# TRADITIONAL KNOWLEDGE: SCOPE IN PATENT LAW

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## ABSTRACT

Intellectual Property is a kind of intangible property which is generated by the intellect of human brain. The question of protection of traditional knowledge usually falls under the purview of patent law. Providing protection to the age old knowledge is one of the most complicated & debatable issue. As the intellectual property are meant to be associated with individual right, thus the traditional knowledge which is in its characteristics based on the knowledge of the community, often push it out of the scope of protection by IP laws. It has been always being considered as knowledge which is free for the exploration and utilization without giving the share of credit to those who are its actual bearers.

The issue of acknowledging the protection for the traditional knowledge has been the agenda on the international level since so long. Since 1998, a forum has been provided by the WIPO (World Intellectual Property Organization) for the debate on this subject. Also, meetings were held to by the Intergovernmental Committee on Intellectual Property and genetic Resources, Traditional Knowledge and Folklore (IGC) WIPO since 2001, to make provisions in relation to the safeguarding of traditional knowledge from being misappropriated and misused. Inspite of these measures, only few results were seen on international level. Nevertheless, there are some of the developing countries like India which have taken measures like introduction of Traditional Knowledge Digital Library (TKDL) and guidelines under section 3 of IP act etc, on the national level to protect their traditional knowledge from exploitation.

**Keywords:** Intellectual Property, Traditional Knowledge, Debatable, Protection, Exploitation

## INTRODUCTION

A legal right which is called as intellectual property rights are provided for its protection such as copyright, patent, trademark etc. These rights are provided to give respect and credit to the real owner and also due to the fact that, intellectual properties have commercial value. For any invention, patent is granted to the patentee, however, the patentee is required to disclose full information regarding the invention before the patent is granted. Once a patent is granted, the others are restricted from reproducing, using, selling or importing those products without the consent of the patentee. It creates a monopoly right over the invention for a fixed tenure. However, once the tenure comes to an end, the invention comes in the public domain and is free for utilization by anybody. Only those inventions are provided with patent which fulfills the criteria for the same i.e, patentable. Obtaining a patent involves complex legal procedures like application, examination, disposal of objections, registration etc. But the moment at which an invention is patented, all the rights associated with it can only be exercised by the patentee or authorized person till it expires.[1]

### Traditional knowledge meaning

There is no specific definition of traditional knowledge however, CBD (Convention on Biological Diversity) shows a varied nature while defining it as "knowledge innovations and practices of indigenous and local Communities embodying traditional lifestyles" . The WIPO IGC has defined it as any content related to knowledge that is originated through the intellectual action in regards to the traditional aspects, which is inclusive of the know-how, innovations-creations, practice, learning etc. Further, it defined that, it is the knowledge which is present in the community's lifestyle and pass on from one generation to the other. It encompasses broad knowledge areas, including agriculture, environment, medicine, and genetic resources.

## ROLE OF INTELLECTUAL PROPERTY RIGHTS IN PROTECTION OF TRADITIONAL KNOWLEDGE

One of the motives behind the IPR enactment is to encourage creativity and innovation and to safeguard it, by providing respect to the creator. Companies exploit the traditional knowledge with the aid of intellectual property rights and get benefited by generating income from the

[1] Vignesh, S., and K. Kathiresan. "Patent Infringement in India." Journal of Intellectual Property Rights (JIPR) 29.5 (2024): 423-427.

wealth of the conventional knowledge. The indigenous people faces deprivation of their rights due to the stealing of their resources and skills by others. Further suffering for them comes due to the expensive goods that are created through utilizing their conventional techniques by the corporations.

**The Patents Act, 1970**

In India, there are numerous forest dwellers. They are usually associated with the distinctive tribes. For them, the source if livelihood is nothing but the forests as they provide them with variety of products. This has led to the gaining of diverse knowledge about the natural environment for these people surrounding their own local culture. They have been practicing the techniques of their forefathers since ages and are away from the reality of the modern man. India is rich in traditional knowledge due to it's forests and the people belonging to them who have preserved it with dedication. Unfortunately, traditional knowledge is not possible to be protected by the current IPR structure. This is due to the fact that, for patent, inventive step and creativity is mandatory but conventional knowledge lacks both of these. There is no technique of proper documentation of the knowledge which is passing on from generations to generations. Thus, the traditional knowledge is underprivileged and at a disadvantaged stage due to these factors. [2]

**BACKGROUND**

Indian Patent Act, 1970 deals with the concept of patent laws in India. It has been amended two times; Patents (Amendment) Act, 1999 and Patents (Amendment) Act, 2002.

Patent is provided to safeguard the rights of the inventor regarding his/her creation in return of the disclosure of information of the same so that the commercial benefits of it can be restricted to the inventor only. However, it is only for a fixed time period. The exclusive rights to exploit or utilization of the invention is allotted to the inventor only and any other person is restricted to exercise such right without authorization. To encourage and speedup the developments in technology and industry, the Patent laws have been legislated.

[2] Riya."Protection of traditional knowledge under intellectual property regime". E- Journal of Academic Innovation and Research in Intellectual Property Assets (E-JAIRIPA).1 (01), (2020), pp. 149-164

Patent consists of numerous rights such as making, using, selling or licensing of the invention and thus termed as the monopoly right of the patentee. As the patent is granted only for a fixed period, it comes into the public domain once the term is expired.

Indian Patent Act grants patent to only those inventions which fulfills the patentability criteria, which refers to patentable invention as a noval product or the process consisting of "inventive step" and have "industrial applications".

**Novelty of invention**

The requirement of invention to be new is related to the concept of priority date. The date on which the application for patenting an invention is first made by the applicant, it is known as the priority date. As the Indian Patent Act mandates the condition of invention to be new, the invention should not be known to the public (state of art i.e, comes under purview of the public knowledge) before the priority date.

The invention becomes the part of state of art or prior art, if the information regarding the invention is, in any manner either written or oral, already disclosed in the public domain before the date on which the application for the patent is made.

**Invention must involve an 'inventive step'**

The second requirement is regarding the non-obviousness of the invention. It requires that the step through which it is invented, should not be an obvious step for a person who is also skilled in the same area of invention. It must be distinctive in character from the already known procedures. Public use and prior publications are checked to ensure whether there is inventive step or not.

Pharmaceutical, chemical or mineral processing industries are some of the illustrations in which resources can be utilized effectively, as it gives different results if the process is changed.

**Invention must be having 'industrial application'**

The patentability of any invention requires that the invention have some industrial applications. Industrial applications does not means that it must involve some complicated manufacturing or

utilization of machines, rather, in simple terms it refers that the product can either be made in industry or has some utility in it.

## PROCEDURE FOR OBTAINING PATENT

### Application for obtaining patent

Section 6 of the Indian Patent Act deals with the person entitled to apply for patent. As per this section, the person who claims that he is the true and first inventor, his assignee or the legal representative of the person who is immediately before his death became entitled to apply for patent, are entitled to apply for the patents. The application can either be made alone or jointly with someone by the persons mentioned above.[3]

When an invention is done by the employee of any corporation, though the patent is granted in the name of that employee but the ownership right of the invention i.e, regarding it's making, use or selling, depends on the employee's contract either the employer. Usually the ownership rights are provided to the employers in the research and development field and patent is issued to the employee.

### Filing a Patent Application

Section 7 of the act provides for the form of application. It requires that, for a single invention only one application should be made along with either provisional or complete specifications. The application shall be made in prescribed form and filed in patent office along with fee.

In a case where the assignee makes the application, he shall provide the proof regarding the right of filing application. It is required that the person making the application has the possession of the invention which should be clearly mentioned in the application for the same along with bearing the name of the actual owner. If the application is not the true and first inventor then a declaration shall be given by him that he believes such person to be the true and first inventor.

The international applications designating India will be considered to be made under the Indian Patent Act , which are filed under the PCT (Patent Co-operation Treaty), if a corresponding

[3] Section 6, The Patent Act,1970, pp. 10.

application regarding the sane is made to the Controller. However, the option of electronic filing of application for patent is introduced by the WIPO.

The application must consists of particulars such as full name and address, nationality of both the inventor and the applicant if so is the case, specifications of Patent, and information regarding whether the application is filed under PCT or any convention country which specifies to Indian citizen or the applicant in India.[4]

**Filing of Provisional and Complete Specification**

The correct description or the information regarding the procedure of the invention specifying how it can be done using the steps as per the knowledge of the person making the application is known as the specifications. It can either be provisional or complete. It consists of the possibilities regarding the invention for which the applicant demands the protection through patent.

Usually, if the application is filed giving the provisional specifications then it is required on the part of the applicant to file a complete specifications within the period of twelve months and the noncompliance of the same results in the abandoning of the application. However, extension of the period can be done from twelve to fifteen months if requested so in the application filed to the controller. The prescribed fee must be paid for the same.

The contents of provisional or complete information is mentioned under section 10 of the Act. The scope or the complete procedures, any additions or development regarding the invention is mentioned in provisional specifications are given under the complete specifications. The inventor has option of filing distinct application for the patent of such additions separately. However complete specifications shall be filed if the application for patent is in regard of convention application. The complete specifications consists information about either a single invention or may consists of group of inventions, involving one inventive concept.

The patentee shall be the same for the original patent and the additional patent, where the patent application is made for an addition or any improvement or change in the previous invention.[5]

[4] Section 7, The Patent Act, 1970,pp. 11-12.
[5] Section 10, The Patent Act, 1970, pp 12-13.

The specification must contain the following:

- Title, sufficiently indicating the subject-matter;
- Relevant drawings
- Full and particular description of the invention:
- Details of its operation or use and the method by which it is to be performed;
- Disclosure of the best method of performing the invention;
- Claims defining the scope of the invention substantiated by the disclosure;
- Abstract providing technical information on the invention:
- Declaration as to the inventorship of the invention.

**Publication of the Application**

Publication of the application is dealt under section 11A of the IP Act, which provides that the application for patent is not published till the prescribed period. Application for patent is usually published after the 18 months from the date when the application was made. Then the objections regarding the invention are invited.

The Controller has the power of restricting the publication of the application which is related to such kind of invention that deemed to be important for the purposes of defence. In some cases, where the directions are issued regarding the maintenance of confidentiality, then until the directions are called off, the publication of patent application of such inventions are prohibited.

Application date, application number, applicant's name and address and an abstract are the particulars which are mentioned in the publication. The specifications and drawings regarding the invention are disclosed in the public domain when it is published on paying the prescribed

fee. If any biological material is mentioned in the specifications, then it shall be submitted in the depository institution by the applicant.[6]

Examination of the Application

Examining the patent application is an important step before granting patent, given under section 12. Applicant or person interested have to file request within 48 months from the date of patent application for the examination. Only upon such request, examination is carried on. However, in the circumstances of non-compliance of this condition, the patent application is deemed to be withdrawn. Where the medicine or drug which is utilized to preserve or safeguard the plant in making of which, some chemical substance is used as an intermediate product, then the application for patent shall be made for such product within twelve months from 31st December 2004 or within 48 months whichever is later, otherwise noncompliance will lead to deemed withdrawn of the application.[7]

It is the duty of the Controller to send the application along with the specifications and the related documents to the examiner when request is made for the examination so that examiner can make report within eighteen months. The report is made on the following points:

- The application or other documents are made according to the conditions of IPA or not.
- Regarding the patent grant, any ground of objection exist or not.
- Before the date of giving the complete specifications, does the invention already published.
- Any other matter.

Search for anticipation by previous publication and by prior claim is dealt under section 13. The question regarding the publication is important. To check whether the invention is already claimed or published before, it is important to look for the specifications regarding previous applications and prior Patent grants. It is also necessary to check that any current or expired patent have same subject matter or not.

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The further step involves the sending of information regarding the objections raised by examiner to the applicant by the Controller, which are required to be addressed within 12 months, only then the acceptance of complete specifications is done. If this condition is not met satisfactorily, the applicant is provided with opportunity of being heard and application is rejected.

**Opposition to the Grant of Patent**

Under section 25, any interested person is authorized to make opposition within one year of publication on grounds that the applicant is obtaining the patent wrongfully:

The complete specification has already been filled in any previous patent, or before the priority date, the invention is already utilized in India or known to public or it is not invention as per the act, false information given or non-diclosure or wrong disclosure of geographical origin of any biological material, or application not made in specified duration in convention applications. The information of oppositions raised is given to the applicant and an Opposition Board is constituted to examine the oppositions. Opportunity of being heard is provided to both the parties and Controller give it's decision upon such hearing.[8]

**Grant and sealing of a patent**

Section 43 deals with grant of patent, which specifies that, if the application is not rejected by the Controller or dies not contravene the provisions of the act, then the patent is granted to the applicant and publication regarding the patent grant is made so that public can access the information easily. When once patent is granted, it is sealed by the seal of patent office and entry of sealing date is made to the register.[9]

**Infringement of Patents**

There are no specific provisions which deals with the infringement of patents. However, as the patent involves the monopoly right of making, using, selling or licensing of the invention, the unauthorised exercise of these rights or violation of the same amounts to an infringement. The question of infringement of patent depends upon the extent of patentee's exclusive rights which

[8] Section 25, The Patent Act, 1970, pp. 25-28
[9] Section 43,The Patent Act, 1970,pp.38

can be easily specified on checking the claims or specifications regarding the application of patent. As already mentioned that the specific provisions are not given regarding the infringement in the act, thus the rights granted to the patentee specified under section 47 and 48 give the scope for the filing suit for infringement. Therefore, these statutory provisions make the background for infringement proceedings.

**The acts or conduct that amounts to infringement are:**

- Colourable imitation of the invention for which patent is granted.
- When someone copy the fundamental features of invention.
- If only those features are varied which are not important, then also it would constitute infringement.
- Substances and mechanisms that have same functions or results.

**Suit for Infringement**

Suit for the infringement of patent shall not be filed in court inferior to the District court. The suit can only be instituted by the patentee after the official sealing of the patent and not before the said period. Where the term of the patent has expired, though if any infringement is done during the existence of the patent time period, then suit can be filed for the same even after expiration. However, no one can sue for infringement where patent was granted to wrongfull owner initially but later on given to the true and first owner.

Where patent had lapsed but was subsequently restored, the proceedings for infringement cannot be instituted against any infringement committed between the date on which the patent ceased to have effect and the date of advertisement of application for restoration.

**Limitation Period for Institution of Infringement Suit**

Suit for infringement can be instituted within three years from infringement date and giving notice of the same to the infringer before filing is not required.

**Relief in Suit for Infringement**

The patentee is entitled to get the relief of injunction, damages, accounts or otherwise.

- Injunction refers to restricting or restraining the infringer from committing the actions for which the suit is instituted. Interlocutory injunction retrains the same till the further orders of court, however in case of final injunction, the restriction is till the expiry of the patent period.

- Damages refers to the loss in monetary terms which is incurred to the patentee therefore obligates the infringer to compensate the said amount.

- The profits which the defendant has made by infringement of patent comes under the remedy of "accounts of profit".

- Otherwise include any kind of remedy which the court deems fit.

**WHY PROTECT TRADITIONAL KNOWLEDGE?**

The persons having the traditional knowledge concerns about its protection. The rationale behind this concern relates to the fact that traditional knowledge is based on the culture and practices of the holders of it, therefore they want that the 'right to use' of that knowledge remains limited in their hands, so that the misappropriation and exploitation of such knowledge can be avoided. The need of protection also the involves the concerns regarding the environmental, social and economic issues. Some of the rationale behind the safeguarding of conventional knowledge had been highlighted by the Professor Graham Dutfield. According to his examination, he pointed out that a large section of tribal or indigenous population is still dependent on the natural resources and the associated knowledge of it for their livelihood. They are advanced in utilizing and managing the resources sustainably. Further, concerns regarding the primary health care of approximately 80% of world's population is looked after through the help of age old knowledge as highlighted by the WHO (World Health Organization). For tbe sustainable development, the traditional knowledge is the best mechanism as pointed out by the major world organization like FAO (Food Agriculture Organization), World Bank, UNEP (United Nations Environmental Programme). Hence, for guaranteeing the holder community's

livelihood and wellness and securing the economic opportunities for them, the conventional knowledge is needed to be safeguarded.

Further, the need of protecting traditional knowledge is not only confined to the benefits of any particular community, rather it has an extra-edge in economy of any of the country having such knowledge. When the traditional knowledge is merged with the commercial field, it provides a significant opportunities for the development of country in both, monetary terms and valueaddition. Products including plant-based medicines, health products, hybrids or cosmetics which are originated and made through the conventional knowledge have been the area of interest nowadays and have potential of exponential growth for nation's revenue. The developing countries which are rich in traditional knowledge have potential to collaborate with those industries which are involved in manufacturing of products like pharmaceuticals, dietary supplements, personal hygiene and care etc, which will lead to the growth of domestic market.

It consists of enormous amount of environmental benefits. The methods of agriculture that have been practiced by the local communities like subsistence agriculture aids in maintaining the ecological balance and conservation of the environmental resources. Incorporating the mechanism mentioned in traditional knowledge will not only lead to preservation of flora and fauna but will also help in achieving the goal of sustainable development. Safeguarding the traditional knowledge through Intellectual Property laws would be step towards giving respect to the holders of it.[10]

## PATENTS AND TRADITIONAL KNOWLEDGE IN INDIA

India consists of numerous forest dwellers which comes from the tribal population. As the tribal population usually lives near the forest regions and utilize the products either timber or non-timber, they have acquired rich knowledge which have been gathered by them since centuries.

As the tribal communities live away from the regions of the common people (modern human beings), they have been able to continue the practices of their forefathers and preserved it over centuries. The forests and the people living close to it, is a source of invaluable conventional knowledge. Therefore, India has vast knowledge regarding the value and usage of various forest products and conventional mechanisms. However, unfortunately, the current patent laws

[10] Erstling, Jay. "Using patent to protect traditional knowledge." Tex. Wesleyan L. Rev. 15 (2008): 295.

does not specifically provide for the protection of traditional knowledge due to the fact that it doesn't have inventive character.

A little publicized fact about India is that there are around 100 million forest dwellers in India, most of whom belong to tribal communities. The forests provide them with sustenance, providing both timber and non-timber forest produce. In turn, the forest dwellers have over the centuries gathered knowledge from the natural environment around their community.

**Traditional Knowledge In Danger**

Dangers to the traditional knowledge have been highlighted by the National Knowledge Commission of India. The unsustainable methods of agriculture and habitat loss has led to the threat on about twelve percent population of almost six-thousand species of the medicinal plants. Even the duplicate materials are being produced due to this emerging shortage. Recommendations have given by the National Knowledge Commission of India with the aim of protecting the traditional knowledge. Preserving and cultivating will prove to be a direct measure and protection through issuance of policies is an indirect support, which are needed.

- Support non-Government and corporate initiatives for promotion of THS: The image of health infrastructure of India have been facilitated by the non-governmental organizations and private entities. The recognition of the national and international awareness about the traditional knowledge of India should be facilitated by the corporates and NGO's.

- For delving deeper into the insights of the traditional knowledge in healthcare, international cooperation should be encouraged. Collaborating with advance Research Institutes and commercial opportunities will provide a boost to this area.

- For exploring the world market for these products, the EXIM (Export- Import bank) of India should be facilitated.

- Support primary healthcare in rural areas: A significant portion of the population for basic medical facilities is dependent on traditional medicines, sometimes due to the lack of state-funded sectors. Thus evidence based research in these areas should be promoted to support such sectors.

- Create a major re-branding exercise of Indian traditional medicine: The medicines based on traditional knowledge must be clinically tested so that an effective branding can be done ensuring safe alternative healthcare system. Integrating the national healthcare system with these proven medicines will not only provide an efficient healthcare alternative but also lead to huge economic benefit if commercially utilized.

## INTERNATIONAL MEASURES

### The Convention on Biological Diversity

The significance of the traditional knowledge of indigenous communities and their have been acknowledged by the CBD (Convention on Biological Diversity). There is a framework for the benefit sharing generated from the utilization and appropriation of the knowledge by the indigenous communities. The preamble of CBD specifies that the lifestyle of the indigenous communities is surrounded by the biological resources. Therefore, for the maintenance of diversity and sustainable utilization of the resources, sharing of benefits of the traditional knowledge is important.

The rights of the local and indigenous people have been specified in some of the articles such as article 8(j), 10 (c) and 18 (4). As per article 10(c), it provides about the obligation of the Contracting Party for the protection and encouragement of the utilization of biological resources customarily according to the conventional practices that are in consistency with the sustainability and preservation of the same.

Further, article 18(4) explicitly specifies that "indigenous and traditional technologies" comes under the purview of "technologies".

Article 8(j) is of paramount importance as it is the most significant provision regarding the conventional knowledge. It explicitly provides about duty of the contracting party for respecting, preserving and also maintaining the innovations, knowledge and practices of the indigenous communities which is inherent in their mode of living having significance in the usage of biological diversity sustainably along with its conservation and spreading the applicability of the same with the consent of the traditional knowledge holder. It also specifies for sharing of benefits that emerges from the use of such knowledge.

However, this obligation on the part of Contracting Party is subject to their national laws.

As far as the intellectual property is concerned, there exists numerous limitations in article 8(j). It makes the following of obligation discretionary on the part of the Contracting Party. Sometimes the language of the article is interpreted by parties as not to take any action for protecting such knowledge. Some countries of Convention stresses on the words "subject to national legislation" and "as possible and appropriate" for safeguarding the rights of their local people. Further, article 8(j) only provides for respecting, preserving and maintaining but does not ensure any right for the traditional knowledge of the local communities.

The limitations of article 8(j) is not hidden from anyone and parties to convention had addressed it many times. It has been explicitly highlighted in various decisions taken by the COP (Conference of Parties). Consent for the "development of national legislation and making of strategies for the enforcement in discussion with the indigenous community's representatives" has been given. Constituting an intersessional process for furthering in the working of article 8(j) implementation and other provisions, is also decided.

The open-ended intersessional working group consisting parties which also includes the indigenous communities has been formed by the CBD for providing advices regarding the legal development and other suitable forms for the traditional knowledge protection.

**Trade-Related Aspects of Intellectual Property Rights (TRIPS)**

The aim behind the TRIPS agreement is to establish uniformity of the Intellectual Property laws across the member countries, minimizing the inaccuracies and hindrances in the international trade, ensuring the implementation of IP laws and fostering the protection provided through it in a manner that does not become obstacle in trade itself and promoting the technology transfer.

However, the obligations provided in the objective of the agreement is loosened by the article 1 which deals with the nature and scope of obligations. Clause 1 of article 1 specifies that though the members may enforce the intensive protection in their national laws which is more than the requirement of the agreement, but simultaneously it states that, there is no such obligations of strictly adhering to this condition. The only mandatory requirement is to not make provisions which are contrary to the agreement. As per Graham De, though there is no specific mention of traditional knowledge but the member countries are free to make laws

regarding it. However, TRIPS cannot be used for affording protection through patenting of such knowledge.

The protection of patent for the any field of invention, either including products or involving process, are to be provided by the members of TRIPS agreement. But for such protection, "inventive step" and "industrial application" is a mandatory condition. As both the criteria are not fulfilled by the traditional knowledge, patenting the same is not possible. Also, it lacks novel character as it is known among the community for centuries. Though it can be contended that it is novel for the people not belonging to the local communities, but that is not an effective argument to be agreed upon.

Under article 29(1), it has been specified that, the disclosure of information about the patented invention is to be done by the patent applicant so that, any skilled person is capable of carrying out the same. This has been a standard condition because the violation of rights of local communities can be easily identified through the disclosed information by those who are in opposition of the granting of patent to such invention. This is needed so that the traditional knowledge of indigenous people cannot be exploited without their approval because the local people, due to the insufficiency of funds and competencies for patenting the products based on their conventional knowledge are usually at disadvantaged position.

The limitation under this article is that it does not explicitly explain the sui generis system or its nature. The determination of sui generis is left on the members independently. The report of Crucible Group 1994 stated that the a sui generis system accounts for flexibility as it may give numerous options of policy for acknowledging the inventors which may or may not provide financial benefits or exclusive control on the invention. The adjudication is left on WTO in case of conflicts.

Patenting of some inventions, even involving plants and animals are discretionary on the part of members i.e, can be excluded. But patenting of inventions involving micro-organisms are mandatory as per article 27(3b).

But there is a mandatory obligation on the members for providing protection to the plant varieties through any of the methods including patent or sui generis or its combination. There is also probability that the promotion of rights of plant breeders is considered to be an efficient

sui generis system by the developed countries and big corporations. This will negatively affect the developing countries as their social and economic need will be neglected.[11]

**Granting of patents in respect of traditional knowledge:**

Patent grant or any of the protection through Intellectual Property laws for the traditional knowledge not to the indigenous community people but to any other person who obtained it's control legally has been the major concern for the TRIPS council. Patent grant in turmeric, neem, basmati rice are examples of such incidents. Granting of patent to someone on any conventional knowledge that has already been in access of the public and that too in the absence of the approval of indigenous people is considered to be the exploitation without authorization.

However, the view was expressed that, the patentability criteria does not go well with the traditional knowledge patenting due the part of "prior art".[12]

**Misappropriation of Traditional Knowledge Neem:**

In countries like India and South-eastern countries which are tropical in nature, neem is the indigenous species there. From period of almost 4000 years, neem have been utilized in India due to its antiseptic and healing capacity, also known as the "village pharmacy". In India it has been used as an Ayurvedic medicine since ages. The neem tree and its leaves have anti-inflammatory, anti-septic, anti-fungal and so many like medicinal properties.

**Problem raised in Neem Patent:** In 1971, neem was imported by an importer in US who then in his headquarters, planted it. On the pesticidal property of neem, he carried on research and various tests and thereby got approval of the US EPA (Environmental Protection Agency).

Thereafter, the patent was sold by him to MNC named WR Grace and Co. In year 1985, the emulsion formula of it was tried to be identified by some of the companies of US and Japan, so that neem based toothpaste could be made. Further, the rights over generating the pesticidal emulsion was claimed by WR Grace and Co in 1992 and suits against India were Instituted for

[11] Mugabe, John, P. Kameri-Mbote, and D. Mutta. "Traditional knowledge, genetic resources and intellectual property protection: towards a new international regime." Geneva: International Environmental Law Research Centre (2001).
[12] Chouhan, Vishwas Kumar. "Protection of traditional knowledge in India by patent: legal aspect." J Humanit Soc Sci 3.1 (2012).

emulsion production.

**Dispute:** The contention given by India was that neem is the native species and, being a part of traditional knowledge, its usage is prevalent in India for ages. The farmers and economy of India would be drastically affected if patent regarding neem will be granted.

**Neem campaign in India:** Neem campaign in India: Neem campaign was started by many NGOs and group of people. The aim was to protect the whole system of traditional knowledge and safeguard traditional products of India by gathering huge people's support. This was for the first time bio-piracy was challenged related to US and European patent system.

**Case judgement:** The contention given by India was established and accepted by the EPO, and the WR Grace and Co. patent was taken back by US patent Office. The significant argument was regarding the use of neem since more than 4000 years in India.[13]

**Turmeric**

Use of turmeric in India: Turmeric too is an indigenous tropical herb which is yellow in colour and used as a regular ingredient in cooking in India. It has significant cosmetics usage and antibacterial properties.

**Patent issue and Turmeric:** For the healing property embodied in turmeric, the patent was granted to the Medical Centre of University of Mississippi by US patent in 1995.

**India's contention:** The patent granted was challenged by Director of CSIR (Council of Scientific and Industrial Research), Dr. R.A. Mashelkar, who tried to highlight the traditional knowledge of turmeric inherent in India.

**Arguments by Indian scientists:** In 1953, Indian Medical Association published about the ancient and old text of Sanskrit regarding turmeric, which became a documentary evidence in this case. Judgement: The documentary evidence regarding the use of turmeric by people in India since ages, was relied on and therefore judgement was given in the favour of CSIR.[14]

[13] 1992

[14] Tarunika, J., and J. Tamilselvi. "Traditional knowledge and patent issues in India." International Journal of Applied Mathematics 119.17 (2018): 1249-1263.

**Basmati rice:**

The basmati rice has been cultivated in India and Pakistan since centuries. However a breed (strain) of basmati rice, named 'rice tec' was produced for which patent granted by US Patent Office in 1997 September. It has been argued that granting patent to such breed of inherent basmati rice is in contravention of the CBD and TRIPS agreement. CBD has been further contravened because the on the basmati rice, sovereign rights of India and Pakistan have not been acknowledged as stated by the South Asia Commission on Economic and Social Policy. However this case is yet to be solved. As the TRIPS agreement have elucidated for the patent grant to biotechnological products and process, this has posed obstacle in the basmati rice case. The rice tec involves a minor modification in the basmati rice by integrating it with western strain and thus the claimants said it to be their own.

**Maca**

In the year 2001, on the Andean plant called as "maca", which has the fertility improvement property, has been traditionally utilized. However, on the claim of "unlocking maca's chemical secrets", a patent was granted to two US companies.

From these cases, it can be inferred that, there are still so many obstacles in the protection for traditional knowledge through patent laws.[15]

**Traditional Knowledge Digital Library**

The Traditional Knowledge Database Library is an initiative taken by India for guaranteeing the security of its traditional knowledge from unauthorized exploitation. It is kind of database that consists of diverse knowledge. It has been made through the help of about 148 books based on the knowledge regarding the conventional medication and is inclusive of prior art books of India. Therefore, through these books, it helps in integrating numerous patent examiners around the corners of the world. Only those patent examiners who have signed the TKDL Access Agreement have the access to this database. The most distinct feature of this database is that it has an inherent non-disclosure system which makes it impossible for an unauthorised person to access it, thereby securing the ancient knowledge of Indian tradition regarding medicines

[15] Chouhan, Vishwas Kumar. "Protection of traditional knowledge in India by patent: legal aspect." J Humanit Soc Sci 3.1 (2012).

and others. The accessibility of this database to the foreign users is only confined for two purposes, one of them is for research and the other for just citations. India has signed the TKDL agreement with several nations and negotiations are goin6on with the others for the same.

**Impact of TKDL on Biopiracy**

There have been a significant effect on the EPO(European Patent Office) due to the TKDL. Evidence of TKDL has been presented for the claims or applications of third parties for patenting something based on the Indian medicine system since July 2015. Even on the basis of the TKDL evidences, in two cases, patent grant was prevented by the EPO. Many patent applications which were related to the Indian medicine system have either been taken back or the applicants have themselves changed their claims due to the proofs shown through TKDL. Reports highlighted the decline of about 44% in the applications involving claims based on Indian medicine of the ancient period. Therefore, the rate of bio-piracy have considerably declined due the detrimental effect posed by TKDL on it.

## GUIDELINES FOR PROCESSING OF PATENT APPLICATIONS RELATING TO TRADITIONAL KNOWLEDGE AND BIOLOGICAL MATERIAL

The Indian Patent Act, 1970, consist of some provisions that aids in the protection of traditional knowledge. Traditional knowledge does not come within the ambit of invention because of its very nature of being publicly known, however, section 2(1) (j) of the act specifies that invention has “inventive steps” and “industrial application”.

Further, section 3(e ) provides that substances that are just the admixture of some components which only come out as an aggregate of already known properties are not patentable.

Among all these, section 3(p) provides for a significant condition that, if an invention is traditional or just a duplicate of conventional properties, then it does not qualify for the patentability criteria. Furthermore, all the provisions under section 3 of the act is relevant regarding the patentability of either biological products or traditional knowledge.

Nevertheless, contravention of provisions under section 25 leads to the rejection revocation of

patents, thereby provides additional security. [16]

## REASON FOR PROTECTION OF TRADITIONAL KNOWLEDGE

The meaning of protection of traditional knowledge in terms of IPRs usually refers to restricting the third party from the using it without due authorization. However, in other sense, it also refers to preventing the traditional knowledge from being destroyed or exploited in such a way that affect the lifestyles of those communities from which it is originated.

a) Consideration of equity.

b) Conservation questions.

c) The maintenance of traditional customs and community.

d) Prevention of appropriation of components of TK by unauthorized persons.

e) Fostering its uses and its significance in development.

**Equity:** The protection of traditional knowledge is based on the idea of fairness. The values originated by it, is often go unrecognized and not compensated. Therefore to do justice to those who are deserving, the protection of traditional knowledge in required. This can be illustrated from the farmer's practice of Inherited assets of plants. The plant inherited assets are often conserved by the conventional farmers who utilize them too. These assets are used in planting, seed processing and in selecting suitable-match for farmers' varieties. The farmers usually converse with each other and share their created varieties among them which encourages dispersion and more production. These local farmers are neglected as they are neither paid nor valued by the breeders or the companies which takes their samples. Hence, the protection is necessary for the equity consideration.

**Conservation:** It is needed to protect the traditional knowledge so that it could be preserved. Conservation and maintenance of the biological selections in the field of agriculture benefits universally. The operations or methods which may have stopped from being used, can be continue to be carried on by the revenue which is generated from the IPR system. It can be illustrated from the fact that, the conventional farmers would have stopped practicing and

[16] Intellectual Property India, Patents Designs Trademarks Geographical indications, Office of the Controller General of Patents, Designs & Trademarks

utilizing the farmer's varieties and probably, have opted to go with the utilization of modern techniques to generate more profits which would have eventually resulted in biodiversity loss. However, the protection provided to them by the IPR system guarantees the fulfillment of conservation of environment, security of food and sustainable development.

**Preservation of traditional lifestyle:** Though the reason to safeguard the traditional knowledge is usually to provide credit and a sense of respect for the holders of it, however one of the most significant factors for the protection of traditional knowledge is to preserve the lifestyle of the local communities and to maintain their cultures for its continuity. The destruction of local community is more threatening than any other loss. Thus to preserve the legacy of the community , protection of their traditional knowledge is important.

**Avoiding bio piracy:** To restrict the threat of bio-piracy, i.e, misappropriation or utilisation without authorisation and to guarantee the benefit sharing, the protection of traditional knowledge is required. For instance, while establishing the harmony between the TRIPS agreement and CBD, it was advised by India that a clause in the agreement should be inserted regarding the non-issuance of a patent when there is an inconsistency under Article 15 of the CBD. Enhancing the mechanism of examination of the novelty and innovation would help in preventing the patent grant unjustly in the context of traditional knowledge.

**Promoting use and development:** Promotion of the use of traditional knowledge is itself an important step. It needs to be protected so that a broader implementation of this could be supported more. To encourage the use of such traditional knowledge, it needs to be protected from being destroyed and the holders of it need to be compensated. It will lead to the growth of traditional knowledge positively. To explore the possibilities of traditional knowledge further, legal security is needed. Nevertheless, for encouraging innovations and for the development of local culture by rebuilding it, the traditional knowledge is a significant source.[17]

## LIMITATION OF IP SYSTEM

There are two major limitations of IP system:

[17] Riya, "Protection of traditional knowledge under intellectual property regime". E- Journal of Academic Innovation and Research in Intellectual Property Assets (E-JAIRIPA).1 (01), (2020), pp. 149-164

- The protection of rights, under the IPRs system is individualistic in nature however the traditional knowledge is knowledge of whole community, thus, patent cannot be granted collectively to them. Further, there is lack of awareness among local people due to complex procedure of patenting.

- The traditional knowledge in its very nature, knowledge of centuries, however the criteria of patentability is innovative character. [18]

## APPROACHES FOR THE PROTECTION OF TRADITIONAL KNOWLEDGE

- There is need of reforms in the current framework of IP laws on both national and international level to enact traditional knowledge specific provisions.

- Establishment of structural framework for the utilization of inherent resources and knowledge lawfully.

- There should be inclusion of indigenous people in the discussion and consultation regarding the conventional knowledge.

- Constructive and protective protection should be incorporated for preserving and fostering the use of hereditary knowledge. Constructive protection refers to the entitlement of indigenous holders to take action against unauthorized exploitation. Protective protection refers to the safeguarding of IP rights from the third parties expropriation.

- Equivalent credit should be allocated to the carrier of the conventional information.

- The scope of IP laws should be expanded holistically.[19]

## CONCLUSION

Currently, IP laws are not able to protect the traditional knowledge exclusively and needs reforms. For research purposes, traditional knowledge has been used as an input, and so many products are formed by it for commercial usage, patents are granted to unauthorised entities,

[18] Chatterjee, Ishita. "Intellectual Property Rights and Traditional knowledge-Indian Perspective." Manu Patra.
[19] Riya."Protection of traditional knowledge under intellectual property regime". E- Journal of Academic Innovation and Research in Intellectual Property Assets (E-JAIRIPA).1 (01), (2020), pp. 149-164

and the concept of benefit sharing is also not followed strictly either. This all leads to the exploitation of the actual holders of such knowledge and it has deterrent effect on them.

Nevertheless, Indian laws have been amended accordingly to enhance the protection by mandating the source or geographical origin disclosure in case of biological innovations and non-compliance results in patent revocation. Even a slight information regarding local knowledge or oral knowledge have been approved as grounds for the patent objections and revocation. The most significant provision in this area of protection has been the exclusion from patenting of such inventions that are conventional or just the addition or imitation of publicly known traditional knowledge.