

DATE 28/7/2024

Outline

Essay: Climate Change in Pakistan: Impacts and Mitigation Strategies.

1. Introduction: Climate change has posed multifaceted threats to Pakistan's Economy, Agriculture, Health, Education, including others. However, Pakistan also has adopted strategies to combat the adverse impacts of climate change.

2. Existential threats of climate change on Pakistan's major sectors:

2a) The role of changing weather patterns in exacerbating economic loss.

(ISSI Report on 2022 floods revealed that; the calamity resulted in the destruction of over 2.2 million homes and 4.4 acres of crops, amounting to a staggering USD 4.0 billion in economic losses)

2b) Changing patterns of Agriculture Production and Crops destruction.

(World Bank states that; "The sector is losing approximately \$14 billion annually, 5% of Country's GDP; at 1°C increase in temperature is projected to cause 6-9% decline in wheat production)

2c) Extreme Heatwaves and Air Pollution; Cause of human deaths, increase vector-borne diseases and health risks.

(World Health Organization states that in 2022 heatwaves resulted in over 6200 fatalities in Karachi alone)

3d. High level of water scarcity and water contamination.

(According to Earth.ORG: Water Scarcity Per capita has plummeted from 5,260 cubic meters in 1951 to above 1,000 cubic meters in recent years).

3e) Adverse Impacts on Education.

(UNICEF Report: 78% of Pakistani students reported their education being affected by climate change).

2f) Climate change, A major factor contributing to women sufferings.

(UNICEF Report revealed that, the 2022 floods displaced 33 million people, with 30% being women. Nearly 650,000 women were deprived of health-care and 8 million lost access to menstrual hygiene products)

2g) Threat to Biodiversity and Ecosystem including Forest depletion and land degradation.

(WWF Reported that, "Around 69% of monitored vertebrate wildlife populations globally have declined since 1970, and Pakistan is no exception to this trend)

2h) Impact of Rising Sea levels of on Coastal Areas.

(According to WWF, sea levels along Pakistan's coast would rise 1-2 millimeters annually, exacerbating coastal erosion and increasing the frequency of extreme weather events like cyclone).

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2i) Poses High Level of Infrastructural damage; a burden on low to middle income countries.

(According to World Bank, the financial tool of infrastructure disruption in low- and middle income countries would reach upto \$ 647 billion in 2019).

3. Pakistan's Historical Development on Climate Action:

3a) Pakistan Council of Renewable Energy and Technologies and establishing Alternative and Renewable Energy board in 2010.

3b) Establishing First Nation Climate Change Policy (NCCP) in 2012 including Ten Billion Tsunami Programme and others.

(UNDP stated that to reach the targets, Pakistan aims to shift 60% renewable energy and 30% electric vehicles by 2030)

3c) Enforcement of National Power Policy in 2013 and climate change act in 2017.

3d) Alternative renewable energy and policy of electric vehicles in 2019.

3e) On December 2020, PM Imran Khan announced Climate Ambition Summit.

4) Pakistan's Recent Developments on Climate Action:

4b) Pakistan's role in International Cooperation including; COP26, COP27 and COP28.

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4b) Pakistan's Bilateral ties with other States to address climate Issue.

(In March 2023, US and Pakistan formed "The Green Alliance". This includes assistance in installing 10 GW of solar power and increasing the share of renewable energy to 60% by 2030).

4c) The Recent 2023 developments includes;

(the role of CPEC in energy production, National Clean Air Policy 2023, and first Artificial Rain through cloud seeding in December 2023).

(Pakistan Economic Survey 2024 reported that the Green Upscaling program's phase-I achieved plantation target of 2.12 billion last year).

5. Conclusion.

Introductory Paragraph:

Pakistan presently faces serious development challenges due to the worsening state of the environment's, increasing pressure on natural resources, and climate change. As per German watch report, Pakistan has been ranked 8th most vulnerable country to climate change, according to global climate Risk Index 2024. The annual mean temperature has increased by 0.5°C , over the last five decades, with changes in the precipitation, an increase in glacial melting, and rising of temperatures.

Moreover, Pakistan's economy remains highly vulnerable to likely future threats posed by climate change. The changing weather patterns have also contributed to land degradation and disturbed crops production, especially wheat and cotton crops. Similarly, it has also posed a major threat to human survival which includes human health risks, vector-borne diseases etc. Also, Education and women related issues are also produced by climate change as it worsened the menstrual cycle and access to basic hygiene products. including the climate risks also created gender disparity amongst the educational attainment of boys and girls leading to high dropout rates. However, biodiversity and Ecosystem are also disturbed by natural disasters

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Resultantly, killing thousands and millions of wild life animals and plants. Conversely, Pakistan has adopted some measures and strategies to ~~per~~ combat this existential threat. For Instance, the formation of ^{first} National climate change policy and climate change all are one of the examples. Moreover, Pakistan has also cooperated internationally in multiple conferences related to climate action including COP26, COP27, and COP28 etc. It has also established bilateral ties with other states to mitigate the impacts of climate change on its different sector. Thus, it is evident that climate has posed multifaceted threats to Pakistan's Economy, Agriculture, Health, Education, ^{and} including others. However, Pakistan has also adopted strategies to combat the adverse impacts of climate change which is the existential threat for humanity.