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Protection of Traditional Knowledge in India: An Analysis

Abstract

'Traditional knowledge' refers to 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.

Keywords: Traditional Knowledge, Intellectual Property, WIPO, WTO.

Introduction

In common parlance Traditional knowledge means the knowledge based on tradition. Knowledge¹ has been the most coveted possession of mankind since the industrial revolution.² The industrial boom after the World Wars has highlighted the importance of the so-called intellectual knowledge.³ Recently, the importance of knowledge that has been in the public domain⁴ has come into question.⁵ The pattern of evolution of society has been marked by a process by which the societies in developed countries have moved towards a more technological orientation. Consequentially, some traditional knowledge, including traditional practices, has been left behind and newer practices that are better, or at least considered better, are being used. Knowledge that is no longer part of the so-called developed societies, but retained by traditional societies has, of late, gained attention because of its value, materially and otherwise. There is, however, a difference between the knowledge vested in indigenous peoples and the corporate interests in using that knowledge. This leads to a gap between source materials and end producers, which can be described as the "gap between producers and users."⁶ Treatises assert that it is only the corporate interests that are finally rewarded. This increasingly threatens the viability of knowledge systems of indigenous peoples and local communities.⁷

'Tradition-based refers to knowledge systems, creations, innovations and cultural expressions⁸ which have generally been transmitted from generation to generation; are generally regarded as pertaining to particular people or territory; and, are constantly evolving in response to a changing environment. Categories of traditional knowledge could include: agricultural knowledge; scientific knowledge; technical knowledge; ecological knowledge; medicinal knowledge, including related medicines and remedies; biodiversity-related knowledge; 'expressions of folklore'.⁹

Indigenous and local communities justly cherish traditional knowledge as a part of their very cultural identities. Maintaining the distinct knowledge systems that give rise to TK can be vital for their future well-being and sustainable development and for their intellectual and cultural vitality. For many communities, TK forms part of a holistic world-view, and is inseparable from their very ways of life and their cultural values, spiritual beliefs and customary legal systems. This means that it is vital to sustain not merely the knowledge but the social and physical environment of which it forms an integral part.¹⁰

TK also has a strong practical component, since it is often developed in part as an intellectual response to the necessities of life; this means that it can have direct and indirect benefit to society more broadly. There are many examples of important technologies being derived directly from TK. But when others seek to benefit from TK, especially for industrial or commercial advantage, this can lead to concerns that the knowledge has been misappropriated and that the role and contribution of TK holders has not been recognized and respected. One of the challenges posed by the modern age is to find ways of strengthening and nurturing the roots of TK, even in times of social dislocation and change, so that the fruits of TK can be enjoyed by future generations, and so that traditional



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communities can continue to thrive and develop in ways consistent with their own values and interests. At the same time, TK holders stress that their TK should not be used by others inappropriately, without their consent and arrangements for fair sharing of the benefits; more generally, it leads to calls for greater respect and recognition for the values, contributions and concerns of TK holders.¹¹

A fundamental fact is that there is no concise definition of TK and it has been defined in so many ways depending upon the importance given to some aspects or not.¹² Although the lack of a concise and acceptable definition may not seem to be a hurdle, defining TK also sets the boundaries and contents of TK. The different jurists and International Organisations defined differently.

Catherine Colston defined TK as "Traditional knowledge (herein after called as TK) 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."¹³

The term "traditional" used in describing this knowledge does not imply that this knowledge is old or untechnical 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.

According to WIPO¹⁴ "traditional knowledge" comprises: tradition-based¹⁵ literary, artistic or scientific works; performances; 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.

The Convention on Biological Diversity (CBD) defines traditional knowledge as the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity.¹⁶

Traditional Knowledge means the collective knowledge of a traditional community of a family related to a particular subject or a skill passed down from generation to generation and include:¹⁷

1. Cultural products and practices from traditional communities such as weaving patterns, pottery, painting, poetry, folklore¹⁸, music, woods work, handicraft, jewellery, metal wares, musical instrument and the like;
2. Genetic materials discovered, selected, cultivated, domesticated, developed or conserved by traditional communities, regardless of whether they used or can be used in the development of new plant varieties or animal breeds or which can be harnessed for other potential users;
3. Agriculture produces and devices developed from indigenous or traditional material, customs and

knowledge by traditional communities;

4. All other products or processes not made by person which was discovered through a communities process, or when the person making the innovation does not claim the knowledge as his own or when the person has discovered it to be used openly for common purposes;
5. Discoveries, innovations and technologies made by communities that are usually not recorded in written form and are transmitted orally from generation to generation;
6. Method of protection of environment such as soil conservation, crop rotation, food grain, storage, water preservation and the like.

This definition of TK seems to be the consolidation of all definitions already defined by the various International bodies like FAO, WIPO, UNEP, CBD etc. The exact definition of TK cannot be possible because it varies from local customary laws of different countries. Despite of the fact the above definition of the draft legislation of IP Chair is plausible because it has tried to consolidate the definition of TK defined differently by various organizations and bodies. The very International debate was started because there were large numbers of cases came because of bio piracy like neem, turmeric, hoodia and basmati patents.

A number of cases relating to traditional knowledge have attracted international attention. As a result, the issue of traditional knowledge has been brought to the fore of the general debate surrounding intellectual property. These cases involve what is often referred to as the examples of *hoodia*, *turmeric*, *neem*, and *ayahuasca* illustrate the issues that can arise when patent protection is granted to inventions relating to traditional knowledge which is already in the public domain. In these cases, invalid patents were issued because the patent examiners were not aware of the relevant traditional knowledge. Here, the issue was not whether the patent should or should not have been granted, but rather on whether the local people known as the San, who had nurtured the traditional knowledge underpinning the invention, were entitled to receive a fair share of any benefits arising from commercialization. Partly as a result of these well known cases, many developing countries, holders of traditional knowledge, and campaigning organizations are pressing in a multitude of fora for traditional knowledge to be better protected. Such pressure has led, for example, to the creation of an Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore in WIPO. The protection of traditional knowledge and folklore is also being discussed within the framework of the CBD and in other international organizations such as UNCTAD, WHO, FAO and UNESCO. In addition, the Doha WTO Ministerial Declaration highlighted the need for further work in the TRIPS Council on protecting traditional knowledge.

Throughout the ages, people have worked together in communities for their survival. In the process, they have invented many survival

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mechanisms, expanded our knowledge of the world, and developed systems for the management of resources. Such knowledge systems are developed from experience gained over centuries and adapted to the local culture and environment. This traditional knowledge is transmitted from generation to generation. Traditional knowledge is mainly of a practical nature, relating to agriculture, fisheries, health, horticulture, forestry, and environmental management. But in present times the knowledge gained by such indigenous communities for their survival throughout the ages are at stake and it has become a subject matter of commercial exploitation by capitalists running big multinational companies.

The call for protection of TK against misuse or misappropriation raises deep policy questions and practical challenges alike. The changing social environment, and the sense of historical dislocation, that currently affect many communities may actually strengthen resolve to safeguard TK for the benefit of future generations. Just as the technological value of TK is increasingly recognized and its potential realized, the challenge is to ensure that the intellectual and cultural contribution of traditional communities is appropriately recognized. This means taking greater account of the needs and expectations of TK holding communities concerning the intellectual property system. Its traditional qualities and frequent close linkage with the natural environment means that TK can form the basis of a sustainable and appropriate tool for local development. It also provides a potential avenue for developing countries, particularly least-developed countries, to benefit from the knowledge economy.

It has sketched out some of the current directions this process is taking. It is a demanding set of tasks that need to be addressed with care and consultation. It requires respect for the values and concerns of traditional communities, as well as consideration of the full international policy and legal context, including a range of current international debates. Even new or expanded forms of IP protection would be inadequate to meet all the needs and expectations that have been voiced, but various forms of IP mechanism have been found to be practically useful. The current WIPO process aims at distilling the practical and policy lessons of a wide range of experience in many countries, with a view to building a shared policy perspective and effective practical tools.

The WIPO work is framing the core principles that should underpin the protection of TK. This offers a potential foundation for international legal development in the form of precise policy and legislative options for enhanced protection of TK through adapted or expanded conventional IP systems, or through stand-alone *sui generis* systems. This may in turn facilitate further development of an international consensus on the more detailed aspects of protection, as the lessons of practical experience in achieving these principles are better understood and shared. This should lead to strengthened linkages between the needs and interests of traditional

communities, and the core public policy principles of the IP system.

Objectives of the Study

1. To find out the relationship between IPRs and TK, specially the relationship between Patents and TK, Copyrights and TK, Trademark and TK, Geographical Indication and TK, Trade Secrets and TK.
2. To find out *sui generis* systems in CBD, WIPO, WHO, TRIPS and UNEP. It will also cover relationship between the *sui generis* and customary laws.

The Sufficiency of Indian Constitutional Provisions Vis-A-Vis The Protection of Their Tk

The Constitution of India nowhere confers specific rights that are related to the rights of the Indigenous communities to economic and social development. Therefore, one has to read into the provision of Article 21, which confers Right to Life, one of the most read into provisions. Right to Life does not refer to mere animal existence but life with human dignity.¹⁹ Therefore the indigenous communities have a right not to be displaced and disabled by actions robbing them of their customary rights so that they can live with basic human dignity. An important aspect of the right to life envisaged in Article 21 is right to livelihood. The rights to life is fundamental right of the people including the indigenous people whose livelihood are depend upon their very knowledge relating to tradition of which they protect and preserve from time immemorial and from generation to generation.

Article 39(b) enjoins a duty upon the state to direct its policy towards ensuring that the ownership and control of the material resources of the community are so distributed as best to observe the common good. The term 'material resources of the community' as used in the article includes everything that is capable of generating wealth for the community. The state should look into matters of adequate distribution and availability of raw materials, which have the potential to create wealth. Under Article 46, the State is under an obligation to see that Scheduled Tribes are not open to exploitation and deprived of their rights on account of their illiteracy and low status.²⁰

Part IV-A imposes a duty on the citizens to value and preserve the rich heritage of our composite culture; and to protect and improve the natural environment including forests, lakes and rivers, which are great reservoirs of indigenous knowledge.²¹ Thus, under this Fundamental Duties the citizens of this country are under Constitutional obligation to protect and improve the natural environment etc. It's embodied to protect the TK of the people which gained through generation to generation by protecting the natural resources of this country.

Article 40 of the Constitution, the state is expected to take necessary steps and *endow* powers with the Panchayats. The Constitution also states that a Gram Sabha may exercise such powers and perform such functions as the legislature of state may

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by law provide.²² With the enactment of The Provisions of the Panchayat (Extension to Scheduled Areas) Act, 1996 (PESA), the provisions of the Panchayat have been extended to the Scheduled Areas with exceptions and modifications as specified in the Extension Act.

One of the important features of PESA is that it acknowledges the *competence* of Gram Sabha, the formal manifestation of a village community, to 'safeguard and preserve the traditions and customs of the people, their cultural identity, community resources and the customary mode of dispute resolutions.'²³ As per this Act, a State Legislature shall ensure that the Panchayats at the appropriate level and the Gram Sabha are endowed *specially* with powers like ownership of minor forest produce, power to prevent alienation of land in Scheduled Areas and to take action to restore any unlawfully alienated land of a Scheduled Tribe, power to manage village markets, power to control over local plans and resources, among other things.²⁴

Thus, by virtue of Article 40, PESA has been enacted which recognizes the customary rights of the tribal people over use and enjoyments of the natural resources including TK of those people in the scheduled area. But despite of this, several laws has been enacted which interfere with the customary rights of those indigenous people which are creating dissatisfaction towards the democratic systems which leads to so many problems in tribal areas including problem of Maoist. So, it's high time to respect the customary rights of indigenous people within the legal framework of India.

The V Schedule deals with administration and control of Scheduled Areas and Scheduled tribes in any state other than Assam, Meghalaya, Tripura and Mizoram. The V Schedule, sometimes described as a Constitution within the Constitution, is the most comprehensive provision for the protection of the tribal people living in Scheduled Areas against the State and other exotic forces.²⁵ As per Para 2 and 3 of the Schedule and Article 60 and 159, it is the duty of the President and the concerned governors to preserve, protect and defend both the Constitution, including this special feature concerning the Scheduled Areas, and the law including the customs and usage of tribal people. Subject to only one condition, namely that it does not affect the basic structure of the Constitution, the governor is given immense power to apply or not to apply any Act to the Scheduled Area, and make regulations for peace and good governance of any area of the state, which for the time being is a Scheduled Area.

So, Indian Constitution also contains so many provisions to protect and preserve the TK of the indigenous people. Art. 21 is very broad and able to cover the rights of livelihood of the indigenous people. Apart from this Article there are so many provisions in Constitution which are able to protect the right of the tribal and TK citizens.

The Possibility and Feasibility of Protection of Tk May Under the Prevailing Iprs Systems

The growing global controversy over the protection of TK pits competing views about the entitlements of indigenous peoples, the purpose and place of IP rights, and the historical responsibilities of wealthy individuals and nations against one another. Proponents of TK rights often employ the rhetoric of theft and piracy to buttress their view that TK is, or ought to be, a form of property that receives protection under domestic and international law.

Intellectual property rights (IPR) are the legal rights given to a person over his/her creative Endeavour's and usually give the creator exclusive rights over the use of his/her creation or discovery for a certain period of time. IPR may include a patent, copyright, trademark, and trade secret. IPRs provisions lay down under the WTO regime and TRIPs agreement. The TRIPs recognizes and made to protect the very individual rights of the western and developed countries like the USA, its provision lack in protecting the interest of poor. IPRs provisions protect the interest of elite class who are on strongest bargaining footing whereas traditional knowledge is not individual rights and it is very based on the collective rights of the indigenous people who are generally not in a position to protect their own rights and are in weaker footing.

Traditional knowledge is being exploited at an alarming rate by the modern herbal medicine, pharmaceutical, food, perfume, and cosmetics industries. Indigenous and local people are increasingly becoming victims of piracy (illicit bio prospecting). The concern is that patents are being granted for non-original inventions that are directly or indirectly based on traditional knowledge and therefore do not meet the fundamental requirements for patentability.

The wound healing properties of turmeric, peculiar quality of basmati and the pesticidal properties of neem were both patented in three of the most notorious patent cases i.e. Turmeric Patent, Basmati Patent and Neem Patent, in which the legal patent system failed to recognize, or search for, prior rights over such 'inventions'. These patents were based on the biological resources and associated traditional knowledge and practices of indigenous communities in the Indian subcontinent and the Amazon, which were obtained without respect for indigenous peoples' rights over their resources, intellectual efforts, and developments. The holders of traditional knowledge need to establish their rights over such knowledge to ensure that they reap the benefits of their cultural discoveries and products and receive compensation for their investment in generating, holding, and promoting this knowledge for the conservation and sustainable use of biodiversity.

Unfortunately, modern intellectual property rights (IPR) law is based on the notion of individual property ownership, which is an alien concept to many indigenous and local communities in India. Such laws favour corporate agencies and individual creators of innovations/ products. Traditional knowledge is dynamic and is usually the combined effort of many community members and evolves over time; hence, it

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is not easy to identify the creator. Global IPR regimes as well as national IPR laws need to be amended to ensure the protection of traditional knowledge holders and to recognise and reward indigenous and local communities for their intellect and creativity. This would encourage further invention and maintain biodiversity in situ. But, it not practical because IPRs systems are based on the TRIPs agreement and India being member of WTO, bound to stick with the same. Thus it seems that the relation between IPRs and TK is confusing and conflicting and it requires special protection by domestic and international law by making the new consolidated and effective law. I have tried to cite some conflicting concepts between IPRs and TK below:

For the short-term, a combination of moral rights and copyrights, coupled with trademarks and geographical indicators can provide overlapping rights. For example, folklore can have a geographic indicator indicating the region of origin. It may also have a trademark as a mark of the tribe, group, or sometimes as a mark owned by the artist. The song, lyrics and tunes can also be protected under moral rights. Attempts to remix a song and other forms of tampering can be brought as violations under moral rights theories or under trade secret law.

Thus, it is high time for the protection of TK to enact new laws which consolidates all laws relating to TK in one place in lucid and easy language so that the aggrieved person can enable themselves to understand the concerned laws. In these ways they can protect their rights which are based on their TK.

Development of A Sui Generis System to Protect Tk

In some communities and countries, the judgments has been made that even adaptations of existing IP rights systems are not sufficient to cater to the holistic and unique character of TK subject-matter. This has led to the decision to protect TK through *sui generis* rights. What makes an IP system a *sui generis* one is the modification of some of its features so as to properly accommodate the special characteristics of its subject matter, and the specific policy needs which led to the establishment of a distinct system.

Sui generis systems alone may or may not be the way forward: they offer unique local means of protecting traditional knowledge that work for the local context. At the same time, they are at risk of being unenforceable outside of the country or region of origin and hence creating vulnerability to the bio-piracy that they are designed to prevent. For *Sui generis* systems to work there will need to be reciprocity among countries to respect one another's local *sui generis* regimes - a prospect that would seem somewhat distant in the prevailing international IP political environment.²⁶

Despite the great advances that they have brought about in protecting traditional knowledge of indigenous people, the *sui generis* laws still reflect certain inherited problems. For example, even though the benefits of a *sui generis* option are substantial for any country with a rich traditional knowledge heritage,

this option has certain inadequacies in coping with various matters such as the limited protection outside the country of origin, the diversity of the subject matter, the identification of the owner of the rights, the procedures and formalities for the acquisition and maintenance of the rights conferred and the limits imposed on the rights.²⁷ For example, *sui generis* law may create problems in identifying the owner of the knowledge if the knowledge belongs to more than one community or a particular territory or a region. Obviously, it may then become necessary to establish a system of geographical and administrative definitions of communities.²⁸

Despite all difficulties mentioned above I am of the view that the very purposes of IPR systems are different and it is not made for the protection of traditional knowledge of this country. India is one of the twelve-mega biodiversity countries of the world. With only 2.4 per cent of the land area, India already accounts for 7% to 8% of the recorded species of the world. Hence it is high time to save her own biodiversity for her own people by enacting her own law based on the notion to protect the TK of indigenous people. It is demand of the time to separate a *sui generis* system from the existing IPR system and it must be designed to protect the traditional knowledge of the local and indigenous communities of India. But while enacting its own *sui generis* law it is necessary to considered the below mentioned suggestions:

1. Objective of the law and purpose behind its enactment.
2. Specify the subject matter to be protected and it must not conflict with the IPRs.
3. Who will be the beneficiaries of protection?
4. What kinds of rights would confer to the beneficiary?
5. Method to protect their rights which should be less expensive and less time consuming.
6. How are the rights administered and enforced?
7. Constitutes the local bodies comprising the local communities to administered and protect their interest.
8. Constitutes the committees at State and National level to watch on the bio piracy by suo motu or on complaint made by local bodies, State Government and Central Government.
9. In case there is bio piracy at the International level the National Committee will tackle the matter to protect the interest of Indigenous people.
10. Must make mandatory about the prior informed consent of Indigenous people before it use.
11. Must specify the percentage of benefit sharing by considering the weaker footing of the indigenous people.
12. Specify the time limit as in every two years to make amendment in existing laws so that to meet the new changes and requirement.

It has been suggested here that these laws should be developed taking into account the particular cultural, social, political and economic diversity this countries. Both national and regional levels are more likely to

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succeed in and between states that possess similar cultures, economies, social status, and ecologies. Such an approach - one that acknowledges national diversity - would indeed optimize the possibility for cooperation among the all States within the territory of India to manage biodiversity to maximize the efficient use of resources, and to ensure that the benefits from their exploitation are fairly and equitably shared in the region.

Ability of the Existing International Legal Framework To Deal With the New Challenges To Protect Tk

The misuse of traditional knowledge has become a matter of international concern. Recognizing the value of traditional knowledge, countries in the region are playing an important role in the international discussions. The World Intellectual Property Organization (WIPO) and its Intergovernmental Committee (IGC) on Intellectual Property and Genetic Resources is moving forward with the traditional knowledge and folklore agenda. Representatives of indigenous/ local communities are increasingly becoming involved in discussions in international forums on intellectual property and traditional knowledge. ILO Convention 169 concerning indigenous and tribal people also responds to some of the growing demands of indigenous people in this area. The Convention on Biological Diversity (CBD) calls not only for parties to respect, preserve, and maintain the knowledge, innovations, and practices of indigenous and local communities as defined under Article 8(j), but also for the promotion and wider application of this knowledge with the approval and involvement of the holders of the knowledge. Article 8(j) further encourages involving local communities in the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices while ensuring the conservation and sustainable use of Biodiversity.

Article 9(1) of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) acknowledges the enormous contribution made by indigenous and local communities and farmers around the world to food and agricultural production from their traditional knowledge. The WIPO is in the process of developing a range of practical tools aimed at protecting the intellectual property (IP) interests of the holders of traditional knowledge and resources. In contrast, the TRIPS Agreement of the WTO only allows a legal entity to be granted rights to knowledge, which is not in harmony with the CBD or the ITPGRFA and poses problems for indigenous and local communities, as it is difficult to trace an inventor for traditional knowledge found within the community domain. The issue is being debated at the Council for TRIPS meetings.

The objective of the CBD is to regulate access to genetic resources and associated traditional knowledge through national legal systems. The process of addressing the issue of traditional knowledge at the international level has been slow, as has the development of an international access and benefit sharing (ABS) regime. During the Conference

of Parties in Curitiba, Brazil, (COP 8) the Open-ended Ad Hoc Working Group on Article 8(j) recommended that protection of traditional knowledge, innovations, and practices with regard to genetic resources are included in an international ABS regime, with input from indigenous and local communities with regard to their experiences of effective protection. The Working Group also discussed sui generis systems of protection. It recommended that parties to the CBD be urged to adopt national and local models for such protection, with the full and effective participation of indigenous and local communities and prior informed consent. The Working Group also presented the findings of the WIPO on the relationship between the TRIPS Agreement and the Convention on Biological Diversity. Further, the 9th COP held in Bonn, Germany, urged parties, governments and international organizations to support and assist indigenous and local communities to retain control and ownership of their traditional knowledge, innovations, and practices including through (a) the repatriation of traditional knowledge, innovations, and practices in databases as appropriate; and (b) supporting capacity-building and the development of necessary infrastructure and resources; with the aim of ensuring that (c) documentation of traditional knowledge, innovations, and practices is subject to the prior informed consent of indigenous and local communities; and (d) indigenous and local communities can make informed decisions regarding the documentation of their traditional knowledge, innovations, and practices.

At the International level so many meeting and committees has formed to protect the indigenous people's rights of TK, but all these initiatives are teeth less and having no effective force because the big violator of the indigenous people rights are not signed and ratified the CBD and The Cartagena Protocol on Bio safety and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits. The USA neither signed the CBD nor ratified it.²⁹

Conclusion

Two key demands on the IP system in particular have arisen in policy debate: first, the call for recognition of the rights of TK holders relating to their TK, and, second, concerns about the unauthorized acquisition by third parties of IP rights over TK. Two forms of IP-related protection have therefore been developed and applied:

1. Positive protection: giving TK holders the right to take action or seek remedies against certain forms of misuse of TK; and
2. Defensive protection: safeguarding against illegitimate IP rights taken out by others over TK subject matter.

Defensive protection can be valuable and effective in blocking illegitimate IP rights, but it does not stop others from actively using or exploiting TK. Some form of positive protection is needed to prevent unauthorized use. This is why a comprehensive approach to protection needs to consider positive and defensive protection as two sides of the same coin.

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For instance, publishing TK as a defensive measure may block others from patenting that TK, but it can also make the knowledge more accessible and put it in the public domain – this can, ironically, make it easier for third parties to use the knowledge against the wishes of the Traditional Knowledge holders.

The main focus of defensive protection measures has been in the patent system. Defensive protection aims at ensuring that existing TK is not patented by third parties, ideally, by ensuring that relevant Traditional Knowledge is taken fully into account when a patent is examined for its novelty and inventiveness. Normally, a claimed invention in a patent application is assessed against the so called “prior art” – the defined body of knowledge that is considered relevant to the validity of a patent. For example, if TK has been published in a journal before the applicable date of a patent application, it is part of the relevant prior art, and the application cannot validly claim that TK as an invention – the invention would not be considered novel. In recent years, concern has been expressed that TK should be given greater attention as relevant prior art, so that patents are less likely to cover existing publicly disclosed TK.

Traditional Knowledge Digital Library project (TKDL), an initiative of several Indian Government agencies, proposes to document the disclosed traditional medicinal knowledge available in public domain by sifting and collating information on TK from the existing disclosed literature covering Ayurveda. The TKDL compiles the information in digitized format in five international languages which are English, German, French, Japanese and Spanish. An interdisciplinary team of Ayurveda experts, a patent examiner, information technology experts, scientists and technical officers have worked for one and a half years for creating the TKDL of Ayurveda, Unani, Yoga etc. TKDL seeks to give recognition and legitimacy to the existing TK and enable protection of such information from getting patented.

The TKDL has an integrated global bio piracy watch system that allows monitoring of patent applications related to Indian medicinal systems. It enables effective detection of attempts to misappropriate this knowledge by third parties filing applications with patent offices around the world. It means that immediate corrective action can be taken, and at zero direct cost, to prevent bio piracy. India is the only country to date to have put such a system in place.

India is the only country in the world to have set up an institutional mechanism, the TKDL to protect its TK. The TKDL enables prompt and almost cost-free cancellation or withdrawal of patent applications relating to India’s TK. Till date the TKDL has enabled the cancellation or withdrawal of a large number of patent applications attempting to claim rights over the use of various medicinal plants. India’s TKDL is a unique tool that plays an important role in protecting the country’s traditional knowledge.

So, it’s high time to prepare proper documentation of associated TK, this would help in checking bio-piracy. It is assumed that if the

material/knowledge is documented, it can be made available to patent examiners the world over so that prior art in the case of inventions based on such materials/knowledge are/is readily available to them. It is also hoped that such documentation would facilitate tracing of indigenous communities with whom benefits of commercialization of such materials/knowledge has to be shared.

Footnotes

1. Knowledge refers to the sum of what has been perceived, either through a theoretical data base or through practical experience, which leads to an in-depth understanding of the issue at hand. Knowledge has always been a coveted possession, beginning in the old Stone Age when mankind evolved. However, the impact of technology and its importance was highlighted during and after World War II. This resulted in the realization that certain types of knowledge require protection for the benefit of the greater good, thus leading to rights over such knowledge. See also Oxford English Dictionary (7d ed. 2005).
2. The industrial revolution resulted in technology becoming a factor of growing importance in international trade and competition, particularly in the production of technology-intensive goods and services. Knowledge of new technology has become an important commodity, prompting a change in the format of intellectual property laws. See also Carlos M. Correa, “Intellectual Property, the WTO and Developing Countries: The TRIPS Agreement and policy options 3-4”, *Third World Network 2000*.
3. World War II caused countries to seek to build global economic relations, thus expanding global trade. The changing legal system prompted a recognition of the intellect as a property, making such intellectual knowledge (which is knowledge that was protect able on account of its importance) property. See also Susan Riley Keyes, “Process Patents: Protection and Weapon in the Global Marketplace”, 22 *Suffolk Transnational Law Review*, 715, 723-728.
4. The knowledge that was not protected by the rights vested under law remained in the public domain.
5. The societies that hold the traditional knowledge have demanded the recognition of their knowledge as an intellectual property. The developing and least-developed countries feel that this knowledge is being plundered by the West. The developed countries have refused to recognize traditional knowledge as an intellectual property. See also Craig D. Jacoby & Charles Weiss, “Recognizing Property Rights in Traditional Biocultural Contribution”, 16 *SELJ*, 74, 75-81 (1997).
6. Gurdial Singh Nijar, “Legal and Practical Perspectives on Sui Generis Options”, available at: <http://www.twinside.org.sg/title/generis-cn.htm>, last visited 18.03.2012.
7. *Ibid*.

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8. This form of protection focuses on the *use* of knowledge such as traditional technical know-how, or traditional ecological, scientific or medical knowledge. This encompasses the content or substance of traditional know-how, innovations, information, practices, skills and learning of TK systems such as traditional agricultural, environmental or medicinal knowledge. These forms of knowledge can be associated with traditional cultural expressions (TCEs) or expressions of folklore, such as songs, chants, narratives, motifs and designs.
9. See, Gopalakrishnan, "Impact of patent system on traditional knowledge", [1998] *Cochin University Law Review* 219, 220
10. WIPO, *Intellectual Property and Traditional Knowledge*, Book 2 available at: http://www.wipo.int/freepublication/tk/920/wipo/pub_920.pdf. last visited 12.03.2012.
11. *Ibid.*
12. In 2002, the International Council for Science (ICSU) defines traditional knowledge as "a cumulative body of knowledge, know-how, practices and representations maintained and developed by peoples with extended histories of interaction with the natural environment. These sophisticated sets of understandings, interpretations and meanings are part and parcel of a cultural complex that encompasses language, naming and classification systems, resource use practices, ritual, spirituality and worldview." According Barsh, "[w]hat is 'traditional' about traditional knowledge is not its antiquity, but the way it is acquired and used. In other words, the social process of learning and sharing knowledge, which is unique to each indigenous culture, lies at the very heart of its 'traditionality' Much of this knowledge is actually quite new, but it has a social meaning, and legal character, entirely unlike the knowledge indigenous people acquire from settlers and industrialized societies," Russel Barsh, *Indigenous knowledge, in spiritual and cultural values of Biodiversity* (D.A. Posey ed., 1999).
13. Catherine Colston, *Principal of Intellectual Property Law*, (Cavendish publishing limited, London, 2010).
14. WIPO, *Intellectual Property Needs and Expectations of Traditional Knowledge Holders: WIPO Reports on Fact- Finding Missions on Intellectual Property and Traditional knowledge (1998-1999)* at 25, available at: <http://www.wipo.int/tk/ffm/report/final/index.html>, last visited 14.03.2012.
15. "Tradition-based" refers to knowledge systems, creations, innovations and cultural expressions which: have generally been transmitted from generation to generation; are generally regarded as pertaining to a particular people or its territory; and are constantly evolving in response to a changing environment. It should be emphasized, however, that a precise definition of traditional knowledge is not a crucial requisite for establishing a system for its protection. (WIPO International Forum, *Intellectual Property and Traditional Knowledge: Our Identity, Our Future*, organized by WIPO and the Government of Sultanate of Oman, available at :http://www.wipo.int/arab/en/meetings/2002/muscat_forum_ip/iptk_mct02_i3.htm#P45_1606, last visited 14.03.2012.
16. Art. 8 (j), Convention on Biological Diversity, June 5, 1992. Art. 3(1) of Portugal's Decree-Law No. 118/2002 defines TK as: Traditional Knowledge is all the intangible elements associated to the commercial or industrial use of local varieties and other indigenous material developed by the local communities, collectively or individually, in a non-systematic manner and that are inserted in the cultural and spiritual traditions of those communities, including and not limited to, knowledge relating to methods, processes, products and denominations that are applicable in agriculture, food and industrial activities in general, including handicrafts, trade and services, informally associated to the use and preservation of local varieties and other indigenous and spontaneous material that is covered by the present law. Similarly Peru's Law No. 27811 through Art. 2(b) define with the name "collective knowledge" as the accumulated, trans generational knowledge evolved by indigenous peoples and communities concerning the properties, used and characteristics of biological diversity. So also Brazilian statutes Provisional Measure No. 2.186-16, of August 23, 2001) associated TK under Art. 7(II) as: Associated traditional knowledge: Information or individual or collective practices of an indigenous or local community having real or potential value as associated with the genetic heritage.
17. IP Chair, CIPRA- NLSIU, "The proposed Traditional Knowledge Legislation", available at: www.brainleague.com/files/NLSIU_TK_Bill_Draft.pdf, last visited 18.03.2012.
18. The traditional beliefs, practices, customs, stories, jokes, songs (etc.) of a people, handed down orally or behaviourally from individual to individual.
19. *Francis Corallie v. Union of India*, 1981 AIR 746; *PUDC v. Union of India*, 1982 SCC (3) 235.
20. Nidhi Srivastava, "Customary Law and the Protection of Indigenous Knowledge", *Research Project on Protection of Indigenous Knowledge of Biodiversity Briefing Paper 2*, November 2004.
21. Art. 51A, Constitution of India.
22. Art. 243 A, Constitution of India.
23. S. 4 (d) of PESA.
24. S. 4 (m) of PESA.
25. B.D. Sharma, *Tribal Affairs in India: The Crucial Transition*, at 514 (Sahyog Pustak Kuteer Trust, New Delhi, 2001).
26. See, Christine Padoch & Brian M. Boom, *Professional Ethics in Economic Botany: A Preliminary Draft of Guidelines* (Society for Economic Botany, 1996).

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27. See, IPTF Luncheon, "Is a *Sui generis* System Necessary: Benefit Sharing Agreements", available at: [http://www.iipi.org/speeches /New York011404.pdf](http://www.iipi.org/speeches/NewYork011404.pdf), last visited 12.03.2012.
28. See, G Westkamp, "Trips Principles, Reciprocity and the Creation of Sui-Generis-Type Intellectual Property Rights for New Forms of Technology" (2003) *Journal of World Intellectual Property* 830.
29. See, latest update available at: <http://www.cbd.int/convention/parties/list/>, last visited 27.04.2011 at 3.10 AM.