

Outline

Essay
Thesis

Climate Change Statement:

Climate Change has become the greatest existential Challenge of 21st Century, affecting economies, societies, and ecosystems worldwide. For Pakistan, which contributes minimally to global emissions but ranks among the most vulnerable states, Climate Change is not merely an environmental issue but a question of Survival.

I. Introduction:

Definition and Significance of

Climate Change

- Global concern turned into lived reality.
- Pakistan's extreme vulnerability despite negligible emissions.

II Causes of Climate change

- 1 Industrial revolution and fossil fuel dependence.
- 2 Greenhouse gas emissions (CO_2 , CH_4)
- 3 Deforestation and Urbanization
- 4 Unsustainable agriculture and overpopulation.
- 5 Consumerism and industrial growth in developed States

III Global impacts of Climate Change.

- Extreme weather events (hurricanes, floods, wildfire, heatwaves)
- Rising global temperature (2023-2025 heat record).
- Melting glaciers and rising sea level
- Climate refugees and displacement

- Threats to biodiversity and ecosystem.

IV. Climate Change in Pakistan.

- Pakistan among top 10 most vulnerable countries.
- 2022 floods: 33 million affected, \$30 billion losses.
- 2025: erratic monsoons, floods + droughts simultaneously.
- Melting glaciers and water insecurity
- Heat waves, smog, and urban health crises.

V. Socio-Economic Repercussions for Pakistan.

- Agricultural decline → food insecurity.
- Climate-induced migration → overcrowded cities.
- Health Crises: dengue, malaria, heat stroke
- Impact on women and children (most vulnerable)
- Resource scarcity → national security challenges

VI. International Response

- Paris Agreement (2015) and COP conferences

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- Inadequate Compliance by developed nations.
- Climate finance and "loss & damage" funds → slow, insufficient
- **2025 reality:** gap between rhetoric and action.

VII Pathways to Resilience and Mitigation.

- 1 Renewable energy transition (Solar, Wind, hydro)
- 2 Reforestation and afforestation (Billion Tree Tsunami)
- 3 Climate-resilient agriculture and water management
- 4 Disaster **preparedness** and early warning systems.
- 5 Public awareness and climate education.
- 6 Pakistan's advocacy for climate justice on global forums

VIII Role of Science, Technology and Society.

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- Clean energy technologies and Carbon Capture.
- Climate modeling and data-driven policies.
- Incorporating traditional knowledge and community practices.
- Individual responsibility: Sustainable consumption and lifestyle changes.

IX. Conclusion

- Climate Change as an existential global threat.
 - Pakistan's disproportionate vulnerability and urgent need for action.
 - Collective global responsibility "act together or perish together."
 - The time for action is now.
- ~~Essay 1~~ ~~Start~~ Climate Change is no longer a distant possibility

it has become a lived reality. Rising temperatures, erratic rainfall, and devastating floods are reshaping human societies in ways never witnessed before. Defined as long-term shifts in temperatures and weather patterns caused primarily by human activity, climate change has emerged as the defining challenges of the country. For the world, it threatens ecosystems, economies, and entire civilization. For Pakistan, however, the challenge is existential; a country that emits less than one percent of global greenhouse gases consistently ranks among the top ten most vulnerable states. As Antonio Guterres, the UN Secretary-General,

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Warned during his 2022 visit to Pakistan, "Humanity has become a weapon of mass extinction." His words underline the urgency of climate action, for failure to act may render our future unsustainable.

2. The cause of climate change are rooted in the industrial revolution, which triggered unprecedented levels of fossil fuel consumption. The burning of coal, oil, and gas releases greenhouse gases - chiefly carbon dioxide, methane and nitrous oxide into the atmosphere. These gases trap heat and destabilize the Earth's balance. Moreover deforestation and unplanned urbanization have

further worsened the situation by reducing the planet's capacity to absorb carbon. Added to this are unsustainable agricultural practices, population explosion and the consumerist lifestyle of developed nations, all of which have accelerated environmental degradation. Indeed, modern progress has largely been achieved at the expense of ecological stability, and the Earth is now demanding repayment.

3/ Consequently, the impacts of climate change are visible across the globe. In recent years, the world has witnessed record-breaking heatwaves across Europe, wildfire in Australia and Canada,

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hurricanes in the United States and floods in Africa. Notably, 2023 was recorded as the hottest year in human history, while 2025 has already witnessed extreme weather events that displaced millions. Melting glaciers are causing sea levels to rise threatening coastal cities and small island nations. According to the intergovernmental Panel on Climate Change (IPCC), more than 3.5 billion people are now living in areas highly vulnerable to climate hazards. Beyond environmental disruption, Climate Change has become a humanitarian crisis, producing climate refugees and fueling conflicts over

Scarce resources. In the words of former US President Barack Obama, "No Challenge poses a greater threat to future generations than Climate Change."

- 4 Pakistan stands at the frontline of this global crisis. Ranked among the top ten most climate-vulnerable countries for two decades, Pakistan has experienced recurring floods, droughts, and heatwaves. The 2022 floods were a stark reminder: one third of the country was submerged, 33 million people were displaced and damages exceeded \$30 billion. Even in 2025 erratic monsoon patterns triggered simultaneous

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floods in Sindh and droughts in Balochistan, highlighting the unpredictability of the crisis. Furthermore, glaciers in the north are melting at unprecedented rates, threatening water security in a country already facing scarcity. Urban centers are ~~choked~~ by smog and heatwaves while rural areas face declining crop yields. Despite contributing negligibly to global emissions, Pakistan has been forced to bear the heaviest costs.

5. The socio-economic repercussions of climate change in Pakistan are equally grave. Agriculture, which employs nearly 40% of the workforce, has been severely disrupted, leading

to food insecurity. Moreover, Climate-induced migration is forcing millions into overcrowded cities, straining infrastructure and public services. Health crises such as malaria, dengue and heatstroke are becoming more frequent. Vulnerable groups, particularly women and children, face the worst consequences as disasters erode livelihoods and deepen poverty. Additionally, Climate Change poses national security threats by exacerbating resource scarcity, fueling inter-provincial tensions over water, and increasing reliance on international aid. As one local farmer in Sindh

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remarked after the 2022 floods, "We contributed nothing to this disaster, but we have lost everything!"

6 On the international front, responses to Climate Change have been inadequate. The 2015 Paris Agreement committed nations to climate limit global warming to below 2°C , yet most states remain far from their targets. Conferences of the Parties (COPs) provide rhetorical commitments, but compliance is weak. The promise of Climate finance—particularly the "loss and damage" fund agreed at COP27—remains largely unfulfilled, with developing nations still waiting for meaningful assistance. The reality of 2025 reveals a

glaring gap between promises and action. Developed countries, historically the largest polluters, continue to prioritize economic growth over environmental responsibility. The imbalance is stark: while the Global North debates targets, the Global South pays the price with lives and livelihoods.

7 Nevertheless, pathways to resilience and mitigation exist. Transitioning to renewable energy such as solar, wind, and hydro can reduce dependence on fossil fuels. Pakistan has already initiated reforestation projects like the Billion Tree Tsunami, which must be expanded nationwide. Climate resilient agriculture efficient water

management, and modern irrigation systems can safeguard food security. Similarly, investment in disaster preparedness and early warning systems can save lives during floods and heatwaves.

Most importantly, climate education and public awareness campaigns are vital for building a culture of sustainability.

On the global stage, Pakistan must continue to advocate for climate justice, ensuring that industrialized nations bear their fair share of responsibility.

Furthermore, science and technology can play a decisive role in this struggle.

Innovations in clean energy, carbon capture, and climate modeling provide new tools

for policymakers. Data-driven policies can help predict and mitigate disasters.

However, technology alone cannot succeed without

social responsibility. Traditional knowledge, community

practices, and sustainable lifestyles must complement

modern solutions. In this regard individual choices - reducing waste,

conserving energy, and adopting eco-friendly practices - may

appear small but collectively create a powerful impact. As

Mahatma Gandhi wisely said,

"The earth provides enough to satisfy every man's need, but not every man's greed."

9. In conclusion, Climate Change represents the gravest challenge of our time. It threatens

not only the environment but the very fabric of human civilization. For Pakistan, the Challenge is disproportionately severe: despite contributing the least to global warming, it suffers among the most. This injustice calls for urgent global warming cooperation and domestic resilience.

Climate Change is not an issue for tomorrow; It is a crisis of today. If humanity continues on its current trajectory, the consequences will be catastrophic. The choice before us is clear; either act collectively to mitigate Climate Change or face a future defined by despair.

As Ban Ki-moon aptly remarked, "There is no Plan B, because there is no Planet B."