

Climate Change in Pakistan:

Causes and Consequences.

Brainstorming

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| <ul style="list-style-type: none"> ① Greenhouse gas emissions. ② Deforestation (Decrease in carbon sequestration) ③ Urbanization/Industrialization ④ Overuse of chemical fertilizers. ⑤ Dependence on fossil fuels / overreliance on coal, oil, gas. ⑥ Industrial Pollution. ⑦ Lack of environmental Regulation / Public awareness. ⑧ Unsustainable Agricultural practices (Methane emissions from rice paddies and livestock). | <ul style="list-style-type: none"> ① Extreme weather events (2022 floods.) ② Loss of bio-diversity, soil erosion / desertification ③ Urban heat island effect, air pollution ④ Water resource depletion / Glacial retreat ⑤ Droughts and flood variability. ⑥ Contamination of fresh water. ⑦ Agricultural disruption and food insecurity. ⑧ Economic strain and displacement ⑨ Health emergencies & increase in water borne diseases. e.g (Cholera and Dengue). |
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Climate Change in Pakistan: Causes and Consequences

Outline

A. Introduction

1. Climate change as a pressing global issue
2. Pakistan's position among the most climate-vulnerable countries
3. Thesis statement

B. Causes of Climate Change in Pakistan

1. Greenhouse gas emissions;
 - a. Jacobabad hit 51°C in June 2021
2. Deforestation
 - a. Pakistan lost nearly 43,000 hectares of forests annually
3. Rapid urbanization
 - a. Unchecked city expansion of Karachi and Lahore
4. Fossil fuel dependence
 - a. 64 percent of Pakistan's energy comes from fossil fuels (Pakistan Energy Yearbook)
 - b. Example of coal plants in Sahiwal
5. Unsustainable agricultural practices
6. Industrial pollution
 - a. River Ravi biologically dead in Lahore segment
7. Poor Environmental governance
 - a. Climate Change Authority bill passed but remains inactive

C. Consequences of Climate Change in Pakistan

1. Extreme weather events
 - a. 2022 Floods affected 33 million people
2. Biodiversity loss
 - a. Mangrove ecosystems, snowleopards and Indus dolphins are under threat

3. Urban heat island effect

4. Rise in air pollution

a. Fossil fuel emissions cause climate volatility

5. Agricultural disruption

a. Indus Water Basin aquifer is depleting rapidly (NASA data)

6. Health diseases

a. Rise in waterborne diseases due to industrial waste

7. Economic setback and climate displacement

a. Climate disasters cost Pakistan approx. 9.1% of GDP (World Bank)

b. 40 percent rural to urban migration

D. Conclusion

Essay

Rivers are drying, skies are choking, and seasons no longer follow the rules of nature; the planet is sounding alarms louder than ever before. In the words of United Nations calls this "the defining crisis of time", unfolding faster than anticipated. From industrialized nations to developing states, no region escapes its reach. This global emergency is climate change—a long term alteration in temperature and weather patterns, primarily driven by human activities. Across the world, nations grapple with rising sea levels, shifting seasons, and climate induced disasters. Likewise, Pakistan is no exception, as it becomes one of the most climate vulnerable countries on the planet. Several causes fuel this crisis in the

Country: unchecked greenhouse gas emissions intensify atmospheric warming; rampant deforestation strips natural carbon sinks; rapid urbanization replaces green spaces with concrete; fossil fuel dependence accelerates environmental degradation; and unsustainable agricultural practices exhaust land and water resources. These causes, in turn, give rise to alarming consequences such as extreme weather events, biodiversity loss, the urban heat island effect, and soaring levels of air pollution—placing both people and the country in peril. Thus, understanding these root causes and their wide-ranging consequences is essential to address one of the biggest challenges faced Pakistan faces today. This essay explores both the causes of climate change in Pakistan and the consequences that follow.