
TRADITIONAL MEDICINAL KNOWLEDGE AND INTELLECTUAL PROPERTY: BALANCING INDIGENOUS RIGHTS WITH INNOVATION

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ABSTRACT

Traditional medicinal Knowledge (TMK) is a shared resource passed orally throughout the generations. It represents a long history of health practices developed and preserved by the indigenous communities; they relied on the traditional medical knowledge for their primary healthcare, biodiversity and sustainable development through close association with the nature.

Traditional medicinal knowledge has social, cultural and scientific importance in the indigenous communities, by way of holistic healthcare and cultural identity, which helps to balancing the body, spirit and mind. The modern healthcare shifts its interest towards this traditional medicinal knowledge, which may lead to misuse and bio piracy. On this regard, the traditional medicinal knowledge needs better recognition, development and preservation. The current Intellectual properties (IP) laws especially patents has essential element of novelty, individual ownership, and industrial application, whereas the traditional medicinal knowledge is passed orally throughout the generations without having the individual owner.

Often the indigenous communities did not receive any benefit for the use of their knowledge, leading to the misappropriation and bio piracy. The growing interactions between traditional medicinal knowledge and IP observes the limitations of existing laws in protecting the collectively owned knowledge.

This study examines the bottlenecks in the existing laws in protecting the community based and collectively owned knowledge. It also examines the tribal rights, legal reforms available to the indigenous communities. It analyses the Indian legal frameworks including the Patents act, 1970, the protection of plant Varieties and Farmers Rights etc. This paper identifies the legal challenges in protecting the traditional medicinal knowledge.

Keywords: Traditional medicinal knowledge, Intellectual Property, Indigenous Communities, Bio Piracy, Unauthorized use.

Introduction

Traditional medicinal knowledge (TMK) is a vital aspect of the cultural, social and ecological heritage of indigenous and local populations. It is a wisdom that has evolved over generations of observation, experience and connection with nature. Traditional communities have used medicinal plants, herbs, minerals, animals and other biological resources to prevent and treat ailments. Such information has mostly been passed down from generation to generation through oral traditions, customary practices, local languages and community-based learning. Traditional knowledge of medicine is vast and varied as seen in the case of traditional systems like Ayurveda, Siddha and Unani, and several indigenous and local methods of treatment in India.¹

India has tackled this challenge using a number of legislative and institutional measures. Section 3(p) of the Patents Act, 1970 excludes an invention which is, in effect traditional knowledge or is simply an aggregation or duplication of known properties of components which are known traditionally. This rule is a crucial precaution against grants of patents on existing conventional knowledge. The development of the Traditional Knowledge Digital Library (TKDL) has enhanced India's defensive protection system even more. The TKDL records the traditional knowledge connected to Indian systems of medicine and offers it in a form that can be reviewed by the patent authority. It is intended to avoid traditional medicinal knowledge being wrongly portrayed as novel and imaginative subject matter.

The Biological Diversity Act, 2002,² also has a significant role to play in regulating access to biological resources and associated knowledge and setting up procedures for equitable benefit sharing. Another supplementary mechanism is provided by the Protection of Plant Varieties and Farmers' Rights Act, 2001³ that recognises the role of farmers and communities to the protection and development of the plant genetic resources. But these developments have not filled important gaps. The existing regime is fragmented across several areas of law and does not provide a unified and coherent rights regime for traditional medicinal knowledge. The task then is not just to prevent the improper grant of patents, but to acknowledge the interests of the

¹ Chakrabarty, S. P., & Kaur, R. (2021). A Primer to Traditional Knowledge Protection in India: The Road Ahead. *Liverpool Law Review*, 42, 401–427. <https://doi.org/10.1007/s10991-021-09281-4> ² The Patents Act, 1970, No. 39, Acts of Parliament, 1970 (India).

² The Biological Diversity Act, 2002, No. 18, Acts of Parliament, 2003 (India).

³ The Protection of Plant Varieties and Farmers' Rights Act, 2001, No. 53, Acts of Parliament, 2001 (India).

communities that have nurtured and cultivated the knowledge.

Nature and Characteristics of the Traditional Medical Knowledge

This collaborative and intergenerational nature of traditional medicinal knowledge is what really distinguishes it from conventional intellectual property. In many circumstances it is difficult to attribute a traditional medicine practice to a specific individual. Rather the information may have been accumulated gradually by the contributions of several generations. For example, a community might know that a particular plant has medical benefits. Over time, different generations may develop ways of gathering the plant, preparing it, mixing it with other substances and deciding its appropriate therapeutic application. The final knowledge is thus the product of accumulated communal experience rather than the labour of one identified inventor.

Traditional medicinal knowledge is thus strongly linked with the environment. Indigenous peoples frequently have sophisticated knowledge of local species, seasonal variations, soil conditions and sustainable harvesting practices.⁴ Therefore, protection of TMK cannot be totally isolated from protection of biodiversity. And knowledge has culture worth too. A medicinal practice may have importance other than its commercial or therapeutic usefulness and may be part of a community's cultural identity. Legal protection should therefore extend to both economic and non-economic elements of traditional knowledge.

Traditional Medicinal Knowledge and the Intellectual Property Concept

Traditionally, intellectual property law has sought to safeguard inventions of the human intellect by conferring exclusive rights on identifiable persons or legal entities. Concepts such as ownership, authorship, creativity, innovation and commercial exploitation have given rise to patents, copyrights, trademarks and other intellectual property rights. Traditional medicinal knowledge does not fit well into this system.

The first problem is novelty. In general, if the identical knowledge already exists, a patent application cannot claim it as a new invention. Traditional medicinal knowledge could have been known and used for centuries.

⁴ Fredriksson, M. (2021). India's Traditional Knowledge Digital Library and the Politics of Patent Classifications. *Law and Critique*, 34, 1–19. <https://doi.org/10.1007/s10978-021-09299-7>

The second problem is ownership. Traditional knowledge can be owned by a group as a whole, not by a single individual. It may not be able to identify the original creator.⁵

The final difficulty is one of time. Although standard intellectual property rights are often limited in time, traditional knowledge can potentially last forever and be handed down through generations.

The fourth problem is commercialisation. A corporation may pour substantial resources into the development of a pharmaceutical product that is derived from traditional knowledge. Thus, the respective contributions of the community and the enterprise may be difficult to discern.

Protection of Traditional Medicinal Knowledge under Patents Act, 1970

The Patents Act, 1970 is one of the major legal mechanisms in India to combat the theft of traditional medicinal knowledge. Section 3 of the Act lists inventions that cannot be patented. Subsection 3(p) particularly precludes an innovation which is in effect traditional knowledge or which is essentially an aggregation or duplicate of the recognised qualities of traditionally known components. This condition is important as it does not permit an applicant to get a patent just by presenting existing traditional knowledge in a new form.

The Act also incorporates disclosure obligations involving biological material. When biological resources are used in an invention, the patent process becomes concerned with the disclosure of the source and geographical origin of the biological material. Such disclosure may assist in tracking the link between a claimed invention and biological resources acquired from specific geographical regions or communities.⁶ But patent law is essentially defensive protection. It can prevent the issue of an unsuitable patent, but it does not automatically confer a positive intellectual property right on the community that possesses the knowledge.

Traditional Knowledge Digital Library as a Tool to Combat Biopiracy

One of the major projects of India to safeguard traditional medicinal knowledge is the Traditional Knowledge Digital Library. Traditional medical knowledge is enshrined in many

⁵ Sumantran, V. N., & Tillu, G. (2013). Insights on Personalized Medicine from Ayurveda. *The Journal of Alternative and Complementary Medicine*, 19, 370–375. <https://doi.org/10.1089/acm.2011.0698>

⁶ Chakrabarty, S. P., & Kaur, R. (2021). A Primer to Traditional Knowledge Protection in India: The Road Ahead. *Liverpool Law Review*, 42, 401–427. <https://doi.org/10.1007/s10991-021-09281-4>

ancient literature and local traditions, many of which are written in languages that are not familiar to patent examiners outside India. The TKDL tackles this challenge by systematically documenting and classifying traditional knowledge in a form that is accessible and understandable to patent authorities.⁷

The database includes information concerning traditional systems of medicine like as Ayurveda, Siddha, Unani, Sowa-Rigpa and Yoga. Its main purpose is defensive, in that it provides evidence that the information in question already existed and hence cannot fulfil the novelty criterion for patent protection. The turmeric patent controversy can shed some light on the importance of the TKDL. The use of turmeric for wounds healing was granted a US patent. India opposed the patent on the grounds that the use claimed was already part of traditional Indian knowledge.⁸ The patent was later revoked.

The neem patent dispute also illustrated the need of capturing traditional knowledge in a form that patent offices can verify. These controversies exposed a fundamental shortcoming in the international patent system: knowledge may be prior art in actuality but undetectable to patent examiners because it is included in traditional writings, local languages or oral traditions. The TKDL is thus an important bridge between ancient knowledge systems and current intellectual property regimes.

Access and Benefit Sharing and Biological Diversity Act.

The link between traditional medicinal knowledge and biological resources makes biodiversity law especially essential. The Biological Diversity Act, 2002 governs access to biological resources and associated knowledge and provides for methods relating to access and benefit sharing. Its mission is not only conservation but also to ensure that communities and other benefit claimers receive acceptable advantages from the use of biological resources and associated knowledge. This is where the notion of Access and Benefit Sharing (ABS) becomes particularly important. Where biological resources or associated traditional knowledge are used for commercial research, the communities contributing to that knowledge should not be

⁷ Imran, Y., Wijekoon, N., Gonawala, L., Chiang, Y.-C., & De Silva, K. R. D. (2021). Biopiracy: Abolish Corporate

Hijacking of Indigenous Medicinal Entities. *The Scientific World Journal*, 2021, 1–8. <https://doi.org/10.1155/2021/8898842>

⁸ Bourdy, G., Aubertin, C., Jullian, V., & Deharo, E. (2017). Quassia “biopiracy” case and the Nagoya Protocol: A researcher's perspective. *Journal of Ethnopharmacology*, 206, 290–297. <https://doi.org/10.1016/j.jep.2017.05.030>

excluded from advantages arising from such usage.⁹ Benefits may be monetary or otherwise. These may be in the form of financial contributions, royalties, transfer of technology, capacity building, development of infrastructure, joint research or support for conservation operations. This strategy also remedies a serious deficiency in patent law. Patent law is largely concerned with whether an invention is eligible for exclusive protection, while biodiversity law may deal with the conditions under which biological resources and associated knowledge are accessed and commercially used.

Protection of Plant Variety & Farmers' Rights

Another important development in Indian legislation is the Protection of Plant Varieties and Farmers' Rights Act, 2001. The Act acknowledges the significant contributions of farmers and local people in protection, development and improvement of plant genetic resources.¹⁰ Farmers may have conserved traditional varieties and information on cultivation, adaptation and sustainable use.

This approach is relevant for traditional medical knowledge as many therapeutic plants are produced, maintained and used by local communities. awareness of farmers' rights is awareness that intellectual property protection need not be based only on the individual inventor model. There are legal systems that can be developed to acknowledge collective and historical contributions.

Misappropriation of Traditional Knowledge and Biopiracy

One of the major challenges about traditional medicinal knowledge is biopiracy. It broadly refers to the unlawful appropriation or commercial exploitation of biological resources and associated traditional knowledge without proper recognition, consent or benefit sharing. The problem can arise in a number of ways. A firm can take information from a local community and utilise it for research purposes without giving credit to the source. A researcher may extract an active chemical from a medicinal plant used traditionally by a culture, and then apply for patent protection. Alternatively, traditional knowledge may be incorporated into commercial

⁹ Sumantran, V. N., & Tillu, G. (2013). Insights on Personalized Medicine from Ayurveda. *The Journal of Alternative and Complementary Medicine*, 19, 370–375. <https://doi.org/10.1089/acm.2011.0698>

¹⁰ Wynberg, R., & Laird, S. A. (2018). Fast Science and Sluggish Policy: The Herculean Task of Regulating Biodiscovery. *Trends in Biotechnology*, 36, 1–3. <https://doi.org/10.1016/j.tibtech.2017.09.002>

items without any significant reward flowing back to the knowledge bearers.¹¹

The turmeric and neem issues show how traditional knowledge is susceptible when patent laws do not sufficiently identify traditional methods as prior art. Biopiracy is thus not just a property conflict. This is about concerns of fairness, cultural acknowledgement, biodiversity conservation and economic equality. Therefore, safeguarding of traditional medicinal knowledge should ensure that communities are not exploited as mere providers of raw information or biological resources.

Key Challenges in Safeguarding Community Owned Knowledge

- I. As a general rule, conventional intellectual property law mandates a clearly defined right holder. Instead, traditional medical knowledge may belong to a community, so it is difficult to define who should possess or enforce the right.
- II. Prior use may be difficult to prove in the absence of written records. Orally transmitted knowledge may not be easily recognised by the patent authorities as previous art.
- III. Documentation helps prevent improper patenting, but sharing might also disclose critical knowledge to outsiders. Thus, it is important that communities have a say in what knowledge gets recorded and how accessible it is.
- IV. Government agencies and organisations have a vital role in safeguarding traditional knowledge, but communities themselves must remain at the center of decisions about access, research and monetisation.
- V. Traditional knowledge may be one component of a final pharmacological product. Therefore, the knowledge may be difficult to assign a proper share of the benefits related to it.
- VI. Protection is provided by patent law, regulations on biodiversity, protection of plant varieties and other legal measures. Without a common foundation, enforcement can be

¹¹ Efferth, T., Banerjee, M., Paul, N. W., Abdelfatah, S., Arend, J., Elhassan, G., Hamdoun, S., Hamm, R., Hong, C., Kadioglu, O., Naß, J., Ochwangi, D., Ooko, E., Ozenver, N., Saeed, M. E. M., Schneider, M., Seo, E.-J., Wu, C.-F., Yan, G., ... Bessarab, D. (2016). Biopiracy of natural products and good bioprospecting practice. *Phytomedicine*, 23, 166– 173. <https://doi.org/10.1016/j.phymed.2015.12.006>

problematic.

VII. Outside India, traditional knowledge can be misused. Patent applications or commercial products created in other countries may therefore be inadequately protected by a domestic legal remedy.

Recommendations for Improving Legal Protection

We may reinforce the present Indian structure by:

- I. Community owned legacy should be specially recognised in traditional medicinal knowledge.
- II. India should think of building a complete sui generis framework that may complement the existing intellectual property and biodiversity laws.
- III. Increased community control over traditional knowledge recording and release is needed.
- IV. Mechanisms for access and benefit-sharing should be more transparent ⁷⁷and accessible to local populations.
- V. Patent offices should improve interaction with TKDL and other traditional knowledge databases further.
- VI. Traditional knowledge holders should be provided with more legal and institutional support to track overseas patent applications and to oppose incorrect claims.
- VII. Customary rules and community protocols should be taken into account, to the extent that they are consistent with constitutional principles and fundamental rights.
- VIII. Legal awareness programs should be undertaken among indigenous and local communities so that the knowledge holders understand the legal ramifications of sharing their information with researchers, companies and other external actors.

Conclusion

Traditional Medicinal Knowledge is a significant form of community knowledge that integrates healthcare, cultural identity and the conservation of biodiversity. Their evolution thru

generations shows the role of indigenous and local communities in human health and sustainable use of nature. But the growing economic and scientific interest in traditional medical knowledge has also been accompanied by rising possibilities of misappropriation, biopiracy and unlawful commercial use. Traditional intellectual property law has an inherent flaw, given that it emphasises identifying inventors, individual ownership and limited duration rights. Traditional medicinal knowledge does not usually have these properties. It is often collective, intergenerational, orally transmitted and embedded in the cultural and ecological identity of specific groups.

In the end, it is important to view the safeguarding of ancient medicinal knowledge as a means of fostering current innovation. It should be defined on a fair relation between traditional knowledge holders, researchers, pharmaceutical firms and the State. Scientific progress should profit from traditional knowledge, but this should be done with respect for the people that have kept it. Thus, recognition, respect and equitable benefit sharing can create the foundation for a legal framework within which ancient medicinal knowledge can contribute to modern healthcare without exploitation or erasure of its original stewards.