CHAPTER IV
PROTECTION OF THE RIGHTS OF INDIGENOUS PEOPLE AND THEIR KNOWLEDGE IN INDIA

4.1 INTRODUCTION

This chapter provides an insight to the various constitutional provisions in India, legislations and policies and databases which give protection to the Traditional Knowledge (TK)\(^1\) and rights of the indigenous people.

It is estimated that there are more than 370 million indigenous people spread across 70 countries. They are distinct from the dominant societies in their countries. They have unique traditions, distinct culture and peculiar approaches towards land, life and religion. They are usually described as descendants of those who inhabited a country at the time when the people of dominant cultures or ethnic groups occupied the country. The dominant groups attained supremacy through conquest, occupation or settlement.\(^2\)

The rich biodiversity of India is matched with equally rich cultural diversity and a unique wealth of indigenous knowledge system developer preserved and practiced by millions of ethnic and indigenous people living in the tribal and rural sectors. This indigenous knowledge system encompasses a plethora of unique and time-tested knowledge wisdom, belief, traditions and practices associated with conservation and sustainable use of biogenetic resources. Most of this knowledge are held within the traditional communities and are transmitted orally from one generation to another.

The value and importance of knowledge possessed by the indigenous people is now being increasingly realized the world over. For example, it is estimated that about 75% of the 120 biological active plant derived compounds presently in use worldwide have been derived through follow up researched to verify the authenticity of data from folk and ethno medical uses. So, there is a great scope for new drug discoveries based on traditional plant

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\(^1\) Hereinafter referred to as TK

use. And the pharmaceutical industry continues to investigate and confirm the efficacy of many medicine and toxins used by traditional communities. The traditional knowledge can also contribute immensely to modern agriculture, food and other industries. The traditional knowledge and traditional resources of local and indigenous peoples are thus important facets of the biological diversity, which offer immense benefits to the social and economic development of a country.³

The current concern with traditional knowledge policy in India may be traced back to the early 1980’s, when activities and intellectuals alleged that India’ biodiversity by multinational pharmaceutical business. Patents, granted on products derivates of the neem, turmeric and basmati plants were the visible targets of the misappropriation charge. As these protests gained momentum and various anti-globalization groups joined in, the government was compelled to come up with a strategy to combat ‘Biopiracy’ and protect Indigenous knowledge.⁴

4.2 CONSTITUTIONAL PROVISIONS IN INDIA TO PROTECT INDIGENOUS PEOPLE AND THEIR KNOWLEDGE

India has a history of cultural assimilation even while we agree to some communities maintain their distinct identity within the nation. India always presented a unity in diversity and diverse cultural identity is no insignia of the existence of indigenous group. Indeed, India accepts the existence of different tribes within its larger system again not different from the main culture in terms of the core values. True to its tradition of cultural assimilation and spirit of accommodation the Indian constitution presents the picture of the larger system of permitting the smaller political systems of tribal populations to be part of the system to remain distinct culturally but to be part of the larger

system politically with sufficient autonomy wherever necessary and possible. Schedules V and VI of the Constitution of India specifically make provision for safeguarding the interests of the tribal people in India located in what is called tribal areas. Tribal people of other areas are taken as part of the main society inasmuch as special constitutional provisions have not been made for them. They are to be assimilated rather than to be made separate entity. Indeed, under the scheme their cultural identity is assured to be maintained.

The Supreme Court observed: “Agriculture is the only source of livelihood for scheduled tribes, apart from collection and sale of minor forest produce to supplement their income. Land is their most important natural and valuable asset and imperishable endowment from which the tribals derive their sustenance social status, economic and social equality and permanent place of abode and work and living. It is a security and source of economic empowerment. Therefore, the tribes too have great emotional attachment of their lands. The land, on which they live and till, assures them equality of status and dignity of person and means to economic and social justice and is a potent weapon of economic empowerment in a social democracy.”

Justice Y.K. Sabharwal the then Chief Justice of India spoke of the constitutional scheme at the Plenary Session of the International Law Association (ILA) in Toronto: “The Fifth and Sixth schedules constitute an integral scheme of the constitution with direction, philosophy and anxiety to protect the tribals from exploitation and to preserve natural endowment of their land for their economic empowerment to cognate social and economic democracy with liberty, equality, fraternity and dignity of their person in our political Bharat.” These observations reflect the philosophy of the Indian Republic and the obligation of the government to respect and protect the rights of these people.

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5 Samatha vs State Of Andhra Pradesh And Ors, AIR 1997 SC 3297
The Constitution of India does not directly address the issue of protection of indigenous people and their knowledge. Article 48A of the Constitution refers to the States obligation to protect and improve the environment and safeguard the forests and wildlife of the country. Further Article 51(A) (g) imposes a duty upon the citizens of India to protect and improve the natural environment, including forests, lakes, rivers and wildlife. As regards protection of Indigenous people’s knowledge, Article 29 of the Constitution recognizes as a fundamental right the protection of the culture of minorities. According to Article 29, any section of the citizens residing in the territory of India or any part thereof having a distinct language, script or culture of its own shall have the right to conserve the same. It is possible to protect the folklore of the distinct groups in India under this provision. However, majority of the TK existing and misused in India belong to small communities who do not belong to small communities who do not come under the scope of aforementioned constitutional provision. But no legislation has been enacted to protect the same. The other general provision in the Constitution that can be identified as a source to protect TK in Article 51A (f) of the Constitution provides that it is the fundamental every citizen of India, to value and preserve the rich heritage of our composite culture. Furthermore, considering the special cultural identity of the tribal population in India, the Constitution provides that it is the fundamental duty of every citizen of India, to value and preserve the rich heritage of our composite culture. Furthermore, considering the special cultural identity of the tribal population in India, the Constitution envisages special protection of the indigenous communities. The areas where they are only tribal communities, as per Article 371 read with the Schedule VI of the Constitution, are permitted to have separate autonomous councils for self-governance in accordance with their customary laws.

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7 Organisation of agriculture and animal husbandry: The State shall endeavour to organise agriculture and animal husbandry on modern and scientific lines and shall, in particular, take steps for preserving and improving the breeds, and prohibiting the slaughter, of cows and calves and other milch and draught cattle.

8 Schedule V of the Constitution provides that the government has the power to create scheduled areas to protect the interests of the tribes. The head of the State can prohibit the application of the normal laws, if they are in conflict with their customs. The tribes not falling in the above categories are subjected to the normal laws of the
In spite of the constitutional provisions which envisage protection and preservation of distinct cultural groups, there is no special law prohibiting the exploitation of folklore of these communities without permission. There are many customary norms in these communities which prohibit the use of some of their folklore and traditional use of plants by the outsiders and of those that are confined only to indigenous people and their customary practices. As there is no particular law prohibiting the use of such indigenous knowledge by the outsiders, increasingly they are being used for commercial gain.

4.3 INTELLECTUAL PROPERTY PROTECTION TO THE INDIGENOUS PEOPLE AND THEIR KNOWLEDGE IN INDIA

At the international level, particularly in forums like the World Intellectual Property Organisation (WIPO)\(^9\) and Trade Related Aspects of Intellectual Property Rights (TRIPS)\(^{10}\) Council, the importance of the intellectual property rights regime in protecting TK and biological resources has been acknowledged. Countries like Australia have expressed the view that, while there is a need to examine ways of improving protection for TK, the starting point should be to explore possibilities for making more effective use of the existing legal framework, particularly the intellectual property system. It was further stated that dismissing the applicability of the current system ignores not only potential benefits to be gained and identify the legitimate “gaps” in protection, but could lead to the creation of additional regulatory burdens and procedures. In surveys conducted by the WIPO to assess the use of existing standards of intellectual property for the protection of TK, countries like Australia, Canada, Columbia, Kazakhstan, New Zealand, the Russian Federation, Venezuela and Vietnam have provided actual examples of how IPRs can be utilized to promote and protect TK.

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\(^9\) Hereinafter referred to as WIPO
\(^{10}\) Hereinafter referred to as TRIPS
These include the use of copyright protection in Canada to protect tradition-based creations including masks, totem poles and sound recordings of Aboriginal artists, the use of industrial designs to protect the external appearance of articles such as head dresses and carpets in Kazakhstan and the use of geographical indications to protect traditional products such as liquors, sauces and teas in Venezuela and Vietnam. India too has realized the importance which the Intellectual Property Rights (IPR) regime could have for protection of its TK and products based on it. India, as a member of the WTO, was under obligation to implement the TRIPS Agreement in totality, thus requiring the Indian Intellectual Property laws to meet the minimum standards laid down in the TRIPS Agreement. This led to the amendment of the Patents Act of 1970 and new enactments- the Biological Diversity Act, 2002, the Protection of Plant Varieties and Farmers’ Rights Act (PPVFR Act)\textsuperscript{11}, 2001 and the Geographical Indication of Goods (Registration and Protection) Act (GI Act)\textsuperscript{12}, 1999. To fulfill the obligations under the Convention on Biological Diversity (CBD)\textsuperscript{13}, India like other countries such as Brazil, Costa Rica, Philippines, Sweden and the Andean Community have tried to regulate access to genetic resources and the associated TK, by incorporating certain provisions in these legislations. An attempt has been made to include requirements to disclose the origin of the source of the genetic material used in biotechnological inventions and the related IK used in the invention, as well as requirements of evidence of benefit sharing and prior informed consent from the relevant national authorities, through an interface between the Patents Act 1970 (amended in 2005) and the Biological Diversity Act, 2002. Here, an attempt has been made to critically analyse the provisions of each of these enactments, with a view to examine their relevance for protection of TK and biological resources.
4.3.1 THE GEOGRAPHICAL INDICATIONS OF GOODS  
(REGISTRATION AND PROTECTION) ACT, 1999

The need to protect India’s famous products, the reputation of each of which was carefully built up and painstakingly maintained by the masters of that region, combining the best of Nature and Man, traditionally handed over from one generation to the next for centuries, through geographical indications was acutely realized following the basmati case. In 1997, the United States Patent Office granted a patent on Basmati rice to an American company called Rice Tech Inc. Basmati is a slender, aromatic, long grain variety of rice from the Punjab provinces of India and Pakistan. It is a major export crop for both countries; annual basmati exports are worth about $300 m and represent the livelihood of thousands of farmers. In the absence of domestic legislation then to protect Geographical Indications (GI)\textsuperscript{14}, India had no option but to resort to the expensive procedure of challenging the patent. In view of these circumstances, it was considered necessary to have a comprehensive legislation for registration and for providing adequate protection for geographical indications. For, unless a geographical indication is protected in the country of its origin, there is no obligation under the TRIPS Agreement for other countries to extend reciprocal protection. Also, India being a party to the TRIPS Agreement is required to protect geographical indications and hence in order to fulfill that obligation, the Geographical Indications of Goods (Registration and Protection) Act, 1999 was enacted. The main benefits which follow from registration under the Act are that it confers legal protection to geographical indications in India, it prevents unauthorized use of a registered geographical indication by others, it boosts exports of Indian GIs by providing legal protection, it promotes economic prosperity of producers and it enables seeking legal protection in other WTO member countries. Here, the discussion would be confined to those provisions of the Act, which have a bearing on protection of IK of biodiversity.

\textsuperscript{14} Hereinafter referred to as GI
According to the definition given in the Act\(^{15}\) a geographical indication in relation to goods\(^{16}\) means that it is an indication used to identify agricultural, natural or manufactured goods. The goods which it identifies originate from a definite geographical territory, the manufactured goods should be produced or processed or prepared in that territory and the goods which it identifies should have a special quality or reputation or other characteristics due to its geographical origin. It is not necessary that a GI has to be the name of a country, region or locality; it will be regarded as a GI if it satisfies two conditions: it is related to a specific geographical area and is used in connection with particular goods originating from that area.\(^{17}\)

Section 2.1(g) gives a list of the indications which can be called GI which are any name, geographical or figurative representation or any combination of them conveying or suggesting the geographical origin of goods. From the perspective of protection of TK, one of the best features of the Indian Act is the comprehensive definition given of GI, whereby agricultural, natural and manufactured goods all come under the ambit of GI. This is especially important in the Indian context considering the wide variety of goods that is deserving of protection ranging from agricultural products like Basmati, Darjeeling tea to manufactured goods such as petha from Agra, Kolhapure chappals, Chanderi silk etc.\(^{18}\)

The provisions of the GI Act can be regarded as adequately suited for the protection of the TK of the indigenous people. It provides that any association of persons, producers, organization or authority established by or under the law can apply for registration of a GI.\(^{19}\) This section especially facilitates protection of the collective rights of the rural and indigenous communities in their TK.

\(^{15}\) Section 2.1(e)  
\(^{16}\) Section 2.1 (f) provides that goods mean any agricultural, natural or manufactured goods or any goods of handicraft or of industry and includes food stuff  
\(^{17}\) Explanation to section 2.1 (e)  
\(^{19}\) Section 11, GI Act,1999
Another positive feature of the Act is that by registering an item which is the product of IK as GI, it can be continued to be protected indefinitely by renewing the registration when it expires after a period of ten years. This is unlike the protection offered by a patent; after patent lapses, the subject matter of protection comes into the public domain.

The Indian Act also deserves applause for the fact that it has tried to extend the additional protection reserved for wines and spirits mandated by TRIPS to include goods of national interest on case to case basis. The Act provides the Central Government with the authority to give additional protection to certain goods or classes of goods.\(^\text{20}\) As seen earlier, India is also exerting pressure in the TRIPS Council in this regard so that high quality products of importance to India based on the IK perfected over centuries can be protected.

The Act, by prohibiting the registration of a GI as a trademark, tries to prevent appropriation of a public property in the nature of a geographical indication by an individual as a trademark, leading to confusion in the market.\(^\text{21}\) This provision is conducive to the protection of IK, which may be regarded as a public property or the heritage of a community. The entire community which has preserved the knowledge and has passed it on with incremental refinement over generations should stand to benefit from the knowledge and this should not be locked up as the private property of one individual. However, the fact remains that Section 25 is diluted to a great extent by the exception contained in Section 26, by which a trademark containing or comprising a GI is protected on fulfillment of certain conditions. A trademark containing a GI is protected, which has been applied for or registered in good faith under the trademarks law or where such trademarks have been used in good faith either (a) before the commencement of the Geographical Indications Act; or (b) before the date of filing the application

\(^{20}\) Section 22(2) GI Act, 1999

\(^{21}\) Section 25 GI Act, 1999
for registration of such geographical indication under the Act.\textsuperscript{22} The Act also does not apply to GIs which have become the common name of goods in India on or before 1st January, 1995.\textsuperscript{23}

A GI cannot be assigned or transmitted. The Act recognizes that a GI is a public property belonging to the producers of the goods concerned; as such it cannot be the subject matter of assignment, transmission, licensing, pledge, mortgage or any contract for transferring the ownership or possession.\textsuperscript{24} This feature is essential for protection of IK and to ensure that it does not pass on to the hands of those who are not holders of the knowledge.

Geographical Indications have emerged as one of the important features of the IPR regime of India. In India, there has been an effort to increase the list of protected GIs. After the Geographical Indications Act came into force on September 15th 2003, applications for registration as GI has been filed in respect of Darjeeling tea, Kancheepuram silk, Chanderi silk sarees, Alphonso mangoes, Basmati rice, Kohlapuri sandals, Bikaneri Namkin, apples from Himachal and Kashmir, Petha from Agra, Pedha from Mathura etc., some of which like Darjeeling tea and Chanderi silk have been notified as GIs.\textsuperscript{25} Apart from this, India has also resorted to other measures. After long litigation in the case of the basmati patent, which resulted in ultimately changing the title of the patent, India has set up a Basmati Development Fund, a watch agency to keep a worldwide watch for new trademark applications of Basmati rice or its deceptive variations. In order to protect a valuable GI, its registration under the Act is not sufficient. Many a geographical indication has died a natural death because those who owned the rights were negligent in stopping any kind of abuse of the geographical indications. Communities that own geographical indications must, therefore, be alert to any misuse or abuse of their geographical indications. Instances of abuse and misuse would include use of a GI in respect of similar or dissimilar goods (e.g. ‘Champagne’ in respect of

\textsuperscript{22} Section 26 (2) GI Act,1999
\textsuperscript{23} Section 26 (3) GI Act,1999
\textsuperscript{24} Section 24 GI Act,1999
mineral water or perfumes), use of a GI in lower case (‘basmati’ in place of ‘Basmati’), use of a GI as a qualifier or laudatory term (‘Champagne of mineral water’), use of a GI in a generic sense (‘Darjeeling type tea’) etc.\textsuperscript{26} The digital and internet age abuse of geographical indications would be the use of a GI as a domain name when the owner has nothing to do with a product in the GI or simply squatting on the domain to derive a monetary gain from the true owners or selling identical goods not originating in the correct place as indicated by the GI through the internet using the domain name.\textsuperscript{27} Again, apart from getting GIs protected, due care needs to be taken to maintain and ensure the quality of the GI protected goods, both in India and while exporting them abroad. Owners of GIs have a collective responsibility to ensure that the quality or supply chain integrity is maintained at all stages. GIs from developing countries like India are mostly agricultural products like rice, tea, dairy products etc. and products of handicrafts such as textiles etc. Most of such products constitute a major source of livelihood and income for rural populations producing them. As such, GIs may be expected to serve as tools for protecting IK as well as acting as mechanisms for socio-economic development of such communities in developing countries. However, it needs to be pointed out that though GIs are considered free of the many adverse socio-economic results of corporate control and accumulation of IPR rights, it is important to recognize that GIs do not in any way protect the knowledge embodied within the good and/or associated production process. Consequently, neither is protection of GIs a guarantee against the misappropriation of IK nor are other strategies to protect IK precluded by the use of GIs.

\textsuperscript{26} L. R. Nair, R. Kumar, \textit{Geographical Indications: A Search for Identity}, 199-200 (Lexis Nexis, New Delhi, 2005)
\textsuperscript{27} Ibid.
4.3.2 THE PROTECTION OF PLANT VARIETIES AND FARMERS’ RIGHTS ACT, 2001

India is the original home for many crops such as, rice, little and kodo millets, red gram, moth bean, jute, pepper, cardamom, many vegetables and fruit species. These plants were identified from the wild, selected and cultivated by Indian farmers over hundreds of years. The present wealth of varieties in India includes both crops that have originated in the country and those that were introduced from other countries in the past. The introduced crops include wheat, sorghum, maize, pearl millet, ragi, groundnut, gram, sugarcane, cotton, tea, rubbers etc. Recently, few crops like soya bean, sunflower, oil palm and kiwi fruit were also introduced in India. Indian farmers have evolved a rich diversity out of these introduced crops. During the long process of selection, conservation and cultivation, farmers have gained extensive knowledge of each variety. This knowledge includes suitability of variety for specific growing seasons and conditions, its maturity duration in different seasons, resistance to different diseases, pests, and other natural vagaries, suitability to different soils, and quality of the produce. Its availability with farmers is as highly valuable to modern scientific improvement as the genetic diversity of crop plants. This makes the contribution of farmers to plant genetic diversity as important as the contribution scientists make in developing modern plant varieties. Therefore when scientific are given the right to own new varieties created by them, this right concurrently recognizes the right of the farmers on their varieties. The protection of Plant Varieties and Farmer’s Rights Act, 2001 (PPVFR Act) therefore, seeks to protect the rights of farmers and breeders on plant varieties. The PPVFR Act is an Act of the Parliament of India enacted to provide for the establishment of an effective system for protection of plant varieties, the rights of farmers and plant breeders, and to encourage the development and cultivation of new varieties of plants. This act received the assent of the President of India on the October 30, 2001.

28 Hereinafter referred to as PPVFR Act
The PPVFR Act, 2001 was enacted to grant intellectual property rights to plant breeders, researchers and farmers who have developed any new or extant plant varieties. The Intellectual Property Right granted under PPV&FR Act, 2001 is a dual right – one is for the variety and the other is for the denomination assigned to it by the breeder. The rights granted under this Act are heritable and assignable and only registration of a plant variety confers the right.

The Act recognizes the individual and community roles played by farmers in the improvement and conservation of varieties on a plant variety is established by registration of the variety. By registering a plant variety, the person becomes its PBR holder. The PBR holder can be one person, a group or community or an institution. The PBR holder alone has the exclusive rights to produce, sell market or distribute the seeds or planting material of that variety.\textsuperscript{29}

The PPVFR Act has a unique provision of benefit sharing to recognize the rights and contribution of local indigenous communities and farmers to conserving genetic resources.\textsuperscript{30}

\subsection*{4.3.3 THE BIOLOGICAL DIVERSITY ACT, 2002}

Indian subcontinent is one of the richest biodiversity habitats in the world. India contains a great wealth of biological diversity in its forests, its wetlands and in its marine areas. Biodiversity encompasses the variety of all life on earth. With only 2.5\% of the land area, India already accounts for 7.8\% of the global recorded species.\textsuperscript{31} India is also rich in traditional and indigenous knowledge, both coded and informal.

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\textsuperscript{30}R. Kriplani, “Defining the Role and Scope of IPR in the realm of Environmental Governance in India: Sui Generis Protection of Plant Genetic Resources”, available at www.ecoinsee.org/flconf/sub\%20theme\%20e/Rahul\%20Kriplani.pdf (visited on 04.03.2016)\\
\textsuperscript{31}Available at http://www.moef.nic.in/sites/default/files/India_Fourth_National_Report-FINAL_2.pdf (visited on 23.02.2016 )
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India is a party to the Convention on Biological Diversity in the year 1992. Recognizing the sovereign rights of States to use their own biological resources, the CBD states that a member country should facilitate access to its genetic resources by other parties on mutually agreed terms, but such access requires a prior-informed consent\textsuperscript{32}(PIC) of the country providing the resources. This convention provides a framework for the sustainable management and conservation of India’s natural resources. In order to regulate access to biological resources of the country with the purpose of securing equitable share in benefits arising out of the use of biological resources and associated knowledge, to conserve and sustainable use biological diversity a legislation was required. Legislation was also required in order to respect and protect traditional knowledge of local communities and to secure benefit sharing with local people who have conserved the biological resources and inherited knowledge and information relating to their use of biological resources. Accordingly, the Biological Diversity Act, 2002 (BDA)\textsuperscript{33} was enacted.\textsuperscript{34}

The Biodiversity Act, 2002 primarily addressed access to genetic resources and associated knowledge by foreign individuals, institutions or companies, to ensure equitable sharing of benefits arising out of the use of these resources and knowledge to the country and the people.

A three-tier structure at the national, state and local level is established as following:

- **National Biodiversity Authority (NBA)\textsuperscript{35}**: All matters relating to requests for access by foreign individuals, institutions or companies, and all matters relating to transfer of results of research to any foreigner will be dealt with by the National Biodiversity Authority.

\textsuperscript{32}Hereinafter referred to as PIC
\textsuperscript{33}Hereinafter referred to as BDA
\textsuperscript{35}Hereinafter referred to as NBA
• **State Biodiversity Boards (SBB)**\(^{36}\): All matters relating to access by Indians for commercial purpose will be under the purview of the State Biodiversity Boards. The Indian industry will be required to provide prior intimation to the concerned SSB about the use of biological resources.

• **Biodiversity Management Committees (BMCs)**\(^{37}\): Institutions of local self government will be required to setup of Biodiversity Management Committees in their respective areas for conservation, sustainable use, documentation of biodiversity and chronicling of knowledge relating to biodiversity and traditional knowledge.\(^ {38}\)

The salient features of the Biodiversity Act are to:

(a) regulate access to biological resources of the country with the purpose of securing equitable share in benefits arising out of the use of biological resources; and knowledge relating to biological resources;

(b) conserve and sustainable use of the biological diversity;

(c) respect and protect knowledge of local communities related to biodiversity;

(d) secure sharing of benefits with local people as conserves of biological resources and holders of knowledge and information relating to the use of biological resources;

(e) conserve and develop areas of importance from the standpoint of biological diversity by declaring them as biological diversity heritage sites;

(f) involve institution of state governments in the broad scheme of the implementation of the Act through constitution of committees.

The Act prescribes some special provisions for the protection of the traditional knowledge. Among them Chapter II of the Act regulates access to biological diversity. The Act prohibits ‘certain persons’ from obtaining any

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\(^{36}\) Hereinafter referred to as SBB

\(^{37}\) Hereinafter referred to as BMCs

biological resources occurring in India or knowledge associated there to for research or for commercial utilization or bio-safety and bio-utilization. The Act prevents any person from transferring the results of any research for monitoring consideration or otherwise to such certain persons without previous approval of NBA (Section 3.4). Section 6 of the Act, is the key provision dealing with IPR’s on biological resources and associated knowledge. According to this provision, no person shall apply for any IPR, by whatever name called, in or outside India for any investigation based on any research or information on a biological resources obtained from India without obtaining the previous approval of the NBA.

The procedures for the access and other purposes mentioned in the Act are provided to ensure effective, efficient and transparent access procedures through written agreements and applications in prescribed formats.

Criteria for Benefit sharing: While the NBA gives Indian nationals/researches permission to access biological resources, it will also lay down conditions as to how any benefits that arise should be shared with local communities. The Act provides that benefit sharing may include monetary payment, technology transfer or joint ownership. IP rights, but this is not an exhaustible list. The Act, subject to Section 21 and Rule 20 of the Biodiversity Rules, insists upon including appropriate benefit sharing provisions in the access agreement on mutually agreed terms related to access and transfer of biological resources or knowledge occurring in or obtained from India for commercial use, bio-survey, bio-utilization or any other monetary purposes. The authority shall develop guidelines and shall notify the specific details guidelines and shall notify the specific details of benefit sharing formula in an official gazette on a case-to-case basis. The suggested benefit sharing measures may include ‘monetary benefits’ such as royalty development, and ‘non-monetary benefits’ such as, education and awareness raising activities, institutional capacity building, venture capital fund, etc. the time frame and quantum of benefits to be shared shall be decided on case-to-case based on mutually agreed terms between the applicant, authority local
bodies and other relevant stakeholders, including local and indigenous communities. Of the suggested mechanisms for benefit sharing includes direct payment to persons or group of individual through district administration, if the biological material or knowledge was accessed from specific individuals or organizations. In cases where such individuals or organizations could not be identified, the monetary benefits may be paid to the National Biodiversity fund. 5% of the benefits may be earmarked for the Authority or State Biodiversity Board towards administrative service charges.\(^{39}\)

A National Biodiversity Fund is being constituted for the purpose of equitable benefit sharing. The NBA will ensure that equitable benefit sharing is made during the utilization of biological resources and the knowledge relating to them. The amount of benefit sharing will be deposited in the National Biodiversity Fund and the amount shall be paid directly to such individuals or organizations in accordance with the terms of any agreement in such manner as described by the NBA. On behalf of the central government, the NBA will take all measures to oppose Intellectual Property Rights (IPR’s) granted outside India on any biological resources or associated knowledge origination from India.\(^{40}\)

With the assistance of NBA, eighteen State Biodiversity Boards (SBBs) have been formed by their respective State governments. Several biodiversity management committees have also been constituted by SBBs. The main function of the Biodiversity Management Committee (BMC) constituted under each local body as per Section 41(1) of the Act and Rule 22(1-11) of Biodiversity Rules (2004), is to prepare Peoples Biodiversity Registers, which shall contain comprehensive information on the availability and knowledge of local biological resources and medicinal or any other traditional knowledge associated with them. Other important functions of the BMC are to advise the

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SSB and the NBA on matters for granting approval, maintain data about the local valid and practitioners using the biological resources, besides maintaining a register containing information on access to biological resources and knowledge granted, details of collection fee received and details of benefit sharing derived along with the mode of sharing.41

4.3.4 THE PATENT ACT, 1970

The term “patent” acquired statutory meaning in India when Patents Act, 1970 was enacted. India being founder member of WTO incurred trade obligations to bring its intellectual property rights regime in tune with obligations as envisaged in TRIPs and introduced first amendment to the Patents Act, 1970 through Patents (Amendment) Act, 1995 which came into force in April 1999. The second major amendment in the Act of 1970 was made in the year 2002. To make the patent law to fully comply with TRIPs substantive changes in the Patent Act were introduced in 2005 effective from 1st January 2005.

The 2005 Patents (Amendment) Act introduced product patents along with some provisions relating to TK.

Firstly, the changes made to the definition of the term ‘patent’ which means a patent granted for an invention under the Act (Section 2(1) (m) and specifications of ‘invention’ which are not patentable in Section 3 of the Act which states that ‘a mere use for a known substance’ [Section 3(d)] an ‘an invention which, in effect, is traditional knowledge or which is an aggregation or duplication or known properties of traditionally known component or components’ [Section 3(p)] will not be an invention.

Secondly, the inclusion of the new provisions of plant opposition proceeding which can be done on limited grounds under Section 25(1) of the Act as:

41 Supra note 8
Where an application for a patent has been published but a patent has not been granted, any person may, in writing, represent by way of opposition to the Controller against the grant of patent on the ground of:

(a) patentability including novelty, inventive step and industrial applicability, or

(b) non-disclosure or wrongful disclosure mentioning in complete specification, source and geographical origin of biological material used in the invention and anticipation of invention by the knowledge, oral or otherwise available within any local or indigenous community in India or elsewhere.

Thirdly, inclusion of the provision for the opposition of a complete patent specification of an invention which was publicly known or publicity used in India before priority date of that claim.42

The reason for the inclusion of all the above provisions in to defy the challenges of misappropriation of the TK which is already in the public domain in India or its use is known to the Indian Communities or individuals from the time immemorial. One inference can be drawn from these provisions that all of them are defensive in nature, which can help to oppose the patents granted for the inventions whose source and geographical origin of biological material used or the knowledge, oral or otherwise is available within any local or indigenous community in India or elsewhere. Benefit sharing is not the concern of the Act. But the doubt arises that, which type of TK knowledge is protected under the provisions. To clarify this confusion, the definition of the TK has to be specified in the Act. This leads to a necessity of a sui generis system for the protection of TK and its subsets which could be a combination of various systems of protection, i.e. patents, trade secrets, geographical indications and a cultural heritage of the nation.43

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42 Section 25(3)(d), The Patents Act, 1970
43 Ibid
4.3.5 THE TRADITIONAL KNOWLEDGE (PROTECTION AND REGULATION TO ACCESS) BILL, 2010

The Traditional knowledge (Protection and Regulation to Access) Bill, 2010 is the first ever attempt made in India for a separate and complete regime for protection of Traditional knowledge in India. The present Draft Bill aims to provide for protection, Conservation and effective management of traditional knowledge. It further provides the need for protection of integrity and sentiments of communities against distortions and disrespectful representations of forms of TK and protection from improper commercial exploitation of such forms. It emphasized the need for sustainability of resources which TK is based, as well as ensures the continuation of the customary practice of the TK. Further the bill provides for a mechanism to access and share such TK along with the rights of the communities who hold such knowledge.

The salient features of the Draft Bill are:
1. Definition of terms such as traditional knowledge, abuse access, accessory, benefit, informed consent, misappropriation, prior informed consent, traditional community etc.
2. Identification of the sources and maintenance of the register of Traditional knowledge.
3. Identification of the sources from where the informed consent to use the traditional knowledge has to be gained.
4. Indicative list of assessors who are required to obtain the prior consent for accessing the traditional knowledge.
5. Restriction on the access of traditional knowledge for a fixed period of time and for any further use additional consent to be obtained.
6. Obligation on the Central government, State government and TK board to ensure the prevention of misuse of traditional knowledge by taking non exclusive consent by the indigenous vulnerable communities.
7. Preparation of National Policy, Strategy and action plan by the Traditional knowledge Authority every five year which ensures the
protection, continuum of use and practice of TK and ensures the sustainability of the resources including human resource on which the TK is dependent.

8. Steps to be taken by the Traditional Knowledge Authority to prevent biopiracy and other misuse of TK and to take preventive/punitive actions to safeguard the same.

9. The Traditional knowledge Board to be assigned with additional responsibility to ensure that the due environmental and social impact assessment to be done before granting the access to any TK.

10. The TK Board to ensure that the use of traditional knowledge is not against public order or morality.

11. The TK board to educate and increase awareness in the communities to ensure just and fair negotiations.

12. The TK board to be assigned with power to notify certain traditional knowledge as endangered or on verge of extinction or likely to become extinct, and also the power to restrict the access to such traditional knowledge.

13. Appellate mechanism where any appeal from Traditional knowledge Authority will be Intellectual Property Appellate Board (IPAB)\(^{44}\). The decision of the IPAB can be challenged by appeal to the Supreme Court of India.\(^{45}\)

Given the nature of Traditional Knowledge of the indigenous people it is difficult to ascertain whether the Traditional Knowledge Bill in its present form will see the light of the legislative day which is still pending.

\(^{44}\) Hereinafter referred to as IPAB

\(^{45}\) Available at www.sinapseblog.com/2010/01/round-table-on-protection-of-25.htm(visited on 24.03.2016)
4.4 OTHER LAWS AND POLICIES RELATING TO TRADITIONAL KNOWLEDGE OF BIOLOGICAL RESOURCES

Other than the IPR legislation, there is also a need to look into some of the existing laws and policies which have some relation, direct or indirect, to the conservation of biological resources, recognition of the rights of local and indigenous communities etc., which also have an implication on IK protection. Following is the brief account of the forest and wildlife legislations, Joint Forest Management, the National Environment Policy, 2004 from the perspective of TK protection.

In the quest for a system to protect TK in the interest of the local communities and the national interest, existing legal provisions and policies have been examined by the researcher to see if they recognise the importance of availability of natural resources to the holders of TK. For this purpose, a legal analysis of the Indian Forest Act, 1927, the Forest Conservation Act, 1980, and the Wild Life Protection Act, 1972 has been attempted. Since the primary subjects of these Acts are forest and wildlife and not TK, the objective will be to see whether they provide the holders of TK access to the natural resources, which is extremely necessary for the existence and development of TK. There can be two ways by which these Acts can protect, or contribute towards protection of TK:

(a) By providing protection to the natural resources.

(b) By ensuring access to the natural resources by the holders of TK.

4.4.1 FOREST LAWS IN INDIA

By the mid-19th century, with depletion of forests becoming a serious issue, the British Government began to take cognizance of the fact that forests in India were not inexhaustible. Accordingly, various officers were deputed from time to time to report on forest areas and all of them emphasized the need for conservation and improvement. In 1856, Lord Dalhousie emphasized the need for definite forest policy. However, the instantaneous reason for this emphasis can also be attributed to the fact that adequate supplies of timber
was required for the great extension of railway lines that were being undertaken.\textsuperscript{46} There was also a great demand for Indian Teak. In 1865 the first Indian Forest Act was passed. It was amended in 1878, when a comprehensive Law, the Indian Forest Act VII, came into force. The provisions of the Act established a virtual state monopoly over the forests in a legal sense on one hand, and attempted to establish, on the other, that the customary use of forests by the villagers was not a 'right' but a 'privilege' that could be withdrawn at will. In the period up to 1980s there were two major policy statements purporting to give direction to the role of the government in relation to the alternate functions performed by forests. They were the policy statements of 1894 and 1952. In practice, it was the Forest Act of 1927 that guided governmental actions for much of the period. Assertion of central control and emphasis on the role of forests as providers of timber and industrial raw materials is the common thread running through these major statements of policy. There is a view that, the 1894 policy, even though it came from a colonial government, was more sensitive towards local interests. The role of forests as essential on climatic and ecological grounds was realised and the significance of local user's was also pointed out. Notably it provided that no restriction should be placed upon local demands, merely in order to increase state revenue. On the other hand, in the National Forest Policy 1952, it was made clear that local priorities and interests and claim of communities around forest areas should be subservient to the larger national interests. Forests were viewed as national asset. In 1976, through the 42nd Constitutional Amendment, ‘forest’ was transferred from a subject in the State list\textsuperscript{47} to the Concurrent list. It thus re-emphasized the role of the Central Government in the management of forests. In view of the continuing forest depletion, the Forest Conservation Act was enacted in 1980. It also emphasized the Central Government’s involvement in deciding land use. Community interests found emphasis only through the introduction of the

\textsuperscript{46} Smythries, E.A ., "India's Forest Wealth", India of Today, Vol. VI, Oxford University Press
\textsuperscript{47} 7th Schedule of the Constitution
National Forest Policy 1988. While conservation of forests in the national interest remained a policy objective, the emphasis shifted to the bonafide requirements of the marginalized individuals and communities who are dependent on forests. Giving major emphasis on the ecological role of forests, it stipulates that the rights and concessions relating to forest produce of the tribal community and the other poor living within and near forests must be fully protected. The domestic requirements of fuel wood, fodder and minor forest produce and construction timber should be the first charge on forest produce. It now remains to be seen whether the laudable objectives of the policy have found reflection through the necessary corollary changes in formal law - the Indian Forest Act, its State variants or the Forest Conservation Act.

4.4.1.1 THE INDIAN FOREST ACT, 1927

At the time when the Indian Forest Act of 1927 (which continues to be the primary forest legislation even today) was enacted, the stated assumption for the introduction of forest laws and policy was that the local communities were incapable of scientific management and that only a trained, centrally organised cadre of officers could properly manage forests. However, such laws also ensured commercial exploitation of the vast natural resources that India possessed and eliminated the local community from having any control over the resources. It was prompted by the great demand of forest produce for industrial use in Britain.

The Forest Act of 1927 was enacted to consolidate the existing law relating to forests, the transit of forest produce and duty that can be levied on timber and other forest produce. The Act as it stands today, does not provide any definition of ‘forest’. For the purpose of the Forest Conservation Act, 1980, the Supreme Court in *TN Godavarman Thirumulkipad vs. Union of India*\(^{48}\) has expressed the opinion that ‘forest’ must be understood according to its dictionary meaning. This description covers all statutorily recognised

\(^{48}\) AIR1997 SC 1228
forests, whether designated as reserved, protected or otherwise for the purpose of the Forest Conservation Act. The term ‘forest land’ will not only include ‘forest’ as understood in the dictionary sense, but also any area recorded as forest in the government record irrespective of ownership. The Act provides for various protection measures for forestland. In general it follows the approach of restricting people's access to the forest. Thus, Section 3 empowers the State Government to constitute any forestland or wasteland which is the property of the Government or over which the Government has proprietary rights, or to the whole or any part of the forest produce of which the Government is entitled, as a Reserved Forest. Section 4 provides the procedure for declaration of a Reserve Forest. It requires the State Government to issue a notification declaring its decision to constitute a Reserve Forest and specifying as nearly as possible the situation and limits of such land. Section 5 lays down that once a notification under Section 4 has been issued, no right can be acquired in or over the land comprised in such notification, except by succession or under a grant or contract in writing made by or on behalf of the Government. The section further prohibits any fresh clearings for cultivation or for any other purpose unless in accordance with such rules as may be made by the State Government in this behalf. The combined effect of sections 6, 7, 8 and 9 is that if one fails to bring to the notice of the Forest Settlement Officer any right and corresponding claim over the specified area, his right shall extinguish. In other words, the burden of proving his right lies on the claimant unless such right is already in Government record. The Indian Forest Act anticipates 3 types of claims in forests proposed to be reserved. Firstly, a forest dweller might lay claim of ownership of land. Secondly, right to pasture and forest produce. And thirdly, right with respect to shifting cultivation. Notably, the Forest Settlement Officer has no power to confer any right on the forest dweller, which has not been satisfactorily established. But he is bound to express fully to the Government, his opinion and advice as to any practice which, though not

49 Hereinafter referred to as FSO
satisfactorily proved to be an existing right, he may think is advisable to sanction as a right or a concession in the interest of the people. It is up to the Government then to decide whether such non-established rights or concessions may be granted in the interest of the people or not. What is left unaddressed is the fact that while community rights or customary rights are themselves difficult to prove in the prevailing judicial system, even the scope provided to the FSO would remain ineffective if it is left to the whims of the officer.  

From the point of view of protection of TK, the most important question that such a provision can pose is: What are the rights over the biological resources that the holders of TK possess? A community might have been using, or rather, relying on the forest for livelihood since time immemorial, but unless they have legally recognised rights over the forest they cannot assert them. It is unlikely that tribal or forest dwellers will find the names of their ancestors on any written documents, which may be used to establish rights to the land, even if they have occupied the forest for centuries.

- Should any person currently using forest land or forest products be given rights over the forest?
- Should the granting of right be limited to communal rights of Scheduled Tribes recognised under the Fifth and Sixth Schedule of the Constitution as distinct communities?
- Should rights be based on reference to historical documents?
- How feasible would that be for a community that is oblivious of the modern education and legal systems?

The Act does not provide answers to such questions. The only practice that has been recognised by the Act is the practice of shifting cultivation, as a privilege or concession. But being a privilege and not a right, it is enjoyed at the pleasure of the State Government, which can prohibit such practice.  

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50 Available at http://envfor.nic.in/legis/forest/forest4.html (visited on 12.09.2016)
51 The practice of shifting cultivation shall, in all cases, be deemed a privilege subject to control, restriction and abolition by the State Govt; Mohd. Siddiq v. State AIR 1968 All 396.
During all the stages of inquiry, the Forest Settlement Officer (FSO)\(^{52}\) is required to give notice to all the affected parties. This is in line with the principles of natural justice. The Supreme Court in *Harish Chandra vs. Land Acquisition Officer*\(^{53}\) has held that though FSO adjudicating claims under the Act is not a court, yet the principle, which is really more of a fair play and is applicable to all tribunals performing judicial or quasi-judicial functions, must also apply to him. The effect of declaration of Reserve Forest is such that even unauthorised entry to the area becomes an offence punishable with imprisonment.\(^{54}\) Thus, in the absence of specific rights to access, declaration of Reserve Forest completely blocks access to the natural resources. Section 28 lays down that the State Government may assign to any village community the rights of Government to or over any land which has been constituted a reserve forest. Such forests are called village forests. The State Government may make rules for regulating the management of village forests. It can prescribe the conditions under which the community to which any such assignment is made may be provided with timber or other forest produce or pasture, and their duties for the protection and improvement of such forest. However, the Act does not say anything about the factors that the State Government will take into account before assigning a reserve forest to the village community. But such an assignment can provide an opportunity for IK holders to access natural resources. Apart from Reserve Forest, the State Government can also declare a forest land or waste land over which it has proprietary rights, as Protected Forest.\(^{55}\)

Section 29 (3) mandates inquiry and recording of the nature and extent of the rights of Government and of private persons in or over the forest land, before declaring an area as protected forest. As mentioned above, here also, the lack of well-defined policy for providing access to the natural resources can create obstacles for the IK holders in practicing their knowledge.

\(^{52}\) Hereinafter referred to as FSO
\(^{53}\) AIR 1961 SC 1500
\(^{54}\) Sec.26(1)(d).
\(^{55}\) Available at http://www.ijlass.org/data/frontImages/gallery/Vol._2_No._8/5.pdf(visited on 27.10.2016)
Section 32 empowers the State Government to make rules for granting licence to the inhabitants of towns and villages in the vicinity of protected forests to take trees, timber or other forest-produce for their own use. This is an enabling provision in favour of TK holders.

4.4.1.2 THE FOREST (CONSERVATION) ACT, 1980

This Act does not in any way effect those provisions of the Indian Forest Act that relate to the access of natural resources by the holders of TK. However Section 2 of the Act lays down that no State Government can, except with the prior approval of the Central Government, make an order that any reserved forest or any portion thereof, shall cease to be reserve.

One very important aspect of the Forest Protection Act got highlighted in the Supreme Court Order in the case T N Godavarman Thirumulkpad vs. Union of India. The Supreme Court expressed the opinion that the Forest Conservation Act, 1980 was enacted with a view to check further deforestation which ultimately results in ecological imbalance; and therefore, the provisions made therein for the conservation of forests and for matters connected therewith, must apply to all forest irrespective of the nature of ownership or classification thereof. The court said that the word 'forest' must be understood according to its dictionary meaning. The term 'forest land', occurring in Section 2 of the Act will not only include 'forest' as understood in the dictionary sense, but also any area recorded as forest in the Government record irrespective of the ownership. Thus, according to this meaning, any kind of non-forest activity in any forest will require prior approval of the Central Government. The observations of the Apex Court can be inferred as conferring sanction to State’s interference even in the context of forests, traditionally owned by communities, in the name of conservation.

56 AIR 1997 SC 1228
4.4.2 THE WILD LIFE (PROTECTION) ACT, 1972

The Preamble to the Act says that it provides for the protection of wild animals, birds and plants and for matters connected therewith or incidental thereto. It is interesting to note that the Act is not limited only to ‘animals’, and includes plants as well. Also the scope of the Act extends to matters that are connected or incidental to the basic objective of protection of wildlife. Section 2 (37) of the Act defines ‘wild life’ to include any animal, bees, butterflies, crustacean, fish and moths, and aquatic or land vegetation which form part of any habitat. From this definition it can inferred that the Act views wildlife as forming part of a habitat and aims at protection in situ.

Chapter III A of the Act, introduced by the 1991 amendment, with a view to protecting specified plants, clearly indicates that members of Scheduled Tribes can freely pick, collect or possess, in the district he resides, any specified plant or part or derivative thereof for his bona fide personal use. Thus, the introduction of this particular section creates a sanction for the activities of the Scheduled Tribes dependent upon forests. However if seen from the perspective of protection of TK, it gives rise to certain questions like:

(i) Why it is only the Scheduled Tribes whose interaction with the forest land is kept intact? There might be other people who are not Scheduled Tribes but dependent upon the forest.

(ii) The holders of TK, for example a vaid in a village practicing herbal medicines, need not be a member of a Scheduled Tribe. It is essential that he is not prohibited from collecting and experimenting upon wild herbs, if his knowledge base is to be protected from extinction due to non-use.

(iii) Further, how to define ‘personal use’ in the context of a vaid, whose livelihood is to cure people from various diseases?

These questions need to be adequately addressed if this provision is to benefit the TK holders. The Wildlife Protection Act is based on a similar

approach as the Indian Forest Act, that is, conservation by keeping people away. It provides for the creation of Sanctuaries and National Parks wherein access by the people are severely restricted. The declaration of a sanctuary or national park is such that no person can destroy, exploit or remove any wildlife, including forest produce without the permission from the Chief Wildlife Warden (CWW). The CWW can grant such a permit only when the State Government is satisfied that such act is necessary for the improvement and better management of wildlife. A Sanctuary can be established under sections 18, 26A, 38 (1) and 66 (3).

For an area of land or water, around India's coast to be notified as a sanctuary under section 26A, there are three conditions to be fulfilled:

- Firstly, notification under section 18, declaring the intention and the boundaries of a particular area that is required to be made a sanctuary. The area should be of adequate ecological, faunal, floral, geomorphological, natural or zoological significance, for the purpose of protecting, propagating or developing wildlife or its environment.
- Secondly, the period of two months after proclamation made by the collector for preferring claim and with regard to people's rights must elapse, and
- Thirdly, all the claims made in relation to any land must be disposed of by the state govt.

After these three conditions are fulfilled the state government is required to issue a notification specifying the limits of the area that would finally be notified as a sanctuary. In case of reserved forests and territorial waters, this notification can be directly issued.

A National Park can be established under sections 35, 38 (2) and 66 (3). For an area to be declared under section 35, an intention is declared by notification for an area, which is of ecological, faunal, floral and...

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58 Hereinafter referred to as CWW
59 Available at http://envfor.nic.in/legis/wildlife/wildlife1.html(visited on 23.05.2016)
geomorphological importance. This area may be an existing sanctuary too. A National Park is notified under the following three conditions:

- Firstly, when the period of preferring claims has elapsed.
- Secondly, when all claims in relation to any land in the area intended to be a national park is disposed of by the state government.
- Thirdly, when all rights in respect of land, which is proposed to be included in the national park are vested in the government.

After these conditions are fulfilled, the state government shall issue a notification specifying the limits of the area that is being declared as a National Park.

According to section 27 (1) and 35 (8) of the Wildlife Protection Act, in both Sanctuaries and National Parks, public entry is restricted and according to section 29 and 35 (6) of the Act the destruction of any wildlife or habitat is prohibited. In theory, National Parks enjoy a higher degree of protection than Sanctuaries. For example, according to section 35 (7) no grazing of any livestock is permitted in a National Park but according to section 33 (d) permissible in a Sanctuary.

The process of settlement of rights in declaring Sanctuary/National Park can be explained as follows:

Stage I: Intention notification declaring intention and limits of such area;
Stage II: Determination of rights: Under section 19, the Collector or any officer authorized by the state government is required to determine the existence, nature and existence of right of any person who may be a claimant in the process of settlement. Section 20 specifically bars the accrual of any rights after the intention notification. The determination of rights under the section is quite comprehensive as it includes the rights of any person. This could mean that such person may not only be those who live within and around the protected area but also those outside it;
Stage III: Proclamation notification under section 21. The Collector or any officer so authorized by the state government is required to issue a proclamation notification under section 21. Such proclamation is required to
be published in regional language in every town or village or in the neighbourhood of the area specifying the boundaries of such a proposed protected area. Under the said notification any claim under section 19 is required to be submitted within 2 months from the date of such proclamation;

Stage IV: Inquiry – section 22 describes the process of inquiry by the collector or his authorized officer. The inquiry includes the claims under section 21 as well as claims under section 19 which may exist as per the collector but not claimed. The inquiry is to be done "expeditiously" though no time limit is given. The primary basis of the claims under this section is records of the government and evidence of any person acquainted with the same;

Stage V: Acquisition - under section 24, the Collector is empowered to pass an order which may admit or reject a claim in whole or part. If such a claim is admitted wholly or partly, then such land may either be excluded from the limits of the protected area or acquired by the state. Such acquisition may either be under an agreement between the right holder and the government or where such right holder has agreed to surrender his right to the government in lieu of compensation, as per Land Acquisition Act, 1894. In case of sanctuaries, the Collector has been given special powers under section 24 (2) (c) to allow any right over any land in CWW of the state. However, it is pertinent to note that no guideline or grounds have been enumerated for acceptance or rejection of such claim. Further, the role of the CWW is unclear in case of allowance of any right in a sanctuary. The Act is silent on the question as to whether his views are binding or not;

Stage VI: Final notification - A sanctuary or national park may be finally notified under section 26A or 35 (4), only after period of claim has elapsed and all other claims have been disposed of (or vested in the government, in case of National Park)\(^\text{60}\).

Thus, it can be said that in case of National parks the restrictions are stricter than in the case of Sanctuary. Because, in case of National Park, all the rights are vested with the government, there is no scope for continuation of any traditional right over such land. As far effects arising from declaration of Sanctuary and National parks are concerned, there has been a prolonged debate over the issue of alienation of people from the forests, as also taking away their livelihood. Such debate is not confined only to the Wild Life Act, but covers the whole perception behind the policy that forest and wildlife is to be protected from the people. In recent times, however, there has been a shift, with the Government gradually realizing the need for people’s participation, as reflected in present policy statements. Thus, the Preamble of the Wild Life (Protection) Act, 2002 recognises the growing alienation of the local communities from wild life conservation programmes as having an effect on increased wild life crimes and mismanagement. The amended Act seeks to provide for participatory management of the buffers around the National Parks and Sanctuaries. Section 36C of the Act introduces the concept of ‘Community Reserves’, under which the State Government may, where the community or an individual has volunteered to conserve wild life and its habitat, declare any private or community land not comprised within a National Park, Sanctuary or a Conservation Reserve, as a Community Reserve, for protecting fauna, flora and traditional or cultural conservation values and practices. This is a welcome step towards legal recognition of people's efforts at conservation. However, as per the definition provided for Community Reserve, it is confined only to private or community land. There may be communities traditionally involved in conservation, though the land concerned might belong to the Government. In such cases, those communities will not be able to derive benefits from this new provision, nor extend the benefits to the biodiversity they are conserving. Further, there is no definition of community land. There are some other provisions in the Act of 2002, which can be termed as supportive of the close link between community and natural resources. Section 36A the Act which provides for constitution of
"Conservation Reserves", states that for such constitution, the nature of the land should be such that it is adjacent to national park or sanctuary and link one protected area with another. The objective is to protect landscapes, seascapes, flora and fauna and their habitats. Notably, the Act requires consultation with local communities in declaration of Conservation Reserve. Furthermore, in the Management Committee for the Conservation of Forest, there is provision for including member from the Village Panchayat and NGOs. Though it is a positive step, yet actual representation from the village community cannot be said to be ensured. While on one hand the management committee is only an advisory committee, on the other, representation is sought through elected members from the Panchayat. The success of the Panchayati system is itself under a great deal of debate and there has been opinion that elected members often do not represent all sections of society, particularly the underprivileged. The same concern also applies to the Community Reserve Management Committees, formed under the Act. It also consists of members nominated by the Village Panchayat and where there is no such Panchayat, nominated by the Gramsabha. However, unlike the management committee for Conservation Reserve, this Committee has authoritative powers to manage the reserve. It is competent to prepare and implement management plans for the reserve and can take steps for the protection of wildlife and habitat.

4.4.3 JOINT FOREST MANAGEMENT

The Forest Policy, 1988 envisaged people's involvement in the development and protection of forests, and enunciated that it is one of the essentials of forest management that the forest communities should be motivated to identify themselves with the development and protection of forests from which they derive benefits. The Government of India passed a resolution on June 1 1990, introducing the concept of Joint Forest

Management\textsuperscript{62} (JFM) to facilitate the implementation of the policy. Joint Forest Management often abbreviated as JFM is the official and popular term in India for partnerships in forest movement involving both the state forest departments and local communities.\textsuperscript{63}

It has over the past few years acquired a more formal shape as the different States have brought out Regulations for this purpose.\textsuperscript{64} The original circular of 1990 to the different States set out a new policy on forest management vide a process of reforestation of degraded forests through a partnership between foresters and forest communities by establishing ecological and economic benefits for the community.

The June 1990 resolution, for the first time, recognized the rights of the protecting communities over forestlands. It also acknowledged the role of NGOs as intermediaries between the Forest Department and the communities. Some of the salient features of JFM Resolution 1990 are:

- Forests should be protected by voluntary agencies or village communities, jointly with State Forest Departments as Village Forest Communities
- No ownership or lease over forest land to be given to village community or voluntary agency.
- The community is entitled full usufruct rights (over non-timber, grass, firewood and timber products) and partial share in final harvest of timber.
- Community to prepare micro-plan for the forest along with Forest Department.\textsuperscript{65}

The subsequent guidelines brought out by the Ministry of Environment and Forests\textsuperscript{66} (MoEF) in the year 2000 and amended again in 2002, have tried to plug the gaps and strengthen the programme. The 2000 guidelines have

\textsuperscript{62}Hereinafter referred to as JFM
\textsuperscript{63}Available at https://en.wikipedia.org/wiki/Joint_Forest_Management(visited on 21.03.2106)
\textsuperscript{64}States such as Assam, Himachal Pradesh, Orissa and Madhya Pradesh have formally introduced Participatory Forest Management through formulating regulations under their respective State Forest legislation.
\textsuperscript{65}Available at http://ifs.nic.in/Dynamic/pdf/JFM%20handbook.pdf(visited on 12.07.2016)
\textsuperscript{66}Hereinafter referred to as MoEF
advised the states governments to provide legal status to JFM committees through registration of forest committees under Societies or Co-operative Societies Act, increased participation of women in the programme, giving 33% reservation to women in the Executive Committee, extension of JFM to less degraded forest areas, flexible forest working plans, to suit micro-plan for JFM areas, recognition for self-initiated forest protection groups and a transparent mechanism to compute the income sharing and benefits between different stakeholders. Further to these guidelines, in 2002 the MoEF issued another set of guidelines with a view to strengthen the JFM system. The provisions under these guidelines are important from the IK point of view, as they provide a scope for reflecting local needs in the work plan for JFM. The 2002 guidelines brought about articulation to the working arrangement between the forest department and the JFM committees. It required that, for the purpose of ensuring smooth working relationship between forest department and the JFM committees and also to bring a sense of empowerment and accountability, a Memorandum of Understanding (MOU) should be signed between the forest department and the JFM committees. Such an MOU should outline the short term and long term roles and responsibilities, implementation of work program, pattern of sharing of usufructs and conflict resolution. Also, in the MOU the JFM committees should form the basic forest management units to provide them a feeling of empowerment and enable them effectively protect and conserve the forest resources. This provision shows recognition on the part of the government of the fact that, a sense of empowerment is necessary for the much-needed identification by the people with the issue of conservation. It was provided that the MOU should reflect the consumption and livelihood needs of the forest dependent communities. It was also provided that the MOU for each committee should have location specific work program based on site vegetation profile and mutual understanding. It should plan for restoration of vegetation and clearly spell out the roles, responsibilities and powers. It was

67 Hereinafter referred to as MOU
emphasized that all JFM committees should be assigned specific roles for boundary demarcation, fire prevention and control of grazing, encroachments and illicit felling as well as ensure non-destructive harvesting of non-timber forest produce including medicinal plants. For this purpose, it was suggested, that the committees should be given authority to act. They should also be given monetary and other incentives as genuine stakeholders.  

4.4.3.1 JFM AND PROTECTION OF TK OF THE INDIGENOUS PEOPLE

The JFM model provides an example of government effort to involve people into the process of conservation, as distinct from the alienation imposed by the existing legal regime for forests in India. In its ideal formulation, this system can be a potent tool for successful forestry management and IK protection. Available statistics also show a similar conclusion. However the JFM system is also not free from criticism. It has received criticism mostly in the following areas:

(i) Effective participation of the Village Forest Committees\(^69\) (VFCs): A number of case studies in JFM areas have highlighted the fact that, though on paper the VFCs are equal partners in management of forest resources, in practice a number of factors block this from happening in reality. Those factors include historical attitude of Forest department towards exclusionary protection of forest resources, reflection of societal, caste-based inequalities in constitution of VFCs and effective participation of villagers in functioning of those committees.

(ii) Effective participation of women: This is a reflection of the lack of due representation of women that is typical of the Indian socio-political system. While JFM notification of 2000 specifically targeted this issue by providing for equal participation of women in the VFCs, requirement of their presence in management meetings and at least one third of

\(^{68}\)Available at http://ifs.nic.in/Dynamic/pdf/JFM%20handbook.pdf (visited on 10.03.2016)

\(^{69}\)Hereinafter referred to as VFCs
women participation in the management committees. In reality JFM model has not have proved itself an effective tool for ensuring effective gender participation. Women, with their immense contribution to generation, protection, propagation and transmission of TK, need to be adequately involved for JFM to contribute to protection of TK and the biodiversity.

As against the provisions for community participation in preparing work plan and management of forest resources, the JFM model has been criticized for not considering traditional practices of forest management of the community. From a more legal point of view, the legal status of the JFM guidelines have been questioned on the ground that they are based on the 1988 Forest Policy, which is not a legally enforceable document. That also raises questions about the legal protection afforded to those village communities who undertake the MOUs and put their efforts in implementing them. There is no legal accountability on the part of the forest department while implementing the JFM system in general, or MOU in particular. Further the benefit sharing provisions under MOUs also have been criticized for favoring the state as compared to the community who undertakes to implement the MOU. The benefits are accruable only on the satisfactory performance of the duties and functions by the community. It cannot be denied that the JFM system does provide a viable alternative to the protectionist approach to forest management and also contains a number of attributes for effective participation of the community.\(^70\)

From the TK point of view, these aspects, implemented effectively, could prove to be an impetus for protection and development of TK related to forest resources. Being a participatory mechanism, it also promises a balance between rights and duties and national interest of forest protection. It can be mentioned here that providing individual or community ownership rights to people might not always prove to be beneficial for conservation. Every

community has its own set of philosophy and practice and is continuously responding to the changes in values, ethics and aspirations. Instead of having a blanket regime for rights over forest resources, there is a need to look into the present state of practices in each society and accordingly plan the participation in managing the forest resources. This will provide on one hand, the much-required livelihood requirements and on the other, ensure that community practices are reflected in management of forests. The JFM model provides specific provisions for local needs and practices into the management plans. These provisions, effectively implemented, can be a means for realizing continuous use and development of TK by the community through use of and interaction with the surrounding natural resources. The legislation as it stands today offers little scope for community’s knowledge to be reflected in the conservation process. The efficacy of the new provisions inserted in the Wildlife and Biodiversity law is yet to be observed. A review of the laws and policies in this field brings to fore that the policy statements in the sector of forests and environment are quite progressive, but there is a huge departure in the laws from the policies on the same subject. Furthermore, policy statements are mere guidelines and serve as intent statements, non-compliance with policies is not enforceable. Hence the good provisions of the policies need to be incorporated into the law on the given subject or else a new law should be enacted to reinforce the intent. In addition, seeking legal recognition to community rights is not sufficient; TK will have to be integrated into developmental planning processes to regain a status and validation.

4.4.4 DRAFT NATIONAL ENVIRONMENT POLICY 2004

The National Environment Policy (NEP)\textsuperscript{71}, 2004 is intended to be a guide to action: in regulatory reform, programmes and projects for environmental conservation; and review and enactment of legislation, by agencies of the Central, State, and Local Governments. It also seeks to

\textsuperscript{71} Hereinafter referred to as NEP
stimulate partnerships of different stakeholders, i.e. public agencies, local communities, the investment community, and international development partners, in harnessing their respective resources and strengths for environmental management. On the whole, it is expected to do better than fiscal neutrality, and likely raise substantial resources from outside the fiscal regime to realize its objectives.\footnote{Available at http://www.cesc-india.org/doc-archiv/cpg-epw-23oct2004-nep-india.pdf (visited on 12.04.2016)}

The draft National Environment Policy has a number of provisions relevant to protection of TK. To begin with, clause 5.2.3 of the policy defines the term ‘traditional knowledge’. TK is here defined as the ethno-biology knowledge possessed by local communities, relating to uses of various indigenous plant and faunal varieties, including in traditional medicine, food, etc., and is potentially an important means of unlocking the value of genetic diversity through reduction in search costs. The policy recognizes IK as a valuable resource and proposes adoption of a sui generis IPR system for its protection. The draft policy emphasizes enabling of the local communities, through this IPR system to derive economic benefits by permitting the use of their ethno-biology knowledge. The policy objective sets out the need to ensure equitable access to environmental resources for all sections of society particularly to the poor communities which are most dependent on these resources for their livelihoods. It also lays emphasis on providing space for participation of underprivileged men and women in various processes. Livelihoods of these vulnerable communities are very closely linked to the biological resources and the TK evolved there from. Thus, fulfillment of this policy objective would also ensure protection of TK when the vulnerable communities are assured equitable access to environmental resources. The policy makes this important observation that village commons – water sources, grazing grounds, local forests, fisheries, etc., have been traditionally protected by local communities from overexploitation through various norms, which may include penalties for unacceptable behaviour. These norms, may, however, have got diluted as a result of the process of development, including
urbanization, and population growth resulting from sharp reductions in mortality, also through state actions which may create conditions for the strengthening of individual over communitarian rights and in doing so allow market forces to press for change that has adverse environmental implications. Such access to the community resources under weakened norms would lead to resource degradation and in result affect the livelihoods of the community.\(^73\)

Protection of TK is also inherent in some of the principles expressed in the NEP 2004 which assure entitlements to human beings in the form of a right to a healthy and productive life in harmony with nature. People are entitled to a right to development and this for underprivileged, bio-resources dependent communities implies access to resources; their rights of self-determination and the right to regulate others’ access to their knowledge. Under Principle of Equity, the NEP mentions procedural and end result equity where the former relates to fair rules for allocation of entitlements and obligations and the latter relates to fair outcomes in terms of distribution of entitlements and obligations. The NEP reinforces the doctrine of Public Trust and has in clear terms stated that State is not an absolute owner but merely a trustee of all natural resources which are by nature meant for public use and enjoyment, subject to reasonable conditions necessary to protect the legitimate interests of a large number of people, or for matters of national interest.\(^74\) Weak enforcement of the laws and policies among other things has been attributed to insufficient involvement of the potentially impacted local communities in the monitoring of compliance.\(^75\) The Policy makes some reference to the traditional land use practices of local people to suggest that the use of such practices should be encouraged through research and development. This accords some validation to the traditional practices which are based on indigenous knowledge of the local and indigenous communities. The National Environment Policy acknowledges the fact that the receding traditional


\(^74\) Clause 4 of the Draft National Environment Policy enlist these principles.

\(^75\) Clause 5.1.3 (v) of the Draft National Environment Policy relating to Substantive Reforms.
community rights of forests dwelling tribes since the commencement of formal forest laws and institutions in 1865 has led to the deterioration of the forests. Disempowerment of the communities led to the forests becoming open access in nature.

Clause 5.2.2 (i) (a) of the policy places a categorical emphasis on giving legal recognition to the rights of the forest dwelling tribes. This, according to the policy, would secure their livelihoods of these people and also provide long – term incentive to the tribals to conserve the forests. The policy also alludes to the establishment of multi-stakeholder partnerships involving the Forest Department, local communities and investors, with clearly defined obligations and entitlements for each partner, following good governance principles to derive environmental, livelihood, and financial benefits. It also suggests rationalization of restrictions on cultivation of forest species outside notified forests to enable farmers to undertake social and farm forestry where their returns are more favourable than cropping. Similarly regarding protection of wildlife, the policy emphasizes expansion of the Protected Area\(^\text{76}\) (PA) network of the country which would include the new categories of Conservation and Community Reserves. In doing so, the policy seeks participation of local communities, and the other stakeholders, to harmonise ecological and physical features with needs of socio-economic development. It also proposes partnerships for enhancement of wildlife habitat in Conservation Reserves and Community Reserves so as for the community to derive both environmental and eco-tourism benefits. The policy, further, proposes promotion of site- specific eco-development programmes in fringe of Protected Areas to restore livelihoods and access to forest produce by local communities. But as the policy itself says ‘any policy is only as good as its implementation’.

The draft NEP, 2004, outlines a number of new and continuing initiatives in matters relating to conservation of biological resource, protection of community rights thereby affording protection to TK, but the policy does

\(^\text{76}\) Hereinafter referred to as PA
not make any reference to any legislative effort that would be required to make the provisions of this policy enforceable.

4.5 DOCUMENTATION OF TK IN INDIA

In the above discussion the researcher has primarily concentrated on the legal efforts at the national level to protect TK. Here, the researcher will be dealing with the non-legal efforts undertaken to protect TK; primarily the efforts at documentation of TK in India. Documentation of TK is regarded as a means to extend protection to TK, innovations and practices in a number of ways. Particularly, it is believed that proper documentation of associated TK could help in checking biopiracy. The nature of TK is such that it is mainly transmitted orally and is seldom written down. This leads to difficulties when parties not authorized by the holder of that knowledge seek to obtain IPRs over it. Since there is no accessible written record, patent examiners from other countries are unable to access documentation that would challenge the novelty or inventiveness of an application which is based on TK. The only option for an aggrieved party, be it the holders of the knowledge, or someone representing them, is to challenge the patent during the granting process or after grant, which is an expensive and cumbersome process (as highlighted in the Basmati and turmeric case). It is assumed that if the material or knowledge is documented it can thus be made available to patent examiners all over the world, so that prior art in the case of inventions based on such materials or knowledge is readily available to them. Such documentation can help establish the property rights of local communities over their TK and in cases where TK is commercialized it can facilitate PIC and an equitable sharing of benefits with the TK holders. Documentation can also serve as a mechanism for obtaining protection of TK through national sui generis systems. In addition, documentation can help provide a reliable estimate of the nature and

78 “Protection of Biodiversity and Traditional Knowledge- The Indian Experience” (WT/CTE/W156 IP/C/W/198), Submission by India at the Committee on Trade and Environment Council for Trade- Related Aspects of Intellectual Property Rights, 14 July 2000
extent of biodiversity and associated TK. It can facilitate researchers and others in examining the threats faced by biodiversity and TK. Through recording and preservation in a documented form, TK is prevented from being lost.

4.5.1 TRADITIONAL KNOWLEDGE DIGITAL LIBRARY (TKDL)\textsuperscript{79}

India’s rich traditional knowledge has not only been passed down by word of mouth from generation to generation, but has also been described in ancient classical and other literature. Such knowledge is often inaccessible to the common man, and even when accessible, is rarely understood, as it exists in local languages such as Sanskrit, Urdu, Arabic, Persia, Tamil etc. Documentation of this existing knowledge of various traditional systems of medicine, available in the public domain, has become imperative to protect it from being misappropriated in the form of patents on non-original innovations. It had been observed that, in the past, patents have been granted to inventions related to already known traditional knowledge because the patent examines could not search for traditional knowledge as prior art, due to the non-availability of such information in the classified non-patent literature. In 1995, the United States Patent Office granted a patent on the wound-healing properties of turmeric (curcuma longa) which was challenged successfully and the patent revoked. The revocation of the patent granted by European Patent Office to W.R. Grace Company and the United States Department of Agriculture on neem, again on the same grounds of its use having already been known in India, is another example. A study conducted in 2000 showed that 4,896 patents on medicinal plants had been granted by the US Patent Office, 80 percent of which were on plants of Indian origin. The finding also revealed that out of 760 such patents, 350 should have not been granted every year, mainly due to the lack of access to documented traditional knowledge in India. Every year, about 1,500 patents were being granted by

\textsuperscript{79} Hereinafter referred to as TKDL
the European Patent Office (EPO) and the US Patent Office, based on traditional knowledge in medicine.\textsuperscript{80}

Keeping in view the importance of such traditional knowledge, the Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH)\textsuperscript{81} of the Indian government constituted an interdisciplinary Task force in 1999 for the preparation of an approach paper on establishing a Traditional knowledge Digital Library (TKDL). Accordingly, the Government of India has undertaken the development of the TKDL database to prevent patenting of inventions based on Indian traditional knowledge.

TKDL aims to act as a bridge between the traditional knowledge existing in local languages and the patent examiners at various international patent offices. If TKDL had existed earlier, international disputes such as those referred to above would not have arisen. TKDL has also resolved the perpetual problem of lack of access to documentation on India’s traditional medicine due to language barriers or formatting incompatibilities, thereby abating the loss of future revenue and resources. It is seen by India as a safeguard against the burgeoning research-based fields of biopharmacology integrative medicine (IM)\textsuperscript{82}, evidence based complementary and alternative medicine (CAM)\textsuperscript{83}, ethnobotany and ethnopharmacology.

TKDL is a joint project of five Indian government organizations, including the Council of Scientific and Industrial Research (CSIR)\textsuperscript{84} and the National Institute of Science Communication and Informative Resources (NISCAIR)\textsuperscript{85}. More than 150 traditional medical practitioners, information technology engineers, patent examiners, intellectual property attorneys, scientists, researchers and libraries worked together to construct this database for India’s indigenous medical and scientific knowledge resources which

\textsuperscript{81} Hereinafter referred to as AYUSH
\textsuperscript{82} Hereinafter referred to as IM
\textsuperscript{83} Hereinafter referred to as CAM
\textsuperscript{84} Hereinafter referred to as CSIR
\textsuperscript{85} Hereinafter referred to as NISCAIR
would fit within the framework of the International Patent Classification (IPC)\textsuperscript{86} scheme. The TKDL teams systematized and arranged the ancient and medieval Indian medicaments in this database in accordance with modern conventions of taxonomy. The database is built up from transcribed texts of the triad of Indian medical sciences-Ayurveda, Unani and Siddha transposed sacred slokas (verses), of 14 ancient texts from the 6\textsuperscript{th} to 3\textsuperscript{rd} century BC Vedic corpus, and other authoritative Oriental canons and treatises.\textsuperscript{87}

Translation of palm leaf scriptural verses, parchment manuscripts, textbook citations and oral tradition references into decoded English, French, German, Japanese and Spanish required Brahmi-based and other non-Latin script conversions of Vedic Sanskrit, classical Sanskrit, Hindi, Arabic, Farsi/Persian, Dravidian, Tamil and Urdu in accordance with international language encoding standards (ISO)\textsuperscript{88} and Unicode meta data.

The TKDL team developed ‘smart translation’ software to produce the scanned text and images from 54 primary sources on ayurvedic medicinal properties, provenance data, biological activity, chemical constituents, approximately 1,50,000 triad medicines and pharmaceutical preparations, 1,500 yoga asana therapies, traditional botanical names malady descriptions, and other bibliographic details in contemporary terminology. TKDL had completed documenting over 2,20,000 medical formulations (including 81,000 Ayurveda, 1,40,000 Unani and 12,000 Siddha formulations) and saved them from piracy. TKDL is a dynamic database, where formulations are continuously added and updated according to inputs from the users of the database.

The information on traditional medicines appears in a standard format in TKDL. For example, formulations on Indian Systems of Medicine appear in the form of a text, which comprises the name of the drug, origin of the knowledge, constituents of the drug with their parts used and their quantity, method of preparation of the drug and usage of the drug as well as

\textsuperscript{86} Hereinafter referred to as IPC
\textsuperscript{87} Ibid
\textsuperscript{88} Hereinafter referred to as ISO
bibliographic details. TKDL uses modern names of plants (e.g. fever Curcuma longa for turmeric), disease (e.g. fever for jwar), or process and establishes relationship between traditional knowledge and modern knowledge. TKDL includes search interface providing full text search and retrieval of traditional knowledge information using the IPC, Traditional knowledge Resource Classification (TKRC)\(^{89}\) and keywords in multiple languages. TKRC, an innovative structured classification system for the purpose of systematic arrangement, dissemination and retrieval has been evolved for about 25,000 subgroups related to medicinal plants, minerals, animal resources, effects and disease, methods of preparation, mode of administration etc. Search features of TKDL include complex Boolean expression search, proximity search, field search, phrase search etc. the database does not claim exhaustive coverage and does not affect the rights and obligations relating to any prior art traditional knowledge formulation or know-how not listed in TKDL. The contents of TKDL are being digitally transcribed into a readable from in fuel international languages-English, French, German, Japanese and Spanish-with the objective of preventing their misappropriation at international patent offices.

India is going all out to save yoga, a 2,000-year-old Indian art of righteous living. The team of TKDL is presently scanning through 35 ancient Sanskrit texts, including the Mahabharata, Bhagwad Gita and the Yoga Sutras of Patanjali to identify and document all known yoga concepts, postures and terminology. Among the yoga books being scanned by scientists are Hatha Praditika, Gheranda Samhita, Shiva Samhita and Sandra Satkarma. Currently, 600 ‘asanas’ (physical postures) have already been documented with a target to put on record at least 1,500 such yoga-related patents granted in the USA have been traced TKDL. One the postures are put on record, they would be made available in five international languages. Besides photos and explanation of the postures, video clips of an expert performing them will be

\(^{89}\) Hereinafter referred to as TKRC
put in the TKDL. A voice-will also point out which text mention the posture.\footnote{Available at http://www.ayush.gov.in/sites/default/files/tkdl.pdf (visited on 13.07.2016)}

Access of TKDL to International Patent offices is available under TKDL Access (Non-disclosure) Agreement. Under the agreement, examiners of patent office can utilize TKDL for search and examination purpose only and cannot reveal the contents of TKDL to any third party unless it is necessary for the purposes of citation. TKDL Access Agreement is unique in nature and has in built safeguard on non-disclosure to protect India’s interest against any possible misuse.

India has signed TKDL Access Agreements with; European Patent Office\footnote{Hereinafter referred to as EPO} (February, 2009); United States Patent and Trademarks Office (November, 2009); Indian Patent Office (July, 2009); Canadian Intellectual Property Office (September, 2010); German Patent Office (October, 2009); united Kingdom Patent Office (February, 2010); Intellectual Property Australia (January, 2011); and Japan Patent Office (April, 2011).\footnote{V. K.Gupta, “Traditional Knowledge Digital Library-A Model to protect Traditional Knowledge “, available at pib.nic.in/new-site/efeatures.aspx?relid=79647 (visited on 29.04.2016)}

The TKDL allows examiners at EPO to compare patent applications with existing traditional knowledge. New patent applications need to demonstrate significant improvements and inventiveness compared to prior art in their field. The cooperation between India and the EPO comes at a time when many countries are struggling to protect traditional and respected knowledge against exploitation, primarily in the pharmaceutical sector. The 34 member states of the EPO now have restricted access for purpose of patent search and examination. TKDL is integrated with the EPO’s database as another measure to thwart illegitimately-gained exclusively. Experts at the EPO say that access to the 30-million-page database will help them to correctly examine patent applications relating to traditional knowledge at an early stage of patent examination.
Since the grant of access in February, 2009, the EPO has identified 36 patents making use of India TK. In some cases, the EPO set aside its intention to grant the patent, application and similar results withdrew their application and similar results are expected by the CSIR for the rest of these cases. This could prevent engagement in legally complex and extremely expensive opposition process, according to the CSIR.\(^93\) TKDL efforts have also been appreciated at the international level as well. It has become a model for other countries on defensive protection of their traditional knowledge from misappropriation. Countries and organizations such as South Africa, the African Region Intellectual Property Organization (ARIPO)\(^94\), Mongolia, Nigeria, Malaysia and Thailand have expressed their keen desire to replicate TKDL.\(^95\)

### 4.5.2 THE INTERNATIONAL CONFERENCE ON THE UTILIZATION OF THE TRADITIONAL KNOWLEDGE DIGITAL LIBRARY (TKDL)

The International Conference on the Utilization of the TKDL as a model for protection of TK was organized by the WIPO, in cooperation with the CSIR, in New Delhi, India from March 22 to 24, 2011.

Following were the the main objectives of the Conference:

- share experiences and information on the role of a TKDL in the documentation of traditional knowledge (TK);
- identify the intellectual property (IP) issues in and technical implications of the establishment of a TKDL; and
- explore the role and functioning of the TKDL within the international IP protection system.\(^96\)

In this Conference, WIPO Director General Francis Gurry welcomed international cooperation in the fight against the misappropriation of TK. This

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\(^{94}\) Hereinafter referred to as ARIPO

was echoed by India’s Minister of Science and Technology, Earth Sciences, and Parliamentary Affairs Pawan Kumar Bansal. Mr. Bansal said TKDL has been “an immensely effective tool for the protection of Traditional Knowledge…..a powerful weapon to fight biopiracy.”

Mr. Gurry described the TKDL approach as complementary to the work currently underway in WIPO’s Inter Governmental Committee (IGC) on Intellectual Property and Genetic Resources, Traditional knowledge and Folklore, where WIPO’s 184 member states are negotiating an international legal instrument to ensure the effective protection of TK and traditional cultural expressions, and to regulate the interface between IP and genetic resources.

The Indian TKDL project, developed over a ten year period, documented knowledge about traditional medical treatments and the curative properties of plants, which was contained in ancient texts and languages, and classified the information in a searchable, via Access and Non-Disclosure Agreements, to six major international patent offices, the TKDL, coupled with India’s global bio-piracy watch, system has, according to the CSIR, achieved dramatic success in preventing the grant of erroneous patents, at minimal direct cost and in a matter of a few weeks. Mr. Gurry said that India’s TKDL could be a good model for others and that WIPO was ready to facilitate international collaboration for countries, inspired by the Indian example, were interested in establishing their own TKDL’s.

The Director-General said WIPO is in consultations with the Government to “internationalize” the TKDL-to help make available the Indian Government’s TKDL experience and know-how to other countries which plant to create their own TKDL’s. He said, “WIPO is prepared to assist beneficiary countries, should they so wish, to conclude access and non-

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98 Hereinafter referred to as IGC
disclosure agreements with international patent offices. Beneficiary countries would own and control access to their own TKDL’s.\textsuperscript{99}

CSIR Director General Samir K. Brahmachari and Director of the TKDL V.K. Gupta reiterated India’s willingness to work with countries interested in similar models to protect their TK. Mr. Brahmachari said that the challenge for the New Delhi Conference and beyond is to ensure that the great treasures represented in a nation’s TK is to ensure this knowledge serves future generations.\textsuperscript{100}

However, as the cradle of one of the most mega bio-diverse regions of the world that supports ancient as well as relatively recent forms of indigenous knowledge, India has a duty towards her traditional communities to ensure their right to live in their natural environment and to earn their livelihood by way of practicing their traditional knowledge. It is imperative for India to establish a viable mechanism to regulate access to the traditional knowledge possessed by the indigenous people as well as ensure that there is reasonable and equitable sharing of benefits based on the three pillars of prior informed consent, regulated access to traditional knowledge resources and establishment of an equitable benefit sharing mechanism.\textsuperscript{101}

It can be concluded that though certain provisions are made in the GI Act, PPVFR Act, Biological Diversity Act, 2002, the Patents (Amendment) Act, 2005 and forest and wildlife legislations for the protection of TK, still there is a strong need for protecting and promoting the traditional knowledge related to biodiversity and TKDL is an effective tool to combat biopiracy and protect traditional knowledge but a sui generis system separate from the existing IPR system should be designed to protect traditional knowledge of the local and indigenous communities of India.

