

Climate change

The United Nations has defined climate change as "long-term variations in weather patterns and climate". Climate change is an inevitable phenomenon and is no longer a myth now.

It is a rising problem in South Asia including Pakistan which suffers from its disastrous effects. The Global Climate Risk Index has ranked Pakistan among top ten most vulnerable countries severely impacted by the changes in climate.

With the passage of time, technology is rapidly increasing. The surge in technology has led to the other inventions which have become detrimental to the quality of earth and environment. Furthermore, the human release of greenhouse gases emissions is one of the major causes of global warming. Although Pakistan contributes less than 1% of global greenhouse gases emissions, still it is considered most susceptible to its impacts.

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To begin with the causes of climate change; it can be categorized into two parts, i.e; anthropogenic activities and natural activities. Hyperconsumerism, industrialization, and transportation are the leading factors which of anthropogenic activities, thereby causing climate change. It has been established by a research that 80% of global warming is caused due to transportation and industrialization. Similarly, the burning of fossil fuels in industries and combustion also come under the scope of industrialization. Moreover, the emissions of greenhouse gases causes the trap of reflected heat which resultantly increases the earth's temperature. There has been rise in temperature from 2.5°C to ^{approximately} 2°C due to increased concentration of carbon dioxide. It is apprehended that the survival of homo sapiens will become impossible if the temperature will increase upto 2°C . Similarly, the geological position of Pakistan also makes it susceptible to the changes in climate, and subsequently for its impacts.

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Pakistan is surrounded by three high-altitude mountain ranges from north, east and south. It is covered with glaciers and ice-sheets from these sides, as well as warm Arabia sea at south. It is also predicted that the geological position as well as the anthropogenic activities make Pakistan vulnerable to the impacts of climate change.

On the other hand, there are also natural causes which lead towards the climate change in Pakistan. It includes glacier melting and volcanoes eruption which has been recorded in the past few decades. In addition to this, there is also the leakage of methane gas from the oil wells, thus increasing the risk of climate change.

It is pertinent to highlight the impacts of climate change. They include torrential rains, melting of ice sheets, frequent floods and droughts. Furthermore, from 1998 to 2018, there have been 150 extreme weather events. From 1990, 14 major floods have hit Pakistan since then. There have also

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been glacial lake outburst flooding due to melting of glaciers. The recent 2022 flooding in Pakistan has caused a loss approximately \$30 billion in agriculture sector, as reported by Ministry of Food and Agriculture.

Similarly, it is also reported by Ministry of Finance that the country has borne the loss of around \$39 billion from torrential rains and inundation. On the other hand, the death toll due to this is 580, along with 539 injured.