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Climate Governance and Its Relevance in the Contemporary World

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Abstract
Climate change has emerged as one of the most complex political, economic, social and environmental challenges of the contemporary world. Addressing it requires more than technological solutions or isolated government programmes; it requires effective climate governance involving states, international organisations, local governments, businesses, civil society and communities. Climate governance refers to the institutions, policies, laws, processes and networks through which societies respond to climate change through mitigation, adaptation and resilience-building. This article examines the meaning, evolution and major dimensions of climate governance and analyses its significance in the contemporary world. It particularly discusses multilevel governance, international cooperation, climate justice, finance, democratic participation and India's climate governance framework. The article argues that effective, transparent and inclusive climate governance is essential for achieving sustainable development and addressing the growing risks associated with climate change.

Keywords: Climate governance, Climate change, Multilevel governance, Climate justice, Sustainable development

Introduction

Climate change has become one of the defining challenges of the twenty-first century. Rising global temperatures, changing rainfall patterns, sea-level rise, extreme weather events, biodiversity loss, droughts, floods and heatwaves are increasingly affecting societies and economies across the world. The Intergovernmental Panel on Climate Change (IPCC) has established that human activities, principally through greenhouse gas emissions, have unequivocally caused global warming. The consequences are already being experienced across different regions, although their intensity and distribution vary significantly (Intergovernmental Panel on Climate Change [IPCC], 2023). The climate crisis is not simply an environmental problem. It has significant implications for politics, governance, economic development, public health, food security, water security, migration, international relations and social justice. Consequently, climate change has increasingly become a question of governance. Governments need to formulate policies, establish institutions, coordinate different levels of administration, mobilise financial resources, regulate economic activities and ensure public participation. At the same time, climate change cannot be effectively addressed by national governments alone. International organisations, cities, businesses, scientific institutions, civil society organisations, indigenous communities and citizens have increasingly become important actors in climate action.

The Paris Agreement of 2015 represents a major development in global climate governance. It established a framework through which countries submit Nationally Determined Contributions (NDCs), strengthen their climate actions over time and participate in a process of collective review. The United Nations Framework Convention on Climate Change (UNFCCC) describes NDCs as being at the heart of the Paris Agreement and requiring countries to communicate successive contributions and pursue domestic mitigation measures (UNFCCC, 2026). However, the existence of international agreements does not automatically guarantee effective implementation. A major challenge of contemporary climate governance is the gap between political commitments and actual implementation. The 2025 NDC Synthesis Report demonstrates the growing importance of legal and institutional frameworks, while also highlighting the increasing involvement of subnational governments, private actors and civil society in climate action (UNFCCC, 2025). Climate governance is therefore concerned with the question of how societies collectively make, implement, monitor and enforce decisions relating to climate change. It includes both governmental and non-governmental forms of authority and operates at multiple levels, from the global to the local. This article examines the concept of climate governance and its relevance in the contemporary world. It discusses its evolution, major dimensions, theoretical significance, institutional mechanisms, challenges and relevance to developing countries, with particular attention to India.

Understanding Climate Governance

The concept of governance is broader than government. Government generally refers to formal political institutions and public authorities, whereas governance encompasses the wider processes through which public and private actors collectively formulate and implement decisions. Governance may involve governments, international organisations, corporations, civil society organisations, communities, scientific institutions and citizens. Climate governance can therefore be understood as the system of institutions, rules, policies, decision-making processes and relationships through which climate-related problems are addressed. The World Bank defines climate change governance in terms of using institutions to address governance failures, strengthen incentives and build the capacity required for climate action (World Bank, 2026). Climate governance involves two broad categories of responses are mitigation and adaptation. Mitigation seeks to reduce greenhouse gas emissions or increase carbon sinks. Examples include renewable energy, energy efficiency, sustainable transport, forest conservation and changes in industrial production. Adaptation, on the other hand, involves adjustments to actual or expected climate impacts. Examples include flood protection, drought-resistant agriculture, climate-resilient infrastructure and disaster preparedness. Effective climate governance must integrate both dimensions. Reducing emissions without preparing vulnerable populations for unavoidable climate impacts would be insufficient. Similarly, adaptation without addressing the causes of climate change would be unsustainable in the long term. The IPCC emphasises that effective climate governance requires political commitment, appropriately aligned multilevel governance, institutional frameworks, laws, policies, strategies, finance and inclusive governance processes (IPCC, 2023).

Thus, climate governance has at least five important characteristics:

1. Institutional coordination
2. Multilevel decision-making
3. Participation of state and non-state actors
4. Long-term policy commitment
5. Accountability and transparency

From Environmental Governance to Climate Governance

The emergence of climate governance can be understood within the broader development of environmental governance. During the twentieth century, environmental problems were initially treated primarily as domestic issues. Governments created environmental ministries, legislation and regulatory institutions to address pollution, deforestation and resource degradation. However, problems such as climate change demonstrated the limitations of purely national approaches. Greenhouse gases emitted in one country affect the global atmosphere. Consequently, climate change became a classic example of a collective-action problem. The establishment of the United Nations Framework Convention on Climate Change in 1992 marked an important stage in the development of international climate governance. The Kyoto Protocol subsequently attempted to establish legally differentiated commitments for reducing greenhouse gas emissions. The Paris Agreement represented a significant transformation. Rather than relying exclusively on internationally negotiated emission targets, it established a system based on nationally determined contributions combined with transparency, reporting and periodic global assessment. The Paris framework reflects the reality that climate governance is simultaneously global and national. International agreements establish common goals, while individual countries determine their domestic approaches. According to Bulkeley and Betsill (2005), climate politics increasingly operates across geographical scales and involves governance arrangements that extend beyond conventional state boundaries. Their work on sustainable cities demonstrates how climate politics involves interactions between local, national and international levels. Similarly, Betsill and Bulkeley (2006) argue that climate governance needs to be understood through a multilevel perspective because climate action involves institutions and processes operating across different scales and involving actors with different forms of authority.

Multilevel Climate Governance

One of the most important characteristics of contemporary climate governance is its multilevel nature.

Climate governance operates at:

- the international level
- the national level
- the state or provincial level
- the municipal level
- the community level.

These levels are interconnected rather than completely independent.

International Level

At the international level, the United Nations, UNFCCC, IPCC, World Bank, regional organisations and other institutions contribute to climate governance. International agreements establish broad objectives, principles and mechanisms for cooperation. The Paris Agreement seeks to strengthen the global response to climate change by keeping the increase in global average temperature well below 2°C above pre-industrial levels while pursuing efforts to limit the increase to 1.5°C (UNFCCC, 2015). The system of Nationally Determined Contributions (NDCs) is particularly important because it connects international objectives with national action (UNFCCC, 2026). Countries are required to prepare, communicate and maintain successive NDCs under the Paris Agreement.

National Level

National governments remain central actors in climate governance. They formulate climate legislation, energy policies, environmental regulations, taxation systems and development strategies. National governments also determine how international climate commitments are translated into domestic policies. The World Bank notes that climate framework legislation can create legally binding targets and institutional arrangements, while climate advisory bodies can strengthen the evidence base for policy decisions (World Bank, 2026). Such institutional mechanisms can help governments establish clear responsibilities and strengthen the implementation of climate policies.

Subnational and Local Level

Cities and local governments have become increasingly important in climate governance. Urban areas are major centres of population, economic activity, energy consumption and transportation.

Local governments can influence:

- public transport
- waste management
- urban planning
- building standards
- water management
- green spaces
- disaster preparedness
- local renewable energy programmes.

Bulkeley and Betsill (2005) demonstrate that climate governance in cities cannot be understood exclusively through national policy because local climate action is shaped by interactions across multiple geographical and political scales. Therefore, successful climate governance requires coordination between national governments and local authorities.

Major Actors in Climate Governance

Climate governance is no longer the exclusive responsibility of national governments. It involves a wide range of state and non-state actors operating at different levels. National governments remain the most important actors because they possess legislative, regulatory and financial powers. They formulate climate policies, establish legal frameworks, regulate industries and determine national development priorities. However, effective climate action increasingly depends on cooperation between governments and other actors. International organisations such as the United Nations, the United Nations Framework Convention on Climate Change (UNFCCC), the Intergovernmental Panel on Climate Change (IPCC), the World Bank and regional organisations contribute to climate governance by providing scientific knowledge, financial resources, technical assistance and institutional support. International agreements provide broad objectives and principles, while national and subnational institutions are responsible for translating these commitments into concrete policies.

Local governments have also become increasingly important. Cities and municipalities are major centres of population, economic activity, energy consumption and transportation. They can influence public transport, waste management, urban planning, building regulations, water management, green spaces and disaster preparedness. Climate governance at the local level is particularly important because many climate impacts are experienced directly by communities and local institutions. Businesses and private corporations are also important participants. Their investment decisions, production methods, energy consumption and supply-chain practices have significant implications for greenhouse gas emissions. Businesses can contribute to climate mitigation through renewable energy, energy efficiency, sustainable production and technological innovation. At the same time, effective regulation is necessary to ensure that private-sector climate commitments are credible and accountable.

Civil society organisations, environmental movements and community groups play an important role in creating public awareness, influencing policy and demanding accountability. Scientific institutions provide the evidence necessary for informed decision-making, while Indigenous Peoples and local communities contribute valuable knowledge concerning ecosystems, agriculture, forests, water resources and adaptation. The IPCC (2022) emphasises that effective climate governance benefits from engagement with civil society, businesses, youth, labour, media, Indigenous Peoples and local communities. Thus, contemporary climate governance is characterised by a movement from government-centred approaches towards more collaborative and networked forms of governance involving multiple actors across different levels.

Climate Governance and Climate Justice

Climate change raises fundamental questions of justice. The people and countries most vulnerable to climate change are not necessarily those responsible for the largest share of historical greenhouse gas emissions. Many developing countries face serious climate risks while having comparatively limited financial and technological capacity to respond.

This creates questions concerning:

- responsibility
- equality
- intergenerational justice
- distribution of costs
- access to finance
- technology transfer
- participation in decision-making

Climate justice therefore represents an important dimension of climate governance. The principle of common but differentiated responsibilities and respective capabilities (CBDR-RC) reflects the recognition that countries have common responsibilities

but differing historical contributions, capabilities and circumstances. Climate governance must therefore address both environmental effectiveness and social fairness. A climate policy may reduce emissions but still create social problems if its costs disproportionately affect poor households. For example, carbon pricing, energy reforms or restrictions on fossil-fuel use may have unequal impacts if social protection mechanisms are absent. Consequently, contemporary climate governance increasingly emphasises a just transition. A just transition seeks to ensure that workers, communities and vulnerable groups are not unfairly disadvantaged during the transition towards a low-carbon economy.

Climate Governance and Sustainable Development

Climate governance is closely connected with sustainable development. The traditional development model has often relied heavily on fossil fuels, resource extraction and carbon-intensive production. Climate change challenges this model by requiring economic development to become less carbon-intensive and more resilient. The Sustainable Development Goals (SDGs) provide a broader framework within which climate action can be understood. Climate governance is particularly connected with:

- SDG 7: Affordable and Clean Energy
- SDG 11: Sustainable Cities and Communities
- SDG 12: Responsible Consumption and Production
- SDG 13: Climate Action
- SDG 16: Peace, Justice and Strong Institutions.

Climate policy should not be isolated from development planning. Decisions concerning energy, transport, agriculture, housing, industry and public finance all have climate implications. The IPCC argues that climate-resilient development depends on integrating adaptation, mitigation and sustainable development objectives (IPCC, 2023). Thus, climate governance should be understood as a component of broader development governance.

Climate Finance and Governance

Finance is one of the most important elements of climate governance. Climate action requires substantial investment in renewable energy, resilient infrastructure, sustainable transport, climate-smart agriculture, disaster preparedness and technological innovation. Developing countries often face significant financial constraints. Consequently, international climate finance has become a major issue in global negotiations. However, climate finance is not simply a question of the amount of money available. It also involves governance questions concerning:

- who controls financial resources
- who receives them
- how projects are selected
- how funds are monitored
- whether vulnerable communities benefit
- how accountability is ensured

The World Bank emphasises that climate governance needs to be integrated into planning, budgeting, public investment, procurement and intergovernmental fiscal systems (World Bank, 2026). Therefore, green budgeting and climate-sensitive public financial management have become increasingly important. Climate governance must ensure that national development budgets are consistent with climate objectives rather than allowing climate policy to remain confined to environmental ministries.

Climate Governance and Technology

Technological innovation is another major dimension of climate governance. Renewable energy technologies, battery storage, electric vehicles, green hydrogen, carbon capture, climate-resilient agriculture and digital monitoring systems can contribute to climate action. However, technology alone cannot solve the climate crisis. Institutions must create the conditions under which technologies can be developed, financed, adopted and fairly distributed.

Technology governance therefore involves:

1. research and innovation
2. investment
3. intellectual property
4. technology transfer
5. skills development
6. infrastructure
7. regulatory frameworks

The IPCC identifies finance, technology and international cooperation as critical enablers of accelerated climate action (IPCC, 2023). For developing countries, access to affordable climate technologies is particularly important. International cooperation is therefore necessary to reduce technological inequalities between countries.

Climate Governance and Democratic Participation

Climate policies can significantly affect people's livelihoods. Therefore, democratic participation is essential. Citizens should have opportunities to participate in decisions relating to:

- land acquisition
- energy projects
- forests
- mining
- transport
- urban development
- environmental regulation
- adaptation programmes

Participatory governance can increase legitimacy and improve policy outcomes. At the same time, climate governance requires transparency. Governments should provide information concerning emissions, climate risks, financial expenditure and progress towards climate targets. Accountability mechanisms such as legislatures, courts, auditors, independent climate advisory bodies and civil society organisations can help ensure that governments implement their commitments. The World Bank specifically identifies legislatures, auditors and courts as important institutions for holding governments accountable for climate commitments (World Bank, 2026). Thus, climate governance is closely connected with democratic governance.

Climate Governance in India

India presents a particularly important case for understanding climate governance in the developing world. India faces significant climate vulnerabilities, including extreme heat, changing rainfall patterns, floods, droughts, coastal risks and threats to agriculture and water security. At the same time, India is a rapidly developing economy with significant energy requirements. India's climate governance therefore has to balance three objectives:

1. economic development
2. poverty reduction and energy access
3. climate mitigation and adaptation

India has developed a range of institutional and policy mechanisms relating to climate change. The National Action Plan on Climate Change (NAPCC) represents an important framework, supported by various national missions addressing areas such as solar energy, energy efficiency, sustainable habitat, water, Himalayan ecosystems, green India and sustainable agriculture. India's climate governance also involves state governments, municipalities, research institutions, businesses and civil society organisations. This demonstrates the importance of multilevel governance in developing countries. National targets require implementation by states and local institutions. India also illustrates the importance of the development-climate relationship. Policies that accelerate renewable energy, improve energy efficiency and expand sustainable transport can contribute simultaneously to climate objectives and economic development. However, implementation remains a major challenge. Climate governance requires stronger coordination between environmental policy and economic policy, as well as adequate financial and administrative capacity at state and local levels.

Climate Governance and Disaster Management

Climate change is increasingly associated with extreme weather and disaster risks. Consequently, climate governance overlaps significantly with disaster governance. Floods, cyclones, heatwaves, droughts and landslides can cause major economic and social losses. Recent events illustrate the growing significance of disaster preparedness and risk governance. A Reuters report in September 2026, for example, highlighted the economic consequences of Himalayan climate-related disasters and the need for stronger disaster insurance and risk-financing mechanisms in South Asia (Reuters, 2026). Effective climate governance should therefore integrate disaster preparedness, risk reduction and resilience-building into broader climate policies.

This demonstrates that climate governance should include:

- early warning systems
- disaster preparedness
- resilient infrastructure
- risk insurance
- emergency response
- climate-resilient urban planning
- community-based adaptation

Climate governance and disaster governance should therefore not operate as completely separate policy fields.

Major Challenges of Climate Governance

Despite significant developments in climate governance, several challenges continue to limit the effectiveness of climate policies. One of the most important challenges is the gap between political commitments and actual implementation. Governments may announce ambitious climate targets, but inadequate financial resources, weak institutions, insufficient technical capacity and poor coordination can prevent these targets from being achieved. Political short-termism is another major challenge. Climate change is a long-term problem, whereas democratic governments often operate according to relatively short electoral cycles. Governments may therefore prioritise policies that produce immediate economic or political benefits rather than investments whose benefits may become visible only over several decades. Effective climate governance requires institutions capable of maintaining long-term commitments despite changes in political leadership.

Coordination is also difficult because climate change cuts across almost every area of public policy. Energy, transport, agriculture, industry, finance, health, housing and urban development all have climate implications. If different ministries and

levels of government pursue conflicting objectives, climate policies can become fragmented and ineffective. Financial constraints represent another serious obstacle, particularly in developing countries. Governments must simultaneously address poverty, unemployment, infrastructure deficits, health and education while investing in climate mitigation and adaptation. Limited public resources can therefore restrict the capacity of developing countries to implement ambitious climate programmes. Inequality further complicates climate governance. Poor and marginalised communities are often more vulnerable to climate impacts because they have fewer economic and institutional resources to adapt. Climate policies themselves may also produce unequal outcomes if their costs fall disproportionately on vulnerable groups. Climate governance must therefore incorporate principles of equity, social protection and justice.

Weak institutional capacity at local and regional levels can also hinder implementation. Effective climate governance requires reliable data, technical expertise, monitoring systems, trained personnel and adequate financial resources. Many local governments, particularly in developing countries, lack these capacities. Finally, international political differences remain a significant challenge. Countries have different levels of economic development, historical contributions to greenhouse gas emissions and capacities to respond to climate change. Disagreements concerning climate finance, technology transfer, responsibility and development rights continue to influence international climate negotiations. Therefore, strengthening climate governance requires not only ambitious policies but also strong institutions, adequate finance, effective coordination, transparency and mechanisms for accountability.

Strengthening Climate Governance

Climate governance can be strengthened through a combination of legal, institutional, financial and participatory measures. Governments should establish clear legal frameworks containing measurable climate targets, defined institutional responsibilities and mechanisms for monitoring and accountability. Strong climate legislation can provide continuity and reduce the possibility that climate commitments will change with short-term political priorities. Climate considerations should also be integrated into national development planning. Climate policy should not remain the exclusive responsibility of environment ministries. Energy, agriculture, transport, industry, finance, health and urban development policies should incorporate climate objectives. Such integration can help avoid conflicts between economic development and environmental sustainability.

Strengthening local governments is particularly important. Local authorities require adequate financial resources, technical expertise and administrative capacity to implement climate policies effectively. Since many climate impacts are experienced locally, empowering municipalities and community institutions can improve adaptation and resilience. Climate-sensitive budgeting is another important mechanism. Public expenditure and investment decisions should be assessed according to their climate implications. Green budgeting can help governments direct resources towards renewable energy, climate-resilient infrastructure, sustainable transportation and other low-carbon and resilient development activities.

Monitoring and evaluation mechanisms should also be strengthened. Governments need reliable indicators to measure progress towards climate targets. Transparent reporting can enable legislatures, civil society, researchers and citizens to assess whether governments are fulfilling their commitments. Public participation is equally important. Communities, civil society organisations, youth, women, workers and vulnerable populations should have meaningful opportunities to participate in climate decision-making. Participation can improve the legitimacy and effectiveness of policies by incorporating local knowledge and diverse perspectives. Scientific capacity should also be strengthened. Governments need reliable climate data, risk assessments and scientific expertise to design evidence-based policies. Cooperation between universities, research institutions and government agencies can contribute significantly to this objective. Finally, international cooperation remains essential. Developing countries require access to finance, technology and capacity-building support. International institutions and developed countries therefore have an important role in strengthening the ability of developing countries to undertake climate mitigation and adaptation.

Relevance of Climate Governance in the Contemporary World

Climate governance has become increasingly relevant because climate change now affects almost every dimension of contemporary society. Politically, climate change has become an important issue in domestic politics and international diplomacy. Governments are required to respond to growing public concern while balancing competing economic and political

interests. The economic relevance of climate governance is equally significant. The transition towards a low-carbon economy is transforming energy systems, industries, employment patterns, investment and international trade. Governments need to manage this transformation in a way that promotes economic development while reducing greenhouse gas emissions. Climate governance also has major social implications. Climate change can increase poverty, inequality, food insecurity, water insecurity and displacement. Vulnerable populations frequently experience the greatest impacts despite having contributed relatively little to global greenhouse gas emissions. Effective climate governance must therefore incorporate social justice and protection for vulnerable groups. Climate change is also increasingly relevant to security. Extreme weather events, resource scarcity, food insecurity, water stress and climate-induced displacement can contribute to social tensions and instability. Climate governance must therefore be connected with disaster management, human security and resilience-building.

International relations are another important dimension. Climate negotiations influence relations between developed and developing countries, particularly concerning finance, technology transfer, historical responsibility and development rights. Climate diplomacy has consequently become an important component of contemporary international politics. Urban governance has also become increasingly important. Rapid urbanisation means that cities are central sites of climate action. Decisions relating to public transport, housing, waste management, energy use, land-use planning and urban infrastructure directly influence both emissions and climate vulnerability. Finally, climate governance is closely connected with democratic governance. Climate policies affect people's livelihoods and future opportunities. Transparency, participation, accountability and access to information are therefore essential for ensuring that climate policies are legitimate and socially acceptable. In this context, climate governance should be understood not simply as environmental administration but as a comprehensive approach to managing the political, economic, social and environmental consequences of climate change. Its relevance will continue to increase as societies confront more complex and interconnected climate risks.

Conclusion

Climate change represents a profound governance challenge because it transcends national boundaries, political jurisdictions and conventional policy sectors. It cannot be addressed solely through environmental regulation or technological innovation. Effective climate action requires institutions capable of coordinating diverse actors, mobilising resources, implementing policies, monitoring progress and ensuring accountability. Climate governance provides an important framework for understanding these processes. It recognises that climate action takes place at multiple levels and involves governments as well as international organisations, businesses, civil society, scientific institutions and communities. The Paris Agreement and the system of Nationally Determined Contributions have established an important global framework, but their success ultimately depends on domestic implementation. The continuing gap between climate ambition and actual emissions reductions demonstrates the importance of governance capacity. The UNFCCC's recent NDC analysis also shows the growing importance of legal frameworks, subnational governments, private-sector participation and civil society in implementing climate commitments. Climate justice is another central concern. Effective climate governance must address unequal vulnerabilities and ensure that climate policies do not disproportionately burden poor and marginalised populations. Similarly, climate finance and technology transfer remain crucial for enabling developing countries to pursue low-carbon and climate-resilient development. The contemporary world therefore needs climate governance that is effective, democratic, inclusive, transparent, science-based and socially just. Governments must integrate climate concerns into economic planning, budgeting, infrastructure development and social policy. Local governments must be empowered, while international institutions must strengthen cooperation and financial and technological support. Ultimately, the relevance of climate governance lies in its ability to connect environmental sustainability with political responsibility, economic transformation and social justice. Climate change is not simply a problem of the atmosphere but it is a problem of collective decision-making. The quality of institutions and governance arrangements will significantly determine whether societies can manage the risks of climate change and move towards a sustainable and resilient future.

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