

SECURITIZATION OF CLIMATE CHANGE IN PAKISTAN: A HUMAN SECURITY PERSPECTIVE

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ABSTRACT

The current research study explores securitization of climate change from human security perspective in Pakistan by focusing on Khyber Pakhtunkhwa. The study finds that in Pakistan generally and in KP specifically there are on ground evidences that justify the securitization of climate change from the broader human security perspective. Climate change is an existential threat to peoples in the country. Climate change induced catastrophes such as floods, heavy precipitation, storms, glacier retreats, cloud bursts, heat waves, water scarcity and droughts are endangering the lives of people in the province. These extreme weather events directly undermine human security in the country. Human security is a comprehensive concept predicated on the notion of securing the core aspects of human life. Over the years the climatic calamities have unsecured the peoples by bringing deaths, injuries, disabilities, expansion of ailments, disturbance in food supplies and production, damaging occupations, destroying houses and forcing peoples for migration. All aspect of human lives are under consistent threat from climate change in the country. The human security dimensions need urgent priority in all the actions and strategies designed for climate change governance.

INTRODUCTION

Human security is a central theme of today's civilized world. Human security is not just the absence of war and violent conflicts. Now, human security is a holistic term encompassing several aspects of human life. The most accepted concept of human security was given by the United Nations Development Programme in its 1994 human development report. According to this report, human security means freedom from fear (physical safety) and freedom from wants (having access to the necessities of life). This report also identified some key areas of human security. These areas include personal security, economic security, food security, health security, environmental security, community security and political security (Fukuda-Parr & Messineo, 2012).

Climate change is widely regarded as a significant threat to human security on a global scale. The

deleterious effects of this phenomenon pose an ongoing menace to people's well-being and necessities. In this regard the developing countries are more prone to implications of climate change (Petzold, & Scheffran, 2024). Pakistan is also a developing country and one of the country's most vulnerable to climate change. Climate change poses a significant threat to Pakistan's population. Pakistan's contribution to global carbon and environmentally degrading gases is relatively small at approximately 0.8%. However, the country is highly susceptible to the consequences of climate change, including glacier and ice cap retreat, altered precipitation patterns, spread of viral diseases, severe flooding, landslides, harsh weather events, and regular occurrence of natural calamities (Rana et al., 2023).

The peoples of Pakistan are facing several human securities issues attributed to climate change, like lack of food, high food prices, scarcity of safe drinking water, unemployment, poor habitat, shortage of energy, displacement and forced migration (Khadim, 2022). Climate change has triggered natural calamities like cloud bursts floods, famine, droughts and cyclones. Peoples have lost their lives, occupations, foods, houses and disabilities are common result of these calamities (Waliullah, 2018). Similarly, the climate variations have caused the shrinking of fresh water sources in the country. Many areas of the country are facing shortages of drinking water. The non-availability of fresh drinking water is also a human security issue (Idrees et al., 2022). Diseases like typhoid, dengue fever, malaria, pneumonia, cholera are escalating due to negative variations in the climate and extreme weather events (Saleem et al., 2022). The lives and human needs of individuals in the country, which are central features of human security, are inextricably linked with climate change. The recent decade has provided substantial evidence that climate change is posing significant risks to various aspects of human security in the region. Flash floods caused by heavy precipitation are frequently affecting the population. This calamity disrupts normal lives and causes fatalities, disabilities, damages crop fields, eliminates occupations, and forces inhabitants to migrate (Mahmood et al., 2024). Similarly, the temperature is consistently increasing in the country due to effects of global climate change. This rise in temperature leads to desiccation of the earth's water sources on one side and glacial melt on the other (Khan et al., 2024). Both aspects are contributing to water scarcity, which is a human security issue, because this water scarcity is also associated with food, health and economic security.

3: Intersection of Climate Change & Human Security in Pakistan

3. 1: Personal Security

Personal security is an essential concern for all individuals. It is the first constituting area of human security comprehensive framework. With the rise of human security, the concept and understanding of personal security have also become prominent in the international discourse. Personal security encompasses several aspects of an individual's life, including protection from physical

harm, emotional distress, and life-threatening risks. Moreover, it encompasses personal well-being and the overall improvement of individuals (Gierszewski, 2017). Other domains of human security, such as health and economic security are closely intertwined with personal security. For instance, the absence of health security constitutes an issue of personal security, as does the lack of food and economic security. Human security practices in response to personal security threats have reshaped the traditional understanding of personal security, making it a comprehensive concept that encompasses various dimensions of individual safety.

In the context of Pakistan, climate change poses a direct threat to personal security. The climate-induced extreme weather events are causing deaths, injuries, disabilities and psychological issues. In recent years, these events have become more frequent and intense (Munir & Munir, 2023). Almost every year, these events occur. The country has faced the deadliest floods in 2010 and 2022. According to an estimate, over 1000 individuals were found dead under debris and flood water. Thousands of people received injuries and severe disabilities became their fate. People also lost their relatives and nearby ones, occupations and homes were damaged, which leads to serious psychological issues such as depression, traumas and anxiety (Khan, 2013).

In the months of June to August 2025, three extreme weather events occurred together in KP province of Pakistan. Cloud bursts that were followed by heavy rains and flash floods that targeted eleven districts of KP. As a result of these events, more than 400 peoples lost their lives. The rescue operators warned that still many people are under debris and water (Asif & Arif, 2025). In Qadar Nagar village of Buner district, the cloudburst took the lives of twenty-four members of the same family. According to Umar Khan, the only survivor of the family, his parents, wife, children, brothers and aunties all died in the house that collapsed due to intense water of cloud bursting. His double-story house was completely destroyed and now only debris and rubble (The News, 2025).

These examples verified that climate change is a threat to the personal security of people in the country. Climate change directly leads to deaths, injuries and disabilities. In this way, it harms the physical security of the people. Similarly, the losses

brought by climatic events cause psychological and mental stress, making indigenous peoples' lives miserable.

3. 2: Economic Security

Economic security is a crucial component of human security, as emphasized by the International Committee of the Red Cross (ICRC, 2015). According to the ICRC, without economic security, the concept of human security is meaningless. Economic security is defined as the ability of individuals, families, or societies to meet both necessary and desired needs in a decorous manner. These necessary human survivals requirements include access to reasonable housing, food, clothing, and healthcare and education services. All of these necessities require a reasonable income and occupation to fulfil. Therefore, having a reliable source of income that allows one to meet all basic needs in an efficient manner is an indication of economic security. Similarly, if the members of a society have reliable sources of income and their needs are met, then the society is considered economically secure. In essence, economic security means possessing sufficient assets and income to live comfortably. Climate change undermines economic security in the province by damaging income generation occupation of people in Khyber Pakhtunkhwa. The negative changes in the climate along with extreme weather events are disturbing the main income-generating occupations such as agriculture, tourism, industry and others (Mumtaz, 2025). A vast majority of people in the province are associated with farming to earn their livelihoods. According to an estimate, about 40 percent of the population in KP depends on farming for their survival. It plays an important role in provincial and individuals' economic prosperity (Hayat et al., n, d).

But now climate change is making this occupation unfavorable. Climate-induced calamities such as floods, storms, hail and heavy rains destroyed the crops in almost every season. Similarly, droughts, water shortages and crop diseases induced by climatic variations are resulting in low crop production and defective quality of production (Shah et al., 2021). The farmers invest in the crops by purchasing seeds, tractor service and cultivation labor. This crop damage affects farmers from two perspectives. Firstly, they are unable to recover the investment cost and, secondly, they lose additional

income. Due to these adversaries in agriculture, agriculture as occupation is losing its significance, as farmers are detaching themselves from this occupation and losing livelihood security in the province.

The tourist industry is also one of the prime sources of people's earnings and the provincial economy of KP. The province is blessed with tourism dentitions. Every year, thousands of tourists from inside and outside the country visit these destinations. Many families are attached to this profession for their livelihood, including hotel business, transportation and purchases (Waliullah, 2023). Climate change has already threatened the economic security of peoples by disturbing tourism activities in the province. The increasing and intense harsh climate events such as heavy rains, floods, landslides and hurricanes lead to road blockages, bridge destruction and infrastructure damage. In many incidents, tourists were trapped and lost their lives. Consequently, due to life threats from these calamities, tourists hesitate to visit tourist points in KP, especially in moon soon weather. Local and other people that are associated with this industry are crying because their source of livelihood for entire years is this seasonal tourism (Irshad, 2025).

Similarly, many inhabitants of the province work in industries and small businesses to earn their livelihood. There are industrial zones in various areas of the province which provide employment to thousands of people. In recent years, twenty-nine factories in DI Khan, twenty-four in Swat and seventeen in Abbottabad have been closed. In the time span from 2017 to 2020, more than 300 industrial units also ceased to operate in other parts of the province. The closure of these industries left almost five thousand factory skilled workers and daily wagedworkers unemployed (Pakistan Observer, 2022 September 20). These industries were closed due to shortages and prices of electricity and gas and other administrative issues. Climate change plays a role in the energy shortage by inducing excessive temperature in summer and excessive cold in winter. The government prioritized domestic supply of energy and failed to facilitate industries. Similarly, agricultural raw materials for industries are also damaged by climate change catastrophes.

These examples clearly demonstrate that climate change destabilizes the economic security of the people by confiscating sources of employment.

Climatic variations severely impact agriculture, which is the chief source of livelihood in the province. It also damages the tourism industry through extreme weather events and disturbs the livelihood of people associated with it. Similarly, the closure of industries and small businesses also left thousands of people unemployed in the province.

3. 3: Health Security

Health security is also another core area of human security. It encompasses strategies and actions aimed at safeguarding individuals from dangers, including chronic diseases, pandemics, and disasters. It encompasses all measures designed to ensure people's safety from all risks that can compromise their good health. It ensures access to good healthcare facilities, effective medicines, immunization, safe water, and proper sanitation systems. Furthermore, health security aims to prepare effectively for health emergencies and disease outbreaks. In essence, health security is about protecting the health of every individual, everywhere, and at all times (Aldis, 2008).

The linkage between climate change and health security can be established through various pathways. These pathways are relevant in the context of Khyber Pakhtunkhwa. Climate change is increasing and increasing various types of diseases. The negative impacts of climate change on the quality and quantity of water, creating air pollution, vector flourishing and food insecurity leading to diseases spreading. The leading causes of mortality among people of KP such as undernourishment, dysentery diseases, respiratory ailments, heart problems and vector-caused diseases are associated with climatic factors (Shah et al., 2020). The extreme weather events such as floods, heavy rain and cloudbursts cause waterborne diseases such as stomach disruption, diarrhea, cholera, hepatitis and typhoid. Similarly, vector-borne complications like malaria, dengue and skin infections are also associated with climatic disasters. After every episode of flooding, these diseases spread and lead to casualties, especially in children and women (Salim et al., 2025).

Similarly, the major urban areas of the province, including Peshawar, Charsda, Noshara and Mardan are facing extreme temperatures every summer season. The excessive temperature induced heat-related diseases such as heatstroke, desiccation and skin rashes. Heatstroke is especially

a fatal one. The recent heatwaves have taken the lives of people in the province (Bacha, 2025). Similarly, climatic variations are increasing air pollution, especially in densely populated areas of the province. The increase in air pollution along with other factors cause many chronic health issues. Over the years, air pollution-related diseases are becoming more common. Asthma, bronchitis, respiratory diseases, cough, flood and other problems are associated with air pollution. The experts have also warned about cancer due to air pollution. The government and people need to collectively make efforts to lessen the pollution issue (Pakistan Today, 2025 July 6).

Access to medical facilities and treatment is a part of health security. This aspect of health security is also endangered by climate change. Climate-induced floods in the province damage health infrastructure, including hospitals, basic health units and dispensaries. Similarly, medical equipment and medicines were also damaged. For instance, the 2022 flood ruined fifty-three health care centers in KP, which include eighteen civil dispensaries, two tehsil main hospitals, twenty-nine basic health units and four rural health centers in different flood-affected areas of the province. Likewise, stocks of medicines were also damaged in several health facilities. The estimated cost of these medicines is in millions of rupees (Pakistan Today, 2022 September 10). This type of damage is not a one-time story. Almost every year these types of incidents happen in the province. The occurrence of these events severely damages the public infrastructure, including health.

The contextual analysis of the ground realities presented above clearly highlights climate change's severe effects on health security. Climatic events endanger health and security through the escalation of diseases such as pollution-related, high temperature-related, pollution-related, contaminated water-related and vector-related diseases. Similarly, mental health issues created by sense of heavy losses in disasters also threaten health security. The health infrastructure damage induced by floods, cloudbursts, heavy rains and storms also undermine people's access to medical care and treatment.

3. 4: Food Security

Food security is an essential component of human security, and it is necessary for ensuring human survival and dignified living conditions. According

to the Food and Agriculture Organization of the United Nations (FAO, 2006), food security refers to the ability of individuals and communities to access adequate, secure, and nutritious food to meet their nutritional requirements. This definition of food security is widely accepted, and the UN and other international organizations have incorporated it into their programs and projects. The FAO, in particular, has been working to include food security objectives in national poverty reduction plans and initiatives, and has been collaborating with national governments and local communities to reduce starvation, famine, and acute poverty. It is important to note that the number of food emergencies has increased significantly in recent decades, from an average of 15 per year in 1980 to 30 per year from 2000 onwards. Protracted food emergencies, which are typically caused by human-created crises, are particularly common in Africa. In order to achieve human security worldwide, it is essential to implement programs and strategies aimed at reducing poverty and hunger. Without individual food security, the realization of human security is not possible.

Climatic variations have been regarded as a food security challenge in Khyber Pakhtunkhwa. The necessary food items such as wheat, rice, vegetables and pulses are direct outputs of agriculture. Similarly, oil, sugar, bakery items etc. are indirect refined products of agriculture. Thus, agriculture played an important role in the supply of food items and meeting the people's need for food (Pawlak & Kołodziejczak, 2020). But climate change through extreme events such as floods, hail, storms, glacial lake floods and heavy rains directly destroy these food crops in almost every season. Similarly, droughts and shortages of irrigation water induced by climate change cause high temperatures, leading to low crop yield. Consequently, the supply of food items decreases and people face shortages of food (Ahmad et al., 2017).

Livestock, poultry and fish are also main components of food in Khyber Pakhtunkhwa. These components are important for energy and physical health requirements. Climate change disrupts the production and supply of these food components. The livestock and poultry farms are damaged by climatic catastrophes. Similarly, domestic cattle and poultry are also killed in these catastrophes. Excessive cold or heat induced by

climate change also kills them by spreading animal and bird diseases. It is disturbing the natural environment by inducing conducive conditions for the spread of communicable diseases in animals, birds and other species. Already the availability of meat and mutton is not sufficient (Israr et al., 2016). Fish is also a component of food for the inhabitants of KP. Climate change endangers the production of fish both in natural water and fish farms. The increasing temperature makes water warm, spreads diseases and destroys the habitats of fish. Consequently, good quality fish is becoming inaccessible to people (Nafees, 2022).

The food purchasing power and affordability is also linked with climate change. When the crops are destroyed or results in low crops production it automatically leads to low availability of food. It increases the demand of food items but supply become low. This supply and demand gap highly increase the prices of food supplies. Consequently, the daily food items such as flour, rice, vegetables and pulses increase. Peoples find it difficult to afford expensive food (Naz et al., 2024). For instance, the 2022 floods disrupt food supply in the province and daily food items such as potato, tomato, turnips and other vegetables along with flour and chicken suddenly raise high. Even tomato become scarce in the market (The Express Tribune, 2022 August 30).

It is established through above analysis that climate change is a growing food security challenge in the province. It undermines food security by damaging food crops in the province and other areas of country especially Punjab. It also affects peoples purchasing capacity by increasing food prices. Similarly, climate change also damages occupations that provide income to peoples consequently lessen the affordability of food.

3. 5: Political & Community Security

According to Inoguchi, (2003), political security constitutes a core component of human security, as indicated in the 1994 UNDP Human Development Report. The term political security refers to the absence of any form of suppression by the government, respect and protection of human rights, and the absence of threat to political processes from the military. Additionally, it encompasses other aspects, such as a politically stable system of government, suitable conditions for individuals to enjoy their political and human rights, and ensuring people's effective participation

in the political process. Likewise, community security is also part of human security framework. Both community and political security are complimentary to each other. Community security refers to protected human settlements with resources for dignified life. This viewpoint acknowledges that an individual's well-being is not limited to personal security, but also encompasses the safety and stability of the larger community. Community security, entails a blend of personal and group security, which means that an individual's life at both the personal and societal levels is shielded under the umbrella of community security (Anthony, 2015).

The relation between political security and climate change is more complex and indirect. Political stability and the legitimacy of government are cornerstone of political security. Climate change threatens these aspects through inducing disasters such as floods, storms and glacial lakes. After these disasters, the people expect generous support from the government in terms of relief and rehabilitation, but when the government fails to respond, public distrust occurs. This distrust of people leads to government legitimacy issue. People start thinking that government is not their true representative. As this happened recently after a cloud burst followed by a flash flood when the government of KP failed to respond quickly and people started agitation against the government (Zubair, 2025).

Similarly, climate-induced calamities are destroying the life-survival infrastructure of peoples' residential areas such as villages, towns and cities. This destruction forced people to migrate to other areas for safety and in search of occupations. Over the past years, thousands of people have been displaced from their communities. They were forced to live in temporary shelters, tent villages. On one hand, it leads to disturbance in peoples' social relations because people of one community scatter in different places. They also have to compromise on their customs and cultural traditions (Bibi et al., 2025). The displacement of people creates human emergencies that occupy governmental attention for relief and rehabilitation activities. As has already happened in KP, where the government finds it difficult to cope with the situation due to a lack of financial and human resources. The government remained busy responding to this crisis and failed to give

other governance matters full attention. This leads to governmental inefficacy and stability issues.

Political participation is core aspect of political security. It needs people's wellbeing and dignified life so that can participate in the political activities especially honest use of vote. But climate change induces poverty, conflicts, unemployment, food insecurity and occupational damages (Shakoor et al., 2024). All these factors hinder people's participation in political process. When people are not able to have their basic needs, how can they rightly use their vote and participate in political activities? How can they work for the attainment of their rights and facilities? People who are affected by climate catastrophes are concerned with life survival needs such as shelter, food, employment and other needs of their family. Actually, their participation in the political process is just a dream. Human rights constitute elements of political security and also facilitate community security. Because respecting and holding high standards of human rights in a state promotes the stability and legitimacy of the state and government. Similarly, human rights violations by any entity lead to people's dissatisfaction and disrespect for the government not only internally but also outside the country (Olimid et al., 2024). In the context of Khyber Pakhtunkhwa, the climate is a severe threat to the realization and enjoyment of several human rights. Especially the basic life survival human rights such as the right to life, health, food, water, occupation and water are continuously damaged by climate change. Climate change directly damages human rights by bringing deaths, injuries, disabilities, diseases, destruction of agriculture, businesses, habitats and water scarcity through disasters, excessive temperature, glacial melting, heavy rains and droughts (Mahmood et al., 2025). In summary, climate change affects political and community security through inducing displacement and migration, social tensions and conflicts, and the destruction of livelihood and economic resources. Similarly, already existing poverty and inequalities are further aggravated by climate change that undermine political participation and governmental stability. Furthermore, the enjoyment of fundamental human rights is also compromised by climatic catastrophes in the province.

Conclusion

Climate change is a serious human security concern in Khyber Pakhtunkhwa due to its high vulnerability to climate catastrophes. From 2010 onwards, the province has experienced a number of climate change-induced calamities including flash and riverine floods, droughts, glacial lake outburst floods, glacial retreats, storms, heavy rains, landslides and cloudbursts. These calamities have directly affected people's lives by producing deaths, injuries, disabilities, spread of diseases, damage to agriculture and occupations, destroying public and private infrastructure and people's displacement from their native communities. In this way, climate change undermines human security core areas by creating insecurities in personal, food, health, economic, community and political security. The human security concerns of climate change are increasing with every passing year the government needs to integrate them with all the initiatives on designed on climate change management.

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