
RECONCILING TRADITIONAL KNOWLEDGE AND INTELLECTUAL PROPERTY: PROTECTING KANI'S MEDICINE THROUGH LAW AND BENEFIT SHARING

Jayant K Dutt, LLM, Rajiv Gandhi National University of Law, Punjab

Mohd Hilal Alam, LLM, Hidayatullah National Law University, Chhattisgarh

1. ABSTRACT

The Kani tribe in the Western Ghats have unique traditional medicinal knowledge that is essential for communal and world health. This heritage is threatened by erosion, ecological degradation, and bio-piracy, as demonstrated in the Jeevani case, which showed the insufficiency of traditional IPR regimes based on novelty and individual inventors. India has created defensive measures, including the Biological Diversity Act, the Patents Act, and the Traditional Knowledge Digital Library, which are supported by Access and Benefit-Sharing frameworks. However, genuine justice and sustainable development necessitate changes that acknowledge communal ownership, protect cultural identity, and implement rights-based, community-centered safeguards that are customized to Kani traditions and values.

Keywords: Kani tribe, Traditional medicine, Bio-piracy, Access and Benefit Sharing, Intellectual Property, Patent Act, BDA

2. Traditional Knowledge & Indigenous Medicine

2.1 Meaning of Traditional Knowledge

With strong linkages to culture, ecology, and spirituality, traditional knowledge (TK) is a living collection of abilities, customs, and inventions created by communities over many generations. Unlike Western science, which is codified and assigned individual attributions, traditional knowledge (TK) is essential to identity and survival for the Kani tribe of the Western Ghats. TK is oral, collaborative, and flexible enough to adapt to changing social and environmental conditions. While the CBD¹ highlights its significance in maintaining biodiversity, WIPO² defines it as knowledge, know-how, and practices that have been passed down through the centuries. TK is still a vital component of India's cultural legacy and intellectual wealth, spanning the fields of health, crafts, folklore, and agriculture.

2.2 Relevance of Indigenous Medicine to Local communities

For indigenous communities, traditional medicine is often the only available healthcare system because of geographic isolation, the high cost of modern treatment and cultural trust in natural remedies³. The Kani tribe uses herbal therapies for fevers, respiratory diseases, and rheumatism, jaundice and snake bites which are locally sourced, affordable and culturally appropriate. Although use over here is mainly local, TK is certainly pharmaceutical world-wide. As an example of how tribal knowledge contributes to biomedical innovation, the Kani's knowledge of Arogyapacha (*Trichopus zeylanicus*) led to the creation of the drug *Jeevani*.

2.3 The Constitutional and Legal Recognition of Traditional Knowledge

In India, cultural rights are protected under Article 29 and health under Article 21 of the Indian Constitution⁴, the Biological Diversity Act, 2002 implements CBD provisions on access to genetic resources and benefit sharing, the National IPR Policy, 2016 also acknowledges protection of TK from appropriation, and globally the Nagoya Protocol⁵.

¹ Convention on Biological Diversity art. 8(j), June 5, 1992, 1760 U.N.T.S. 79.

² WIPO, Traditional Knowledge, World Intellectual Property Organization (2020).

³ World Health Organization, Traditional Medicine Strategy 2014–2023 (2013).

⁴ INDIA CONST. arts. 21, 29.

⁵ Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits, Oct. 29, 2010, 1760 U.N.T.S. 79.

2.4 The Medicine of the Kani Tribe.

More than 138 medicinal plants are known to be used for treating various ailments by the Kani, like *Curcuma longa*(turmeric), *Azadirachta indica*(neem), *Justicia adhatoda*(Malabar Nut), and Arogyapacha⁶. Knowledge is carried orally by healers(Plathi or Mooligai), where the new generation takes lengthy apprenticeships. The Kani's Ethno-medicine project was honored by the UN with the Equator Initiative Prize (2002) as one of the most important Ethno-medicine projects worldwide for its global significance. Decoctions, pastes and powders from leaves, roots and bark are used as remedies.

3. Legal Framework of Traditional Knowledge in the Registry as well as on IPR in India

3.1 Constitutional basis for Traditional Knowledge

The constitutional philosophy of protecting TK and TMK in India Article 29⁷ provides the communities the right to preserve their distinct culture including indigenous medicinal knowledge. Article 51(c), which directs State compliance with international law and treaty obligations, provides the basis of India's compliance to international conventions such as the Convention on Biological Diversity(CBD) and the Nagoya Protocol and indirectly lays the constitutional foundation for legislation on indigenous resources and knowledge.

3.2 Statutory Protection

- **Biological Diversity Act, 2002⁸** - It is India's major anti-piracy legislation, meant to promote sustainable use, safeguard biodiversity, and ensure equitable benefit-sharing. Section 3 requires prior clearance from the National Biodiversity Authority(NBA) for foreign businesses seeking access to biological resources or relevant information, while Section 6 forbids establishing intellectual property claims on Indian biological resources without NBA consent. This inhibits the illegitimate patenting of traditional knowledge, such as plants, herbs, and remedies. A key example is the *Jeevani* case, in which the Tropical Botanic Garden and Research Institute(TBGRI) reached an Access and Benefit Sharing(ABS) arrangement with the Kani tribe over Arogyapacha. This

⁶ K. Udayan et al., "Medicinal Plants Used by the Kani Tribe," 6 Indian J. Tradit. Knowledge 35 (2007).

⁷ INDIA CONST. art. 29

⁸ Biological Diversity Act, No. 18 of 2002, INDIA CODE(2002).

example demonstrated the ethical collaboration between traditional wisdom and modern research⁹.

- **Patents Act, 1970 (as amended in 2005)**¹⁰ - Under the Act, privatization of traditional medicinal knowledge is given an absolute prohibition. Section 3(p) states that "a member of the prior art or a mere aggregation or duplication of a member of the prior art of known use or of combinations of known use of persons skilled in the art" is not patentable¹¹ (this provision was key to the Indian victories in reversing the turmeric patent in the USA and the neem patent in the EU¹² ; Section 25, Patent Act, 1970 permits opposition to anticipation by TMK in oral form. However, the Act does not provide positive rights to communities in relation to ownership of their knowledge; it acts as a shield against bio-piracy and not a sword for empowerment. This shortcoming is again rendered by the case of *Jeevani*. The Kani tribe gained from a revenue-sharing system rather than patent rights, showing the lack of fit between indigenous collective rights and an IPR regime which is quintessentially individualistic.
- **Forest Rights Act, 2006**¹³ – “The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (FRA)” aims to correct historical injustices by acknowledging forest groups' rights to land and resources. Section 3(1)(i) empowers communities to conserve, manage, and safeguard biodiversity and its accompanying knowledge¹⁴. Such acknowledgment has increased Kani people's access to medicinal plants that are crucial for their health and livelihood. However, the FRA's concentration on land and tenure ignores unambiguous provisions for benefit-sharing and intellectual property protection. Its necessity for documentary evidence frequently disadvantaged populations in which knowledge is passed down orally, risking exclusion from legal safeguards despite the Act's protective objective.

⁹ P. Pushpangadan & C.K. Atal, *Ethnopharmacology of Trichopus zeylanicus: The Arogyapacha of Kani Tribe*, 2 ANCIENT SCI. LIFE 1, 1984.

¹⁰ Patents Act, No. 39 of 1970, INDIA CODE (1970).

¹¹ The Patents Act, No. 39 of 1970, INDIA CODE § 3(p).

¹² U.S. Patent No. 5,401,504 (issued Mar. 28, 1995)(revoked on reexamination in 1997) & Case T 0416/01, European Patent Office (2000).

¹³ Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (No. 2 of 2007), INDIA CODE (2007).

¹⁴ Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (No. 2 of 2007), INDIA CODE § 3(1)(i).

- **Drugs and Cosmetics Act, 1940¹⁵** - It is law governing preparation, sale and distribution of drugs including *Ayurveda*, *Siddha* and *Unani* medicines. It differentiates between "classical preparations" (those contained in authoritative texts) and "patent or proprietary medicines" (formulations derived from classical sources but modified), both of which must be scientifically demonstrated to assure that they are safe for the consumer, whereas undocumented tribal medicines (such as many Kani) are not easily recognized. This leaves a gap in the regulation under which valuable TK is excluded from formal protection.

3.3 Judicial Precedents

The judicial system has impacted in shaping the Indian way of protecting TK. In the *Turmeric Case* (1997), in India, we successfully contested a U.S. patent over the wound-healing characteristics of turmeric, on the basis of the fact such knowledge was part of traditional Ayurvedic texts and thus not new; similarly, in the *Neem Case* (2000), in Europe, a patent over neem-based fungicides was revoked, based on knowledge of prior traditional use. These cases show the value of using TK as prior art for invalidating improperly-obtained patents. But they also highlight the need to better document and utilise prophylactic legal mechanisms to deter misappropriation prior to patent grants.

3.4 Institutional Mechanisms

- **Traditional Knowledge Digital Library** - India started the TKDL back in 2001, which has digitized over 424,000 formulations from *Ayurveda*, *Siddha*, *Unani*, and *Yoga* available in different languages internationally. TKDL is accessible with NDA to patent office like the United States, Europe, Japan, etc. to check for prior art before granting patent. This has resulted in rejection/withdrawal of many patent applications, and has made TKDL an example of defensive protection worldwide.
- **Ministry of AYUSH** - The Ministry institutionalized the propagation of the traditional systems of medicine. In addition, AYUSH aims to scientifically validate and modernize TMK and to ensure that communities benefit from its use within the framework of policy frameworks, research and education. It is a dual role because it aims at bringing

¹⁵ Drugs and Cosmetics Act, No. 23 of 1940, INDIA CODE (1940).

ISM up to the world level and also to save it from getting exploited.¹⁶

3.5 International Legal Framework

India's domestic architecture is consistent with international legal instruments. Though the TRIPS Agreement(1995)¹⁷ gave a minimum standard for the protection of IPRs, it did not specifically provide for the protection of TK, hence enabling bio-piracy because traditional medicinal knowledge would not be patentable subject matter under TRIPS. The *Nagoya Protocol* (2010)¹⁸ (which complements the CBD) focuses on “*Prior Informed Consent*” (PIC) and “*Mutually Agreed Terms*” (MAT) for the utilization of genetic resources or genetic knowledge.

India has been a strong proponent of a binding international treaty on TK and folklore and the discussions in the ‘*WIPO Intergovernmental Committee (IGC)*’ are ongoing. India's case for the recognition of TK as a living and evolving system resists attempts to exclude systems of codified knowledge such as *Ayurveda* from the international arena.

3.6 Challenges and Critique

Despite substantial gaps remain. The BDA, 2002 is weakly enforced and community awareness is low, whereas Patents Act, just provide for defensive mechanism not indigenous ownership rights. The FRA, while progressive exclusive intellectual property aspect. The Drugs and Cosmetics Act, criminalizes traditional medicine, thereby tribes are limited in using their medicine to fullest. These challenges underscore the conflict between Western IPR regimes focused on novelty and individual ownership and indigenous systems based on collective, oral traditions. But India has emerged as a global leader in conversation of their heritage, because of cultural traditions thanks to its hybrid structure of statutory, institutionalized and international protocols. However need of stronger legal forms are required to uplift Kani's medicinal knowledge, this can lead to cultural longevity and equitable benefit-sharing.

4. Cases Laws and Judicial Developments

The evolutionary pattern of the protection of TK in India has thus been influenced by both the

¹⁶ Ministry of AYUSH, Government of India, available at (<https://www.ayush.gov.in>).

¹⁷ Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299.

¹⁸ Nagoya Protocol on Access and Benefit Sharing, Oct. 29, 2010, U.N.T.S. (entered into force Oct. 12, 2014).

international patent debates and also by the recognition of indigenous rights by the Judiciary. While international conflicts brought the vulnerability of TK to bio-piracy to the fore, Indian courts and legislation, specifically the Biological Diversity Act, 2002, have brought the need to share benefits to the forefront.

For instance, the *Turmeric Patent Case* (1995) was a landmark case because for the first time, after centuries of use in Ayurveda, a patent was granted by the *United States Patent and Trademark Office (USPTO)* for the wound-healing property of turmeric. The patent was successfully opposed by the *Council of Scientific and Industrial Research (CSIR)*, on the basis of documentary and oral evidence, and was revoked in 1997¹⁹; this case was the first major win by India in the assertion that traditional knowledge is a form of "prior art".

Also, in the *Neem Patent Case* (1994), a European patent was awarded for fungicidal use of neem oil. Indian NGOs and their international supporters presented copious evidence of neem's agricultural and medicinal applications. The *European Patent Office (EPO)* revoked the patent in 2000, on the grounds that it lacked inventive step, which is a form of novelty.

In another case in the U.S., the exploitation of agricultural heritage was in play, the *Basmati Rice Case*, India and Pakistan protested a patent on Basmati Rice obtained by RiceTec Inc. on the grounds that they were the originator of Basmati Rice. A number of claims were struck out, reaffirming the value of the "Geographical Indications of Goods (Registration and Protection) Act, 1999"²⁰ in protecting the agrarian knowledge associated with cultural identity.

A more positive example was the case of *Ariyakepacha/Jeevani* in India. The knowledge of the Arogyapacha plant from the Kani tribe was commercialized by scientists of *Tropical Botanic Garden and Research Institute (TBGRI)* to prepare the herbal formulation Jeevani. Importantly, an ABS agreement was negotiated under the Biological Diversity Act, 2002, and ensured that profits were distributed through a tribal trust, the first of its kind and later recognised with the UN Equator Prize (2002).

Indian courts have also got involved directly. In *Divya Pharmacy v. Union of India*²¹,

¹⁹ U.S. Patent No. 5,401,504 (filed Dec. 28, 1993), reexam. granted, U.S. Patent & Trademark Off. (1997).

²⁰ The Geographical Indications of Goods (Registration and Protection) Act, No. 48 of 1999, INDIA CODE (1999).

²¹ *Divya Pharmacy v. Union of India*, Writ Petition (PIL) No. 127 of 2016, decided on Dec. 21, 2018 (Uttarakhand HC).

Uttarakhand High Court affirmed 'biological resources and related traditional knowledge' "collective property" of indigenous communities and benefit-sharing is a "statutory right" of Biodiversity Act. Establishing, among other things, that tribal and local communities are active stakeholders and not passive knowledge-holders.

For Kani tribe, *Divya Pharmacy* is a judicial guideline. Just as collective rights on medicinal plants were recognized by the Uttarakhand Court, a similar approach on medicinal plants can further entrench the Kani's rights and duties to manage, preserve, and benefit their medicinal heritage-ensuring not only that they do not lose ethno-botanical knowledge, but that they are in a position to use the law to protect it.

5. Problems in protecting the medicine of Kani tribe

The Kani tribe's traditional ecological knowledge, which is central to its cultural identity, is under increasing threat from degradation, appropriation, and exploitation. These obstacles are not only legal, but also cultural, social, and financial. A major concern is a lack of documentation: Kani medicine is orally passed, which protects sacred information but limits recognition as "prior art" in patent regimes, leaving it vulnerable to misuse. The mismatch between common knowledge and individualistic IP regimes creates further friction. The Patents Act, 1970 prohibits patenting of ideas based on traditional knowledge but retains the concept of the "inventor"²², which is incompatible with common ownership. Similarly, the Forest Rights Act, 2006 recognizes community rights to minor forest produce but stops short of providing comprehensive intellectual property protection.

The Arogyapacha/Jeevani example exemplifies both advantages and disadvantages of combining traditional knowledge with modernity. Although it resulted in historic ABS agreement under the Biological Diversity Act, 2002²³, it sparked concerns about cultural autonomy. Many Kani people objected sharing knowledge due to fear of misuse concerns and incidents of bio-piracy, in which indigenous knowledge was used without authorization or fair benefit-sharing.

Beyond legal structures, socioeconomic vulnerabilities exacerbate abuse. Middlemen frequently purchase forest produce from the Kani at cheap credit-based pricing and resale it for

²² The Patents Act, No. 39 of 1970, § 3(p), INDIA CODE (1970).

²³ The Biological Diversity Act, No. 18 of 2003, § 6, INDIA CODE (2002).

a high profit. Poverty, illiteracy, and a lack of contractual awareness make the community vulnerable to unjust agreements, while state-centric systems under the BDA and FRA frequently clash with indigenous territorial claims, such as those for the Agastyamala Hills. Development pressures and ecological challenges as poorly constructed housing complexes to wildlife-caused crop losses, further undermine protection to Kani people.

6. Reconciling IP and Traditional Knowledge: Analysis, Challenges and Pathways for Reform

The case of the Kani tribe confirms this structural discontinuity between the indigenous medicine and the intellectual property regimes. While the Kani know that TK is communal, orally-transmitted, and central to their identity, patent law requires novelty, identifiable inventors and codification (the *Turmeric* and *Neem* cases show how foreign entities tried to patent this culturally ingrained heritage²⁴; Jeevani is built around the Kani knowledge of the Arogyapacha plant). As well as giving rise to a ground breaking Access and Benefit Sharing (ABS) agreement, it presented the inadequacy of existing laws to recognise a system of 'cultural patency' and 'collective ownership'.

India has taken a multifaceted strategy to conserving traditional knowledge (TK). The Biological Diversity Act, 2002 (BDA) requires prior informed consent and equitable benefit-sharing for the commercial utilization of biological resources. The Patents Act of 1970, *Section 3(p)*, bans TK from patentability, whereas the Traditional Knowledge Digital Library (TKDL) protects against misappropriation abroad. Collectively, these show India's defensive strategy for protecting TK and sovereignty. However, implementation gaps exist. The Forest Rights Act, 2006 protects community rights to forest produce but does not fully handle intellectual property in traditional medicine. For the Kani tribe, this implies that their medicinal knowledge is still being appropriated without proper recognition or compensation.

Socioeconomic weaknesses exacerbate these disparities. Poverty, marginalization, and a lack of bargaining power preclude the Kani from engaging in equitable negotiations with corporations or the state. They are exploited by middlemen who buy cheap forest produce and sell it at a big profit margin. Government assistance policies, which are frequently imposed

²⁴ S. Ramanna, *Bio-piracy and Traditional Knowledge: The Case of the Jeevani Drug*, 45 ECON. & POL. WKLY. 15 (2010).

from the top down, undermine traditional livelihoods and diminish intergenerational knowledge transfer.

A community-based framework is necessary for reform. India must go beyond defensive measures and establish a unique TK framework that guarantees collective ownership, permanent protection, and enforceable benefit-sharing. Documenting oral traditions with 'Free, Prior, and Informed Consent (FPIC)' is critical. Expanding TKDL to incorporate oral traditions under community control, coupled with improved Access and Benefit-Sharing (ABS) procedures, would assist ensure that benefits both monetary and non-monetary such as healthcare, education, and technology transfer are delivered to the Kani. Facilitation cells inside the Ministry of AYUSH, as well as empowered Panchayats working in partnership with tribal institutions, could help to bridge the gap between communities and complex intellectual property systems.

The survival of Kani medicine is dependent on preserving the Western Ghats ecology and implementing culturally sensitive development methods. Partnerships between the research and pharmaceutical industries must be based on respect, equity, and FPIC. The Kani experience demonstrates both the benefits and drawbacks of incorporating TK into current frameworks. Treating traditional knowledge (TK) as a living communal history rather than an exploitable resource is critical to ensuring that indigenous medicine contributes to global health while maintaining justice for its caretakers.

7. Findings

1. Kani traditional medicine is fundamental to their cultural identity and delivers low-cost, high-quality healthcare to local communities.
2. Vulnerability to Bio-piracy is there as Kani knowledge is still at danger due to gaps in legal protection, a lack of codification, and middleman abuse, as demonstrated by the Jeevani case.
3. Legal Protections Are Partial as the BDA, Patents Act, and TKDL provide protective procedures, they do not bestow positive ownership or collective recognition to communities.
4. International instruments provide support but do not guarantee protection, as TRIPS

and the Nagoya Protocol have an impact on Indian law, but stronger implementation is required to prevent misappropriation.

5. Socioeconomic challenges, poverty, illiteracy, and limited bargaining power impede Kani's equal involvement in benefit-sharing, limiting their ability to protect and use their medicinal knowledge.

8. Conclusion

The Kani Tribe of the Western Ghats have traditional medicinal expertise that is important to both tribal identity identity and global medical care. It is however under threat from oral tradition collapse, bio-piracy, ecological deterioration and marginalisation. Example of *Jeevani* Case shows that IPR mechanisms fail to safeguard such communal, orally shared wisdom. With adoption of BDA, 2002 , Patents Act,1970 and TKDL India has given some protection. The ABS model created around Jeevani highlights how one can protect culture and economically benefit simultaneously. For Kani Right's protection a comprehensive, rights-based approach with ABS processes, community acknowledgement, with documentation with FPIC be adopted practically. Finally, to protect this knowledge, legal change and moral responsibility is of utmost importance while contributing to global health is required.

9. Suggestions

1. Enhance ABS processes under the BDA to achieve equitable monetary and non-monetary benefits for the Kani community.
2. Document oral traditions with respect, digitize Kani medicinal knowledge in the Traditional Knowledge Digital Library with Free, Prior, and Informed Consent (FPIC), assuring community control over sensitive information.
3. Legal reforms for collective rights. Recognize collective ownership and "cultural patency," which grants tribes such as the Kani positive rights to their knowledge.
4. Capacity Building and Awareness: Inform Kani about legal rights, bio-piracy risks, and ABS negotiations to ensure informed participation in commercial and scientific cooperation.

5. Culturally Sensitive Development: Integrate protection of the Western Ghats and Kani medicine into local development plans to balance environmental sustainability, community health, and livelihoods.

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