Living Knowledge, Living Law: Safeguarding Traditional Knowledge and Customary Practices within Plural Legal Frameworks

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Abstract

Traditional Knowledge (TK) and customary practices form the living foundation of indigenous and local communities, carrying generations of wisdom about healing, farming, and caring for the environment. This chapter explores how these community-based systems of knowledge and ethics interact with modern legal frameworks—both internationally and in India. While global agreements like the Convention on Biological Diversity (CBD), the Nagoya Protocol, and WIPO initiatives have recognized the value of TK, they often remain limited by bureaucratic and state-centric approaches. In India, laws such as the Biological Diversity Act (2002) and the Forest Rights Act (2006), along with efforts like the Traditional Knowledge Digital Library (TKDL), have advanced TK protection but sometimes reduce living traditions to static records. Real-life examples, such as the Kani–Jeevani benefit-sharing case and the Niyamgiri Hills judgment, show that customary law continues to shape fair and sustainable governance at the community level. This paper argues that protecting traditional knowledge is not only a legal task but a moral and cultural one. TK should be seen as a living, evolving system—rooted in relationships between people, nature, and spirit—not as data to be archived or commercialized. True protection requires laws that respect community authority, uphold free and informed consent, and value the intergenerational ethics that sustain these knowledge systems. In essence, this paper calls for a more humane and pluralistic approach—one that allows indigenous wisdom to thrive on its own terms while enriching the shared future of humanity.

***Key words**: Access to benefit sharing, customary law, traditional Knowledge, WIPO*

1. Introduction

Traditional Knowledge (TK) and customary practices form the epistemic and normative bedrock of indigenous and local communities worldwide. They encapsulate generations of collective wisdom—ecological, medicinal, agricultural, and spiritual—developed through lived experience and transmitted orally or through ritualized practice. The global legal discourse on TK protection has evolved substantially since the early 1990s yet continues to grapple with a fundamental tension: the divergence between communal, customary systems of knowledge governance and Western intellectual property paradigms that prioritize individual authorship, novelty, and codification.

The concept of TK has gained increasing recognition in international law, primarily through the Convention on Biological Diversity (CBD), the Nagoya Protocol on Access and Benefit-Sharing, and the deliberations of the World Intellectual Property Organization (WIPO) Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore. These instruments acknowledge the need to respect and preserve TK, but they stop short of fully integrating customary law systems that underpin its creation and regulation.

In the Indian context, TK is intricately tied to customary practices and community-based governance, visible in the agricultural, medicinal, and ecological management systems of tribal and rural communities. India's vast ethno botanical diversity and plural legal traditions position it as a critical site for examining how indigenous epistemologies can coexist with formal legal regimes.

This paper explores the philosophical, legal, and institutional dimensions of traditional knowledge and customary practices, analyzing how they interact within international and Indian legal frameworks. It argues that

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understanding TK requires not merely documentation or legal protection, but recognition of the living customary systems that sustain it.

2. Conceptual Foundations of Traditional Knowledge

Traditional Knowledge may be defined as "the knowledge, innovations, and practices of indigenous and local communities developed from experience gained over centuries and adapted to the local culture and environment."[3] It encompasses a broad range of subject areas, including agriculture, medicine, biodiversity management, folklore, and spirituality. TK is inherently dynamic—it evolves continuously as communities adapt to ecological, social, and technological changes.

Unlike modern scientific knowledge, TK is holistic and experiential. It is transmitted orally, often through apprenticeship, storytelling, or ritual, and is embedded in social relationships that regulate how knowledge is accessed, used, and shared. The collective nature of TK defies Western notions of intellectual property that depend on identifiable inventors and fixed, tangible expressions.

From a jurisprudential standpoint, TK challenges the Western epistemological hierarchy that privileges written, codified, and "scientific" knowledge. Scholars such as Boaventura de Sousa Santos describe this as epistemicide—the systematic erasure or marginalization of non-Western ways of knowing.[4] Understanding TK thus requires moving beyond positivist legal frameworks toward a pluralistic epistemology that recognizes customary systems as legitimate sources of normativity and innovation.

Traditional Knowledge cannot be separated from the customary practices through which it is created and transmitted. Customary norms determine who holds knowledge, who may use it, and under what circumstances. They also impose obligations of stewardship, ensuring that knowledge use is aligned with communal ethics and ecological balance. In many indigenous societies, the right to access certain knowledge—such as sacred medicinal formulas or ritual songs—is contingent on fulfilling community obligations or rites of passage. For example, among India's *Kani* tribe in Kerala, the use of the medicinal plant *Trichopus zeylanicus* (locally known as *arogyapacha*) is governed by customary norms that restrict access to initiated healers.[5] When researchers from the Tropical Botanic Garden and Research Institute (TBGRI) commercialized an herbal drug derived from this plant, the community demanded benefit-sharing under its customary rules. This eventually led to the first benefit-sharing agreement in India, underscoring the continued relevance of customary systems in TK governance.[6] Customary practices also embody principles of collective custodianship rather than ownership. Knowledge is viewed not as private property but as a shared heritage linked to community identity and the environment. This worldview resonates with the concept of *intergenerational equity*, which requires that the present generation maintain the integrity of natural and cultural resources for future generations—a principle increasingly recognized in international environmental law.[7] Traditional Knowledge is not static folklore; it is living, adaptive, and innovative. Communities modify their knowledge systems in response to ecological changes, external interactions, and internal needs. For instance, the agricultural practices of the *Apatani* tribe in Arunachal Pradesh—such as integrated paddy-cum-fish cultivation—demonstrate sophisticated environmental engineering and adaptive innovation rooted in traditional systems.[8]

Recognizing TK as dynamic has profound implications for its legal protection. Legal frameworks often freeze knowledge at a point of documentation—such as in databases like the Traditional Knowledge Digital Library

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[3]Convention on Biological Diversity art. 8(j), June 5, 1992, 1760 U.N.T.S. 79.

[4] Boaventura de Sousa Santos, Epistemologies of the South: Justice Against Epistemicide 12–15 (Routledge 2014).

[5] R.V. Anuradha, Sharing with the Kanis: A Case Study from Kerala, India, in Protecting and Promoting Traditional Knowledge: Systems, National Experiences and International Dimensions 383 (Twarog & Kapoor eds., UNCTAD 2004).

[6] Id.

[7] Edith Brown Weiss, In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity 45–52 (Transnational Publishers 1989).

[8] P.S. Roy et al., Traditional Ecological Knowledge of the Apatani Tribe of Arunachal Pradesh, 3 Indian J. Traditional Knowledge 208 (2004).

(TKDL)—to prevent biopiracy. While this approach has defensive value, it risks transforming TK into a static artifact detached from its social and spiritual context. A more appropriate approach acknowledges TK as a continuum of practice—a system that is constantly renewed through communal experience.

Customary law represents the normative order through which TK operates. It consists of unwritten but binding rules developed through community consensus and sustained by moral and spiritual sanctions.[9] Within many indigenous systems, the legitimacy of knowledge derives not from state recognition but from its embeddedness in community life.

Customary law thus serves two critical functions:

a) It regulates access and transmission of TK; and
b) It affirms the community's sovereignty over its knowledge systems.

In legal anthropology, customary law is increasingly recognized as a source of plural legal authority coexisting alongside formal state law. In India, Article 13 of the Constitution preserves the validity of customary laws among Scheduled Tribes, provided they do not conflict with fundamental rights.[10] Similarly, the Supreme Court of India has acknowledged the legitimacy of tribal customs in matters of inheritance, marriage, and resource use.[11]

When applied to TK, this recognition of custom offers a foundation for sui generis protection—legal regimes designed specifically to safeguard collective and customary forms of knowledge. Integrating customary law into formal governance structures can therefore bridge the gap between community norms and international legal standards, aligning protection mechanisms with the lived realities of knowledge holders.

3. The International Legal Framework for Traditional Knowledge Protection

3.1 The Convention on Biological Diversity (CBD)

The modern international recognition of Traditional Knowledge (TK) began with the Convention on Biological Diversity (CBD), adopted in 1992 at the Earth Summit in Rio de Janeiro. Article 8(j) of the CBD obliges States to "respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity," and to promote equitable benefit-sharing arising from their utilization.[12] This provision marked a paradigm shift: it acknowledged that indigenous and local communities are not merely beneficiaries but active custodians of biodiversity, whose knowledge systems are integral to global ecological governance. The CBD's emphasis on *equity* and *participation* introduced two principles that remain central to TK discourse: prior informed consent (PIC) and access and benefit-sharing (ABS).

However, the CBD's implementation has faced challenges. Its language remains largely exhortatory, leaving national governments with discretion over enforcement. Moreover, the absence of a binding definition of TK has led to divergent national interpretations. While some states have established ABS mechanisms through domestic legislation, others have relied on defensive measures such as TK databases.

3.2 The Nagoya Protocol on Access and Benefit-Sharing

To operationalize the CBD, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits was adopted in 2010. The Protocol explicitly requires parties to obtain prior informed consent from indigenous and local communities before accessing their TK associated with genetic resources.[13] It also mandates that benefits—monetary or non-monetary—be shared fairly in accordance with mutually agreed terms. The Nagoya Protocol is significant because it recognizes community protocols as legitimate expressions of

[9] Brian Tobin, Customary Law as the Basis for Prior Informed Consent of Indigenous Peoples 5–6 (UNU-IAS, 2004).
[10] Constitution of India. Article 13(3)(a).
[11] Madhu Kishwar v. State of Bihar, (1996) 5 S.C.C. 125 (India).
[12] Convention on Biological Diversity art. 8(j), June 5, 1992, 1760 U.N.T.S. 79.
[13] Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits, Oct. 29, 2010, 1760 U.N.T.S. 79.

customary law. Article 12 of the Protocol directs states to "take into consideration indigenous and local communities' customary laws, community protocols and procedures."[14] This represents a critical step toward integrating customary governance into formal international law. Nonetheless, the Protocol's effectiveness depends heavily on national implementation. For many developing countries, including India, challenges persist in balancing community control with state sovereignty over biological resources. The Indian Biological Diversity Act (2002) is one such effort to domesticate CBD and Nagoya provisions, though questions remain regarding the extent to which it genuinely empowers local communities.

3.3 TRIPS and the Debate on Intellectual Property

The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), administered by the World Trade Organization (WTO), has also influenced the discourse on TK. However, TRIPS reflects a distinctly Western intellectual property framework that protects individual inventors through patents, copyrights, and trademarks. Article 27(3)(b) permits member states to exclude plants and animals from patentability but requires protection for plant varieties either by patents or by an effective *sui generis* system.[15]

Developing countries and indigenous peoples' organizations have criticized TRIPS for failing to address collective and intergenerational forms of innovation. The push for disclosure of origin in patent applications—requiring applicants to identify the source of genetic materials and associated TK—emerged as a key reform proposal, linking TRIPS with CBD principles. The ongoing debates in the WTO and WIPO highlight the unresolved conflict between commercial IP regimes and customary knowledge systems.

3.4 The Role of WIPO and UNDRIP

The World Intellectual Property Organization (WIPO) established the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) in 2000 to negotiate international legal instruments for TK protection. Although progress has been incremental, the IGC has developed draft articles for a possible international agreement recognizing collective rights, customary law, and community consent as foundational principles.[16] Complementing WIPO's work, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) (2007) provides a human rights framework for TK protection. Article 31 affirms indigenous peoples' right "to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions."[17] While UNDRIP is not legally binding, it establishes soft law standards that increasingly influence national and international policymaking. Together, CBD, Nagoya, WIPO, and UNDRIP represent a multilayered regime complex for TK governance. Yet, fragmentation persists, as each instrument addresses TK from different normative perspectives—environmental, commercial, and cultural—without a unified enforcement mechanism.

4. Traditional Knowledge in the Indian Legal Context

4.1 Constitutional and Legislative Foundations

India provides a unique laboratory for studying the intersection of traditional knowledge, customary practices, and modern law. The Indian Constitution recognizes the distinct cultural and legal systems of tribal communities. Article 29(1) guarantees the right to conserve cultural heritage, while the Fifth and Sixth Schedules provide for autonomous governance in tribal areas.[18] Legislatively, the most significant instrument is the Biological Diversity Act (BDA), 2002, enacted to implement the CBD. The Act establishes a three-tier structure comprising the National Biodiversity Authority (NBA), State Biodiversity Boards (SBBs), and Biodiversity Management Committees (BMCs) at the local level. Section 41 of the Act mandates BMCs to prepare People's Biodiversity

[14] Id. Art. 12.
[15] Agreement on Trade-Related Aspects of Intellectual Property Rights art. 27(3)(b), Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299.
[16] World Intellectual Property Organization [WIPO], Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, *Draft Articles on the Protection of Traditional Knowledge* (WIPO/GRTKF/IC/40/18, 2019).
[17] United Nations Declaration on the Rights of Indigenous Peoples, G.A. Res. 61/295, U.N. Doc. A/RES/61/295 (Sept. 13, 2007).
[18] INDIA CONST. arts. 29(1), scheds. V–VI.

Registers (PBRs), documenting TK associated with local biodiversity.[19] While the BDA provides a formal mechanism for benefit-sharing, critics argue that it remains state-centric, with limited recognition of community sovereignty over resources. The law conceptualizes TK largely as a database entry rather than a living, customary system.

4.2 The Traditional Knowledge Digital Library (TKDL)

India's Traditional Knowledge Digital Library (TKDL), launched in 2001, serves as a defensive measure against biopiracy by documenting traditional medicinal knowledge from ancient texts such as the *Ayurveda*, *Unani*, and *Siddha*. The TKDL has successfully prevented several attempts to patent Indian TK, notably in cases involving turmeric, neem, and basmati rice.[20] For instance, in 1995, the U.S. Patent and Trademark Office (USPTO**)** granted a patent for the wound-healing properties of turmeric. The Indian Council of Scientific and Industrial Research (CSIR) challenged this on the grounds that the use of turmeric for wound healing was part of Indian traditional medicine. The USPTO ultimately revoked the patent, recognizing that the claimed invention lacked novelty.[21] While the TKDL represents a major success **in defensive protection**, it also illustrates the limitations of formal codification. By transferring oral and experiential knowledge into textual databases, TK risks being stripped of its contextual and spiritual significance. Furthermore, defensive protection does not create positive rights for communities; it merely prevents others from claiming exclusive ownership.

4.3 The Kani and Jeevani Case: A Model of Benefit-Sharing

The Kani–Jeevani case remains India's most cited example of benefit-sharing. In the 1990s, scientists from the Tropical Botanic Garden and Research Institute (TBGRI) developed a drug, *Jeevani*, based on the Kani tribe's knowledge of the *arogyapacha* plant. Following community protest, TBGRI entered into a benefit-sharing agreement granting the Kani community 50 percent of license fees and royalties.[22] This case set a precedent for recognizing community contributions in scientific innovation. However, the absence of formal legal frameworks at the time meant that the agreement remained ad hoc, reliant on goodwill rather than enforceable rights. Subsequent guidelines under the BDA sought to institutionalize such arrangements, but issues of representation, consent, and equitable distribution continue to surface.

4.4 Other Developments: Forest Rights and Environmental Jurisprudence

Beyond the BDA, India's Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (FRA) recognizes community rights to forest resources, reflecting the customary governance of forests by tribal communities.[23] The Act affirms that traditional practices are legitimate forms of resource management, challenging colonial-era exclusionary conservation models. Indian environmental jurisprudence has also evolved toward integrating traditional ecological wisdom. The Supreme Court, in *T.N. Godavarman Thirumulpad v. Union of India*, emphasized sustainable development and recognized community participation in forest management.[24] Similarly, in *Orissa Mining Corporation v. Ministry of Environment & Forests*, the Court upheld the *Gram Sabha's* authority to decide on projects affecting the sacred Niyamgiri Hills, thereby affirming the constitutional value of customary religious and ecological practices.[25]

Together, these developments reflect an emerging, though uneven, legal pluralism where customary law and formal state law coexist and interact in the governance of traditional knowledge and natural resources.

5. Challenges in Legal Recognition and Protection

[19] Biological Diversity Act, No. 18 of 2003, § 41, INDIA CODE (2003).
[20] Traditional Knowledge Digital Library (TKDL), Council of Scientific and Industrial Research (CSIR), India.
[21] U.S. Patent No. 5,401,504 (filed Dec. 28, 1993) (revoked after opposition by CSIR).
[22] R.V. Anuradha, *Sharing with the Kanis: A Case Study from Kerala, India*, in *Protecting and Promoting Traditional Knowledge: Systems, National Experiences and International Dimensions* 383 (Twarog & Kapoor eds., UNCTAD 2004).
[23] Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, No. 2 of 2007, INDIA CODE (2006).
[24] *T.N. Godavarman Thirumulpad v. Union of India*, (2002) 10 S.C.C. 606 (India).
[25] *Orissa Mining Corp. v. Ministry of Env't & Forests*, (2013) 6 S.C.C. 476 (India).

A fundamental challenge in TK protection arises from the conceptual incompatibility between customary knowledge systems and Western intellectual property law. IP law emphasizes novelty, authorship, and fixation—criteria that exclude collective, orally transmitted knowledge. As a result, TK rarely qualifies for protection under patents or copyrights, leaving communities vulnerable to biopiracy.[26] Furthermore, the commodification of knowledge through IP rights often conflicts with indigenous ethical frameworks that treat knowledge as sacred or communal. This epistemic dissonance has led scholars such as Vandana Shiva to describe IP law as an extension of colonial appropriation, perpetuating the extraction of biological and cultural resources from the Global South.[27] Efforts to document TK, though valuable for preservation, also risk exposing sensitive or sacred information to misuse. Once knowledge is documented in public databases, it may enter the public domain, undermining community control. The Traditional Knowledge Digital Library (TKDL) mitigates this risk by restricting access to patent offices under non-disclosure agreements, yet similar safeguards are absent in many national databases.[28] Additionally, the process of translating orally transmitted knowledge into written or digital formats raises issues of epistemic distortion. The meanings embedded in ritual, context, and language may be lost or misinterpreted when subjected to scientific or bureaucratic classification systems.

Another challenge concerns who speaks for the community in matters of consent and benefit-sharing. Many indigenous groups are not homogenous; internal hierarchies, gender roles, and intergenerational differences affect decision-making. Without clear procedural safeguards, benefit-sharing agreements may replicate existing inequalities. The Nagoya Protocol and India's Biological Diversity Rules (2004) require prior informed consent (PIC), but operationalizing this principle remains complex. In practice, consent processes often occur through intermediaries or local elites, raising questions about legitimacy. Ensuring free, prior, and informed consent (FPIC) in line with UNDRIP principles is therefore crucial to ethical and effective TK governance.[29]

Finally, the multiplicity of international instruments—CBD, TRIPS, WIPO, and UNDRIP—has resulted in fragmented governance. Each instrument serves different institutional interests, leading to overlaps and gaps. At the national level, TK-related laws are dispersed across biodiversity, forest, cultural heritage, and IP sectors, with little coordination.[30] This fragmentation undermines legal clarity and community participation. A coherent framework must therefore integrate environmental, cultural, and intellectual property dimensions under a unified policy guided by customary law principles.

6. Towards a Pluralistic Roadmap: Integrating Customary and Formal Systems

The protection of Traditional Knowledge (TK) requires a profound shift from legal centralism to legal pluralism—a recognition that multiple systems of law coexist within a single jurisdiction. In the context of TK, pluralism entails acknowledging customary law as a legitimate and autonomous source of regulation, operating alongside statutory and international legal orders. This shift is not merely procedural but epistemological: it challenges the Western monopoly on defining what counts as "knowledge" and "law." Legal theorist Boaventura de Sousa Santos argues that modern law suffers from "abyssal thinking", which divides valid (scientific, written, codified) knowledge from non-valid (oral, indigenous, customary) knowledge.[31] Overcoming this epistemic divide requires embracing a *"pluriverse of legalities,"* where indigenous and customary systems are seen not as exceptions but as equal contributors to global legal order. In practical terms, this pluralist paradigm aligns with the Convention on Biological Diversity (CBD) and the Nagoya Protocol, both of which emphasize respect for customary law and community consent. Yet, implementation remains largely symbolic. A genuine integration would mean that customary norms themselves—not state-defined proxies—govern access, use, and benefit-sharing related to TK.

One innovative mechanism for bridging customary and formal systems is the Community Protocol. These are locally developed instruments articulating how communities wish external actors to engage with their knowledge and resources. They codify customary norms, ethical principles, and procedural expectations while retaining community control. Article 12 of the Nagoya Protocol explicitly encourages states to support the development of

[26] Graham Dutfield, *Protecting Traditional Knowledge: Pathways to the Future* 34–36 (Routledge 2018).
[27] Vandana Shiva, *Biopiracy: The Plunder of Nature and Knowledge* 22–24 (South End Press 1997).
[28] TKDL, supra note 18.
[29] United Nations Declaration on the Rights of Indigenous Peoples, supra note 15, art. 32.
[30] Dutfield, supra note 24, at 55–58.
[31] Lina F. Callejas, *TAPUYA: Latin American Science, Technology and Society*, **2** Tapuya: Lat. Am. Sci., Tech. & Soc'y 253 (2019), https://doi.org/10.1080/25729861.2019.1586344.

community protocols.[32] India's National Biodiversity Authority has issued guidelines encouraging Biodiversity Management Committees (BMCs) to prepare such protocols alongside People's Biodiversity Registers (PBRs).[33] For instance, in Rajasthan and Madhya Pradesh, local communities have begun creating Biodiversity Community Protocols (BCPs) that outline terms of access and benefit-sharing for medicinal plants and seeds. These protocols blend oral customary rules with written documentation, enabling recognition under both domestic and international frameworks.[34] Such initiatives demonstrate how hybrid instruments—grounded in custom but compatible with state law—can operationalize the principles of *free, prior, and informed consent (FPIC)* and equitable benefit-sharing. Importantly, community protocols shift agency from bureaucratic institutions to the knowledge holders themselves.

To reconcile TK's collective and dynamic nature with the rigidity of intellectual property (IP) systems, scholars and policymakers have advocated for sui generis protection regimes—legal frameworks specifically tailored to TK characteristics.

A *sui generis* system differs from conventional IP law in three respects:

a. It recognizes collective ownership and intergenerational custodianship;
b. It accommodates oral transmission and cultural context; and
c. It is adaptable to community-specific norms and procedures.

The African Model Law on the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources (2000) is one prominent example.[35] It grants communities the right to collectively benefit from the utilization of their knowledge and to regulate access according to their customary law.

India's Biological Diversity Act (2002), though inspired by similar principles, remains limited by its administrative character. To evolve into a genuine *sui generis* system, the BDA must:

- Legally recognize community ownership over documented knowledge;
- Incorporate customary law as a source of authority in benefit-sharing disputes; and
- Establish community-led adjudicatory bodies for TK-related conflicts.

Beyond intellectual property, TK plays a critical role in global climate change adaptation and sustainable development. The Intergovernmental Panel on Climate Change (IPCC) now acknowledges indigenous knowledge as vital for local resilience strategies.[36] Similarly, the United Nations Framework Convention on Climate Change (UNFCCC) established the *Local Communities and Indigenous Peoples Platform (LCIPP)* in 2017 to enhance TK participation in climate policy.[37] In India, TK-based practices—such as traditional water harvesting (*johads* in Rajasthan), rotational grazing, and mixed cropping—exemplify low-carbon, adaptive innovations. Integrating these into national and international climate policies strengthens both environmental sustainability and cultural preservation. A pluralistic roadmap for TK protection must therefore transcend IP debates, positioning TK within a broader framework of ecological governance and cultural rights. This approach affirms that protecting TK is not

[32] L. Glowka & V. Normand, *The Nagoya Protocol on Access and Benefit-Sharing: Innovations in International Environmental Law*, in *The 2010 Nagoya Protocol on Access and Benefit-Sharing in Perspective: Implications for International Law and Implementation Challenges* 21 (E. Morgera, E. Tsioumani & M. Buck eds., 2013).
[33] National Biodiversity Authority, Guidelines for Operationalization of Biodiversity Management Committees (BMCs) (2013), http://nbaindia.org/uploaded/pdf/Guidelines_BMC_1.pdf
[34] P. Priyadarshini & P.C. Abhilash, *Promoting Tribal Communities and Indigenous Knowledge as Potential Solutions for the Sustainable Development of India*, 32 *Envtl. Dev.* 100459 (2019).
[35] African Union, *African Model Law on the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources* (2000), https://au.int/en/treaties/african-model-law.
[36] T. Mustonen et al., *The Role of Indigenous Knowledge and Local Knowledge in Understanding and Adapting to Climate Change*, in *IPCC Climate Change 2022: Impacts, Adaptation and Vulnerability — Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* 1459 (H.-O. Pörtner et al. eds., Cambridge Univ. Press 2022).
[37] S. Tabriz, S.L.M. Trærup & F.M.E. Minjauw, *Indigenous Peoples and Climate Technologies* (U.N. Env't Programme & Climate Tech. Ctr. & Network 2021).

merely about preventing biopiracy—it is about sustaining the ethical and ecological foundations of community life.

7. Policy Recommendations and Future Pathways

States must formally recognize customary law as a source of rights in national legislation. This can be achieved by incorporating explicit clauses, similar to Article 12 of the Nagoya Protocol, affirming the legal validity of community norms governing TK. India could amend the Biological Diversity Act (2002) to explicitly reference customary institutions in ABS decision-making and conflict resolution. Judicial interpretation also plays a role. Courts should interpret biodiversity and IP laws in light of constitutional pluralism, ensuring that indigenous customs are not subsumed under bureaucratic control. Cases like *Orissa Mining Corporation v. Ministry of Environment & Forests* demonstrate the judiciary's willingness to uphold community-based decision-making.[38] Legal protection alone cannot safeguard TK without institutional empowerment. Biodiversity Management Committees (BMCs), Gram Sabhas, and traditional councils require capacity-building, legal literacy, and access to technical support. Funding mechanisms should prioritize community-led research, documentation, and education programs that revitalize traditional systems. Furthermore, representation in national and international forums—such as WIPO negotiations or CBD COP meetings—should include indigenous delegates, ensuring that policy-making reflects lived experiences rather than external assumptions. Research institutions and corporations must adhere to ethical access protocols that honor community consent and equitable benefit-sharing. The development of ethical certification systems, similar to fair trade, could incentivize compliance. The Nagoya Protocol's PIC and MAT requirements should be enforced through transparent monitoring. In India, the NBA could establish a centralized ABS Registry documenting agreements and ensuring that benefits reach the intended communities. Moreover, companies utilizing TK—especially in pharmaceuticals, cosmetics, and agriculture—should adopt Corporate TK Responsibility (CTKR) standards, analogous to Corporate Social Responsibility (CSR), to ensure ongoing partnerships rather than extractive transactions. Protection must also address intergenerational transmission. The erosion of TK often results not from external exploitation alone but from cultural discontinuity within communities. Integrating TK into formal and non-formal education systems—through bilingual curricula, community museums, and apprenticeship programs—can sustain its vitality. In India, initiatives like the *Indigenous Knowledge Innovation Network* and *Vigyan Ashram* model demonstrate how youth engagement can combine traditional and modern knowledge systems.[39] Supporting such models helps transform TK from a subject of protection into a living practice of innovation.

8. Conclusion

Traditional Knowledge and customary practices embody worldviews that are at once epistemic, ethical, and ecological. They reveal an understanding of the world rooted in relationality—the interconnectedness of humans, nature, and the spiritual realm. Yet, despite their global significance, these systems continue to be marginalized within dominant legal and economic frameworks that prioritize codified, commodified forms of knowledge. The international community's gradual recognition of TK—through the CBD, Nagoya Protocol, UNDRIP, and WIPO initiatives—marks progress toward inclusivity, but not yet justice. Most existing frameworks remain state-centric, bureaucratic, and fragmented, failing to capture the organic complexity of customary governance. India's experience illustrates both promise and paradox. Mechanisms like the Biological Diversity Act and the TKDL demonstrate institutional innovation but risk divorcing TK from its cultural roots when implemented without community control. Cases such as the Kani–Jeevani benefit-sharing arrangement and the Niyamgiri judgment show that customary law is not merely historical—it is contemporary, functional, and capable of governing equitable resource use. To truly protect traditional knowledge, legal systems must undergo an epistemic reorientation—from protecting static "knowledge objects" to sustaining living knowledge relationships. This requires pluralistic legal architecture that respects customary law as law, recognizes collective ownership, and values oral and spiritual dimensions of knowledge transmission. In this sense, "understanding traditional knowledge and customary practices" is not merely an academic exercise but a call for transformative legal imagination. By embracing plurality, reciprocity, and justice, international and Indian legal systems can move

[38] V.P. Singh, *Preserving Biodiversity: The Role of Judiciary in Upholding International Conventions Within Ecosystem Protection*, 5 *ShodhKosh: J. Visual & Performing Arts* 618 (2024), https://doi.org/10.29121/shodhkosh.v5.i2.2024.4994

[39] G. Kamalakar & H. Vageeshan, *Integrating the Indian Knowledge System in Education: A Study of Government Reforms and Student Development*, *ShodhKosh: J. Visual & Performing Arts* (2024).

beyond extractive paradigms toward a future where indigenous knowledge is not protected from the world but shared with it—on its own terms.