

## Traditional Knowledge and Its Protection Under Indian Intellectual Property Laws: Challenges and Prospects

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### Abstract

Traditional Knowledge (TK) refers to the cultural, ecological, and medicinal knowledge cultivated and conserved by local and indigenous communities over centuries. Though it is of vital significance to biodiversity, sustainable development, and cultural identity, the protection of TK under the Indian intellectual property paradigm is still insufficient. This paper critically analyses the current Indian legal framework with respect to TK, pointing out its shortcomings and examining the compatibility of traditional IP rights with the intergenerational and communal character of TK. Using doctrinal analysis and case studies, the research identifies challenges of misappropriation, absence of formal documentation, and the challenge of balancing customary law and statutory regimes. The paper advocates for a sui generis model of protection suitable to India's socio-cultural context and emphasizes the necessity for international cooperation and community involvement in order to protect TK as effectively as possible.

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## 1. INTRODUCTION

Traditional Knowledge (TK) is a source of knowledge, innovations, and practices that emanate from the indigenous and local communities' experiences. Such knowledge has been passed on orally and culturally over generations and is part of the identity and survival of the community. TK spans many areas, such as agriculture, medicine, natural resource management, and spiritual beliefs. India's massive biodiversity and cultural richness have given rise to an enormous wealth of TK ranging from Ayurvedic medicine to indigenous farming practices. But with globalization, quick industrialization, and a lack of proper legal protection, TK is getting misappropriated and eroded. The Indian legal system, mainly suited for individual and new-age inventions, finds it difficult to provide a space for the traditional and collective nature of TK. The present paper shall critically evaluate the efficacy of the Indian Intellectual Property (IP) legal regime in safeguarding traditional knowledge and seek legal reforms that shall align with the peculiar features of TK. The article shall be divided

into sections on literature review, theoretical and methodological paradigms, followed by an elaborate discussion on challenges, current laws, and likely future reforms.

## 2. LITERATURE REVIEW

Protecting traditional knowledge has been the subject of extensive debate within academic and policy-making communities. Dutfield (2004) points out that traditional IP rights, like patents and copyrights, are not well adapted to TK since they focus on novelty, personal ownership, and fixed terms-attributes opposite to TK's communal, cumulative and eternal nature<sup>1</sup>. Vandana Shiva (2002) has been a prominent voice for the cause of indigenous peoples, contending that protection of TK is not only important to conserve cultural heritage but also to provide equal benefit-sharing and avert biopiracy.<sup>2</sup> In the Indian setting, Ganguli (2001) and others have noted that the existing legislative framework-such as the Patent Act, 1970 and the Protection of Plant Varieties and

<sup>1</sup> Dutfield, G. (2004). *Protecting traditional knowledge: Pathways to the future*. International Centre for Trade and Sustainable Development.

<sup>2</sup> Shiva, V. (2002). *Protect or plunder? Understanding intellectual property rights*. Zed Books.

Farmers' Rights Act, 2001-provides partial protection but stops short of full protection<sup>3</sup>. The Biological Diversity Act, 2002 establishes benefit-sharing and access controls but does not grant complete recognition to collective ownership of TK. The Traditional Knowledge Digital Library (TKDL) initiated by the Government of India is an innovative attempt to avoid wrongful patents by documenting TK but is restricted to specific areas such as Ayurveda and Yoga. Internationally, the Convention on Biological Diversity (CBD) and the Nagoya Protocol highlight the conservation of TK and fair benefit-sharing but have weak enforcement measures at the national level.<sup>4</sup> Studies indicate that combining TK protection with indigenous rights regimes and sui generis laws might provide more effective avenues.<sup>5</sup> This literature informs the requirement for multi-layered protection mechanisms that respect indigenous knowledge systems but interface with contemporary legal standards, a deficit this article seeks to fill for the Indian legal environment.

### 3. THE RATIONALE OF THE STUDY

India's rich cultural wealth and biodiversity are directly connected to the traditional knowledge of indigenous and local communities. Yet numerous cases of misappropriation of TK, or so-called biopiracy, have been registered, that deny the communities recognition and benefit sharing resulting from their knowledge. In spite of numerous laws, which cover different facets of TK, there is no single, overarching law that exists to this day, specifically addressing its special nature and community ownership.

This study therefore seeks to:

- Identify the gaps and deficiencies in Indian IP legislations with respect to TK;
- Examine the socio-legal consequences of inadequate protection;
- Suggest viable reforms such as sui generis systems which can provide adequate protection and fair benefit-sharing.

### 4. THEORETICAL FRAMEWORK

The research is based on a socio-legal paradigm which identifies traditional knowledge as a collective cultural good. In contrast to Western IP legislation where individual rights and economic rewards are prioritized, protection of TK has to accommodate communal ownership, oral transmission, and cultural integrity. The paradigm draws on indigenous rights theories, which identify a right of communities to self-determination and cultural control over their cultural heritage, as expressed in the UN Declaration on the Rights of Indigenous Peoples (UNDRIP). This method also takes environmental justice into account, correlating TK protection with sustainable resource management and biodiversity conservation.

### 5. METHODOLOGY

A doctrinal research methodology is adopted, involving detailed examination of statutory laws, case law, policy documents, and academic literature. This is supplemented with qualitative case studies illustrating challenges faced by TK holders and legal responses. The research critically analyses the compatibility of Indian IP laws with TK's characteristics and explores international best practices.

<sup>3</sup> Ganguli, P. (2001). *Intellectual property rights: Unleashing the knowledge economy*. Tata McGraw-Hill.

<sup>4</sup> Convention on Biological Diversity. (1992). *Text of the Convention*. <https://www.cbd.int/convention/>

## 6. DISCUSSION

### 6.1 Challenges in Protecting Traditional Knowledge

Preserving traditional knowledge throws up a complex array of challenges based on its inherent nature and socio-cultural contexts. To start with, TK is inherently collective and communal. In contrast to traditional intellectual property, which is awarded to individuals or corporations as exclusive rights, TK is owned by communities with no single creator to identify. This shared ownership makes the application of conventional IP regimes, based on well-defined authorship or inventorship for registration and enforcement, more difficult. Additionally, TK is passed on orally and by practice and not written records and is therefore susceptible to being ignored or downplayed in legal systems based on written evidence. Secondly, the novelty and inventiveness requirements of patent laws inherently contradict TK's generations-old cumulative development. Much traditional knowledge predates recorded history, thereby failing the novelty test that is central to patent protection. This allows corporations and researchers to patent isolated aspects of TK-such as chemical compounds derived from plants-without recognizing the original community's contribution, a practice often referred to as biopiracy. The Neem patent row is a prime example: the first patent obtained by an American company on the pesticide properties of Neem was successfully opposed by India, but only after much legal effort and publicity around the world.

Thirdly, the period of protection is also a significant concern. Traditional IP rights have a finite term-patents usually 20 years, and copyrights 50 to 70 years. TK, on the other hand, is forever applicable, passed down through generations with no definite expiry date. This time difference serves to leave many communities' knowledge vulnerable to exploitation once the IP is over or when no protection whatsoever is acknowledged. Enforcement itself presents another barrier. Indigenous communities are often unaware of their rights and of how to effectively protect TK. Power disparities between large corporations and rural or tribal communities make it hard to assert rights or access legal remedies. IP litigation is often too complex and expensive, leaving communities open to exploitation. In addition, globalization and the pace of technological progress have sped up the diffusion and commercial utilization of TK, oftentimes without permission or benefit-sharing. Lack of common international legal standards aggravates this situation, as TK misappropriated in one nation may not be properly protected in another.

### 6.2 Indian Intellectual Property Regime and TK

India has passed a number of legislations that extend to the protection of traditional knowledge, but none addresses the issue comprehensively as it relates to TK's specific requirements.

- The Patent Act, 1970: Despite being amended several times, it does not contain express provisions to safeguard TK. It states that any invention which is a part of "traditional knowledge or that which has been published in any document or publicly known" is excluded from patentability.<sup>7</sup> Still, it does not safeguard TK per se or hinder biopiracy other than refusing patents on the grounds of prior art.

Nagoya Protocol. (2010). *On access to genetic resources and the fair and equitable sharing of benefits*. <https://www.cbd.int/abs/>

<sup>5</sup> Coombe, R. J. (2005). *The recognition of indigenous peoples' and community traditional knowledge in international law*. *Arizona Journal of International and Comparative Law*, 17(1), 113–146.

- Protection of Plant Varieties and Farmers' Rights Act, 2001: This Act acknowledges farmers' rights to save, use, and exchange seeds and recognizes community input into plant breeding. It is a major move towards the protection of agricultural TK but is narrowly applied to plant varieties and does not cover other fields of knowledge.

- The Biological Diversity Act, 2002: This act aims to control access to biological resources and related knowledge, requires benefit-sharing with local people, and provides for Biodiversity Management Committees at local levels. It is important for controlling the use of TK related to biodiversity but has enforcement issues and does not confer exclusive IP rights to communities.

- Traditional Knowledge Digital Library (TKDL): Set up in 2001, TKDL is an innovative project translating old traditional medicinal knowledge into computerized searchable forms in various languages to avoid wrongful patenting overseas. It has already prevented a few patent applications overseas, showcasing proactive safeguarding.<sup>8</sup> Yet, TKDL protects Ayurveda, Siddha, and Unani medicinal knowledge primarily, with many other TK areas going uncovered<sup>6</sup>. Even with these steps, Indian IP legislation has large loopholes in giving TK owners legal control, ownership, and economic rewards. The collective nature of TK is hard to find space for in individualistic IP systems.

### 6.3 *International Legal Framework and Its Influence on Protection of Traditional Knowledge*

Protection of traditional knowledge (TK) is not an isolated phenomenon; it is more and more influenced by international legal instruments as well as global policy discourse. India, being a TK-dense nation, is an active member of the schemes, but both possibilities and limitations are offered by the international legal framework for valid protection. One of the first international treaties that affect TK protection is the World Trade Organization's (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). TRIPS establishes a minimum level of intellectual property protection for WTO members. TRIPS mainly represents Western IP models that emphasize individual inventors, novelty, and finite terms of protection-criteria that do not fit well with the communal and eternal nature of TK. TRIPS does not directly cover traditional knowledge or give it methods of protection against misappropriation, resulting in large voids that nations such as India have to work around. This void has fueled demands from the developing world and indigenous communities for amendments or interpretative statements explaining TRIPS' reach in connection with TK. In tandem with TRIPS, the Convention on Biological Diversity (CBD) (1992) and its add-on Nagoya Protocol on Access and Benefit-Sharing (2010) are landmark multilateral treaties that acknowledge the sovereign rights of states over their biological resources and stress fair sharing of benefits accruing from their use. The Nagoya Protocol actually aims to achieve prior informed consent and mutually agreed terms with local communities ahead of making use of their genetic resources and related traditional knowledge. While India has signed both the CBD and Nagoya Protocol, implementation issues continue, such as weak enforcement at the national level and a lack of awareness among TK holders regarding their rights under these instruments. Another significant international

player is the World Intellectual Property Organization (WIPO), which has created the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC). The IGC is charged with the duty of formulating international legal tools to facilitate the protection of TK effectively. As talks under the IGC have proceeded on a variety of protection strategies, such as sui generis systems, compulsory disclosure in patent applications, and more powerful enforcement instruments, the pace has been glacially slow given the heterogeneity of members' interests. WIPO, however, offers an indispensable arena for India to argue for standards that resonate with indigenous interests and cultural sensibilities.<sup>7</sup> In addition, international legal frameworks overlap with the law of human rights. The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) establishes indigenous peoples' rights to preserve and manage their cultural heritage and traditional knowledge. Although UNDRIP lacks legal force, it provides normative advice in favor of community ownership and self-determination, which are fundamental to any legal system safeguarding TK.

In spite of these global frameworks, critics point out that enforcement is weak with no clear remedies for communities in case of misappropriation of TK abroad. Moreover, global IP regimes frequently do not have provisions that are considerate of the oral and communal transmission of TK. This makes domestic sui generis laws all the more crucial to implement these principles within the socio-legal framework of India, at the same time actively participating in international policy negotiations to shape global norms. Ultimately, India's efforts to protect TK need to be contextualized in this intricate international legal framework. The alignment of domestic law with international standards and the engagement of TK holders with policy makers are crucial to developing a functional, multi-faceted system that protects traditional knowledge from misuse while enabling sustainable utilization and cultural conservation.

### 6.4 *Suggested Legal Reforms and Sui Generis Models*

Scholars, indigenous people's rights activists, and legal experts increasingly agree that India requires a sui generis legal regime—a specially crafted, unique law—for the protection of Traditional Knowledge (TK). The traditional intellectual property system, with its focus on individual authorship, novelty, and limited term, is incompatible with the intergenerational, communal, and dynamic nature of TK. Therefore, legal reform is needed that addresses the distinctive features and socio-cultural value of traditional knowledge systems in India. Most importantly, such a system should provide for collective ownership of TK by local and indigenous communities. Traditional knowledge is not frequently identifiable with a solo inventor or author; instead, it is the outcome of centuries of collective knowledge acquired orally or by practice. Legal protection of such collective ownership is crucial to protect the rights and sovereignty of such communities. Moreover, any use of TK should be made subject to prior informed consent (PIC) of the holders of the knowledge so that third parties—such as corporations, researchers, even state agencies—cannot steal such knowledge without the consent of the community. In addition, the principle of mutually agreed terms (MAT) must also accompany mechanisms of consent.

<sup>6</sup> Traditional Knowledge Digital Library. (n.d.). Government of India. Retrieved from <https://tkdl.res.in>

<sup>7</sup> World Intellectual Property Organization. (n.d.). World Intellectual Property Organization. Retrieved June 2, 2025, from <https://www.wipo.int/portal/en/index.html>

These terms would define the conditions under which TK is accessed or utilized, such as purposes, term, and remuneration. Concurrently with this, the legal system will have to provide for equitable benefit-sharing schemes so that communities are offered a legitimate share of the economic or social benefit derived from the utilization of their knowledge. This is in accordance with Article 8(j) of the Convention on Biological Diversity and demonstrates adherence to distributive justice. India also needs to create documentation and registration systems that encourage record-keeping while being sensitive to culture. Documentation must be voluntary and community-initiated, and the records must be protected against disclosing sacred or secret information. Confidentiality and deference to customary norms should be the guiding factor throughout the process, marking it as distinct from mainstream patent or copyright databases. Essentially, any sui generis system would need to incorporate customary laws and traditional systems of governance. People's communities typically already possess established norms controlling the use, transmission, and preservation of their knowledge. Instead of preempting these systems, national law should aim to complement and strengthen them, hence encouraging legal pluralism as well as cultural legitimacy. No less critical is the provision of proper enforcement and dispute settlement mechanisms. These mechanisms should be readily available to marginalized communities and may take the form of specialized TK tribunals, ombudsman services, or simplified procedures within current courts. Key priorities should be affordability, efficiency, and cultural sensitivity so that justice is available and meaningful. In addition, protection should be extended from agricultural or medicinal knowledge to cultural expressions like traditional handicrafts, performing arts, folklore, oral traditions, traditional textiles, and designs. All these are susceptible to misappropriation and commodification and must equally be addressed under the new regime. For their implementation, India's institutional infrastructure needs to be strengthened. This may include the creation of a National Traditional Knowledge Protection Authority that will manage registration, track benefit-sharing arrangements, and coordinate with state governments. This institution may also assist in awareness programs and community capacity building. Participatory involvement of the community is essential for the legitimacy of any such legislation. Drafting of legislation should include widespread consultation with indigenous communities, NGOs, scholars, and lawyers. Participatory drafting ensures that the law is grounded in local circumstances and does not follow a top-down, bureaucratic approach that is insensitive to the lived realities of knowledge keepers. India can even learn from global examples to shape its reforms. Various Pacific Island countries have passed laws that legally establish communal rights in TK. New Zealand's jurisprudence has integrated Maori customary principles as part of national law, providing an example of legal pluralism for upholding indigenous sovereignty. These models cannot be directly transplanted to the Indian situation but are insightful into community-based legal design. Lastly, India needs to be proactive in global institutions, especially the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore. By engaging in international standard-setting actively, India can push for norms that are fair and culturally appropriate, and ensure its domestic legislation keeps pace with evolving international standards. In conclusion, a strong sui generis framework should transcend the ordinary legislative drafting; it needs to be a multi-faceted legal, institutional, and cultural

approach. This would safeguard the rights of indigenous peoples, help India maintain its rich heritage, and ensure that traditional knowledge is utilized in a way that is fair, respectful, and sustainable

## 7. CONCLUSION

The protection of traditional knowledge under Indian intellectual property laws remains a complex and evolving issue. The communal, intergenerational, and culturally embedded nature of TK challenges the conventional individualistic and time-limited IP frameworks. While India has taken important steps through laws such as the Biological Diversity Act, the Protection of Plant Varieties and Farmers' Rights Act, and innovative initiatives like the Traditional Knowledge Digital Library, these measures fall short of providing comprehensive and effective protection. This article has highlighted key challenges including biopiracy, inadequate legal recognition, and enforcement difficulties. It advocates for the development of sui generis legislation tailored to India's socio-cultural realities, which recognises community ownership, prior informed consent, and equitable benefit-sharing. Additionally, active participation in international policy-making forums and fostering awareness among TK holders are crucial for strengthening protection mechanisms. Ultimately, safeguarding traditional knowledge is not merely a legal task but also a socio-cultural imperative that supports biodiversity conservation, cultural heritage preservation, and sustainable development. The future of TK protection in India hinges on a multi-layered, participatory approach that balances modern innovation with respect for indigenous wisdom.

## Author Contribution

The author conceptualised the research, conducted the literature review and doctrinal analysis, drafted the manuscript, and finalised the article for submission.

## Conflict of Interest

Conflict of interest declared none.

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