CHAPTER 6
CONCLUSION AND SUGGESTIONS

The intangible right of patent is becoming increasingly valuable in the market. The utility of patents has been recognized not only in the economically developed countries, but also in developing countries like India. The patent is a “monopoly which is granted for an invention after application to, and examination for patentability by, the patent office and lasts for a maximum of twenty years”. The essential conditions for grant of patent are that “the invention must be new, must show an inventive step and be industrially applicable”. The procedure as provided under the Indian patent laws requires a person applying for a patent to file specific and complete specification which contains the details of the invention. The specifications filed by the person are published and examined to ensure that the invention is something not known earlier. In other words, the Patents Act, 1970 has ensured ways to determine the essentials for grant of patent. But the irony is that, these provisions of patents law are being exploited while drafting specifications for grant of patent. The advocates or person who drafts specifications use tricky language. The source of origin is not disclosed and the language used in the specification is such that it can escape the infringement rules. The lawyers/persons who draft the specification draft it so articulately that even if the invention does not fulfill the requirements of patent law, patent is granted. The complexity of patent laws is being used by the multinational corporations and these companies using the complexity of patent laws to get the rights to use the traditional knowledge of indigenous people for commercial purposes.

Indigenous people possess unique cultural and environmental knowledge which they have developed and preserved for years. Such knowledge of indigenous people is termed as traditional knowledge. Traditional knowledge covers the knowledge of farmers concerning biodiversity, the knowledge of therapeutic plants and processes for extracting relevant properties from plants and also, the intangible cultural heritage of the indigenous people. Traditional knowledge is a “collectively owned property and is integral to the cultural or spiritual identity of a community” who have developed this knowledge over a period of time. Rights of the indigenous people are now gradually being recognized at national and international level. The recognized rights include
“right to self-determination, collective right to the ownership, use, and control of lands and other natural resources, and the right to protect their traditional knowledge”. There are “no uniform norms regarding the protection” of different types of traditional knowledge owned by local communities.

Though the rights of indigenous people are being recognized, still, in many parts of the world even today, these people “do not enjoy their fundamental rights in the state in which they live to the same degree as the rest of the population”. Indigenous people are not even aware that they are indigenous. Their traditional knowledge is not protected despite having economic and cultural significance. Traditional knowledge “plays an important role in the global economy and is valuable not only to those who depend on it in their daily lives, but also to modern industry and agriculture”. The value and contribution of traditional knowledge is immense in the field of pharmaceutical and medical sciences.

The traditional knowledge which communities have possessed since time immemorial has been facing tremendous strain in hands of multinational companies. The cultural survival of communities is under threat as local languages and cultures have been greatly affected. There is “lack of respect and appreciation for such knowledge”. Because of rapid advancement and growth of science and technology the very survival of traditional knowledge is at stake. The emerging patent rights regime poses serious threat to traditional knowledge and causes apprehension to the indigenous people. Many “expressions of folklore and several other forms of traditional knowledge do not qualify for protection under patent laws because they are too old”. The challenge of applying or adjusting existing patent rights to traditional knowledge and expressions of culture is caused by the special characteristics, such as “collective ownership, oral transmission and presumed existence in the public domain and absence of an identifiable author”. The “author or inventor is often a large and diffuse group of people and the same creation or invention may have several versions and incarnations”.

Enforcement of patent rights on agriculture raises the question about the utilization of the world’s biodiversity, about who should control it, how to utilize it, who should have the right to resources derived from it. The multinational companies, though they have not been directly contributing to the traditional knowledge, they have been using the traditional knowledge for their business. Traditional knowledge has been “treated as knowledge in the public domain for free exploitation without showing any respect or
concern for the effort taken by the communities to preserve and promote this knowledge”. The missing legal protection for traditional knowledge has created problems for traditional knowledge “holders and for the countries where traditional knowledge is found”.

Patent laws are exploited as an instrument for piracy of traditional knowledge of indigenous people. The multinational companies use the country’s biological and intellectual wealth “without prior informed consent of the communities who have developed this knowledge”. There is a concern that patent systems “encourage the appropriation of traditional knowledge for commercial use and that too without the fair sharing of benefits with the holders of traditional knowledge”. There has been a growing concern about “biopiracy, the unauthorized commercial use of genetic resources and traditional knowledge and the patenting of spurious inventions based on such knowledge and resources”. The person who “commits biopiracy enjoys the maximum benefits at the cost of the indigenous people’s knowledge”, as these people are unaware of the importance and value of their traditional knowledge.

Indigenous people have expressed their concerns regarding the recognition of traditional knowledge related “inventions, which did not fulfill the requirements of novelty and inventive step, when compared with the relevant prior art”. The best illustrations of the situation are grant of patent on healing properties of turmeric, neem, basmati rice, wheat and ginger etc.

Though traditional knowledge systems are used by corporations, the indigenous people are never adequately compensated by equitably sharing the benefit derived from such commercialization. The companies involved in research do use this knowledge for commercial exploitation. Through patents, an attempt is made by these companies “to take away what belongs to nature, to farmers, and to term this invasion improvement and progress”.

There is growing “opposition to the grant of patents on biological materials such as genes, plants, animals and humans”. Farmers and indigenous people are concerned that “plants that they developed are being hijacked by companies. There is growing public outrage that these companies are being granted patents for products and technologies that make use of the genetic materials, plants and other biological resources that have long been identified, developed and used by farmers and indigenous people”. Whilst the corporations stand to “make huge revenues from this process, the local communities are
unrewarded and in fact, face the threat in future of having to buy the products of these companies at high prices”.

There have often been instances where, patents based on or derived from traditional knowledge have been granted without considering adequate requirements of patent laws. This has happened mainly, due to the absence of thorough research by patent examiners or because of the inadequacy of information available for the purposes of searching for prior art. The situation is a “major burden for indigenous communities which wish to nullify or invalidate patents over inventions or discoveries that have used or incorporated their traditional knowledge”. Misappropriation of traditional knowledge through patent laws is facilitated by the fact that this knowledge is held collectively by the community, is freely exchangeable, and is considered to be in the public domain.

The irony is that traditional knowledge does not find protection in patent laws since traditional knowledge does not usually fulfill the criteria for protection under patent laws. There are several characteristics of traditional knowledge that create barriers to protection through the use of exiting patent law. Being “traditional is by definition not new”. It, therefore, cannot satisfy criterion of novelty. Novelty is judged according to prior art. Traditional knowledge is passed on from generation to generation that means, it is in public knowledge that leads to the assumption that this knowledge is in public domain and so it lacks novelty. The public domain has been used to serve as a tool to deny the claims of traditional knowledge for patent protection. So, this knowledge cannot fulfill the criteria of novelty which is the first essential for getting a patent.

Another requirement in patent law is sufficient inventive step. When traditional knowledge is disclosed it becomes publicly available and hence, under current patents rules lies in the public domain making it an obvious form of knowledge that cannot be claimed for patent rights. The subject matter of protection is sufficient inventive step in the application of the original traditional knowledge and is not merely a repackaging of what is already known.

Another requirement for grant of patent is industrial application that means invention must be able to make profits when used. Patents are “recognized only when knowledge and innovation generate profits”. Traditional knowledge is not used commercially by the communities who held it. Therefore, it does not generate profits in all cases. So, traditional knowledge fails to fulfill this criterion too. These barriers have kept the traditional/indigenous people outside the scope of the patent rights protection.
Indigenous people and local communities have “sought for greater protection and control over traditional knowledge and resources as the misappropriation of traditional knowledge for private financial gain has resulted in a significant loss to the value of traditional knowledge to indigenous communities”. The new millennium poses “serious challenge to the international legal community to set new international legal standard for tackling the problem of intellectual property protection thrown open by the technology developments”. The international instruments have contributed in some way to the trend towards “global harmonization of patent law” throughout the world. The “harmonization process has been initiated by the Paris Industrial Property Convention and it culminated with the adoption of the Trade-Related Aspects of Intellectual Property Rights (TRIPs) Agreement”. However, presently, no “single patent system” exists that will “protect an invention globally, and despite the attempts in international treaties to simplify patenting, the process remains complex, lengthy and expensive”. The fact of today is that existing patents in most industrialized countries provide little protection for traditional knowledge. Additionally, the corporations of developed countries are even unwilling to extend international protection to traditional knowledge. Though there have been attempts at harmonization of patent laws and procedure, there is no international patent system in the strict sense of the word, rather, individual states while maintaining an essentially domestic patent system of varying degrees of effectiveness, attempt to synchronize their national patent laws and systems with one another. The lack of protection under patent laws leads to misappropriation of traditional knowledge. The multinational corporations taking advantage of few principles of different national legislations use traditional knowledge for the commercial activities. In the United States, to qualify as an invention, an “item has to be useful, novel, and non-obvious”. The United States Patents Act specifies that “the invention should not be obvious to one skilled in the art”. The United States and most other developed countries “restrict their search for use in the public domain to the country in which the patent application is made even if the subject of the patent may have long been in use in public domain in other parts of the world”. Prior use in any foreign country anticipates a United States patent only when the use in foreign country is in a “tangible, accessible form such as a published document or a patent”. The obvious consequence is that, for states and people who do not have strong formal structures for patenting plants and/or publishing their knowledge in journals, their domestic resources
could be discovered and taken to the United States for the purposes of patent protection. Traditional knowledge is found in oral traditions than documented form and so, it become extensively vulnerable for misappropriation. Traditional knowledge, therefore, faces ‘obstacles if it has not been documented in printed form’.

The patent laws of United Kingdom also provides for novelty, non obviousness and industrial applicability as essentials for grant of a patent. The novelty of an invention is judged on basis of prior art, i.e., if information is already available to the public for free use, it will not be considered novel. The traditional knowledge unable to fulfill these requirements fails to get protection under patent law of England too. The information might be in oral or printed form.

International conventions also have not been able to protect the traditional knowledge. The passage of TRIPs Agreement is an example of the ignorance of the international community regarding the traditional knowledge of indigenous people. The preamble of the TRIPs Agreement “recognizes intellectual property rights only as private rights”. This “excludes all kinds of knowledge, ideas and innovations that take place in the intellectual commons, in villages among farmers, in forests among tribal people and even in universities among scientists”. TRIPs Agreement is a mechanism for the privatization of the intellectual commons. Article 27(2) of the agreement provides “for exclusion from patentability inventions, whose commercial use needs to be prevented to safeguard against serious prejudice to environment. This phrase is rather vague”. Article 27(3) provides “the countries to exclude plants and animals from patentability by providing an effective means or sui generis system of protection of intellectual property rights related to these, which will be interpreted differently by various countries”.

The TRIPs Agreement “fails to protect traditional knowledge because it does not provide an international rule of novelty and gives too much discretion to states in shaping their own domestic patent law”.

Indigenous people are scattered at different places, but these people all over the world share common worries and face similar problems in protection of their traditional knowledge. International attention has, now turned to intellectual property laws “to preserve, protect, and promote the traditional knowledge”. During the last four decades, especially since the formation of “the United Nations Working Group on Indigenous Population (WGIP) in 1982”, international legal mechanism have developed extensively to promote the cause of indigenous people all over the world.
The ‘International Labor Organization (ILO) Convention No. 107 of 1957’ that “introduced term indigenous people at international level, was relating to the protection and integration of indigenous and other tribal and semitribal population in independent countries”. Thereafter, International Labor Organization Convention No. 169 of 1989, made it obligatory for the states to accommodate tribal customs and customary laws, when applying national laws to the people concerned.

Since its inception, the ‘World Intellectual Property Organisation (WIPO)’ has been eager to protect all forms of innovations and inventions. In October 2000, the ‘World Intellectual Property Organisation General Assembly’ established ‘the World Intellectual Property Organisation Inter Governmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore’ (IGC) as an “international forum for debate and dialogue concerning the relationship between intellectual property, and traditional knowledge”. The Inter Governmental Committee is working in collaboration with all the stake-holders to evolve a mechanism to ensure that intellectual property rights are not given to parties other than the holders of traditional knowledge. It must be granted to the custodians and holders of traditional knowledge and such custodians/holders must have an equitable benefit sharing in case their knowledge is commercially exploited.

The Convention of Biological Diversity (CBD) is the “principal international instrument” which explicitly “acknowledges the role of traditional knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyle in biodiversity conservation and its sustainable development”. It is a convention, “setting out general principles that the parties agree to be guided by and work towards in a long term process”. The Convention, “imposes obligation on the member states, subject to their national legislations, to respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyle relevant for the conservation and sustainable use of biological resources, promote the wider application of such knowledge, innovation and practices with the approval and involvement of the holders of the knowledge and encourage the equitable sharing of benefits arising from the utilization of such knowledge, innovations and practices”.

The ‘Trade Related Aspects of Intellectual Property Agreement (TRIPs Agreement)’ is another instrument providing for protection of intellectual property rights in context of
trade. The TRIPs Agreement incorporates “a minimum set of basic procedural regulations to achieve effectiveness in the enforcement of these rights”. The Agreement by “taking into account differences in national legal systems” has sought uniformity on the rules of enforcement. The preamble of TRIPs Agreement envisages “the reduction in impediments to international trade and recognizes the need to promote and protect intellectual property rights and also to ensure that the measures of enforcement do not become barriers to the trade”. The agreement binds the member countries to bring their domestic laws in consonance with the provisions of the agreement.

In 1980s, the sessions of the Working Group on Indigenous Population (WGIP) became a major forum for the exchange of ideas and information among many indigenous groups and Non Government Organizations working for the cause of indigenous communities. In August 1988, during its sixth session, the Working Group on Indigenous Population considered a draft declaration which covered a broad range of areas affecting indigenous people including culture, identity, language, education, religion, land, forests, environment, autonomy, political participation and other issues. Its efforts bore fruit when in September 2008, after more than a decade long discussion and deliberations, the United Nations General Assembly ultimately ratified ‘the United Nations Declaration on Rights of Indigenous People (UNDRIP)’. The Declaration on the Rights of Indigenous People, 1994 accepts the “right of self determination” of indigenous people. It recognizes “their collective rights to live in freedom, peace and security as distinct people, their rights to the full recognition of their laws, traditions and customs, and full maintenance, protection and promotion of past, present and future manifestations of their cultures”. The declaration provides “States shall abstain from removing indigenous people from their lands or territories, respect their traditions and indigenous knowledge and restore and protect the environment”. These rights are, though, “inherent rights” but because of the weak position of indigenous people, a need was felt to recognize these rights so that the violation of the rights of indigenous people could be checked and controlled. The Declaration does not create new rights, rather, it elaborates existing human rights as they apply to indigenous people.

Another effort by United Nations for protection of traditional knowledge is the ‘Permanent Forum on Indigenous Issues (PFII)’. The forum is the foremost body for dialogue between indigenous people and states. The Permanent Forum on Indigenous Issues creates a space for cooperation with United Nations system through its mandates.
United Nations has also appointed a ‘Special Rapporteur’ who can receive complaints or denunciations against the violations of the human rights of indigenous communities by States and forward them to various United Nations agencies for action. The Special Rapporteur “mandate has been a crucial instrument for making the situation of indigenous people more visible in the work of human rights bodies and international agencies”. These instruments at international level have contributed their bit in protection and promotion of rights of indigenous people.

At national level also, some efforts were made by the “Government of India and the Non Government Organisations” for the protection and promotion of rights of indigenous people. The changes in laws and enacting of legislations along with other efforts and initiatives of Government have proved to be a saving grace for government and have proved helpful in protection of rights of indigenous people. The amendments in patent laws and enactment of new legislations like “the Biological Diversity Act, 2002, the Protection of Plant Variety and Farmers Rights Act, 2001, the Scheduled Tribes and Other Traditional Forests Dwellers (Recognition of Forest Rights) Act, 2006, and the Geographical Indication of Goods (Registration and Protection) Act, 1999” have proved to be beneficial for protection of traditional knowledge of India.

Patents law, after amendments, provides that “an invention which in effect is traditional knowledge or which is an aggregation or duplication of known properties of traditionally known component or components is non patentable”. Recently amended patent law contains provisions for “mandatory disclosure of source and geographical origin of the biological material used in the invention while applying for patents in India”. The enactment of ‘Biological Diversity Act, 2002’ is a boost for the protection of traditional knowledge of India. The Act creates a three tier system for the implementation of its purpose, “the National Biodiversity Authority (NBA) at the national level, State Biodiversity Board (SBB) at the state level and Biodiversity Management Committees (BMC) at the local level”. This system can help to check and restrict the alarming increase in bio piracy. The Central Government is empowered “to respect and protect the knowledge of local people relating to biological diversity, as recommended by the National Biodiversity Authority”. The Biological Diversity Act, 2002 primarily aims at “regulating access to genetic resources and associated knowledge for the purpose of securing equitable sharing of benefits arising out of the use of these resources and knowledge with the local people, who are conservers of
biological resources and holders of knowledge and information relating to the use of these resources”. The concept of benefit sharing is innovative under this Act so far as, it provides that the “authority can decide joint ownership of a monopoly intellectual right to both the inventor and the authority or to the actual contributors, such as, farmers if they can be identified”.

Another legislation, that aims for protection of traditional knowledge, is “Protection of Plant Varieties and Farmers’ Rights Act, 2001”, without which the conservation of biodiversity is, perhaps, impossible. This Act intends to provide an “effective system for protection of plant varieties, the rights of farmers and plant breeders”. The Act ensures the farmers’ “rights to save, use, sow, resow, exchange, share or sell the farm produce including seed of a protected variety” under this Act. The Act recognizes the role of farmers, traditional, rural and tribal communities as “cultivators and conservers”, and their contribution to the country’s agricultural biodiversity by rewarding them through benefit sharing. The authority under this Act is “empowered to invite claims of benefits sharing to the variety registered.” Being a signatory to the Trade Related Aspects of Intellectual Property Rights (TRIPs) Agreement, India has responded favorably and “opted for a sui generis system” through this Act.

Moreover, ‘the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Right) Act, 2006’ represents a major paradigm shift in approach towards addressing the concerns for providing tenure security, livelihood and traditional rights to the forest dwelling scheduled tribes. These tribes have been living in forests for generation without legal protection. The Act confers on “scheduled tribes and other forest dwellers right to hold and live in the forests”. While ensuring “livelihood and food security of the forest dwelling scheduled tribes and other traditional forest dwellers”, the Act also recognizes “rights of the forest dwelling scheduled tribes and other forest dwellers”. The responsibilities and authority for “sustainable use, conservation of biodiversity and maintenance of ecological balance and thereby, strengthening the conservation regime of the forests is also the responsibility of these tribes and the Act confers authority on the tribes to fulfill the responsibilities”.

The provisions of the ‘Biological Diversity Act, 2002 and Forest Rights Act, 2006’ provide a shield for traditional knowledge, on the one hand, by “respecting and protecting the knowledge of the local communities related to biodiversity and on the other, by declaring that the intellectual property rights, in such knowledge belongs
primarily to members of the community collectively”. Thus, the two Acts acknowledge that ‘the traditional knowledge of the tribal/forest dwellers is to be considered as equal to that of documented scientific and technological information’.

Further, the most effective tool for the protection of traditional knowledge initiated by Government of India is ‘Traditional Knowledge Digital Library (TKDL)’. The project was to document by collecting information of Indian traditional medicinal practices in digitized format in “Hindi and five international languages (English, German, French, Spanish and Japanese)” using ‘Traditional Knowledge Resource Classification (TKRC)’. Traditional Knowledge Digital Library is a very useful tool using digital technology to enable people who have no understanding on Ayurveda to find out relevant information about Ayurveda. It made the life of researchers very easy in finding out the existing drugs and its ingredients to conduct research to develop modern drugs. It will surely help in preventing grant of turmeric type patents in future. The use of digital technology enabled the consolidation of this scattered undocumented and secret knowledge in one place and its access made possible to anyone in the world, who is interested in future research and development. This digital library has become a “model for other countries on defensive protection of their traditional knowledge from misappropriation”.

The empirical research done by the researcher through interview of people working in field of traditional knowledge shows that though Government is taking steps for the protection of traditional knowledge, still, the sincerity is lacking. Government has provided for few provisions in different legislations for protection of traditional knowledge, but it is not serious about the implementation of the legislations. The Non Government Organizations are putting serious efforts for the protection of rights of indigenous people and for the revival of traditional knowledge. They are making indigenous people aware of their rights. These organizations are also training people how the traditional knowledge can be more beneficial to them specially, the farmers who are moving toward the companies for pesticides and other things which are claimed to be helpful in their fields. These organizations are making efforts to remind people of their rich cultural heritage and of the value of the knowledge which the ancestors have left for this generation and which this generation should pass on to next generation not to the multinational companies.
SUGGESTIONS

Traditional knowledge is in demand as “a source of information of the possible properties of biological material”. It is valuable knowledge. In spite of the legal provisions and efforts at national and international level for the protection of the indigenous people and their rights, there is increasing erosion of the rights and powers of the indigenous people over their natural resources and cultural rights. Despite having specific provisions in the patent statute, there was no strict implementation of them. Most of the applications that are filed for grant of patents flout the provisions of disclosing the source and origin of the material used in the invention. The patentee is enjoying all the rights but his obligations are dwindling. In the communities, nations and countries that owned traditional knowledge, especially developing countries, the urge of the legal protection of traditional knowledge has been getting stronger and stronger. The following are few suggestions that can prove helpful in better protection of traditional knowledge.

- The access to ‘Traditional Knowledge Digital Library (TKDL)’ may be made restricted. Contract law is best suited for this. The use of contractual provisions to overcome the flaws in the patent system might pave a way to prevent cases of piracy in the future. Any person who wishes to access the database must be required to first agree to certain conditions, for example, compensation to the source of the knowledge or payment of fees. The database can be made available to patent offices around the world as well as to researchers and scholars, but at the same time Government can retain control of the knowledge for the purpose of benefit-sharing. Controlled regime of access will lead to control over biodiversity conservation. Traditional Knowledge Digital Library is, sometimes, used by people who seek to patent traditional knowledge in their name. People get information from Traditional Knowledge Digital Library and then, make changes in the language or in the process of extraction from plants and claim it as novel, as was done in neem case. Restrictions on access can help to curb this misuse of the digital library.

There are serious efforts going on in many countries and internationally to develop new standards for protecting these types of databases considering the investment involved in its creation. This will enable the database owners to put the public domain knowledge under their control for access.
There is a need of “national legislation specifically’, to protect traditional knowledge”. This should be followed by “negotiations at the international level for an international agreement to protect traditional knowledge and other rights of local communities”. Monitoring of the systems developed for protection of traditional knowledge should be done by civil society organizations like Panchayats, state and national biodiversity boards. The Non Governmental Organizations working in field of traditional knowledge can be of great help in this monitoring of systems.

A policy at national level for medicinal, aromatic and other commercially important plants and herbal products and their trade with the help of patent laws should be developed for large-scale commercial use in domestic and international markets. Such policy should include “elements of transparency, sustainability, and benefit sharing and legal protection”. A strategy involving Non Government Organizations, universities and research institutes should be devised for providing legal protection of traditional knowledge. There is a need for “greater investment in research in traditional knowledge” by both the government and the private sector.

Concepts such as indigenous people, traditional knowledge, benefit sharing and community ownership should be defined with more precision and must be harmonized. Rights of indigenous people should be defined under legislation in clear terms. The Biological Diversity Act, 2002 must include “customary laws for protection of traditional knowledge”, as the indigenous people are more adapted to such laws. Benefit sharing i.e. sharing of profits, earned with the help of traditional knowledge of indigenous people, with these people must be provided in all legislations dealing with traditional knowledge as has been provided in Biological Diversity Act, 2002. The identification of beneficiaries of benefit sharing is a tough task. The Act must be amended to ensure the identification and also, to ensure that the benefits reach the deserving people.

*There is also a need on the part of government and nongovernmental organisations to create a general awareness among the public at large thereby enabling them to take maximum advantage out of that. Government should create awareness with the help of Panchayats and Gram Sabhas, about the significance of traditional knowledge. Panchayats and Gram Sabha are best suited for the job as Members of Panchayats can easily reach out to indigenous people living in areas nearby under the jurisdiction of respective Panchayats and Gram Sabhas. The Gram Sabha, the village community, has*
the power to revive the culture of indigenous people. The holders of traditional knowledge should be empowered so that they can hold their traditional knowledge with dignity and pride.

- Prior informed consent of knowledge holders must be obtained “before the use of knowledge”. There must be an “involvement of indigenous and local communities in applying and utilizing their knowledge to the development of new products”. While framing the laws affecting the rights of indigenous people, these people should be consulted foremost because these people will be most affected by such laws. “Disclosure, informed consent and equitable benefit sharing should be mandatory” for any commercial use of traditional knowledge. “Concrete and specific methods of sharing benefits” should be worked out in the event of commercialization. The corporations using the traditional knowledge must be required to enter into contracts with the indigenous communities before using their knowledge. Free consent of indigenous communities must be made mandatory like other commercial contracts.

- Constitutional protection to safeguard the traditional knowledge possessed by the tribal population must be ensured. The indigenous communities should be provided special status. Specific laws for protection of traditional knowledge of indigenous people should be passed under Article 15 of Constitution of India. The passage of ‘Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Right) Act, 2006’ is beginning in this field. More such specific Acts can lead to protection of rights of indigenous people.

- International cooperation through international convention and treaties must be ensured. The role of World Intellectual Property Organisation and United Nations must be strengthened. In the area of biodiversity, Convention on Biological diversity must take primacy over TRIPs Agreement. ‘TRIPs Agreement’ provides for exceptions to patents and ‘Convention on Biological Diversity’ provides “sovereign rights on genetic resources to the concerned nations in their jurisdiction and calls for the fair and equitable sharing of benefits arising out of the utilization of genetic resources”. While framing laws and policies for protection of rights of indigenous people, States should give priority to “benefit sharing provisions of Convention on Biological Diversity” rather than providing for exceptions from grant of patent.

- Part of the solution to problem of piracy lies in a well-defined set of *sui generis system* i.e. harmonized law of intellectual property rights in indigenous and local knowledge. A
very well known example of *sui generis law* is ‘Protection of Plant Varieties and Farmer’s Rights Act, 2001’ which is based on ‘Union for the Protection of New Varieties of Plants (UPOV)’. Sui generis system defining the rights of indigenous people is needed for protection of their rights.

- *Documentation of traditional knowledge of communities and their legal protection is urgently needed in view of the ‘rapid erosion of this knowledge base’. “Legally protected databases with suitable contractual agreements” based on principles given in Convention on Biological Diversity should be set up.*

- Traditional knowledge is ‘a technology capable of providing sustainable solutions to many modern day problems’. This fact should be “acknowledged and the commercial use of traditional knowledge should be handled in the same way that other technologies are”.

The protection of traditional knowledge has, now, acquired international recognition, still a lot need to be done. An “urgent action is needed” to protect the knowledge systems through “national policies and international understanding” linked to intellectual property rights, while providing for its “development and proper use for the benefit of its holders”. India has always been a rich country when it comes to knowledge and sharing knowledge. From ancient times, Indians have shared their knowledge without any intention of earning from such sharing. This traditional of sharing of the knowledge is prevalent even today. The developed countries are taking advantage of this traditional of sharing knowledge. The efforts made, at international and national level, have, to some extent, led to mitigation of piracy of traditional knowledge, but still, India has a long way to go. The Government should take immediate steps for protection of traditional knowledge, so that, this rich heritage should be preserved and conserved and the future generations can benefit from the traditional knowledge of this rich country.