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Environmental Jurisprudence in Anthropocene: Evaluation of Law in Addressing Impact of Environment Degradation on Economically Disadvantaged Communities

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ABSTRACT

The Anthropocene represents a period in which human activities have become a major force influencing the Earth's ecological systems. Environmental degradation arising from climate change, pollution, deforestation, biodiversity loss and resource depletion does not affect all sections of society equally. Economically disadvantaged communities, including rural, tribal, forest-dependent, agricultural and fishing communities, often experience greater environmental burdens because of their dependence on natural resources and their limited capacity to adapt or to obtain effective remedies. This study examines the relationship between environmental degradation and environmental justice in the Indian context. It analyses the constitutional, statutory and judicial framework governing environmental protection, with particular emphasis on Articles 14, 21, 38, 39(b), 48A and 51A(g), on the major environmental legislation, and on principles such as sustainable development, the precautionary principle, polluter pays, public trust and intergenerational equity. The study further evaluates environmental justice through its distributive, procedural and recognition dimensions. Using a doctrinal and analytical methodology, it examines primary and secondary legal sources in order to assess whether existing Indian environmental law adequately protects economically disadvantaged communities. The study finds that although India has developed a substantial environmental legal framework, significant gaps remain between legal recognition and practical protection. Weak implementation, limited participation, inadequate access to remedies, displacement and loss of livelihood continue to produce environmental injustice. The study concludes that Indian environmental law requires a stronger justice-oriented approach that integrates environmental protection with socio-economic equality, livelihood security, meaningful community participation and recognition of vulnerable communities.

Keywords: Anthropocene, Environmental Justice, Environmental Degradation, Economically Disadvantaged Communities, Indian Environmental Law

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I. INTRODUCTION

The Anthropocene is used to describe a period in which human activities have become a major force affecting the Earth's ecological systems. Climate change, deforestation, biodiversity loss, pollution, land degradation and excessive use of natural resources show the scale of human influence on the environment. These changes have also exposed the limits of traditional approaches to environmental governance. The law is no longer concerned only with preventing pollution; it must also address questions of responsibility, vulnerability, livelihood and fairness. The Anthropocene therefore has an important legal dimension. Environmental regulation must respond not only to ecological damage but also to the unequal social consequences of such damage. This makes environmental justice an important basis for examining the role of law in the Anthropocene. Environmental degradation is not merely an ecological problem. Its consequences extend to health, livelihood, housing, food security, access to natural resources and quality of life. The IPCC has found that poverty, inequality and limited access to resources increase vulnerability to environmental and climate-related risks.¹ It also recognises that marginalised and low-income communities are often disproportionately affected.

In India, environmental protection is closely connected with constitutional rights. The Supreme Court has interpreted Article 21 to include the right to a pollution-free environment and has recognised principles such as sustainable development, the precautionary principle and the polluter pays principle. *Vellore Citizens' Welfare Forum v. Union of India*² remains a leading authority in this regard. Environmental degradation therefore raises a legal question of both protection and justice: whether existing laws are capable of protecting those who are most vulnerable to environmental harm.

A. Unequal impact on economically disadvantaged communities

Environmental harm is not distributed equally. Economically disadvantaged communities often depend directly on land, forests, water bodies and other natural resources for their livelihood. Farmers, agricultural labourers, fishing communities, forest dwellers and other resource-dependent groups may therefore suffer greater consequences from pollution, ecological destruction, displacement and climate-related risks.

The IPCC observes that vulnerable communities have lower capacity to adapt because of poverty, limited access to basic services and dependence on climate-sensitive livelihoods. In

¹ L. Olsson et al., *Livelihoods and Poverty*, in IPCC, CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY, PART A: GLOBAL AND SECTORAL ASPECTS 793, 796 (C.B. Field et al. eds., 2014), https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap13_FINAL.pdf.

² *Vellore Citizens' Welfare Forum v. Union of India*, (1996) 5 SCC 647 (India).

India, this concern is particularly relevant to forest-dependent communities. The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 recognises and vests forest rights in forest-dwelling Scheduled Tribes and other traditional forest dwellers whose rights were historically not adequately recorded.

The Supreme Court has also recognised the importance of community rights in environmental decision-making. In *Orissa Mining Corp. v. Ministry of Environment & Forests*,³ the Court emphasised the role of the Gram Sabha in determining the rights of tribal and forest-dwelling communities. This demonstrates that environmental governance cannot be separated from livelihood, culture and community rights.

II. THE ANTHROPOCENE: A THEORETICAL FRAMEWORK

A. Meaning and emergence of the Anthropocene

The term Anthropocene describes the growing influence of human activity on the Earth's ecological systems. Crutzen and Stoermer introduced the term in 2000 to indicate that human activities had become a significant force of global environmental change.⁴ The concept subsequently gained wider scientific and academic attention, particularly following Crutzen's 2002 discussion in *Nature*.⁵

The Anthropocene is relevant to law because environmental change on this scale raises questions that extend beyond traditional pollution control. Climate change, biodiversity loss, deforestation, resource depletion and pollution increasingly affect human rights, livelihoods and social equality. The legal response must therefore consider not only how environmental harm can be prevented but also who is exposed to that harm, who benefits from environmental exploitation, and who has access to remedies.

B. The Anthropocene and environmental law

Traditional environmental law was largely developed to regulate specific forms of environmental harm, such as air and water pollution, hazardous activities and the exploitation of natural resources. The Anthropocene presents a broader challenge because environmental problems are interconnected and often arise from cumulative human activity.⁶ This requires environmental law to function as more than a system of regulatory restrictions. It must provide

³ *Orissa Mining Corp. v. Ministry of Env't & Forests*, (2013) 6 SCC 476 (India).

⁴ P.J. Crutzen & E.F. Stoermer, *The 'Anthropocene'* (2000), in PAUL J. CRUTZEN AND THE ANTHROPOCENE: A NEW EPOCH IN EARTH'S HISTORY 19 (S. Benner et al. eds., 2021), https://doi.org/10.1007/978-3-030-82202-6_2.

⁵ Paul J. Crutzen, *Geology of Mankind*, 415 NATURE 23 (2002), <https://doi.org/10.1038/415023a>.

⁶ Frank Biermann et al., *Down to Earth: Contextualizing the Anthropocene*, 39 GLOBAL ENV'T CHANGE 341 (2016), <https://doi.org/10.1016/j.gloenvcha.2015.11.004>.

mechanisms for accountability, participation, environmental rights and the equitable distribution of environmental benefits and burdens. The concept of the environmental rule of law is important in this context because it connects environmental protection with rights, institutions, accountability and access to justice. The United Nations Environment Programme emphasises that effective environmental governance requires both enforceable environmental rules and institutions capable of implementing them. The recognition of a “human right to a clean, healthy and sustainable environment” by the United Nations General Assembly in 2022 further reflects the movement towards a rights-based approach to environmental protection.⁷

Law in the Anthropocene must therefore increasingly address the relationship between ecological protection, human rights and social justice.⁸

C. The concept of environmental justice

Environmental justice rests on the principle that environmental benefits and burdens should be distributed fairly and that all persons should have a meaningful opportunity to participate in decisions affecting their environment.⁹ It challenges situations in which certain communities bear a disproportionate share of pollution, ecological damage or resource loss while receiving fewer of the benefits of development. Environmental justice is therefore broader than environmental protection. It asks whether environmental governance is fair, inclusive and responsive to social inequality.¹⁰ David Schlosberg’s influential work explains environmental justice through interconnected concerns of distribution, recognition and participation rather than through distribution alone.¹¹

For the present study, environmental justice provides the principal framework for examining whether Indian law adequately responds to the unequal environmental burdens borne by economically disadvantaged communities.

D. Distributive, procedural and recognition justice

Environmental justice may be understood through three closely connected dimensions.

⁷ G.A. Res. 76/300, *The Human Right to a Clean, Healthy and Sustainable Environment* (July 28, 2022); *UN General Assembly Declares Access to Clean and Healthy Environment a Universal Human Right*, UN NEWS (July 28, 2022), <https://news.un.org/en/story/2022/07/1123482>.

⁸ Tanay Shrivastava, *Protecting People and Planet: Integrating Human Rights with Environmental Law*, MANUPATRA ARTICLES (Sept. 13, 2024), <https://articles.manupatra.com/article-details/Protecting-People-and-Planet-Integrating-Human-Rights-with-Environmental-Law>.

⁹ Shantanu Gupta, *Constitutionalism and Environmental Justice*, 23 NEUROQUANTOLOGY 975 (2025).

¹⁰ DAVID SCHLOSBERG, *DEFINING ENVIRONMENTAL JUSTICE: THEORIES, MOVEMENTS, AND NATURE* (2007).

¹¹ *Id.*

i. Distributive justice

Distributive justice concerns the fair distribution of environmental benefits, risks and burdens. It asks who is exposed to pollution, displacement, resource depletion or climate risks and who receives the economic benefits of environmentally harmful activities. Economically disadvantaged communities often have greater exposure and fewer resources with which to recover from environmental harm.¹²

ii. Procedural justice

Procedural justice concerns how environmental decisions are made and who is able to participate in them. Access to information, public consultation, participation in environmental decision-making and access to courts or tribunals are central to this dimension.¹³ A formally equal procedure may still be inadequate where poorer or marginalised communities lack the resources, information or institutional capacity to participate effectively.

iii. Recognition justice

Recognition justice requires law and institutions to recognise the distinct identity, interests, knowledge, culture and vulnerabilities of different communities.¹⁴ Failure to recognise these differences can make apparently neutral environmental policies unequal in their practical effects. This dimension is particularly relevant to indigenous and forest-dependent communities whose livelihoods and cultural practices may be closely connected with natural resources. The three dimensions are interdependent. Unequal distribution may result from exclusion from decision-making, while a lack of recognition may itself produce both procedural and distributive injustice.

E. Relationship between environmental degradation and socio-economic inequality

Environmental degradation and socio-economic inequality reinforce one another. Communities with limited economic resources generally have fewer opportunities to avoid environmental risks, relocate, obtain healthcare, protect their livelihoods or recover after environmental disasters. The IPCC has found with very high confidence that climate change and climate variability worsen existing poverty and exacerbate inequalities, and that climate change

¹² Olsson et al., *supra* note 1, at 805–07.

¹³ Jonathan Skinner-Thompson, *Procedural Environmental Justice*, 97 WASH. L. REV. 399 (2022), <https://digitalcommons.law.uw.edu/wlr/vol97/iss2/5>.

¹⁴ K.P. Whyte, *The Recognition Dimensions of Environmental Justice in Indian Country*, 4 ENV'T JUST. 199 (2011), <https://doi.org/10.1089/env.2011.0036>.

interacts with non-climatic stressors and entrenched structural inequalities to shape vulnerabilities.¹⁵

The relationship is therefore circular: poverty and social disadvantage → greater exposure and vulnerability → greater environmental harm → loss of livelihood and assets → deeper poverty and inequality.

This relationship is particularly significant in India, where many disadvantaged communities depend directly on agriculture, forests, fisheries, land and other natural resources. Environmental degradation can therefore affect not only physical health but also employment, food security, housing and cultural life.

The legal significance of this relationship is that environmental protection cannot be treated as separate from social justice. Environmental pressures also contribute to poverty and to growing social inequalities, which makes fair access, rights-based governance and the environmental rule of law all the more important.

Accordingly, law in the Anthropocene must move beyond the narrow objective of controlling environmental harm and address the unequal social consequences of environmental degradation.¹⁶ This provides the theoretical basis for examining whether the Indian legal framework adequately protects economically disadvantaged communities.

III. ENVIRONMENTAL DEGRADATION AND ECONOMICALLY DISADVANTAGED COMMUNITIES IN INDIA

Environmental degradation in India has significant social and economic consequences, and its effects are not distributed equally. Communities with limited economic resources and greater dependence on land, forests, water and other natural resources are generally less able to avoid environmental risks or to recover from environmental harm. Climate change further intensifies these existing vulnerabilities. The IPCC recognises that poverty, inequality and limited access to resources increase vulnerability to climate-related risks.¹⁷

A. Vulnerability of rural and poor communities

Rural communities are closely dependent on agriculture, livestock, forests and natural water resources. Environmental degradation can therefore directly affect income, food security, health and employment. Droughts, floods, soil degradation, water scarcity and changing climatic

¹⁵ Olsson et al., *supra* note 1, at 796.

¹⁶ E. Webster & L. Mai, *Transnational Environmental Law in the Anthropocene*, 11 TRANSNAT'L LEGAL THEORY 1 (2020), <https://doi.org/10.1080/20414005.2020.1778888>.

¹⁷ Olsson et al., *supra* note 1.

conditions can reduce productive capacity while increasing household expenditure. The problem is not exposure alone. Poorer households often have fewer assets and limited access to credit, insurance, technology and public services, and consequently have less capacity to adapt. Climate change can therefore deepen existing poverty and encourage migration from environmentally vulnerable areas. A recent FAO programme in India identifies coastal Odisha and drought-prone Telangana as areas where climate change and environmental degradation are increasing the vulnerability of rural households and contributing to climate-related mobility.

B. Tribal and forest-dependent communities

Tribal and other forest-dependent communities have a particularly close relationship with natural resources. Forests provide food, fuel, minor forest produce, land, water and cultural and religious resources. Consequently, deforestation, mining, forest diversion and restrictions on access to forest resources can affect both livelihood and community identity. The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006¹⁸ was enacted to recognise and vest forest rights that had not been adequately recorded in the past. Its significance extends beyond individual land rights to community forest resources and customary practices. The Supreme Court's decision in *Orissa Mining Corp.*,¹⁹ the Niyamgiri mining case, illustrates the relationship between environmental protection, development and community rights. The Court recognised the role of the Gram Sabha in considering the religious, cultural and community rights of tribal and forest-dwelling communities. The decision demonstrated that environmental decision-making cannot disregard the social and cultural interests of affected communities.

C. Farmers and agricultural labourers

Farmers and agricultural labourers are among the groups most directly affected by environmental and climatic change because their livelihoods depend upon land, water and stable climatic conditions. Drought, irregular rainfall, floods, heat stress, declining soil quality and water scarcity can reduce agricultural productivity and household income. The consequences are particularly serious for small and marginal farmers, who possess fewer assets and have limited capacity to absorb agricultural losses. Agricultural labourers are also vulnerable because environmental shocks can reduce the availability of farm employment. Environmental

¹⁸ The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, No. 2, Acts of Parliament, 2007 (India).

¹⁹ *Orissa Mining Corp.*, *supra* note 3.

degradation can therefore produce a wider chain of effects: loss of productivity, loss of income, indebtedness, food insecurity and migration.²⁰

From a legal perspective, this demonstrates why environmental policy cannot be separated from livelihood protection. Measures addressing environmental degradation must also consider their consequences for people whose economic survival depends upon natural resources.

D. Fishing and coastal communities

Fishing communities depend directly on marine and inland ecosystems. Pollution, coastal degradation, overexploitation of fish resources, coastal erosion and climate change can reduce fish availability and damage the economic foundations of fishing households. The FAO notes that small-scale fishing communities are particularly vulnerable because many lack secure rights over the land and resources on which they depend and have limited capacity to adapt to climate-related risks.²¹ In the Indian context, FAO research on coastal fishing communities in Odisha has identified poverty, food insecurity, declining access to fish resources and changes in fishing technologies and markets as important factors affecting livelihoods. Climate change adds further risks through sea-level rise, storms, flooding and changes in the distribution and availability of fish. Environmental degradation therefore threatens not only income but also housing, food security and community stability.

E. Displacement due to development projects

Large development projects such as dams, mining projects, industries, highways and other infrastructure may generate economic benefits, but their environmental and social costs may fall disproportionately on local communities. Acquisition or diversion of land and natural resources may result in displacement, loss of livelihood and disruption of social and cultural relationships. The Supreme Court's decision in *Narmada Bachao Andolan v. Union of India*²² illustrates the tension between development objectives, environmental protection and the interests of displaced populations. The Court recognised rehabilitation as an important component of large development projects while permitting the project to proceed. The issue is therefore not simply whether development should occur, but how its environmental and social costs are distributed and whether affected communities receive adequate participation, rehabilitation and compensation.

²⁰ Olsson et al., *supra* note 1, at 805–07.

²¹ FOOD & AGRIC. ORG. OF THE U.N., VOLUNTARY GUIDELINES FOR SECURING SUSTAINABLE SMALL-SCALE FISHERIES IN THE CONTEXT OF FOOD SECURITY AND POVERTY ERADICATION (2015), <https://openknowledge.fao.org/server/api/core/bitstreams/edfffbfc-81e5-4208-a36f-334ff81ac10f/content>.

²² *Narmada Bachao Andolan v. Union of India*, (2000) 10 SCC 664 (India).

F. Pollution, climate change and loss of livelihood

Pollution and climate change can simultaneously affect health, livelihood and economic security. Air and water pollution may increase health expenditure and reduce the ability to work, while environmental contamination can damage agricultural land, fisheries and other livelihood resources. Climate change can intensify these pressures through extreme heat, floods, droughts and other environmental risks. For economically disadvantaged households, a single environmental shock can have long-term consequences because they often lack savings, insurance and alternative sources of income. Environmental harm can therefore create a cycle in which environmental degradation produces economic loss, and economic disadvantage reduces the capacity to respond to further environmental degradation.²³

G. Why disadvantaged communities bear disproportionate environmental burdens

The disproportionate burden on disadvantaged communities can be explained through four interconnected factors. First, greater dependence on natural resources makes their livelihoods more sensitive to environmental change. Second, geographical exposure places many communities in areas vulnerable to floods, droughts, coastal hazards or environmental pollution. Third, limited economic and institutional capacity reduces their ability to adapt, relocate or obtain effective remedies. Finally, limited participation in decision-making can result in development and environmental policies being adopted without adequate consideration of local interests. This creates a central environmental-justice concern: the people who are most economically vulnerable may bear a greater share of environmental costs while having a smaller role in decisions concerning natural resources and development.

The Indian legal framework has progressively recognised this problem through environmental rights, forest rights, public participation and judicial protection of affected communities. However, the continuing vulnerability of rural, tribal, agricultural and fishing communities indicates that legal protection must be assessed not only by the existence of environmental legislation but also by its ability to secure a fair distribution of environmental burdens, meaningful participation and the protection of livelihood. The experience of these communities therefore provides the substantive basis for examining, in the next section, whether Indian constitutional, statutory and judicial mechanisms adequately realise environmental justice in the Anthropocene.

²³ *Causes, Effects, and Solutions to Environmental Degradation*, PLANT WITH PURPOSE, <https://plantwithpurpose.org/stories/causes-effects-and-solutions-to-environmental-degradation/> (last visited Aug. 15, 2026).

IV. THE INDIAN LEGAL FRAMEWORK AND JUDICIAL RESPONSE

India has developed a substantial legal framework for environmental protection through constitutional provisions, legislation and judicial interpretation. The framework is significant for environmental justice because environmental harm frequently affects communities that have limited economic and institutional capacity. The Indian approach has gradually moved from conventional pollution control towards the recognition of environmental rights, sustainable development, community participation and liability for environmental damage.

A. Constitutional framework

The Constitution of India does not contain a separate fundamental right expressly titled the “right to environment.” Environmental protection has nevertheless been incorporated into constitutional law through fundamental rights, the Directive Principles of State Policy and the fundamental duties.

i. Article 14: equality before law

Article 14 guarantees equality before law and the equal protection of the laws.²⁴ In environmental matters its importance lies in preventing arbitrary State action and in requiring environmental decisions to rest on rational and non-discriminatory standards. Environmental policies that disproportionately burden already disadvantaged communities may therefore raise questions of substantive equality.

ii. Article 21: right to life

Article 21 has been the principal constitutional basis for environmental protection.²⁵ The Supreme Court has interpreted the right to life to include the right to live in a healthy environment and has repeatedly treated environmental quality as essential to human dignity and life. In the *M.C. Mehta* litigation the Court developed strong protection against hazardous activities and environmental pollution. The Court has subsequently used Article 21 to impose duties on both public authorities and private actors where environmental harm affects fundamental rights.

iii. Article 38: social justice

Article 38 directs the State to promote the welfare of the people and to secure a social order informed by justice.²⁶ Its relevance to environmental justice lies in connecting environmental

²⁴ INDIA CONST. art. 14.

²⁵ INDIA CONST. art. 21.

²⁶ INDIA CONST. art. 38.

protection with broader social and economic justice. Environmental governance should therefore take account of the consequences of environmental harm for vulnerable and economically disadvantaged sections of society.

iv. Article 39(b): distribution of material resources

Article 39(b) directs the State to ensure that the ownership and control of material resources are so distributed as to serve the common good.²⁷ Natural resources such as land, water, forests and minerals have substantial social value. The provision therefore supplies a constitutional basis for examining whether their use and distribution serve the wider public interest rather than benefiting economically powerful groups alone.

v. Article 48A: protection of the environment

Article 48A requires the State to protect and improve the environment and to safeguard forests and wildlife.²⁸ Although it is contained in the Directive Principles and is therefore not independently enforceable, it has been important in the development of Indian environmental jurisprudence. The Supreme Court has repeatedly read Articles 47, 48A and 51A(g) together with fundamental rights while developing environmental principles.

vi. Article 51A(g): fundamental duty

Article 51A(g) imposes a fundamental duty on citizens to protect and improve the natural environment, including forests, lakes, rivers and wildlife, and to have compassion for living creatures.²⁹ It strengthens the constitutional commitment to environmental protection and has been relied upon by courts in interpreting environmental obligations.

Taken together, these provisions establish that environmental protection in India is not merely a matter of administrative policy. It is connected with equality, life, social justice, resource distribution and constitutional responsibility.

B. Major environmental legislation

i. Environment (Protection) Act, 1986

The Environment (Protection) Act, 1986 is the principal umbrella legislation for environmental protection in India.³⁰ It empowers the Central Government to take measures for protecting and improving the environment and to regulate activities causing environmental pollution. Sections 3, 5 and 7 are particularly important, conferring broad governmental powers, the power to issue

²⁷ INDIA CONST. art. 39(b).

²⁸ INDIA CONST. art. 48A.

²⁹ INDIA CONST. art. 51A(g).

³⁰ The Environment (Protection) Act, 1986, No. 29, Acts of Parliament, 1986 (India), §§ 3, 5, 7.

binding directions and a prohibition on the discharge of pollutants in excess of prescribed standards. For disadvantaged communities its significance lies in providing a statutory basis for controlling environmental harm before it causes serious damage to health and livelihood. Its effectiveness, however, ultimately depends upon implementation, monitoring and enforcement.

ii. Water (Prevention and Control of Pollution) Act, 1974

This Act seeks to prevent and control water pollution and to maintain or restore the wholesomeness of water.³¹ It establishes the Central and State Pollution Control Boards and provides a regulatory framework for preventing contamination of water resources. The legislation is particularly relevant to communities dependent upon rivers, groundwater and other water bodies for drinking water, agriculture and livelihood.

iii. Air (Prevention and Control of Pollution) Act, 1981

The Air Act, 1981 provides for the prevention, control and abatement of air pollution and assigns regulatory functions to the Pollution Control Boards.³² Its social-justice significance arises from the fact that air pollution can affect health, productivity and quality of life, particularly where economically disadvantaged people have limited ability to avoid polluted environments or to obtain private healthcare.

iv. Forest Rights Act, 2006

The Act of 2006 recognises and vests forest rights in forest-dwelling Scheduled Tribes and other traditional forest dwellers whose rights were historically not adequately recorded.³³ The Act is particularly important to environmental justice because it connects conservation with livelihood, community rights and participation. It recognises that forest governance cannot be separated from the interests of communities whose survival and culture are closely connected with forests.

v. Biological Diversity Act, 2002

The Act of 2002 provides for the conservation of biological diversity, the sustainable use of biological resources and the fair and equitable sharing of benefits arising from their use.³⁴ It also establishes institutions such as the National Biodiversity Authority, the State Biodiversity Boards and Biodiversity Management Committees. The principle of equitable benefit sharing is significant for economically disadvantaged and resource-dependent communities because it

³¹ The Water (Prevention and Control of Pollution) Act, 1974, No. 6, Acts of Parliament, 1974 (India).

³² The Air (Prevention and Control of Pollution) Act, 1981, No. 14, Acts of Parliament, 1981 (India).

³³ The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, *supra* note 18.

³⁴ The Biological Diversity Act, 2002, No. 18, Acts of Parliament, 2003 (India).

recognises that communities contributing to the conservation and traditional use of biological resources should not be excluded from the benefits derived from them.

vi. National Green Tribunal Act, 2010

The National Green Tribunal Act, 2010 established the National Green Tribunal for the effective and expeditious disposal of environmental disputes.³⁵ Its statutory objectives include environmental protection, the conservation of forests and other natural resources, the enforcement of environmental rights and the provision of relief and compensation for environmental damage. The Tribunal is particularly important for environmental justice because it provides a specialised forum for persons and communities affected by environmental harm.

vii. Land acquisition, rehabilitation and resettlement framework

The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 establishes a participative and transparent acquisition process and provides for the compensation, rehabilitation and resettlement of affected families.³⁶ The Act expressly seeks to minimise disturbance and requires consultation with local self-government institutions and Gram Sabhas in specified cases. Its relevance to the Anthropocene lies in addressing the social cost of development. Where infrastructure, mining or industrial projects require land and natural resources, environmental justice requires that affected communities are not left to bear the costs of development without adequate participation, compensation and rehabilitation.

C. Environmental principles

Indian environmental jurisprudence has developed several principles that guide the interpretation and application of environmental legislation.

i. Sustainable development

Sustainable development seeks to reconcile economic development with environmental protection. The Supreme Court has recognised it as an important principle of Indian environmental law. It does not prohibit development; rather, it requires development to be pursued without causing unacceptable and irreversible environmental harm. *Narmada Bachao Andolan*³⁷ illustrates the Court's attempt to balance development, environmental concerns and rehabilitation.

³⁵ The National Green Tribunal Act, 2010, No. 19, Acts of Parliament, 2010 (India).

³⁶ The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, No. 30, Acts of Parliament, 2013 (India).

³⁷ *Narmada Bachao Andolan*, *supra* note 22.

ii. Precautionary principle

The precautionary principle requires preventive action where there is a risk of serious environmental harm, even when scientific uncertainty remains. In *Vellore Citizens' Welfare Forum*³⁸ the Supreme Court recognised the precautionary principle as part of Indian environmental law, linking it with the constitutional framework and the existing environmental statutes. For disadvantaged communities this principle is important because prevention may be more effective than compensation after environmental harm has already destroyed health or livelihood.

iii. Polluter pays principle

The polluter pays principle requires the party responsible for pollution to bear the cost of remedying the resulting environmental damage. In *Indian Council for Enviro-Legal Action v. Union of India*, the Bichhri case,³⁹ the Supreme Court applied the principle not merely to compensation for victims but also to the cost of restoring damaged ecological systems. The Court has subsequently reaffirmed this broader understanding. The principle has direct distributive-justice significance because it seeks to prevent communities from bearing the economic cost of pollution caused by another actor.

iv. Public trust doctrine

Under the public trust doctrine the State holds important natural resources in trust for the benefit of the public. In *M.C. Mehta v. Kamal Nath*⁴⁰ the Supreme Court applied the doctrine to protect public resources and held that natural resources cannot be treated as unrestricted private property. The Court also connected the doctrine with the polluter pays and precautionary principles. The doctrine is particularly relevant where economically powerful interests seek access to resources on which local communities depend.

v. Intergenerational equity

Intergenerational equity requires present generations to use natural resources in a manner that does not deprive future generations of the ability to meet their needs. It introduces a temporal dimension to environmental justice. Environmental degradation is therefore not only a present social problem but also an issue of justice between present and future generations.

³⁸ *Vellore Citizens' Welfare Forum*, *supra* note 2.

³⁹ *Indian Council for Enviro-Legal Action v. Union of India*, (1996) 3 SCC 212 (India).

⁴⁰ *M.C. Mehta v. Kamal Nath*, (1997) 1 SCC 388 (India).

D. Judicial approach

The Supreme Court has played a central role in expanding Indian environmental law. Through public interest litigation and constitutional interpretation, the Court has developed environmental principles and connected environmental protection with Article 21.

The *M.C. Mehta* cases represent a continuing body of environmental jurisprudence involving pollution, hazardous industries, river protection and urban environmental harm. In the Oleum gas leak case⁴¹ the Court established the rule of absolute liability for enterprises engaged in hazardous or inherently dangerous activities. Later *M.C. Mehta* proceedings also addressed major forms of pollution and environmental degradation. The importance of these cases lies in shifting environmental protection from ordinary regulatory compliance towards stronger constitutional accountability for environmental harm. The Court in *Vellore Citizens' Welfare Forum* held that sustainable development, the precautionary principle and the polluter pays principle are essential features of Indian environmental law, and established that environmental protection and development must be balanced within a framework that recognises ecological limits. The Bichhri case strengthened the polluter pays principle and affirmed that industries responsible for pollution can be required to bear the cost of remedial measures. That is important from an environmental-justice perspective because environmental restoration is treated as part of liability rather than as a cost to be transferred to the public. *Narmada Bachao Andolan* concerned the environmental and social consequences of the Sardar Sarovar project. The Court recognised that development projects may serve important public purposes but emphasised the significance of environmental safeguards and rehabilitation. The judgment illustrates the continuing tension between development, environmental protection and the interests of displaced communities.

In *Samatha v. State of Andhra Pradesh*⁴² the Supreme Court protected tribal interests in Scheduled Areas and placed significant restrictions on the transfer of tribal lands for mining and related activities. The decision is important because it connects control over natural resources with the constitutional protection of vulnerable communities. In *Orissa Mining Corp.*⁴³ the Supreme Court recognised the role of the Gram Sabhas in determining the religious, cultural and community rights of tribal and forest-dwelling communities affected by the proposed mining project. The judgment demonstrates that environmental decision-making may require

⁴¹ *M.C. Mehta v. Union of India*, (1987) 1 SCC 395 (India).

⁴² *Samatha v. State of Andhra Pradesh*, (1997) 8 SCC 191 (India).

⁴³ *Orissa Mining Corp.*, *supra* note 3.

recognition of community identity and customary rights, not merely a technical assessment of environmental impact.

E. Assessment of the Indian legal and judicial framework

The Indian legal framework has incorporated several elements of environmental justice. Article 21 provides a constitutional foundation for environmental protection; environmental statutes regulate pollution and resource use; the National Green Tribunal provides a specialised forum; and judicial decisions have developed principles such as sustainable development, precaution, polluter pays and public trust.

The framework nevertheless remains stronger in recognising environmental rights and principles than in ensuring their effective implementation. Economically disadvantaged communities may still face barriers in accessing information, participating in environmental decisions, obtaining timely remedies and protecting livelihood against environmentally harmful development.

The judicial approach has therefore made Indian environmental law significantly more justice-oriented, but the continuing challenge is to convert constitutional principles and statutory protections into effective distributive, procedural and community-based environmental justice. This gap between legal recognition and practical protection is central to the question whether Indian law is adequately equipped to respond to the social consequences of environmental degradation in the Anthropocene.

V. CRITICAL ANALYSIS OF INDIAN ENVIRONMENTAL LAW IN THE ANTHROPOCENE

Indian environmental law has developed a substantial body of constitutional rights, statutory safeguards and judicial principles. The existence of legal protection does not, however, necessarily mean that environmental justice is achieved in practice. The central issue is whether the law protects disadvantaged communities not only from environmental harm but also from the unequal distribution of environmental risks, the loss of livelihood and exclusion from environmental decision-making.

A. Unequal distribution of environmental risks

Environmental risks are often distributed unevenly. Economically disadvantaged communities may live closer to polluted areas, depend more heavily on natural resources and have fewer

economic resources with which to avoid or recover from environmental harm.⁴⁴ Pollution, degradation of forests, loss of agricultural land, coastal hazards and displacement can therefore produce consequences that are much more serious for poorer households than for economically secure groups. This raises a fundamental question of distributive justice:⁴⁵ whether the benefits of development and the burdens of environmental degradation are shared fairly. Environmental law has traditionally focused on controlling the activity causing harm, but an Anthropocene approach requires greater attention to the social distribution of that harm.

B. Weak implementation of environmental laws

India has comprehensive environmental legislation, but implementation remains a major challenge. Environmental protection depends upon effective monitoring by government authorities, compliance by industry, accurate environmental assessments and timely enforcement. Where these mechanisms are weak, statutory rights may remain largely formal.

The problem is particularly serious for disadvantaged communities because they often lack the financial and institutional capacity to monitor pollution independently, obtain technical evidence or challenge regulatory failures. The gap is therefore not simply between law and violation; it is also between legal entitlement and the practical capacity to enforce that entitlement.

The importance of effective enforcement is reflected in the role assigned to the National Green Tribunal, which is empowered to provide relief, compensation and environmental restoration and is intended to offer specialised and comparatively accessible environmental justice.

C. Environmental displacement and rehabilitation

Development projects can create significant environmental and social costs for local communities. Mining, dams, industries, highways and other infrastructure may require the acquisition or diversion of land and natural resources, resulting in displacement and loss of livelihood. The 2013 Act⁴⁶ attempts to address these concerns through social impact assessment, consultation, compensation, rehabilitation and resettlement. Its stated objective is to ensure a humane, participative and transparent process with the least disturbance to affected families. Compensation, however, cannot always restore what displacement destroys. Land may have economic value, but forests, common resources, community relationships and cultural

⁴⁴ *Environmental Inequalities*, EUR. ENV'T AGENCY, <https://www.eea.europa.eu/en/topics/in-depth/environmental-inequalities> (last visited Aug. 17, 2026).

⁴⁵ Julian Lamont & Christi Favor, *Distributive Justice*, STANFORD ENCYCLOPEDIA OF PHILOSOPHY, <https://plato.stanford.edu/entries/justice-distributive/> (last visited Aug. 20, 2026).

⁴⁶ The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, *supra* note 36.

connections may have social and non-monetary value that is difficult to replace. Environmental justice therefore requires rehabilitation to be understood as more than monetary compensation.

D. Access to environmental justice

Access to environmental justice includes the ability to obtain information, to participate in decision-making and to seek effective remedies. The creation of the National Green Tribunal is an important institutional response. The Tribunal is specifically empowered to hear environmental disputes, to enforce environmental rights and to grant compensation for environmental damage. It also permits individuals to approach it without necessarily engaging an advocate.

Formal access to a tribunal does not, however, automatically result in equal access to justice. Economic disadvantage, lack of legal awareness, technical complexity, geographical distance and dependence upon expert evidence can create practical barriers. Environmental justice consequently requires not merely an available remedy but a remedy that affected communities can realistically use.

E. Community participation in environmental decision-making

Environmental decisions often affect communities whose livelihoods depend directly on land, forests and water. Participation is therefore a central part of environmental justice.

The Forest Rights Act, 2006 and the Supreme Court's decision in *Orissa Mining Corp.*⁴⁷ are significant because they recognise the importance of community institutions and local rights in decisions affecting forest-dwelling communities. The Court gave the Gram Sabha a meaningful role in determining the religious and community rights of the affected tribal population.

This approach reflects recognition justice: communities should not be treated merely as persons affected by a project but as rights-bearing participants whose interests, knowledge, culture and relationship with natural resources deserve legal recognition.

F. Environmental impact assessment and affected communities

Environmental impact assessment is intended to identify environmental consequences before projects receive approval. The Environmental Impact Assessment Notification, 2006 provides a framework involving screening, scoping, public consultation and appraisal for specified projects.⁴⁸ The Supreme Court has emphasised that environmental impact assessment is not a

⁴⁷ *Orissa Mining Corp.*, *supra* note 3.

⁴⁸ MINISTRY OF ENVIRONMENT AND FORESTS, Notification S.O. 1533(E), ¶ 7(i), Gazette of India, Extraordinary, pt. II sec. 3(ii) (Sept. 14, 2006) (India) (Environmental Impact Assessment Notification, 2006).

technical formality. In *Hanuman Laxman Aroskar v. Union of India*⁴⁹ the Court closely examined the assessment process, including public consultation, appraisal and the quality of the environmental information placed before the appraisal committee, and emphasised the importance of the environmental rule of law in decision-making.

Similarly, in *Alembic Pharmaceuticals Ltd. v. Rohit Prajapati*⁵⁰ the Supreme Court rejected the proposition that environmental clearance could ordinarily be granted retrospectively in order to cure an existing violation. The decision reinforces the preventive character of environmental regulation.

The difficulty, however, is that participation may become ineffective where affected communities lack adequate information, technical knowledge or the ability to understand complex environmental reports. Procedural participation must therefore be meaningful rather than merely formal.

G. Protection of livelihood

Environmental protection and livelihood protection are closely connected. For farmers, fisherfolk, forest dwellers and other resource-dependent communities, damage to the environment can translate directly into economic deprivation. The constitutional development of Article 21 is important in this context. The right to life has been interpreted broadly to include the conditions necessary for a dignified existence and a healthy environment. Environmental law must therefore consider whether regulatory and development decisions undermine the basic conditions on which vulnerable communities depend.

The challenge is to reconcile environmental protection with legitimate livelihood needs. Conservation without recognition of community rights may generate injustice, while development without adequate environmental safeguards may destroy the resource base on which livelihoods depend.

H. Gaps between legal rights and actual protection

The principal weakness of Indian environmental law is not the absence of principles but the gap between recognition and implementation. The legal framework recognises environmental rights, community interests, participation, liability and sustainable development. Yet economically disadvantaged communities may continue to face pollution, displacement, loss of livelihood and limited participation.

⁴⁹ *Hanuman Laxman Aroskar v. Union of India*, (2019) 15 SCC 401 (India).

⁵⁰ *Alembic Pharms. Ltd. v. Rohit Prajapati*, (2020) 17 SCC 157 (India).

Three gaps are particularly significant. The first is an implementation gap: environmental standards may exist but enforcement can be inconsistent. The second is a participation gap: affected communities may have a formal opportunity to participate but lack the information and capacity required for meaningful participation. The third is a remedial gap: compensation after environmental damage may not adequately restore lost livelihood, community resources or cultural relationships. These gaps demonstrate why environmental justice must be evaluated through practical outcomes rather than through the existence of statutes alone.

I. Does existing law adequately recognise economically disadvantaged communities?

Indian law has made important progress in recognising vulnerable communities. The Forest Rights Act recognises specific rights of forest-dwelling communities; land acquisition law provides safeguards for affected families; environmental jurisprudence recognises public participation and community interests; and the National Green Tribunal provides a specialised avenue for environmental remedies. Recognition nevertheless remains uneven. Environmental regulation often treats affected persons primarily as victims requiring compensation rather than as rights-bearing participants in environmental governance. Economically disadvantaged communities may also lack the institutional power needed to influence decisions concerning projects and natural resources. A stronger Anthropocene framework would therefore require law to recognise not only environmental harm but also the structural conditions that make some communities more vulnerable than others. These dimensions demonstrate that environmental justice cannot be reduced to compensation after harm occurs. Distributive justice requires a fair allocation of environmental burdens; procedural justice requires meaningful participation; and recognition justice requires law to recognise the distinct circumstances and rights of vulnerable communities.

VI. CONCLUSION AND SUGGESTIONS

A. Conclusion

Environmental degradation is a socio-legal problem, not merely an ecological one. Its consequences extend to health, livelihood, housing, food security and access to natural resources. The Anthropocene has changed the role of environmental law, which must now address not only environmental protection but also the unequal social consequences of environmental degradation. Economically disadvantaged communities bear disproportionate environmental burdens. Rural communities, tribal and forest-dependent communities, farmers, agricultural labourers and fishing communities are particularly vulnerable because of their dependence on natural resources and their limited adaptive capacity.

The Indian Constitution provides a strong foundation for environmental justice. Articles 14 and 21, together with Articles 38, 39(b), 48A and 51A(g), connect environmental protection with equality, dignity, social welfare and responsible governance. Indian environmental legislation provides extensive legal protection: the Environment (Protection) Act, 1986, the Water Act, 1974, the Air Act, 1981, the Forest Rights Act, 2006, the Biological Diversity Act, 2002 and the National Green Tribunal Act, 2010 collectively create a broad environmental governance framework. Judicial intervention has significantly strengthened environmental law.

Environmental justice nevertheless requires more than compensation. For disadvantaged communities, environmental harm may involve the permanent loss of livelihood, land, community resources and cultural identity, which cannot always be adequately compensated in monetary terms. A significant gap remains between legal rights and practical protection. Weak implementation, inadequate monitoring, limited awareness and difficulties in accessing legal remedies reduce the effectiveness of existing environmental protections. Community participation is essential to environmental justice: decisions affecting forests, land and natural resources should recognise affected communities as rights-bearing participants rather than merely as beneficiaries or victims.

Indian environmental law is progressive in principle but incomplete in practice. The existing framework contains the foundations of environmental justice but requires stronger implementation and a greater focus on distributive, procedural and recognition justice. The central challenge of law in the Anthropocene is therefore one of equity. Environmental governance must ensure that the benefits of development are not achieved by imposing disproportionate environmental costs on economically disadvantaged communities.

B. Suggestions

1. Strengthening enforcement mechanisms: existing environmental laws should be supported by stronger monitoring, compliance mechanisms, penalties and institutional capacity.
2. Ensuring meaningful public participation: environmental decisions should provide affected communities with timely information, accessible documentation and genuine opportunities to participate.
3. Protecting livelihood rights: environmental clearances and development policies should expressly assess their impact on agriculture, fishing, forests and other community-dependent livelihoods.

4. Strengthening community rights: the rights of tribal, forest-dependent and other resource-dependent communities should receive stronger protection in decisions concerning land, forests, minerals and biodiversity.
5. Improving access to environmental justice: legal and institutional mechanisms should be made more accessible to economically disadvantaged persons through legal aid, simplified procedures and greater environmental awareness.
6. Increasing corporate accountability: industries causing environmental harm should bear the full costs of prevention, remediation, restoration and compensation in accordance with the polluter pays principle.
