TRADITIONAL KNOWLEDGE IN INDIA: A LEGISLATIVE ANALYSIS

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Abstract

A major problem faced in creating a comprehensive and efficient legislative framework for the protection of Traditional Knowledge is the difficulty faced in defining it and the absence of a universal understanding of the concept. However, Traditional Knowledge needs to be protected because there is a vast global market for it, the creation of a market in fact helps in preserving it and there are consent, equity and compensatory issues that need to be taken care of. This research will study the various aspects of Traditional Knowledge, like, the economic importance of Traditional Knowledge in various spheres like health care, agro biodiversity, biodiversity in India and try to analyze the Legislative frameworks available for the protection of Traditional Knowledge. For the purpose of this analysis, the researcher has identified certain parameters (aim of the legislation, subject matter of the legislation, rights granted, term and nature of protection and manner in which the legislation protects Traditional Knowledge) on which the sufficiency and the level of protection provided to Traditional Knowledge will be analyzed.

I. Introduction

THE INDIAN continent spans over an area of 329 million hectares and stands second in all of Asia and seventh in the World in terms of geographical area.[1] So, it's natural that if one travels from one end of the Indian continent to the other, one will experience different climatic conditions, geography, flora and fauna, *etc*. India is endowed with a selection of agro-climatic

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[1]Prof S. Kannaiyan, *Biological Diversity and Traditional Knowledge*, National Consultation Workshop on Agro biodiversity hotspots and Access and benefit sharing, held on (Annamalai University, Chennai, July 19-20, 2007), *available at:* http://nbaindia.org/uploaded/docs/traditionalknowledge_190707.pdf (last visited on Nov. 8, 2019).

conditions, however, loss of biodiversity due to global climatic change, soil erosion, expanding urban area, *etc.*, stands to be a major concern for India.[2] The rural population is of the view that biodiversity is a major source of livelihood for them and this has been well recognized; conservation of biodiversity is in our own interest as it fuels the pharmaceutical industries, cosmetic industries, agro based industries and many more.[3]

Apart from being a treasure of biodiversity, India is also a repository of medical formulations related to Traditional Knowledge. Traditional Knowledge Digital Library has identified around 0.29 million medical formulae from ancient texts on the Indian medical systems of Ayurveda, Yoga, Unani and Siddha.[4] India also houses a huge number of handicrafts and artisans who specialize in various handicrafts; the Ministry of Textiles has done a commendable job in promoting, facilitating and showcasing the growth of industries based on these handicrafts.[5] India's cultural richness can be matched only by a few countries, if not none.

Part two deals with the notion of Traditional Knowledge, its importance in the Indian context and the dependency of a large part of the Indian demography on Traditional Knowledge. Part three talks about the economic importance of Traditional Knowledge and highlights the quantum of trade in products and goods related to Traditional Knowledge that has been happening worldwide. Part four analyses the controversial litigation that has happened over Indian Traditional Knowledge being misappropriated at the global level and hence, argues for better legislative protection. Part five discusses and analyzes the Legislations that are present in India for the protection of Traditional Knowledge and holds the opinion that even though *sui generis* protection has been granted to a few classes of Traditional Knowledge, the majority of Traditional Knowledge still remains unprotected.

II. Traditional Knowledge and the Indian Lifestyle

[2] *Ibid*.
[3] *Ibid*.
[4] TKDL, About TKDL*, available at:* http://www.tkdl.res.in/tkdl/langdefault/common/Abouttkdl.asp?GL=Eng (last visited on Nov. 9, 2019).
[5] Ministry of Textiles, Welcome to Craft Clusters of India, *available at:* http://craftclustersofindia.com/about-us/ (last visited on Nov. 8, 2019).

The Traditional Knowledge in India can be said to be its heritage as it is a testimony of our socio-political, cultural, economic systems along with our ethical, moral and belief systems in the form of customs, *etc*.[6] Our heritage is also reflective of the many languages, arts, craftsmanship, dances, folklores, symbols, architecture, scientific and ecological knowledge, skills and technical know-how.[7] India being an agricultural economy, it is bound to have known how related to farming and biodiversity. As India is an agrarian economy, it is a repository of farming and biodiversity related Traditional Knowledge. India is home to a large number of Traditional communities, wherein the lifestyle is determined and given shape to by generations of ancestors.[8] These communities are antithetical to the lifestyle of the urban areas in terms of culture, socio-economic systems, occupations and other aspects of life as their occupation is based on natural resources (easily accessible) like forest dwelling, fishing, *etc*.[9]

The Indigenous Peoples have a unique culture as mentioned above and warrant minimum interference into their way of life, an example is the case of Dongaria Kondh. In India, the Indigenous Peoples are notified as Scheduled Tribes (STs) and there are around 705 such ethnic groups.[10] One of such ethnic groups is the Dongaria Kondh which lives in the Niyamgiri Hills in the eastern state of Orissa. The Kondhs are a simple people, worship the Niyam Raja, the hill that they live on and also farm on its slopes and harvest the produce.[11] The Niyam Raja is a bounty reserve of bauxite and the mining giant Vedanta Resources intended to exploit the reserves and in furtherance of this ulterior motive, it started activities which were a precursor to such mining without obtaining the proper and complete clearances required from the Ministry of Environment and Forests.[12] The Kondhs showed unmatched spirit and resisted this imperialistic encroachment of their rights and a danger to their livelihood.

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[6]*Supra* note 1.
[7]*Ibid.*
[8]*Ibid.*
[9]*Ibid.*
[10]Human Rights Council, Joint Stakeholders' submission on The situation of the rights of indigenous peoples in India, 2017, *available at:* https://www.upr-info.org/sites/default/files/document/india/session_27_-_may_2017/js46_upr27_ind_e_main.pdf (last visited on Oct. 21, 2019).
[11]"We'll lose our soul. Niyamgiri is our soul", Survival International, *available at:* https://www.survivalinternational.org/tribes/dongria (last visited on Oct. 21, 2019).
[12]Vedanta Resources lawsuit (re Dongria Kondh in Orissa), Business & Human Rights Resource Centre, *available at:* https://www.business-humanrights.org/en/vedanta-resources-lawsuit-re-dongria-kondh-in-orissa (last visited on Oct. 21, 2019).

It will be reasonable to state that a considerable part of India's demography is indigenous and they have their own unique lifestyle, occupation, culture, art, dance, folklores, medical systems, conservation related know how, *etc*. These form a part of their Traditional Knowledge and are often of great commercial value to corporations, in developing their product.[13] From this, follows the corporation's interest in acquiring the related Intellectual Property Rights. It is to be noted that acquiring such rights will also work in the favor of Indigenous communities as; a) they get to decide whether they want to share their Knowledge with a particular applicant (prior informed consent) and b) they get a fair and equitable share in the benefits accrued from such knowledge.

III. Economic importance of Traditional Knowledge

Traditional Knowledge systems are developed over a long period of time and passed on from generation to generation; this Knowledge generally relates to human and animal health, food, agriculture, textiles, *etc*. and thus is very valuable to industries which have a presence in these sectors.[14] The problem arises when this knowledge is exploited commercially, without sharing benefits or even obtaining consent from the rightful owners.[15] The economic importance of Traditional Knowledge has been well established and is growing by leaps and bounds. Traditional Knowledge has been known to be helpful in producing marketable products in the areas of health care, pharmaceuticals, agro-biodiversity, music, art, textile, conservation techniques, *etc*. The economic significance of Traditional Knowledge in a few sectors is shown:

Biodiversity

In the year 2000, it was reported by the Council for Scientific and Industrial Research that the United States Patents Office made reference to 4896 plant based medicinal patents, in the year 2003, there were around 15,000 such patents in the USA, UK, *etc*. and by 2005, this number had grown to 35,000 in these regions.[16] This pattern clearly shows the growing importance and utility of Traditional Knowledge in the developed world. Also, all over the Indian continent, the

[13] *Supra* note 1.
[14] *Ibid.*
[15] *Ibid.*
[16] *Ibid.*

indigenous and local communities have been the preservers, protectors and conservers of natural resources like forests, rivers, mountains, flora and fauna, *etc*.; because they worship these natural resources and they are given high regard in their culture.[17] As a result, the Indigenous Peoples have preserved and nurtured biodiversity (which can now be used for conservation as well as commercial purposes) using their Traditional Knowledge.

Health Care

The Indian system of Medicine includes Ayurveda, Siddha, Unani and other related systems and they are based on biological diversity and Traditional Knowledge for treatment.[18] In India, the practice of using plants for health and medicinal treatment has been prevalent since the Vedic period *i.e*., 3000 BC, there are around 10-30 million manuscripts in Sanskrit which talk about Traditional Medicine[19], and therefore, this system is very well developed today and forms the core of the medical system in rural and tribunal communities.[20] There are around 60,000 village bone settlers and herbal medicine practitioners in the country.[21] The traditional medicine practitioners use around 90,000 known plant species for treatments.[22]

A similar pattern can be seen all over the world as according to the World Health Organization, close to 80% of the world's population has subjected itself to Indigenous systems for medical care at least once in their lifetime.[23] A direct relation can be drawn between this data by the WHO and another set of statistics, which is as follows:

- International Trade in medicinal and aromatic plants was valued at 1.1 to 1.3 billion USD in 1997.[24] Global import of medicinal and aromatic plants has gone up by +3% since 2010 and reached a total of 2.8 billion USD in 2014.[25]

[17] *Ibid.*
[18] *Ibid.*
[19] Namrata Pathak, *Protection of Traditional Knowledge: A Comparative Study of India and Bangladesh* (2014) (Unpublished PhD thesis, Jawaharlal Nehru University).
[20] *Supra* note 1.
[21] *Ibid.*
[22] *Supra* note 19.
[23] *Supra* note 1.
[24] *Ibid.*
[25] Dharmendra Kalauni and Arati Joshi, "Status of Medicinal and Aromatic Plant (MAPs) and Socio-Economic Influence in Nepalese Livelihood - A Review Research" 2 *Acta Scientific Agriculture* 123-130 (2018).

- China leads the market in the export of botanical drugs.[26]
- India stands second in exports in terms of volume exported and sixth in terms of revenue generated.[27]
- The annual growth rate of the global medicine market is between 5-15%.[28]

Agro-biodiversity

India is an agrarian economy and more than 60% of the population is dependent on agriculture for employment.[29] Seed supply in India, fundamentally depends on local systems of seed production as these systems ensure that the best quality seeds are made available to members of the community and thus promoting a community based system as opposed to an individual one.[30] India houses around 45,000 wild plant species, at least 166 species of crops have been known to have originated in India, within these species, there is a huge diversity.[31] For example, it has been reported that around 50-60,000 varieties of rice are grown in India and traded and used in other countries.[32] Other examples are the Indian Sugarcane of different varieties being used as the parent of choice in sugarcane breeding in the USA, Indonesia, West Indies, *etc*.; wheat, maize, chickpea, *etc*. are similarly placed.[33]

IV. Litigation over Traditional Knowledge

There have been cases of misappropriation of Traditional Knowledge the world over; a few cases across different industrial sectors will be discussed.

The case of Turmeric (Health care)

[26] *Supra* note 1.
[27] *Ibid.*
[28] *Ibid.*
[29] *Supra* note 19.
[30] *Ibid.*
[31] *Ibid.*
[32] *Ibid.*
[33] *Ibid.*

Two researchers, Suman K. Das and Harihar P Cohly, based in the United States of America and researching at the University of Mississippi Medical Centre applied to the United States Patents Office for patenting the use of turmeric in the healing of acute wounds and the application elaborated that the inventors have found that by applying turmeric on the site of an injury and/or by consuming it orally, the process of healing of wounds gets boosted.[34] The patent application stated that turmeric had been used in India since time immemorial, as a traditional medicine for healing sprains and inflammatory conditions.[35] The Patents Office approved the application and a patent was granted on the use of turmeric for healing wounds.[36] This Patent was granted on the basis of a 'prior art search', however, this search did not indicate that the use of turmeric for healing wounds was widely known and used in India and that it has been a part of the public domain for centuries.[37] As the Patent was granted by the United States Patents Office, it was challenged in the United States itself, by the Council of Scientific and Industrial Research on the ground that the use of turmeric for healing wounds was a part of the public domain in India.[38] Pursuant to this challenge, the Patent application was reassessed and the Patent was revoked as the prior art search only recognized items as prior art if they have been written about in researches or published in printed publications.[39]

This and other similar cases have led countries to take up initiatives like the Traditional Knowledge Digital Library in India, which documents all Traditional Knowledge which is in the public domain and this information is made available to patent granting authorities all around the world so that they can exclude applications which are merely in the nature of knowledge in the public domain.[40]

The case of Neem (Agriculture)

[34] *Supra* note 19.
[35] *Ibid.*
[36] *Ibid.*
[37] *Ibid.*
[38] *Ibid.*
[39] *Ibid.*
[40] *Supra* note 4.

In India and other neighboring countries as well, Neem has been used as a pesticide, medicine, preservative, *etc*.[41] It has a commercial value attached to it and there has been a lot of research on the commercial uses of neem; especially, the preservative property of neem.[42] Commercially produced neem based pesticides have a longer shelf life and in 1992, W.R. Grace was granted the patent for a method creating this type of commercial fertilizer and this solution was named 'Neemix'.[43] W.R. Grace also applied for a patent as an anti-fungicidal product at the European Patent Office and the same was awarded in 1994.[44] This Patent was challenged on the grounds that neem used as an anti-fungal element was knowledge in public domain and the extraction method used by W.R. Grace was identical to the traditional methods used for the same purpose; the Patent was accordingly revoked in 2000.[45] However, the decision was appealed on procedural grounds and the patent was reinstated to the plaintiffs.[46]

This case has provided with an important insight that as long as the patents are granted in accordance with the Law of the country granting them, patents cannot be essentially challenged.[47]

The case of Basmati (Food)

Basmati Rice is a variety of rice that is grown in the Punjab provinces of India and Pakistan; this is a terminology which is used world over.[48] In 1997, a rice breeding firm, United States Rice Tec Inc. was successfully granted a patent which enabled it to create a monopoly over rice lines and some of them had characteristics that were identical to basmati rice.[49] Thus, even though all Rice Tec did was that it derived a strain of rice from the Basmati Rice from India and Pakistan, but it claimed that it had invented a novel rice line.[50] It was only after an uproar by Non-Governmental Organizations and people worldwide , that the patent was struck down by the

[41]*Supra* note 19.
[42]*Ibid.*
[43]*Ibid.*
[44]*Ibid.*
[45]0436257, 10 May 2000, European Patent Office, Opposition Division, Decision Revoking the European Patent.
[46]*Supra* note 19.
[47]*Ibid.*
[48]*Ibid.*
[49]*Ibid.*
[50]*Ibid.*

United States Patent Office.[51] After this incident, the protection of Traditional Knowledge *via* Geographical Indications gained prominence as Basmati was an indication that the rice grown in a particular geographical area.[52]

These instances of misappropriation of Traditional Knowledge go on to show that a robust framework for protecting the unique nature of Traditional Knowledge is needed. It is clear that to misuse and misappropriate is quite an easy task due to the low awareness regarding Traditional Knowledge and the reasons as to why it requires protection. The holders of Traditional Knowledge are also quite unaware about the advantages of getting their Knowledge tagged as an intellectual property; this is one of the reasons that it becomes easier to exploit Traditional Knowledge.

V. India: Legislative Framework

An analysis of the current legislations in India, which afford protection to Traditional Knowledge in any form, has been done in this chapter. The legislations have been analyzed on five parameters; namely, aim of the legislation, subject matter of the legislation, rights granted, Terms of protection and the nature of protection and Manner in which the legislation protects Traditional Knowledge.

The Patents Act, 1970

Aim of the legislation: The Patents Act, 1970 (hereinafter as "Act") was enacted to consolidate the law relating to patents in the Republic of India.[53] Justice N. Rajagopala Ayyangar Committee was instituted to deal with the question of Patent Law and the present Act is a product of this Committee Report.[54] The Patents Act has been amended thrice, *i.e.*, The Patents (Amendment) Act, 1999, The Patents (Amendment) Act, 2002, The Patents (Amendment) Act, 2005.[55]

[51] *Ibid.*
[52] *Ibid.*
[53] The Patents Act, 1970 (39 of 1970), Preamble.
[54] Department for Promotion of Industry and Internal Trade, *History of Indian Patent System, available at:* http://www.ipindia.nic.in/history-of-indian-patent-system.htm (last visited on Dec. 18, 2019).
[55] *Ibid.*

Subject Matter of the Legislation: 'Chapter II- Inventions not Patentable' expressly excludes the patenting of Traditional Knowledge under the Act.[56] Thus, the Act puts Traditional Knowledge in the public domain and not patentable by anyone for any purpose.

The Manner in which the Legislation protects Traditional Knowledge: By excluding Traditional Knowledge from being patented, the Act has actually created a type of protection for Traditional Knowledge in the sense that it cannot be patented and thus, no person can gain commercial benefits out of it.

Under the Patent regime in India, the Patents Act, 1970 expressly excludes patenting of Traditional Knowledge and thus the question of protecting Traditional Knowledge *via* patenting is redundant. Therefore, this research cannot examine the Patents Act, 1970 on the parameters of 'Rights granted' and the 'Terms of protection and the nature of protection.' Even though the Act protects Traditional Knowledge by putting it in the public domain and thus preventing monopolization of the same, it is still present for the public to use at large and therefore, it requires a robust legal framework for its protection.

The Geographical Indications of Goods (Registration and Protection) Act, 1999

Geographical Indication (hereinafter as "GI") signifies that the product has a particular and unique geographical origin and it also shows that the product has certain qualities that are exclusive to that particular geographical area.[57] The GI tag is awarded to a community, group, association associated with a particular geographical area.[58] The Trade Related Aspects of Intellectual Property Rights (hereinafter as hereinafter as "TRIPS") Agreement has defined Geographical Indication in the following manner: [59]

[56] The Patents Act, 1970 (39 of 1970)**,** s. 3(p).
[57]María Paola Rizo, Nathalie Frigant, "*What is a geographical indication?"*, *available at:* https://www.wipo.int/edocs/pubdocs/en/geographical/952/wipo_pub_952.pdf (last visited on May 18, 2019).
[58]Ruchi Pant, "*Protecting and promoting Traditional Knowledge in India: What role for Geographical Indications?"* (International Institute for Environment and Development, 16574 IIED).
[59]The Agreement on Trade-Related Aspects of Intellectual Property Rights, art. 22.1

> "indications which identify a good as originating in the territory of a Member [of the World Trade Organization], or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin".

In India, Geographical Indications are regulated by the Geographical Indications Act, 1999 (hereafter referred as the 'GI Act') the enactment of this Legislation was initiated for fulfilling obligations under the TRIPS Agreement.

Aim of the legislation: The GI Act, 1999 was enacted to provide protection to the Geographical Indications (goods) in India and to provide for their registration mechanism.[60]

Subject matter of the legislation: The GI Act has defined the word 'Geographical Indication' as a tag which indicates that agricultural goods, natural goods, manufactured goods or other goods have unique and peculiar qualities which are identifiable as originated or manufactured in a specific geographical area like a locality, region *etc*. within the territory of a country.[61] If the goods in question are manufactured goods, then, their processing, preparation or manufacturing itself can be identifiable to a particular region, territory, locality or any other geographical area of a country.[62]

The Act provides relief in cases where a good is known by the virtue of its origination, manufacturing*, etc*., unique to a geographical region but the name provided to it is not the name of that particular geographical area; such good is still to be considered as a Geographical Indication.[63]

The definition clause also defines the word 'Goods' and according to it, goods are agricultural, manufactured, handicrafts or other industrial goods.[64] Under the GI Act, 1999, registration can be done for any goods or all goods or a class of goods (determined by the registrar) in respect of

[60] The Geographical Indications of Goods (Registration and Protection) Act, 1999 (48 of 1999), Preamble.
[61] *Id*, s.2(e).
[62] *Ibid.*
[63] *Id.*, s.2(e), Explanation.
[64] *Id.*, s.2(f).

a definite territory, region or locality.[65] The goods are classified in accordance with the International classification of foods for the purpose of registration of Geographical Indications.[66]

The GI Act, 1999 prohibits the registration of certain Geographical Indications; these are, (a) such goods, the use of which is likely to cause confusions, (b) such goods, used, their use would be contrary to law, (c) GIs comprising of obscene or scandalous matter, (d) GIs of the nature that is likely to hurt the religious sentiments of any class of citizens of India, (e) GIs, for which protection cannot be demanded from any court, (f) GIs which are no longer in use in a particular territory, and, (g) GIs, which in spite of being a true representation of the territory that they originate in, give a false impression that they originate in another territory.[67]

The GI act also allows for registration of homonymous[68] Geographical Indications with the condition attached that, they will be registered, only if the Registrar arrives at the conclusion that the goods in question are in fact different from one another and that there is a need for equitable treatment of the producers of these goods and that such registration will not lead to confusion among the customers.[69]

It is important to observe here that, the Geographical Indications tag is limited to only goods. Services, other Traditional Knowledge related to medicines, folklore, *etc*. is not protected under the GI Act, 1999.

Rights granted: The Act confers rights on the holders of a Geographical Indication; they are, (a) right to claim (may be made by the registered user or authorized users) relief in case of infringement, (b) exclusive right to the authorized user to use the Geographical Indication, (c) however, if there are more than one authorized users, the exclusive rights to use the Geographical Indication cannot be deemed to have been acquired by any one of them as against the other, but, they have the same rights.[70]

[65] *Id.*, s.8.
[66] *Id.*, s.8(2).
[67] *Id.*, s.9.
[68] Words which are spelled the same but have different meanings.
[69] *Id.*, s.10.
[70] *Id.*, s.21.

Terms of protection and the nature of protection: A Geographical Indication shall be registered for a period of ten years and may be renewed from time to time (ten years at a time); on the other hand, an authorized user is registered to use the GI for a period of ten years or till the time the registration of the Geographical Indication ends, whichever is earlier in time.[71]

A Geographical Indication is considered to have been infringed when, a person who is not an authorized user, uses such Indication in a manner that it creates an impression that the goods have originated from a place other than the actual place of origin or, such person uses the Geographical Indication in a manner that it is considered an act of unfair competition.[72] The right granted to a registered Geographical Indication is not transferable, assignable, licensable, transmittable, pledgeable, or any such other agreement.[73]

The Manner in which the legislation protects Traditional Knowledge: The Act has created a Registry called the 'Geographical Indications Registry', for the purpose of registration of Geographical Indications; wherein, a Register has to be maintained which will contain information such as the names, addresses, *etc*. of registered users along with the names, addresses and other information of the authorized users, other relevant and required information may also be mentioned therein.[74]

Any person or group of persons, representing the interests of producers of the goods in question, are required to apply to the Registrar for obtaining a Geographical Indication, in the prescribed manner; the application has to contain information like (a) justification as to how the concerned goods can be identified to be originating from a particular geographical area, the qualities of the goods which can be said to be unique and inherent to that geographical area, (b) the class of goods to which the Geographical Indication is intended to be applied, (c) map of the geographical area, (d) appearance of the Geographical Indication, *etc*.[75] If accepted by the

[71] *Id.*, s.18.
[72] *Id.*, s.22.
[73] *Id.*, s. 24.
[74] *Id.*, s.6.
[75] *Id.*, s.11.

Registrar, the application has to be advertised[76] and a time of three months has to be given for opposition to such application by any person[77]. After all the conditions have been satisfied and the application is unopposed or if opposed, decided in favor of the applicant, then, the Registrar shall register the said Geographical Indication and authorized users in the Register and the date of making the application will be deemed to be the date of such registration; along with such registration, the applicants as well as the authorized users will be given certificates to such effect.[78] An application may also be made by any person for being designated as the authorized user, if he is the producer of such goods.[79]

To better understand the process of determining whether a good is registrable as a GI, the example of registration of *Boka Chaul (GI Application no. 558)*, a variety of rice which is native rice of Assam, is analyzed.[80] The application was filed jointly by 'Lotus Progressive Centre' and 'Centre for Environment Education' under section 11 of the Act for obtaining registration of *Boka Chaul* as it's unique quality is that it can cook itself by just soaking it in the water at room temperature.[81] The GI was granted to *Boka Chaul* after the Registrar examined the description of the good, its uniqueness of cooking itself at room temperature, areas in which it is produced (Nalabari, Darrang, *etc.* districts of Assam), proof of origin/historical records (it was found that *Boka Chaul* had many historical references in the anglo-assamese literature), method of production, *etc*., in detail.[82] It was granted a GI on these considerations and it is represented in the following way:

[76]*Id.*, s.13.
[77]*Id.*, s. 14.
[78]*Id.*, s. 16.
[79]*Ibid.*
[80]Government of India, Geographical Indications Journal, (March 18, 2018), *available at:* http://www.ipindia.nic.in/writereaddata/Portal/IPOJournal/1_2598_1/Journal_104.pdf (last visited on Dec. 18, 2019).
[81]*Ibid.*
[82]*Ibid.*

BOKA CHAUL

[83]

In conclusion, the GI Act protects those goods which are unique to a particular geographical location but it excludes services. The GI Act provides wide protection to goods as GIs as it protects agricultural, natural, manufactured or other goods which have a uniqueness attributable to a particular geographical region. The Act also grants various rights like exclusive right to use to the authorized user, right against infringement, *etc*., which are essential for the effective protection of Traditional Knowledge in the form of a GI. It has a defined structure and framework according to which, the applications for granting GIs are entertained by the Registry. After thoroughly examining factors like uniqueness, justification for origination of the good from the particular geographical location, *etc*. for ascertaining its authenticity, the GI is either granted to the applicant or rejected.

The Protection of Plant Varieties and Farmer's Rights Act, 2001

The Patent Act, 1970 specifically excludes the patentability of life forms as well as methods of agriculture and horticulture.[84] Initially, India did not require the plant varieties to be protected as the system was such that farmers used to freely exchange seeds and other requirements for farming efficiently.[85] The commercialization of agriculture and opening up of the economy to the whole world meant the entry of multi-national and foreign companies into the Indian markets

[83] *Ibid.*
[84] *Supra* note 56 at s.3.
[85] *Supra* note 19.

and thus, the need to protect the rich plant and seed varieties of India was felt.[86] As a consequence, the Protection of Plant Varieties and Farmers' Right Act, 2001 was enacted; it was a first of its kind legislation that recognizes as well as rewards the breeder's and farmer's contribution to the development of new crop varieties.[87] The Act was enacted as a way of fulfilling obligations under the TRIPS Agreement.[88]

Aim of the legislation: The Act was enacted with the purpose of establishing an effective regime for the protection of plant varieties, farmer's and breeder's rights as well as to encourage the development of new plant varieties.[89]

Subject matter of the legislation: The Act expressly excludes certain varieties from being registered under the Act. These are the varieties whose commercial exploitation is necessary to be prevented to maintain public order, morality, health or life of human beings or plants or to avoid detriment to the environment.[90]

The Act provides for the protection of different types of new varieties, *i.e*., (i) essentially derived variety: is derived from an initial variety when it is majorly derived from the initial variety or any variety which itself is derived from the initial variety, however, the variety in question maintains the important characteristics that accrue from combining the genotype of such initial variety, (b) is distinct from the initial variety, and (c) conforms to the initial variety in terms of the essential characteristics that have been derived from the initial variety.[91]

(ii) extant variety is a variety available in India and is (a) notified under the Seeds Act, 1966, (b) a farmer's variety, (c) in the public domain in India.[92]

(iii) farmer's variety: is one which has been cultivated by farmers in their fields or is a wild manifestation of a species which is of common knowledge.[93]

[86] *Ibid.*
[87] *Ibid.*
[88] The Plant Variety Protection and Farmer's Rights Act, 2001 (53 of 2001), Preamble.
[89] *Ibid.*
[90] *Id.,* at s.29.
[91] *Id.,* at s.2(i).
[92] *Id.,* at s.2(j).

Rights granted: The Act confers a number of rights to the breeders and farmers. For the purpose of discussing the rights available to them, the definitions of 'farmer' and 'breeder' as per the Act, will first be discussed. A breeder has been defined to be a person, farmer or institution or a group of any of these, which has evolved, bred or developed a variety of plant.[94] Farmer has been understood to be a person himself cultivating a land or directly supervising cultivation himself or who conserves and preserves any wild species or traditional variety or identifies their useful properties.[95]

i. The right to benefit sharing: While making an application, the applicant has to disclose the source of parent varieties used for deriving the new variety.[96] As soon as a certificate of registration is issued by the Registrar, the Authority is required to publish the same and invite claims for benefit sharing by a person who is a citizen of India or a firm, NGO or governmental organization which is established in India.[97] The claim and amount of benefit sharing are decided by the Authority on the basis of the extent and nature of genetic material, of the claimant, used in the creation of the new variety as well as the commercial utility and demand of the variety for which the benefit is being claimed.[98]

ii. Breeder's rights after registration: After the certificate of registration is issued, the breeder and his legal heirs get the exclusive right to produce, sell, distribute, trade the variety.[99]

iii. Farmer's rights: A farmer who is involved in developing a new variety will be awarded registration as if he were a breeder under the Act and a farmer who

[93] *Id.,* at s.2(l).
[94] *Id.,* at s.2(c).
[95] *Id.,* at s.2(k).
[96] *Id.,* at s.18(e).
[97] *Id.,* at s.26.
[98] *Id.,* at s.26(5).
[99] *Id.,* at s. 28.

conserves and preserves genetic resources shall be entitled to recognition as well as reward out of the Gene Fund established under this Act.[100]

iv. Community based rights: The Act makes express provisions for any village or community in India to claim for benefit sharing in a new variety, if the community or village claims their contribution as a society, in the development of that variety[101] and such claim is verified by the designated Centre and the Centre then reports it's findings to the Authority[102]. The Authority then has the power to decide on the veracity of these claims and either reject them or recognize them and accordingly decide the amount of reward for such community or village.[103]

Terms of protection and the nature of protection: The Act considers a variety to be registrable only if the variety is novel, distinct, uniform and stable.[104] A new variety is not registrable if the denomination of such variety is (a) not identifying such variety, (b) only figures, (c) likely to confuse or mislead with regard to the characteristics or identity of such variety or likely to confuse the public about the identity of the variety, (d) not distinguishable from other denominations which identify the same botanical species registered under the Act, (e) likely to hurt the religious sentiments of any class of citizens of India, (f) simply a geographical name, or (g) is prohibited from use as a name or emblem by the Emblems and Names Act, 1950.[105]

The Authority has the power to order compulsory licensing in certain cases *i.e*., when after the expiry of three years, a person makes an application for compulsory licensing on the grounds that the variety is not available to the public at reasonable prices, *etc*.[106] After hearing both the parties, the Authority may order the breeder to issue a licence to the applicant on such terms which the Authority decides.[107] In cases of infringement of the rights under this Act, different

[100] *Id.,* at s. 39.
[101] *Id.,* at s. 41.
[102] *Id.,* at s. 41(2).
[103] *Id.,* at s. 41(3).
[104] *Id.,* at s.15.
[105] *Id.,* at s.15 (4)
[106] *Id.,* at s. 47.
[107] *Id.,* at s. 47 (3).

reliefs may be claimed, like, (a) an injunction, (b) damages, (c) account of profit (d) delivery of goods or (e) destruction of goods.[108]

Manner in which the legislation protects Traditional Knowledge: The Act establishes an Authority by the name of 'Protection of Plant Varieties and Farmer's Rights Authority'[109] and the functions of this authority include; (a) promotion of the development of new plant varieties and protection of the farmer's and breeder's rights, (b) registration of extant varieties under the Act, (c) documentation of the varieties under the Ac.[110].

There is a 'National Register of Plant Varieties', which contains the names of all the plant varieties that have been registered under the Act along with the names and addresses of their breeders, the associated rights of such breeders and other such information.[111]

The application for registration of an extant variety or a farmer's variety or species mentioned under section 29 (2) of the Act can be made by any person specified in section 16[112] *i.e*, a breeder of a variety, successor of such breeder, assignee of the breeder, farmer or group of farmers, any authorized person or any university or publicly funded institution.[113] The applicant has to submit samples of the seed in question for tests to be conducted by the Authority to make sure that the seed conforms to the standards specified.[114]

After the application has been accepted by the Authority, it is advertised and the oppositions to such application are adjudicated upon by the Registrar.[115] When the Registrar accepts the application for registration, a certificate to this effect is issued and it is valid for nine years for trees and vines, while, six years for other crops and it may be renewed up to eighteen years for

[108] *Id.,* at s. 66.
[109] *Id.,* at s. 3.
[110] *Id.,* at s. 8.
[111] *Id.,* at s. 13.
[112] *Id.,* at s. 14.
[113] *Id.,* at s. 29(2).
[114] *Id.,* at s. 19.
[115] *Id.,* at s. 22.

trees and vines, fifteen years for extant varieties and fifteen years in other cases, from the date of registration.[116]

The Act was enacted with the intention of protecting the rights of farmers and breeders and to encourage the development of new plant varieties. The Act provides for protection of different varieties of plants and brilliantly takes into account various types of origins of these varieties, like, extant variety, farmer's variety, *etc*. It is commendable that it also gives protection to an individual as well as community rights. The Act, by establishing an Authority and a Register for the purpose of registering varieties under the Act, has created a channel and structured framework for the protection of plant varieties and associated rights.

The Biological Diversity Act, 2002

The Biodiversity Act, 2002 was enacted in pursuance of India's obligations under the Convention on Biodiversity as the member States are required to provide access to genetic resources, to the other members, however, such access should be based on mutually agreed terms as well as prior informed consent (PIC) of the source country, with the intention of attaining equitable benefit sharing.[117]

Aim of the legislation: The Act was enacted to promote the conservation of biodiversity along with the sustainable use of its contents. The Act aims to provide for equitable sharing of the benefits which are a result of the use of biological resources and other related knowledge.[118]

Subject matter of the legislation: The Act is enacted for the purpose of protection of biodiversity and hence, the definition of 'biological diversity' under the Act needs to be looked at. Biological diversity is the distinction between living organisms from all sources and ecologies that they are a part of; including diversity between different species or between species and eco systems.[119] Another important term is 'biological resources', which means the plants, animals and

[116] *Id.,* at s. 24.
[117] Interview titled 'Looking after India's Biodiversity' with the National Biodiversity Authority Secretary by K. Venkataraman (2005).
[118] The Biological Diversity Act, 2002 **(**18 of 2003), Preamble.
[119]*Id.,* at s. 2(b).

microorganisms or their parts, genetic material and the byproducts which have a real use or value, excluding human genetic material.[120]

Rights granted: The Act provides for equitable benefit sharing between the applicants who apply for approval for use of biological diversity or other related knowledge, local bodies and the benefit claimants; such benefit sharing is to be determined by the Authority.[121]

The Authority may grant benefit sharing in the form of - (a) joint ownership of IPR to the Authority or where identifiable, to the benefit claimers, (b) transfer of technology, (c) order setting up of production and research units in places which will benefit the benefit claimers most, (d) coming together of Indian scientists, local people and benefit claimers in utilizing biological resources, (e) venture capital for furthering the cause of benefit claimers, (f) payment of monetary or non-monetary benefits to the benefit claimants.[122]

Terms of protection and the nature of protection: The Act prohibits certain people from participating in activities, the subject matter of which is related to biodiversity or to the associated knowledge, without the consent of the National Biodiversity Authority for commercial utilization, bio survey, utilization or even research.[123] The following people have to take permission from the National Biodiversity Authority; (a) non-citizen of India, (b) citizen of India, who is a non-resident, (c) body corporate, association or organization which is not incorporated in India or has any foreign participation in its share capital or company management.[124]

The approval granted by the Authority under section 19 is non-transferable, except for by obtaining permission of the Authority after making an application in the prescribed form and such application may be rejected or granted on terms of payment of imposed charges or royalty, *etc*.[125]

[120] *Id.,* at s. 2(c).
[121] *Id.,* at s. 21(1).
[122] *Id.,* at s. 21(2).
[123] *Id.,* at s. 3.(1).
[124] *Id.,* at s. 3.(2).
[125] *Id.,* at s. 20.(1).

Manner in which the legislation protects Traditional Knowledge: The Act establishes an Authority by the name of 'National Biodiversity Authority', with its head office in Chennai.[126] The duties of the Authority include, (a) regulate issues related to biodiversity and issue guidelines for the same[127], (b) grant approvals related to applications for IP protection, *etc*.[128], (c) advice the Centre and State Governments on related matters.[129]

The Act puts restrictions on the ability to apply for Intellectual Property protection related to biodiversity as any person who wants to apply for obtaining an Intellectual Property Right (within or outside India) for an invention which is based on a biological resource from India, has to take approval from the National Biodiversity Authority for making such application.[130] While granting approval for such an application, the Authority may prescribe benefit sharing fee or royalty or both or, put stipulations for sharing of financial benefits accrued out of commercial use of such rights.[131]

Any person, who wishes to use a biological resource or associated knowledge from India for research or commercial purpose, *etc*., has to make an application for such use, to the Authority.[132] After satisfying itself, the Authority may grant approval to such use and may require payment of imposed charges or royalty.[133] The Authority is required to give public notice of the same.[134]

This Act is yet another piece of legislation enacted to fulfill India's obligations under an international instrument, with the aim of the conservation of biodiversity and its use in a sustainable manner. The Act protects components of biodiversity which have a real use or value attached to it. A striking feature of the Act is the Rights that it grants in the form of joint ownership of IPR, benefit-sharing and payment of monetary or non-monetary benefits to the

[126] *Id.,* at s. 8.(1).
[127] *Id.,* at s. 18.(1).
[128] *Id.,* at s. 18(2).
[129] *Id.,* at s. 18(3)(a).
[130] *Id.,* at s. 6.(1).
[131] *Id.,* at s. 6(2).
[132] *Id.,* at s. 19(1).
[133] *Id.,* at s. 19(3).
[134] *Id.,* at s. 19(4).

claimants. The Authority set up under the Act, acts as a Regulator for issues related to biodiversity.

Traditional Knowledge Digital Library

This project was an initiative of the Council of Scientific and Industrial Research along with the Ministry of Science and Technology, Department of AYUSH, as well as the Ministry of Health and Family Welfare (set up in the year 2001) and it is implemented by the Council of Scientific and Industrial Research.[135]

The main aim of this initiative was to stop or minimize the misappropriation of India's rich Traditional Knowledge at the International Patents Office and for this purpose, the Traditional Knowledge Digital Library (hereinafter referred to as 'TDKL') has documented around 0.29 million (till date) medical formulations which are essentially Traditional Knowledge in the public domain in India.[136] TKDL is also linguistically diverse and has formulations in German, French, Spanish, *etc*. and thus, while examining patent applications, the officer can now check whether the invention is based on Traditional Knowledge from India, easily.[137] India has TKDL access agreements with nine International Patent Offices at present and negotiations are under way for collaborating with other such Patent Offices.[138]

At the time of initiation of this project, the Expert Group estimated that near to 2,000 patents based on Indian medicinal systems were being granted annually worldwide, erroneously.[139] The reason behind this was that when Patent Examiners of various countries carried out prior Knowledge searches, Indian Knowledge would not come up in those searches as they were not documented anywhere, in languages which were understood by people in these Offices and thus, an urgent need for a database like TKDL was felt.[140] After the advent of TKDL, in a short span

[135]WIPO, About the Traditional Knowledge Digital Library, *available at:* https://www.wipo.int/meetings/en/2011/wipo_tkdl_del_11/about_tkdl.html (last visited on May 18, 2019).
[136]*Supra* note 4.
[137]*Ibid.*
[138]*Supra* note 135.
[139]*Supra* note 58.
[140]*Ibid.*

of two years, India has successfully fought thirty six applications against patenting of medical formulations based on Indian Traditional Knowledge, in Europe alone.[141]

All patent offices that have signed TKDL Access Agreements, have access to the contents of TKDL and these Agreements entail non-disclosure obligations.[142] India has signed Access Agreements with the patent offices of Australia, Germany, Canada, UK, USA, *etc*.[143] The TKDL has come to be recognized as a global IP watch system as it has enabled 'Third Party Observations' (TPOs), *i.e*, whenever an application for patenting of the invention based on Indian Traditional Knowledge is rejected by any of the Patent Offices which have signed Access Agreements with India, they can make observations regarding such rejection and the Indian counter parts are made aware of any such attempts of misappropriation immediately and thus, corrective action can be taken.[144]

VI. Conclusion

This Research makes an argument that India is a country which is home to a great number of indigenous people and tribes and thus, by extension, is a repository of Traditional Knowledge. It argues in favor of legislating over Traditional Knowledge for protection of the rights of indigenous peoples and giving them their due share for their knowledge and also analyses relevant legislations for this purpose. A detail analysis of the Legislative framework shows that Traditional Knowledge has been in fact efficiently protected to an extent. However, it is imperative to mention that this protection is available to only a limited and assorted variety of Traditional Knowledge, *i.e*., GIs, plant varieties and certain types of biodiversity. While the Legislations provide protection to the aforementioned forms of Traditional Knowledge, an overwhelming majority of Traditional Knowledge still remains unprotected in India.

[141]WIPO, Protecting India's Traditional Knowledge, (2011), *available at:* https://www.wipo.int/wipo_magazine/en/2011/03/article_0002.html (last visited May 18,2019).
[142]*Supra* note 58.
[143]*Ibid.*
[144]*Ibid.*