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Federalism For Sustainability: Leveraging Multi-Level Governance for Environmental Protection in India

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ABSTRACT

India, a federal country with a variety of habitats, encounters substantial environmental difficulties. This research examines the relationship between federalism and environmental governance in India. It also aims to evaluate the efficacy of the existing federal framework in attaining environmental sustainability. It examines the potential of multi-level governance to enhance environmental protection initiatives. This research utilises a doctrinal legal research technique. The paper analyses the allocation of legislative and executive authority in environmental affairs between the federal government and individual states. It examines how the distribution of power might result in gaps in implementation and inconsistencies across various locations. It further examines the function of institutions like the National Green Tribunal in addressing the divide between central and state-level environmental regulation. The analysis indicates that although the Indian federal structure promotes diversity, it can impede coordinated and efficient environmental action. The paper highlights difficulties such as the presence of multiple authorities with overlapping jurisdiction, insufficient allocation of resources at the state level, and a lack of collaboration between different levels of government. Nevertheless, the study also emphasises the possibility of multi-level governance, wherein federal, state, and local governments cooperate to formulate and execute environmental policies that are customised to meet the specific requirements of different regions. The findings of this study suggest that the establishment of a comprehensive federal framework, which prioritises multi-level governance, is essential for attaining environmental sustainability in India. Identifying significant areas for change includes strengthening intergovernmental collaboration, boosting the ability of local bodies, and fostering public participation.

Keywords: *Federalism, Environmental Governance, NGT, Sustainability, India.*

I. INTRODUCTION

India, a dynamic democratic nation with diverse cultures and ecosystems, has a crucial task of

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harmonising environmental conservation with swift economic progress. India, a federal republic made up of 28 states and eight UTs, spans a wide range of landscapes, including snow-capped Himalayan mountains, lush tropical jungles, and parched deserts. Nevertheless, this remarkable variety of ecosystems gives rise to distinctive ecological obstacles, including issues such as air and water contamination, deforestation, and climate alteration.

The federal system of India, as created by the Constitution of 1950, allocates legislative and executive powers between the central government and individual states. Schedule VII of the Constitution provides a detailed enumeration of the subjects that fall under the legislative authority of both the Union (central government) and the states. Environmental protection is categorised as a concurrent issue, which implies that both the central government and individual states have the authority to create legislation regarding this matter. This power-sharing structure is designed to offer adaptability and address the specific requirements of different regions. For example, the federal government has the authority to create nationwide environmental policies and frameworks, while individual states can customise rules to tackle specific environmental concerns within their respective areas of jurisdiction.

India faces numerous environmental challenges despite its abundant natural resources. The fast process of industrialization and urbanization has resulted in concerns about levels of air and water pollution. Rivers and groundwater are contaminated by industrial waste and untreated sewage, posing a threat to public health and aquatic ecosystems. The levels of air pollution, especially in large urban areas, routinely above the established safety thresholds, presents a substantial health hazard to millions of individuals. Deforestation is a significant issue that leads to soil erosion, loss of biodiversity, and disturbance of natural water cycles. India's forest cover, which was earlier a substantial part of the nation's territory, has reduced as a result of factors such as agricultural growth, infrastructure development, and unsustainable logging practices. Moreover, the imminent danger of climate change introduces an additional level of intricacy. India is very susceptible to the impacts of increasing sea levels, unpredictable weather patterns, and severe weather events such as floods and droughts. The environmental difficulties in India not only endanger its ecological well-being but also have an adverse effect on agriculture, food security, and overall socio-economic progress.

India faces extensive and complex environmental challenges. Here is an analysis of some alarming statistics that demonstrates the gravity of the problems. As per the 2020 report of "World Health Organisation (WHO)" assessment on ambient air quality, Delhi is ranked as the most polluted city globally, with 9 other cities in India also being among the top 10. India is

home to 14 out of the 15 most polluted towns in the globe, with Delhi routinely being the worst.[3] Several Indian cities greatly surpass the World Health Organization's acceptable guideline of 25 micrograms per cubic meter.[4] According to the "Central Pollution Control Board (CPCB)", more than 70% of India's surface water is contaminated as a result of untreated sewage and industrial waste.[5] As per NITI Aayog, India is at risk of experiencing a water scarcity catastrophe by 2030, which could endanger the water security of millions of people.[6] India's position in the "Water Quality Index (2023)" is 120th out of 125 countries. India's forest cover, as reported by the "Forest Survey of India (FSI)", is around 21.67% of the country's total land area, which is below the suggested target of 33%.[7] According to the World Bank, India experiences a yearly loss of approximately 1.5 million hectares of forest cover due to a variety of factors. The annual deforestation rate in India is expected to be 1.14% based on data from 2010 to 2020.[8] According to the "Intergovernmental Panel on Climate Change (IPCC)", India is very susceptible to climate change. The country faces the risk of increasing sea levels, which pose a threat to coastal areas, and unpredictable weather patterns that negatively affect agricultural output.[9] The "National Disaster Management Authority (NDMA)" states that climate change is causing an escalation in the occurrence and severity of extreme weather phenomena such as floods and droughts in India.[10] According to a 2020 study conducted by the World Bank, it is projected that the increase in sea levels could result in the flooding of coastal cities such as Mumbai and Kolkata, leading to the displacement of a significant number of individuals.[11]

In India, air and water pollution have a substantial role in causing respiratory disorders, waterborne diseases, and various other health concerns. India's economic growth and development are significantly threatened by environmental deterioration, which has adverse effects on industries such as agriculture and tourism. These data emphasize the imperative of

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[3] Rajveer Kaur & Puneeta Pandey, Air Pollution, Climate Change, and Human Health in Indian Cities: A Brief Review, frontiers (Aug. 13, 2021), https://www.frontiersin.org/articles/10.3389/frsc.2021.705131/full.

[4] Vikas Singh & Shweta Singh, Exceedances and trends of particulate matter (PM2.5) in five Indian megacities, National Library of Medicine (Aug. 11, 2020), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7417276/.

[5] Dr Neelam Gupta, Water contamination: Still a serious national challenge, The Times of India (July 25, 2023), https://timesofindia.indiatimes.com/blogs/voices/water-contamination-still-a-serious-national-challenge/.

[6] Government of India, *NITI Aayog Report on Water Crisis*, Ministry of Jal Shakti (Dec. 9, 2019), https://pib.gov.in/newsite/PrintRelease.aspx?relid=195635.

[7] EHMP Freshwater Scores (2023)

[8] *Why It Matters | India lost 668,400 ha of forest cover in the last 30 years*, The Hindu (Mar. 21, 2023), https://www.thehindu.com/sci-tech/energy-and-environment/why-it-matters-india-has-lost-668400-ha-of-forest-cover-in-the-last-30-years/article66645294.ece.

[9] Special Report on the Ocean and Cryosphere in a Changing Climate (2019)

[10] Sunil Chauhan, Climate Change, Disasters and Security ……Issues, Concerns and Implications for India, University of Maryland.

[11] Architesh Panda, *Climate change, displacement, and managed retreat in coastal India*, ReliefWeb (May 22, 2020), https://reliefweb.int/report/india/climate-change-displacement-and-managed-retreat-coastal-india.

tackling India's environmental concerns. A robust and efficient environmental governance framework, capable of managing the intricacies of federalism, is essential to guarantee a prosperous and enduring future for the country.

The efficacy of India's environmental governance relies heavily on the interaction between the central and state administrations. The distribution of authority within the federal system offers both advantages and difficulties. One advantage of a federal system is that it enables the implementation of customized environmental policies that take into account regional differences. States can enhance their ability to solve local environmental challenges by implementing laws that are tailored to their unique circumstances. Moreover, adopting a decentralized strategy might stimulate creativity and trial-and-error, motivating nations to establish optimal methods for safeguarding the environment. Nevertheless, the existing federal framework also has significant drawbacks. Confusion and delays in policy execution might arise from the overlapping jurisdictions of the national and state governments. Variations in environmental regulations among different states might give rise to loopholes and impede the enforcement of regulations. In addition, limitations on resources at the state level can restrict the ability to establish and enforce robust environmental regulatory bodies and systems.

Gaining insight into the relationship between federalism and environmental governance is essential for discerning the advantages and disadvantages of the current system. Through a thorough analysis of power distribution, the efficacy of intergovernmental coordination, and the capabilities of various government levels, we can pinpoint areas that require enhancement.

Examining the relationship between federalism and environmental governance is crucial for several reasons:

- Analysing the current framework enables the identification of deficiencies in legislation and instances where overlapping authority leads to confusion and inefficiency.

- To enhance environmental governance, it is crucial to comprehend the difficulties linked to the existing framework. This understanding will enable the development of plans to reinforce environmental governance at both the national and regional levels.

- Analysing federalism enables the exploration of solutions to promote increased collaboration and coordination among various tiers of government.

India has the potential to create a more sustainable future by addressing the shortcomings of the existing federal framework. This would involve balancing environmental conservation with economic development.

(A) **Research objective and scope**

This study examines India's federalism-environmental governance relationship. This study analyzes power distribution and possible restrictions to find development opportunities and release the potential for a more efficient and sustainable approach. The analysis will explore how the Indian Constitution divides environmental legislative and executive power between the federal government and states. The study will examine India's main environmental issues: air and water pollution, deforestation, land degradation, and climate change. The report investigates federal system-related environmental law and enforcement disparities. This project will assess intergovernmental environmental governance coordination procedures to find areas for improvement. This project will examine multi-level governance, which involves multiple levels of government working together to create and implement environmental legislation. This research only discusses India's federal system and environmental control. This allows a focused assessment of Indian challenges and solutions.

(B) **Research Methodology**

This study utilizes a doctrinal legal research technique. The primary sources for this research will consist of pertinent Indian laws, such as the Constitution and environmental legislation, as well as significant judicial rulings on the environment. Additionally, policy papers that outline government strategies will be included. The secondary sources shall consist of scholarly papers, books, and reports authored by legal professionals and environmental specialists that are specifically examined in the paper. The research seeks to analyze these sources in order to determine the advantages and disadvantages of the existing federal system and investigate possible remedies for attaining environmental sustainability.

II. THEORETICAL FRAMEWORK

The correlation between federalism and environmental governance is an intricate enigma. This portion employs a theoretical framework to examine the fundamental ideas, different methods, and the capacity of cooperative federalism in tackling India's environmental issues.

(A) **Concept of Federalism and Environmental Governance:**

Federalism is a system that allocates authority between a central government and regional entities such as states. The allocation of authority also applies to environmental governance, in which both the central government and individual governments have shared obligations. The Indian Constitution delineates this allocation, with the central government exercising jurisdiction over inter-state rivers, forests, and specific environmental legislation. States,

however, independently oversee and regulate their own environmental assets, such as land, water within their boundaries, and pollution management.

The allocation of power can have advantageous effects, promoting regional variety and enabling states to customize environmental policies according to their particular requirements. Nevertheless, environmental concerns frequently surpass the limits of individual states, resulting in complex difficulties. Air pollution originating from a particular state has the ability to travel across great distances and affect nearby regions. Likewise, the cutting down of trees in the upper part of a river can impact the movement of water and the availability of resources in the lower part of the river.

(B) **Multi-Level Governance Approach:**
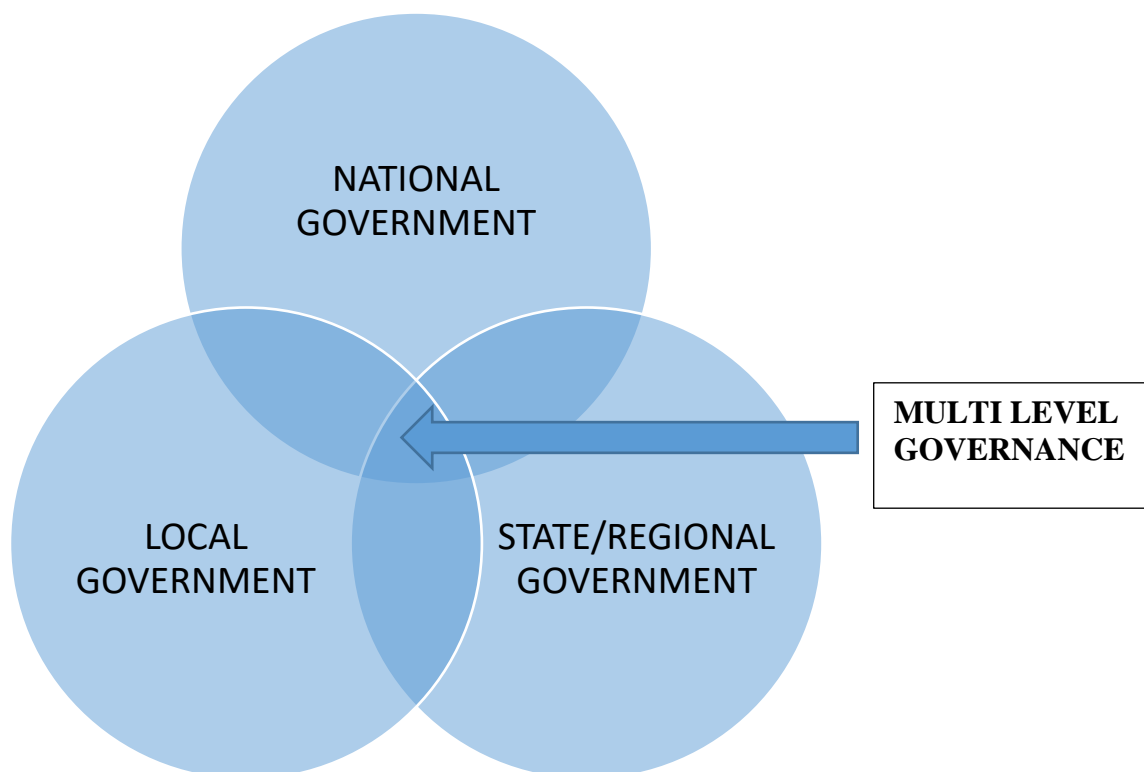
[Venn diagram showing MLG]

Given these issues, a "Multi-Level Governance (MLG)" strategy presents itself as a possible solution. MLG acknowledges the constraints of solely adopting a centralized or decentralized approach and advocates for cooperation among all tiers of government - national, regional, and local. There are multiple ways in which this collaboration can manifest. For example:

The central and state governments can engage in joint efforts to create inclusive environmental policies that incorporate uniform national guidelines while allowing for regional adjustments. Information sharing and coordination involves the exchange of data regarding environmental

challenges and the dissemination of best practices among various levels of government. This collaborative approach facilitates well-informed decision-making and promotes synchronized action. The federal government has the ability to offer states both technical and financial support in order to strengthen their ability to effectively regulate and enforce environmental policies. MLG promotes active involvement of local communities in decision-making processes, cultivating a sense of ownership and ensuring that environmental policies effectively meet local issues.

(C) Relevance of Cooperative Federalism in Environmental Protection:

Cooperative federalism, which is a component of MLG highlights the importance of collaboration and shared accountability between the central government and individual states in order to accomplish national objectives. This method is especially pertinent in the context of environmental conservation in India.

Cooperative federalism can mitigate the inherent fragmentation of a federal system by fostering a cohesive approach to environmental regulation and enforcement. Cooperation among governments is essential for addressing environmental problems that extend beyond state borders, such as air and water contamination. By collaborating, resources can be consolidated and distributed more efficiently to tackle environmental issues. States hold considerable expertise regarding their particular ecosystems and environmental concerns. Cooperative federalism enables the integration of this knowledge into the formulation of national policies.[12]

This paradigm is based on theoretical concepts such as ecological federalism, which suggests that environmental governance systems should be designed to align with ecological realities that frequently go beyond political boundaries. Furthermore, the ideas of cooperative federalism and collaborative governance serve as a basis for fostering intergovernmental collaboration and shared accountability in the pursuit of environmental sustainability.

III. LEGISLATIVE FRAMEWORK

"Environmental protection is a fundamental duty cast upon every citizen under Article 51A of the Constitution and a right inherent in the right to life guaranteed by Article 21."

-    Justice J.S. Verma

The environmental governance in India is governed by an intricate structure consisting of central and state laws, policies, and judicial decisions. The Indian Constitution includes

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[12] Charles Sims,Paul R Armsworth, et. al., *Leveraging federalism for flexible and robust management of social-ecological systems*, British Ecological Society (Feb. 16, 2023), https://besjournals.onlinelibrary.wiley.com/doi/full/10.1002/pan3.10458.

protecting the environment concepts through multiple provisions. Although there is no distinct and independent legal right to a clean environment, it is acknowledged as an intrinsic component of the right to life as stated in Article 21.[13] Moreover, Article 48A[14] requires the state to make efforts towards environmental preservation and the conservation of forests and wildlife. Furthermore, Article 51A(g)[15] imposes a fundamental obligation on each citizen to safeguard and enhance the natural environment. These clauses establish a robust constitutional basis for environmental preservation in India, highlighting the joint obligation of the government and its citizens.

(A) Allocation of Environmental Authority between Centre and States

Aspect	Central Government	State Government	Concurrent List (Both)
Legislative Authority	Makes laws for subjects in the Union List (e.g., air and water pollution control)	Makes laws for subjects in the State List (e.g., local environmental issues)	Can make laws for subjects in the Concurrent List (e.g., forests and wildlife)
Role	Sets national environmental standards and regulations	Implements and enforces central environmental legislation within their state	Can implement stricter environmental laws than national standards
Examples	The Water (Prevention and Control of Pollution) Act, 1974	State-specific pollution control boards	The Indian Forest Act, 1927 (can have stricter state-level regulations)

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[13] Article 21, Constitution of India
[14] Article 48A, Constitution of India
[15] Article 51A(g), Constitution of India

Advantages	Ensures uniformity in national environmental standards	Allows for regional specificities and addressing local issues	Provides flexibility for stricter environmental regulations if needed
Disadvantages	May not address regional variations effectively	Uneven enforcement capacity across states can lead to disparities	Potential for overlap and confusion in concurrent list areas

[Table - 1]

The Indian Constitution, which serves as the fundamental basis of the legal structure, allocates legislative and executive authority in environmental affairs. The central government possesses the authority to make laws for specific subjects listed in the "Union List (Schedule VII)". The federal government establishes comprehensive environmental legislation and establishes nationwide regulations for pollution management. Additionally, it plays a vital part in international environmental treaties and accords. The authority of state governments includes the ability to create laws for topics listed in the "State List (Schedule VII)". States enact and uphold centralised environmental legislation within their own territories. In addition, they have the power to implement more stringent environmental laws that go beyond the established national norms. The allocation of power to different regions, whilst promoting regional independence, might present difficulties. Some environmental issues may fall within concurrent authorities (Schedule VII), resulting in possible overlap and confusion regarding the accountable body. States may exhibit uneven degrees of capacity and dedication to environmental enforcement, resulting in disparities between regions.

(B) Analysis of Relevant Environmental Laws and Policies

India's environmental preservation activities are supported by a number of crucial environmental legislation. The EPA, enacted in 1986, is a legislation aimed at safeguarding the environment. This comprehensive legislation grants the central government the authority to issue notifications aimed at safeguarding and enhancing the environment. The framework encompasses pollution control, management of hazardous waste, and assessments of

environmental effect. The "Water (Prevention and Control of Pollution) Act, 1974" is a legislation that aims to regulate and manage the prevention and control of pollution in water bodies. The primary objective of this legislation is to mitigate and regulate water pollution by implementing a framework of licenses and criteria for wastewater discharge. The "Air (Prevention and Control of Pollution) Act, 1981" is a law that aims to regulate and manage the control and prevention of air pollution. This act primarily addresses the issue of air pollution by designating certain zones for air pollution control, implementing emission standards for industries, and establishing boards dedicated to the control and prevention of pollution. The "Wildlife Protection Act of 1972" is a legislation that aims to save wildlife species and their habitats. It encompasses the establishment of protected areas such as national parks and sanctuaries. The "Forest (Conservation) Act, 1980" imposes limitations on the conversion of forest land for purposes other than forestry, with the objective of safeguarding India's important forest resources.

These laws are reinforced by other environmental policies such as the "National Green Mission (2009)" and the "National Action Plan for Climate Change (2008)", which offer strategic guidance and action plans for specific environmental issues.

This research work is based on multiple environmental doctrines that support the goal of enhancing environmental governance in India. The concept of "sustainable development" prioritises the fulfillment of current demands while ensuring that future generations can also fulfill their own needs without any hindrance.[16] The "precautionary principle" emphasises the need to take proactive steps to prevent environmental damage, even when there is no definitive scientific evidence.[17] The "polluter pays principle" supports the idea of making people who are responsible for pollution financially responsible for the expenses of fixing it.[18] This also examines "federalism", emphasising the allocation of authority between central and state governments in environmental protection.[19] The concept of "intergenerational equity" ensures a just allocation of natural resources and benefits between current and future generations.[20] These principles offer a platform for examining India's environmental governance system and pinpointing areas that might be enhanced.

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[16] Justice Mensah, *Sustainable development: Meaning, history, principles, pillars, and implications for human action: Literature review*, Taylor and Francis Online (Sept. 8, 2019), https://www.tandfonline.com/doi/full/10.1080/23311886.2019.1653531.

[17] D Kriebel, J Tickner, et.al., The Precautionary Principle in Environmental Science, 109 EHP Publishing 871-876 (2001).

[18] Abhishek Gaur, and Sangeeta Chaudhary, Polluter-Pays Principle ScienceDirect (2022).

[19] Dr. Sairam Bhat, The Paradox of Environmental Federalism in India, NLSIU (2019)

[20] J.K. Summers and L.M. Smith, The Role of Social and Intergenerational Equity in Making Changes in Human Well-Being Sustainable 43 Springer, 718-728 (2014)

(C) Role of the National Green Tribunal (NGT)

The NGT, set up in 2010 by the "National Green Tribunal Act, 2010", is a specialised institution dedicated to promptly resolving environmental lawsuits. The NGT possesses jurisdiction to adjudicate disputes pertaining to environmental safeguarding and preservation of jungles and other natural assets. The entity has the authority to grant reparation for harm done to the environment and enforce mandatory directives for the regulation of pollution and the repair of the environment. The NGT has played a crucial role in ensuring that both the national and state governments are held responsible for any breaches of environmental regulations.

It acts as an intermediary in the federal system. Further it has the authority to address instances when federal or state environmental agencies do not fulfill their commitments, thereby filling gaps in implementation.[21] The presence of the Tribunal ensures consistent enforcement by promoting a standardised interpretation and application of environmental legislation throughout different states. The NGT's authority to issue enforceable orders and levy penalties guarantees the efficient enforcement of environmental legislation.

Nevertheless, there are constraints or restrictions that need to be acknowledged. The NGT is experiencing a backlog of cases as a result of limits in its human resources, which is causing workforce constraints. The Tribunal's jurisdiction is generally limited to correcting environmental infractions rather than engaging in proactive policy formation. In light of the constraints of the existing system, it is imperative to implement reforms in order to enhance environmental governance within India's intricate federal framework. An essential aspect that requires improvement is the establishment of minimal national environmental standards. Implementing this measure would guarantee uniformity among states and effectively eliminate any potential gaps or vulnerabilities. Moreover, it is imperative to cultivate cooperation between the federal government and individual states. One such approach is to establish collaborative task groups to address cross-border concerns, provide platforms for sharing information, and implement programmes to enhance the skills of government personnel.

Moreover, the establishment of efficient environmental governance necessitates adequate resources. Possible solutions include augmenting budgetary allocations, investigating inventive financing techniques such as pollution levies, and fostering collaborations between the public and private sectors. Granting local governments greater autonomy and allocating additional resources to address local environmental concerns is a crucial measure. This may entail

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[21] Dr. Moatoshi Ao, A Review of the NGT on Environmental Compensation and Waste Management Implementation, Live Law, June 28, 2023, available at: https://www.livelaw.in/articles/a-review-of-the-ngt-on-environmental-compensation-and-waste-management-implementation-231437 (last visited on Mar. 18, 2024).

delegating environmental management responsibilities and offering capacity-building initiatives.

It is imperative to streamline the processes for obtaining environmental clearance. One way to accomplish this is by implementing uniform methods across different sectors and agencies, making use of internet platforms, and enhancing openness and public involvement in environmental impact assessments. Ultimately, promoting accountability and ownership in environmental protection activities can be achieved by cultivating increased public participation through awareness campaigns, facilitating easier access to environmental information, and encouraging community involvement in environmental programmes.

India's environmental governance framework is an intricate interaction of federal structures, environmental legislation, and institutional players. Although the legal structure establishes the basis for safeguarding the environment, there are still obstacles such as inadequate implementation, limited resources, and insufficient public involvement. India can achieve a more effective and sustainable approach to environmental governance by implementing prospective reforms and promoting greater collaboration between the centre, states, and local governments.

This section has presented a thorough and inclusive summary of the legal structure governing environmental management in India. The subsequent segments of the research paper will provide in-depth analysis of particular case studies, scrutinise legal decisions made by the NGT and higher courts, and explore scholarly viewpoints to assess the practical implementation of these frameworks. Additionally, potential solutions for overcoming the obstacles encountered in attaining environmental sustainability in India will be identified.

IV. CHALLENGES IN ENVIRONMENTAL GOVERNANCE

India encounters an intricate network of difficulties in its endeavour to achieve efficient environmental governance. Although there is a comprehensive legal structure in place, implementing these rules effectively poses a substantial challenge. The nation's progress towards environmental sustainability is hindered by three main challenges: jurisdictional overlaps and conflicts, resource allocation limits, and coordination gaps between the central and state administrations.

(A) Jurisdictional Overlaps and Conflicts

The federal system of India, as defined in the Constitution, allocates the authority to make laws and take executive actions regarding environmental issues between the central government and

various states. This separation, although promoting regional autonomy, has the potential to generate confusion and conflict. The Constitution contains a Concurrent List, which grants both the central government and states the power to make laws on particular environmental matters such as water pollution and air pollution.[22] This overlap might result in contradictory legislation and a lack of clarity regarding which authority has priority. Industries can take advantage of these vulnerabilities by targeting jurisdictions with lenient regulations, impeding the efficacy of environmental safeguards. This overlap might lead to ambiguity over the ultimate jurisdiction of the government, impeding prompt and efficient decision-making.

Consider a hypothetical situation in which the discharge of pollutants from an industrial facility located in State A contaminates a river that flows into State B. Both states may have environmental legislation in effect, but the issue at hand is: which state bears the main responsibility for overseeing and implementing pollution control measures? This lack of clarity can result in the assignment of blame, administrative inefficiencies, and ultimately, a dearth of responsibility. The distinction between central and state jurisdiction can be indistinct, especially when it comes to cross-border environmental concerns such as air pollution or river water management. This lack of clarity can result in conflicts and inefficiencies when addressing environmental issues that go beyond regional borders. Inter-state disputes occur when environmental issues have an influence on numerous states, leading to debates regarding the allocation of resources, methods to control pollution, and responsibilities for remediation. These conflicts can impede advancements in environmental conservation and worsen pre-existing issues.

(B) Resource Allocation Issues

Efficient environmental management relies on sufficient financial and technological resources. Nevertheless, India encounters substantial obstacles in this domain such as: Limited budgetary allocations, Disparity in Resource Distribution and Lack of Skilled Manforce.

Environmental conservation is frequently given less importance in comparison to other urgent national issues. This leads to inadequate financial allocations for both national and state environmental agencies. Insufficient financial resources can impede the execution and application of environmental regulations, as well as limit investments in vital sectors such as sustainable technology, pollution mitigation infrastructure, and environmental surveillance systems. The allocation of resources among states is frequently imbalanced. Developed states may have superior financial and technical resources to tackle environmental issues, whereas

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[22] *Environmental Policy and Constitutional Provisions in India*, Indian Institute of Ecology and Environment.

poor states may face difficulties in meeting even their fundamental environmental requirements. This discrepancy results in a scenario where environmental deterioration is frequently more pronounced in areas that lack the means to address it efficiently. Environmental agencies at both the central and state levels frequently face a scarcity of proficient professionals. This encompasses a range of professionals, such as scientists, engineers, environmental lawyers, and enforcement officials, who possess the necessary skills to efficiently enforce environmental legislation and oversee environmental initiatives.

(C) Coordination Challenges between Central and State Governments

In order to successfully accomplish common environmental goals, it is essential to establish efficient coordination between the central government and state governments. Nevertheless, there are various variables that hinder this cooperation such as Divergent Priorities, Inadequate communication and collaboration and Differences in Commitment Levels.

The federal government may place greater emphasis on achieving national economic development objectives, whilst state governments may be more concerned with attaining immediate economic benefits within their own domains. The divergence in priorities can lead to conflict when more stringent environmental restrictions are seen as impeding economic operations.[23] Effective and transparent communication and sharing of information between the national and state governments are essential for synchronised efforts in addressing environmental concerns. Nevertheless, administrative obstacles and a deficiency of specialised systems for cooperation might impede the sharing of information and the coordination of planning initiatives. The degree of dedication to environmental protection can greatly range among various states. The absence of consistency can provide challenges in implementing nationwide environmental policy and ensuring consistent enforcement of legislation across the country.

These problems emphasise the necessity for a more cooperative and efficient approach to environmental governance in India. India can achieve a more effective and sustainable approach to environmental protection by resolving jurisdictional overlaps, allocating resources adequately, and enhancing coordination between the national and state governments.

V. OPPORTUNITIES FOR MULTI-LEVEL GOVERNANCE

India has substantial obstacles in attaining efficient environmental governance, yet a transition

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[23] Ricardo García-Vegas, *Alan Fenna, Sébastien Jodoin y Joana Setzer (eds.): Climate governance and federalism. A forum of federations comparative policy analysis,* 2024 Gestión y Análisis de Políticas Públicas 130, https://doi.org/10.24965/gapp.11337.

towards multi-level governance presents encouraging prospects. This strategy acknowledges the interrelatedness of environmental problems and utilises the advantages of many tiers of government - national, regional, and local - in addition to the involvement of individuals and interested parties.

(A) Enhancing Intergovernmental Collaboration: Bridging the Gap Between Center and States

The efficacy of environmental governance relies on a robust collaboration between the federal government and state governments. Multi-level governance facilitates the bridging of gaps and promotes collaboration. Creating collaborative task forces to address cross-border environmental concerns such as air pollution or water resource management can enhance synchronised efforts and the exchange of resources. Collaborative teams consisting of members from both central and state environmental agencies can exchange and implement the most effective methods and create nationwide environmental regulations that take into account regional factors.

Establishing digital platforms for the purpose of data exchange and information sharing among central and state environmental agencies can enhance transparency and enable well-informed decision-making. This facilitates the exchange of knowledge and experiences among governments regarding their achievements and difficulties in the realm of environmental protection. Capacity building programmes aim to strengthen the technical expertise of state environmental officers in environmental monitoring, enforcement, and policy creation. Disseminating optimal methods in pollution control technology and conducting thorough evaluations of environmental impacts can additionally enhance environmental governance at the state level.[24]   By linking central financial aid to states with their performance in environmental protection, financial incentives and performance-based funding can effectively motivate governments to prioritise environmental goals. This may entail providing incentives to states that successfully meet specified environmental objectives or launch groundbreaking environmental programmes.

(B) Strengthening the Role of Local Governments: Empowering the Frontlines

Municipalities frequently take the lead in addressing environmental issues such as waste management, sanitation, and local pollution control. Enhancing their participation in

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[24] Xingshuai Wang et al., *Environmental Governance Goals of Local Governments and Technological Innovation of Enterprises under Green Performance Assessment,* 20 Int'l J. Env't Rsch. & Pub. Health 1996, (2023), https://doi.org/10.3390/ijerph20031996.

environmental governance can greatly enhance environmental results. Transferring environmental management responsibilities to local governments might allow them to customize solutions to local requirements and conditions. This may entail granting local authorities the jurisdiction to oversee local garbage collection and disposal systems or control small-scale companies. Enhancing the capacity of local government officials to effectively tackle local environmental concerns can be achieved through the provision of training programmes on environmental management, environmental budgeting, and community participation at the local level.

It is vital to allocate dedicated financial resources to local governments for environmental initiatives such as tree planting programmes, water conservation projects, and green infrastructure development. In addition, investigating novel financing options at the community level, such as implementing user fees for waste collection services, can produce supplementary resources. Promoting the integration of environmental factors into urban planning and development processes at the local level can prioritize environmental sustainability. This may entail advocating for sustainable construction methods, establishing efficient public transit networks, and safeguarding urban green areas.

(C) Promoting Public Participation in Environmental Decision-Making: A Stronger Voice for the People

Public participation is a fundamental element of efficient environmental governance. Involving citizens in environmental decision-making promotes accountability, ownership, and a collective sense of responsibility for safeguarding the environment such as Enhancing Public Awareness Campaigns, Facilitating Access to Environmental Information, Enabling Communities Through Citizen Science and Advocating for Environmental NGOs.

Educational initiatives have the potential to heighten public consciousness of environmental legislation, individuals' entitlements, and the significance of safeguarding the environment.[25] This can be accomplished by means of public service announcements, educational curriculums in schools, and community outreach programmes. Creating online platforms that provide convenient access to environmental data, pollution levels, and environmental impact assessments can enable individuals to demand transparency and responsibility from their governments.[26] Additionally, this can enhance openness and enable well-informed public

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[25] Education Increases Awareness and Concern for the Environment (2015) UNESCO

[26] Yuan Ma & Changshan Liu, *The Impact of Online Environmental Platform Services on Users' Green Consumption Behaviors,* 19 Int'l J. Env't Rsch. & Pub. Health 8009, (2022), https://doi.org/10.3390/ijerph19138009.

engagement in environmental decision-making processes. Involving residents in citizen science activities enables them to gather environmental data, such as measurements of air quality or water quality. This data possesses significant value for the purpose of environmental monitoring and has the potential to empower communities in advocating for environmental protection actions within their respective localities. Assisting the efforts of environmental NGOs can have a crucial impact on fostering public engagement. NGOs have the ability to enhance public consciousness, offer legal assistance to populations impacted by environmental deterioration, and promote more stringent environmental rules.[27]

India can establish a stronger and more efficient system for safeguarding the environment by implementing a multi-level governance strategy that promotes cooperation among national, state, and local governments, empowers local communities, and actively involves individuals in decision-making. The collaborative approach, which emphasises shared responsibility and a clear vision for a sustainable future, can guarantee a healthier environment for everyone.

VI. CASE STUDIES

(A) Examination of Selected Environmental Judgements of the Supreme Court:

The Apex Court of India has had a significant impact on environmental regulation by making influential decisions. Below is a comprehensive examination of some pivotal cases:

The case of "M.C. Mehta vs Union of India[28]" pertains to the need for air pollution control in Delhi. An environmental lawyer named M.C. Mehta has launched a PIL to draw attention to the excessive levels of air pollution in Delhi caused by vehicle emissions. The Supreme Court has instructed the central government to enforce more stringent pollution regulations for automobiles and has made it mandatory to use unleaded petrol. Additionally, it mandated the gradual elimination of outdated and environmentally harmful cars. This case represented a pivotal moment in the development of India's environmental legal system. Article 21 of the Constitution recognised the right to a clean environment as a basic right. The ruling resulted in the implementation of unleaded petrol and more stringent emission standards, which contributed to a decrease in air pollution levels in Delhi. Nevertheless, there are still obstacles to overcome in efficiently controlling the continuously growing fleet of vehicles and guaranteeing adherence to emission regulations.

"Development must be need-based and take into account the ecological imperatives of the area.

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[27] Ayesha Siddiqua et al., *An overview of the environmental pollution and health effects associated with waste landfilling and open dumping,* 2022 Env't Sci. & Pollution Rsch., https://doi.org/10.1007/s11356-022-21578-z.
[28] M.C. Mehta v. Union of India, (1987) 1 SCC 395 (India)

The rights of those who are displaced for development projects must be scrupulously protected."

-Justice A.M. Ahmadi

The case of "Narmada Bachao Andolan versus Union of India[29]" dealt with the challenge of finding a balance between development and environmental protection. The Narmada Bachao Andolan, a social movement advocating for displaced families, has launched a PIL to contest the development of the Sardar Sarovar Dam project on the Narmada River. The Supreme Court established comprehensive instructions for the rehabilitation and resettlement of displaced communities, guaranteeing equitable compensation and opportunities for livelihood. Furthermore, it required the implementation of environmental precautions throughout the process of building dams. This case underscored the importance of maintaining a harmonious equilibrium between development initiatives, environmental conservation, and the rights of impacted populations. Although the judgment provided measures to protect resettlement and the environment, there are still worries about the lasting socio-economic effects on displaced people and the complete enforcement of environmental safeguards.

The "Vellore Citizens Welfare Forum vs Union of India[30]" case pertained to the problem of tanneries in Tamil Nadu producing significant water contamination as a result of inappropriate disposal of waste containing chromium. The Apex Court has directed the shutdown of tanneries that did not comply with more stringent pollution control regulations and required the implementation of greener technologies. Additionally, it instructed the government to offer monetary support to tanneries in order to enhance their infrastructure. This case illustrates the Court's readiness to adopt tough measures in order to tackle environmental deterioration. Nevertheless, it also underscores the difficulties of achieving a harmonious equilibrium between safeguarding the environment and sustaining the livelihoods of individuals employed in businesses that contribute to pollution. The ultimate outcome of this ruling depends on the government's efficacy in promoting cleaner technology and the tanneries' capacity to adhere to more stringent standards.

These judgements demonstrate the proactive role of the Supreme Court in holding the government responsible for environmental preservation and maintaining a balance between development and environmental sustainability.

(B) Analysis of Successes and Failures in Multi-Level Governance

    a. Successes:

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[29] Narmada Bachao Andolan v. Union of India, (2010) SCC 664 (India)
[30] Vellore Citizens Welfare Forum v. Union of India, 1996 (5) SCC 647 (India)

The NGT, established in 2010, has been instrumental in expediting environmental cases and ensuring more rigorous enforcement of environmental legislation. The concerns of pollution caused by industries, illicit sand mining, and environmental harm resulting from infrastructure projects have been effectively dealt with. Numerous state governments have effectively implemented environmental measures. An instance of this is the "Haritha Keralam Mission"[31] in Kerala, which advocates for sustainable agricultural methods and effective waste management. Moreover, Sikkim's emphasis on organic farming and renewable energy indicates a dedication to environmental sustainability.

b. Failures:

Despite endeavours, the collaboration between the central government and state governments might be constrained by divergent agendas and an absence of efficient communication methods. This can result in disparities in environmental policies and enforcement across different areas. Local governments frequently have capacity constraints in terms of financial resources and technical skills, which hinders their ability to effectively address environmental concerns.[32] This can impede their capacity to enforce environmental standards and pursue sustainable development programmes. Despite the growing number of public awareness efforts, there is still a requirement for more efficient methods to involve citizens in environmental decision-making processes.

(C) Lessons Learned and Best Practices:

The establishment of collaborative environmental task forces, platforms for sharing information, and programmes to enhance the skills of state environmental authorities can promote improved collaboration and a cohesive approach to environmental governance. Transferring environmental management responsibilities, offering financial and technical assistance, and promoting the exchange of knowledge among local governments can improve their ability to tackle local environmental issues. Promotion of public participation is beneficial to invest in public awareness campaigns, streamline access to environmental information, and promote citizen involvement in environmental monitoring and decision-making. These efforts can help cultivate a sense of responsibility and ownership for environmental protection. By promoting public-private partnerships, fostering investment in green technologies, and engaging with NGOs and civil society organisations, we can facilitate the discovery of creative

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[31] *Haritha Keralam Mission*, https://education.kerala.gov.in/haritha-keralam-mission (last visited June 6, 2024).
[32] Matthew V. Vo et al., *Addressing Capacity Constraints of Rural Local Health Departments to Support Climate Change Adaptation: Action Is Needed Now*, 19 INT'L J. ENV'T RSCH. & PUB. HEALTH 13651, (2022), https://doi.org/10.3390/ijerph192013651.

solutions to environmental concerns.[33] India may progress towards a more efficient multi-level governance structure by gaining insights from both successful and unsuccessful experiences. This strategy should prioritise the cultivation of collaboration, the empowerment of local actors, and the active involvement of citizens. Through collaborative efforts, India has the potential to establish a future that is more environmentally and socially sustainable, ensuring the well-being of future generations.

(D) Comparative Environmental Governance Frameworks:

Aspect	India	European Union (EU)	Germany	Brazil
Legislative Framework	Central and State laws (e.g., EPA, Water Act)	Binding EU directives set high environmental standards	National laws + "Polluter Pays" principle	Strong environmental ministry sets regulations
Enforcement Mechanisms	Pollution control boards	EU enforces compliance by member states	Strict enforcement with polluter liability	Environmental ministry with enforcement power
Pollution Control	Emission standards and regulations	Emissions trading program for pollution permits	"Polluter Pays" principle	Focus on protected areas and environmental impact assessments
Biodiversity Conservation	Protected areas and wildlife acts	Natural 2000 network of	None Specified	Extensive network of

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[33] Antoaneta VASSILEVA, *Green Public-Private Partnerships (PPPs) as an Instrument for Sustainable Development,* 2022 J. World Econ., https://doi.org/10.52459/jowett25221122.

		protected areas		protected areas
Strengths	Comprehensive legislation	Uniform high standards across member states	Strong enforcement with polluter responsibility	Focus on protected areas
Weaknesses	Uneven enforcement capacity across states	Potential for bureaucratic hurdles	High costs for industries	Limited resources for enforcement

[Table – 2]

Several federal nations with comparable environmental challenges to India have implemented efficient legislative frameworks and methodologies. The "European Union (EU)" enforces rigorous environmental guidelines that member nations are required to incorporate into their national legislation.[34] This guarantees a superior standard of environmental safeguarding throughout the union. In addition, the EU uses emissions trading programmes to impose limits on pollution licences and facilitate the exchange of these permits, thereby motivating industry to decrease their emissions. Germany has a robust "polluter pays" approach, which means that industries are held fully responsible for any environmental harm caused and the expenses incurred for cleaning up.[35] In contrast, Brazil has implemented a strong environmental ministry that possesses substantial enforcement authority and employs protected area networks to safeguard biodiversity.[36] Examining these methods can offer significant perspectives for India to enhance its own environmental governance structure.

VII. POLICY RECOMMENDATIONS FOR STRENGTHENING ENVIRONMENTAL GOVERNANCE IN INDIA

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[34] Environment & Climate Change Laws and Regulations European Union (2024)

[35] Environment & Climate Change Laws and Regulations Germany (2024)

[36] Mariana M. Vale et al., *Planning protected areas network that are relevant today and under future climate change is possible: the case of Atlantic Forest endemic birds,* 6 PeerJ e4689, (2018), https://doi.org/10.7717/peerj.4689.

India's environmental governance framework faces significant challenges, but it also holds immense potential for improvement. By implementing well-designed policies that foster collaboration, strengthen enforcement, and promote sustainable practices, India can move towards a more effective and environmentally responsible future.

"Sustainable development is not a slogan but a mandate from the Constitution. It is the right and duty of each generation to develop its resources to meet its own needs but without compromising the ability of future generations to meet their own needs."

-Justice Madhu Mehta

(A) **Proposals for Improving Federal Environmental Governance:**

1. Standardisation of Environmental Regulations:

Implement uniform national environmental regulations for air, water, and land pollution to guarantee consistency throughout different areas.[37] Permit states to enforce more stringent criteria as necessary, taking into account their unique environmental obstacles. This measure will effectively close regulatory loopholes and deter the establishment of "pollution havens," which refer to situations where industries migrate to evade more stringent rules.

2. Enhancing the capacity of central environmental agencies:

Allocate additional funds to the "Ministry of Environment, Forest and Climate Change (MoEFCC)" and "Central Pollution Control Board (CPCB)" in order to strengthen their ability to monitor, collect data, and establish policies. Allocate resources towards implementing training programmes that provide environmental officials with up-to-date technical knowledge in fields such as environmental impact assessment and pollution control technology.

3. Promoting Interagency Cooperation:

Create collaborative environmental task teams that include both central and state environmental agencies to tackle cross-border environmental concerns such as air pollution and water resource management. Create online platforms that enable the interchange of data and sharing of expertise between central and state environmental agencies. Facilitate capacity-building initiatives for state environmental officials, focusing on areas such as environmental monitoring, enforcement methods, and exemplary practices in environmental governance.

(B) **Strategies for Enhancing Multi-Level Cooperation**

1. Enabling Local Governments to have greater authority and control:

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[37] Environmental Compliance and Enforcement in India: Rapid Assessment (2006)

Delegate additional environmental management responsibilities to local entities, including the management of solid waste, local water resources, and urban planning with a focus on environmental factors. Allocate additional budgetary funds to local governments, while also considering other financing methods such as pollution cess or revenue-sharing models that are tied to environmental performance. Provide capacity-building initiatives targeting local government officials to enhance their knowledge and skills in environmental monitoring, waste management technology, and sustainable urban planning.[38]

2. Facilitating and encouraging involvement of the general public:

Implement public awareness campaigns across several media platforms to educate individuals about environmental concerns, their entitlements under environmental legislation, and their responsibility in conservation endeavours. Facilitate the retrieval of environmental information by ensuring that environmental data and reports are easily accessible on open-data portals on the internet. Promote transparency in environmental decision-making by ensuring that EIA reports are readily available for public examination and conducting public hearings for development projects.

3. Promoting and supporting citizen science initiatives:

Provide training to civilian volunteers on doing water quality assessments, monitoring air pollution levels, or documenting instances of environmental deterioration. Create digital platforms for citizen science data gathering and analysis that enable people to independently monitor and assess environmental conditions in their local areas.

(C) **Policy Implications for Sustainable Environmental Management**

1. Environmental Taxation and Incentives:

Enforce a pollution levy on industries proportionate to the level of pollution they produce. Provide tax incentives and financial support to companies who embrace environmentally friendly technologies or allocate funds towards renewable energy sources.

2. Reforms in the field of EIA:

Simplify the process of conducting "Environmental Impact Assessments (EIA)" in order to speed up the decision-making process for projects that are ecologically friendly, while yet maintaining a high level of environmental protection.[39] Enhance the calibre and clarity of EIA

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[38] Justice Kofi Debrah et al., *Raising Awareness on Solid Waste Management through Formal Education for Sustainability: A Developing Countries Evidence Review,* 6 Recycling 6, (2021), https://doi.org/10.3390/recyc ling6010006.

[39] Ramesh Prasad Bhatt, *Environmental Impact Assessment System and Process in Developing Countries,* 13 Open

reports through the inclusion of public engagement and the evaluation of independent experts.

3. Allocation of funds towards the development of environmentally-friendly infrastructure:

Enhance government investment in eco-friendly infrastructure initiatives such as the development of renewable energy sources, the establishment of sustainable public transit networks, and the construction of waste-to-energy facilities. Promote the involvement of private companies in funding environmentally-friendly infrastructure projects by establishing partnerships between the "Public and Private Sectors (PPPs)" and making it easier for them to obtain financial resources for such projects.[40]

4. Encouraging the adoption of sustainable consumption practices:

Implement public education initiatives aimed at promoting resource conservation, energy efficiency, and acceptable waste management techniques among the general population. Implement measures that provide incentives for the adoption of sustainable products and discourage the utilisation of environmentally detrimental products, such as single-use plastics.[41]

By adopting and implementing these policy proposals, India can transition towards a more efficient and enduring approach to environmental governance. An essential factor in attaining environmental objectives is the implementation of a collaborative federal system that provides robust central supervision, empowers local governments, and encourages active public participation. In addition, the implementation of green taxation and incentives, the reformation of EIAs, the allocation of funds towards green infrastructure, and the promotion of sustainable consumption behaviours can foster an atmosphere that supports long-term environmental sustainability. By implementing these measures, India can guarantee a more sustainable environment for current and future generations.

VIII. CONCLUSION: A MULTIFACETED APPROACH FOR ENVIRONMENTAL SUSTAINABILITY IN INDIA

The environmental governance framework in India is characterised by an intricate network of challenges and opportunities. Effective environmental protection is hindered by jurisdictional

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J. Ecology 977, (2023), https://doi.org/10.4236/oje.2023.1312059.

[40] *Public-Private Partnerships: A Key to Social Initiative Success | CSR Mandate,* CSR Mandate | Enabling Sustainability, https://www.csrmandate.org/public-private-partnerships-a-key-to-social-initiative-success/ (last visited June 5, 2024).

[41] Mubarik K. Rabiu & Melanie Jaeger-Erben, *Reducing single-use plastic in everyday social practices: Insights from a living lab experiment,* 200 Ress. Conservation & Recycling 107303, (2024), https://doi.org/10.1016/j.resconrec.2023.107303.

overlaps, resource restrictions, and coordination challenges between central and state governments. Nevertheless, the federal system, despite its inherent problems, also presents significant opportunities for enhancement through a multi-level governance strategy.[42]

The analysis has discovered multiple significant findings. Enforcing a set of baseline environmental criteria at the national level, while granting states the authority to impose more stringent restrictions, can guarantee uniformity and prevent any potential gaps or weaknesses in the regulatory framework. Enhancing the effectiveness of environmental impact assessments, enhancing the capabilities of environmental agencies, and fostering environmental innovation are essential measures. Moreover, it is crucial to promote cooperation between central and state governments by establishing joint task forces and venues for sharing information. Granting local governments additional environmental management responsibilities, increased financial resources, and enhanced technical skills can make a substantial contribution to tackling local environmental issues. Ultimately, it is crucial to prioritise the promotion of public participation by conducting awareness campaigns, providing open access to environmental data, and establishing more robust citizen engagement methods. This is essential for ensuring accountability and fostering a sense of ownership in environmental preservation endeavours.

An all-encompassing governmental framework for environmental sustainability is crucial for the future of India. India can establish a strong framework for environmental protection by aligning environmental standards, enhancing enforcement mechanisms, and promoting collaboration at all levels. Incorporating environmental factors into development planning, advocating for efficient use of resources and a circular economy, and allocating funds towards green infrastructure are crucial measures for achieving sustainable development.

This analysis has also identified possible avenues for future research and initiatives. Additional study might investigate the efficacy of current environmental legislation and policies, ascertain optimal approaches to multi-level governance for environmental concerns, and analyse the economic ramifications of more stringent environmental restrictions. In addition, action-oriented research might prioritise the creation of capacity-building programmes for environmental officials, the development of new finance methods for environmental initiatives, and the promotion of citizen science initiatives for environmental monitoring.

Achieving environmental sustainability in India requires a comprehensive and diverse strategy. India can achieve a cleaner, healthier, and more sustainable future for all its residents by

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[42] Wilfried Swenden et al., *Understanding multilevel dynamics in India: constituent power and multilevel governance*, 2021 Territory Pols. Governance 1, https://doi.org/10.1080/21622671.2021.1972830.

adopting a multi-level governance framework, enhancing enforcement mechanisms, encouraging environmental innovation, and boosting public involvement.

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