

Protection of Traditional Knowledge: The Way Forward

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ABSTRACT

Looking at the pace of competition in the past few years, the importance of protecting traditional knowledge has increased to a large extent. Traditional knowledge has been an easily available 'treasure' for western scientists and multinational corporations to sneak into and make it an easy prey for biopiracy. Intellectual Property Rights is the field of encounter between traditional knowledge and modern scientific knowledge.

This paper tries to throw light upon the fact that TRIPS Agreement as well as the CBD does not talk about granting protection to traditional knowledge. The TRIPS agreement provides for a sui generis protection however the loophole lies in the fact that there is no adequate system outlined for benefit sharing and the inclusion of traditional knowledge as IPR.

This paper endeavors upon grant of patents of non obvious innovations based on traditional knowledge in contemporary world and the restrictions related to current intellectual property regime. The paper further delves into the arena of initiatives being taken up internationally as well as within the legal framework of India to provide better protection to traditional knowledge. As far as far the Indian initiatives are concerned, various organizations such as The Council of Scientific and Industrial Research (CSIR), Indian Council of Agricultural Research (ICAR) in collaboration with the Technology Information Forecasting Assessment Council (TIFAC) of the department of science and technology, Government of India are working together and has prepared a traditional knowledge digital library (traditional knowledge) so as to garner protection against the illegitimate and inappropriate use of traditional knowledge which is basically an extension of the international principles as advanced by the WIPO.

The paper concludes with the suggestions of the author as to the viability of the protection of traditional knowledge and the steps that can be taken in the direction of protection of traditional knowledge.

INTRODUCTION:-

In contemporary years, the significance of traditional knowledge has augmented due its huge role in the economy of especially developing and under-developed countries. While the free use of Traditional Knowledge has benefitted many individuals, corporations or organizations, on the other hand the cases of bio-piracy have increased because many of multi-national corporations and westernized individuals are getting patent of the traditional knowledge which is held by indigenous communities and has been conserved and passed on by them from generations to generations. This has created a tension worldwide over the legal protection of traditional knowledge and its holders who face difficulties because of inept existing legal mechanisms in protection of traditional knowledge. Additionally, in most cases TK holders are deprived of the benefits which result from the application of traditional knowledge in various fields.

This paper throws light upon the loopholes present in the existing legislations in protection of traditional knowledge. It further delves into the arena of solutions which can effectively bridge the gap between various laws thereby proposing a sui generis system and also analyzing various initiatives taken up internationally and also within the Indian legal framework.

When we talk of the international initiatives, World Intellectual Property Organization always had an important role to play. The Intergovernmental Committee of WIPO has advanced two protection mechanisms i.e. defensive protection (protection against the third parties from getting an illegitimate IPR over traditional knowledge) and positive protection (prevention from unauthorized, unwanted or inappropriate use by the third party including culturally offensive and demeaning use to exploit traditional knowledges commercially by way of granting of licenses).

As far the Indian initiatives are concerned, various organizations such as The Council of Scientific and Industrial Research (CSIR), Indian Council of Agricultural Research (ICAR) in collaboration with the Technology Information Forecasting Assessment Council (TIFAC) of the department of science and technology, Government of India are working together and has prepared a traditional knowledge digital library (traditional knowledge) so as to garner protection against the illegitimate and inappropriate use of traditional knowledge which is basically an extension of the international principles as advanced by the WIPO. Also, to curb the menace of biopiracy, the Central Legislative body of India has enacted various legislations with the objective to protect the traditional knowledge.

The paper concludes with the suggestions of the author as to the viability of the protection of traditional knowledge and the steps that can be taken in the direction of protection of traditional knowledge.

What is Traditional Knowledge?

Traditional knowledge (TK) has no lucid definition. However, TK can be said to incorporate information on the application of biological and other materials for medical treatment and agriculture, production processes, music, rituals, literature, designs and other arts. TK, therefore, comprises knowledge that can be used in medicine, agriculture, engineering and cultural events, knowledge mostly developed in the past and may still be developing. It is the knowledge used since generations and is passed on to future generations as part of the community's property. The families or communities having proprietorship of certain traditional knowledge take(s) pride in keeping it a 'secret. TK represents a reservoir of knowledge accumulated during century's old experiences of trial and error, success and failure and has been passed on through oral tradition at the kin level.

TK, such as healing practices, may be possessed by individuals or by a group. Such practices may also be obtainable to all members of a group, for example, knowledge on home herbal remedies. TK

may, therefore, have power over commercial value depending on its use. TK also incorporates spiritual components peculiar to each community.¹

The inter-governmental committee of WIPO on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore defines traditional knowledge as knowledge that is:

- (a) Generated, preserved and transmitted in a traditional context.
- (b) Distinctively associated with the traditional or indigenous culture or community that preserves and transmits it between generations.
- (c) Linked to a local or indigenous community or other group of persons identifying with a traditional culture through a relationship based on a sense of custodianship, guardianship or cultural responsibility such as a sense of obligation to preserve the knowledge, or a sense that to permit misappropriation or demeaning usage would be harmful or offensive, a relationship that may be expressed formally or informally by customary law.
- (d) Originating from intellectual activity in a wide range of social, cultural, environmental and technological contexts, and
- (e) identified by the community or other group as being traditional knowledge².

Traditional knowledge (TK) is knowledge, know-how, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity. TK in a general sense embraces the content of knowledge itself as well as traditional cultural expressions, including distinctive signs and symbols associated with TK. TK in the narrow sense refers to knowledge as such, in particular the knowledge resulting from intellectual activity in a traditional context, and includes know-how, practices, skills, and innovations. Traditional knowledge can be found in a wide variety of contexts, including: agricultural, scientific, technical, ecological and medicinal knowledge as well as biodiversity-related knowledge³.

Traditional Knowledge refers to the cumulative and dynamic body of knowledge, know-how and representations possessed by peoples with long histories of interaction with their natural milieu⁴.

TRIPS Agreement:-

¹ Wekesa Moni. WHAT IS SUI GENERIS SYSTEM OF INTELLECTUAL PROPERTY PROTECTION? The African Technology Policy Studies Network: ISBN: 9966-916-71-7.

² Swamy Narayan Raju, Protection of Traditional Knowledge in the Present IPR Regime: A Mirage or A Reality, Indian Journal of Public Administration. 36 / vol. Lx, no. 1, january-march (2014)

³ World Intellectual Property Organization, *Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions*, WIPO publication 933 E (2012), available at: <http://www.wipo.int/tk/en/tk.pdf> (last visited on 12th November, 2015)

⁴ The United Nations Educational, Scientific and Cultural Organization (UNESCO), Traditional Knowledge. http://www.unesco.org/bpi/pdf/memobpi48_tradknowledge_en.pdf (last visited on 13 November, 2015)

The World Trade Organization Agreement on trade related aspects of intellectual property rights (TRIPS), negotiated during Uruguay round introduced intellectual property rules for the first time into the multilateral trading system. The Agreement, while recognizing that intellectual property rights (IPRs) are private rights, establishes minimum standards of protection that each government has to give to the intellectual property right in each of the WTO Member countries. The Member countries are, however, free to provide higher standards of intellectual property rights protection.⁵ Section 5 Part II of the TRIPS Agreement (Article 27 to Article 34) contains the provisions for standards in respect of the Patents.

Convention on biological diversity:-

The Convention on Biological Diversity (CBD) is an international legally-binding treaty with three main goals: conservation of biodiversity; sustainable use of biodiversity; and the fair and equitable sharing of the benefits arising from the use of genetic resources. Its overall objective is to encourage actions which will lead to a sustainable future. The conservation of biodiversity is a common concern of humankind. The CBD covers biodiversity at all levels: Ecosystems, species and genetic resources. It also covers biotechnology through the Cartagena Protocol on Biosafety. In fact, it covers all possible domains that are directly or indirectly related to biodiversity and its role in development, ranging from science, politics and education to agriculture, business, culture and much more.⁶

LOOPHOLES:-

Loopholes within TRIPs

TRIPs basically favors the development of current IPR regimes, there are some provisions in TRIPs that can be subjugated by parties having greater money power.

Article 8 provides for legal measures to protect public health and nutrition in public interest. Environmental protection has not been explicitly built into this provision. Although, "Public Interest" can be interpreted to incorporate environmental protection, however, this provision gives a wide scale to interpret the term "Public Interest".

Article 27 (2) provides barring from patentability of those inventions, whose commercial utilization needs to be prevented to safeguard against "serious prejudice to environment". This phrase is rather fuzzy. A country would be required to first define "what is serious prejudice ?", justify the prevention of commercial use and only then justify non-granting of patents.

Article 27 (3) provides the countries to leave out plants and animals from patentability by providing an effective means or *sui generis* system of protection of IPRs related to these, which will be interpreted differently by various countries

⁵ THE AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS (TRIPS), available at http://commerce.nic.in/TRIPS_matter_amended.pdf last seen on 12th November, 2015

⁶ Convention on Biological Diversity, 2011-2020 United Nation Decade On Bio Diversity available at <https://www.cbd.int/undb/media/factsheets/undb-factsheet-cbd-en.pdf> last visited on 11th November, 2015

Loopholes within CBD

Although conservation of biological resources has been considered as important in CBD, utilization of biological resources can run counter to conservation and sustainable use as unambiguous standards for sustainable use has not been defined. Moreover, CBD is subject to national and international legislations, which raises the issue that between TRIPs and CBD which holds legal priority. Legal opinion would perhaps be that between the two, TRIPs being the later treaty would supersede CBD in case of conflicts. However, given that CBD deals to a large extent as compared to TRIPs in the safeguarding of public interest and morality, which TRIPs acknowledges as valid grounds for any dealings that a country would take, it could be argued that CBD's provision should supersede those of TRIPs. This conflict between TRIPs and CBD is yet to be tested in international legal arena. The CBD regrettably is at a serious disadvantage, as it does not have a dispute resolution machinery of its own, unlike WTO as in TRIPs. Besides, CBD in Article 8(j)⁷ requires the countries to respect and protect indigenous and local community knowledge and ensure its equitable sharing of benefits arising out of use of such resources. Various parties involved in the sharing mechanism can interpret this provision differently⁸.

TRIPS vs. CBD

1. Chief Divergence

Article 27 of TRIPS provides for protection of process and products, patenting products in all field of technologies, on the condition that they are new (novelty), involve an inventive step(non obviousness) and are capable of industrial use. This article is in conflict with objectives of CBD as article 15.1 of CBD recognizes autonomy of nations and allows nations to determine right to use their genetic resources. CBD differs from TRIPS in a way that CBD keeps genetic resources out of public domain by recognizing a patent country's right to benefit and technologies coming from them.

2. Clash in basis and underlying principle

TRIPS is a commercial treaty with commercial objectives that profits primarily multinational corporations and private firms whereas CBD was established due to the increasing distress over the rapid worldwide loss of biodiversity, recognizing the role of traditional knowledge and local communities.

3. Rule vs. Rights

CBD is based on principle of national sovereignty and therefore provides for a country's right to control access of foreigners to biological resources and knowledge. TRIPs facilitate persons or institutions to patent a country's biological resources in countries outside the country of origin of the resources or knowledge. In this way, TRIPS facilitates the circumstances for embezzlement of ownership or rights over living organisms, knowledge and processes on the use of biodiversity.

4. Community rights vs. private, individual rights

In the preamble of TRIPS, it is recognised that "intellectual property rights are private rights". Patents confer exclusive rights on its owner to prevent third parties from making, using, offering for sale, selling or importing (for these purposes) the patented product, and to prevent third parties from using the patented process (and from using, selling or importing

⁷ Article 8(j), Convention On Biodiversity

⁸ ISSUES RELATING TO TRADITIONAL KNOWLEDGE SYSTEMS AND INTELLECTUAL PROPERTY RIGHTS (IPRS) <http://www.fao.org/docrep/article/wfc/xii/0911-a3.htm> last seen at 12th November,2015.

the product obtained from the patented process). In TRIPS, the award of IPRs over products or processes confers private ownership over the rights to make, sell or use the product or to use the process (or sell the products of that process). This makes it an offence for others to do so, except with the owner's permission, which is usually given only on license or payment of royalty. IPRs, therefore, have the effect of preventing the free exchange of knowledge, of products of the knowledge, and their use or production. This system of exclusive and private rights is at odds with the traditional social and economic system in which local communities make use of, and develop and nurture, biodiversity. For example, seeds and knowledge on crop varieties and medicinal plants are usually freely exchanged within the community. Knowledge is not confined or exclusive to individuals but shared and held collectively, and passed on and added to from generation to generation, and also from locality to locality. The CBD has several provisions that acknowledge this and also that aim at protecting community rights, the key provision being Article 8(j). However, the contribution and nature of community knowledge and community rights are not recognised in the TRIPS agreement. Instead, the patent system endorsed by TRIPS favours private individuals and institutions, enabling them to acquire "rights", including rights over the products or knowledge, whose development was mainly carried out by the local communities. TRIPS and the enactment of patent laws relating to biological materials in some countries have facilitated the misappropriation of the knowledge and resources of indigenous and local communities, and the number of "biopiracy" cases has been increasing at a rapid rate. This misappropriation is counter to the principles and provisions of the CBD that oblige countries to recognise local community rights and fair benefit sharing. Indeed, one of the main objectives of establishing the CBD was to counter the possibility of misappropriation or "biopiracy", whilst one of the effects of TRIPS has been to enable the practice of such misappropriation.⁹

Intellectual property based protection

The safeguarding of TK through IP prevents unwanted use by others especially those which are culturally offensive and demeaning in use. Consequently, 'communities wish to gain IP protection in order to dynamically exercise IP rights to avert the use and commercialization of their cultural heritage and TCEs by others, including culturally offensive or demeaning in use.' The fact that 'the progressive appropriation of TK through intellectual property rights also has an impact on the ownership of TK' should not however be overlooked. This is so in so far as resources that are communally owned by TK holders may end up being owned exclusively by individuals thus excluding TK holders from using such resources. Meaningful protection of TK, as Munzer and Raustiala have pointed out, 'will require a major deviation from established legal as well as philosophical doctrine.'¹⁰

Limitations of IP based Protection:-

⁹ Third World Network, Intellectual Property Rights, TRIPS Agreement and the CBD, TWN Statement to the 2nd meeting of the Panel of Experts on Access and Benefit Sharing, Montreal, 19-22 March (2001)

¹⁰ Munzer SR and Raustiala K, The uneasy case for Intellectual Property Rights in Traditional Knowledge, *Cardozo Arts & Entertainment*, 27(2009) 37-97.

1. IPR provides for protection of individual property rights whereas traditional knowledge is collective or community resource.
2. Traditional knowledge has evolved over a long period of time stretching over generations and may not meet the criterion of novelty or inventive step required for IPRs like patents.
3. Products which are based upon TK cannot be condensed to a limited duration of protection as is provided for patentable products.
4. TK may be held by single or multiple communities and it becomes intricate in case of multiple communities to find out title holders.
5. Traditional Knowledge is not based on scientific methods or assessments.
6. Disclosure of TK in patent filings is not mandated by IP laws in developed countries.
7. IP system is 'based on document-intensive, codified and governmentally administered structures and procedures'¹¹. This attribute of the IP system makes it inaccessible to TK holders who may find the requisite formalities difficult to comply with and the costs may equally be prohibitive.

CASE STUDY ON NEEM:-

In 1971, US timber importer Robert Larson observed the tree's usefulness in India and began importing neem seed to his company headquarters in Wisconsin. Over the next decade he conducted safety and performance tests upon a pesticidal neem extract called Margosan O and in 1985 received clearance for the product from the US Environmental Protection Agency (EPA). Three years later he sold the patent for the product to the multinational chemical corporation, W R Grace and Co. Since 1985, over a dozen US patents have been taken out by US and Japanese firms on formulae for stable neem based solutions and emulsions and even for a neem based tooth paste. At least four of these are owned by W R Grace, three by another US company, the Native Plant Institute, and two by the Japanese Terumo Corporation. Having garnered their patents and with the prospect of a licence from the EPA, Grace has set about manufacturing and commercialising their product by establishing a base in India. The company approached several Indian manufacturers with proposals to buy up their technology or to convince them to stop producing value added products and instead supply the company with raw material. In many cases, Grace met a rebuff. M N Sukhatme, Director of Herringer Bright Chemicals Pvt. Ltd, which manufactures the neem based insecticide Indiar, was put under pressure by Grace to sell the technology for a storage stable neem extract, which does not require heating or any chemical change. Sukhatme refused their offers, stating: 'I am not interested to commercialise the product. 'But Grace eventually managed to arrange a joint venture with a firm called P J Margo Pvt. Ltd. They are now setting up a plant in India which will process neem seed for export to the US. Initially, the plant will process 20 tons of seed a day. They are also setting up a network of neem seed suppliers, to ensure a constant supply of the seeds and a reliable price. Grace is likely to be followed by other patent holding companies. In 1992, the US National Research Council published a report designed to 'open up the Western world's corporate eyes to the seemingly endless variety of products the tree might offer'.¹²

Turmeric Case:-

¹¹ WIPO Doc. WIPO/GRTKF/IC/1/3 (March 16, 2001), p.20; see footnotes 50 and 51

¹² Shiva Vandana, The Neem Tree – A Case History of Biopiracy, <http://www.twinside.org.sg/title/pir-ch.htm> last seen on

The rhizomes of turmeric are used as a spice for flavouring Indian cooking. It also has properties that make it an effective ingredient in medicines, cosmetics and dyes. As a medicine, it has been traditionally used for centuries to heal wounds and rashes.

In 1995, two expatriate Indians at the University of Mississippi Medical Centre (Suman K. Das and Hari Har P. Cohly) were granted a US patent (no.5, 401,504) on use of turmeric in wound healing. The Council of Scientific & Industrial Research (CSIR), India, New Delhi filed a re-examination case with the US PTO challenging the patent on the grounds of existing of prior art. CSIR argued that turmeric has been used for thousands of years for healing wounds and rashes and therefore its medicinal use was not a novel invention. Their claim was supported by documentary evidence of traditional knowledge, including ancient Sanskrit text and a paper published in 1953 in the Journal of the Indian Medical Association. Despite an appeal by the patent holders, the US PTO upheld the CSIR objections and cancelled the patent. The turmeric case was a landmark judgment case as it was for the first time that a patent based on the traditional knowledge of a developing country was successfully challenged. The US Patent Office revoked this patent in 1997, after ascertaining that there was no novelty; the findings by innovators having been known in India for centuries.¹³

The way forward

SUI GENERIS SYSTEM:-

Sui-generis literally means “of its own kind” and contains a set of nationally recognized laws. A Sui-generis system may consist of some standard forms of intellectual property protections collectively with other forms of protection, or none for protecting traditional knowledge and genetic resources. There exists differences from country to country and can be implemented in various ways.¹⁴

It is important to create legal rights that recognize any connected traditional knowledge, relating to genetic resources and encourage access and benefit sharing. The government may prefer to enlarge protections to genetic resources and / or knowledge to a community in the form of patents, trade secrets, copyrights, farmers and breeder’s rights or another creative form not presently recognized in the intellectual property regime.

It can also be secluded by intellectual property offices which can privately preserve inventions or registries of locally held knowledge. A patent application can be denied if the knowledge on which it is based is already held in the registry. Under a Sui-generis system and according to Convention on Biological Diversity, it is mandatory for a person to take prior informed consent of the indigenous people and who is interested in gaining right to use a community’s biological resources or knowledge for scientific commercial or industrial purposes who, unless the knowledge is already in the public domain.

This would permit the community to make a decision on access to their traditional knowledge and subsequent use of it with the choice to share or not. If consent is granted to the person who wishes to access traditional knowledge, he would need to put forth evidence of this consent to the intellectual property office or proper authority.

The TRIPS Agreement neither defines sui generis nor elaborates what makes the sui generis system ‘effective’. The Latin word sui generis means generated by one self and hence also meaning ‘of its own kind’ or ‘unique’. It is hence implied that a sui generis system devised by a country need not

¹³ <http://www.tkdil.res.in/tkdil/Langdefault/common/BioPiracy.asp?GL=#Tur> , last seen on 13th November,2015

¹⁴ TRADITIONAL KNOWLEDGE AND SUI-GENERIS LAW, published in International Journal of Scientific & Engineering Research Volume 3, Issue 7, July-2012 1 ISSN 2229-5518

sustain either total identity or similarity with such legislations of other countries or groups of countries, provided all these systems are effective. This sharpens the focal point to the undefined qualified requirement of the sui generis system. Lack of these definitions is rightly interpreted to provide elasticity in structuring the sui generis system while protecting its effectiveness.

This elasticity of the sui generis system is important for developing countries like India for three major reasons:-

1. It will assist in striking a balance between promotions of private interest and conserving the essential public good and enhances the livelihood opportunities of communities, in poverty alleviation, and in conserving the related traditional knowledge. The traditional ethics and cultural lore followed by the communities over long year's value a public rather than exclusive ownership on propagating material of all plants. They may find complicated in coming to terms with a rigid protection regime which may deny the traditional in saving, re-using, sharing such knowledge. Such sudden change is loaded with serious socio-economic, ecological, legal and political implications.
2. The conflict between TRIPS Agreement and other legally and morally binding international declarations, treaties and conventions concerned with poverty alleviation, economic development, human rights protection and bio-resources conservation. The relevant legally binding instruments are the UN Convention on Biological Diversity (CBD)¹⁵, the International Treaty on Plant Genetic Resources (ITPGR)¹⁶ for Food and Agriculture and UN International Covenant on Economic, Social and Cultural Rights (CESCR)¹⁷. The legally non-binding instruments are the Universal Human Rights Declaration (UHRD)¹⁸ and UN Declaration on the Right to Development (DRD)¹⁹. At these international instruments have important bearing on large public good concerns and are binding on Member countries as much as the TRIPS Agreement, the Members should have the right to harmonize these conflicts in their national legislation until the sources of conflicts are addressed.
3. The third significant feature is that, as an IPR protection device, the sui generis system is equal to the patent system in the stringency of offered protection.

Benefits of Sui-generis Laws

1. It protects the rights and interests of traditional knowledge holders.
2. It aids in enhancement of livelihoods of traditional knowledge holders and communities.
3. It is helpful for national economy.
4. It helps to safeguard the environment.
5. It helps in preventing bio-piracy.
6. It is essential for legally protecting traditional knowledge.

Limits of Effective Sui Generis System

¹⁵ Convention on Biological Diversity of the United Nations. Adopted in 1992, entry into force in 1993, <http://www.biodiv.org/default.aspx>

¹⁶ The International Treaty on Plant Genetic Resources for Food and Agriculture, adopted by the 31st Session of Conference of the Food and Agriculture Organization, Rome, 3 November 2001, entry into force on 29 June 2004

¹⁷ International Covenant on Economic, Social and Cultural Rights adopted by UN General Assembly resolution 2200A (XXI) of 16 December 1966 and entry into force on 3 January 1976

¹⁸ Universal Declaration of Human Rights adopted and proclaimed by General Assembly resolution 217 A(III) of 10 December 1948

¹⁹ Declaration on the Right to Development adopted by the UN General Assembly resolution 41/128 of 4 December 1986

While leveraging the flexibility available in the TRIPS Agreement, it is essential to make sure the ‘effectiveness’ of sui generis system evolved. Also that the TRIPS Agreement does not elaborate what constitutes effectiveness of a ‘sui generis system’, the definition of effectiveness is left to broad interpretation. Such interpretations, however, have to recognize two important aspects. First, the sui generis system is less rigid than the patent system. Second, notwithstanding the lesser rigidity, as an instrument of intellectual property protection it must conform to some de minimis requirements. These requirements extensively known for different forms of intellectual property rights have following features:-

1. Definition of protectable subject matter,
2. Definition of necessary criteria which make subject matter eligible for protection,
3. Definition of scope and duration of protection,
4. Allow balance of privilege in favour of IP right holder,
5. Provision of rights of priority,
6. National treatment and independence of IPR,
7. Creation of administrative and judicial framework for effective enforcement of the provisions on protection and dispute settlement,
8. Maintenance of a healthy balance between the private benefit accruable from IPR and the public good flowing from the working of the IPR.

In addition, the legal framework may comprise such other elements which corresponds to the legislation with the socio-political and eco-environmental predilections of the state and its international commitments associated to the legislative topic without compromising on the above mentioned requirements.

World Intellectual Property Organization (WIPO)

Intellectual Property Right offers two forms of protection to TK: (i) A positive protection by granting exclusive rights over use to the members of the local community, and (ii) a negative protection by excluding others from the use of TK held by a particular community.

(a) Positive Protection: This has been described by the Intergovernmental Committee as “based on the active assertion of rights by the owners and custodians of TK.” Classic examples are protective legislations and use of contracts in the interest of indigenous communities.

(b) Defensive Protection: Preventive patent applications and defensive trademark registration come within the ambit of this definition. The application herein does not seek to gain rights, but merely prevents third parties from getting unfavourable IPR in the same subject²⁰.

There are four prime reasons as to why TK should be protected:

- (a) Conserving the environment
- (b) Improving the livelihood of TK holders.
- (c) Benefiting national economies in a knowledge driven era
- (d) Preventing biopiracy

We must not forget that commoditization of collective resources – which are often alleged as sacred or secret – is a violation of human rights in the broadest sense of the term.

The basic question that arises here is: is the IP system compatible with the values and interests of traditional communities – or does it privilege individual rights over collective interests? What can be done to ensure that IP protects TK? The answer lies in a comprehensive strategy with national and international dimensions. These can take the form of:

²⁰ <http://www.wipo.int/tk/en/tk/> last seen at 12th November,2015

- (a) National laws (for instance Brazil, Costa Rica, Peru, Panama, Philippines, Portugal, Thailand and US have adopted sui generis laws vis-a-vis some aspects of TK).
- (b) International legal framework.

National Access and Benefit Sharing (ABS)

The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization adopted on 29 October 2010 in Nagoya, Japan, at the tenth meeting of the Conference of the Parties (COP 10) further advances the implementation of one of the three objectives of the Nagoya Protocol: the fair and equitable sharing of benefits arising out of the utilization of genetic resources.

About access and benefit sharing

What are genetic resources? All living organisms; plants, animals and microbes, carry genetic material that could be potentially useful to humans. What does “using” genetic resources mean? Using or utilizing genetic resources refers to the process of researching their beneficial properties and using them to increase scientific knowledge and understanding, or to develop commercial products. Users of genetic resources may include research institutes, universities and private companies operating in various sectors such as pharmaceuticals, agriculture, horticulture, cosmetics and biotechnology. What is access and benefit-sharing? ABS refers to the way in which genetic resources may be accessed, and how users and providers reach agreement on the fair and equitable sharing of the benefits that might result from their use. A person or institution seeking access to a genetic resource (user) should obtain the prior informed consent of the country in which the resource is located. Moreover, the user and country providing the genetic resource need to agree on the terms and conditions of access and use of this resource (mutually agreed terms). This includes the sharing of benefits arising from the use of this resource, with relevant authorities in the provider country. Benefit-sharing with providers will take various forms, ranging from royalties to joint ventures, technology transfer, capacity-building, etc. It will thus contribute to poverty reduction and sustainable development in developing countries. In return for these benefits, providers of biodiversity will enable access to their genetic resources for research or other purposes. This can contribute to the advancement of science and to human well-being through the use of genetic resources in pharmaceuticals, cosmetics, agriculture and other sectors.²¹

Conclusion

²¹ <https://www.cbd.int/cop/cop-11/doc/cop-11-media-press-brief-abs.pdf>, last seen at 13th November,2015

Suggestions for improving protection of traditional knowledge

1. Recognizing Customary Rights

Sui generis systems have to be planned in continued collaboration and discussion with indigenous peoples and must have room for the holistic nature of their knowledge and respect its cultural context. Importantly, indigenous customary laws which administer existing local problems must be supported by such a system of protection. The significance of this is reflected in the view held by a North American indigenous organization, the Four Directions Council, that (quoted in Dutfield, 1999; p.508): Indigenous peoples have power over their own locally-specific system of jurisprudence with respect to the categorization of various types of knowledge, proper procedures for acquiring and sharing knowledge, and the rights and responsibilities which attach to possessing knowledge, all of which are rooted uniquely in each culture and its language. Rather than attempting to work out uniform IPR guidelines for protection of traditional knowledge, the Four Directions Council urges governments to agree that traditional knowledge must be acquired and used in conformity with the customary laws of the people concerned. Significantly, concepts presented by many customary law systems may also exist in other bodies of similar laws around the world and can be considered 'common principles' or "norms" of customary law. A case in point is the Nunavut Wildlife Act that lists important Inuit customary law principles with respect to biodiversity (CBD, 2007). Such principles that are familiar to those followed by other communities can be put together to develop a system of protection that can be applied across communities, resources and regions.

2. Complementary national and international legislation

Sui generis systems, however well designed, would not be valuable on their own; rather they would need to be supported by suitable national and international measures that would present best-practice guidelines and recognize and endorse existing local protection systems (CBD, 2007). At the national level sui generis systems would have to be synchronized with other national laws which according to WIPO (CBD, 2007) could be done by determining the extent to which the law of IP can meet national objectives and help address policy issues related to TK. If such law is found to be scarce for the purpose of protecting TK, the WIPO suggests (CBD, 2007) that IP laws be adapted and sui generis measures, laws and systems developed to complement IP and non-IP tools. Legal protection of TK makes it necessary that the following issues be addressed (CBD, 2000):

3. Documentation and Traditional Knowledge Digital Library

Another challenge is that the IP system is 'based on document-intensive, codified and governmentally administered structures and procedures. This attribute of the IP system makes it inaccessible to TK holders who may find the requisite formalities difficult to comply with and the costs may equally be prohibitive. A useful suggestion that has been put forward in order to make the system accessible is that IP offices need to know of the existence of TK and this is only possible if the local community of TK holders establish a working relationship with such offices. This suggestion can work if TK is documented and IP offices are granted access to the database so that the information can be used for defending the rights of TK holders against inappropriate use by third parties. The suggestion does not however address the other problems that TK holder may have with the formal IP system such as elements of incompatibility and prohibitive costs of filing their own applications.

Traditional Knowledge Digital Library (TKDL)²²

²²http://www.csir.res.in/External/Utilities/Frames/career/main_page1.asp?a=tkdl_topframe.htm&b=tkdl_left.htm&c=..%2F..%2F..%2FHeads%2FTKDL%2Fmain.htm, last seen on 1th November,2015

TKDL is a pioneer initiative of India to prevent misappropriation of country's traditional medicinal knowledge at International Patent Offices on which healthcare needs of more than 70% population and livelihood of millions of people in India is dependent. Its genesis dates back to the Indian effort on revocation of patent on wound healing properties of turmeric at the USPTO. Besides, in 2005, the TKDL expert group estimated that about 2000 wrong patents concerning Indian systems of medicine were being granted every year at international level, mainly due to the fact that India's traditional medicinal knowledge which exists in local languages such as Sanskrit, Hindi, Arabic, Urdu, Tamil etc. is neither accessible nor comprehensible for patent examiners at the international patent offices.

India's Traditional Knowledge Digital Library (TKDL) warrants special mention and description since it is currently accessible to a number of international patent offices and provides a good example of how it can aid the IP system to prevent unwanted use of TK by third parties. TKDL is a collaborative project of the council of Scientific and Industrial Research (CSIR), Ministry of Science and Technology and Department of AYUSH (Ayurveda, Yoga and naturopathy, Unani, Siddha and Homeopathy) as well as the Ministry of Health and Family Welfare, and is being implemented at CSIR.²³ The project was initiated in the year 2001 for purposes of providing information on TK, in languages and format that patent examiners at International Patent Offices (IPOs) can understand. The library is aimed at constructively organising TK and making it available in a format that can be easily disseminated.²⁴ This has so far prevented the granting of wrong patents since TKDL serves as an accessible non-patent literature database that deals with traditional knowledge subject matter.²⁵ In this regard TKDL is a good intervention, which can ensure the protection and preservation of TK. Access to TKDL agreements have been concluded with a number of international patent offices and TKDL evidence has been utilized to successfully challenge applications for patent registration, which utilized unmodified form TK that already forms part of the TKDL.²⁶ In this sense, TKDL is used for defensive protection of TK. Defensive protection 'safeguards against illegitimate third-party assertion of IPRs over TK.

4. Other Specific suggestion

Suggestions that have been given in literature on factors that should be considered in developing a sui generis system of protection can be developed to protect TK should also be considered. The three factors that Dutfield has proposed are very relevant in this regard.

1. Registration of the rights should be encouraged as a way of fostering enforceability of the rights but it should not be made a legal requirement. This makes sense in view of the concern that has been noted in this paper that the current IP registration system is inaccessible and costly for TK holders.
2. The governments can determine the rights by law or a private collective management institution can be established to manage the rights.
3. The envisaged sui generis system should take the world views and customary norms of TK holder communities into consideration since their customs regulate social and economic behavior. Notably, the IGC's draft Articles have incorporated this suggestion already in its 2012 version of the legal instrument.

²³ About TKDL, <http://www.tkdil.res.in/tkdil/langdefault/common/Abouttkdil.asp?GL=Eng> (21 May 2012).

²⁴ Jeevan VKJ, Digital library development: identifying sources of content for developing countries with special reference to India, the International Information & Library Review, 36(2004) 185-197.

²⁵ Gupta VK, Traditional Knowledge Digital Library, paper presented at the Sub-Regional Experts Meeting in Asia on Intangible Cultural Heritage: Safeguarding and Inventory-Making Methodologies (Bangkok, Thailand, 13-16 December 2005).

²⁶ For specific examples, see <http://www.tkdil.res.in/tkdil/langdefault/common/Abouttkdil.asp?GL=Eng>, last seen on 12th November, 2015

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