

Batch NOA 71 - Assignment 1.

Climate Change in Pakistan

Brainstorm

Climate change

Impacts



- Melting Glaciers
- Rising temperatures
- Poor public awareness.

Recommendations



- Strengthen implementation of climate policies.
- Reforestation and sustainable forestry.
- Climate education in schools.

Outline

1. Introduction.

- 1.1 Define Climate change (global phenomenon with local impacts)
- 1.2 Brief introduction to Pakistan's vulnerability.
- 1.3 Thesis statement: Climate change poses a serious threat to Pakistan's environment, economy, agriculture, water security, and public health requiring urgent policy, awareness and resilience measures.

2. Causes of Climate Change (Global and local Dimensions)

2.1 Global Causes

- Greenhouse gas emissions from industrialized nations
- Deforestation and fossil fuel burning.

2.2 Local / National Causes

- Urbanization without planning.
- Deforestation in Pakistan (e.g; cutting of forests in KP, Murree)
- Poor waste management
- Increase in vehicle emissions.
- Unsustainable agricultural practices

3. Impacts of Climate Change in Pakistan

3.1 Environmental Impacts:

- Melting glaciers (Hindu Kush, Himalayan region).
- Rising temperatures
- Frequent and intense heatwaves (e.g; Karachi 2015)
- Irregular rainfall and droughts
- Desertification in Sindh and Balochistan

3.2 Economic Impacts

- Damage to infrastructure from floods.
- Increased cost of climate resilience

3.3 Agricultural Impacts

- Reduced crop yield
- Loss of arable land due to salinity and flooding.

3.4 Water Security:

- Reduction in freshwater availability
- Water disputes intensified by

scarcity.

4. Climate Change Disaster in Pakistan

4.1 2010 super floods

4.2 2022 monsoon floods

4.3 Glacial Lake Outburst Floods (GLOFs) in Gilgit - Baltistan

5. Government Response and Policies

5.1 National Climate Change Policy (2012, revised in 2021)

5.2 Ten Billion Tree Tsunami Project.

5.3 Pakistan's Intended Nationally Determined Contributions (INDCs) under Paris Agreement.

5.4 Creation of Ministry of Climate Change.

5.5 Role of NDMA in disaster risk reduction.

6. Challenges in Tackling Climate Change

6.1 Lack of implementation and coordination

6.2 Limited financial and technical resources

6.3 Poor public awareness

6.4 Dependence on fossil fuels.

6.5 Governance and political instability.

7. Recommendations

7.1 Strengthen implementation of climate policies.

7.2 Invest in renewable energy (solar, wind)

7.3 Improve urban planning and public transportation.

7.4 Reforestation and sustainable forestry.

2.5 Climate education in schools

2.6 Regional cooperation (especially on water issues)

2.7 International Support (climate finance, technology transfer)

8. Conclusion

- Recap of climate change threat.
- Reassert need for integrated national and global response.
- Optimistic note: with proactive policy and public awareness, Pakistan can mitigate and adapt to climate risks.

The Essay

Introduction

"I want you to act as if the house is on fire, because it is."

(Greta Thunberg) quote from her book (No-one is Too small to Make Difference (2019))

Climate change represents one of the most significant existential threats to the modern world, impacting ecosystems, economies, and communities across every continent. While it is a global phenomenon, its consequences are felt most acutely by developing nations that possess limited adaptive capacities. Among these, Pakistan stands out as one of the countries most vulnerable to climate change, despite its negligible contribution to global

Greenhouse gas emissions. Ranked consistently among the top ten countries most affected by climate change by the Global Climate Risk index, Pakistan faces a wide array of challenges - from floods and droughts to glacial melting and food insecurity. Climate change in Pakistan is not just an environmental issue; it is a developmental, economic, and security challenge. Its effects ripple across agriculture, public health, water availability, and national security. The current and future trajectory of climate impacts threatens to undermine Pakistan's socioeconomic development, exacerbate poverty and destabilize already fragile infrastructure. To build climate resilience, Pakistan should strengthen governance and institutions to ensure policy continuity, investment in renewable energy, implement climate-resilient agriculture and leverage international support.