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Traditional Indian Medicine and Intellectual Property Rights: An Indian Perspective

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ABSTRACT

Traditional medical knowledge is abundant in India, and it can be discovered in Indian woodlands and other sites. Multinational businesses are rushing to seize control of valuable bio-products, filing patents on everything that moves. The patent system has become tainted to the point where global corporations may now obtain patents with ease. Bio piracy isn't just a problem in the pharmaceutical industry. Other countries have patented the neem tree, tamarind, turmeric, and Darjeeling tea, among other things, for monetary reasons. In 1976, the World Health Organization recognized traditional medicines. Traditional medical knowledge has been preserved thanks to the 1992 signing of the Convention on Biological Diversity. The Indian government's Council for Scientific and Industrial Research plays a key role in documenting Traditional Knowledge in the Traditional Knowledge Digital Library. It has proven to be beneficial in terms of Traditional Knowledge protection. In the end, global bio-piracy aims to reconstruct a framework for comprehending how patent law doctrines, principles, and cultural elements assist and legitimate the theft and appropriation of indigenous peoples' traditional medicine knowledge. The current study focuses on India's traditional knowledge sector experience. In this work, I make the case that strong patent protection has harmed indigenous peoples and their traditional medical knowledge. In order to regulate the rising prevalence of bio piracy, a unique legal structure is urgently needed. India is a developing country that can become developed with the support of appropriate intellectual property laws and government initiatives.

Keywords: *Traditional medicine, Indigenous knowledge, Bio piracy, IPR, TKDL, CBD*

I. INTRODUCTION

Knowledge about the usage of medicinal plants has existed from the beginning of time in the form of local folklore passed down from generation to generation among tribal families and societies. Patents are frequently given to people that were not traditionally the owners of this

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right due to a lack of documentation of Traditional Knowledge. The traditional medicinal system of India is also one of the world's oldest traditional knowledge systems. Traditional systems of medicine have long played a significant part in satisfying global health care demands, as is clear. They endure to show a momentous role in the present and will continue to do so in the future. In this area, India has six recognized medical systems: Ayurveda, Siddha, Unani, Yoga, Naturopathy, and Homoeopathy. Though Homoeopathy arrived in India in the 18th century, it quickly merged into Indian culture and became enriched like any other traditional system, earning it a place among Indian medical systems. Authorities have not provided a precise definition. The World Health Organization outlines traditional medicine as indigenous people's knowledge, skills, and practices. Medicinal plant knowledge has persisted in the form of local folklore passed down from generation to generation among tribal families and cultures since the beginning of time. Patents are frequently given to people that were not traditionally the owners of this right due to a lack of documentation of Traditional Knowledge. The traditional medicinal system of India is also one of the world's oldest traditional knowledge systems. Traditional systems of medicine have long played a significant part in satisfying global health care demands, as is clear. They continue to play an important part in today's world and will do so in the future.² Ayurveda, Siddha, Unani, Yoga, Naturopathy, and Homoeopathy are the six recognized medical systems in India. Despite the fact that homoeopathy emerged in India in the 18th century, it swiftly assimilated into Indian culture and enriched like any other traditional system, earning it a place among Indian medical systems. Authorities haven't given a clear definition. The World Health Organization defines traditional medicine as indigenous people's knowledge, skills, and practices.³

II. TRADITIONAL MEDICAL KNOWLEDGE AND ITS IMPORTANCE

Traditional medical knowledge (TMK) is an important aspect of most local cultures' identities. It's an important part of a community's social and physical ecosystem, and preserving it is crucial. Many attempts have been made to exploit traditional medical knowledge for industrial or commercial benefit, resulting in its misappropriation and harm to the rights of the original custodians. In the face of such threats, it is critical to devise effective strategies for protecting and safeguarding Traditional medical knowledge for long-term development and the interests of Traditional medical knowledge holders. Because India is a developing country, the

² Ravishankar B, Shukla VJ. Indian systems of medicine: a brief profile. *Afr J Tradit Complement Altern Med*. 2007;4(3):319-337. Published 2007 Feb 16. doi:10.4314/ajtcam.v4i3.31226

³ 2021. *Traditional Medicine*. [online] Available at: <<https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/traditional-medicine>> [Accessed 7 October 2021].

preservation, protection, and promotion of the Traditional medical knowledge is very vital. Traditional medical knowledge is widely available in India and plays an important role in Indians' daily life. Traditional medical knowledge is a significant asset that is at jeopardy in many parts of the world due to a lack of paperwork and proper legislation. Third parties are using and patenting this information without Traditional medical knowledge holders' permission, and in some circumstances, the original holder has received very little or no financial gain because the third parties produce a lot of money that the original Traditional medical knowledge holder does not expect. Traditional medical knowledge has climbed to the top of the international agenda as a result of these challenges. The overall scenario needs the documentation and digitization of Traditional Knowledge -related literature, and TKDL is a godsend in this regard, demonstrating that it is an effective means of preserving and protecting Traditional Knowledge by third parties.

III. TRADITIONAL MEDICINE AND INTELLECTUAL PROPERTY RIGHTS PERSPECTIVE

Traditional Medicine (TM) is a significant part of health care in poor nations, serving the gigantic mainstream of the population. In underdeveloped nations such as India, where more than half of the population lives in rural and is still reliant on traditional medicinal knowledge, people are unaware of contemporary health care and medicine. For the poor people who live in distant communities, Traditional Medicine becomes the only affordable and conveniently accessible treatment. The genuine trademark owners have no idea how valuable the knowledge they have is. They have no idea how to put their expertise to good use, yet Traditional Medicine Knowledge has helped health care providers all across the world, including big pharmaceutical companies, increase in size. Traditional treatments are usually based on medicinal herbs and centuries-old indigenous knowledge. There is no official documentation for the Traditional Medicine Knowledge. The majority of Traditional Medicine Knowledge was passed down orally from generation to generation. Because of this fundamental struggle, the protection of Traditional Medicine (TM) under intellectual property rights (IPRs) raises two major questions: to what degree can TMK be protected under the current intellectual property rights system, and to what extent can Traditional Medicine Knowledge (TMK) be protected under the current IPR system, and to what extent can Traditional Medicine Knowledge be protected under the current IPR system. Traditional Medicine Knowledges do not fit all of the criteria for IPR protection because some kinds of it may be covered by patents or other IPRs, but not all TMKs are. There have been numerous

ideas to build Traditional Medicine Knowledge -specific defensive measures. Such ideas are founded on the premise that traditional knowledge holders should be compensated in the same way that innovators in the formal system of invention are compensated through IPRs. Traditional Medicine is codified in a variety of ways. Folk or tribal medicine, for example, might be characterized as codified or uncoded.

In India, traditional medicinal knowledge is generally passed down orally through folk customs from generation to generation. Folk/tribal medicine is based on traditional notions, attitudes, and practices, and is founded on century-old experiences of trials and errors, successes and failures at the household level. These are known as tribal medicines, home remedies, or folk cures and are passed down the centuries. People or communities living in indigenous territories may own Traditional Medicine in rare cases (TM). Healers, for example, use rituals as part of their traditional therapeutic methods, which allows them to keep control of their knowledge even if the materials, things, or techniques they used are disclosed. Medical information anchored in hundreds of writings is included in the codified tradition, which encompasses all areas of medicine, including "Ayurveda, Siddha, and Unani." Most pharmaceutical companies gain patents on non-original concepts that are already part of traditional knowledge in underdeveloped nations, which has created great concern in developing countries like India.⁴ Traditional medicine is defined by the World Health Organization (WHO) as the sum of all knowledge and practices used in the diagnosis, prevention, and treatment of physical, mental, and social imbalances based solely on practical experience and observations passed down verbally or in writing from generation to generation, whether explicable or not. Many of these are being used by health care professionals all across the world, including huge pharmaceutical corporations. Traditional remedies are mostly based on medicinal plants that are local to these countries, where the system has been in use for centuries. Efforts are being undertaken to acquire direct access to these plants or to employ current breeding and cultivation technologies such as tissue culture, cell culture, and transgenic technology to gain access to these plants. Concerns about intellectual property in relation to such activities have yet to be resolved. As a result, special IPR policies to protect traditional medicinal knowledge are urgently needed. Intellectual property rights (IPRs) safeguard traditional medicine (TM), which raises two types of difficulties. To begin, how feasible is it to protect the current IPR system? Some aspects of Traditional Medicine may be covered by patents or other intellectual property rights. Many suggestions for developing unique

⁴ R.A. Mashelkar, Intellectual Property rights and the Third World, Special Section: Science in the Third World, *Current Science*, Volume 81, No. 8, 25 October 2001, at page 959.

protection techniques have also been given. Such ideas are founded on the rationale that traditional knowledge holders should be compensated in the same way that innovators in the formal innovation system are compensated through IPRs. Traditional Medicine is codified in a variety of ways. In Asia, there is a distinction to be drawn between codified systems of traditional medicine and non-codified medicinal knowledge, such as "folk," "tribe," or "indigenous" medicine.⁵

IV. THE 1992 CONVENTION ON BIOLOGICAL DIVERSITY AND ITS ROLE

The importance of convention in biological diversity (CBD) cannot be overstated. It's a multilateral accord. The Convention is principally concerned with biodiversity conservation and long-term utilization of its components, as well as an equitable sharing of traditional resource advantages. The main purpose of this convention is for its signatories to adopt national policies for the protection and sustainable use of biological variety. They have the potential to be a crucial document in terms of long-term growth. On June 5, 1992, the Earth Summit in Rio de Janeiro opened the Convention for signatures, and it entered into force on December 29, 1993. The treaty includes India as a signatory. Such criteria are important since India has a huge heritage of traditional medicinal knowledge.⁶

There are numerous issues raised by the convention, but I have attempted to describe them quickly as follows:

- a) The first issue is to quantify the incentives that are required for biological diversity conservation and sustainable utilization.
- b) There should be delimited admittance to inherited possessions and traditional knowledge, which must entail the party giving the resources' Prior Informed Consent.
- c) Benefits accruing from the marketable and other operation of inherited properties with the Contracting Party contributing such resources, rather than fair and equitable benefit sharing. Both technology transfer and access are critical.
- d) There is an urgent need for technical and scientific cooperation.
- e) A Global Taxonomy Initiative should be established.
- f) Then there must be an impact evaluation.
- g) Adequate education and public awareness are also required.

⁵ https://en.wikipedia.org/wiki/Convention_on_Biological_Diversity, visited on 12th may 2021.

⁶ The Biological Diversity Act, 1992.

- h) Appropriate allocation of financial resources.
- i) Efforts to implement treaty commitments should be reported at the national level.

V. THE BIOLOGICAL DIVERSITY ACT OF 2002'S IMPORTANCE

This Act was passed by the Indian Parliament to protect India's biological variety and to establish a much-needed system for equitable benefit sharing from indigenous biological resources and knowledge. The primary purpose of this Act is to assist India in fulfilling its obligations under the Convention on Biological Diversity (CBD), to which it is a signatory. According to section 2(b) of the Act, biodiversity is defined as the inconstancy among living organisms from all sources and the ecological architecture of which they are a part, including diversity among species and eco-systems.

The National Biodiversity Authority (NBA), situated in Chennai, is one of the two sovereign institutions established under the above-mentioned Act. Second, State Biodiversity Boards have been constituted in all Indian states (SBBs). Biological management committees have been established at local levels throughout India, such as in panchayats, municipalities, and corporations, in addition to these two bodies. The main responsibilities of these boards are as follows:

- To control acts that are prohibited under the Act.
- Advising the government on biodiversity protection and biological heritage area identification.
- Take the appropriate efforts to prevent the issuing of intellectual property rights in other countries based on the exploitation of biological resources or associated traditional knowledge.

According to clause (30) of section 2 of the Income-tax Act, 1961, a foreigner who is not an Indian resident, or an external company or figure trade, must obtain permission from the NBA before obtaining any biological resources or associated knowledge from India for their research work or for commercial use. The situation is different if Indian individuals or corporations must acquire permission from the applicable State Biodiversity Board. The final result of any research utilizing biological resources from India cannot be conveyed to a foreign firm or a foreign national without the consent of the National Biodiversity Authority. There is one exception: if the study work is published in a journal or seminar, or if cooperative research is carried out by Central Government-approved institutions, no approval is required. The National Biodiversity Authority must first give approval to anyone who wants to apply for a patent or other intellectual property protection based on biological resource research. The

National Biodiversity Authority may make an order for benefit sharing or royalty based on the use of such protection throughout the process of awarding such license. The Biodiversity Act's main purpose is to ensure that the benefits of biological resources and traditional knowledge are shared fairly. Benefit sharing is defined as the notion of benefit sharing with respect to a product or process generated or manufactured using knowledge for commercial purposes and shared with benefit claimants under Section 2 (a) of the Act, as read with Section 6 of the Act (2). Beneficiary claimants are the original owner of information. Anyone who violates the regulatory provisions Act faces a sentence of up to five years in prison or a fine of up to ten lakh rupees, or both. The fine will be proportionate to the harm caused if the damage exceeds 10 lakh rupees. This Act makes any offence non-bailable and cognizable.⁷

VI. TRADITIONAL KNOWLEDGE AND PATENT APPLICABILITY

The purpose of patents is to foster invention, and the innovations must be new, legal, and valuable to the general public. According to patent laws, Traditional Knowledge is defined as written or unwritten information that has been passed down through multiple societies and is already in existence. Traditional Knowledge that has been documented has previous art qualities, and because it is in the public domain, there can be no restrictions or prohibitions on its commercial usage. Furthermore, according to Section 3 of the Patents Act, ordinary knowledge is not to be regarded an invention or a novel idea.

To evade patent contributions to Traditional Knowledge in India, a project has been hatched to record and circulate all Traditional Knowledge through an e-library, which is known as the Traditional Knowledge Digital Library (TKDL). TKDL provides information on scientific and traditional knowledge, which is organized according to worldwide patent categorization. Patent rules apply to undocumented Traditional Knowledge held by diverse communities, as many organizations are attempting to get ownership of such Traditional Knowledge in order to exploit it for economic advantage. In the case of undocumented TK, establishing that it is a new invention is quite straightforward in the perspective of the law. The Indian Patent Office published a circular to address this issue, stating that patents pending in the Traditional Knowledge domain will be made public online and that any objections would be resolved by the Patent Office.⁸

VII. BIO-PIRACY AND THE TRADITIONAL KNOWLEDGE DIGITAL LIBRARY

The Traditional Knowledge Digital Library (TKDL), a collaboration between the CSIR and

⁷ The Biological Diversity Act, 2002

⁸ <http://www.ipindia.nic.in/writereaddata/Portal/IPOGuidelinesManuals>, visited on 15th may 2020.

the Department of AYUSH, is a local initiative to guarantee that patent offices throughout the world do not grant patents for applications based on India's richness, particularly traditional knowledge. The foundation of TKDL was motivated by India's efforts to have the US Patent and Trademark Office (USPTO) withdraw the patent on turmeric's wound-healing abilities and the European Patent Office (EPO) invalidate the patent on neem's antifungal characteristics. These efforts have shown positive outcomes, but they are both expensive and time-consuming. Since 2001, the TKDL has discovered that almost 2,000 patents relating to Indian medicinal systems have been improperly granted by patent offices all around the world.

The TKDL has helped major patent office's fill in gaps in Traditional Knowledge data by breaking down linguistic barriers. Using data innovation devices and a revolutionary Traditional Knowledge Resource Classification System, the TKDL translated and structured old texts into 34 million A4-sized pages in the format of a patent application (TKRC). Patent analysts with access to the database can quickly identify applications that clearly do not meet the weirdness requirement. Renouncing a patent without a TKDL database can be a costly and time-consuming process. Limiting a patent granted by a patent office takes five to seven years and costs between \$0.2 million and \$0.6 million. With 0.226 million therapeutic definitions in India, it's evident that security without a TKDL would be prohibitively expensive.

The use of intellectual property rights and IP systems to make legal the exclusive use of biological resources, biological products, and patents that have existed and been used in the non-industrialized sector for centuries is referred to as bio-piracy. Bio-piracy is defined as the intentional exploitation of conventional knowledge in order to profit from it by obtaining patent protection. Due to devolution, a lack of effective legislation, a conflict between the systems, and encroachment, traditional knowledge is vulnerable to bio-piracy. Traditional knowledge can help people improve and build the greatest product or process possible without having to invest a lot of money on R&D and clinical trials. In the long run, traditional knowledge may save you a lot of time.⁹

VIII. CASES OF TRADITIONAL KNOWLEDGE AND BIOPIRACY

The Famous case of the Neem Patent

The global firm W.R. Grace and the United States Department of Agriculture initially filed a patent for Neem in the European Patent Office in 1994. Neem's antifungal properties have been granted a patent. In this case, a method for suppressing fungal development in plants was

⁹ https://www.wipo.int/wipo_magazine/en/2011/03/article_0002.html, visited on 12th may 2020.

patented, which involved contacting a fungus with a neem oil formulation. India has lodged a protest against the grant in question. The opponent demonstrated that neem includes a wide range of chemicals and is commonly used as an astringent and antiseptic. The entire plant has been used to cure ailments ranging from diabetes to skin conditions. Neem twigs have been used as toothbrushes since ancient times. Hydrophobic extracts from neem seeds were not only known, but also employed in plants to treat skin disorders and fungal infections. The same is written in Indian Ayurvedic writings. The European Patent Office (EPO) decided that the invention was not unique or innovative, and that it was identical to prior art, and thus cancelled the patent.

The famous case of the Turmeric Patent

Turmeric is a tropical Indian herb used in a variety of applications, including food and medicine. Turmeric has a long list of benefits, including working as a blood purifier, healing colds and skin disorders, and being a staple in Indian cuisine. The University of Mississippi Medical Centre was given a patent on turmeric in 1995 for its wound-healing qualities. The issuance of a patent on turmeric has been met with opposition from India. Turmeric has been utilized for twisted medicinal for a long time, with evidence offered in Hindi, Sanskrit, and Urdu. As a result, the patent was rescinded by the United States Patent Office because the patent's entitlement was pledge to be deceptive and renowned.¹⁰

India's government has taken a new initiative.

Finally, India passed its first-ever Intellectual Property Rights (IPR) law, with the goal of encouraging science and technology, arts and culture, traditional knowledge, and biodiversity resources while also protecting creativity and innovation. The new IPR policy includes a variety of measures related to the strengthening of traditional knowledge.

The following factors for the preservation of traditional knowledge are outlined in the policy:¹¹

1. The policy's primary goal is to raise awareness about intellectual property rights in relation to traditional knowledge. The policy's major purpose is to increase public awareness of traditional knowledge, inherited belongings, traditional enlightening lexes, and folklore, as well as to identify genuine traditional knowledge bearers. Its goal is to transform the way people think about and value knowledge, as well as to make effective attempts to turn information into Intellectual Property by reassuring knowledge monetization, which has never

¹⁰ <https://www.mondaq.com/india/patent/586384/traditional-knowledge-and-patent-issues-an-overview-of-turmeric-basmati-neem-cases>, visited on 12th may 2020.

¹¹ <https://ipindia.gov.in/>, last visited on 12th may 2020.

been the norm in India.

2. The IPR Policy's second purpose is to restore generations of IPRs, particularly with regard to traditional knowledge, by emphasizing the necessity of steering events toward the promotion of traditional knowledge while partaking of receptacles of such knowledge.
3. The policy's third goal is to think about some fundamental conditions for expanding the Traditional Knowledge Digital Library (TKDL). The goal of broadening the scope of the Traditional Knowledge Digital Library beyond Ayurveda, Yoga, Unani, and Siddha, which it presently covers, is to make it more useful for future research and development.
4. The fourth purpose of the IPR policy is to safeguard that oral traditional knowledge is documented besides those bearers of traditional knowledge are supported and rewarded for contributing to the advancement of knowledge systems.
5. The policy's fifth goal line is to establish operative synchronization between its office and the National Biodiversity Authority, allowing for the unswerving application of strategies for the grant of patents on discoveries based on biological possessions and accompanying Traditional Knowledge.

The government's IPR strategy is a step in the right direction toward establishing an effective IPR framework. The Policy's effective implementation can work miracles and pave the way for a slew of medical and agricultural breakthroughs based on the wealth of existing Traditional Knowledge and the emancipation of Traditional Knowledge holders.

IX. CONCLUSION

While TKDL is a useful tool for providing defensive protection, it has limits in terms of providing comprehensive protection against various types of Traditional Knowledge. Because of its broad nature, which leads to cross-border misuse, TK cannot be secured by domestic laws alone. As a result, the International Legal Instrument is a requirement for providing stronger protection to all kinds of Traditional Knowledge. An international legal instrument would obligate Member States to implement the treaty's provisions at the national level by providing positive protection, thereby safeguarding and protecting

Traditional Knowledge for future generation. To respond to the scenarios arising from global competition, ongoing reflection on the basic issue of Traditional Knowledge protection is required and a comprehensive international legal instrument is urgently needed to provide a holistic of all types of Traditional Knowledge.

The new National Intellectual Property Rights Policy promotes a neoliberal agenda of

knowledge commodification that includes traditional knowledge as well. However, the primary, still unsolved challenges surrounding the safeguarding of traditional knowledge, as well as its tentative remedies, must be revisited. Given the inevitability of participation in the global trade order, there is a case to be made for equipping traditional knowledge holders, indigenous and local communities, and traditional knowledge users with the tools they need to participate in the market economy, assert their rights to their traditional knowledge, and financial gains from its use. The goal of the policy is to broaden the scope of the Traditional Knowledge Digital Library (TKDL) beyond Ayurveda, Yoga, Unani, and Siddha, allowing public research institutes and private players to use it for future research and development ("R&D").
