

Research Proposal

on

Global Warming

In

Pakistan

Group Members:

210950 Muhammad Aashir

212006 Muhammad Jawad Anjum

210893 Muhammad Zeeshan Zia

210953 Rehan Akhtar

210992 Saad Mansoor Minhas

Research Proposal on Global Warming in Pakistan

Title

Impact of Global Warming on Pakistan: Challenges and Adaptive Strategies

Abstract

This research aims to investigate the multifaceted impacts of global warming on Pakistan, focusing on climate variability, socio-economic repercussions, and adaptive strategies. By analysing historical data and current trends, the study will highlight the specific challenges faced by Pakistan due to climate change and propose actionable strategies to mitigate these effects. The goal is to provide a comprehensive understanding of how global warming influences Pakistan and to suggest policies for sustainable adaptation.

Introduction / Research Question

Global warming poses a significant threat to countries worldwide, but its effects are particularly pronounced in regions with high vulnerability like Pakistan. This research seeks to answer the question: **How does global warming affect the climate, agriculture, water resources, and socio-economic stability of Pakistan, and what adaptive strategies can be implemented to mitigate these effects?**

Rationale

Global warming has led to increased frequency of extreme weather events, rising temperatures, and shifting precipitation patterns in Pakistan. These changes threaten agricultural productivity, water availability, and overall economic stability. This research is essential as it will fill a gap in understanding the specific impacts of global warming on Pakistan and offer evidence-based recommendations for adaptive strategies to enhance resilience and sustainability.

Literature Review

The literature review will cover existing research on global warming and its impacts on South Asia, with a particular focus on Pakistan. Key studies include:

- The Intergovernmental Panel on Climate Change (IPCC) reports detailing regional climate projections.
- National and international research on the effects of climate change on Pakistan's agriculture, water resources, and economy.
- Case studies on successful adaptive strategies in similar climatic regions.

Methodology

This research will employ a mixed-methods approach:

1. **Data Analysis:** Historical climate data from meteorological departments and satellite imagery to identify trends in temperature, precipitation, and extreme weather events.

2. **Surveys and Interviews:** Conducting surveys and interviews with local farmers, water management authorities, and policymakers to gather qualitative data on the perceived impacts and current adaptive measures.
3. **Case Studies:** Analysing case studies from regions with similar climate challenges to identify best practices in adaptation.

Budget and Timeframe

- **Data Collection:** \$5,000 (purchase of satellite data, travel expenses for field visits)
- **Surveys and Interviews:** \$3,000 (compensation for participants, travel expenses)
- **Data Analysis and Reporting:** \$2,000 (software licenses, research assistant salaries)
- **Total Budget:** \$10,000
- **Timeframe:** 12 months (June 2024 - May 2025)
 - Data Collection: June 2024 - August 2024
 - Surveys and Interviews: September 2024 - November 2024
 - Data Analysis: December 2024 - February 2025
 - Report Writing and Review: March 2025 - May 2025

Conclusion

The research will provide valuable insights into the impacts of global warming on Pakistan, highlighting the urgency of implementing adaptive strategies. The findings will inform policymakers, stakeholders, and the public, contributing to the development of robust policies and practices aimed at mitigating the adverse effects of climate change.

References

1. **Intergovernmental Panel on Climate Change (IPCC) Reports:**
 - IPCC Fifth Assessment Report (AR5)
 - IPCC Sixth Assessment Report (AR6)
2. **National Climate Change Policy of Pakistan:**
 - National Climate Change Policy of Pakistan (2012)
 - Framework for Implementation of Climate Change Policy (2014-2030)
3. **Relevant academic articles and case studies from peer-reviewed journals:**
 - [ScienceDirect - Articles on Climate Change in Pakistan](#)
 - [SpringerLink - Research on Climate Change Adaptation in Pakistan](#)
 - Google Scholar - Climate Change Impact in Pakistan