

Traditional Knowledge: History and legal aspects of health and IPR

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Abstract

Traditional knowledge has been influenced largely by sex, age and occupation. Talking about accessibility, health has been overlooked aspect of the right to health. Without accessibility right to health becomes non influential. The commitments of government to provide equality of access to health care for all and have stated the need of users view. The main findings of this particular research was that minority amount of people, especially teenagers, has health problems which are not met by existing system and the main reasons are lack of services, because of unsympathetic staff, lack of confidentiality. United nation human right commission and world health organization (WHO) have acknowledged accessibility as human rights and have assured that in recent especially in 21st century traditional medicine has its effective relevance in public health in developed and developing country. Keeping the factors like diversity, easy accessibility, low cost, less technological interference, comparative less side effects and growing economic importance of traditional medicine there is a need to mainstream traditional medicine. This paper discusses about the oldest medical text, Ayurveda, its significance, lost grounds because of the various factors like evolvement of technology, globalization, and depletion of natural resources.

Intellectual property rights being a powerful tool help in economy growth and country's development in general. A knowledge revolution has been arrived demoing a special pedestal for intellectual property. Each product whether in technological sector, health sector , pharmaceutical sector etc., has been concentrated upon patent , copyrights or trade secret for traditional knowledge that govern each product categorizing in different field of science and technology . Traditional knowledge helps to provide platform to maintain a continuous stream of new ideas and experimentations, public -private partnership. Intellectual property rights included TRIPS which requires signatories to make it easier for the citizens and others to obtain and enforce IP rights. In recent years India has made robust

progress not only in implementing its obligations under the WTO Agreement on TRIPs Rights, but also in developing its own IP regime which endeavors to balance the trade-off between monopoly rights and free access to knowledge. To discuss the issue related to health care, accessibility and human rights requires an understanding of the complex relation between culture, policy, economics, environments and other natural technology. This paper examines the entire health care system and its human right management where conclusive study about the system and all the policy of traditional knowledge and people linkage with biodiversity has been addressed. This paper addresses about how we can improve access to care for children and pregnant women and also focuses on administrated review article, agreements and arguments related to various protection of traditional knowledge concentrating on emerging intellectual property. It is a review of the detailed analysis about how and why there is need for protection of the traditional knowledge. The author of this paper believes that taking traditional knowledge for health and welfare for global humanity is of great importance and needs to be protected under IPR.

Introduction

The era of technology immensely influenced today's human well-beings but with immense advances in human well-beings there also exist extreme deprivation in various parts of the world in this 21st century³. Traditional knowledge basically refers to knowledge, practices and innovation of local and indigenous communities around the world and it has been developed from experience and adapted to the local community and is transmitted from generation to generation. It is the integral part of the local communities at large and is the key component of social and physical environment of the community. For proper access to health care it has been appropriately acknowledged as a human right through international giants such as the United Nations Human Rights Commission, Millennium Development Goals (MDGs) and the World Health Organization (WHO).

Modern human right is based on universal values. It doesn't mean that the concept of human right is new to traditional society. There is scope to explore the areas of convergence and divergence between traditional rights and modern human rights, for example food. For development to take place it must draw from the cultural frame of reference of people for whom development is intended. Access to food have been traditionally influenced as all over the world throughout the history has been determined by traditional institutional system by the regulated power relationship within the societies and established entitlements of foods and goods. Such system is very much in the society and can be explored within countries along ethnic, tribal and religious and other lines. Alfred Marshall believed that with advancements in technology, commodities alone would no longer be the primary factor in determining the real value of money: "But if inventions have increased man's power over nature very much, then the real value of money is better measured for some purposes in labour than in commodities."⁴ Traditional knowledge is used to sustain the community and its culture and to maintain the genetic resources necessary for the community's survival and also includes inventories of local biological resources.

³World Health Report 2006— accessed on 28th August 2009.

⁴ Ankit Prakash, India: IP Value 2009: Recent Developments in Intellectual Property, available at <http://www.mondaq.com/article.asp?articleid=76022>.

Biological resources and related traditional knowledge is of greater commercial values especially in developing products. The creation of an integrated health care system is especially necessary in countries like India, where the population possesses a strong commitment and connection to the natural health remedies that traditional medicine offers. The creation of a health care system that incorporates both traditional and allopathic health practices can lead to further discoveries of new medical treatments, the conservation of biodiversity, improvements upon both traditional and allopathic remedies, and ultimately, a higher achievement of satisfying the goal of any health care system – providing exceptional health care to all especially teenagers and women's.

History and traditional indigenous medicines and current scenario

Globally in order to improve their health conditions there have been an increasing numbers of people who have opt for herbal medicines or products. All over the world herbal “renaissance” is occurring. According to the World Health Organization, 80% of the world's populations are using herbal medicines for basic healthcare and the responses have been tremendous with effectiveness of the herbs/plants use. In fact many pharmaceutical drugs are derived from nature and traditional remedies and followed around the globe. Nation like china, India and Arabic nation use the most of the indigenous medicines especially by the usage of herbs and have their significant contribution to the health services in the over-populated and aging society with the growing demand for herbs and increased depletion of the plant resources. Herbalism is a traditional prepared medicine by use of the plants and their extracts. There are about 350,000 species of existing plants out of which 287600 have been recognized as of 2010.⁵ The medicines are also termed as *phytomedicines* or *phytotherapy*, botanical medicine herbal materials etc.⁶

⁵“Botanic gardens conservation international,” 2013 (Chinese), http://www.bgci.org/index.php?option=com_content&id=2016&status=published.

⁶Media Centre. Traditional Medicine, 2013.

According to the archeological survey it has shown that the practice of herbal medicines has been from 60000 years ago in Iraq and 8000 years ago in china⁷⁸. Because of the lack of scientific evidence it has been questioned and challenged by various medicine practitioners despite of its effectiveness and long history. But because of the side effects of the chemical drugs and lack of effectiveness in curing several diseases and more costly medicines, traditional medicines are back with more popularity. Nowadays practitioners of conventional medicine also advise for herbal medicines and product to their patients for effective treatment. There was a survey in 2007 which shows that about 40% of adults and 11% of children used CAM therapy i.e. complementary and alternative medicine especially for breast cancer⁹. In china traditional medicine, TCM, are originated from plants, animal parts/insects, minerals and crude synthetic compounds and are prescribed even by Chinese practitioners. It also has been preferred over folk medicines. Chinese herbal medicine, CHM, is extremely valuable, rich, lengthy, and have extensive treatment history and was coined 5000 years ago. Indian medicine or Indian herbal medicine is also called Ayurveda medicine and belongs to the traditional health care systems. And according to Indian culture “everything can be a drug” and traditional medicine in India by using plant resources for treatment of diseases as been started well back from 6000 to 4000 BC. The oldest text of Ayurveda medicine, the *Rasa Vaisesika of Nagarjuna*, was composed during the 5th century and it consists of various concepts of drug composition.¹⁰ Currently 70% of Indians still rely on traditional medicine for primary health care.

Two most upfront countries manufacturing traditional medicine are china and India as Chinese Herbal Medicine and Indian Herbal Medicine.

⁷A. Leroi Gourhan, “The flowers found with Shanidar IV, a Neanderthal burial in Iraq,” *Science*, vol. 190, no. 4214, pp. 562–564, 1975.

⁸“Neolithic site of the cross-lake bridge,” 2013 (Chinese), <http://baike.baidu.com/view/1464263.htm>.

⁹P. M. Barnes, B. Bloom, and R. L. Nahin, “Complementary and alternative medicine use among adults and children: United States, 2007,” *National Health Statistics Reports*, no. 12, pp. 1–23, 2008. View at Google Scholar

¹⁰“Nagarjuna,” 2013, <http://plato.stanford.edu/entries/nagarjuna/#PriLit>.

Chinese Herbal Medicine

Chinese herbal medicine, CHM, first described by legendary *Shen-Nong* said by tasting hundreds of herbs on one day found more than 70 herbs that had medicinal value, selected those that were suitable as remedies, and described their properties.¹¹ CHM has been influencing the world since ancient times and Chinese medicine, *panax quinquefolium*, discovered in 18th century also possesses *neuroprotective*, *cardioprotective*, *antidiabetic*, *antioxidant*, and *anticancer* properties and also has the ability to alleviate symptoms of the common cold.^{12,13} More than 40 forms of CHM products are available in the market which include decoction (*hot water extract*), *tincture (ethanol extract)*, *powders*, *pills*, *granules*, *tablets* etc. Recently “*nanomized*” and “*aerosol*” herbs have emerged as new forms of CHM.¹⁴ More than 8000 varieties of CHM or related traditional medicine products are now imported from china to 130 countries and recently china has put a great effort of humans and in financial resources to promote research and development in the area of CHM in a system.

Indian Herbal Medicine (IHM)

In India when we talk about traditional knowledge medicine come foremost with its diversity of nation and especially so rich in flora and fauna. Traditional Indian medicines are also called Ayurveda medicine belonging to the longevity system. Ancient Indian sacred collection *Rig veda* shows all the references to plants, mineral and animal product with their usage for traditional medicine and especially *bhava prakashais* the most important written text on herbs and is held at very high esteem

¹¹D. Kuang, “Agricultural advance by Yandi Sennongshi and Hunan ancient rice culture,” *Agricultural Archeology*, vol. 1, no. 1, pp. 129–141, 2000.

¹²L.-W. Qi, C.-Z. Wang and C.-S. Yuan, “Ginsenosides from American ginseng: chemical and pharmacological diversity,” *Phytochemistry*, vol. 72, no. 8, pp. 689–699, 2011.

¹³S. Kuhle, J. K. Seida, and T. Durec, “North American (*Panax quinquefolius*) and Asian ginseng (*Panax ginseng*) preparations for prevention of the common cold in healthy adults: a systematic review,” *Evidence-Based Complementary and Alternative Medicine*, vol. 2011, Article ID 282151, 7 pages, 2011.

¹⁴Z. Y. Tang and G. W. Ling, “Advances in studies on nano-Chinese materia medica,” *Chinese Traditional and Herbal Drugs*, vol. 38, no. 4, pp. 627–629, 2007 (Chinese).

in modern Ayurveda.¹⁵ Approximately 25000 plant-based methods are used in traditional medicines and 2000 of which is used in Ayurveda. Special herbal preparations, known as *Rasayans*, are used for rejuvenation and retarding the aging process, thereby promoting longevity¹⁶. Many plants which are valuable are on the verge of extinction. The *Red Data Book of India* in 2000 has 498 entries of species which are endangered and similarly released in 2012 shows 4000 species critically endangered and 5788 as endangered and more than 11000 vulnerable.¹⁷ Indian traditional medicine manufacturing process is very different compared to the other products and the ingredients used in the manufacturing plays very important role in breaking down the chemical compounds and forming the products that is valuable to the people, for example, *shodhana* (purification), *gomutra* (cow's milk) for *shodhana of vatsanabha (aconitum ferox wall)* and *Godugdha* (cow's milk) for *kupeelu (strychnos nux-vomica Linn.)*¹⁸. Ayurvedic drug are usually taken orally such as honey, sugar, ghee, milk etc. These drugs can improve acceptability and help in absorption of the main herbal remedy and can also act as an antidote. India not only plays an important role as a supplier of herbal products for domestic market but also it has its tremendous benefits in overseas markets. In India the turnover of IHM industry is estimated to about Rs 90 billion.

Accessibility

In developing countries more than 50% deaths are due to five infectious diseases. According to WHO 2002 report common communicable diseases are common in areas where access to modern drugs is limited. In the developing countries TCAM continues to be comparatively inexpensive though it is feared that a technology

¹⁵P. V. Prasad, "Atharvaveda and its materia medica," Bulletin of the Indian Institute of History of Medicine (Hyderabad), vol. 30, no. 2, pp. 83–92, 2000.

¹⁶K. Ramakrishnappa, "Impact of cultivation and gathering of medicinal plants on biodiversity: case studies from India," in Biodiversity and the Ecosystem Approach in Agriculture, Forestry and Fisheries, FAO, 2013, <http://www.fao.org/DOCREP/005/AA021E/AA021e00.htm>.

¹⁷A. Chaudhary and N. Singh, "Herbo mineral formulations (Rasaoushadhies) of Ayurvedia an amazing inheritance of Ayurvedic pharmaceuticals," Ancient Science of Life, vol. 30, no. 1, pp. 18–26, 2010.

¹⁸R. Ilanchezhian, J. C. Roshy, and A. Rabinarayan, "Importance of media in Shodhana (purification/processing) of poisonous herbal drugs," Ancient Science of Life, vol. 30, no. 2, pp. 54–57, 2010.

intensive production process would make TCAM unaffordable. For the health sector to improve, measures such as improving physical and economic access, preventive strategies, wellness management, promotion of best and essential practices in both communicable and chronic diseases, increased cooperation between various medical systems, sustainable natural resource use, protection of intellectual property rights, and equitable transactions are vital.

Judicial approach: Intellectual property right and Human rights

Intellectual property rights have been recognized under Article 27 of the UDHR¹⁹ in human right treaties and Article 15 (1) ICESCR²⁰ and are considered them as the intellectual property provisions. Human rights and IPR are of very different nature. In the report of the High Commissioner for Human Rights said that the human rights take control over the economic interests of intellectual property and repeated that human rights protection is the primary objective of the states²¹. The place where general public can seek help for the protection if implementation of TRIPS agreements through national policy violates their rights is judiciary. For example, the Indian judiciary has been enthusiastically carrying the task of expanding the area of human rights and judicial activism has also become a tool that prevent unconstitutional provisions in the laws violating fundamental rights of the citizens. The WTO officials also should approach TRIPS through the human rights view and accordingly illuminate the TRIPS provisions. Although, WTO is not the best place to negotiate TRIPS rules, as it is stage to discuss trade issues and not human rights.

¹⁹ Universal Declaration of Human Rights, Article 27(2), states that “everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he or she is the author.”

²⁰ International covenant on the economic, social and cultural rights, Article 15 (1)(c) states that “the States Parties to the present Covenant recognize the right of everyone: To benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.”

²¹ See Intellectual property rights and Human rights, sub commission on Human rights resolution 2001/21, available at <http://www.unhchr.ch/Huridocda/Huridoca.nsf/%28Symbol%29/E.CN.4.SUB.2.RES.2001.21.En?Opendocument>

India is a member of the International Covenant on Civil and Political Rights (ICCPR), International Covenant on Economic, Social and Cultural rights (ICESCR) and TRIPS. It has adopted international human rights obligations in the Constitution. The Indian Constitution guarantees fundamental rights to every citizen including the right to life and personal liberty²². India has always been one of the foremost runners in putting forward the issues related to TRIPS.

Most international human rights law fails to notice the access to health because the right to health indirectly addresses how that right is to be fulfilled. The right to health states that everyone should have equal access to health, but does not address the specific issues of access, guarantees to access, and does not explain what access demands.

Traditional practices in the area of mother and child health

traditional systems of medicine exist in India not only in the form of the organized sector - that is *Vaidyas*, *Hakims* etc. who are trained in the colleges of Ayurveda, *Unani* and *Siddha* systems of medicine but also in the form of the widespread Lok Swaasthya Paramparaas - that is local health traditions. There is a great range, variety and multiplicity of these traditions. These may cover an entire spectrum of practitioners the housewife or grandmother who is at handling home remedies, the Dai or the traditional birth attendant, the folk or tribal local health practitioners (known by various names in different parts of India - *Vaidu* in Maharashtra, *Vaidhyan* in Tamil Nadu, *Dhami* in Sikkim etc.), some families which specialize in treating single diseases as well as certain practitioners who are adept in highly specialized areas such as bone setting, *VishaChikitsa* (treatment of poison), etc. Besides such practices which come under the category of "treatment", there are also a variety of practices which are part and parcel of our daily existence which help in maintaining good health. These may include knowledge of properties of various foods - what to eat and what to avoid in some seasons and in some disease conditions etc., cultural practices such as periodic fasting, sports, games and

²²See Indian const. Art. 21 ("No person shall be deprived of his life or personal liberty except according to procedure established by law.")

exercises including the practice of Yoga for maintaining normal health, adopting of food and life style according to a seasonal regimen (*rutacharya*) - to name a few.

Government has (however grudgingly) taken note of the existence of local health practitioners, namely, Dais. Dai training is now an essential part of the maternal and child health programme of not only in India but over 50 other countries. It is estimated that there are about 6 lakhs dais in India who give birth to the majority of child and use traditional methods in rural India.

Lok Swasthya Farampara Samvardhan Samithi, LSPSS, had decided to hold a National Convention on the theme of Traditional Practices in the area of Mother and Child Health. It was felt that there is a need to obtain detailed information on various prevailing traditional practices relating to Mother and Child Health. It "was decided that the survey would be in the nature of an in-depth interview for which purpose a questionnaire in three parts was prepared, the 'questions pertaining to -

1. Ante-natal care
2. Practices of the Dai and
3. Post-natal care of the mother and child.

Ayurvedic treatment of pregnant woman

Comprehensive theoretical frame work is been provided in Ayurveda and various suggestions regarding the care of the pregnant woman. Related to which various observations have been made by Ayurvedic Acharyas which are very pertinent (LSPSS, 1989). The importance of massage during pregnancy has been put forward as the most important in Ayurveda. It is said that it can help in a normal delivery by massaging the body with *kaphahara* drugs in the upward direction. Sexual intercourse is also prohibited during pregnancy as it involves sudden pressure on the abdomen. Regarding food Ayurveda suggest the foods having *Mad-hurarasa* and taking more fluids. Dry, hot, spicy, heavy foods are avoided. In the time of the deliver labour takes place in darkened room where lights and shiny objects are taken away because it is believed that Tetanus is caused by the reflected light. Various delivery positions have been tried. Generally it has been observed that during the delivery the woman is in a reclining position. Although several variations like the

squatting position has also been observed and also examined the logic of various delivery position.

Traditional health policy measures

Traditional medicine strategy of WHO has highlighted the urgent need of national, international policy and regulation for the safety and quality access and rational use of the traditional medicines. As of 2012 only 66 countries out of 213 WHO member states have traditional policies whereas 43 states have some kind of legislation and 20 out of which are in process of establishing some of those traditional regulatory policy. Some of the key elements suggested in national policy are:

- Definition of TCAM (Traditional complementary and alternative medicine)
- Government role in developing TCAM
- Provision of safety and quality assurance for therapies and products
- Legislation related to TCAM providers
- Provision of education and training of traditional practioners
- Coverage of public health insurance and consideration of intellectual property rights.

However in most countries there are no record for modalities and outcomes of the traditional medicine usage²³. Increased implementation of the national policies would facilitate creation of internationally accepted standards for research into safety and efficacy of TCAM and use traditional medicinal knowledge. Countries like India and china have developed traditional medicine sector and strengthen medical heritage and also its cost effective in health accessibility.

Economic benefits of TCAM

The world market of traditional herbal medicine is around 60 billion dollar ²⁴ and growing rapidly. The spa industry based on TCAM is valued around 225 billion dollar annually. Many major modern drugs like quinine, salicylic acid, artemisinin

²³In the National Policy on Indian Systems of Medicine & Homoeopathy of 2002, folk healing or local health traditions was recognized for the first time—http://www.whoindia.org/LinkFiles/AYUSH_NPolicy-ISM&H-Homeopathy.pdf.

²⁴ WHO 2002

have been discovered from folk knowledge²⁵. According to NAPRALERT database of the University of Chicago²⁶, 74% of the 119 pure compound based drugs are derived from plants and are based on the data provided by traditional medical knowledge and are similar to the traditional ones. The economic importance of traditional knowledge is based on the products and services and is growing as they provide employment opportunity to various sections of people. At the same time it raises concerns about availability of medicinal plants, increasing costs of herbal products in domestic market especially for marginalized population and a dilution of classical practices.

Policies related to Indigenous people, traditional knowledge (TK), and biodiversity following TCAM policies.

- The United Nations Declaration on the Rights of Indigenous Peoples of 2007²⁷, article 24, it is about right to use traditional medicines.
- The Convention on Biological Diversity (CBD) 1992²⁸,
- Indigenous and Tribal Peoples Convention (ILO) 1989²⁹,
- International Treaty on Plant Genetic Resources (FAO) 2001³⁰,
- UN Declaration on the Rights of Indigenous Peoples (UNPFII) 2006, the Convention for the Safeguarding of Intangible Cultural Heritage (UNESCO) 2003³¹)

²⁵See also <http://www.ncbi.nlm.nih.gov/pubmed/1490916> (The Quinine connection), <http://www.ncbi.nlm.nih.gov/pubmed/18175528> (From the willow to aspirin), <http://www.ncbi.nlm.nih.gov/pubmed/18699744> (Artemisinin).

²⁶Natural Product Alert Database—<http://www.napralert.org/>.

²⁷<http://www.un.org/esa/socdev/unpfii/en/drip.html>—Article 24—Indigenous peoples have the right to their traditional medicines and to maintain their health practices, including the conservation of their vital medicinal plants, animals and minerals. Indigenous individuals also have the right to access, without any discrimination, to all social and health services

²⁸Convention on Biological Diversity (CBD)—see article 8J—<http://www.cbd.int/traditional>

²⁹Indigenous and Tribal Peoples Convention (ILO)—see article 25—<http://www.ilo.org>

³⁰International Treaty on Plant Genetic Resources (FAO)—see article 9—<ftp://ftp.fao.org/ag/cgrfa/it/ITPGRe.pdf>

³¹United Nations Educational, Scientific and Cultural Organization (UNESCO)—see <http://unesdoc.unesco.org/images/0013/001325/132540e.pdf>

These are some of the major global giants that look upon the issues related to traditional knowledge. The Convention on Biological Diversity signed by 191 countries calls for the need to respect, preserve and maintain traditional cultures and encourage customary use of biological resources in line with compliance of sustainable use and conservation; need to ensure equitable sharing of benefits among TK holders who have contributed to a research process; and the need to obtain prior informed consent of providing parties to access biological resources and related knowledge on mutually agreed terms between the parties. Similarly WIPO in conjunction with UNESCO has developed a *sui generis* model for intellectual property type protection of traditional cultural expressions.

Emerging challenges

Although there have been many international and national policies for traditional knowledge especially medicine:

- But the progress of their implementation has been very slow.
- These policies do not meet adequate working of the concerns related to TCAM.
- Lack of scientific evidence.
- Problems in ensuring quality and equal use.
- Lack of understanding of socio-cultural context of their practice and usage.
- Protection of intellectual property rights of TK holders
- Innumerable issues relating to developing an adequate and appropriate protection of traditional knowledge under IPR.

Any knowledge which living body possess, developed, sustained and passed from one generation to another within community forming a part of a cultural demarcation. There is a constant threat of losing the originality of a knowledge that gives a particular community its intellectual mean, hence currently it is difficult to protect it by present Intellectual property system which provides the protection for a limited time period and here we come across to a concept of what called as “traditional” knowledge. Traditional here doesn’t mean ancient or inert, but is a

vital, dynamic part of contemporary life of communities. Leading with time current era of intellectual property law need to be diverted and concentrated for the promotion of cultural interpretation of knowledge, ownership, and authorship private property and monopoly privileges. Traditional knowledge comprises of strong practical component as it is often developed as a part of intellectual response to life which directly or indirectly provide merits to society.

Folklore or traditional culture expression is consider to be integral as well as important part of cultural and social identity of indigenous and communities which has to be transmitted its core value and significant believe. Protecting folklore may contribute to economy development, encourage cultural diversity and help in preserving cultural heritage.

WIPO have given a classification of knowledge into traditional knowledge, genetic resources and traditional cultural expressions or (folklores). This classification helps to describe the nearly constructed and therefore inadvertently erase the inevitable and integral moment of overlap between these kinds of knowledge in practice. This classification also helps to create more manageable for all those who are responsible for keen discussion and need to develop remedies as further.

Related issues

- ❖ Representation of indigenous people for policy making so as to discuss their knowledge about intellectual property and for this it is a huge requirement of participation of various experts and bureaucrats to the proceedings.
- ❖ As there is a widespread in context of art, science and/or technology, there are range of non-indigenous people that are also inevitably involved within the traditional knowledge and intellectual property matrix.
- ❖ Many issues related to language, health, housing, art, biopharma, land management, sustainable development ,governance of knowledge ownership and authorship control are yet to be controlled and discussed.
- ❖ Some aspects of traditional knowledge has been applied as follow:
 - a) Filmmakers draw their story lines from the culture of many indigenous communities such as their traditional songs , customs follow, beliefs practices etc., which tends to encounter intellectual property issues and ongoing

question who can stand and speak for whom and which all are the relevant context to be idolize.

- b) Pharmaceutical companies working on developing new drugs that basically derive from some or another kind of resources within an indigenous context engage with traditional knowledge and IP issues.
- c) There is much to learn from literature for Intellectual Property Right which helps to be aimed on guidance of policy making.

Need for protection of Traditional knowledge

- ❖ Legal recognition of the rights of the holders of the traditional knowledge related to tribal and indigenous people.
- ❖ Requirement for recognizing for those who conserve biodiversity by adopting sustainable method.
- ❖ Need for public awareness is much more need. Because until and unless our traditional knowledge is protected, the country would have to fight for patent claimed by other countries in the case of *haldi, neem* and *basmati*.

Challenges confronting TK holders

- ❖ There are many difficulties which are faced by TK holders. There are cases where the survival of knowledge is questioned as the cultural survival of communities is under threat.
- ❖ Another challenge faced by TK holder is the lack of respect and appreciation for such knowledge such as a traditional healer provides some herb to cure certain sickness. That herb may be based on the medical treatment upon generation of clinical trials undertaken by him in past solid empirical understanding of interaction between the mixture and human physiology.
- ❖ External social and environmental pressure, migration, the encroachment of modern lifestyles and disruption of traditional way of life weaken traditional mean of maintaining or passing it to next generation.
- ❖ Irretrievably losing of the language that gives the primary voice to a knowledge tradition and spirituality through acculturation or diffusion.

- ❖ Commercial exploitation of knowledge by other questioned the legal protection of TK against misuse.
- ❖ Other than this a lack of experience with existing formal knowledge, limited economic resources, lack of a unified voice as well a lack of clearance of nation policy concerning protection of traditional knowledge brings demerit to existing IP mechanism.
- ❖ Also Traditional knowledge is often misappropriated, because it is conveniently assumed that since it is in public domain, communities have given up all claims over it.

Kinds of legal protection provided

- ❖ Defining what is meant by traditional knowledge and traditional culture expression, who would be the rights holders, how competing claims by communities would be resolved, and what right and expectation ought to apply.
- ❖ Traditional knowledge plays important role in economic and social life of those countries which are particularly developing. Placing value on such knowledge helps strengthen cultural identity and enhance use of such knowledge to achieve social and development goal such as sustainable agriculture, appropriate public health and conservation of biodiversity.
- ❖ Implementation of international agreement to know how knowledge can be associated with the use of genetic resources is protected and disseminated, safeguarding the national interest.
- ❖ Incentives shown by WIPO in complementing the international legal framework that regulates the access to, and sharing of benefits arising out of the utilization of genetic resources defined by the Convention on Biodiversity (CBD)³², and its Nagoya Protocol, and International Treaty on Plant Genetic Resources for Food and Agriculture of the UN Food Agriculture Association.

³²Downes, D. (1997) "Using Intellectual Property as a Tool to Protect Traditional Knowledge: Recommendations for Next Steps". Washington DC, Center for International Environmental Law.

[www.ciel.org/Publications/UsingIPtoProtectTraditionalKnowledge.pdf]

- ❖ Communities wish to control all uses of traditional culture expressions includes work inspired by them. Copyright laws considered to be legal instrument so as to provide a line between legitimate borrowing and unauthorized appropriation.
- ❖ Sui generis laws measures as well as conventional IP laws have recognized elements of customary law within a broader framework of protection need to be adapted.
- ❖ Prior Informed Consent (PIC) – According to this principle TK holder should be fully consented before their knowledge is accessed by third party. Agreement between them should reach complete and appropriate terms for which they are consented and fully informed about its consequences.
- ❖ Equitable benefit sharing³³- There is a need for balancing of the interest of right holders and general public. The Convention of Biological Diversity encourages fair and equitable sharing of benefits from the use of certain forms of TK. According to this principle, the TK holders would receive an equitable share of the benefits that arise from the use of the TK, which may be expressed in terms of a compensatory payment, or other non-monetary benefits.

Traditional knowledge in public domain

The concept of public domain has become important for formation of critical IP discourse. A counter-framework has been provided to understand the cultural and economic effect of the monopoly privileges upheld through conventional IPR.³⁴ Present concern is that the public domain can also be interpreted as a culturally specific framework that reinforces the invisibility of the past and ongoing

³³Brush, S. B. and D. Stabinsky, Eds. (1996) Valuing Local Knowledge: Indigenous Peoples and Intellectual Property Rights. Covelo, CA, USA, Island Press.

³⁴See the extensive work conducted through the Center for the Study of the Public Domain at Duke Law School. <http://www.law.duke.edu/cspd/>

indigenous peoples' practices in regards to knowledge management- where certain kinds of knowledge have very specific rules governing access and circulation.³⁵

The Agreement on the Trade-Related Aspects of Intellectual Property (TRIPS)

TRIPS are the agreement that promotes monopoly rights through patents. The TRIPS Agreement is gives the recommendation for WTO adopting rules intellectual property minimum standards on right and enforcement obligation was that IP is inherent in many/most goods that are traded. The TRIPS Agreement requires a review of Article 27.3(b) which deals with patentability or non-patentability of plant and animal inventions, and the protection of plant varieties. **Article 27.3(b)** allows governments to exclude some kinds of inventions from patenting, i.e. plants, animals and "essentially" biological processes (but micro-organisms, and non-biological and microbiological processes have to be eligible for patents). However, plant **varieties** have to be eligible for protection either through patent protection or a system created specifically for the purpose ("sui generis"), or a combination of the two.

The fundamental problem is of the state asking about treaty which had taken the precedence over the other and this question around the TRIPs agreement and its limited recognition for traditional knowledge are not easily remedied. There is need for securing participation of indigenous people, the position that they hold within international system needs to be addressed.

The General Agreement on Tariff and Trade (GATT), was signed in 1947 which is a multilateral agreement regulating trade among about 150 countries. According to its preamble, the purpose of GATT is "substantial reduction of tariff and other trade barriers and the eliminations of preferences, on a reciprocal and mutually

³⁵As noted by the Saami Council: "Indigenous peoples had rarely placed anything in the so-called 'public domain,' a term without meaning to [us,] . . . the public domain is a construct of the IP system and does not take into account domains established by customary indigenous laws." A. Taubman, *Nobility of Interpretation: Equity, Retrospectively, and Collectivity in Implementing New Norms for Performers' Rights*, 12 J. Intell. Prop. L. 351 (2004–2005).

advantageous basis". Traditional knowledge was non-issue at the GATT Uruguay Round of trade negotiation³⁶

Biopiracy of traditional knowledge

The traditional knowledge related to treatment of various diseases has provided leads for development of biologically active molecules by technology rich countries. This clearly gives an indication of exploitation of traditional knowledge for bio prospecting. Misappropriations of traditional knowledge have been seen frequently. The grant of patents on non-patentable knowledge related to traditional medicines which are either based on existing traditional knowledge of a developing world, or a minor variation thereof, has been causing concern to developing world. There are the many cases where for bio piracy of traditional knowledge, country had to fight for revocation of granted patents which involves both money and time as an extent.

Traditional Knowledge Digital Library is a tool that is preventing the misappropriations of traditional knowledge³⁷. It targets Indian System of medicine includes *Ayurveda*, *Unani*, *Siddha* and *yoga* which has been avail in public domain. Documentation can help to protect TK, for example by providing a confidential or secret record of TK reserved for the relevant community only. Some formal documentation and registries of traditional knowledge support Suigenerics protection system while TK database provides a defensive protection within existing IP laws. This is being documented by sifting and collating the information on traditional knowledge from existing literature in local languages to the international languages. Traditional knowledge Digital Library acts as bridge between formulations existing in languages and a patent Examiner at a global level, since the database will provide information on as well as local names and format understandable to Patent Examiners.

Highlighting the problem posed by US government related to patent have a say:

³⁶See JOHN H. JACKSHON, THE WORLD TRADING SYSTEM: LAW AND POLICY OF INTERNATIONAL ECONOMIC RELATIONS I (2nd ed. 1997) .

³⁷Drahos, P. (2000) "Indigenous knowledge, intellectual property and bio piracy: is a global bio-collecting society the answer?" European Intellectual Property Review (6): 245-250.

“Informal systems of knowledge often depend upon face-to-face communication, thereby limiting access to the information to persons in direct contact with one another. The public at large does not benefit from the knowledge nor can the knowledge be built upon. In addition, if information is not written down, that information is completely inaccessible to patent examiners everywhere as prior art when they are examining patent applications. It is possible, therefore, for a patent to be issued claiming as an invention technology that is known to a particular indigenous community. The fault lies not with the patent system, however, but with the inaccessibility of the knowledge involved beyond the indigenous community. The US patent granted for a method of using turmeric to heal wounds, referred to during India’s intervention in June 1999 and again in October 1999, is an example of a patent issued because prior art references were not available to the examiners. In that instance, however; the patent system worked as it should. The patent claim was cancelled based on prior art presents by a party that requested reexamination”³⁸

Conclusion

From the foregoing study of traditional knowledge and its aspects it has been concluded that traditional knowledge plays a vital role in the entire health care system and is widely practiced among the many developed and developing nation with its prolonged history. Especially in the form of the medicine it has been widely prevalent around the globe and larger section of people are using for the health benefits. Although in the existence system still the use of single system medicine is unable to cope with the increasing health care demand for future. Lack of traditional practices implementation increases the gap between the people and right to health especially in terms of accessibility. International organization and bigger giants like World health organization (WHO), United Nation (UN) etc. are contributing and taking a bigger step by implementing various policies related to TCAM and other traditional knowledge accessibility and also making it as mandatory provisions in every state to follow with necessary conditions being implied. But failing to analyze and absence of proper assessment there is a risk in developing in health care system. Economy of the country depends upon traditional medicine especially in nation like India and China and judiciary has also seen the urge to protect the rights of

³⁸ US General Declaration to the First Meeting of the WIPO Committee, May 1, 2001.

indigenous people and their practice under IPR. It also says that both human rights and IPR are affected by each other and therefore is need to be together utilized for basic human rights. Indigenous people want their knowledge and practices rights to be protected under the IPR irrespective of other human right issues. IPR basically that provides trade protection and copyright of anything that is basically of artistic work or innovation. Though various TK holders hold their copyright in various works and are also protected under IPR. Increasing cases of bio-piracy and we know that bio-diversity rich nation has so much commercial value and with the advent bio-piracy the need for protection under IPR especially TK holders is necessary. In recent years India has made robust progress not only in implementing its obligations under the WTO Agreement on TRIPs Rights, but also in developing its own IP regime which endeavors to balance the trade-off between monopoly rights and free access to knowledge and also endeavors it to protect various traditional knowledge under these rights.