

IPR IN TRADITIONAL KNOWLEDGE PROTECTION- NEED, LAWS AND GLOBAL PERSPECTIVE

ABSTRACT

Traditional knowledge (TK) is an invaluable asset passed down through generations, contributing to the cultural, social, and economic development of indigenous and local communities worldwide. However, the misappropriation and exploitation of TK, known as biopiracy, pose significant threats to these communities and their heritage. This paper explores the role of intellectual property rights (IPRs) in protecting TK, both at the national and international levels, with a focus on India. Highlighting the importance of TK, the paper discusses the implications of biopiracy and the challenges faced by indigenous peoples in safeguarding their knowledge from exploitation. It examines various cases of biopiracy, such as the Neem, Turmeric, and Basmati rice cases, which underscore the urgent need for robust legal mechanisms to protect TK.

The study aims to critically analyze existing national and international legislation related to TK protection, identifying weaknesses and gaps in global regulations. Through a comprehensive examination of biopiracy incidents and disputes, the paper underscores the necessity of proactive measures to safeguard TK and the rights of indigenous communities. Ultimately, the research seeks to raise awareness about the significance of TK and advocate for the implementation of effective legal frameworks to prevent biopiracy and ensure equitable benefit-sharing for indigenous and local communities.

Keywords- *Traditional Knowledge, IPR, biopiracy, indigenous, International, national.*

INTRODUCTION

"Indigenous peoples are entitled to the recognition of the full owners/tip, control and protection of their cultural and intellectual property. They have the right to special measures to control, develop and protect their sciences, technologies and cultural manifestations, including human and other genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs and visual and performing art"¹

The recognition of Intellectual Property Rights in Traditional Knowledge acts as a means for the development of the indigenous and local communities. Traditional Knowledge is a natural capital which refers to tangible or intangible knowledge, innovations and practices of indigenous and local communities curated and developed through age old experiments with the environment. These are basically the genetic resources forming a part of its cultural or spiritual identity of world's biodiversity carried on by one generation to other. Therefore, protection of traditional knowledge is necessary for various reasons like in sense of IPR, to exclude third party from unauthorized access or in other sense, as to protect the age long information from vanishing and to have detrimental effect on the lives and cultures of the societies. Though, India has no substantive actor law to protect traditional knowledge but other IP Acts contains provision related to it. In this paper, role of IPRs in the protection of traditional knowledge shall be dealt along with the international regime for its protection.

The significance of Intellectual Property Rights in Traditional Knowledge acts as a source for the development of native and regional societies. Traditional knowledge is a genuine source that relates to tactile or impalpable knowledge, transformation, and habits and processes of indigenous and native people's have collocated and developed through generations of experiments with the Eco-system around their habitat. They are normally the hereditary resources forging a section of the cultural or intangible identity of the earth's biodiversity taken on from generation to generation. Thus, the protection of this traditional knowledge is imperative for many reasons in the terms of IPR, to separate third parties from unaccredited gain from such use or in any form, as to secure the age-old knowledge from depreciating or to have any negative effect on the lives and cultures of the communities.

¹ Part VI and Article 29 of United Nations Draft Declaration on the Rights of Indigenous Peoples

In this paper, the stand of IPRs in the protection of traditional knowledge shall be given as well as the international stands of their protection.

The world has been witness to a significant change in a few short years. Knowledge is considered to be of important advantage for the development and boom in any country which makes traditional knowledge to be a grave issue. The world population consists of about 6% of native and indigenized people. The traditional people's, traditional knowledge has constantly been misused and highly misunderstood by a number of researchers and MNCs. Generally, they are the real owners of the knowledge that they created, discovered, etc. They also are not given the profit share which comes out of their knowledge by these MNCs, etc. The laws and measures for the protection of traditional knowledge (TK) which is often sidelined are leading to greater risks such as the mechanism of bio-piracy. Bio-piracy is not a stranger to any country having a massive amount of traditional knowledge (TK). The records of bio-piracy are evident and it has affected the natives of a country. India is one such country that has a huge amount of traditional knowledge (TK) and hence, is constantly at fight bio-piracy such as many cases like the Neem case, basmati case, and the infamous turmeric case.

This research endeavors to shed light on the reasons of bio-piracy, the significance of technology, and the global and national laws, declarations, international treaties, conventions, etc. in order to highlight the problem of bio-piracy. for the TK's security and defense. Gene-rich emerging nations confront numerous challenges; one such instance is the pursuit of patents covering antiquated customs, procedures, etc.

BACKGROUND

The totality of perceptions gained from theoretical databases or real-world experience that contribute to a comprehensive grasp of the problem at hand is referred to as knowledge. Knowledge has traditionally been regarded as humanity's most prized asset. Since the beginning of human evolution, people have valued knowledge above everything else. In the past, knowledge was only a topic of renown and fame that was dispersed without any benefit. Nonetheless, as civilizations evolved, a number of changes occurred that acknowledged knowledge as a property, with numerous rights being associated with the possessor of that knowledge. And the term 'traditional' means belonging to or of the nature of tradition; handed down by or derived from tradition; loosely customary, conventional.² "The term traditional knowledge has been defined by many but till now an exact definition has not been made. It is tagged in various manners, traditional knowledge (TK), indigenous knowledge (IK), and local knowledge that are usually referred the old traditions and practices of certain indigenous, local and religious communities"³ There is no universal definition of traditional knowledge however, scholars typically define it either as knowledge developed by indigenous communities or tradition based intellectual activity.⁴ Tracing the history of knowledge and its protection, the importance of technology and protection of certain kind of knowledge now called as intellectual knowledge was highlighted. Knowledge is evolved through lots of trials and has been passed from generation to generation constantly evolving to meet the changing needs of the people of a specific territory.⁵

Traditional Knowledge is the knowledge of people in a given society, which is developed over time and has ancient roots, and is transmitted orally from one generation to another in the forms of stories, songs, and proverbs, beliefs which are mainly related to agriculture, health, traditional festivals and other cultural expressions. It is held collectively by a community and not limited by any specific field of technology. Traditional knowledge therefore encompasses everything from plant cultivation to medicinal remedies to food recipes.⁶ It is the knowledge,

² The new shorter Oxford English Dictionary, vol. 2, Edn. 1993, page 3359.

³ Lukose, Lisa P, Protection of traditional knowledge as intellectual property: With special reference to India, Traditional Knowledge, available at http://shodhganga.inflibnet.ac.in/bitstream/10603/22605/9/09_chapter2.pdf [Last accessed on 29th January, 2024]

⁴ Javier Garcia, Fighting Biopiracy: The Legislative Protection of Traditional Knowledge, (Berkeley La Raza Law Journal, Vol.18, 2007).

⁵ Erin Donovan, Beans, Beans, the Patented Fruit: The Growing International Conflict over the Ownership of Life, 25 (LoY. L.A. INT'L & COMP. L. REV. 117, 126-27 2002)

⁶ Stephen Hansen & Justin Vanfleet, Traditional Knowledge and Intellectual Property: A Handbook on Issues and options for Traditional Knowledge Holders in Protecting their Intellectual Property and Maintaining Biological Diversity, 3 (2003); Gina Marie Mcandrews, Utilization Of Medicinal Plant Species In The Zapotec Community Of Yatzachi El Bajo, Oaxaca, Mexico (1995), <https://community->

innovations and practices of indigenous and local communities around the world. This can be understood as tradition based literature, artistic or scientific works, inventions, marks, names or symbols which are carried forward due to the rich values and culture embedded in it. “Knowledge about characteristics of plants having healing properties and technology of its use gives medicinal plants their social and economic value. This use of technology has been acquired through thousands of years of experience, trial and error and generation to generation refinement. As a result of this, age old communities have developed their knowledge of the plant, animal and mineral resources to a grown up and scientifically sound technology, which reflects in old traditions of healing science like Ayurveda and Siddha. In addition to this, ethnic communities i.e. tribal, island and local have developed their own knowledge base about the flora, fauna and mineral wealth of their region”⁷ The term “traditional knowledge” refers to the entirety of all practices and knowledge—implicit or explicit—that are applied to the socioeconomic and ecological aspects of life management.

It is defined as “*Traditional knowledge refers to the knowledge, innovations and practices of indigenous and local communities around the world. Developed from experience gained over the centuries and adapted to the local culture and environment, traditional knowledge is transmitted orally from generation to generation. It tends to be collectively owned and takes the form of stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local language, and agricultural practices, including the development of plant species and animal breeds. Traditional knowledge is mainly of a practical nature, particularly in such fields as agriculture, fisheries, health, horticulture, and forestry.*”⁸

“*Traditional Knowledge refers to "tradition- based literary, artistic, or scientific works; performances; inventions; scientific discoveries; designs; marks, names and symbols; undisclosed information and other tradition- based innovations and creations resulting from intellectual activity in the industrial scientific, literary or artistic fields. "Tradition-based" refers to knowledge systems, creations, innovations and cultural expressions which: have generally been transmitted from generation to generation; are generally regarded as pertaining to a particular people or its territory; and, are constantly evolving in response to a changing environment. Categories of traditional knowledge could include: agricultural knowledge; scientific knowledge; technical knowledge; ecological knowledge; medicinal knowledge, including related medicines and remedies; biodiversity-related knowledge; "expressions of folklore" in the form of music, dance, song, handicrafts, designs, stories and artwork; elements of languages, such as names, geographical indications and symbols; and, movable cultural properties. Excluded from this description of TK would be items not resulting from intellectual activity in the industrial, scientific, literary or artistic fields, such as human remains, languages in general, and other similar elements of "heritage" in the broad sense.*”⁹

There are many definitions of TK but the main characteristics are cultural values and customs that are being passed on from generations and to maintain a balance with the ecosystems.¹⁰

Nature of TK

Traditional Knowledge (TK) is the totality of all knowledge and practices, whether explicit or implicit, used in the management of socio-economic and ecological facets of life. This knowledge is established on past experiences and observations. Generally it is collective in nature and is considered as the property of the whole community. But sometimes it may not be so. Any TK may also be the property of any one individual. The creation of TK may be the work of one individual or the joint efforts of a group of individuals. So, an individual or a family or a local or an indigenous- community or a tribe may all own TK. But most of the TKs involve collective ownership by a group of people. It includes the knowledge of 'indigenous peoples' or 'tribal people' but it is not

wealth.org/sites/clone.community-wealth.org/files/downloads/book-hansen-vanFleet.pdf [Last accessed on 24th March, 2024]

⁷ 4 Pharmaceutical Biopiracy and Protection of Traditional Knowledge, available at <https://www.omicsonline.org/open-access/pharmaceuticals-biopiracy-and-protection-of-traditionalknowledge-.pdf> [Last accessed on 24th March, 2024]

⁸ Article 8(j) CBD available at <https://www.cbd.int/undb/media/factsheets/undb-factsheet-tk-en.pdf> [Last accessed on 16th March, 24]

⁹ WIPO, Intergovernmental Committee on Intellectual Prop available at https://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_3/wipo_grtkf_ic_3_9.pdf [Last accessed 25th February, 2024]

¹⁰ Definitions of Traditional Knowledge, available at https://www.nafaforestry.org/forestry.org/forest_home/documents/TKdefs-FH-19dec06.pdf [Last accessed 25th February, 2024,]

limited to these specific categories.¹¹ TK is transmitted from one generation to other. It is originated and created by traditional people and it would not be isolated from traditional people. It is a "..... body of knowledge built by a group of people through generations living in close contact with nature. It includes a system of classification, a set of empirical observations about the local environment, and a system of self- management that governs resource use".¹² The lives of TK holders and communities are improved by TK. It helps to stop biopiracy and boosts national economy. For the indigenous peoples, traditional wisdom has become an extremely valued source of income. The governments of many countries now use it as a source of foreign exchange. However, it is an ironic twist of fate that those who possess this traditional wisdom do not receive the appropriate recognition or financial support.

Characteristics of TK

- Local knowledge: - It's knowledge from the area. Since it is produced and developed in a specific location, locality has evolved into one of the characteristics of traditional knowledge;
- Oral transmission: - Traditional knowledge is typically passed down verbally from generation to generation and from person to person. However, sometimes it might be in writing.
- Origin in practical experience: - Trial and error methods along with real-world experimentation and application are the sources of traditional knowledge. Therefore, traditional knowledge originated from practical experiments conducted by traditional people.
- Emphasis on the empirical rather than theoretical: - Traditional knowledge holders prioritize empirical knowledge above theoretical understanding. Practical experimentation gradually modifies and reformulates this knowledge. Thus, the holders used to prioritize experimentation over theory.
- Repetitiveness: - People employ traditional knowledge in the same way, generation after generation.
- Widely shared knowledge: - This information is being widely shared among people as time goes on. It disseminates from one location to another, becoming widely accepted knowledge in the process.
- Fragmentary distribution Traditional knowledge is sometimes only partially disseminated during its transmission. People may exchange knowledge in bits and pieces.
- Collective effort: - Individuals or groups may have contributed to the creation of traditional knowledge. However, if information is produced via individual effort and transferred to the community, it becomes common knowledge owing to social, economic, and political requirements. Therefore, traditional knowledge is typically produced, originated, and retained by the community; in other words, it is the outcome of group labor.
- Vital for the socio-economic and spiritual existence of a community: - Traditional knowledge is typically derived from local communities. The community's members rely heavily on this information. Traditional knowledge is essential to the community's socioeconomic and spiritual well-being.
- TK is changeable, and may evolve because of the changes of environment: - The word "traditional" refers to the approach used in the conventional manner to create this information. TK is the result of human interaction with the environment. It is never static, then. It is constantly dynamic and adapts to changes in its surroundings.
- The innovator or creator is often unidentifiable: - Most of the time, TK is acquired by individuals without a written record. As a result, the inventors frequently lose their identity. However, thanks to advancements in technology, most TK developed in the present day can be identified. However, it is typically undocumented, making it impossible to identify the inventor.

¹¹ Philippe Cullet, *Intellectual property protection and sustainable Development*, edn 2004. Lexis Nexis, Butterworth's, p-288-289.

¹² Johnson, M. (1992), "Research on traditional environmental knowledge: Its development and its role", in *lore: Capturing traditional Environmental knowledge*", edited by Martha Johnson, Oene cultural Institute and International Development Research Centre (IDRC), Ottawa, ISBN-o-88936- 644-6at PP- 3-4. <http://www.mtnforum.org/oldocs/1418.pdf> (Accessed on 10-3-2024).

NEED FOR PROTECTION OF TRADITIONAL KNOWLEDGE

Knowledge is wealth in the hands of an individual. It is a wide and general concept that is subject to commercial and public interest. Roots of knowledge can be found in strings of wisdom; “developed over generations towards a homogeneous existence of humanity with key elements such as natural resources, and environment holistic traditional scientific utilization of the lands playing an integral role in the existence and sustenance of this knowledge base.”¹³

In the modern times, the traditional knowledge has been relegated behind forms of knowledge from the developed world, including modern science. With the increase in the use of traditional knowledge over the years, its importance and awareness have also escalated at both global and national level as it has become a weapon of cultural and political identity of the most indigenous communities. It is a vital player in the day to day lives of people as it is essential to the food security and health of millions of people in the developing world, especially India. Traditional Knowledge contributes to modern medicines and developmental strategies in several ways by identifying cost effective and sustainable mechanisms for poverty alleviation at local level, by finding out innovative measures to deal with the complexities and manage sustainable development. Such increasing awareness of the economic value of the bio diversity has resulted in exploitation of traditional knowledge through means such as bio piracy as happened in the case of Neem, Turmeric and Basmati Rice in the later 90s¹⁴.

The traditional knowledge holders face various difficulties in protecting their traditional knowledge to such extent that even the very existence of the ‘knowledge’ is at stake due to threat on survival of such communities due to social pressures, migration, encroachment of modern lifestyles and disruption of traditional ways of life. Such practices lead to disability of the knowledge holders to maintain and pass knowledge from generation after generation. It is important to protect the indigenous groups from loss suffered due to unauthorized and commercial misuse of traditional knowledge and help them to preserve such ancient practices. Their knowledge should be respected and recognized as a part of intellectual property rights and the holders of such information should be given a right to participate as peoples and actors in their own development. The need to protect the traditional knowledge is being realized as the associated practices with such knowledge are having an essential role to play in environment management and the promotion of sustainable development. For an instance, according to the Reports by WHO¹⁵ large sections of the population in developing countries still rely on traditional practitioners and herbal medicines for their primary care. In Africa up to 90% and in India 70% of the population depend on traditional medicine to help meet their health care needs. In China, traditional medicine accounts for around 40% of all health care delivered and more than 90% of general hospitals in China have units for traditional medicine.¹⁶

Therefore, it is imperative that the wisdom of traditional communities everywhere be preserved and protected. Their expertise ought to be valued and acknowledged. According to their own vision and tradition, indigenous peoples have the right to take an active role in their own development as both peoples and actors. Their own customary methods of decision-making must be used to get their free and informed agreement, free from any kind of coercion. They cannot be forced to participate in state-sponsored development. It is necessary to acknowledge, uphold, and protect their rights as peoples to their lands, territories, and natural resources. The necessity to

¹³ Pranjal Puranik, “TK Rights and Intellectual Property Rights: The Tale of Two Rights”, R.K.Dewan & Co. (25 September 2007) <https://www.rkdewan.com/articles-traditional-knowledge-ip-rights.jsp> (Last Accessed on 31st March, 2024)

¹⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3038276/>

¹⁵ World Health Organization (WHO). National Policy on Traditional Medicine and Regulation of Herbal Medicines. Geneva: 2005. Report of WHO global survey.

¹⁶ Wachtel-Galor S, Benzie IFF. Herbal Medicine: An Introduction to Its History, Usage, Regulation, Current Trends, and Research Needs. In: Benzie IFF, Wachtel-Galor S, editors. Herbal Medicine: Biomolecular and Clinical Aspects. 2nd edition. Boca Raton (FL): CRC Press/Taylor & Francis; 2011. Chapter 1. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK92773/> (Last Accessed on 01st April, 2024)

safeguard traditional knowledge (TK) is becoming more and more apparent as TK and related practices are acknowledged as playing a crucial part in environmental management and the needs¹⁷

India is one of the mega biodiversity countries of the world. Indian biodiversity is approximately 12.53% of the world biodiversity. In India, the medicinal plant related trade is estimated to be nearly US one billion dollar per year. Thus, India's biodiversity offers enormous commercial potential. However, this potentiality is being threatened by "bio piracy." It lessens genetic diversity, jeopardizes the traditional people's livelihoods and health, and lowers India's foreign exchange revenues. It needs to be observed with great concern that there is a rising number of patent applications based on biological materials or Indian Traditional Knowledge. As a result, the issue of TK and TCE legal protection has grown in significance. Nonetheless, there is no particular law preserving traditional knowledge and traditional cultural expressions in India. Therefore, the following laws apply: the Geographical Indications of Goods (Registration and Protection) Act of 1999, the Plant Variety Protection and Farmers Rights Act of 2001, the Biological Diversity Act of 2002, and the Patent Act of 1970.

PROTECTION OF TRDAITIONAL KNOWLEDGE

Since the Traditional Knowledge reflect the diverse cultural identity of Traditional and Indigenous people of the world, it is imperative to protect the interests of the holders particularly in developing and under-developed nations. The protections of knowledge, innovations and practices of traditional communities have been receiving greater attention by the world communities as they have realized the importance of the same. Noting some of the importance-

- Traditional knowledge is recognized to play a dominant role in the preservation and sustainable use of biodiversity. Age-old practices and the reasoning behind such practices are of immense importance as they are formulated in a sustainable way and is time-tested.
- Activities and products based on the advent of traditional knowledge acts as source of income, food and healthcare for the local groups of the developing and underdeveloped nations. Also the access to the traditional knowledge of such groups can provide great benefit to the companies and scientific research centers. But this often leads to misappropriation and piracy of the traditional knowledge by the multi-national corporations and the unauthorized users leading to the exploitation of the knowledge holders.
- Commercialization of Traditional Knowledge based products may contribute to the long term socio-economic viability of indigenous and local communities which may improve their social, economic and political condition.

The primary concerns for such protection should be the acknowledgment of the rights of the original holders of traditional knowledge and the unlawful acquisition of rights over traditional knowledge by third parties.

Approaches to protection

The legitimacy of Traditional Knowledge protection can usefully be put into three types of categories¹⁸: The Preservation Approach, The Human Rights Approach and the IP Approach.

1. The preservation approach

The preservation approach uses biodiversity preservation as a lens through which to frame the protection of traditional knowledge. More than any other strategy, this one has been successful in spurring both national and international action on the safeguarding of traditional knowledge. Concerns over the loss of biological diversity in the world led to the adoption of the CBD. Following the CBD, several developing nations passed legislation controlling cross-border access to genetic resources and related traditional knowledge. But generally, the effect of these provisions does not extend beyond national borders. Moreover, where access regimes require the permission of multiple and hard to identify stakeholders, they may unintentionally lead to an 'anticommonsc'.¹⁹There is a The CBD's framing of traditional

¹⁷ Y. Daya and N. Vink, "Protecting traditional ethno-botanical knowledge in South Africa through the Intellectual Property Regime", published in "Agrekon", Vol. 45, No.- 3, September, 2006. <http://www.agreconsearch.umn.edu/bitstream/123456789/3470/1/45030319.Pdf>

¹⁸ Visvanathan, Shiv& Parmar, Chandrika. (2002). A Biotechnology Story: Notes from India. Economic and Political Weekly, 37(27), available at <http://www.jstor.org/stable/4412325/>

¹⁹ Helfer, Laurence R. (2004). Regime Shifting: The TRIPS Agreement and New Dynamics of International Intellectual Property Lawmaking. Yale Journal of International law, 29

knowledge and biological resources through the prism of state sovereignty and its transfer of ownership to the state, which may have very different priorities than indigenous groups, is a major source of concern among developed nations and multinational corporations. Given the intimate relationship between genetic resources and traditional knowledge, governments effectively control traditional knowledge because the CBD recognizes their sovereign rights over the genetic resources located within their borders. If that is the case, that presents a concern because national governments have been implicated in some of the worst cases of marginalization of indigenous groups. Additionally, it begs the question of who, exactly, benefits from the CBD's preservation efforts: ethnic and indigenous communities

2. The human rights approach

According to Yu (2007), the Human Rights approach to traditional knowledge emphasizes the importance of "human rights" commitments over other agreements and economic policies. However, when it comes to applying intellectual property laws to safeguard traditional knowledge, it is unclear exactly what this "primacy" means. The link between intellectual property law and international human rights legislation is not well understood and ambiguous. A number of worries have been raised by the growing awareness of the connection between intellectual property and human rights discourse, laws, and institutions. For starters, the two communities seem to speak 'very different languages': while intellectual property commentators tend to focus on the economic trade-offs between incentives and access, human rights commentators 'engage in a discourse of absolutes', emphasizing 'categorical rights and responsibilities'.²⁰ Another concern is that absence of a clearer understanding of human rights law's engagement with intellectual property issues. Actors on both sides of the intellectual property divide will simply invoke human rights rhetoric to bolster arguments for strengthening or weakening IP standards in treaties and national laws.²¹

3. The IP approach

If the Preservation Approach prioritizes biodiversity preservation, and the Human Rights Approach prioritizes human rights concerns, the IP Approach prioritizes the conventional purposes of intellectual property law. By and large, this approach has posed a seeming dead end to proponents of traditional knowledge protection because of its emphasis on incentives to create, the limited application of moral rights and labour desert principles, and increased concern for the public domain.²²

LEGAL FRAMEWORK FOR PROTECTION- INTERNATIONAL LEVEL

Traditional Knowledge (TK) was once disregarded as outdated and primitive, associated with uncivilized and illiterate populations. However, in today's globalized world, TK is gaining recognition for its evolution through investigation, application, modification, and innovation by indigenous communities.²³ Despite this, traditional communities often face cultural denigration due to lack of awareness about the value of their knowledge. Over the past decade, TK has garnered increasing attention on the international stage. The main international debate revolves around the best approach to protect TK, whether through established Intellectual Property Rights (IPRs) systems or alternative sui generis systems.²⁴ Advocates argue that TK, being knowledge, warrants protection under intellectual property principles, emphasizing individuals' moral right to control their creations. Various methods have been proposed for TK protection, including traditional resources rights, discoverer's rights, source material identification, and separation of genetic resource ownership from knowledge ownership.²⁵

²⁰ Ibid

²¹ Yu, Peter, K. (2003). Traditional Knowledge, Intellectual Property and Indigenous Culture: An Introduction. *Cardozo Arts and Entertainment Law Journal*, 11.

²² Hahn, Anja & Von (ed). (2003). *Indigenous Heritage and Intellectual Property: Genetic Resources, Traditional Knowledge, and Folklore*. Kluwer Law International.

²³ The Protection of Traditional Knowledge: Outline of Policy options and Legal elements, available at www.wipo.int (last visited on Apr 01, 2024)

²⁴ Hanns Ullrich, *Traditional Knowledge, Biodiversity, Benefit Sharing and the Patent System* *Romantic v. Economics*, 4(, European University Institute, Badia Fiesolana, Italy, 2005)

²⁵ Srividhya Ragavan, *Protection of Traditional Knowledge*, (*Minnesota Intellectual Property Law Review*, Vol. 2, No. 2, 2001)

Numerous international conventions and agreements address TK, including TRIPS²⁶, CBD, ITPGR²⁷, UNCTAD²⁸, UNESCO, and WIPO. Despite their recognition of TK's importance, there is a lack of specific legislation or clauses outlining comprehensive protection measures for TK. This gap highlights the need for further international collaboration and the development of tailored legal frameworks to safeguard TK and ensure equitable benefit-sharing for traditional communities.

United Nations Commission on Human Rights (1964)

The United Nations Commission on Human Rights (UNCHR) established a working group to draft the Declaration on the Rights of Indigenous Peoples. This Declaration addressed various rights of indigenous communities, including self-determination, culture and language, education, health, housing, employment, land and resources, environment and development, intellectual and cultural property, indigenous law, and treaties with governments. After extensive efforts by the working committee, the draft Declaration was adopted by the General Assembly on September 13, 2007. Initially, many countries opposed it, but over time, they reversed their positions and became members of the declaration.²⁹

Under Article 29 of the Declaration, indigenous peoples are granted full ownership, power, and protection of their cultural and intellectual property. They are also entitled to develop, protect, and control their technologies, cultural manifestations, genetic resources, seeds, medicines, knowledge of fauna and flora properties, oral traditions, literature, designs, and ritual and performing arts.³⁰ However, tensions arise between Intellectual Property (IP) protection and the protection of Traditional Knowledge (TK), particularly concerning knowledge used without prior consent, denying indigenous peoples the compensation they deserve. The Declaration aims to ensure the survival, well-being, and dignity of indigenous people's worldwide, building upon existing human rights standards and fundamental freedoms. It establishes a universal framework of minimum standards for the protection of indigenous rights.³¹

The United Nations Conference on Trade and Development (UNCTAD) 1964

UNCTAD, established in 1964, has been pivotal in addressing trade and development issues, including Intellectual Property (IP) matters. Initially, it played a significant role in IP and development, focusing on technology transfer and competition policy. However, during the adoption of TRIPS, its influence on IP matters waned deliberately sidelined due to concerns over negative impacts on technology advancement arising from existing IP regimes. Despite this, UNCTAD has remained engaged in IP work within broader policy contexts, collaborating with other organizations.³² Notably, it has focused on technology transfer and E-commerce, particularly open-source software. Collaborative efforts with the International Centre for Trade and Sustainable Development (ICTSD) have led to successful projects on IP rights and sustainable development. Preparations for UNCTAD XI have emphasized the need to bolster its role in IP, particularly in analyzing international IP rule-making's development dimension.³³ However, opposition from developed countries, including the United States, persists regarding including IP in UNCTAD's mandate. An expert meeting in November 2000 convened by UNCTAD focused on Systems and National Experience for Protecting Traditional Knowledge (TK), with participation from over 80 countries and various stakeholders. Recommendations from the meeting included raising awareness about TK protection, supporting innovation among indigenous communities, facilitating TK documentation, and encouraging TK-based product commercialization.³⁴

TK, defined as the knowledge, innovations, and practices of indigenous and local communities, was recognized for its value to survival, modern industry, and sustainable development. It contributes to various markets, including pharmaceuticals, cosmetics, agriculture, and personal care. TK has influenced farming systems for

²⁶ The Trade Related aspects of Intellectual Property Rights, 1994

²⁷ The International Treaty on Plant Genetic Resources for Food and Agriculture, 2001

²⁸ The United Nations Conference on Trade and Development, 1964

²⁹ Traditional Knowledge available at www.med.govt.nz/buslt/int-prop/traditionalknowledge/factsheets/factsheets-08.html (last visited on March 23, 2024).

³⁰ Ibid

³¹ United Nations Declaration on the Rights of Indigenous Peoples available at [https:// www.un.org](https://www.un.org)

³² Peter Drahos & John Braithwaite, *The Globalization of Regulation*, 103-107, (Vol 19, 2001)

³³ Protecting and promoting traditional knowledge: Systems, National Experiences and International Dimensions available at https://unctad.org/system/files/official-document/ditcted10_en.pdf (last visited on 23rd March, 2024)

³⁴ UNCTAD Commission on Trade in Goods and Services, available at <http://www.unctad.org/en/special/c1dos5.htm> (last visited on March 30, 2024).

thousands of years, enabling the development of diverse products, though its full monetary value remains challenging to estimate.³⁵

World Intellectual Property Organisation (WIPO)

The World Intellectual Property Organization (WIPO) plays a crucial role in safeguarding traditional knowledge (TK), cultural expressions, and genetic resources globally. Established in 1883, WIPO became a specialized agency of the United Nations in 1974. It currently administers 23 treaties, divided into Intellectual Property Treaties, Global Protection System Treaties, and Classification Treaties. WIPO emphasizes the initiation of IP protection worldwide, modernization of existing legislations, and technical assistance to developing countries. It centralizes administration in Geneva and supervises through various organs, ensuring economic issues of member states.³⁶

To protect TK, WIPO collaborates closely with international agencies and processes, aiming for a comprehensive approach.³⁷ Its International Committee on Intellectual Property and Genetic resources conducts negotiations for effective TK protection through international legal instruments. WIPO aligns its activities with international cooperation for development objectives, promoting domestic creative activity, facilitating foreign technology acquisition, and organizing access to scientific and technological information for the cultural, economic, and social development of developing countries. It has advocated openly for the protection of TK.³⁸

Convention on Bio Diversity

The Convention on Biological Diversity (CBD), enacted in 1992, emphasizes the conservation of biodiversity, sustainable use of its components, and fair benefit sharing from genetic resources. With 176 ratifying countries, it sets national commitments for biodiversity conservation, requiring the development of biodiversity strategies and action plans.³⁹

The CBD's decision-making body, the Conference of the Parties (COPs), reviews progress and adopts measures for implementation. It debates topics like intellectual property rights (IPRs) and the TRIPs Agreement, particularly concerning access to genetic resources and benefit sharing.⁴⁰

Article 8(j) of the CBD acknowledges the importance of traditional knowledge (TK) of indigenous and local communities for biodiversity conservation.⁴¹ However, TK protection is seen as a means to achieve conservation goals, not an end itself. The CBD lacks specific provisions for TK protection through IP or sui generis systems, leaving it subject to domestic legislation.⁴² While the CBD recognizes indigenous people's dependency on biodiversity and their role in conservation, concrete developments in TK protection through IP have not occurred under its auspices. Despite emphasizing the promotion and equitable sharing of benefits from TK, the CBD primarily focuses on biodiversity conservation.⁴³

³⁵ Intellectual Property Rights: Implications for Development, available at <http://www.iprsonline.org/unctad/projectoutputs.htm>. (last visited on March 30, 2024).

³⁶ The Protection of Traditional Knowledge: Draft Articles. WIPO/GRTKF/IC/40/4. Document of the Secretariat for the 40th Session of the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, Geneva, June 17 to 21, 2019.

³⁷ WIPO, available at < <http://www.wipo.int/tk/en/>> (last visited on March 12, 2024)

³⁸ Daniel F. Olejko, "Charming a Snake: Open Source Strategies for Developing Countries Disillusioned with TRIPs", (Vol25, 2007). Available at <http://elibrary.law.psu.edu/psilr/vol25/iss4/9> (last accessed on 30th March, 2024)

³⁹ Understanding The WTO: The Agreements Intellectual property protection and enforcement, available at https://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm7_e.htm (last visited on February, 14, 2024).

⁴⁰ G Chin Khan Muan, "Traditional Knowledge and Convention of Biological Diversity", available at <http://www.aippfoundation.org/R+ID/TK%20&%20cbd.pdf> (Last Accessed 23rd March 2024)

⁴¹ Convention on Biological Diversity 1992, art 8(j)

⁴² Nuno Pires de Carvalho, 'From the Shaman's Hut to the Patent Office: A Road Under Construction' in Charles Mc Manis (ed), Biodiversity and the Law: Intellectual Property, Biotechnology & Traditional Knowledge (Earthscan 2007) 262.

⁴³ Peter-Tobias Stoll and Anja von Hahn, 'Indigenous Peoples, Indigenous Knowledge and Indigenous Resources in International Law' in Silke von Lewinski (ed), Indigenous Heritage and Intellectual Property: Genetic Resources, Traditional Knowledge and Folklore (2nd edn, Wolters Kluwer 2008) 9

The TRIPS Agreement

The TRIPS Agreement, established under the World Trade Organization (WTO), aims to provide comprehensive protection to intellectual property rights (IPRs) owners, rewarding innovation and creativity.⁴⁴ It is considered a significant multilateral instrument in this field, setting high standards for IPR protection worldwide. Originally conceived as part of the Uruguay Round negotiations, the TRIPS Agreement went into effect on January 1st, 1995.⁴⁵ It grants patent owners exclusive rights over their inventions, including the ability to prevent others from producing, using, and marketing, selling, or importing patented goods. However, this system of exclusive rights conflicts with traditional communal practices, where biodiversity, including agricultural and medicinal plants, is freely shared within local communities.⁴⁶

The TRIPS Agreement, catering to the interests of developed nations, imposes broad standards for patent eligibility, covering inventions in all fields of technology. This has led to concerns, particularly in developing countries, about the appropriation of traditional knowledge by third parties through patents and other IPR instruments, a phenomenon known as biopiracy. Despite not explicitly addressing traditional knowledge, the TRIPS Agreement does not prohibit its protection as an intellectual property right. However, it fails to recognize the unique characteristics of traditional knowledge, leading to inadequacies in its protection. This has resulted in instances where indigenous and local communities, the true originators of traditional knowledge, do not benefit appropriately from its use.⁴⁷

In summary, while the TRIPS Agreement sets high standards for IPR protection worldwide, it lacks provisions specifically addressing traditional knowledge. This gap has led to concerns about the exploitation of traditional knowledge by third parties and highlights the need for enhanced protection mechanisms tailored to the unique nature of traditional knowledge.

International Treaty on Plant Genetic Resources for Food and Agriculture (2001)

The International Treaty on Plant Genetic Resources for Food and Agriculture, adopted in November 2001,⁴⁸ aims to protect plant genetic resources and ensure fair benefit sharing from their use. It recognizes the contribution of farmers and communities to conservation efforts and establishes rights for farmers, including participation in decision-making and safeguarding traditional knowledge. The treaty includes provisions related to agricultural traditional knowledge, such as promoting farmers' efforts to conserve plant genetic resources on farms and supporting conservation efforts by indigenous and local communities. It also calls for the protection of traditional knowledge relevant to plant genetic resources for food and agriculture.⁴⁹

In addition to food and agriculture, the importance of local knowledge is recognized in the Convention for the Safeguarding of the Intangible Cultural Heritage. This parallelism highlights the significance of traditional knowledge across different sectors. Benefit sharing under the treaty is facilitated through a multilateral system, incentivizing nations to grant access to genetic resources. This includes sharing financial benefits, technology transfer, capacity building, and information exchange to support research and development partnerships and enhance the protection and sustainable use of plant genetic resources.

United Nations Educational, Scientific and Cultural Organization (UNESCO)

UNESCO helps to preserve traditional knowledge by ensuring that the intangible cultural heritage is protected. The Convention for the Safeguarding of the Intangible Cultural Heritage defined intangible cultural heritage as

⁴⁴ Marcia E. DeGeer, Biopiracy: The Appropriation of Indigenous Peoples' Cultural Knowledge, 180, (9 NEW ENG. J. INT'L & COMP. L. ANN. 179, 180 2003)

⁴⁵ Gervais, "The TRIPS Agreement: Drafting History and Analysis", 2d Ed. 220 (2003)

⁴⁶ Overview: the TRIPS Agreement, https://www.wto.org/english/tratop_e/trips_e/intel2_e.htm (last visited on March 24, 2024)

⁴⁷ Victoria Tauli - Corpaz, Biodiversity, Traditional Knowledge and Rights of Indigenous Peoples, Published by Third World Network, Penang, Malaysia, Page 23, <http://www.twinside.org.sg/title2/IPR!IPRS05.Pdf> (Last visited on March 24, 2024)

⁴⁸ Food and Agriculture Organization, available at <http://www.fao.org/nr/cgrfa> (last visited on February 13, 2024)

⁴⁹ Bioprospecting for blue gold in high seas: Regulatory options for access and benefit-sharing, available at <https://www.duo.uio.no/handle/10852/35087> (last visited on February 15, 2024)

practices, representations, skills, knowledge, and related tools, materials, artifacts, and cultural spaces that are acknowledged by communities, groups, and, in certain situations, by individuals as a part of their cultural legacy. The Convention on the preservation and growth of the variety of Cultural Expressions 2005 was the first legal act to use the term “traditional knowledge” which reads as “the significance of traditional knowledge as a source of intangible and tangible heritage, and particularly knowledge systems of indigenous individuals, and their constructive aid to continual improvement, and the necessity to ensure their proper protection and promotion”.⁵⁰

The convention specifies that states must take the necessary actions to prevent, avert, halt, and suppress acts of inter-national cultural heritage damage. In accordance with the principles of equality, justice, and solidarity, the convention sought, among other things, to guarantee the respect of human dignity as well as the protection of fundamental freedoms and human rights, while giving due consideration to the freedoms of speech and thought, including the freedom of research. The treaty does, however, state that it is intended to safeguard both the rights of the world's indigenous and traditional peoples as well as their many cultural manifestations.⁵¹

World Trade Organisation

Within the framework of the WTO, protection of traditional knowledge is done as stipulated by the Trade-Related Aspects of Intellectual Property Rights Agreement (TRIPS Agreement). Discussions are in progress regarding potential modifications that must be made to the Agreement to prevent inconsistencies with the Convention on Biological Diversity. The need of the TRIPS Agreement to expand patentability to include some types of "biological invention" is met with strong opposition from some developing nations: “The TRIPS Agreement, as it stands, facilitates the granting of patents for products based on genetic resources and associated traditional knowledge, and does not contain sufficient provisions to preserve these resources and relevant understanding from misappropriation and theft. The lack of such provisions in the TRIPS Agreement may lead to arguments in its implementation and the implementation of the Convention on Biological Diversity”⁵².

PROTECTION OF TK IN INDIA

In every aspect, India is a diverse nation. Because of its vast genetic resources and related traditional knowledge, it is classified as one of the "mega diverse" countries under the CBD. The people who live in India have long been accustomed to using the country's rich biological resources as part of their traditions. Global technological breakthroughs have left TK open to challenges like biopiracy. Many pieces of law have been passed with the intention of preserving TK.

The most difficult part of Traditional Knowledge is its protection. Intellectual Property Rights can be seen as the one possible way for the protection of traditional Knowledge. “Most countries use IPR as a legal mechanism to allocate rights over knowledge, which has a significant role in the relationship between indigenous and local communities, their knowledge, and other societies with which they interact”⁵³

Patent Protection

⁵⁰ Asija Sharifullova Gazizova, Protection of Traditional Knowledge: The Work and the Role of International Organisations and Conferences, Vol. 9, No. 8; 2020 (International Journal of Higher Education), 95 (2020), <https://files.eric.ed.gov/fulltext/EJ1281244.pdf> (Last Accessed on 27th March 2024).

⁵¹ UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage.

⁵² “Overview: The Trips Agreement”, WTO, available at https://www.wto.org/english/tratop_e/trips_e/intel2_e.htm#:~:text=The%20TRIPS%20Agreement%20is%20a,wn%20legal%20system%20and%20practice. (Last Accessed 01st April, 2024)

⁵³ David Downes, “Using Intellectual property as a Tool to Protect TK: Recommendations for Next Step” Center for International Environment Law (21 November 1997) <http://www.ciel.org/Publications/UsingIPtoProtectTraditionalKnowledge.pdf> (Last Accessed on 25th March 2024)

The Indian Patent Protection system grants legal monopoly rights to inventors for their creations, typically lasting 20 years from the application filing date.⁵⁴ However, traditional knowledge (TK) faces threats due to its oral transmission and lack of documentation, leading to patents being granted to individuals or entities who may not be the original owners. This results in discontent among the rightful owners, as they often do not receive profits from their knowledge. The Indian Patent System's shortcomings in protecting TK are evident in its treatment of Traditional Medicinal Knowledge (TMK) as prior art. Chief Justice Vijender Jain highlighted concerns about patents being granted for TMK-related inventions that lack novelty and inventive step compared to prior art. This prior art, often unrecognized during patent examination, forms the basis for determining novelty and inventive step.⁵⁵

Challenges persist regarding the protection of TK under intellectual property laws and ensuring continuous protection. Additionally, existing intellectual property systems prioritize individual innovation over collective knowledge creation and ownership. These challenges underscore the need for reforms to better protect and acknowledge traditional knowledge within the intellectual property framework.⁵⁶

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

Geographical indication is the best method for preserving traditional knowledge, which is jointly owned by the local population. “Geographical Indication of Goods Act, 2003 is a “sui generis legislation enacted by union government of India, with the aim to protect the geographical indications of the country”⁵⁷ Geographical Indication indicates that particular goods originate from a country, region or locality and have some special characteristics, qualities or reputations which are attributable to its place of origin.⁵⁸ So, the geographical indications reflect the traditions, culture, human efforts, resources, and environment of particular region, thereby denoting the traditional knowledge or traditional cultural expressions. A community in an exact locality is waged by the Geographical Indications of Products (Regulations and protection) Act 1999. GI security is valid for 10 years, but it can be extended any number of times in order to safeguard GI for an infinite period of time. The methods of manufacturing products are evolving with time in order to give a better quality to the product. GIs can be used to shield traditional therapeutic products as well. Therefore the current act encourages the traditional people to geographical indications reflect the traditions, culture, human efforts, resources, and environment of particular region.

The Protection of Plant Varieties and Farmers Rights Act, 2001

India has implemented legislation to protect intellectual property rights (IPR) in agriculture, emphasizing the principle of common heritage and free exchange to preserve biodiversity and prevent biopiracy. The Protection of Plant Varieties and Farmers' Rights Act, 2001, is a sui generis law drafted to comply with the TRIPS agreement of the WTO.⁵⁹ It safeguards plant varieties based on criteria such as novelty and cultivator's variety, promoting efficient profit-sharing agreements between suppliers and recipients of plant genetic resources.⁶⁰ The Act prohibits the patentability of life forms and methods of agriculture or horticulture, ensuring farmers' rights to use, share, and exchange seeds. It establishes administrative and judicial apex bodies, the Protection of Plant Varieties and Farmers' Rights Authority and the Plant Varieties Protection Appellate Tribunal, respectively. Rights accorded to farmers under the Act include the right to seed, register varieties, reward, recognition, benefit sharing, information,

⁵⁴ Divya Bhargava, “Patent Act: Biopiracy of Traditional Indian Products – An Overview” *Countercurrents* (14 May 2009) <https://www.countercurrents.org/bhargava140709.htm> (Last Accessed 25th March, 2024)

⁵⁵ Ashmita Saha, “Role of Patent Act in Protecting & Preserving TK” *AuthorStream*, <http://www.authorstream.com/Presentation/athor-486578-role-of-patent-act-in-protecting/> (Last Accessed on 26th March 2024)

⁵⁶ Hon'ble Mr. Vijender Jain, Chief Justice of Punjab and Haryana High Court, Chandigarh “Safeguarding the TK in India”, Seminar on Asia Pacific Jurist Association (APJA) (28 April 2008) Delhi, https://highcourthd.gov.in/right_menu/events/events/apjaspeech.pdf (Last Accessed on 12th March 2024)

⁵⁷ Biopiracy: The Vanishing point of Traditional Knowledge, available at <http://lawmantra.co.in/biopiracythe-vanishing-point-of-traditional-knowledge-by-sidhant-tigga-and-sachin-mishra/> (last visited on 12th March, 2024)

⁵⁸ Dr. V.K.Ahuja, *Law Relating to Intellectual Property Rights*, Lexis Nexis Butterworths, First edition 2007, NewDelhi

⁵⁹ IPR & Farmer's Rights in India, available at <https://www.linkedin.com/pulse/ipr-farmers-rights-indiabharat-kumar-singh> (last visited on February 13, 2024)

⁶⁰ K. Venkataraman and S. Swarna Latha, *Intellectual property Rights, Traditional Knowledge and Biodiversity of India*, *Journal of Intellectual Property Rights*, Vol.13, July 2008.

and compensation. The Act aims to establish an effective system for protecting plant varieties and farmers' rights, stimulating investment in research and development for new plant varieties, and facilitating the growth of the seed industry to ensure high-quality seeds for farmers.⁶¹

Wildlife Protection Act

“The Wildlife Protection Act was passed by the Indian Parliament in the year 1972 to protect India’s wildlife.”⁶² The act provides for the constitution of a National Board for Wildlife with the Prime Minister as the Chairperson. The National Board promotes the conservation and development of wildlife and forests by such measures as it thinks fit. The act also provides for the constitution of a State Board for Wildlife to advise the state government in matters connected with the protection of wildlife. The act regulates the hunting of wild animals and protection of specified plants. It also empowers the State Government to notify Sanctuaries, National Parks, and Game Reserves. Contravention of provision of the act is punishable with imprisonment from 1 to 7 years and fine up to Rs. 50 lakh depending on the nature of offence.⁶³

Biological Diversity Act, 2002 & Rules 2004

India ratified the Convention on Biological Diversity (CBD) and enacted the Biological Diversity Act of 2002 to promote the sustainable use of biological diversity and ensure equitable sharing of profits from natural assets.⁶⁴ The Act establishes the National Biodiversity Authority (NBA), State Biodiversity Boards (SBB), and Biodiversity Management Committees (BMCs) at the local level.⁶⁵ It prohibits the application for intellectual property rights without prior consent from the NBA for discoveries based on Indian natural resources. The legislation ensures equitable benefit sharing from the use of biological resources and associated knowledge. It also outlines property rights and profit-sharing structures. The Act complements existing legislation and exempts applicants under the Protection of Plant Varieties and Farmers' Rights Act from NBA approval, with endorsement from the PPVFR Authority⁶⁶.

The Copyrights Act, 1957

Copyright preserves the method of speech and expression and not the ideas themselves. The holder of the copyright is sanctioned to carry out any of the actions laid down under section 14 of the Copyright Act, 1957. Copyright can be used to shield TK holders' imaginative demonstration, especially artists belonging to indigenous and indigenous groups, from illegal reproduction and misuse of such demonstrations. The relationship between the creators / artists / authors and their work are being dealt under moral rights.⁶⁷

Constitution of India

The Indian Constitution includes provisions for the protection of traditional knowledge. Cultural and Educational Rights ensure the preservation of distinct languages, scripts, and cultures. Article 39 aims to establish a Welfare State, emphasizing equitable distribution of material resources for the common good.⁶⁸ Article 21, the right to life and personal liberty, protects traditional knowledge as part of a meaningful life.⁶⁹ Article 47 mandates the State to improve public health and raise the standard of living, encompassing cultural aspects.⁷⁰ Article 51(A) (f) makes it a duty for citizens to value and preserve India's rich heritage, including genetic resources and traditional knowledge.⁷¹

⁶¹ Sudhir Kochhar, System Perspective for IPR protection in Plant Kingdom, 348, (Vol. 9,2004).

⁶² Wild life protection Act, available at <http://www.environmentallawsofindia.com/the-wildlifeprotection-act.html> (last visited on March 23, 2024).

⁶³ Wildlife Protection Act, 1972, available at www.wealthywaste.com (last visited on March 23, 2024)

⁶⁴ Wildlife Protection Act, 1972, available at www.wealthywaste.com (last visited on March 23, 2024)

⁶⁵ Biological Diversity Act, Section 3, 4 & 6; Biological Diversity Rules, Rule 18 (2004)

⁶⁶ Biological Diversity Act, Section 21

⁶⁷ The Copyright Act, Section 57

⁶⁸ INDIA CONST. art 39

⁶⁹ INDIA CONST. art 21

⁷⁰ INDIA CONST. art 47

⁷¹ INDIA CONST. art 51 A (f)

TRADITIONAL KNOWLEDGE DIGITAL LIBRARY (TKDL) (2001)

India boasts a rich heritage of traditional medicines, therapies, and yoga, passed down through generations. Protecting this knowledge has been a longstanding concern for Indian scientists and intellectual property (IP) specialists. Traditional knowledge is predominantly transmitted orally, posing challenges when unauthorized parties seek intellectual property rights (IPRs) over it. Lack of accessible written records complicates the process of challenging patents based on traditional knowledge. India successfully contested several patents, including turmeric for wound healing and neem for anti-fungal properties, but the process was arduous and costly.⁷²

Establishment of TKDL: India established the Traditional Knowledge Digital Library (TKDL) in 2001 to address these challenges. TKDL aims to prevent patent offices worldwide from granting patents based on India's traditional knowledge. It converts ancient texts into structured digital formats and translates them into major international languages. This initiative facilitates early identification of patent applications that lack novelty, saving time and costs associated with legal battles.

Methodology: TKDL employs a Traditional Knowledge Resource Classification (TKRC) system to categorize information, making it accessible to patent examiners. Computer-savvy experts translate and decode ancient texts, ensuring easy comprehension. The database incorporates a web-based search interface for efficient retrieval of traditional knowledge-related information.

Role of TKDL: TKDL serves as a bridge between ancient texts and patent examiners worldwide, minimizing the risk of granting patents for unoriginal inventions. It legitimizes existing traditional knowledge, prevents bio-piracy, and fosters research in traditional healthcare systems. Additionally, TKDL promotes collaboration between Indian and foreign pharmaceutical companies, encouraging the development of a unique healthcare industry.

Critics argue that TKDL may inadvertently facilitate bio-piracy, as private companies could manipulate traditional knowledge to create seemingly novel products. Challenges include incomplete documentation, translation difficulties, and limited protection for knowledge outside the database. Ownership of the database by entities other than indigenous knowledge holders raises concerns about equitable benefit-sharing. While TKDL represents a significant step towards protecting traditional knowledge, it faces challenges in addressing bio-piracy and ensuring equitable benefit-sharing. Despite limitations, TKDL remains a valuable tool in preserving India's ancient scientific heritage and fostering collaboration in healthcare innovation.⁷³

SUI GENERIS PROTECTION OF TK

"Sui generis" protection refers to a unique legal regime designed to safeguard rights that fall outside traditional intellectual property doctrines like patents, trademarks, copyrights, and trade secrets. It encompasses nationally recognized laws aimed at extending legal protection to traditional knowledge (TK) and genetic resources. Under this system, individuals seeking access to a community's biological resources or knowledge for scientific, commercial, or industrial purposes must obtain Prior Informed Consent (PIC) from the indigenous peoples holding the knowledge, unless it is in the public domain. The Secretariat of the Convention on Biological Diversity outlined key features necessary for an effective sui generis system, emphasizing its alignment with human rights principles, environmental concerns, and the promotion of social justice and equity.⁷⁴

Traditional Knowledge associated with biodiversity has sparked debates on intellectual property rights due to challenges in defining and classifying such resources within existing legal frameworks. With the conclusion of international agreements like the Convention on Biological Diversity (CBD) and the Trade-Related Aspects of

⁷² TKDL to Protect Traditional Knowledge of Indian Medicinal System, available at www.pib.ic.in/newsite/ProntRelease.aspx?relid=148831 (last visited on February 14, 2024)

⁷³ Traditional Knowledge: As Intellectual Property, It's Protection and Roles in Sustainable Future, available at <https://www.rhimrj.com/admin/upload/MAY15020510.pdf> (last visited on February 12, 2024).

⁷⁴ Ajay Sharma, The Global Loss of Biodiversity: A Perspective in the Context of Controversy over Intellectual Property Rights. *Balat Intellectual Property Law Journal*, 4

Intellectual Property Rights (TRIPS), the protection of TK gained significant attention and became a contentious issue.⁷⁵

Negotiations under the World Trade Organization (WTO) and the CBD highlighted conflicting views between industrialized and developing countries regarding intellectual property rights related to biodiversity-associated traditional knowledge.⁷⁶ The TRIPS Agreement, enforced in 1994, aimed to standardize intellectual property protection globally but faced criticisms for favoring the interests of developed nations and multinational corporations. Despite promises of facilitating technology transfer and development, the TRIPS Agreement's impact on technology transfer to developing countries has been limited. National legislation and biodiversity prospecting agreements aimed at protecting countries' rights to biological resources have introduced legal complexities, necessitating appropriate legal representation to address intellectual property issues effectively. In summary, sui generis protection offers a unique legal framework to safeguard traditional knowledge and genetic resources, addressing challenges posed by conventional intellectual property doctrines. However, ensuring effective protection requires alignment with human rights principles, environmental concerns, and equitable benefit-sharing, as outlined by international agreements like the CBD.⁷⁷

BIOPIRACY AND ALLIED ISSUES

Biopiracy refers to the exploitation of biological resources and traditional knowledge by entities outside a country without proper consent or fair compensation to the original possessors.⁷⁸ Vandana Shiva and others characterize it as the appropriation of traditional knowledge and biological resources for commercial gain, often without acknowledgment or benefit-sharing with the indigenous communities.⁷⁹

Cases of Biopiracy in India:

1. Neem Case:

The multinational agrochemical company W.R. Grace obtained a European patent for a method involving neem oil in plant fungicide. However, the patent was revoked in 2000 after opposition from various parties, including Dr. Vandana Shiva, citing lack of novelty and inventiveness.⁸⁰

2. Turmeric Case:

Two Indian nationals were granted a U.S. patent for the use of turmeric in wound healing. The patent was challenged by India's Council of Scientific and Industrial Research, and eventually revoked in 1997 due to lack of novelty, supported by evidence of turmeric's extensive historical use in India.⁸¹

3. Basmati Rice Case:

The United States granted a patent to RiceTec Inc. for Basmati rice lines and grains, affecting the economic interests of farmer communities in South Asia, particularly India. After a legal battle, large sections of the patent were struck down in 2001 by the U.S. Patent and Trademark Office, recognizing the traditional knowledge and biodiversity legacy of Indian farmers.

⁷⁵ Traditional Knowledge Digital Library, available at <https://www.google.co.in/amp/s/www.gktoday.in/tkdl/amp> (last visited on February 15, 2024)

⁷⁶ Shiva, Vandana. (2002). *Protect or Plunder?: Understanding Intellectual Property Rights*. Paper: ISBN 1-842-77109-4.

⁷⁷ Dr. E Rama Reddy, *Traditional knowledge, Biodiversity and local wisdom: The Indian Experience*, P7-8, http://www.leralinfont.net/toyota/file/Prof.ReddyTK-final_paper.pdf. (Accessed on March 12, 2024)

⁷⁸ Grant E. Issac and William A. Kerr, *Bioprospecting or Biopiracy*, *The Journal of World Intellectual Property*, (37, Vol. 7, No. 1, January 2004).

⁷⁹ Grant E. Issac and William A. Kerr, *Bioprospecting or Biopiracy*, *The Journal of World Intellectual Property*, (37, Vol. 7, No. 1, January 2004).

⁸⁰ Linda Bullard, "Freeing the Free Tree: A Briefing Paper on the First Legal Opposition to a Biopiracy Patent: The Neem Case," (2008)

⁸¹ Biswajit Dhar and Anuradha, R.V, "Access, Benefit Sharing and Intellectual property Rights," *The Journal of World Intellectual Property*, Vol. 7, No. 5, 603-05 (2004).

These cases exemplify the challenges posed by biopiracy, where traditional knowledge and biological resources are exploited for commercial gain without adequate recognition or benefit-sharing. They underscore the importance of protecting traditional knowledge and biodiversity, as well as the need for robust legal frameworks to prevent biopiracy and ensure equitable access and benefit-sharing.⁸²

CONCLUSIONS AND SUGGESTIONS

The Fallout

- Biopiracy occurs when biological resources and traditional knowledge are exploited without the consent or fair compensation of indigenous communities who have nurtured this knowledge for generations.
- Existing legal frameworks, such as the Biological Diversity Act, 2002, aim to regulate access to indigenous resources, but are often insufficient to combat biopiracy effectively.
- The current intellectual property rights (IPR) regime tends to privatize ownership, whereas traditional knowledge is often collectively held and passed down through generations.⁸³
- There is an urgent need for an umbrella legislation to govern Indigenous Community and their Traditional Knowledge (TK) comprehensively, as well as amendments to patent laws to reflect the rights of indigenous people as the real inventors.
- The implementation of a sui generis legislation specifically designed to protect TK could offer better protection by recognizing its economic, cultural, and monetary value.

Recommendations:

1. Positive legal mechanisms should be formulated to ensure fair contractual obligations between knowledge holders and bioprospectors, considering the negotiating capacity and transaction costs involved.
2. Establishing a Global Biocollecting Society, akin to copyright societies, could facilitate the regulation of access to TK and resolve disputes arising from its usage.
3. Contracts for technology and knowledge transfer should be devised to maximize welfare benefits, ensuring mutual consent, equal bargaining power, and prior informed consent from indigenous communities.
4. Basic research should be conducted to evaluate the market and non-market use of TK, facilitating the calculation of its monetary value.
5. The World Intellectual Property Organization (WIPO) should undertake a comprehensive study to revise multilateral trade agreements in line with the nature and scope of TK.
6. Strengthening IPR laws to prevent the misuse of monopoly grants by biopirates is essential.
7. Empowerment of traditional knowledge holders through capacity building, technology transfer, and legal aid is imperative.
8. NGOs should collaborate with governments to raise awareness and provide legal assistance to TK holders.
9. International and regional cooperation is vital for protecting and promoting TK collectively.
10. Providing special legal and constitutional status to TK holders is crucial for their protection and empowerment.

⁸² Arvind Padmanabhan 'Row over basmati far from over', available at: http://www.rediff.com/money/2001/Aug/25_rice.htm.

⁸³ A Damodaran, Traditional knowledge, Intellectual Property Rights and Biodiversity conservation: Critical Issues and key challenges; Journal of Intellectual Property Rights; vol-13; September 2008, PP 509-513.

Effective protection of traditional knowledge requires a multifaceted approach, including legislative reforms, international cooperation, empowerment of indigenous communities, and robust enforcement mechanisms. By implementing these recommendations, countries can safeguard their invaluable cultural and biological heritage from exploitation and ensure equitable benefit-sharing for all stakeholders.⁸⁴



⁸⁴peter Drahos, *European Intellectual Property Review*, Vol. 22, 2000, p. 245