CHAPTER VIII

Traditional Knowledge and Intellectual Property Rights issues

Ethnobotanists and others have been seeking information free of cost from the local people who are knowledgeable about processes, practices and the traditional uses of natural products that were accumulated through several generations of experimentations and adoption. Generally, information gathered pertains to the uses of plant species, location and habitat preferences of individual species, time and mode of harvest, and preparation, processing and formulations. The information collected and subsequently published are often patented without giving credit for the leads provided by or giving compensation or reward to the communities or traditional practitioners. The findings are generally shown as original discoveries. This is in fact not true at least in some cases. Pharmaceutical industries investigate the efficacy of medicines used by the indigenous people. Useful substances are known to the indigenous people and based on such traditional knowledge the pharmaceutical companies isolate active principles and market them as drugs directly or design new drugs with modifications or synthesize them. While companies patent the products and earn huge profits, the information provided by the indigenous people is ignored by treating the traditional knowledge as mere tradition, folklore or public property. Large numbers of patents have been granted on genetic resources and traditional knowledge without the consent of the possessors of the resources and knowledge. For example, the Council for Scientific and Industrial Research (CSIR) in India had asked for re-examination of US Patent No. 5, 401, 5041 granted for the wound healing properties of turmeric. The US Patent and Trademark Office (USPTO) revoked this patent after ascertaining that there was no novelty. This knowledge has been in use in India for centuries. Similarly, the patent granted to Neem was also revoked on the grounds that it is the intellectual property of the Indians who have been using it for centuries.

Protection of the traditional knowledge of local and indigenous communities is a very contentious issue. Traditional knowledge has always been treated as knowledge in the public domain, which is freely available for exploitation without acknowledging the efforts made by the communities. Need to protect the traditional knowledge has captured the attention of the world community only after modern biotechnological advances have
demonstrated the usefulness of traditional knowledge in the development of new products of commercial importance. Benefits of new technology have not reached the custodians of knowledge. The process of globalization is threatening the appropriation of elements of collective knowledge of communities into proprietary knowledge for the commercial profit of a few (Dashaco, 2001; Tripathi, 2003).

Since the knowledge held by the practitioners of a community is not known to other communities or societies it must be considered as private and not something which comes within public domain or as something which is a human heritage available free of cost. Goodwill of the communities or societies is taken advantage of by the ethnobotanists, researchers or scientists whose motives may be personal gain or profit maximization. The gathering of knowledge and collection of biological resources from traditional people by outsiders is intense ‘bio-prospecting’ (search for and collection of biologically active materials for commercial use).

Many communities are now aware of such motives and have, therefore, taken upon themselves to protect their traditional systems, ideas, information and innovations. There is increasing realization amongst the traditional communities regarding the mining of their knowledge by the outsiders without any respect to the rights of the local inhabitants. The local communities do not come forward easily to share or divulge information unless commensurate returns are guaranteed. For example, a person known to possess antidotes for snakebite never discloses the source of antidote. At present, indigenous or traditional knowledge passed down orally over many generations are not rewarded in the absence of community Intellectual Property Rights (IPRs). The intellectual properties that have been in existence in the ancient cultures since ages are still extant. Without the appropriate safeguards in the current IPR laws situation may arise where unauthorized commercial exploitation of biological resources may be encouraged thereby legitimizing bio-piracy. Patenting of products derived by following leads from traditional knowledge and bioprospecting are not only exploitative but also violate the spiritual values of many traditional people (Dutfield, 1999).

As has been mentioned elsewhere, there are nearly 5000 ethnic communities in India. And there are as many diverse traditional practices, home remedies, recipes and formulas practiced by them; these have been handed down orally from generation to generation. The relevance of local herbal health traditions have not diminished despite
progresses made in the field of modern medicine. The economic value of traditional knowledge can never be truly evaluated because their contribution is unquantifiable and can never be adequately measured. Traditional knowledge needs to be protected. The following considerations proposed by Correa may be taken into account for evolving effective IPR regimes for traditional knowledge (Correa, 2001) –

(i) Ethical and moral considerations – For providing knowledge for evolving and promoting noble cause; in finding solutions to global health and other problems facing humanities.

(ii) Sustainable development considerations - Benefits from use of traditional knowledge can be used to sustain economic development activities.

(iii) Conservation considerations – Use and importance of traditional knowledge of biological resources has potential to highlight the importance of conservation and sustainable utilization of natural biological resources.

(iv) Preservation of traditional lifestyles – Traditional knowledge provides framework to encourage the maintenance of practices and knowledge embodying traditional lifestyles. Preservation of traditional knowledge becomes conditional to continuation of traditional lifestyles. The crisis affecting the world’s diverse cultures and languages is as great as the crisis of biodiversity loss. According to some estimates, 90% of 9,000 currently spoken languages may become extinct in the next 100 years. Possibility of economic returns from use of traditional knowledge will be an incentive to continue to engage in traditional practices.

(v) Prevention of unauthorized appropriation of traditional knowledge (biopiracy) by unscrupulous parties – Improving the quality and quantity of information made available to various patent offices can help in examination of novelty, inventive steps and processes.

(vi) Promoting use of traditional knowledge – Protection of traditional knowledge does not mean limiting access to it. Use of traditional knowledge needs to be promoted with adequate measures to prevent misappropriation. Government of Philippines has made provisions in their relevant Acts with an aim to accelerate the development of traditional and
alternative health care by improving the manufacture, quality control and marketing of traditional health care materials. Traditional knowledge has to be treated as underutilised “intellectual resource”.

The Convention on Biological Diversity (CBD) ratified in 1992 by over 170 countries in the world has three objectives - (i) conservation of biological diversity, (ii) sustainable use of its components, and (iii) fair and equitable sharing of the benefits arising out of the utilization of genetic resources. Article 8(j) of the Convention provides that – “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 biodiversity and promote the wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of benefits arising from the utilization of such knowledge, innovations and practices”. CBD contains 42 Articles. The basic commitments of the CBD, therefore, are as follows–

- Recognition of sovereign rights of the states over their biological resources.
- Stipulation that access to biological resources can only occur with the prior and informed consent of the states.
- Protection and promotion of the rights of communities in terms of their biological resources and traditional knowledge.
- Establishment of access to the biological resources of developing countries on a quid pro quo basis with technology transfer from the developed countries.
- Equitable sharing of benefits arising from the commercial use of biological resources and associated traditional knowledge.
- IPRs must not conflict with the conservation and sustainable use of biodiversity.
Trade Related Aspects of Intellectual Property Rights (TRIPs) agreement (1994) also has some provisions having limited application to the protection of traditional knowledge. Many countries including India have suggested few preconditions while granting patent rights (Bellman et al., 2003). These include –

(i) Disclosure of the source and origin of the resource and of the traditional knowledge used in the invention. For example, process and use of a medicinal or aromatic plant to make products or extracting vegetable dye from certain minerals and plants.

(ii) Evidence of Prior Informed Consent (PIC) before using the biological resource.

(iii) Evidence of fair and equitable benefit sharing (both monetary and non-monetary) from the use of traditional knowledge.

(iv) The onus of providing compliance (burden of proof) to be upon user agency, which will have to prove that all conditions of disclosure and benefit sharing have been met.

Only inventions that can be dated and attributed to an individual or small group of people can be patented. In theory, traditional knowledge may be patentable as sources of knowledge could be attributed to individuals, kinships or communities. Collective nature of most traditional knowledge poses complicated problems about the attribution and exercise of rights. It is often impossible to trace traditional knowledge to a specific community or geographical area, and hence it becomes ineligible for patent protection. Further, once traditional knowledge is recorded and published its use and application is beyond the control of the original knowledge providers and there is no way to protect their IPR. No one discounts the importance of documentation. However, once published, novelty on the disclosed information cannot be claimed. If a scientist or researcher improves upon published traditional knowledge and develops a new product or comes out with a formula satisfying the requirements for patentability, he obtains patent for the product or formula and not for the herbs used. The people who are using and applying traditional products may technically become patent violators (Dutfield, 1999). Presently, the existing patent laws do not work for traditional knowledge holders because of following reasons (Anonymous, 2002) –
Individual inventors can not be identified as traditional knowledge is collective in nature.

It is often impossible to attribute traditional knowledge to any particular geographical location.

Since traditional knowledge has been in existence over a long period of time, it is often impossible to present it as novel.

There is no recorded documentation of traditional knowledge as it has been passed on orally.

In India, section 36(iv) of the Biodiversity Bill provides for the protection of knowledge of local people relating to biodiversity through measures such as registration of such knowledge, and development of a *sui generis* system. For ensuring equitable sharing of benefits arising from the use of biological resources and associated knowledge. Section 19 and 21 stipulate prior approval of the National Biodiversity Authority (NBA) before their access. NBA will impose terms and conditions while granting approval. One of the functions of NBA is to take measures to oppose the grant of IPRs in any country outside India on any biological resource obtained from India or knowledge associated with such a biological resource. Thailand has developed a comprehensive *sui generis* regime for Traditional Medicine, which is called “Thai Medicinal Intelligence Act” (Correa, 2001). The Act distinguishes three different categories of “Traditional Formulations”. Certain formulas of traditional Thai Medicine, which have significant benefit or special medicinal value, have been designated as national formula. Rights of such formulas belong to the state. The commercial use of a national formula for the production of drugs or for research and development is subject to permission from the Government. Private formulas are those which can be used freely by the owner. Whereas, third party has to obtain permission from the owner of the formula. This Act provides for registration of private formulas by an inventor or developer of such formulas. The rights over a registered personal formula subsist throughout the life of the owner and for a further 50 years from the date the applicant dies. Third category of formula is “general formula”, which is well known traditional formulas that remain free to use by anybody. One of the important feature of this law is that all three types of formulas can continue to
be used free domestically by the traditional healers or Thai communities on a limited scale. The law also provides for the conservation and sustainable use of the medicinal plants. A “Thai Traditional Knowledge Development Fund” has also been created.

Any strategy to protect traditional knowledge must take into account the rights of indigenous and local communities with regard to informed consent procedures. Prospecting of biological resources has to be allowed only with the prior consent of the local communities in accordance with the customary laws of the concerned communities. The laws should not only prevent biopiracy, these laws must also provide the basis for sharing benefits arising out of use of traditional knowledge. Mere documentation of traditional knowledge will not ensure benefit sharing with the holders of such knowledge. It may even foreclose that possibility as documented knowledge is deemed part of the prior art. Another equally important factor that prohibits the communities to go for patents is the cost of application for patents and pursuing patent infringement cases.

Considering above mentioned aspects of traditional knowledge and IPRs and the present studies on the traditional knowledges possessed by the Bhotias of Dharchula region, in my view, following strategies may ensurc rights of local communities which will ensure sustainable development and conservation –

1. Laws must provide for, as far as possible, patenting the traditional knowledge, processes and practices in the name of persons or communities who hold this knowledge, either singly or jointly. If necessary, the requirements of inventive steps in the existing patent laws must be done away with. Indigenous people will then be entitled to full ownership, control and protection rights over their intellectual property.

2. A minimum of 25% or even 50% of the income realized from use of new products developed following leads derived from the traditional knowledge should be provided as royalty to the local communities possessing the knowledge and this should be made mandatory while patenting new products. When traditional knowledge is used for curing a disease or developing new processes or products it is expected that there would be disclosure only if there are commensurate returns.

3. All the communities should be made to register their practices or knowledge and the patent for a product should not be granted unless consent of the
concerned community has been obtained for research, investigation and development.

4. Entire spectrum of traditional knowledge or practices of all the communities should be documented so that they come within private domain. This would ensure that the information is not lost and that information will come within the ambit of ‘prior art’ i.e. disclosure of contents of the claim prior to application for patent.

5. Collective rights of indigenous and local communities to freely use, exchange and develop biodiversity and to access their territories must be recognized as a prior right and be placed over and above private IPRs.

6. Collective invention must be recognized to protect communities from biopiracy. There are genuine concerns that many companies may be unwilling to share their intellectual property rights with traditional communities or resource providers and pay adequate compensation.

7. Customary laws, rules and traditions must be accommodated in the national laws. Many communities have their own laws and traditions to conserve, protect and utilize their biological resources.

8. Above concerns have to be reflected in legislation and national policies by making necessary amendments or insertions in the provisions of the relevant acts and rules.