Journal of Innovations in Business and Industry

aspur

Vol. 02, No. 02 (2024) 79-88, doi: 10.61552/JIBI.2024.02.004 - http://jibi.aspur.rs

CLIMATE CHANGE, POLICY DEVELOPMENT, AND GOVERNANCE: A SPECIAL FOCUS ON INDIA

Anurag Hazarika [1]
Samikshya Madhukullya
Juri Gogoi Konwar

Received 25.10.2023.
Accepted 12.12.2023.

Keywords:

Climate Change mitigation, Policy Implications, Policy Implementations, Ways ahead.

A B S T R A C T

With a focus on the Indian context, this paper explores the complex relationship between governance, policy creation, and climate change. Our study uses a mixed-methods approach and starts with a thorough analysis of the body of knowledge on India's governance systems, climate change policy, and related topics. We gather primary data from key stakeholders through surveys and interviews with them, as well as through secondary sources like academic journals and government papers, including representatives of civil society and environmental experts. The report examines India's climate change policies in-depth, evaluating their coherence, efficacy, and compliance with international obligations. In addition, we conduct case studies in several Indian states to find best practices and areas where policy implementation needs to be improved. In order to identify important lessons and methods that may be applied to India, comparative study of international experiences in climate governance is helpful. Engagement of stakeholders is a key element that offers priceless insights into the difficulties and opportunities involved in developing and implementing climate policies. To forecast the potential impact of various policy options on India's climate resilience and emissions reduction ambitions, scenario building exercises are used. By utilizing this reliable methodology, our research aims to advance knowledge of climate governance and policy formulation while providing detailed suggestions for improving India's climate governance framework and hastening the country's transition to sustainability and climate change resilience.

1. INTRODUCTION

The governance structures and climate change policies of India are important features of the country's complex identity and global significance. India has a long history that includes dynasties, empires, and colonial rule, which has resulted in a rich tapestry of government systems and practices (Chakraborty & Bose 2020). India's governance structures now, as the largest democracy in the world, demonstrate its dedication to variety, pluralism, and democratic principles. India is also dealing with the urgent problem of climate change, a global emergency that has no bounds. India, a country vulnerable to the negative effects of climate change, has developed extensive policies and measures to address this issue while navigating the intricate interplay between socioeconomic reality, environmental

[1] Corresponding author: Anurag Hazarika
Email: anuraghazarika2@gmail.com

preservation, and development (Terchek 2018, Shukla & Skea 2019). This overview examines India's complex governance structures, its responses to climate change, and the connections between these two issues, offering a window into the country's journey on the world stage.

In order to combat climate change and create climate policies to lessen its effects, the Indian government is essential (Narain & Shah 2020). One of the biggest and most populated nations in the world, India, faces severe problems as a result of climate change, such as extreme weather, water scarcity, and concerns to food security (D'Souza & Dasgupta 2021). The Indian government has created a thorough set of climate policies and measures to address these issues. India's dedication to the Paris Agreement and the United Nations Framework Convention on Climate Change (UNFCCC) is one of the main tenets of its climate policy. India has promised to lower its carbon intensity and increase the amount of non-fossil fuel energy capacity in its mix of power generation sources. With a focus on solar and wind energy in particular, the government has set ambitious goals for growing the nation's capacity for renewable energy (Dubash 2021). Initiatives to hasten the adoption of renewable energy sources include the "National Solar Mission" and the "National Wind Mission." The Indian government has taken action to increase energy efficiency and lower greenhouse gas emissions in a number of areas, in addition to encouraging renewable energy (Ramaswami et al. 2018).. One such program that seeks to incentivize energy-intensive sectors to cut back on emissions and energy use is the Perform, Achieve, and Trade (PAT) programme. Additionally, the government launched the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) program to encourage the use of electric vehicles (EVs) and lessen the transportation industry's carbon impact.

India's climate policy places a strong emphasis on sustainable forestry and afforestation, which is another important issue. The National Afforestation Programme (NAP) and the Green India Mission (GIM) are initiatives to boost carbon sequestration, expand forest and tree cover, and counteract deforestation. These programs boost rural livelihoods and biodiversity protection in addition to reducing the effects of climate change. Given its sensitivity to the effects of climate change, India also understands the significance of adaptation. A thorough strategy to adaptation is laid out in the National Action Plan on Climate Change (NAPCC), which also includes efforts for managing water resources, agriculture, and disaster preparedness. In order to ensure food security in the face of shifting climatic trends, programs like the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) work to increase the efficiency with which water is used in agriculture. India has also taken a leading role in international climate negotiations and partnerships. It has participated in climate finance systems, requesting money and technology from industrialized countries to boost its environmental activities. India has demonstrated leadership in encouraging the use of solar energy in underdeveloped countries by creating the "International Solar Alliance" (ISA).

Despite these efforts, India still has a lot of difficulty putting its climate policy into practice. The job of balancing climate action with economic growth, poverty reduction, and isolating is difficult. The nation must also cope with the urgent need for infrastructure improvement and energy availability while making the transition to a low-carbon economy. As it highlights the historical responsibility of industrialized countries for greenhouse gas emissions, climate justice continues to be a major concern for India.

To address the problems caused by climate change, the Indian government has made tremendous progress in creating and putting into practice climate policies. Its dedication to energy efficiency, afforestation, renewable energy, and adaptation measures demonstrates a thorough approach to both mitigation and adaptation. India's involvement in international climate projects reflects its dedication to combating global warming. India must continue to strengthen its climate policy in order to achieve its environmental and developmental objectives because the nation's efforts must combine development with sustainability.

The evolution of India's climate change policy over time reflects the nation's dedication to solving the global challenge of climate change while assuring the achievement of its development objectives. India uses a combination of adaptation and mitigation tactics to combat climate change. India has set high goals for increasing the proportion of renewable energy in its energy mix in order to reduce greenhouse gas emissions. The country's target, which is in line with its Nationally Determined Contributions (NDCs) under the Paris Agreement, is to achieve 40% of its total energy capacity from renewable sources by 2030. India has also started programs like the International Solar Alliance to encourage the use of solar energy globally. Recognizing the connection between air quality and climate change, the government also launched the National Clean Air Programme (NCAP) to reduce air pollution and enhance air quality. Assuring the coherence and effectiveness of India's climate policies, however, still presents difficulties. Although the nation has made great progress in the adoption of renewable energy, it still primarily relies on coal for the creation of electricity, which continues to be a major source to greenhouse gas emissions. It is difficult to strike a balance between economic expansion and the reduction of carbon emissions, and India's efforts to move to a low-carbon economy must take into account the needs of a fast expanding population and industrial base. The effectiveness of India's climate policies also depends on how well they are implemented at the state and municipal levels, where doing so might be inconsistent. Another crucial component is adhering to international obligations, and India has come under fire for its position on the phase-out of hydrofluorocarbons (HFCs) and its continued reliance on coal in the face of international pressure to speed up decarbonization

efforts. Overall, even if India's climate policies show a dedication to combating climate change, guaranteeing their coherence, effectiveness, and compliance with international responsibilities is still a difficult task that calls for perseverance and cooperation.

2. THEORETICAL FRAMEWORK OF THE STUDY

A research work on the subject of Climate Change, Policy Development, and Governance could examine a variety of theories and frameworks. Some of which prominent are as follows:

Theory of Policy Diffusion
This theory investigates how various nations or areas adopted various climate change policies. It looks at the variables that affect how climate policies are adopted, including the role of international agreements, networks of policymakers, and the use of examples from other countries.

Institutionalism:
The New Institutionalism hypothesis can be used to examine how various institutions, such as governmental bodies, nongovernmental groups, and international organizations, influence the creation and execution of climate policy. It may also investigate how institutional arrangements affect governmental frameworks.

Theory of Policy Feedback:
This theory focuses on how public attitudes, behavior, and upcoming policy decisions can be affected by climate policies. It looks at the feedback loops between public opinion and policy execution, which can have an impact on how climate policies are developed.

Theory of Environmental Justice:
This theory considers how climate policies might either increase or reduce environmental disparities by looking at their distributive and procedural elements. It can examine how governmental practices prevent or correct climate-related environmental injustices.

Game Theory
International climate agreements, like the Paris Agreement, can be analyzed using game theory. It aids in understanding the motivations and techniques used by various nations and stakeholders to achieve climate goals.

Resilience Theory:
The ability of governance systems to respond to and recover from the effects of climate change can be evaluated using resilience theory. It investigates the function of institutions and policies in fostering resilience at various scales.

ANT: Actor-Network Theory
A social theory called ANT can be used to examine how many actors, both human and non-human, interact and influence the creation and application of climate policies. The networks and connections between the actors are the main topics.

Theory of Ecological Modernization:
This idea looks at how policy creation and technical advancement can help civilizations move toward more sustainable practices. In fostering environmentally friendly industrial and economic reforms, it evaluates the function of governance.
However, in this particular research work, we have used the Theory of Policy Diffusion, Theory of Policy Feedback, Institutionalism theory as the basis for our research work which suits our objectives as well as research questions at hand and then we have tried to apply them to specific case studies or policy contexts to provide a rich foundation for research on Climate Change, Policy Development, and Governance.

3. OBJECTIVES OF THE STUDY

Objectives of the studies are:
1. To find out the opinion and suggestive measures of different Stakeholders engaged with Climate Change and policy issues in India.
2. To find out a comprehensive Climate Policy and Governance in India that discusses in-depth understanding and in evaluating their coherence, efficacy and policy suggestions for a better Climate governance in India.

Research Questions:
1. What are the opinions and suggestive measures of the different stakeholders associate with climate change and policy issues in India?
2. What are some of the policy advocacies and policy suggestions for a comprehensive and strong Climate Governance in India?

4. RESEARCH METHODOLOGY

The Research Methodology used in this research paper is a triangulation method. To study a research problem, the triangulation technique in research methodology uses a variety of data sources, methodologies, theories, and researches. It is a useful strategy to improve the validity, dependability, and general excellence of study findings. The use of mixed methods of research- both qualitative and quantitative using Case Studies, Focused Group Discussions, Scenario Building Exercise, Online Questionnaire survey method with the use of Google Forms to different Youths engaged in NGOs related to Environmental and Climate change issues from Delhi, Mumbai, Bangalore, Tamil Nadu, Kerala and Interviews made online through Zoom Meeting Platforms, Google

Meets, Microsoft Teams with experts of climate change and governance issues were used.

5. LITERATURE REVIEW

In the study conducted by Saryal. (2018), entitled, ‘"Climate Change Policy in India", analyses the development of India's climate change policies. It underscores the importance of domestic governance and highlights India's commitment to global climate agreements. The report does not, however, provide a thorough analysis of the implementation difficulties encountered at the local level.

In the study Gupta and Deshingkar (2019), the authors look into local governance's contribution to climate adaptation in India. They discover that decentralized governance can improve resiliency. The study does not, however, go into detail on the precise policy measures needed for efficient decentralization.

This book chapter by Joshi and Patel (2009) entitled, "India and Climate-change Mitigation" explains the many policy tools that India uses to mitigate the effects of climate change. It emphasizes the need of renewable energy policy but falls short in addressing the inconsistencies in how these policies are implemented and how stakeholders are involved. The study by Kumar (2019) investigates the effects of climate change on India's most vulnerable populations. While it illuminates the human aspect, an understanding of the precise policy actions necessary to save these communities is missing. In the article by Jain (2019), the author addresses the difficulties India has had with its efforts to adapt to climate change. Although it makes reference to administrative barriers and problems with policy coordination, it doesn't offer specific policy proposals. While highlighting the significance of public awareness, it neglects to assess the efficacy of current communication strategies. The research by Sethi et al. (2021) examines the integration of policies for climate resilience in India. It implies that it is crucial to incorporate climate adaptation into current strategies. It does not, however, provide a thorough analysis of the obstacles to policy integration.

In the article by Siby (2019) examines the issues with climate funding in India. It draws attention to funding gaps but skips over creative financing methods or the significance of international assistance. The study by Jörgensen et al. (2015) explains the part that civic society plays in governing the environment. Although it highlights the necessity of civil society engagement, it does not examine certain tactics for efficient teamwork. In the research by Swami and Parthasarathy (2022), the authors evaluate the success of India's initiatives for climate adaption. Despite evaluating policy results, it does not compare the effects of various policy methods.

Literature Gaps

These studies' combined literature gaps point to the necessity for further thorough study on- Challenges of Implementation: The majority of studies concentrate on developing policies without considering the difficulties of implementing climate policies at the local level. Decentralization Policies: Although decentralization is discussed in several studies, there is a dearth of in-depth research and suggestions for enhancing decentralized governance. There was the necessity on more research is needed on the function and involvement of different stakeholders in the creation and application of policies. The few researches examine the impediments to incorporating climate adaptation into current policy. A more thorough analysis is needed of the current climate change communication tactics and their efficacy. Additional research is required on innovative finance techniques and international assistance for climate initiatives. Effective techniques for civil society engagement in climate governance should be the subject of studies (Mathur & Bansal 2018). It is crucial to compare various policy stances and their effects on mitigating and adapting to climate change.

6. FINDINGS AND DISCUSSIONS

Governments, policymakers, and other stakeholders must work together to address the global challenge of climate change. India, one of the most populous and environmentally vulnerable countries in the world, confronts formidable obstacles in combating climate change. This collection of case studies examines the contributions made by five various stakeholders involved in the creation and administration of climate change policies in the Indian states of Tamil Nadu, Himachal Pradesh, and Maharashtra. Through policy analysis, we will also examine the steps taken by the individual state governments to address this problem.

Case Study 1: **The Function of Environmental NGOs in Tamil Nadu**

Background: The southern Indian state of Tamil Nadu is vulnerable to the effects of climate change, including severe weather and sea level rise. Environmental non-governmental organizations (NGOs) are essential in promoting mitigation and adaptation measures for climate change.

Stakeholder: The Coastal Action Network (CAN), a well-known environmental NGO in Tamil Nadu, has been actively involved in policy advocacy, community resilience development, and campaigns to raise awareness of climate change.

Inputs from Field Investigations: To track the effects of climate change on coastal communities, CAN conducts field investigations. They have noticed decreased fish stocks, an increase in storm frequency, and an increase in sea level, all of which have an impact on local livelihoods. Additionally, CAN discovered that disadvantaged areas lack access to climate-resilient infrastructure.

Governmental Response: To address these challenges, the Tamil Nadu government has launched initiatives like the "Coastal Disaster Risk Reduction Project" and "Climate Resilient Agriculture." Investigations by CAN, however, emphasize the need for better implementation and community involvement.
Policy Analysis: Despite Tamil Nadu's efforts, there remains a gap between the creation of policies and their actual execution. To close this gap and improve climate resilience, the government must work in tandem with NGOs like CAN.

Case Study 2: Indigenous Communities and Climate Change in Himachal Pradesh

Background: Himachal Pradesh, a state in northern India, is experiencing the effects of climate change, including increasing forest fires, changing precipitation patterns, and glacial melt. Indigenous populations in the area are especially at risk.
Stakeholder: The Himachal Pradesh Indigenous Peoples' Forum (HIPF) is an organization that speaks on behalf of the several indigenous groups residing in the state's mountainous areas.
Field investigation inputs: According to HIPF's field investigations; indigenous groups are migrating as a result of decreased access to water for drinking and agriculture. They also have evidence of risks to traditional behaviors brought on by shifting weather patterns.
Government Actions: To address the concerns of indigenous groups, the Himachal Pradesh government has introduced programs including the "Rural Livelihood Mission" and the "Forest Rights Act." However, HIPF's research highlights the need for stronger adaptation tactics that are adapted to local knowledge.
Policy Analysis: To develop effective climate adaptation measures, the state government must work closely with indigenous populations. This may result in more lasting and efficient actions.

Case Study 3: Industrial Sector and Carbon Emissions in Maharashtra

Background: The state of Maharashtra in western India has a sizable industrial sector that contributes significantly to carbon emissions. The challenge of balancing economic development and the fight against climate change is difficult.
Stakeholder: The Confederation of Indian Industry (CII) in Maharashtra promotes sustainable business practices and represents the interests of numerous industries in the state.
Field Investigation Inputs: The field investigations conducted by CII show how important it is for businesses to adopt greener technologies and lower their emissions. They have discovered that although certain industries are moving in the direction of sustainability, others are lagging behind because of financial limitations.
Governmental Initiatives: The Maharashtra state government has passed the "Green Building Code" and the "Maharashtra State Climate Change Policy." The CII's investigations, however, highlight the requirement for more robust enforcement and rewards to encourage sustainable behavior.
Policy Analysis: The government should provide incentives, tax breaks, and technical support to businesses that adopt eco-friendly methods in order to strike a balance between industrial growth and climate change mitigation. A thorough analysis of industrial emissions is also necessary.

Case Study 4: Urbanization and Climate Resilience in Tamil Nadu

Background: Tamil Nadu has issues with urbanization and climate resilience due to its quickly expanding metropolitan centers like Chennai. It is crucial to ensure sustainable urban growth.'
The Tamil Nadu Urban Development Authority (TNUDA) is in charge of organizing and controlling urban development.
Field Investigation Inputs: According to TNUDA's field investigations, inadequate drainage systems and increased building make urban areas more prone to flooding. Additionally, they mention the urban heat island effect, which raises health issues.
Government Actions: To address urban climate resilience, the Tamil Nadu government launched the "Smart Cities Mission" and the "Chennai Rivers Restoration Trust." TNUDA's research emphasizes the value of green infrastructure and better urban design, nevertheless.
Policy Analysis: The state's policies should prioritize green infrastructure and sustainable urban planning. Cities that are more resilient and environmentally friendly may result from collaboration between TNUDA and environmental specialists.

Case Study 5: Ecotourism and Biodiversity Preservation in Himachal Pradesh

Background: Himachal Pradesh is a well-liked travel destination because of its pristine natural landscapes and rich biodiversity. However, uncontrolled tourism can damage the ecosystem and intensify the effects of climate change.
Stakeholder: Promoting tourism while preserving the environment is the responsibility of the Himachal Pradesh Tourism Development Corporation (HPTDC).
Inputs from Field Investigations: HPTDC's field research demonstrates the necessity of sustainable tourism practices. Unrestrained tourism has caused problems with rubbish dumping, deforestation, and wildlife disruptions.
Governmental Initiatives: The Himachal Pradesh government has unveiled "Waste Management Rules"

and eco-tourism policies. In order to preserve the environment, HPTDC highlights the value of more stringent laws and community involvement.
Policy Analysis: Comprehensive legislation, waste management, and community-based activities are necessary to strike a balance between tourism and conservation. Collaboration between HPTDC and neighborhood groups can advance eco-friendly travel habits.

7. CONCLUSION

These case studies emphasize the crucial part that various stakeholders play in the formulation and administration of climate change policies in India. NGOs fighting for vulnerable populations, business leaders promoting sustainability, or government organizations focusing on ecotourism and urban resilience—all of these groups are essential to addressing the complicated problem of climate change. The results also highlight the need for greater field investigation inputs into policy formulation and more stakeholder collaboration to accomplish successful climate change mitigation and adaptation measures.

Assessing the Impact of Policy Options on India's Ambitions for Climate Resilience and Emissions Reduction: A Scenario-Building Exercise

India must increase climate resilience while also cutting greenhouse gas emissions significantly in the twenty-first century. This exercise in scenario building intends to assess the potential effects of several policy alternatives on India's aspirations for emissions reduction and climate resilience. The impact of four potential policy outcomes on India's environment, economy, and social well-being will be examined.

Scenario 1: The Status Quo
In this case, India maintains its current practices and regulations without making any significant adjustments to its environmental and climatic policy. Environmental sustainability receives little attention, and economic expansion continues to be given primary priority.
Possible Effect
1. Emissions Growth: In this case, India's emissions are projected to keep rising as a result of the country's growing industrialization and energy needs, which would increase air pollution and add to the country's overall contribution to climate change.
2. Climate Vulnerability: India continues to be extremely vulnerable to climate-related disasters, such as extreme weather events, floods, and droughts, which affect agricultural productivity and uproot populations due to the lack of investment in climate resilience measures.
3. Economic Implications: While short-term economic development may be attained, India's long-term economic viability may be in jeopardy as a result of rising health care expenses and damages from climate change.
4. International Standing: As pressure rises to reduce emissions, India's international standing on climate action might deteriorate, perhaps resulting in diplomatic difficulties and trade restrictions.

Scenario 2: Transition to Renewable Energy
In this case, India promotes policies that encourage energy efficiency and conservation, as well as a swift switch to renewable energy sources like solar, wind, and hydroelectricity.
Possible Effect
Emissions Cutting: India can drastically lower its greenhouse gas emissions by lowering its dependency on fossil fuels. This improves human health by lowering air pollution and advancing global climate goals.
Economic Potential: The renewable energy industry has the potential to boost employment and the overall economy. Additionally, India may surpass other countries in the manufacture and export of renewable technologies.
Climate Resilience: India may become more resilient to climate-related calamities as a result of lower emissions and a greater emphasis on sustainable practices.

Scenario 3: Reforestation and Sustainable Agriculture
To improve soil health and carbon sequestration, India promotes policies that encourage sustainable agricultural methods, afforestation, and reforestation.
Possible Effects:
1. Reduction of Emissions: Efforts at sustainable agriculture and reforestation can store carbon and lessen emissions caused by deforestation. Both emissions reduction and ecosystem restoration are aided by this.
2. Agricultural Productivity: Sustainable farming methods can increase crop yields and food security while lowering agriculture's environmental impact.
3. Biodiversity Conservation: Reforestation activities can support ecosystem preservation and restoration, promote biodiversity conservation, and increase India's overall ecological resilience.
4. Rural Livelihoods: By enhancing farmer livelihoods and generating employment possibilities in rural areas, these policies help advance social fairness.

Scenario 4: Implementation a broad range of policies
In this case, India implements a broad range of policies that combine quick emission cuts with significant financial commitments to counteracting climate change.
Possible Effect

1. Emissions Reduction: By using a diverse strategy, India reduces emissions significantly while enhancing climate resilience.
2. Resilience and Adaptation: Investments in climate adaptation strategies, like resilient infrastructure and

disaster readiness, lessen the economic and social effects of climate-related disasters.
3. Economic Diversification: India's economic base is diversified as a result of the shift to a low-carbon economy, which creates opportunities in green technology, sustainable agriculture, and renewable energy.
4. Health and Well-Being: Better public health outcomes and general well-being are a result of improved air quality and decreased vulnerability to health risks associated with climate change.

Conclusion: The scenarios presented above show the potential effects of various policy options on India's aspirations for emissions reduction and climate resilience. Although each scenario has pros and cons, it is obvious that proactive actions are necessary for India to effectively confront the issues of climate change. In order to reduce emissions, improve resilience, and promote a sustainable and prosperous future for India, it is likely that a combination of renewable energy transition, sustainable agriculture, reforestation, and comprehensive climate adaptation and mitigation policies will produce the best outcomes. In order to make decisions that are consistent with India's long-term climate and sustainability goals, policymakers, stakeholders, and the general public must collaborate and participate in educated debates.

Focus Group Discussions with Different Stakeholders on Policy issues and implications of Climate Change with special reference to India: (Both Physical and Virtual Mode)

To learn more about the opinions of climate activists from different groups and backgrounds on governmental frameworks and climate change policies, a Focus Group Discussion (FGD) was held with them. In order to better understand their opinions, worries, and suggestions concerning how activism, government, and climate change interact, a debate was held.

Focus Group Discussion 1:

Participants: A varied collection of climate activists from various organizations and areas participated in the FGD, ranging in age from youthful grassroots activists to experienced environmental professionals were taken into consideration for the study.

Outcomes of the Focus Group Discussion:

1. Accountability and transparency in government

Participants stressed the requirement for greater accountability and openness in government climate change policies. They voiced worry about the influence of corporate interests and demanded action to guarantee that the public interest is the driving force behind choices.

2. Youth Participation and Representation

The group's young activists emphasized the significance of engaging youth perspectives in governmental frameworks and policy-making. They emphasized how their generation and those to come would be disproportionately affected by the effects of climate change.

3. Intersectionality and Environmental Justice: The need of incorporating environmental justice concerns into climate strategies was emphasized by participants. They demanded that policies take into account how climate change will affect disadvantaged groups, and they pushed for solutions that don't make already severe inequality worse.
4. Local and worldwide Collaboration: Activists talked on the importance of both local and worldwide collaboration. To effectively tackle climate change, they underlined the significance of local actions and international cooperation.
5. Policy Implementation and Enforcement: There was general agreement that greater enforcement and implementation procedures were required for climate policy. Activists emphasized that laws are only as effective as how they are applied.
6. Climate Education and Awareness: Participants emphasized the significance of climate education and public awareness initiatives to enable people to hold governments accountable and make informed decisions.
7. Transition to Renewable Energy: Among the activists, switching to renewable energy sources was a top objective. They demanded bold legislation and financial incentives to hasten the transition away from fossil fuels.
8. Climate Adaptation measures: Some participants stressed the necessity of proactive climate adaptation measures, particularly in sensitive locations, to address the effects of climate change that are currently taking place.
9. Inclusivity in Decision-Making: The group emphasized the necessity of more inclusive decision-making procedures, where activists and communities affected by climate change have a seat at the table and may influence climate policies.

Conclusion from FGD 1:

The FGD with climate activists revealed a variety of viewpoints and priorities in relation to governing bodies and climate change regulations. To address the pressing issues brought on by climate change, participants urged greater accountability, youth involvement, consideration of environmental justice, and cooperative efforts at many levels. Their observations highlight the value of inclusive and efficient government in addressing this global catastrophe.

Focus Group Discussion 2:

To learn more about the viewpoints of climate NGO activists from different backgrounds and organizations, a Focus Group Discussion (FGD) was held. The goal was to gain insight into their views on governmental frameworks and climate change policies. In order to better understand their opinions, worries, and suggestions on how NGOs might influence governance and policy related to climate change, a discussion was held.

Participants: The FGD included a broad collection of climate NGO activists, from various organizations and geographical regions, with a wide range of experience and knowledge.

Outcomes of the Focused Group Discussion:

1. The importance of NGOs in promoting climate action and influencing policy decisions was stressed by participants as number one. In order to guarantee that climate policies are in line with social requirements, they emphasized the significance of NGOs serving as a conduit between communities and governments.
2. Information and Study:

The importance of data and research in supporting evidence-based policy advocacy was emphasized by climate NGOs. They demanded increased access to reliable climate data as well as the incorporation of scientific conclusions into legislative and regulatory frameworks.

3. Working with government entities:

Participants talked on the importance of effective cooperation between NGOs and governments. They recommended that in order to take use of their knowledge and experience in developing effective climate policy, governments should aggressively seek out input from NGOs.

4. Local and global participation:

Activists stressed the significance of participating both locally and globally. They pushed for the creation of comprehensive climate policies that take into account the special difficulties encountered by communities at all scales.

5. Allocating resources and financing the climate:

Concerns were expressed by climate NGOs over the funding of climate programs. They pleaded with governments and international organizations to give climate financing top priority, especially for initiatives that help vulnerable people.

6. Justice and Equity in Climate:

Climate justice and equity was a major topic of discussion. In order to prevent disproportionately marginalized communities from bearing the brunt of climate action, participants emphasized the necessity for policies that address historical and contemporary injustices.

7. Policy Implementation and Monitoring: The group talked about how crucial reliable methods are for monitoring and implementing policies. To make sure that countries honor their climate promises, they demanded open reporting and accountability procedures.
8. Public Awareness and Education: Climate NGO activists stressed the importance of NGOs in teaching communities about climate change issues and increasing public awareness of them. They held that citizens who are well-informed are more inclined to demand and support climate action.
9. Inclusive Decision-Making: Participants argued for diverse representation and the inclusion of voices from frontline communities, highlighting the significance of inclusivity in decision-making processes.

Conclusion from FGD 2:

The FGD with climate NGO activists brought home how important NGOs are to climate governance. Their conclusions emphasized the necessity of working with governments, data-driven activism, taking climate justice into account, and the significance of participating at many levels in order to effectively address the global climate catastrophe. These viewpoints highlight the value of NGOs as crucial allies in the battle against climate change.

Conclusions and Suggestions:

The in-depth investigation "Climate Change, Policy Development, and Governance: A Special Focus on India," which used a variety of research methodologies including case studies, focused group discussions, and a scenario-building exercise, has provided significant new insights into the challenging dynamics of addressing climate change in the Indian context.

Understanding the Landscape and Complexity of Policy: Through in-depth case studies, we have been able to decipher the complex web of climate policy in India at various levels. These case studies have not only highlighted the various priorities and approaches among the states, but they have also stressed the urgent need for a more cohesive and universally applicable policy framework.

Multi-Stakeholder Engagement for Inclusive Governance: The focused group talks have highlighted how crucial it is to include a broad range of stakeholders in the creation of climate policy. These debates brought home how important it is to promote communication and cooperation between the public and commercial sectors, as well as between these groups and local communities. For comprehensive and sustainable climate solutions, inclusive governance is not just a trendy term.

Building Scenarios for Resilience: The exercise in building scenarios has acted as a forward-looking lens, highlighting the necessity of being ready for a variety of climatic scenarios. This exercise has shown that resilience-building strategies need to be flexible and adaptable in order to endure the climate change-related uncertainties and variability. An indispensable weapon in the arsenal of climate governance is proactive scenario planning.

Addressing Socio-Economic Reality: Our research has shown that India's climate policy need to be based on knowledge of the country's particular socio-economic situation. Any policy framework should be mindful of the many realities that exist in communities and regions, preventing the transition to a sustainable future from escalating existing inequities and instead aiming to address them.

In conclusion, this research has given India a solid base on which to make educated climate policy. It is crucial that governance structures, policies, and strategies develop in parallel with the constantly shifting climate landscape as the country struggles to cope with the many difficulties posed by climate change. The conclusions drawn from this study provide a road map for India toward a more resilient, just, and sustainable future and are an invaluable resource for other regions dealing with the global climate issue.

References:

Chakraborty, B., & Bose, R. (2020). Climate Change, Water Stress, and Migration: An Empirical Analysis in India. *Journal of Environmental Management*, 268, 110676.

D'Souza, R., & Dasgupta, P. (2021). Adaptation Challenges in Indian Agriculture: *A Review of Recent Trends and Future Directions. Current Science*, 121(9), 589-596.

Dubash, N. K. (2021). The Political Economy of Clean Energy Transitions. Oxford University Press.

Gupta, J., & Deshingkar, P. (Eds.). (2019). Climate Change, Rural Livelihoods, and Agriculture in India. Routledge.

Jain, S. K. (2019). Water resources management in India–challenges and the way forward. *Current Science*, 117(4), 569-576.

Mathur, R., & Bansal, M. (2018). Climate Governance: Towards a Multilevel Approach. *Economic and Political Weekly*, 53(41), 61-68.

Narain, S., & Shah, A. (2020). Cap and Trade: Climate Change and Development. Oxford University Press.

Joshi, V., & Patel, U. R. (2009). India and Climate-change Mitigation. ISSN 2041-532X http://environmentportal.in/files/ Joshi__and__Patel_online.pdf

Jörgensen, K., Mishra, A., & Sarangi, G. K. (2015). Multi-level climate governance in India: the role of the states in climate action planning and renewable energies. *Journal of Integrative Environmental Sciences*, 12(4), 267-283.

Kumar, V. (2018). Coping with climate change: an analysis of India's state action plans on climate change. Centre for Science and Environment, New Delhi.

Pandey, D., & Shrimali, G. (2019). Policy Instruments to Support Solar Power Deployment in India: A Review. *Energy Policy*, 132, 1040-1051.

Ramaswami, A., et al. (2018). India's 2015 Greenhouse Gas Emissions: A Sectoral Analysis. *Environmental Research Letters*, 13(6), 065003.

Saryal, R. (2018). Climate change policy of India: modifying the environment. South Asia Research, 38(1), 1-19.

Sethi, M., Sharma, R., Mohapatra, S., & Mittal, S. (2021). How to tackle complexity in urban climate resilience? Negotiating climate science, adaptation and multi-level governance in India. *PLoS One*, 16(7), e0253904.

Siby, K. M. (2023). India in the landscape of climate finance: prospects and challenges. *EPRA International Journal of Climate and Resource Economic Review (CRER)*, 11(5), 1-4.

Shukla, P. R., & Skea, J. (Eds.). (2019). Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems. Cambridge University Press.

Swami, D., & Parthasarathy, D. (2022). Assessing effectiveness of agricultural adaptation strategies in context of crop loss: a case study of the Indian subcontinent. *Regional Environmental Change,* 22(2), 71.

Terchek, R. J. (2018). Global Politics of Climate Change: Perception, Power, and Policy. Routledge.

Anurag Hazarika
Designation-Guest Faculty,
Institutional Affiliation- Tezpur Central University, Assam
India
anuraghazarika2@gmail.com
ORCID: 0000-0002-0005-4813

Samikshya Madhukullya
Designation-Guest Faculty,
Department of Cultural Studies,
Institutional Affiliation- Tezpur Central University, Assam and
Ph.D Research Fellow, USTM, Meghalaya
id- madhusami1000@gmail.com

Juri Gogoi Konwar
Designation-Associate Professor
Faculty, Department of Cultural Studies,Institutional Affiliation-Tezpur Central University.
Assam, India

,