

Protection of Traditional Knowledge in India: A Legislative Analysis

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Abstract-- A significant challenge in establishing a comprehensive and effective legislative framework for the protection of Traditional Knowledge is the difficulty in defining the term and the lack of a universal consensus on its meaning. Traditional Knowledge requires protection due to its substantial global market; the establishment of such a market aids in its preservation, while also necessitating attention to consent, equity, and compensation issues. This research will examine the multifaceted dimensions of Traditional Knowledge, including its economic significance in areas such as healthcare, agro-biodiversity, and biodiversity in India, while also analyzing the legislative frameworks established for the protection of Traditional Knowledge. In this analysis, the researcher has delineated specific parameters (legislative aim, subject matter, granted rights, duration and nature of protection, and the methodology of Traditional Knowledge protection) to evaluate the adequacy and extent of protection afforded to Traditional Knowledge.

Keywords-- traditional knowledge, biodiversity, legislation, India

I. INTRODUCTION

THE INDIAN continent spans over an area of 329 million hectares and stands second in all of Asia and seventh in the World in terms of geographical area.¹ So, Traveling across the Indian subcontinent always exposes one to diverse weather conditions, terrain, vegetation, and animals. India possesses a variety of agro-climatic conditions; however, the loss of biodiversity resulting from global climate change, soil erosion, and urban expansion is a significant issue for the country. The rural populace believes that biodiversity is a crucial source of livelihood, a sentiment that is widely acknowledged; conserving biodiversity serves our interests as it supports the pharmaceutical, cosmetic, agricultural, and various other businesses.

Prof S. Kannaiyan, Biological Diversity and Traditional Knowledge, National Consultation Workshop on Agro biodiversity hotspots and Access and benefit sharing, held on (Annamalai University, Chennai, July 19-20, 2007), available at: http://nbaindia.org/uploaded/docs/traditionalknowledge_190707.pdf (last visited on Nov. 8, 2019).

Apart from being a treasure of biodiversity, India is also a repository of medical formulations related to Traditional Knowledge.

Traditional Knowledge Digital Library has identified around 0.29 million medical formulae from ancient texts on the Indian medical systems of Ayurveda, Yoga, Unani and Siddha.² India also houses a huge number of handicrafts and artisans who specialize in various handicrafts; the Ministry of Textiles has done a commendable job in promoting, facilitating and showcasing the growth of industries based on these handicrafts.³ India's cultural richness can be matched only by a few countries, if not none.

Part two addresses the concept of Traditional Knowledge, its significance within the Indian setting, and the reliance of a substantial portion of the Indian population on Traditional Knowledge. Part three discusses the economic significance of Traditional Knowledge and emphasizes the volume of global trade in products and items associated with Traditional Knowledge. Part four examines the contentious legal disputes surrounding the global misappropriation of Indian Traditional Knowledge and advocates for enhanced legislative safeguards. Part five examines the existing legislations in India regarding the protection of Traditional Knowledge, asserting that while *sui generis* protection has been conferred upon certain categories of Traditional Knowledge, the vast majority remains unprotected.

II. TRADITIONAL KNOWLEDGE AND LIFESTYLE IN INDIA

Traditional Knowledge in India constitutes its heritage, serving as a testament to our socio-political, cultural, and economic institutions, as well as our ethical, moral, and belief systems manifested through customs, among other forms. Our history reflects a multitude of languages, arts, craftsmanship, dances, folklore, symbolism, architecture, scientific and ecological knowledge, skills, and technical expertise.

²TKDL, About TKDL, available at: <http://www.tkdl.res.in/tkdl/langdefault/common/Abouttkdl.asp?GL=Eng> (last visited on Nov. 9, 2019).

³Ministry of Textiles, Welcome to Craft Clusters of India, available at: <http://craftclustersofindia.com/about-us/> (last

As an agricultural economy, India is inherently connected to farming and biodiversity. India, as an agrarian economy, serves as a repository of traditional knowledge pertaining to agriculture and biodiversity. India hosts numerous traditional cultures, whose lifestyles are shaped by generations of ancestors. These communities are fundamentally opposed to the lifestyle of urban areas regarding culture, socio-economic systems, jobs, and other living characteristics, as their livelihoods rely on readily available natural resources such as forestry and fishing.

The Indigenous Peoples have a unique culture as mentioned above and warrant minimum interference into their way of life, an example is the case of Dongria Kondh. In India, the Indigenous Peoples are notified as Scheduled Tribes (STs) and there are around 705 such ethnic groups.⁴One such ethnic group is the Dongria Kondh, residing in the Niyamgiri Hills of the eastern state of Orissa. The Kondhs are an unpretentious community that venerates the Niyam Raja, the hill upon which they reside and cultivate, harvesting its yield. The Niyam Raja is a bauxite reserve, which the mining corporation Vedanta Resources aimed to exploit. To further this objective, it commenced preliminary activities for mining without securing the necessary and comprehensive approvals from the Ministry of Environment and Forests.⁵The Kondhs showed unmatched spirit and resisted this imperialistic encroachment of their rights and a danger to their livelihood.

III. HOW TRADITIONAL KNOWLEDGE IMPOTANT FOR ECONOMIC PROSPECTIVE

A significant portion of India's population is indigenous, possessing distinct lifestyles, occupations, cultures, arts, dances, folklore, medical systems, and conservation knowledge. These constitute a component of their Traditional Knowledge and frequently possess significant commercial worth for firms in product development. This indicates the corporation's interest in obtaining the associated Intellectual Property Rights.

⁴Human Rights Council, Joint Stakeholders' submission on The situation of the rights of indigenous peoples in India, 2017, available at: https://www.upr-info.org/sites/default/files/document/india/session_27_-may_2017/js46_upr27_ind_e_main.pdf (last visited on Oct. 21, 2025).

⁵Vedanta Resources lawsuit (re Dongria Kondh in Orissa), Business & Human Rights Resource Centre, available at: <https://www.business-humanrights.org/en/vedanta-resources-lawsuit-re-dongria-kondh-in-orissa> (last visited on Oct. 21, 2025).

Acquiring such rights will benefit Indigenous communities by allowing them a) to determine whether to share their knowledge with a specific applicant (prior informed consent) and b) to receive a fair and equitable share of the benefits derived from that knowledge.

Traditional Knowledge systems are cultivated over extended periods and transmitted throughout generations; this knowledge typically pertains to human and animal health, food, agriculture, textiles, and is therefore highly important to enterprises operating within these domains. The issue is when this knowledge is commercially used without equitable benefit sharing or getting authorization from the legitimate proprietors. The economic significance of Traditional Knowledge has been firmly established and is rapidly expanding. Traditional Knowledge has proven beneficial in generating commercial products across various sectors, including healthcare, medicines, agro-biodiversity, music, art, textiles, and conservation approaches. The economic importance of Traditional Knowledge in several domains is demonstrated:

- *Biodiversity*

In 2000, the Council for Scientific and Industrial Research reported that the United States Patent Office referenced 4,896 plant-based medicinal patents. By 2003, this number had increased to approximately 15,000 in the USA, UK, and other regions, and by 2005, it had risen to 35,000 in these areas. This pattern distinctly illustrates the increasing significance and applicability of Traditional Knowledge in the developed world. Throughout the Indian subcontinent, indigenous and local groups have served as custodians of natural resources such as forests, rivers, mountains, and biodiversity, due to their reverence for these elements, which hold significant cultural value. Consequently, Indigenous Peoples have safeguarded and cultivated biodiversity, which may now be utilized for both conservation and economic objectives, through their Traditional Knowledge.

- *Healthcare*

The Indian medical system comprises Ayurveda, Siddha, Unani, and other associated systems, grounded in biological variety and Traditional Knowledge for therapeutic purposes. In India, the utilization of plants for health and medicinal purposes has been established since the Vedic period, approximately 3000 BC. There exist around 10-30 million manuscripts in Sanskrit that discuss Traditional Medicine, indicating that this system is highly developed today and constitutes the foundation of the medical framework in rural and tribal communities.

Approximately 60,000 rural bone settlers and herbal medicine practitioners exist in the nation. Practitioners of traditional medicine utilize around 90,000 recognized plant species for therapeutic purposes.

A similar pattern can be seen all over the world as according to the World Health Organization, close to 80% of the world's population has subjected itself to Indigenous systems for medical care at least once in their lifetime. A direct relation can be drawn between this data by the WHO and another set of statistics, which is as follows:

1. International Trade in medicinal and aromatic plants was valued at 1.1 to 1.3 billion USD in 1997. Global import of medicinal and aromatic plants has gone up by +3% since 2010 and reached a total of 2.8 billion USD in 2014.⁶
2. China leads the market in the export of botanical drugs.
3. India stands second in exports in terms of volume exported and sixth in terms of revenue generated.
4. The annual growth rate of the global medicine market is between 5-15%.

• *Agro biodiversity*

India has an agrarian economy, with over 60% of the population reliant on agriculture for jobs. The seed supply in India mostly relies on local seed production systems, which guarantee the availability of high-quality seeds to community members, hence fostering a community-based approach rather than an individualistic one. India is home to over 45,000 wild plant species, with at least 166 crop types believed to have originated in the country, showcasing significant diversity among these species. It has been stated that between 50,000 to 60,000 types of rice are cultivated in India and are traded and utilized in other nations. Other instances include certain Indian sugarcane cultivars serving as the preferred progenitors in sugarcane breeding across the USA, Indonesia, West Indies, and other regions; similarly, wheat, maize, and chickpea occupy comparable positions.

IV. JUDICIAL APPROCH OVER TRADITIONAL KNOWELEDGE

There have been cases of misappropriation of Traditional Knowledge the world over; a few cases across different industrial sectors will be discussed.

⁶Dharmendra Kalauni and Arati Joshi, "Status of Medicinal and Aromatic Plant (MAPs) and Socio-Economic Influence in Nepalese Livelihood - A Review Research" 2 Acta Scientific Agriculture 123-130 (2018).

1. *The case of turmeric*

Researchers Suman K. Das and Harihar P. Cohly, affiliated with the University of Mississippi Medical Center in the United States, submitted a patent application to the United States Patent Office for the utilization of turmeric in the treatment of acute wounds. The application detailed that the inventors discovered that topical application and/or oral consumption of turmeric enhances the healing process of injuries. The patent application indicated that turmeric has been utilized in India from ancient times as a traditional remedy for treating sprains and inflammatory ailments. The Patents Office sanctioned the application, resulting in the issuance of a patent for the utilization of turmeric in wound healing. This patent was awarded based on a 'prior art search'; however, this search failed to reveal that the application of turmeric for wound healing was extensively recognized and utilized in India, constituting a component of the public domain for centuries. The patent, obtained by the United States Patent Office, was contested in the United States by the Council of Scientific and Industrial Research, asserting that the application of turmeric for wound healing was part of the public domain in India. In response to this challenge, the Patent application was reevaluated, resulting in the revocation of the Patent, as the prior art search acknowledged objects as prior art solely if they had been documented in research or published in printed materials.

This and other similar cases have led countries to take up initiatives like the Traditional Knowledge Digital Library in India, which documents all Traditional Knowledge which is in the public domain and this information is made available to patent granting authorities all around the world so that they can exclude applications which are merely in the nature of knowledge in the public domain.

2. *The case of Neem*

In India and neighboring nations, Neem has been utilized as a pesticide, medicinal agent, and preservative. It possesses inherent commercial value, and extensive study has been conducted on the commercial applications of neem, particularly its preservation properties. Commercially manufactured neem-based insecticides possess an extended shelf life, and in 1992, W.R. Grace received a patent for a technique of producing this sort of commercial fertilizer, which was designated as 'Neemix'. W.R. Grace submitted a patent application for an anti-fungicidal product to the European Patent Office, which was granted in 1994.

This Patent was challenged on the grounds that neem used as an anti-fungal element was knowledge in public domain and the extraction method used by W.R. Grace was identical to the traditional methods used for the same purpose; the Patent was accordingly revoked in 2000.⁷ However, the decision was appealed on procedural grounds and the patent was reinstated to the plaintiffs.

V. LEGAL FRAMEWORK IN INDIA

This chapter presents an analysis of the existing legislations in India that provide protection for Traditional Knowledge in any form. The legislations have been examined based on five criteria: the objective of the legislation, the subject matter, the rights conferred, the terms of protection, and the kind and method of protection for Traditional Knowledge.

The Patents Act, 1970

Aim of the legislation: The Patents Act, 1970 (hereinafter as "Act") was enacted to consolidate the law relating to patents in the Republic of India.⁸ Justice N. Rajagopala Ayyangar Committee was instituted to deal with the question of Patent Law and the present Act is a product of this Committee Report.⁹ The Patents Act has been amended thrice, i.e., The Patents (Amendment) Act, 1999, The Patents (Amendment) Act, 2002, The Patents (Amendment) Act, 2005.

The Patents Act of 1970 in India explicitly prohibits the patenting of Traditional Knowledge, rendering the pursuit of patent protection for such knowledge superfluous. Consequently, this research is unable to analyze the Patents Act, 1970 concerning the criteria of 'Rights awarded' and 'Terms of protection and the type of protection.' Although the Act safeguards Traditional Knowledge by placing it in the public domain to avert monopolization, its accessibility necessitates a comprehensive legal framework for its protection..

The Geographical Indications of Goods (Registration and Protection) Act, 1999

Geographical Indication (hereinafter as "GI") signifies that the product has a particular and unique geographical origin and it also shows that the product has certain qualities that are exclusive to that particular geographical area.¹⁰ The GI tag is awarded to a community, group, association associated with a particular geographical area. The Trade Related Aspects of Intellectual Property Rights (hereinafter as hereinafter as "TRIPS") Agreement has defined Geographical Indication in the following manner:¹¹ "indications which identify a good as originating in the territory of a Member [of the World Trade Organization], or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin".

In India, Geographical Indications are regulated by the Geographical Indications Act, 1999 (hereafter referred as the 'GI Act') the enactment of this Legislation was initiated for fulfilling obligations under the TRIPS Agreement.

VI. CONCLUSION

This research posits that India is a nation inhabited by a significant population of indigenous peoples and tribes, hence serving as a storehouse of Traditional Knowledge. It advocates for the enactment of legislation concerning Traditional expertise to safeguard the rights of indigenous peoples and ensure they receive appropriate compensation for their expertise, while also examining pertinent legislation for this objective. A detailed review of the legislative framework indicates that Traditional Knowledge has been effectively protected to a certain degree. It is essential to note that this protection is restricted to a limited and diverse range of Traditional Knowledge, specifically Geographical Indications, plant varieties, and some categories of biodiversity. Although the legislation safeguards the specified categories of Traditional Knowledge, a significant portion of Traditional Knowledge in India remains unprotected.

⁷50436257, 10 May 2000, European Patent Office, Opposition Division, Decision Revoking the European Patent.

⁸The Patents Act, 1970 (39 of 1970), Preamble.

⁹4 Department for Promotion of Industry and Internal Trade, History of Indian Patent System, available at: <http://www.ipindia.nic.in/history-of-indian-patent-system.htm> (last visited on Dec. 18, 2025).

¹⁰Maria Paola Rizo, Nathalie Frigant, "What is a geographical indication?", available at: https://www.wipo.int/edocs/pubdocs/en/geographical/952/wipo_pub_952.pdf (last visited on May 18, 2025).

¹¹The Agreement on Trade-Related Aspects of Intellectual Property Rights, art. 22.1