



## The Policy Framework to Cope with Climate Change in India

(\*Chaitanya Ashok Adhav)

Department of Agricultural Economics, G B Pant University of Agriculture and Technology,  
Pantnagar, Udham Singh Nagar, Uttarakhand, India-263145

Corresponding Author's email: [chaituadhav2103@gmail.com](mailto:chaituadhav2103@gmail.com)

Climate change is one of the most pressing challenges of the 21st century, posing significant threats to economies, ecosystems, and communities worldwide. India, with its vast population and diverse climate, is particularly vulnerable to its impacts. The Indian government has recognized this threat and has developed a comprehensive policy framework to mitigate and adapt to the effects of climate change. This article explores India's key policies, initiatives, and commitments aimed at addressing climate change, highlighting their importance in steering the nation toward a sustainable future.

### The National Action Plan on Climate Change (NAPCC)

Launched in 2008, the National Action Plan on Climate Change (NAPCC) is India's primary policy response to climate change. It outlines a series of national missions, each targeting specific areas of concern. The NAPCC comprises eight core missions:

- National Solar Mission:** Aimed at promoting the development and use of solar energy in India, this mission has set ambitious targets for increasing solar power capacity. By 2023, India had achieved a significant milestone, with over 67 GW of installed solar capacity, positioning the country as one of the global leaders in solar energy (MNRE, 2023).
- National Mission for Enhanced Energy Efficiency:** This mission focuses on improving energy efficiency across various sectors, including industry, transportation, and buildings. Initiatives such as the Perform, Achieve, and Trade (PAT) scheme have been instrumental in reducing energy consumption and greenhouse gas emissions (BEE, 2023).
- National Water Mission:** Recognizing the critical importance of water resources, this mission aims to ensure sustainable water use through the conservation of water, minimizing wastage, and ensuring more equitable distribution (CWC, 2023).
- National Mission for a Green India:** This mission seeks to enhance India's forest cover as a means of increasing carbon sequestration and improving biodiversity. Afforestation and reforestation projects are key components of this mission (MoEFCC, 2023).
- National Mission for Sustainable Agriculture:** Given the vulnerability of Indian agriculture to climate change, this mission promotes climate-resilient agricultural practices, including crop diversification, water-efficient irrigation, and the adoption of drought-resistant crop varieties (ICAR, 2023).
- National Mission on Sustainable Habitat:** This mission addresses urban challenges by promoting energy efficiency in buildings, waste management, and sustainable urban planning. The Smart Cities Mission is an example of a program that integrates climate resilience into urban development (MoHUA, 2023).
- National Mission on Strategic Knowledge for Climate Change:** This mission focuses on improving the understanding of climate science and building capacity for climate

research in India. It aims to provide policymakers with the necessary data and tools to make informed decisions (DST, 2023).

8. **National Mission for Sustaining the Himalayan Ecosystem:** The Himalayan region is particularly sensitive to climate change. This mission focuses on protecting the fragile ecosystem and ensuring the well-being of communities dependent on these ecosystems (MoEFCC, 2023).

## International Commitments and Agreements

India is also a proactive participant in international climate agreements. The country is a signatory to the Paris Agreement, under which it has committed to reducing its carbon intensity (emissions per unit of GDP) by 33-35% by 2030, compared to 2005 levels. Additionally, India aims to achieve 40% of its installed electricity capacity from non-fossil fuel sources by 2030 (UNFCCC, 2023).

In 2021, at the COP26 summit in Glasgow, Prime Minister Narendra Modi announced India's target to achieve net-zero emissions by 2070. This commitment underscores the country's long-term vision for transitioning to a low-carbon economy while balancing its developmental needs (MoEFCC, 2023).

## State-Level Initiatives

In addition to national policies, several Indian states have developed their own climate action plans tailored to their specific vulnerabilities and resources. For instance, Gujarat has been a pioneer in renewable energy adoption, particularly in wind and solar power. The state of Maharashtra has implemented extensive water conservation programs to combat drought, while Kerala focuses on coastal zone management to mitigate the impacts of rising sea levels (TERI, 2023).

These state-level initiatives are crucial in complementing national efforts and ensuring that climate action is context-specific and locally relevant.

## Financial Mechanisms and Green Finance

Implementing climate policies requires substantial financial resources. India has been actively exploring various financial mechanisms to support its climate goals. The establishment of the National Adaptation Fund for Climate Change (NAFCC) is a significant step in this direction, providing financial assistance to states for implementing climate adaptation projects (MoEFCC, 2023).

Green bonds have also emerged as a key tool for mobilizing resources for climate-friendly projects. The Indian government and private sector have issued green bonds to finance renewable energy projects, energy efficiency improvements, and sustainable infrastructure (RBI, 2023).

Moreover, international climate finance, such as the Green Climate Fund (GCF), plays a crucial role in supporting India's climate initiatives. These funds are essential for scaling up renewable energy deployment, enhancing climate resilience, and reducing greenhouse gas emissions (GCF, 2023).

## Challenges and the Way Forward

Despite the comprehensive policy framework, India faces significant challenges in its climate change efforts. Rapid urbanization, population growth, and economic development exert tremendous pressure on natural resources, complicating the implementation of climate policies. Additionally, the transition to a low-carbon economy requires balancing developmental priorities with environmental sustainability.

However, the ongoing commitment to climate action, coupled with innovations in technology, policy, and finance, provides hope for a sustainable future. Continued investment in renewable energy, energy efficiency, and climate-resilient infrastructure will be crucial.

Furthermore, enhancing public awareness and community participation in climate action can drive grassroots-level changes, making climate policies more effective.

### Conclusion

India's policy framework for coping with climate change is robust, encompassing a wide range of strategies aimed at both mitigation and adaptation. Through national missions, international commitments, state-level initiatives, and innovative financial mechanisms, India is making significant strides in addressing the challenges posed by climate change. However, sustained efforts and continuous policy evolution are necessary to achieve long-term climate goals and ensure a resilient future for all.

### References

1. Bureau of Energy Efficiency (BEE). (2023). National Mission for Enhanced Energy Efficiency. Retrieved from BEE Website
2. Central Water Commission (CWC). (2023). National Water Mission. Retrieved from CWC Website
3. Green Climate Fund (GCF). (2023). Climate finance in India. Retrieved from GCF Website
4. Indian Council of Agricultural Research (ICAR). (2023). National Mission for Sustainable Agriculture. Retrieved from ICAR Website
5. Ministry of Environment, Forest and Climate Change (MoEFCC). (2023). National Action Plan on Climate Change. Retrieved from MoEFCC Website
6. Ministry of Housing and Urban Affairs (MoHUA). (2023). National Mission on Sustainable Habitat. Retrieved from MoHUA Website
7. Ministry of New and Renewable Energy (MNRE). (2023). National Solar Mission. Retrieved from MNRE Website
8. Reserve Bank of India (RBI). (2023). Green bonds in India. Retrieved from RBI Website
9. The Energy and Resources Institute (TERI). (2023). State-level climate action in India. Retrieved from TERI Website
10. United Nations Framework Convention on Climate Change (UNFCCC). (2023). Paris Agreement and India's commitments. Retrieved from [UNFCCC Website](#)