

The background of the journal cover features a top-down view of a desk. On the left, a pair of black leather brogue shoes is partially visible. In the center, an open notebook with lined pages and a silver pen lies on a light-colored wooden surface. To the right, a black leather bag with a zipper is partially shown, and a black leather watch with a silver dial is resting on the desk. A large, semi-transparent white rectangular box is centered over the image, containing the journal's title and ISSN information.

INTERNATIONAL LAW
JOURNAL

**WHITE BLACK
LEGAL LAW
JOURNAL**
**ISSN: 2581-
8503**

Peer - Reviewed & Refereed Journal

The Law Journal strives to provide a platform for discussion of International as well as National Developments in the Field of Law.

WWW.WHITEBLACKLEGAL.CO.IN

DISCLAIMER

No part of this publication may be reproduced, stored, transmitted, translated, or distributed in any form or by any means—whether electronic, mechanical, photocopying, recording, scanning, or otherwise—without the prior written permission of the Editor-in-Chief of *White Black Legal – The Law Journal*.

All copyrights in the articles published in this journal vest with *White Black Legal – The Law Journal*, unless otherwise expressly stated. Authors are solely responsible for the originality, authenticity, accuracy, and legality of the content submitted and published.

The views, opinions, interpretations, and conclusions expressed in the articles are exclusively those of the respective authors. They do not represent or reflect the views of the Editorial Board, Editors, Reviewers, Advisors, Publisher, or Management of *White Black Legal*.

While reasonable efforts are made to ensure academic quality and accuracy through editorial and peer-review processes, *White Black Legal* makes no representations or warranties, express or implied, regarding the completeness, accuracy, reliability, or suitability of the content published. The journal shall not be liable for any errors, omissions, inaccuracies, or consequences arising from the use, interpretation, or reliance upon the information contained in this publication.

The content published in this journal is intended solely for academic and informational purposes and shall not be construed as legal advice, professional advice, or legal opinion. *White Black Legal* expressly disclaims all liability for any loss, damage, claim, or legal consequence arising directly or indirectly from the use of any material published herein.

ABOUT WHITE BLACK LEGAL

White Black Legal – The Law Journal is an open-access, peer-reviewed, and refereed legal journal established to provide a scholarly platform for the examination and discussion of contemporary legal issues. The journal is dedicated to encouraging rigorous legal research, critical analysis, and informed academic discourse across diverse fields of law.

The journal invites contributions from law students, researchers, academicians, legal practitioners, and policy scholars. By facilitating engagement between emerging scholars and experienced legal professionals, *White Black Legal* seeks to bridge theoretical legal research with practical, institutional, and societal perspectives.

In a rapidly evolving social, economic, and technological environment, the journal endeavours to examine the changing role of law and its impact on governance, justice systems, and society. *White Black Legal* remains committed to academic integrity, ethical research practices, and the dissemination of accessible legal scholarship to a global readership.

AIM & SCOPE

The aim of *White Black Legal – The Law Journal* is to promote excellence in legal research and to provide a credible academic forum for the analysis, discussion, and advancement of contemporary legal issues. The journal encourages original, analytical, and well-researched contributions that add substantive value to legal scholarship.

The journal publishes scholarly works examining doctrinal, theoretical, empirical, and interdisciplinary perspectives of law. Submissions are welcomed from academicians, legal professionals, researchers, scholars, and students who demonstrate intellectual rigour, analytical clarity, and relevance to current legal and policy developments.

The scope of the journal includes, but is not limited to:

- Constitutional and Administrative Law
- Criminal Law and Criminal Justice
- Corporate, Commercial, and Business Laws
- Intellectual Property and Technology Law
- International Law and Human Rights
- Environmental and Sustainable Development Law
- Cyber Law, Artificial Intelligence, and Emerging Technologies
- Family Law, Labour Law, and Social Justice Studies

The journal accepts original research articles, case comments, legislative and policy analyses, book reviews, and interdisciplinary studies addressing legal issues at national and international levels. All submissions are subject to a rigorous double-blind peer-review process to ensure academic quality, originality, and relevance.

Through its publications, *White Black Legal – The Law Journal* seeks to foster critical legal thinking and contribute to the development of law as an instrument of justice, governance, and social progress, while expressly disclaiming responsibility for the application or misuse of published content.

TRIBAL WOMEN AS NATURE'S CUSTODIANS: INSIGHTS FROM RURAL INDIA

AUTHORED BY - DR. VANI PRAKASH & SHUBHAM TRIVEDI

Guru Gobind Singh Indraprastha University

ABSTRACT

In India, tribal women are crucial for strengthening climate resilience in both rural and forest regions. Despite their significant and productive job, they do not receive the acknowledgement and recognition they deserve. Their ecological knowledge, subsistence practices, and customary governance sustain biodiversity, stabilise food systems and safeguard community forests. Despite this, national climate strategies, environmental legislation, and development policies seldom acknowledge the foundational nature of their contributions or integrate their perspectives meaningfully.

The stewardship roles played by tribal women are examined in this article, along with the lessons their practices can teach us about ecological governance and climate adaptation. It draws on experiences from regions such as Odisha, Jharkhand, Chhattisgarh, Maharashtra, Rajasthan, and the Northeastern states to show how closely women's livelihoods, cultural traditions, and community economies are tied to local ecosystems. The Forest Rights Act of 2006, national climate frameworks, and administrative institutions that continue to limit women's participation in decision making are among the ongoing gaps in legal and policy acknowledgement that the paper examines. Using insights from green criminology, the study argues that structural environmental harms fall disproportionately on tribal women, reinforcing cycles of marginalisation and ecological injustice. Their inclusion is therefore essential for restorative forms of environmental governance that centre community wellbeing. The conclusion outlines practical pathways to strengthen tribal women's leadership within India's climate policy landscape and highlights why such recognition is crucial for achieving broader environmental and gender equality goals, including Sustainable Development Goal 5.

Keywords: - Tribal women, Environmental stewardship, Climate resilience, ecological governance

1. Introduction: The Invisible Architects of Resilience

1.1 The Anthropocene and the Subcontinent

The Indian subcontinent stands at a very crucial juncture in the way of its geological age. India is simultaneously also one of the most climatically vulnerable territory because of rapid industrialization, urbanization that puts pressure on natural resources.

Caught between development and sustainability, virtually all of our thinking and implementation has shifted towards techno-managerial frameworks focusing on renewable energy targets, carbon sequestration technologies, and large-scale infrastructure adaptation, but beneath this high-level policy discourse lies a fundamental layer of environmental management that has sustained the subcontinent's biodiversity for thousands of years which is the hard work, knowledge, and spiritual ecology of tribal women¹.

Tribal peoples, constitutionally recognized in India as Scheduled Tribes (STs) or Adivasis, constitute approximately 8.6% of the national population, numbering over 104 million individuals.²

Although they are lived from the forest of northeast to the deserts of Rajasthan and the mineral rich forests of central India which makes their presence across the country's vast geography. Although they are spread across the country's vast geography from the deserts of Rajasthan to the forests of the Northeast and the mineral rich deciduous forests of Central India. They mainly reliable on the ecosystem around them and share a historic path of isolation. Among these communities, tribal women occupy a unique and important place. These are the main resources managed to preserve seed biodiversity, the repository of traditional ecological knowledge (Taik), and, often, to protect the environment from damage.

1.2 The Gendered Nature of Environmental Stewardship

The care-taker role of tribal women is not only a function of a division of labour that assigns them domestic chores; it must be seen as an epistemological stance. As noted in submissions to the United Nations Permanent Forum on Tribal Issues, for tribal peoples, the health of the community cannot be separated from the health of the environment³. This bio-cultural nexus is

¹ Paul Haokip, Environmental Insights from Tribal People: Northeast India Perspective, 18 *Asian Horizons* 113–125 (2024).

² Office of the Registrar General & Census Commissioner, India, Primary Census Abstract, Census of India 2011 (ST Population) (visited Dec. 12, 2025) <https://censusindia.gov.in/nada/index.php/catalog/5049>

³ Andrea Carmen & Viola Waghiyi, Tribal Women and Environmental Violence: A Rights-Based Approach Addressing Impacts of Environmental Contamination on Tribal Women, Girls and Future Generations, Submission to the U.N. Permanent Forum on Tribal Issues Expert Group Meeting on Combatting Violence Against Tribal Women and Girls, Jan. 18–20, 2012, New York.

most acutely embodied by women, whose reproductive health, economic autonomy, and social identity are inextricably linked to the "spaces of life" the forests, rivers, and commons they inhabit⁴.

In rural and forest area, women are responsible for the collection of Non-Timber Forest Products (NTFPs), water, and fuelwood. This daily interaction with the environment is an active interaction which involves a continuous process of monitoring, managing, and conserving resources. Whether it is the intricate knowledge of medicinal tubers in Chhattisgarh⁵ or the management of agrobiodiversity in the shifting cultivation landscapes of Nagaland⁶, women's labour is the mechanism through which ecological sustainability is operationalized. Yet, this "shadow work" remains largely invisible in national economic accounts and climate strategies. The National Action Plan on Climate Change (NAPCC), while comprehensive in its sectoral approach, has been critiqued for its gender blindness, often viewing women as vulnerable victims in need of rescue rather than as knowledgeable agents of adaptation⁷.

1.3 Scope and Objectives of the Report

The main objective of this article to enlighten people and spread awareness by giving an exhaustive analysis of the role of tribal women as caretaker of environment of India. Further it tries to answer very important questions regarding nature of their contributions, the structural barriers they face and the lessons their practices offer for global climate governance.

This report covers a multi-regional study which analyses the data from different kinds of tribal states which are rich in minerals like Odisha, Jharkhand, and Chhattisgarh, the desert ecosystems of Rajasthan, the biodiversity hotspots of the Northeast, and the agricultural landscapes of Maharashtra. Tribal women are protecting nature not merely as stakeholders but as the foundational pillars of India's ecological security and this narrative has been built upon the conclusion which we got from synthesizing data from various types of diverse sources including ethnographical accounts, policy documents, and green criminology literature. Apart from this, the report tells us about theoretical framework of Green Criminology to interrogate the systemic harms inflicted upon these women. It argues that the displacement caused by

⁴ T. Evens, Don Handelman & C. Roberts, Reflecting on Reflexivity: The Human Condition as an Ontological Surprise (2016).

⁵ Poonam Xess, Garima Tiwari & Kritika Thakur, Role of Traditional Knowledge in Modern Era for Sustainable Utilization of Forest Produce in Central India, 51(6) *Indian J. Ecology* 1172–1175 (2024), <https://doi.org/10.55362/IJE/2024/4373>.

⁶ Id. At 1

⁷ S. Sengupta, D. Singhal & A. Chakraborty, Local Feminist Perspective as Transformative Levers: Women's Health and Climate Action in India, IDOS Discussion Paper 8/2025 (German Inst. of Dev. & Sustainability 2025), <https://doi.org/10.23661/idp8.2025>

mining, the pollution of water bodies, and the alienation from forest commons constitute forms of "environmental victimization" and "lawful harm" that disproportionately impact women.⁸ By framing these issues through the lens of justice and criminality, the report highlights the urgent need for a paradigm shift toward restorative environmental governance, as intended in Sustainable Development Goal (SDG) 5.

2. Theoretical Framework: Green Criminology and the Gendered Ecology of Harm

To completely understand the depth of the challenges faced by tribal women in India, it is very important and justifiable to move beyond traditional environmental sociology and engage with the critical perspectives offered by Green Criminology. This field expands the notion of "crime" to encompass harms against the environment and humanity that may be technically legal under state laws but are devastating in their consequences.

2.1 Defining Green Criminology in the Indian Context

Traditional criminology is anthropocentric and state-centric which defines it as a kind of crime as a violation of the legal penal provisions. Apart from this, in different form Green Criminology adopts a "harm-based" approach (zemiology). It scrutinizes activities that cause ecological destruction and social suffering, regardless of their legal status.⁹ In the context of tribal India, this is particularly salient. Large scale development projects, such as open-cast coal mines in the Hasdeo Arand forest or bauxite mining in the Niyamgiri hills are often sanctioned by the state through environmental clearances. Yet, these projects result in the destruction of habitats, the severance of human-nature bonds, and the annihilation of tribal livelihoods.

From the perspective of Green Criminology, the state and corporate entities involved in these activities are perpetrators of "environmental crimes" or "ecocide." The victims are not just the flora and fauna, but the tribal communities who depend on them. This framework allows us to analyse the "treadmill of production" the inherent drive of capitalism to expand extraction as a criminogenic force that inevitably leads to the victimization of the most marginalized.¹⁰

⁸ Dhinakaran Savariyar, Dalit and Tribal Women as Ecological Victims, 9(2) *J. Soc. Encounters* 155–168 (2025), <https://doi.org/10.69755/2995-2212.1370>

⁹ A.J. Shetty & M. Saxena, Harm Principle in Green Criminology: Environmental Harm and Human Risk Matrix, 7 *Front. Clim.* 1602227 (2025), <https://doi.org/10.3389/fclim.2025.1602227>

¹⁰ Averi R. Fegadel, Environmental Crimes and Green Victimization, Faculty Publications No. 1 (2021), <https://arch.astate.edu/clac-scrim-facpub/1>

2.2 The "Masculinization" of Territory and Structural Violence

Gendered nature of environmental harm is a clear insight from green criminology. The intrusion of extractive industries into tribal landscapes fundamentally changes the social and geographical dynamics of the region, a process described as the "masculinization of territories".¹¹

Prior to industrial intervention, many Adivasi societies in India shown relatively equitable gender relations, with women enjoying significant autonomy in the economic and social spheres. The arrival of mining companies, accompanied by a predominantly male workforce of transient labourers, truck drivers, and private security contractors, disrupts this balance. The forest, once a domain of women's economic production (foraging, gathering), becomes a zone of fear and potential violence. Reports from Chhattisgarh and Jharkhand indicate a correlation between mining activities and increased sexual violence, trafficking, and harassment of tribal women.¹²

This structural violence serves a strategic purpose; it intimidates the community and suppresses resistance. By targeting women who are often the most vocal defenders of the land perpetrators strike at the biological and cultural core of the tribe. The phenomenon of "Black Diamond Brothels" in the coal belts of Eastern India serves as a harrowing example of how the commodification of the earth (coal) is intimately tied to the commodification of tribal women's bodies.¹³

2.3 Eco-Casteism and the Invisible Victim

The concept of "environmental victimization" in India cannot be understood without an analysis of caste. The intersection of caste, tribe, and gender creates a unique vulnerability, termed "eco-casteism".¹⁴ Tribal women (Adivasis) and Dalit women occupy the lowest rungs of the Indian social hierarchy. This social location renders their suffering invisible to the dominant society and the state apparatus.

When an upper-caste urban population faces water shortages or pollution, it often triggers media outrage and judicial activism. However, when tribal women in rural hinterlands lose

¹¹ Faith Ngum & Radha Barooah, The Impact of Environmental Crime on Tribal Women, Global Initiative Against Transnational Organized Crime (visited Dec. 10, 2025), <https://globalinitiative.net/analysis/impact-environmental-crime-indegenous-women>

¹² Asmita Bhutani, Pollution and Patriarchy in Tribal India, *Jamhoor*, Issue 4, <https://www.jamhoor.org/read/2020/7/13/pollution-and-patriarchy-in-tribal-india>

¹³ Id.

¹⁴ Dhinakaran Savariyar, Dalit and Tribal Women as Ecological Victims, 9(2) *J. Soc. Encounters* 155–168 (2025), <https://doi.org/10.69755/2995-2212.1370>

their water sources to industrial sludge or are displaced by dams, it is frequently dismissed as the "necessary cost of development." Green criminologists argue that this disparity constitutes a "recognitional injustice" which makes a failure to recognize the humanity and rights of the victims.¹⁵ The police and judicial systems often fail to investigate crimes against these women, further entrenching a culture of impunity. As noted in the literature, the "invisible victims" of environmental crime are those whose victimization is normalized by structural forces like colonialism, capitalism, and patriarchy.¹⁶

3. The Survival theory of knowledge: Traditional Ecological Knowledge and Subsistence

Beyond the framework of victimization lies the powerful reality of agency. Tribal women possess a sophisticated understanding of their environments, known as Traditional Ecological Knowledge. This knowledge is not static folklore even it is a dynamic, adaptive system of management evolved over centuries of observation and interaction.

3.1 The Forest as a Pharmacy and Granary

In the tribal cosmology, the forest is not only a source of timber even it is a pharmacy, a granary, and above all a temple for them. With out any doubt women are the primary holders of this botanical knowledge. Research conducted in the Katghora Forest Division of Central India reveals that tribal women can identify and utilize hundreds of species of wild edibles, tubers, roots, and leafy vegetables.¹⁷ This knowledge is crucial for "food sovereignty." While modern agriculture relies on a handful of staple crops like rice, wheat etc while tribal food systems are highly diverse. During the "lean months" or periods of drought when agricultural crops fail, it is the women's knowledge of wild foods that prevents starvation. They know which tubers are toxic and how to detoxify them also they know which leaves boost immunity and which roots cure ailments. This reliance on a diverse basket of forest foods makes tribal communities more resilient to climate variability than those dependent solely on market-purchased monoculture grains.¹⁸

¹⁵ Averi R. Fegadel, Environmental Crimes and Green Victimization, Faculty Publications No. 1 (2021), <https://arch.astate.edu/clac-scrim-facpub/1>

¹⁶ Paulina García-Del Moral, State Complicity: Settler Colonialism, Multisided Violence, and Missing and Murdered Tribal Women and Girls in Canada, 32(3) *Soc. Pol.: Int'l Stud. Gender, State & Soc'y* 560–583 (2025)

¹⁷ Xess et al., Role of Traditional Knowledge, at 1173.

¹⁸ S. Ghosh-Jerath, R. Kapoor, A. Singh, S. Downs, S. Barman & J. Fanzo, Leveraging Traditional Ecological Knowledge and Access to Nutrient-Rich Tribal Foods to Help Achieve SDG 2: An Analysis of the Tribal Foods

3.2 Agrobiodiversity and Seed Keepers

In agricultural practices, tribal women are the custodians of genetic diversity. In the rainfed landscapes of the Deccan and the shifting cultivation plots of the Northeast, women are responsible for seed selection, preservation, and storage. We can understand it by two examples. One of them is millets versus monocultures. In regions like Odisha and Maharashtra, women farmers have resisted the push toward cash crops like cotton and have maintained the cultivation of millets like ragi, jowar, bajra.¹⁹ Millets are climate-smart crops: they require a fraction of the water needed for rice, grow in poor soils, and are heat tolerant. By preserving these seeds, women are effectively maintaining a "genetic shield" against climate change. Another one is the science of storage which is basically the technique used to store these seeds using ash, neem leaves and specific mud containers etc are scientifically sound methods of pest control and moisture regulation, developed without industrial chemicals.²⁰

3.3 Case Study: The "Barefoot Ecologists" of the Nilgiris

A noticeable example of traditional ecological knowledge interacting with modern science is found in the Nilgiri Biosphere Reserve. Here, the Keystone Foundation has supported a group of tribal women to become "Barefoot Ecologists".²¹ These women have been drawing from their ancestral knowledge of the forest, are trained in modern observation techniques.

They monitor the health of rivers, track the phenology of forest trees, and observe the impacts of climate change on local flora and fauna. Using digital modelling alongside traditional observation, they generate data that is vital for local conservation planning. This initiative flips the narrative of "science" being the exclusive domain of formal experts. It demonstrates that tribal women are capable of producing rigorous ecological data that is often more granular and historically grounded than remote sensing data.²²

3.4 The Spiritual Ecology: Sacred Groves and Taboos

Traditional ecological knowledge often covers behind in cultural and spiritual practices. There

of Sauria Paharias, a Vulnerable Tribal Community in Jharkhand, India, 7 *Front. Nutr.* 61 (2020), <https://doi.org/10.3389/fnut.2020.00061>

¹⁹ Anusha Arif, Women, Tribal Knowledge, and Inclusive Climate Action, Social Policy Research Found. India (visited Dec. 11, 2025).

²⁰ Malavika Dadlani, S. Sinha & Raghavendra Kavali, Seed Storage and Packaging (2023), https://doi.org/10.1007/978-981-19-5888-5_11

²¹ Bhavya George, Women Barefoot Ecologists Bridge Ancestral Knowledge with Modern Science to Protect Their Ecosystems, Women & Gender Constituency (2022), <https://womensgenderclimate.org/gjcs/women-barefoot-ecologists-bridge-ancestral-knowledge-with-modern-science-to-protect-their-ecosystems/>

²² Id.

is a community-based conservation model in which patches of forest are strictly protected in the name of a deity and this institution of "Sacred Groves" which also known as Sarna in Jharkhand and Devrai in Maharashtra.²³

Women play an important role in the rituals associated with these sacred groves. In various tribes, specific taboos prevent the harvesting of certain plants during their flowering or fruiting seasons, effectively acting as a "closed season" to allow for regeneration. These cultural restrictions are not superstitions but ecological management tools that prevent over exploitation of the commons. For instance, the Bishnoi women's insistence on protecting the Khejri tree is rooted in religious duty, but it serves the ecological function of maintaining soil moisture and providing fodder in a desert ecosystem.²⁴

4. Regional Ecologies of Stewardship: A Pan-Indian Analysis

The challenges and responses are different in nature even significantly from the arid west to the wet northeast and to understand the nuance of tribal stewardship, one must examine the specific ecological contexts in which these women operate.

4.1 The Arid West: Rajasthan and the Bishnoi Ethos

In the Thar Desert of Rajasthan, water is life, and green vegetation is sacred. The Bishnoi community presents one of the most compelling examples of religiously motivated environmentalism in the world.

- **The Theological Foundation:** Founded by Guru Jambheshwar, the Bishnoi faith follows 29 principles, which include absolute prohibitions on cutting green trees and killing animals. While the guru was male, the *praxis* of this faith is sustained by women.²⁵
- **Maternal Stewardship:** A unique and widely documented practice among Bishnoi women is the breastfeeding of orphaned fawns specially blackbuck and chinkara. This act of radical interspecies care dissolves the boundary between human and animal,

²³ R. Nair, D. Dhee, O. Patil, N. Surve, A. Andheria, J.D.C. Linnell & V. Athreya, Sharing Spaces and Entanglements with Big Cats: The Warli and Their Waghoba in Maharashtra, India, 2 *Front. Conserv. Sci.* 683356 (2021), <https://doi.org/10.3389/fcsc.2021.683356>

²⁴ Amir Sohel & Farhat Naz, The Bishnoi: Revisiting Religious Environmentalism and Traditional Forest and Wildlife Management in the Thar Desert, *Arcadia*, no. 10 (Summer 2024),

²⁵ Sohani Bishnoi, Ecofeminism and Environmental Protection: Bishnoi Women's Activism in Rajasthan, 7(4) *Int'l J. for Multidisciplinary Rsch.* (July–Aug. 2025)

integrating wildlife into the domestic sphere of the family. It is a powerful statement of stewardship that goes beyond "conservation" to "kinship".²⁶

- **The Legacy of Amrita Devi:** The collective memory of the community is anchored by the sacrifice of Amrita Devi, a Bishnoi woman who, in 1730, led 363 people to their deaths to protect Khejri trees from the King's men who were going to cut these trees. This history is actively transmitted by women to their children, ensuring that the ethos of sacrifice for nature remains a core identity marker.²⁷
- **Water Management:** In this water-scarce region, Bishnoi women are responsible for managing the underground water cisterns generally known as *tankas* and village ponds. Their traditional knowledge dictates strict purity rituals that prevent the contamination of these vital water sources, ensuring survival during prolonged droughts.²⁸

4.2 The Central Indian Tribal Belt: Resistance in the Resource Curse

The states of Odisha, Jharkhand, and Chhattisgarh form the heart of India's tribal population and its mineral wealth. This region is the epicenter of the conflict between tribal stewardship and extractive capitalism.

- **Counter mapping the commons:** In Odisha, women from the Paraja and Gadaba tribes have engaged in "participatory mapping" or "counter-mapping." Faced with the loss of their communal lands to state and corporate interests, these women created "dream maps" which shows the visual representations of how their landscape used to be and how they wish to restore it. These maps document the shrinking of the commons (by up to 25%) and serve as evidence in legal battles for land rights.²⁹
- **The Sal and Tendu Economy:** The livelihoods of women in this belt are heavily dependent on the Sal tree for getting leaves, seeds, and resin and the Tendu leaf which has been used for rolling bidis. Women organize into cooperatives to collect and sell these products. The protection of Sal forests is thus directly linked to their economic independence. Movements to protect the "Sacred Mountain" of Niyamgiri against

²⁶ Raghav Sharma, *Bishnois of India: Analysing Changes and Threats to Their Philosophies and Livelihoods*, Forest & Nature Conservation Policy Chair Group.

²⁷ *Id.* at 24.

²⁸ *Id.* at 25.

²⁹ Sakshi Yadav & Sushila Shekhawat, Tribal Women as Agents of Environmental Change: A Study of Selected Indian Ecodocumentaries, *Feminist Media Stud.* 1–19 (2024), <https://doi.org/10.1080/14680777.2024.2395973>

bauxite mining were led largely by Dongria Kondh women, who famously formed human chains to prevent heavy machinery from entering their forests.³⁰

- **Toxic Legacies:** This region also highlights the dark side of industrialization. In Jharkhand, the uranium and coal mines have left a legacy of radioactive and chemical pollution. Tribal women have been at the forefront of health movements, documenting the rise in congenital deformities and reproductive disorders caused by this pollution, linking their bodies' health directly to the violation of the land.³¹

4.3 The Sahyadri and the Deccan: Coexistence and Agriculture

In Maharashtra, the Warli and Mahadeo Koli tribes inhabit the Western Ghats (Sahyadris), a global biodiversity hotspot.

- **The Cult of Waghoba:** The Warli people live in close proximity to leopards. Unlike the urban panic that characterizes leopard sightings in cities like Mumbai, the Warlis have a deep cultural acceptance of the big cat, worshipped as the deity *Waghoba*. In this worship, women play central role by maintaining the shrines and conducting rituals. This cultural institution promotes tolerance allowing for a unique human and wildlife coexistence where leopards are seen not as intruders but as co-inhabitants.³²
- **Warli Art as Ecological Text:** The famous Warli paintings, traditionally done by women using rice paste on mud walls, are not just decorative. They are ecological texts that depict the cycles of nature, showing the harvest, the hunt, the dance of the seasons. Through this art, women transmit traditional ecological knowledge to the younger generation, ensuring the continuity of their ecological worldview.³³
- **Sustainable Agriculture:** In the Deccan plateau, tribal women are reviving traditional mixed cropping systems. By planting legumes, millets, and oilseeds together, they maintain soil fertility and reduce pest attacks and even by adopting natural way. This

³⁰ S. Ghosh-Jerath, R. Kapoor, A. Singh, S. Downs, S. Barman & J. Fanzo, Leveraging Traditional Ecological Knowledge and Access to Nutrient-Rich Tribal Foods to Help Achieve SDG 2: An Analysis of the Tribal Foods of Sauria Paharias, a Vulnerable Tribal Community in Jharkhand, India, 7 *Front. Nutr.* 61 (2020)

³¹ Andrea Carmen & Viola Waghayi, Tribal Women and Environmental Violence: A Rights-Based Approach Addressing Impacts of Environmental Contamination on Tribal Women, Girls and Future Generations, Submission to the U.N. Permanent Forum on Tribal Issues Expert Group Meeting on Combatting Violence Against Tribal Women and Girls, Jan. 18–20, 2012, New York.

³² R. Nair, D. Dhee, O. Patil, N. Surve, A. Andheria, J.D.C. Linnell & V. Athreya, Sharing Spaces and Entanglements with Big Cats: The Warli and Their Waghoba in Maharashtra, India, 2 *Front. Conserv. Sci.* 683356 (2021), <https://doi.org/10.3389/fcosc.2021.683356>

³³ Manasi Kurtkoti & Parnita Joshi, Gender and Tribal Knowledge Systems: Women's Role in Preserving Tribal Knowledge, 13 *Young Researcher* (Special Issue No. 1) (Dec. 2024), <https://doi.org/10.5281/zenodo.14566772>

contrasts sharply with the debt-inducing, chemical-intensive cotton farming that has led to an agrarian crisis in the region.³⁴

4.4 The Northeast Frontiers: Shifting Cultivation and Agrobiodiversity

The Northeastern states such as Arunachal Pradesh, Nagaland, Meghalaya etc are characterized by distinct tribal governance systems and the practice of *Jhum* (shifting cultivation).

- **Reframing Jhum:** Colonial and modern state narratives have long vilified *Jhum* as destructive "slash and burn" agriculture. However, tribal women manage *Jhum* fields as complex and multi-tiered agroforests. They plant a high diversity of crops up to 40 varieties in a single plot which ensures dietary diversity and soil recovery. The fallow periods allow for forest regeneration, maintaining a mosaic landscape that supports high biodiversity.³⁵
- **Apatani Paddy-cum-Aquaculture:** In the Ziro valley of Arunachal Pradesh, the Apatani tribe practices a highly efficient system of wet rice cultivation integrated with fish farming. Women are key to managing the water channels and the transplantation of rice. This system is incredibly productive and sustainable, requiring no external chemical inputs, and is recognized as a potential Globally Important Agricultural Heritage System.³⁶
- **Community Seed Banks:** In response to the introduction of hybrid seeds, women in Nagaland and Meghalaya have established community seed banks. These banks preserve rare varieties of rice, maize, and millet that are adapted to the specific micro climates of the hills. This is a critical adaptation strategy, ensuring that farmers have access to seeds that can withstand changing rainfall patterns.²⁶

Table 1: Comparative Matrix of Tribal Women's Stewardship

Region	Ecosystem	Primary Tribes	Key Stewardship Practices	Ecological Outcome
Western India (Rajasthan)	Arid Desert	Bishnoi	Religious protection of Khejri trees & wildlife; water tanka	Prevention of desertification; high wildlife density; water

³⁴ Id.

³⁵ Id. at 1.

³⁶ United Nations Sustainable Development Group, India's Bio-Cultural Treasure: Revitalizing Traditional Knowledge for Healthy Ecosystems (visited Dec. 10, 2025), <https://unsdg.un.org/latest/stories/indias-bio-cultural-treasure-revitalizing-traditional-knowledge-healthy-ecosystems>

			management.	security.
Central India (Odisha, Jharkhand)	Deciduous Forest	Gond, Santhal, Paraja	Counter-mapping; Sal/Tendu leaf economy; resistance to mining.	Protection of forest commons; preservation of carbon sinks; food sovereignty.
Western Ghats (Maharashtra)	Biodiversity Hotspot	Warli, Mahadeo Koli	Worship of <i>Waghoba</i> (Leopard); Warli art as pedagogy; mixed cropping.	Human-wildlife coexistence; maintenance of agrobiodiversity.
Northeast India	Hill Forests	Apatani, Naga, Khasi	Management of <i>Jhum</i> cycles; paddy-cum- aquaculture; seed banking.	Genetic diversity conservation; sustainable intensification; soil health.

5. The Policy Paradox: Exclusion in an Era of Climate Urgency

Through the table no 1 and cited many resources, one thing is clear that women are playing really stewardship towards environment. Despite this they face systemic exclusion from the legal and policy frameworks governing India's environment. This paradox where the most effective stewards are the least empowered is a central failing of Indian climate governance.

5.1 The Forest Rights Act (FRA) 2006: Implementation Gaps

The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, was a landmark legislation intended to undo "historical injustice." A key provision of the FRA is the requirement that land titles be issued jointly in the name of both spouses, or in the name of the woman in female-headed households.³⁷

However, the implementation has been marred by patriarchal and bureaucratic resistance.

³⁷ Raghawi & Rukmani, Empowering Through Recognition: An Analysis of Women's Participation in the Forest Rights Act 2006 in Andhra Pradesh, Uttarakhand and Rajasthan, 30(1) *Educ. Admin.: Theory & Prac.* 6743–6747 (2024), <https://doi.org/10.53555/kuey.v30i1.10003>

- **Tokenism in Gram Sabhas:** While the FRA mandates women's representation in the Forest Rights Committees, their participation is often tokenistic. In states like Andhra Pradesh and Rajasthan and many more states where women's names are included to meet quotas, but they are frequently excluded from the actual decision making meetings due to social norms or scheduling conflicts.³⁸
- **Denial of Community Rights:** There has been a systemic reluctance by the state to recognize Community Forest Resource rights, which are critical for women who depend on the collective commons. Instead, the focus has been on Individual Forest Rights (IFR), which often marginalizes women who may not have formal proof of ownership or who rely on shared resources.³⁹
- **Lack of Data:** There is a significant lack of gender-disaggregated data on FRA implementation. Without knowing how many titles actually bear women's names or how many women actively participate in governance, it is impossible to hold the administration accountable.⁴⁰

5.2 The Compensatory Afforestation Fund Management and Planning Authority and the "Green Grab"

The Compensatory Afforestation Fund Management and Planning Authority (CAMPA) represents a significant threat to tribal stewardship. Enacted to manage funds collected from industries for forest diversion, CAMPA has amassed over \$6 billion.⁴¹ The Forest Department utilizes these funds to carry out afforestation. However, this often takes the form of monoculture plantations like teak, eucalyptus etc on lands that the state classifies as degraded but which are actually village commons used by tribal women for grazing and non-timber forest products collection.⁴² These plantations are often fenced off, criminalizing the women who have used these lands for generations. The case of Uma Bai Netam in Chhattisgarh is illustrative. Despite having recognized rights under the FRA, her land was taken over by the Forest Department for a teak plantation funded by CAMPA. This effectively turned a legal right-holder into an "encroacher" on her own land. The mechanism of CAMPA creates a

³⁸ Sasha Chauhan Kanwar & Anoop Kumari, A Critical Analysis of Tribal Women's Empowerment Through the Forest Rights Act, 2006, 8 *Int'l J. Novel Rsch. & Dev.* b973–b980 (2023)

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ World Rainforest Movement, India: Plantations Uproot Women from Their Customary Forests (visited Dec. 11, 2025), <https://www.wrm.org.uy/bulletin-articles/india-plantations-uproot-women-from-their-customary-forests>

⁴² *Id.*

perverse incentive. The destruction of a natural biodiverse forest which supports women's livelihoods and generates funds that are then used to destroy another patch of common land to plant commercial timber which excludes women. This "double displacement" is a prime example of a "false solution" to climate change that exacerbates social inequality.⁴³

5.3 The Gender Blindness of the National Action Plan on Climate Change

India's National Action Plan on Climate Change (NAPCC), launched in 2008, sets the national strategy for climate adaptation and mitigation. However, feminist scholars and activists argue that it is fundamentally gender blind in nature. A few reasons behind that are

- **Passive Victims vs. Active Agents:** The policy discourse within the NAPCC and State Action Plans (SAPCCs) often frames women merely as vulnerable populations. While true, this narrative obscures their role as active agents of adaptation. There is little recognition of their traditional ecological knowledge or their leadership potential in managing climate risks.⁴⁴
- **Technocratic Bias:** The NAPCC favours large scale, technological solutions like solar parks, hydro projects etc over decentralized, community-based approaches. This biased approach to climate security marginalizes the low-carbon, labor-intensive, and care-oriented practices of tribal women.⁴⁵
- **Budgetary Gaps:** There is a lack of Gender responsive budgeting in climate finance. Funds allocated for climate action rarely trickle down to women's self-help groups or cooperatives. Instead, they flow to large infrastructure projects or state bureaucracies, bypassing the grassroots level entirely.⁴⁶

6. Structural Violence: The Intersection of Patriarchy, Caste, and Pollution

The marginalization of tribal women, directly or indirectly in making of policies somehow related to conservation of environment, is not just a matter of policy exclusion even it is

⁴³ Nat'l Auth., Compensatory Afforestation Fund Mgmt. & Planning Auth. (CAMPA), *Transforming Forestscapes: Success Stories and Best Practices from the Field Under CAMPA* (Ministry of Env't, Forest & Climate Change, Gov't of India Year) <https://nationalcampa.nic.in/dashboard/PublicationPDF/668f7f96640f3.pdf>

⁴⁴ Sreerupa Sengupta, Divya Singhal & Ananya Chakraborty, *Local Feminist Perspectives as Transformative Levers: Women's Health and Climate Action in India*, IDOS Discussion Paper (German Inst. of Dev. & Sustainability).

⁴⁵ Nicole Beach et al., *Climate Crisis Jeopardizes Health in India: Why Are Rural Women So Vulnerable?*, *Story & Multimedia* (Oct. 14, 2024), <https://www.storyandmultimedia.com/climate-crisis-jeopardizes-health-in-india>

⁴⁶ Leia Achampong, *Gender-Responsive Climate Finance: The Key to Just Climate Action and Tackling Inequalities*, Expert Paper Prepared for the Expert Group Meeting on Accelerating the Achievement of Gender Equality and the Empowerment of All Women and Girls by Addressing Poverty and Strengthening Institutions and Financing with a Gender Perspective (Eurodad).

reinforced by structural violence that manifests physically, economically, and socially.

6.1 The "Fetal Basis of Adult Disease" and Reproductive Violence

As obvious, the environmental pollution is a significant threat to reproductive health regardless of location, but here we're talking about pollution in tribal areas. Specially those tribal women living near mines, thermal power plants, and industrial estates are exposed to high levels of heavy metals and toxins. That's why it's called reproductive violence.

Scientific evidence points to the "fetal basis of adult disease," where exposure to environmental toxins in the womb leads to lifelong health issues for the child. Lots of women report high rates of miscarriages, stillbirths and congenital anomalies in the pesticide effected areas of Kasaragod and uranium belt of Jharkhand also there many endosulfan victims can be found. This toxic burden directly violates the fundamental right to health which is inseparable part of article 21 and threatens the biological continuity of the tribes. It is a slow violence that is often invisible in the short term but catastrophic over generations.⁴⁷

6.2 The Political Economy of Trafficking

Along with asset, this is also a resource curse in state like Jharkhand and Chhattisgarh which has a distinct gendered dimension. The displacement caused by mining projects shatters the traditional community support structures. Impoverished and landless, Adivasi women are forced to migrate or are trafficked into precarious labour.

The phenomenon of "Black Diamond Brothels" in the coal mining areas is a stark indicator of this collapse. Women, displaced from their lands to make way for coal mines, are often sexually exploited by the very workforce that extracts the coal. Here, the exploitation of the earth and the exploitation of women's bodies are inextricably linked both are treated as consumable commodities to fuel the nation's energy needs.⁴⁸

6.3 Eco-Casteism and State Repression

When tribal women resist this dispossession, they face the full force of the state. The label of "Maoist" or "Naxalite" is often used to delegitimize legitimate environmental protests in the tribal belt. Women activists are subjected to surveillance, harassment, and custodial violence.

⁴⁷ Andrea Carmen & Viola Waghiiyi, Tribal Women and Environmental Violence: A Rights-Based Approach Addressing Impacts of Environmental Contamination on Tribal Women, Girls and Future Generations, Submission to the U.N. Permanent Forum on Tribal Issues Expert Group Meeting on Combatting Violence Against Tribal Women and Girls, Jan. 18–20, 2012, U.N. Headquarters, New York.

⁴⁸ Id. at 12.

This repression is facilitated by "eco-casteism" which is a systemic prejudice that devalues the lives and claims of Adivasis. The police and judicial systems, dominated by upper-caste individuals, often view tribal assertions of sovereignty as a threat to national security. Consequently, violence against Adivasi women whether by security forces or corporate militias often goes unpunished, reinforcing a cycle of fear and silence.⁴⁹

7. Grassroots Resilience and the Feminization of Governance

Despite these enormous challenges, Tribal women are not silent victims. They are organizing, protesting, and adopting innovative methods and this is precisely what these tribal women have done to bravely face these difficult challenges and raise their voices against injustice.

7.1 MAKAAAM: The Voice of Women Farmers

The *Mahila Kisan Adhikar Manch* (MAKAAAM) is a nationwide forum asserting the rights of women farmers. MAKAAAM challenges the state's definition of "farmer" which has been usually tied to land ownership and demands recognition for the landless, tenant, and tribal women who do the bulk of agricultural work.⁵⁰

Their "Charter of Demands" includes specific climate related calls that is meant to be prioritize the rain fed agriculture, promotion of biodiverse crops like millets, and the rejection of GMOs. MAKAAAM advocates for the scaling up of the *Mahila Kisan Sashaktikaran Pariyojana* (MKSP), a government scheme that has successfully empowered millions of women in sustainable agriculture. They argue that supporting women's collectives is the most effective way to build climate resilience.⁵¹

7.2 Women in Local Governance (Panchayati Raj)

The reservation of seats for women in Panchayati Raj institutions (local governance) has created a space for tribal women to assume leadership roles.

- **Success Stories:** Leaders like Smt. Sampatiya Uikey at Mandla in Madhya Pradesh and Smt. Linisha C have used their positions as Sarpanches to drive environmental agendas.

⁴⁹ Id. at 12.

⁵⁰ MAKAAAM: Mahila Kisan Adhikaar Manch, Foundation Statement of MAKAAAM: Mahila Kisan Adhikaar Manch (visited Dec. 11, 2025), <https://feministlawarchives.pldindia.org/wp-content/uploads/Foundation-Statement-of-MAKAAAM-Mahila-Kisan-Adhikaar-Manch.pdf>

⁵¹ MAKAAAM, Charter of Demands for Women Farmers (visited Dec. 11, 2025), <https://makaam.in/charter-of-demands/>

They have prioritized the construction of check dams, the installation of handpumps, and the protection of river banks.⁵²

- **Policy Impact:** Studies show that when women lead Gram Panchayats, there is a higher investment in public goods like water and sanitation. These women bring their lived experience of resource scarcity into the governance hall, ensuring that development funds address the immediate ecological needs of the community.⁵³

7.3 International Advocacy

Tribal women from India are also making their voices heard on the global stage. At climate summits like COP29, they align with global tribal movements to demand direct access to climate finance and the protection of "Free, Prior, and Informed Consent" (FPIC). They challenge the "financialization of nature" (carbon markets) and advocate for non-market approaches that respect the sanctity of Mother Earth.⁵⁴

8. Conclusion: Towards Restorative Environmental Governance

The evidence presented in this report leads to an inescapable conclusion. According to these evidences Tribal women are the unacknowledged backbone of India's environmental stability. Their stewardship is not a hobby but a survival strategy, honed over centuries and deeply integrated into their cultural and spiritual lives. From the deserts of Rajasthan to the rainforests of the Northeast, they have developed sophisticated systems to manage water, biodiversity, and forests. However, the current model of development and environmental governance in India is structurally hostile to this stewardship. By prioritizing extractive industries, enforcing bureaucratic centralization through CAMPA, and adhering to gender-blind climate policies, the state is actively dismantling the very systems that could offer resilience in a warming world. The "green crimes" of displacement, pollution, and dispossession are not just violations of

⁵² Soc’y for Dev. of Humanity, Documentation of Success Stories of Women Panchayat Representatives of Madhya Pradesh on Women’s Leadership, Zilla Panchayat – Mandala (visited Dec. 17, 2025), https://nirdpr.org.in/nird_docs/casestudies/shodh/shodh2.pdf and Gov’t of India, Ministry of Agriculture & Farmers Welfare, Dept. of Agriculture & Farmers Welfare, *Success Stories of Progressive Women Farmers and Agripreneurs* (2021–22), <https://agriwelfare.gov.in/Documents/Success-Story-For-approval.pdf>

⁵³ Arya A. Raghuvanshi, Empowering Women Leaders in Rural India: A Qualitative Study of Women Sarpanches’ Experiences, 11(6) *SSRG Int’l J. Hum. & Soc. Sci.* 62–72 (Nov.–Dec. 2024), <https://doi.org/10.14445/23942703/IJHSS-V11I6P106>

⁵⁴ UN Women Asia and the Pacific, In Focus: UN Women Asia and the Pacific at COP29 (Nov. 2024), <https://asiapacific.unwomen.org/en/stories/in-focus/2024/11/in-focus-un-women-asia-and-the-pacific-at-cop29> And India Opposes COP29 Finance Deal After It Is Adopted, Terms It ‘Optical Illusion’, *The Hindu* (Dec. 13, 2025), <https://www.thehindu.com/sci-tech/energy-and-environment/developed-nations-offer-300-billion-annually-after-10-years-to-global-south/article68903747.ece>

human rights actually they are acts of ecological self-sabotage.

8.1 Pathways Forward

To achieve true climate resilience and meet the targets of SDG 5 (Gender Equality) and SDG 13 (Climate Action), India must move toward Restorative Environmental Governance. This requires various positive steps to be adopted and implemented.

- 1. Epistemic Justice:** Recognizing traditional ecological knowledge as a valid scientific system. This involves integrating tribal women's knowledge into national climate adaptation plans and university curriculum.
- 2. Legal Empowerment:** rigorously implementing the joint title and community rights provisions of the Forest Rights Act. The consent of the *Mahila Sabha* (Women's Assembly) must be made mandatory for any diversion of forest land.
- 3. Restructuring CAMPA:** Funds should be devolved to the Gram Sabhas for community-led restoration, prioritizing species that support local livelihoods rather than commercial timber.
- 4. Gender-Responsive Finance:** Climate finance mechanisms must be designed to be accessible to grassroots women's collectives, with transparent tracking of gender impacts.
- 5. Ending Impunity:** A zero-tolerance policy towards violence against women environmental defenders, backed by specialized legal support and monitoring mechanisms.

Ultimately, recognizing tribal women as environmental stewards is not an act of charity; it is a strategic imperative. In their hands lie the seeds of a sustainable future one where the economy serves ecology, and where governance is an act of care.