
INTERFACE BETWEEN IPR AND TRADITIONAL KNOWLEDGE: A STUDY

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ABSTRACT

Traditional knowledge (TK) indigenous peoples' and local communities' know-how, skills, innovations, and practises – has been the subject of intense debate in many international forums. In modern industry, TK has shown to be beneficial as a raw material. Pharmaceutical corporations, for example, have employed medicinal TK to produce medications more swiftly. Despite its worth, TK is disappearing at an alarming rate, despite several efforts to conserve it for future generations. Almost every important issue concerning TK protection, however, is debatable, including whether worldwide TK protection is required or if country legislation alone is sufficient to safeguard knowledge from extinction.

Many nations in the Global South, which contain the majority of TK, have implemented domestic TK protection laws, but most countries in the Global North, where the majority of TK-using companies are located, have limited TK protection. As a result of this situation, there is a significant disparity in negotiation positions, and the most advanced TK protection instrument (the Draft Articles on TK Protection) is still far from becoming a guideline, much alone a binding treaty.

This paper seeks to provide a background, an outline of normative development, including important concepts, in relation to sustainable development and TK is provided. The current conflicts and reasons in favour of applying IPRs to TK are summarised, followed by an analytical reconciliation of points of disagreement based on international and domestic legal norms, and a discussion of TK's role in attaining sustainable development. Recognition of IPRs in TK owned by ILCs through a specialised globally binding instrument might help to overcome mistrust, encourage preservation, and function as an equitable facilitator of sustainable development.

Introduction

Traditional knowledge forms an essential part of most native identities. Protection of traditional knowledge is important as it further helps in sustainable development. Furthermore, it is critical to preserve the social and physical milieu in which traditional knowledge is embedded. The question that often arises is whether traditional practices, folkways, performances, and skills be protected under intellectual property law? Individuals and businesses have patented ancient herbal medicines, included fragments of traditional melodies and dances in copyrighted content, and even gained patents, copyrights, and trademarks for yoga-related products in recent years. As a result of these and other activities, some argue that "traditional knowledge" (TK) should be protected under both international and domestic law.

Providing legal protection for TK is viewed as a necessary corrective action for both the international community and individual countries. Indigenous peoples definitely have a great deal of knowledge about the world around them, and much of it is traditional. They have rich cultural and religious traditions and rituals as well. As a result, it is undeniable that TK exists, and has done so for some time. In many circumstances, indigenous tribes' customary norms and regulations safeguard this TK. The present debate is over whether, and if so, how, TK should be protected under international and national law.

The World Intellectual Property Organization (WIPO), the United Nations Human Rights Council (hereinafter referred to as UNHRC), and many other international and state organizations have recently taken steps to incorporate TK protection in the law. These efforts, which focus almost entirely on indigenous peoples' knowledge, reflect a widely held belief that the existing intellectual property ("IP") system unfairly favours such information.

TK and its concept

TK is defined as indigenous peoples' knowledge or skill about their culture and folklore, their technologies, and their usage of native plants for therapeutic purposes. Traditional knowledge (TK) is knowledge, know-how, skills, and practises that are established, maintained, and passed down through generations within a community, typically as part of the community's cultural or spiritual identity.

The term 'indigenous peoples' refers to communities dwelling in nations where settler communities live, whereas the word 'local communities' refers to groups living in countries

where colonizing forces have departed but where they are nevertheless isolated from mainstream society.

The term "protection" is used in two ways in international debate. In the defensive sense, protection refers to the revelation of TK in order to disprove outsiders' claims to intellectual property ownership by illegitimate means. In a positive meaning, protection entails allowing source communities positive rights to control the use of their traditional knowledge by outsiders.

Outsiders' use of TK has resulted in a conflict of worldviews, as users (including for-profit companies, academic institutes, and people) get access to TK without the approval or knowledge of source communities. When employed as an input in modern industries, TK proven to be helpful to outsiders. The use of traditional medicinal expertise in the modern drug discovery process is a good example. This paper will focus on traditional medicinal knowledge ("TMK") because it appears to be the most widely used knowledge in discussions about TK protection. The discussions, on the other hand, will have ramifications for other sorts of traditional knowledge.

The terms TK and IPR refer to two distinct categories: TK refers to a group right, such as a community right, whereas IPR refers to an individual right. Furthermore, IPR provides time-limited protection, which TK does not fit into. Furthermore, it is critical to comprehend what is being safeguarded and what type of protection is being provided. IPRs are essentially individualistic rights to innovation and newness for a limited time period. However, when it comes to TK, it cannot be seen as an individual right and must be handled differently from IPR. The reason is simple: it is a collective right, which cannot be granted in a timely manner. It is critical to recognise that, in most circumstances, TK can be used by the general population in its original form without the need for outside science and technology involvement. As a result, it does not need to be brought under the IPR system for the sake of economic exploitations and advantages.

Reasons for Protecting TK

In many nations, the traditional knowledge system plays an equally important role in communities. Many individuals in these places rely on the utilisation of traditional knowledge that exists in their country to make a living. This is especially true when it comes to health-care systems. According to the World Health Organization (WHO), traditional medicine is used by

80% of the world's population for basic health care, and Traditional Knowledge is essential for its survival.

1. Enhancement of TK Holders' Livelihoods

TK is a significant asset first and foremost to indigenous and local communities who rely on it for their livelihoods and well-being, as well as for enabling them to manage and use their local ecosystems in a sustainable manner.

2. Benefit to National Economy

Several business industries such as pharmaceuticals, botanical medicines, cosmetics & toiletries, agriculture, and biological insecticides employ TK. Most of the value added in products is captured by companies situated in industrialised countries with advanced scientific, technological, and marketing capabilities. This condition must be solved in order for developing countries to gain a greater share of the value added. Estimates of the contribution of TK, particularly biodiversity-related TK, to modern industry and agriculture have been made.

3. Environmental protection

Many field investigations have shown that the conservation ethic is a common component of many contemporary indigenous or native peoples' and traditional groups' subsistence and resource management methods. Several academic research on traditional cultures show that the preservation of TK can have major environmental benefits. Members of traditional communities, for example, plant forest gardens and manage the regeneration of bush fallows in many forest locations in ways that take use of natural processes and mirror the richness of natural forests. Researchers are becoming more conscious of the extent to which traditional natural resource management can improve biodiversity, and as a result, they're becoming more cognizant of the extent of artificial landscapes even within "pristine" tropical forests.

Farmers who follow age-old farming and land-use methods in biologically complex agricultural systems, which permit biodiversity conservation, are in charge of a large portion of the world's crop diversity. Traditional communities preserve agricultural genetic variety, which includes traditional cultivars, or land races, which are an important part of the world's crop genetic legacy, as well as non-domesticated plant and animal species.

4. *Biopiracy prevention*

The North American advocacy group Rural Advancement Foundation International invented the term biopiracy as part of a counter-attack campaign on behalf of developing countries that had been accused of intellectual piracy by rich countries, primarily the United States. It usually refers to the illegal exploitation of biological resources and/or associated TK from poor countries, as well as the patenting of fraudulent innovations based on such knowledge or resources without remuneration. Indigenous peoples have had difficulties trying to protect their traditional knowledge under intellectual property rules. Even the high expenses of registering and defending a patent or other intellectual property claim can limit effective protection.

In the framework of scientific development, current intellectual property rules have permitted corporations, notably pharmaceutical industries, to monopolise the benefits generated from the utilisation of indigenous knowledge, disregarding indigenous people's moral rights and material (financial) interests.

There are numerous other reasons to safeguard TK.

- Moral - to uphold one's moral responsibilities to indigenous and local populations.
- Legal - to ensure adherence to international treaties and evolving norms (e.g. the CBD, the Universal Declaration of Human Rights, the International Undertaking on Plant Genetic Resources).
- Utilitarian - for local economic, welfare (health and food security), and subsistence benefits; - for national economic and welfare advantages; - for global economic and welfare benefits; and - for better biodiversity and conservation management.

Protection under International Regime

- ***WIPO***

WIPO began working on TK-related issues in 1978, when it began conversations with the United Nations Educational, Scientific, and Cultural Organization (UNESCO) on the sui generis protection of folklore expressions. The "Model Provisions for National Laws on the Protection of Folklore Expressions against Illicit Exploitation and Other Prejudicial Actions" were adopted in 1982 as a result of this effort. WIPO launched a new set of initiatives in 1998, following the adoption of the Model Provisions, to investigate the IP elements of TK protection.

The major goal of these initiatives was to identify and investigate the IP requirements and expectations of TK owners in order to promote the IP system's contribution to their social, cultural, and economic development.

The rapid rise of global civil society from the early 1990s to the millennium was also a feature of the period. The Brundtland Report (1987) recommended a shift in development policy that allowed for direct community participation while also respecting local rights and aspirations. Indigenous peoples and others had successfully petitioned the United Nations to form an indigenous peoples working group, which conducted two early surveys on treaty rights and land rights. As a result, there has been a stronger public and government acknowledgement of indigenous land and resource rights, as well as the need to address collective human rights issues, as opposed to individual rights under existing human rights law.

The international Labour Organisation (ILO) CONVENTION 169 (1989) and the declaration on the right of indigenous peoples (2007) both acknowledge the collective human rights of indigenous and local communities. Indigenous and local communities were recognized as unique groups with special concerns that should be addressed by nations in the Rio Declarations of 1992, which were endorsed by precedents and ministers from the majority of the world's countries.

The IP system is becoming more well-known, particularly among segments of society and groups that are unfamiliar with it, such as indigenous and local communities, as well as government offices that are not directly involved with IP law and administrations. Facilitation of dialogue and contact between TK holders, the private sector, governments, non-governmental organizations, and other stakeholders to aid in the development of corporate modalities between them at the community, national, regional, and international levels.

- ***The Convention on Bio Diversity***

The Convention on Biological Diversity (CBD) is one of the most important international instruments that explicitly recognises the significance of indigenous and local communities' traditional knowledge, ideas, and practises in biodiversity conservation and sustainable development. However, the convention's coverage of traditional knowledge is limited to

genetic materials. It is a framework convention, outlining fundamental principles that the parties agree to be guided by in a long-term process¹.

As per Article 8(j) of the convention, every contracting party is required to respect, preserve, and maintain knowledge, innovations, and practises of indigenous and local communities tangible or visible lifestyles relevant to conservation and sustainable use of biological resources, and to promote the wider application of such knowledge, innovations, and practices with the approval and involvement of their holders, as well as to encourage the wider application of such knowledge, innovations, and practices with the approval and involvement of their holders.

The convention expressly recognises TK owners' rights. It establishes a framework in which the holders will benefit from the use of their expertise. It is stated in the preamble that there should be benefit sharing. However, it is vital to emphasize that Biodiversity knowledge is only one area of TK².

- **TRIPS**

Article 1 of TRIPS expressly states that the signatories may provide for greater protection than that which is provided by the agreement. As a result, there is room to design an SUI GENERIS protection statute to safeguard TK. Such safeguards are neither adequate nor specific. As a result, it was felt that a regime was needed to provide precise and clear protection for TK. It's important to note that IP is both evolutionary and adaptive. New technological breakthroughs, notably in information technology and biotechnology, as well as changes in economic, social, and cultural conditions, necessitate ongoing system evaluation and, at times, adjustments and expansions, which are frequently accompanied with controversy.

Nature of Protection to TK

The role of IP system in relation to traditional knowledge (TK), as well as how to maintain, protect, and equally use TK, has recently gotten a lot of attention in a variety of international policy discussions. These cover a wide range of topics, including food and agriculture, the

¹ Aman Gebru, *The Global Protection of Traditional Knowledge : Searching For the Minimum Consensus*, 17 J. MARSHALL REV. INTELL. PROP. L. 42 (2017), 52-54 (2017).

² *Id.*

environment, particularly biological diversity protection, health, including traditional medicines, human rights and Indigenous problems, and trade and economic development.

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- ***Defensive Protection***

Requiring relevant patent applications to include disclosure of the source of genetic resources and associated TK, as well as evidence of PIC and benefit sharing, is a key defensive weapon. A few countries have recently begun to put this into practise on a national level. As previously stated, developing countries have frequently proposed that this criterion be included in the TRIPS Agreement at the international level. Traceability and benefit sharing would be made easier with such a policy. TK that is already in the public domain, like as the codified Indian Systems of Medicine, must be made available to patent examiners in a manner and language that they can understand, preferably in the form of a patent application. A database like this could help establish the existence of prior art and so prevent bad patents from being granted.

- ***Positive Protection***

Many TK-holding groups protest that their knowledge and cultural assets are treated as public property, free to be used commercially by anybody, anywhere. Because such uses are frequently not patentable, defensive protection techniques such as those indicated above would have minimal effect. These groups want to assert their intellectual property rights and have them acknowledged under national and international law. A declaration of indigenous and local communities' rights, including ownership of their traditional knowledge, would be a legislative measure that could establish the groundwork for this. Recognition of customary laws in national legislation is another approach. The usage of TK is governed by a variety of customary laws in most TK-holding groups. This strategy might work effectively among communities. However, unless the laws are recognised in national legislation or the formal legal system, they have limited effect outside of the communities. Indigenous and local communities appreciate

this strategy because it respects their values and beliefs while allowing them to maintain their traditional lives.

Another tool is the formation of TK Registries, in which entering TK into the database essentially establishes a legal claim to the TK. This concept is also worth exploring further. A good example is the People's Biodiversity Register (PBR), which was started in various Indian communities. PBR aims to promote long-term use and equitable benefit distribution while preserving biological variety. It produces biodiversity management plans at the village level, with the goal of eventually occupying legislative and political spaces for decentralised control. Aside from the immediate preservation of villagers' natural resource rights, broader objectives include the protection of their intellectual property rights through the creation of documentation proof that can be used in court.³

Indian Initiative in Protecting TK

India has created a database known as the Traditional Knowledge Digital Library (TKDL) with the goal of defending the codified traditional knowledge on our country's Indian systems of medicine.

Traditional Knowledge Digital Library (TKDL)

Dr. R. A. Mashelkar, Director General, CSIR, India, chaired the Standing Committee on Information Technology (SCIT) of the World Intellectual Property Organisation (WIPO) at its 3rd Plenary Session in Geneva in June 1999, which was attended by 170 member nations of WIPO. The WIPO Member States' concern about granting intellectual property rights due to a shortage of conventional knowledge documented in the public domain was highlighted in the SCIT strategy plan for the twenty-first century. The SCIT proposed taking the lead by adding efforts in its work programme to assist WIPO Member States, particularly developing nations, in building databases in the area of public domain traditional knowledge in order to establish prior art.⁴

After an interdepartmental meeting attended by Secretaries of the Departments of Industrial Policy & Promotions (DIPP), Department of Indian Systems of Medicine & Homoeopathy

³ World Intellectual Property Organisations , https://www.wipo.int/pressroom/en/briefs/tk_ip.html (last visited Jan. 22, 2022).

⁴ Public Information Bureau , <https://pib.gov.in/newsite/erecontent.aspx?relid=23723> (last visited Jan.22,2022).

(D/o ISM&H), and Department of Scientific & Industrial Research (D/o SIR), the TKDL Task Force was formed in January 2000. (DSIR). The Council of Scientific and Industrial Research, the National Institute of Health, the Patent Office, Ayurveda Experts, the Central Council of Research in Ayurveda and Siddha, and the Department of Indian Systems of Medicine and Homoeopathy are all members of the task force (ISMH).

Verses are converted into numerous languages using the TKDL programme and its related classification system, i.e. TKRC. It should be observed that the software does not translate; instead, it performs smart translation, in which data is abstracted once and then transformed into several languages using Unicode and Metadata technique. Traditional nomenclature is also converted into modern language, such as a local name 'Kumari' to Aloe vera, 'Masurika' (Sanskrit name of a disease) to small pox, and so on. TKDL features a search interface that allows for full text search and retrieval of conventional knowledge information in many languages using IPC and Keywords.

Traditional Knowledge Classification, as well as background on principles and terminology of Indian system of medicine, scientific basis of Indian system of medicine, and information on practitioners, hospitals, and dispensaries, will be included in the TKDL database.

The TKDL database will serve as a global bridge between ancient Sanskrit/Unani verses and a patent Examiner, as it will provide information on present and local names in a language and format that patent Examiners can understand. It is anticipated that the gap in prior art knowledge will be narrowed. The database has sufficient information on definitions, principles, and concepts to reduce the likelihood of minor/insignificant changes.⁵

Interaction between TK and Traditional IP Law

The relationship between the Draft Articles and existing international instruments, including IP laws, has been another issue upon which members of the IGC have not agreed. While some members of the IGC, including the European Union, push to make the Draft Articles consistent with existing international IP laws, other members, (mostly developing countries such as Brazil and India) and the African Group, argue that this would unfairly subordinate TK protection systems to existing systems of IP protection.

⁵ Traditional knowledge Digital Library , <http://www.tkdil.res.in> (last visited Jan. 23,2022).

The Indian delegation stated, "The inception of the IGC may be clearly connected to the common idea that intellectual property legislation should help the preservation of TK and must not stand in opposition to its purposes and values." Existing IP policies, according to the Brazilian delegation, are part of the problem since bio-piracy takes use of loopholes in existing patent laws to misappropriate TK. As indicated by the Draft Articles, this split in view has remained to this day.

The instrument should take into account, and operate continuously and consistently with, other numerous international and regional instruments, in particular to those regimes which are related to intellectual property and benefit sharing of genetic resources associated with that traditional knowledge.⁶

One of the two uncontested preamble/introductory statements in this paragraph is that, If the instrument is adopted with such wording, the planned TK protection system may be required to adhere with current IP rules, which may include characteristics that defeat the instrument's basic aim. On the basis of it, the clause requiring consistency with current systems of "access to and benefit sharing of genetic resources" appears to offer some promise in keeping the Draft Articles from becoming subservient to existing IP rules.

This is because the term "access and benefit sharing" appears to allude to the system created under the Biodiversity Convention. However, the CBD framework's power to safeguard TK is limited because the framework's terminology is very vague and primarily aspirational. As a result, the preamble/introductory statement urging conformity with current legislation will focus on the strong IP rights that fail to safeguard TK. As a result, making the Draft Articles subject to current laws may restrict their ability to bring about an effective TK protection regime.

The Draft Articles' link to other instruments may have an impact on knowledge-holding groups' motivation to codify and share their TK. This is because existing intellectual property rules might be utilised against knowledge-holding communities. There is no binding international patent instrument, for example, demanding the disclosure of TK utilised in the inventive process. A patent on an innovation based on TK can be obtained by users. As a result, knowledge-holder groups may be hesitant to codify and publish their information if doing so allows outsiders to gain exclusive rights to that knowledge. To recap the concerns stated in this

⁶ *Id.*

part, the Draft Articles are packed with debatable alternative wordings that make a thorough examination of the provisions included in them.

Depending on which wordings are selected in the final form, the essence of the Draft Articles will alter dramatically. Rather than a thorough examination of the instrument, the preceding section focused on the main points of disagreement, followed by an examination of the consequences for TK codification and disclosure. The part suggested that in order to facilitate the codification and disclosure of TK, a legally enforceable international document with a high level of certainty is required. Because people will have a vote in what happens to their information after it is codified and released, such an instrument will be able to instill trust among knowledge-holder groups.

Now that the Draft Articles and their implications for TK codification and disclosure have been examined, the next section will investigate the concepts and approaches that must be adopted to provide sufficient international protection for TK using the need to encourage TK codification and disclosure as an organising principle (a minimum consensus)

Important Case Studies

There are several instances where one witnessed bio piracy of traditional knowledge. Some of these are as follows:

- ***The Neem Case***

Neem extracts may be used to fight pests and fungal diseases which damage crops. The oil collected from its seeds could be used to treat colds and flu; and when used with soap, it can help with malaria, skin conditions, and even meningitis.

The European Patent Office (EPO) issued the US Corporation W.R. Grace Company and the US Department of Agriculture a patent (EPO patent No.436257) in 1994 for a technique for controlling fungus on plants using hydrophobic extracted neem oil. A collection of foreign NGOs and Indian farmer representatives launched a legal challenge to the patent in 1995. They presented evidence that the fungicidal action of neem seed extracts had been recognised and utilised in Indian agriculture for millennia to safeguard crops, making it prior art and unpatentable. As per evidence, all characteristics of the present claim were known to the public previous to the filing of the patent application, and the patent was not

regarded to constitute an innovative step. The European Patent Office (EPO) cancelled the neem patent in March 2005.

- ***Basmati Rice***

Rice Tec. Inc. had filed to the UK Trade Mark Registry to register the mark TEXMATI. The Agricultural and Processed Food Exports Authority successfully rejected it (APEDA). The US Patent 5,663,484 given to Rice Tec by the US Patent Office was one of the papers relied on by Rice Tec as evidence in favour of the registration of the claimed mark. This US utility patent claimed a rice plant with features comparable to traditional Indian Basmati Rice lines, as well as a geographical delimitation that included North, Central, and South America, as well as the Caribbean Islands. Rice Tec received the patent on September 2, 1997, from the US Patent and Trademark Office. It included 20 claims that covered not only new rice plants but also different rice lines, as well as the resultant plants and grains, seed deposit claims, and a process for choosing a rice plant for breeding and multiplication. Its claims 15-17 were for a rice grain that resembled Indian Basmati rice lines in terms of attributes. If properly implemented, these allegations would have hampered Indian exports to the United States.

Against assertions 15-17, the evidence from Indian Agricultural Research Institute Bulletin was utilised. This was backed up by Directorate of Rice Research's germplasm collection, which dates back to 1978. The many Scientists from the CFTRI assessed grain properties and made recommendations based on their findings.

On the basis of their reports, claims 15-17 were challenged. On April 28, a request for conducting re-examination of this patent was eventually submitted. Rice Tec decided to drop the re-examination request shortly after it was filed in 2000.

- ***Turmeric Case***

Turmeric has been used for ages to heal wounds and rashes. Two expatriate Indians working at the University of Mississippi Medical Center in 1995 were given a patent in the United States on the usage of turmeric to treat wounds. The Indian Council of Scientific and Industrial Research (ICSI) CSIR filed a re-examination case with the US Patent and Trademark Office, disputing the validity of the patent.

On the basis of prior art, a patent is granted. Turmeric, according to the CSIR, has been utilised for a variety of purposes. It has been used medicinally for thousands of years

to treat wounds and rashes and was not a brand-new concept. Documentary evidence was used to back up their assertion. Documentary proof of traditional knowledge, such as an old Sanskrit manuscript and a study published in the Journal of the Indian Medical Association in 1953, backed up their assertion.

The USPTO sustained the CSIR objections and revoked the patent, notwithstanding the patent holders' appeal. The turmeric case was a watershed moment in legal history since it was the first time a patent based on a developing country's customary knowledge was successfully challenged. After determining that there was no originality, the US Patent Office cancelled the patent in 1997, citing the fact that the discoveries of inventors had been known in India for millennia⁷.

Conclusion

The possibility of extraterritorial free-riding highlights the necessity for a global TK protection system. While some domestic measures such as deferred disclosure may help to mitigate the effects of free-riding, they also limit the dissemination of TK, resulting in inefficiencies. Only until there is a worldwide TK protection system will the legal framework's full potential be achieved.

The current state of affairs in terms of important international fora with consequences for TK protection was explored in this research. It also looked at the most sophisticated tool for TK protection, the WIPO IGC Draft Articles. Despite the fact that worldwide TK protection has been considered for over a decade, no clear and enforceable protection mechanism has been established. International discussions at the WIPO IGC have come to a halt due to delegates' inability to agree on a number of crucial topics. The proposed instrument's legal character, the conflict between giving flexibility for domestic policy space and constructing an effective/enforceable system of protection, and the link between the proposed instrument and existing international accords are among these concerns.

The most viable path forward for international TK protection appears to be striking the right balance between giving domestic jurisdictions the flexibility to craft domestic laws based on their needs and capabilities while also ensuring that there is a sufficient international obligation to encourage the codification and disclosure of TK. A structure like this should start with a

⁷ World Trade Organisation, https://www.wto.org/english/tratop_e/trips_e/ipcw368_e.pdf (last visited Jan.23,2022).

minimal level of agreement among important parties, such as major source nations and jurisdictions where the majority of users seeking access to TK dwell.