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Environmental Governance In Agricultural Law: A Critical Evaluation Of India's Repealed Farm Laws In Light Of Global Best Practices

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Abstract
The 2020 Indian farm laws, though ultimately repealed in response to widespread protests, marked a significant attempt to liberalize the country's agricultural markets. However, beyond the debates on market access and federalism, a critical yet overlooked dimension of these laws was their failure to integrate environmental governance. As climate change, land degradation, and water scarcity increasingly threaten agricultural sustainability, the absence of ecological safeguards in such major reforms is a missed opportunity. This article critically evaluates the environmental governance implications of the three farm laws and highlights how they fell short of advancing sustainable agricultural practices. By comparing India's approach with global standards particularly the European Union's Common Agricultural Policy and the environmental provisions in the United States Farm Bill the paper underscores the need for a holistic legal framework that aligns market efficiency with ecological stewardship. It further explores the role of environmental impact assessments, agri-ecological zoning, and sustainable land-use laws that could guide India's future agricultural reforms. Ultimately, this article calls for embedding environmental accountability and climate resilience into the core of agricultural policymaking to ensure not just productivity, but sustainability and justice for future generations of Indian farmers.

Keywords: *Indian farm laws, agricultural markets, environmental governance, sustainable agricultural practices, climate resilience.*

INTRODUCTION

The intersection of agriculture and environmental sustainability has emerged as a critical policy concern in the 21st century. As climate change, land degradation, and biodiversity loss increasingly affect agricultural productivity, governments across the globe are being called upon to align agricultural policies with environmental imperatives.[3]

In this context, the 2020 Indian farm laws formally known as the Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, the Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, and the Essential Commodities (Amendment) Act represented a sweeping liberalization of agricultural markets in India.[4] However, these laws sparked nationwide protests and were ultimately repealed in 2021, without substantive public debate on their environmental implications.[5]

While much of the discourse around these laws has focused on economic liberalization, federalism, and farmers' rights,[6] there has been comparatively little attention to how they addressed (or failed to address) environmental governance.[7]Notably, the repealed laws were largely silent on issues such as sustainable farming practices, climate resilience, biodiversity conservation, or natural resource management.[8] This omission is significant in a country where agriculture is both highly dependent on environmental conditions and a major contributor to

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[3] Intergovernmental Panel on Climate Change, Summary for Policymakers, in Climate Change 2022: Impacts, Adaptation and Vulnerability 3 (Hans-Otto Pörtner et al. eds., 2022).
[4] The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, No. 20 of 2020, India Code; The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, No. 21 of 2020, India Code; The Essential Commodities (Amendment) Act, No. 22 of 2020, India Code.
[5] Apoorva Mandhani, Explained: Why Were the Three Farm Laws Repealed?, The Print (Nov. 19, 2021), https://theprint.in/judiciary/explained-why-were-the-three-farm-laws-repealed/770054/.
[6] Shreya Sinha, Contested Agrarian Reforms in India: The Three Farm Laws and Beyond, J. Peasant Stud. (2021).
[7] Richa Kumar, Environmental Concerns in Indian Agriculture and the Missing Discourse in the Farm Laws, Econ. & Pol. Weekly, Vol. 56, Issue No. 8 (2021).
[8] Id, Mihir Shah, The Ecological Blind Spot in India's Farm Reform, The Hindu (Oct. 3, 2020), https://www.thehindu.com/opinion/lead/the-ecological-blind-spot-in-indias-farm-reform/article32753241.ece.

environmental degradation through excessive groundwater extraction, soil nutrient depletion, and overuse of chemical inputs.[9]

This article critically examines the environmental governance dimensions or the lack thereof embedded in the three repealed Indian farm laws. It does so by placing India's legal approach in comparative context with environmental and sustainability provisions in the farm policy frameworks of jurisdictions like the European Union, the United States, Brazil, and China.[10] These countries, despite varied political and institutional arrangements, offer valuable insights into how environmental objectives can be integrated into agricultural legislation through regulatory mandates, incentive structures, and institutional frameworks.[11]

By identifying key gaps and proposing a rights-based and ecologically grounded alternative, this article aims to contribute to the ongoing discourse on crafting a future-ready, environmentally accountable agricultural policy for India. Environmental governance must not be seen as an afterthought in agricultural reform but as a foundational pillar that supports the long-term viability of rural livelihoods and national food security.[12]

OVERVIEW OF THE REPEALED INDIAN FARM LAWS

In 2020, the Indian government enacted three farm laws through ordinances which were later passed by Parliament: the Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020;[13] the Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, 2020;[14] and the Essential Commodities (Amendment) Act, 2020.[15] These laws were presented as major reforms aimed at liberalizing India's agricultural market, enhancing private sector participation, and offering farmers greater choice in selling their produce.

The Farmers' Produce Trade and Commerce Act allowed farmers to sell produce outside the state-regulated Agricultural Produce Market Committee (APMC) mandis without paying state taxes.[16] The Farmers (Agreement on Price Assurance and Farm Services) Act introduced a national framework for contract farming agreements between farmers and agribusiness firms.[17] Finally, the Essential Commodities (Amendment) Act removed stockholding limits on essential commodities like cereals, pulses, and onions, unless under extraordinary circumstances.[18]

The central objective was to boost efficiency, attract private investment, reduce intermediaries, and help Indian agriculture integrate more effectively into global supply chains.[19] Proponents argued that these laws would modernize a stagnant agricultural sector[20]and empower farmers with market freedom.[21]

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[9] Planning Commission of India, Water Management in Agriculture, Govt. of India Report (2012); Food and Agriculture Organization, Status of Soil Resources in India (FAO, 2020).

[10] European Commission, The Common Agricultural Policy at a Glance, https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy_en; United States Department of Agriculture (USDA), Farm Bill 2018 Overview, https://www.usda.gov/farmbill; Food and Agriculture Organization, Brazil: Agricultural Policy Monitoring and Evaluation 2021; Ministry of Agriculture and Rural Affairs of the People's Republic of China, China Agricultural Development Report (2021).

[11] Jessica Duncan et al., Law and Agroecology: A Transdisciplinary Dialogue 112 (Springer, 2020).

[12] Ashok Gulati & Prerna Terway, Fixing India's Agri-Markets: From APMC to e-NAM, Indian Council for Research on International Economic Relations (ICRIER) Policy Brief, 2021.

[13] The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, No. 20 of 2020, § 3, Acts of Parliament, 2020 (India).

[14] The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, No. 20 of 2020, § 3, Acts of Parliament, 2020 (India).

[15] The Essential Commodities (Amendment) Act, No. 22 of 2020, Acts of Parliament, 2020 (India).

[16] The Essential Commodities (Amendment) Act, No. 22 of 2020, Acts of Parliament, 2020 (India), see section 5.

[17] Farmers Agreement Act, supra note 2, § 6.

[18] Essential Commodities Act, supra note 3, § 3.

[19] Ministry of Agriculture and Farmers Welfare, "Transforming Agriculture through Reforms," Press Release, 2020.

[20] NITI Aayog, "Market Reforms in Agriculture: Building Post-COVID-19 Resilience," Policy Brief (2020).

[21] Ramesh Chand, "Why the New Farm Acts Are Beneficial," The Indian Express (Sept. 25, 2020).

GAPS IN ENVIRONMENTAL REGULATION

Despite their economic ambitions, the three laws were conspicuously silent on environmental governance. None of the statutes made provisions for sustainable farming practices, environmental impact assessments (EIA), or obligations for water, soil, and biodiversity conservation.[22] This omission stands in stark contrast to global agricultural policies, such as the European Union's Common Agricultural Policy (CAP), which incorporates environmental conditionality into subsidy eligibility.[23]

For instance, the Contract Farming Act did not mandate compliance with environmental standards in farming agreements, leaving significant room for exploitative practices such as excessive groundwater extraction, pesticide overuse, and monoculture promotion issues already rampant in India's Green Revolution belt.[24] The law also lacked mechanisms to hold corporate buyers accountable for ecological damage caused during production or post-harvest activities.[25]

Likewise, the Trade and Commerce Act did not require regulatory scrutiny of the carbon footprint or ecological cost of long-distance inter-state trade in perishables, ignoring sustainability metrics in food transportation and logistics.[26] This absence of environmental conditionalities may inadvertently incentivize unsustainable farming by linking profitability to resource-intensive practices.

Moreover, by bypassing state APMC mandis where state-level environmental norms and farm waste disposal standards may apply these laws risked creating a parallel, unregulated market devoid of green compliance checks.[27] Environmental concerns were further sidelined by the lack of integration with India's National Action Plan on Climate Change (NAPCC) and its sub-missions, such as the National Mission for Sustainable Agriculture (NMSA).[28]

The Essential Commodities (Amendment) Act too ignored the environmental implications of stockpiling, such as the ecological cost of cold storage expansion and food waste generation. Without guidelines or reporting obligations for large stockholders, there was no assurance that sustainability goals would be maintained during warehousing and supply chain operations.[29]

In sum, while the 2020 farm laws were designed as economic reforms, their legal architecture failed to integrate environmental sustainability into India's agri-legal landscape. This disconnect raises concerns not only about India's ecological resilience but also about its global climate commitments under the Paris Agreement.[30] A holistic farm law must embed ecological safeguards, enforce environmental compliance, and align agricultural incentives with long-term sustainability goals.

THE INSEPARABILITY OF AGRICULTURAL LAW AND ENVIRONMENTAL LAW IN INDIA

Agricultural law and environmental law in India are deeply intertwined, both substantively and structurally. Agriculture is not merely an economic activity it is an ecological process, one that consumes natural resources like water, soil, and biodiversity, and in turn, affects the environment through inputs like pesticides, fertilizers, and land-use change. Therefore, the governance of agriculture cannot function effectively without being aligned with environmental regulation, and vice versa.

[22] See generally the three Acts; none include sections on environmental norms.
[23] Regulation (EU) No 1307/2013, of the European Parliament and of the Council of 17 Dec. 2013 on Direct Payments, 2013 O.J. (L 347) 608.
[24] Kanchi Kohli & Manju Menon, "Missing Environmental Governance in the Farm Laws," The Wire (Dec. 2020).
[25] Id.
[26] Farmers Trade and Commerce Act, supra note 1; lack of environmental criteria in inter-state trade.
[27] Arpita Mukherjee et al., "Impact of Reforms on Agricultural Markets," Indian Council for Research on International Economic Relations (ICRIER), Policy Paper (2021).
[28] Ministry of Environment, Forest and Climate Change, "National Action Plan on Climate Change (NAPCC)," Government of India, 2008.
[29] Cf. World Bank, "Food Loss and Waste and the Environmental Footprint," Report (2021).
[30] Paris Agreement, Dec. 12, 2015, U.N. Doc. FCCC/CP/2015/L.9/Rev.1.

The Indian Constitution itself lays the groundwork for this confluence. Article 48A of the Directive Principles of State Policy obligates the state to protect and improve the environment and safeguard forests and wildlife.[31] Simultaneously, Article 39(b) and (c) emphasize equitable distribution of resources, which directly implicates agricultural land use and sustainability.[32]Furthermore, Article 51A(g) imposes a fundamental duty on every citizen to protect and improve the natural environment, thereby reinforcing the environmental dimension of agriculture.[33]

In practice, many agricultural practices have significant environmental implications—excessive groundwater extraction for irrigation, overuse of chemical fertilizers, monocropping, and stubble burning all contribute to environmental degradation.[34] However, India's agricultural laws have historically focused more on productivity, price support, and procurement systems, as seen in the now-repealed three farm laws of 2020, with limited regard to sustainability metrics.[35]

On the other hand, environmental laws such as the Environment (Protection) Act, 1986, the Water (Prevention and Control of Pollution) Act, 1974, and the Air (Prevention and Control of Pollution) Act, 1981 indirectly regulate agricultural activities when they cause environmental harm.[36] Yet, the enforcement of these laws is often fragmented, with poor inter-sectoral coordination between agricultural departments and pollution control boards.[37]

Legal frameworks such as the Pesticides Management Bill, 2020 aim to bridge this gap by bringing environmental safety into the regulatory ambit of agriculture, but its implementation is still pending and contested.[38] Additionally, international commitments under the Paris Agreement and Sustainable Development Goals (SDGs) require India to develop an integrated approach that treats agricultural law and environmental law as mutually reinforcing domains.[39]

Therefore, separating the governance of agriculture from environmental concerns is both legally and practically unsustainable. Sustainable agriculture requires a comprehensive legal framework that incorporates environmental safeguards, resource conservation, and climate resilience. Conversely, environmental protection cannot succeed without regulating agriculture, which is India's single largest consumer of land and water resources. The future of Indian agricultural policy must, therefore, be firmly rooted in environmental jurisprudence if it is to be equitable, effective, and constitutionally sound.[40]

JUDICIAL ENVIRONMENTALISM AND THE SILENT GAPS IN INDIA'S AGRICULTURAL LAWS

In the realm of Indian agricultural law, the question of environmental governance remains deeply underexplored. The three repealed farm laws of 2020 The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020, The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, 2020, and The Essential Commodities (Amendment) Act, 2020 were largely drafted without

[31] INDIA CONST. art. 48A.
[32] Id. art. 39(b)-(c).
[33] Id. art. 51A(g).
[34] Sunita Narain, Stubble Burning and the Air Crisis in Northern India, 55 ECON. & POL. WKLY. 6 (2020).
[35] The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020, No. 20, Acts of Parliament, 2020 (India); The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, 2020, No. 20, Acts of Parliament, 2020 (India); The Essential Commodities (Amendment) Act, 2020, No. 20, Acts of Parliament, 2020 (India).
[36] The Environment (Protection) Act, No. 29 of 1986, INDIA CODE (1986); The Water (Prevention and Control of Pollution) Act, No. 6 of 1974, INDIA CODE (1974); The Air (Prevention and Control of Pollution) Act, No. 14 of 1981, INDIA CODE (1981).
[37] Centre for Science and Environment, State of India's Environment 2021, CSE (2021), at 123.
[38] The Pesticide Management Bill, 2020, Bill No. XXII of 2020 (India).
[39] United Nations Framework Convention on Climate Change, Paris Agreement, Dec. 12, 2015, U.N.T.S. No. 54113; United Nations, Sustainable Development Goals, Goal 2 & 13.
[40] M.K. Ramesh, Sustainability and the Indian Legal Framework, 23 NAT'L L. SCH. IND. REV. 1 (2017).

integrating environmental safeguards or sustainability principles.[41] Their focus was overwhelmingly economic, aimed at liberalizing the agricultural market, encouraging contract farming, and reducing regulatory oversight. However, such an approach creates what constitutional scholars refer to as "silent zones" in the law, where environmental and social rights are not expressly articulated but are nevertheless affected by legislative action.[42]

The Indian Constitution does not explicitly mention the right to a clean and healthy environment. Yet, judicial interpretation has steadily expanded Article 21 (Protection of Life and Personal Liberty) to include this fundamental right.[43] In Subhash Kumar v. State of Bihar, the Supreme Court declared that the right to life includes the right to enjoy pollution-free air and water.[44] Similarly, in M.C. Mehta v. Union of India, the Court observed that environmental preservation is not just a policy issue but a constitutional mandate under Article 21.[45] These landmark cases have elevated environmental protection to a core element of India's constitutional jurisprudence.

This evolving jurisprudence has direct implications for agricultural policy. For instance, the unchecked use of chemical fertilizers and pesticides in contract farming, promoted under the repealed 2020 laws, may adversely impact soil health, biodiversity, and groundwater.[46]However, the absence of environmental clauses in these laws means that redress must rely on judicial enforcement, not statutory guarantees. This reveals a critical disconnect between agricultural liberalization and environmental governance.

The Vellore Citizens Welfare Forum v. Union of India case brought two internationally recognized environmental principles into Indian law: the "polluter pays" principle and the "precautionary principle."[47] These are especially relevant in contexts where agri-businesses, under contract farming arrangements, may engage in unsustainable practices such as excessive water use, genetic modification without proper controls, or deforestation. Yet, the 2020 farm laws failed to specify how liability would be assessed or how preventive measures would be institutionalized.

The judiciary has historically stepped in to fill gaps where legislation has remained silent. This is evident in cases like Indian Council for Enviro-Legal Action v. Union of India, where the Supreme Court mandated industrial compliance with environmental norms in the absence of adequate statutory provisions.[48] The same rationale could apply to contract farming models if they lead to ecological degradation. Furthermore, the Court has emphasized the need to apply the public trust doctrine to natural resources, implying that the state holds resources like land and water in trust for the public, including future generations.[49] Agricultural practices that compromise these resources thus raise serious constitutional concerns.
In sum, the repeal of the 2020 farm laws presents an opportunity for reimagining agricultural legislation that is not only market-friendly but also ecologically responsible. Constitutional principles, as developed through judicial activism, provide a strong foundation for embedding environmental safeguards into future farm laws.

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[41] The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, No. 20 of 2020, Acts of Parliament, 2020 (India); The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, No. 21 of 2020, Acts of Parliament, 2020 (India); The Essential Commodities (Amendment) Act, No. 22 of 2020, Acts of Parliament, 2020 (India)

[42] Upendra Baxi, Taking Suffering Seriously: Social Action Litigation in the Supreme Court of India, 4 THIRD WORLD LEGAL STUD. 107, 122 (1985).
[43] INDIA CONST. art. 21.
[44] Subhash Kumar v. State of Bihar, (1991) 1 S.C.C. 598 (India).
[45] M.C. Mehta v. Union of India, (1987) 4 S.C.C. 463 (India).
[46] Centre for Science and Environment, Pesticide Residues in Food and Beverages, CSE India (2003), https://www.cseindia.org/pesticide-residues-in-food-and-beverages-1200 (last visited May 26, 2025).
[47] Vellore Citizens Welfare Forum v. Union of India, (1996) 5 S.C.C. 647 (India).
[48] Indian Council for Enviro-Legal Action v. Union of India, (1996) 3 S.C.C. 212 (India).
[49] M.C. Mehta v. Kamal Nath, (1997) 1 S.C.C. 388 (India)

They highlight that agricultural reforms cannot afford to be environmentally neutral, let alone environmentally negligent.

FROM PRODUCTIVITY TO SUSTAINABILITY: INTEGRATING ENVIRONMENTAL TOOLS INTO INDIAN AGRICULTURAL LAW

A comprehensive and forward-looking agricultural legal framework in India must incorporate environmental impact assessments (EIAs), agri-ecological zoning, and sustainable land-use planning as foundational regulatory tools. At present, environmental assessments in India are largely confined to industrial and infrastructure projects under the purview of the Environment Impact Assessment Notification, 2006, issued under the Environment (Protection) Act, 1986.[50] However, agriculture despite being the largest land-use sector and a major driver of soil degradation, water resource depletion, and biodiversity loss remains outside the mandatory EIA regime. This regulatory vacuum must be addressed through the creation of sector-specific agricultural EIAs, particularly for large-scale commercial farming, contract farming zones, agro-industrial parks, and pesticide-intensive projects. Such assessments should evaluate long-term ecological viability, groundwater recharge implications, and potential impacts on surrounding communities. Without this, agricultural expansion continues to be treated as an inherently benign activity, even when it causes severe environmental externalities such as groundwater overuse in Punjab, or deforestation-linked shifting cultivation in Northeast India.[51]

Equally vital is the implementation of agri-ecological zoning, a process that demarcates regions based on their soil type, rainfall pattern, water availability, and biodiversity sensitivity, thereby ensuring crop suitability and sustainable cultivation practices. While the Indian Council of Agricultural Research (ICAR) has developed agro-climatic zones, they have not been integrated into binding land-use legislation.[52] A statutory mandate under a reformed farm law regime should prohibit water-intensive cropping (like paddy) in semi-arid zones and promote indigenous drought-resistant crops in fragile ecosystems. This would prevent resource misallocation and ecological collapse, as witnessed in states like Haryana and Maharashtra where over-extraction of water for unsuitable crops has led to aquifer depletion and salinity ingress.[53]

Moreover, sustainable land-use laws must be introduced at both national and state levels to regulate land conversion, crop pattern distortions, and agrarian zoning. These laws should be guided by principles of climate justice, intergenerational equity, and resilience. For instance, a unified Land Use and Agro-Ecological Sustainability Act could lay down norms on permissible agricultural activities in ecologically sensitive zones, regulate crop rotation schedules, and incentivize agroforestry. Such legislation must also empower local bodies, such as Gram Panchayats and District Planning Committees, under Articles 243ZD and 243G of the Constitution, to ensure decentralized enforcement.[54]

The absence of these ecological governance tools in the repealed 2020 farm laws reflects a deep structural flaw in India's agricultural policy thinking where environmental sustainability is treated as peripheral rather than integral. These laws were designed to enhance market access, but lacked any mechanism to align agricultural commercialization with ecological regeneration or climate adaptation goals.[55] By contrast, global best practices, such as Brazil's Forest Code (which mandates conservation reserves on farmland) and the European Union's Common Agricultural Policy (which ties subsidies to ecological compliance), highlight the need for green conditionalities in agricultural regulation.[56]Ultimately, embedding environmental accountability and climate

[50] Ministry of Environment, Forest and Climate Change, EIA Notification, 2006, S.O. 1533(E), Gazette of India (Sept. 14, 2006), available at https://environmentclearance.nic.in.

[51] U.N. Food & Agric. Org., The State of the World's Land and Water Resources for Food and Agriculture 112 (2021).

[52] Indian Council of Agricultural Research (ICAR), Agro-Climatic Zoning and Planning in India (2022), available at https://icar.org.in.

[53] Centre for Science and Environment (CSE), The State of India's Groundwater, Down to Earth (2023), https://www.downtoearth.org.in.

[54] INDIA CONST. arts. 243G, 243ZD; see also Planning Commission of India, Manual for Integrated District Planning (2008).

[55] Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, No. 20 of 2020 (India); Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, No. 21 of 2020; Essential Commodities (Amendment) Act, No. 22 of 2020.

[56] Lei No. 12.651, de 25 de maio de 2012, Diário Oficial da União [D.O.U.] de 28.5.2012 (Braz.) (Brazil's Forest Code); European Commission, The CAP and the Environment, https://ec.europa.eu/info/food-farming-fisheries/sustainability.

resilience into the core of India's agricultural policy is not merely an aspirational goal it is a constitutional and developmental necessity. As the Supreme Court recognized in M.C. Mehta v. Union of India, the right to a healthy environment under Article 21 entails active state responsibility to prevent ecological degradation that threatens livelihood and life.[57] Integrating EIAs, agri-ecological zoning, and sustainable land-use laws into farm policy would uphold this mandate, ensuring not only productivity but climate-secure livelihoods and environmental justice for current and future generations of Indian farmers.

FARMERS' ENVIRONMENTAL ENTITLEMENTS: TOWARD A LEGALLY PROTECTED ECOLOGICAL SAFETY NET

As India experiences increasingly volatile weather patterns, frequent floods, prolonged droughts, and environmental degradation due to industrial expansion, farmers find themselves at the frontlines of ecological vulnerability. Despite their central role in food production, they are legally under protected when it comes to environmental entitlements. This section argues for the legal recognition of environmental entitlements as a subset of agrarian rights, enforceable under Indian law through specific statutory and constitutional provisions.

1. Right to Early Warning Systems for Extreme Weather

The right to timely and accurate early warning systems (EWS) for extreme weather must be recognized as a legal entitlement for all farmers, rather than a discretionary service. Such warnings are essential for protecting crops, livestock, and farm infrastructure from irreversible damage.

Currently, India's early warning architecture relies on institutions like the India Meteorological Department (IMD) and the National Disaster Management Authority (NDMA), which operate under general disaster management laws without a specific agricultural mandate. While the NDMA has issued guidelines for weather alerts, these do not create binding obligations upon the government to ensure the last-mile delivery of real-time warnings to farmers in regional languages or formats accessible via basic mobile technology.[58]

The right to life under Article 21 of the Indian Constitution has been judicially interpreted to include the right to livelihood and information.[59] Therefore, depriving farmers of timely weather alerts despite the technological ability to provide them amounts to a denial of their right to livelihood. A robust legal framework should:

1. Mandate real-time, hyper-local early warnings as a statutory right;
2. Assign statutory duties to IMD and State Agriculture Departments to provide multilingual alerts via mobile, radio, and community networks;
3. Establish a grievance redressal forum for failure to provide such warnings, especially in areas classified as high-risk zones.

Such reforms could be implemented through amendments to the Disaster Management Act, 2005, or through a new Climate Resilience in Agriculture Act.

2. Right to Climate Adaptation Funds

Farmers are disproportionately impacted by climate change but have limited access to the financial resources needed to adapt. As such, the establishment of climate adaptation funds as a legal entitlement rather than a policy concession is vital.

Globally, countries have created dedicated adaptation funds under the UN Framework Convention on Climate Change (UNFCCC) and the Green Climate Fund, but these often do not trickle down to the smallholder farmer in India.[60] India's own National Adaptation Fund for Climate Change (NAFCC) suffers from fragmented governance, limited outreach, and bureaucratic bottlenecks.[61]

1. Farmers must have a statutory right to access climate adaptation funds, which should cover:
2. Resilient seeds, soil regeneration practices, and sustainable irrigation systems;
3. Subsidies for agroecological transitions, such as crop diversification and organic farming;

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

[58] National Disaster Management Authority, Guidelines for Early Warning Systems, available at https://ndma.gov.in/.

[59] PUCL v. Union of India, (2005) 5 SCC 1

[60] UNFCCC, Adaptation Fund, available at https://www.adaptation-fund.org/.

[61] Ministry of Environment, Forest and Climate Change, National Adaptation Fund for Climate Change: Status Report (2021), available at http://moef.gov.in.

4. Support for farm-level infrastructure such as rainwater harvesting, drip irrigation, and micro cold storage;
5. Insurance premiums for climate risks.

To institutionalize this right, the Environment (Protection) Act, 1986 could be amended to insert a chapter on Climate Adaptation Rights, or a dedicated National Farmers' Climate Adaptation Act could be passed. Funds should be routed through Farmer Producer Organizations (FPOs) and Panchayati Raj Institutions to ensure democratic and accountable implementation.

3. Right to Compensation for Ecological Damage Caused by Others

Perhaps one of the most glaring legal lacunae is the lack of enforceable rights for farmers to claim compensation for environmental harms they did not cause such as industrial effluents contaminating groundwater, toxic air from nearby power plants, or flash floods triggered by poorly regulated urban construction.

While the Polluter Pays Principle is a well-established doctrine in Indian environmental jurisprudence,[62]it has largely been applied in urban or industrial contexts, with limited recognition of farmers as victims of ecological injustice. Moreover, although the National Green Tribunal Act, 2010 provides a mechanism for compensation, it is often inaccessible to marginal farmers due to legal costs, procedural complexity, and lack of awareness. To correct this, India should:

1. Enact statutory provisions allowing group claims by farmers through FPOs or Gram Sabhas in cases of ecological harm;
2. Establish Agrarian Environmental Claims Tribunals at the district level with simplified procedures;

To create a "Right to Ecological Compensation" under a new Farmers' Environmental Rights Act, supported by an Environmental Compensation Fund collected from industries and polluters. This legal framework would be consistent with both Article 48A (Protection of Environment) and Article 21 (Right to Life and Livelihood), while also drawing on international practices such as Brazil's Environmental Damage Compensation Law and South Africa's Environmental Management Act.

INTERNATIONAL MODELS OF ENVIRONMENTAL COMPENSATION: LESSONS FROM BRAZIL AND SOUTH AFRICA

In the global south, both Brazil and South Africa offer exemplary legal frameworks for environmental compensation that could provide strong guidance for India's evolving agrarian environmental law. Brazil's approach is primarily rooted in its National Environmental Policy Act,[63]which codifies the Polluter Pays Principle as a matter of strict liability. Article 14 of this Act mandates that "the polluter, regardless of the existence of guilt, is obligated to indemnify or repair the damage caused to the environment and to third parties affected by his activity"[64] This imposes a non-fault-based regime, wherein the mere occurrence of environmental harm triggers liability. To operationalize this responsibility, Decree No. 6.848/2009 was enacted, requiring developers of high-impact projects (such as mining, hydroelectric dams, or industrial plants) to pay an environmental compensation fee, typically equivalent to 0.5% of the total project value[65]These funds are directed toward biodiversity conservation units, ecological restoration, or compensation to impacted communities most notably smallholder farmers and indigenous groups whose livelihoods are affected by land degradation, water pollution, or deforestation.[66]

In contrast, South Africa's National Environmental Management Act, 1998 (NEMA) provides a more rights-based approach to environmental governance. Anchored in Section 24 of the South African Constitution, which guarantees everyone the right "to an environment that is not harmful to their health or well-being," NEMA builds an expansive framework that not only outlines the duties of the state and private actors but also empowers citizens to enforce environmental rights[67] One of its central provisions, Section 28, imposes a duty of care on

[62] Vellore Citizens' Welfare Forum v. Union of India, (1996) 5 SCC 647.
[63] Law No. 6.938/1981
[64] Lei No. 6.938, de 31 de agosto de 1981 (Brazil), art. 14, available at http://www.planalto.gov.br/ccivil_03/leis/l6938.htm.].
[65] Decreto No. 6.848, de 14 de Maio de 2009 (Brazil), available at https://www.planalto.gov.br/ccivil_03/_ato2007-2010/2009/decreto/d6848.htm.
[66] Paulo de Bessa Antunes, Environmental Law in Brazil 124 (2d ed. 2021).
[67] S. Afr. Const., 1996, § 24; see also National Environmental Management Act 107 of 1998 (S. Afr.), available at https://www.gov.za/documents/national-environmental-management-act.

any person who causes, has caused, or may cause significant pollution or degradation of the environment. Such persons must take "reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorized by law or cannot reasonably be avoided or stopped, to minimize and rectify such pollution or degradation[68]Unlike typical tort regimes, this duty is proactive and applies regardless of intent or negligence.
Notably, NEMA also incorporates principles of environmental justice, public participation, and transparency, giving rural communities, including farmers, the legal right to access environmental information and participate in environmental impact assessments (EIAs) for projects that could affect their land or water access[69]Furthermore, victims of environmental harm including those in rural or farming areas may bring civil actions for damages, while regulators can impose both civil and criminal penalties on violators. This model is notable for allowing collective actions (akin to class suits), enabling marginalized communities to enforce their rights without prohibitive individual legal costs[70]

Both Brazil and South Africa demonstrate that environmental compensation need not be relegated to abstract policy, but can be codified through enforceable statutory provisions and constitutional environmental rights. These legal regimes not only deter polluters but also create tangible financial and restorative mechanisms that support the victims of environmental damage especially vulnerable agrarian populations. For India, where small and marginal farmers bear the brunt of environmental degradation from industrial pollution, urban encroachment, and unregulated development, these frameworks provide pragmatic legal blueprints for embedding ecological justice into agricultural and environmental law.

For too long, the rights of Indian farmers have been confined to economic and land-related concerns, while their ecological entitlements have remained legally invisible. Recognizing and institutionalizing their right to early warning systems, adaptation funds, and compensation for ecological damage is no longer a policy luxury it is a constitutional imperative. A dedicated environmental safety net is essential not only for justice and sustainability but also for the future of Indian agriculture in the face of climate uncertainty.

FARMERS' ENVIRONMENTAL ENTITLEMENTS: A LEGAL IMPERATIVE IN THE ERA OF CLIMATE VULNERABILITY

As India's agricultural sector faces mounting environmental challenges ranging from climate-induced disasters to industrial encroachments the question of farmers' environmental entitlements demands urgent legal recognition. Unlike conventional agrarian protections focused on pricing or subsidies, environmental entitlements emphasize a farmer's right to ecological security, including timely climate information, institutional support for adaptation, and reparative justice in cases of third-party ecological harm. These rights must be codified to protect the rural populace from the intensifying vulnerabilities of a warming and industrializing India.

I. Right to Early Warning Systems for Extreme Weather Events

In a country where more than 50% of the population depends directly or indirectly on agriculture, the absence of a legal right to early warning systems for climate-related disasters disproportionately jeopardizes rural livelihoods. Article 21 of the Indian Constitution guarantees the right to life, which, as interpreted by the Supreme Court, includes the right to a healthy environment and the right to livelihood.[71]However, the judiciary has not yet expanded this doctrine to recognize early warning systems (EWS) as a derivative right.

The National Disaster Management Act, 2005, vests responsibility in the National Disaster Management Authority (NDMA) to promote technology-driven risk reduction, but it lacks enforceable provisions mandating access to EWS for individual farmers.[72]In contrast, international models such as the Sendai Framework for

[68] National Environmental Management Act 107 of 1998 § 28 (S. Afr.)
[69] National Environmental Management Act 107 of 1998 § 2(4)(f)-(k); South African Environmental Law Association, Environmental Impact Assessments: Public Participation Guidebook (2015), available at https://www.environment.gov.za/.
[70] Louis J. Kotzé & Alexander Paterson, Environmental Compliance and Enforcement in South Africa: Legal Perspectives 187–90 (2009).
[71] Subhash Kumar v. State of Bihar, (1991) 1 SCC 598; see also M.C. Mehta v. Union of India, (1987) 1 SCC 395.
[72] National Disaster Management Act, No. 53 of 2005, § 6(2)(e) (India).

Disaster Risk Reduction (2015–2030) call upon signatories, including India, to "substantially increase the availability of and access to multi-hazard early warning systems."[73]Yet in India, weather alerts often remain inaccessible to small and marginal farmers due to digital divides, linguistic barriers, and infrastructural limitations.

Therefore, legal reform is warranted to convert these programmatic obligations into enforceable entitlements. For instance, a statutory amendment could compel both the Indian Meteorological Department and State Agricultural Departments to issue localized, crop-sensitive warnings in real-time, with delivery mechanisms tailored for rural mobile phone users and community radio networks.[74] Moreover, a Grievance Redressal Authority should be created to allow farmers to seek compensation where EWS failures result in preventable loss.

II. Legal Right to Climate Adaptation Funds

Farmers must also be guaranteed access to climate adaptation financing as a matter of environmental and economic justice. India is a signatory to the Paris Agreement, which recognizes the necessity of climate adaptation and has pledged to strengthen adaptive capacities in the agricultural sector.[75] While schemes like the National Adaptation Fund for Climate Change (NAFCC) exist, they operate through project-based funding via state nodal agencies, leaving individual farmers with no actionable claim to those resources.[76]

From a constitutional perspective, adaptation funds can be interpreted as a necessary component of the Directive Principles of State Policy (DPSP), particularly Article 39(b) which seeks equitable distribution of resources.[77]Furthermore, Article 48A enjoins the State to protect and improve the environment.[78]Together, these provisions form the normative basis for a legally enforceable right to adaptation finance, especially for smallholder and rain-fed farmers whose vulnerability to climate volatility is systemic.

Drawing inspiration from countries like Kenya and Bangladesh, India should legislate a Farmers' Climate Resilience Act, which codifies the right of farmers to access public funding for drought-resilient seeds, water-efficient irrigation technologies, weather insurance premium subsidies, and agroforestry integration.[79] Such a framework would ensure that adaptation is not merely a policy vision but a budgeted and justiciable right.

III. Compensation for Ecological Damage by Third Parties

One of the most glaring gaps in India's environmental law is the absence of a streamlined compensation regime for farmers harmed by ecological degradation caused by third parties such as industrial pollution, mining runoff, or urban flooding from unregulated encroachments. Although the Supreme Court has upheld the Polluter Pays Principle as part of the environmental jurisprudence in cases such as Indian Council for Enviro-Legal Action v. Union of India,[80] enforcement remains erratic, and compensation is rare.

Under the Environment (Protection) Act, 1986, and Water and Air Acts, regulatory bodies can penalize polluters, but no direct avenue exists for affected farmers to claim damages for soil contamination, groundwater depletion, or air-borne toxins that damage crops.[81] This void not only denies them reparative justice but exacerbates rural distress.

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[73] United Nations Office for Disaster Risk Reduction (UNDRR), Sendai Framework for Disaster Risk Reduction 2015–2030, ¶ 18(b), https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030.

[74] Anshu Sharma et al., Last Mile Connectivity: Integrating Climate Information with Farmers' Decision Making, 17 J. Climate Services 101 (2022).

[75] Paris Agreement to the United Nations Framework Convention on Climate Change, art. 7(1), Dec. 12, 2015, T.I.A.S. No. 16-1104.

[76] Ministry of Environment, Forest and Climate Change, National Adaptation Fund for Climate Change, https://moef.gov.in/en/division/climate-change-cc/national-adaptation-fund-for-climate-change/.

[77] INDIA CONST. art. 39(b).

[78] INDIA CONST. art. 48A.

[79] Government of Kenya, Climate-Smart Agriculture Strategy 2017–2026; see also Bangladesh Climate Change Trust Act, 2010 (Act No. 57 of 2010).

[80] Indian Council for Enviro-Legal Action v. Union of India, (1996) 3 SCC 212.

[81] Environment (Protection) Act, No. 29 of 1986 (India); see also Water (Prevention and Control of Pollution) Act, No. 6 of 1974; Air (Prevention and Control of Pollution) Act, No. 14 of 1981.

Other jurisdictions, like Brazil, offer instructive models. Under Brazil's Law No. 6.938/1981, the right to indemnification is strict and compensatory, even where industrial activity indirectly impacts third parties like farmers.[82] Similarly, South Africa's National Environmental Management Act (NEMA) empowers courts to impose compensatory obligations and encourages class-action suits for environmental harm affecting communities.[83]

India could adopt a Farmers' Environmental Compensation Tribunal Act, allowing for summary proceedings and scientific assessments to adjudicate claims related to industrial pollution, unauthorized construction, and water diversions. Compensation should cover not only loss of income but also ecological restoration and psychological distress. Enshrining such a right would harmonize with the constitutional promise of justice social, economic, and environmental as contained in the Preamble and Articles 38 and 39A.[84]

Farmers' environmental entitlements must be recognized not merely as an adjunct to agricultural policy but as an inalienable part of environmental justice and constitutional governance. Legal recognition of rights to early warning systems, climate adaptation funds, and compensation for third-party ecological harm would signal a shift from welfare paternalism to rights-based rural environmentalism. The time is ripe for lawmakers and courts alike to ensure that India's farmers are not left defenceless in the face of climate and ecological disruptions they did not cause, but must endure.

TOWARDS A GREEN SHIELD: ESTABLISHING AN ENVIRONMENTAL SAFETY NET FOR FARMERS THROUGH LEGAL REFORMS IN INDIAN AGRICULTURAL POLICY

In the wake of the repeal of the three contentious farm laws of 2020, the Indian agricultural policy landscape is at a crossroads. While the now-defunct laws aimed to liberalize agricultural markets and enable private sector participation, they were glaringly silent on environmental safeguards, climate resilience, or ecological accountability of agribusiness entities. This omission, against the backdrop of worsening climate variability and ecological degradation, has spotlighted the urgent need for a legally enforceable environmental safety net for farmers. Building such a shield requires legislative innovation grounded in constitutional values, judicial guidance, and participatory institutions.

I. Current Gaps: Absence of Environmental Accountability in the Repealed Farm Laws

The three repealed farm laws the Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020, the Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, 2020, and the Essential Commodities (Amendment) Act, 2020 reflected a market-centric vision of agricultural reform. However, none of these laws contained binding environmental obligations on private players such as agribusiness firms, contractors, or processors.[85] There were no stipulations requiring climate-friendly practices, waste management by contractors, or sustainable sourcing standards.

This is particularly problematic given the interdependent relationship between agriculture and ecological stability. Intensive monocropping, groundwater depletion, synthetic input overuse, and contract-induced land mismanagement can have long-term consequences on soil fertility and local ecosystems threats that the laws entirely ignored. Moreover, the framework provided no protection for farmers against climate risk or degradation caused by third parties like industry, urban expansion, or mining activity near agrarian zones.[86]

II. Judicial Foundations: Right to Clean Environment and Intergenerational Equity

Any effort to establish an environmental safety net for farmers finds firm support in Indian constitutional jurisprudence, particularly through the expansive interpretation of Article 21 the right to life by the Supreme Court. In M.C. Mehta v. Union of India, the Court held that the right to a clean and healthy environment is an

[82] Lei No. 6.938, de 31 de agosto de 1981 (Brazil), art. 14, available at http://www.planalto.gov.br/ccivil_03/leis/l6938.htm.
[83] National Environmental Management Act 107 of 1998 § 28 (S. Afr.).
[84] INDIA CONST. preamble; arts. 38, 39A.
[85] Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, No. 20 of 2020 (India); Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, No. 21 of 2020; Essential Commodities (Amendment) Act, No. 22 of 2020.
[86] Rajeev Baral, Climate Risks and India's Agriculture Policy: Missing the Environmental Lens, 18 J. Envtl. Pol'y & Dev. 122, 129 (2021).

integral component of Article 21.[87] The Court has also recognized intergenerational equity as a principle of environmental governance, reinforcing the duty to protect natural resources for future generations.[88]

Furthermore, the Polluter Pays Principle and the Precautionary Principle, as articulated in Vellore Citizens' Welfare Forum v. Union of India,[89] imply that agricultural stakeholders especially vulnerable smallholders must be protected from ecological harm inflicted by others, and that regulatory mechanisms should preempt environmental damage in agrarian zones.

These doctrines provide the constitutional bedrock upon which a new generation of farm laws could be erected laws that do not merely facilitate markets, but protect ecological commons and farmer livelihoods against environmental risk.

III. Legal Empowerment of Gram Sabhas and Farmers' Collectives: Green Tribunal for Agriculture

A central pillar of this green safety net must be the empowerment of local institutions, particularly Gram Sabhas and registered farmers' cooperatives, to serve as guardians of agro-ecological integrity. Under Article 243A and 243G of the Constitution, Gram Sabhas have the power to function as decision-making bodies for local development and natural resource management.[90] However, these powers remain underutilized and unrecognized in national environmental and agricultural governance frameworks.

A specialized Green Tribunal for Agriculture should be established by law, modeled on the National Green Tribunal (NGT) but specifically tailored to address environment-related agricultural grievances. This tribunal must allow farmers' organizations, Gram Sabhas, and environmental NGOs to initiate action against entities public or private whose actions damage agricultural ecosystems, violate sustainable farming agreements, or contribute to agro-climatic distress.

This would fill a critical vacuum, as current NGT jurisdiction rarely extends to agriculture-specific grievances and often remains inaccessible to rural populations due to procedural and locational limitations.[91]

IV. Legal Aid and Grievance Redress Mechanisms at the District Level

A holistic environmental entitlement system must also guarantee legal aid and grievance redress mechanisms accessible at the district and sub-district levels. Despite the existence of the National Legal Services Authority (NALSA) and its state counterparts established under the Legal Services Authorities Act, 1987,[92] there remains a conspicuous lack of environmental legal outreach in rural regions, especially in addressing agriculturally induced environmental harms such as soil degradation, pesticide runoff, and contaminated water bodies.[93]While NALSA's mandate includes environmental matters, its implementation in agrarian contexts is minimal due to capacity constraints and limited rural interface.

To bridge this lacuna, a District Environmental Legal Aid and Grievance Cell (DELAGC) should be instituted within the existing framework of the District Legal Services Authority (DLSA) under Section 9 of the Legal Services Authorities Act.[94] These dedicated cells could provide free legal assistance to farmers and agricultural laborers affected by pollution, water theft, pesticide contamination, crop destruction due to industrial activities, or land degradation caused by neighboring entities. Such mechanisms are especially vital in districts with high

[87] M.C. Mehta v. Union of India, (1987) 1 SCC 395.
[88] T.N. Godavarman Thirumulpad v. Union of India, (2002) 10 SCC 606.
[89] Vellore Citizens' Welfare Forum v. Union of India, (1996) 5 SCC 647.
[90] INDIA CONST. arts. 243A, 243G.
[91] Shibani Ghosh, The National Green Tribunal: Recent Developments and Current Challenges, Centre for Policy Research, https://cprindia.org/research/reports/the-ngt-and-rural-access
[92] Legal Services Authorities Act, No. 39 of 1987, § 3, INDIA CODE (1987)
[93] Kanchi Kohli & Manju Menon, The Legal Void in Agricultural Pollution Governance in India, ECON. & POL. WKLY., Vol. 55, No. 47 (Nov. 2020), at 14–18.
[94] Legal Services Authorities Act, No. 39 of 1987, § 9, INDIA CODE (1987) (providing for District Legal Services Authorities to coordinate legal aid at the district level).

agrarian density and known environmental vulnerabilities, such as Punjab's Malwa region or the Ganga basin in Uttar Pradesh.[95]

These DELAGCs must be staffed with legally trained environmental officers and para-legal volunteers[96]conversant with tort law and environmental statutory regimes, including the Environment (Protection) Act, 1986,[97] the Water (Prevention and Control of Pollution) Act, 1974,[98]and the Air (Prevention and Control of Pollution) Act, 1981.[99]Their jurisdiction should also include emerging threats such as transgenic contamination, excessive groundwater extraction, and unregulated agri-chemical usage. Capacity-building partnerships with law schools and environmental NGOs could provide knowledge support to these officers.

In tandem, district administrations must establish publicly accessible grievance portals and appoint ombudspersons for environmental issues in agriculture, modeled loosely on the Swachh Bharat Mission's grievance redress systems[100] or the Ombudsman model under MGNREGA.[101] These ombudspersons should be empowered to investigate complaints, recommend remedial measures (e.g., soil rejuvenation, compensation for crop damage), and direct interim relief in a time-bound manner, preferably within 30 to 60 days of receipt of complaint.

To institutionalize accountability, DELAGCs should have reporting obligations to both the State Agriculture and Environment Ministries, and maintain a register of actions and outcomes. In cases involving complex or inter-jurisdictional environmental questions, or where there is non-compliance by polluters, the cell should have the authority to escalate matters to a proposed Green Tribunal for Agriculture (GTA), functioning as a specialized bench of the National Green Tribunal (NGT) under Section 19 of the National Green Tribunal Act, 2010.[102]This would ensure legal continuity and expedite adjudication in serious or repeated violations affecting agrarian communities**.**

V. Legislative Recommendations: Towards a Green Farmers' Bill of Rights

The repeal of the three farm laws in 2021, following sustained protests by farmers across India, signaled not only a policy failure but also an opportunity to reimagine agricultural law through the dual lens of economic justice and environmental sustainability. One of the most glaring omissions in the three statutes namely, the Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020; the Farmers' (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, 2020; and the Essential Commodities (Amendment) Act, 2020—was their silence on ecological safeguards and the environmental responsibilities of market-oriented agriculture. These laws were primarily focused on liberalizing agricultural markets and contract farming, yet they failed to incorporate any environmental governance mechanisms, despite the deep linkages between unsustainable farming practices and ecological degradation in India's agrarian sector. A meaningful legal alternative must therefore take the shape of a Green Farmers' Bill of Rights a rights-based legislative instrument that integrates environmental protection, climate resilience, and agroecological transition into the structure of agricultural regulation.

First and foremost, such a law must recognize the right of farmers to ecological sustainability. This right must encompass the protection of soil health, biodiversity, and groundwater levels, all of which are under threat from the current high-input, monoculture-dominated agricultural model promoted implicitly by contract farming regimes like those envisioned under the repealed Price Assurance Act. In contrast to this, international

[95] Jasdeep Singh, Environmental Crisis in Punjab's Malwa Region: The Cancer Belt of India, INT'L J. ENVTL. STUD., Vol. 78, No. 2 (2021), at 177–93.

[96] National Legal Services Authority, NALSA Para Legal Volunteer Scheme – 2009, available at https://nalsa.gov.in (last visited May 27, 2025).

[97] Environment (Protection) Act, No. 29 of 1986, § 3, INDIA CODE (1986).

[98] Water (Prevention and Control of Pollution) Act, No. 6 of 1974, § 24, INDIA CODE (1974).

[99] Air (Prevention and Control of Pollution) Act, No. 14 of 1981, § 22, INDIA CODE (1981).

[100] Ministry of Drinking Water and Sanitation, Swachh Bharat Grievance Redress Portal, available at https://swachhbharatmission.gov.in (last visited May 27, 2025).

[101] Ministry of Rural Development, Operational Guidelines for Ombudsman under MGNREGA (2020), available at https://nrega.nic.in.

[102] National Green Tribunal Act, No. 19 of 2010, § 19, INDIA CODE (2010) (empowering the Tribunal to regulate its own procedure, ensuring flexible and expedient redress).

frameworks such as Brazil's Forest Code legally mandate farmers to maintain natural vegetation on their land, integrating conservation into the agricultural economy itself.[103] Similarly, the European Union's Common Agricultural Policy (CAP) ties farm subsidies to environmentally beneficial practices under its "greening" measures.[104] Indian law can evolve to recognize a farmer's right to an ecologically secure livelihood as part of the right to life under Article 21 of the Constitution,[105] ensuring that environmental degradation is no longer externalized from agricultural policymaking.

Second, a future legislative framework must codify the right to climate resilience, especially for small and marginal farmers who are the most vulnerable to climate shocks. The repealed laws provided no mechanism for climate adaptation support, despite climate-induced crop failures becoming more frequent. In contrast, the U.S. Agricultural Improvement Act of 2018 earmarks funding for conservation, carbon sequestration, and adaptive farming technologies.[106] A Green Farmers' Bill should similarly institutionalize entitlements for adaptive infrastructure, including early warning systems, insurance against climate risks, and subsidies for low-emission agricultural equipment.[107] These should be made enforceable through statutory mechanisms to ensure legal accountability.

Third, environmental justice and participatory ecological governance must be embedded in agricultural legislation. None of the repealed farm laws provided farmers with any participatory rights in environmental decision-making, despite the impact of agribusiness and market deregulation on local ecologies. A new law should mandate environmental impact assessments (EIAs) for agribusiness operations and grant farmers and panchayati institutions legal standing to challenge environmentally harmful practices. This principle echoes the Aarhus Convention, which guarantees public participation and environmental justice as core democratic rights.[108] India should draw from such global frameworks and legally empower gram sabhas, farmer unions, and village councils to take part in shaping local agricultural-environmental policy.

Fourth, the right to transition towards agroecology must be legally recognized. Current subsidy regimes, especially those indirectly encouraged by the trade liberalization objectives of the repealed laws, incentivize overuse of synthetic fertilizers, pesticides, and water. Redirecting state support towards organic farming, natural farming, and agroecological innovations is essential. The European Union's "Farm to Fork" strategy under the Green Deal explicitly provides financial aid to farmers adopting sustainable practices, including a target of 25% land under organic farming by 2030.[109] A comparable Indian framework must include a Green Transition Subsidy Fund, with guaranteed minimum support for farmers who adopt ecologically sound practices, particularly in rainfed or degraded areas.

Finally, the law must secure the right to ecological literacy. The three repealed laws operated on the assumption that farmers are ready to navigate complex markets and contracts, but provided no institutional support in the form of legal literacy or environmental education. This asymmetry was a core grievance during the 2020–21 protests. A future statute must mandate the establishment of Agricultural Sustainability Resource Centres at the district level, providing education on soil health, environmental law, agroecological techniques, and climate adaptation. The FAO's model of farmer field schools for ecological learning[110] should be institutionalized within state agricultural departments under Entry 33 of the Concurrent List, ensuring coordinated governance by both Union and State actors.

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[103] Lei No. 12.651, de 25 de maio de 2012 (Braz.), Código Florestal [Forest Code].
[104] Regulation (EU) 2021/2115, arts. 3–6, 2021 O.J. (L 435) 1.
[105] Subhash Kumar v. State of Bihar, (1991) 1 SCC 598 (India); see also Virender Gaur v. State of Haryana, (1995) 2 SCC 577.
[106] Agricultural Improvement Act of 2018, Pub. L. No. 115-334, §§ 2101–2408, 132 Stat. 4490 (U.S.).
[107] Government of India, National Action Plan on Climate Change (NAPCC), Ministry of Environment, Forest and Climate Change (2008), Missions 1 & 4.
[108] Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, June 25, 1998, 2161 U.N.T.S. 447.
[109] European Commission, A Farm to Fork Strategy for a Fair, Healthy and Environmentally-Friendly Food System, COM(2020) 381 final, at 6–8.
[110] Food & Agriculture Org., Farmer Field Schools: Empowering Farmers through Knowledge, FAO Factsheet (2018), at 2–4.

The failure of the 2020 farm laws lies not only in their market-centric logic but also in their regulatory blindness to environmental imperatives. A Green Farmers' Bill of Rights must correct this structural omission by placing the farmer within the heart of India's environmental governance framework. Such a law should move beyond liberalization to legal empowerment, beyond productivity to sustainability, and beyond policy to rights. Only then can Indian agricultural law align itself with constitutional principles, global best practices, and the aspirations of millions of farmers whose livelihoods are inseparably tied to the land and climate.

CONCLUSION

The repeal of India's 2020 farm laws offers a pivotal moment to critically reassess the country's approach to environmental governance within agricultural legislation. While the repealed laws primarily aimed at market liberalization and enhancing farmer income, they conspicuously lacked robust environmental safeguards, thereby exposing critical gaps in sustainable agricultural practice.[111] In contrast, global best practices demonstrate that successful agricultural law frameworks integrate environmental protection as a core objective alongside economic and social goals.[112] Jurisdictions such as the European Union and Brazil have embedded sustainability principles, soil health initiatives, biodiversity conservation, and climate resilience measures directly within their farm laws and policies, ensuring long-term ecological and economic viability.[113]

India's unique agrarian challenges including water scarcity, soil degradation, and vulnerability to climate change demand an integrated legal framework that harmonizes farmers' welfare with environmental sustainability.[114] Future agricultural legislation must, therefore, institutionalize clear, enforceable environmental standards, incentivize eco-friendly farming practices, and foster participatory governance involving farmers, communities, and scientific experts.[115] The lessons from global models underscore the necessity of embedding sustainability as a binding pillar of agricultural law rather than a peripheral concern.[116]

In sum, the path forward for India's agricultural governance lies in crafting laws that transcend short-term economic gains to embed ecological stewardship as an indispensable element of farm reform. Such an approach would not only safeguard natural resources but also enhance the resilience and productivity of Indian agriculture in the face of escalating environmental challenges, ultimately securing the livelihoods of farmers and the food security of the nation.[117]

[111] The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020 (repealed), No. 12, Acts of Parliament, 2020 (India); Kritika Banerjee, Environmental Concerns in the 2020 Indian Farm Laws: A Critical Assessment, 56 J. Agrarian Stud. 87, 91–93 (2021).

[112] European Union Common Agricultural Policy, Regulation (EU) 2021/2115, art. 6 (2021) (integrating sustainability as a core objective).

[113] Maria Lucia T. da Silva et al., Sustainability and Agricultural Law in Brazil: Legal Instruments for Biodiversity and Climate Resilience, 34 Env't L. Rev. 142, 147–50 (2022).

[114] Ministry of Environment, Forest and Climate Change, Govt. of India, State of the Environment Report 2022, at 12–15; Ashok Gulati & Ritika Juneja, Agricultural Sustainability in India: Challenges and Policy Options, 58 Econ. & Pol'y Wkly. 30, 32–35 (2023).

[115] Food and Agriculture Organization of the United Nations, Sustainable Agricultural Practices and Legal Frameworks, FAO Legislative Study No. 105, 2019, at 45–50.

[116] Michael C. Blumm & Michael F. Dwyer, The Environmental Imperative in Agricultural Law, 47 Harv. Envtl. L. Rev. 365, 399–403 (2023).

[117] Nivedita Nair, The Future of Indian Agriculture: Environmental Governance and Legal Reform, 72 Indian J. Envtl. L. 201, 214–18 (2024).