

THE RIGHT TO CLEAN AIR AND STUBBLE BURNING: EVALUATING STATE ACCOUNTABILITY UNDER ARTICLE 21 OF THE INDIAN CONSTITUTION

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ABSTRACT

Air pollution in northern India, particularly during the winter months (October-December), has become a persistent environmental and public health crisis. The deterioration in air quality during this period is the result of a complex interaction of multiple factors, including industrial emissions, vehicular pollution, construction activity, biomass burning, unfavourable meteorological conditions, and seasonal agricultural practices. Among these, stubble burning in many north indian states such as Punjab, Haryana, Uttar Pradesh and Madhya Pradesh has attracted significant legal, administrative, and judicial attention due to its temporal concentration and trans-boundary impact. However, it would be analytically incomplete and normatively unsound to attribute the entirety of winter air pollution to agricultural residue burning alone. This paper contends that the persistence of stubble burning must be examined within the wider context of multi-source air pollution and fragmented regulatory responses. While agricultural residue burning constitutes only one component of the problem, its predictable recurrence and known environmental impact imposes a heightened duty on the State to act in a constitutionally compliant manner. By analysing the right to clean air under Article 21, the paper evaluates whether State action and inaction, across agricultural, industrial, and environmental governance frameworks meet the standards of accountability required for the effective protection of fundamental rights. In doing so, the study reframes stubble burning not as the sole cause of winter pollution, but as a critical test case for assessing the State's capacity to address environmental harm through holistic, data driven and integrated approach towards rights-oriented governance.

KEYWORDS: *Air Pollution, Right to Life, Clean Air, Stubble Burning, Environmental Governance.*

1. INTRODUCTION

Indian constitutional jurisprudence has consistently expanded the scope of Article 21¹ to encompass the right to health and a clean environment, thereby imposing positive obligations on the state to prevent foreseeable and avoidable environmental degradation. Where pollution arises from identifiable and recurrent sources, the state is constitutionally required to adopt effective, proportionate, and coordinated measures across sectors, rather than relying on selective or symbolic regulation. The recognition of air pollution as a multi-source phenomenon does not diminish the constitutional relevance of the right to clean air; rather, it underscores the need for a nuanced assessment of state responsibility in addressing contributory causes of environmental harm.

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¹ INDIA CONST. art. 21.

In recent years, the seasonal phenomenon of stubble burning has shifted from a local agricultural issue to a significant constitutional challenge, requiring a re-evaluation of the State's duty to protect its citizens from hazardous environmental conditions. Despite this constitutional mandate, regulatory responses to stubble burning have often proceeded on the assumption of singular causation, leading to enforcement strategies that disproportionately target farmers while leaving other significant sources of pollution insufficiently regulated. Such an approach raises critical concerns regarding equality, reasonableness, and proportionality in environmental governance. It also risks obscuring broader structural failures in industrial regulation, urban planning, and transport policy that contribute substantially to deteriorating winter air quality.

1.1 OBJECTIVES OF THE STUDY

- (i) To study the legal and constitutional aspects of the right to clean air with special emphasis on Article 21.
- (ii) To evaluate the scope of state accountability as a principle in the context of stubble burning.
- (iii) To analyze the impact of judicial interventions and statutory directives on the mitigation of air pollution.

2. RESEARCH METHODOLOGY

The research methodology used in this paper is doctrinal research. The primary and secondary sources of this research include data collected from various statutes, including the constitution of India, environmental laws, Supreme Court judgments, NGT rulings, law journals, and official government reports.

3. AIR POLLUTION AND ITS IMPACT ON HUMAN HEALTH

Air pollution has a profound and well-documented impact on human health, constituting one of the leading environmental risk factors globally. According to the World Health Organization, exposure to ambient and household air pollution was responsible for approximately 6.7 million premature deaths worldwide in 2019², making it a major contributor to global mortality.

As per the study³ published in *Lancet Planetary Health*, 1.5 million deaths per year in India can be attributed to long-term exposure to air pollution. Fine

² World Health Organization *Air Pollution Data Portal* (Apr. 17, 2025, 07.19 PM) <https://www.who.int/data/gho/data/themes/air-pollution>.

³ Jaganathan S & Stafoggia M et al, *Estimating the effect of annual PM_{2.5} exposure on mortality in India: a difference-in-differences approach*, 8 *The Lancet Planetary Health* e987-e996 (2024) [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(24\)00248-1/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(24)00248-1/fulltext).

particulate matter (PM_{2.5}), due to its extremely small size, can penetrate deep into the respiratory system and enter the bloodstream, leading to a wide range of serious health conditions. Epidemiological evidence links air pollution to ischemic heart disease, stroke, chronic obstructive pulmonary disease (COPD), lung cancer, and lower respiratory infections, with cardiovascular diseases accounting for a significant proportion of pollution-related deaths. Moreover, long-term exposure to PM_{2.5} has been shown to increase overall mortality risk, particularly in densely polluted regions such as India, where studies indicate a strong association between sustained exposure and increased death rates. Air pollution also contributes substantially to the global burden of disease, measured in disability-adjusted life years (DALYs), by causing both premature mortality and prolonged illness. Vulnerable populations, including children, the elderly, and those with pre-existing conditions, are disproportionately affected, with evidence showing impacts on lung development, immune response, and cognitive health. Thus, the health consequences of air pollution are not limited to immediate respiratory distress but extend to chronic, systemic, and life-threatening conditions, underscoring the urgent need for effective regulatory intervention.

4. MULTI-SOURCE NATURE OF AIR POLLUTION

Air pollution is a multi-source phenomenon, with varying contributions from different sectors.⁴ Empirical evidence consistently demonstrates that air pollution is the result of multiple sources, including vehicular emissions, industrial discharge, construction dust, and thermal power generation, many of which contribute more significantly on an annual basis.⁵ While stubble burning has emerged as the most visible and politically convenient explanation for the seasonal spike in air pollution in northern India, it is neither the sole nor the dominant cause of deteriorating air quality throughout the year. Studies indicate that while stubble burning contributes significantly during peak periods, its annual share remains limited in comparison to other sources such as vehicular emissions, industrial pollution, and construction dust. During extreme episodes, stubble burning may account for the rise of particulate matter concentration in Delhi, but on an annual basis, its contribution is considerably lower.

Government source-apportionment data for Delhi-NCR (TERI-ARAI study, as reported on the Government of India Open Data Platform) indicates that transport contributes approximately 20–30% of PM_{2.5} emissions, road dust 17–38%, industries 11–30%, and domestic fuel burning 7–20%, while stubble burning contributes only a seasonal spike, reaching up to 25–40% during peak

⁴ ROY M. HARRISON, AIR QUALITY GUIDELINES GLOBAL UPDATE 9-11 (WHO 2005).

⁵ Marilena Kampa & Elias Castanas *Human health effects of air pollution*, 151 *Environmental Pollution* 2, 362-367 (2008).

days but remaining negligible on an annual average basis.⁶ Studies cited by the Ministry of Environment, Forest and Climate Change show that industrial and energy-related sources together account for nearly 60–70% of total particulate pollution annually, highlighting the predominance of continuous, non-agricultural emission sources in overall air quality degradation.⁷

However, regulatory and enforcement efforts have disproportionately focused on agricultural residue burning, largely because it is temporally concentrated and easier to attribute to a specific group. This selective emphasis obscures persistent state inaction in addressing other major contributors, where regulatory compliance is often weak, monitoring is inconsistent, and enforcement remains inadequate. The failure to impose comparable accountability on industrial polluters, urban infrastructure projects, and transport systems reflects a fragmented and imbalanced approach to environmental governance. Consequently, the narrative that singularly blames farmers not only misrepresents the structural complexity of the problem but also diverts attention from systemic regulatory failures that lie at the core of India's air pollution crisis. This variability underscores the need for a holistic regulatory approach. Singular attribution not only misrepresents the problem but also leads to disproportionate policy responses that fail to address other major contributors. Recognising the multi-source nature of air pollution is therefore essential for evaluating the adequacy and reasonableness of State action.

5. THE RIGHT TO CLEAN AIR AS A FUNDAMENTAL RIGHT UNDER ARTICLE 21- THE EVOLUTION

The Constitution of India does not expressly guarantee a right to clean air. However, through sustained judicial interpretation, the Hon'ble Supreme Court has progressively expanded the scope of Article 21 to encompass environmental protection as an indispensable component of the right to life. The meaning of 'right to life' under Article 21 has been interpreted to include more than mere animal existence; it includes the right to live with human dignity, health, and well-being. A clean and healthy environment, free from avoidable pollution, has therefore come to be recognised as a foundational precondition for the

⁶ Government of India, *Source-wise Details of Air Pollution in Delhi NCR Contribution of Various Sources to PM2.5 and PM10 Levels in Delhi (TERI-ARAI Study)*, Open Government Data Platform (Aug. 27, 2024), https://www.data.gov.in/resource/source-wise-details-air-pollution-delhi-ncr-contribution-various-sources-pm-25-and-pm-10?utm_source=chatgpt.com.

⁷ Sarang K. Guttikunda & B. R. Gurjar, *Role of Meteorology in Seasonality of Air Pollution in Megacity Delhi, India*, 43 *Atmospheric Env't* 4841, 4846–48 (2009), <https://www.urbanemissions.info/wp-content/uploads/docs/2012-03-EMAS-Delhi-Meteorology-Seasonality.pdf>.

meaningful enjoyment of the right to life. A decisive shift occurred when the Supreme Court interpreted Article 21 expansively, in *Maneka Gandhi v. Union of India*⁸ held that the right to life includes the right to live with human dignity and in conditions conducive to health and well-being.

The judicial recognition of environmental rights under Article 21 emerged in response to the growing realisation that environmental degradation poses a direct threat to human life and public health. In the jurisprudential evolution of environmental law in India, the case of *Subhash Kumar v. State of Bihar*⁹, serves as a watershed moment that explicitly elevated environmental protection to the status of a fundamental right. Through this judgment, the Supreme Court explicitly held that the right to life includes the right to enjoyment of pollution-free water and air. Prior to this judgment, environmental concerns were largely addressed through the lens of statutory violations or common law nuisance. This marked a decisive shift in constitutional jurisprudence, placing environmental quality within the realm of enforceable fundamental rights. This case dealt with the concern of the discharge of industrial slurry into the Bokaro River, and the court while deciding the public interest litigation, fundamentally expanded the horizons of the "Right to Life" guaranteed under Article 21. The Court ruled that the right to live is not merely a guarantee of physical existence but encompasses the "right of enjoyment of pollution-free water and air for full enjoyment of life."

In the early years, environmental concerns were treated largely as matters of policy or statutory compliance. The Court clarified that environmental harm affecting public health could be challenged directly and allowed individuals to directly approach the Supreme Court under Article 32¹⁰ for environmental violations, the judgment effectively constitutionalised environmental protection and strengthened judicial oversight over state inaction. This declaration effectively integrated environmental quality into the constitutional fabric, providing a powerful legal tool for citizens to challenge state inaction or industrial pollution. By characterizing clean air and water as indispensable components of human dignity, *Subhash Kumar*¹¹ shifted the legal discourse from a regulatory framework to a rights-based approach, paving the way for the "greening" of the Indian Constitution and establishing a precedent that continues to hold state machinery accountable for ecological degradation today.

The recognition of the right to clean air under Article 21 is not confined to negative restraints on State action; it imposes positive obligations on the State

⁸ *Maneka Gandhi v. Union of India*, (1978) 2 S.C.R. 621.

⁹ *Subhash Kumar v. State of Bihar*, (1991) 1 S.C.R 5 (India).

¹⁰ INDIA CONST. art. 32.

¹¹ *Ibid*

to take effective measures to safeguard environmental health. The Court has consistently emphasised that environmental protection is a matter of public interest that requires proactive governance, regulatory enforcement, and long-term planning. Principles such as the precautionary principle, sustainable development, and the public trust doctrine have been read into domestic law, strengthening the constitutional foundation for environmental rights and reinforcing the State's role as a trustee of natural resources.

This rights-based approach is further supported by the constitutional scheme as a whole. Article 48A¹² directs the State to protect and improve the environment, while Article 51A(g)¹³ imposes a fundamental duty on citizens to safeguard the natural environment. When read together with Article 21, these provisions reflect a constitutional commitment to environmental governance that prioritises human health and ecological sustainability. The right to clean air thus emerges not as an abstract aspiration, but as a substantive constitutional entitlement capable of judicial enforcement.

This jurisprudence was further developed through the *M.C. Mehta v. Union of India* series of cases, where the Court repeatedly addressed air pollution arising from industrial activity, vehicular emissions, and hazardous industries. In these decisions, the Court not only reaffirmed that air pollution violates Article 21 but also imposed affirmative duties on the State to regulate, prevent, and control environmental harm. The *Oleum Gas Leak*¹⁴ case was particularly significant in introducing the principle of absolute liability, reinforcing the idea that protection of life and health takes precedence over economic considerations.

In *Vellore Citizens' Welfare Forum v. Union of India*¹⁵, the Court deepened the constitutional basis of environmental protection by incorporating the principles of sustainable development, the precautionary principle, and the polluter pays principle into Indian law. These principles were treated as essential components of Article 21, thereby strengthening the normative framework through which environmental harm, including air pollution, could be assessed. The judgment made clear that environmental protection is not a trade-off against development but a constitutional requirement.

The scope of Article 21 was further broadened in cases such as *A.P. Pollution Control Board v. Prof. M.V. Nayudu*¹⁶, where the Court emphasised the role of scientific expertise and preventive regulation in environmental

¹² INDIA CONST. art. 48A.

¹³ INDIA CONST. art. 51A(g).

¹⁴ *M.C. Mehta v. Union of India*, (1987) 1 S.C.R. 819.

¹⁵ *Vellore Citizens' Welfare Forum v. Union of India*, (1996) 5 S.C.C. 647.

¹⁶ *A.P. Pollution Control Board v. Prof. M.V. Nayudu*, (1999) 2 S.C.C. 718.

decision-making. The Court recognised that environmental harm, once caused, is often irreversible, thereby reinforcing the State's duty to act proactively rather than reactively.

The most recent development in environmental jurisprudence arose from the judgment of *M.K. Ranjitsinh v. Union of India*¹⁷, in which the Supreme Court linked environmental protection and climate change concerns to the right to life under Article 21. While addressing the conflict between renewable energy infrastructure and wildlife conservation, the Court affirmed that environmental degradation and climate change pose a direct threat to life and ecological balance. Importantly, the Court recognised that constitutional interpretation must respond to contemporary environmental challenges and acknowledged the relevance of international environmental obligations. This judgment represents a significant evolution in Article 21 jurisprudence by situating environmental and climate protection firmly within the framework of fundamental rights and State accountability.

Taken together, these decisions demonstrate a clear judicial trajectory: from recognising pollution-free air as an aspect of life and health, to imposing positive obligations on the State, and finally acknowledging environmental and climate protection as constitutional imperatives. The right to clean air thus emerges not as an isolated entitlement, but as part of a broader, evolving constitutional commitment to safeguarding life, health, and ecological sustainability under Article 21.

However, the practical realisation of the right to clean air remains fraught with challenges, particularly in the context of complex and multi-source air pollution. While courts have recognised the right in principle, the persistence of severe air quality crises raises questions regarding the adequacy of State action and the effectiveness of existing regulatory frameworks. The constitutional recognition of the right to clean air therefore necessitates a corresponding inquiry into State accountability, especially where environmental harm is foreseeable, recurrent, and preventable.

6. PUBLIC TRUST DOCTRINE AND STATE ACCOUNTABILITY

One of the most significant developments in the Indian environmental jurisprudence has been termed as 'public trust doctrine' in relation to environmental protection and the conservation of natural resources. The principle asserts that natural resources like air, water, forests, and the seashore are common, shared property of all citizens and they must be preserved for

¹⁷ *M.K. Ranjitsinh v. Union of India*, 2024 SCC OnLine SC 73.

public use.¹⁸ The role of the government is to act as a trustee and therefore it becomes imperative for the government to protect and maintain these resources for the public's benefit. Indian judiciary has given this doctrine a constitutional backing to uphold environmental protection and equitable use of resources. The concept of Public Trust Doctrine can be traced to Roman law under the maxim 'res communis', meaning certain resources are common to all and cannot be privately owned.¹⁹

The concept of state accountability has evolved from the principle of public trust doctrine where preventing air pollution is not merely a policy goal but a constitutionally mandated obligation. In the Indian legal context, state accountability for air pollution has transitioned from a mere directive to a "strict liability" duty, largely due to the judiciary's expansion of Article 21 (Right to Life) into the Right to Clean Air. Furthermore, the state's accountability is now tested by its proactive duty to bridge the "enforcement gap" in issues like stubble burning and urban emissions; recent 2024-2025 rulings emphasize that administrative lethargy, such as leaving 50% of regulatory posts vacant or failing to utilize allocated environmental funds, constitutes a violation of constitutional mandate. Under the precautionary principle, the state is held accountable not just for cleaning up existing pollution, but for failing to anticipate and prevent it, shifting the legal focus from "compensation after the fact" to "preventative governance" as a non-negotiable public health priority.

7. POLLUTER PAYS PRINCIPLE

The polluter pays principle is a foundational concept of environmental law which mandates that the entity responsible for causing environmental harm must bear the cost of preventing, controlling, and remedying that damage. It reflects a shift from viewing environmental protection as a collective social burden to assigning direct financial and legal responsibility to the polluter. In Indian jurisprudence, this principle has been firmly recognised and integrated into constitutional law through decisions such as *Vellore Citizens Welfare Forum v. Union of India*²⁰, where the Supreme Court held that polluting industries are absolutely liable to compensate for environmental degradation and restore ecological balance. The principle serves both a compensatory and deterrent function, ensuring that environmental costs are internalised rather than externalised onto society at large. It is also closely linked with the broader framework of sustainable development, reinforcing the idea that economic

¹⁸ Michael Blumm, *Public Property and the Democratization of Western Water Law: A Modern View of the Public Trust Doctrine*, 19 Env't L. 573 (1989). Available at: https://lawcommons.lclark.edu/faculty_articles/73.

¹⁹ Dr. N.P. Verma The Public Trust Doctrine In India: A Constitutional And Environmental Perspective Indian Journal of Law and Legal Research 2025 Vol VII Issue II 2482-2498

²⁰ Supra note 12.

activities must not proceed at the expense of environmental integrity. By placing the financial burden on the polluter, the principle seeks to promote responsible behaviour and encourage the adoption of cleaner and more sustainable practices.

The polluter pays principle has been firmly entrenched in Indian environmental jurisprudence through a series of landmark judicial pronouncements. In *Indian Council for Enviro-Legal Action v. Union of India*²¹, the Supreme Court unequivocally held that industries responsible for environmental degradation are absolutely liable not only to compensate affected persons but also to bear the full cost of restoring the damaged environment. This position was further consolidated in *Vellore Citizens Welfare Forum v. Union of India*, where the Court explicitly recognised the polluter pays principle as an essential component of sustainable development and declared it to be part of the law of the land. Earlier decisions such as *M.C. Mehta v. Union of India* laid the doctrinal foundation by introducing the concept of absolute liability for hazardous industries, thereby reinforcing the idea that economic enterprises must internalise the environmental costs of their activities. The principle was further linked with the Public Trust Doctrine in *M.C. Mehta v. Kamal Nath*²², where the Court emphasised that natural resources are held in trust by the State and cannot be exploited for private gain without accountability. Collectively, these decisions demonstrate a consistent judicial approach that shifts the burden of environmental harm from the public to the polluter, thereby strengthening both accountability and deterrence in environmental governance.

The application of the polluter pays principle in the context of stubble burning reveals significant practical and normative limitations, rendering it an inefficient tool for addressing this form of environmental harm. While the principle assumes that the polluter has both the capacity and the agency to bear the costs of environmental damage, this assumption does not hold true for a large proportion of farmers engaged in stubble burning, many of whom operate under severe economic constraints and structural compulsions. Unlike industrial polluters, farmers often lack access to affordable and timely alternatives for crop residue management, and the imposition of penalties does little to deter the practice when burning remains the most viable option within a narrow agricultural window. Moreover, air pollution caused by stubble burning is diffuse and cumulative in nature, making precise attribution of harm both scientifically and administratively difficult in a multi-source pollution environment. The selective enforcement of the principle against farmers, while other major contributors such as vehicular emissions and industrial pollution remain inadequately regulated, further undermines its legitimacy and raises

²¹ *Indian Council for Enviro-Legal Action v. Union of India*, (1996) 3 S.C.C. 212.

²² *M.C. Mehta v. Kamal Nath*, (1997) 1 S.C.C. 388 (India).

concerns of inequity and arbitrariness. In this context, the rigid application of the polluter pays principle risks becoming a punitive mechanism rather than a corrective one, failing to achieve either environmental protection or constitutional fairness, and highlighting the need for a more nuanced, incentive-based approach to regulatory governance.

8. PRECAUTIONARY PRINCIPLE

Precautionary principle provides that where there are threats of serious or irreversible environmental damage, the lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation.²³ The evolution of the concept can be traced back to Principle 15 of the Rio Declaration²⁴ which articulates the precautionary principle as a guiding norm for environmental governance. In essence, the principle shifts the regulatory approach from reaction to prevention by recognising that waiting for conclusive scientific proof may result in irreversible harm. It requires states to act in advance of environmental risk, particularly in situations where the potential consequences are grave or uncertain. Importantly, it also introduces a standard of proportionality by emphasising “cost-effective” measures, thereby balancing environmental protection with economic considerations. The principle thus places a proactive obligation on states to anticipate environmental harm, adopt preventive strategies, and prioritise long-term ecological sustainability over short-term economic interests, making it a cornerstone of modern environmental law and policy.

9. STATUTORY AND LEGAL FRAMEWORK GOVERNING AIR POLLUTION

While Article 21 forms the constitutional foundation for recognising the right to clean air, a comprehensive analysis of state responsibility for controlling air pollution can be traced through statutory and institutional framework governing environmental regulation in India. The Air Act, 1981²⁵ establishes the primary regulatory mechanism for controlling air pollution through central and state pollution control boards, while the Environment (Protection) Act, 1986²⁶ provides an overarching framework empowering the central government to take measures for environmental protection, including the regulation of emissions and hazardous activities. More recently, the Commission for Air Quality

²³ Jose Felix Pinto-Bazurco, *The Precautionary Principle*, Int’l Inst. for Sustainable Dev. (Oct. 23, 2020), <https://www.iisd.org/articles/deep-dive/precautionary-principle>.

²⁴ Rio Declaration on Environment and Development, princ. 15, U.N. Doc. A/CONF.151/26 (Vol. I) (1992).

²⁵ Air (Prevention and Control of Pollution) Act, 1981, No. 14, Acts of Parliament, 1981 (India).

²⁶ Environment (Protection) Act, 1986, No. 29, Acts of Parliament, 1986 (India).

Management Act, 2021²⁷ was enacted to address the persistent air quality crisis in the NCR through a specialised, centralised authority. However, despite the existence of these institutions, the regulatory landscape remains fragmented, marked by overlapping jurisdictions, weak enforcement, and coordination failures between central and state authorities. This fragmentation is further complicated by the constitutional distribution of powers, where agriculture which is closely linked to stubble burning is a state subject, while environmental protection falls within the concurrent domain. As a result, effective governance requires a high degree of inter-governmental coordination, which has often been lacking in practice. Therefore, the question of state accountability cannot be assessed solely through the lens of Article 21, but must also consider whether the statutory framework is being implemented in a coherent, coordinated, and constitutionally compliant manner.

10. PERSISTENCE OF STUBBLE BURNING AND THE FAILURE OF STATE RESPONSIBILITY

The prohibition on open-air stubble burning was enunciated in *Vikrant Kumar Tongad v. Union of India*²⁸, wherein the National Green Tribunal issued substantive directions banning crop residue burning in Punjab, Haryana, Uttar Pradesh, and Rajasthan and prescribed regulatory measures for controlling air pollution. Subsequently, Supreme Court proceedings focused on ensuring enforcement of such existing prohibitions, directing states to implement crop residue management measures, utilise funds, and ensure compliance through administrative accountability, rather than introducing a fresh ban.

The issue of stubble burning is where the Public Trust Doctrine and State Accountability meet their most difficult real-world test. In the Indian legal context, the state is no longer viewed as a mere regulator but as a "fiduciary" that has failed its beneficiaries (the citizens) if it cannot manage the seasonal air crisis.

Despite repeated prohibitions under environmental regulations and directions issued by the Supreme Court and the National Green Tribunal, stubble burning continues to persist across North India. The persistence of this practice is closely linked to structural constraints within the agricultural system rather than mere non-compliance by farmers. Paddy harvesting in the region is followed by wheat sowing within a very short interval of roughly two to three weeks, leaving farmers with limited time to clear crop residue from their fields. Mechanised alternatives such as Happy Seeders, Super Straw Management Systems and mulchers are available through government-supported Crop

²⁷ Commission for Air Quality Management in National Capital Region and Adjoining Areas Act, 2021, No. 29, Acts of Parliament, 2021 (India).

²⁸ *Vikrant Kumar Tongad v. Union of India*, Original Application No. 101 of 2014 (Nat'l Green Trib.).

Residue Management (CRM) schemes; however, access to these technologies remains uneven, particularly for small and marginal farmers who constitute a significant proportion of cultivators in the region. According to government data, the Centre has provided thousands of CRM machines to states since 2018 under subsidy schemes, yet the demand for such equipment continues to exceed supply in many districts, and operational challenges such as high rental costs, lack of technical awareness, and delays in subsidy delivery persist. In these circumstances, burning crop residue often remains the quickest and least expensive method for farmers to prepare fields for the next cropping cycle. The continued prevalence of stubble burning therefore reflects deeper policy and governance gaps rather than solely the unwillingness of farmers to comply with environmental regulations. From a constitutional perspective, this raises important questions regarding State accountability under Article 21. Where environmental harm arises from predictable and recurring practices linked to structural economic constraints, the State's responsibility extends beyond imposing prohibitions or penalties. Instead, it requires the creation of enabling conditions that allow farmers to adopt sustainable alternatives through timely financial support, accessible technology, and coordinated agricultural policy. The persistence of stubble burning despite regulatory bans thus highlights a broader failure of environmental governance, demonstrating the limitations of punitive approaches that do not adequately address the underlying socio-economic drivers of the practice.

11. JUDICIAL APPROACH TOWARDS STATE ACCOUNTABILITY

- a. The courts are moving toward holding the State machinery (Chief Secretaries and Nodal Officers) personally accountable for administrative lethargy. If funds for Crop Residue Management (CRM) machines remain unspent or "ghost machines" exist only on paper, it is treated as a breach of the Public Trust Doctrine.
- b. Accountability is now granular. If a fire happens in a specific block, the state must prove that the assigned Nodal Officer provided the farmer with a viable alternative (like a Bio-Decomposer or Happy Seeder). If no alternative was provided, the State, not the farmer, is held primarily liable for the "systemic failure."
- c. The Supreme Court's recognition of the Right against the adverse effects of climate change has changed the narrative around stubble burning. The earlier narrative that revolved around blaming and penalising farmers has now been shifted to failure of state to provide adequate system to control an annual environmental nuisance. Since air pollution disproportionately affects the health of the rural poor and children, the state's failure to control stubble burning is now argued as a violation of equality vis-a-vis the right to the same air quality regardless of one's socio-economic status.

12. THE CHALLENGE OF POLICY MAKING AND ITS IMPLEMENTATION

At the very core, the debate over stubble burning is a classic "rights-versus-duties" conflict. On one side, the Supreme Court views air pollution arising out of stubble burning as a violation of Article 21; on the other side, farmers argue that without viable economic alternatives, they are being penalized for a structural failure of the State. State accountability in the context of air pollution and stubble burning must be assessed not only through constitutional doctrine but also through measurable indicators of governance capacity and institutional performance. Empirical evidence points to persistent structural deficiencies within environmental regulatory bodies, particularly the State Pollution Control Boards (SPCBs), which continue to suffer from significant understaffing, with a substantial proportion of sanctioned posts remaining vacant and thereby constraining effective monitoring, inspection, and enforcement. This institutional weakness is compounded by systemic inefficiencies in public financial management, as audit findings of the Comptroller and Auditor General of India have repeatedly highlighted the underutilisation and misallocation of funds earmarked for environmental protection, including delays and lapses in the implementation of pollution control schemes. In the specific context of stubble burning, the Crop Residue Management (CRM) scheme introduced by the Ministry of Agriculture and Farmers Welfare has faced significant implementation challenges despite substantial budgetary allocations, including delayed subsidy disbursement, uneven distribution of machinery, and limited accessibility for small and marginal farmers. These governance deficits are further aggravated by weak monitoring mechanisms, with instances of unverified utilisation of machinery and discrepancies in reporting undermining policy effectiveness. Taken together, such systemic shortcomings demonstrate that the persistence of stubble burning cannot be attributed solely to farmer non-compliance, but reflects deeper failures of administrative capacity, regulatory enforcement, and fiscal accountability. From a constitutional perspective, these failures may amount to a breach of the State's positive obligations under Article 21, as the inability to effectively deploy available institutional and financial resources undermines the State's duty to prevent foreseeable and recurring environmental harm.

13. CONCLUSION AND SUGGESTIONS

13.1 CONCLUSION

The persistent crisis of winter air pollution in northern India serves as a critical litmus test for the functional efficacy of Article 21 of the Indian Constitution. While seasonal agricultural residue burning has frequently been isolated as the primary catalyst for deteriorating air quality, an objective source-apportionment analysis reveals that it operates within a broader, continuous matrix of industrial, vehicular, and systemic urban emissions. Consequently, an

environmental governance paradigm that relies on the singular attribution of blame onto the agricultural community is both empirically flawed and constitutionally untenable. It shifts the structural burdens of state regulatory failures onto economically vulnerable farmers who are constrained by rigid crop cycles and a lack of viable alternatives.

Under the framework of the Public Trust Doctrine, the State cannot limit its role to that of a passive regulator enforcing punitive measures; it must act as a proactive fiduciary ensuring the protection of shared natural resources. The evolution of Article 21 jurisprudence—spanning from the foundational declarations in *Subhash Kumar* to contemporary climate-change litigations—establishes that the right to clean air imposes positive, non-negotiable obligations on state machinery to eliminate institutional lethargy and enforcement gaps. True constitutional compliance requires moving away from reactive, ad-hoc emergency mandates and transitioning toward a holistic, rights-oriented governance model. Only by addressing administrative understaffing, optimizing fiscal deployment, and restructuring agricultural incentives can the promise of a dignified, pollution-free life be effectively realized.

13.2 POLICY AND INSTITUTIONAL SUGGESTIONS

To bridge the gap between constitutional aspirations and administrative enforcement, the following multi-pronged interventions are suggested:

- **Transition from Punitive to Incentive-Driven Regulation:** The rigid application of the 'Polluter Pays Principle' against marginal farmers must be replaced with a compensatory framework. The State should offer direct, front-ended financial incentives and robust subvention models to offset the operational and rental costs of Crop Residue Management (CRM) machinery, ensuring technology reaches smallholders before the narrow harvesting window closes.
- **Decentralized Accountability and Machine Auditing:** Administrative responsibility must remain granular and verified. State governments should establish real-time, block-level monitoring systems to match local farm demands with functional CRM equipment, thereby eliminating "ghost machinery" and ensuring that field-level nodal officers are evaluated on resource facilitation rather than punitive prosecution.
- **Crop Diversification and Structural Agricultural Realignment:** Long-term mitigation requires moving away from ecologically demanding traditional cropping patterns. The State must actively promote and subsidize alternative, shorter-duration paddy varieties or non-rice crop alternatives through assured market support, thereby structurally widening the temporal window between harvest and sowing cycles.

- **Institutional Capacity Building within Regulatory Frameworks:** To address the multi-source reality of air pollution, the chronic understaffing and vacancy crisis within State Pollution Control Boards (SPCBs) must be immediately resolved. Capital from unutilized environmental funds should be legally ring-fenced to upgrade continuous ambient air monitoring infrastructure and enforce stricter compliance across industrial and municipal sectors year-round.
- **Inter-Governmental and Cross-Sectoral Coherence:** Given that environmental protection sits in the Concurrent List while agriculture remains a State subject, a formalized, statutory coordination mechanism under the Commission for Air Quality Management (CAQM) should be leveraged. This will synchronize federal fiscal allocations with state-level agricultural execution, replacing fragmented policies with an integrated, airshed-based governance strategy.