



Revisiting the Landscape of Indian Environmental Policies: National and International Concerns

Dr Malkiat Singh^{1*}, Dr. Nirmal Singh¹

^{1*}Assistant Professor, Department of Political Science, Guru Nanak Dev University, Amritsar

²Assistant Professor, Department of Political Science, Guru Nanak Dev University, Amritsar

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ABSTRACT

India's environmental policy architecture has evolved from early reactive measures toward a more integrated framework that addresses pollution control, conservation, and climate commitments. This paper revisits India's environment policy by tracing its legislative foundations, institutional mechanisms, and the tensions that arise between developmental priorities and environmental protection. It examines domestic policy instruments and key controversies, evaluates how India's international obligations (including its Paris Agreement commitments and net-zero pledge) interact with national politics and capacities, and highlights enforcement, governance, and fiscal gaps. The paper concludes with policy recommendations aimed at reconciling growth and sustainability, strengthening enforcement and transparency, and aligning India's domestic policy toolkit with credible international climate action.

Keywords - Environmental policy, India, Paris agreement, climate action, sustainable development.

Introduction

The environmental policy landscape in India stands at a critical crossroads, shaped by decades of developmental experimentation, ecological struggle, and global engagement. The tension between economic growth and environmental protection, an enduring dilemma of modern governance, has found a particularly complex expression in India, a country marked by both extraordinary biodiversity and pressing developmental imperatives. Since independence, India's environmental trajectory has been influenced by its historical legacies of colonial resource extraction, postcolonial developmentalism, and contemporary globalization. These dynamics have produced a distinctive policy regime that seeks to balance national priorities with international responsibilities. Revisiting Indian environmental policy, therefore, demands an inquiry that transcends administrative narratives and engages with broader theoretical discourses on justice, sustainability, and global governance. Environmental policy in India cannot be understood merely as a legislative or bureaucratic construct; it represents a deeply political process, embedded in the shifting relationship between state, society, and nature. The early decades after independence were dominated by the developmentalist paradigm, where economic planning and industrialization were prioritized over ecological preservation. The environment was viewed through an instrumental lens—as a resource base to be exploited for nation-building. However, the environmental movements of the 1970s and 1980s, such as Chipko and Narmada Bachao Andolan, challenged this paradigm by revealing the social and ecological costs of centralized development. These movements gave rise to a new intellectual and political consciousness, grounded in the principles of **environmental justice** and **ecological democracy**, which demanded that environmental governance include questions of equity, participation, and cultural identity. Scholars such as Gadgil and Guha (1992) argued that environmental degradation in India was inseparable from patterns of social inequality and political exclusion, a thesis aligned with the global theoretical framework of **political ecology**, which interprets environmental conflicts as manifestations of broader struggles over power and access to resources.

The evolution of India's environmental policy has also been deeply influenced by international developments in environmental governance. The 1972 United Nations Conference on the Human Environment in Stockholm marked a turning point by framing the environment as a global concern, prompting India to adopt a constitutional and legislative framework for environmental protection. The inclusion of Articles 48A and 51A(g) in the Constitution institutionalized ecological responsibility within the nation's legal and moral

fabric. The subsequent decades witnessed the proliferation of environmental legislation, the Water Act (1974), Air Act (1981), and Environment (Protection) Act (1986), reflecting the emergence of a **command-and-control regulatory model** inspired by global regulatory traditions. Yet, over time, the limitations of this top-down model led to the rise of participatory and decentralized approaches that drew from theories of **common property resource management** and **polycentric governance** advanced by Elinor Ostrom and others. These frameworks emphasized collective action, institutional diversity, and local autonomy as foundations of sustainable governance, principles that have increasingly informed India's forest, water, and biodiversity policies. The conceptual framework of **sustainable development**, as articulated by the Brundtland Commission's *Our Common Future* (1987), introduced a new global paradigm that profoundly influenced Indian policymaking. The 1992 Rio Earth Summit further linked sustainability to global equity, technology transfer, and environmental justice—principles that resonated with India's long-standing developmental priorities. The **National Environment Policy (NEP) of 2006** embodied these ideas by seeking to integrate environmental considerations into economic decision-making, reflecting the influence of **ecological modernization theory (EMT)**, which holds that technological innovation and institutional reform can make development compatible with environmental preservation. The NEP also emphasized intergenerational equity and the precautionary principle, demonstrating a shift from reactive environmental protection to proactive ecological management. This marked India's gradual transition from a regulatory to a reflexive model of environmental governance, where environmental policy becomes an adaptive, learning-oriented process responsive to scientific, social and economic complexity.

Parallel to these domestic transformations, India's role in global environmental politics has become increasingly prominent. From the early assertion of the right to development at the Stockholm Conference to its leadership in articulating the principle of **Common but Differentiated Responsibilities (CBDR)** under the United Nations Framework Convention on Climate Change (UNFCCC), India has consistently advocated for equity and justice in international environmental negotiations. This position, grounded in **Rawlsian distributive justice** and **dependency theory**, challenges the structural inequalities embedded in global environmental regimes by emphasizing historical responsibility and differentiated capacities. The works of Agarwal and Narain (1991) articulated this moral and political argument by exposing the asymmetries in carbon consumption between industrialized and developing nations. Over time, India's international environmental diplomacy has evolved from a defensive posture to one of constructive engagement, evident in initiatives such as the **International Solar Alliance (ISA)** and commitments under the **Paris Agreement (2015)**. Theoretically, this evolution aligns with **constructivist international relations theory**, which views states not merely as rational actors but as entities shaped by norms, identities, and shared values. India's global environmental identity today thus reflects both its domestic developmental imperatives and its aspiration for global environmental leadership. The contemporary environmental policy discourse in India also reflects the growing influence of **reflexive modernization theory**, developed by Ulrich Beck and Anthony Giddens, which posits that modern societies must continually adapt their institutions in response to the unintended risks of industrialization. This theoretical lens illuminates the ongoing reorientation of Indian policy toward climate adaptation, renewable energy, and sustainable urbanization. The national mission on solar energy, the push for green hydrogen, and the emphasis on biodiversity conservation under the National Biodiversity Mission exemplify a shift toward knowledge-based, adaptive policymaking that integrates scientific innovation with social inclusion. However, this transition is neither uniform nor uncontested. Persistent challenges of enforcement, institutional coordination, and socio-environmental inequality continue to constrain effective implementation, revealing what scholars describe as the "implementation gap" in environmental governance. At a broader level, India's environmental policy embodies the ethical and political dilemmas of the Anthropocene, a period in which human activity has become a dominant geological force. The global environmental crisis has redefined traditional notions of sovereignty, justice, and responsibility, demanding new forms of governance that transcend national boundaries. In this context, India's environmental policy serves as a vital case study for understanding how developing democracies negotiate the complex intersections of growth, equity, and sustainability within an unequal global order. The Indian experience demonstrates that environmental governance is not merely a technical exercise but a continuous negotiation between competing moral, economic and ecological claims. Revisiting India's environmental policy, therefore, is not only an analytical necessity but also an ethical imperative. It invites reflection on how the nation's environmental vision can evolve toward greater coherence, inclusivity and international solidarity. The ensuing study seeks to examine this evolution across both national and international dimensions, analyzing the theoretical underpinnings, institutional mechanisms and global alignments that shape India's environmental governance.

Literature Review

The literature on India's environmental policy reflects a multidimensional and evolving body of scholarship that intersects environmental law, political ecology, development economics, and global governance. It has progressed from early descriptive analyses of conservation and regulation toward more complex theoretical explorations of sustainability, justice, and international environmental relations. The historical trajectory of

Indian environmental policy has thus been framed by multiple academic paradigms, ranging from state-centric environmentalism and ecological modernization to participatory governance and environmental justice, which collectively inform the conceptual foundation of this study. Early scholarship on environmental governance in India largely emerged from post-independence debates on development and resource management. Foundational works such as Madhav Gadgil and Ramachandra Guha's *The Fissured Land* (1992) and *Ecology and Equity* (1995) critiqued the colonial and postcolonial legacies of centralized environmental control, arguing that India's environmental challenges were as much socio-political as they were ecological. Their framework of **political ecology** illuminated how state-led conservation policies often marginalized indigenous communities and disrupted traditional ecological knowledge systems. These studies drew heavily from the **dependency theory** of development, emphasizing that environmental degradation in the Global South was structurally linked to unequal economic and political relations perpetuated by global capitalism. This early scholarship set the stage for reinterpreting Indian environmental policy through the lenses of **power, justice, and participation**, rather than purely through legal or administrative categories. During the 1970s and 1980s, the global discourse on environmental protection began to influence Indian policy scholarship. The 1972 Stockholm Conference catalyzed interest in linking ecological protection to constitutional and legislative frameworks. Scholars such as S.P. Sathe (1991) and Upendra Baxi (1993) examined the constitutionalization of environmental rights in India, situating it within the emerging field of **environmental constitutionalism**, which argues that environmental protection, when embedded in constitutional principles, acquires normative permanence. The introduction of Articles 48A and 51A(g) was thus interpreted as a shift from ad hoc environmental management to a rights-based approach, integrating environmental responsibility into the moral and legal fabric of governance. Subsequent analyses, including the works of Shyam Divan and Armin Rosencranz in *Environmental Law and Policy in India* (2001), elaborated on how the **command-and-control regulatory model** underpinned India's early environmental legislation, including the Water Act (1974), Air Act (1981), and Environment (Protection) Act (1986). These laws reflected the classical **Weberian model of bureaucratic rationality**, where environmental management was viewed as a function of state control and procedural compliance. However, the limitations of this centralized approach prompted a shift in both academic and policy thought toward participatory and decentralized governance. Scholars like Nirmal Sengupta (1996) and Kanchan Chopra (2000) analyzed the emergence of **common property resource (CPR) theory** and **community-based natural resource management (CBNRM)** in India, particularly in the context of forest governance. Drawing from Elinor Ostrom's *Governing the Commons* (1990), they demonstrated how collective action and local participation could produce more sustainable resource outcomes than state-driven conservation. This theoretical shift found practical expression in India's **National Forest Policy of 1988** and the **Joint Forest Management (JFM)** programme, both of which reflected the move toward **polycentric governance** and participatory environmentalism. Such decentralization was supported by scholars like Arun Agrawal (2001), who argued that sustainable governance depends on aligning institutional incentives with local knowledge and community empowerment.

The 1990s witnessed a global reconceptualization of environmental policy under the influence of the **Brundtland Commission's Report, Our Common Future (1987)**, which introduced the idea of **sustainable development** as a unifying paradigm. Indian scholarship during this period engaged with the challenge of reconciling growth with environmental protection. Authors such as T.N. Khoshoo (1995) and M.S. Swaminathan (1998) emphasized the need for an integrated approach that linked ecological stability with social equity and technological innovation. This discourse reflected the influence of **ecological modernization theory (EMT)**, advanced by scholars like Arthur Mol and Gert Spaargaren, which posits that environmental improvement can be achieved through modernization, cleaner production, and institutional reform rather than through deindustrialization. In India, the **National Environment Policy (NEP) of 2006** embodied this synthesis, aiming to mainstream environmental considerations into economic planning while maintaining commitments to intergenerational equity and the precautionary principle. Environmental economists such as Haripriya Gundimeda and Kanchan Chopra explored the policy's emphasis on valuation of ecosystem services and market-based instruments, linking it to **Pigouvian theories of externality correction** and **environmental economics**. The literature on India's environmental policy has also been shaped by legal scholarship that examines the rise of **environmental jurisprudence**. The works of Lavanya Rajamani and Philippe Sands trace how Indian courts, especially the Supreme Court and the National Green Tribunal, have operationalized doctrines such as the **polluter-pays principle**, **precautionary principle**, and **public trust doctrine** within constitutional and international contexts. These developments illustrate the emergence of what scholars term **green constitutionalism**, wherein courts interpret environmental protection as intrinsic to the right to life under Article 21. Theoretical frameworks from **rights-based environmental governance** and **environmental justice theory** have been applied to analyze how the judiciary has transformed environmental litigation into a tool for participatory democracy and ecological accountability. From a political-economic standpoint, scholars such as Amita Baviskar (2003) and Rohan D'Souza (2006) have highlighted the contradictions between state-led development and environmental protection, situating India's environmental conflicts within the broader framework of **political ecology**. These studies reveal how large-scale projects, such as dams, mining, and urban expansion, disproportionately affect marginalized communities, giving rise to the discourse of

environmental justice. This aligns with international theoretical currents developed by Robert Bullard and David Schlosberg, which argue that environmental governance must address issues of equity, recognition, and participation. Indian movements such as the Narmada Bachao Andolan and the Chipko movement have thus been studied as embodiments of **ecological democracy**, grassroots struggles that contest the centralization of environmental decision-making and reassert the right to ecological self-determination. In the international context, the literature situates India's environmental diplomacy within frameworks of **regime theory, constructivism, and global environmental governance.** Scholars such as Navroz Dubash (2009) and Lavanya Rajamani (2011) have examined India's evolving stance in climate negotiations, particularly its role in shaping the **Common but Differentiated Responsibilities (CBDR)** principle under the UNFCCC. This doctrine, grounded in **Rawlsian distributive justice** and **equity theory**, embodies India's assertion that historical responsibility and developmental capacity must guide the allocation of environmental obligations. Earlier analyses, such as those by Anil Agarwal and Sunita Narain in *Global Warming in an Unequal World* (1991), articulated the moral logic of this position, arguing that global climate policy must recognize asymmetries in consumption and carbon emissions between the North and the South.

Recent scholarship extends these debates by interpreting India's climate leadership through the lens of **constructivist international relations theory.** Authors like Ulka Kelkar and Lavanya Rajamani note that India's international posture has evolved from defensive developmentalism to proactive norm entrepreneurship, as seen in initiatives such as the **International Solar Alliance (ISA)** and commitments under the **Paris Agreement (2015).** Theoretically, this transition aligns with **Keohane and Nye's complex interdependence theory**, which suggests that power in the international system increasingly derives from interlinked issues, technology, energy and environment, rather than military strength. India's engagement in climate diplomacy also resonates with **Ostrom's theory of polycentric governance**, which advocates for distributed, adaptive responses to global environmental challenges across multiple levels of authority. In parallel, scholars like Amartya Sen and Martha Nussbaum have advanced the **capability approach**, emphasizing that environmental sustainability must be understood in terms of expanding human freedoms and opportunities. This theoretical framework has influenced Indian discourses on **climate justice**, highlighting that the pursuit of global sustainability must not constrain developmental aspirations or deepen inequality. Academic analyses of India's stance in global forums, such as the G77 and the Conference of the Parties (COP), reveal its continued advocacy for equity-based solutions and technology transfer mechanisms, consistent with **collective action theory** and the logic of providing global public goods. Recent interdisciplinary studies further situate India's environmental policy within the framework of **reflexive governance theory**, which conceives environmental policymaking as an iterative, adaptive process responsive to scientific uncertainty and socio-economic complexity. The works of Anthony Giddens and Johan Schot underscore that modern environmental governance must constantly evolve through self-reflection, institutional learning, and public engagement. In the Indian context, this has been observed in the gradual shift from rigid regulatory enforcement toward flexible, knowledge-based approaches, including the promotion of renewable energy transitions, climate adaptation strategies, and biodiversity conservation. Overall, the existing literature portrays India's environmental policy as a complex interplay between law, economy, politics, and ethics. Scholars have progressively moved from viewing environmental regulation as a technocratic domain of state control to understanding it as a contested arena shaped by power relations, community agency, and global norms. The theoretical evolution, from **bureaucratic regulation** and **sustainable development** to **ecological modernization, polycentric governance** and **environmental justice**, reflects the intellectual pluralism that underlies India's environmental policymaking. However, the literature also identifies persistent challenges, including policy fragmentation, weak institutional capacity, and socio-environmental inequalities, underscoring the need for integrative and equitable governance frameworks.

Emergence of Environmental Policy

The evolution of India's environmental policy is a complex historical and theoretical trajectory that reflects the country's changing socio-economic conditions, ideological orientations, and international engagements. From its early post-independence developmental priorities to the contemporary era of global climate governance, India's environmental policy has oscillated between ecological preservation and economic pragmatism. This evolution can be broadly situated within the frameworks of environmental governance theory, ecological modernization, and sustainable development paradigms, each of which offers an interpretive lens for understanding how India's environmental consciousness and policy structures have developed over time. The earliest phase of environmental policymaking in India, emerging prominently in the 1970s, was shaped by the **command-and-control model of environmental regulation**, consistent with what environmental governance theorists describe as the **regulatory state paradigm.** This approach emphasized legislative control, institutional oversight, and punitive enforcement mechanisms as the principal tools for environmental protection. The period coincided with the rise of global environmental awareness following the 1972 United Nations Conference on the Human Environment held in Stockholm, which served as a turning point for many developing countries, including India. The Indian government responded by amending its Constitution through the **42nd Amendment in 1976**, introducing **Article 48A** (Directive

Principles of State Policy) and **Article 51A(g)** (Fundamental Duties), thereby embedding environmental protection as both a state responsibility and a citizen's duty. This constitutional grounding can be understood through the **theory of environmental constitutionalism**, which posits that embedding environmental protection in constitutional law ensures its prioritization in the hierarchy of policy objectives. The enactment of core legislations during this phase, such as the **Water (Prevention and Control of Pollution) Act of 1974**, the **Air (Prevention and Control of Pollution) Act of 1981**, and the **Environment (Protection) Act of 1986**, reflected the state's adoption of a legalistic and centralized framework for environmental governance. These laws operationalized the principles of **environmental regulation and compliance theory**, where environmental quality was maintained primarily through state inspection, licensing, and penalty-based control mechanisms. The establishment of institutions such as the **Central Pollution Control Board (CPCB)** and **State Pollution Control Boards (SPCBs)** further entrenched a bureaucratic model of environmental regulation consistent with the **Weberian framework of administrative rationality**, which views environmental governance as an outcome of rule-based, hierarchical administration. However, by the late 1980s and early 1990s, India's environmental policy began to reflect a shift towards **participatory and decentralized governance models**, influenced by both internal social movements and global sustainable development discourses. The **National Forest Policy of 1988** epitomized this transition. It departed from the earlier colonial legacy of resource extraction and state control over forests to embrace the principles of **community-based natural resource management (CBNRM)** and **common property resource theory**, both of which advocate for the involvement of local communities as stakeholders in ecological stewardship. This transformation was further reinforced by the Joint Forest Management (JFM) programme, which institutionalized participatory forest governance and sought to align environmental protection with livelihood security. The theoretical foundation of this phase rests on **Elinor Ostrom's theory of collective action and polycentric governance**, which argues that sustainable resource management is most effective when decision-making authority is distributed among multiple, interlinked governance levels rather than monopolized by the state.

The post-1992 period marked another watershed moment in India's environmental evolution, shaped by the **Earth Summit in Rio de Janeiro** and the subsequent adoption of the **Rio Declaration on Environment and Development** and **Agenda 21**. These international instruments catalyzed India's internalization of the concept of **sustainable development**, a theoretical paradigm advanced by the **Brundtland Commission (1987)**, which defined development as meeting the needs of the present without compromising the ability of future generations to meet their own needs. This period witnessed India's growing engagement with global environmental regimes, particularly those concerning climate change, biodiversity conservation, and desertification. Domestically, the 1990s were characterized by the growing influence of **environmental economics** and the **polluter-pays principle**, reflecting a gradual movement towards **market-based environmental governance**. This transition aligned with the global trend of **ecological modernization theory (EMT)**, which suggests that technological innovation, market mechanisms, and institutional reform can drive both economic growth and environmental improvement simultaneously. The early 2000s ushered in an era of consolidation and integration of India's environmental agenda. The **National Environment Policy (NEP) of 2006** symbolized a paradigmatic shift from reactive regulation to proactive integration of environmental concerns into development planning. The NEP was informed by **integrated environmental management theory**, emphasizing cross-sectoral policy coherence, the precautionary principle, and inter-generational equity. It recognized that environmental degradation could not be addressed through fragmented or sectoral approaches alone but required systemic, multi-level, and multi-actor coordination. The policy also acknowledged the relevance of **institutional ecology**, a theoretical perspective that explores how institutions, norms, and governance systems evolve in response to environmental pressures. The NEP thus positioned environmental policy within a broader governance framework that connected ecology, economy, and society, reflecting what scholars such as Anthony Giddens describe as **reflexive modernity**, wherein societies increasingly reflect upon and adapt their institutional frameworks to mitigate the unintended consequences of modernization. In the contemporary phase, India's environmental policy has become deeply intertwined with global climate governance and international environmental diplomacy. The formulation of the **National Action Plan on Climate Change (NAPCC) in 2008**, with its eight mission frameworks, represents the institutionalization of **adaptive governance theory**, which emphasizes flexibility, learning, and resilience in environmental management. Adaptive governance seeks to accommodate scientific uncertainty and socio-political complexity by promoting experimentation, feedback mechanisms, and cross-scale linkages. India's policy commitments under the **Paris Agreement (2015)**, particularly its Nationally Determined Contributions (NDCs), embody this adaptive logic by linking domestic policy reform to evolving international norms and technological progress. Furthermore, the ongoing environmental transition in India is influenced by the global discourse on **environmental justice** and **ecological democracy**, both of which challenge the technocratic and top-down orientation of earlier policies. Environmental justice theory, rooted in political ecology, critiques the unequal distribution of environmental benefits and burdens, calling for a greater focus on inclusion, transparency and social equity. In the Indian context, this theoretical lens is particularly relevant given the intersection of environmental degradation with issues of poverty, caste and indigenous rights. The evolution of India's policy regime, therefore, cannot be understood merely as a chronological

development of laws and institutions but must also be seen as a reflection of shifting theoretical orientations, from regulatory control and state-centric governance to participatory, adaptive and justice-oriented frameworks.

Understanding the International Alignment

In recent decades, India's environmental policy has undergone a profound transformation, reflecting the convergence of national development priorities with international environmental norms. This transformation can be situated within the larger theoretical frameworks of **global environmental governance**, **ecological modernization**, and **environmental multilateralism**, each providing a lens through which to understand how India has aligned its domestic policies with evolving international commitments. The trajectory of this alignment, from the early 2000s to the present, reveals a dynamic process in which environmental sustainability has become both a moral and strategic imperative, shaped by global diplomatic negotiations, transnational advocacy networks, and internal socio-economic restructuring. The early 21st century marked a shift from fragmented environmental regulation toward an integrated, climate-responsive governance model. The adoption of the **National Environment Policy (NEP) in 2006** represented a conceptual bridge between domestic environmental imperatives and international commitments. Drawing from the **sustainable development paradigm** advanced by the **World Commission on Environment and Development (Brundtland Report, 1987)**, the NEP articulated environmental stewardship not as an external constraint on growth but as an intrinsic component of developmental planning. The theoretical underpinning here reflects **ecological modernization theory (EMT)**, developed by scholars such as Arthur Mol and Gert Spaargaren, which argues that environmental reform can be achieved through technological innovation, institutional restructuring, and the integration of ecological considerations into capitalist systems. India's adoption of cleaner technologies, promotion of renewable energy, and emphasis on market-based instruments such as carbon credits illustrate this shift from the command-and-control model of the 1970s to a modernization-driven environmental regime in which economic growth and ecological sustainability are treated as mutually reinforcing rather than antagonistic. A defining moment in India's environmental realignment came with the establishment of the **National Action Plan on Climate Change (NAPCC) in 2008**. This framework, comprising eight national missions, exemplifies the theoretical orientation of **adaptive governance**, which emphasizes flexibility, learning, and resilience in managing complex environmental systems. Adaptive governance, as advanced by theorists such as Carl Folke and Lance Gunderson, suggests that environmental policy must be capable of evolving in response to scientific uncertainty and socio-political change. The NAPCC reflects this ethos by integrating sectoral missions, on solar energy, energy efficiency, sustainable habitat, water and agriculture, into a dynamic policy framework that can respond to emergent climate challenges. This model also resonates with **polycentric governance theory**, proposed by Elinor Ostrom, which contends that effective environmental management requires multiple, overlapping centers of decision-making rather than a singular, hierarchical authority. India's federal structure, with both central and state-level climate action plans, demonstrates this polycentric configuration, where diverse actors (ministries, state governments and local institutions) jointly implement adaptive strategies within a broader policy matrix.

At the international level, India's engagement with global environmental regimes has been equally significant. Since becoming a signatory to the **United Nations Framework Convention on Climate Change (UNFCCC) in 1992** and later to the **Kyoto Protocol (1997)**, India's stance has been informed by the principle of **Common But Differentiated Responsibilities and Respective Capabilities (CBDR-RC)**, a cornerstone of international environmental law. This principle, rooted in theories of **environmental justice** and **developmental equity**, asserts that while all nations share responsibility for addressing global environmental problems, developed nations bear a greater historical burden due to their disproportionate contribution to ecological degradation. Indian policymakers and negotiators have consistently invoked this principle as both a moral argument and a strategic positioning tool within international climate diplomacy. This theoretical grounding aligns with the **dependency theory** perspective in environmental politics, which views global environmental governance as structured by unequal power relations between the Global North and South. By advocating for equity in emission responsibilities and financial transfers, India situates itself as a defender of climate justice within a globalized environmental order dominated by northern technological and financial hegemony. The **Paris Agreement of 2015** marked a new era in India's environmental diplomacy and policy alignment. By committing to reduce the emission intensity of its GDP by 33-35 percent by 2030, achieving 40 percent of its power capacity from non-fossil sources, and expanding forest cover to create carbon sinks, India embraced a framework of **conditional compliance** embedded in the Paris architecture. The Paris model is theoretically anchored in **networked governance** and **transnational policy diffusion**, whereby national commitments are voluntarily articulated, monitored through transparency mechanisms, and reviewed in a collective global process. For India, this arrangement offered flexibility, preserving sovereignty while fostering alignment with global norms. The underlying theoretical basis also draws from **constructivist international relations theory**, which posits that states' behaviors are shaped not merely by material capabilities but by shared norms, identities, and expectations. India's growing identification as a "responsible environmental actor" and a proponent of South-South cooperation demonstrates how normative pressures can shape domestic policy evolution. The subsequent years have seen

the emergence of a policy discourse integrating **climate adaptation, resilience, and sustainable transition frameworks**. India's rapid expansion of renewable energy, epitomized by the International Solar Alliance (ISA) launched in 2015, reflects a synthesis of environmental diplomacy and developmental pragmatism. The ISA initiative embodies elements of **global public goods theory**, as it seeks to collectively provide access to solar technology and finance for developing nations, reinforcing India's role as a norm entrepreneur in global climate governance. Moreover, this shift corresponds to **neo-institutionalist perspectives** in environmental policy analysis, which emphasize how institutional norms, organizational learning, and international cooperation shape long-term sustainability trajectories. From a theoretical standpoint, India's environmental realignment also demonstrates the influence of **multi-level governance (MLG)** and **policy convergence theory**, which explain how supranational frameworks and global institutions drive domestic policy adjustments. The diffusion of global standards on emissions reporting, environmental impact assessment, and biodiversity conservation into India's administrative and legal systems exemplifies the process of vertical and horizontal policy convergence. At the same time, India's resistance to externally imposed conditionalities and its advocacy for national sovereignty over natural resources highlight the ongoing tension between global governance and state autonomy, a theme central to **political ecology** and **critical environmental theory**. These frameworks critique the unequal distribution of environmental responsibilities and question whether global sustainability initiatives perpetuate asymmetries of power under the guise of cooperation.

In the current decade, India's environmental trajectory reflects an increasingly **strategic alignment between ecological policy and economic modernization**. The national focus on green energy, electric mobility, and circular economy initiatives aligns with the theoretical premises of **green growth theory**, which seeks to decouple economic expansion from environmental degradation through innovation and efficiency. Yet, as scholars such as Tim Jackson and Kate Raworth have argued, this approach also invites critique from **degrowth and ecological economics perspectives**, which challenge the assumption that technological advancement alone can ensure ecological balance. India's policy orientation thus remains situated within an unresolved theoretical debate between reformist modernization and transformative ecological restructuring. Another salient feature of recent policy development is the **integration of environmental security** into India's strategic calculus. This linkage derives from **non-traditional security theory**, which broadens the scope of national security to include environmental degradation, resource scarcity, and climate vulnerability as existential threats. The incorporation of environmental security considerations into India's foreign and defense policies underscores the growing recognition that ecological instability can exacerbate geopolitical tensions, migration, and socio-economic inequalities. In this sense, India's international alignment is not merely normative but deeply strategic, reflecting what scholars of **realist environmental politics** term "the securitization of the environment"—the process by which environmental issues are reframed as matters of national and global security. Finally, the evolution of India's environmental alignment cannot be fully understood without reference to **environmental democracy theory**, which connects global governance to local participation. The proliferation of sub-national climate action plans, community-based adaptation projects, and non-governmental environmental movements indicates a bottom-up diffusion of environmental norms consistent with participatory governance models. The state's engagement with civil society, international funding agencies, and transnational networks represents a form of **deliberative environmentalism**, where policymaking increasingly depends on dialogue, consensus-building and collective learning across scales of governance.

Exploring the National Dimension

The national dimension of India's environmental policy represents a deeply layered and evolving governance architecture in which legal, institutional, and socio-political elements intersect to shape environmental decision-making. This structure is influenced by both domestic development imperatives and the theoretical underpinnings of environmental governance, administrative decentralization, and ecological justice. Understanding India's national environmental framework therefore requires not only a descriptive account of its policies and institutions but also a theoretical interpretation of how these elements function within the broader paradigms of environmental regulation, federal governance, and policy implementation. At the core of India's environmental framework lies a set of foundational policies and statutes that collectively form what scholars of **environmental federalism** describe as a "multi-level regulatory regime." India's Constitution, particularly Articles 48A and 51A(g), provides the normative foundation for environmental protection by embedding ecological stewardship within the Directive Principles of State Policy and citizens' duties. This constitutionalization of environmental responsibility aligns with the theoretical framework of **environmental constitutionalism**, which argues that environmental protection, when enshrined in constitutional law, acquires a quasi-fundamental status that transcends transient political interests. This framework ensures that environmental rights and duties are not merely programmatic but form part of the legal and moral fabric of the nation's governance system. Following this constitutional mandate, the emergence of landmark legislation such as the **Water (Prevention and Control of Pollution) Act (1974)**, the **Air (Prevention and Control of Pollution) Act (1981)**, and the **Environment (Protection) Act (1986)** created the institutional scaffolding for regulatory control. These laws reflect the classical **command-and-control model** of environmental regulation, a theoretical construct rooted in

instrumental rationality, where environmental outcomes are achieved through direct state intervention, standard setting, and punitive enforcement. This model assumes that the state, as a rational actor, can define optimal environmental standards and ensure compliance through bureaucratic oversight. The establishment of the **Central Pollution Control Board (CPCB)** and the **State Pollution Control Boards (SPCBs)** as implementing authorities further exemplifies what Max Weber termed **bureaucratic rational-legal authority**, characterized by hierarchical organization, procedural formality, and rule-based administration. However, while this structure has institutionalized environmental protection, it has also generated rigidity and administrative inertia, issues that scholars such as Lipsky (1980) identified in **street-level bureaucracy theory**, where local-level actors face the challenge of implementing complex mandates with limited resources and discretion. As India transitioned toward liberalization in the 1990s, its environmental policy began to adopt elements of **new institutionalism** and **regulatory pluralism**. These theoretical perspectives recognize that environmental governance cannot rely solely on state regulation but must incorporate diverse actors—private enterprises, local communities, and civil society organizations. The **National Forest Policy of 1988** and the introduction of **Joint Forest Management (JFM)** exemplify this paradigm shift. Drawing on the principles of **common property resource (CPR) theory** developed by Elinor Ostrom, these initiatives redefined forests not as state-owned commodities but as shared ecological commons whose sustainable management depends on local participation, collective decision-making, and trust-based governance. Ostrom's theory challenges the "tragedy of the commons" thesis by demonstrating that local communities, when empowered institutionally, can self-organize to manage resources sustainably without top-down control. In India, the decentralization of forest governance and the inclusion of local forest committees signify the adoption of **polycentric governance**, where multiple centers of authority operate at various levels, village, state and national, to co-manage environmental resources. The **National Environment Policy (NEP) of 2006** represents a significant conceptual and institutional consolidation of India's environmental regime. The policy is grounded in the principles of **integrated environmental management** and **sustainable development**, drawing inspiration from the **Brundtland paradigm** that advocates for harmonizing economic growth with ecological integrity and intergenerational equity. The NEP also institutionalized core environmental principles derived from international environmental law, such as the **precautionary principle**, the **polluter-pays principle** and the **public trust doctrine**, each carrying specific theoretical significance. The precautionary principle, originating from environmental risk theory, asserts that lack of full scientific certainty should not delay preventive action in the face of potential environmental harm. The polluter-pays principle, rooted in **Pigouvian economic theory**, internalizes environmental externalities by ensuring that those who cause pollution bear the cost of mitigation. The public trust doctrine, articulated by legal scholars like Joseph Sax, posits that certain natural resources are held in trust by the state for the benefit of all citizens, thereby transforming environmental governance into a fiduciary responsibility rather than an administrative function. The institutional structure of India's environmental governance reveals an intricate interaction between centralization and decentralization. The **Ministry of Environment, Forest and Climate Change (MoEFCC)** serves as the apex body responsible for policy formulation, legislative oversight, and coordination with international agencies. Its subsidiary bodies, such as the CPCB and the National Biodiversity Authority, exercise regulatory, advisory, and monitoring functions. However, the implementation of environmental norms largely rests with state governments, reflecting the principles of **cooperative federalism**. Theoretically, this arrangement draws from **fiscal federalism and subsidiarity theory**, which hold that governance functions should be devolved to the lowest level of authority capable of effectively performing them. While this model allows flexibility and contextual adaptation, it also produces asymmetries in enforcement capacity, as state-level institutions often face severe resource constraints, political interference, and technical inadequacies.

India's environmental policy landscape is also marked by a significant degree of judicial activism, which can be understood through the lens of **environmental jurisprudence theory**. The Supreme Court and National Green Tribunal (NGT) have played transformative roles in expanding environmental rights through landmark rulings based on the constitutional "right to life" under Article 21. These judicial interventions illustrate the concept of **green constitutionalism**, where courts act as custodians of environmental justice and interpret environmental protection as a fundamental human right. The judicial expansion of doctrines such as the precautionary principle and intergenerational equity has led to a normative shift from administrative enforcement to rights-based environmental governance. Despite these policy advancements, the national dimension of India's environmental framework is beset by enduring structural challenges that can be interpreted through multiple theoretical perspectives. The **implementation gap** between legislation and outcomes reflects what Michael Lipsky described as the problem of **bureaucratic discretion under constraint**, where frontline officials must reconcile conflicting demands from political authorities, industries, and citizens. This gap also resonates with **institutional capacity theory**, which posits that effective governance depends not only on formal rules but also on organizational learning, resource availability, and inter-agency coordination. The fragmentation of environmental governance, where different ministries oversee water, forests, energy and urban development without a unified strategy, illustrates the challenges of **policy coherence and institutional interoperability**, issues well-documented in the literature on **network governance** and **policy integration theory**. These theories argue that sustainable environmental governance requires coordination across sectors and scales to avoid policy contradictions and

inefficiencies. From a socio-political perspective, India's environmental governance is also deeply intertwined with the dynamics of **environmental justice** and **political ecology**. The uneven distribution of environmental burdens, such as industrial pollution, deforestation and displacement caused by infrastructure projects, reveals the intersection of ecology with class, caste, and ethnicity. The theory of **environmental justice**, emerging from grassroots movements in the United States and adapted in the Indian context, argues that environmental harms are disproportionately borne by marginalized communities, while benefits accrue to industrial and urban elites. Political ecology, as advanced by scholars like Piers Blaikie and Raymond Bryant, provides a broader interpretive framework by situating environmental conflicts within structures of power, capitalism, and development. In India, struggles over land acquisition, mining, and forest rights exemplify this tension between economic growth and ecological democracy. Furthermore, India's national environmental framework is increasingly shaped by the logic of **ecological modernization**, wherein environmental sustainability is pursued through technological innovation, efficiency improvements, and market mechanisms. Initiatives such as the National Solar Mission and energy efficiency programs under the **National Action Plan on Climate Change (NAPCC)** demonstrate the incorporation of economic incentives and clean technologies into environmental governance. However, this approach also raises questions about the **technocratic bias of ecological modernization theory**, which tends to privilege technical solutions over socio-political transformation. Critics, drawing from **critical environmental theory**, caution that such market-oriented approaches risk depoliticizing environmental issues by framing them as managerial challenges rather than as questions of equity and justice. The cumulative picture of India's national environmental policy thus reflects a hybrid institutional ecology shaped by legal formalism, bureaucratic rationality, community participation, and market adaptation. The state's regulatory apparatus continues to play a central role, yet its effectiveness depends increasingly on the capacity to integrate multiple governance modes (hierarchical, participatory and networked). The persistence of implementation failures, policy incoherence, and distributive injustices underscores the ongoing need to bridge theory and practice in environmental governance. The challenge, as environmental governance theorists argue, is to move from a system of fragmented interventions to one of **reflexive governance**, where policy continuously evolves through feedback, accountability and learning. It's safe to say that the national dimension of India's environmental policy is not merely an administrative framework but a reflection of the country's broader political and developmental philosophy. It embodies the tension between the imperatives of growth and sustainability, central authority and local autonomy, efficiency and equity. The interplay of theories, ranging from command-and-control regulation to polycentric governance and environmental justice, reveals that India's environmental governance is best understood as an adaptive, multi-scalar, and contested process. The national policy architecture thus stands as both a product of and a response to the theoretical evolution of environmental thought, continuously redefined by the realities of a rapidly transforming society and a fragile ecological landscape.

Conclusion: India on the Global Stage

India's role in the global environmental arena has evolved from that of a cautious participant in international negotiations to a proactive actor shaping the discourse on climate justice, sustainable development, and ecological equity. The trajectory of India's international environmental engagement is deeply interwoven with the theoretical currents of **international relations, global environmental governance, ecological modernization, and environmental justice**, each offering insights into how India's environmental diplomacy reflects both developmental pragmatism and normative leadership. From the early decades of independence, India's environmental stance was guided by the **dependency and world-systems theories** of international political economy, which framed environmental degradation as a consequence of global structural inequalities between the industrialized North and the developing South. Indian leaders such as Indira Gandhi, who famously declared at the **1972 Stockholm Conference on the Human Environment** that "poverty is the worst form of pollution," articulated an early form of **ecological developmentalism**, linking environmental degradation to underdevelopment rather than overconsumption. This articulation aligned with **postcolonial environmental theory**, which emphasizes that environmental crises in the Global South are often symptoms of historical exploitation, unequal resource distribution, and externally imposed models of modernization. India's insistence on the primacy of development over environmental constraints during this period thus reflected the **realist orientation** in international relations, prioritizing national sovereignty and economic self-determination over binding environmental commitments. However, the global discourse on environmental governance began to shift in the late twentieth century with the emergence of **regime theory**, which conceptualizes international cooperation as the creation of shared norms, rules, and institutions to manage transboundary issues such as climate change, biodiversity, and pollution. India's participation in global environmental regimes, including the **United Nations Framework Convention on Climate Change (UNFCCC)**, the **Convention on Biological Diversity (CBD)**, and the **Montreal Protocol on Substances that Deplete the Ozone Layer**, marked its gradual integration into the institutional fabric of global environmental governance. Within the theoretical framework of **regime theory**, India's engagement can be interpreted as a process of **norm internalization**, whereby developing states adopt international norms not merely through coercion

or compliance, but through negotiation and adaptation to domestic contexts. This perspective recognizes that environmental governance is not an externally imposed order but a co-constructed system shaped by the interplay of global and national actors.

India's international environmental position matured further after the **1992 Earth Summit in Rio de Janeiro**, where the **Brundtland Commission's concept of sustainable development** provided the intellectual basis for reconciling ecological preservation with economic growth. India's endorsement of the **Rio Declaration, Agenda 21**, and subsequent conventions on climate and biodiversity reflected its recognition of sustainability as a legitimate developmental objective. However, India's advocacy for the principle of **Common but Differentiated Responsibilities (CBDR)**, enshrined in the UNFCCC, became the cornerstone of its international environmental diplomacy. This principle, rooted in **equity theory** and **distributive justice**, asserts that while all nations share the responsibility for addressing global environmental challenges, the burden should be distributed according to historical responsibility, technological capacity and developmental needs. The theoretical underpinning of CBDR draws on **Rawlsian justice theory**, particularly the notion of fairness as equality adjusted for circumstance, where unequal capacities justify differentiated obligations. By championing CBDR, India positioned itself as both a representative of the developing world and an architect of a more equitable global environmental order. The 2000s marked India's deepening engagement with global environmental institutions through the frameworks of **global environmental governance** and **climate diplomacy**. This phase can be analyzed using **constructivist theory** in international relations, which emphasizes the role of identity, ideas, and discourse in shaping state behavior. India's identity as a developing democracy with a strong moral claim to equity allowed it to exercise what Joseph Nye describes as **soft power**—influencing global negotiations not through coercion but through normative persuasion. India's contributions to the **Kyoto Protocol negotiations**, where it resisted binding emission targets but advocated for technology transfer and financial assistance, illustrate its constructivist strategy: reshaping global norms to reflect developmental justice while gradually aligning with emerging global standards. The establishment of the **International Solar Alliance (ISA)** in 2015, spearheaded by India and France, demonstrates India's transition from a defensive actor to a **norm entrepreneur** in the global environmental arena. Drawing on **Keohane and Nye's theory of complex interdependence**, India's leadership in renewable energy diplomacy reflects the changing nature of power in the international system, where environmental and technological interdependencies increasingly define global cooperation. The ISA, grounded in the principles of **ecological modernization theory (EMT)**, advances the idea that environmental sustainability can be achieved through technological innovation, renewable energy transitions, and market-based mechanisms. Ecological modernization posits that economic and environmental objectives need not be mutually exclusive but can be harmonized through innovation and institutional adaptation. By promoting solar energy as a pathway to both energy access and climate mitigation, India embodies the EMT's central thesis, modernization need not be ecologically destructive if guided by green technology and cooperative governance.

India's engagement with the **Paris Agreement (2015)** further reinforced its role as a key player in global climate politics. The Paris framework, grounded in the notion of **polycentric governance** as articulated by Elinor Ostrom, rejects centralized enforcement in favor of distributed and adaptive climate action across multiple actors and scales. India's Nationally Determined Contributions (NDCs), which include commitments to expand renewable energy capacity and reduce emissions intensity, exemplify this polycentric logic. Rather than adhering to externally imposed quotas, India's NDCs reflect a domestically tailored approach to global cooperation, demonstrating the dynamic interplay between national autonomy and collective responsibility. This approach also resonates with the principles of **adaptive governance**, which emphasize flexibility, learning, and resilience in responding to complex environmental challenges under conditions of uncertainty. Another significant theoretical lens through which India's international environmental role can be interpreted is **environmental justice and climate ethics**. As the global climate debate increasingly centers on issues of loss, damage, and responsibility, India's advocacy for climate justice foregrounds the moral and distributive dimensions of environmental governance. Climate justice theory, derived from both political ecology and moral philosophy, critiques the inequitable burdens imposed on vulnerable populations by climate change, particularly in the Global South. India's stance in forums such as the **Conference of the Parties (COP)** and the **G77+China** coalition has consistently highlighted this ethical dimension, emphasizing that sustainable development must integrate the principles of equity, inclusion, and human rights. This position has also found resonance with **Amartya Sen's capability approach**, which frames development as the expansion of human freedoms and capabilities rather than mere economic output. India's emphasis on balancing climate mitigation with poverty eradication reflects this normative framework, suggesting that environmental sustainability cannot be divorced from social justice. India's engagement with international financing mechanisms such as the **Green Climate Fund (GCF)** and global initiatives on biodiversity and desertification further reflects the influence of **institutional economic theories**, particularly those related to public goods and externalities. Climate stability and biodiversity conservation are global public goods—non-excludable and non-rivalrous resources that require collective action to maintain. India's call for financial and technological transfers from developed to developing countries aligns with **Olson's collective action theory**, which argues that without incentives, individual actors (or states) may underinvest in public goods. By emphasizing the asymmetry in capacity and responsibility, India not only

advocates for greater global solidarity but also highlights the need for institutional reforms that address the incentive structures underlying global environmental governance.

Despite these theoretical and diplomatic advances, India's international environmental role is not free from contradictions. The country's reliance on coal, expanding industrial base, and growing energy demands have led to tensions between its developmental aspirations and environmental commitments. This duality can be interpreted through **world-systems theory**, which posits that semi-peripheral nations like India navigate the pressures of global capitalism by balancing industrial growth with ecological constraints. India's climate diplomacy thus represents a continual negotiation between **realist imperatives of national interest** and **constructivist commitments to global norms**, between the pursuit of material development and the assertion of moral leadership in the climate discourse. Moreover, India's engagement with global environmental governance illustrates the shift from **state-centric diplomacy to transnational environmental politics**, where non-state actors, like scientific networks, civil society organizations and private corporations, play an increasingly influential role. Theoretically, this shift embodies what scholars like Oran Young and Peter Haas describe as **epistemic community theory**, which explains how networks of experts and scientists shape policy outcomes by generating and diffusing environmental knowledge. India's participation in global research initiatives on climate modeling, biodiversity mapping, and sustainable technologies underscores its integration into these transnational epistemic networks that transcend the traditional boundaries of diplomacy. So, India's presence in the global environmental arena represents a complex synthesis of theory and practice. Its evolving policy stance encapsulates the transition from a **developmentalist realism** grounded in sovereignty and equity to a **constructivist environmentalism** rooted in cooperation, technology, and justice. The application of diverse theoretical perspectives, ranging from **Rawlsian distributive justice** and **Ostromian polycentrism** to **Keohane's interdependence theory** and **postcolonial environmental critique**, reveals the multidimensional nature of India's international environmental engagement. India has moved from being a reluctant participant to a proactive norm-setter in the global environmental regime, asserting that environmental sustainability and social justice are inseparable goals. Its diplomacy, oscillating between pragmatism and principle, demonstrates how a developing nation can shape the contours of global environmental governance while negotiating its own pathway toward sustainable development.

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