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SAFEGUARDING HERITAGE: A CRITICAL ANALYSIS OF LEGAL AND SOCIOECONOMIC IMPERATIVES FOR TRADITIONAL KNOWLEDGE PROTECTION IN INDIA

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ABSTRACT

Traditional knowledge (TK) forms the very foundation of Indian cultural and natural heritage, embodying centuries of indigenous wisdom in areas such as agriculture, medicine, and ecological stewardship. Despite its significant contribution to sustainable development, India's TK remains vulnerable to exploitation due to insufficient legal framework for its protections. This study aims to critically evaluate and compare the current legal framework governing TK in both Indian and international contexts, assessing its efficiency in protecting indigenous communities and their knowledge while also addressing exploitation. The research dives into the gaps and challenges in existing legislation, highlighting the limitations in India's Intellectual Property Rights (IPR) regulations that often fail to align with indigenous demands and customs.

This study explores the critical need for a robust, specialized legal framework that recognizes the peculiar nature of TK, with the aim to protect community rights while fostering equitable benefit-sharing. It also examines the socioeconomic consequences of TK exploitation, which often leads to cultural erosion, loss of biodiversity, and economic disadvantages for indigenous communities. This research identifies and proposes mechanisms for fair benefit-sharing, advocating for participation that ensure indigenous communities gain equitable returns from the commercial use of their knowledge. Lastly, it underscores the importance of promoting sustainable practices that preserve TK for future generations, emphasizing the critical role of community engagement and policy reforms in achieving this goal.

This analysis concludes with recommendations for a comprehensive legal approach that respects the cultural integrity of TK, supports community rights, and promotes sustainable development, thus reinforcing India's commitment to preserving its rich heritage in a globalized world.

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Key Words: Traditional Knowledge, Intellectual Property Rights, Communal Rights, Indigenous communities', Customs

RESEARCH OBJECTIVES

1. To assess the current legal framework in Indian and international context.
2. To evaluate the need for a comprehensive legal framework.
3. To understand the socioeconomic impact of Traditional knowledge exploitation.
4. To propose mechanism for fair benefit sharing.
5. To promote sustainable practice and knowledge preservation.

INTRODUCTION

Traditional Knowledge is the very essence of cultural heritage¹. It has a vast ambit that includes wisdom, innovations and practices that have been subject to indigenous and local communities over the years. In India, Traditional Knowledge is very intricately intertwined with agriculture, medicine, biodiversity conservation and cultural identity. Ayurveda for example, is one of the world's oldest medical system, which as shown major reliance on TK for its formulation and methodologies. In Parallel, certain traditional agricultural practices, such as mixed cropping and seed preservation have been in existence since centuries.

TK is not merely a source of livelihood but it also a warehouse of sustainable practices that are essential for global ecological balance. It holds significant economic value offering significant contributions to industries such as pharmaceuticals, agriculture and cosmetics. The landmark cases wherein patents were granted on neem and turmeric, highlight the challenges in protecting TK from global commercial interests.

In defiance of its significance, TK in India is at risk of cultural erosion, bio-piracy and exploitation by commercial interests such as MNCs. The existing legal frameworks such as Biological Diversity Act and Traditional Knowledge Digital Library (TKDL), have proven to be inadequate in completely protecting Traditional Knowledge as well as in addressing the socioeconomic disparities faced by indigenous communities. Factors like weak enforcement, limited community participation and insufficient benefit-sharing Mechanisms amplify these issues.

The rise in globalization and rapid technological advancements have led to a significant rise in exploitation of TK. International Frameworks such as Convention on Biological Diversity (CBD) and the Trade- Related Aspects of Intellectual Property Rights (TRIPS) Agreement provide some guidelines for TK protection, which often fails to align with the needs and expectations of indigenous communities. Which in turn, requires critical evaluation of India's legal and socioeconomic approach towards protection of TK as well as bridging the gap between policy and practice.

In the context of upsurge in globalisation and commercialisation, protecting TK is a not merely a moral imperative but also a strategic necessity for fostering sustainable practices and enhancing India's position as a leader in cultural heritage and biodiversity conservation.

¹ Mazzocchi F, "Western Science and Traditional Knowledge" (2006) 7 EMBO Reports 463

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GLOBAL EFFORTS IN TRADITIONAL KNOWLEDGE PROTECTION

Worldwide, the recognition of TK's importance has been increasing, especially with the increasing acknowledgment of indigenous communities' contributions to biodiversity conservation and sustainable development. The **Convention on Biological Diversity (CBD)** adopted in 1992, it was a landmark treaty that has brought TK into international spotlight. **Article 8(j) of CBD** provides for the respect, preservation and maintenance of TK while promoting equitable benefit-sharing². This framework encourages that indigenous communities to retain ownership of their knowledge, while also integrating TK into biodiversity management.

The **Nagoya Protocol** adopted in 2010, as a supplementary agreement to the CBD, further strengthens the focus Access and Benefit-Sharing (ABS)³. It provides for enforceable requirements that uses of genetic resources and associated traditional knowledge must obtain prior informed consent and give communities fair compensation. However, implementation of such provisions remains a challenge especially in countries with diverse indigenous population.

The **Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement**, aims to protect intellectual property. TRIPS allows for countries to develop their frameworks to protect TK, its focus on patents and copyrights often contradicts with communal and intergenerational nature of TK⁴. Patenting grants exclusive rights to individuals or organizations, which conflicts with collective ownership of TK by indigenous communities. TRIPS fails to address the unique characteristics of TK, leaving it vulnerable to misuse.

International organizations such as **World Intellectual Property Organization (WIPO)**, have called for discussions on developing a Sui generis framework for protecting TK. However, the lack of consensus among member states has delayed progress⁵. South Africa, Brazil and India,

² Secretariat of the Convention on Biological Diversity, "Article 8(j) - Traditional Knowledge, Innovations and Practices" <<https://www.cbd.int/traditional/default.shtml>>

³ "The Nagoya Protocol on Access and Benefit-Sharing" <<https://www.cbd.int/abs>>

⁴ "WTO | Intellectual Property - Overview of TRIPS Agreement"

<https://www.wto.org/english/tratop_e/trips_e/intel2_e.htm>

⁵ "GAO-11-922, United Nations: Improved Reporting and Member States' Consensus Needed for Food and Agriculture Organization's Reform Plan" (September 29, 2011) <<https://www.gao.gov/assets/a585454.html>>

have been advocating for strict international safeguards, emphasizing the need to preventing biopiracy and ensuring fair benefit-sharing.

INDIAN LEGAL FRAMEWORKS

The Indian sub-continent, is a biodiversity blessed country with diverse indigenous communities, has made significant efforts to protect TK. Few frameworks form the core of its legal approach,

The **Biological Diversity Act (2002)**, is a significant legislation with aim of conserving biological diversity and promoting equitable benefit-sharing. It provides a mechanism for granting access to biological resources and associated TK while creating obligations for benefit sharing agreements. The **National Biodiversity Authority (NBA)** supervises the implementation of the act, ensuring compensation is granted to indigenous communities for use of their knowledge. However, inadequate enforcement and lack of community awareness have compromised its efficacy.

The **Traditional Knowledge Digital Library (TKDL)** was launched in 2001, it is said to be an ambitious initiative to document traditional medicinal knowledge, including Ayurveda, Siddha and Unani systems in a digital format. This information is accessible to patent offices worldwide which prevents the unauthorised patenting of TK. Prominent neem and turmeric disputes highlighted the need for such a mechanism, as this emphasises on how TK could be exploited under global intellectual property regimes. TK has proved to be successful in invalidating several biopiracy claims, it focuses primarily on medicinal knowledge which leaves other domains of TK inadequately represented.

The **Patents Act (1970)** provides that the amendments made to the Patents Act explicitly prohibits the patenting of knowledge that is a part of the public domain. But, the act does not address the situations wherein TK exists in verbal form or is in practice by specific communities, leaving the knowledge unprotected.

Even though these measures represent significant advancements, they have been subject to criticism for being fragmented character and limited scope. The legal framework has failed to address the communal and intergenerational dimensions of TK ownership, it rather focuses upon intellectual property models that are more appropriate for contemporary advancements.

SOCIOECONOMIC IMPORTANCE OF TK

Traditional knowledge is not a mere cultural relic, rather it has significant socioeconomic ramifications. For the indigenous communities in India, TK serves as source of livelihood, healthcare and social identity. Traditional farming methods such as mixed cropping and natural pest control techniques are essential for farmer's economic well-being in addition to being ecologically sustainable. In parallel, the traditional medicine systems like Ayurveda and Unani provide affordable healthcare options specifically in remote areas where there is inadequate availability of modern medical facilities.

According to studies, TK makes a significant contribution to the Indian economy, especially in the sectors like pharmaceuticals, ecotourism and agriculture. However, TK is often commercialized without the knowledge or approval of the custodians⁶. For instance, MNCs involved in developing pharmaceutical products based on medicinal plants often fail to share profits with communities that have been the source of this knowledge for generations. This erodes the notion of equitable benefit sharing and causes economic inequality.

Furthermore, TK erosion poses a threat to biodiversity and the loss of this knowledge could pose ecological repercussions.

IDENTIFIED GAPS IN RESEARCH AND PRACTICE

Despite national and international efforts, there are significant loopholes that prevent effective protection and utilization of TK:

Weak Enforcement Mechanisms: Legal frameworks like Biological Diversity Act often lack enforceability and bureaucratic inefficiencies. The Indigenous communities lack resources and knowledge to successfully negotiate legal processes.

Fragmented Frameworks: India has made significant steps in order to protect TK, which has spread to multiple laws and initiatives leading to inconsistencies. For instance, TKDL aims to prevent biopiracy but it fails to address benefit sharing or protection of oral traditions.

Limited Community Participation: Indigenous communities' opinion is often disregarded in the decision making processes with reference to TK protection. Which not only violates the

⁶ Oyelude AA, "Indigenous Knowledge Preservation as a Sign of Respect for Culture: Concerns of Libraries, Archives and Museums" (2023) 36 Insights the UKSG Journal <https://doi.org/10.1629/uksg.628>

Principle of prior informed consent but also leads to failure of policies in reflecting realities and need of these communities.

Focus on Medical Knowledge: India has made significant success in documenting medicinal TK but other domains such as agricultural practices, ecological knowledge and cultural expression haven't received much attention.

International Disconnect: India has incorporated international conventions like CBD into its legal frameworks still there is a limitation of global consensus on protection of TK. Which in turn, limits India's ability to combat biopiracy at the international level.

LEGAL CHALLENGES

BIOPIRACY AND UNAUTHORISED COMMERCIALISATION

Biopiracy is the unauthorised use of TK and other biological resources for commercial purposes, it is one of the most significant challenges. Prominent cases of patenting of neem and turmeric by foreign entities shows how TK has been exploited without equitable benefit sharing and acknowledgment. India has succeeded in dismissing such patent utilizing the TKDL, these instances highlight the flaws in the International patent regimes that fail to recognize TK as intellectual property.

Further, the current Indian legal frameworks doesn't provide a comprehensive protection for verbal or undocumented TK which leaves many indigenous practices vulnerable to exploitation.

WEAK ENFORCEMENT MECHANISMS

The enforcement of TK related laws in India is not comprehensive and inconsistent. The **National Biodiversity Authority (NBA)**, is tasked with implementing the Biological Diversity Act, which often encounters inadequate funds, insufficient manpower and bureaucratic inefficiencies. Similarly, the Local Biodiversity Management Committees (BMCs), that play an essential role in identifying and protecting TK at the root level, often lacks the capacity and resources to discharge its duties effectively.

LACK OF RECOGNITION FOR COLLECTIVE OWNERSHIP

The existent intellectual property strategies are primarily formulated to protect individual ownership which contradicts the collective and intergenerational ownership of TK by

indigenous communities. Resulting in the indigenous knowledge system falling outside the scope of the traditional intellectual property protections.

LIMITED COMMUNITY AWARENESS AND PARTICIPATION

The Indigenous communities are the primary custodians of TK who are often unaware of their rights under the existing laws. This lack of awareness restricts their ability to impose ownership and negotiate equitable benefit-sharing agreements. Also, the decision making process receives inadequate community participation which violates the principle of Prior Informed Consent (PIC) as provided for in international agreements such as Nagoya Protocol.

GLOBAL INCONSISTENCIES IN TK PROTECTION

The International intellectual property frameworks such as the **Trade Related Aspects of Intellectual Property Rights (TRIPS)**, is often seen to put forth modern innovations rather than the traditional systems of knowledge. This inadequacy leaves the custodians of TK in countries such as India at disadvantage, due to which their knowledge is undervalued and inadequately protected on the global stage.

RECOMMENDED SOLUTIONS

To address the legal challenges associated with protection of TK in India requires a multifaceted approach that includes legislative reforms, capacity- building initiatives and enhanced international cooperation.

1. ESTABLISHING A SUI GENERIS LEGAL FRAMEWORK

India should also have its own sui generis legal structure to provide protection to TK. This framework should:

- Acknowledge TK ownership as a shared and intergenerational concern.
- Include protections for oral tradition and undocumented knowledge
- Ease process for indigenous communities to claim their rights
- Ensure alignment with global instruments such as the CBD and TRIPS, while taking into account local interests.

For instance, Brazil has ABS frameworks that are tailored around the needs of their indigenous communities, which is a useful learning exercise for India.

2. STRENGTHENING LOCAL GOVERNANCE

It is important to empower local governance institutions like Panchayati Raj institutions and Biodiversity Management Committees (BMCs). These should be given to these entities:

- Incorporating funding and resources to identify and document TK at the base level.

- Capacity-building training as to how to monitor and enforce laws related to TK.
- Authorization to negotiate benefit-sharing agreements in representation of their communities.

Local governance is empowered and representation from the communities that possess this knowledge and practices involved shall India have TK protection that results in realistic measures at ground level in the community.

3. ENHANCING THE TRADITIONAL KNOWLEDGE DIGITAL LIBRARY

The TKDL has been very effective in combating biopiracy in particular, with respect to the pharmaceutical industry. Moreover, its scope should be broadened so as to contemplate other areas of TK, including but not limited to:

- Agricultural methods.
- Environmental knowledge, including but not limited to, water resource management and forest management.
- Creative manifestations, creative industries and other works of a decorative art nature.

Furthermore, the TKDL should embrace community-based documentation strategies to articulate and preserve the indigenous perspectives into the database.

4. RECOGNISING TK AS A CONSTITUTIONAL RIGHT

Strengthening the protection of the indigenous people's TK by using the legal amendment that integrates respect for the indigenous communities' rights to their TK is ideal contemporarily. This would be in accordance with the principles of equity and justice as provided for in the Directive Principles of State Policy.

5. FOSTERING INTERNATIONAL COLLABORATION

India should pursue active engagement in the international discourse for the progressive development of the international legal instruments for the protection of TK. This includes advocacy for the:

- Creation of a global TK Database to ensure that TK is not inappropriately patented in other nations.
- Inclusion of Benefit Sharing Clause in international trade agreements.
- Efforts to make TRIPS compatible with the CBD so that IP regimes in countries do not violate the interests of TK holders.

6. RAISE COMMUNITY AWARENESS AND EDUCATION

There is an emphasis on making indigenous communities about their existing entitlements. This can be accomplished by:

- Undertaking local campaigns in indigenous languages.
- Cooperating with civil societies and educational institutions to spread the word on the legal regimes available for protection.
- Training the communities to enable them conclude fair benefit sharing arrangements.

7. INTEGRATING MODERN TECHNOLOGY FOR TK MONITORING

The use of more sophisticated technology, such as Artificial Intelligence and GIS will help in monitoring and managing TK more effectively. For instance, there are alternative tools that are AI-powered that assist in locating instances of biopiracy by comparing patent applications with TK databases.

CASE STUDIES FROM OTHER COUNTRIES

BRAZIL: INTEGRATING PERSPECTIVE OF TK INTO BIODIVERSITY MANAGEMENT

Holy Amazon forest, Brazil is rich not only in biodiversity but considerable indigenous TK as well. The country has made advancement to have some of the TK within its policies and legislation, especially through the provisions of its ABS model under the Convention on Biological Diversity (CBD) .

- **Key Features:** The Genetic Heritage Management Council (CGEN) of Brazil supervises the access to genetic resources and the application of the related TK. The system requires specific approvals such as PIC that for TK users to get the TK of indigenous communities. It also contains provisions for equitable compensation as well as benefit-sharing.

- **Community Engagement:** Indigenous communities have even been involved actively in the decision making. By putting in place the policies of the Brazilian Government, many communities have been given rights and responsibility in management of biodiversity policy.
- **Examples of Success:** An interesting example is the collaboration between pharmaceutical companies and indigenous communities in which the communities get payment for their input into the drug development process (introduction).

LESSON FOR INDIA

India can start with empowering NBA and use NBM- and use of local BMCs to promote these (Rajasthan Sustainability). Within the changed framework global TK, which India has a considerable amount, is seen. One without any central control and significant amount of oversight.

NEW ZEALAND: THE RECOGNITION OF INDIGENOUS RIGHTS

New Zealand has taken a global lead in recognizing and embedding the rights of indigenous Māori in national decision-making. Within this context, the Treaty of Waitangi provides a basis for partnerships between the government and Māori communities to ensure that their traditional knowledge preserved and respected.

- **Key Features:** Māori TK, or Mātauranga Māori, is acknowledged as a vital contributor to New Zealand's environmental and cultural policy 6. There are specific legislation, such as the Resource Management Act (1991), which contains some provision for the protection and incorporation of TK in natural resource management.
- **Partnership Model:** The government is responsible for working with Māori in terms of natural resources and ensuring that things are still done traditionally and sustainably (although I do not think this is happening one hundred percent of the time).
- **Cultural Recognition:** They have also placed emphasis on the culture aspects of TK in New Zealand.

LESSON FOR INDIA

India must learn from New Zealand and take the initiative to recognize indigenous TK as a WANA and grant community-right and participation rights of all tribal groups in all decisions regarding the resources. Incorporation of Traditional Knowledge related provisions into India's governance structure, especially through constitutional amendments will ensure better protection and sharing of benefits in an equitable manner.