Unit-IV

Traditional Knowledge and Intellectual Property

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Systems of Traditional Knowledge Protection

With the growing commercial use of TK has made it vulnerable to misuse and misappropriation by the third parties. There is a constant debate going on for efforts towards adapting to the changing requirements. The National Intellectual Property Rights Policy, 2016 recognizes that there is 'considerable unexplored potential for develop, promoting and utilizing traditional knowledge of India'. It also lays the importance on acknowledging the inputs of the less visible Intellectual property generators like the traditional knowledge holders. Similarly, AYUSH Policy 2002, and the draft AYUSH Policy 2016, supports promotion of the Traditional Medicine industry. Such initiatives act as a move for protection and recognition of TK and also the rights of TK holders. Apart from medicinal knowledge there are various traditional agricultural techniques, the local communities have used their understandings and identified valuable genes and traits in crops ad maintained them over centuries.

The most difficult aspect of traditional knowledge is in its protection. There has been a lot of debate to protect traditional knowledge under IP regime but that in itself faces a lot of challenges such as; a) under which IP under which traditional knowledge can be protected, b) since every IP protection is provided for a limited period of time then how will traditional knowledge have a continuous protection. Protection of traditional knowledge is rooted in the problem of Bio-piracy. Bio-piracy occurs when there is commercial utilization of traditional knowledge without proper authorization of the indigenous or local people associated with such knowledge.

In just under two years, in Europe alone, India has succeeded in bringing about the cancellation or withdrawal of 36 applications to patent traditionally known medicinal formulations. The key to this success has been its Traditional Knowledge Digital Library (TKDL), a database containing 34 million pages of formatted information on some 2,260,000 medicinal formulations in multiple languages. Designed as a tool to assist patent examiners of major intellectual property (IP) offices in carrying out prior art searches, the TKDL is a unique repository of India's traditional medical wisdom. It bridges the linguistic gap between traditional knowledge expressed in languages such as Sanskrit, Arabic, Persian, Urdu and Tamil, and those used by patent

examiners of major IP offices. India's TKDL is proving a powerful weapon in the country's fight against erroneous patents, sometimes referred to as "biopiracy".

Legal concepts for the protection of traditional knowledge

Though, there is no particular legislation for protection of TK and the rights of the holders but there are certain legislations that indirectly protect the TK.

The Forest Conservation Act, 1980: Under the Act, there are restrictions made on the de-reservation of forest or use of the forest land for non-forest purpose without the approval of the Central Government. The legislation is a strict one and, in a way, provides for conservation and protection of medicinal plants.

The Protection of Plant Varieties and Farmers' Rights Act, 2001: The Protection of Plant Varieties and Framers' Rights Act, 2001 has been enacted as a sui generis act, as mentioned under the "Article 27 (3)(b)" of the TRIPS Agreement. The Act recognizes the role of farmers as cultivators and conservers, and also acknowledges the contribution of traditional, rural and tribal communities in the country's agro-biodiversity by making provisions for benefit sharing and compensation and also protecting the traditional rights of the farmers.

Under the Act, the Protection of Plant varieties and farmers rights' Authority is formed. It is an agency that is concerned with protection of TK. The main function of the Authority is documentation, indexing and cataloguing of farmers' varieties; registration of extant varieties; maintenance of the National Gene Bank, and lastly, recognizing and rewarding farmers, community of farmers for conservation and improvement of plant genetic resources of economic plants and their wild varieties.

The Biological Diversity Act, 2002: The Biological Diversity Act, 2002 was enacted to fulfill India's obligations towards Convention on Biological Diversity. The biological diversity Act is regarded as an important legislation in India for protection of TK. The Biological Diversity Act, along with the Biological Diversity Rules, 2004 and the Guidelines on Access to Biological Resources and Associated Knowledge and Benefits Sharing Regulations, 2014, indirectly recognizes the rights of the indigenous communities and the knowledge that they hold. There are no specific provisions that refer to TK per se, but the biological resources associated to TK are mentioned.

Among different provisions the access and benefit sharing provisions under the Biological Diversity Act must be taken into consideration. Under the Act, provisions are laid down for benefit sharing that arises out of the utilization of the biological resources. The National Biodiversity Board has the power to regulate activities and also to issue guidelines for benefit sharing. Similarly, the Biological Diversity Act also provides provisions for access of biological resources. the provisions lay down the conditions under which persons, commercial firms, and other institutions can access biological resources

available in Indian and also the knowledge that is associated with biological resources, for research or for commercial utilization or for bio survey and bio utilization.

Schedule Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006: The Schedule Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 is an Act that aims to provide forest rights and occupation of forest land in forest dwelling Schedule Tribes and other traditional forest dwellers, who have been residing in such forest s for generations. The Act also recognize the right to intellectual property and traditional knowledge related to biodiversity.

Patent Act, 1970 (Amendment Act, 2005): The Patent Act, 1970, provided exclusive right to the inventor for his invention. Patent Act of 1970 excluded patentability of genetic resources but Patent Act as amended in 2005 under section 10 makes it mandatory for applicant to disclose the source and geographical origin of biological material in the patent application. The said Amendment Act aims to provide protection to traditional knowledge of the indigenous community but the Act does not provide any provision to oppose a patent application or to revoke a patent granted on the ground that the traditional knowledge is used without the prior informed consent of the community.

The Geographical Indications of Goods (Registration and Protection) Act, 1999: Geographical Indications (hereafter referred to as GIs) are signs that identify goods originating in a specific locality, region or territory, and enjoy certain quality, reputation or characteristic adducible to the geographical origin. The Act facilitates protection of collective rights of the rural and indigenous communities and their traditional knowledge. By registering an item which is the product of TK as Geographical Indication, it can be continue to be protected indefinitely by renewing the registration when it expires after a period of ten years. The Act also prohibits registration of a GI as a trade mark, thereby preventing misappropriation of traditional knowledge in public domain by an individual as a trade mark.

The Trade Marks Act, 1999: Trademarks are indications of distinctiveness that a trade mark holder may affix on a product for which that mark is registered. But the protection of TK under as trademarks is difficult. There is little scope of protection of TK under this Act.

Certain non-IPR mechanisms of traditional knowledge protection

Non-IP protection of TK focuses on protection of ecological resources. Non-IP protection includes establishing conservation parks, protecting endangered species, restricting development, protecting cultural remains, and conserving habitats, among other forms of protection. Moreover, the CBD (Convention on Biological Diversity), the Convention of Agriculture, and other international agreements provide protection to genetic resources or TK, and the benefit sharing mechanism.

Genetic resources themselves are not intellectual property (they are not creations of the human mind) and thus cannot be directly protected as intellectual property. However, inventions

based on or developed using genetic resources (associated with traditional knowledge or not) may be patentable or protected by plant breeders' rights. In considering intellectual property aspects of use of genetic resources, WIPO's work complements the international legal and policy framework defined by the Convention on Biological Diversity (CBD), and its Nagoya Protocol, and the International Treaty on Genetic Resources for Food and Agriculture of the United Nations Food and Agriculture Organization. The methods of protecting such genetic traditional resources includes:

- ***Defensive protection of genetic resources*:** This strand of the work aims at preventing patents being granted over genetic resources (and associated traditional knowledge) which do not fulfil the existing requirements of novelty and inventiveness. In this context, to help patent examiners find relevant prior art, proposals have been made that genetic resources and traditional knowledge databases could help patent examiners avoid erroneous patents and WIPO has improved its own search tools and patent classification systems. The other, more controversial, strand concerns the possible disqualification of patent applications that do not comply with CBD obligations on prior informed consent, mutually agreed terms, fair and equitable benefit-sharing, and disclosure of origin. "Biopiracy" is a term sometimes used loosely to describe biodiversity-related patents that do not meet patentability criteria or that do not comply with the CBD's obligations – but this term has no precise or agreed meaning.
- ***Traditional Knowledge Digital Library***: India has adopted one of the defensive protection of TK through the development of a digital database in the form of the Traditional Knowledge Digital Library (TKDL) in 2001. This initiative was taken by India to protect Indian traditional medicinal knowledge from misappropriation at International Patent Offices. It has converted Indian Systems of Medicines like Ayurveda, Siddha, Unani and Sowa Rigpa, even Yoga into five different languages, namely, English, Japanese, French, German and Spanish through information technology tools. **TKDL** database consists of over 2,50,000 formulations used in traditional medicine systems in India, namely, Ayuveda, Siddha, Unani and Yoga. TKDL is a pioneer initiative of India to prevent misappropriation of country's traditional medicinal knowledge at international patent offices on which healthcare needs of more than 70% population and livelihood of millions of people in India is dependent.
- Convention on Biological Diversity: The Convention on Biological Diversity (CBD), known informally as the Biodiversity Convention, is a multilateral treaty. The Convention has three main goals: the conservation of biological diversity (or biodiversity); the sustainable use of its components; and the fair and equitable sharing of benefits arising from genetic resources. Its objective is to develop national strategies for the conservation and sustainable use of biological diversity, and it is often seen as the key document regarding sustainable development.
- The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) to the Convention on Biological Diversity

is another supplementary agreement to the CBD. It provides a transparent legal framework for the effective implementation of one of the three objectives of the CBD: the fair and equitable sharing of benefits arising out of the utilization of genetic resources. The Nagoya Protocol was adopted on 29 October 2010 in Nagoya, Japan, and entered into force on 12 October 2014.

- Habitat and Biodiversity Conservation: India is one among the 17 mega diverse countries of the world. But many plants and animals are facing threat of extinction. To protect the critically endangered and other threatened animal and plant species, Government of India has adopted many steps, laws and policy initiatives. Project Tiger was launched by the Government of India with the support of WWF-International in 1973 and was the first such initiative aimed at protecting this key species and all its habitats. Similarly, Crocodiles have been threatened as their skin is used for making leather articles. This led to the near extinction of crocodiles in the wild in the 1960s in India. A Crocodile Breeding and Conservation Program was initiated in 1975 to protect the remaining population of crocodilians in their natural habitat and by creating breeding centers. It is perhaps one of the most successful ex situ conservation breeding projects in the country.

Important Indian Acts passed related to Environment and Bio Diversity

- Fisheries Act 1897
- Indian Forests Act 1927
- Mining and Mineral Development Regulation Act 1957
- Prevention of cruelty to animals 1960
- Wildlife protection act 1972
- Water (prevention and control of pollution) act 1974
- Forest Conservation Act 1980
- Air (prevention and control of pollution) act 1981
- Environment Protection Act 1986
- Biological Diversity Act 2002
- Scheduled Tribes and other traditional forest dwellers (recognition of rights) act 2006.

Patents and Traditional Knowledge

Traditional knowledge, as opposed to common belief, is not so called because of its antiquity. It is a living body of knowledge that is developed, sustained and passed on from generation to generation within a community, and often forms part of its cultural or spiritual identity. As such, it is not easily protected by the current intellectual property system, which typically grants protection for a limited period to inventions and original works by named individuals or companies. Its living nature also means that “traditional” knowledge is not easy to define.

Protecting and promoting traditional knowledge is an amalgamation of various ideas like human rights, conservation of resources, sustainable development, intellectual property rights and

benefit sharing mechanism. This work looks at traditional knowledge through the lens of intellectual property ecosystem.

In term of Intellectual Property (IP) protection for traditional knowledge, two types are being sought:

i. Defensive protection which aims to stop people outside the community from acquiring intellectual property rights over traditional knowledge. India, for example, has compiled a searchable database of traditional medicine that can be used as evidence of prior art by patent examiners when assessing patent applications. Defensive strategies might also be used to protect sacred cultural manifestations, such as sacred symbols or words from being registered as trade marks.
ii. Positive protection under which there is granting of rights that empower communities to promote their traditional knowledge, control its uses and benefit from its commercial exploitation. Some uses of traditional knowledge can be protected through the existing intellectual property system, and a number of countries have also developed specific legislation.

However, the international legal system has not surfaced with an instrument for specific protection of such traditional or indigenous knowledge and even though some national laws do accord protection, this may not hold sufficient for other countries.

India is a mega diverse country with only 2.4% of the world's land area, harbours 7-8% of all recorded species, including over 45,000 species of plants and 91,000 species of animals. Of the 34 global biodiversity hotspots, four are present in India, represented by the Himalaya, the Western Ghats, the North-East, and the Nicobar Islands. Further, India is the largest producer of medicinal plants and the traditional medicinal systems found under Ayurveda, Siddha and Unani, are concepts that were developed between 2500 and 500 BC in India.

That India is a biologically diverse and the traditional knowledge possessed regarding various resources, especially the medicinal system, makes it a richer nation is understood, however such the possession of such knowledge must be both protected and promoted. India has undergone many struggles in trying to safeguard her traditional knowledge. These resulted from patents granted to corporations, for knowledge that is India's legacy. Here three popular cases that brought to the fore the supposed "stealing" of Indian traditional knowledge and access of biological resources, in contravention of the Biological Diversity Act, 2002.

The Neem Case

A controversy that can be tagged the "first" for India, and which rose doubts about a supposedly "strict" patent system, was the granting of patent to a company W.R. Grace. The company was granted a patent in the United States and the European Union, for a formulation that held in the stable storage of azadirachtin, the active ingredient in the neem plant; it planned to use azadirachtin for its pesticidal properties. Traditional systems of medicine like Ayurveda and Unani, identify antiviral and antibacterial properties of the neem tree also known as the "curer of all ailments" in Sanskrit, and prescribe the same for treating skin diseases and as a natural pesticide. The applicant admitted in the patent application of how the pesticidal uses of neem were

known and pointed out to the fact that storing azadirachtin for a longer duration is difficult. The US patent granted, covered a limited invention whereby the applicant was only given the exclusive right to use azadirachtin in the particular storage solution described in the patent.

The grant of the patent was followed by an uproar and it was challenged through re-examination and post-grant opposition proceedings before the United States Patent and Trade Mark Office (USPTO) and the European Patent Office (EPO), respectively. Though there was no success at the Uspto, the European Patent Office ruled in favour of the opposition stating the patent granted, lacked in novelty and inventive step.

The Turmeric Case

As the USPTO and EPO were dealing with the Neem case, a similar matter was boiling; a patent was granted for "use of turmeric in wound healing" and claimed a method to heal wounds in a patient by administration of an "effective amount" of turmeric. Suman K. Das and Hari Har P. Cohly were the inventors of this patent and had later assigned the patent to the University of Mississippi.

A re-examination application was filed against the granted patent, along with nearly two dozen references, which resulted into early success. The inventors' defence was proven weak in front of the modern commentaries on classic ayurvedic texts, extracts from Compendium of Indian Medicinal Plants and nineteenth century historical texts from the library of Hamdard University, resultantly in August 1997, the USPTO ordered revocation of the patent, which lacked novelty.

The Basmati Case

Another case that created much havoc was a patent granted by the USPTO to an American company called RiceTec for "Basmati rice lines and grains". Basmati rice is a traditionally grown aromatic variety of rice, in India and Pakistan. The grant of this patent created multitude IP issues besides that under the patent law i.e. under trademarks and geographical indications.

RiceTec had been granted patent for the invention of hybrid rice lines that combined desirable grain traits of Basmati rice with desirable plant traits; this was due to the inferior quality of Basmati rice that grew in US in comparison to the good quality Basmati rice being cultivated in northern India and Pakistan and would help in growing a better crop of Basmati rice in the western hemisphere, especially US. A re-examination request was filed, with declarations from two scientists, along with several publications on Basmati rice and the research conducted on the rice in India—one of which made the USPTO realise that core claims of RiceTec were non-obvious. This resulted into RiceTec not challenging the USPTO's decision and reducing its twenty claims to three.

Strategies to increase protection of traditional knowledge

The following strategies or measures can be adopted to better protect and harness traditional knowledge

- ***Establishing Systems for protecting traditional knowledge and ensuring benefit sharing***

Measures designed to secure recognition of indigenous and local people's rights over resources and intellectual property must include:

- Steps to strengthen partnerships between local government and local people
- Establishment of wider networks and linkages among indigenous peoples, NGOs, universities and local governments, with a view to broad-based management of various ecosystems
- Steps to enhance local control over traditional resources, including mechanisms to ensure adequate benefit sharing from the wider use and application of indigenous and local knowledge, innovations, and practices.

As regards the creation of sui generis systems for managing indigenous IPR, suitable legal frameworks for the protection of the knowledge, innovations and practices of indigenous and local communities must be established that acknowledge the socio-cultural diversity between and within communities.

Such systems must be established in consultation with the communities in question. Local groups need to have secure access to the lands in which their knowledge and spiritual world are based. Forced movement of native communities should be discouraged as being profoundly destructive to indigenous and other traditional societies, as well as to biological and cultural diversity. As a matter of course, the issue has to be seen in a larger context, taking into account all the different factors influencing land tenure.

- ***Harnessing TK for development and trade***

There should be policies, legislation and ethical guidelines ensuring that local and indigenous communities are able to protect their traditional resources (including land, knowledge and genetic resources) but at the same time benefit equitably from the wider use and application of their knowledge, innovations and practices. In order to bring about these changes, programmes and actions should be guided by a holistic approach. This involves finding common ground between scientific, local, and political world views and carefully considering important linkages between culture, nature and the external socio-political environment. It also requires a shift in scientific perspective, towards recognition of different modes of knowing and of the validity of all systems of knowledge.

Global and regional markets can have both positive and negative impacts on biodiversity and local cultures. Generation of income for members of the local community can have a positive impact. However, the commoditization of locally available products, including intangible products such as culture and knowledge, does not of itself ensure that local community benefit in an equitable and sustainable manner. Positive action is needed to ensure that local communities have access to markets. For example, information can be provided on prices, purchasers, and technologies, and institutional arrangements can be introduced that shorten supply chains.

- ***Capacity-building needs***

All efforts to promote conservation of TK must include capacity building, ensuring that community members, NGO staffers, and employees of government bodies have the right skills at the right level. New technologies and strategies create a need for effective training, impact assessment, and follow-up support. External agencies may have to develop these skills before they can assist regional and community groups.

- ***Institutional consolidation of indigenous organizations***

Case studies and workshops have shown that both traditional and newly created indigenous organizations have a strong need for institutional support in a large number of areas such as management skills, financial administration and legal affairs. Processes of self-determination should be fostered and support given to grassroots and umbrella organizations and to networks. Linkages between the different levels of these organizations are often weak and in need of special attention. Information management should, therefore, be included in capacity building activities. Institutions should also be given training in fund-raising and in how to approach donor organizations. Other institutions that should be considered for capacity building are bodies that grant access to knowledge and biodiversity (see the Philippines case study); bodies dealing with TK in their role as alternative scientific institutions; and indigenous educational institutions such as schools and universities.

- ***Promoting intercultural exchange of experiences***

Actions to promote dialogue, mutual understanding and respect include supporting indigenous groups in creating mechanisms through which communities can exchange experiences of conserving biological and cultural diversity; immersion programmes for outsiders designed to bring about changes in attitude towards indigenous cultures and to improve communication skills; and the inclusion of both indigenous and scientific knowledge in local educational curricula. Exchanges between indigenous communities (e.g. through mutual visits) can be a powerful means for "bottom-up" capacity building. In particular, cross-border visits between members of the same ethnic group should be fostered in order to promote learning processes. Several regional meetings and workshops on TK and indigenous communities in South-East Asia and Latin America have recommended such a step.

- ***Enablement for policy dialogue***

Local people should be supported in their efforts to conduct policy dialogues and should be provided with appropriate training for such activities. Education and training should focus on young leaders within indigenous and local communities, and young men and women should be helped, through the provision of financial support, to gain access to universities and other educational institutions. Capacity building should not concentrate just on local communities; it should extend to representatives of local government and NGOs with a view to improving communication and collaboration with local communities. This can lead to the creation of partnerships for developing effective mechanisms for the protection of TK. Capacity-building activities should expose policy makers, officials, and NGO staff members to the daily life of

communities, so that their own experiences are fed back into the policy-making process. This would also involve establishing mechanisms for multi-stakeholder dialogue, cooperation and conflict management.

- ***Awareness raising and cultural impact assessment***

Raising education and awareness, both in the countries of origin of biodiversity and TK and in industrial countries, helps increase public understanding of the importance of TK in effectively conserving biological and cultural diversity. Awareness-raising campaigns help communities develop an understanding of the problems associated with bioprospecting and the potential it has for community development. Such activities can mobilize self-help forces and can prompt communities to find their own solutions to problems and also to develop regimes, instruments and institutions for regulating access to their territories, resources and TK. Activities and seminars involving young people have been particularly successful, for this is the group whose future depends on the resources and the associated knowledge being conserved.

Global legal Fora[1] for increasing protection of Indian Traditional Knowledge

Indian TK is now available to the United States Patent and Trademark Office (USPTO) and European Patent Office (EPO), who can access the database of TK, courtesy the Indian Government's permission. India's Council of Scientific and Industrial Research (CSIR), and the Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy developed the TK Digital Library (TKDL), a 30-million page searchable database of TK translated from several languages such as Hindi, Sanskrit, Arabic, Persian, Urdu and Tamil into English, Japanese, French, German and Spanish. *There are several other international legal platforms and mechanisms that currently address IP protection relating to TK, including the following:*

- **The UN Draft Declaration on Rights of Indigenous Peoples (UNDRIP)**: Article 29 of this UN Draft Declaration specifically states that people from LICs are authorized to the recognition of the complete ownership, control and protection of their cultural and IP. They have the special rights to control, develop and protect their sciences, technologies and cultural expressions, including human and other genetic resources, seeds, medicines, wisdom of the characteristics of flora and fauna, oral traditions, literature, designs and, visual and performing arts.
- **Global Guidelines**: Another positive initiative is the inclusion of a set of draft corporate guidelines for businesses that want to use native plants and TK from LICs to make commercial drugs.

The CBD and the 2010 Nagoya Protocol establish the dominant international system for the recognition and protection of TK. Under Article 8(j) of the CBD, parties are required to respect and maintain knowledge held by LICs, and promote broader application of TK based on fair and equitable benefit-sharing. TK is further recognized in Article 16 as a 'key technology' for effective

[1] *FOR A means a court which has jurisdiction to hold a trial of a particular lawsuit or petition.*

practices of conservation and sustainable use of biodiversity, with procedural requirements established in Article 15(4–5) for access to genetic resources, including those based on prior informed consent and mutually agreed terms. The Nagoya Protocol, which became effective from 2014, broadens the CBD provisions establishing a concrete system determining access and benefit-sharing. Other relevant developments relating to TK that evolved simultaneously to progress in the CBD leading up to the Protocol include the establishment of:

- The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) passed by the Food and Agriculture Organization Conference in 2001, effective from June 29, 2004. This treaty provides for protections relating to 'farmers' rights' including TK and traditional breeding practices.
- The Inter-Governmental Committee (IGC) on IP and Genetic Resources, TK and Folklore, established under the World Intellectual Property Organization (WIPO) in 2000, which provides a forum for negotiations on issues related to development of a binding international mechanism on TK.
- The protection of TK raises several policy issues, prominently the objectives and methods of such protection, and its impact and ramifications for intended beneficiaries. Such issues are extremely complex, since there are broad differences about the definition of the subject matter, the justification for protection, and the means for achieving its purposes. The issues pertinent to TK should be addressed in a comprehensive manner, including ethical, environmental and socio-economic concerns. Moreover, there are still several unresolved technical issues such as the problem of collective ownership and the modes of enforcement of rights.
- The conviction that TK has helped the industry generate gargantuan profits has proved to be relentless. Of course, much of the international law governing access to genetic resources and benefit-sharing has been woven around this idea. TK should be protected on both human rights and utilitarian grounds, but the political strategy adopted by India for the past two decades needs to be seriously reconsidered. In terms of legal benchmark, this strategy has been dichotomous. The first is the access and benefit-sharing path via the CBD and its Nagoya Protocol. The second is based on IP law and comprises:

  (i) Reforms aimed to reduce misuse of genetic resources and TK, such as by enhancing patent prior art searching, restricting the scope of the subject matter claims in patent law to biological, biochemical and genetic issues, and necessitating patent applicants to disclose the origin of genetic resources and TK that were useful or essential to an invention; and

  (ii) The enactment of *sui generis* TK protection laws, based partly on current forms of IPRs, but with some modern features.

- TK cannot flourish when decisions affecting LICs continue to be made by urban educated elites. We need to give up political space to allow LICs to formulate the rules of

involvement. The 2007 UNDRIP affirms territorial rights and self-determination, and these must be essential elements of strategies, activities, laws and regulations.

- The development of any system for the protection of TK should be established on a logical definition of the objectives sought, and on the propriety of the mechanism selected to accomplish them. IPRs may be one of the devices to be used, but their limits and ramifications should be clearly gauged. A balance should be struck between the protection and promotion of the use of such knowledge. The extent to which the myriad proposals made for the protection of TK convey the aims and cultural values of the LICs they intend to serve should not be ambiguous. There is a risk of transferring concepts and models unsuited to their realities to such communities, or which may prove ineffective in solving the issues they are supposed to address. The protection of TK should not outweigh the fact that its preservation and use requires ensuring the survival and improvement of living conditions in the ambiance and cultural setting of such LICs.

Questions:

1. Do you feel the need of protecting traditional knowledge? If yes, explain some legal methods to protect traditional knowledge?
2. What are the different methods of protecting traditional knowledge? Explain some non-IPR methods of protecting traditional knowledge?
3. What is patent? Can traditional knowledge be patented, explain with illustration?
4. Explain various strategies that can be used to protect traditional knowledge?
5. What is the global legal for a of protecting traditional knowledge? What are the recent developments in the conservation of biodiversity in the international scenario.