Desertification and deforestation are major environmental concerns around the world. Indeed, environmental degradation has now become a global issue. This paper analyses the environmental problems faced by the inhabitants of the Kaghan valley in Northern Pakistan. It aims to enlist the devastating consequences of changing climate conditions and ecosystem degeneration of their cumulative effects on humanity and the nonhuman world. Extreme weather events and warm temperatures are further evidence of persistent environmental turbulence induced by global climate change. The key issue is to focus on the challenge of climate change on earth and considers the importance of ecosystem as a whole. Climate plays an important role in maintaining our ecosystem well strong due to the rise of infrastructure development, road construction, shifting of population in hilly areas, avalanches, and melting of Glaciers with all factors lead to cause Global warming. All life forms on earth are interdependent upon natural elements such as land, air, water, plants and animals. Nature is very friendly and at the same times it is very much hazardous where anything can happen at any time at the one side high ranges of mountains and on the other side deep green valleys of Kaghan. The paper attempts to analyze how Uzma depicts human ecological exploitation of nature in the name of progress and modernity in her novel, Thinner than Skin (2012). Besides a critical form of environmental brutality; deforestation and pollution in Northern Pakistan is also a point of contemplation is this article.

**Keywords:** Climate change, global warming, nature, environments, Uzma Aslam Khan.

**INTRODUCTION:**

"The environment is in us, not outside of us. The trees are our lungs, the rivers our bloodstream. We are all interconnected, and what you do to the environment ultimately you do to yourself".  
- Ian Somerhalder

Climate change is the long-term change in meteorological conditions. Change of climate describes as “change in the state of the atmosphere over time scales ranging from decades to millions of years” (Wikipedia). Uzma Aslam Khan is a Pakistani Anglophone writer. Thinner Than Skin is her fourth novel set in the northern areas of Pakistan. The story revolves around the life of Maryam, a nomad girl living with her husband Suleman in Kaghan valley. Uzma Aslam khan highlights the factors that impact on climate change “I headed for the river, inhaling a midsummer hill deep into my lungs. Breathing was like sucking a hookah filled with flakes of glass” (Khan 08). In the morning when we walk along side of a river, we get fresh air which purifies our lungs and maintain us healthy. As Nadir the narrator of the story whose deep love for nature, whenever he runs out he breaks up towards the river to get their soul fresh and prepare the healthy spirits. The novel has its setting in Northern Pakistan, where Khan shows the landscape of mighty glaciers, rivers, valleys and Mountains “With the elevation five mountain peaks over 8000 meters” (Khan 09). Maryam belongs to Gujjar tribe a type of nomadic people whose lives largely depend upon seasonal migration and indigenous livestock. Such locations show the true equity of nature, in the summer month because of the high humidity some nomadic groups migrate from these mountainous areas on the northern part of India and Pakistan. The term nomad is used to illustrate the close relationship between the indigenous peoples of the Kaghan valley and the native varieties of animals and plants in the valleys. “The longer our stay in the north, the more opportunities would present
Climate change is having a noticeable impact on the greater Himalayan region, also known as “The Roof of the World”. These Himalayas stretch across northeastern India and pass through Pakistan, Afghanistan, China, Nepal, and Bhutan. These Himalayan valleys are rich in glaciers, lakes, and grasslands and full of luxuriant vegetation. “Glacial growth and decline were equal indicators of global warming, as she herself liked to remind me and if glaciers were growing in the old world, there were also growing in the old world, there were also growing in the new” (Khan 44). Both the increase and decline of glaciers have its effects on climatic change in Northern side of Himalayas. In this northern side of Pakistan the fifty percent of the average annual river flows contributed to snowfall and glacial melt. “We haven’t intended to change the climate; this does not mean that it is not still changing”. (Griffiths 21). Climate change has had a significant impact on the greater Himalayas, with the most frequently reported impact being the rapid loss of glaciers, such as “Batura and Ullar glaciers” (Khan 57) which serve as the primary source of freshwater downstream. The Himalaya in Northern Pakistan is a large ice water resource, which serves as a natural regulator for the regional water supply in these regions. Melting and reducing snowfall not only affects the reduction in water, but also has an effect and sudden flooding in the regions. The mountains of the North Pakistan have the largest and longest moderate latitude glaciers. Greta Claire Gaard writes about the ecological consequences on climate change, “rising sea levels melting ice sheets and receding glaciers, vanishing, coral reefs, extreme weather events i.e. (hurricanes, floods, droughts, wildfires, heat waves)” (Gaard 122). Climate change creates an impact on the mountains; which covers twenty percent of the land area in which only ten percent reside for humans and rest for other natural resources. The following textual extract elucidates this close relationship between mountains and glaciers:

“Apparently people believed that on days when the mountain appeared – the one that only looked like Nanga Parbat, but could not have been – the queen snow melted even faster, due either to her rage at having her beauty over shadowed poor her excitement at beholding her lover. And on such days his snow also melted faster, due either to his rage at having his beauty unloaked” (Khan 64).

Khan graphically describes the working conditions of nomadic people who live in the areas unaware the reasons behind the melting of glaciers much faster they think that of mountains overshadowed or the excitement of between these two lovers. These nomads are extremely excited about the love of nature and its manifestations. John R. Wennersten and Denise Robbins argues that “In the coming decades, rising sea levels, heavier storms, and drought and desertification will force hundreds of millions of people from their homes— and even their countries” (01).One of the characters, Irfan notice that the rising of tides in the lake and believes it is due to some eco-spiritualism because these mountains surround some djinns. The change in atmospheric condition allows to covers the real pictures of various natural, landscapes of the Himalayas.

Although natural factors play a major role, at the global level, human interfaces have become a definitive driving force. Global warming is defined as the increase of temperature on the surface of earth that may cause some change a climatic condition usually attributed to the green house effect caused by the elevated level of carbon dioxide, chloro fluor carbon, and other polluted gases. “What is the most beautiful thing you ever witnessed” (Khan 40). The relationship between Irfan and Zulekha reflects the beauty of glaciers and the earth. During winter there is a great amount of snowfall that so often marks as one layer over another. Khan idealize the relation between Irfan and Zulekha as a two ice block, a male and a female after five months the couple begin to creep downhill’s, growing into a natural glaciers free of cultivating hands of men. These glaciers provide drinkable water to the village and irrigate the crops with fresh water.

The symbolic productions of rice, potato, legumes, apricots, and firewood are the result of Irfan’s hard work. “Changes in temperature and severity of extreme events will affect the energy production and consumption” (Sybikowska 5). Between glaciers and mountains, there is a transit in love balance, but this balance is currently being disrupted as global warming and pollution force glaciers to melt and generate unstable lakes. “Glaciers in the eastern Himalayas are receding. Some say the Alps will be ice – free by 2100. Greenland’s Glaciers are melting so fast they could sink southern California and Bangladesh. But in parts of Pakistan, glaciers could be expanding. It was a possibility Wes and Farhana had come to explore” (Khan 43). Khan attempts to examine through the characters of Wes and Farhana that the Alps are Europe's highest and most widespread mountain range system, and that coastal areas such as Bangladesh and California have been drowned due to global warming. "And if the glaciers continue to shrink at the present rate, the most populous parts of Asia will face catastrophic water shortages within a decade or two” (Ghosh 121). The 2015 Paris Agreement established that rapid greenhouse gas emission reductions are required to keep global warming at a safe level. “Here in the land she "returned" she found glaciers that weathered global gas emissions and spurned newness” (Khan 44). The warming of the planet is one aspect of climate change that relates to the long-term increase in temperature on the green planet. The main cause due to increase in density of green house gases, in the
atmosphere mainly from human activity such as deforestation, farming and combustion of fossil fuels. “The alarming growth of the world’s population, mounting evidence of global warming, destruction of the planet’s protective ozone layer, the increasingly harmful effects of acids rain, over cuttings of the world’s last remaining great forests, the critical loss of top soil and groundwater, over fishing and toxic poisoning of the oceans, inundation in our own garbage, an increasing rate of extinction of plant and animal species” (Glotfeltty 226-227). Khan writes, “His scalding fury caused Malika Parbat snow to melt with such force it breached the banks of the lake and nearly drowned the poor lovers” (Khan 46). When the snow melts as Malika Parbat, it destroys the large and tiny lakes, bushes, and flora and animals. Khan draws attention to the growth of global warming. Survival in the Himalayas is dependent on the finite and insignificant resources of valleys and mountain meadows.

Khan declares that if we do not ever interrupt nature, they do not agitate us. According to Thoreau’s “Without the harmonious relationship between human and nature, human will have no chance to enjoy the prosperity and development of the whole ecosystem” (Das 88). Every thing on earth has some special phenomenon; we humans also become a part of the terrestrial nature. Through the title of the novel “Thinner than Skin” by Uzma Aslam khan, analyzes that our earth covers a thin layer of gases which protect us from dangerous radiance from the sun is similar to how skin covers our entire body and protect our organs. “From Tashkent he descended into the Fergana valley, and now he was getting close. He was approaching the passes through the Pamir and Karakoram ranges he knew so well he could have made the trek in his sleep, and might have, but for one event that required him to remain fully awake” (Khan 142). The high elevations of the Himalaya in Central Asia are characterized by extreme weather conditions that have unique landscapes and a large portion of glaciers. “The novel is also an explicit narrativization of the rapid extinction of ancient cultures, animal species as well as deforestation” (Makhdoom 3). However, due to the increase in temperature, the glaciers retreated, the hydrological conditions deeply changing in the ranges of Karakoram and the Pamir plateau. This particular region provides water to the majority of Central Asian countries.

The Pamir region is an isolated region, with high mountains which is difficult to access with fear observation. “I am still circling the boat, listening to a keening above, watching those eyes enclose when a wave of fresh ice water hits me” (Khan 177). Due to increase in atmospheric pressure, Global warming and construction of roads network in Himalayas of Northern Pakistan the glacier’s melting point becomes high which leads to heavy loss of property and living life. “We said she sprang from marsh, I from desert, she loved the damp closeness of curves, the rich debris of glaciers and deltas; she loved her gloves and her socks. I though always cold, hated to cover my extremities. I preferred the raw, violent beauty of the pacific coast to the secret tides of the protected bays” (Khan 134). Khan argues to enhance the environmental conditions of the Hunza and Kaghan valley. These marshes are rich in glaciers and deltas. Desert and wet lands have played a significant role in the environmental ecosystem. Although few animals or plants are fit for the extreme dryness of the desert, the desert is a life saving biome. Deserts cover one-fifth of the earth’s surface, and their temperature rises even faster than the world average, with consequences that go beyond simply making the desert warmer. “What I had seen in the sonorant desert and the valleys of the Himalayas” (Khan 135). Khan discusses through the character of Nadir that Sonoran Desert is very unique, beautiful place, different species of plants and surrounded by its majestic beauty. The Himalayan valleys are rich in glaciers, rivers, prairies, lakes and luxuriant vegetation. Glacial depletion can affect agriculture, drinking water supply and ecological habitats. Melting and reduced snowfall leads to both a decrease in water and sudden flooding in these areas.

The biodiversity of the region is the major source of subsistence for the local people and the source of enjoyment for tourists. The exquisite beauty of Lake Saiful Maluk has attracted many tourists from everywhere in the world. But now due to increase of melting of glaciers in Malika Parbat, and because of increase in high rate of global warming caused by increases in automobiles, deforestation, wastage materials, urbanizations, start up new small factories all these lead to adversely affect on Saiful Maluk. As Dana Phillips also remarks that “literary realism has been oriented more towards the human, the social, and the Artificial than towards the natural world” (Phillips 163-164). These lakes were once an important supply of fresh water, but they are now completely depleted due to poisonous materials in these areas. “It was soon after we had witnessed the mating of glaciers that had begun devoting himself to bringing water to these and neighboring areas” (Khan 71). The role of water played an important role of any nation or part of a land. The water comes from these glaciers have important for us in respective of irrigation in rural and urban areas, water is the essential elements of nature. “The ecology of the land and the water has been severely disturbed and damaged” (Shoaib 82). Irfan plays a significant role in manipulation of water. Khan grows sympathetic and rues the fact how water is used indiscriminely in urban areas. A healthy life needs fresh air and pure water which Nature has provided mankind with. People who live in these areas of the northern Himalayas are dependent on these lands and natural resources.

Khan writes about the beauty of lakes, “The prince Saiful Maluk, the princess Badar Jamal, Malika Parbat, Nanga Parbat and the Jinn” (Khan 75). Uzma Aslam khan novel “Thinner than Skin” covers pictures of various natural beauties, valleys lakes and landscapes of northern Himalayas specially focuses on Malika Parbat, Nanga Parbat, and Lake Saiful Maluk. Some old memories of Farhana mother have linked with these valleys. Here, Khan has
tried to demonstrate how a changed mentality of a few people may easily disturb the ecological style of a large population. “And Maryam who was only Maryam was more interested in stories from beyond the mountains than the stuff legend. She already knew all the legends of the valley” (Khan 85). Maryam who was more interested and passionately in love the rolling regions of Himalayas Mountains. Once she stayed along these rivers, lakes and mountains but now she can only feel it in her memories, along with the memory of her mother and the land of pastures.

In the novel *Thinner than Skin* (2012) the Ultar glaciers, Batura glaciers play an important role in the natural environment of the plain areas of Islamabad, Gilgit and Hunza valley. She has tried to depict the ecological exploitation of nature by man in the name of advancement and modernity in Pakistan. As Nazar conclude her paper with the remarks that “*Thinner Than Skin* offers valuable strategies to restore the sustainability of a collapsing ecosystem in Northern valleys of Pakistan” (Nazar 7). A serious reading of her novel can make every reader realize how Irfan shows that the way for maintaining sustainable development. “I opened my eyes and saw a downpour of sill. How did the water appear clear from above? How could it reflect us so sweetly when filthy inside? I surface, blinked dived again” (Khan 113). As the character Farhana describes the fresh and clean water of a lake as it plunges over and over. As Literary critic Lawrence Buell (1995), suggests that a focus on what he describes as “the environmental imagination will ultimately bring about a change in what we consider to be the basic tenets of literary theory” (Buell 2-3). When at that time how men and aquatic life have friendly relationship, so their friendship reflects the purification of water in the lake with no disturbance. However, aquatic life in the Kaghan valley lakes has been affected as a result of some people using harmful substances to kill fish and other creatures in the lakes.

The narrator of the novel gives a witness of the valley, its beautiful lakes, forest, water, mountains, pine trees, birds, animals and their sweet voice in the morning. It seems Nature had lent its own voice both to its living things or non living things. “Though faint, this morning call echoed clearly over the lakes across the valley” (Khan 121). The beautification and glorification of nature keep changing from time to time, we feel different in the early morning and soon after morning we witness how the rising of sun changes color of natural elements on this green planet. “Farhana began explaining to Wes what I had once explained to her. The old tradition of marrying glaciers was coming back as a way to affect a dwindling supply of melt water’s “winter temperature on the rise, summer temperature dropping” (Khan 203). Uzma Aslam Khan attempts to demonstrate the true force of nature and its creativity by using various natural elements such as humans, animals, plants, air, water, and everything else that surrounds us. She criticizes the artificial world in which we not only destroy and pollute nature but also we tamper with the natural elements, the fresh water, healthy air etc due to movements of rural pollution towards urban areas. The ever growing materialistic attitude of mankind has distanced them from the serene joys of Nature. The novelist with her delineation of certain myths and beliefs has tried to reawaken people’s faith in Nature. She not only shows her conviction but in reawakening people’s faith in ecology, asserts that the artificial bonding cannot obliterate the facts of human existence. Uzma’s novel is an eye-opener in this regard and makes us remind of and rue the fact that Matthew Arnold transcribed in one of his poems:

The sea of faith
Was once, too, at the full, and round earth’s shore
Lay like the folds of a bright girdle furl’d;
But now I only hear
Its melancholy, long, withdrawing roar,
Retreating to the breath
Of the night-wind, down the vast edges drear
And naked shingles of the world. (Arnold, “Dover Beach”)
CONCLUSION:

Through this study, we conclude that Khan depicts the poor state of Pakistan's inhabitants as a result of natural disasters such as droughts, floods, and climatic shifts, which have had a negative impact on agricultural and food resources. Threats like deforestation, water pollution and uncontrolled development of the tourism industry too are on the rise. Khan in an attempt to improve the environmental conditions of the Kaghan valley calls for immediate measure to conserve mountains resources including forest, biodiversity and water. She adds that these glaciers play an important role in sustaining life and development. Depletion of glaciers, particularly recently melted ice, can have an impact on agriculture, drinking water supply, and natural habitat. Global warming is a driving force behind climate change which results in the increase of greenhouse gases on earth surfaces. This study also covers some countries which are linked to mountains region such as Tajikistan, China, Pakistan, India, Afghanistan and Kyrgyzstan. The Himalayas in Northern Pakistan is a great resource of ice water which serves as a natural regulator of regional water supplies in these areas. Khan shows the beauty and loves of lake and mountains in Northern Pakistan. Through various instances in the novel, she records the love between glaciers and lakes having an immense reflection of nature. The love between Maryam and her mother and these love impressions in between is an integral part of the subconscious of judge, because it is inevitably associated with the beauty of nature in these Himalayas. But man’s blind craze for progress, in turn, invites the elements of pollution and deprives the earth of its real glory and beauty. Behind the glorification of the world lie numerous pollutants arising out of industrial waste posing threat such global warming affecting humans and their surroundings.

WORKS CITED

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