

“Exploitation and Need to Protect Traditional Knowledge”

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ABSTRACT

The term 'Traditional Knowledge' (TK), likewise utilized equally with indigenous learning, is utilized to portray any indigenous learning, advancement, or custom, tradition of local knowledge that is imperative in insurance, protection and sustainable utilization of biodiversity and different customs. TK is essential to the sustenance of security and soundness of a huge number of individuals and is created and passed on from age to age as records, melodies, social qualities, nearby dialects, traditions and customary practices, healing arts, and farming practices, for the common good of the community. It closely interlinks ethnic and natural variety, shaping a basic reason for the preservation and feasible utilization of worldwide biodiversity. Likewise, inside the system of the Convention on Biological Diversity (CBD), the contracting States have embraced to regard and elevate TK and to make it locally accessible.

A lot of this information contributes broadly to innovative work, especially in regions, for example, pharmaceuticals, and rural and restorative items. These wilderness staying social orders may know plant solutions for illnesses that right now perplex present day science. This hypothesis is the reason for a multi-million dollar business push to patent new meds from old home grown cures.

In tribal areas the folk medicinal practices incorporate herbal medications, regularly in blend with reciting certain verses called mantras. There is gigantic profundity of innate information with respect to the utilization of natural resources. They utilize more than 90,000 plant species, including 75,000 types of plants for medicinal properties. Other than this, a noteworthy number of materials of creature and mineral source are utilized in conventional medication. Note that Ayurveda, Siddha and Unani don't debase or smother these people customs however have a harmonious association with them. These arranged medicinal frameworks and people customs draw from and get advanced by each other's practices.

With regards to these utilizations, indigenous people groups guarantee that their rights as conventional holders and caretakers of this information are not enough perceived or secured by lawful measures. They request not just for acknowledgment and security of this

information, yet in addition for the privilege to share fairly in benefits got from the employments of this learning

KEYWORDS

- Traditional Knowledge (TK)
- Equitable Benefit Sharing
- Convention on Biological Diversity (CBD)
- Farmers Right or Breeders Right
- Traditional Cultural Expression (TCE)

INTRODUCTION

Traditional Knowledge has dependably been an effortlessly open treasure and in this way has been vulnerable to misappropriation. The traditional knowledge, especially, identified with the treatment of different ailments has given prompts improvement of biologically active molecules by the technology rich nations. As such, traditional knowledge is being abused for bio-prospecting. Also Traditional information is regularly misused, in light of the fact that it is helpfully accepted that since it is in broad daylight space, communities have surrendered all claims over it. Traditional Knowledge incorporates both the systematized (recorded) and additionally non-systematized data (not archived but rather might be orally transmitted).

Bio-piracy of systematized Indian traditional knowledge continues since, this data exists in regional dialects, and there exists a dialect barrier because of which the patent offices can't look through this data as prior art, before allowing licenses. Details utilized for the treatment of human diseases from traditional knowledge are time-tested since they have been in practice for quite a long time. The dependability of the traditional drug frameworks combined with the nonappearance of such data with patent workplaces, gives a simple chance to intruders for getting licenses on these clinical formulations got from traditional pharmaceutical frameworks.

In the WIPO talks, many contend that utilization of traditional knowledge should be liable to free, earlier and informed assent, particularly for holy and secret materials. Be that as it may, others expect that allowing selective control over conventional societies could smother development, reduce people in general space and be hard to execute practically speaking.

There are likewise numerous activities in progress to archive traditional knowledge. Much of the time the rationale is to safeguard or scatter it, or to utilize it, for instance, in natural administration, as opposed to with the end goal of lawful protection. There are nevertheless worries that if documentation makes traditional knowledge all the more broadly accessible to the general population, particularly on the off chance that it very well may be retrieved on the

Internet, this could prompt misappropriation and use in manners that were not foreseen or planned by traditional knowledge holders.

In the meantime, documentation can help ensure traditional knowledge, for instance, by giving a private or secret record of traditional knowledge saved for the pertinent network as it were. Some formal documentation and registries of traditional knowledge bolster sui generis insurance frameworks, while traditional knowledge databases -, for example, India's database on customary drug - assume a part in guarded security inside the current IP framework. These illustrations exhibit the significance of guaranteeing that documentation of customary learning is connected to a licensed innovation methodology and does not occur in an approach or lawful vacuum.

Kinds of Traditional Knowledge¹

There are various classes of TK, that may incorporate agriculture information, biological knowledge, restorative information including related pharmaceuticals also, cures, biodiversity-related learning, articulation of folklore in the type of music, dance, melodies, craftwork, plans, stories and fine arts, logical information, specialized learning and so on.

Importance of Traditional Knowledge

Traditional Knowledge plays a significant role in the protection of biodiversity and its traditional uses. The recent technological developments clearly show the usefulness of traditional knowledge for developing new products which have commercial importance. It is important for the nourishment and health of millions of people in the developing and under-developed countries.²

Healthcare: Numerous phytochemical based medicines and cosmetics are procured from the understanding of properties of specific plants. Indian Ayurveda and Unani system of medicines relies upon a diversity of biological resources and related traditional knowledge. In developing nations traditional medication is the main route for low cost treatment. World Health Organization (WHO) characterizes conventional solution (TM) as:

"the whole of all the information and practices, regardless of whether logical or not, utilized in determination, avoidance and disposal of physical, mental or social irregularity and depending solely on practical experience and perceptions passed on from age to age, whether verbally or in composing".

Indeed, even in many developed nations, 70% to 80% of the population utilize some type of elective medicine (for instance needle therapy). The customary arrangement of medication is critical in light of the fact that it offers helpful options for some degenerative and age-related illnesses, for example, stiffness, for which other palatable treatments are inadequate. Health care industry relies upon customary therapeutic learning as the items derived from medicinal

¹ See http://www.nativescience.org/html/traditional_knowledge.html

² See <http://lawinfowire.com/articleinfo/importance-traditional-knowledge-national-treasure>

ecological knowledge are eco-friendly and have no or least reactions. This learning demonstrates boon to the economy of the health care industry as natural items are favoured by the consumers.

Agriculture: Continuous improvement of plant varieties; pest administration practices; selection method; rearing techniques by ranchers and advancement of domesticated animals by livestock keepers assume an imperative part in agrarian frameworks of developing nations. Regional groups enhanced and sustained decent variety in vegetation through their customary practices and farming techniques

Wild biodiversity: Through social convictions and conventional practices regional groups have moderated wild regions including natural environments. These practices help in keeping ecological balance.

Traditional Knowledge under Indian Constitution

The Constitution of India does not specifically address the issue of security of traditional knowledge. Article 48(A) of the Constitution alludes to the State's commitment to secure and enhance the environment and defend the forests and natural life of the nation. Article 51 (A)(g) Imposes an obligation upon the citizens of India to ensure and enhance the common habitat, including forests, lakes, streams and natural life. As regards insurance of TCEs, Article 29 of the Constitution perceives as a "Fundamental Right" (Part III) the security of the heritage of minorities. As per Article 29, "any section of the residents living in the territory of India or any part thereof having a particular dialect, content or culture of its own will have the privilege to protect the same." It is conceivable to ensure the protection of folklore of the distinct groups in India in light of this provision. Be that as it may, most of the TCEs existing and misused now in India are owned by small communities who do not come under the purview of the above mentioned constitutional provisions.

The only other general provision in the Constitution that can be recognized as a source to ensure TCEs is Article 51 A (f) of the Constitution. It is the essential obligation of each native of India "to value and safeguard the rich legacy of our composite culture." Moreover, thinking about the uncommon social personality of the tribal populace in India, the Constitution envisages special protection of the indigenous networks. The zones where there are just ancestral communities, according to Article 371 read with the Schedule VI of the Constitution, are allowed to have separate Autonomous Councils for self-administration as per their customary laws.

Traditional Medicine

Customary know how and traditional medicines³ make a vital contribution to the holders of traditional knowledge in the Committee however their portrayal isn't made obligatory in the Act or Rules.

In some Asian and African nations, 80% of the populace relies upon traditional drug for essential healthcare.⁴ In China, traditional solution accounts for around 40% of all healthcare services provided. In Chile, 71% of the populace and in Colombia 40% of the populace utilize such medication. In India, 65% of the populace in rural areas utilize Ayurveda and therapeutic plants to help meet their essential healthcare needs.

Traditional frameworks of medicine are by and large based on traditional beliefs, standards and practices in light of hundreds of years old encounters of trials and blunders, victories and disappointments at the family and community level. These are passed through oral tradition.⁵ India has entrenched arrangement of traditional therapeutic practices, for example, Ayurveda, Unani and Siddha. The information related with these frameworks is very well reported and has been effectively honed in India for centuries.⁶ Moreover, there are endless varieties of regional healthcare practices spread over the towns in India.

In India, the national approach on traditional pharmaceutical was presented in 1940. National laws and controls were likewise issued in 1940, and updated in 1964, 1970 and 1982. The national program was issued in 1964. The national office the Department of Medicine and Homeopathy was built up in 1995 as a feature of the Ministry of Health and Family Welfare. There are various councils for various types of customary prescription; the first of which was set up in 1962. There are also various national research organizations; the first being the Central Council of Indian Medicine, built in 1970.

India also has two multivolume national pharmacopeias, the Ayurvedic Pharmacopeia of India and the Unani Pharmacopeia of India. Both are thought to be lawfully authoritative. With respect to monographs, various sources are utilized, including a national database on

³ In the Context of Health Policy, the WHO defines Traditional Medicinal Knowledge as: "the sum total of the Knowledge, Skills and Practices based on the Theories, Beliefs and Experiences Indigenous to Different Cultures, whether explicable or not, used in the maintenance of health, as well as in the prevention diagnosis, Improvement or Treatment of Physical and Mental Illnesses." See WHO Fact Sheet, No. 134, revised in December 2008, available at http://www.who.int/mediacentre/factsheets/fs_134/en/ (accessed 5 August 2009) visited on 06.02.2014.

⁴ WHO, "Report on Intellectual Property Right and Access to Medicines: a South East Asia Perspective on Global Issues," **WHO Regional Office for South-East Asia**, India, (2008).

⁵ M. Correa, Carlos, "Protection and Promotion of Traditional Medicine: Implications for Public Health in Developing Countries", **Geneva**, South Centre, (2002).

⁶ See Venkataraman, K. and S. Latha, Swarna, "According to the All India Coordinated Research Project on Ethnobotany, the indigenous communities are acquainted with the use of over 9000 species of plants and specifically for the purpose of healing are aware of the use of over 7500 species of plants. "Intellectual Property Right, Traditional Knowledge and Biodiversity of India", **Journal of Intellectual Property Right** 13: (2008), pp 326-328.

restorative plants utilized in Ayurvedic medication and monographs contained in the national pharmacopeias.

Safety prerequisites incorporate those required for conventional pharmaceuticals, and also special necessities of traditional use without determined harmful impacts and reference to reported logical research on comparative items. No control instrument is utilized for these necessities, as the long standing utilization of herbal prescriptions in the Ayurveda, Unani and Siddha frameworks exhibits their security for human utilization.

The need for the protection of traditional medicines emerged with regards to bio-piracy and licensing of new items in light of customary information utilizing biotechnology. Western science has recognized the importance of traditional medicine for the advancement and commercialization of new pharmaceutical items.

Plants Varieties and Farmers Right Act

Another enactment that has an extremely restricted application if there should arise a need for protection of traditional medicine is the Protection of Plant Varieties and Farmers' Right Act (PVFA) 23,⁷ 2001. The PVPA however basically planned to secure new plant varieties additionally incorporates arrangements for the enlistment of existing varieties and payment of remuneration and equitable benefit sharing to the community.

The law is helpful for safeguarding traditional drug only if there are therapeutic plant varieties. The advantage under this law is for the most part focused on the farmers. To ensure the traditional learning of farmers the PVPA encourages the enlistment of extant variety and ranchers' variety under this act.

There are provisions for acknowledgment of Right of farmers, benefit sharing, paying remuneration to communities for their contributions, protection from indictment in the event of innocent encroachment (PVPA, Chapter VI, area 42), payment of yearly charge by the reproducers and the formation of a Gene Fund²⁶ are the unique provisions incorporated into the Act. Like the Biodiversity Act, there is no provision providing any sort of recognition of traditional knowledge with the community.

Section 41 of the PVPA takes into consideration any people, gathering of people (regardless of whether effectively occupied with cultivation or not) or any legislative or non-administrative association to record claims inferable from the commitment of the general population of a town or network in the development of any variety to stake a claim for the benefit of such town or local community. Such claims are liable to a mind boggling set of verifications by the Central Government and the PVPA appears to be lopsidedly one-sided

⁷ The PVP A is India's *sui generis* legislation for the protection of plant varieties giving effect to Article 27(3)(b) of the TRIPS Agreement. The Preamble to the Act outlines some of the basic objectives behind the PVP A. The Act is purportedly for the establishment of an effective system for protection of plant varieties, the Right of farmers and plant breeders and to encourage the development of new varieties of plants. The PVP A acknowledges the need to protect plant breeders Right to stimulate investment for research and development. The PVPA was also created for the purpose of facilitating the growth of the seed industry in India, which will ensure the availability of high quality seeds and planting material to farmers.

for the Right of reproducers [PVPA, Chapter VI, Section 41 (3)]. The payment of compensation to the network as opposed to right of proprietorship is perceived under the PVPA.

Convention on Biological Diversity

Traditional learning can make a huge contribution to sustainable development. Most indigenous and regional communities are situated in regions where huge varieties of the world's hereditary resources are found. Majority of them have developed and utilized biological diversity economically for a large number of years. A portion of their practices have been demonstrated to improve and advance biodiversity at the local level and help in keeping up sound biological communities. Be that as it may, the commitment of indigenous and local networks to the protection and practical utilization of biological diversity goes a long ways past their part as normal asset administrators. Their abilities and procedures give significant data to the worldwide communities and a helpful model for biodiversity strategies. Besides, as on-site communities with broad information of nearby environments, indigenous and local communities are most specifically involved with preservation and sustainable use.

In perspective of these worries, India, being a signatory to the CBD passed the Biological Diversity Act (BDA), 2002 which is proposed to accommodate protection of biological diversity, sustainable utilization of its elements and reasonable and fair sharing of the advantages emerging out of the utilization of biological resources and learning (BDA, Section 21).⁸ Since 1980's protection of Resources for the interest of present and future generation is one of the quickest developing fields at the worldwide, regional and national levels.

The NBA's only commitment is to guarantee that the benefit sharing agreement is equal and as per the commonly concurred terms and conditions between the people applying for endorsement and the nearby bodies and benefit claimers [BDA, Section 21 (1)]. It is anyway required for the NBA to counsel the Biodiversity Management Committees (BMC) before taking decisions relating the utilization of biological assets [BDA, Section 41(2)]. Be that as it may, there is no commitment with respect to NBA to take after the recommendation or choices of the BMC since the commitment is just to "consult".

Understanding that India has immense and rich biodiversity, its security against bio-piracy and guaranteeing equitable benefit sharing revered in CBD is a challenging task. One of the significant difficulties before India lied in adopting an instrument which understands the purpose of equitable benefit sharing.

The Convention on Biological Diversity (CBD), signed on the sidelines of the Earth Summit held at Rio de Janeiro, Brazil in June 1992 rose as an incredible milestone toward this path; and was reacted to by its signatories including India which turned out with domestic legislation as a proof of their pledge to ensure the protection all types of flora and fauna.

⁸ See <http://www.un.org/en/events/biodiversityday/convention.shtml>

Regional Efforts

Karnataka

Indian states are passionately engaged in the protection of traditional knowledge. For example, activities of the State of Karnataka incorporate Eco-development project in the Nagar hole National Park that tries to address the livelihood issues of the backwoods living communities in and around the National Park. The state has established in excess of 3700 Joint Forest Planning and Management Committees for involving individuals in administration and protection of forest⁹. The state is likewise wealthy in medical plants and has comprised the Karnataka Medicinal Plant Authority to advance restorative plant protection and development in the state.¹⁰

The Karnataka Forest Department has started different Programs for the production of medical herbs, bushes and trees related with conventional strategies for medicines. In Karnataka with the assistance of Foundation for Revitalization of Local Health Traditions (FRLHT) Bangalore, 13 Medicinal Plant Conservation Areas (MPCA) and Medicinal Plant Development Areas (MPDA) are set up and are dealt with the assistance of local people.¹¹

Andhra Pradesh

Documentation and training programs have been started in Andhra Pradesh to increase awareness of ancient Ayurvedic, natural and native medicines. For example, a cognizant effort has been made by Laya, a NGO working for the evolution of tribals in Visakhapatnam and East Godavari district, to record the knowledge of tribal and to promote their system of medicine. It set up 'Vanantram', an Adivasi Moolika Vaidyasala and Training Centre, at Addategala in East Godavari region for training intrigued tribal youth¹² in scientific techniques for preparation of native medicines, conveyance and documentation.

Kerala

⁹ See. State of the Environment Report (Karnataka), (2003), at 170.

¹⁰ In Karnataka according to the study of the Botanical Survey of India there are 3924 species belonging to 1323 genera and 199 families in the forests, of which 1493 species are of medicinal value. These belong to 808 genera and 108 families. They occur in different vegetation types across the Western Ghats.

¹¹ See website for the Karnataka Forest Department, available at http://karnatakaforest.gov.in/English/forest_glance/medical_plants.html visited on 08.03.2014.

¹² See Gopal, Madhu B. The tribals are now trained to prepare drugs that can be stored for some months and in some cases a year so that they can be used as and when required. The community health practitioners maintain a record of the cases attended by them and the results obtained, (2009). *"Effort to promote Native Medicine"*, **TheHindu**, October (2009).

After conferences for almost 3 years, the State of Kerala, vide Government Order (P) No. 4/2008/Law, turned out recently with an IPR arrangement (hereinafter KTKP) mainly focusing on the absence of insurance for conventional information in the state. The policy recognizes misappropriation of traditional knowledge in Kerala, particularly identified with its traditional prescription arrangement of Ayurveda in Kerala as the central driving force to the development of the strategy (Section 2).

The policy outlines the State's worry about securing its abundance of knowledge involving tribal meds, Ayurveda hones and bio-diversity. Kerala had in the past its traditional knowledge Right on health care, nourishment and food supplements, and also on outlines and social properties, on the grounds that the first designers or communities that acquired the information over ages were not supported by the government.¹³

"Industrialist" or "corporate" substances are terms utilized - Section 4 (iii) expresses that "no substance enrolled as a medium or extensive endeavour might be esteemed to have any Right over traditional knowledge." Section 7 of the Policy prohibits "medium and large enterprises" from acquiring autonomous permit of utilization both inside the State and outside.

Traditional Cultural Expressions

Introduction

The term traditional cultural expression alludes to work crafted by indigenous individuals and the traditional networks, yet the term has not been clearly defined. The term Traditional Cultural Expressions (TCEs) in the international network is sometimes also referred as "folklore" and a few countries lean toward utilizing the expression "folklore" in their national copyright laws. The expression "folklore" implies the traditional beliefs, legends, stories, and practices of a gathering of individuals, transmitted orally. The expression "folklore" was instituted by William Thomas in the year 1846. Mr Thomas intended to incorporate behaviour, traditions, perceptions, superstitions, songs, precepts etc. in the term 'folklore', which he outlined as the lore of the general population.¹⁴

Traditional Cultural Expressions (TCEs) are basically of two kinds, namely tangible and intangible. These include:

- Verbal expression or images (stories, sagas, legends, riddles and so forth.)
- Musicalespression(tunes, instrumental music)
- Expression by action (dance move, play, custom, and so on.)

¹³Losing the trademark Right on Jeevani tea and nutritional supplements to the US-based Nutri Science Inc. is a recent example. Jeevani, a health drink with high medicinal value, was developed by the State-owned Tropical.

¹⁴<https://www.lexology.com/library/detail.aspx?g=a806fd78-711e-4811-a881-ed269533b635>

- Tangible Expression (illustrations, outlines, artistic creations, body art, carvings, figures, stoneware, earthenware, warli painting, mosaic, woodwork, rockwork, metal work, gems, container, embroidery, carpets, and so forth.)
- Intangible expression reflecting conventional thoughts
- Architectural forms

TCEs mirror a community's cultural and social foundation and comprises of trademark components of a community's legacy. They are regularly made by creators who are obscure or unidentified, or by communities or people perceived as having the right, responsibility or consent to make them as per the standard law and practices of that network. TCEs are regularly advancing, creating, and being reproduced inside source communities.¹⁵

TCEs are imperative to the social and social personalities of indigenous and nearby networks, they typify expertise and aptitudes, and they transmit center qualities and advantages. Their assurance is connected to the advancement of innovativeness, enhanced cultural diversity and the safeguarding of cultural legacy.¹⁶

Numerous universal networks elude TCEs as "Traditional Knowledge" or "Indigenous knowledge". These terms refer to the long-standing customs and practices of certain provincial, local, neighbourhood communities. Customary information additionally incorporates the observation, learning and lessons passed on from ages to ages. A few types of customary learning are communicated through stories, legends, folklore, ceremonies, tunes and even laws.

Indian Position on International Protection of TCEs

India has been a participating member in the on-going negotiations at the WIPO concerning the protection of TK and folklore. According to India, the objective of IP protection ought to be to avert their misappropriation and to guarantee economic returns to the communities who had been nurturing and creating them.

Thus, India has demonstrated an inclination for a mix of both economic right and moral right for the insurance of TCEs. The comprehension in this regards is that economic right would add to capacity building and, consequently, protection and positive advancement of the TCEs while moral right would make way for suitable acknowledgment and affirmation by others of the TCEs.

Commercialization of TCEs/EOF without just and fitting pay ought to be viewed as an unlawful and unsatisfactory act." Apart from worrying on PIC for commercialization of TCEs

¹⁵WIPO handbook

¹⁶View or opinion expressed by author Molly Torsen at Santa Clara Law School's Conference

and access to secret or spiritual TCEs, India has likewise required for equitable pay to be paid to the communities concerned.¹⁷

India has maintained whatever authority is needed to national direction to comply with universal commitments in such manner. India trusts that all nationals or habitual occupants of a prescribed nation as characterized by international agreements Right ought to be qualified to become beneficiariesto the insurance of TCEs under national measures or laws. India likewise tries to stretch out national treatment to qualified foreign recipients.¹⁸

Considering the way that India has focused on the requirement for national direction in the light of conceivable national obligations, it is essential to look at and dissect how far the present State of Indian laws are equipped for protecting TCEs.

CONCLUSION

Role of intellectual Property Rights in protection of Traditional Knowledge

- **Protection of TK through Patent Act 1970**

IPR depends on the thought of individual property proprietorship while TK is aggregately held by a traditional community. The knowledge is owned by the entire community. Ensuring protection of TK under the current IPR administration is a challenge because of its completely distinct nature. The patent framework can be utilized as a guarded measure against the abuse of traditional learning. The main benefit of defensive system of assurance is that it keeps all monopolies on biological resources and related traditional information by business enterprises. This methodology treats biodiversity and related traditional information as common human legacy that ought not to come under private monopolies. To shield Traditional learning from being protected, provisions under section 25[1(k), 2(k)] and 64 [1(q)] of the Act, have been subsumed to incorporate anticipation of invention by accessible local information including oral knowledge as one of the grounds for both pre-grant and post-grant opposition and furthermore for denial of patent.

Under the proviso (j) of subsection 1 and 2 of section 25 of the Act and 64[1(p)], it has been said to consider non-disclosure or wrongful revelation of source and geological origin of biological material utilized for the creation as a ground for opposition and revocation of the patent.

The Patent Act 1970 has provisions that require disclosure of TK which is the premise of invention being referred to. Section 10 (contents of specification) of the Act provides for the disclosure of source and topographical origin of any biological material utilized for the innovation in the specification.

¹⁷Available at WIPO/GRTKF/IC/11115 Prov., (2007),

¹⁸Available at WIPO/GRTKF/IC/11115 Prov., (2007),

Inventions that are not patentable are given under Section 3 of the Patent Act 1970. Plant varieties or basically biological procedures are non-patentable under section 3 of the Act. Provision under clause (p) of section 3 would fortify the position of indigenous community as it prevents the acquisition of right over traditional information through patent. As indicated by section 3(p), an invention which in actuality is traditional information or which is a total or duplication of known properties of customarily known component or sections is certainly not a patentable invention. For instance, the patent application for a procedure for preparing an enhanced Chyawanprash discloses the procedure which includes cutting, roasting and mixing of dry fruits and then adding it to the Chyawanprash, which under Section 3(p) of Patents Act 1970 (as revised in 2005) isn't an innovation. This innovation depends on customary learning so not patentable under the Act.

Diverse features of TK can be ensured protection through patent framework. Specialized issues recognized in earlier prior art which have novelty and inventiveness and can be industrially applied can be ensured protection through patent. For instance the TM, that contains contemporary subject matter, might be protected through patents. Process for the preparation of products segregated from biological resources like microorganisms, plant and animal can be ensured protection through patents. The arranged TM can't be protected under Patents as it doesn't satisfy the criteria of novelty. Be that as it may, by utilizing codified information on TM as prior art, we can keep others from getting patents

- **Protection of TK through Copyright.**

Copyright protects the form of expression and not simply the ideas. Copyright holder is approved to do any of the acts stipulated under section 14 of the Copyright Act, 1957. Copyright can be utilized to ensure protection the artistic manifestations of the TK holders, particularly craftsmen who are from indigenous and local communities, against unapproved reproduction and abuse of those signs. Moral rights¹⁹ address the relationship between the makers/craftsmen/creators and their work. These rights could offer a powerful means for ensuring privileges of indigenous people in works that get from indigenous information.

- **Protection of TK through Trade Secret**

A trade secret might be a equation for a chemical compound, a procedure of manufacturing, treating or preserving materials, a pattern for a machine or other gadget, or a list of clients. It is data that gets economic value from not being for the most part known or easily ascertainable. India does not have a particular enactment to protect trade

¹⁹ Moral rights of author exist even after assigning the right during the term of protection. These rights allow the author to take certain action (e.g. any distortion, mutilation, modification of work) to preserve the personal link between himself/herself and the work.

secrets and confidential data. Trade Secrets are secured in India either through contract law or through the equitable doctrine of breach of confidentiality.

Trade Secret protection might be applied to the procedures, techniques and ceremonies practiced by customary healers. The relevance of trade secret protection to TM is very much fact dependent. In situations where conventional method or learning is known among just a small circle of customary healers, and is passed down from generation to generation within a family, the information may not be by and large known and may, in this manner, be protectable as a trade secret. For instance, just a couple of conventional families in Aranmula - a country region in Pathanamthitta District of the State of Kerala in India, know the produce of special sort of metal mirror called "Aranmula kannadi. Knowledge related with products enlisted under the Geographical Indications of Goods (Registration and Protection) Act, 1999 can be protected adequately on the off chance that it is kept as firmly watched by the holders of TK.

- **Protection of TK through Industrial Designs**

An industrial design is one type of protected innovation where the design frame work centres around the aesthetic element of an article got from its visual appearance. The plan and state of furniture, garments, and containers, articles of wood, leather ceramics, and so forth arranged by indigenous individuals or association for the benefit of indigenous individuals in a customary manner can be protected as industrial designs. Traditional craft things like hand-woven articles like rugs, cotton bed blankets can likewise be enrolled for protection as an Industrial design. Innumerable types of traditional designs are established naturally in rich social legacy of India. E.g. hand-square prints known as "baandhnis" of Rajasthan are the distinguished traditional designs of India.

- **Protection of TK through Geographical Indications of goods**

The products fabricated in the region of a Country, or an area or locality in that territory. A given quality, reputation or other characteristics for such products is basically attributable to its Geographical Origin. Precedents of GI: Darjeeling Tea Kanchipuram Silk, Alphonso Mango, Nagpur Orange, Kolhapuri Chappal, Bikaneri Bhujia, Agra Petha, Goa Feni and so on.

TK is held together by the indigenous communities and GI is the most suited type of preservation pertaining to TK²⁰. The Geographical Indications of Goods (Regulations and protection) Act remunerates a community in a particular area. GI preservation is substantial for ten years, yet can be renewed any number of times so GI can be secured for an unbounded time. The techniques for creating goods are changing with time to give better quality to the

²⁰ **Darjeeling Tea:** Darjeeling Tea is widely and universally acknowledged to be the finest tea, because of its unique flavour. The distinctive, exclusive and rare character of Darjeeling tea is due to various natural factors and traditional methods used for the production of tea.

item²¹. The goodwill and notoriety of the products is earned over numerous years or centuries. GIs reward this notoriety of the given item and isn't restricted to a particular technique for creation of a given item yet in addition permitting development. The indigenous communities has kept up and advanced their traditional methods over hundreds of years to grant particular attributes to items. GIs offer acknowledgment to their efforts and preclude others from free-riding on that notoriety. As long as natural and social attributes of the given item in the applicable place of cultivation are kept up, the GI is protected. As the rights under GI are community rights so these can't be exchange freely starting with one proprietor then onto the next.

- **Protection of TK through Trademarks**

Through Trademark Act 1999, indigenous items even agricultural and organic items can be protected. A wide range of merchandise makes and administrations offered by producers, experts skilled workers, and brokers in native and indigenous communities, or by the entities that represent them or in which they are assembled (cooperatives, guilds, and so on.), can be recognized from same sorts of products and services given by others using trademarks and service marks²².

The trademarks are key component in the business advancement of products and enterprises both inside the nation and abroad. Through awareness programs indigenous communities can be made aware of the fact that Trademark can be utilized by them to remove monetary benefits from their TK and protect it from unfair commercial exploitation by outsiders.

Collective marks²³ can likewise be used to secure handicrafts and cultural goods. Collective marks, can be used to recognize a wide specter of merchandise and services, ranging from traditional art and fine art to food items, garments and visitor administrations.

The cultural icons, signs, and images of indigenous communities can be secured through trademark and enrollment of check gives them a significant lawful protection.

RECOMMENDATION

Approaches for the Protection of Traditional Knowledge

Traditional learning in present Intellectual Property Rights (IPR) administration can be protected through two different ways: Positive Protection and Defensive Protection.

²¹ **Aranmula Kannadi:** Aranmula - a rural area in Pathanamthitta District of the State of Kerala in India and is famous for a peculiar type of metal mirror called "Aranmula kannadi". The high quality of mirror made up of combination of tin and copper makes it different from ordinary mirror. Only a few traditional families are engaged in the production of this metal mirror.

²² Service Mark is a word, name or symbol (or a combination) which identifies the services provided by entities from that of others, similar to a trademark which identifies the maker of a product. e.g. logo of State Bank of India

²³ A collective mark can be obtained by an organization which can permit the members to use the mark. These marks serve to distinguish the geographical origin or other common characteristics of goods or services of different enterprises which use the collective mark under the control of the owner.

Distinctions between defensive and positive intellectual property protection are not watertight. So the two methodologies ought to be utilized to ensure protection of traditional knowledge in a viable way.

Positive Protection: Through this kind of protection TK holder can gain an IPR or some other alternative rights given under sui-generis framework. They can make a move against abuse of TK. This type of protection centres on the strengthening of traditional knowledge holders and takes into account genuine necessities of TK holders. This type of protection promotes Prior Informed Consent; equitable benefit sharing from the utilization of customary learning and stifle misappropriation of traditional knowledge.

PIC is the authorization taken from original holders of biological assets and related traditional information to access and commercial misuse of asset and associated learning. PIC would be supportive in combatting the issue of biological asset administration. Any organization or any person who need to utilize natural assets for business reason needs to acquire prior informed consent of all communities and all individuals from every network who have utilized and contributed in the advancement in biodiversity related knowledge prior to physically getting the asset. PIC would prompt equitable benefit sharing and prevent the abuse of TK.

Defensive Protection: This sort of framework gives shields against illegitimate licensed rights gained by outsiders over traditional information²⁴. These protections are:

- Requirement of exposure of origin of hereditary assets and related TK significant to the innovation in the patent application
- Preparing a database containing complete data about traditional learning in a logical and specialized frame and open to patent analysts. Such a database will be useful in deciding oddity of the creation being referred to.

Appropriate quality control system ought to be adopted to save the notoriety of GI goods. Cautious measures ought to be adopted for securing the monetary and social value of conventional medical learning and guarding against others acquiring insurance for subject matter in which they have no rights. Motivating forces for the protection and economical utilization of biodiversity should be adequately adaptable and assorted in order to accommodate the development and advancement of the traditional and in addition the contemporary information that is held by people and the community.

Till now there is no universal accord on the most ideal approach to protect biodiversity and related learning from the dangers it faces from customary IPRs administration. With the end

²⁴ Gujarat Grassroots Innovations Augmentation Network (GIAN) is an international non-government organization (NGO) which promotes the sustainable management and use of agricultural biodiversity based on people's control over genetic resources and local knowledge.

goal to ensure misappropriation of biological resources and the privileges of indigenous individuals, effort should be done both at national and also worldwide level.