



The Current Status of Climate Change in India

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India, a nation of over 1.4 billion people, is highly vulnerable to the impacts of climate change. The country is experiencing more frequent and severe extreme weather events, such as heatwaves, floods, and cyclones, with significant socio-economic consequences. This article provides an overview of the current status of climate change in India, focusing on key areas of concern and ongoing responses.

Extreme Weather Events

India has witnessed a dramatic increase in the frequency and intensity of extreme weather events in recent years. Heatwaves have become more common, with record-breaking temperatures recorded across the country. In 2023, several regions experienced temperatures exceeding 45°C, leading to heat-related deaths and severe health issues (IMD, 2023). Moreover, the monsoon season has become increasingly erratic, with both excess rainfall and droughts occurring in different parts of the country.

Flooding is another significant concern, particularly in urban areas. The cities of Mumbai, Chennai, and Kolkata have all faced devastating floods in recent years, disrupting lives and economies. These events are exacerbated by poor urban planning and inadequate drainage systems, highlighting the need for climate-resilient infrastructure (TERI, 2023).

Agriculture and Food Security

Agriculture, which supports nearly half of India's population, is particularly vulnerable to climate change. Changes in temperature, rainfall patterns, and the frequency of extreme weather events are already affecting crop yields. For instance, the productivity of staple crops like wheat and rice is expected to decline due to heat stress and water scarcity (ICAR, 2023). This poses a serious threat to food security in a country where millions are already undernourished.

Farmers are increasingly turning to climate-resilient practices, such as adopting drought-resistant crop varieties and implementing water-saving irrigation techniques. However, these efforts need to be scaled up significantly to meet the challenges posed by climate change (MoEFCC, 2023).

Water Resources

India's water resources are under severe stress due to climate change. The Himalayan glaciers, which feed major rivers like the Ganges and Brahmaputra, are retreating, leading to reduced water availability in the long term (WWF, 2023). In contrast, the country is also experiencing more intense rainfall events, leading to flash floods and landslides in the Himalayan region.

Groundwater, a critical source of irrigation and drinking water, is being depleted at an alarming rate. Climate change, coupled with over-extraction, is exacerbating this crisis.

Effective water management strategies, such as rainwater harvesting and sustainable groundwater use, are essential to mitigate these challenges (CWC, 2023).

Health Impacts

The health impacts of climate change in India are multifaceted. Rising temperatures are contributing to an increase in heat-related illnesses and deaths. Additionally, the changing climate is altering the distribution of vector-borne diseases, such as malaria and dengue, potentially leading to outbreaks in new areas (MoHFW, 2023).

Air pollution, exacerbated by climate change, is another major health concern. The burning of fossil fuels, agricultural residue, and biomass contribute to poor air quality, particularly in northern India. This has severe implications for respiratory and cardiovascular health, especially among vulnerable populations (CPCB, 2023).

Government Initiatives and Policy Responses

The Indian government has recognized the urgency of addressing climate change and has implemented several policies and initiatives to combat its impacts. The National Action Plan on Climate Change (NAPCC) outlines eight national missions focusing on key areas such as solar energy, enhanced energy efficiency, and sustainable agriculture (MoEFCC, 2023).

In addition, India has committed to achieving net-zero carbon emissions by 2070 as part of its international climate commitments under the Paris Agreement. The country is also focusing on increasing its renewable energy capacity, with ambitious targets for solar and wind power (MNRE, 2023).

Conclusion

India is at a critical juncture in its fight against climate change. The country faces significant challenges, from extreme weather events to water scarcity and health impacts. However, with robust government policies, innovative solutions, and community engagement, India can build resilience and adapt to the changing climate. The path forward requires collective action at all levels, from local communities to national governments, to ensure a sustainable future.

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