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Maudhanda Kurichi, Srirangam,

Tiruchirappalli – 620102

Phone : +91 94896 71437 – [info@iledu.in](mailto:info@iledu.in) / [Chairman@iledu.in](mailto:Chairman@iledu.in)



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## REVITALIZING ROOTS: PROTECTING TRADITIONAL KNOWLEDGE & LEVERAGING IPR FOR SUSTAINABLE DEVELOPMENT

**AUTHOR** – AABHA SHARMA, STUDENT AT FACULTY OF LAW, DELHI UNIVERSITY

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### ABSTRACT:

This paper examines the significance of traditional knowledge (TK) in India. Traditional knowledge encompasses the collective wisdom, practices, and innovations developed over generations, closely tied to cultural identity and ecological stewardship. India's diverse ecosystems and cultural richness present a vast reservoir of Traditional Knowledge, with critical applications in agriculture, medicine, artisanal crafts, and cultural expressions. However, this invaluable heritage faces numerous challenges, including biopiracy, loss of biodiversity, cultural erosion, and inadequate legal protections. Efforts by the World Intellectual Property Organization (WIPO) and other international frameworks aim to safeguard Traditional Knowledge, emphasizing the need for both defensive and positive protection strategies. Recent developments, such as the WIPO Treaty on Intellectual Property, Genetic Resources, and Associated Traditional Knowledge, seek to enhance legal clarity and community rights. Despite these advancements, criticisms highlight the treaty's limitations, including its lack of enforcement mechanisms and a generalized approach that may not cater to the diverse needs of various indigenous groups. This paper also explores the crucial role of NGOs and grassroots initiatives in documenting traditional practices, building community capacities, and advocating for policy reforms. Ultimately, preserving traditional knowledge is vital for maintaining cultural heritage and promoting sustainable development in the face of modernization and globalization. The paper concludes that prioritizing the protection of traditional knowledge is essential for safeguarding cultural identity and enhancing ecological resilience in India.

### Introduction

The Todas, an indigenous lineage in the Nilgiri Hills of southern India, illustrate the profound connection between traditional knowledge and sustainable living. Known for their unique pastoral lifestyle, the Todas have traditionally relied on their deep understanding of original ecosystems to manage their herds of buffalo and cultivate the land.

Traditional knowledge encompasses the practices, innovations, and wisdom developed by indigenous and original communities over generations. This knowledge is fundamentally linked to social identity, spirituality, and ecological stewardship. In India, a nation known for its rich cultural diversity, traditional knowledge plays an essential role in a variety of

sectors, including agriculture, medicine, handicrafts. This paper delves into the scope of traditional knowledge in India, its significance, the challenges it faces, and the international efforts to safeguard it, particularly the recent developments under the World Intellectual Property Organization (WIPO) conventions.

### Meaning

Under the Convention on Biological Diversity, traditional knowledge encompasses the insights, innovations, and practices of indigenous and local communities worldwide. This knowledge is shaped by centuries of experience and is tailored to specific cultural and environmental contexts. It is typically passed down orally from one generation to the next and is often collectively owned. Traditional

knowledge is expressed through stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local languages, and agricultural methods, including the cultivation of plant species and the breeding of animals. Sometimes called oral tradition, it is conveyed through various forms such as performance, dance, painting, and chanting over millennia. This knowledge is primarily practical, particularly in areas like agriculture, fisheries, health, horticulture, forestry, and overall environmental management.<sup>[1]</sup>

### Understanding Traditional Knowledge

Traditional knowledge refers to the knowledge systems cultivated by local and indigenous communities, typically transmitted orally across generations. This knowledge spans a wide array of practices related to agriculture, biodiversity, medicinal plants, crafts, and cultural expressions. Traditional Knowledge is characterized by its communal nature, where knowledge is collectively owned, and it is often an integral part of a community's identity and heritage.

### Traditional Knowledge in India

India's vast diversity of cultures, languages, and ecosystems makes it a vibrant reservoir of traditional knowledge. Various communities, including Adivasis (tribal populations) and rural groups, contribute to this rich mosaic

### Categories of Traditional Knowledge

- 1. Agricultural Practices:** Indigenous methods of farming, such as intercropping and organic pest management, that enhance sustainability and food security. Traditional agricultural practices have been pivotal in India's farming landscape. For instance, methods such as mixed cropping promote biodiversity and soil health. Local communities have developed extensive knowledge of seed preservation and crop resilience, crucial for adapting to changing climatic conditions.
- 2. Medicinal Knowledge:** The application of local plants and herbs for health purposes, including traditional healing practices. India's

traditional medical systems, notably Ayurveda, Siddha, and Unani forming part of the AYUSH system of medicine are deeply rooted in traditional knowledge. Ayurveda employs a holistic approach to health, emphasizing balance and wellness. Many plants utilized in these systems have been used for centuries and are now being investigated for their therapeutic potential. Establishing a separate ministry of Ayush works in the direction to protect Traditional Knowledge. Traditional Knowledge Digital Library (TKDL), is a database of over 2,50,000 formulations used in traditional medicine systems in India, namely, Ayurveda, Siddha, Unani and Yoga. The Traditional Knowledge Digital Library (TKDL) is an innovative initiative by India aimed at safeguarding the country's traditional medicinal knowledge from misappropriation at international patent offices. This knowledge is essential for the healthcare needs of over 70% of the population and supports the livelihoods of millions in India.<sup>[2]</sup>

- 3. Artisanal Skills:** Handicrafts, textile production, and other forms of craftsmanship that reflect cultural heritage. Traditional crafts in India—such as pottery, weaving, and metalwork—embody both artistic expression and cultural narratives. Each region boasts unique crafts that reflect historical significance, sustaining the livelihoods of many artisans and preserving local traditions

- 4. Cultural Narratives:** Oral traditions, music, and dance that express community identity and values. The oral traditions, folklore, and music of diverse Indian communities serve as repositories of knowledge and values. The multiplicity of languages enriches this cultural heritage, with each dialect contributing to the vast spectrum of stories and performances that are vital to community identity.

### Types of protection:

Protection for traditional knowledge involves two primary strategies:

**Defensive protection** focuses on preventing outsiders from acquiring intellectual property

rights over traditional knowledge. For example, India has created a searchable database of traditional medicine that acts as prior art for patent examiners evaluating applications.

**Positive protection** provides rights that empower communities to promote their traditional knowledge, regulate its use, and gain benefits from its commercial applications. Some elements of traditional knowledge can be safeguarded under existing intellectual property laws.

This dual framework aims to both shield traditional knowledge from exploitation and offer communities opportunities to utilize their heritage for economic benefit.

### Case Studies

#### 1. The Neem Tree

The Neem tree (*Azadirachta indica*) exemplifies the challenges of protecting traditional knowledge. For centuries, Indian communities have utilized various parts of the Neem tree for medicinal purposes. In the 1990s, a U.S. company patented Neem oil for agricultural uses, prompting significant backlash from Indian farmers and activists. This case underscored the urgent need for enhanced legal protections for traditional knowledge and prompted calls for reform in intellectual property laws.

#### 2. Basmati Rice

Basmati rice, celebrated for its distinctive aroma and taste, is traditionally grown in the Indian subcontinent. In the early 2000s, an American company sought to patent Basmati rice in the United States, claiming it as an innovation. This action was met with strong opposition from Indian farmers and the government, resulting in legal disputes that highlighted the necessity of protecting geographical indications and traditional knowledge.

#### Need for Protection to Traditional Knowledge

Despite its immense value, traditional knowledge in India faces numerous challenges,

particularly regarding its protection and sustainability which gives rise to the need for creating a framework to protect the same.

#### 1. Commercial Exploitation and Biopiracy:

One of the most significant threats to traditional knowledge is biopiracy, where corporations exploit indigenous knowledge and resources without proper consent or compensation. This often involves patenting products derived from traditional practices or plants without recognizing the contributions of local communities. For example, the patenting of the Neem tree's properties by a U.S. company in the 1990s led to widespread protests and highlighted the urgent need for legal frameworks to protect indigenous innovations. In 2005, an expert group on the TKDL estimated that approximately 2,000 erroneous patents related to Indian systems of medicine were being issued annually at the international level. This issue arises primarily because India's traditional medicinal knowledge, documented in local languages such as Sanskrit, Hindi, Arabic, Urdu, Tamil, and others, is neither accessible nor understandable to patent examiners in international patent offices.

2. **Loss of Biodiversity:** Modern agricultural practices and urbanization threaten the ecosystems that sustain traditional knowledge. The shift towards monoculture and chemical-intensive farming not only diminishes biodiversity but also erodes the traditional agricultural practices that have been developed over centuries. This loss of biodiversity directly impacts the associated knowledge systems that depend on it, leading to the decline of traditional practices.

3. **Cultural Erosion:** Globalization has resulted in cultural homogenization, threatening the survival of traditional practices and knowledge systems. As younger generations migrate to urban areas, there is a risk of losing traditional skills, languages, and practices that are vital to cultural identity.

4. **Legal Framework:** There is currently a lack of comprehensive legal protection for

traditional knowledge, which makes it vulnerable to misuse and appropriation. Existing intellectual property laws often do not recognize the communal nature of traditional knowledge, complicating its protection. This gap in legal frameworks allows for the exploitation of traditional knowledge without fair compensation or acknowledgment of the communities that developed it.

### **International Framework for Protecting Traditional Knowledge**

Recognizing the importance of safeguarding traditional knowledge, various international organizations have initiated efforts to establish protective frameworks. WIPO has been particularly proactive in this domain.

### **Traditional Knowledge AND USA**

Traditional knowledge (TK) protection in the USA primarily falls under various legal frameworks and initiatives, although there is no singular, comprehensive law specifically dedicated to Traditional Knowledge.

- 1. Copyright:** Artistic expressions of traditional knowledge, such as folklore, music, and crafts, can be protected under copyright law.
- 2. Trademarks:** Geographical indications (GIs) can be protected as trademarks. For instance, products like "Napa Valley" wines can signify a specific region and its associated qualities, which may include traditional practices.
- 3. Patents:** The patent system has faced criticism for allowing biopiracy, where companies patent traditional knowledge without proper consent from indigenous communities. Efforts are underway to address this issue, including calls for stricter requirements around prior art that includes traditional uses.

### **Traditional Knowledge AND EU**

Traditional knowledge (TK) in the European Union (EU) is protected through a combination of legal frameworks, policies safeguarding the

rights of communities that possess such knowledge.

#### **1. Intellectual Property Rights**

EU uses Trademarks, copyrights and GIs to build a robust system to ensure protection to traditional knowledge and its sources. For e.g. traditional agricultural products and foods (e.g., Parmigiano Reggiano, Champagne). Such protections help preserve traditional knowledge related to the production methods and cultural significance of these products.

#### **2. Biodiversity and Conservation Policies**

The EU has established several policies aimed at conserving biodiversity, which often overlap with traditional knowledge. As a party to the CBD, the EU recognizes the importance of traditional knowledge in biodiversity conservation and promotes its integration into environmental policies.

#### **3. Community and Cultural Rights**

The EU supports the rights of indigenous peoples and local communities through various initiatives such as European Charter for Regional or Minority Languages: This charter encourages the protection of languages, many of which carry traditional knowledge.

#### **WIPO's Initiatives**

WIPO has engaged in discussions focused on traditional knowledge, traditional cultural expressions, and genetic resources. Key initiatives include:

- 1. Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC):** This committee aims to negotiate international legal instruments to protect traditional knowledge and cultural expressions.
- 2. Traditional Knowledge Databases:** WIPO has developed tools for countries to document and protect traditional knowledge, enabling communities to assert their rights effectively. The Nagoya Protocol is an international agreement under the Convention on Biological Diversity (CBD) that aims to ensure the fair and

equitable sharing of benefits arising from the utilization of genetic resources

**3. Access and Benefit-sharing (ABS):** The Nagoya Protocol establishes a framework for Access and Benefit-sharing, which is crucial for protecting traditional knowledge. This framework requires that:

**a) Prior Informed Consent:** Users of genetic resources, including researchers and companies, must obtain prior informed consent from indigenous communities and local populations before accessing their traditional knowledge or genetic resources. This ensures that communities are aware of and agree to the use of their knowledge and resources.

**b) Mutually Agreed Terms:** The protocol mandates that the benefits arising from the use of genetic resources (including traditional knowledge) be shared fairly and equitably with the communities that hold this knowledge.

**4. Recognition of Traditional Knowledge:** The Nagoya Protocol acknowledges the importance of traditional knowledge in the context of biodiversity conservation and sustainable use. It encourages countries to:

**5. Respect Traditional Knowledge:** Member countries are urged to recognize and respect the traditional knowledge of indigenous peoples and local communities. This recognition is crucial for protecting the rights of these communities over their knowledge.

**6. Document Traditional Knowledge:** The protocol encourages the documentation of traditional knowledge, which helps preserve it and provides a basis for asserting rights over that knowledge in negotiations

### WIPO TREATY ON INTELLECTUAL PROPERTY, GENETIC RESOURCES AND ASSOCIATED TRADITIONAL KNOWLEDGE 2024 [3]

#### Features of the treaty:

- Enhance efficacy and transparency of the patent system with regard to traditional knowledge.

- To prevent patents from being granted erroneously as was observed previously in the cases of the turmeric and basmati.

- Article 2 provides a list of terms wherein certain definitions are provided such as:

Source of traditional knowledge associated with genetic resources” means any source from which the applicant has obtained the traditional knowledge associated with genetic resources, such as scientific literature, publicly accessible databases, patent applications and patent publications.”

- Article 3 provides for the disclosure requirements wherein the applicant has to disclose the country of origin or the source.

- In cases of traditional knowledge, he has to disclose the indigenous community who have provided such traditional knowledge or where the such information is not available, has to share the source of the traditional knowledge.

- Article 5 provide for sanctions and remedies such as legal and policy measures in cases of failure to provide the information required u/a 3.

- Acknowledges the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and its goals.

#### Criticism of WIPO treaty

While the treaty seeks to establish a strong framework for protecting traditional knowledge and genetic resources, it ultimately falls short in its effectiveness. Like many international statutes, it lacks the authority and mechanisms for enforcement, rendering its provisions largely symbolic. Although Article 5 introduces promising actions, its vague language and undefined terms undermine its potential impact, making it a paper tiger that fails to deliver meaningful protection.

**Generalization of Approaches:** The document takes a one-size-fits-all approach, failing to account for the diverse cultural contexts and specific needs of different indigenous groups.

**Implementation Challenges:** While the document emphasizes the need for tailored laws, there exist practical difficulties in

implementing these recommendations, especially in countries with limited resources.

**Focus on Intellectual Property:** Overemphasis on intellectual property frameworks could overshadow other important aspects of cultural preservation and community rights.

**Insufficient Action Plans:** There is a lack of clear, actionable steps or timelines for how to achieve the proposed recommendations, leaving communities uncertain about the way forward.

**Economic Considerations:** Concerns regarding the balance between protecting traditional knowledge and allowing for economic development, particularly in regions reliant on cultural tourism or resource exploitation.

**Evolving Nature of Culture:** Cultures are not static, and strict protection mechanisms could hinder the natural evolution of traditional knowledge and expressions.

### Conclusion

Traditional knowledge in India is a crucial component of the nation's cultural and ecological heritage, providing significant contributions to agriculture, health, and cultural diversity. However, it faces substantial threats from commercialization, the loss of biodiversity, and cultural erosion, which jeopardize its existence.

The international community, particularly through initiatives led by WIPO, is increasingly acknowledging the importance of safeguarding traditional knowledge and the rights of indigenous peoples. Key measures such as strengthening legal protections, fostering community involvement, and ensuring fair benefit-sharing are vital for preserving this essential aspect of cultural identity. As India grapples with the challenges of modernization and globalization, prioritizing the protection and appreciation of traditional knowledge is critical for maintaining cultural heritage and promoting sustainable development.

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- [3] Traditional Knowledge, <https://www.wipo.int/tk/en/>.