
GUARDING THE WILD: A CRITICAL STUDY OF INDIA'S WILDLIFE PROTECTION AND ITS LEGAL FRAMEWORK

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ABSTRACT

Wildlife conservation in India did not begin with a statute. The historical trajectory of wildlife conservation in India reveals a complex interplay between cultural reverence, colonial legacy, and modern environmental governance frameworks. Ancient Indian traditions emphasized respect for nature and non-violence, which translated into early practices of species and habitat protection. However, colonial policies prioritized hunting and commercial exploitation, undermining indigenous stewardship. Post-independence, India enacted comprehensive legislation such as the Wildlife (Protection) Act of 1972, marking a significant shift towards structured conservation efforts aligned with constitutional mandates and international treaties. The evolution of wildlife governance includes multi-tiered institutions, judicial activism, community participation, and technological innovations. Despite substantial progress, ongoing challenges such as habitat destruction, poaching, and climate change impact conservation outcomes. This research highlights the critical need to strengthen legal frameworks, enhance enforcement through technology and inter-agency collaboration, empower local communities, and integrate climate resilience into wildlife protection strategies. India's conservation journey exemplifies the necessity of harmonizing traditional knowledge, scientific approaches, and policy reforms to safeguard biodiversity for sustainable ecological and socio-economic futures.

Keywords: Wildlife conservation in India, Wildlife Protection Act of 1972, biodiversity, judicial activism, community participation, technological innovation

1. Introduction

India's relationship with its wildlife is deeply etched in its history, spiritual consciousness, and evolving legislative frameworks. From the reverence for animals in ancient Hindu and Buddhist thought, which encouraged the protection of flora and fauna, to restrictions imposed by ancient rulers and the maintenance of sacred groves, India's approach to conservation began on the foundations of tradition and community stewardship. This indigenous ethic persisted through centuries until disrupted by colonial-era laws, hunting was reclassified as sport, forests as timber, and resource extraction while relegating conservation to a marginal role. It took the visible collapse of wildlife populations after independence, where tigers were vanishing and forests were shrinking which forced the state to introduce new laws. The Wildlife (Protection) Act of 1972, followed by the Forest Conservation Act of 1980 and later biodiversity legislation, gave India a statutory backbone that drew on both its constitutional commitments under Articles 48A and 51A(g) and its obligations under international conventions. What followed was not a single reform but an accumulation of them. There were new government agencies, judicial activism and, slowly, a larger role for the communities that had been practising conservation long before the law caught up with them. These reforms forged a multifaceted, modern framework for wildlife conservation, one that seeks to harmonize ecological, social, and economic goals.

2. Historical Background of Wildlife Conservation in India

India's relationship with its wildlife has traversed a fascinating historical arc, from ancient reverence, through colonial exploitation, to post-independence awakening. Hindu and Buddhist texts treat a duty of care toward all living beings as a moral obligation, and the idea of "ahimsa" (non-violence) shows up not only in philosophy but in the everyday folklore and customs of tribal communities across the subcontinent. That ethic was not merely aspirational, as far back as the Mauryan Empire, rulers enforced hunting restrictions and protected specific groves and lakes, giving conservation a practical aspect, before any wildlife statute existed.

That older tradition eventually found its statutory successor in the Wildlife (Protection) Act, 1972, which superseded colonial hunting laws and protected endangered areas, hunting regulations and species-specific safeguards.¹ It also aligned India with international standards

¹ Shirili R & Dhivya R, "A Comparative Study of Wildlife Protection Act of 1972 and Wildlife (Protection) Amendment Bill, 2013 with regard to National Parks, Sanctuaries and Closed Areas" 120 *International Journal of Pure and Applied Mathematics (Special Issue)* 2135 (2018)

such as the Convention on International Trade in Endangered Species (CITES) and the Convention on Biological Diversity (CBD).²

2.1. Pre-Independence

Local conservation efforts were marginalized by colonial-era game laws that prioritized hunting rights and commercial forestry. Early laws offered restricted, species-specific protection, mostly for sport purposes.³

2.2. Post-Independence

The Wildlife Protection Act (1972), Forest Conservation Act (1980), and Biodiversity Act (2002), which demonstrated India's dedication to comprehensive environmental care, were significant reforms brought about by environmental awareness after 1970.⁴

2.3. International Influence and Commitments

International agreements like the Convention on Biological Diversity (CBD), the Convention on International Trade in Endangered Species (CITES), and the Convention on Migratory Species (CMS) provided new momentum, reaffirming India's responsibilities and spurring additional efforts at legal harmonization and enforcement, which also integrated obligations on trade, biodiversity, and migratory species.⁵

3. Constitutional and Legislative Framework

Articles 48A & 51A(g): While Article 51A(g) makes it a fundamental responsibility for citizens to take care of the environment, flora, and fauna, Article 48A orders the state to protect the environment.⁶

² Toshant Verma, "Wildlife Protection Laws and Their Enforcement" *Jus Corpus* (2025), available at: <https://www.juscorpus.com/wildlife-protection-laws-and-their-enforcement/> (last visited on 5 Nov., 2025)

³ Rajak Siddharth & Chaturvedi Kalpana, "Historical Role of Institutions in Forest and Wildlife Conservation in India" *10 Journal of Emerging Technologies and Innovative Research (JETIR)* e426 (2023)

⁴ Shristi Choudhary, "The Wildlife (Protection) Act, 1972: A Comprehensive Study on Wildlife Conservation in India" *SSRN Electronic Journal* (2024)

⁵ Arie Trouwborst, Andrew Blackmore, Luigi Boitani, Michael Bowman, Richard Caddell, Guillaume Chapron, An Cliquet, Ed Couzens, Yaffa Epstein, Eladio Fernández-Galiano, Floor M. Fleurke, Royal Gardner, Luke Hunter, Kim Jacobsen, Miha Krofel, Melissa Lewis, José Vicente López-Bao, David Macdonald, Stephen Redpath, Geoffrey Wandesforde-Smith, John D. C. Linnell, "International Wildlife Law: Understanding and Enhancing Its Role in Conservation", 67(9), *BioScience*, 784-790, (2017)

⁶ The Constitution of India, arts. 48A, 51A(g)

Legislative Powers: The Concurrent List (Seventh Schedule) includes wildlife, which permits the Center and States to enact laws, frequently necessitating coordinated efforts for effective governance.⁷

Center-State Roles: While states oversee protected areas, uphold the law, and engage with local populations, central authorities create broad policies.⁸

4. Structure of Wildlife Governance: Authorities and Bodies

The Wildlife (Protection) Act, 1972 sets up governance at more than one level. At the top sits the National Board for Wildlife (NBWL), chaired by the Prime Minister, which reviews policy and signs off on major wildlife-related decisions. Each state runs a parallel State Board for Wildlife, headed by its Chief Minister, which deals with protected-area management, local priorities and state-specific policy feedback.⁹

Below these boards sit more specialised bodies: the National Tiger Conservation Authority handles tiger landscapes and species-specific enforcement, while the Central Zoo Authority sets standards for zoos and captive-animal management. The Wildlife Crime Control Bureau, headquartered in New Delhi, coordinates intelligence and investigation on transnational wildlife crime alongside INTERPOL and other international agencies.¹⁰

5. Legal Provisions Attracted (The Wild Life (Protection) Act, 1972)

A strong system of prohibitions and classified schedules forms the foundation of the Wildlife (Protection) Act, 1972. It classifies certain plants in Schedule VI for similarly strict protection, permits hunting of vermin under Schedule V, and forbids hunting of wild animals in Schedules I–IV except in certain, restricted circumstances (e.g., threat to human life or incurable sickness).¹¹

The Act reinforces the laws governing the ownership, transportation, trading, and transfer of wildlife or its derivatives and acknowledges government ownership of hunted animals, animal

⁷ Pranavee Kataria, Dhruv Dewan & Palak Khanna, “Wildlife Protection Law in India – An Overview” 11(3) *TIJER – International Research Journal*, 346, (2024)

⁸ The Wild Life (Protection) Act, 1972 (Act 53 of 1972)

⁹ *Supra* note 7

¹⁰ *Ibid*

¹¹ The Wild Life (Protection) Act, 1972 (Act 53 of 1972)

products, and specific plant species. It supports the landscape-based approach to protection by permitting the establishment of national parks, sanctuaries, community and conservation reserves, and eco-sensitive zones.¹²

According to **Section 2(1) of the Wildlife (Protection) Act, 1972**, a "wild animal" is any animal aside from humans that is wild by nature. This includes aquatic and terrestrial animals, reptiles, amphibians, birds, insects, and other invertebrates, whether they are alive or dead, as well as eggs, young, and their parts or derivatives.¹³

The Wildlife (Protection) Act of 1972, Section 9: Except as permitted by this Act, no one may hunt any of the wild animals listed in Schedules I, II, III, or IV.¹⁴

The Wildlife (Protection) Act of 1972, Section 18: Any location that the Central Government deems to have sufficient ecological, faunal, floral, geomorphological, natural, or zoological significance may be designated as a sanctuary by notification.¹⁵

The Wildlife (Protection) Act of 1972, Section 35: Any place that the Central Government deems to have sufficient ecological, faunal, floral, geomorphological, natural, or zoological interest may be declared a national park by notification.¹⁶

The Wildlife (Protection) Act of 1972, Section 51: Anyone who violates any of this Act's provisions or any of its rules, orders, or directives faces up to three years in prison, a fine of up to twenty-five thousand rupees, or both.¹⁷

The Wildlife (Protection) Act of 1972, Section 57: To prevent organized wildlife crime, the Central Government may establish a Wildlife Crime Control Bureau through notification.¹⁸

The Wildlife (Protection) Act of 1972, Section 63: A Director of Wildlife Preservation and any other personnel deemed appropriate for the purposes of this Act may be appointed by the Central Government through notification.¹⁹

¹² *Supra* note 7

¹³ The Wild Life (Protection) Act, 1972 (Act 53 of 1972), s. 2(1)

¹⁴ The Wild Life (Protection) Act, 1972 (Act 53 of 1972), s. 9

¹⁵ The Wild Life (Protection) Act, 1972 (Act 53 of 1972), s.18

¹⁶ The Wild Life (Protection) Act, 1972 (Act 53 of 1972), s. 35

¹⁷ The Wild Life (Protection) Act, 1972 (Act 53 of 1972), s. 51

¹⁸ The Wild Life (Protection) Act, 1972 (Act 53 of 1972), s. 57

¹⁹ The Wild Life (Protection) Act, 1972 (Act 53 of 1972), s. 63

6. Important Aspects of the Wild Life (Protection) Act, 1972

Prohibition of Hunting: Unless there are certain circumstances, such as a threat to human life or disease, hunting of listed animals is prohibited.²⁰

Protected Areas: The government has the authority to designate regions as national parks, protected zones, and animal sanctuaries.

Trade Regulation: Permits and stringent licensing are used to control the ownership, sale, and commercial exploitation of wildlife.

Strict Penalties: Serious penalties, such as jail time and fines, are imposed for offenses such as illicit hunting, trading, and exploitation.²¹

Wildlife Advisory Boards: By advising the government on issues pertaining to wildlife, these boards guarantee professional direction in the creation of policies.

Schedules: Each of the six schedules, which were reduced to four in the most recent modification, assigns different levels of protection to listed species.²²

7. The Social and Moral Landscape

Wildlife protection in India was never solely the state's job. Tribal communities, indigenous groups and rural populations have shaped and depended on the natural world for far longer than any wildlife statute has existed, protecting biodiversity through sacred trees, community forests, societal taboos and traditional ecological knowledge long before the law arrived to formalise any of it. NGOs and volunteer groups now occupy a similar space, not replacing government action but filling its gaps through ground-level conservation work, litigation, research, education and policy advocacy.²³

This informal stewardship has started to find legal recognition. The Forest Rights Act gives

²⁰ Supra note 7.

²¹ "The Wild Life (Protection) Act, 1972" *Nehru Smriti University*, (2025) available at: <https://nsuniv.ac.in/wp-content/uploads/2025/03/WILDLIFE-PROTECTION-ACT.pdf> (last visited on 6 November 2025)

²² "Wild Life (Protection) Act" *Haryana Forest Department, Govt. of Haryana* (2025) available at: <https://haryanaforest.gov.in/wild-life-protection-act/> (last visited on 6 Nov. 2025)

²³ "5 Innovative Wildlife NGOs in India" *Give.do Blog* (2023) available at: <https://give.do/blog/5-innovative-wildlife-ngos-in-india/> (last visited on 6 Nov. 2025)

traditional forest-dwelling communities, defined rights and responsibilities over the resources they depend on, while community and conservation reserves formalise the kind of local stewardship that predates the statutory law by centuries.²⁴

8. Wildlife Conservation Initiatives

Project Tiger: This initiative, which was started in 1973 and is currently run by the National Tiger Conservation Authority, has employed targeted intervention to stop the tiger population reduction.

Project Elephant: This initiative aims to reduce human-animal conflict, strengthen enforcement, and conserve habitat.

Central Zoo Authority: Supervision of conservation breeding initiatives and zoo standards

9. Recent Developments

2021: The Wildlife (Protection) Amendment Bill, 2021 enlarged conservation reserves, clarified sanctuary management practices, including Gram Sabha consultation in tribal areas, and imposed harsher fines and rules on invasive alien species.²⁵

2020–2023: A greater emphasis on using technology for monitoring and enforcement in the fight against wildlife trafficking; judicial activism in instances involving the poaching of tigers and elephants.²⁶

2019: Collaborative federal efforts were reflected in a number of state-level advances in enforcement tactics and public outreach on wildlife offenses.²⁷

February 2025: India's robust wildlife framework and high standards were acknowledged by the CITES Secretariat, which confirmed full alignment with worldwide best practices and compliance with CITES requirements. The Wildlife (Protection) Act of 1972 was

²⁴ *Supra* note 7

²⁵ The Wild Life (Protection) Amendment Bill, 2021 (Bill No 159 of 2021)

²⁶ *Supra* note 8

²⁷ *Ibid*

acknowledged as satisfying the minimal legal requirements of CITES.²⁸

March 2025: In order to combine human well-being with wildlife protection, the National Human-Wildlife Conflict Mitigation Strategy and Action Plan (2021–2026) was revised, incorporating scientific, policy, and community-driven initiatives. The approach places a strong emphasis on integrating climate change considerations and conservation at the landscape level.²⁹

11 April, 2025: Five new wildlife conservation initiatives, including Project Dolphin, Project Sloth Bear, and Project Gharial, were introduced by the Union Environment Ministry with an emphasis on community involvement, habitat preservation, and reducing conflicts between people and wildlife. These programs, which are backed by a strong legal framework, seek to improve public trust in conservation efforts as well as enforcement.³⁰

10. Judicial Activism and Landmark Judgments

In India, the judiciary plays a crucial role in preventing poaching and enforcing wildlife conservation. In order to safeguard endangered species and stop illegal poaching and trafficking, courts have actively supported severe penalties for wildlife violations, interpreting the Wildlife (Protection) Act, 1972, broadly. Prominent rulings from the Supreme Court, include **Sansar Chand v. State of Rajasthan**³¹, where the Hon'ble Court upheld convictions against infamous poachers and highlighted the ecological significance of protecting wildlife.³² Additionally, government accountability and the execution of conservation measures have been expedited by judicial activism, especially PILs (Public Interest Litigations).³³

²⁸ "CITES flags Vantara's 'exceptionally high' care standards after India visit" *CNBC-TV18* (2025) available at: <https://www.cnbctv18.com/india/cites-secretariat-notes-indias-strong-wildlife-framework-high-standards-at-vantara-ws-l-19738359.htm> (last visited on 7 Nov. 2025)

²⁹ Ministry of Environment, Forest and Climate Change, *India's Wildlife Conservation Milestones: Policies, Achievements and Global Commitments*, Press Information Bureau, (2025) available at: <https://static.pib.gov.in/WriteReadData/specificdocs/documents/2025/mar/doc202533511501.pdf> (last visited on 7 November 2025)

³⁰ "Five Wildlife Conservation Projects India 2025" *Universal Institutions* (2025) available at: <https://universalinstitutions.com/five-wildlife-conservation-projects-india-2025/> (last visited on 7 Nov. 2025)

³¹ (2010) 10 SCC 604

³² "Efficacy of Wildlife Protection Laws in India" *Law Gratis Blog* (2025) available at: <https://www.lawgratis.com/blog-detail/efficacy-of-wildlife-protection-laws-in-india-1> (last visited on 7 November 2025)

³³ G.N. Gill, Nupur Chowdhary & Nidhi Srivastava, "Biodiversity and the Indian Judiciary: Tracing the Trajectory" 8(2) *BRICS Law Journal* 10 (2021) available at: <https://www.bricslawjournal.com/jour/article/view/493> (last visited on 20 Sept. 2026)

However, a number of issues compromise the efficacy of the judiciary. Cases drag on for years, sometimes decades, by which important evidence has deteriorated and witnesses have turned hostile, leading to the conviction rates for wildlife crime sit³⁴ below 3%.³⁵ Due to socioeconomic factors for accused rural or tribal people, there is widespread judicial tolerance that occasionally overshadows the gravity of wildlife crimes. Even where investigators use tools such as sniffer dogs, that evidence often runs into admissibility hurdles in court, and prosecutors who are under-trained in wildlife law tend to treat these cases as a lower priority.³⁶

Efforts to fix this have leaned on training judges rather than changing the law. Sensitisation programmes run by TRAFFIC, WWF-India and the Meghalaya State Judicial Academy aim to inform judges about wildlife legislation and the value of swift convictions³⁷ in improving deterrence.³⁸ Section 55 of the Wildlife Act also allows for special wildlife courts to expedite trials, though these remain hamstrung by the same resource and infrastructure limitations that affect the rest of the system.³⁹

Where courts have intervened, the results are visible, poaching of certain flagship species has fallen, more areas have gained protected status, and statutory backing for conservation has strengthened. But judicial intervention alone cannot outpace organised trafficking networks, entrenched socio-political interests, and the steady loss of habitat that continues regardless of what any court orders.⁴⁰

In Animal Welfare Board of India v. A. Nagaraja⁴¹ - The Hon'ble Supreme Court made a clear decision to acknowledge the welfare and rights of animals. It ruled that the practice of Jallikattu and bullock-cart racing violated the Prevention of Cruelty to Animals Act, 1960, highlighting the fact that needless suffering inflicted upon animals cannot be excused in the

³⁴ "Orientation Programme on Wildlife and Forest Conservation Laws in Meghalaya" *WWF-India* (07 Apr. 2024) available at: <https://www.wwfindia.org/?27023%2FOrientation-Programme-on-Wildlife-and-Forest-Conservation-Laws-in-Meghalaya> (last visited on 8 Nov. 2025)

³⁵ Kiran Rahalkar, "Wildlife Crime: Prosecution Hurdles" *Wildlife Conservation Trust* available at: <https://www.wildlifeconservationtrust.org/wildlife-crime-prosecution-hurdles/> (last visited on 8 November 2025)

³⁶ Medha Pushkarna & Rupendra Singh, "Role of the Judiciary in the Conservation of Wildlife in India" 11 *Journal of Emerging Technologies and Innovative Research (JETIR)* c201 (2024)

³⁷ *Supra* note 25

³⁸ *Supra* note 23

³⁹ "Orienting the judiciary towards enhanced wildlife crime conviction rates in India", TRAFFIC available at: <https://www.traffic.org/news/orienting-the-judiciary/> (last visited on 8 November 2025)

⁴⁰ Ajay Kumar Rana & Nishant Kumar, "Current Wildlife Crime (Indian Scenario): Major Challenges and Prevention Approaches" 32 *Biodiversity and Conservation* 1473–1491(2023)

⁴¹ (2014) 7 SCC 547

name of custom or culture. The Court acknowledged that Article 21 of the Indian Constitution, which protects the right to life, also protects animals, adding that life encompasses animal life with dignity and well-being, not merely existence. The ruling made it clear that every species has a right to life and security and emphasised the importance of treating people with compassion. One of the clearest legal acknowledgements of animal rights in India, the ruling prioritized an eco-centric approach over anthropocentric legislation.⁴²

In Centre for Environmental Law, WWF-India v. Union of India⁴³ - The Hon'ble Supreme Court reviewed a petition about the degradation of protected areas and the failure to enforce the Wild Life (Protection) Act, 1972. The Court reiterated the legal duty to protect species and their habitats as well as the significance of ecological balance. It examined the anthropocentric versus eco-centric paradigm, highlighting the need for the legal system to take an eco-centric stance, seeing the environment and all species as inherently important, not just as resources for human consumption. In addition to safeguarding human rights, Article 21 was considered to require humans to preserve the ecological chain and equilibrium, as well as to protect other species. In order to conserve wild animals, birds, and plant species that are essential to ecological security, the Court ordered more stringent enforcement.⁴⁴

T.N. Godavarman Thirumulpad v. Union of India⁴⁵ - Also known as the "Forest Case," is perhaps the most striking example of judicial activism in this area. What began as a single writ petition turned into continuing judicial oversight of India's forest policy, with the Supreme Court effectively stepping into the role of forest administrator, banning non-forest activity on forest land, halting deforestation, and enforcing compliance with forest conservation law through a long series of orders. Its influence on India's forest governance is undeniable, but it has also fuelled a genuine debate about how far courts should go before judicial activism starts to look like judicial overreach.⁴⁶

⁴² Arshbir Kaur & Anhad Bawa, "Case Analysis On Animal Welfare Board Of India Vs. A. Nagaraja & Ors. (The Jallikattu Judgement)" 6 *Indian Journal of Law and Legal Research* 1043 (2024)

⁴³ AIR 1999 SC 354

⁴⁴ Sonal Sinha, "Case Analysis: Centre for Environmental Law WWF-1 v. Union of India" *studocu* available at: <https://www.studocu.com/in/document/symbiosis-international-university/environmental-law/case-analysis-on-centre-for-environmental-law-wwf-1-v-union-of-india/24415444> (last visited on 8 November 2025)

⁴⁵ (1997) 2 SCC 267

⁴⁶ Nivedha K, "Case Analysis: T.N. Godavarman Thirumulpad v. Union of India & Others" *IJLLR Journal* (2025) available at: <https://www.ijllr.com/post/case-analysis-t-n-godavarman-thirumulpad-vs-union-of-india-others> (last visited on 20 Sept. 2026)

Together, these rulings show how judicial recognition of animal rights and the need to preserve ecological balance is growing and progressive, reflecting an eco-centric constitutional perspective in Indian law.

11. The Contemporary Crisis and the Path Forward

The following points outline key areas for legal and policy improvements:

- i. **Addressing Legal Gaps and Penalties:** While the Wildlife (Protection) Act, 1972, prescribes penalties under Section 51, enforcement remains inconsistent, and penalties may not be sufficiently deterrent for severe offences like poaching and habitat destruction. Amendments should clarify definitions (e.g., 'critical habitats'), introduce graded penalties based on offence severity, and expand the scope of protected species and areas.
- ii. **Strengthening Enforcement and Technological Integration:** Enforcement challenges stem from jurisdictional overlaps, limited manpower, and lack of technological tools such as real-time surveillance, forensic labs, and data sharing platforms. Legislative reforms should mandate the adoption of advanced technology, establish dedicated wildlife enforcement agencies, and streamline inter-agency cooperation.⁴⁷
- iii. **Enhancing Community Participation and Local Governance:** Although policies promote community involvement, institutional mechanisms are weak. Legal reforms should formalize community-based conservation models, empower gram sabhas in decision-making, and provide legal protections and incentives for local communities engaged in conservation efforts.⁴⁸
- iv. **Improving Inter-Agency Coordination and Judicial Processes:** Fragmented efforts among forest departments, police, and judiciary hinder timely action. Establishing specialized wildlife courts, standard operating procedures, and inter-agency task forces

⁴⁷ “Five Wildlife Conservation Projects India 2025” *Universal Group of Institutions* (2025) available at: <https://universalinstitutions.com/five-wildlife-conservation-projects-india-2025/> (last visited on 8 Nov. 2025)

⁴⁸ *Ibid*

with clear responsibilities can improve prosecution rates and enforcement outcomes.⁴⁹

- v. **Reforming Habitat Protection and Human-Wildlife Conflict Resolution:** Existing protected areas are insufficient to cover all critical habitats. Laws should expand protected zones, incorporate ecological corridors, and establish clear, prompt procedures for conflict mitigation, compensation, and dispute resolution involving local communities and authorities.⁵⁰
- vi. **Legal Reforms for New and Emerging Challenges:** Rapid urbanization, climate change, and zoonotic diseases necessitate updating legal provisions to address habitat fragmentation, pollution, and health risks. The recent Environment Audit Rules, 2025, exemplify steps toward stricter industry compliance, but further integration with wildlife laws is essential.⁵¹ Additionally, state-specific amendments like Kerala's 2025 wildlife bill highlight tensions between conservation and local needs, requiring a harmonized national legal framework.⁵²

Moving forward, wildlife protection in India must be recast as a national priority, not for romantic or nostalgic reasons, but because the country's economic, cultural, and existential future depends on the resilience of its natural capital. This imperative is recognized in the Constitution, reflected in the body of law, continuously shaped by judicial vision, and sustained only through the active engagement of all sectors, from government and industry, to communities and individuals.

12. Technological and Policy Innovations

Technology has quietly become one of India's more effective tools. India is rapidly leveraging cutting-edge technology and new policy strategies for wildlife protection. Innovations include adoption of drones, artificial intelligence (AI), geospatial mapping (GIS), DNA analysis,

⁴⁹ *Ibid*

⁵⁰ "What is Kerala Wildlife Bill?" *PolicyCircle* (2025) available at: <https://www.policycircle.org/policy/what-is-kerala-wildlife-bill/> (last visited on 8 November 2025)

⁵¹ "Government brings Major Reform in Environmental Compliance in the form of Environment Audit Rules, 2025" *Ministry of Environment, Forest & Climate Change, Press Information Bureau* (2025) available at: <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2163488> (last visited on 9 Nov. 2025)

⁵² Here is the citation in ILI style for the article you provided:

"Kerala first state to amend central wildlife law: CM Vijayan" *Deccan Herald* (2025) available at: <https://www.deccanherald.com/india/kerala/kerala-first-state-to-amend-central-wildlife-law-cm-vijayan-3759246> (last visited on 9 Nov. 2025)

mobile-based apps, and community-based data collection. These advancements help in precise monitoring, efficient data gathering, quick responses to threats, and formulation of better conservation policies. Policy integration with biodiversity and climate goals, as well as public–private partnerships, are also encouraged for holistic management.⁵³

12.1. Use of Drones, AI, and GIS in Monitoring Wildlife

Drones: Used extensively for real-time aerial surveillance, especially in remote or inaccessible areas. In Kaziranga National Park, drones help monitor rhinos and detect poaching activity. Drones equipped with thermal and LiDAR sensors assist in fire detection, tracking animal movement, and forest health evaluation.

AI: Camera traps and AI-powered software aid in identifying individual animals, movement patterns, and population estimates, significantly advancing anti-poaching efforts.⁵⁴

GIS: Geospatial tools help map critical habitats, monitor forest cover changes, track wildlife corridors, and plan restoration activities efficiently. GIS and remote sensing are also used to predict and manage forest fires, and their integration with other tech offers a comprehensive surveillance system.⁵⁵

12.2. Integration with Climate Change and Biodiversity Policies

Policies increasingly recognize the link between wildlife protection, climate resilience, and biodiversity.

Initiatives include the establishment of Eco-Sensitive Zones (ESZs), large networks of tiger and elephant reserves, and efforts under the Green India Mission and National Afforestation Programme.

⁵³ Neha Tripathi, “Innovation in India: Harnessing Technology for Wildlife Conservation in India” *NehaScope* (2024) available at: <https://nehascope.com/2024/03/29/innovation-in-india-harnessing-technology-for-wildlife-conservation-in-india/> (last visited on 9 Nov. 2025)

⁵⁴ Nivash Jeevanandam, “Wildlife Conservation in the Digital Age: How AI Powers World Wildlife Day” *IndiaAI* (2024) available at: <https://indiaai.gov.in/article/wildlife-conservation-in-the-digital-age-how-ai-powers-world-wildlife-day> (last visited on 9 Nov. 2025)

⁵⁵ “The Power of GIS in India’s Wildlife and Forest Protection” *AGSRT – GIS Blogs* available at: <https://www.agsrt.com/post/the-power-of-gis-in-india-s-wildlife-and-forest-protection> (last visited on 8 November 2025)

Strategic coordination across ministries ensures actions like habitat security, green investments, and restoration are part of India's climate and biodiversity commitments, supporting international goals like the Paris Agreement and the SDGs.

Use of technology (e.g., drones, GIS) is integral to tracking climate impact, ecosystem health, and guiding adaptive conservation strategies.⁵⁶

Together, these efforts point toward a wildlife protection framework in India that is becoming more resilient and more technologically capable, one where conservation and climate policy are increasingly treated as the same conversation rather than two separate ones.⁵⁷

13. Conclusion

India's wildlife conservation has made significant strides, shaped by a rich historical legacy, a robust legal framework, and ongoing technological and community-driven innovations. Rooted in ancient cultural respect for nature and fortified through post-independence legislation like the Wildlife (Protection) Act of 1972, India has established an intricate governance structure involving central and state authorities, complemented by active judicial intervention and civil society engagement. Despite these achievements, the growing pressures of habitat loss, poaching, urbanization, and climate change pose formidable challenges that require urgent and multifaceted responses.

To ensure the long-term survival and flourishing of its diverse wildlife, India must enhance the effectiveness of its conservation strategies by closing legal gaps, raising penalties, and streamlining enforcement through inter-agency cooperation and adoption of advanced monitoring technologies such as drones, AI, and GIS. Empowering local communities through participatory conservation frameworks and legally recognizing their stewardship roles will foster sustainable coexistence and social equity. Expanding protected areas and ecological corridors while integrating climate resilience into conservation planning will address habitat fragmentation and environmental uncertainties. Additionally, strengthening judicial processes

⁵⁶ "India's Wildlife Conservation Milestones: Policies, Achievements & Global Commitments" *Ministry of Environment, Forest and Climate Change, Press Information Bureau Delhi* (2025) available at: <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2107821> (last visited on 9 November 2025)

⁵⁷ "India's Wildlife Plan for Climate Future" *Universal Group of Institutions Blog* (2025) available at: <https://universalinstitutions.com/indias-wildlife-plan-for-climate-future/> (last visited on 9 Nov. 2025)

and specialized courts can accelerate justice delivery in wildlife crimes, improving deterrence and boosting public confidence.

Overall, India's future in wildlife conservation hinges on a holistic approach that balances ecological preservation with social and economic realities, driven by science, empowered governance, and inclusive participation to safeguard its invaluable natural heritage for generations to come.