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# PROTECTING TRADITIONAL KNOWLEDGE THROUGH INTELLECTUAL PROPERTY RIGHTS

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## ABSTRACT

This research article examines the intricate connection between intellectual property rights (IPR) and traditional knowledge (TK), highlighting the difficulties in safeguarding the TK under the existing IPR framework. Generations of indigenous and local tribes have transmitted traditional knowledge. Therefore, it is valuable, both culturally and economically. However, this knowledge is commonly used without giving commendation or benefit-sharing. The article assesses the legal loopholes in the current IPR frameworks, primarily those relating to patents and biopiracy, and brings out an outline of international attempts to safeguard TK, such as the Convention on Biological Diversity, which can help us get an outline as to how can we incorporate such provisions in Indian laws. It also gives insights into why TK needs to be protected and how it can be done under existing modes of Intellectual Property. All this is discussed with the help of precedents and instances related to the protection of TK. It also suggests certain measures for developing a fairer and more inclusive framework that upholds benefit-sharing methods while respecting the general nature of TK. By recommending strategies for better traditional knowledge protection at both national and international levels, this article adds to the current conversation about intellectual property rights reforms.

**Keywords:** Traditional knowledge, Intellectual Property Rights, Biopiracy, Benefit-sharing, Customary Law, Geographical Indications

## INTRODUCTION

Traditional knowledge (TK), a strength of indigenous and local communities, is a repository of cultural, biological, and intellectual heritage cumulated over time. TK is dynamic, evolving with each generation, and covers a wide range of subjects, including agriculture, medicines, environmental conservation, and cultural expressions. It is of great value to the communities that own and use it and to sectors such as agriculture, pharmaceuticals, and cosmetics, which frequently exploit this knowledge for commercial advantage.

Moral and legal concerns with the exploitation of TK frequently arise without any compensation or acknowledgment to the communities that have fostered it. The evolution of new and advanced technology and the exploitation of products based on TK today are the major threats for the existence of many of these communities. “The modern cultural industries as well as the manufacturing industries now commercially exploit the traditional knowledge-based products using new technology without the permission and sharing of profits with the communities.”<sup>1</sup> As a result, TK is often vulnerable to misappropriation through practices like biopiracy, where entities claim ownership over traditional resources without fair compensation.

This article explores the existing legal frameworks that attempt to protect TK, the shortcomings of these systems, and possible alternatives for providing protection and recognition to the genetic resources and the communities that own them.

## ECONOMIC AND CULTURAL SIGNIFICANCE OF TRADITIONAL KNOWLEDGE

Traditional knowledge plays a crucial role in Indigenous communities' social, cultural, and economic life. Economically, TK contributes to pharmaceuticals, agriculture, textiles, forestry, cultural heritage, and food production. For instance, “Traditional Medicine serves the health needs of a vast majority of people in developing countries where access to 'modern' health care services and medicines is limited by economic and cultural reasons.”<sup>2</sup> Similarly, addressing global environmental problems is important today. Traditional agricultural methods that prioritize sustainability and biodiversity are recognized as crucial for resolving these global issues. Traditional practices like weaving, dyeing, craftwork, and medicinal practices provide employment to rural and indigenous communities, thereby generating livelihood. Traditional methods of farming and conservation contribute to a sustainable economy and reduce reliance

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<sup>1</sup> Aman Kumar, *Protection of Traditional Knowledge*, 4 IJLLR (2022).

<sup>2</sup> Adarsh Verma and Bhanu Prakash Verma, *Critical Analysis of Traditional Knowledge vis-a-vis IPR Laws in India*, 4 IJLLR (2022-2023).

on heavy expenditure and external inputs. Traditional and cultural practices, crafts, and events contribute to the growth of tourism, boosting local economies, the best example of which is Rajasthan's cultural tourism.

Culturally, TK represents indigenous communities' identity, history, values, heritage, and spirituality. "It represents cultural values of a particular group. It is a key constituent of a community's social and physical environment and, as such, its preservation is of paramount importance."<sup>3</sup> For example, folk music and dance forms, oral traditions, Ayurveda practices, rituals, languages, etc. Such practices have been followed since time immemorial and ensure the survival and continuation of the authenticity and heritage of the communities they belong to. These centuries-old traditions, like Yoga of different kinds and Kumbh Mela, are so valuable that they are recognized by international organizations such as UNESCO. Despite its value, external actors have repeatedly exploited TK, often without proper benefit-sharing or compensation, leading to significant economic and cultural losses.

### **NEED TO PROTECT TRADITIONAL KNOWLEDGE**

As discussed above, TK contributes significantly to the preservation of the cultural heritage of Indigenous communities and the economic development of the country. It also serves as a basis for research endeavors. Hence, it is imperative that genetic resources and their traditional knowledge should be preserved. As globalization and modernization are (somewhere) threatening the authenticity of TK, legal protection can help conserve the cultural expressions integral to the community by recognizing them and compensating for unethical commercial exploitation of TK.

"The answer to the question that why do we need to protect the Traditional Knowledge can be found in the United Nations Convention on Biological Diversity (1992) wherein the Convention reaffirmed the sovereign rights of States to protect their biological resources"<sup>4</sup>, which will be discussed in the upcoming section. The lack of legal protection often makes TK vulnerable to biopiracy, which occurs when companies or individuals exploit TK for commercial gain without recompense or benefit-sharing. "Biopiracy occurs when genetic resources and traditional knowledge is taken from biodiverse developing countries without permission."<sup>5</sup> This information is then used to patent similar inventions without essential profit-

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<sup>3</sup> Aman, *supra* note 1, at 8.

<sup>4</sup>*Id.* at 9.

<sup>5</sup> John Reid, *BIOPIRACY: THE STRUGGLE FOR TRADITIONAL KNOWLEDGE RIGHTS*, 34(1) AILR (2009).

sharing or recognition. The questions of growing importance regarding the rights of Indigenous people regarding access and benefit sharing have not been dealt with in a simplified manner. Legislations, complementary laws, innovations, and practices of indigenous communities must be considered as part of the human rights of these communities.

Also, this issue is a matter of social justice. Indigenous communities have often faced marginalization and exploitation. The Indian Constitution does not directly talk about the subject of protecting traditional knowledge. However, 'Article 29 of the Constitution' recognizes the protection of the culture of minorities as a 'Fundamental Right' (Part III), according to which 'any section of the citizens residing in the territory of India or any part thereof having a distinct language, script or culture of its own shall have the right to conserve the same.'<sup>6</sup> "The only other general provision in the Constitution that can be identified as a source to protect traditional culture, knowledge, etc. is Article 51 A (f) of the Constitution"<sup>7</sup> which says that "It is the fundamental duty of every citizen of India to value and preserve the rich heritage of our composite culture."

Therefore, **sui generis**, or alternative law, is incumbent to preserve TK. Currently, India does not have a specified sui generis legislation to safeguard such TK and folklore, but it is working on creating them. The Sui generis system, based partly on the existing IPR system but with modern features, should be designed to protect TK in India. Customary, communal, and normative principles should be recognized in a sui generis system. Customary principles ensure that traditional practices and community laws governing TK use are recognized and respected. Communal principles throw light upon how to prevent exploitation and biopiracy through collective ownership and benefit-sharing. Normative principles help protect cultural integrity and harmony ethically and sustainably. By following these principles, a sui generis system can ensure fair treatment of communities, promote equality and equity, and preserve TK in line with international initiatives like the Nagoya Protocol and CBD.

## **PROTECTION OF TRADITIONAL KNOWLEDGE UNDER THE EXISTING MODES OF INTELLECTUAL PROPERTY**

Though **TRIPS (Trade-Related Aspects of Intellectual Property Rights)** does not clearly include protection of TK as a subject matter, it does not entirely exclude or prohibit protection of TK as a form of IPR. Therefore, if traditional knowledge, practices, and innovations meet

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<sup>6</sup> INDIA CONST. art. 29.

<sup>7</sup> Aman, *supra* note 1, at 3.

the requirements for protection under the existing intellectual property rights, they are also covered under the scope of the TRIPS Agreement.

- **PATENTS:** For the registration of any invention under the Patents Act 1970, the invention must be-
  - (a) novel (unique)
  - (b) an inventive step
  - (c) of some industrial use.

Traditional knowledge, being ancient and already in the public domain, does not meet these criteria. According to Section 3(p) of the Indian Patents Act, 1970, inventions based on TK are not patentable. However, patents can sometimes protect traditional medicinal knowledge if applied in a novel way, such as through novel compositions or processes. For example, if a traditional herbal remedy is transformed to create a novel pharmaceutical drug, the preparation process or the drug itself may be patented.

- **COPYRIGHT AND NEIGHBOURING RIGHTS:** The question of copyright occurs in the context of folk materials composed of traditional knowledge expressed in art form. Folk materials, which include folklore, drama, folk music, dance, and other artistic endeavors, please a large audience today. “WIPO also recognizes the performances of indigenous and local communities as traditional knowledge. Copyright law also protects the performances by way of neighboring rights or performer’s rights.”<sup>8</sup> Copyright can protect such literary, artistic, or musical works by granting the producers absolute rights over their creations.

Neighboring rights protect sound recordings, performances, and broadcasts. These cannot be recorded without the permission of the performer. This ensures the protection of the rights of traditional performers through IPR.

It is now well-established that indigenous communities or unknown or unidentified authors can legally recognize and protect literary, religious, artistic, technological, scientific, and other traditions and productions they created and passed down through generations as intellectual property under the copyright law.

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<sup>8</sup> Indian Copyright Act, 1957, s 38, No. 14, Acts of Parliament, 1957 (India).

- **TRADEMARKS:** Trademarks play a crucial role in representing different commercial interests and marketing strategies. Indigenous communities can register trademarks to differentiate their products by ensuring their distinctive quality. Trademarks can safeguard the prestige of traditional knowledge up to a point, but they cannot protect the substance of that information. Trademarks can help protect the identity of traditional products by reserving them under a symbol or name. This will prevent unauthorized users from exploiting the prestigious knowledge by connecting them with a brand. For example, if trademarked, handicrafts, designs, traditional products and processes, and indigenous medicinal products can be protected from misuse and imitation.
- **GEOGRAPHICAL INDICATION:** By preserving the distinctive characteristics and reputation of traditional products linked to a specific geographical location, GIs can aid the preservation of TK. “GI affords collective rights and thus is more suited to protection and promote traditional knowledge than most IPRs, since traditional knowledge is largely held collectively. Both GI and traditional knowledge are location-specific and are emanate or associate from a culture and traditions of a community or a region.”<sup>9</sup> Many examples in India are produced traditionally and have gained a GI tag.

Kanchipuram Silk, Aranmula Kannadi of Kerala, Pochampally Saree of Telangana, and Tirupathi Laddoos of Andhra Pradesh are some of the examples which are, to date, prepared by age-old traditional methods and have gained protection through GI tags. India has shown considerable growth in protecting region-specific materials and TK in the last few years by providing GI tags, including many traditional products, some of which are mentioned above.

- **TRADE SECRETS:** Certain types of TK, especially those related to medicinal plants or cultural practices, can be safeguarded as trade secrets if the community takes steps to make their knowledge confidential. Trade secrets protect confidential information that provides commercial and competitive advantage if reasonable efforts are made to keep it secret. The 22<sup>nd</sup> Law Commission of India, in its 289<sup>th</sup> report, recommended a new legal framework to adjudicate claims related to trade secrets. Law Commission

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<sup>9</sup> Ajoy Jose and Padmavati Manchikanti, *Traditional Knowledge: The Changing Scenario in India*, 18(3) IJIL (2021).

has suggested that there should be a separate law on this, separate from the general IP laws. Such reforms and recommendations can prove to be helpful for protecting TK in the coming years in case of protecting unique confidential information.

- **PROTECTION OF PLANT VARIETIES AND FARMERS' RIGHTS (PPVFR), ACT 2001:** This legislation is unique because it recognizes the significant role of farmers in conserving, improving, and making available genetic resources. The Act considers it “necessary to recognize and protect the rights of the farmers in respect of their contribution to the development of the new plant varieties.”<sup>10</sup> The legislation is a clear protector of TK of the farmers when it comes to plant varieties and protecting farmers’ rights and knowledge of creating new plant genetic resources. Farmers in India have developed an extensive repository of TK relating to rich biodiversity in Indian agriculture. The Act acknowledges the importance of this knowledge and offers legal protection to such farmers. “It provides a model of an effective *sui generis* system for the protection of plant varieties that WTO members are expected to put in place in fulfillment of their commitment to the Agreement on TRIPS.”<sup>11</sup>
- **DEFENSIVE PROTECTION MECHANISMS:** In addition to the conventional IP modes, there is also a concept of Defensive Protection or negative protection, which prevents others from misusing TK, which involves documenting it as prior art. The best example is the Traditional Knowledge Digital Library (TKDL), a special library in India that classifies traditional medicines like Ayurveda, Unani, and Siddha. India has developed this database in several languages. This data is available with the patent offices worldwide to protect India’s traditional heritage and knowledge from wrong claims. “TKDL was established with the objective of incorporating a list of codified traditional knowledge practices of India.”<sup>12</sup> This database is used to challenge patent applications that attempt to use traditional knowledge without proper acknowledgment and recognition.

Defensive protection prevents outsiders and unknown users from obtaining rights to TK as intellectual property. The Council of Scientific and Industrial Research (CSIR), the Indian Council of Agricultural Research (ICAR), and the Technology Information

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<sup>10</sup> Protection of Plant Varieties and Farmers’ Rights Act, 2001, No. 53, Acts of Parliament, 2001 (India).

<sup>11</sup> Ajoy and Padmavati, *supra* note 9.

<sup>12</sup> Shambhu Prasad Chakrabarty and Abhishek Rodricks, *Protection of traditional knowledge in India by sui generis laws of Geographic Indications and the Protection of Traditional Knowledge Bill*, 13(2) IJLJ (2022).

Forecasting Assessment Council (TIFAC) of the Department of Science and Technology are working on the documentation and conservation of TK.

### TURMERIC AND NEEM CASE

Multiple incidents of bio-piracy of TK have occurred in India in recent years. The first patent was on the wound-healing capabilities of turmeric (haldi), neem, and hypoglycaemic properties of karela (bitter gourd) and basmati rice, etc. In this regard, one of the main criticisms is that foreigners obtain patents based on biological materials from India without citing the source of their knowledge or benefit-sharing.

- “The Indian Council for Scientific and Industrial Research (CSIR) filed a case with the US Patent Office challenging the patent on the grounds of ‘prior art,’ i.e., existing public knowledge.”<sup>13</sup> According to CSIR, turmeric has been used for healing wounds for thousands of years. CSIR also presented a study published in the Journal of the Indian Medical Association (IMA) in 1953 and an ancient Sanskrit text. The US Patent Office upheld the objection, and the patent was revoked. The turmeric case did not meet the novelty requirement.
- “In 1994 the European Patent Office granted European Patent No. 0436257 to the US Corporation W.R. Grace and USDA for a method for controlling fungi on plants by the aid of a hydrophobic extracted neem oil.”<sup>14</sup> In 1995, some international NGOs and representatives of Indian farmers collectively filed a legal objection against the patent. “They presented evidence that the fungicidal effect of extracts of neem seeds had been known and used for centuries in Indian agriculture to protect crops, conveying that the invention claimed in EP257 was not unique. The patent was canceled by the EPO in 2000.”<sup>15</sup>

It is not only the Turmeric and Neem cases that are discussed regarding benefit-sharing and traditional knowledge. There is a very prevalent case and precedent from South Africa. It discusses the rights of the Indigenous people of South Africa, called the San people, who have had their roots for 150,000 years. The hoodia plant has been used as an appetite suppressant by the San people for centuries, especially during hunting journeys where there was little food available for many days. However, these people were believed to have disappeared. In the

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<sup>13</sup> Adarsh and Bhanu Prakash, *supra* note 2.

<sup>14</sup> Google Patents, <https://patents.google.com> (last visited 17 January 2025).

<sup>15</sup> *Id.* at 15.

1980s, the South African Council for Scientific and Industrial Research (CSIR) patented a compound called P57, which was extracted from the hoodia plant. P57 was licensed by the CSIR to Phytopharm, a small British biotech company, in 1997. The company conducted clinical chemical tests to confirm the appetite-suppressing quality of the compound. The company's CEO accepted his mistake and acknowledged the need to protect this type of knowledge as it is the most valuable asset of the indigenous tribes and communities. A South African San Council was formed in 2001, representing the San community and advocating for their rights to benefit-sharing. The San did not challenge the patent but asked for their share of the benefits arising from the commercial development process. Their demand was acknowledged, and terms were negotiated with their representatives.

## **INTERNATIONAL LEGAL FRAMEWORKS FOR PROTECTING TRADITIONAL KNOWLEDGE**

Various international efforts have been made to address the issue of TK protection, though significant gaps exist.

- **‘Convention on Biological Diversity’ (CBD), 1992:** Adopted in 1992, “CBD is the first international agreement acknowledging the role and contribution of indigenous and local communities in the conservation and sustainable use of biodiversity.”<sup>16</sup> It promotes the fair and equitable sharing of benefits from using traditional knowledge and genetic resources, particularly through access and benefit-sharing mechanisms (ABS). “Article 8(j) of the CBD states the need for governments to respect, preserve, maintain, and promote the wider application of traditional knowledge with the approval and involvement of the relevant ILCs.”<sup>17</sup> For example, if the users wish to take the help of traditional knowledge for their research and development work, they would need prior permission from the relevant ILCs. They must have a mutual agreement on terms that encourage the equal sharing of any benefits arising from this use and giving appropriate credit to the communities. While CBD acknowledges the importance of protecting traditional knowledge, its emphasis on genetic resources leaves gaps in protecting other forms of TK.
- **The Nagoya Protocol (2010):** A supplementary agreement to the CBD, which is legally

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<sup>16</sup> Convention on Biological Diversity (opened for signature May 22, 1992, entered into force Dec. 29, 1993), U.N.T.S. 79.

<sup>17</sup> *Id.* at 80.

binding, further strengthens the provisions related to sharing benefits that arise from using genetic resources. Parties to the protocol are obliged to monitor resource utilization through checkpoints and reporting to comply with the rules. Providers also issue a certificate of compliance, recognized internationally, ensuring adherence to the mutually agreed terms and conditions. Parties must ensure that their citizens abide by the domestic legislations and regulations, especially those related to benefit-sharing and accessing traditional knowledge linked to genetic resources.

- **World Intellectual Property Organization (WIPO):** The World Intellectual Property Organization (WIPO) defines traditional knowledge as “indigenous cultural and intellectual property, indigenous heritage, and customary heritage rights.”<sup>18</sup> WIPO and UNESCO jointly took the initiative to develop model legislation to protect folklore. WIPO is actively working on formulating a model law on traditional knowledge. In 2000, WIPO individuals set up an Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge, and Folklore (IGC). “In 2009, they consented to build up an international lawful instrument (or instruments) that would give traditional knowledge, genetic resources and traditional cultural expressions (folklore) successful protection.”<sup>19</sup>

## ALTERNATIVE APPROACHES AND RECOMMENDATIONS

- **Benefit-Sharing Agreements:** Benefit-sharing agreements, as promoted by the Nagoya Protocol, ensure that indigenous communities get a fair share of the profits from commercial exploitation of their knowledge. Countries like India and Brazil have passed national legislation requiring benefit-sharing agreements when TK is used commercially. Such approaches can be adopted globally to bring reform.
- **Customary Laws:** Many indigenous communities have personal customary laws governing the use and dissemination of their knowledge. Customary law can be used in collaboration with formal intellectual property systems to overcome the loopholes in the protection of TK. “For example, customary laws imposing an obligation of confidentiality may be effectively extended to prevent disclosure beyond the traditional

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<sup>18</sup> World Intellectual Property Organization, *Intellectual Property Needs and Expectations of Traditional Knowledge Holders*, WIPO, (2021).

<sup>19</sup> Anchita Sood, *Protection of Traditional Knowledge in Present IPR Regime Indian Context*, 4 IJLLR (2022).

circle.”<sup>20</sup>

To fully protect TK, some recommendations are as follows:

- Traditional treaties and national/domestic laws need to consider the oral and dynamic nature of TK and acknowledge its collective character. This would ensure the protection of such knowledge in a way that respects the community's rights as a whole.
- Indigenous groups should receive assistance and awareness to preserve their knowledge through formats that adhere to IPR regulations. Giving them access to legal methods and resources will empower and encourage these communities to safeguard their heritage and TK.
- To guarantee equitable compensation for using TK, benefit-sharing agreements and community protocols should be reinforced. This will ensure fair distribution of profits through knowledge amongst community members.
- There should be more focus on how customary laws protect traditional knowledge. Customary laws are governed by cultural practices. Adopting them and aligning with them would be easier and more comfortable for the communities without engaging with the complex external legal systems.
- Spread of awareness about the protection of TK, especially by providing IP rights, can be of help. Policymakers also need to be educated about the importance of preserving the rights of these conventional communities so that we can have laws significant for the growth and preservation of these communities. This will reduce the exploitation of indigenous resources and lead to better results and reforms.

## CONCLUSION

Controversies persist pertaining to the protection of the rights of Indigenous communities in the context of TK. Their knowledge must be protected not just to preserve their cultural heritage but also to ensure their economic and fundamental rights. Current intellectual property regimes provide some protection through frameworks such as patents, copyrights, trademarks, trade secrets, and geographical indications. But they frequently prove to be insufficient due to the evolving nature and presence in the public domain of traditional knowledge. Acts such as the Protection of Plant Varieties and Farmers' Rights (PPVFR) Act of 2001 and the Biological

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<sup>20</sup> Adarsh and Bhanu Prakash, *supra* note 2.

Diversity Act of 2002 play a crucial role in recognizing and compensating the contributions of TK of these communities. However, barriers such as biopiracy, lack of knowledge, and difficulty enacting benefit-sharing agreements remain. By international cooperation and the inclusion of customary laws in domestic and international frameworks, we can create a more equal and effective framework for protecting TK. Such reforms will help empower indigenous communities and ensure their knowledge is respected, acknowledged, and compensated in a globalized world.