitalize those tribal institutions that are not contrary to global values, such as the traditional knowledge system. Activities that work to restore relations with the land, waters, and living world are necessary to restore balance in social systems (Adaptation planning is one type of actionable science that is improved through the use of locally relevant information derived from traditional knowledge).

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