Protection of Traditional Knowledge under Indian Patent Law: Some Issues

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Abstract

Traditional knowledge (TK) is the knowledge that an indigenous community accumulates over generations of living. Traditional knowledge includes mental inventories of local biological resources, animal breeds, and local plant, crop and tree species. Traditional knowledge is the information that people in a given community, based on experience and adaptation to a local culture and environment, have developed over time, and continues to develop. This knowledge is used to sustain the community and its culture and to maintain the genetic resources necessary for the continued survival of the community. A part of this knowledge is recorded in local languages and a major portion is still not recorded and remains confined to local communities. In the light of the prevalent loss and threatened future of TK, it is important to preserve it in a contemporary format that would be familiar to the future generation. Preservation also empowers the community/country to protect its knowledge from misuse and utilize it for better development. Presently there is no comprehensive existing legislative framework to preserve traditional knowledge and to protect rights of its holder from being infringed. In the light of the above the present paper highlights on existing patent regime for preserving and safeguarding Traditional Knowledge holder's rights.

Key words: *Copyright, Geographical Indication, Patent, Traditional Knowledge*.

Introduction

Human communities have always generated, refined and passed on knowledge from generation to generation. Such "traditional" knowledge" is often an important part of their cultural identities. Traditional knowledge has played, and still plays, a vital role in the daily lives of the vast majority of people. Traditional knowledge is essential to the food security and health of millions of people in the developing world. In many countries, traditional medicines provide the only affordable treatment available to poor people. In developing countries, up to 80% of the population depends on traditional medicines to help meet their

healthcare needs. In addition; knowledge of the healing properties of plants has been the source of many modern medicines.

Traditional knowledge is at the risk of becoming extinct because of the rapidly changing natural environments, fast-paced urbanization, invasion of technology, lack of awareness and language barriers.[1] Only recently, however, has the international community sought to recognize and protect traditional knowledge. In 1981, WIPO and UNESCO adopted a model law on folklore. In 1989 the concept of Farmers' Rights was introduced by the FAO into its International Undertaking on Plant Genetic Resources and in 1992 the Convention on Biological Diversity (CBD) highlighted the need to promote and preserve traditional knowledge.[2]

Solutions to the protection of traditional knowledge in IPR law may be sought in terms of 'positive protection' and 'defensive protection'. Positive protection refers to the acquisition by the TK holders themselves of an IPR such as a patent or an alternative right provided in a sui generis system. Defensive protection refers to provisions adopted in the law or by the regulatory authorities to prevent IPR claims to knowledge, a cultural expression or a product being granted to unauthorized persons or organizations. Positive protection measures may also serve to provide defensive protection and vice versa.[3]

Traditional knowledge: Setting out the Concept

Traditional knowledge includes mental inventories of local biological resources, animal breeds, and local plant, crop and tree species. It may include such information as trees and plants that grow well together, and indicator plants, such as plants that show the soil salinity or that are known to flower at the beginning of the rains. It includes practices and technologies, such as seed treatment and storage methods and tools used for planting and harvesting. TK also encompasses belief systems that play a fundamental role in a people's livelihood, maintaining their health, and protecting and replenishing the environment. TK is dynamic in nature and may include experimentation in the integration of new plant or tree species into existing farming systems or a traditional healer's tests of new plant medicines.

[1] R. Lakshmi Poorna, et.al. "Preservation and Protection of Traditional Knowledge – Diverse Documentation Initiatives across the Globe" *CURRENT SCIENCE*, VOL. 107, NO. 1240 8, 25 OCTOBER 2014.

[2]Article 8j of CDB provides that " Members should respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices".

[3] See http://www.ictsd.org/iprsonline

The term "traditional" used in describing this knowledge does not imply that this knowledge is old or un-technical in nature, but "tradition based." It is "traditional" because it is created in a manner that reflects the traditions of the communities, therefore not relating to the nature of the knowledge itself, but to the way in which that knowledge is created, preserved and disseminated.[4]

Traditional knowledge (TK) is a term generally applied for any knowledge generated outside the context of modern western knowledge and covers a large amount of distinct subcategories, which in extreme cases might have little or nothing in common.[5]

Traditional knowledge is collective in nature and is often considered the property of the entire community, and not belonging to any single individual within the community. It is transmitted through specific cultural and traditional information exchange mechanisms, for example, maintained and transmitted orally through elders or specialists (breeders, healers, etc.) and often to only a select few people within a community.[6]

Anthropologist Johnson defines traditional knowledge as a body of knowledge built by a group of people living in close contact with nature. It includes a system of classification, a set of empirical observations about the local environment and a system of self-management that governs resource use.[7]

More than ten years following its establishment, the WIPO IGC struggles to reach a clear definition of traditional knowledge. The definition is complicated because indigenous peoples, communities and nations may be holders of traditional knowledge, but not all traditional knowledge holders are necessarily indigenous.[8] Further, since traditional knowledge holders are incredibly diverse, it has been suggested that it may not be possible to have a single definition of the term.[9] Thus, despite the attempt to define traditional knowledge in relation to indigenous peoples, the category of persons included as traditional

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[4] "Elements of a *Sui Generis* System for the Protection of Traditional Knowledge", World Intellectual Property Organization, Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, 3rd Sess., 2002, WIPO/GRTKF/IC/3/8.

[5] Correa, C. M., A discussion paper on traditional knowledge and intellectual property: issues and options surrounding the protection of traditional knowledge. *QUNO*, Geneva, 2001.

[6] Stephen A. Hansen *et.al.* "Traditional Knowledge and Intellectual Property" A Handbook on Issues and Options for Traditional Knowledge Holders in Protecting their Intellectual Property and Maintaining Biological Diversity, *American Association for the Advancement of Science, 2003.* http://shr.aaas.org/tek/handbook

[7] Walter H. Lewis & Veena Ramani, Ethics and Practice in Ethnobiology: Analysis of the International Cooperative Biodiversity Group Project in Peru

[8] WIPO, Intellectual Property Needs and expectations of Traditional Knowledge Holders: WIPO Report on Fact-Finding Missions on Intellectual Property and Traditional Knowledge (1998–1999), 26 (2001), *available at* http://www.wipo.int/tk/en/tk/ffm/report/index/html.

[9] Graham Dutfield, *TRIPS-Related Aspects of Traditional Knowledge*, 33 CASE W. RES. J. INT'L L. 233, 240 (Spring 2001).

knowledge holders is potentially broader than indigenous peoples and nations. Moreover, traditional knowledge may be difficult to distinguish from other types of knowledge.[10]

The WIPO Secretariat chose a working definition that reflected the general approach used in other international fora.[11] Traditional knowledge is loosely defined by WIPO as including: "tradition-based literary, artistic or scientific works; performances; inventions; scientific discoveries; designs; marks, names and symbols; undisclosed information; and all other tradition-based innovations and creations resulting from intellectual activity in the industrial, scientific, literary, or artistic fields."[12]

Thus, traditional knowledge, broadly speaking, includes cultural works as well as intergenerational knowledge about the properties of certain plants, such as the appetite suppressing qualities of the *Hoodia Cactus*. Broadly speaking, traditional knowledge can be described as the result of intellectual activity, which is handed down through the generations, and which pertains to particular cultural groups.[13]

Protection of Traditional Knowledge & Existing Indian Patent Law

Some traditional knowledge can be protected as intellectual property, while some cannot. The international dialogue relates to the types of traditional knowledge that are not subject to any internationally recognized legal right.

Devolution, encroachment, the bio prospecting rush, lack of appropriate legal systems and a clash of systems all make traditional knowledge highly vulnerable to Biopiracy. Several traditional plants and related knowledge in Asia, specifically India, have also been allegedly falsely patented by the US patent office, including: Neem', Haldli', pepper, Harar', Mustard, Basmati rice, Ginger, Castor, Jaramla', Karela and Jamun'. The African continent has too

[10] WIPO IGC, Matters Concerning Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore 63–70, WIPO Doc. GRTKF/IC/1/3 (2001); *see* Graham Dutfield, *TRIPS-Related Aspects of Traditional Knowledge*, 33 CASE W. RES. J. INT'L L. 233, 241–42 (Spring 2001).

[11] J. Janewa OseiTutu, *Emerging Scholars Series: A Sui Generis Regime for Traditional Knowledge: The Cultural Divide in Intellectual Property Law*, 15 Intellectual Property L. Rev. 147 (2011). *Available at:* http://scholarship.law.marquette.edu/iplr/vol15/iss1/3

[12] WIPO IGC, Traditional Knowledge Operational Terms and Definitions 11, WIPO Doc. WIPO/GRTKF/IC/13/9 (2002). For the purpose of its 2008 Gap Analysis, WIPO described TK as "referring in general to the content or substance of knowledge resulting from intellectual activity in a traditional context, and includes the knowhow, skills, innovations, practices and learning that form part of traditional knowledge systems, and knowledge embodying traditional lifestyles of indigenous and local communities, or contained in codified knowledge systems passed between generations. It is not limited to any specific technical field, and may include agricultural, environmental and medicinal knowledge, and knowledge associated with genetic resources. This general description of TK is based on the work of the Committee itself." *See* WIPO IGC, The Protection of Traditional Knowledge: Draft Gap Analysis: Revision 4, WIPO Doc. WIPO/GRTKF/IC/13/5/(b) Rev. (2008); WIPO IGC, Matters Concerning Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore 11, WIPO Doc.WIPO/GRTKF/IC/1/3 (2001).

[13] *Supra Note* 11

been plagued by biopiracy —with the case of West Africa‘s sweet genes and one of the most recent cases involving —Hoodia still unresolved. Some cases have been resolved but clearly demonstrate the problems with the intellectual property system.[14]

Most countries use IPR as a legal mechanism to allocate rights over knowledge, which has a significant role in the relationship between indigenous and local communities, their knowledge, and other societies with which they interact.[15] There are many approaches in IPR regime to protect TK of indigenous communities. These approaches include copyright, trademarks, industrial designs, trade names, geographical indications and patents.

The law of patent in India prescribes three essential conditions i.e. novelty, non-obviousness and usefulness for patentability of an invention. The Patent law of India has been criticized as it is considered to have helped in the misappropriation of traditional knowledge of India. The essential requirements for getting an invention patented under Indian Law are being used for piracy of traditional knowledge.[16] The term “Patent” refers to a right granted to anyone who invents or discovers any new and useful process, machine, article of manufacture or composition of matter, or any new and useful improvement thereof. Patent is an exclusive right given to an inventor to exclude all others from making, using, and/or selling, offering for sale or importing the patented invention for term of patent.[17] The patent holder has an exclusive right to restrict others from making, using, selling, or distributing the patented invention without permission. Generally the term of protection offered by the Indian Patent Act, for a patented invention is 20 years from the date of filing of an application.[18]

The idea “patent” acquired statutory meaning when the Indian parliament enacted a law[19]. India being founder member of World Trade Organization (WTO) incurred trade obligations to bring its intellectual property rights regime in tune with obligations as envisaged in TRIPs and introduced first amendment to the Patents Act, 1970 through Patents (Amendment) Act, 1995 which came into force in April 1999. The second major amendment in the Act of 1970 was made in the year 2002. To make the patent law to fully comply with TRIPs substantive changes in the Patent Act were introduced in 2005.

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[14] Vishwas Kumar Chouhan (Dr), “Protection of Traditional Knowledge in India by Patent: Legal Aspect”, *IOSR Journal of Humanities and Social Science (JHSS) Volume 3, Issue 1 (Sep-Oct. 2012),p.37* www.iosrjournals.org

[15] David Downes, “Using Intellectual property as a Tool to Protect TK: Recommendations for Next Step” Center for International Environment Law (21 November 1997)

[16]Manisha Narula, “Impact of Indian Patent Law on Traditional Knowledge”, *International Journal of Advanced Research in Management and Social Sciences* ISSN: 2278-6236 Vol. 3, No. 6, (June 2014) www.garph.co.uk

[17] *Ibid*

[18] Divya Bhargava, “Patent Act: Biopiracy of Traditional Indian Products – An Overview” Countercurrents (14 May 2009)

[19] The Patents Act, 1970.

Sharing and exchange of knowledge by indigenous people get converted to “piracy” when individuals, organizations or corporations who freely receive biodiversity from indigenous communities and knowledge convert the freely received gifts into private property through patent claims. Indians too have the attitude of sharing the knowledge to others without protecting it. The knowledge and use of 'biodiversity' resides with the farmers and indigenous people, who have shared their knowledge and plants freely. Yet through patent applications, the companies are claiming the exclusive right to produce and sell many 'modified' plants and animals. Whilst the corporations stand to make huge revenues from this process, the local communities are unrewarded and in fact the threat in future of having to buy the products of these companies at high prices. Indigenous communities are concerned that in future they will have to pay high prices for these materials, which in the first place they (more than any other party) had after all developed[20].

To be patentable an invention must meet the criteria of novelty, utility, involve an inventive step and be non-obvious and have industrial applicability. Such criteria with respect to TK raise some problematic issues. Since TK is not a contemporary form of knowledge and has been used and passed down the generations, it cannot fulfill the novelty and/or inventive step requirements of patent protection. Importantly, although it is widely accepted that traditional medicines are useful in healing many ailments, they often do not meet the requirements of novelty and non-obviousness point out that determining non-obviousness with respect to TK would be problematic as it would be difficult to pinpoint the relevant prior art. Patent applicants through documentary evidence must show that their innovation is the result of a single act of discovery. Indigenous communities cannot protect information relating to TK or protection of biodiversity if it is not the result of specific historic act of “discovery”. Hold that although it can be presumed that prior art would be knowledge held by the indigenous people before the invention was made, it would be difficult due to the trans-generational nature of such knowledge to ascertain when exactly the indigenous people had acquired or developed the relevant knowledge.[21]

Another issue of importance in this respect is whether prior art, as a proof of nonobviousness, should include only the knowledge of the potential indigenous patent applicant or also the knowledge held by other indigenous groups that have been neighbours of or have been in contact with the applicant. *The fact that other indigenous peoples do not*

[20] *See* Manisha Narula *Supra Note* 16 p.50

[21] Shamama Afreen, “Biopiracy and Protection of Traditional Knowledge: Intellectual Property Rights and Beyond” Indian Institute of Management Calcutta Working Paper Series WPS No. 629/ September 2008 p.13

use a plant in a particular way known to one group, although the others also have access to the same plant and use it in other ways common to many groups, might be evidence of the inventiveness of one group's particular, unique use.[22]

Traditional knowledge is held and generated collectively while patent law attributes inventiveness to a person's (natural or legal) accomplishment. In other words, patents require an inventor to have legal entity – a criteria that does not apply to indigenous peoples that hold and develop knowledge communally. Moreover, since TK generally is shared among all the members of an indigenous society, it has been in the public domain and cannot be considered prior art. As such, any invention based on such knowledge would be obvious to anyone skilled in that art, making such knowledge unprotectable through patents. Patents can however, protect some elements of traditional medicine as illustrated by patents that have been granted on natural components and on combinations of plants used for therapeutic purposes.

An important aspect of patents that has long disturbed indigenous peoples is that this form of protection motivates commercialization and distribution. Indigenous communities may however, be largely concerned with prohibiting commercialization and restricting use and distribution.[23]

According to the 1994 COICA Statement: *For members of Indigenous peoples, knowledge and determination of the use of resources are collective and inter-generational. No Indigenous population, whether of individuals or communities, nor the government, can sell or transfer ownership of resources which are the property of the people and which each generation has an obligation to safeguard for the next*[24].

Patents recognize only market economic values and ignore spiritual, aesthetic, or cultural – or even local economic - values. Indigenous peoples may value such information as they are linked to their cultural identity and symbolic unity.

The concern of indigenous people is that present patent regime favours multinationals and other non-indigenous interests. The existing patent regime is seen to help corporate interests and entrepreneurs who lay claim to indigenous knowledge without appropriate acknowledgement or compensation for communities who have developed that knowledge. The patent system gives the entire economic benefit to those who have only slightly altered the traditional knowledge and gives nothing at all to those who developed it over generations

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[22] *ibid*
[23] *See*, Shamama Afreen, *supra note*,21 p.15
[24] *ibid*

to its present form.[25] Patent protection to the corporations transforms farmers into suppliers of free raw material, displaces them as competitors, and makes them totally dependent on industrial supplies for vital inputs.[26]

Amendments in Indian Patent Law as a Compliance to TRIPS Concern Over Traditional Knowledge

In India, the legal regime for traditional knowledge protection is still largely in the process of being developed. The extension of the recognition of rights to traditional knowledge is still new. The Government of India has made efforts at different levels to protect the traditional knowledge of its indigenous people.[27]

To fulfill TRIPS obligation the Indian Patent Act was amended in the year 1999, 2002 and 2005 respectively. Primacy has been given to provide therein adequate and necessary safeguards for protection of public interest, national security, bio-diversity, traditional knowledge etc.' new definition of the term "invention" and "inventive step" has been introduced. [28] The Patent (Amendment) Act defines the term "invention"[29] as "a new product or process involving an inventive step and capable of industrial application". "Inventive step" means "a feature that makes the invention not obvious to person skilled in the art".

India reintroduced pharmaceutical patenting in order to comply with its obligations as a WTO member in 2005. While Section 2(1) (j) retains the old definition of "invention", a new definition for "new invention" has been added. "New invention" is defined as any invention or technology which has not been anticipated by the publication in any document or used in the country or elsewhere in the world before the date of filing of patent application with complete specification.[30] The amended patent law contains provisions for mandatory disclosure of source and geographical origin of the biological material used in the invention while applying for patents in India. The amended Act provides that an invention which in effect is traditional knowledge or duplication of known properties of traditionally known components is not an invention within this Act[31]. Provisions have also been incorporated to

[25] Manisha Narula, "Impact of Indian Patent Law on Traditional Knowledge", *International Journal of Advanced Research in Management and Social Sciences* ISSN: 2278-6236 Vol. 3, No. 6, (June 2014) p.53
[26] Vandana Shiva, *The Plunder of Nature and Knowledge Bio Piracy*, (2012), p. 54
[27] Philippe Cullet, *IP Protection and Sustainable Development*, (2005), p. 309
[28] The Patent Act, 2002.
[29] Section 2(1) (j)
[30]Section 2 (1) of Patents Act, 1970
[31] Section 3

include non-disclosure or wrongful disclosure of the same as grounds for opposition and for revocation of the patents, if granted.[32]

Conclusion

The patent law of our country is not so equipped to provide a sacred abode to the precious rights of the traditional knowledge holders. The concern of indigenous communities regarding unfair exploitation of their bioresources and traditional knowledge with disregard to their customary laws and practices has been gaining ground and there is growing recognition of the need to respect and protect their rights over such resources. The great diversity in cultures, lifestyles, laws and practices of indigenous peoples the world over makes it impossible to design a one-sizefits- all protective regime. As experiences of different countries have shown, there is no one protection system that is universally applicable; rather each country has to come up with its own options that can only be guided by international frameworks. In spite of these efforts which have spanned two decades, final and universally acceptable solutions for the protection and promotion of traditional knowledge have not yet emerged.

The government should take immediate measures to protect traditional knowledge possessed by the tribal people. While the government has gone to great length to protect the patents rights of foreign companies in the food, agribusiness and pharmaceutical sector, it has done little to protect the patents rights of local farmers. Strong law (*sui generis*) for protection of rights of indigenous people and its strict implementation is the need of the hour; else these indigenous communities will soon loose what have belonged to them since time immemorial.

[32] K. Venkataraman. & Swarna S. Latha, "Intellectual Property Rights, Traditional Knowledge and Biodiversity of India", *Journal of Intellectual Property Rights*, Vol 13, (July 2008), p. 326-335