

PROTECTION OF TRADITIONAL KNOWLEDGE : A BRIEF ANALYSIS

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I. INTRODUCTION

India has a civilization of 5,000 years plus, with vastly divergent population spreads, ecological systems, geographical distinctions and cultural heritage. This centuries old living in harmony with nature, which is generally worshipped in its various Avatars has led to the development of various practices ranging from agricultural techniques, cultivation strategies, medicinal systems, culinary practices etc. But due to globalisation of production systems, increase in population, destruction of forests for agriculture and timber purposes, bio-diversity is declining at a rapid pace. Bio-diversity and associated traditional knowledge is also declining due to decreased motivation amongst the local communities to conserve and protect them. This is happening because of change in their life style as well as misappropriation of their resources and their knowledge. Misappropriation of traditional knowledge not only violates the rights of communities who conserved traditional knowledge but also adversely affects the conservation and sustainable use of the traditional knowledge and that of bio-diversity. The international community is debating the consequences of globalisation in its various dimensions in various forums. It is the responsibility of the same international community to debate the means of protecting and preserving traditional knowledge. In this regard, it is necessary to recognize and respect the rights of holders of traditional knowledge. Misappropriation of traditional knowledge and bio-piracy erode the rights of the traditional knowledge holders and adversely affect conservation and sustainable use of bio-diversity and associated traditional knowledge which stand as a glorious example of sweat, ingenuity and experimentation of previous generations of artisans, farmers, medicinal practitioners etc. The paper looks at the various aspects of law and policy issues as regards securing legal rights at community levels.

II. TRADITIONAL KNOWLEDGE (TK)

Traditional knowledge is a sum total of knowledge gained by application of generations of experience to survive in various lands and

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could be in the nature of cultural heritage, scientific knowledge and religious practices at the same time.¹

However, there is a fine line of difference between scientific knowledge of indigenous communities and the ritualistic practices adopted which could lead to scientifically acceptable results without there being an empirical understanding of the process leading to the said result. For example turmeric has been known to have medicinal value and has been used in antiseptic and other medical applications for centuries with the effects well documented in ayurvedic texts but it was neither categorized as an antiseptic nor there was any effort to analyze the inherent properties. This, therefore could mean that the use of turmeric per se was only in the nature of general purpose based on effects as a curative herbal remedy and not specifically as a herbal product with determined curative values and dosage.² This in essence allowed various companies to use extracts from turmeric and mix it in various proportions and come up with new products with similar effects in the markets allowing them to commercially exploit the medicinal value while obtaining a monopolistic rights over the product by securing patents on the same. Such usage is very common in pharmaceutical industry wherein every year millions of dollars are saved

¹ Mauro F, Hardison P.D., *Traditional Knowledge of Indigenous and Local Communities: International Debate and Policy Initiatives*, dated 7 September, 1999 published in website in Convention of Biological Diversity webpage <https://www.cbd.int/doc/articles/2002-/A-00108.pdf> retrieved Feb. 25, 2011.

² 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 USPTO 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 USPTO upheld the CSIR objections and cancelled the patent. The turmeric case was a landmark 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. Available on the Website <http://www.tkd.lres.in/tkd/lan/default/common/Biopiracy.asp?GL=Eng> retrieved 27 Feb 2011.

by narrowing the scope of research by placing reliance on traditional knowledge acquired by Indigenous communities and possibly generating huge revenues for individual companies whereas the communities themselves could scarcely take benefit from the same.

III. SECURING TRADITIONAL KNOWLEDGE

The indigenous rights to customary law, social organization, land tenure, collective land ownership, and customary practices were recognized by the UN International Labor Organization (ILO) in 1957 by way of the ILO Convention 107.³ However, these were conceived as individual rather than sovereign rights, and were promoted primarily to integrate indigenous peoples into the labor pools of the modern nation-state⁴. In his report titled “Study of the Problem of Discrimination against Indigenous Populations”, Lepage has concluded that “...states should respect traditional laws and customs; indigenous peoples should have control over their own lands and resources, with the right to communal land ownership and to manage land according to their own traditions; and such ownership and rights should be protected by national and international laws.”⁵

Traditional knowledge *per se* cannot be monetized like other intellectual property assets and therefore a feasible way of valuing the same cannot be conceived as the usage is diverse and transcends geographies and was developed over generations of trials and errors. Similarly, traditional knowledge is also closely linked to the local biodiversity and environmental conditions, hence it is important that in understanding the economics of traditional knowledge the most important factor will be the biodiversity from which it is derived. For instance, the global benefits from coral reefs including tourism, fisheries and coastal protection are estimated at some US \$ 30 billion per year; insect pollination of over 40 commercial crops in US alone at US \$30 billion per year, whereas the market for herbal drugs amounted to US \$47 billion in 2000.⁶

³ Refer the International Labor Organization webpage titled “Convention No. 107” posted on its official website at webpage titled <http://www.ilo.org/indigenous/Conventions/no107/lang—en/index.htm> retrieved 25 Feb2011.

⁴ Lepage, *Indigenous peoples and the evolution of international standards: A short history*, in M. Léger (ed.), *ABORIGINAL PEOPLES: TOWARDS SELF-GOVERNMENT* (Black Rose Books, Montréal, Québec, Canada, 1994) 1-24.

⁵ *Ibid.*

⁶ Convention on Biodiversity website on webpage titled ‘*Economics, Trade and Incentive Measures*’ available on <http://www.cbd.int/incentives/> retrieved on 27 Feb 2011.

There is an intimate connection between traditional knowledge and the rights of the indigenous communities as they are the most vulnerable to any exploitation of resources as may be required during the application of the traditional knowledge to the commercial activities. The need to provide protection for these communities was recognized by the United Nations based on which they formulated the 'United Nations Declaration on the Rights of Indigenous Peoples'⁷ also sought to affirm the community rights, protection of diversity of civilizations and cultures, protection from discrimination of any kind, and to respect and promote political, economic and social structures and their cultures, spiritual traditions, histories and philosophies, especially their rights to their lands, territories and resources.

IV. LEGAL AND POLICY FRAMEWORK

India has a rich cultural heritage, wide geographical multitudes and diverse climatic conditions and a genetically vibrant flora and fauna. All this is a valuable resource and should be respected as the same. But the legal framework has been pathetically obsolete and redundant in regard to the protection afforded to the said classes of assets. Even the most important heritages have only cursory references in the various legislative enactments. Lack of a strong framework and statutory enactments or enforcement mechanisms further contribute to the degeneration of the various facets of the traditional knowledge and lead to the indiscriminate commercial exploitation of the same at the hands of both private entities or multi-national corporations, without any passing of the benefits to the originators.

There is separate realms of traditional knowledge and patents, a segregation which finds explicit mention in section 3 and 25 of Patents Act, 1970. Sec 3 (p) of the Patent Act 1970 for instance maintains inter alia that an invention which in effect and essence, is a traditional knowledge or which is and imply an aggregation or duplication of known properties of traditionally known component shall not qualify as an invention, under the Act and hence shall not be eligible for protection thereunder.

In the same vein section 25 (2) of the Patent Act 1970, which pertains to the various grounds for post grant opposition of a patent, specifically mentions that any interested person may, so oppose a patent

⁷ Adopted by the General Assembly vide the General Assembly Resolution 61/295 on 13th of Sep. 2007.

(i.e. even after being granted) on the ground that the invention claimed was anticipated having regard to the knowledge, oral or otherwise, available within any local or indigenous community in India or elsewhere.

Emergence of traditional knowledge digital library provides information on traditional knowledge existing in the country, in languages and format understandable by patent examiners at International Patent Offices (IPOs'), so as to prevent the grant of wrong patents. Traditional Knowledge digital library thus, acts as a bridge between the traditional knowledge information existing in local languages and the patent examiners at IPOs.

India fought successfully for the revocation of turmeric and basmati patents granted by USPTO and neem patent granted by EPO. As a sequel to this, in 1999, the Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH) erstwhile Department of Indian System of Medicine and Homeopathy (ISM & H) constituted an interdisciplinary Task Force, for creating an approach paper on establishing a Traditional Knowledge Digital Library.

V. COMPARISON OF TRADITIONAL KNOWLEDGE & INTELLECTUAL PROPERTY RIGHTS

Traditional knowledge is different from other forms of intellectual property because IPR secures rights for a person (which could be an individual or a corporate entity), traditional knowledge secures such rights for a community.

Some of the differences between traditional knowledge and IPR (in general) happens to be are enumerated hereunder:

- 1) IPRs in general are distinguishable from traditional knowledge in the sense that they have to register (barring a few exceptions) with some authority, and they lapse after a period of time based on the governing laws, whereas traditional knowledge is inherent and continues for generations.
- 2) IPRs are generally specific and can be boiled down to particular usages, goods or such other forms of commercially viable products, whereas traditional knowledge is basically more sublime in the

sense that it is basically derived from generations of experimentation, and could be understood as mere common-sense by the communities.

- 3) IPRs also identify the beneficiaries in clear ways based on the person who actually files, whereas the definition of the community will identify the scope of the beneficiary.
- 4) IPRs can be crystallized in strict pecuniary terms, whereas the scope is much wider as far as traditional knowledge is concerned as for many communities it may be their only means of subsistence.
- 5) IPRs grant monopoly rights for usage of knowledge whereas traditional knowledge grants community rights over knowledge.

VI. ECONOMIC DIMENSIONS

Traditional knowledge is enabling in nature, in the sense that it secures economic rights as regards usage at community levels. Commercially viable traditional knowledge can alleviate poverty; bring about community development while contributing to the GDP. It may build viable sustainable development at grass-root levels; lead to major discoveries in medicine and foods; and aid in ecological conservation drives. It is the best way of targeting the bottom of the pyramid users. New products may be developed, basically herbal/vegetable origin which might still be unknown/undiscovered. It can harmoniously integrate industry with community, and create a mutually viable symbiotic relation. The TRIPs Agreement⁸ should be used not only to reward the inventions but also the local communities who have conserved and developed knowledge which provides valuable base for such inventions. Bio-piracy and patenting of indigenous knowledge is a double-theft because first it allows theft of creativity and innovation and secondly the exclusive rights are established by patents which preclude benefit sharing with the indigenous communities and monopolizes the benefit to the owner of the patent.

⁸ Text of the Agreement available on the World Trade Organization webpage at http://www.wto.org/english/tratop_e/trips_e/t_agm0_e.htm retrieved on 27 Feb 2011.

VII. PROTECTING TRADITIONAL KNOWLEDGE – INTERNATIONAL DIMENSIONS

Due to the globalization of trade and increase in population, destruction of forests for agriculture and timber, bio-diversity is declining at a rapid rate. Along with biodiversity, associated traditional knowledge is also declining due to the lack of understanding as regards the importance of the protection of traditional knowledge amongst the local communities to conserve and protect them. Misappropriation of traditional knowledge not only violates the rights of communities who conserve traditional knowledge but also adversely affects the conservation and sustainable use of traditional knowledge and that of biodiversity. In order to address this present problem traditional knowledge is being discussed in various international forums. Foremost among these are those related to the conservation and sustainable use of biodiversity, namely the International Undertaking on Plant Genetic Resources for Food and Agriculture (now the FAO International Treaty) and the Convention on Biological Diversity (CBD). Fair and equitable sharing of the benefits arising out of the utilization of genetic resources is one of the primary objectives of the Convention on Biological Diversity. The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity⁹ is an international agreement which aims at sharing the benefits arising from the utilization of genetic resources in a fair and equitable way, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding, thereby contributing to the conservation of biological diversity and the sustainable use of its components. It was adopted by the Conference of the Parties to the Convention on Biological Diversity at its tenth meeting on 29 October 2010 in Nagoya, Japan.

The problem of conservation and sustainable use of traditional knowledge is also addressed in arenas related to the rights of indigenous peoples (International Labour Organization, United Nations Commission

⁹ The text of the Convention is available at the official website of Convention on Biological Diversity at [http://www.cbd.int/cop/cop-10/doc/advance-final-unedited-texts/advance-unedited-version-ABS-Protocol footnote-en.doc](http://www.cbd.int/cop/cop-10/doc/advance-final-unedited-texts/advance-unedited-version-ABS-Protocol%20footnote-en.doc) retrieved on 27 Feb 2011.

on Human Rights, United Nations Permanent Forum on Indigenous Issues), intellectual property (World Intellectual Property Organization, WIPO) and culture (United Nations Educational, Scientific and Cultural Organization). To take one such instance, the UN Commission on Human Rights has established the Working Group on Indigenous Populations (WGIP). The WGIP reviews the evolution of standards concerning the rights of indigenous peoples, provides a forum where they can express grievances, and promotes the protection of their rights. More recently, traditional knowledge has become a topic of discussion in trade-related forums such as the World Trade Organization (WTO) and the United Nations Conference on Trade and Development (UNCTAD).

As traditional knowledge is a very complex issue, each forum allows focus on a particular facet. However, there are some risks of confusion or lack of coordination among forums and agencies. Developing country governments in particular may find that they cannot be fully engaged in all forums and thus must focus on one or two where they think the pay off will be the greatest. While many consider the CBD to be the forum most sympathetic to their perspective, WIPO has technical expertise on intellectual property rights (IPRs) and WTO with its dispute settlement mechanism "has teeth". One thing that has come out of the internationalization of the whole issue is that nowadays violation of traditional knowledge has renewed the debate to protect rights of indigenous communities regarding the protection and preservation of their rights.

VIII. CONCLUSIONS

There is a need for implementation mechanism to prevent instances of bio-piracy. Local and indigenous communities should be called upon to exchange information on national system to protect traditional knowledge and to explore minimum standard for an internationally recognized sui generis system for traditional knowledge protection. The following suggestions may be considered for the aforesaid sui generis system:

- Policy implementation efforts for securing traditional knowledge by creating a viable mechanism.
- CBD an excellent example of underused policy, which should be used as a background for the development of statutory provisions for protection of traditional knowledge at national levels.

- Bureaucratic inaction is a major hurdle in securing and understanding the vast amount of traditional knowledge levels. A committed mechanism to ensure the specific needs of the traditional knowledge is required to proactively approach the various regions and to syndicate the traditional knowledge into a coherent available database.
- Traditional knowledge syndication efforts should be localized and integrated at national levels.
- Strong need for credible commitment to share the benefit by strengthening incentives to improve informed settlement, build infrastructure, business and lessen conflict.