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BEYOND THE PRESENT: CONSTITUTIONAL MECHANISMS FOR INTERGENERATIONAL CLIMATE EQUITY

- Navanshu Pawar & Manvi Chaturvedi[1]

Abstract

The climate crisis extends beyond traditional environmental issues and requires a paradigm shift in constitutional responsibilities over time. This paper examines how intergenerational equity has become a constitutional necessity in India and how the principle has reshaped the balance of rights, duties, and democratic responsibilities between current and future generations. This paper employs the methodology of doctrinal research and examines the evolution of Indian environmental jurisprudence, tracing its development from fragmented statutory provisions to the establishment of institutions for climate governance as a constitutional provision. The discussion illustrates how modern judicial activism, drawing on cultural, philosophical, and comparative legal traditions, has articulated an intergenerational climate justice framework based on sustainable development, precaution, and equity.

The study also reveals important gaps between constitutional acknowledgment and actual execution,which demonstrates the need to have institutional frameworks that go beyond electoral cycles and short-term political interests. The paper demonstrates that the concept of environmental protection has evolved from a matter of preference in policy to one of necessity in democratic governance, as recognized by the constitutional Court through the analysis of cases involving intergenerational environmental harm and the irreversible consequences of legislative inaction.The work contributes to the growing field of climate constitutionalism, proposing ways in which future-oriented governance can ensure constitutional guarantees for

[1] Student at CHRIST (Deemed to be University) Bangalore

unborn generations without compromising the democratic legitimacy of current constituencies.

Keywords - *Intergenerational Equity, Constitutionalism, Climate Justice, Environmental Governance, Sustainable Development.*

INTRODUCTION

Constitutional democracies are guided by one primary assumption: victims of government policies should be part of the process of decision-making. This value completely fails to hold when it comes to addressing climate change, where those most affected, such asfuture generations, have no political representation in the present decision-making processes.[2]. Brian Barry terms this a "grand-scale prisoner's dilemma" across temporal boundaries, where present-day actors impose costs on future generations who possess no means to either participate or retaliate. This asymmetry distinguishes climate change from traditional environmental problems, creating what Stephen Gardiner identifies as a "*perfect moral storm*", a convergence of global, intergenerational, and theoretical challenges that complicate ethical and legal responses.[3]

The constitutional system in India offers uniquewaysfor addressing this asymmetry througha broad interpretation of the right to life in Article 21. The jurisprudential development by the Supreme Court from *Maneka Gandhi*[4] The most recent environmental rulings reveal the Constitution's capacity to evolve beyond its original framers' intentions. However, there exist significant gaps between the constitutional acknowledgment and actual execution. The most recent indications from the Supreme Court in recognizing intergenerational equity in environmental matters lack specific institutional means to maintain climate control, which Rajamani refers to as a "climate governance deficit."[5]

Intergenerational harm from climate change is transmitted in multiple, interconnected waysthat compoundover time. Environmental degradation manifests through greenhouse gas

[2]Edith Brown Weiss, In Fairness to Future Generations and Sustainable Development, 8 Am. U. Int' l L. Rev. 19, 19-26 (1992).
[3]Stephen M. Gardiner, A Perfect Moral Storm: Climate Change and Intergenerational Ethics 6-8 (2011).
[4]Maneka Gandhi v. Union of India, AIR 1978 SC 597 (India); see also Upendra Baxi, The Avatars of Indian Judicial Activism: Explorations in the Geographies of [In]Justice, in Fifty Years of the Supreme Court of India 156-209 (S.K. Verma ed., 2000).
[5]Lavanya Rajamani, The Reach and Limits of the Climate Transparency Framework, 51 Current Opinion Env't Sustainability 119 (2021).

emissions, ecological impairment, and resource depletion, which are exacerbated over time. Health impacts include exposure to climate-sensitive diseases, heat stress, air pollution, and food insecurity,which result in lifelong susceptibility of the impacted populations. Economic consequences include loss of productivity, infrastructure damage, adaptation, and resource conflicts, which cause financial burdens and fewer opportunities for future generations.

JUDICIAL EVOLUTION OF THE ENVIRONMENTAL JURISPRUDENCE

Environmental jurisprudence in Indian is built upon philosophical traditions that view the relationship of man and nature as one based on interdependence.[6] The Vedic conception, primarily as expressed in the Purusha Sukta of the Rig Veda,offers a cosmological understanding in which the stability of the environment, along with the well-being of human beings, is interconnected. The sacred reverence for natural resources exemplified in the veneration of rivers like the Ganges reflects an ancient recognition that ecological health underpins human prosperity. This cultural foundation has evolved into what Upendra Baxi has described as ecological constitutionalism, whereby traditional ecological ethics are incorporated into constitutional explanations of the fundamental rights, with the right to life under Article 21 being the most prominent of them.[7].

This philosophical tradition, however,found limited expression in the formal Indian legal tradition. The pre-constitutional period was marked by disjointed statutory laws thatemphasized controlling pollution rather than holistic environmental protection. The Water (Prevention and Control of Pollution) Act of 1974, which established the Central and State Pollution Control Boards, exemplified this approach.[8]. Although these boards had considerable regulatory powers in theory, their efficiency was compromised by gaps in enforcement, regulatory capture, and a lack of connection between environmental policy and democratic responsiveness,which Shyam Divan and Armin Rosencranz identified as core issues.[9]. This regulatory framework operated independently ofconstitutional principles, whichresulted in environmental protection not being linked to the discourse of fundamental rights.

[6]Kapila Vatsyayan, Ecology and Indian Myth, 19 India Int' l Centre Q. 175 (1992).
[7]Upendra Baxi, Environmental Protection and the Law: The Indian Experience, in Environmental Protection and the Law 25-48 (Upendra Baxi ed., 1990).
[8]The Water (Prevention and Control of Pollution) Act, 1974, §§ 3-5.
[9]Shyam Divan & Armin Rosencranz, Environmental Law and Policy in India 125-47 (3d ed. 2011).

The constitutional transformation began with the Supreme Court's recognition that environmental degradation could not be addressed through isolated statutory mechanisms alone but required integration with fundamental constitutional rights. This marked the beginning of a jurisprudential evolution that would synthesize ancient environmental knowledge together with contemporary constitutional interpretation,transforming environmental protection into a constitutional imperative.

Subhash Kumar v. State of Bihar[10]Acknowledged the right to a pollution-free environment as a constitutional right under Article 21. The Court, however, restricted this only to cases involving personal injury, revealing the dilemma between the rights of an individual and the overall environmental concern. *Vellore Citizens Welfare Forum v.Union of India resolved this limitation.*[11], that established a comprehensive constitutional system of environmental protection. The Court recognised that the threat to life, health, or property by air, water, and soil pollution under Article 21 hampered sustainable development. Furthermore, the development of*precaution and polluter pays principles* transformed the State into an observer rather than an enforcer of environmental legislation. The Court stressed the development should be sustainable, so that the current actions are not at the cost of future generations that will enjoy the environmental heritage. In *M.C. Mehta v. Kamal Nath*[12]The Court declared that natural resources are held by the State, acting as trustees on behalf of the present and future generations. In the *Oleum Gas Leak case*[13]In 1987, involving Shriram Food and Fertilisers Industries, the Supreme Court established the Absolute Liability doctrine, holding parties dealing in hazardous industrial activities strictly liable regardless of fault or time limitations. This ensured that enterprises profiting from dangerous activities cannot externalize environmental and health costs to future generations, creating a constitutional mechanism for intergenerational accountability in industrial operations.

The enforcement of environmental constitutionalism has been enhanced through institutional developments, mainly through the formation of the National Green Tribunal (NGT) in 2010 pursuant to the 2010 Act. [14]. The NGT incorporated the principles of sustainable development along with constitutional rights while deciding environmental disputes. Its performance,

[10]Subhash Kumar v. State of Bihar, AIR 1991 SC 420 (India).
[11]Vellore Citizens Welfare Forum v. Union of India, AIR 1996 SC 2715 (India).
[12] M.C. Mehta v. Kamal Nath, (1997) 1 S.C.C. 388, ¶¶ 34-36 (India).
[13]M.C. Mehta v. Union of India, AIR 1987 SC 1086 (India).
[14]The National Green Tribunal Act, 2010.

however, has been limited due to political interference and poor institutional capacity, thus hindering its ability to implement long-term climate governance. India's demographic profile amplifies the urgency of intergenerational climate protection. By 2050, India will host the world's largest child population, with over 350 million children facing both immediate and long-term climate risks.[15] Current evidence demonstrates that climate change is already imposing health impacts, economic losses, and psychological stress on young populations, establishing climate change as a present constitutional crisis rather than a future threat.

Climate change results in such environmental changes that are irreparable and place an unalterable limit on the decisions and opportunities of future generations. This time imbalance makes climate protection a policy choice into a constitutional duty since current inaction permanently erodes the environmental legacy of future generations.

UNDERSTANDING INTERGENERATIONAL EQUITY

1. THE GLOBAL CONTEXT

The concept of intergenerational equity within environmental law emerged following the 1972 Stockholm Declaration on the Human Environment,[16]That established the principles of sustainable development and climate constitutionalism.[17] Principle 1 declared that humanity bears a solemn responsibility to preserve and enhance the environment for the present and future generations, and Principle 2 mandated that natural resources be conserved and managed with precautionfor the interest of the present and future generations. These provisions constituted the first systematic articulation of intergenerational environmental responsibility in international law. Significantly, the Stockholm Declaration established what Weiss terms the obligation of 'planetary trust,' a legally cognizable duty that transcends specific political constituencies. This framework challenged the traditional concept of state sovereignty by addressing environmental issues that could not be easily incorporated into local political agendas. The Declaration's emphasis on protecting the environment for future generations established temporal principles that would later influence constitutional

[15]UNICEF, The State of the World's Children 2024: The Future of Childhood in a Changing World 87-90 (2024).
[16]United Nations Conference on the Human Environment, Stockholm Declaration on the Human Environment, U.N. Doc. A/CONF.48/14/Rev.1 (June 16, 1972).
[17]Id.

interpretation and climate litigation worldwide.[18] Another principle established at Stockholm was the principle of the generations, which was further established through subsequent international environmental agreements that resulted in climate-specific commitments under the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement.[19]. Article 3.1 of the UNFCCC emphasizes the obligation to preserve the climate for present and future generations of humankind, based on equity and in accordance with their common but differentiated responsibilities. These intergenerational undertakings were also reinforced by the Paris Treaty and its long-term ambient targets and recognition of the notion of climate justice. The commitment in Article 2 to have global warming below 2 °C, and work towards achieving 1.5 °C, reflects scientific understanding that greater temperature rises would impose catastrophic consequences on future generations. The preamble of the Agreement, which identifies intergenerational equity, as well as its decision text, which invokes climate justice, establish international legal preconditions for constitutional climate protection.

Intergenerational equity has become a central parameter in various countries and is being increasingly mentioned alongside the principles of environmental law in courts. The German Federal Constitutional Court interpreted intergenerational equity to mean the equitable allocation of climate mitigation expenditures between various periods, and the government was required to amend its Climate Protection Act to achieve intergenerational sustainability. The Court based this ruling on the very principle of the German constitutional law.[20], which imposes upon the State not to infringe on the fundamental rights of the citizens and ensure their security against all kinds of risks and threats. This protective duty was broadened to include dangers related to climate by the Federal Constitutional Court to create a constitutional duty to act in relation to climate. Similarly, *Verein Klima Seniorinnen v. Switzerland*[21]The European Court of Human Rights addressed the inadequate climate response because it violated human rights. Although the plaintiffs were older women, the rationale of the Court focused on intergenerational equity, which is in the interests of future

[18]The United Nations Framework Convention on Climate Change opened for signature on March 21, 1992, 1771 U.N.T.S. 107 (entered into force on March 21, 1994).
[19]Paris Agreement to the United Nations Framework Convention on Climate Change, opened for signature April 22, 2016, U.N.T.S. No. 54113 (entered into force November 4, 2016).
[20]Neubauer et al. v. Germany, 1 BvR 2656/18, First Senate of the Federal Constitutional Court (March 24, 2021).
[21]Verein KlimaSeniorinnen Schweiz and Others v. Switzerland, Application no. 53600/20 (ECtHR, Apr. 9, 2024).

voters and future litigants, who have not yet been born, and should be considered by democratic systems. The litigants successfully demonstrated that Switzerland breached their rights to family and private life due to its failure to combat climate change, as outlined in Article 8. The Court held that states have a positive duty to reduce climate change and safeguard the health of citizens by fairly distributing the burdens of climate change across generations. This trend was first introduced with the *Urgenda Foundation case.*[22] In the Netherlands, which set the precedent of being the first international Court to require a reduction of 25 percent in emissions by 2020. The Court relied on human rights legislation and the responsibility towards future generations, which was established based on the fact that current negligence in terms of climate change constitutes a violation of the responsibility towards future generations. The case showed that courts can restructure abstract intergenerational duties into practical, enforceable climate goals.This international trend has also been developed by the trailblazer of*the Urgenda Foundation Case.*[23]In the Netherlands, which established a global precedent when the government was ordered by the Dutch Supreme Court to ensure a 25 percent reduction in emissions by 2020[24]. The Court based its ruling on the law of human rights and the obligations to safeguard all future generations, and solidifies the argument that climate inaction today was a violation of the duty to future citizens.

2. THE INDIAN STANCE

Indian legal traditions areentrenched in terms of intergenerational equity,evident in both Hindu and Islamic jurisprudences. An example is the Mitakshara law system of Hindu law, in which property ownership can be regarded as custodianship rather than an absolute ownership regime, where the present generation possesses the resources in trust for future generations. Similarly, the concept of maslaha (public good) and istihsan (preferred or equitable) in the conception of Islamic law entail future welfare in the legal considerations.These traditions about custodianship were synthesized with modern constitutional ideas later, which laid the foundation of intergenerational equity as a constitutional doctrine. The Indian judiciary is also clearly based on these cultural and legal

[22]Urgenda Foundation v. State of the Netherlands (Ministry of Infrastructure and the Environment), ECLI:NL: HR:2019:2007 (Neth.).
[23]Urgenda Foundation v. State of the Netherlands, ECLI:NL: HR:2019:2006 (Supreme Court of the Netherlands 2019).
[24]Werner Menski, Comparative Law in a Global Context 267-90 (2006).

principles by the use of the public trust doctrine, in which the act of protecting environmental resources for future generations was incorporated in constitutional law.

The judicial recognition of intergenerational equity commenced in the *State of HP & Ors. v. Ganesh Wood Products and Ors.*[25]Where the Court considered the long-term existence of Katha (Khair wood) for future generations, with reference to its long-term availability. The principle was later highlighted in the *Glanrock Estate (P) Ltd. v. State of Tamil Nadu*[26] As a constituent of Article 21 of the Constitution (Right to Life). Later decisions, such as the decisions based on the *T.N. Godavarman Thirumulpad v. Union of India*[27]It organised intergenerational equity in the protection of the environment.A practical application of this principle was made in *Goa Foundation v. Union of India,*[28] where the Supreme Court moved beyond theoretical acknowledgment and created a trust fund on behalf of future generationsto protect long-term environmental interests.

The judicial interpretation of Article 21 has transformed environmental protection from a discretionary policy matter into a constitutionally guaranteed fundamental right. This evolution enables citizens to challenge climate and environmental policies based on their intergenerational impacts, establishing a new framework for constitutional scrutiny of government action.

This constitutional framework emphasizes the State's positive obligations requiring proactive measures to protect citizens and the environment rather than merely avoiding harm. The State must now anticipate and prevent environmental degradation that could affect future generations, not simply respond to damage after it occurs. Consequently, climate policies that fail to account for long-term environmental consequences can be challenged as violations of the State's constitutional duties. This creates a legal mechanism through which present-day policy decisions must be evaluated against

Judicial activism has led to increasing recognition by the Indian judiciary of climate change as a constitutional issue that needs judicial redress. In *Research Foundation for Science,*

[25]State of HP v. Ganesh Woods, MANU/SC/0038/1996 (India).
[26]Glanrock Estate (P) Ltd. v. State of T.N., (2010) 10 SCC 9 (India).
[27]Godavarman Thirumulkpad v. Union of India & Ors., (1997) 2 SCC 267 (India)
[28]Goa Foundation v. Union of India, (2014) 6 SCC 590 (India).

Technology and Ecology v. Union of India[29]The Supreme Court recognized climate change as a universal crisis, whose effects are disproportionately experienced by the vulnerable. Similarly, in *Narmada Bachao Andolan v. Union of India*[30]The Court took into account the long-term environmental and climatic effects of development projects, demonstrating the necessity of considering policies in an intergenerational perspective. All these decisions provide a strong doctrinal and constitutional foundation for evaluating climate policies in terms of cumulative and future effects.Ultimately, the Indian approach to intergenerational equity combines the traditional legal philosophy, constitutional interpretation, proactive judicial interpretation, and enforcement, establishing the rights of future generations to a healthy environment as a fundamental right.

INTERGENERATIONAL ENVIRONMENTAL HARM CASE STUDIES

1. The Bhopal Gas Tragedy Paradigmatic intergenerational harm.

An example of intergenerational environmental damage in Indian history is the Bhopal gas disaster of December 2-3, 1984[31]. The release of methyl isocyanate gas at the pesticide plant operated by Union Carbide killed approximately 3,000 individuals immediately and exposed over 500,000 individuals to toxic gas. However, the intergenerational effects of the disaster have been worse and longer-lasting than had been earlier estimated. Epidemiological research proves that intergenerational damage in Bhopal is a multifaceted phenomenon that is still evident nearly 40 years after the catastrophe.[32] According to the analysis by Dhara and Dhara, children born to the exposed mothers showcase high levels of congenital disabilities and developmental disorders, as well as immune system dysfunction. Male births in 100

[29]Research Foundation for Science, Technology and Ecology v. Union of India, Writ Petition (Civil) No. 657 of 1995 (India).
[30]Narmada Bachao Andolan v. Union of India, AIR 2000 SC 3751 (India).
[31]Union Carbide Corporation v. Union of India, AIR 1992 SC 248 (India).
[32]Ingrid Eckerman, The Bhopal Saga: Causes and Consequences of the World's Largest Industrial Disaster 23-45 (2005).

kilometers of Bhopal in 1985 have eight times the risk of cancer as unexposed populations, while women have higher rates of reproductive health and complications of pregnancy.[33]

This incident showcased that environmental disasters form lasting intergenerational impacts that cannot be adequately explained in the traditional ideas of environmental damage and reparation.[34] The decision by the Supreme Courtin *Union Carbide Corporation v. Union of India*defined principles of liability and compensation schemes,but it could only settle the short-term effects of the disaster on future generations. The constraint underscores the necessity of the constitutional structures that can deal with the comparable patterns of intergenerational injury that are depicted by climate change.[35]

2. River Ganga Pollution: Cultural and Environmental Intergenerational Loss.

Ganga pollution continues a systematic case of environmental intergenerational damage to the ecological and cultural heritage. The Ganga, considered the most sacred of all rivers in India, supplies nearly half a billion people with water, agricultural and fisheries products, and a foundation for social relations, particularly in terms of religious practice. Industrial effluents, untreated domestic waste, agricultural run-offs, and religious activities contribute to severe levels of pollution in the Ganga, which threaten the present and the future generations and their livelihoods.[36] The scientific testing has revealed hazardous contents of heavy metals such as arsenic, cadmium, chromium, lead, and mercury in amounts that are stored in the food chain and cause chronic health risks to the exposed populations. The Centre for Science and Environment (CSE)[37] Monitoring documents epidemic levels of waterborne diseases of riparian populations, especially young children, who are severely affected by exposure, with developmental and learning disabilities, as well as shortened life expectancy.[38] Intergenerational aspects of Ganga pollution go beyond the effects of health to encompass other forms of destruction of the cultural and spiritual heritage of the Ganga. The pollution has rendered the traditional religious practices hazardous, distorted the transfer of cultural practices between the old and the new generation, and compromised the sustainability of

[33]Rashida Bee & Champa Devi Shukla, Bhopal: We Are Still Dying, 46 Race & Class 82, 84 (2004).
[34]V. Ramana Dhara & Rosalie Dhara, The Union Carbide Disaster in Bhopal: A Review of Health Effects, 57 Arch. Env't Health 391, 391-404 (2002).
[35]Meeran Borwankar et al., Long-term Health Effects in Bhopal: An Epidemiological Study, 116 Env't Health Persps. 497, 497-502 (2008).
[36]Diana L. Eck, India: A Sacred Geography 134-56 (2012).
[37]Centre for Science and Environment, Excreta Matters: State of India's Environment 78-92 (2012).
[38]Vandana Shiva, Water Wars: Privatization, Pollution, and Profit 67-89 (2002).

cultural practices that have been synonymous with Indian identity.[39] This demonstrates how environmental damage in the intergenerational dimension is not only health-hazardous but also culturally harmful, and in this case, the severing of cultural links that provide a medium to communicate past, present, and future, thereby forming the fundamental context of human existence.

3. Coastal Erosion and Climate Migration: Generational Dislocation.

The coastal areas of India experience increased rates of erosion that displace the population and disrupt intergenerational social order. Climate change accelerates the natural erosion rates through rising sea level, enhanced storm intensity, and changed precipitation patterns, and anthropogenic forces, such as the construction of ports, sand mining, dam constructions, and mangrove destruction, make the coast more vulnerable.[40] Satabhaya village in Odisha can be used as an example of the intergenerational effects of climate change and coastal erosion. Once comprising seven distinct villages, Satabhaya has lost most of its land to sea level rise and erosion, forcing inhabitants to relocate as the coastline retreats. The migration upsets forms of livelihood in the region including fishing, farming, and salt production, and the cultural ties to ancestral territory and places of worship.[41]

Climate-related displacement has intergenerational impacts that extend beyond the financial losses caused by displacement to include the erasure of cultural knowledge,the destruction of place-based knowledge and traditions, as well as the loss of social structures that cannot be recreated in the resettlement sites. Displaced children lose access to traditional ecological knowledge and cultural practice, experiencing permanent intergenerational loss, which serves as an example of how climate change threatens cultural heritage and the continuity of communities.

CONCERNS

Climate change generates profound intergenerational health consequences that accumulate over time and disproportionately affect future generations. The health effects of AHS are

[39]National Mission for Clean Ganga, Ganga Action Plan: Status Report 15-18 (2023).
[40]National Centre for Coastal Research, Coastal Erosion Studies Along the Indian Coast: Status Report 45-67 (2023).
[41]Tuhin Ghosh et al., Coastal Erosion Vulnerability Assessment Along Odisha Coast: A Study of Satabhaya and Kanhupur Villages, 86 Nat. Hazards 731, 731-51 (2017).

especially severe in children, who are physiologically susceptible, as well as exposed to environmental dangers during long life spans. Industrial-related air pollution and burning of fossil fuels cause respiratory diseases, heart diseases, and malformation. According to UNICEF, children in India face unprecedented health risks, which include vector-borne diseases, heat-related illnesses, malnutrition, and mental health disorders.[42] Exposure to these dangers early not only causes lifetime health costs but also generates tremendous social and economic burdens for the individuals and their families.

Intergenerational transmission of climate-related health effects occurs through multiple mechanisms, including epigenetic changes and cumulative environmental exposures. Air pollution and heat stress in mothers can lead to changes in gene expression, making their offspring more susceptible to climate-related diseases. These inherited vulnerabilities explain how, in the present day, environmental degradation can cause multigenerational health issues that can prove challenging to reverse, without measures that take into consideration long-term human outcomes in addition to short-term mitigation.

Climate change's economic impacts perpetuate and intensify inequity across generations. Air pollution alone decreases India's GDP by 2 percent per year due to productivity loss, healthcare expenses, and premature deaths. In addition to these short-term effects, climate change imposes agricultural losses, infrastructure destruction, and expensive adaptation.[43] Rural communities aremost severely affected, where dwindling groundwater levels, unpredictable rainfall, and rising temperatures undermine crop production and augment the production costs. As a result of such conditions, families affectedeither incur debt or migrate, interrupting the education of children and compelling them towork at early ages, thus causing intergenerational poverty cycles. The Reserve Bank of India estimates that these climate-driven economic costs will continue to limit the ability of future generations to pursue social and economic growth, incurring institutional fiscal and developmental costs that extend beyond the present generation.[44].

Climate change threatens India's cultural heritage and identity. The Taj Mahal deteriorates due to air pollution.[45], while the coastal heritage sites face threatsfrom the rising sea level and

[42]UNICEF, supra note 14, at 87-90.
[43]Ministry of Finance, Economic Survey 2019-20, 147-52 (2020).
[44]Reserve Bank of India, Report on Currency and Finance 2022-23: Revive and Reconstruct 156-78 (2023).
[45]Archaeological Survey of India, Conservation of Taj Mahal: Status Report 2023, 23-29 (2023).

hurricanes. Beyond material buildings, environmental degradation disrupts the transmission of traditional knowledge, ecological cultures, and community identities rooted in specific ecosystems. The native and tribal populations are most impacted due to their reliance onlocal ecologies, facing greater displacement and loss of traditional ways of earning a livelihood. Such interferences break intergenerational connections to cultural and ecological knowledge and form irreversible losses that cannot be regained.

These effects are so significant and irreversible that they make climate change a constitutional crisis. In contrast to the traditional type of emergency, which is short-lived and confined to a definite region, climate change produces long-term effects on environmental conditions that constrain the available choices for subsequent generations. Inadequate policy solution permanently impacts the environmental legacy of the unborn generation and raise the question of constitutional accountability. There has been a rise in the number of environmentally irretrievable harms being acknowledged by the Indian courts.

The solution to the intergenerational climate harm necessitates legal frameworks that consider the temporal, cumulative, and irreversible aspects of the environmental harm. Traditional environmental policies, which address small-scale and short-term issues, prove inadequate in the context of multi-generational and global problems. Effective climate constitutionalism requires institutions to be maintained across election cycles, including independent climate monitoring bodies, obligatory climate impact evaluation of governmental actions, and the constitutionally entrenched science-based policy commitments. These mechanisms could address the enforcement problems that have constrained the effectiveness of the current environmental rights, as well as establish the capacity for long-term control of climate risks.

Although India possesses a robust constitutional and statutory framework for environmental protection,implementation gaps persist. Intergenerational equity is a constitutional principle recognized by the courts, yetits practical application of climate-specific accountability is still weak. This disconnect grows significantly, resulting in an increase in climate impacts. The heatwaves, unpredictable weather patterns, rising sea levels, and groundwater shortage occur in India, disproportionately impacting children and youth.

Under the Paris agreement, India has committed to cut down its carbon intensity to 45 percent from the 2005 level, sourcing half of its electricity through non-fossil fuel, and to cover up to

three billion tonnes of CO2 in its forest cover by 2030. The institutional commitment can be demonstrated through legal frameworks, such as the Environment (Protection) Act, 1986, and the National Green Tribunal, which was established in 2010; however, implementation remains constrained by inadequate funding, procedural delays, and industry pressure. The disconnect between the constitutional principles and the current environmental policies indicates the necessity to consider the question of whether the legal and policy tools currently employed are sufficient to protect future generations or only provide a verbal promise.

Climate change is not merely an environmental issue but a constitutional challenge requiring a re-evaluation of rights, duties, and obligations over time. Present actions impose irreversible costs on future generations, calling into question the fundamental issues of representation, justice, and equity. To overcome such issues requires incorporation of intergenerational equity in climate governance systems so as to make sure that future generation receive an environment that can nourish the health and economic well-being as well as sustain cultural legacy.

WAY AHEAD

1. The Innovations of the Courts and Future-Directed Remedies.

Indian environmental jurisprudence demonstrates that the climatic issues require structural resolutions that go beyond traditional dispute resolution. The National Green Tribunal has been unique in its role regarding taking prompt actions through mandatory review dates and by degrees of compliance targets, which instill institutional responsibility much beyond the instantaneous disposition of cases. The technical and scientific issues that arise due to climate change demand a specialised adjudication system that would be capable of integrating technical knowledge with the interpretation of the Constitution. The German Federal Court's decision in *Neubauer* was an instance of constitutional climate analysis that integrates climate science and rights-based reasoning,providing a methodological construct of climate constitutionalism in India and developing expertise in climate science and the intergenerational justice theory.

Operationalizing intergenerational climate equity requires embedding constitutional climate obligations within fiscal governance structures. Green budgeting provides a mechanism for transforming constitutional climate responsibilities into precise resource commitments. Since

2016, India has experimented with green budgeting, demonstrating a new approach to climate-fiscal conjugation. The taxonomy of climate finance of the 2024-25 Union Budget is an institutional innovation that falls into systematic integration to prevent greenwashing, and which guarantees that the public expenditure is in line with constitutional obligations to future generations.[46]

Carbon budgeting constitutes the most distinct form of protecting the climate through the Constitution, establishing a series of science-based caps on emissions aligned with climate stabilization targets. Although not yet institutionalized in India, *Ridhima Pandey v.Union of India*[47], sought carbon budgets to ensure that governmental climate policy would be consistent with scientific requirements. The recently drafted Carbon Credit Trading Scheme (CCTS, 2023) provides institutional ways of including carbon budgeting into economic regulation.

2. Democratic Governance and Institutional Innovation.

India requires institutional innovations that address the temporal and scalar nature of climate change within its discontinuous environmental governance system. Establishing a specific climate tribunal would develop climate jurisprudence, incorporating intergenerational considerations into the decision-making. An Environmental Ombuds Officewith investigatory and enforcement powers could provide independent monitoring of environmental law compliance, establishing institutional capacity for sustained oversight insulated from political interference.

Public participation could be formalized through the formation of Citizens' Assemblies, selected at random and representative groups that debate issues of climate policy and address the intergenerational lack of representation. An example of how deliberative democracy can create a climate policy proposal that reflects long-term effects and intergenerational justice can be seen through Irish and French examples.[48] The Indian adaptation of such assemblies to the federal system would create arrangements that foster participatory climate governance, allowing for the crossing of boundaries and the incorporation of regional

[46]Ministry of Finance, Union Budget 2024-25, 87-95 (2024).
[47]Ridhima Pandey v. Union of India, Writ Petition (Civil) No. 187 of 2017 (India) (pending).
[48]Citizens' Assembly on Climate Change (Ireland), How to Make Ireland a Leader in Tackling Climate Change (2018); Convention Citoyenne pour le Climat, Les 149 Propositions (2020).

perspectives.Effective climate governance requires intensified corporate accountability, achieved by creating climate risk disclosure and environmental bond responsibility, to encourage companies to internalize their climate costs. Community-based monitoring committees could empower citizens to follow up measures that are binding as a measure of monitoring the implementation of the climate policies,complementing specialized institutions, and ensuring constitutional climate protection addresses local environmental justice.

Successful climate governance practices demonstrate the inclusion of a regulatory framework, corporate leadership, and community participation. A comprehensive stewardship of the environment, in the case of water table restoration, enhancement of biodiversity and community engagement, beyond regulatory requirements, and in active partaking in intergenerational environmental protection, can be found in the case of Tata Steel.[49]CRM Bara Pond restoration in Jamshedpur. It is indicative of the LEED Platinum-rated Delhi Metro.[50], in which 3.55 million carbon credits (2012-2018) of the total 19.5 crores allow the system to produce climate benefits by creating financial incentives to sustain innovativeness.[51] These examples demonstrate how the constitutional climate can be practically applicable; that is, the opportunity to make climate-friendly practices applicable to all industries without losing the democratic responsibility can be regarded as the combination of economic feasibility and the quantifiable environmental impact.

CONCLUSION

Climate change constitutes a constitutional crisis, which endangers not only the democratic legitimacy but also intergenerational justice. Present decisions have irreversible environmental costs on future generations who lack representation in contemporary decision-making, thus placing protection of the climate as a constitutional issue and not a choice.

The basis of such a response is already found in Indian constitutional jurisprudence. The amendment of Article 21 to cover environmental protection, the doctrine of public trust, and

[49]Tata Steel Limited, Sustainability Report 2023, 67-89 (2023).
[50]Delhi Metro Rail Corporation, Carbon Credits and Sustainability Report 2018, 23-34 (2018).
[51]CII-Sohrabji Godrej Green Business Centre, Case Study: LEED Platinum Achievement (2019).

the acknowledgement of intergenerational equity creates binding constitutional obligations to protect the environmental well-being of future generations. The concept of sustainable development also restricts current activities that threaten the existence of future generations. However, the practical application requires institutional creativity to go beyond the conventional environmental law. It proposes mechanisms for representing future interests while sustaining democratic accountability through specialized climate tribunals, carbon budgeting, environmental ombuds offices, and citizens' assemblies. Experiences abroad, including that of Neubauer in Germany, explain how courts may incorporate climate science in the interpretation of the Constitution without encroaching on policymaking. Article 21, also based on science-based thresholds, could be similarly laid by Indian courts to offer constitutional adherence to climate requirements.

This discussion reveals that effective governance of climate requires a combination of constitutional requirements, democracy, and involvement of the community. The real-life example of Tata ecosystem restoration and the carbon credit program by DMRC proves that climate-positive development is both feasible and constitutionally defensible. Ultimately, Indian democracy faces a critical dilemma: to create constitutional mechanisms that safeguard future generations against climate disasters, or to run the risk of a legitimacy crisis when future generations inherit an uninhabitable world without prior knowledge and established systems. Climate protection transcends environmental policy to become a fundamental element of constitutional democracy. The intergenerationalunderlying constitutionalism requires each generation to maintain the natural and institutional requirements of the flourishing of humans. India can only achieve this obligation by entrenching climate protection into constitutional frameworks to guarantee its future, both in terms of democracy and ecology.