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BIOPIRACY AND TRADITIONAL KNOWLEDGE IN INDIA'S PATENT REGIME

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INTRODUCTION

"Knowledge, innovations, and practices that are indigenous to a people group are collectively referred to as Traditional Knowledge."

In many cases, Traditional Knowledge is passed down verbally from one generation to the next. This information is typically derived from the accumulation of experience over the course of several centuries and is customised to the local culture and environment. Stories, songs, folklore, proverbs, cultural values, beliefs, rituals, and other forms of expression can all be ways in which it might be expressed. It is typically owned jointly. In addition to this, it is the origin of the traditional usage and management of lands, territories, and resources, as well as the indigenous farming practices that are kind to the earth and do not deplete the resources. Oral traditions are followed by indigenous peoples. These traditions include cultural expressions such as dances, paintings, carvings, and other artistic forms that have been practiced and passed down through the generations.

Traditional Knowledge is of utmost significance, particularly in regions that are home to a diverse array of species, such as India. Due to the fact that indigenous people have been responsible for the preservation and protection of a significant portion of the world's biodiversity, the preservation of Traditional Knowledge is absolutely necessary for the preservation and sustainable development of the environment.

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Knowledge that has been passed down through generations is essential to the identities, cultural heritage, and livelihoods of indigenous peoples. The transmission of Traditional Knowledge from one generation to the next is essential for the preservation and promotion of the cultures and identities of indigenous peoples, as well as for the maintenance of livelihoods, the resilience to natural and man-made disasters, and the maintenance of economic development that is culturally appropriate.[2] The comprehensive approach to life that indigenous peoples take is brought to light by Traditional Knowledge, which is an essential component of the cultural and biological variety that exists across the globe.

For centuries, indigenous peoples have been subjected to continued colonialism, racism, exploitation, and dispossession, all of which have contributed to the formation of structural inequalities, as well as societal exclusion and vulnerability[3]. Additionally, these processes have resulted in the undervaluing and undermining of Traditional Knowledge. Indigenous languages, which contain a vast amount of Traditional Knowledge pertaining to conservation and ecological systems, as well as providing opportunities for the preservation of biodiversity and the maintenance of cultural diversity, are also in danger of having their existence threatened.

An increasing number of people are beginning to recognise the significance of traditional wisdom. Knowledge that has been passed down through generations is not only valuable to those who rely on it in their day-to-day lives, but also to modern companies and agricultural practices. Indigenous peoples have a deep grasp of their ecosystems, which they have developed over the course of thousands of years, and their everyday lives and practices provide the foundation for their Traditional Knowledge on the conservation of land and species, as well as the management and revitalisation of biological resources with regard to conservation. It has the potential to play a significant role in sustainable development and in tackling the most serious global concerns, including as climate change, land management, and land conservation, as well as in

[2] "Backgrounder - Traditional Knowledge"

<https://social.desa.un.org/sites/default/files/migrated/19/2019/04/Traditional-Knowledge-backgrounder-FINAL.pdf>

[3] "Issues Relating to Traditional Knowledge Systems and Intellectual Property Rights (IPRs)" <https://www.fao.org/4/XII/0911-A3.htm>

strengthening scientific, technological, and medical research, as proven in the pharmaceutical industry, among other areas. Furthermore, Traditional Knowledge has the potential to provide viable pathways for achieving food security not only for indigenous peoples but also for people living in other parts of the world. There are a number of indigenous land and environmental management methods that have been demonstrated to improve and promote biodiversity at the local level, as well as to assist in the maintenance of healthy ecosystems. There is a substantial way to retain and preserve indigenous cultures and identities, reduce the rates of illiteracy and school dropouts, improve learning, protect the environment, and promote wellness through the use of educational techniques that combine indigenous Traditional Knowledge and languages.

The right of indigenous peoples to promote, protect, and safeguard their Traditional Knowledge is incorporated in a number of international legal and policy instruments. This is done in recognition of the significance of Traditional Knowledge. According to Article 31 of the United Nations Declaration of the Rights of Indigenous Peoples (UNDRIP)[4], the safeguarding of indigenous peoples' rights to their Traditional Knowledge is a particularly important aspect. Additionally, the Convention on Biological Diversity (CBD) acknowledges the intimate relationships that indigenous peoples and local communities have to biological resources, as well as the contributions that Traditional Knowledge can make to the Convention and to the preservation of biological variety (Article 8(j))[5]. Therefore, in order to achieve this goal, the CBD has established a working group that will address the implementation and safeguarding of Traditional Knowledge. The United Nations Declaration describes the significance that Traditional Knowledge plays in ensuring the rights of indigenous peoples. Other UN bodies also have related policies and programs that acknowledge the function that Traditional Knowledge plays in this regard.

According to WTO, "Traditional Knowledge encompasses the knowledge, expertise, skills, and practices that are cultivated, preserved, and transmitted between generations within a society, frequently constituting an integral aspect of its cultural or spiritual identity"[6].

[4]United Nations Declaration of the Rights of Indigenous Peoples (UNDRIP), Article 31.
[5]Convention on Biological Diversity (CBD), Article 8(j)
[6] "Traditional Knowledge" (Traditional-knowledge) <https://www.wipo.int/en/web/traditional-knowledge/tk/index>

Meaning:

There is a wide variety of sectors in which Traditional Knowledge can be found, including agriculture, science, technology, ecology, medicine, and themes relating to biodiversity. Not only does Traditional Knowledge encompass the knowledge itself, but it also encompasses traditional cultural manifestations like signs and symbols. It is the result of intellectual effort that takes place within a conventional setting.

- It encompasses the traditional utilisation and administration of lands and resources through the utilisation of different indigenous farming practices.
- In addition to that, it encompasses traditional medicinal techniques and medications, such as herbs and spices. Traditional medical methods such as Ayurveda, Yoga, Unani, Siddha, and Naturopathy, for instance, are acknowledged and practiced in India.
- A significant amount of Traditional Knowledge is typically transmitted verbally from one generation to the next. This knowledge is derived from the accumulation of experience over a considerable period of time and is fitted to the local culture and environment.
- Everyone in the group is responsible for its preservation, which is accomplished through the transmission of stories, songs, folklore, proverbs, cultural values, beliefs, rituals, and so on.
- Oral traditions are practised by indigenous peoples. These traditions range from dances and paintings to sculptures and other forms of artistic expression. These traditions have been passed down from generation to generation for millennia.

EXAMPLES:

1. **Neem Tree (Azadirachta indica)**

   The neem tree, recognised for its pesticidal properties, is indigenous to India. It garnered global attention in the 1990s. Businesses have copyrighted things containing neem without appropriately crediting the centuries-old Traditional Knowledge of the Indian

populace regarding its use[7]. The biopiracy of neem sparked a debate regarding the unethical commercialisation of indigenous knowledge.

2. Basmati Rice

Biopiracy of basmati rice occurred when a U.S. business asserted ownership over some traits of a basmati rice strain it copyrighted in the late 1990s. The cultivation and refinement of basmati rice varieties by traditional producers in Pakistan and India over decades has drawn criticism for potentially jeopardising their livelihoods. The patent was ultimately contested and consolidated after a legal dispute.

3. Hoodia Gordonii

Hoodia gordonii, also known as the Hoodia cactus, is a native plant traditionally utilised by Southern African communities to suppress appetite during prolonged hunting expeditions. A pharmaceutical company patented the active ingredient for weight loss objectives in the early 2000s without adequately compensating communities[8]. This elicited apprehensions on the lack of benefit-sharing and the exploitation of Traditional Knowledge.

4. Quinoa

Renowned for its great nutritional value, quinoa is a staple crop in the Andean region of South America.[9] Global enterprises patented quinoa varieties without recognising the contributions of indigenous communities to the cultivation and development of the crop. This elicited apprehensions over biopiracy and the necessity for equitable remuneration and recognition.

[7] "The Neem Tree - a Case History of Biopiracy" <https://twn.my/title/pir-ch.htm>.
[8] "Hoodia: Usefulness and Safety" (*NCCIH*) <https://www.nccih.nih.gov/health/hoodia>
[9] Regional Office for Latin America and the Caribbean, "Quinoa: An Ancient Crop to Contribute to World Food Security" (2011) <https://www.fao.org/4/aq287e/aq287e.pdf>

BIOPIRACY- "the unethical or unlawful appropriation or commercial exploitation of biological materials (such as medicinal plant extracts) that are native to a particular country or territory without providing fair financial compensation to the people or government of that country or territory"[10].

RESEARCH OBJECTIVE

1. To examine the concept and scope of Traditional Knowledge
2. To analyze the phenomenon of biopiracy
3. To analyse the Patent regime and propose policy reforms.

FUNDAMENTAL ELEMENTS OF TRADITIONAL KNOWLEDGE

In its most basic form, Traditional Knowledge is comprised of information that has been accumulated over the course of centuries as a result of customs. As an additional point of interest, it frequently takes into consideration the expansion or adaption of production from one point to another, depending on the ever-changing necessities of society. These innovations act as an extension to the existing consciousness as well as a shape element of the information that is transferred to the following age group. As a result, they define the essence of customary knowledge for the subsequent age group jointly. In light of the information presented above, it is possible to deduce that the fundamental elements of Traditional Knowledge include the following[11]:

i. the development of a new method or procedure for the purpose of satisfying a requirement.

[10] "Biopiracy" <https://www.merriam-webster.com/dictionary/biopiracy>

[11]WIPO Magazine, "Protecting India's Traditional Knowledge." <https://www.wipo.int/en/web/wipo-magazine/articles/protecting-indias-traditional-knowledge-37721>

ii. The practice of passing down the procedure or method from one generation to the next through the use of customs.
iii. By virtue of the ideals that it upholds, it is restricted to the group or community that is a part of a certain group or community.

The 'neem' example, in which the neem tree was thought to have a wide variety of applications in India, is an excellent instance of what constitutes Traditional Knowledge. This substance was described in Indian literature that were written more than two thousand years ago. It has been utilised for centuries in a variety of fields, including agriculture, human and veterinary medicine, cosmetics, toiletries, and as a repellant for insects and other pests.

THE SIGNIFICANCE OF INTELLECTUAL PROPERTY RIGHTS IN SAFEGUARDING TRADITIONAL KNOWLEDGE

Intellectual Property Rights aim to safeguard research and development investments and foster creativity by incentivising innovators. However, the interpretation and formulation of Intellectual Property Rightsemphasize altering the willingness of others to engage. Private corporations use Traditional Knowledge and derive profit from our natural resources through Intellectual Property Rights. Rural farmers and indigenous communities are deprived of their natural resources and associated skills due to biopiracy.[12] Due to the exorbitant costs set by bio-pirating enterprises, Traditional Knowledge-based products have become prohibitively expensive for them. Bio-piracy engenders multiple conflicts over the protection of indigenous rights, the sustainability of local biodiversity, global climate stability, and the capacity of nations to ensure food security.

The TRIPS agreement of the World Trade Organisation (WTO) emphasizes patent rights, yet overlooks the rights of Traditional Knowledge holders. If IPRs can be interpreted and enhanced authentically and justifiably, they may serve as a mechanism for the protection of Traditional

[12]Science Business, "India Leads the Way in Protecting Traditional Knowledge." <https://sciencebusiness.net/news/72773/India-leads-the-way-in-protecting-traditional-knowledge>

Knowledge. Certain fundamental aspects remain applicable in both a constructive security and defensive capacity to safeguard conventional information, notwithstanding the numerous deficiencies in the new IPR framework.[13] To safeguard the rights of indigenous peoples, their biological resources, and associated knowledge, national Intellectual Property Rights legislation and international conventions must be advanced.

THE PATENT ACT OF 1970

The patent Act is applicable for the protection of scientifically significant technological solutions that are novel and necessitate a phase of creativity. Patents may be revoked for genetic resources and Traditional Knowledge pertaining to items that are inaccessible, synthesised, or derived from genetic structures, microorganisms, and creatures residing in the environment. Patent protection is conferred for processes related to the exercise and utilisation of those assets, as well as for procedures recognised by indigenous regions that fulfil the same criteria.

Conventional knowledge will not be protected as Intellectual Property Rights are structured in contemporary commerce. Traditional Knowledge cannot be trademarked due to its inherent lack of originality and innovative qualities. Communities jointly keep traditional expertise more effectively than individual owners. This Traditional Knowledge is information transmitted orally among families or the community, lacking formal documentation, over generations. This has resulted in the devaluation and marginalisation of traditional expertise. Indeed, one of the challenges in these communities is that the information would have been forfeited to the community through expropriation if it were to be documented.

Section 3 (p)[14] "***An invention which in effect, is Traditional Knowledge or which is an aggregation or duplication of known properties of traditionally known component or components***"

[13] "Tulasi GK, Rao BS. A detailed study of patent system for protection of inventions. Indian J Pharm Sci. (2008 Sep;70(5):547-54). doi: <10.4103/0250-474X.45390. PMID: 21394248; PMCID: PMC3038276>".
[14] Section 3 (p) of Indian Patent Act 1970

Traditional Knowledge refers to pre-existing knowledge that has been passed down through generations or is commonly known. This knowledge has been in the possession of the public for a significant period of time and has been transmitted from one generation to another. For instance, the utilisation of Turmeric, also known as Haldi, as an antibacterial, specifically for the purpose of wound healing. Another instance involves the utilisation of Neem for pesticidal or insecticidal purposes.

The Traditional Knowledge Digital Library (TKDL) is an innovative endeavour by India aimed at safeguarding traditional medicinal knowledge and preventing its theft at international patent offices. Traditional Knowledge is a significant but precarious resource for indigenous and local people reliant on it for their sustenance. Over 70% of the population in India relies on traditional medicine for their healthcare requirements and the livelihoods of millions.

The Patent examiner can perform an investigation using TKDL, or Traditional Knowledge Digital Library, which is a valuable database for verifying Traditional Knowledge and other relevant resources. This database assists the applicant in determining whether the claimed subject invention falls within the scope of Section 3(p) or not. The Council of Scientific and Industrial Research (CSIR) and the Ministry of Ayurveda, Yoga and Naturopathy, Unani, Siddha, Sowa Rigpa and Homoeopathy (AYUSH) had joined forces to create the Traditional Knowledge Digital Library in 2001, which is a pioneering initiative of India. The goal of this initiative is to prevent the exploitation of Indian Traditional Knowledge and to protect it at Patent Offices around the world.

Consequently, any invention or innovative concept that fits within Sections 3(a) through 3(p) is ineligible for patent protection. Therefore, it is essential for applicants and inventors to verify if their original ideas fall into the aforementioned categories or not. In addition, Indian patent

agents must verify that the inventions for which patent applications are to be filed do not fall within the aforementioned sub-sections of Section 3.[15]

However, due to the territorial nature of patents and the varying laws in each nation for interpreting sub-sections, especially Section 3(p). For example, ideas pertaining to the "method of treatment" are considered acceptable and eligible for patent protection in the United States and Australia, but not in countries such as India, the European Patent Office (EP), Japan, Korea, and others.

In 2002, the Patent Act was amended to include Section 3(p), which criminalized the act of participating in biopiracy. This rule substantially exempts the patentability of biological techniques for the propagation or cultivation of plants and animals. This system ensures that the traditional medical knowledge of India is protected against sudden patent monopolies. India can combat biopiracy by enacting laws that explicitly prohibit patents on indigenous bioresources.

BIOLOGICAL DIVERSITY ACT OF 2002

India, which is a signatory to the Convention on Biological Diversity (CBD), believed that it was acceptable to offer an outcome to that Convention. The Biological Diversity Act of 2002 was subsequently adopted by India in order to promote the preservation of biological diversity[16], the responsible utilisation of its constituents, and the equitable distribution of profits that are a direct outcome of the utilisation of natural resources.

- The fundamental concerns of the right to use natural assets are addressed by the rule under consideration.
- Natural resources are gathered and consumed in this process.
- A division of the profits that are generated via such an entrance means.

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[15] Section 3 of Indian Patent Act 1970: Importance and Interpretation, Effectual Services (2020). <https://www.effectualservices.com/section-3-of-indian-patent-act-importance-and-interpretation>

[16] https://highcourtchd.gov.in/sub_pages/top_menu/about/events_files/apjaspeech.pdf

- Protecting against the theft of biological material.

The National Biodiversity Authority (NBA) is established under section 8 of the Act[17], the State Biodiversity Board (SBB) is established under section 22 of the Act, and Biodiversity Management Committees (BMCs) are established under section 22 of the Act.[18] All of these entities establish themselves at the local community level. Without first getting prior authorisation from the National Biodiversity Authority (NBA), no one may submit an application for any Intellectual Property Rights in India or elsewhere for any discovery that is based on research or knowledge on an Indian natural reserve. In order to establish a framework for property rights, the act attempts to be extremely resolute with regard to the question of access to biological resources that are located outside of India. In addition, the regulation stipulates that the structure of profit will be distributed among the individuals who are accountable for the development, improvement, and utilisation of this technology resulting from the commercial usage of this technology.

GENERAL CONCERNS: SAFEGUARDINGTRADITIONAL KNOWLEDGE

The vulnerabilities of Traditional Knowledge to biopiracy are exacerbated by factors such as devolution of authority, external exploitation, a rapid increase in bioprospecting activities, inadequate legal safeguards, and entrenched systemic inconsistencies. Traditional Knowledge, which is inherently linked to biodiversity and natural resources, often forms an intangible yet integral aspect of these ecosystems. It encapsulates long-standing practices, insights, and innovations developed and preserved by indigenous and local communities over generations. Due to its potential to guide the development of valuable methods, medicines, and technologies, TK holds significant prospects for commercial utilization. Consequently, it is imperative that the original custodians or creators of such knowledge are justly recognized and granted a fair share of the benefits arising from its use, in accordance with the principles of equity and prior informed consent.Certain countries possess comprehensive legislation that safeguards this type

[17]Biological Diversity Act of 2002, section 8.
[18]Biological Diversity Act of 2002, section 22.

of knowledge, while others contend that their existing Intellectual Property Rights framework provides adequate protection.[19] Currently, India lacks a specific sui generis statute to safeguard Traditional Knowledge and folklore; nevertheless, it is in the process of developing such legislation.

Neem: For over a century, a tree renowned in India has been utilised for biopesticides and medicinal purposes. The Neem tree and its therapeutic powers are referenced in ancient Indian Ayurveda literature. The European Patent Office (EPO) revoked patent number 436257 granted to the United States of America and the multinational corporation W.R. Grace for the insecticide derived from Neem tree seeds. "Notwithstanding Neem's historical significance, more than 12 US patents have recently been granted for Neem-based emulsions and solutions."[20]

In 1993, the U.S. Patent and Trademark Office granted patent rights to the University of Mississippi Medical Centre for the use of turmeric in the treatment of wounds. An application for the re-evaluation of the granted patent was submitted, accompanied by over two dozen references, resulting in initial success.

A patent awarded by the USPTO to the American firm Rice Tec for 'Basmati rice grains' generated considerable controversy. Basmati rice, a fragrant type, is predominantly cultivated in India and Pakistan. The issuance of this invention generated numerous intellectual property issues outside those pertaining to patent law, namely regarding trademarks and geographical indications. A request for re-examination was submitted, supported by statements from two scientists and other publications regarding Basmati rice and studies conducted on rice in India, which indicated to the USPTO that Rice Tec's primary claims were not substantiated.[21]

[19] https://www.rkdewan.com/articles/effort-to-preserve-the-indian-traditional-knowledge-challenges-for-a-patent-application/

[20] Ravi V&, "Traditional Knowledge: Definition, Threats & India's Initiatives" (Vajiram& Ravi, January 9, 2025) <https://vajiramandravi.com/quest-upsc-notes/traditional-knowledge/>

[21] "Basmati Rice Patent Issue - R K Dewan - Patent and Trademark Attorney in India" (R K Dewan - Patent and Trademark Attorney in India) <https://www.rkdewan.com/articles/basmati-rice-patent-issue/>

Protecting Traditional Knowledge is highly complex because to its communal characteristics, absence of official documentation, and susceptibility to exploitation. The primary obstacles in safeguarding Traditional Knowledge are as follows[22]:

i. Absence of Legal Acknowledgement: Traditional Knowledge is not acknowledged within the current Intellectual Property Rights system, which was established for individual and temporally limited innovations.
ii. Bio-Piracy: The illicit appropriation of Traditional Knowledge persists, particularly in agriculture and medicine, where knowledge regarding the qualities of plants and their medical applications is patented without appropriate remuneration to the rightful owners of such knowledge.
iii. Cultural Sensitivity: Certain elements of TK, especially those linked to religious or holy knowledge, are not readily amenable to commercialisation or dissemination. Protection must be harmonised with the respect for cultural values in a nuanced challenge.
iv. Enforcement Challenges: Enforcing Intellectual Property Rights concerning Traditional Knowledge is difficult due to its informal transmission among groups and lack of formal documentation.

INITIATED ACTIVITIES

There are a number of international groups, instruments, and projects that are particularly relevant to Traditional Knowledge. These include the Convention as well as other international organization. The following are some examples of them, but the list is not exhaustive:

i. Principle 22 of Agenda 21, which was the primary document that emerged from the Earth Summit that took place in Rio de Janeiro in 1992, acknowledges that indigenous peoples have a significant part to play in environmental management and development due to the fact that they have established their own traditional methods and expertise;

[22] "Traditional Knowledge in AIPR: Protection, Challenges & Legal Approaches" <https://thelegalschool.in/blog/traditional-knowledge-in-ipr>

ii. The International Labor Organization's Convention 169 on Indigenous and Tribal Peoples: This Convention calls for action to protect the rights of indigenous peoples;
iii. The Declaration on the Rights of Indigenous Peoples (UNDRIP);
iv. The United Nations Permanent Forum on Indigenous Issues (UNPFII);
v. The World Intellectual Property Organisation (WIPO);
vi. The United Nations Education, Scientific, and Cultural Organisation (UNESCO);
vii. The European Bank for Reconstruction and Development, the Asian Development Bank, and the African Development Bank.

These are the organisations that have taken action to protect the rights of indigenous population The World Bank and the United Nations Development Programme (UNDP) are two of the financial institutions that have made it their mission to ensure that the development process encourages the participation of indigenous peoples.

SUGGESTIONS

a. It is imperative that national and international regulatory frameworks be designed and implemented inside the intellectual property system in order to guarantee the lawful right to employ hereditary resources and conventional proficiency.
b. India should take a proactive role in advocating for the recognition of Traditional Knowledge at the WTO, WIPO, and CBD forums and push for a legally binding international treaty on the protection of Traditional Knowledge and against biopiracy.
c. While TKDL is a landmark initiative, efforts must be made to expand documentation at the grassroots level in vernacular languages through local institutions, including Panchayats, universities, and NGOs.
d. Indian Patent Office should adopt stricter scrutiny standards for biological resource-related patents and ensure mandatory compliance with disclosure of origin and benefit-sharing provisions under the Biological Diversity Act.

e. Traditional Knowledge holders must be made key stakeholders in decision-making processes. Capacity-building programs, legal awareness campaigns, and participatory models for benefit-sharing should be institutionalized.

CONCLUSIONS

After conducting an analysis of the many facets of Traditional Knowledge, it has been discovered that, on the one hand, Traditional Knowledge is the cultural foundation of any nation; on the other hand, it is also a valuable resource that needs to be utilised in order to bring about economic prosperity. However, in order to achieve socioeconomic harmony, it is essential that the delicate balance that exists between safeguarding the rights of indigenous communities and reaping the benefits that come from the commercialisation of developments involving such Traditional Knowledge not be disrupted. The immense expanding requirements of the people of India and the restricted investment prospects have converted Traditional Knowledge into a dormant gold mine that is just waiting to be harnessed.

The issue of biopiracy represents a serious challenge to the sovereignty of indigenous communities over their cultural and biological heritage. Despite India's rich and diverse repository of Traditional Knowledge, its protection remains inadequate under conventional Intellectual Property Rights (IPR) frameworks, which are rooted in Western notions of innovation and ownership. India's patent regime has evolved significantly over the years, particularly with amendments aligned with TRIPS compliance. However, it still struggles to reconcile the informal, oral, and communal nature of Traditional Knowledge with formal patent requirements such as novelty, inventive step, and industrial applicability.

Case studies such as the neem, turmeric, and basmati patent controversies have highlighted glaring loopholes in both domestic and international legal systems, often resulting in the unauthorized patenting of knowledge that has been in the public domain in India for centuries.This is the case in India, where sufficient measures have been made to protect Traditional Knowledge for the purpose of ensuring its protection. In light of this, commercial

entities should gradually tap into the enormous ocean of Traditional Knowledge in order to satisfy the ever-increasing demands of the people of this country. This should be done without compromising the rights of the indigenous people and with due regard for the cultural legacy of India. Furthermore, in light of the fact that the existing laws provide for the promotion of community rights as well as for an environment that is conducive to the granting of patents, the benefit sharing agreement ought to be deliberately supported in order to preserve the equilibrium between those who possess Traditional Knowledge and those who discover it.

BIBLIOGRAPHY

Statutes

- The Patent Act, 1970
- Biological Diversity Act of 2002
- Geographical Indications Act
- WIPO

Websites

1. **United Nations Department of Economic and Social Affairs (UN DESA)**, "Backgrounder - Traditional Knowledge." Available at: https://social.desa.un.org/sites/default/files/migrated/19/2019/04/Traditional-Knowledge-backgrounder-FINAL.pdf
2. **Food and Agriculture Organization (FAO)**, "Issues Relating to Traditional Knowledge Systems and Intellectual Property Rights (IPRs)." Available at: https://www.fao.org/4/XII/0911-A3.htm
3. **World Intellectual Property Organization (WIPO)**, "Traditional Knowledge." Available at: https://www.wipo.int/en/web/traditional-knowledge/tk/index
4. **WIPO Magazine**, "Protecting India's Traditional Knowledge." Available at: https://www.wipo.int/en/web/wipo-magazine/articles/protecting-indias-traditional-knowledge-37721
5. **Science Business**, "India Leads the Way in Protecting Traditional Knowledge." Available at: https://sciencebusiness.net/news/72773/India-leads-the-way-in-protecting-traditional-knowledge
6. **Punjab and Haryana High Court**, Speech by Dr. APJ Abdul Kalam, Available at: https://highcourtchd.gov.in/sub_pages/top_menu/about/events_files/apjaspeech.pdf
7. **R K Dewan & Co.**, "Efforts to Preserve Indian Traditional Knowledge: Challenges for a Patent Application." Available at: https://www.rkdewan.com/articles/effort-to-preserve-the-indian-traditional-knowledge-challenges-for-a-patent-application/

8. **Vajiram& Ravi**, Ravi V, "Traditional Knowledge: Definition, Threats & India's Initiatives." Available at: https://vajiramandravi.com/quest-upsc-notes/traditional-knowledge/
9. **R K Dewan & Co.**, "Basmati Rice Patent Issue." Available at: https://www.rkdewan.com/articles/basmati-rice-patent-issue/
10. **The Legal School**, "Traditional Knowledge in IPR: Protection, Challenges & Legal Approaches." Available at: https://thelegalschool.in/blog/traditional-knowledge-in-ipr
11. **Traditional Knowledge Digital Library (TKDL) Official Portal** https://www.tkdl.res.in/tkdl/langdefault/common/Abouttkdl.asp?GL=Eng
12. **PIB Note – TKDL** https://static.pib.gov.in/WriteReadData/specificdocs/documents/2022/sep/doc20229199001.pdf

Articles

1. **Tulasi GK, Rao BS**, "A detailed study of patent system for protection of inventions." *Indian J Pharm Sci.* 2008 Sep;70(5):547-54. doi: 10.4103/0250-474X.45390. PMID: 21394248; PMCID: PMC3038276.
2. *Section 3 of Indian Patent Act 1970: Importance and Interpretation*, Effectual Services (2020). https://www.effectualservices.com/section-3-of-indian-patent-act-importance-and-interpretation
3. *A Rising Need for a Modern Understanding of Traditional Knowledge Under Indian Patent Law*, Lakshmikumaran& Sridharan. https://www.lakshmisri.com/insights/articles/a-rising-need-for-a-modern-understanding-of-traditional-knowledge-under-indian-patent-law/