



IMPACT OF INDIAN PATENT LAW ON TRADITIONAL KNOWLEDGE

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Abstract: *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. The present paper is an attempt to analyse the essentials of patent law and why traditional knowledge could not be patented and also what efforts are being made to protect and preserve the traditional knowledge of India.*

Key words: *Traditional Knowledge, Invention, Novelty, Obviousness, Utility, Prior Art*

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INTRODUCTION

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 patent¹. Patent seeks to reward the inventor for the information embodied in his/her invention, not for the physical product itself². Every invention is not worthy of grant of patent. In order to obtain patent, an invention has to pass through triple requirement of newness (novelty), non obviousness and usefulness. The element of novelty in an invention is dependent upon the state of prior art i.e. the existing knowledge and similar inventions already known in the particular field. There would be no novelty if there has been prior publication and prior use of same or an identical invention³. Patent rights are not available for new advances that are merely obvious extensions or modifications of prior designs⁴. The requirement of usefulness of an invention means that the invention must be useful for the purposes indicated by the inventor or patentee. However, it need not mean commercial utility alone⁵.

The term “patent” acquired statutory meaning in India when Patents Act, 1970 was enacted. India being founder member of World Trade Organisation (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 effective from 1st January 2005.

TRADITIONAL KNOWLEDGE

Knowledge available through centuries to communities regarding all aspects of life is called traditional knowledge. Traditional knowledge reflects the aesthetics, beliefs, history, ethics

¹K.S., Bhatti, “Intellectual Property Rights Law Evolution and Development”, in Singh Sahai Shiv (ed.) Law of IPR(Introductory) (2004) , p. 15

²M.K., Bhandari, *Law Relating to Intellectual Property Rights*, (2006), p.95

³Elizabeth, Verkey, *Law of Patents*, (2005), p 26

⁴M.K., Bhandari, *Law Relating to Intellectual Property Rights.*, (2006), p.95

⁵V.K., Ahuja, *Law relating to Intellectual Property Rights*, (2004), p.392



and traditions of a particular group of people⁶. Traditional knowledge is not created or produced systematically. It evolves over a period of time by contributions of members of a particular society⁷. The definition of traditional knowledge used by the WIPO includes indigenous knowledge relating to categories such as agricultural knowledge, medicinal knowledge, biodiversity related knowledge and expressions of folklore in the form of music, dance, song, handicraft, designs, stories and art work, 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 fields⁸.

Traditional knowledge is generally passed down by word of mouth from generation to generation and most of the part is undocumented⁹. Traditional knowledge systems and rules of ownership confer on community members who possess knowledge a kind of intellectual property right¹⁰. Indigenous and local communities often do not have strong traditions of ownership over knowledge that resembles modern forms of private ownership. Many have clear traditions of custodian ship over knowledge¹¹.

TRADITIONAL KNOWLEDGE OF INDIA

India is having 8% of bio diversifiable and traditional knowledge resources of the world. In international market share of the medicinal plant related trade is at US \$ 60 billion per year and which is rapidly growing at the rate of 7% annually¹². In India there are 53 million tribal people and they belong to 550 tribal communities and each tribal community possesses one or other sort of traditional knowledge¹³. Biodiversity of India amounts to approximately 12.53% of the global biodiversity. The immense biotic wealth of India has approximately 7000 species reportedly used for the medicinal purposes mostly for the extraction of rare

⁶V.K., Gupta, "Intellectual Property Rights in Agriculture" in Satarkar S.P. (ed.) Intellectual Property Rights and Copyrights, (2003), p.166

⁷Shahid Ali Khan and R. A. Mashelkar (eds.) "Intellectual Property and Competitive Strategies in the 21st Century" (2006), p. 77

⁸ Speech of Justice Vijendra Jain in a seminar of Asia Pacific Jurist Association (APJA) on "Safeguarding the Traditional Knowledge in India" on 28.04.2008 in Delhi retrieved from http://www.highcourtchd.gov.in/right_menu/events/apjspeech.pdf visited on June 10, 2011

⁹Retrieved from <http://www.unesco.org/new/en/indigenous-peoples/> visited on October 02, 2012

¹⁰Rajat Rana, "Indigenous Culture and Intellectual Property Rights", *Journal of Intellectual Property Rights*, Vol 11 (March 2006), pp. 132-139

¹¹Retrieved from http://en.wikipedia.org/wiki/Traditional_knowledge last visited on November 20th 2013

¹²J.P. Mishra, *Introduction To Intellectual Property Rights*, (2009), p 124-125

¹³Jetling Yellosa, "Traditional Knowledge –An Overview", *Andhra Law Times*, Vol 2,(2002), pp. 14-17



drugs¹⁴. India is also acknowledged centre for rich crop diversity and is considered to be place for 167 important cultivated plant species and 320 wild species¹⁵. Forests cover 23.68 per cent of India's total geographical area¹⁶ and provide optimum conditions for survival and conservation of the genetic and species diversity.

MISAPPROPRIATION OF TRADITIONAL KNOWLEDGE

Western societies, in general, have not recognized any significant value of traditional knowledge. These societies looked at traditional knowledge as information in the 'public domain', which was freely available for use by anybody. The concept of any compensation to the creators and possessors of traditional knowledge also did not exist. It is only recently that western science has become more interested in traditional knowledge. They are beginning to see that traditional knowledge, in combination with modern scientific knowledge, can lead to the solution of current problems in diverse areas-ranging from agriculture to health¹⁷. Given the considerable commercial value of traditional knowledge and its scientific importance as a rich prior art which remains unprotected, traditional knowledge is extremely vulnerable to misappropriation¹⁸.

The sharing and exchange of biodiversity and knowledge of its properties and use has been the norm in all indigenous societies, and it continues to be the norm in most communities including the modern scientific community. The problem arises when individuals or corporations from an advanced capitalist society have contact with a primitive indigenous community¹⁹. The rights of indigenous are informal and unwritten, which makes it easy for outsiders to ignore, violate, and steal them²⁰. There are an increasing number of businesses that derive large profits from the production and sale of goods obtained from traditional

¹⁴ Retrieved from <http://www.tkdil.res.in/tkdil/langdefault/common/Biopiracy.asp> visited on October 10, 2012

¹⁵ Annual Report of National Biodiversity Authority, 2007-2008, p. 7

¹⁶ State of Forests Report, India, 2003

¹⁷ Shahid Ali Khan and R.A. Mashelkar(eds.), "Intellectual Property and Competitive Strategies in the 21st Century", (2006), pp. 33-54

¹⁸ Retrieved from http://dipp.nic.in/English/Country_Position_Paper/discussionPaper_TK_25Apr2011.pdf, *Traditional Knowledge and the Negotiations in the World Intellectual Property Organization* visited on January 10th 2013

¹⁹ Krishan Gopal, "Intellectuals and Intellectual Property", in Gopal Krishan and Sharma Sarabjit (eds.) *Proprietary Knowledge*, (2006), pp.1-26

²⁰ Jayanta Perera, "International Law and Indigenous Peoples' Rights: Land and Cultural Survival: the communal land rights of indigenous people in Asia" retrieved from http://www.ccc-cambodia.org/downloads/adi/adireport/ADB_ADI_land-cultural-survival.pdf visited on February 12, 2012



knowledge²¹. Indigenous communities have argued that public claims on their knowledge without their consent amounts to misappropriation of their identity and heritage, a violation of their fundamental, inalienable and collective human rights²². The multinational companies are making money by fully utilizing their knowledge without sharing the profit to them²³. Indigenous people's culture and customary laws is the product of their interaction with their land and forests. Yet, at an alarming rate, they have been losing their land and livelihood to industries which wantonly destabilize their habitats. As a result, they have been rendered landless, homeless, foodless, jobless and sadly enough, cultureless²⁴.

LAW OF PATENTS AND TRADITIONAL KNOWLEDGE

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 claims²⁵. Indians too have the attitude of sharing the knowledge to others without protecting it²⁶. 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 developed²⁷.

Over the past few years, the patent system has come under considerable criticism for its failure to prevent the misappropriation of traditional knowledge. A number of concerns have recently been raised regarding the protection of traditional knowledge using the

²¹"Cultural Heritage and Intellectual Property Rights" Paper Presented by Hon'ble Mr. Justice Mukul Mudgal, Judge High Court of Delhi and Member of NALSA in the conference of International Law Association held at Toronto, Canada in June 2006, Published in *Nyaydeep, Journal of NALSAR*, p. 38

²²Retrieved from http://en.wikipedia.org/wiki/Traditional_knowledge last visited on November 20, 2013

²³C.B. Raju, "Intellectual Property Rights and Traditional knowledge" in Sreenivasulu N. (ed.) *Intellectual Property Rights*, (2007), pp. 266-273

²⁴Melvil Pereira, "Indigenous People and Human Right Mechanism", *Social Action: Vol 60* (October December 2010), p. 339-353

²⁵Vandana Shiva, *The Plunder of Nature and Knowledge Bio piracy*, (2012), pp. 65-87

²⁶G.K. Tulasi & B.S. Rao, "A Detailed Study of Patent System For Protection of Inventions", *Indian Journal Pharma Science* Vol. 70, (2008) pp. 547-554

²⁷Rajshree Chandra, *Knowledge as Property :Issues in Moral Grounding of Intellectual Property Rights*, (2010), pp.280



patent rights regime²⁸. The missing legal protection for traditional knowledge has created problems for traditional knowledge holders and for the countries where traditional knowledge is found. Difficulty experienced by indigenous people in trying to protect their traditional knowledge under patents law stems mainly from its failure to satisfy the requirements for protection under existing patent law. There are several characteristics of traditional knowledge that create barriers to protection through the use of exiting forms of patents²⁹.

A necessary criterion that patentable invention must meet is that it must be 'novel' in the sense that it must not be known to the public. Traditional knowledge by its very nature is knowledge that has been known over a long period of time and therefore it lacks novelty. For this reason, it cannot be brought within the ambit of patent protection. It never actively endeavors to be 'novel' or distinct from nature³⁰. It is not possible to satisfy the novelty requirement for obtaining a patent because a great number of traditional formulae have been known or used for a long period, even if they have rarely been used for commercial purposes³¹. Being traditional is by definition not new.

Another requirement in patent law to be is sufficient inventive step. The grant of patent status to traditional knowledge-derived inventions is very much dependent on how 'sufficient inventive step' can be established by an individual/commercial entity. When traditional knowledge is disclosed it becomes publicly available and hence, under current patents rules lies in the public domain making it an 'obvious' form of knowledge that cannot be claimed as intellectual property³². Further since indigenous systems are non industrial but part of folk traditions or small scale production processing and use, they also do not meet criterion of industrial application. Patents are recognized only when knowledge and innovation generate profits³³.

The patent granted to for patenting the medicinal properties of turmeric is an example of commodification of traditional knowledge of India. In March 1995, two Indians at the

²⁸Vandana Shiva, *The Plunder of Nature and Knowledge Biopiracy*, (2012), pp. 124

²⁹Shravan Kalluri, "Traditional knowledge and Patent Strategy" *JIPR* 17(5) pp. 430-436

³⁰Shahid Ali Khan and R.A. Mashelkar (eds.), "Intellectual Property and Competitive Strategies in the 21st Century", (2006) p.77

³¹Shahid Ali Khan and R.A. Mashelkar (eds.), "Intellectual Property and Competitive Strategies in the 21st Century", (2006) p.77

³²Rajshree Chandra, *Knowledge as Property: Issues in Moral Grounding of Intellectual Property Rights*, (2010), p.298

³³Vandana Shiva, *The Plunder of Nature and Knowledge Bio Piracy*, (2012), p. 65-87



University of Mississippi Medical Centre, Jackson, (Suman K Das and Hari Har P. Cohly) were granted a US patent for turmeric to be used to heal wounds. The Indian Council for Scientific and Industrial Research (CSIR) filed a case with the US Patent Office challenging the patent on the grounds of "prior art", i.e. existing public knowledge as use of turmeric for healing wounds was known to each and every Indian. CSIR said turmeric has been used for thousands of years for healing wounds and rashes and therefore its use as a medicine was not a new invention. CSIR also presented an ancient Sanskrit text and a paper published in 1953 in the Journal of the Indian Medical Association. The US Patent Office upheld the objection and cancelled the patent. The turmeric case failed to meet the novelty criteria. Grant of patent on properties of Neem which are known to Indians for generations is one more example of how traditional knowledge is being used by western countries to reap profits. The European Patent Office (EPO) had to revoke in its entirety Patent number 436257, which had been granted to the United States of America and the multinational corporation W.R. Grace for a fungicide derived from seeds of the Neem tree. Following extensive testimony by expert witness, the 4-person panel judged that the claimed "invention" was lacking in "inventive step," which is a prerequisite to obtaining patent protection. The panel had earlier ruled that the USA/Grace neem fungicide product was lacking in "novelty," another patent criterion, and established that its properties and use were "prior art" years before the "proprietors" applied for a patent³⁴. The patent granted in these cases were revoked because the Indian government was able to establish prior art through available published material, else India would have lost its traditional knowledge to corporations of western countries.

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

³⁴C.M. Correa, "Access to Knowledge :The Case of Indigenous and Traditional Knowledge" in Krikorian G. and Kapczynski(eds.) Access to Knowledge in the ages of Intellectual Property, (2010), p. 245



generations to its present form³⁵. 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 inputs³⁶.

EFFORTS FOR PROTECTION FOR TRADITIONAL KNOWLEDGE IN INDIA

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 people³⁷. The Indian Parliament amended the Patents Act in 1999, 2002 and 2005 to bring it in compliance with the TRIPS Agreement. The first TRIPS compliant amendment to the Patent Act, 1970 came via the Patent (Amendment) Act, 2002. The Amendment made several broad reaching changes to the existing Act, in an endeavour to 'make the law TRIPS compliant, but also to provide therein adequate and necessary safeguards for protection of public interest, national security, bio-diversity, traditional knowledge etc.' The Patent Act of 2002 introduced new definitions of the term "invention" and "inventive step". Section 2(1) (j) of Patent (Amendment) Act defines the term "invention" 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". The Amendment, introduced in 2005, the Patent (Amendment) Act, 2005, was enacted with nearly similar objectives. 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 specification³⁸. 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. Section 3 of the amended Act provides that an invention which in effect is traditional knowledge or duplication of known properties of traditionally known

³⁵Sangeeta Udgaonkar , "The Recording of Traditional Knowledge: Will it prevent 'bio-piracy'?" *Current Science*, VOL. 82, NO. 4, (February 2002), pp.413-419

³⁶Vandana Shiva, *The Plunder of Nature and Knowledge Bio Piracy*, (2012), p. 54

³⁷Philippe Cullet, *IP Protection and Sustainable Development*, (2005), p. 309

³⁸Section 2 (1) of *Patents Act, 1970*



components is not an invention within this Act. Provisions have also been incorporated to include non-disclosure or wrongful disclosure of the same as grounds for opposition and for revocation of the patents, if granted³⁹.

TRADITIONAL KNOWLEDGE DIGITAL LIBRARY (TKDL)⁴⁰

Bitter experiences of turmeric, neem and many other cases led to the creation of this mammoth digital database of traditional knowledge called Traditional Knowledge Digital Library (TKDL), a first of its kind⁴¹. Traditional Knowledge Digital Library is a project sponsored by the Government of India⁴² to create a database on Indian traditional medicinal practices using the tools of digital technology, to prevent bio-piracy and grant of questionable patents⁴³. TKDL is a collaborative project between the Council of Scientific and Industrial Research (CSIR), Ministry of Science and Technology and Department of AYUSH, Ministry of Health and Family Welfare, and is being implemented at CSIR⁴⁴. The project TKDL was initiated in the year 2001⁴⁵. The main feature of TKDL is the innovative classification system that will facilitate the interaction of modern scientific medicinal knowledge with Ayurveda. The second feature is the software that could facilitate the understanding of the complex Sanskrit Slokas by laymen that too in different languages. The decodified format of the formulations could be read and understood by common man as well⁴⁶. Modern scientific names are given to the traditional names of plants, disease and preparations to establish relationship with traditional knowledge and modern science. The creation of Digital library of Traditional knowledge and its linking to the International Patent Classification system (IPC) through Traditional Knowledge Resource Classification system is conceptually a step forward⁴⁷.

³⁹K. 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

⁴⁰N.S. Gopalakrishnan, "Traditional Knowledge, Information Technology and Development –the Challenges", *Cochin University Law Review (CULR)*, Vol. XXIX (2005), p. 135-145,

⁴¹Retrieved from <http://www.tkdl.res.in> visited on October 10, 2012

⁴²*TKDL User Manual*, NISCAIR, New Delhi, p.1

⁴³N.S. Gopalakrishnan, "Traditional Knowledge, Information Technology and Development: the Challenges", *Cochin University Law Review*, Vol XXIX, No. 2, (June 2005), p. 150

⁴⁴S. Savitha, "Protection of Traditional Knowledge –A Cause for Concern", in C.B.Raju (Ed.) *Intellectual Property Rights*, (2006), p. 220

⁴⁵Retrieved from <http://www.tkdl.res.in> visited on October 10, 2012

⁴⁶Features of TKDL, TKDL I-Ayurveda, NISCAIR, New Delhi

⁴⁷R.A. Mashelkar, "Intellectual Property Rights and the Third World", in Parkash Shri and Chaturvedi H.(eds.), *WTO, IPRs and Branding*, (2007), pp. 103-120



India does not have any specific legislation for protecting traditional knowledge, but has introduced new acts and amended existing acts for attending to the traditional knowledge issues: Amendments of Patent Act of 1970 in 2002 and 2005, the Protection of Plant Variety and Farmers Rights Act, 2001; the Biological Diversity Act, 2002; the Scheduled Tribes and Other Traditional Forests Dwellers (Recognition of Forest Rights) Act, 2006; and the Geographical Indication of Goods (Registration and Protection) Act, 1999. These acts have provisions that can be utilized for protecting traditional knowledge⁴⁸. The enactment of Biological Diversity Act, 2002 is a boost for the protection of traditional knowledge of India. These efforts have been aided by the increasing activism and awareness of indigenous peoples and the increasing recognition of indigenous rights⁴⁹.

CONCLUSION

The present legal regime in the field of traditional knowledge is inadequate and incomplete. The indigenous people are placed in the disadvantaged position and they are not in a position to enjoy the benefit derived out of their traditional knowledge. The multinational companies are making money by fully utilizing their knowledge without sharing the profits with them. Patent laws are very technical and sometimes complex. This complexity is further compounded when they are exploited by states as instruments of both domestic and international economic policy⁵⁰. States have neither fully explored nor adequately adapted the patent system to suit the interests of their traditional communities⁵¹. Indigenous people and local communities have sought to prevent the patenting of traditional knowledge and resources where they have not given express consent. They have sought for greater protection and control over traditional knowledge and resources. 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 farmers⁵². Strong law for protection of rights of indigenous people

⁴⁸R.M. Dungawat, "Protection of TK : National and International Perspectives", in Singh Sahai Shiv (ed.) Law of IPR(Introductory), (2004), p. 336-337

⁴⁹S. Savitha, Protection of Traditional Knowledge –A Cause for Concern, in Raju C.B.(ed.) *Intellectual Property Rights*, (2006), pp.211-223

⁵⁰Ikech Mgbeoji, *Global Biopiracy- Patents, Indigenous and Traditional Knowledge and Biopiracy*, (2006), p. 31

⁵¹Jayashree Wattal, *Intellectual Property Rights in the WTO and Developing Countries*, (2005), p. 171

⁵²Priyanka Josson, "Patently Robbed", *Combat Law*, Vol 4 Issue 5, (2005), p. 67



and its strict implementation is the need of the hour; else these indigenous communities will soon lose what have belonged to them since time immemorial.

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