



PROTECTION OF TRADITIONAL KNOWLEDGE AND INTELLECTUAL PROPERTY

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The true sign of intelligence is not knowledge but imagination.- Albert Einstein

Abstract

Knowledge is the fruit that creativity nourishes. Mankind by their intellectual creativity have developed Traditional Knowledge. The passing of their knowledge from generation to generation has kept it alive. Though the reign of technology has come up with solutions for all problems, Traditional Knowledge must be protected. It is necessary to develop means to protect Traditional Knowledge and interests of Traditional Knowledge holders. This Article throws light on the importance and means of protection of Traditional Knowledge.

Introduction

In this changing society, importance of knowledge has changed rapidly world over. The Knowledge which was once sensed as a source of power, now in this 21st century considered as a property. This intellect is protected for a limited period recognizing innovation and creativity of the possessor. Apart from individuals, there are indigenous communities residing in various demographic region of world possessing a vast Traditional Knowledge. These knowledge flows through generation after generation, developed and practiced based on

ancient methodology. While most of them are still unknown and most of them lacks preservation and promotion. India having a developed system to protect its Intellectual Properties, underestimated the traditional knowledge that was common in every Indian households. India has a diverse and distinct culture with unique food habits, tradition and dialect, which changes after every few kilometers you travel. These cultures include valuable knowledge conserved by the indigenous community which is asset to Indian culture. Medicinal plants, indigenous medicines, Agricultural methods, Designs, Textiles are part of the Traditional Knowledge conserved by these communities. The developing countries, mostly in Africa and Asia identified as Third world countries have emphasized on plant genetic resources from generations. Traditional Knowledge doesn't come under a single roof and can be exploited in any of the modes of Intellectual properties. It is well known fact that Traditional Knowledge can't be protected by current provisions of IPR. IPR have been developed for evolving modern commerce and traditional knowledge is very much complex to be protected under this legislation.

Traditional Knowledge has always been defined differently with a different purpose and interest. WIPO (World Intellectual Property Organization) defines it as "*Tradition based literary, artistic or scientific work; performances; Invention; Scientific discoveries; Design marks; names and symbols; undisclosed information and all*



other tradition based innovation and creation.”¹

The unique nature of Traditional Knowledge is that this knowledge is not controlled by a single entity but controlled collectively by a community. Each of them are subject to some restriction embedded itself in the religious practices of the community.

Why Traditional Knowledge should be protected?

Traditional Knowledge is striving to survive due to modern lifestyles, urbanization, environmental problems. Somehow the knowledge that is being passed through generations has lost its faith and recognition among themselves. Another factor is lack of economical support to encourage the Traditional Knowledge. As commercialization exploded, developed nations started exploiting the biodiversity of the Third World. Exploitation with mere modification of the Traditional Knowledge and claiming Intellectual Property Rights without even returning some of the benefits to the traditional people is a continuing practice. Traditional Knowledge is very much different as compared to other intellectual property as it is not produced systematically like others. Generally Traditional Knowledge are information passed collectively within the community and present IPR regime which is trade centric which may not fully respond to the cultural nature of the Traditional Knowledge. That's why it becomes important to develop a sui generis system which will not only preserve this tradition but will also promote the knowledge.

¹ Pushpa kumar Lakshmanan, Protecting Traditional Knowledge: Can Intellectual Property Rights Help? , Vol.1 issue2 (2014) pp30-41 eISSN:2373-7964,pg.3

An important aspect of Traditional Knowledge its creation is only tradition to the extent of community while it keeps on evolving everyday within the community. To protect the interest of communities particularly in least developed and developing nations, two International agreements have been ratified – **CBD (Convention on Biological Diversity) and TRIPS (Trade Related Aspects of Intellectual Property Rights)** . Many of them have agreed the idea of promoting high standards of Intellectual Property and free trade. This way the Traditional Knowledge achieves a sense of fraternity among the community and a tool for development for least and developing nations.

Traditional Knowledge and Economy

India is a hub to these biodiversity having number of unknown and unregistered Traditional Knowledge. Approximately 8% of the world's biodiversity remains in India and has potential to become a major player in the International market as quoted in an article by R.A. Mashelkar.² It should be noted that Traditional Knowledge is being used developing drugs and medicines by the pharmaceutical industries. In the year 1995 a total trade that was estimated was for US \$56 Billion and apart from labor cost, the traditional people got nothing. The royalty if estimated would have turned to millions and mere 0.001% of profits were only provided.

Some Existing Practices in India

Water harvesting practices – Many of the ancient civilization that were discovered by the archaeologist which are as old as 550AD. These old age practices are still followed

² R.A. Mashelkar, Role of IPR in Economics of Knowledge, Journal of IPR, Vol ,6, July 2001, Pg no. 272



mainly in desert areas of Rajasthan. “Johad” is a practice still being followed in parts of Rajasthan, to recharge ground water and restore it.³ “Zabo” is a method to collect running water from the mountains.⁴ The conventional method of harvesting water included collect rainwater, restore and recharge of ground water.

Bamboo drip irrigation – The use of bamboo for drip irrigation is a common practice in North eastern states. These designs differ in different parts in accordance with variance of rainfall. practice that is been followed in rain shadow area of Assam somehow will differ in high rainfall areas of Meghalaya.

Traditional Housing – The architectural and designs of houses in rural India is similar and designed by the local traditional labours. Also the design is based upon the local construction material available in that region. Rural architecture depends upon some major aspects of climate, soil, material available in that region (Timber, bamboo), culture etc. A traditional technique of using mud, clay and bricks in the rural areas to construct houses is a more cost effective way as compared to a modern urban house. Using construction materials like mud, soil and bamboo which are easily available in the backyard makes it more cost friendly and also as mud is a bad conductor of heat, temperature remains cooler than outside. These traditional methods and techniques are giving tough competition to urban housing equipped with modern amenities. Also bamboo is a common

material used in some parts of Bihar, Arunachal Pradesh, Assam, Meghalaya, Himachal Pradesh, Uttarakhand. An important aspect of such practises is also its usefulness in natural calamity, climate adaptation and low carbon emission.

Traditional Agricultural Practices – India after the independence changed its status from an agrarian economy; still agriculture supports 18% of the GDP of India. Most of the rural India survives on agriculture and variety of crops being cultivated across different parts of the country. These varieties are cultivated with different irrigation and agricultural methods which includes selection of crop variety, land selection, land preparation, soil fertility management, irrigation, harvesting, post harvesting, seed preservation etc. Also different tools are used for different purpose and size of the tools differs in all parts of the country depending on the soil, terrain and crop to be cultivated. For Example, Plough used in the rest of the India has a small handle as compared to a long handle that is used in Arunachal Pradesh by the Tangsa Naga community. Sickles used for harvesting differs in size in parts of the country.

Weather Forecasting – Evolution of science has taken a great leap in human lives, people today know sooner whether to take an umbrella or not. Meteorological Department’s prediction of climate every year makes mitigate the worst effects of extreme weather. Before these developments happened, there were many methods that

³ Aaron Vansintjan, Water Johads : A low Tech Alternative to Mega Dams in India, <https://www.notechmagazine.com/2015/06/water-johads-a-low-tech-alternative-to-mega-dams-in-india.html>

⁴ Usha Deewani, Zabo - The art of impounding water, <https://www.indiawaterportal.org/articles/zabo-art-impounding-water>



farmers used for weather prediction. For example, farmers in Himachal Pradesh believed that honey bee flying towards the northern hills was indication of no rainfall. In Rajasthan many community believed presence of butterflies in the region indicates good rainfall and better harvesting of crops. There are many such examples across different demographic regions of the country.

Traditional Knowledge in India

Turmeric Patent – Turmeric having medicinal value is well known in India. In 1995, the U.S awarded Patent on turmeric to University of Mississippi Medical Center regarding its wound healing property⁵. This Patent was objected by the Indian Council for Scientific and Industrial Research (CSIR). Though India has known the use of turmeric since ages, it was very difficult to find published information about it. However, 32 references were found in favour of India and the Patent was revoked.

Neem Patent – The Department of Agriculture, U.S.A had applied for the patent of Neem with regard to it being a method to control fungi. This Patent was objected by India since it has been regarded as a plant with medicinal value since ages in India. The European Patent Office (EPO) revoked this patent due to lack of novelty and inventive step.⁶

Basmati Patent – Patent to ‘Rice Tec’ for a strain of Basmati rice was granted by the U.S.A. In the patent application Ricetec also

mentioned that good quality basmati rice grows in Northern India and Pakistan. The Indian Government had made claims to object the patent. However, three strains development by Ricetec are allowed patent protection and they are eligible to label its strain as “Superior Basmati Rice”.

The Warli Tribe – The Warli tribe from Maharashtra, India known for their World Class Art got its IP protection recently⁷. A Geographical Indication tag was also registered which would benefit the tribe.

The Kani Tribe - In Kerala a TGBRI (Tropical Botanic Garden and Research Institute) model has been instituted under Travancore Cochin Literary, Scientific and Charitable Societies Registration Act, 1955. A patent was filed for the drug “JEEVANI” developed in Malaysia. This drug “JEEVANI” was developed by scientist at the TBGRI based on the medicinal knowledge of Kani Tribe. The custodians of the Traditional Knowledge were given proper Royalty for the Traditional Knowledge provided.

Traditional knowledge in other parts of the World

Amazon Rain Forest Plant Patent -The indigenous tribes of Amazon collected a plant named Banisteriopsis caapi to prepare a ceremonial drink called ‘Ayahavica’. It was prepared only under the guidance of traditional healers. A Patent was issued to Loren Miller by the USPTO over a variety of

⁵ Sajpriya Ballasubramanian, Traditional Knowledge and Patent issue :

<https://www.mondaq.com/india/patent/586384/traditional-knowledge-and-patent-issues-an-overview-of-turmeric-basmati-neem-cases>

⁶ Sajpriya Ballasubramanian, Traditional Knowledge and Patent issue

<https://www.mondaq.com/india/patent/586384/traditional-knowledge-and-patent-issues-an-overview-of-turmeric-basmati-neem-cases>

⁷ Latha jishnu, The Massai are protecting their intellectual property rights, what of other like India’s Warlis?

<https://www.downtoearth.org.in/blog/economy/protecting-a-a-s-brand-59857>



B.caapi. This patent was challenged by the Center for International Environment Law (CIEL) on behalf of the Coordinating Body of Indigenous organizations of the Amazon Basin (COICA). The USPTO revoked the patent but later on the inventor convinced the USPTO on April 17, 2001. The patent rights were thus restored to the innovator.⁸

The Massai Tribe - Massai tribe is identified as the warrior tribe found in the South African continent known for their rich culture. This includes their World famous Shuka (a blanket cloth), bead work and their traditional dance. Top fashion brands including Louis Vuitton, Calvin Klein and Ralph Lauren have used Massai imagery and iconography to promote their beads. The total value of these interests is estimated at more than US \$10 million a year. Issac Ole Tialolo, a Massai himself formed a Massai Intellectual property Initiative to protect the interest of the tribe. This encouraged companies to pay for the royalties which are worth hundreds of million dollars.⁹

Hoodia Cactus Controversy – The San Tribe from South Africa has tradition of using cactus for long hunting trips to starve off hunger and thirst. The South African Council and Research (CSIR) after thorough research patented P57, appetite suppressing element inside the Hoodia cactus. It was later licensed to a UK based Biotech company, phythofarm. A pharmaceutical Company Pfizer acquired the rights for developing P57 as a slimming drug and a cure for obesity for

\$32 million royalty. After knowing about this, the San Tribe threatened to sue CSIR for bio-piracy. In 2002 after mutual agreement it was agreed that any further sharing of Traditional Knowledge of Hoodia plant will attract a future share in the royalty for the San Tribe.¹⁰

Indian Legal Regime

In India there is no such legislation that addresses the Traditional Knowledge but Intellectual property laws have some provisions in relevance to Traditional knowledge.

- **Patent Act 1970:** After the amendment Act 2002, applicant must show its source and geographical origin of any biological material being developed. Similarly Section 25 of the Act Provides opposition on the ground of non disclosure of the geographical origin of the biological material quoted in the complete specification. Also it prohibits granting of patents U/S 3(p) of the Act which says “invention from a Traditional knowledge or duplication of known properties of Traditional Knowledge can’t be patented”.¹¹
- **Designs ACT, 2000 :** Designs Act prohibits registration of any design which is not new or having a prior publication in any part of India or any other country in tangible form or by use or in any other way.¹²
- **Trademarks Act, 1999:** Trademarks which usually consist of marks / indication which designate its kinds, quality, purpose, values, geographical origin and time of production of

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<http://www.legalservicesindia.com/article/400/Traditional-Medicine-and-Intellectual-Property-Rights-An-Indian-Perspective.html>

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<https://www.downtoearth.org.in/blog/economy/protecting-a-tribe-s-brand-59857>

¹⁰ V.J.Maharaj, Hoodia – A case study at CSIR, http://researchspace.csir.co.za/dspace/bitstream/handle/10204/2539/Maharaj_2008.pdf;sequence=1

¹¹ The Patent Act, 1970

¹² Design Act, 2000



goods can't be registered. Marks or indication which becomes customary in current language or established practices of the trade shall not be registered.

- Also under **Copyright Act, 1957** having a prior publication in a public domain can't be registered for copyright protection.¹³
- **Geographical Indication of Goods Act, 1999** is the most relevant legislation for protection of Traditional Knowledge, which aims for registration and better protection of geographical indication of goods. The main object of the law is to prevent the unauthorized access to these Geographical Indications from exploitation. Goods originating from a particular area/territory are due to the Traditional Knowledge, this legislation enables community to register GI in respect of an area/ territory across India.¹⁴
- **Biological Diversity Act, 2002:** This legislation was provided for conservation of Biological diversity and its components and prohibits any Intellectual Property Rights without prior approval of the National Biodiversity Authority which based on biological research from India. This Act is more defensive in nature and has precautionary measures to prevent misuse of Traditional Knowledge.¹⁵
- **Protection of Plant Variety and Farmers Right Act, 2001:** It is one of the rare legislations specifically devoted to plants and farmers. This Act ensures using, sharing and selling of goods produced by the farmers protected under the Act and also ensuring sharing of benefits arising out of plant genetics resources, that may be from sale of seeds and planting material of a protected variety. The community will also be

compensated if the traditional or local variety is being used for research purpose.

International Legal Instruments

Inventions that are well protected under Intellectual Property Rights do not fully protect the intellectual creativity by the indigenous community. A sui generis legal instrument is needed for the recognition of rights and claims of these communities.

Food and Agriculture Organisation (FAO):

The Food and Agriculture organisation has contributed well for the protection of Traditional Knowledge. It works for the protection of Traditional Knowledge in the forest department and it also includes program on non-wood forest products and communities. The International Seed Treaty adopted by the FAO on November 30, 2001 in its 31st Session held in Rome was the biggest achievement. This treaty is also known as 'International treaty on plants genetic Resources for food and agriculture' (ITPGR). It is an attempt to protect the rights of farmers, local communities and traditional knowledge relating to plant genetic resources.

Convention on Biodiversity (CBD):

The CBD concluded on June 5, 1992 recognizes the significance of traditional use of genetic resources in the sustainable preservation of biological diversity. It incorporates provisions which provide for the encouragement, development of exchange and use of indigenous and traditional knowledge and technology in the spirit of CBD¹⁶.

¹³ The Copyright Act, 1957

¹⁴ Geographical Indication of Goods Act, 1999

¹⁵ Biological Diversity Act, 2002

¹⁶ G.Chin Khan Muan "TK and CBD".

<http://www.aippfoundation.org/R+ID/TK%20&%20cbd.pdf>



United Nations Conference on Trade and Development (UNCTAD):

The UNCTAD has raised the problem of protection of Traditional Knowledge from the trade and development perspective. It focuses on the protection of Traditional Knowledge by exchanging national experience on policies. It has recognised the importance of Traditional Knowledge in promoting sustainable development of national and international economics.

World Health Organisation (WHO):

The World Health Organisation (WHO) established on April 7, 1948 has made efforts to protect Traditional Knowledge in relation to Traditional Knowledge in relation to Traditional Medicine. The WHO objective as set out in its Constitution is the attainment by all people of the highest level of health, as the economic and trade value of Traditional Knowledge, particularly the knowledge of traditional medicine and medicinal plants, in becoming increasingly recognised, more and more WHO members states have become concerned with the need to protect and to secure the fair and equitable sharing of benefit derived from its utilization¹⁷.

Efforts of WIPO to protect Traditional Knowledge:

The World Intellectual Property Organization (WIPO) has been in a process to develop enough legal protection for Traditional Knowledge. Still WIPO has failed to provide a proper definition for Traditional Knowledge, due to the complex nature of Traditional Knowledge. In Its 26th

and 27th session for WIPO Intergovernmental Committee has come up with three drafts:

- Consolidated Document for Intellectual Property and Genetic Resources
- Draft Articles for the Protection of Traditional Knowledge
- Draft Articles for Protection of Tradition Cultural Expression

WIPO Draft Articles on the Protection of Traditional Knowledge:

- Article 1 recognizes the subject matter of Traditional Knowledge which can be codified, oral or other forms.
- Article 2 identifies the beneficiaries of Traditional Knowledge

Power given to communities to authorize/deny access to Traditional Knowledge.

- Prior consent should be taken from the Traditional Knowledge holders before sharing Traditional Knowledge.
- Cultural and Moral rights should be respected even after sharing of Traditional Knowledge. While Traditional Knowledge is in public domain, should be protected under the national law to enforce protection to Traditional Knowledge. The WIPO draft articles to combine both positive and defensive protection which means it stops people from acquiring Traditional Knowledge outside community and granting their rights to promote and empower Traditional Knowledge.¹⁸

Acknowledging of Traditional Knowledge

Traditional Knowledge must be protected and acknowledged. For example, it is being used for research and discovery of new Pharmaceutical products but the consent of the Traditional Knowledge holders is not

¹⁷ World Trade Organisation (WTO), Kent Nnadozie, 'African Perspective on Genetic Resources: A Handbook on Law and Politics'

¹⁸ Pushpa kumar Lakshmanan, Protecting Traditional Knowledge: Can Intellectual Property Rights Help? , Vol.1 issue2 (2014) pp30-41 eISSN:2373-7964, pg no, 12- 16



taken. The end product of such research work is patented but any kind of recognition is not provided to the Traditional Knowledge holders.

The Legal World is providing effective protection to inventions in the form of Patent, Copyright, Trademark etc but it is not the case with Traditional Knowledge. However, certain International bodies such as FAO, IUCN, UNEP, CBD and WIPO have made some level of contribution in protecting Traditional Knowledge.

Suggestions

The current legislation lacks protection to our Traditional Knowledge and needs a universal legislation that addresses all problems related to Traditional Knowledge. A database to record all Traditional Knowledge under one platform, to ascertain no prior publication in case of any Intellectual Property Rights being granted. A portal for promotion and development of Traditional Knowledge and financial assistance for encouraging such knowledge should exist. Apart from Government, it is the duty of the communities, NGOs to protect Traditional Knowledge and ensure proper documentation to promote them in International platform.

Conclusion

Human civilization has developed some of the advance traditional methods, refined and generated from generation to generation. Such methods exist as an identity to these civilizations. Knowledge has proved to be there identity. Starting from food, health to textiles they have their own rich culture and heritage. Though IPR related legislation does prohibits exploitation to some extent but laws are still not effective to deal with all aspects of Traditional Knowledge.