

Climate Change Litigation in India: Judicial Innovation, Contemporary Challenges, and Future Trajectories

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Abstract

Climate change has emerged as one of the most serious environmental and human rights challenges of the present century. In India, despite the absence of a comprehensive climate change statute, courts have increasingly relied on constitutional interpretation and established principles of environmental jurisprudence to address climate-related harms. This article undertakes a doctrinal analysis of climate change litigation in India, focusing on the evolving role of the judiciary. It critically examines key decisions such as *Ridhima Pandey v. Union of India* and *M.K. Ranjitsinh v. Union of India*, through which Indian courts have gradually moved towards recognising protection from the adverse effects of climate change as part of fundamental rights. The article argues that while judicial innovation has significantly strengthened climate jurisprudence, effective climate governance ultimately requires comprehensive legislative and institutional intervention.

I. INTRODUCTION

Climate change has emerged as one of the most profound environmental and human challenges of the contemporary era. The increasing frequency of extreme weather events, rising sea levels, changing precipitation patterns, and accelerating biodiversity loss pose serious threats to ecological balance, economic stability, and human well-being. These impacts are especially acute in developing countries such as India, where a significant portion of the population depends directly on climate-sensitive sectors, including agriculture, fisheries, and forest-based livelihoods.

Despite the scale and urgency of the climate crisis, India's legal response remains largely indirect. While various policies, action plans, and regulatory mechanisms address environmental protection and sustainable development, the country does not yet have a comprehensive and dedicated climate change statute. As a result, climate-related concerns are often addressed through broader environmental laws and constitutional provisions, leading to fragmented and sometimes inconsistent legal outcomes.

In this legislative context, the judiciary has assumed an increasingly important role in responding to climate-related harms. Indian courts have a long tradition of expanding the scope of fundamental rights through purposive constitutional interpretation, particularly in environmental matters. Environmental protection has been integrated into the right to life and personal liberty, enabling courts to intervene where environmental degradation threatens human health, dignity, and survival. Globally, climate change litigation has emerged as an important legal strategy to address governmental inaction and regulatory shortcomings. In India, climate litigation has developed

within the broader framework of environmental public interest litigation, which has historically served as a powerful mechanism for advancing environmental governance and access to justice. This article examines the evolution of climate change litigation in India, analyses the judicial response to climate challenges, and evaluates the need for legislative reform to complement judicial innovation.

II. CONSTITUTIONAL AND STATUTORY FRAMEWORK FOR CLIMATE PROTECTION

A. Constitutional Provisions

Although the Constitution of India does not expressly refer to climate change, it provides a strong constitutional foundation for environmental protection. The Supreme Court has consistently interpreted Article 21 of the Constitution, which guarantees the right to life and personal liberty, to include the right to a clean and healthy environment.¹ This interpretation has enabled courts to address environmental degradation that poses a direct threat to human life and dignity.

In addition to Article 21, the Constitution contains explicit environmental provisions in the form of Directive Principles of State Policy and Fundamental Duties. Article 48A mandates the State to protect and improve the environment and to safeguard forests and wildlife, while

¹ Subhash Kumar v. State of Bihar, (1991) 1 S.C.C. 598 (India).

Article 51A(g) imposes a duty on citizens to protect and improve the natural environment. Although these provisions are not directly enforceable, courts have relied upon them as interpretative aids to strengthen environmental adjudication.²

B. Statutory Framework

India's environmental regulatory regime consists of statutes such as the Environment (Protection) Act, 1986, the Air (Prevention and Control of Pollution) Act, 1981, and the Water (Prevention and Control of Pollution) Act, 1974. The establishment of the National Green Tribunal under the National Green Tribunal Act, 2010 marked an important institutional development by providing a specialised forum for environmental disputes.

However, despite this framework, India lacks a comprehensive climate change statute. Consequently, climate-related disputes are addressed indirectly through constitutional remedies or general environmental legislation, resulting in fragmented legal responses to climate harms.

III. DOCTRINAL FOUNDATIONS OF INDIAN ENVIRONMENTAL JURISPRUDENCE

Indian climate change litigation is grounded in well-established principles of environmental jurisprudence. In *M.C. Mehta v. Union of India* (Oleum Gas Leak case), the Supreme Court evolved the doctrine of absolute liability for hazardous industries and affirmed that environmental protection forms an essential component of the right to life under Article 21.³

The Court has also embraced the public trust doctrine, holding that the State holds natural resources in trust for the public and must protect them from private exploitation.⁴ Further, principles such as sustainable development, the precautionary principle, and intergenerational equity have been consistently applied by Indian courts. These principles are particularly relevant in

the context of climate change, which involves long-term, transboundary, and irreversible environmental harm.

² M.C. Mehta v. Kamal Nath, (2000) 6 S.C.C. 213 (India).

³ M.C. Mehta v. Union of India, A.I.R. 1987 S.C. 1086 (India)..

⁴ M.C. Mehta v. Kamal Nath, (2000) 6 S.C.C. 213 (India).

IV. EMERGENCE OF CLIMATE CHANGE LITIGATION IN INDIA

A. *Ridhima Pandey v. Union of India*

One of the earliest cases to directly raise climate change concerns in India was *Ridhima Pandey v. Union of India*, decided by the National Green Tribunal in 2019.⁵ The petitioner alleged that the failure of the State to take adequate steps to mitigate climate change violated fundamental rights under Articles 14 and 21, as well as environmental principles such as intergenerational equity.

The National Green Tribunal dismissed the petition, holding that climate change issues were already being addressed through existing policies, action plans, and international commitments. While the decision did not grant substantive relief, it remains significant for formally introducing climate change claims into Indian environmental adjudication.

B. *M.K. Ranjitsinh v. Union of India*

A major development in Indian climate jurisprudence occurred with the Supreme Court's decision in *M.K. Ranjitsinh v. Union of India* (2024).⁶ The case concerned the impact of overhead power transmission lines on the critically endangered Great Indian Bustard. While balancing renewable energy development with wildlife conservation, the Court engaged directly with climate change considerations.

The Supreme Court explicitly recognised that the **right to be free from the adverse effects of climate change** forms part of the fundamental rights guaranteed under Articles 14 and 21 of the Constitution. The Court observed that climate change poses serious threats to equality, life, health, and human dignity, and emphasised that constitutional interpretation must evolve to respond to contemporary environmental challenges.

V. JUDICIAL INNOVATION AND THE RECOGNITION OF CLIMATE RIGHTS

The recognition of climate protection as part of fundamental rights reflects the Indian judiciary's long-standing tradition of purposive constitutional interpretation. By reading

⁵ *Ridhima Pandey v. Union of India*, Original Application No. 187 of 2017, Nat'l Green Tribunal (India Jan. 15, 2019).

⁶ *M.K. Ranjitsinh v. Union of India*, 2024 INSC 280 (India)

environmental and climate concerns into Article 21, courts have transformed abstract environmental values into enforceable legal rights.

The Supreme Court in *M.K. Ranjitsinh* also referred to India's international climate commitments, including the Paris Agreement, as persuasive interpretative tools.⁷ Although international treaties are not directly enforceable in Indian courts, judicial reliance on them signals an emerging willingness to align domestic constitutional law with global climate norms.

VI. CONTEMPORARY CHALLENGES IN CLIMATE CHANGE LITIGATION IN INDIA

Despite significant judicial innovation, climate change litigation in India continues to face multiple structural, institutional, and doctrinal challenges that limit its transformative potential.

A. Absence of a Comprehensive Climate Change Statute

One of the most fundamental challenges is the absence of a dedicated climate change legislation in India. Unlike several jurisdictions that have enacted specific climate frameworks, India lacks a statute that clearly defines emission reduction targets, institutional responsibilities, enforcement mechanisms, and accountability standards. Consequently, climate-related disputes are addressed indirectly through constitutional remedies or general environmental legislation such as the Environment (Protection) Act, 1986.

This legislative vacuum results in fragmented and case-specific adjudication. Courts are compelled to rely on constitutional interpretation and environmental principles without clear statutory guidance, leading to uncertainty in compliance standards and remedies. While judicial innovation has partially filled this gap, courts are institutionally ill-equipped to design and implement comprehensive climate policy, which remains primarily a legislative and executive function.⁸

B. Institutional and Technical Limitations of Courts

Climate change litigation involves complex scientific evidence, including climate modelling, emissions data, and long-term risk projections. Indian courts, including specialised forums such

⁷ Paris Agreement, 2015 (United Nations Framework Convention on Climate Change).

⁸ Lavanya Rajamani, *Climate Change and India: Policy, Law and Institutions*, 19 Rev. Eur. Comp. & Int'l Envtl.

L. 145, 152–54 (2010).

as the National Green Tribunal, often lack the technical expertise required to independently assess such evidence.

Although courts occasionally rely on expert committees, this approach raises concerns regarding consistency, transparency, and effective judicial scrutiny. In *A.P. Pollution Control Board v. Prof. M.V. Nayudu*, the Supreme Court itself acknowledged the limitations of traditional adjudicatory mechanisms in addressing technically complex environmental disputes and highlighted the need for specialised knowledge.⁹ These challenges are amplified in climate litigation, where impacts are cumulative, long-term, and often irreversible.

C. Challenges of Causation and Attribution

Establishing causation presents another significant obstacle in climate change litigation. Climate change is a global phenomenon resulting from cumulative emissions over time, making it difficult to attribute responsibility to specific governmental actions or omissions. Indian courts traditionally require a demonstrable nexus between State action and environmental harm, a standard that is difficult to satisfy in climate-related cases.

While principles such as the precautionary principle and intergenerational equity provide some doctrinal flexibility, Indian jurisprudence has yet to develop a consistent framework for climate attribution. This limitation restricts the ability of courts to grant effective remedies for climate harm, particularly where the injury is future-oriented or probabilistic in nature.¹⁰

D. Separation of Powers and Judicial Overreach Concerns

Judicial intervention in climate governance also raises concerns relating to the separation of powers. Climate policy involves complex trade-offs between environmental protection, economic development, energy security, and social welfare. When courts issue directions affecting infrastructure development or energy policy, they risk encroaching upon the domain of the executive and legislature.

E. Access to Justice and Procedural Barriers

Despite the expansion of environmental public interest litigation in India, access to climate justice remains uneven. Procedural barriers, lack of legal awareness, evidentiary burdens, and litigation costs limit the participation of climate-vulnerable communities. Climate harms often

⁹ A.P. Pollution Control Bd. v. Prof. M.V. Nayudu, (1999) 2 SCC 718 (India).

¹⁰ Jacqueline Peel & Hari M. Osofsky, Climate Change Litigation's Regulatory Pathways, 4 *J. Envtl. L.* 1, 12–15 (2015).

manifest gradually and disproportionately affect marginalised populations, making them difficult to articulate within traditional legal frameworks of injury and causation.

Without procedural innovation and greater community engagement, climate litigation risks remaining confined to elite or urban actors rather than functioning as an inclusive mechanism for climate justice.¹¹

VII.ROLE OF THE NATIONAL GREEN TRIBUNAL IN CLIMATE ADJUDICATION

The National Green Tribunal (NGT) occupies a central position in India's environmental adjudicatory framework and has the institutional potential to contribute meaningfully to climate change litigation. Established under the National Green Tribunal Act, 2010, the Tribunal was created to provide specialised and expeditious adjudication of environmental disputes involving complex scientific and technical questions. Its composition, which includes both judicial and expert members, distinguishes it from ordinary courts and enables it to address environmentally sensitive disputes through informed decision-making.

Although the NGT does not possess an explicit statutory mandate to adjudicate climate change claims, it has indirectly engaged with climate-related concerns through cases involving environmental clearance, industrial pollution, deforestation, and large infrastructure projects. Many of these disputes implicate issues such as greenhouse gas emissions, ecosystem degradation, and long-term environmental risk, all of which are closely connected to climate governance. As a result, climate considerations often arise before the Tribunal in a fragmented and incidental manner rather than as standalone claims.

Judicial principles developed by the Supreme Court have significantly influenced environmental adjudication before the NGT. In *Hanuman Laxman Aroskar v. Union of India*, the Supreme Court emphasised the importance of sustainable development, intergenerational equity, and rigorous environmental impact assessment in the approval of large-scale development projects.¹² These principles are foundational to environmental and climate governance and provide normative guidance for adjudicatory bodies such as the NGT when assessing projects with long-term ecological consequences.

At the same time, the Tribunal has generally demonstrated institutional restraint in directly

addressing climate mitigation obligations. In the absence of clear legislative standards on

¹¹ Jona Razzaque, Access to Environmental Justice: Role of the Judiciary in India, 32 *J. Env'tl. L.* 365, 378–80 (2020).

¹² Hanuman Laxman Aroskar v. Union of India, (2019) 15 S.C.C. 401 (India).

emission reduction, climate targets, or attribution of responsibility, the NGT has tended to defer to executive policy frameworks and international commitments rather than issuing binding climate-specific directions. This cautious approach reflects the structural limitations faced by adjudicatory bodies when addressing a global, cumulative, and policy-intensive phenomenon such as climate change.

Despite these constraints, the NGT's procedural flexibility, reliance on expert knowledge, and comparatively accessible forum make it a crucial institution for addressing climate-related environmental harm in India. The Tribunal is particularly well-positioned to assess the environmental consequences of development activities that contribute to climate vulnerability, even if it cannot comprehensively regulate climate change itself. Legislative clarification of the NGT's role in climate governance could strengthen its capacity to address climate disputes in a more direct, coherent, and effective manner, while maintaining respect for the separation of powers

VIII.COMPARATIVE AND GLOBAL PERSPECTIVES

Indian climate jurisprudence does not evolve in isolation. Courts across jurisdictions have increasingly relied upon constitutional and human rights frameworks to address governmental inaction on climate change, and these developments have persuasive value for Indian courts as well. One of the most significant international precedents is the decision of the Supreme Court of the Netherlands in *Urgenda Foundation v. State of the Netherlands*¹³. In this case, the Court held that the Dutch government had a legal obligation to reduce greenhouse gas emissions in order to protect the right to life and the right to respect for private and family life under Articles 2 and 8 of the European Convention on Human Rights. The Court ordered the State to reduce emissions by at least 25% compared to 1990 levels, marking the first instance in which a national court imposed a binding emissions reduction obligation on a State grounded in human rights law.

Another influential decision from the Global South is *Leghari v. Federation of Pakistan*¹⁴, decided by the Lahore High Court. In this case, the petitioner challenged the failure of the

¹³ *Urgenda Found. v. State of the Netherlands*, ECLI:NL:HR:2019:2007 (Sup. Ct. Neth. Dec. 20, 2019).

¹⁴ *Leghari v. Fed'n of Pakistan*, W.P. No. 25501/2015 (Lah. High Ct. Sept. 4, 2015).

Pakistani government to implement its National Climate Change Policy. The Court recognised climate change as a serious threat to fundamental rights, including the rights to life, human dignity, and property guaranteed under the Constitution of Pakistan. It held that governmental delay in climate action amounted to a violation of these rights and directed the establishment of a Climate Change Commission to ensure effective policy implementation.

Although Indian courts have not treated these foreign judgments as binding precedents, they illustrate a growing global judicial consensus that climate change obligations are justiciable and

closely linked to fundamental rights.

IX. CLIMATE CHANGE AND THE EXPANDING SCOPE OF ARTICLE 21

Indian constitutional jurisprudence has consistently recognised that the content of fundamental rights must evolve in response to changing social, economic, and environmental realities. Article 21 of the Constitution, which guarantees the right to life and personal liberty, has been interpreted expansively by the Supreme Court to include the right to a clean and healthy environment, access to pollution-free air and water, and protection of human health and dignity. This dynamic interpretation provides a constitutional foundation for addressing environmental degradation and climate-induced harm within the framework of fundamental rights.

A significant doctrinal foundation for environmental rights under Article 21 was laid in *Subhash Kumar v. State of Bihar*, where the Supreme Court held that the right to life includes the right to enjoyment of pollution-free water and air.¹⁵ The Court recognised that environmental pollution directly affects the quality of life and human survival, thereby bringing environmental protection within the ambit of constitutional guarantees. This principle has since been relied upon in numerous environmental cases and offers a constitutional basis for addressing the adverse impacts of climate change, which increasingly threaten air quality, water resources, and ecological stability.

The scope of Article 21 was further strengthened in *Virender Gaur v. State of Haryana*, in which the Supreme Court emphasised that environmental protection is essential for the full enjoyment of the right to life and human dignity.¹⁶ The Court observed that ecological imbalance and environmental degradation undermine the basic conditions necessary for a dignified human

¹⁵ *Subhash Kumar v. State of Bihar*, (1991) 1 S.C.C. 598 (India).

¹⁶ *Virender Gaur v. State of Haryana*, (1995) 2 S.C.C. 577 (India).

existence. By linking environmental protection with human dignity, the judgment justified judicial intervention to prevent ecological harm even in the absence of explicit statutory safeguards, reinforcing the constitutional character of environmental rights.

At the international level, human rights bodies have increasingly acknowledged the connection between climate change and the right to life. In *Teitiota v. New Zealand*, the United Nations Human Rights Committee recognised that climate change poses serious threats to the effective enjoyment of the right to life, particularly for vulnerable populations exposed to environmental degradation and extreme climatic events.¹⁷ Although the individual claim was dismissed on factual grounds, the decision is significant for affirming that climate change can, in principle, engage human rights obligations. These developments provide persuasive guidance for Indian courts and reinforce the legitimacy of a rights-based approach to climate adjudication under Article 21.

X. CONCLUSION

Climate change litigation in India has undergone a gradual but significant evolution, shaped largely by judicial innovation in the absence of comprehensive climate legislation. Indian courts have drawn upon constitutional interpretation, established principles of environmental jurisprudence, and comparative global developments to address climate-related harms within existing legal frameworks. Decisions such as *M.K. Ranjitsinh v. Union of India* mark an important doctrinal shift

by explicitly recognising protection from the adverse effects of climate change as part of the fundamental rights guaranteed under Articles 14 and 21 of the Constitution. This recognition reflects the judiciary's responsiveness to contemporary environmental challenges and its willingness to adapt constitutional norms to emerging realities.

At the same time, the trajectory of climate change litigation in India reveals inherent limitations of a judiciary-driven approach. Courts are institutionally constrained in addressing complex scientific questions, long-term climate risks, and policy-intensive issues such as emission reduction targets and energy transitions. The National Green Tribunal, despite its specialised composition and procedural flexibility, lacks an explicit statutory mandate to adjudicate climate

¹⁷ *Teitiota v. New Zealand*, Human Rights Committee, Commc'n No. 2728/2016, U.N. Doc. CCPR/C/127/D/2728/2016 (2020).

change claims, resulting in fragmented and indirect engagement with climate concerns. These structural and doctrinal constraints underscore the fact that judicial intervention, while important, cannot serve as a substitute for comprehensive legislative and policy action.

The expanding interpretation of Article 21 to include environmental quality, human dignity, and protection from ecological degradation provides a strong constitutional foundation for climate adjudication. Judgments such as *Subhash Kumar v. State of Bihar* and *Virender Gaur*

v. State of Haryana demonstrate that environmental protection is integral to the right to life and dignified existence. When viewed alongside international developments, including the recognition by human rights bodies that climate change poses serious threats to fundamental rights, Indian constitutional jurisprudence is well-positioned to support a rights-based approach to climate governance. However, the effectiveness of such an approach ultimately depends on the development of clear legal standards and institutional mechanisms.

XI. RECOMMENDATIONS

First, there is a pressing need for the enactment of comprehensive climate change legislation in India. Such legislation should clearly define emission reduction obligations, institutional responsibilities, enforcement mechanisms, and accountability frameworks. A statutory climate framework would provide much-needed guidance to courts and tribunals, reduce reliance on ad hoc constitutional interpretation, and enhance legal certainty in climate governance.

Second, legislative clarification of the role and jurisdiction of the National Green Tribunal in climate-related matters is essential. Explicit recognition of climate change within the NGT's mandate would enable the Tribunal to address climate disputes more coherently and effectively, while continuing to respect the separation of powers and the policy-making role of the executive.

Third, greater integration of scientific expertise into judicial decision-making is necessary to address the technical complexity of climate litigation. This may be achieved through permanent expert panels, clearer standards for evaluating scientific evidence, and improved coordination between adjudicatory bodies and regulatory institutions.

Finally, climate litigation must be complemented by broader policy reforms and inclusive governance mechanisms that prioritise the needs of climate-vulnerable communities. Access to justice, procedural innovation, and public participation are crucial to ensuring that climate adjudication

contributes meaningfully to climate justice rather than remaining confined to elite or symbolic litigation.

In conclusion, while Indian courts have played a crucial role in advancing climate jurisprudence through constitutional interpretation and judicial innovation, sustainable and effective climate governance requires a coordinated legislative, institutional, and policy-driven response. Judicial intervention should function as a catalyst and safeguard, not as a substitute for democratic climate action. Only through such a balanced approach can India effectively address the legal and human challenges posed by climate change.