

EXPLORING TRADITIONAL MEDICAL KNOWLEDGE AND ITS PROTECTION THROUGH INTELLECTUAL PROPERTY RIGHTS (IPR): A CASE OF THE JAUNSARI TRIBE OF HIMALAYA

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ABSTRACT:

This paper endeavors to explore the intricate tapestry of traditional medical knowledge embedded within the Jaunsari tribe of Himalaya, shedding light on the unique traditional medical knowledge passed down through generations. With a focus on the preservation and protection of this invaluable heritage, the study delves into the potential application of Intellectual Property Rights (IPR) as a safeguarding mechanism. Recognizing the vulnerability of traditional medical knowledge to exploitation and erosion, the paper navigates the complex terrain where traditional medical practices intersect with the contemporary legal frameworks of intellectual property.

The paper evaluates the applicability and limitations of existing IPR mechanisms in the context of traditional medical knowledge, considering the communal nature of these practices and the necessity for culturally sensitive protection measures. Through case studies and collaborative insights from indigenous communities, the research aims to propose practical recommendations for integrating IPR into the broader framework of safeguarding traditional medical knowledge, fostering a balance that respects cultural heritage, promotes community well-being, and addresses the challenges posed by contemporary global dynamics. The study aspires to contribute to the ongoing discourse on the intersection of traditional wisdom and legal frameworks, advocating for a holistic approach that ensures the sustainability and resilience of Himalayan tribal traditions in the face of modern challenges.

Keywords: Himalayan tribe, Traditional Medicinal Knowledge, Intellectual Property Rights

I.INTRODUCTION:

The Himalayan region, often referred to as the "abode of snow," is home to a myriad of indigenous tribes, each contributing to the cultural mosaic that has evolved over centuries. This vast and geographically diverse area spans across several countries, including India, Nepal, Bhutan, Tibet, and Pakistan. Nestled amidst the towering peaks and deep valleys, the Himalayan tribes have nurtured unique customs, traditions, and notably, distinctive medical practices that reflect their deep connection with the land and its resources. The Himalayan tribes, such as the Sherpas, Tamangs, Gurungs, and Bhutias, among many others, exhibit a rich cultural tapestry that has endured the test of time. Their lifestyles are intricately woven into the fabric of the harsh Himalayan terrain, influencing their beliefs, rituals, and, significantly, their approach to healthcare. These tribes are often characterized by their close-knit communities, reliance on agriculture and pastoralism, and a harmonious coexistence with the challenging environment that surrounds them.

Traditional medical practices among the Himalayan tribes are deeply rooted in a holistic understanding of health, embracing physical, mental, and spiritual well-being¹. The indigenous medical systems have evolved through generations of empirical knowledge, passed down orally and through practical experience. Shamanism plays a central role in many Himalayan cultures, where shamans act as intermediaries between the physical and spiritual realms. They conduct healing rituals, invoking deities and spirits to bring about balance and cure ailments. Herbal medicine is another integral aspect of Himalayan traditional healthcare. The diverse flora of the region provides a rich pharmacopeia, and indigenous healers possess an intimate knowledge of plants, their properties, and their applications². Infusions, decoctions, and poultices made from locally sourced herbs are employed to address a spectrum of health issues, ranging from minor afflictions to more complex conditions.

The cultural practices of Himalayan tribes are intertwined with their medical beliefs. Festivals, dances, and communal gatherings serve not only as expressions of joy and spirituality but also as opportunities for the transmission of medical knowledge. Elders share wisdom with the younger generation, fostering a continuous exchange that sustains the community's unique healthcare practices. Moreover, the Himalayan tribes' medical traditions are deeply aligned with the region's spiritual and religious beliefs. The concept of balance and harmony in the body echoes the broader philosophy prevalent in Hinduism, Buddhism, and other indigenous Himalayan religions. Medical practices often incorporate rituals, prayers, and the use of sacred symbols to invoke divine blessings for healing.

Despite the resilience of these traditional medical practices, Himalayan tribes face challenges in preserving their unique healthcare heritage. Rapid socio-economic changes, globalization, and modernization pose threats to the continuity of indigenous knowledge³. Additionally, issues such as climate change and environmental degradation impact the availability of certain medicinal plants, further challenging the sustainability of traditional healing practices. This study highlights the

¹Salagame, Kiran Kumar K. "The perspectives on reality in Indian traditions and their implications for health and well-being." *An integrated view of health and well-being: Bridging Indian and Western knowledge*. Dordrecht: Springer Netherlands, 2013. 39-57.

²Phondani, P. C., R. K. Maikhuri, and N. S. Bisht. "Medicinal plants used in the health care system practiced by traditional Vaidyas in Alaknanda catchment of Uttarakhand, India." *Ethnobotanical Leaflets* 2009.12 (2009): 4.

³Gupta, Pankaj, Vijay Kumar Sharma, and Sushma Sharma. *Healing traditions of the Northwestern Himalayas*. Springer India, 2014.

traditional medical knowledge of Juansari tribe of Uttarakhand and its health care practices through these herbs. This Himalayan tribe represents a living testament to the coexistence of ancient traditions and the ever-changing world. Their distinct cultural and medical practices, deeply rooted in the Himalayan landscape, offer a glimpse into the profound connection between humans and their environment. As the Jaunsaris navigate the complexities of the modern era, it becomes crucial to recognize, respect, and preserve their traditional knowledge systems, ensuring the continuity of a heritage that has shaped their identity for generations. The paper also discusses the role of the Intellectual Property Rights (IPR) in global and Indian context and its importance in protecting these knowledge systems and channelizing them to the modern health practices.

Vulnerability of Traditional Medicine Knowledge of indigenous communities

The traditional knowledge held by Himalayan tribes, with its intrinsic link to the region's cultural and medical practices, is alarmingly susceptible to exploitation and erosion. The rapid pace of globalization, coupled with increased external interest in traditional remedies and practices, places these communities at risk of losing their invaluable heritage. The vulnerability arises from a lack of legal protection, enabling the unauthorized appropriation of traditional knowledge for commercial gains. Commercial interests seeking to capitalize on the perceived exoticism of Himalayan traditional medicine often exploit the lack of stringent intellectual property regulations⁴. Bioprospecting and biopiracy, where external entities extract and patent indigenous remedies without fair compensation, threaten to diminish the cultural and economic autonomy of these tribes⁵. Furthermore, as younger generations migrate to urban areas in pursuit of alternative livelihoods, the transmission of traditional knowledge within the communities weakens, accelerating the erosion of these time-honored practices. Climate change, environmental degradation, and the unsustainable harvesting of medicinal plants further compound the vulnerability of Himalayan traditional knowledge⁶. Recognizing and addressing these challenges is imperative to safeguard the rich cultural and medical heritage of the Himalayan tribes, ensuring the continued resilience of their traditional knowledge against the forces of exploitation and erosion.

I. JAUNSARIS AND THEIR TRADITIONAL MEDICAL KNOWLEDGE:

Jaunsar-Bawar, situated in the Dehradun Districts of Uttarakhand, is a designated tribal area. The region is demarcated by a ridge that evenly divides the Tons and Yamuna drainage systems. Its inhabitants, referred to as Khasa, were mentioned in the Mahabharata, where they were categorized among non-Aryan mountain tribes. According to Saksena (1964), the epic depicts the Khasa as gold miners residing along the Sailoda River, flowing between the Meru and Mandar mountains.

Originally part of the Sirmaur dynasty, Jaunsar-Bawar fell under Gorkha rule in February 1803 until 1815. Seeking British assistance, the Sirmaur dynasty regained control with British support, leading to the defeat of the Gorkhas in 1815. In compensation for their losses during the conflict, the Queen of

⁴Arora, Payal. "The next billion users: Digital life beyond the West." Harvard University Press, 2019.

⁵Limbu, Numa. "Protection of Traditional Knowledge From Biopiracy: A Study With Special Reference to Sikkim." Diss. 2018.

⁶Maikhuri, R. K., et al. "Assessment of climate change impacts and its implications on medicinal plants-based traditional healthcare system in Central Himalaya, India." *Iranian Journal of Science and Technology, Transactions A: Science* 42 (2018): 1827-1835.

Sirmaur pledged the Jaunsar region to the British, who established a cantonment in Chakrata and utilized the dense forest for training purposes.

Despite this historical backdrop, the Jaunsar-Bawar area preserves traditions and practices reminiscent of Himachal, and the local community often opts for intermarriage with neighboring Sirmaur communities rather than Garhwalis. Inhabited by the Jaunsari community, named after the region, this population is considered a "living fossil of the Mahabharata" due to their distinctive practice of polyandry and historical connections to the Mahabharata era.⁷ The majority of Jaunsari's households opted herbs and flora for commonly used medication as their initial choice. The homemade remedies are used to avert health problems. Their traditional medical knowledge system keeps them healthy from several health issues. The following enumerates diverse homemade remedies and medicinal plants utilized by the villagers:

	Local Name of the plant	Scientific name	Part of the plant used as medicine	Cure for disease
1	Banaksha	<i>Viola serpens</i>	Leaves	Common cold and fever
2	Ajwain	<i>Trachyspermum ammi</i>	seeds	Cold and fever
3	Kheera	<i>Cucumber</i>	Fruit	In dehydration
4	Adrak	<i>Zinger</i>	Rhizome	Cold, cough
5	Kachoor	<i>Hedychium spicatum</i>	Leaves	Pain killer in different pains like body ache, stomach ache, arthritis,
6	Kodhu	<i>Rubus lasiocarpus</i>	Leaves	Typhoid, antiseptic,
7	Chiraita	<i>Swertia & gentiana</i>	Leaves	Stomach ache
8	Nilkanthi	<i>Chrozophora prostrata</i>	Leaves	Earache
9	Chamar	<i>Glochidion velutinum</i>	Leaves	Headache
10	Tobacco	<i>Nicotiana tabacum</i>	Leaves	Baltod (wound caused by hair) and scabies
11	Wild pomegranate	<i>Punicagranatum</i>		Cough, Diarrhoea, dysentery
12	Kashmoi	N/A	Wood, bark and leaves	Eye sore/ swelling, roots-jaundice
15	Sondi	<i>Moringa pterygosperma</i>	Leaves	Snake bite

⁷Kumari, Vandana, Vinay Kumar Srivastava, and Ramesh Sahani. "Identity Politics, Solidarities and Development in JaunsarBawar: A 'Scheduled Tribe Area'." *Journal of the Anthropological Survey of India* 70.1 (2021): 139-148.

16	Onion	<i>Allium cepa</i>	Bulb	Pain and fever
17	Kulthi	<i>Macrotylomauniflorum</i>	Seeds	Stone
18	Singraouda	N/A	Leaves	Boils/ wound
19	Bekhad (bhakoi)	N/A	root	Antiseptic
20	Chanwara	N/A	Dry leaves	Blood coagulant
21	Mandua	<i>Eleusinecoracana</i>	Seeds	Cold
22	Chullu	<i>Prunus armeniaca</i>	Seeds	Strength oil massage
23	Kaduweghas	N/A	Leaves	Blood clotting and antiseptic
24	Moseltu	N/A	Leaves and bark	Skin disease
26	Karanai	N/A	Root	Anti-venom
28	Fedu	N/A	Milk/latex	Wound caused by thrones
30	Dhatura	<i>Datura stramonium</i>	Seeds	Piles
31	Almora	N/A	Leaves	Tooth-ache
32	Walnut	<i>Juglans regia</i>	Bark/seeds	Tooth and gum
33	Timur	<i>Zanthoxylumarmatum</i>	String and seeds	Tooth and gum (used as meshwak)
34	Aadoo	<i>Prunus persica</i>	Seed	Boils/skin diseases
35	Burans	<i>Rhododendron arboreum</i>	Flower juice	Diarrhoea , dysentery
36	Pine	<i>Pinus roxburghii</i>	Latex	Sprain
37	Bheemal	<i>Grewiaoptiva</i>	Bark	Bone fracture (as supporter)
38	Bukumra	N/A	Leaves and string	Cut and bleeding
39	Chaulai	<i>Amaranth sp.</i>	Seeds	In cold to keep body warm
40	Turmeric	<i>Curcuma longa</i>	Root	Cough
41	Sitaj ka fool (wild yellow flower)	N/A	Flower	Earache

II. INTELLECTUAL PROPERTY RIGHTS AND ITS SIGNIFICANCE IN PROTECTING TRADITIONAL MEDICAL KNOWLEDGE SYSTEM:

Legal protections offered to people or companies for their discoveries or innovations are known as intellectual property rights (IPR). These rights serve to encourage innovation and creativity while also establishing guidelines for the fair and equitable utilisation of intellectual assets. Trade secrets, trademarks, copyrights, and patents are the main forms of intellectual property rights.

The purpose of copyrights is to protect the exclusive right of authors, artists, and composers to make and sell reproductions of their works. Patents protect inventions, providing inventors with exclusive rights to their innovations for a specified period, encouraging scientific and technological advancements. Trademarks protect distinctive symbols, names, or phrases associated with goods or services, preventing unauthorized use that could lead to confusion among consumers. Trade secrets involve confidential business information, such as formulas or processes, safeguarded against unauthorized disclosure or use.

The concept of IPR aims to strike a balance between encouraging innovation and ensuring that creators and inventors receive due recognition and economic benefits for their contributions.⁸ Through legal mechanisms, IPR seeks to incentivize the creation and dissemination of knowledge and creativity while safeguarding the rights of those responsible for these intellectual endeavors.

III. APPLICABILITY AND LIMITATION OF IPR WITH RESPECT TO TRADITIONAL MEDICAL KNOWLEDGE:

The applicability and limitations of current Intellectual Property Rights (IPR) mechanisms in the context of traditional medical knowledge, particularly within the Himalayan tribes, present a complex and nuanced challenge.⁹ While these mechanisms are designed to protect innovations and creations, they may not seamlessly align with the communal and holistic nature of traditional medical practices.

A. *Applicability:*

1. Patents:

Patents are designed to protect novel and non-obvious inventions. In the context of traditional medical knowledge, certain formulations or methods may be eligible for patent protection if they meet the criteria of novelty and non-obviousness¹⁰. Traditional medical practices often involve collective knowledge passed down through generations. Patenting may conflict with the communal nature of this knowledge, potentially leading to the exclusion of indigenous communities from their own practices.

⁸Guellec, Dominique, and Bruno Van Pottelsberghe de La Potterie. "The economics of the European patent system: IP policy for innovation and competition". OUP Oxford, 2007.

⁹Oguamanam, Chidi. "Pressuring 'suspect orthodoxy: Traditional knowledge and the patent system" *Indigenous Intellectual Property*. Edward Elgar Publishing, 2015. 313-333.

¹⁰Holman, Christopher M. "In defense of secondary pharmaceutical patents: A response to the UN's guidelines for pharmaceutical patent examination." *Ind. L. Rev.* 50 (2016): 759.

2. Copyright:

Copyright protects original expressions of ideas. In the context of traditional medical knowledge, this could extend to written or recorded documentation, preserving traditional texts or songs associated with healing practices. The oral nature of traditional knowledge transmission may pose challenges for copyright protection¹¹. Additionally, the emphasis on collective wisdom may not align with the individual ownership model inherent in copyright.

3. Trademarks:

Trademarks can protect symbols or names associated with goods or services. In the realm of traditional medicine, specific symbols or names tied to medicinal practices may be eligible for trademark protection. Traditional knowledge often emphasizes shared symbols and names within a community, making it challenging to establish exclusive rights without potentially excluding the community that practices them.

4. Trade Secrets:

Traditional medicinal knowledge often involves closely guarded secrets, such as specific plant combinations or preparation methods. Trade secret protection could be relevant in preserving these confidential aspects. The very nature of traditional knowledge is often communal, making it challenging to maintain exclusivity. Moreover, trade secret protection relies on confidentiality, which may conflict with the cultural practice of sharing knowledge within the community.

B. Limitations:

1. Cultural Sensitivity:

IPR frameworks are often rooted in Western legal traditions and may not fully appreciate the communal and spiritual dimensions of traditional knowledge. The cultural context of Himalayan tribes may clash with the individualistic nature of IPR.

2. Documentation Challenges:

Traditional knowledge is often transmitted orally, making it challenging to meet the stringent documentation requirements of IPR. This can lead to difficulties in proving the novelty or uniqueness required for protection.

3. Biopiracy Concerns:

IPR mechanisms can inadvertently contribute to biopiracy, where external entities exploit traditional knowledge for commercial gain without fair compensation to the indigenous communities¹². The current mechanisms may not effectively prevent such exploitation.

¹¹Oguamanam, Chidi. "The protection of traditional knowledge: towards a cross-cultural dialogue on intellectual property rights." (2004).

¹²Priya, Ritu, and Chris M. Kurian. "Regulating access and protecting traditional health knowledge through intellectual property rights? Issues from a holistic health systems perspective." *Science, Technology and Society* 23.3 (2018): 504-529.

4. Limited Economic Incentives:

The economic benefits derived from IPR mechanisms may not sufficiently trickle down to the communities practicing traditional medicine. The traditional knowledge holders may not always have the resources to navigate complex legal processes.

Therefore, while IPR mechanisms can provide a degree of protection for traditional medical knowledge, their applicability is often limited by the communal, oral, and spiritual nature of such knowledge. There is a need for a more holistic and culturally sensitive approach that respects the collective wisdom embedded in traditional practices while addressing the challenges of exploitation and erosion. Collaborative efforts involving indigenous communities, policymakers, and legal experts are essential to strike a balance that preserves traditional medical knowledge while acknowledging the global legal frameworks.

IV. GLOBAL EFFORTS TO PROTECT TRADITIONAL KNOWLEDGE THROUGH INTELLECTUAL PROPERTY RIGHTS (IPR):

Global efforts to protect traditional knowledge through Intellectual Property Rights (IPR) have gained momentum in response to concerns about biopiracy, cultural exploitation, and the erosion of indigenous wisdom. Several initiatives and international agreements aim to create a framework that respects the rights of traditional knowledge holders. Some notable efforts include:

a) Convention on Biological Diversity (CBD):

The CBD, a key international agreement, recognizes the importance of conserving biological diversity, including traditional knowledge. The Nagoya Protocol, a supplementary agreement to the CBD, specifically addresses access to genetic resources and the fair and equitable sharing of benefits arising from their utilization.

b) World Intellectual Property Organization (WIPO):

When it comes to protecting traditional knowledge, WIPO has been right in the thick of things. Preservation of traditional knowledge is a continuous effort by the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge, and Folklore (IGC).

c) United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP):

Under UNDRIP, indigenous peoples' rights to own, manage, and advance their intellectual property are emphasised. This affirms their inherent autonomy and the value of their traditional practices, knowledge, and artistic manifestations while also recognising their right to preserve and advance these things.

d) International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA):

Issues of access and benefit sharing pertaining to plant genetic resources are addressed by ITPGRFA. It takes into account the efforts of farmers, especially indigenous groups, to preserve and responsibly use plant genetic resources, while it does not rely just on traditional knowledge.

e) Access and Benefit-Sharing Agreements:

Many countries have implemented national-level access and benefit-sharing agreements that require researchers and corporations to obtain informed consent and negotiate fair and equitable benefit-sharing agreements with indigenous communities before accessing their traditional knowledge.

V. INTEGRATING IPR INTO PROTECTION OF TRADITIONAL MEDICAL KNOWLEDGE:

Integrating Intellectual Property Rights (IPR) into the protection of traditional medical knowledge among Himalayan tribes requires a balanced approach that respects cultural values, promotes community involvement, and addresses the unique challenges posed by the communal nature of this knowledge. Here are practical recommendations to navigate this delicate balance:

i. Establish Community-Based Intellectual Property Rights:

Develop a framework for community-based intellectual property rights that recognizes the communal ownership of traditional medical knowledge. This approach ensures that the benefits and responsibilities associated with IPR are shared among the community members.

ii. Documentation and Codification:

Facilitate the systematic documentation of traditional medical knowledge in collaboration with the concerned communities. This documentation should include detailed descriptions of medicinal plants, preparation methods, and associated cultural practices. Establish a culturally sensitive process that respects oral traditions and incorporates community input.

iii. Customary Law Integration:

Recognize and integrate customary laws and traditional governance structures into the IPR framework. Empower local authorities and traditional leaders to play a central role in the protection and management of intellectual property associated with traditional medical practices.

iv. Community-Driven Research Collaborations:

Foster partnerships between indigenous communities and research institutions to conduct collaborative studies. These collaborations can contribute to the validation of traditional medical knowledge and the identification of aspects eligible for IPR protection.

v. Prior Informed Consent (PIC) and Benefit-Sharing Mechanisms:

Implement robust Prior Informed Consent mechanisms that ensure the involvement of indigenous communities in any research or commercialization activities related to their traditional knowledge. Establish fair benefit-sharing mechanisms, ensuring that economic benefits derived from IPR are equitably distributed among the communities.

vi. Educational Programs and Capacity Building:

Develop educational programs to raise awareness among community members about the value of their traditional medical knowledge and the potential benefits of IPR. Provide training on the

legal aspects of intellectual property and empower community members to actively participate in decision-making processes.

vii. Establish Traditional Knowledge Databases:

Create accessible databases that store traditional medical knowledge and related IPR information. These databases can serve as a valuable resource for researchers, policymakers, and community members, facilitating transparency and accountability in the management of traditional knowledge.

viii. Legal Recognition and Tailored Legislation:

Advocate for legal recognition of traditional medical knowledge within national and international legal frameworks. Explore the possibility of enacting specific legislation or amendments that address the unique aspects of traditional knowledge, ensuring protection while respecting cultural nuances.

ix. International Collaboration and Advocacy:

Engage in international forums and collaborations to advocate for the protection of traditional medical knowledge. Encourage the exchange of best practices, information-sharing, and the development of international standards that recognize and respect indigenous intellectual property rights.

x. Continuous Monitoring and Adaptation:

Establish mechanisms for continuous monitoring of the effectiveness of IPR in protecting traditional medical knowledge. Adapt policies and strategies based on feedback from indigenous communities, ensuring that the protection mechanisms remain relevant and responsive to evolving needs.

VI. CONCLUSION:

By implementing these recommendations, a more inclusive and culturally sensitive approach to protecting traditional medical knowledge through IPR can be realized. This approach seeks to empower Himalayan tribes to preserve their heritage, maintain cultural integrity, and secure equitable benefits from the global recognition of their invaluable traditional medical practices.

Despite these efforts, challenges persist in creating effective international mechanisms for the protection of traditional knowledge. Issues such as defining the scope of traditional knowledge, ensuring respect for cultural contexts, and addressing power imbalances in negotiations remain critical. The ongoing dialogue in international forums reflects the global commitment to finding solutions that strike a balance between protecting traditional knowledge and promoting innovation and economic development. Ultimately, the success of these efforts will depend on collaborative and inclusive approaches that prioritize the rights and interests of indigenous communities.

A framework based on openness and recognition of the rights of Indigenous communities at the local and tribal levels may be established by establishing intellectual property protection for Traditional Wisdom. This method guarantees inalienable rights, which enhances the collecting,

recording, and preservation of Traditional Wisdom. By implementing distinctive intellectual property rights (IPRs) for these knowledge systems, we can do double duty: first, by protecting them via a unique international legal framework; and second, by actively fostering Sustainable Development by standardising community protocols and ensuring equitable distribution of benefits.

When looking at sustainable development as a whole, rather than in a vacuum, it is clear that building trust and respect with indigenous groups is essential. To protect Traditional Ecological Knowledge (TEK) and enable benefit sharing with local populations, India has enacted regulations including the Biological Diversity Act, 2002; the Forest Rights Act, 2006; and Intellectual Property Rights. There have been several national and international initiatives to record, preserve, and promote TEK, but very little has changed at the local level. Although there is no specific legislation protecting indigenous knowledge in India, the country's biodiversity, cultural history, traditions, trading practices, resale royalty, geographic designations, succession rules, and intellectual property may all contribute.

Challenges within the socio-cultural environment of TK owners in India exist, despite the fact that these rules and regulations have enabled the protection of TK to some level. Because they are unaware of these regulations, they risk having their information sold before they even know what it's worth. India must ensure that these rules are properly enforced and work to educate indigenous and tribal groups. One of the most important steps towards achieving sustainable development is giving indigenous people and local communities the recognition they rightfully deserve for their traditional knowledge (TK), particularly that which is linked to biodiversity and genetic resources (GRs). In order to ensure that indigenous wisdom is respected and preserved on the road to sustainable development, India should recognise the immense potential of its varied traditional knowledge and take steps to preserve it.