



BIOPIRACY AND THE ECLIPSE OF TRADITIONAL KNOWLEDGE IN INDIA

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ABSTRACT

Traditional knowledge is a valued concept that has been carried on for generations for the benefit of the indigenous society. Such knowledge pertains to various natural resources and is utilized towards a sustainable living. One such element of traditional knowledge includes its usage for medicinal purposes. India is the hub of such medicinal knowledge considering it is the birth place of Ayurveda. The issue arises when such traditional knowledge is illegally procured by outside agencies and is utilized for their own advantage, often patented without giving due credit to the indigenous people and places which led to the development of such resources. The mode of misappropriating cultural and traditional knowledge is known as Biopiracy.

This paper aims to delve into the concept of biopiracy in India. It analyses various case studies of biopiracy and international conventions and national laws formed to control them. In the end, it suggests a way forward to control the vice of biopiracy.

INTRODUCTION

Indigenous people belonging to certain communities are gifted with traditional knowledge allowing them to make use of natural resources for a sustainable living. Some of these indigenous communities are known to have used biological diversity for

generations. Such constant use of the resources has also passed on the knowledge to generations through ages. In this way, this arrangement works for the benefit of the society as a whole.

MEANING AND SCOPE OF TRADITIONAL KNOWLEDGE

UNESCO defines Traditional Knowledge as the “*the cumulative and dynamic body of knowledge, knowhow and representations possessed by peoples with long histories of interaction with their natural milieu. It is intimately tied to language, social relations, spirituality and worldview, and is generally held collectively.*”¹ World Intellectual Property Organization (WIPO) defines as “*it is knowledge, know-how, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity*”²

Using this valued traditional knowledge, the indigenous communities have been able to use it for survival and sustainable living. The knowledge may pertain to food crops, biologically important and lifesaving medicinal plants and herbs etc. However, this traditional knowledge and developments

¹ 3 R.D. Singh, S.K. Modi, H.B. Patel, “*Pharmaceutical Biopiracy and Protection of Traditional Knowledge*”, International Journal of Research and Development in Pharmacy and Life Sciences, pp-866-871.

<https://www.omicsonline.org/open-access/pharmaceutical-biopiracy-and-protection-of-traditional-knowledge-.pdf> (last assessed on: 24.06.2018).

² World Intellectual Property Organization (WIPO). (2013) Traditional Knowledge, Available online: <http://www.wipo.int/tk/en/tk/> (updated: Aug. 2013) (last assessed on: Apr. 19, 2017).



pertaining to these resources are facing threat from what may be called, bio piracy.

WHAT IS BIO-PIRACY?

In simple terms, Bio-piracy is unauthorized use of traditional knowledge pertaining to biological resources for profit motives. It is defined as “*the misappropriation and commercialization of genetic resources and traditional knowledge of rural and indigenous people*”³ In *Kiss Catalog v. Passport International*, the action of piracy was defined as “*any unauthorized duplication of any matter protected by Intellectual Property.*”⁴ A person involved in the act of piracy takes advantage of someone else’s work without taking any prior approval or permission from the original author of the work. Similarly, Biopiracy is the appropriation of someone’s knowledge of use relating to biological resources.

The major issue with this process is gross violation of rights of indigenous communities resulting out of it. Since the indigenous communities have not gone through the process of patenting their innovation on the biological resources, big corporations often take the opportunity of utilizing such knowledge in their own name. Some of them get the traditional scientific knowledge patented in their own names. The patent is granted to even minor modifications in the traditional knowledge

even though a strict requirement of ‘novelty’ in a patented invention may not be satisfied. Further, it often paying less or, *in most cases*, no compensation to the indigenous communities for the knowledge used for their own personal interests. It has been found out that even when the firms provide employment or hires these indigenous people, the growth prospective of these indigenous people are not stronger as they are minimized to menial level jobs. They are also not given the opportunity to learn about their own product and develop them subsequently. They are not provided with any information related to the research and development which is being carried.⁵

Another problem is that negotiations relating to profit sharing can result in clash within communities. Biological resources, most of the times, are equitably distributed within the entire country or region and are within the utility and access of these local communities. Now, if several communities are commonly using a particular type of plant, it might result in a clash between the communities in accessing the profit sharing benefits as several indigenous communities’ claims that they share a command over the traditional knowledge associated with the product. These clashes between different indigenous communities most of the times end up in court litigations as the companies apart from providing employment also provides monetary benefits.

³ Understanding, resisting and acting against biopiracy, The (French) Biopiracy Collective. Available online at: http://www.biopiraterie.org/sites/default/files/etudes/Livret_Uk_010612.pdf (last assessed on: Apr. 18, 2017)

⁴*Kiss Catalog v. Passport Intern Productions*, 405 F. Supp.2d 1169..

⁵ Basil B. Mathew, “*Traditional Knowledge Misappropriation and Biopiracy in India: A study on the legal measures to protect traditional knowledge*”, Vol. 2, No. 2, Dec. 2013, International Journal of Financial Services and Marketing Research. Available Online at www.indianresearchjournals.com (last assessed on: 24.06.2018)



Once patented, the use of the knowledge becomes limited only to the big corporations, thus snatching the indigenous communities of their labor and living by use of the biological resources according to their traditional knowledge.

Since a lot of indigenous communities reside in developing or underdeveloped countries, the economies of these countries are threatened by the acts of biopiracy since due credit any revenue is not annotated to them. At international level, the act of biopiracy also intrudes with the sovereignty of the nations since their resources and knowledge are acquired without their knowledge. Thus, biopiracy violates states sovereign right as well as the common heritage of mankind.

Unlike some countries and conventions, biopiracy is not considered a crime in India. Article 1(1) of its International Undertaking on Plant Genetic Resource for Food and Agriculture (1983) states that the undertaking is based on the premise that "*plant genetic resources are common heritage of mankind and consequently should be available without restriction*". This implies that no individual or corporation can exercise sovereignty over the natural resources or restrict their use to others. But the field of biotechnology and especially patent in biotechnology runs against such principles.

Following from the above, the main onus falls on the developed countries, which are incidentally also the home to these biotechnology patent owning big corporations, to draft norms so that the

rights of the indigenous communities are not compromised.

BIOPIRACY CASES ON INDIA'S AND OTHER COUNTRIES TRADITIONAL KNOWLEDGE

In India, such traditional knowledge especially with regard to medicines through Ayurveda is recognized worldwide. Developed by Charak in the treatise Charaka Samhita, Ayurveda is one of the oldest traditional healthcare systems in the world. Historically, India is seen as a *hotspot* of traditional knowledge as the indigenous communities and tribal groups residing in naturally rich forests possesses an immense understanding and knowledge of the environment they belong to. They tend to play a major role in enhancing the value derived from the environment.

In this area also, the cure of various diseased through the use of codified traditional knowledge has been exploited by these pharmaceuticals who obtain various leads for development of biologically active molecules by the technology rich countries. Since the traditional knowledge are codified, if any, in regional languages, the information about their being is not easily accessible to international patent offices. Some of the examples of bio piracy of traditional Indian knowledge include –

1. NEEM

Neem is a traditional Indian tree known for its medicinal value. It has been used as bio-pesticide for centuries. Ayurveda, an ancient Indian text, as far back as in 5000 BC had recognized neem tree and its medicinal value.



However, US Department of Agriculture issued a patent in the year 1994 to W.R. Grace, which is a US based company, for fungicide which is made from oil extracted through neem. This patent was later opposed by many of Non-governmental Organizations (NGO's) and various environmental organizations. The arguments raised by these organizations were that the act amounts to biopiracy as there is no 'novelty' in it and the multinational corporation has stolen the idea from these communities and ancient texts. After proper evidence was adduced, the European Patent Office withdrew the patent in May, 2000 after confirming that "there is no invention" and that indigenous communities were using neem since many decades. They also stated that the use of neem is widespread in India and there was prior use.⁶

2. TURMERIC

The US Patent and Trademark Organization (US PTO) in the year 1993 granted the patent rights to the University of Mississippi Medical Center over the use of turmeric as a healing wound. This university registered a patent after it administering turmeric to a patient who was afflicted with a wound. After the administering of turmeric, the wound healed. In India, turmeric has been used for centuries towards healing of wounds. Indians have knowledge and awareness of turmeric's medicinal wonders. After India came to know of the fact that University of Mississippi Medical Center is

using turmeric to cure or heal the wounds of the patient, it filed a case against this University claiming that the Indians have been traditionally aware of the fact that turmeric can also be used for curing wounds and that the University copied this concept and the claim over patent was wrong.

After evidence was deduced where India relied on ancient texts which shows the medicinal use of *haldi*, the patent was eventually cancelled in the year 1998. But, this case is another example where India and other indigenous communities got this fact revealed that how easy is it to falsely patent centuries old traditional knowledge.⁷

3. BASMATI RICE

In 1997, the US Patent Office granted patent to RiceTec Inc., a Texas based company to call the aromatic rice grown in India and Pakistan as 'Basmati'. As a result of this patent, the said company started dealing in the said 'Basmati' rice in US as well as exporting it to other countries like India on a higher price.

This resulted in great loss to both India and Pakistan as the patent not only cost India the US market but also other international markets in Asia, UK and Europe etc. India, aggrieved with the patent being granted to US Company, took the matter before the World Trade Organization (WTO) for a clear violation of the TRIPs agreement as according to TRIPs, "geographical

⁶ Vandana Shiva, Radha Holla Bhar, "Piracy by Patent: The case of Neem Tree", Available Online at: <https://www.scribd.com/doc/8156919/Piracy-by-Patents-the-Case-of-the-Neem-tree-VANDANA-SHIVA-and-RADHA-HOLLA-BHAR> (Last assessed on: 24.06.2018)

⁷ Divya Bhargava, "Patent Act: Biopiracy of Traditional Indian Products-an overview", May, 2009. Available Online at: <http://www.countercurrents.org/bhargava140709.htm> (Last assessed on: Apr.24.06.2018)



indication products cannot be patented".⁸ Ultimately, the patent was rejected against RiceTec Inc.

4. KARELA, JAMUN AND BRINJAL

The US Company, Cromak Research Inc. was granted a Patent on edible herbal compositions which was made by compromising the mixtures of karela, Jamun and Brinjal. After these mixtures were prepared, the product so formed helped in reducing sugar level. These are vegetables and fruits which are traditionally found in India and the practice of compromising the mixture were widely followed by the Indigenous societies and groups to reduce sugar level and cure diseases. Later, India filed an objection to the patent granted to Cromak Research Inc. The application was accepted and the patent was rejected accordingly as the compromising of mixture which was formed with the Karela, Jamun and Brinjal was traditionally known to the indigenous communities.⁹

5. YOGA PATENT

A recent case of copyright on Yoga can also be considered as an act of Bio-piracy. Bikram Choudhary, who is a US-based Non-resident India, filed for an application of copyright over his style of teaching Yoga. Apart from copyright, he also filed a patent over Yoga as well. According to various Yoga teachers and enthusiasts, this seems to

be an unjustified move because Yoga is something which has been traditionally known to Indians and it is for the entire human race and should accordingly fall within the public domain.

It also came to the notice that United States Patent and Trade Office (USPTO) has granted around 150 copyrights related to yoga, 134 trademarks on yoga and 2,315 patents were assigned on Yoga.¹⁰ This step by USPTO was widely criticized and opposed by India. India has also taken a strong move against USPTO granting patents and copyrights over Yoga techniques and postures. They have also opposed for patent revocation. The verdict is yet to come.

6. 'NAP HAL' WHEAT

India has also raised its concern after one of the Indian varieties of wheat also known as "Nap Hal" was patented to MONSANTO, an American Multinational Corporation (MNC) under the category of 'plants'.

Later this patent was challenged by Research Foundation for Science and Technology along with Greenpeace and Bharat Krishak Samaj. They jointly filed a petition on January 27th, 2004 against MONSANTO over the grant of patent rights. After adducing proper evidence, it came to notice that Indian societies and indigenous groups have traditional knowledge of this type of wheat and that they have been using it for centuries. Since, there was a prior use and no 'novelty' or

⁸ Article 22, TRIPs Agreement 1995. Available Online at

https://www.wto.org/english/docs_e/legal_e/27-trips_04b_e.htm (Last assessed on: 24.06.2018)

⁹ M.B. Rao, Manjula Guru, "Understanding TRIPs; Managing Knowledge in Developing Countries", New Delhi: Response Books, 2003.

¹⁰ Suvarna Pandey, "Biopiracy related to traditional knowledge and patenting issues", Patent Attorney, S. Majumdar & Co., New Delhi, <http://www.birac.nic.in/webcontent/dib.pdf> (Last assessed on: 24.06.2018).



'invention', the patent was resultantly revoked in the year 2004 in October.¹¹

7. COLGATE CASE

The American company Colgate was accused of stealing recipe of India's 1000-year-old toothpaste. Colgate was granted a US patent over the tooth powder composition which comprises of rust-like red iron oxide, camphor, spearmint, black pepper and clove oil. When this patent was granted, activists from India accused Colgate of 'biopiracy' for the theft of traditional knowledge of 1000 year old toothpaste recipe. It was evidentiary produced that the ingredients which were used in making this toothpaste dated back to antiquity and that Indians were using it since thousands of years.¹²

8. ASWAGANDHA

Relive International Inc. was granted a patent called as 'Aswagandha' which acts as a supplement for healthy joints. USPTO granted dozens of patents over Aswagandha. Indians filed an objection regarding the grant of Patent to Relive International. Indian government relied on ancient texts where it was shown that it was traditionally known to the indigenous Indian groups that Aswagandha can be used as a supplement for healthy joints. This case is still going and the decision is yet to come.¹³

9. HERBAL PRODUCTS

Natreon Inc. which is a US based company headquartered in New Jersey is engaged in ayurvedic extracts. Natreon Inc. was issued patents for 13 claims of Amla by the US

patent office. The application was also filed with the Patent Office of Europe. Later it was discovered that the product is widely popular and is commonly used by the people of India. Since, there was prior use, the patent was rejected.¹⁴

10. RICE

Chattisgarh, which is also known as the rice bowl of India, is a home to 22,972 varieties of Paddy. The US Company Syngenta which is a biotech company also tried to grab and steal the precious collections of 22,972 paddy varieties. Syngenta also signed a memorandum of understanding with the Indira Gandhi Agricultural University (IGAU). The memorandum was signed to get an access to Dr. Richharia. He is the ex-director of Central Rice Research Institute (CRRI) which is situated in Cuttack and is also considered as the pioneer of rice sage of India who is known for his pioneering and instrumental work in the field of agriculture particularly rice. The Company was looking for getting an access to Dr. Richharia's priceless collection of rice fields which was so diverse.

After getting access to Dr. Richharia's farms, the Company stole the idea and got the patents on 22,972 varieties of rice which later, after the objection by India, was rejected.¹⁵

ANALYSIS

After looking at these case studies, it becomes evident that Intellectual Property laws contain a loophole so that the big

¹¹*Ibid*

¹² Pandey (n 10).

¹³ Rao, Guru (n 9).

¹⁴*Ibid*.

¹⁵ Biopiracy Related Issues. Available Online at <http://www.simplydecoded.com/2013/07/14/biopiracy-related-issues/> (Last assessed on: 24.06.2018)



corporations can misuse the traditional knowledge to their benefit. These laws have constantly failed to protect the indigenous communities and most importantly, prevent the biopiracy of traditional knowledge. What seems to happen now is that traditional knowledge is seen as a free input for commercialization and an instrument for profit earning without providing any compensation to the indigenous communities from whom these resources are being derived at.

Indian patent law which has been recently amended has taken into account this plight of disadvantaged indigenous groups. The newly added provision provides for mandatory disclosure and geographical origin of the biological material, which is being patented in India, by the use of invention. There are certain provisions which are also included in the Patent Act, 1970 which deals with wrongful or non-disclosure of geographical origin or from where the product belongs to as a ground for opposition, revocation and ultimately rejection of patents if it has been granted.

Some other provisions which were incorporated in law to protect traditional knowledge from being patented were anticipation of invention by available local knowledge including oral knowledge, as one of the grounds for opposition as also for revocation of patent.¹⁶

¹⁶ Dr. Vishwas Kumar Chauhan, "Protection of Traditional knowledge in India by Patent: legal Aspect", Vol. 3, Issue 1 (Sept.-Oct., 2012) IOSR Journal of Humanities and Social Sciences, PP-35-42. Available Online at: <http://www.iosrjournals.org/iosr-jhss/papers/Vol3-issue1/F0313542.pdf?id=5696> (Last Assessed on: Apr.21, 2017)

The Supreme Court in *Novartis v. UOI*¹⁷ dismissed the application of the grant of patent to the Swiss drug maker Novartis over Glivec which the anti-cancer drug in India was. In this case, Supreme Court also accepted the existence of *imatinib mesylate* as prior art by looking into Zimmerman patent and thus declared it not to be a 'invention' under section 2(1)(j) and section 2(1) (ja) of the Patents Act, 1970.¹⁸

INTERNATIONAL TREATIES DEALING WITH BIOPIRACY

It is important to understand that because biopiracy includes a very difficult and complex subject matter, it relates to numerous branches of law. This subject on one hand deals protects the right of the patent owner and on the other hand violates the right of those indigenous communities who are already well versed with these biological resources as they have traditional knowledge over the product which is being patented.

Henceforth, there are several legal texts, declarations and provisions under the International law, Intellectual Property Rights and Environment law which provides measures in regulating Biopiracy. However, it is also important to understand that because of the prevailing differences in relation to the object and subject matter, these provisions tend to differ and contradict each other from time to time.

On one hand, there are one set of laws in relation to IPR or International Trade or any Commercial matters whose main focus is profit maximization and there are other sets

¹⁷ *Novartis v UOI*, (2013)6SCC1.

¹⁸ *Ibid*.



of law on the other hand which deals with protection of environment and respect and protect the rights of the indigenous groups. The differences in these laws time again has led to ‘*clash of interest*’ between these two sets of groups i.e., the Corporation and the Indigenous groups.

1. TRIPs AGREEMENT

World Trade Organization in order to provide an international framework for the protection of Intellectual Property Rights came up with TRIPs Agreement in 1955.¹⁹ TRIPs, better known as Trade Related Aspects of IPR Agreement, allowing patenting the life forms²⁰ has resulted in the widespread encouragement of Biopiracy.

2. DOCTRINE OF SUI GENERIS

Article 27.3.b of the TRIPs agreement provides for a member state to grant protection to varieties of plant either under the patent or under Sui generis system or both.²¹ It however fails to indicate the nature of sui generis model which is being referred to. This has resulted in controversy which emerged between the developing and developed countries.²²

TRIPs also recognize geographical indications. It helps in identifying the territory where a particular product belongs to. According to Article 22.3 of the TRIPs agreement, if the registration of trademark

which uses a geographical indicator in a misleading manner or which confuses the user of the good must be refused or invalidated ex officio²³. This was what was held in the case study of Basmati.

3. DOCTRINE OF COMMON HERITAGE OF HUMANKIND

Article 1(1) of FAO’s International undertaking on Plant Genetic Resources for Food and Agriculture, 1983, states that the undertaking was based on “the universally accepted principle that plant genetic resources are a common heritage of mankind and consequently should be available without restriction.”²⁴ This in plain words means that no one can claim the right of sovereignty over such resources.

4. CONVENTION ON BIOLOGICAL DIVERSITY

The Convention on Biological Diversity not only recognizes the dependency of indigenous people on biodiversity but also their unique role in conserving life in earth.²⁵ This is the reason why the Biological Diversity Convention provides that the parties have undertaken to preserve, protect and maintain the traditional practices, innovations and knowledge of these local and indigenous communities which seems relevant for the protection and conservation of biodiversity. Article 8 provides and emphasizes to promote their wider application with the approval of knowledge holders and to encourage equitable sharing

¹⁹ M. Khor, “*Re-thinking Intellectual Property Rights and TRIPs*” 2002 Global Intellectual Property Rights, p. 207.

²⁰ Article 27.3b, TRIPs Agreement, 1995.

²¹ *Ibid.*

²² R. Johan., 2004, “*Biopiracy, the CBD and TRIPs – The Prevention of Biopiracy, Intellectual Property*”, Master thesis, FACULTY OF LAW, University of Lund. (unpublished).

²³ Article 22.3, TRIPs Agreement, 1995.

²⁴ Article 1(1), Food and Agriculture Organisation’s International undertaking on Plant Genetic Resources for food and agriculture, 1983.

²⁵ Preamble, Convention on Biological Diversity, 1992.



of benefits arising out of the use of biodiversity.²⁶

This Act also recognizes the principle of state sovereignty which means that the state can exercise the right of sovereignty over its resources. Thus, they can be benefitted from these resources with a prior approval from the state.

5. THE NAGOYA PROTOCOL

The Nagoya Protocol which was ratified in the year 2010 specifies and provides the means through which the Convention of Biological Diversity can be applied. This protocol majorly deals with access and benefit sharing. The Nagoya Protocol aims at ensuring better regulation of access towards genetic or biological resources and also encourages the State to set up an agency to which researchers and firms can seek request for operating licenses. States should also ensure the setting up and running of an equitable mechanism of sharing any benefits arising from the use of resources.²⁷

INDIA'S FIGHT AGAINST BIOPIRACY LAWS

India is one of the 17 mega-biodiversity countries with 2.4 per cent of the global land area and accounts for 7 to 8 per cent of the recorded species of the world, making it more prone to biopiracy.²⁸ As mentioned above, India has successfully overturned the patent which was granted to the US

Company by various patent offices over its resources and knowledge. This has led to a way towards a pathway to fight against biopiracy. Also, it is important to understand that this was the first time when a third world country succeeded against the developed countries and powerful corporations by objecting to the patent so granted as it was based on the India's traditional knowledge for generations.

To stop 'pirates' from exercising the practice of Biopiracy and through its own bitter experiences, government of India has come up with the Biological Diversity Act, 2002. The Act seeks to perform several functions which include regulatory access to these resources without leading to unfair commercial exploitation. The main purpose is securing equitable share in benefits which arises out of any use over the biological resource so obtained. It aims to protect, conserve and recognize the traditional knowledge of these local or indigenous communities by sharing equitable profits with them. Further the Patent Act, 1970 requires "mandatory disclosure of source and geographical origin of the biological material in the specification when used in an invention."²⁹ It is relevant to note that if there is a failure in disclosure or participation in wrongful disclosure of such information, then the amendment may result in opposition or revocation of the patent.³⁰ The protection of plant varieties and farmers right act, 2001 also acknowledges the exploration, conservation, characterization, collection and evaluation of plant genetic resources for agriculture and food which is essential to meet nations demand by

²⁶Article 8(j), Convention on Biological Diversity, 1992.

²⁷ Available Online at: www.cbd.int/abs/doc/protocol/nagoya-protocol-en.pdf (Last accessed on: 24.06.2018)

²⁸ S. Udgaonkar, "The recording of traditional knowledge: Will it prevent 'bio-piracy'?" (2002) Current Sci. 82(4): p.413-419.

²⁹ Section 4(D) of Patent Act, 1970.

³⁰ Section 64 of Patent Act, 1970.



fulfilling the goal of nutritional security and national food which is also for the sustainable development of the present and future generations.³¹ The Geographical Indication of goods (Registration and Protection) Act 2003 characterizes certain products according to the areas where they are found.³² It also advance product standards³³, provide cataloguing and categorization and enforces regulation.³⁴ Darjeeling tea became the first GI tagged product in India, in 2004–05, since then 193 goods had been added to the list as of March 2013.³⁵

In order to prevent acts of bio piracy the Indian government also launched the traditional knowledge and digital library (TKDL) in 2001. This project opened a digital library which identifies India's indigenous resources. Through this digital library, sourcing form different books in local languages were translated into five different languages so that it is accessible to the masses. It aims to identify the usages, characteristics and bibliographic sources of different plants and then translates it. The ulterior motive of establishing this digital

library is to set up a competent and rigorous mechanism to establish anteriority of traditional knowledge in cases of biopiracy. To fight biopiracy and unethical patents, the library is set up as repository of 1200 formulations of various systems of Indian medicine, such as Ayurveda, unani and Siddha.³⁶ The library also has 50 traditional Ayurveda books digitized and available online.³⁷

CONCLUSION

During these times of war on patents when someone who doesn't belong to this nation contends that a particular resource belongs to them and alleges even a miniscule piece form the territory of India, the country goes into tailspin. Indian government shows pride in its heritage and is showing sincere efforts to combat this problem of Biopiracy. This becomes evident through the efforts made by the government to claim its heritage and avoid its piracy. Even though various efforts are being made by the government and individual stakeholders, it is important to consider whether such efforts will be sufficient to control bio piracy at an international level.

According to me, there is still a need of making an 'umbrella' legislation which governs the entire landscape of these local or indigenous groups and their traditional knowledge. Also, indigenous people should have the access to information related to the protection of their traditional knowledge using various international or national laws

³¹V.K. Chauhan, "Protection of Traditional Knowledge in India by Patent: Legal Aspect." (2012) IOSR Journal of Humanities and Social Science. Pp 35- 42.

³²Section 1 (3)(e), Geographical Indications of Goods (Registration and Protection) Act, 2003.

³³Section 11, Geographical Indications of Goods (Registration and Protection) Act, 2003.

³⁴Section 20-24, 39 and 41 of Geographical Indications of Goods (Registration and Protection) Act, 2003.

³⁵"STATE WISE REGISTRATION DETAILS OF G.I APPLICATIONS 15th September, 2003 – 31st March, 2013". Geographical Indications Registry, Government of India. (last assessed on: 24.06. 2018)

³⁶"Know Instances of Patenting on the UES of Medicinal Plants in India". PIB, Ministry of Environment and Forests. 6 May 2010.

³⁷50 Ayurveda books online, Traditional Knowledge Digital Library (Govt. of India).



of the land. Both the principles of justice and morality demands that these million-dollar corporations belonging to developed nations should treat indigenous people of developing countries with respect. If soft law is not able to bring that effect, then a well thought of enforceable legislation should be brought into place to bring effect to the same.

