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Traditional Knowledge and its Efficacy in Economic Growth

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ABSTRACT

The World Intellectual Property Organisation mentions traditional knowledge as "indigenous cultural and intellectual property", customary heritage rights as well as indigenous heritage. Some innovation and creation are based on tradition referring knowledge system that is transmitting from one generation to another through people and their territory. It is necessary to protect traditional knowledge for establishing equity consideration, preserving traditional culture and practices, preventing unauthorized parties appropriation of components of traditional knowledge and promotion of its use in development.

It is very much indispensable to incorporate global legal instrument so as to give effective protection to traditional knowledge, cultural expressions and genetic resources. Thus the members of the WIPO agreed upon to develop a global legal instrument for helping members outside the local community threshold to access traditional knowledge. The "Copyright Act, (1957)", was passed to protect the creations of artists such as literary sources, music and art. Moreover, there were specifications regarding the protection of traditional knowledge in Article 31 of the UNDRIP Convention. The report stated that the role of the members of the WIPO was to put emphasis on developing international legal structures such that creative inventions and works of the creators could be protected. Legal structures of IPR were designed such that traditional knowledge of the local indigenous people residing in multiple belts of India could be protected.

The report highlighted the implications of traditional knowledge of Indian economic growth. Moreover, the ecological traditional knowledge of natives of the rain forests led to the development of the market economy.

Some probable recommendations were also suggested by the researcher. The researcher recommended that technical advice is to be circulated among community members and representatives should be encouraged to participate in meetings organized by the WIPO agency.

Keywords: *Traditional, knowledge, IPR, indigenous, protection.*

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I. INTRODUCTION

The 'Intellectual property rights (IPR)' are authorities sanctioned to the creator for creations developed by them. These rights provide the exclusive right to a creator for using their own creation for a specific duration of time. This report highlighted how traditional knowledge was protected by positive and defensive intellectual rights. It emphasised how an international legal instrument was developed for protecting traditional knowledge in India. It also focused on how traditional knowledge has helped in the economic growth of India.

The diverse and rich traditional knowledge of indigenous people residing at various states of India is unregistered, unprotected and undocumented for the protection of intellectual rights. Such rights were required for combating against intellectual theft and cultural appropriation³.

It was later realised that indigenous people had the authority to develop, protect, control and maintain their traditional knowledge and cultural expressions⁴.

Traditional knowledge was realised as a form of vital technology required for sustainable use of resources, meeting procedural requirements and maintaining conservation practice. However, the global community started a migration towards recognising the need for protection of rights, sustainable development practices and appreciating the role of traditional knowledge. As a result, the proposal for including traditional knowledge in the IPR system was passed by the United Nations⁵.

II. TRADITIONAL KNOWLEDGE IN IPR

Traditional knowledge can be defined as know-how, skills knowledge, practices and skills that are sustained, developed and eventually transferred among generations within a particular community. Thus, traditional knowledge forms a component of the spiritual and cultural identity of the community members⁶.

When a framework of traditional knowledge was used by community members, it gave them a right to use the system of patents for protecting their own innovations. Alternatively, traditional knowledge remains unprotected from conventional IPR systems. Traditional knowledge can be

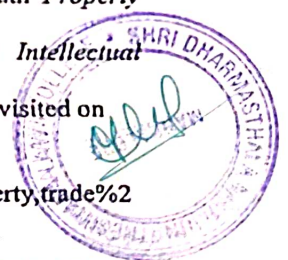
³Moses, Maguipinamei, *Traditional Knowledge, Traditional Cultural Expressions and Intellectual Property Rights of Tribes in North-Eastern Region of India*, Int. Res.: J. Lib. Inf. Sci., 6.2, (2016).

⁴Richard, Awopetu, *In Defense of Culture: Protecting Traditional Cultural Expressions in Intellectual Property*, Emory LJ, 69, 745, (2019).

⁵ Intellectual Property Rights in Traditional Knowledge: Enabler of Sustainable Development, (last visited on September 18, 2020).

⁶ Traditional Knowledge, (last visited on September 18, 2020)

<https://www.wipo.int/tk/en/tk/#:~:text=Traditional%20knowledge%20and%20intellectual%20property,trade%20secret%20or%20confidential%20information.>



termed as the knowledge that is mostly informal and has traditional roots of the development. Members of the WIPO argued among themselves that traditional knowledge should be utilised either subject to informed, free or prior consent or not. The argument focused on using traditional knowledge in on secret and sacred materials. A section of WIPO members believed that grant of IPR on traditional knowledge would result in a decline of public domain, stifle innovation and growth and pose threats in the practice of implementation⁷.

There are basically two types of *intellectual protection of properties* that are being sought for safeguarding traditional knowledge in India. The forms of protection systems are listed below.

III. DEFENSIVE PROTECTION OF TRADITIONAL KNOWLEDGE

Defensive protection protects the rights of the third party⁸. The proponents of defensive protection of traditional knowledge had to justify why the sudden push for safeguarding traditional knowledge did not constitute a form of potential danger to the existing domain of the public⁹. The defensive protection system aimed to prevent people belonging to other communities, besides indigenous ones to acquire IPR over possession of traditional knowledge. For example, India has a compiled database where there are names of multiple traditional medicines. Such medicines are considered as pieces of evidence of ancient art that can be used for assessing applications of patents by examiners. Another example is the traditional knowledge of turmeric for treating wounds. The "US Patent and Trademark Office" granted a patent to the traditional knowledge of utilising turmeric for the treatment of wounds. This property was well-known to the Indian community that was well documented in ancient texts written in Sanskrit. Such sacred traditional cultural manifestations were protected by defensive strategies of protection. For example, the use of sacred words and symbols that were registered as official trademarks were protected using the defensive protection strategy¹⁰. The defensive protection strategy was used for protecting misappropriation and bio piracy of traditional form of knowledge. A digital library was established in India as a part of the defensive protection strategy.

The proponents of defensive protection strategy claimed that possession of multiple sources of such traditional knowledge that are easily searchable by and accessible to examiners at the time

⁷ Traditional Knowledge and Intellectual Property – Background Brief, available at: https://www.wipo.int/pressroom/en/briefs/tk_ip.html (last visited on September 18, 2020).

⁸ Candra, Irawan, *Protection of traditional knowledge: A perspective on Intellectual Property Law in Indonesia*, The Jour. of Wo. In. Pro., 20, 1-2, 2017, at 57,67.

⁹ Chidi, Oguamanam, *Wandering footloose: Traditional knowledge and the "Public Domain"*, The Jour. of Wo. In. Pro., 21, 5-6, 2018, at 306,325.

¹⁰ Traditional Knowledge and Intellectual Property – Background Brief, (last visited on September 18, 2020), https://www.wipo.int/pressroom/en/briefs/tk_ip.html.



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of the process of prosecution might minimise granting of patents that covers traditional knowledge. This can lead to avoidance of problems that are produced by patents that are erroneously granted. The databases of traditional knowledge have thwarted granting of patent scores in intellectual property offices that are spread across India. Such a defensive protection strategy seemed to be a win-win situation for patent offices in India that avoid granting bad patents. However, the critics were confused and raised questions regarding what sort of protection was provided by the defensive database of traditional knowledge to the knowledge it contained¹¹.

IV. POSITIVE PROTECTION OF TRADITIONAL KNOWLEDGE

Positive protection aims to keep outsiders from manufacturing commercial commodities out of raw materials that were originally derived from traditional knowledge¹². It was later realised that defensive protection cannot be deemed as a perfect substitute for positive protection of traditional knowledge¹³. There were two aspects of exploring the positive protection strategy of traditional knowledge through the use of "intellectual property rights". Firstly, the unauthorised use of traditional knowledge was required to be prevented using the positive protection strategy. Secondly, positive protection ensures that the members of the community that has originated the traditional knowledge are able to exploit it actively¹⁴. However, it was ensured that any particular protection regulation that is afforded under the national law may not seem to exist for other nations. As a result, the critics of the positive protection strategy comprising local and indigenous community members have demanded the establishment of a global legal instrument of protection of the traditional knowledge in India¹⁵.

¹¹Margo, A., Bagley, *The Fallacy of Defensive Protection for Traditional Knowledge*. Washburn LJ, 58, 323, (2019).

¹²*Id*, at 57,67.

¹³Rohaini, Rohaini, and Nenny Dwi Ariani, *Positive Protection: Protecting Genetic Resources Related to Traditional Knowledge in Indonesia*, FIAT JUSTISIA: Jurnal Ilmu Hukum, 11.2, 2018, at 122,132.

¹⁴ Traditional Knowledge, (last visited on September 18, 2020),

<https://www.wipo.int/tk/en/tk/#:~:text=Traditional%20knowledge%20and%20intellectual%20property,trade%20secret%20or%20confidential%20information>.

¹⁵ Traditional Knowledge and Intellectual Property – Background Brief, (last visited on September 18, 2020), https://www.wipo.int/pressroom/en/briefs/tk_ip.html.

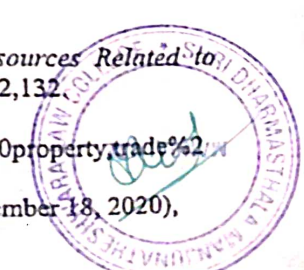


Figure 1: Features of the two protection strategies of traditional knowledge¹⁶

V. DEVELOPING AN INTERNATIONAL LEGAL INSTRUMENT

Rationale for directing towards the development of the global legal instrument

The members of the WIPO agreed in favour of establishing an “international legal instrument” for giving effective protection to genetic resources, traditional knowledge and ancient cultural expressions. Initially, the instrument was considered to be either a recommendation to members of the WIPO or any formal treaty binding nations selecting to ratify¹⁷. As a result, an “Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore” was established in 2000 by the members of the WIPO.

It was perceived that the members of the WIPO attempted to prepare a sort of consensus draft considering the proposition of the “international legal instrument” that would protect the traditional knowledge possessed by the indigenous community members of India. The global legal instrument would allow access to traditional knowledge to those members who are outside the local community threshold¹⁸. There is immense importance of considering ways of developing global regulatory frameworks in the context of safeguarding the traditional knowledge, besides the presence of positive and defensive protection instruments in India¹⁹.

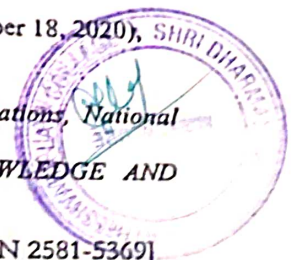
The present global system of intellectual property was not sufficient and capable of fully protecting traditional cultural expressions and traditional knowledge of community members of nations such as India. As a result, the need for establishing a global legal instrument that

¹⁶ Traditional Knowledge and Intellectual Property – Background Brief, (last visited on September 18, 2020), https://www.wipo.int/pressroom/en/briefs/tk_ip.html.

¹⁷ *Id.*

¹⁸ Javed, Ghazala, et al., *Protection of Traditional Health Knowledge: International Negotiations, National Priorities and Knowledge Commons*, So. and Cul. in S. Asia, 6.1, 2020, at 98,120.

¹⁹ Adel IIsiyarovich, Abdullin, and Asiiia Sharifullova Gazizova. *TRADITIONAL KNOWLEDGE AND INTELLECTUAL PROPERTY RIGHTS.*, Revista TURISMO, Estudos e Práticas, 2, (2019).



would provide "sui generis" level of protection was realised. An example of such an instrument was that the indigenous community members might be willing to control the utilisation of ancient cultural expressions and traditional knowledge. They would be tempted to exercise control over literary works that were written by them. The "Copyright Act, (1957)", was a suitable means for protecting the works and creations of the indigenous community members²⁰.

Figure 2: Reasons behind the need for developing global legal instruments²¹

Regulations of Global Legal Instruments

There were multiple examples of global legal instruments that were proposed for provisioning the IP of sources of traditional knowledge. For example, Article 31 of the "UN Declaration on the Rights of Indigenous People (UNDRIP)" mentioned that UN members enjoy the authority of protection, control and ownership of the intellectual and cultural property. They also enjoy the authority to protect and develop technologies, sciences along with cultural manifestations

²⁰ Traditional Knowledge and Intellectual Property – Background Brief, (last visited on September 18, 2020), https://www.wipo.int/pressroom/en/briefs/tk_ip.html.

²¹Javed, Ghazala, et al., *Protection of Traditional Health Knowledge: International Negotiations, National Priorities and Knowledge Commons*, So. and Cul. in S. Asia, 6.1, 2020, at 98,120.



of creations of human beings such as performing arts, visual arts, literature, and knowledge of fauna, flora and medicines²².

Another example of the global legal instrument was the "Copyright Act, (1957)", which sanctions rights to creators of artistic, musical, sound recordings, drama and literature. It incorporates a culmination of rights such as translation and adaptation of work, public communication and film reproduction rights that sanctioned to their legal owners. The Copyright law permitted developing works created by other people provided there was sufficient originality²³. The texts of such legal instruments had to underline the line of distinction between unauthorised appropriation and legitimate borrowing.

The role of the WIPO forum in designing global legal instruments

The WIPO is an international forum for the global cooperation, services of intellectual property, IP information and associated services. It is considered as self-funding cooperation developed by the United Nations that comprises 193 members.. The mission of WIPO is to direct towards a proper development of effective and balanced global intellectual property systems that would enable creativity and lead to communal welfare. The list of legal procedures, governing bodies and mandates are listed in WIPO Convention. The Convention was responsible for creating the WIPO agency in 1967²⁴. The directors of the WIPO agency placed greater emphasis on designing global instruments as they believed that intellectual properties, such as creative works and inventions, had played a pivotal role in the promotion of innovation in India²⁵.

However, the protection of intellectual property should support the protection of traditional knowledge. There is a subtle difference between how an optimum global instrument of legislations can be structured and methods of amending existing rules of intellectual property in India. The representatives of local communities and indigenous people in India are well-assisted by members of the "WIPO Voluntary Fund" in their mission of protecting their own creations. They are granted permission for attending the annual meetings of the WIPO as it was deemed that such active participation of community representatives would be crucial for obtaining successful and feasible outcomes²⁶.

²²Id. at 98,120.

²³ Copyright Protection Act, 1957, (Section 63).

²⁴ Inside WIPO, (last visited on September 18, 2020), <https://www.wipo.int/about-wipo/en/>.

²⁵Bhavisha P., Sheth, and S. B. Sareen, *A report on 'WIPO India summer school on intellectual property 2017'*, *Wor. Pa. Infr.*, 52, 2018, at 19,21.

²⁶ Traditional Knowledge and Intellectual Property – Background Brief, (last visited on September 18, 2020), https://www.wipo.int/pressroom/en/briefs/tk_ip.html.



VI. IMPACT OF TRADITIONAL KNOWLEDGE ON ECONOMIC GROWTH

The traditional knowledge of indigenous people in India has become an active component of the typical market economy in India. Markets are believed to be closely related to traditional knowledge and the prevalence of a free market economy often accelerate the acquisition of traditional knowledge by community members in India. For example, the acquirement of ecological traditional knowledge of the Tawahka Indians, residing in the Honduran forests helped in the development of the market economy. The market economy of India flourished due to greater market integration through the higher sale of agricultural commodities. The traditional knowledge of the local native tribal helped them in specialising in the production of agricultural commodities such as crops that had an inherent competitive advantage. Hence, market-driven economic growth flourished in India because tribal indigenous people had traditional knowledge about the commercial value of forest products. The acquirement of such knowledge helped them in gaining greater market exposure in India²⁷.

The economic growth in India was driven by the traditional knowledge that was retained by the native people of the Byans Valley in India. Traditional knowledge coupled with the practice of optimum utilisation of resources has helped in the growth of the Indian economy since a long time ago. The economic development was possible because of better health and low mortality of indigenous people in India. The community residing at Byans Valley had traditional knowledge about the utilisation of proper medicinal herbs in the treatment of diseases. The traditional knowledge of medical herbs helped pharmaceutical companies to develop formulations of medicine required for treatment purposes. The production of formulations of medicines soon transformed into a major commercial activity which led to economic growth in India²⁸.

The traditional knowledge of indigenous people in India led to the development of the seed industry. People's organisations in India have participated in protests for protecting the rights of the farmers. The native farmers were competent to produce agricultural crops using biological innovative measures. However, the USA had specialised in the manufacture of genetically engineered food products and accruing higher sales of seeds that were genetically engineered. As a result, IP protection was granted to the Indian farmers regarding the production of agricultural crops using biological innovations. The protection sought to help the

²⁷Koteswara Rao, Kodirekkala, *Internal and external factors affecting loss of traditional knowledge: evidence from a horticultural society in South India*, J. of Anthropol. Re., 73.1, 2017, at 22,42.

²⁸Vikram S., Negi, et al. *Traditional knowledge and biodiversity conservation: a case study from Byans Valley in Kailash Sacred Landscape, India*, J. Env. Plan. and Mng., 61.10, 2018, at 1722,1743.

farmers, protect them for competition, enable the growth of the local seed industry and in turn achieve higher economic growth²⁹.

The traditional knowledge of indigenous community members in India about dioecious plants has led helped in the emergence of treatment principles such as Ayurveda. Such treatment methods were considered to be cheaper as compared to foreign treatment methods. The rationale was that Ayurveda incorporated the traditional knowledge of dioecious medical herbs into the field of scientific medical research. Thus, economic growth occurred due to the growth of scientific medical innovation and research. The indigenous people residing around remote areas of Tamil Nadu invented the "folk medicine" as a part of Ayurveda treatment³⁰. Traditional knowledge about ecological characteristics of dioecious medical herbs helped in the development of treatment facilities, which later translated into a major commercial activity.

Traditional knowledge of sustainable farming also contributed to Indian economic development. For example, Maharashtra accounted for 20% of entire cotton production and contributed 30% of land resources for the cultivation of cotton. The farmers have incorporated the principles of "shashwat sheti" in farming practices. The incorporation of the principle resulted in a reduction of farmer suicides and contributed to the maximisation of the production of cotton in the belt of Maharashtra³¹. The per-unit income level of farmers has also increased when the cotton cultivation translated into a key commercial activity in India. Higher per capita income led to economic growth in India.

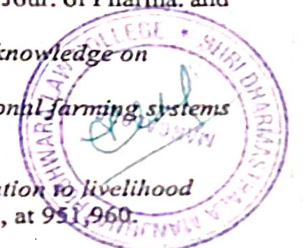
The traditional knowledge of rural women residing at Garhwal Himalaya, Uttaranchal about medicinal herbs erupted in a major economic activity. The women had sufficient knowledge about the preservation and cultivation practices of medicinal herbs. The medicinal plants served as medicines for local community members as well as used in scientific experiments. The herbs were even sent to treat people residing at Doon Valley in Dehradun. Therefore, the medicinal herbs were used in the improvement of the health care sector in India³². Economic growth was translated by means of commercialisation of the herbs.

²⁹Bheemabai S., Mulage, *Impact of Seed Monopolization on Indian Agriculture and Farmer*, Jour. of Pharma. and Med. Chem., 3.2, 2017, at 149.

³⁰Gopalakrishnan Saroja, Seethapathy, et al. *Ethnobotany of dioecious species: Traditional knowledge on dioecious plants in India*. J. Ethnopharmacol, 221, 2018, at 56,64.

³¹Jagjit, Plahe et al. *Livelihoods crises in Vidarbha, India: food sovereignty through traditional farming systems as a possible solution*. S. Asia: J. S. Asian Std., 40.3, 2017, at 600,618.

³²Ankush Sharma, et al. *Studies on traditional knowledge of medicinal flora and its contribution to livelihood enhancement in the doon-valley, Uttrakhand (India)*, Int. J. Life. Sci. Scienti. Res, 3.2, 2017, at 951,960.



VII. CONCLUSION

It can be concluded that the both positive as well as defensive IPR systems were used for protecting the traditional knowledge of indigenous people in India. The members of the WIPO sought to propose a framework and suggest global legal instruments that could be used for protecting the traditional knowledge of Indian people. The idea popped up when it was realized that the current IPR system was not sufficient for safeguarding traditional cultural manifestations and knowledge of indigenous people in India. Moreover, it can be deduced that traditional knowledge of farming practices and the cultivation of agricultural products such as cotton, dioecious plants and medicinal herbs led to the economic growth in India.

Some probable recommendations for protecting traditional knowledge as a part of the IPR system are listed below:

- Technical advice is required to be circulated among community members such that they are able to make effective utilisation of systems of IPR.
- The representatives of the community members should be encouraged by local state authorities so that they take more active participation in annual and quarterly meetings held by the WIPO agency.
- The members of the WIPO agency should provide assistance to strengthen and develop regional and national systems for safeguarding traditional knowledge. The tools for the protection of traditional knowledge include the imposition of laws, regulatory policies, practical instruments and the use of information systems.
- There is also a need for providing "hands-on training" system for the management of "intellectual property rights" and boosting interests of the people for documenting traditional cultural manifestations and knowledge. [Refer to appendix]



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IX. APPENDIX: RECOMMENDATIONS FOR PROTECTING TRADITIONAL KNOWLEDGE

