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THE SAGA ON TRADITIONAL KNOWLEDGE UNDER IPR: PROTECTION, PROMOTIONAND STRATEGIES

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ABSTRACT

Throughout many millennia, Traditional Knowledge of the Indigenous and local populations' has proven extremely valuable. It has been passed from generation to generation based on decades of experience and adaptations to the local lifestyle and culture. It has a broad domain like food, genes, clothes, biodiversity, etc. It has kept involved as per community interaction with their cultural environment. Despite its existence for a long time, it is on the verge of being marginalized. This article analyses the risks, the inadequacies of the international legal framework, and the failing attempts by national governments to re-establish their role in the world. It identifies the need for the preservation and promotion of Traditional Knowledge. It discussed the Traditional Knowledge protection under the different legal statutes and threw light upon the few landmark cases like Turmeric, basmati rice and neem cases. The paper aims to analyse the prominent existing national and international legal protection of TK (TraditionalKnowledge) and provide suggestions for sustainable resource management.

Keywords: Traditional Knowledge, Indigenous, TKDL, Biodiversity

INTRODUCTION

An African proverb says, "When an old person of knowledge dies, then a whole Library disappears".

According to this famous quote, traditional knowledge has ancient origins in every culture throughout the world. This knowledge was also beneficial to their long-term growth and livelihood. To put it in layman's terms, Traditional Knowledge (TK) is a knowledge base accumulated over a significant period in a particular region or community, in which the people are well adapted to the local environment and culture, and they do not strive to maximize their income but instead take action to prevent their risks. And by this, it should be emphasized that

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traditional knowledge is a collective piece of information over which only society may claim a right, not a specific individual. Traditional knowledge pertains to indigenous and local group's knowledge, inventions, and customs from worldwide. Traditional knowledge is passed down orally from generation to generation, based on decades of experience and adaptations to the local lifestyle and culture. Stories, music, folklore, proverbs, cultural values, beliefs, rituals, community rules, the local language, and agricultural techniques, including the development of plant species and domesticated animals, are examples of collectively owned knowledge. It is sometimes called an oral tradition since it has been practiced, sung, danced, painted, carved, recited, and performed for centuries. Traditional knowledge is practical, especially in agriculture, fishing, health, horticulture, forestry, and general environmental management. Traditional knowledge protection and promotion culminate numerous ideals such as human rights, environment protection, sustainable development, intellectual property rights, and benefit-sharing mechanisms.[3] The first and most significant stage in determining the nature of intellectual property protection for traditional knowledge is to define which aspect of intellectual property traditional knowledge pertains to. The three categories of intellectual property that can protect traditional knowledge are copyright law[4], patent law, and trade secrets.

SIGNIFICANCE AND CHARACTERISTICS OF TRADITIONAL KNOWLEDGE

Traditional Knowledge doesn't have one domain to define it due to its diverse nature. The feature that characterizes Traditional Knowledge is its evolving nature. Traditional Knowledge evolves with the collective or individual creator's responses to an interaction with their cultural environment. In addition to that, it is held by members of a distinct culture and or/sometimes acquired "by means of inquiry peculiar to that culture, and concerning the culture itself or the local environment in which it exists."[5]

Traditional Knowledge represents a collective culture, not an individual one. This bestows it with a unique feature of common control instead of single-controlled entity. And users of common property are subject to rules and restrictions embedded in cultural or religious customs. Resultantly, they perceive themselves as possessors of their habitat instead of resource owners. Hence, community members have only community rights.

[3] Meera Nayak, The Misappropriation of Traditional Knowledge, DENVER JOURNAL OF INTERNATIONAL LAW & POLICY (April.30, 2019), http://djilp.org/the- misappropriation-of-traditional-knowledge/.
[4] Vatsala Singh, IPR Vis- A- Vis Traditional Knowledge, KHURANA & KHURANA ADVOCATES AND IP ATTORNEYS (Oct. 5, 2018), https://www.khuranaandkhurana.com/2018/10/05/ipr-vis-a-vis-traditional- knowledge/.
[5] UNEP/CBD/COP/3/Inf.33, Annex ii

A very important feature of Traditional Knowledge is that it is 'Traditional' only to the extent that its creation and use are part of the cultural traditions of communities.[6] "Traditional", therefore does not necessarily mean that the knowledge is ancient.[7] "Traditional" knowledge is being created every day, it is evolving as a response of individuals and communities to the challenges posed to their social environment.[8]

The value of traditional knowledge is becoming more widely recognized. Traditional knowledge is vital not just to individuals who rely on it in their daily lives, but also to industry and agriculture in the modern world. Traditional knowledge concerning land and species conservation, management, and biological resource rejuvenation is based on indigenous people's daily lives and practices, as well as their deep understanding of their ecosystems developed over thousands of years. It has the potential to play a critical role in achieving sustainable development and addressing the world's most pressing issues, such as climate change, land management, and land conservation, as well as strengthening scientific, technological, and medical research, as evidenced by pharmaceuticals, among other things.

Furthermore, traditional knowledge has the potential to provide viable paths for achieving food security not only for indigenous peoples but for people all over the world. Many indigenous land and environmental management strategies have been shown to improve and promote biodiversity at the local level, as well as contribute to the maintenance of healthy ecosystems.

Promotion of traditional knowledge by a country also encourages the feeling of national cohesion and identity. Moreover, complying with international agreements like the TRIPS Agreement and Convention on Biodiversity (CBD) help to establish the high standard of intellectual property protection.

PRESERVATION, PROTECTION AND PROMOTION OF THE TRADITIONAL KNOWLEDGE

As Traditional Knowledge is considered to be a publicly owned property, this makes it more prone to unauthorized use and exploitation. Hence, protection is needed to safeguard the interest of rightful owners. When it comes to developing countries, it is of key importance for them to protect, preserve and promote the traditional knowledge. As their rich endowment of traditional knowledge and biodiversity plays a crucial role in their healthcare, food security,

[6] Dr. G.B. Reddy's, Intellectual Property Rights and the Law 399 (9th ed. 2012).
[7] Id.
[8] Id.

culture, religion, identity, environment, sustainable development and trade.[9]

Due to the absence of Sui generis legislation to safeguard the Traditional Knowledge, it is exploited without the benefits being shared with the original TK holders. Traditional Knowledge in such cases is used without the consent of the owners and used by the third parties in unauthorized manner for the commercial purpose, thereby depriving the rightful owners of the profit. Therefore, effective measures are required to preserve, promote and protect Traditional Knowledge.

Estimation is that out of over 6,000 currently spoken languages representing the cultures, 90% may face extinction in the next 100 years. Traditional Knowledge can be preserved through recording, documentation, digitization of traditional knowledge, registries or databases. Protecting Traditional Knowledge not only allows the rightful owners to get the benefit derived, but it also helps to keep the knowledge alive for future generations so that the cultural knowledge could be preserved.

Presently, traditional knowledge can be protected in two ways namely;

1. **Positive Protection** and;
2. **Negative Protection**.

Positive Protection

"Positive protection is the granting of rights that empower communities to promote their traditional knowledge, control its uses and benefit from its commercial exploitation."[10] It aims to establish legal protections for traditional knowledge. This is accomplished by either exploiting existing laws or enacting new sui generis laws through legislative processes.

Defensive Protection

This mechanism protects against third-party acquisition of unlawful intellectual property rights over traditional knowledge. The Indian Patent Act 1970 provides for the defensive protectionto the Traditional Knowledge. This protection can be claimed when it is made mandatory for the applicant to disclose the source of origin of genetic resources and associated traditional Knowledge.

Unlike other types of intellectual property rights, India does not have a comprehensive act or

[9] V.K. Gupta, Protecting India's Traditional Knowledge, WIPO MAGAZINE, June 2011 at p.5.
[10] Traditional Knowledge and Intellectual Property – Background Brief, (April 4 2022,

law to safeguard traditional knowledge, but other IP acts do, such as the Patents Act of 1970, Sections 25 and 64, which enumerates traditional knowledge as one of the grounds for revocation of a patent application. The Copyright Act of 1957 makes no reference of protecting traditional cultural, literary, or artistic works, or folklore, but Section 31A provides for safeguarding of unpublished Indian work, However, Copyright protection is only for a limited period of time, and it also necessitates that certain criterion be met, so traditional knowledge protection under this IP is restricted.

TRADITONAL KNOWLEDGE UNDER PATENTS

It's been indicated that the Indian Patent Office is issuing patent protection on the use of Indian traditional knowledge (TK), particularly relating to the Ayurveda, Unani, and Siddha systems of medicine, as well as patents on inventions involving biological resources acquired from India, without continuing to follow the law's obligation even though other foreign patent offices have denied or objected to the award of such patents based on prior art evidence retrieved from the Traditional Knowledge Digital Library.

The preservation of traditional knowledge and biodiversity is adequately provided under the Indian law. Traditional knowledge is in the public domain by definition, so any patent filing relating to TK does not meet the criteria as an invention under Section 2 (1) (j) of the Patents Act, 1970,[11] which defines "invention"; as a new product or process involving an inventive step and capable of industrial application. Furthermore, a substance created by a simple mixing resulting merely in the amalgamation of the qualities of the components thereof, or a technique for making such substances, is not an innovation and hence not patentable, according to Section 3(e) of the Patents Act. Under Section 3 (p) of the Indian Patents Act,[12] "an invention which, in effect, is traditional knowledge or which is an aggregation or duplication of known qualities of traditionally known component or components"; is not an invention and hence not patentable within the meaning of the Act.

As previously indicated, the Patents Act protects traditional knowledge with defensive protection. An innovation which, in effect, is traditional knowledge or which is an aggregation or duplication of known qualities of historically known component or components; is not an invention, according to Section 3(p) of the Indian Patents Act, 1970.[13] It's also a reason to file

[11] The Patents Act, 1970, § 2 (1) (j).
[12] *Id*. § 3 (p).
[13] Id.

a pre-grant or post-grant opposition under sections 25(1)(k)[14] and 25(2)(k).[15] Section 25(1)(k) states that any person may oppose a patent application after it has been published but before it has been granted on the grounds that the invention, in so far as it is claimed in any claim of the complete specification, is anticipated based on knowledge, oral or otherwise, available within any local or indigenous community in India or elsewhere. Section 25(2)(k) allows any person who is interested to submit a post-grant objection after the patent has been granted but before one year has passed since the patent has been published. This is also a reason for termination of a patent under Section 64(1) (q) of the Patent Act, 1970.[16] Aside from the aforementioned, if the applicant has incorporated biological material in the innovation that is not accessible to the general public, the applicant will be required to declare the sources and geographical origin of the biological material in the patent specification. Pre-grant and post-grant opposition, as well as patent revocation, can be brought because of non-disclosure or erroneous reference of biological material in the specification.

Defensive protection can also be obtained by gathering traditional knowledge from all accessible sources, compiling it into a database, and making it accessible to patent offices for the purpose of performing patent searches. Many applications based on traditional knowledge will be rejected merely on the basis of examination. Many traditional knowledge sources are unwritten and passed down orally. Identifying the people who have such information and their documentation is a difficult undertaking.

Biopiracy, as the term implies, is the piracy of diverse biosphere elements such as microorganisms, plants, and animals. According to research conducted by the Council of Scientific and Industrial Research (CSIR) in 2000[17], seven medicinal herbs from India accounted for 80 percent of all medical patents filed in the United States and the United Kingdom. In 2003, the US and UK filed roughly 15000 patents on medicinal plants of Indian origin, and by 2005[18], the number of patents had risen to 35000,[19] demonstrating developed nations 'interest in developing countries' knowledge and skills. Furthermore, the patent

[14] *Id*. § 25 (1) (k).
[15] The Patents Act, 1970, § 25 (2) (k).
[16] *Id.* § 64(1) (q).
[17] Chandra Prakash Kata, Pitamber Prasad Dhyani, Bikram Singh Sajwan, Developing the medicinal plants sector in northern India: challenges and opportunities, NATIONAL LIBRARY OF MEDICINE (Aug.8, 2006), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1562365/.

[18] Subramani Parasuraman, Gan Siaw Thing, Sokkalingam Arumugam Dhanaraj, Polyherbal Formulation: Concept of Ayurveda, NATIONAL LIBRARY OF MEDICINE, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4127824/.
[19] Ramesh Menon, Traditional knowledge receives a boost, INDIA TOGETHER, https://indiatogether.org/tkdl-economy.

examiner who comes for examination is from a developed country rather than a developing country, giving the former carte blanche to take and utilize traditional medical expertise. The instances of neem, turmeric, and basmati rice must be studied in order to have a better understanding of how biopiracy occurs.

THE TURMERIC CASE

Turmeric is a tropical herb extensively used in India as a cosmetic and colouring ingredient in almost all cuisines. Turmeric powder has a vivid yellow colour and a somewhat bitter flavour when uncooked. In 1995, a US Patent was granted to the Medical Centre of the University of Mississippi to use Turmeric wound-healing properties.

A patent was awarded for the "use of turmeric in wound healing"; and claimed a technique to cure wounds in a patient by administering an "effective amount" of turmeric while the USPTO and EPO dealt with the Neem dispute. The inventors of the claimed patent on turmeric were Suman K. Das and Hari Har P. Cohly, who eventually assigned the patent to the University of Mississippi. A re-examination application was filed against the issued patent, citing roughly two dozen references, and it was granted quickly.[20] The inventor's defence was inadequate in the face of current interpretations of traditional Ayurveda texts, extracts from the Compendium of Indian Medicinal Plants, nineteenth-century historical materials from Hamdard University's collection and the patent was revoked in August 1997.

India's claim: From 1995 to 2006, Dr. R. A. Mashelkar, the Director of the Council of Scientific and Industrial Research (CSIR), contested the patent awarded to the Medical Centre of Mississippi University and fought very hard to restore India's ancient Turmeric understanding. Scientists from India make the following arguments: The assertion was backed up by documented proof, which included an old newspaper dated 1953 printed and published by the Indian Medical Association and other material such as ageing and ancient Sanskrit literature. In April of 1998, the court ruled in favour of the CSIR, based on the claim that Turmeric has been used by Indians since ancient times, as evidenced by extensive documented evidence.

[20] Vatsala Singh, IPR Vis- A- Vis Traditional Knowledge, KHURANA & KHURANA ADVOCATES AND IP ATTORNEYS (Oct. 5, 2018), https://www.khuranaandkhurana.com/2018/10/05/ipr-vis-a-vis-traditional-knowledge/.

THE BASMATI CASE

Another example that caused a great deal of difficulty was a patent given by the USPTO to Rice Tec, an American firm, for "Basmati rice lines and grains". Basmati rice is a fragrant rice type that has been farmed in India and Pakistan for centuries. Aside from patent law,[21] the issuance of this patent resulted in a slew of other IP concerns, such as trademarks and geographical indications.

Rice Tec had been granted a patent for the invention of hybrid rice lines that supplemented desirable grain traits of Basmati rice with desirable plant traits; this was due to the inferior quality of Basmati rice grown in the United States compared to the high-quality Basmati rice grown in northern India and Pakistan and would aid in the production of a better Basmati rice crop in the western hemisphere, particularly in the United States. A re-examination request was submitted, along with testimonies from two scientists and many articles on Basmati rice and Indian rice research—one of which convinced the USPTO that Rice Tec's essential claims were non-obvious. Rice Tec decided not to appeal the USPTO's judgement and reduced its twenty claims to three.

THE NEEM CASE

Neem is a tropical evergreen plant native to India and other Southeast Asian countries. Because of its medicinal capabilities, Neem is regarded in India as "the village pharmacy". It has been utilized in medicine since the beginning of time, primarily in Ayurveda, and may be dated over 4000 years. The Sanskrit term "Arista" means "imperishable" or "perfect"; and refers to the Neem tree. The leaves of the Neem tree, as well as the tree itself, are used in medicine. It is used to treat inflammatory, pyretic, antiseptic, antifungal, and antiviral symptoms. Theft of genetically diverse resources and materials, especially plant varieties, is known as bio-piracy in exchange for a patent.

Even though the owner is the legitimate owner of the property, once material is patented, the owner may be able to prevent it from being repossessed by anybody else. As a result, by patenting indigenous people's local customs, companies may be able to ban locals from using their indigenous practices, posing a threat to native economic growth.

[21] Saipriya Balasubramanian, India: Traditional Knowledge And Patent Issues: An Overview Of Turmeric, Basmati, Neem Cases, MONDAQ (April.18, 2017), https://www.mondaq.com/india/patent/586384/traditional-knowledge-and-patent-issues-an-overview-of-turmeric-basmati-neem-cases.

Problem raised in Neem Patent

In the year 1971[22], a timber importer from the United States purchased neem seeds to establish neem trees in his Wisconsin headquarters. He also carried out performance and safety experiments on the pesticide capabilities of Neem and received approval from the United StatesEnvironmental Protection Agency, EPA. After three years, he transferred the patent to W R Grace and Co., a global organization. By 1985, numerous US and Japanese corporations attempted to locate and formulate emulsions for toothpaste manufacture using Neem. In 1992, the company W R Grace and Co claimed ownership of the insecticide emulsion made from Neem seeds.

Dispute

According to India's assertion, Neem is an indigenous plant still used as a type of traditional knowledge in the country. It was also claimed that granting a patent to Neem would hurt impoverished farmers and, as a consequence, the Indian economy. In India, a group of individuals and numerous non-governmental organizations launched the Neem campaign to mobilise global support and defend traditional knowledge systems as well as Indian traditional goods from biopiracy. The Neem Case was the first legal challenge against biopiracy patents in the United States and Europe.

Judgement

The European Patent Office (EPO) acknowledged the arguments of Indian scientists on July 30, 1997, resulting in the rejection of W R Grace and co.'s patent by the US patent office. The consumption of Neem and its derivatives in India for even more than 4000 years has been the only justification acknowledged in its entirety.

TRADITIONAL KNOWLEDGE DIGITAL LIBRARY (TKDL)

The then-Central Government's Planning Commission established a "Task Force on Conservation and Sustainable Use of Medicinal Plants" in June 1999. One of its goals was to discover ways to make it easier to safeguard "patent rights and intellectual property rights of medicinal plants". One of the Task Force's recommendations was to establish a library to ensure the collection of traditional knowledge on a single platform that is digitally accessible and useful in demonstrating to the world that traditional medicinal knowledge associated with India is prior art and that patent applications based on such expertise will not meet the criteria

[22] *Id*.

for novelty. As a result, a database of India's traditional knowledge was created.

The Traditional Knowledge Digital Library (TKDL) is a database of approximately 2, 50,000 formulas used in Ayurveda, Siddha, Unani, and Yoga schools of traditional Indian medicine.[23] TKDL is a pioneering Indian attempt to avoid misuse of the country's traditional medical knowledge at international patent offices, on which the healthcare requirements of over 70% of India's population and the subsistence of millions around the world depend.[24] India's approach toward defensive protection in constructing the digital library to combat biopiracy and misappropriation of traditional knowledge has been noticed worldwide. However, simply acknowledging the problem is insufficient; it is necessary to implement an equitable benefit-sharing mechanism.

According to the TKDL advisory committee, about 2000 erroneous patents about Indian systems of medicine are awarded every year at the international level because of India's traditional system of medical knowledge, which exists in local languages such as Sanskrit, Hindi, Arabic, Urdu, Tamil, and others, is neither obtainable nor understandable to patent examiners at international patent offices.

PROTECTION OF TK UNDER INDIAN COPYRIGHT LAW

The Indian Copyright Act safeguards the author of a work, but there is no single author for awarding protections to the author of traditional knowledge. In the case of traditional knowledge, the work is a collection of information passed down through generations, making authorship challenging and impossible.

Although Section 31A (2),[25] of the Indian Copyright Act safeguards unpublished Indian works, it does not expand its branches to protect indigenous people's traditional knowledge or folklore expression directly. However, safeguarding traditional knowledge has its own set of issues. The following are the most significant drawbacks:

The Indian Copyright Act protects works registered under it for a finite period of just 60 years. On the other hand, traditional knowledge should be protected indefinitely rather than for a specified period.

- Only a tangible form of work may be registered under the Indian Copyright Law to

[23] Traditional knowledge digital library (TKDL), Council of Scientific and industrial research, accessed at https://www.csir.res.in/documents/tkdl.
[24] Ramesh Menon, Traditional knowledge receives a boost, INDIA TOGETHER, https://indiatogether.org/tkdl-economy.
[25] The Indian Copyright Act, 1957, § 31A 2.

protect copyright. On the other hand, traditional knowledge is never a set form of work butrather a verbal form of information passed down through generations. However, the stories areonly available in written form in some instances.

- Traditional knowledge cannot be registered under Indian Copyright law and is quickly rejected because it does not meet the Indian Copyright Act's fundamental standards.

PROTECTION OF TK UNDER THE INDIAN TRADE SECRETS ACT

Traditional knowledge can be preserved under the Trade Secrets Act without an expensive procedure like the one required under Patent Act.[26] Traditional knowledge is a bit of a mystery among members of a specific group, and they are constantly careful of passing it down from generation to generation. As a result, traditional knowledge can be protected under the Indian Trade Secrets Act. Even though Indian traditional knowledge is quite extensive and is employed in various disciplines such as agriculture and medicine, Indian intellectual property laws fail to safeguard traditional knowledge adequately. However, there are alternative options, such as special legislation to protect traditional knowledge and benefit-sharing schemes.

PROTECTION OF PLANTS VARIETIES AND FARMERS' RIGHTS ACT 2001[27]

The Protection of Plant Varieties and Farmers' Rights Act 2001, which aims to preserve farmers' traditional rights, such as the ability to keep, use, distribute, or sell farm produce of a variety protected under the Act, is another crucial piece of law relating to TK in farming. This Act also allows the equal distribution of benefits flowing from the use of plant resources that may accrue via a breeder from the agricultural community will be disposed disposal and planting material of a variety. The Act allows any farmer, group of farmers, or community to apply for the registration of "extant variety" and "farmer's variety"' if they claim to be the breeder of the variety. "Extant variety" refers to a variety that is (a) notified under Section 5 of the Seeds Act, 1966[28] (b) a farmer's variety (c) a variety about which there is common awareness; or (d) any other variety that is in the public domain and is available in India. Farmer's variety has been characterized as a variety (a) that has been historically farmed and evolved by farmers in their fields; or (b) is a wild relative or land race of a variety about which the farmers have common knowledge. However, such a variation must meet the parameters of uniqueness, conformity and stability. In the case of existing varieties, such as farmer's varieties,

[26] DR. G.B. REDDY'S, INTELLECTUAL PROPERTY RIGHTS AND THE LAW, Gogia Law Agency.
[27] Protection of Plants Varieties and Farmers Act, 2001.
[28] The Seeds Act, 1966, §5.

the criteria of novelty that applies to the registration of other kinds has been reduced.

Farmers will also be eligible for compensation from the Gene Fund as a result of the Act. A farmer who is involved in the conservation of genetic resources of land races and wild relatives of economic plants, as well as their enhancement via selection and preservation, is eligible for recognition and award from the Gene Fund, according to Section 39(iii).[29]

INTERNATIONAL LEGAL REGIME ON THE PROTECTION OF TRADITIONAL KNOWLEDGE

The need of preserving indigenous and local communities' information, originality, and customs is increasingly becoming more widely recognized around the world. The first attempt to protect traditional knowledge under the IP regime was a joint initiative by WIPO and the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1978, which led to the further fortification of folklore expressions against unlawful exploitations and other detrimental conducts in 1982. The protection of traditional information has grown in importance since the ratification of the Convention on Biological Diversity (CBD) in 1992. There are some international instruments which contain certain provisions for the protection of Traditional Knowledge and Traditional Cultural Expressions. However, there's no binding international instrument as such which deals exclusively with the protection of traditional knowledge.

Berne Convention for the protection of literary and Artistic works, 1886

For the protection of 'Literary and Artistic work', Berne Convention for the protection of literary and artistic works was adopted in 1886. Words like 'literary' and 'artistic' are defined comprehensively but inclusively in the convention. After the Stockholm revision (1967) and Paris revision (1971), article 15(4) of the convention covered the work of 'Folklore'. But it is noteworthy that the word 'folklore' has not been used anywhere in the convention.

Article 15(4) (a): *-In the case of unpublished works where the identity of the author is unknown, but wherethere is every ground to presume that he is a national of a country of the Union, it shallbe a matter for legislation in that country to designate the competent authority who shall represent the author and shall be entitled to protect and enforce his rights in the countries of the Union.*

(a) Countries of the Union which make such designation under the terms of this provision shall notify the Director General by means of a written declaration giving full information concerning the authority thus designated. The Director General shall at

[29] *Supra* note, §39 (iii).

once communicate this declaration to all other countries of the Union.

It can be clearly established from the above article that the three foremost things required for the enforcement of the provisions of this article is that (i) there should be unpublished work (ii) the author is unknown (iii) and there is every reason to believe that the author is a national of a given country. In this case, with the fulfilment of above conditions, any country can enforce the right of its work in other countries. This particular provision is more prone to exploitation by the way of claiming the anonymous work by the authority and enforcing it against the other nations.

ILO Convention on Indigenous and Tribal Peoples, 1989

This convention obligated member states to confer rights on the indigenous and tribal people.

Few articles which talk about the tribal people rights: -

➢ **Article 13(1):** It obligates the member states to respect the special importance for the cultures and spiritual values of the peoples concerned of their relationship with their landsor territories.

➢ **Article 23:** It lays down that handicrafts, rural and community-based industries, and subsistence economy and traditional activities of the peoples concerned, such as hunting, fishing, trapping and gathering, are to be recognized as important factors in the maintenance of their cultures and in their economic self-reliance and development.

United Nation Declaration on the Rights of Indigenous People, 2007

This declaration was adopted in 2007 recognizing inter alia "respect for indigenous knowledge, cultures and traditional practices contributes to sustainable and equitable development and proper management of the environment." The declaration recognizes the rights of the tribal people to protect and promote their traditions and cultures in order to manifest their past, present and future. States have an obligation to provide redress cultural property taken without their free or prior consent or in violation of their laws, culture or tradition.

- **Article 13:** This article recognizes the rights of tribal people to revitalize, use, develop and transmit to future generations their tradition, history and culture etc.
- **Article 32:** It states that indigenous people have right to maintain, control, protect anddevelop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the, manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of flora and fauna etc.

Access to benefit sharing of TK and Convention of Biological Diversity and Nagoya Protocol

The UN Convention on Biological Diversity, 1992, is the first multilateral treaty which recognizes the role of traditional knowledge. It also recognizes the practices of local and indigenous communities for sustainable development and biodiversity conservation.

Nagoya Protocol was adopted on 29 October 2010 in order to fulfil the objective of fair and equitable sharing of benefits arising from the utilization of genetic resources.

Some of the things which have been mentioned in the protocol are- interrelationship between genetic resources and traditional knowledge for the conservation of biodiversity and the sustainable use of its components and for the sustainable livelihood of these communities.[30]

The protocol provides great transparency to the user as well as the providers of genetic resources. Not only this, but the protocol also gives access to traditional knowledge to the local and tribal people when it is related to the genetic resources. These provisions are made for the benefit of tribal and local people so as to strengthen their traditional knowledge.

➢ **Article 5** of the protocol speaks about the sharing of the benefits derived from the utilization of genetic resources and the profit gained after the application and commercialization of the sources by the parties.[31] It is ensured that the parties take the required administrative and legislative measures so that benefits arising from the genetic sources be shared in a fair and equitable manner to the local and tribal communities.[32]

➢ **Article 6:** This article speaks about access to the genetic resources for utilization after prior consent.[33]

➢ **Article 7:** This article required the parties to take prior and informed consent from parties and involved them into it before utilizing the resources.

Thus, the Nagoya Protocol encourages the conservation of Biodiversity, thereby balancing the interrelationship between the local communities and the genetic resource.

[30] Preamble, Nagoya Protocol 2010.
[31] Article 5, Nagoya Protocol
[32] Id.

[33] Article 6, Nagoya Protocol

RECOMMENDATIONS

Traditional knowledge is a significant asset that should be maintained since it is the foundation of indigenous and local population's livelihoods. Traditional knowledge also helps the Indian economy since much of the tested traditional knowledge utilized to make novel products have economic worth. Agriculturalists preserve and protect biodiversity and implement sustainable farming methods using traditional knowledge.

1. The documentation of traditional knowledge reduces the risk of bio-piracy since it protects native traditional knowledge from third-party exploitation and misappropriation of our goods. As a result, the Traditional Knowledge Digital Library (TKDL) must be updated regularly, and a headquarters should be maintained by a team from either the central / or state governments.

2. All intellectual property laws in India may be amended to safeguard that any information that is a part or outcome of TK is not protected through patents, designs, or trademarks.

3. Commercialize specific forms of traditional knowledge and distribute the rewards of commercializing traditional knowledge equally.

4. Promote ecological protection and management utilization.

5. Prevent traditional knowledge from being misused.

CONCLUSION

Traditional knowledge is frequently a significant aspect of a person's cultural identity, and it has played a vital role in the vast majority of people's everyday lives. Millions of people in impoverished countries rely on TK for their food security and health. It is also critical to preserve the rich culture and legacy in the form of folklore and designs, among other things. A sui generis legislation is widely suggested as a mechanism to effectively conserve traditional knowledge however policies and ideas like the National IP Policy, Digital India, and Start-up India would save the rapidly disintegrating traditional knowledge system until a law is established. To safeguard the survival of species and mankind, it would not be erroneous to suggest that the current generation will be required to assist in the preservation of the valuable information of a passing generation.

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