CHAPTER-6

CONCLUDING REMARKS & OBSERVATIONS
"Each contracting Party shall, as far as possible and as appropriate, subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices." 

TK and TCEs are the valuable intellectual properties of the Indigenous Communities. These are the valuable attributes of biological diversity and are one of the important sources of sustainable development in most of the developing countries including India. TK in its various forms "fulfills the human needs of the local and indigenous people in different ways. It has great role to the forest conservation, soil conservation, seed conservation and crop biodiversity. Pharmaceutical companies have been making use of the TK of tribal people to identify plants and their ingredients for developing new medicines. In the recent decades, there has been an increased demand for the traditional medicines all over the world. Over 80% of people from developing countries depend on traditional medicines (TM) for health needs. Even in developed countries the demand for TK is increasing day by day. TK and TCEs are also considered as a valuable attribute of the indigenous and local communities that depend on it for their health, livelihood and general well-being. These are considered as a manifestation of culture of the indigenous people and local communities.

During the last few decades, Traditional Knowledge (TK) has received increasing attention on the international agenda. Due to globalization of production systems, increase in population, new invention of sophisticated technologies, destruction of forests for agriculture 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 has happened due to change in their lifestyle.

---

as well as misappropriation of their resources and knowledge. Misappropriation of TK poses a serious threat to the traditional community specifically and to the entire civilization in general. Misappropriation of biological resources and associated traditional knowledge not only violates the rights of communities who conserve them, but also adversely affects their conservation and sustainable use. The United States Patents and Trade Mark Office (USPTO) database shows that it has granted as many as 168 patents on yoga-related devices and accessories used in conducting exercises that include yoga mattresses, grip blocks and yoga socks, besides some devices used for doing stretching exercises\(^2\). Similarly, there are about 3,700 trademarks on yoga accessories which have been listed in the database register and pending trade marks by the USPTO\(^3\). Most of the traditional people depend upon these resources. They are creators, originators and the owners of this knowledge. But as a result of misappropriation of TK, they do not get benefit from TK. Their survival and livelihood has become now at stake. The developing country itself is also losing heavy financial loss. Biodiversity and ecological balance are also in danger because of indiscriminate use and misappropriation of TK for profit by some unlawful users. To prevent such a catastrophic situation, therefore, need has been felt to ensure that the traditional systems of conservation of biological resources and associated TK are preserved. It is necessary to recognize and respect the rights of holders of traditional knowledge. Misappropriation of TK and biopiracy erode the rights of the traditional knowledge holders and adversely affect conservation and sustainable use of bio-diversity and associated TK. In International level various organizations are working to protect and preserve TK and TCEs. Work on TK is taking place in various inter-governmental bodies like CBD, WIPO, FAO, WTO, UNESCO and UNCTAD etc. In WIPO, the WIPO Inter-Governmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore is working on issues relating to contractual practices, TK database and preparation of a document with


\(^3\) Ibid 2.
elements for a possible sui generis system for the protection of TK. The most relevant issues regarding conservation and suitable use of bio-diversity and associated TK are:

a) Prevention of bio-piracy and misappropriation of TK;
b) Systems of protection of TK;
c) Means for fair and equitable sharing of benefits arising out of utilization of biological resources and associated TK.

There are concerns that the genetic resources and TK of developing countries are often used commercially and/or patented in developed countries with little or even no benefit to the owners of the genetic resources. To solve these problem developing countries, inter alia, have repeatedly sought to amend the TRIPs Agreement so that applications for patents relating to biological materials or to TK would provide as a condition to acquiring patent rights-

a) Disclosure of the source and country of origin of the biological resource and of the TK used in the invention;
b) Evidence of prior informed consent through approval of authorities under the relevant national regime of the country of origin;
c) Evidence of fair and equitable benefit sharing under the national regime of the country of origin.

This would provide a legally binding defensive protection against “bad patents” based on misappropriation of genetic resources and TK and also would help in benefit sharing. However, these defensive protections may serve all the purpose of protecting TK and TCEs. That’s why both the defensive and positive protections are suggested for the protection of TK & TCEs.

In the recent past, there have been several cases of bio-piracy of traditional knowledge from India. India is one of the 12 mega biodiversity countries of the world. So, protection of TK and TCEs has gained wide acceptance and importance here. Government of India has also taken some steps in this regard in the recent past. There are many options for the protection of TK and TCEs. Some of these are:
i. Use of the existing intellectual property regimes in India;

ii. The creation of a new sui generis legislation to protect TK and TCEs;

iii. Registers and databases of TK (e.g. TKDL in India);

iv. Customary law;

v. The use of contractual agreements such as material transfer agreements;

vi. Codes of conducts, code of practice and guide lines to protect TK & TCEs;

vii. Prior Informed Consent (PIC) and Access and Benefit Sharing (ABS);

viii. Mechanisms in mutually agreed terms and

ix. Unfair competition law etc.

The above mechanisms for the protection of TK & TCEs, can, however, be grouped into two broad heads. These are: Defensive Protection and Positive Protection (this has been discussed in detail in chapter 4). India has a duty towards her traditional communities to ensure their rights to live in their natural environment and to earn their livelihood by way of practicing their TK. It is imperative for India to establish a viable mechanism to regulate access to TK as well as to ensure that there is reasonable and equitable sharing of benefits to the owner of Traditional Knowledge and Traditional Cultural Expressions. In India, it is the need of the hour to enact a sui generis legislation to protect TK & TCEs. It is to be mentioned here, that Government of India is heading towards this direction slowly but surely. The Protection, Conservation and Effective Management of Traditional Knowledge Relating to Biological Diversity, Rules 2009 is one of the important steps towards this direction. Rule 2(w) of the Protection, Conservation and Effective Management of Traditional Knowledge Relating to Biological Diversity Rules, 2009 says that the term “Traditional Knowledge” includes inter alia, cultural expressions, folklore, dance and music etc. So, this is a very vast definition. Traditional Knowledge includes the term Traditional Cultural Expressions. However, A Round Table Conference on Protection of Traditional Knowledge was also concluded recently (January 25-26, 2010) at National Law School of India University, Bangalore. The two day conference was held for the
deliberations on the Sui-Generis Model developed for the Protection of Traditional Knowledge/Traditional Cultural Expressions. One of the important developments of the discussion was the Traditional Knowledge (Protection and Regulation to Access) bill 2009 drafted by NLSIU, Bangalore. This is no doubt an important development toward enactment of sui generis legislation to protect TK & TCEs in India. Though it is not a government initiative, it must be praised as the first ever initiative in India. However, even if the Sui Generis legislation is enacted that will not be the panacea for all problems relating to misappropriation of TK & TCEs. Any one single instrument or mechanism would not solve the problem. Only Sui Generis legislation in India or TKDL or the existing IP legislations or PIC or ABS mechanism is not capable to protect TK & TCEs. All of these mechanisms would be used to strongly protect TK & TCEs. Through a selective and coherent combination of these legal tools a customized form of protection could be constructed which could seek to provide: improved defensive protection; appropriate application of prior informed consent principles; improved benefit sharing for industrial and commercial uses of TK and a sensitivity towards customary laws and understandings of TK holders. An integration of both defensive and positive protection is very essential. At the time of framing Sui Generis legislation it should be kept in mind that the law must be consistent with international obligations and suitable to the cultural and political conditions of the indigenous and traditional people of India. Such system should also encourage the flow of benefits from bio prospecting to indigenous and local peoples. Legislation could be drafted in such a way as to allow the Indian indigenous community to become the successor in title of these intellectual resources. A long term vision is to be adopted and clear and realistic goals must be formulated based on an informed calculation of what is necessary and feasible. The hard reality relating to the indigenous groups and TK holders that they suffer from extreme poverty, ill health, unemployment, lack of access to land and essential resources and human rights violations must be kept in mind at the time of resolving the problem. Their interests should be protected giving first priority. So, only one mechanism (like disclosure of origin or TKDL or any sui generis legislation etc) will not solve all of the concerns
relating to illegal or irregular access to the TK of indigenous community in India. Both the positive and defensive mechanisms are to be used to give strong protection to the TK and TCEs of indigenous communities.

Again, no single international organization may provide suitable forum for developing international rules for the protection and promotion of TK & TCEs. A cooperative initiative involving several international organizations and the concerned countries are very essential. A collective effort both nationally and internationally, is sine qua non for resolving this problem. Because, bio-piracy is a global problem and more often than not, involves the acquisition of material in one country and seeking of a patent in another. This means that relying on national measures alone is not sufficient to address the bio-piracy problem. Hence, to ensure the effectiveness of the contemplated obligations on the applicants a positive and mandatory obligation needs to be imposed on the member countries of the WTO to require the disclosure by patent applicants in their territories of the source and country of origin of the biological resources and/or TK used in inventions. Such a positive and mandatory obligation could be introduced into the TRIPs Agreement either by appropriately amending the existing provisions or by introducing a new Article in the agreement. So, a collective effort in both national and international level is very essential to protect TK & TCEs. The researcher, however, makes the following suggestions which may be implemented at national and international level before long.

Suggestions for taking action at the international level to protect Traditional Knowledge and Traditional Cultural Expressions:

I. To implement sincerely the relevant provisions of the international commitments in various international instruments, guidelines etc. Most prominent of these are as below:
   a. The ILO Convention;
   b. The UNESCO/WIPO Guidelines for Protection of Folklore;
   c. The UN Draft Declaration on the Rights of Indigenous Peoples, 2007;
   d. Convention on Biological Diversity (CBD);
e. TUNIS Model law on Copyright for Developing Countries 1976;
f. The Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples, 1993;
g. Kari-Oca Declaration [The World Conference of Indigenous Peoples on Territory, Environment and Development (25\textsuperscript{th} -30\textsuperscript{th} May, 1992)] 1992 etc.

II. To take initiative to remove or change Article 27.3.b from the TRIPs;

III. Not to remove the flexibility of countries to draft their own Sui Generis legislation for plant varieties by now insisting on compliance with UPOV;

IV. To apply Article 29 of TRIPs which requires disclosure in the case of patent applications, to genetic resources and traditional knowledge used in inventions for which IPRs are claimed;

V. To enhance the scope of Article 23 of TRIPs to provide protection of geographical indications for goods other than wine and spirits, such as Darjeeling tea;

VI. There is a need to strengthen the implementation of the CBD at global, regional, national and local levels. Article 8(j),15 and 16 of the CBD should be linked in all discussions relating to access to bio resources;

VII. The CBD should recognize indigenous peoples, TK holders and indigenous women as experts and encourage and facilitate their full and effective participation in expert meetings and advisory bodies;

VIII. CBD processes should be linked with other related international instruments and in particular established a developing human rights standards and processes and other relevant international structures (e.g. the Draft Declaration on the Rights of Indigenous Peoples and United Nations Permanent Forum on Indigenous Issues) with the idea of promoting further harmonization;

IX. Indigenous Peoples and their organizations should enhance their capacities and develop specializations to effectively participate in CBD processes at all levels from international to national and national to local; and governments should support indigenous peoples in these initiatives;
X. CBD discussions should be based upon the grass-roots indigenous and local communities, where it is implemented. More indigenous voices are required at all CBD meetings to better represent themselves;

XI. The CBD should accelerate its work on Article 10c regarding sustainable use by allocating more resources including staff, as this will complement the work regarding the promotion and protection of TK;

XII. The CBD should critically examine its processes for dissemination of information and its reliance on internet based information with a view to developing more effective modes of transmission recognizing the context of indigenous and local communities;

XIII. Parties to the CBD should accelerate implementation of national mechanisms for indigenous participation in the implementation of the CBD;

XIV. The CBD should develop a strategy to disseminate information, through indigenous people’s organizations and NGOs, to the community level.

XV. All state parties and member countries of the CBD should create mechanisms such as dissemination campaigns to highlight the importance of the traditional knowledge for indigenous peoples;

XVI. All state parties to CBD should encourage and develop support programmes to promote the agricultural diversity of indigenous peoples and this will lead to the strengthening of their TK;

XVII. The CBD secretariat should support the effective participation of indigenous representatives in all CBD processes related to access to genetic resources and traditional knowledge as well as encourage the dissemination of information regarding these issues at the national level to indigenous and local communities.

XVIII. The CBD secretariat and working groups should play an active role in continuing to prepare studies and analyze the interpretation and development of these CBD provisions and not merely delegate research to other organizations which may have different objectives.
XIX. The right of self-determination of indigenous peoples and the related process of free, prior and informed consent needs to be acknowledged and implemented if indigenous peoples are to be empowered to protect their TK.

XX. Governments of the developed countries of the World should stop blocking the substantive review of Article 27.3.b. of the TRIPs Agreement and support developing countries in the interpretation and review of the same.

XXI. There should not be any conflict between the CBD and the TRIPs Agreement. Governments of the developed countries should admit and proceed accordingly so that the WTO-TRIPs Agreement must be consistent with the provisions of the Convention on Biological Diversity (CBD) to conserve and sustainably use natural resources, ensure prior informed consent and benefit sharing arrangement;

XXII. The WIPO and UNESCO and other specialized international organizations should intensify their efforts to provide greater assistance to various developing countries of the World in general-

   a. By providing technical and legal co-operation;
   b. By providing training to officers in the field of collection, classification, conservation, documentation and dissemination of expressions of folklore;
   c. By assisting these countries in the creation of national centers specialized in the conservation of expressions of folklore, strengthening such existing centers and creating a pilot regional centre for the conservation, documentation and promotion of expressions of folklore by granting the expected protection,
   d. By establishing a standing committee on Expressions of Folklore and TK in both WIPO and UNESCO,
   e. By making an international convention on the protection of Expressions of Folklore.
Suggestion for taking action at the national level to protect Traditional Knowledge and Traditional Cultural Expressions:

i. To take initiative for a substantive review of Article 27.3(b) of TRIPs:
   a. In relation to “life form patenting” and the clarification that plants, animals, micro-organisms and other living organisms and their parts cannot be patented, and that natural processes that produce plants, animals and other living organisms should also not be patentable.
   b. In relation to the option of establishing a sui generis system for the protection of traditional knowledge;
   c. On the relationship between the TRIPs Agreement and the CBD. Here, stress should be given on the fact that the review process should ensure complementarities between Article 27.3(b) provisions and the CBD, taking into account access and benefit sharing; conservation and sustainable use of biodiversity; and protection of the rights and knowledge of indigenous and local communities;

ii. Initiative should be taken to enact a sui generis legislation by the Parliament to protect traditional knowledge and Traditional Cultural Expressions in India.

iii. National sui generis legislation should contain the following among various other aspects:
   a. Compulsory disclosure of origin of materials or traditional knowledge used;
   b. Evidence of Prior Informed Consent (in standard format) before using the TK and TCEs;
   c. Evidence (in standard format) of the nature (i.e. monetary or non-monetary) mode and method of sharing benefits derived from using TK;
   d. Application for use of TK should be published in all major newspapers, specially the vernacular press;
   e. Maintenance of register of Traditional Knowledge;
f. Restriction on the access of traditional knowledge for a fixed period of time and for any further use of TK - additional consent is to be obtained by payment of additional fees;
g. Steps to be taken by the Traditional Knowledge Authority to prevent bio piracy and other misuses of traditional knowledge and to take preventive /punitive actions to safeguard the same;
h. The penalty for infringement and bio-piracy of TK should be severe enough to be an effective deterrent;
i. TK Board to be assigned with additional responsibility to ensure that the due environmental and social impact assessment be done before granting the access to any traditional knowledge;
j. The TK Board should ensure that the use of traditional knowledge is not against public order or morality;
k. The TK Board should take steps to educate and increase awareness in the Traditional Communities to ensure just and fair negotiations;
l. The TK Board should be given power to notify certain TK as endangered or on the verge of extinction or likely to become extinct, and also the power to restrict the access to such traditional knowledge;
m. The TK Authority should frame National Policy, Strategy and Action Plan every five year which ensures the protection, conservation of traditional knowledge and ensures the sustainability of the resources including human resource on which the TK is dependent;
n. A systematic appellate mechanism must be incorporated to the legislation;
o. The onus of proving or the burden of proof should be reversed. That is in case of a dispute, the user company or person or agency will be required to prove that all conditions
of disclosure and benefit sharing have been complied with properly.

iv. TK holders at the local level should be responsible for local implementation of protection measures for TK. Governments need to support the local implementation through legislation and enforcement of that legislation;

v. Indigenous peoples and local communities require access, control and ownership of their territories and natural resources to practice, promote and protect their TK;

vi. Indigenous peoples and their traditional territories need to be recognized in order to protect TK and ensure the full and effective implementation of the CBD;

vii. Indigenous and local communities should promote the sustainable use of traditional food, crop varieties, animals, agricultural and agro-forestry systems and medicines to encourage the utilization of TK;

viii. The introduction and promotion of indigenous education programmes including indigenous languages and the important role of Community Elders and Indigenous Woman as holders and transmitters of TK, should be encouraged and widened to bridge the growing generation gap and to ensure the perpetuation of TK;

ix. Government should recognize the principles of customary indigenous law applicable to TK and incorporate such principles into national legal systems in equal partnership with TK holders and with their prior and informed consent, and respecting the right of indigenous peoples to continue practicing these systems without disturbance and interference;

x. The integrity of indigenous territories should be respected because fragmentation of indigenous territories and privatization of land may impact on the loss of TK;

xi. Special initiative should be taken to protect indigenous peoples, who are under immediate threat and face extinction of language, culture and TK practices and including indigenous peoples living in voluntary isolation;
xii. Coordination between national and local bodies responsible for protection and promotion of TK should be enhanced;

xiii. National Patent offices and judicial bodies should be made aware and understand the flexibilities available under TRIPs and the implications of different interpretations of key terms, including how such terms have been interpreted by developed country’s patent offices and courts;

xiv. National Government should establish agricultural research programmes and centers for ex situ\(^4\) and in situ\(^5\) conservation of plant varieties and plant genetic resources, and for developing new plant varieties by making use of the knowledge and innovations of local farming communities, and transferring good practices and varieties throughout the country;

xv. The Government should take steps to incorporate traditional knowledge as part of the curriculum for schools, colleges, universities and research centers;

xvi. The Government should set up or promote herbal gardens of traditional medicinal plants;

xvii. The Government should recognize the leaders, experts and holders of TK by providing incentives;

xviii. Traditional medicines and healing practices should be introduced in state-run hospitals;

xix. The government must support and ensure broad and effective participation of indigenous and other local communities in all United Nations discussions and negotiations on genetic resources and traditional knowledge;

---

\(^4\) “Ex-situ conservation” means the conservation of components of biological diversity outside their natural habitats. It literally means ‘offsite conservation’. It is the process of protecting an endangered species of plant and animal outside of its natural habitat; for example, by removing part of the population from a threatened habitat and placing it in a new location which may be a wild area or within the care of humans.

\(^5\) “In-situ conservation” means the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in case of domesticated or cultivated species, in the surroundings where they have developed distinctive properties.
xx. Importance should be given upon both positive and defensive protection of TK and TCEs. No one system is sufficient to protect TK and TCEs properly. In Indian situation both Positive and Defensive protection mechanisms should be used to provide strong protection of TK & TCEs.

xxi. Protection of expressions of folklore at the national level is very important. A list of expressions of folklore and traditional knowledge is to be prepared for the preservation and protection of TK and TCEs at the national level;

xxii. A specialized institution or centre is to be created for the collection, classification, conservation, promotion, documentation and dissemination of Folklore in India;

xxiii. At the time of enacting Sui Generis legislation to protect TK and Folklore the international obligations, rules and guidelines, specially the Model Provisions for National Laws on the Protection of Expressions of Folklore Against Illegal Exploitation and other Prejudicial Actions developed by UNESCO and WIPO in 1982 for the protection of Expressions of Folklore should be kept in mind;

xxiv. Interests of indigenous peoples and traditional communities should be placed at the centre of all negotiating strategies on Traditional Knowledge and Traditional Cultural Expressions.