Advanced International Journal of Multidisciplinary Research

E-ISSN: 2584-0487
editor@aijmr.com

Volume 4, Issue 3, May-June 2026

CrossRef DOI: 10.62127/aijmr.2026.v04i03.1306

Traditional Ecological Knowledge and Sacred Groves in India: Challenges of Legal Recognition and Environmental Protection

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Abstract:

This article critically examines the legal status and protection of **Traditional Ecological Knowledge (TEK)** embedded in **sacred groves in India**, situating the discussion within the broader framework of environmental governance, indigenous rights, and biodiversity conservation. Sacred groves—community-protected forest patches rooted in cultural and spiritual traditions—represent a unique convergence of ecological sustainability and customary law. Despite their proven role in conserving biodiversity and sustaining local ecosystems, these institutions remain **marginally recognized within formal legal frameworks**, leading to gaps in protection and governance.

The study adopts a **doctrinal and interdisciplinary methodology**, drawing upon environmental law, constitutional principles, and indigenous knowledge systems. It analyses statutory frameworks such as the Biological Diversity Act, 2002, the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, and relevant forest and environmental regulations, alongside judicial interpretations that have progressively expanded the scope of environmental rights under the Constitution of India. The article identifies a persistent tension between **state-centric conservation models and community-based ecological practices**, which often results in the exclusion or dilution of traditional knowledge systems.

By engaging with case-based examples from different regions of India, the study demonstrates how sacred groves function as **informal yet effective conservation regimes**, preserving endemic species, maintaining ecological balance, and fostering sustainable resource use. However, the absence of a **coherent legal recognition framework** exposes these systems to threats such as deforestation, commercialization, and erosion of cultural practices.

The article argues for a **harmonized legal framework** that integrates TEK into formal environmental governance without undermining its community-based character. It proposes recognizing sacred groves as **community-conserved areas**, strengthening participatory governance, and embedding TEK within biodiversity and climate change policies. Such an approach aligns with constitutional values of environmental protection, decentralization, and cultural preservation.

The study concludes that the future of environmental sustainability in India depends not only on statutory regulation but also on the **meaningful incorporation of indigenous knowledge systems**, positioning sacred groves as vital instruments in achieving ecological resilience and sustainable development.

Keywords: Traditional Ecological Knowledge, Sacred Groves, Environmental Law, Biodiversity Conservation, Forest Rights Act, Community Governance, Indigenous Knowledge, Sustainable Development.

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1. Introduction

1.1 Concept of Traditional Ecological Knowledge (TEK)

Traditional Ecological Knowledge (TEK) refers to the cumulative body of knowledge, practices, beliefs, and worldviews developed by indigenous and local communities through long-term interaction with their natural environment. It is not merely a collection of empirical observations about nature, but a holistic knowledge system that integrates ecological understanding with cultural, spiritual, and ethical dimensions of human–environment relationships. TEK is transmitted orally across generations and is deeply embedded in social institutions, rituals, and customary laws.

Unlike modern scientific ecology, which often compartmentalises environmental phenomena into discrete categories for analysis, TEK operates through a relational framework. It perceives humans as an integral part of ecosystems rather than external managers of nature. This worldview fosters sustainable resource use practices, biodiversity conservation, and ecosystem resilience. For instance, seasonal harvesting restrictions, sacred prohibitions, and customary conservation norms are not externally imposed regulations but internally governed community ethics rooted in TEK systems.

In the Indian context, TEK manifests in diverse forms across tribal and rural communities. From the pastoral knowledge systems of Himalayan herders to the forest-based ecological wisdom of Central Indian tribal groups, TEK has historically shaped sustainable livelihoods and environmental stewardship. One of the most prominent expressions of TEK in India is found in the institution of sacred groves, which represent community-protected forest patches conserved through religious and cultural norms rather than statutory environmental law.

In recent decades, TEK has gained global recognition in environmental governance discourse, particularly after the Convention on Biological Diversity (1992), which acknowledged the importance of indigenous knowledge in biodiversity conservation. However, despite this recognition at the international level, TEK systems remain underrepresented and inadequately protected within formal legal frameworks in many countries, including India.

1.2 Historical and Cultural Significance of Sacred Groves in India

Sacred groves are small patches of forest or natural vegetation traditionally protected by local communities due to their religious, cultural, and ecological significance. Known by various names across India—such as *Devrai* in Maharashtra, *Kavu* in Kerala, *Sarna* in Jharkhand, and *Law Kyntang* in Meghalaya—these groves are dedicated to local deities, ancestral spirits, or nature worship traditions.

Historically, sacred groves predate formal state forestry systems and represent one of the oldest forms of community-based conservation in India. Their origins can be traced to ancient animistic traditions and indigenous belief systems that regard nature as sacred and imbued with spiritual essence. In many communities, it is believed that deities reside within these groves, and any disturbance or exploitation of their resources may invoke divine retribution. This belief system has functioned as a powerful social mechanism for environmental protection.

Sacred groves are typically characterized by strict prohibitions on activities such as logging, hunting, grazing, and even the collection of dead wood in some regions. As a result, these areas often serve as biodiversity hotspots, preserving rare, endemic, and endangered species of flora and fauna. Ecological studies have shown that sacred groves act as gene banks, maintain microclimatic stability, and contribute to watershed protection and soil conservation.

Culturally, sacred groves are deeply intertwined with community identity and ritual life. They serve as sites for festivals, seasonal rituals, initiation ceremonies, and conflict resolution. The governance of these groves is usually managed by village councils, elders, or hereditary custodians, rather than formal state

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institutions. This decentralized and culturally embedded management system reflects a sophisticated form of ecological governance rooted in collective responsibility and spiritual obligation.

Despite their ecological and cultural importance, sacred groves have faced increasing pressures in the modern era due to urbanization, agricultural expansion, infrastructure development, and weakening of traditional belief systems. As a result, many groves have been degraded, fragmented, or completely lost, raising concerns about both biodiversity loss and cultural erosion.

1.3 Research Problem: Lack of Formal Legal Recognition

Despite their proven ecological significance and deep cultural roots, sacred groves in India suffer from a critical governance gap: the absence of explicit and uniform legal recognition within the formal environmental and forest law framework. While India has enacted several environmental statutes—such as the Indian Forest Act, 1927, the Wildlife (Protection) Act, 1972, the Forest (Conservation) Act, 1980, and the Biological Diversity Act, 2002—none of these laws specifically and comprehensively recognize sacred groves as a distinct category of conservation space with enforceable legal status.

At best, sacred groves are indirectly protected under broader categories such as reserved forests, community reserves, or biodiversity heritage sites under the Biological Diversity Act, 2002. However, these provisions are either insufficiently tailored or unevenly implemented across states. For example, while some states like Maharashtra and Karnataka have initiated documentation and partial protection measures for sacred groves, there is no uniform national policy that formally integrates them into conservation planning.

This lack of legal recognition creates several interlinked problems. First, it renders sacred groves vulnerable to land-use change and encroachment, particularly in areas where traditional governance systems have weakened. Second, it undermines the authority of customary institutions that historically managed these ecosystems effectively. Third, it creates ambiguity regarding ownership, management rights, and legal responsibility, especially when conflicts arise between community practices and state development priorities.

Moreover, the current legal framework does not adequately acknowledge the knowledge systems underlying sacred grove conservation. TEK is often treated as supplementary or anecdotal rather than as a valid epistemological framework for environmental governance. This marginalisation weakens the integration of community-based conservation into mainstream environmental law and policy.

Another significant issue is the lack of institutional mechanisms for documentation, mapping, and monitoring of sacred groves. Many groves remain undocumented or poorly recorded in official land records, making them invisible in planning processes. This invisibility contributes to their gradual degradation, as they are often not considered in environmental impact assessments or land acquisition decisions.

Thus, the research problem centres on a critical disconnect between traditional ecological governance systems and formal legal structures. Bridging this gap is essential not only for biodiversity conservation but also for cultural preservation and environmental justice.

1.5 Objectives and Scope of the Study

The primary objective of this study is to critically examine the relationship between Traditional Ecological Knowledge systems and the conservation of sacred groves in India, with a particular focus on the absence of formal legal recognition and its implications for environmental governance.

More specifically, the study seeks to:

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i. **Analyse the conceptual framework of TEK** and its role in shaping sustainable environmental practices, particularly in indigenous and rural Indian contexts. This includes examining TEK as a dynamic knowledge system that integrates ecological, cultural, and spiritual dimensions.
ii. **Investigate the historical evolution and cultural significance of sacred groves** across different regions of India. The study aims to highlight the diversity of sacred grove traditions and their ecological functions in biodiversity conservation.
iii. **Identify gaps in the existing legal and policy framework** governing forest conservation and biodiversity protection in India. This includes evaluating how current statutes address—or fail to address—community-based conservation systems like sacred groves.
iv. **Examine the consequences of inadequate legal recognition**, particularly in terms of ecological degradation, cultural erosion, and weakening of customary governance institutions.
v. **Explore comparative and policy-oriented approaches** that could facilitate the integration of sacred groves and TEK into formal legal frameworks. This includes assessing models of community conservation, participatory governance, and legal pluralism.

The scope of the study is primarily focused on India, though it is informed by broader international developments in environmental law and indigenous rights. The analysis draws upon interdisciplinary perspectives, including environmental law, anthropology, ecology, and cultural studies.

Geographically, while sacred groves exist across India, the study acknowledges regional variations in their structure, governance, and ecological significance. Therefore, examples may be drawn from different states such as Kerala, Maharashtra, Karnataka, Odisha, Jharkhand, and the northeastern region to illustrate diversity within the institution.

The study also situates sacred groves within the broader discourse of environmental governance and sustainable development. It engages with contemporary legal debates on biodiversity conservation, community rights over natural resources, and the recognition of indigenous knowledge systems in policy frameworks.

Ultimately, the introduction sets the foundation for a broader inquiry into how legal systems can evolve to accommodate pluralistic knowledge systems and decentralized environmental governance models. It argues that recognizing sacred groves and TEK is not merely a matter of cultural preservation but a necessary step toward achieving ecological sustainability and environmental justice in a rapidly changing socio-ecological landscape.

2. Conceptual Framework: Traditional Ecological Knowledge (TEK) and Sacred Groves

The conceptual framework of this study is built on the intersection of Traditional Ecological Knowledge (TEK), sacred groves as community-based conservation systems, and the intricate relationship between culture, religion, and ecology. Together, these elements form a holistic paradigm of environmental governance that contrasts sharply with modern state-centric and technocratic approaches to conservation. This framework is essential to understand how indigenous knowledge systems have historically contributed to biodiversity conservation and why their marginalisation in formal legal structures creates significant ecological and cultural gaps.

2.1 Meaning and Characteristics of Traditional Ecological Knowledge (TEK)

Traditional Ecological Knowledge (TEK) refers to a cumulative body of knowledge, practices, and beliefs developed by indigenous and local communities through long-term interaction with their surrounding environment. It is not a static body of information but a dynamic and adaptive system that evolves over time in response to ecological, social, and climatic changes. TEK encompasses an integrated

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understanding of ecological processes, species behaviour, seasonal cycles, resource management practices, and environmental ethics.

One of the defining features of TEK is its **holistic nature**. Unlike Western scientific knowledge systems that often compartmentalise environmental phenomena into discrete disciplines such as botany, zoology, or hydrology, TEK views the environment as an interconnected and living system. Humans, animals, plants, water bodies, and even spiritual entities are perceived as part of a unified ecological order. This holistic worldview fosters sustainable interaction with nature, as any disruption in one component is understood to affect the entire system.

Another key characteristic of TEK is its **oral transmission and intergenerational continuity**. Knowledge is passed down through stories, rituals, practices, and daily engagement with the environment rather than through formal written texts. Elders, spiritual leaders, and community custodians play a crucial role in preserving and transmitting this knowledge. This mode of transmission ensures that TEK remains closely tied to lived experience and local ecological contexts.

TEK is also inherently **place-based**. It is developed in specific ecological and geographical settings and is therefore deeply adapted to local environmental conditions. For instance, knowledge about monsoon patterns, soil fertility, forest regeneration, and medicinal plants varies significantly between different ecological zones in India. This localisation makes TEK highly effective in managing natural resources sustainably within specific ecosystems.

A further characteristic of TEK is its **integration of spiritual and ethical dimensions**. In many indigenous communities, environmental stewardship is not merely a practical necessity but a moral and spiritual obligation. Nature is often regarded as sacred, and ecological balance is maintained through rituals, taboos, and customary laws. Violations of environmental norms are not only seen as ecological transgressions but also as moral or spiritual breaches.

TEK also demonstrates remarkable **adaptive capacity**. Contrary to the misconception that traditional knowledge systems are static or outdated, TEK has historically adapted to environmental changes, population pressures, and socio-economic transformations. For example, shifting cultivation practices, seasonal migration patterns, and resource-sharing arrangements have evolved in response to ecological feedback mechanisms.

Importantly, TEK is **collective in nature**. It is not owned by individuals but belongs to the community as a whole. This collective ownership fosters shared responsibility for resource management and discourages overexploitation. It also strengthens social cohesion and reinforces community-based governance structures.

In contemporary environmental discourse, TEK is increasingly recognised as complementary to scientific ecological knowledge. International frameworks such as the Convention on Biological Diversity (CBD) acknowledge the importance of integrating traditional knowledge systems into biodiversity conservation strategies. However, despite this recognition, TEK often remains marginalised in formal policy and legal frameworks, particularly in rapidly modernising societies.

2.2 Sacred Groves as Community-Based Conservation Systems

Sacred groves represent one of the most tangible and enduring manifestations of Traditional Ecological Knowledge in India. They are patches of natural or semi-natural vegetation that are protected by local communities through religious and cultural beliefs. These groves are dedicated to local deities, ancestral spirits, or nature worship traditions, and are considered inviolable spaces where human interference is either restricted or completely prohibited.

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Sacred groves function as **community-based conservation systems** that operate outside formal state regulation. Their protection is ensured not through statutory enforcement but through customary norms, social sanctions, and spiritual beliefs. This form of governance is decentralised, participatory, and deeply embedded in local cultural contexts.

One of the most significant features of sacred groves is their role as **biodiversity reservoirs**. Because of long-term protection from human exploitation, these groves often contain rich and unique assemblages of plant and animal species, including rare, endemic, and endangered species. In many cases, sacred groves preserve primary forest characteristics even in landscapes that have otherwise undergone significant ecological degradation.

Ecologically, sacred groves serve multiple functions. They act as **microhabitats** for wildlife, **gene banks** for plant species, and **refugia** during environmental stress. They also contribute to **soil conservation**, **water regulation**, and **microclimatic stability**. In some regions, sacred groves are associated with water sources such as springs and ponds, which are believed to be protected by resident deities. As a result, they play a crucial role in watershed management and groundwater recharge.

From a governance perspective, sacred groves are typically managed by **customary institutions** such as village councils, priestly families, or hereditary custodians. These institutions enforce rules regarding access, use, and protection of the grove. Violations of these rules are often met with social sanctions or religious penalties rather than legal punishment. This system of governance reflects a high degree of community ownership and accountability.

Sacred groves also function as **cultural landscapes**, where ecological conservation is intertwined with ritual practices, festivals, and community gatherings. Many groves serve as sites for annual ceremonies, seasonal rituals, and local festivals that reinforce communal identity and collective memory. These cultural practices play a critical role in sustaining conservation ethics across generations.

Despite their ecological and cultural importance, sacred groves are increasingly under threat due to modernisation, land-use change, urban expansion, and weakening of traditional belief systems. In many regions, younger generations are less aware of the spiritual significance of these groves, leading to reduced community enforcement of protective norms. Additionally, lack of formal legal recognition has made them vulnerable to encroachment and degradation.

2.3 Relationship Between Culture, Religion, and Ecology

The relationship between culture, religion, and ecology forms the core of the conceptual framework linking TEK and sacred groves. In traditional Indian societies, these three domains are not separate but deeply interwoven, creating a unified worldview in which environmental stewardship is both a cultural practice and a spiritual duty.

Religion plays a central role in shaping ecological behaviour within the sacred grove system. Many groves are associated with local deities who are believed to inhabit or protect specific natural spaces. These deities are often regarded as guardians of the forest, and their presence legitimises conservation practices. The belief that harming the grove may invite divine punishment serves as a powerful deterrent against ecological exploitation.

This religious dimension transforms conservation into a **moral obligation** rather than a regulatory requirement. Unlike modern environmental laws that rely on external enforcement mechanisms, sacred grove protection is internalised through belief systems. This internalisation makes compliance more consistent and culturally reinforced.

Cultural practices further reinforce ecological conservation. Rituals, festivals, and oral traditions associated with sacred groves encode ecological knowledge and conservation ethics. For example,

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restrictions on tree cutting or hunting are often embedded in mythological narratives that explain the origins and sanctity of the grove. These narratives function as educational tools that transmit ecological values across generations.

Culture also shapes the **social organisation of environmental governance**. In many communities, elders and ritual specialists hold authority over ecological decision-making. Their role is not merely administrative but also symbolic, as they are seen as custodians of both cultural heritage and ecological balance. This integration of authority ensures that conservation practices are respected and maintained.

From an ecological perspective, the fusion of culture and religion creates a **self-regulating conservation system**. Because sacred groves are protected by strong social norms and belief systems, they often remain intact even in the absence of formal legal protection. This demonstrates the effectiveness of culturally embedded conservation mechanisms.

However, the relationship between culture, religion, and ecology is not static. It evolves in response to broader socio-economic and political changes. Modernisation, urbanisation, and globalisation have led to shifts in belief systems and cultural practices, weakening traditional conservation norms in many regions. As a result, the ecological integrity of sacred groves is increasingly dependent on external legal and policy interventions.

At the same time, there is growing recognition of the need to **integrate cultural and religious values into modern environmental governance frameworks**. Environmental law and policy are beginning to acknowledge that effective conservation cannot rely solely on scientific and regulatory approaches but must also incorporate cultural and ethical dimensions.

2.4 Concluding Analytical Perspective

The conceptual framework of TEK and sacred groves reveals a deeply integrated system of ecological knowledge, cultural values, and spiritual beliefs that has sustained biodiversity conservation in India for centuries. TEK provides the epistemological foundation, sacred groves represent its practical institutional expression, and the relationship between culture, religion, and ecology ensures its continuity and effectiveness.

However, this framework also highlights a critical tension between traditional and modern governance systems. While sacred groves and TEK operate through decentralised, culturally embedded mechanisms, modern environmental governance relies on formal legal structures and scientific rationality. The lack of integration between these systems creates gaps in conservation policy and weakens the protection of ecologically and culturally significant landscapes.

Understanding this conceptual framework is therefore essential not only for academic analysis but also for developing more inclusive and effective environmental governance models that respect indigenous knowledge systems while addressing contemporary ecological challenges.

3. Legal and Constitutional Framework in India

The legal and constitutional framework governing environmental protection in India is one of the most progressive in the world, particularly in terms of judicial interpretation and constitutional environmentalism. However, despite this apparent strength, the framework reveals significant gaps when it comes to recognising and integrating Traditional Ecological Knowledge (TEK) systems and community-based conservation institutions such as sacred groves. This section examines the constitutional provisions, statutory frameworks, and local governance institutions relevant to environmental protection in India, with a focus on their relevance—or limitations—in protecting sacred groves and indigenous ecological knowledge systems.

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3.1 Environmental Provisions under the Constitution of India

The Constitution of India does not explicitly contain a separate chapter dedicated to environmental protection in its original text. However, through judicial interpretation, constitutional amendments, and evolving environmental jurisprudence, environmental protection has been firmly established as a constitutional mandate. Three key provisions form the foundation of environmental governance in India: Article 21, Article 48A, and Article 51A(g).

- **Article 21: Right to Life and Environmental Protection**

Article 21 of the Constitution guarantees the Right to Life and Personal Liberty, stating that "No person shall be deprived of his life or personal liberty except according to procedure established by law." Over time, the judiciary has expanded the scope of Article 21 to include the right to a clean and healthy environment as an essential component of the right to life.

The Supreme Court of India has consistently interpreted Article 21 in an expansive manner, recognising environmental pollution as a violation of fundamental rights. Landmark judgments such as *Subhash Kumar v. State of Bihar* (1991) and *M.C. Mehta v. Union of India* series have established that the right to life includes the right to pollution-free water, air, and a sustainable environment.

In the context of TEK and sacred groves, Article 21 provides an indirect but powerful constitutional basis for environmental protection. Degradation of sacred groves can be interpreted as a violation of community rights to a healthy environment. However, the lack of explicit recognition of community-based ecological systems means that enforcement under Article 21 remains largely reactive and litigation-driven rather than preventive or culturally integrated.

- **Article 48A: Directive Principle of Environmental Protection**

Article 48A, inserted through the 42nd Constitutional Amendment Act, 1976, is part of the Directive Principles of State Policy. It states that:

"The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country."

Although not justiciable, Article 48A places a constitutional obligation on the State to ensure environmental protection. It reflects the policy commitment of the Indian State towards ecological conservation.

However, Article 48A primarily operates within a state-centric governance model. It does not explicitly recognise community-led conservation systems such as sacred groves or indigenous knowledge systems as part of environmental governance. As a result, while the State is constitutionally bound to protect forests, the role of traditional custodians remains secondary or informal within this framework.

- **Article 51A(g): Fundamental Duty of Environmental Protection**

Article 51A(g), also introduced through the 42nd Amendment, imposes a fundamental duty on every citizen of India to:

"Protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures."

This provision is particularly significant because it shifts environmental responsibility from the State alone to individual citizens and communities. It aligns more closely with the ethos of TEK systems, where environmental stewardship is a collective moral responsibility.

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In theory, Article 51A(g) provides constitutional space for recognising community-based conservation practices, including sacred groves. However, in practice, this provision is largely symbolic and lacks enforcement mechanisms. It does not explicitly acknowledge customary ecological practices or provide legal protection to traditional governance systems.

3.2 Statutory Framework

India's environmental governance is further supported by a range of environmental statutes. Among the most relevant to TEK and sacred groves are the Biological Diversity Act, 2002, the Forest Conservation Act, 1980, and the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.

- **Biological Diversity Act, 2002**

The Biological Diversity Act, 2002 (BDA) is one of the most important legislative instruments for biodiversity conservation in India. It was enacted to give effect to the Convention on Biological Diversity (1992), focusing on the conservation of biological resources, sustainable use, and fair benefit-sharing.

A key feature of the Act is its recognition of the role of local communities in biodiversity conservation. The Act provides for the establishment of **Biodiversity Management Committees (BMCs)** at the local level, which are responsible for documenting biological resources and associated traditional knowledge through People's Biodiversity Registers (PBRs).

Importantly, the Act acknowledges "associated traditional knowledge" as part of biodiversity governance. This creates a statutory entry point for recognising TEK systems, including knowledge related to sacred groves.

However, there are significant limitations. First, the implementation of BMCs varies widely across states, and many remain non-functional or poorly resourced. Second, the Act does not explicitly recognise sacred groves as distinct legal entities. Instead, they are subsumed under broader biodiversity categories, which dilutes their cultural and spiritual significance.

Furthermore, while the Act provides for benefit-sharing mechanisms, it does not adequately address collective custodianship or customary governance systems that manage sacred groves. As a result, TEK is recognised in principle but not fully integrated into governance practice.

- **Forest (Conservation) Act, 1980**

The Forest (Conservation) Act, 1980 is a central legislation aimed at regulating the diversion of forest land for non-forest purposes. It requires prior approval from the Central Government for any such diversion, thereby providing a regulatory safeguard against deforestation.

While the Act plays a crucial role in forest conservation, it operates primarily within a bureaucratic and state-controlled framework. Forests are defined in legal and administrative terms, often excluding community-managed and culturally protected spaces such as sacred groves unless they are officially recorded as forest land.

This creates a legal invisibility for many sacred groves, especially those located on community or revenue land. Since their protection is often based on customary norms rather than formal forest classification, they may not fall within the ambit of the Act.

Additionally, the Act does not recognise community ownership or traditional governance structures. Decision-making authority remains centralised, limiting the role of local communities in forest conservation.

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Thus, while the Forest Conservation Act is essential for regulating deforestation, it does not adequately accommodate TEK-based conservation systems or culturally protected ecological spaces.

- **Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006**

The Forest Rights Act (FRA), 2006 is a landmark legislation that recognises the rights of forest-dwelling communities over land and natural resources. It aims to correct historical injustices committed against tribal and forest-dependent communities by granting them legal rights over forest land and resources.
The FRA is particularly significant for TEK and sacred groves because it recognises both **individual and community forest rights**. It empowers Gram Sabhas (village assemblies) to determine forest rights, manage forest resources, and protect community forests.
Section 3 of the Act provides for community rights to use, manage, and conserve forest resources, which can potentially include sacred groves. The Act also strengthens the role of Gram Sabhas as primary decision-making bodies in forest governance.
However, implementation challenges persist. In many cases, sacred groves are not formally recorded as community forest resources under the FRA, leading to uncertainty about their legal status. Additionally, conflicts between forest departments and local communities often hinder the effective exercise of community rights.
Despite these limitations, the FRA represents one of the most progressive legal frameworks for integrating TEK into formal governance structures.

3.3 Role of Local Governance Institutions

Local governance institutions play a crucial role in bridging the gap between constitutional ideals, statutory provisions, and community-based environmental practices. Two key institutions in this context are the Gram Sabha and Biodiversity Management Committees (BMCs).

- **Gram Sabha: The Foundation of Grassroots Environmental Governance**

The Gram Sabha, consisting of all registered voters in a village, is the cornerstone of local self-governance in India under the Panchayati Raj system. It plays a central role in rural decision-making, including matters related to land use, natural resources, and community welfare.
Under the Forest Rights Act, the Gram Sabha is empowered to:

- Initiate the process of recognising forest rights
- Manage community forest resources
- Protect forests and biodiversity
- Ensure sustainable use of natural resources

In the context of sacred groves, the Gram Sabha can function as a custodian institution responsible for protecting and managing these ecological spaces. Since sacred groves are often embedded in village traditions, Gram Sabhas are well-positioned to integrate customary conservation practices into formal governance structures.
However, the effectiveness of Gram Sabhas varies widely. In many regions, their role is weakened by political interference, lack of awareness, and limited administrative capacity.

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- **Biodiversity Management Committees (BMCs)**

Biodiversity Management Committees, established under the Biological Diversity Act, 2002, are mandated to be formed at the local body level (Panchayats and Municipalities). Their primary functions include:

- Preparing People's Biodiversity Registers (PBRs)
- Documenting local biodiversity and associated knowledge
- Advising on conservation and sustainable use
- Supporting benefit-sharing mechanisms

BMCs are particularly relevant for documenting sacred groves and associated TEK. By recording traditional knowledge and ecological practices, they can serve as institutional bridges between customary systems and formal biodiversity governance.

However, similar to Gram Sabhas, BMCs suffer from weak institutional capacity, lack of funding, and limited integration with higher-level decision-making bodies.

3.4 Concluding Analysis

The constitutional and legal framework of India provides a strong theoretical foundation for environmental protection, particularly through Articles 21, 48A, and 51A(g), as well as progressive statutes like the Biological Diversity Act, 2002 and the Forest Rights Act, 2006. However, despite these provisions, there remains a significant gap in the formal recognition of TEK systems and sacred groves.

While local governance institutions such as Gram Sabhas and Biodiversity Management Committees offer promising avenues for community-based conservation, their effectiveness is constrained by institutional weaknesses and lack of consistent implementation.

Thus, the current legal framework reflects a partial and fragmented recognition of traditional ecological systems. A more integrated and culturally sensitive legal approach is required to fully incorporate sacred groves and TEK into India's environmental governance architecture.

4. Judicial Approach and Environmental Jurisprudence

Indian environmental jurisprudence has evolved largely through **judicial innovation**, with the higher judiciary—particularly the Supreme Court—playing a transformative role in expanding the scope of environmental protection. In the absence of a comprehensive statutory framework in the early years, courts have relied on **constitutional interpretation, international principles, and equitable doctrines** to develop a robust body of environmental law. This section examines three core dimensions: the expansion of environmental rights under Article 21, the application of the Public Trust Doctrine and sustainable development, and key judicial decisions on forest rights and environmental protection.

4.1 Expansion of Environmental Rights under Article 21

The transformation of Article 21 of the Constitution of India into a source of environmental rights represents one of the most significant developments in Indian constitutional law. Originally interpreted narrowly, Article 21 has been expanded to include the **right to a wholesome, pollution-free environment**, thereby linking environmental protection with fundamental rights.

The foundation for this expansion was laid in:

- ***Subhash Kumar v State of Bihar, (1991) 1 SCC 598:*** The Supreme Court held that the **right to life includes the right to enjoyment of pollution-free water and air**, making environmental protection enforceable through writ jurisdiction. The Court emphasized that environmental degradation directly affects the quality of life.

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- ***Rural Litigation and Entitlement Kendra v State of Uttar Pradesh, 1985 Supp SCC 79:*** One of the earliest environmental PILs, where the Court ordered the closure of limestone quarries in the Dehradun region, recognizing ecological balance as essential to life under Article 21.
- ***M.C. Mehta v Union of India, (1987) 1 SCC 395:*** The Court evolved the doctrine of **absolute liability**, holding hazardous industries strictly liable for harm caused, without exceptions. This case marked a shift toward **strict environmental accountability**.
- ***Virender Gaur v State of Haryana, (1995) 2 SCC 577:*** The Court reaffirmed that environmental, ecological, and hygienic conditions are integral to the **right to life**, emphasizing the State's duty to maintain environmental standards.

Through these decisions, Article 21 has evolved into a **powerful tool for environmental governance**, enabling judicial intervention in cases of pollution, ecological degradation, and public health risks.

4.2 Public Trust Doctrine and Sustainable Development

Indian courts have incorporated key environmental doctrines from international law into domestic jurisprudence, particularly the **Public Trust Doctrine** and **sustainable development**, thereby strengthening the legal framework for environmental protection.

(a) Public Trust Doctrine

- ***M.C. Mehta v Kamal Nath, (1997) 1 SCC 388:*** The Supreme Court formally adopted the Public Trust Doctrine, holding that **natural resources such as rivers, forests, and air are held by the State in trust for the public**. The Court invalidated the lease of forest land for private commercial use, emphasizing that the State cannot abdicate its fiduciary responsibility.
- ***Intellectuals Forum v State of Andhra Pradesh, (2006) 3 SCC 549:*** The Court reiterated that the State is a **trustee of natural resources**, and any action that compromises ecological balance violates public trust obligations.

(b) Sustainable Development

- ***Vellore Citizens Welfare Forum v Union of India, (1996) 5 SCC 647:*** A landmark judgment where the Court explicitly recognized **sustainable development** as part of Indian law. It incorporated:
  - Precautionary Principle
  - Polluter Pays Principle

The Court held that development must not come at the cost of environmental degradation.

- ***Indian Council for Enviro-Legal Action v Union of India, (1996) 3 SCC 212***: The Court enforced the **Polluter Pays Principle**, directing industries to compensate for environmental damage caused by hazardous waste.
- ***Narmada Bachao Andolan v Union of India, (2000) 10 SCC 664***: The Court upheld the construction of the Sardar Sarovar Dam, emphasizing that **sustainable development requires balancing environmental concerns with developmental needs**.

These doctrines have become **cornerstones of Indian environmental law**, ensuring that environmental protection is integrated into policy and decision-making processes.

4.3 Judicial Approach to Forest Rights and Environmental Protection

The judiciary has played a complex role in balancing **forest conservation with the rights of indigenous communities**, often navigating tensions between ecological protection and livelihood concerns.

(a) Forest Conservation Jurisprudence

- ***T.N. Godavarman Thirumulpad v Union of India, (1997) 2 SCC 267 and subsequent orders***: This ongoing case is one of the most significant in Indian environmental law. The Court:

Advanced International Journal of Multidisciplinary Research
E-ISSN: 2584-0487
editor@aijmr.com
Volume 4, Issue 3, May-June 2026
CrossRef DOI: 10.62127/aijmr.2026.v04i03.1306

- Expanded the definition of "forest" beyond statutory classification
- Imposed a nationwide ban on deforestation without approval
- Established continuous judicial monitoring (continuing mandamus)

While it strengthened conservation, it also raised concerns about **centralization of forest governance**.

(b) Recognition of Community and Cultural Rights

- ***Orissa Mining Corporation v Ministry of Environment & Forest, (2013) 6 SCC 476:*** The Supreme Court recognized the rights of tribal communities under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, allowing Gram Sabhas to decide whether mining could proceed in the Niyamgiri hills.
  This case is significant for:
  - Recognizing **cultural and religious rights linked to forests**
  - Affirming **community participation in environmental decision-making**
- ***Samatha v State of Andhra Pradesh, (1997) 8 SCC 191:*** The Court held that tribal lands cannot be leased to private mining companies, emphasizing the protection of **indigenous land and forest rights**.

(c) Judicial Trends and Tensions

While courts have increasingly acknowledged community rights, there remains a tension between:

- **Conservation-centric approaches (state control)**
- **Community-based ecological practices (customary governance)**

This tension is particularly relevant for **sacred groves**, which are often governed by **customary laws rather than formal legal recognition**.

4.4 Conclusion of the Section

Indian environmental jurisprudence reflects a **dynamic and evolving legal framework**, shaped by judicial activism and constitutional interpretation. Through the expansion of Article 21, the adoption of doctrines such as **public trust and sustainable development**, and progressive rulings on forest rights, the judiciary has established a **strong normative foundation for environmental protection**.

However, the jurisprudence also reveals an ongoing challenge: **harmonizing state-led conservation with community-based ecological knowledge systems**, including sacred groves. Future judicial approaches must move toward a more **inclusive and pluralistic model**, recognizing that sustainable environmental governance requires both **legal regulation and the preservation of traditional ecological practices**.

5. Case Studies: Sacred Groves in Practice

Sacred groves across India represent **living examples of Traditional Ecological Knowledge (TEK)**, where ecological conservation is sustained through **cultural beliefs, customary laws, and community governance systems**. These groves are not isolated environmental units but are embedded within **social, religious, and economic life**, making them highly resilient conservation models. This section provides a detailed regional analysis to demonstrate their ecological, legal, and governance significance.

5.1 Western Ghats (Kerala and Karnataka)

The Western Ghats, one of the world's eight "hottest biodiversity hotspots," contain thousands of sacred groves, particularly in Kerala and Karnataka. Locally known as *kavus* in Kerala and *devarakadus* in Karnataka, these groves are traditionally dedicated to **local deities, serpent spirits (Nāga worship), or ancestral forces**.

Advanced International Journal of Multidisciplinary Research
E-ISSN: 2584-0487
editor@aijmr.com
Volume 4, Issue 3, May-June 2026
CrossRef DOI: 10.62127/aijmr.2026.v04i03.1306

Ecological Significance

Sacred groves in this region function as:

- **Micro-reserves of biodiversity**, often preserving species that have disappeared from surrounding landscapes
- Refugia for **endemic and endangered flora and fauna**
- Critical regulators of **local hydrology**, helping in groundwater recharge and maintaining perennial water sources

Scientific studies have shown that even small sacred groves exhibit **higher species richness and ecological stability** compared to nearby degraded forests.

Governance and Customary Practices

Protection of these groves is ensured through:

- Religious taboos prohibiting cutting of trees or hunting
- Ritual practices that reinforce ecological stewardship
- Informal community monitoring

In Kodagu (Coorg), for example, sacred groves are maintained by **clan-based or village-level institutions**, reflecting a decentralized governance model.

Challenges

Despite their importance, sacred groves in the Western Ghats face increasing threats:

- Conversion into agricultural or plantation land (coffee, rubber)
- Urban expansion and infrastructure development
- Decline in traditional belief systems among younger generations

Crucially, these groves lack **clear statutory recognition**, making them vulnerable under formal land-use regimes.

5.2 Meghalaya Sacred Groves

Meghalaya hosts some of the **most intact and ecologically rich sacred groves in India**, particularly among the Khasi, Jaintia, and Garo communities. The Mawphlang Sacred Grove is widely cited as a classic example of **community-led conservation**.

Ecological Features

These groves are characterized by:

- Dense forest cover with **multi-layered vegetation**
- Presence of **rare, endemic, and medicinal plant species**
- Minimal human interference, resulting in near-pristine ecological conditions

The biodiversity within these groves often exceeds that of formally protected areas, highlighting their conservation effectiveness.

Governance Structure

The governance of sacred groves in Meghalaya is highly institutionalized within traditional systems:

- Managed by local bodies such as **Dorbar Shnong (village councils)**
- Strict customary laws prohibit removal of any forest produce, including deadwood
- Violations are met with **social sanctions and spiritual consequences**

This system reflects a **deep integration of ecology with cultural and spiritual values**, ensuring long-term sustainability.

Advanced International Journal of Multidisciplinary Research
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editor@aijmr.com
Volume 4, Issue 3, May-June 2026
CrossRef DOI: 10.62127/aijmr.2026.v04i03.1306

Legal Interface

Although these groves align with the objectives of the Biological Diversity Act, 2002, formal legal recognition remains limited. Biodiversity Management Committees (BMCs) have the potential to integrate these systems into statutory frameworks, but implementation has been inconsistent.

Contemporary Challenges

- Changing socio-economic aspirations
- External development pressures
- Gradual weakening of customary authority

Nevertheless, Meghalaya's sacred groves remain among the **best-preserved examples of indigenous conservation systems globally**.

5.3 Central India Tribal Regions

In Central India—covering states such as Jharkhand, Chhattisgarh, and Madhya Pradesh—sacred groves form an integral part of **tribal cosmology and socio-cultural life**. Known as *Sarna*, *Dev Van*, or *Jaher Than*, these groves are closely associated with:

- Ancestor worship
- Seasonal festivals
- Community rituals and identity

Ecological Role

Sacred groves in these regions contribute to:

- Conservation of **indigenous plant species and forest biodiversity**
- Protection of **water bodies and micro-watersheds**
- Maintenance of **local climatic conditions**

Unlike the relatively isolated groves of the Western Ghats, these groves are often embedded within **larger forest landscapes**, forming part of a broader ecological network.

Customary Governance

Governance is typically informal and community-driven:

- Managed by tribal councils or elders
- Protected through customary norms and ritual obligations
- Integrated into everyday life and cultural practices

This system ensures **collective responsibility and intergenerational continuity**.

Legal Context and Gaps

The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 provides a framework for recognizing **community forest rights**, including cultural and religious practices. However:

- Sacred groves are rarely explicitly documented or mapped
- Implementation varies widely across states
- Bureaucratic processes often overlook customary systems

Threats

- Mining and industrial activities
- Deforestation and land acquisition
- Weak enforcement of forest rights

These pressures highlight the vulnerability of sacred groves in the absence of **formal legal protection**.

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5.4 Role of Community Governance and Customary Practices

A unifying feature across all regions is the central role of **community governance**, which distinguishes sacred groves from state-managed conservation models.

(a) Informal Legal Systems

Sacred groves are governed by **customary laws**, which are:

- Unwritten but deeply internalized
- Enforced through social norms and collective belief systems
- Often more effective than formal legal sanctions

(b) Collective Stewardship

Responsibility for conservation is shared among:

- Community members
- Religious leaders
- Traditional institutions

This collective approach fosters **long-term commitment and accountability**.

(c) Integration of Culture and Ecology

Sacred groves embody a holistic worldview where:

- Nature is sacred and not merely a resource
- Conservation is a moral and spiritual obligation
- Ecological balance is linked to social harmony

This contrasts sharply with modern legal frameworks, which tend to treat environmental protection as a **regulatory or administrative function**.

(d) Sustainability and Resilience

Community-based systems have demonstrated:

- High levels of **ecological sustainability**
- Adaptability to changing conditions
- Strong resilience due to cultural reinforcement

5.5 Key Insights from the Case Studies

The regional analysis reveals several critical insights:

1. Sacred groves function as **effective community-conserved areas**, often outperforming formal conservation mechanisms.
2. **Traditional Ecological Knowledge (TEK)** plays a central role in maintaining biodiversity and ecological balance.
3. Community governance systems provide **sustainable and decentralized models of environmental management**.
4. There exists a significant **gap between customary practices and formal legal recognition**, leading to vulnerability.

5.6 Conclusion of the Section

Sacred groves in India demonstrate that **environmental conservation can be deeply rooted in cultural and ethical systems**, rather than relying solely on statutory regulation. They offer a powerful example of how **community-based governance and traditional knowledge** can achieve long-term ecological sustainability.

However, their continued survival depends on bridging the gap between **customary systems and formal legal frameworks**. Recognizing sacred groves as legitimate conservation entities within Indian

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environmental law is essential for preserving both **biodiversity and cultural heritage**, and for advancing a more inclusive and sustainable model of environmental governance.

6. Challenges in Legal Recognition

Despite their ecological value and long-standing cultural legitimacy, sacred groves and the **Traditional Ecological Knowledge (TEK)** embedded within them continue to face significant barriers in achieving **formal legal recognition in India**. These challenges arise from structural gaps in environmental law, tensions between governance models, and broader socio-economic transformations. This section critically examines the key obstacles that hinder the effective protection of sacred groves.

6.1 Lack of Formal Legal Status

One of the most fundamental challenges is the **absence of explicit statutory recognition** for sacred groves within Indian environmental law. While various laws address biodiversity conservation and forest management, none provide a **clear, dedicated legal category for sacred groves as community-conserved ecosystems**.

Existing frameworks such as the Biological Diversity Act, 2002 and the Forest Conservation Act, 1980 indirectly support conservation objectives, but they:

- Do not specifically identify sacred groves as protected entities
- Fail to incorporate **customary governance systems**
- Often prioritize **state-led conservation models**

As a result, sacred groves remain legally invisible or ambiguously categorized, making them vulnerable to:

- Encroachment
- Land-use change
- Administrative neglect

This lack of recognition also limits access to **institutional support, funding, and policy protection**.

6.2 Conflict between State Control and Community Rights

A major structural challenge lies in the tension between **centralized state control over forests** and **decentralized community-based management systems**. Indian forest laws have historically followed a **top-down governance approach**, where the State exercises primary authority over forest resources.

Although the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 seeks to recognize community forest rights, its implementation has been uneven. In practice:

- Bureaucratic procedures often override customary practices
- Community claims over sacred groves are frequently under-recognized
- Decision-making authority remains concentrated in state institutions

This creates a **legal and administrative disconnect**, where:

- Sacred groves are protected in practice by communities
- But controlled in law by the State

Such conflicts undermine the **autonomy and effectiveness of traditional conservation systems**, and may lead to alienation of local communities.

6.3 Commercial Exploitation and Urbanization

Rapid economic development has intensified pressures on land and natural resources, posing a serious threat to sacred groves. Key drivers include:

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E-ISSN: 2584-0487
editor@aijmr.com
Volume 4, Issue 3, May-June 2026
CrossRef DOI: 10.62127/aijmr.2026.v04i03.1306

- Infrastructure development (roads, urban expansion)
- Agricultural and plantation activities
- Mining and industrial projects

In many cases, sacred groves are not officially recorded in land-use maps, making them particularly vulnerable to:

- Acquisition for commercial purposes
- Illegal encroachment
- Conversion into non-forest land

The absence of legal recognition allows such activities to proceed with minimal scrutiny, despite their **irreversible ecological and cultural impact**.

Furthermore, market-driven resource exploitation often conflicts with the **non-commercial, conservation-oriented ethos** of sacred groves, leading to their gradual degradation.

6.4 Erosion of Traditional Practices

The sustainability of sacred groves depends heavily on **cultural beliefs, rituals, and customary norms**. However, these practices are increasingly under threat due to:

- Modernization and changing lifestyles
- Decline in traditional knowledge transmission
- Influence of formal education systems that marginalize indigenous knowledge

As younger generations move away from traditional belief systems, the **social and moral foundations of conservation weaken**. This results in:

- Reduced community participation
- Relaxation of customary restrictions
- Increased vulnerability to external exploitation

The erosion of traditional practices is particularly concerning because sacred groves rely on **informal enforcement mechanisms**, which cannot be easily replaced by formal legal systems.

6.5 Institutional and Policy Gaps

Another critical challenge is the lack of **institutional coordination and policy clarity**. While multiple agencies are involved in environmental governance—forest departments, biodiversity boards, local self-government institutions—there is:

- No unified policy framework for sacred groves
- Limited integration between laws governing forests, biodiversity, and tribal rights
- Inadequate documentation and mapping of sacred groves

This fragmented approach leads to **policy inconsistency and administrative inefficiency**, further complicating efforts at legal recognition and protection.

6.6 Knowledge and Documentation Deficit

Sacred groves are often **poorly documented**, with limited scientific and legal recognition of their existence. Many groves:

- Exist only in oral traditions
- Are not recorded in official land or forest records
- Lack formal boundaries or classification

This invisibility in official data systems makes it difficult to:

- Extend legal protection

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E-ISSN: 2584-0487
editor@aijmr.com
Volume 4, Issue 3, May-June 2026
CrossRef DOI: 10.62127/aijmr.2026.v04i03.1306

- Monitor ecological health
- Integrate them into conservation planning

6.7 Conclusion of the Section

The challenges in legal recognition of sacred groves are **multifaceted**, encompassing legal, institutional, socio-cultural, and economic dimensions. The lack of formal status, conflicts between state and community governance, increasing commercial pressures, and the erosion of traditional practices collectively threaten the survival of these vital ecological systems.

Addressing these challenges requires a **paradigm shift in environmental governance**, moving from a purely state-centric approach to one that **recognizes, respects, and integrates community-based conservation systems**. Without such reform, sacred groves risk being marginalized despite their critical role in sustaining biodiversity and ecological balance.

7. Comparative and International Perspectives

The discourse on **Traditional Ecological Knowledge (TEK)** and community-based conservation is not unique to India. Across the globe, indigenous communities have developed **sophisticated ecological practices** that contribute significantly to biodiversity conservation and sustainable resource management. International legal instruments and comparative national frameworks increasingly recognize the value of such knowledge systems. This section situates the Indian experience within a broader global context, examining (i) recognition of indigenous knowledge globally, (ii) the role of the Convention on Biological Diversity (CBD), and (iii) key lessons for India.

7.1 Recognition of Indigenous Knowledge Globally

In many jurisdictions, indigenous knowledge systems are now acknowledged as **integral to environmental governance**, particularly in regions with strong indigenous populations.

(a) Latin America

Countries such as Brazil, Bolivia, and Ecuador have incorporated **indigenous rights and environmental protection** into their constitutional frameworks. Notably:

- Ecuador recognizes the concept of **"Rights of Nature" (Pachamama)**, granting ecosystems legal standing
- Indigenous communities are granted **territorial rights and participatory governance powers**

These frameworks reflect a shift from state-centric conservation to **community-centered ecological stewardship**.

(b) Australia

Australia recognizes Aboriginal ecological knowledge through:

- **Co-management of protected areas**
- Indigenous Protected Areas (IPAs), where communities manage land using traditional practices

This model integrates TEK with scientific conservation, creating a **hybrid governance system**.

(c) Canada

Canada has developed mechanisms for incorporating indigenous knowledge into environmental decision-making, particularly through:

- Land claims agreements
- Co-management boards
- Recognition of **First Nations' ecological knowledge in environmental assessments**

(d) Africa

Advanced International Journal of Multidisciplinary Research
E-ISSN: 2584-0487
editor@aijmr.com
Volume 4, Issue 3, May-June 2026
CrossRef DOI: 10.62127/aijmr.2026.v04i03.1306

Several African countries recognize community-based conservation through:

- Customary land rights
- Community conservancies (e.g., Kenya, Namibia)

These systems emphasize **local participation and benefit-sharing**, ensuring that conservation aligns with community interests.

7.2 Convention on Biological Diversity (CBD) and TEK

The Convention on Biological Diversity represents the most significant international legal instrument recognizing the role of indigenous knowledge in biodiversity conservation.

(a) Article 8(j): Core Recognition

Article 8(j) of the CBD explicitly requires States to:

- Respect, preserve, and maintain **knowledge, innovations, and practices of indigenous and local communities**
- Promote their wider application with the **approval and involvement of knowledge holders**
- Ensure **equitable sharing of benefits** arising from the use of such knowledge

This provision establishes TEK as a **legitimate and valuable component of environmental governance**.

(b) Nagoya Protocol (2010)

The CBD is supplemented by the Nagoya Protocol, which focuses on:

- Access to genetic resources
- Fair and equitable benefit-sharing

It reinforces the need to protect **community rights over biological resources and associated knowledge**.

(c) Global Policy Influence

The CBD has influenced national legislation worldwide, encouraging countries to:

- Document and protect traditional knowledge
- Establish community-based conservation systems
- Integrate TEK into biodiversity policies

India, as a signatory, has incorporated some of these principles into the Biological Diversity Act, 2002, though implementation remains partial.

7.3 Lessons for India

A comparative analysis reveals several important lessons that can inform the legal recognition of sacred groves and TEK in India:

(a) Legal Recognition of Community-Conserved Areas

Countries such as Australia and Namibia demonstrate the effectiveness of formally recognizing **community-managed conservation areas**. India can adopt similar models by:

- Legally recognizing sacred groves as **Community Conserved Areas (CCAs)**
- Providing statutory backing to customary governance systems

(b) Strengthening Participatory Governance

Global best practices emphasize **co-management frameworks**, where:

- Communities share decision-making authority with the State
- Local knowledge informs policy and implementation

India can enhance the role of Gram Sabhas and Biodiversity Management Committees in line with this approach.

(c) Protection of Traditional Knowledge

International frameworks highlight the need to:

Advanced International Journal of Multidisciplinary Research
E-ISSN: 2584-0487
editor@aijmr.com
Volume 4, Issue 3, May-June 2026
CrossRef DOI: 10.62127/aijmr.2026.v04i03.1306

- Safeguard TEK from misappropriation
- Ensure **benefit-sharing mechanisms**
- Recognize intellectual and cultural rights of communities

This is particularly relevant in the context of bio-prospecting and commercialization of biological resources.

(d) Integration of Culture and Ecology

Many countries recognize that conservation is most effective when it is **culturally embedded**. Sacred groves exemplify this principle, and Indian law must:

- Move beyond purely scientific or regulatory approaches
- Incorporate **cultural and spiritual dimensions of conservation**

(e) Documentation and Policy Integration

International experiences show the importance of:

- Systematic documentation of indigenous knowledge
- Integration of TEK into national biodiversity strategies

India must address its current **documentation deficit** to ensure effective protection.

7.4 Conclusion of the Section

The global recognition of indigenous knowledge systems underscores a fundamental shift in environmental governance—from **centralized, state-driven models to inclusive, community-based approaches**. International frameworks such as the Convention on Biological Diversity affirm that **Traditional Ecological Knowledge is indispensable for sustainable development and biodiversity conservation**.

For India, these comparative insights highlight the urgent need to:

- Provide **formal legal recognition to sacred groves**
- Strengthen community participation in environmental governance
- Integrate TEK into statutory and policy frameworks

By aligning domestic law with international best practices, India can develop a more **holistic, inclusive, and sustainable model of environmental protection**, ensuring that traditional knowledge systems are preserved as vital components of its ecological and cultural heritage.

8. Towards a Harmonized Legal Framework

The preceding analysis reveals a persistent gap between **formal environmental law** and the lived realities of **Traditional Ecological Knowledge (TEK)** embodied in sacred groves. A harmonized framework must therefore move beyond piecemeal recognition and develop a **coherent, integrated approach** that respects community practices while ensuring legal protection and accountability. This section proposes a multi-dimensional framework grounded in constitutional values, statutory reform, and participatory governance.

8.1 Integrating TEK into Environmental Law

A foundational step is the **systematic integration of TEK into existing environmental legal frameworks**. While India has enacted progressive legislation such as the Biological Diversity Act, 2002, the incorporation of traditional knowledge remains **partial and largely procedural**.

To meaningfully integrate TEK:

- **Legal Recognition of Knowledge Systems**: TEK should be formally acknowledged as a **legitimate source of ecological knowledge**, alongside scientific expertise, in environmental decision-making processes.

Advanced International Journal of Multidisciplinary Research
E-ISSN: 2584-0487
editor@aijmr.com
Volume 4, Issue 3, May-June 2026
CrossRef DOI: 10.62127/aijmr.2026.v04i03.1306

- **Inclusion in Environmental Impact Assessments (EIA)**: Local ecological knowledge must be incorporated into project assessments, particularly in regions where sacred groves exist.
- **Protection against Misappropriation**: Legal safeguards should prevent the exploitation of traditional knowledge without **prior informed consent and benefit-sharing**, consistent with international norms.
- **Judicial Recognition**: Courts can play a role in recognizing TEK as part of environmental jurisprudence, particularly in cases involving community conservation practices.

Integrating TEK into law ensures that environmental governance becomes **context-sensitive, culturally informed, and ecologically effective**.

8.2 Recognition of Sacred Groves as Community-Conserved Areas

A critical reform is the formal recognition of sacred groves as **Community-Conserved Areas (CCAs)** within the legal framework. Currently, sacred groves exist in a **legal grey area**, lacking explicit statutory protection.

This can be addressed through:

- **Statutory Classification**: Amending environmental laws to create a specific category for sacred groves as protected ecological entities.
- **Linkages with Existing Laws**: Utilizing provisions under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 to recognize community forest rights over sacred groves.
- **Biodiversity Registers**: Documenting sacred groves under local biodiversity registers managed by Biodiversity Management Committees.
- **Legal Safeguards**: Ensuring that these areas are protected from land-use change, commercial exploitation, and encroachment.

Recognition as CCAs would provide **legal legitimacy, institutional support, and long-term protection**, while preserving the community-based character of these systems.

8.3 Strengthening Decentralized Governance

Effective protection of sacred groves requires a shift from centralized control to **decentralized, participatory governance models**. Community institutions have historically demonstrated their ability to manage these ecosystems sustainably.

Key measures include:

- **Empowering Gram Sabhas**: Strengthening the role of local self-governance bodies in decision-making related to forest and biodiversity management.
- **Institutional Coordination**: Enhancing collaboration between forest departments, biodiversity boards, and local communities.
- **Capacity Building**: Providing training and resources to community institutions for effective conservation and management.
- **Legal Pluralism**: Recognizing customary laws as complementary to formal legal systems, thereby creating a **hybrid governance model**.

Decentralized governance aligns with constitutional principles of **democracy, participation, and subsidiarity**, ensuring that conservation efforts are both effective and inclusive.

8.4 Policy Recommendations

To operationalize a harmonized framework, the following policy interventions are essential:

Advanced International Journal of Multidisciplinary Research
E-ISSN: 2584-0487
editor@aijmr.com
Volume 4, Issue 3, May-June 2026
CrossRef DOI: 10.62127/aijmr.2026.v04i03.1306

(a) Legal and Institutional Reforms

- Introduce a **national policy on sacred groves and TEK**
- Amend existing environmental laws to explicitly recognize community-conserved ecosystems
- Establish clear guidelines for **documentation, protection, and management**

(b) Documentation and Mapping

- Conduct nationwide surveys to identify and map sacred groves
- Integrate these data into official land and forest records
- Support community-led documentation initiatives

(c) Financial and Administrative Support

- Provide funding for conservation activities through government schemes
- Incentivize community participation through **eco-development programs**
- Ensure administrative support for Biodiversity Management Committees

(d) Awareness and Education

- Promote awareness about the ecological and cultural importance of sacred groves
- Integrate TEK into educational curricula
- Encourage interdisciplinary research on traditional knowledge systems

(e) Judicial and Policy Integration

- Encourage courts to recognize sacred groves in environmental litigation
- Align national policies with international commitments such as the Convention on Biological Diversity
- Develop guidelines for incorporating TEK into climate change and biodiversity strategies

8.5 Conclusion of the Section

A harmonized legal framework for sacred groves and TEK requires a **paradigm shift in environmental governance**, moving from exclusionary, state-centric models to **inclusive, community-oriented approaches**. By integrating traditional knowledge into formal law, recognizing sacred groves as community-conserved areas, and strengthening decentralized governance, India can create a system that is both **ecologically sustainable and socially just**.

Such a framework not only protects biodiversity but also preserves **cultural heritage and indigenous knowledge**, ensuring that conservation efforts are rooted in the lived experiences of local communities. Ultimately, harmonization is not merely a legal exercise but a **transformative process** that redefines the relationship between law, society, and the environment.

9. Conclusion

The analysis of sacred groves and **Traditional Ecological Knowledge (TEK)** demonstrates that environmental conservation in India cannot be effectively pursued through **purely state-centric, regulatory approaches**. Instead, it requires a more nuanced framework that recognizes the **interdependence of ecology, culture, and community practices**. Sacred groves exemplify how conservation can be sustained over centuries through **customary norms, spiritual values, and collective responsibility**, offering a model that is both ecologically effective and socially embedded.

Balancing Conservation with Cultural Rights

A central challenge lies in reconciling **environmental conservation with cultural and community rights**. While modern environmental law emphasizes protection through regulation and enforcement, sacred groves are governed by **customary systems that derive legitimacy from tradition and belief**.

Advanced International Journal of Multidisciplinary Research
E-ISSN: 2584-0487
editor@aijmr.com
Volume 4, Issue 3, May-June 2026
CrossRef DOI: 10.62127/aijmr.2026.v04i03.1306

Ignoring these systems risks not only undermining conservation outcomes but also eroding the **cultural identities and rights of indigenous and local communities**.
The constitutional framework, particularly the Constitution of India, supports such a balance by:

- Recognizing the right to life under Article 21, which includes environmental protection
- Encouraging environmental stewardship under Articles 48A and 51A(g)
- Upholding cultural and community rights as integral to a pluralistic society

Thus, a balanced approach must ensure that conservation policies do not displace or marginalize communities but instead **empower them as primary stakeholders in environmental governance**.

Integrating Traditional Knowledge into Modern Law

The study underscores the urgent need to integrate TEK into formal legal frameworks. While statutes such as the Biological Diversity Act, 2002 and the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 provide partial recognition, their implementation remains **fragmented and insufficient**.
Integrating TEK into modern law requires:

- Formal recognition of sacred groves as **community-conserved ecological systems**
- Incorporation of traditional knowledge into **policy-making, environmental assessments, and judicial reasoning**
- Protection of community rights through **participatory governance mechanisms**

Such integration would not only strengthen conservation efforts but also ensure that environmental law becomes **inclusive, context-sensitive, and culturally grounded**.

Future of Sustainable Environmental Governance in India

The future of environmental governance in India lies in **harmonizing traditional knowledge systems with modern legal frameworks**. Sacred groves provide a powerful illustration of how **community-based conservation** can complement statutory regulation, offering a model that is both sustainable and resilient.
Moving forward, India must:

- Transition from a **top-down regulatory model** to a **participatory and decentralized approach**
- Recognize the value of **legal pluralism**, where customary and formal systems coexist
- Align domestic policies with global commitments such as the Convention on Biological Diversity

Ultimately, sustainable environmental governance requires a shift in perspective—from viewing nature as a resource to be managed, to recognizing it as a **shared heritage that demands ethical responsibility and collective stewardship**.

Final Reflection

Sacred groves are not merely remnants of the past; they are **living institutions of ecological wisdom**. Their continued survival depends on the ability of the legal system to **adapt, recognize, and integrate** these traditional practices within contemporary frameworks.
By bridging the divide between **law and tradition, conservation and culture, and state and community**, India can develop a model of environmental governance that is not only effective but also **just, inclusive, and sustainable**.

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E-ISSN: 2584-0487
editor@aijmr.com
Volume 4, Issue 3, May-June 2026
CrossRef DOI: 10.62127/aijmr.2026.v04i03.1306

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