

Ongoing Climate Change crisis and its impact on Tourist

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HIGHLIGHTS

Pakistan rising temperature is one of the main issues. Rising temperature is not only affecting urban area of Pakistan but also affect the different industry of Pakistan.

Tourism is a major sector in economic development in many countries, offering benefit through revenue generation and creating job opportunity.

Northern Pakistan, encompassing regions such as Gilgit-Baltistan, Chitral, Swat, and parts of Khyber Pakhtunkhwa, experiences a wide range of temperature extremes due to its diverse topography and high-altitude



Introduction

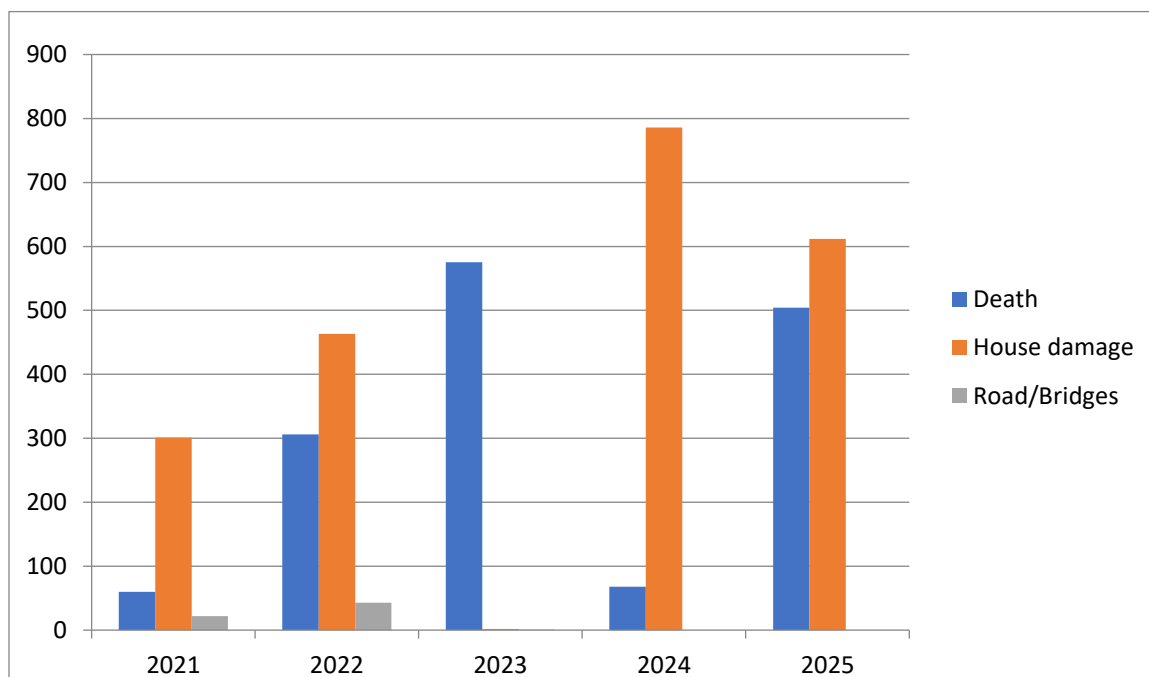
Climate change refers shifts weather pattern and long term increased in temperature. Human activities have been the main reason of climate change due to burning of coal, oil and gas. The main cause of climate change is use of greenhouse gas, included carbon dioxide and methane which is come from transportation, coal burning, deforests and massive use of oil and gas in industry. Issue of climate change not only face by developing country but also developed country like USA, China also faced climate change crisis. Recent past decade Pakistan most vulnerable country to climate change. In global climate risk index Pakistan placed on the fifth most vulnerable country. According to the report of David Eckstein the entire region of Pakistan is located in prone to extreme weather events. In term of economic losses Pakistan among third over last 10 years. Last 15 to 20 years due to climate change word face lot of life losses and economic loss as well.

Country	Death	Economic Loss	Extreme Event
Worldwide	832,000	4.5 trillion USD	97,000
Pakistan	10,000	3.8 billion USD	1520

Climate Change in Pakistan:

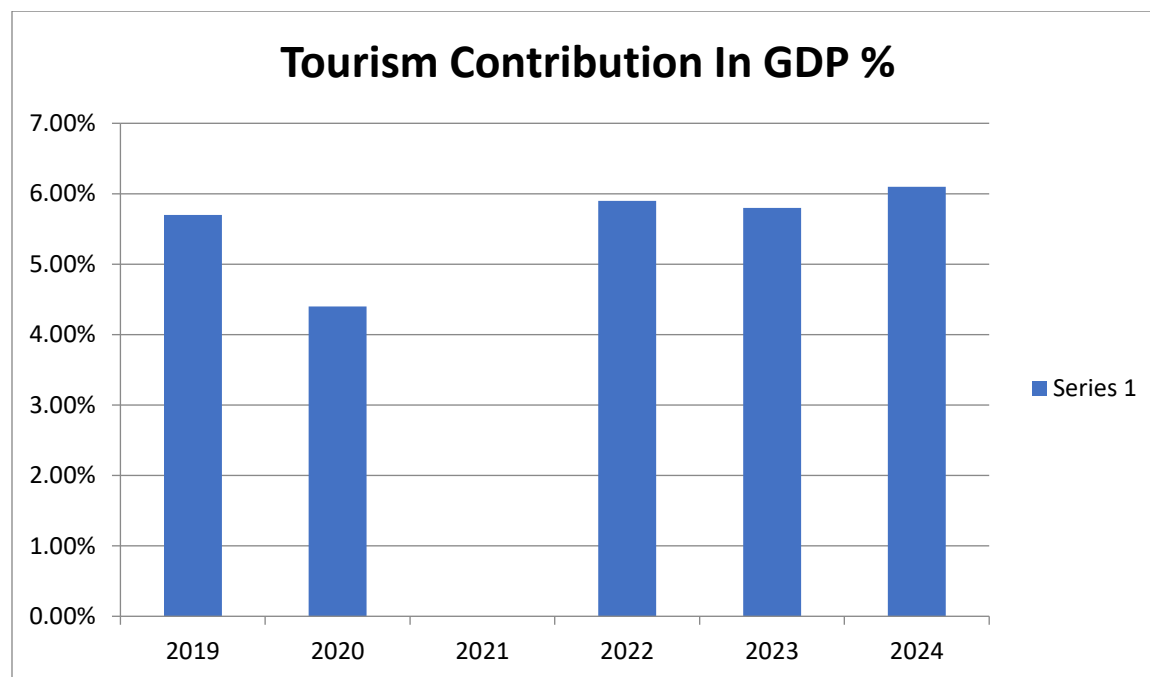
In Pakistan rising temperature is one of the main issues. Rising temperature is not only affect urban area of Pakistan but also affect the different industry of Pakistan. Raising temperature in Pakistan also affects Pakistan tourism industry. Raising temperatures in Pakistan also affects northern area. Glacier melts frequently and makes Glacier Lake. 33 among these lakes are identified as highly hazardous. These lakes release millions of cubic feet of water frequently, which destroys communities and lots of houses.

The 2022 flood in the northern area of Pakistan badly affected a large area and also around 300 people lost their lives and around 0.3 million people were displaced. The 2025 flood in the northern area which was reported in the media also caused huge demand. Especially in the Swat incident and upper Dir incident, especially badly affected tourists. The 2025 sudden flood caused a lot of life; even the dead body of a tourist was found 4 or 5 days later. Such incidents affect tourists visiting that particular area, and they choose to attend nearby stations



Tourism and its contribution in GDP:

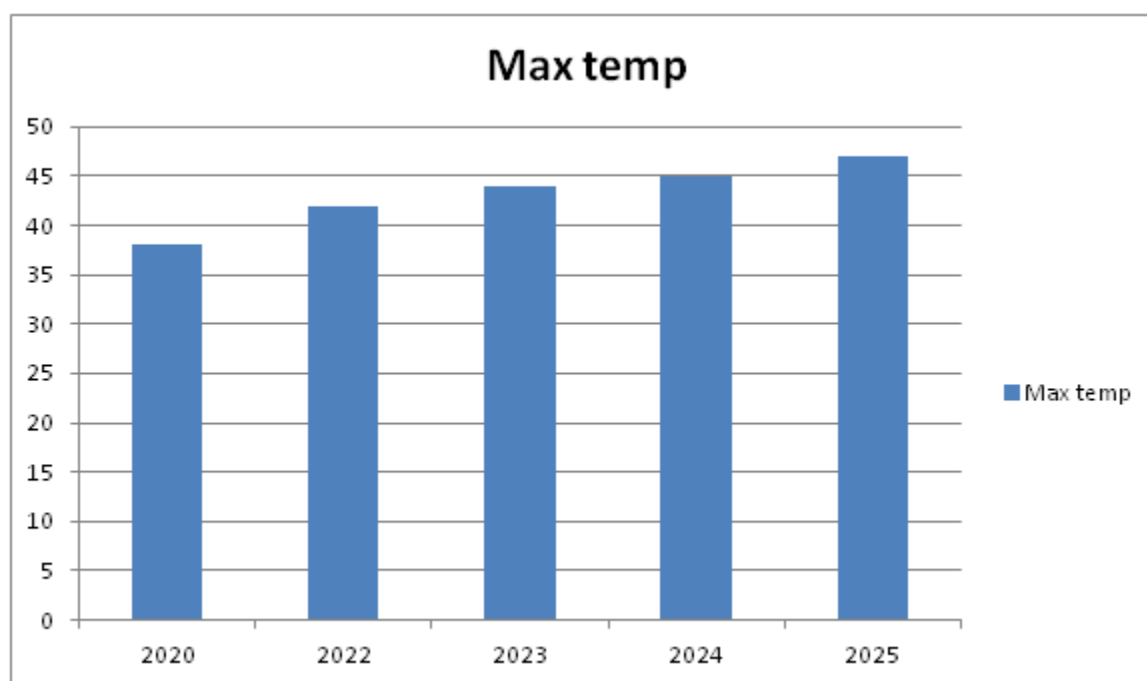
Tourism is a major sector in economic development in many countries, offering benefit through revenue generation and creating job opportunity. Pakistan wants to show real beauty of the country, including its untouched nature landscapes and rich unique culture, especially from the northern valley. The northern valleys of KP, GB and AJK are popular tourist places because visitors usually have a good experience with the mountain and local people. The tourism industry also makes a substantial contribution to national GDP. Beyond its direct economic value, tourism stimulates growth across multiple sectors. Pakistan's tourism industry positively contributes to GDP.



Temperature raised in Pakistan:

Northern Pakistan, encompassing regions such as Gilgit-Baltistan, Chitral, Swat, and parts of Khyber Pakhtunkhwa, experiences a wide range of temperature extremes due to its diverse topography and high-altitude landscapes. Summers can bring relatively warm conditions in lower valleys, with temperatures reaching up to 35–38°C, while winters are characterized by harsh cold, with temperatures frequently dropping below –10°C and, in some high-altitude areas, below –20°C. These extremes are exacerbated by climate change, which has led to increased variability, more frequent heat waves, and intensified cold spells. The rapid melting of glaciers and snowpack during unusually warm periods poses additional risks such as flash floods and glacial lake outburst floods (GLOFs), while prolonged cold periods affect agriculture, livestock, and local livelihoods. Understanding these temperature extremes is crucial for disaster preparedness, sustainable development, and the formulation of climate adaptation strategies in northern Pakistan.

Years	Region	Recorded Temp	Key Impact
2016	Gilgit-Baltistan	38–40 (°C)	Early glacier melt
2018	KP	40(°C)	Heat stress crop loss
2020	GB	44(°C)	Snow melt
2022	GB / KP	45(°C)	Flood situation
2024	Northern KP	47(°C)	Flash floods



Policy Recommendations

To address the climate change crisis and its impact on tourism the following policy suggestions are proposed.

Short Term Policy Recommendations:

- Established an early warning system which is helpful to protect tourist's life and infrastructure losses.
- Established proper waste management system in tourist points of northern area, build plastic bans which reduced waste near lake and glaciers.
- Introduced digital app which is provide complete detail about tourist point, weather condition, availability of hotels and in case of any disaster online information available for tourist to check that particular area.

Long Term Policy Recommendations:

- Developed a climate awareness training program for local, tour operators and local communities on climate adaptation and disaster preparedness to minimize losses.
- Renewable energy policy in that particular region. Promote solar and micro hydropower for hotels and lodges to reduced diesel and petrol use.
- A long term policy required for protection of forest which is very helpful to prevent landslides, extreme weather events and reduced heat waves.

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