
TRADITIONAL KNOWLEDGE UNDER IPR REGIME

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ABSTRACT

Traditional knowledge forms an important part of the wisdom, practices, and innovations of indigenous and local communities, developed and preserved over generations. However, the modern intellectual property rights regime often struggles to protect such knowledge, leading to biopiracy or misappropriation. This paper examines the relationship between traditional knowledge and intellectual property law, exploring existing protection mechanisms as well as what they lack. It analyses defensive and positive protection mechanisms, including patents, trademarks, geographical indications, copyright, and *sui generis* systems, and focuses on India's legal and institutional responses, such as the Traditional Knowledge Digital Library (TKDL) and the Biological Diversity Act, 2002. The paper also explores international efforts under WIPO and the Convention on Biological Diversity.

The paper seeks to examine and promote favourable practices by comparing measures adopted by countries such as Peru and South Africa. Through case studies such as the turmeric and basmati rice disputes, the study underscores the urgent need for benefit sharing, prior informed consent, and community centred legal reforms. It concludes that a balanced approach combining IPR mechanisms with dedicated traditional knowledge protection systems is essential to prevent exploitation while respecting the rights, knowledge and culture of traditional knowledge holders resulting in a favourable situation for everyone involved.

Introduction

Traditional knowledge is a shared body of experience and wisdom that is transmitted from generation to generation among indigenous and other communities. It is a broad set of knowledge ranging from agriculture and medicine to art, among others. It is an important part of their heritage and has been the foundation of many societies, which has been cultivated and protected through generations.

However, the modern world's focus on making money and globalisation presents major challenges to such traditional knowledge. This includes the usage of Intellectual property rights (IPRs). Although IPRs have certainly helped innovation, they have also provoked anxiety over the possible exploitation of traditional knowledge.

There is an increasing need to harmonise protecting intellectual property and protecting traditional knowledge. Most indigenous and local communities have experienced the unauthorised appropriation of their knowledge, causing disrespect and loss of cultural heritage. The taking of resources and traditional knowledge without permission, commonly referred to as biopiracy, has become an urgent matter. Therefore, it is necessary to develop effective mechanisms or improve the existing tools to protect the rights of indigenous communities to their traditional knowledge. Governments can try to promote practices like benefit sharing and providing compensation to communities whose knowledge has been used.

Knowledge of the various aspects regulating traditional knowledge and IPR are thus essential to take proper action and safeguard such precious resources. Though there is a limited extent of protection due to existing laws and International Conventions, there must be more efforts to protect traditional knowledge and frame specific statutes and measures in this direction.

Traditional Knowledge and IPR

Traditional knowledge (TK) is knowledge, know-how, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity.^{1 2}

¹ Angela R. Riley, *The Ascension of Indigenous Cultural Property Law*, 121 Mich. L. Rev. 75 (2022).

² WIPO, Traditional knowledge WIPO, [https://www.wipo.int/tk/en/tk/#:~:text=Traditional%20knowledge%20\(TK\)%20is%20knowledge,its%20cultural%20or%20spiritual%20identity](https://www.wipo.int/tk/en/tk/#:~:text=Traditional%20knowledge%20(TK)%20is%20knowledge,its%20cultural%20or%20spiritual%20identity). (last visited Aug 8, 2024).

is an open-ended way to refer to tradition-based literary, artistic or scientific works; performances; inventions; scientific discoveries; designs; marks, names and symbols; undisclosed information; and all other tradition-based innovations and creations resulting from intellectual activity.³ This is passed on to multiple generations as an unbroken practice as seen in many tribal societies.

Intellectual Property refers to ideas and creations of the mind. This includes things like inventions, writings, artwork, and brand names. Laws like patents, copyrights, and trademarks protect these creations by providing Intellectual Property Rights. These laws give creators the right to benefit from their work. By balancing the rights of creators and the public's interest, the legal system aims to encourage creativity and innovation.⁴

In recent years, IPR has been explored as a means of protecting traditional knowledge to prevent exploitation from larger corporations or even other individuals such as scientists who learn of the existence of such traditional knowledge and make use of it to give the illusion of making a new discovery in order to get a Patent and thereby monopolise on something which has already been discovered and used traditionally.

Need for Protecting Traditional Knowledge

Since traditional knowledge is frequently formed in part as an intellectual response to life's requirements, it also has a significant practical component. As a result, society as a whole may benefit directly or indirectly from traditional knowledge. There are numerous instances of significant technologies that are directly descended from traditional knowledge. However, when other people try to profit from traditional knowledge, particularly for commercial or industrial purposes, this can raise questions about whether the knowledge has been misappropriated and whether the contributions and roles of traditional knowledge holders have not been valued.⁵

Thus, preserving traditional knowledge is crucial, particularly in these dynamic times. It can prevent unauthorised commercial exploitation of this knowledge base. If it is not safeguarded,

³ Justice Vijendra Jain, Asia Pacific Jurist Association (APJA) on “Safeguarding the Traditional Knowledge in India” (2008), https://highcourtchd.gov.in/sub_pages/top_menu/about/events_files/apjaspeech.pdf (last visited 2024).

⁴ WIPO, What is intellectual property (IP)? WIPO, <https://www.wipo.int/about-ip/en/> (last visited Jun 27, 2025).

⁵ WIPO, Intellectual property and traditional knowledge: Key to a diverse and sustainable future (2008).

the indigenous people who have brought it to the public's attention may suffer severe losses, both financially and emotionally. Preserving traditional knowledge also helps to safeguard and maintain traditional practices.⁶

Methods for Protection of Traditional Knowledge

The two most common IPR protection strategies for traditional knowledge are defensive mechanisms/protection and positive protection:

1. Defensive Protection

The concept of "defensive mechanism" describes the actions traditional knowledge holders take to stop others from obtaining their intellectual property rights. This technique of knowledge protection aids those who possess traditional knowledge in defending their illegally obtained intellectual property rights.⁷

Defensive protection strategies have mainly focused on the patent system. By making sure that relevant traditional knowledge is fully considered when a patent is evaluated for its novelty and inventiveness, defensive protection seeks to prevent third parties from patenting already-existing knowledge. A claimed innovation in a patent application is often evaluated in comparison to the so-called "prior art," which is the established corpus of information deemed relevant to a patent's validity. For instance, traditional knowledge is part of the relevant prior art if it has been published in a journal before the application date. In this case, the application cannot legitimately claim traditional knowledge as an invention because it would not be regarded as unique.⁸

2. Positive Protection

When traditional knowledge is protected in this way, the bearer can obtain an intellectual property right (IPR) or another kind of alternative right that is offered under the *sui generis* system. They have the power to stop the exploitation and improper use of knowledge. Positive protection places real requirements on the holders of traditional

⁶ Manan Kalra, What is traditional knowledge and how to protect it? IPTSE (2023), <https://iptse.com/what-is-traditional-knowledge-and-how-to-protect-it/> (last visited Jun 28, 2025).

⁷ *Id.*

⁸ WIPO, *supra* note 4.

knowledge and focuses on their emancipation.⁹

The options for positive protection include the following: new, stand-alone *sui generis* systems as previously mentioned, which grant rights in traditional knowledge as such; extended or adapted IP rights specifically focused on traditional knowledge (*sui generis* aspects of IP laws); and existing IP laws and legal systems (including the law of unfair competition). Trade practices and labelling laws, the law of civil liability, the use of contracts, customary and indigenous laws and protocols, regulation of access to genetic resources and associated traditional knowledge, and remedies based on¹⁰ tort like unjust enrichment, rights of publicity, and blasphemy are some other non-IP options that can be included in the overall menu.¹¹

In India this has been employed in the form of the **Traditional Knowledge Digital Library (TKDL)** in an effort to protect its "Traditional Knowledge" and prevent biopiracy. Moreover, by employing traditional knowledge, the program hopes to foster innovation and originality.¹²

IPR for Protection of Traditional Knowledge

Intellectual Property Rights are designed to protect investments in research, development, and the promotion of inventions by providing incentives to creators. However, the implementation of IPR has led to restrictions on others' ability to participate.

Private corporations often exploit traditional knowledge, obtaining revenue from such resources through intellectual property rights. They are developing methods to plagiarise this knowledge, which results in countryside farmers and tribal communities losing access to their natural resources and associated knowledge due to biopiracy. Products derived from traditional knowledge are typically priced too high for these communities, as biopirating corporations set exorbitant prices for such goods.¹³

The TRIPS Agreement of the World Trade Organisation (WTO) stressed patent rights but

⁹ Kalyani Gupta, Traditional Knowledge and IPR - An Indian Perspective (2021).

¹⁰ Pietro D. Farah & Riccardo Tremolada, *Conflict Between Intellectual Property Rights and Human Rights: A Case Study on Intangible Cultural Heritage* (2016), <https://core.ac.uk/download/36693474.pdf>.

¹¹ WIPO, *supra* note 4.

¹² Kalyani Gupta, *supra* note 8.

¹³ *Id.*

ignored the rights of traditional knowledge holders. If Intellectual Property Rights (IPRs) could be interpreted and improved in a genuine and equitable manner, they could serve as a tool for safeguarding traditional knowledge. Despite the limitations of the current IPR regime, the present tools still provide an opportunity to be used either as positive or defensive protection methods to preserve traditional information.¹⁴

1. Patent

Indian patent laws do not allow for the protection of traditional knowledge under Section 3(p) of the Indian Patent Act, 1970.¹⁵ An invention that is essentially traditional knowledge or a mere aggregation or duplication of known properties of traditionally known components¹⁶ does not qualify as an invention and cannot be patented.

However, if there is a significant modification to the existing traditional knowledge that enables the innovation to meet the requirements of Indian intellectual property law, then IP protection may be pursued.

The Patent Act, 1970 includes provisions that require traditional knowledge to be disclosed as the origin of the invention. Specifically, Section 10(4)(ii)(D)¹⁷ of the Act mandates the disclosure in the specification of the source and geographical origin of all biological material used in the invention.¹⁸

2. Trademarks

Trademarks play a vital role in the marketing of goods and services both domestically and internationally. Awareness systems should educate native communities about how trademarks can be used to gain economic benefits from their traditional knowledge and protect it from unfair commercial exploitation.

"Collective marks" can be utilised to safeguard handicrafts and ethnic products.

¹⁴ Riya, *Protection Of Traditional Knowledge Under Intellectual Property Rights Regime*, 1 E- Journal of Academic Innovation and Research in Intellectual Property Assets (E-JAIRIPA) 149–164 (2020).

¹⁵ The Patent Act, 1970, §3(p).

¹⁶ iPlaaders, *Traditional Knowledge in IPR*, blog (May 22, 2023), <https://blog.ipleaders.in/ipr-vis-vis-traditional-knowledge/>.

¹⁷ The Patent Act, 1970, §10(4)(ii)(D).

¹⁸ Gautam Badlani, Traditional knowledge in IPR iPlaaders (2024), https://blog.ipleaders.in/ipr-vis-vis-traditional-knowledge/#TRIPS_Agreement (last visited , Jun 28, 2025).

Certification marks serve to distinguish a wide range of goods and services, from traditional art and artworks to food products, clothing, and travel services. Certification trademarks verify that the goods or services meet specific standards related to raw materials, manufacturing techniques, or value.¹⁹

The Trademark Act of 1999²⁰ can be utilised to bring this into being. If a patent restricts an indigenous community from selling a product, they could register a trademark and then licence the use of the trademark to companies. This approach would help ensure the authenticity of the product while allowing the community to maintain control and benefit economically.²¹

3. Copyright

Copyright protects the method of speech and expression, not the underlying ideas. The copyright holder is granted the rights to perform any of the actions specified under Section 14 of the Copyright Act, 1957.²² Copyright can be utilised to safeguard the creative expressions of traditional knowledge holders, particularly artists from indigenous and local communities, against unauthorised reproduction and misuse. The relationship between creators, artists, or authors and their works is addressed under moral rights.^{23 24}

4. Geographical Indications

Geographical Indications are granted for special qualities of products which is tied to their place of origin. Goods produced in a specific region or locality of a country often possess distinctive qualities, reputation, or traits that are directly linked to their geographical origin. Examples of Geographical Indications (GIs) include Darjeeling Tea, Kanchipuram Silk, Alphonso Mango, and Nagpur Orange.

Traditional knowledge, which is collectively held by indigenous communities, is well-protected under the framework of Geographical Indications. The Geographical

¹⁹ Kalyani Gupta, *supra* note 8.

²⁰ The Trademark Act, 1999.

²¹ Gautam Badlani, *supra* note 15.

²² The Copyright Act, 1957, §14.

²³ Riya, *supra* note 12.

²⁴ The Copyright Act, 1957, §57.

Indications of Goods (Registration and Protection) Act²⁵ provides benefits to communities from particular regions, protecting their unique products. GI protection lasts for 10 years but can be renewed indefinitely, ensuring long-term safeguarding. GIs recognise and reward the hard work of these communities and prevent others from exploiting their reputation. Additionally, GIs can be used to protect traditional pharmaceutical products, where the physical characteristics of botanicals are linked to their geographical origin.²⁶

5. Biological Diversity Act

As a signatory to the Convention on Biological Diversity (CBD), India enacted the Biological Diversity Act of 2002²⁷ to implement the objectives of the convention. This legislation aims to promote the protection of biological diversity, the sustainable use of its components, and the equitable sharing of benefits arising from the use of natural resources.²⁸

The Act addresses key issues, including:

- The right to use natural resources.
- The collection and utilisation of natural resources.
- The equitable distribution of benefits derived from such use.
- Protection against biopiracy.

At the local community level, the Biological Diversity Act establishes several key bodies: the National Biodiversity Authority (NBA) under Section 8²⁹, the State Biodiversity Boards (SBBs) under Section 22³⁰, and Biodiversity Management Committees (BMCs). According to the Act, no individual may apply for intellectual property rights in India or internationally for any discovery based on research or

²⁵ The Geographical Indications of Goods (Registration and Protection) Act, 1999.

²⁶ Kalyani Gupta, *supra* note 8.

²⁷ The Biological Diversity Act, 2002.

²⁸ The Biological Diversity Act, 2002, §2(c).

²⁹ The Biological Diversity Act, 2002, §8.

³⁰ The Biological Diversity Act, 2002, §22.

knowledge derived from Indian biological resources without prior consent from the NBA.³¹

The Act sets out a robust framework for property rights, particularly concerning access to biological resources beyond India's borders. It also outlines a system for sharing profits with the individuals or communities responsible for developing, enhancing, and utilising this technology through commercial use of traditional knowledge.^{32 33}

6. Traditional Knowledge Digital Library

India adopted a unique approach to preserve traditional knowledge through the creation of the Traditional Knowledge Digital Library (TKDL). This was created by the Council of Scientific and Industrial Research (CSIR) in order to create a record of known traditional knowledge in order to prevent misuse. The recorded data cannot be used to make patentable products.³⁴ Presently, the database boasts 34 million pages and has thwarted multiple attempts to patent this information, thereby protecting traditional knowledge.³⁵

However, it comes with its own set of drawbacks. The database is not public and accessible to all, which sometimes results in the defence that the patent application must not be rejected as the information proving it to be traditional knowledge is unavailable.³⁶

Moreover, it stands mostly limited to *Ayurveda, Siddha, Unani* and *Yoga*.³⁷ Thus, many other local traditions are lost or prone to exploitation. The overwhelming focus is on knowledge, bearing medicinal usage while disregarding other forms, including oral

³¹ The Biological Diversity Act, 2002, § 3, 4 & 6; Biological Diversity Rules, r 18 (2004).

³² Riya, *supra* note 12.

³³ The Biological Diversity Act, 2002, §21.

³⁴ Abha Nadkarni & Shardha Rajam, *Capitalising the Benefits of Traditional Knowledge Digital Library (TKDL) in Favour of Indigenous Communities*, 9 NUJS L. Rev. 129 (2016), <https://nujslawreview.org/wp-content/uploads/2017/01/2016-9-1-2-Abha-Nadkarni-Shardha-Rajam-Capitalising-the-Benefits-of-Traditional-Knowledge-Digital-Library-TKDL-in-Favour-of-Indigenous-Communities.pdf>.

³⁵ Council of Scientific & Industrial Research, *Traditional Knowledge Digital Library Unit*, CSIR (India) (last visited June 29, 2025), <https://www.csir.res.in/documents/tkdl>.

³⁶ Traditional Knowledge Digital Library, *Bio-Piracy of Traditional Knowledge*,

<http://www.tkdl.res.in/tkdl/Langdefault/common/BioPiracy.asp?GL=> (last visited June 29, 2025).

³⁷ Martin Fredriksson, *India's Traditional Knowledge Digital Library and the Politics of Patent Classifications*, 34 Law & Critique 1 (2023), <https://doi.org/10.1007/s10978-021-09299-7>.

tradition.³⁸

Another drawback is the fact that while Patent offices enter into Non-Disclosure Agreements with indigenous communities to effectively protect their right, the communities do not get any benefits from this, such as financial compensation if and when used.³⁹

International Mechanism of Protection Under IPR

The concept of traditional knowledge is acknowledged in the intellectual property rights (IPR) regime of most nations. Effective enforcement of IPR rights requires cooperation globally. Therefore, it is crucial to analyse how international tools protect traditional knowledge.

Recently on May 24, 2004, Member States of the World Intellectual Property Organization (WIPO) – a specialised agency of the United Nations – agreed to a groundbreaking new treaty addressing intellectual property (IP) related to genetic resources and associated traditional knowledge.

The Treaty on Intellectual Property, Genetic Resources, and Associated Traditional Knowledge also includes key provisions aimed at protecting the rights of Indigenous Peoples and local communities. Once ratified by 15 contracting parties, the Treaty will establish an international legal framework requiring patent applicants to disclose the origin of genetic resources and the associated traditional knowledge used in their inventions.⁴⁰

However as it is yet to be ratified, reliance can only be placed on existing international bodies and treaties to seek remedies.

1. World Intellectual Property Organization (WIPO)

WIPO's work on traditional knowledge and folklore began in 1978 when WIPO, in cooperation with UNESCO, created the *sui generis* model for national folklore protection. In 1998, WIPO initiated a new proposal, which included a fact-finding

³⁸ Seemantani Sharma, *Traditional Knowledge Digital Library: 'A Silver Bullet' in the War Against Biopiracy*, 16 J. Marshall Rev. Intell. Prop. L. 214 (2017).

³⁹ Nadkarni & Rajam, *Supra* note 32.

⁴⁰ United Nations, Nations agree landmark treaty on traditional knowledge, protecting indigenous peoples' rights | UN news United Nations (2024), <https://news.un.org/en/story/2024/05/1150231> (last visited Sep 3, 2024).

contact mission to 28 countries regarding intellectual property and traditional knowledge. This mission formed a global study on the needs of intellectual property and the objectives of traditional knowledge holders. At its 26th meeting, the WIPO General Assembly established the Intergovernmental Committee (IGC).⁴¹

WIPO's work on traditional knowledge covers three distinct yet related areas: traditional knowledge in the strict sense (technical know-how, practices, skills, and innovations related to, for example, biodiversity, agriculture, or health); traditional cultural expressions/expressions of folklore (cultural manifestations such as music, art, designs, symbols, and performances); and genetic resources (genetic material of actual or potential value found in plants, animals, and micro-organisms).⁴²

2. Convention on Biological Diversity (CBD)

On 5th June 1992, the Convention on Biological Diversity (CBD) was finalised as a result of negotiations under the United Nations Environment Programme (UNEP) in Rio de Janeiro. Governed by UNEP, the CBD establishes standards for environmental conservation while promoting ongoing economic growth. It emphasises biodiversity conservation, the sustainable use of resources, and the fair distribution of benefits derived from genetic resources.⁴³

It has established a Working Group on Traditional Knowledge to guide and facilitate discussions among governments, Indigenous and local communities (ILCs), and other stakeholders about traditional knowledge. This group enables representatives of indigenous and local communities to share their views and recommendations on related issues.

Article 8(j) of the CBD highlights the need for governments to respect, preserve, maintain, and promote the broader application of traditional knowledge with the consent and involvement of the relevant ILCs.⁴⁴ For instance, if users wish to incorporate traditional knowledge into their research and product development, they

⁴¹ Riya, *supra* note 12.

⁴² WIPO, Traditional knowledge and intellectual property (2023), <https://www.wipo.int/edocs/pubdocs/en/wipo-pub-rn2023-5-1-en-traditional-knowledge-and-intellectual-property.pdf> (last visited Jun 30, 2025).

⁴³ Riya, *supra* note 12.

⁴⁴ Convention on Biological Diversity art 8(j), June 5th, 1992, 1760 U.N.T.S. 79, 143; 31 I.L.M. 818 (1992).

must obtain prior approval from the relevant ILCs and negotiate mutually agreed-upon terms that support the equitable sharing of any benefits derived from the use of this knowledge.⁴⁵

3. Comparison of the Protection of Traditional Knowledge in Different Jurisdictions

a. Peru

The country of Peru can be credited with creating the first law protecting Traditional Knowledge. The law, namely, Law 2781, acknowledges the rights of indigenous communities to manage their traditional knowledge and control how they deal with third parties.⁴⁶

The law mandates that consent must be obtained from the relevant representative organisations of indigenous groups if any person or entity seeks to access such knowledge for scientific, commercial, or industrial application.⁴⁷ The main methods used for the protection of Traditional or Collective Knowledge are “know-how” licences and registers. This is accomplished by registers keeping track of all the information, helping to serve as prior art, while licenses provide a medium to control how traditional knowledge is accessed and used for commercial purposes.⁴⁸

There is a definite focus on benefit sharing, with licenses having specific provisions which say exactly how it shall be done.⁴⁹ Two minimum royalty rates have been specified by the law. The licences also need to be registered with the *Instituto Nacional de Defensa de la Competencia y de la Protección de la Propiedad Intelectual (INDECOPI)*.⁵⁰

⁴⁵ Secretariat of the Convention on Biological Diversity, Convention on Biological Diversity: ABS (2011), <https://www.cbd.int/abs/infokit/revised/web/factsheet-tk-en.pdf> (last visited Jun 30, 2025).

⁴⁶ Ley No. 27811, Ley que establece el régimen de protección de los conocimientos colectivos de los pueblos indígenas vinculados a los recursos biológicos [Law Establishing the Protection Regime for the Collective Knowledge of Indigenous Peoples Related to Biological Resources], El Peruano, Aug. 10, 2002 (Peru).

⁴⁷ *Id.* art. 6.

⁴⁸ Susanna E. Clark, Isabel Lapeña & Manuel Ruiz, *The Protection of Traditional Knowledge in Peru: A Comparative Perspective*, 3 Wash. U. Global Stud. L. Rev. 755 (2004), https://openscholarship.wustl.edu/law_globalstudies/vol3/iss3/3.

⁴⁹ Ley No. 27811, *supra* note 44, art. 7.

⁵⁰ Ley No. 27811, *supra* note 44, art. 27.

b. South Africa

South Africa has taken a unique approach in protecting traditional knowledge by expanding the scope of their existing IP regime to protect such knowledge. They have divided the various facets of the actual traditional knowledge's subject matter to provide protection under specific types of IPR.⁵¹

The Intellectual Property Laws Amendment Act of 2013⁵² provides a definition of Traditional Knowledge and a protection mechanism. There must be a benefit-sharing agreement between third parties and the indigenous community, which is considered a legal person. Once the agreement is entered into, the application to register the indigenous knowledge can be pursued under existing IP laws. The law embodies principles of obtaining consent and benefit sharing while using the traditional knowledge.⁵³

Furthermore, the Act provides for the establishment of the National Trust for Indigenous Knowledge that shall create a National Trust Fund for Indigenous Knowledge. The trust is responsible for the promotion and preservation of traditional knowledge and indigenous culture. It is also tasked with providing training and promoting awareness regarding such matters.⁵⁴

Issues and Challenges

Indigenous people experience a lot of challenges in protecting their traditional knowledge and cultural heritage. Most of the challenges result from historical injustices, institutional disparities, and challenges of incorporating the traditional practices into modern legal frameworks.

A big concern is biopiracy. It essentially refers to the wrongful use of indigenous knowledge commercially without their consent or fair compensation. This is done by patenting traditional medicines, plants, or indigenous genetic resources that have been used by indigenous

⁵¹ WIPO-WTO Colloquium Papers, *Protection of Traditional Knowledge and Genetic Resources*, ch. 8, at ____ (World Trade Org. & World Intell. Prop. Org. eds., 2016),

https://www.wto.org/english/tratop_e/trips_e/colloquium_papers_e/2016/chapter_8_2016_e.pdf.

⁵² Intellectual Property Laws Amendment Act 28 of 2013 (S. Afr.).

⁵³ WIPO-WTO Colloquium Papers, *supra* note 41, ch. 8, at 112.

⁵⁴ *Id.*

communities for generations, resulting in exploitation. The fact that there are no mechanisms in law to avert such exploitation leaves the communities at risk and undermines their rights to control their intellectual and cultural property.

Furthermore, aspects such as poverty, marginalisation, discrimination and restricted access to legal help worsen the challenges indigenous communities are experiencing in protecting their traditional knowledge and cultural heritage. Many indigenous groups struggle with inadequate financial resources, technical expertise, and institutional support necessary for effective advocacy.⁵⁵

There have been multiple cases and instances which have dealt with the issue of biopiracy with India putting up strong objections.

1. The Turmeric Case

In 1995, the United States granted a patent for wound healing using turmeric to the University of Mississippi Medical Center. This patent covered the use of “turmeric powder and its administration” for both oral and topical wound healing, granting exclusive rights for sale and distribution.

The Indian Council for Science and Industrial Research (CSIR) challenged this patent by presenting evidence of prior art to the USPTO. Although turmeric's use for wound healing was well-known in India, documenting this knowledge—particularly its application through both oral and topical methods—proved challenging. After extensive research, CSIR provided 32 references in languages such as Sanskrit, Urdu, and Hindi. As a result, the USPTO revoked the patent, concluding that the claims were obvious and anticipated, acknowledging that the use of turmeric for wound healing was an ancient practice. Thus, the traditional knowledge (TK) related to turmeric was preserved in this case.⁵⁶

⁵⁵ Simran Kaur Khalsa, Protecting traditional knowledge and intellectual property De Penning and De Penning (2024), <https://depenning.com/blog/ip-and-indigenous-communities-protecting-traditional-knowledge-and-cultural-heritage/#:~:text=Indigenous%20communities%20encounter%20a%20multitude,practices%20into%20modern%20legal%20frameworks.> (last visited Jun 30, 2025).

⁵⁶ Gautam Badlani, *supra* note 15.

2. The Basmati Rice Case

In 1997, RiceTec, a Texas-based seed company, applied for a patent on Basmati rice and its cultivation method with the US Patent and Trademark Office (USPTO). India opposed this patent application, arguing that Basmati rice was indigenous to India and that RiceTec's claim constituted biopiracy, as it aimed to appropriate traditional knowledge. India petitioned the USPTO to prevent the patenting of Basmati rice.

The Indian government contended that Basmati rice had been cultivated in India for centuries and was renowned for its distinctive aroma, taste, and cooking quality. The USPTO eventually granted RiceTec a patent, but it was limited to certain aspects of the cultivation method and did not cover the rice itself. The patent did not include the key characteristics of Basmati rice, such as its grain attributes, taste, and aroma.

The decision was met with criticism in India, leading the Indian government to appeal. In 2001, the USPTO reviewed the case and revoked RiceTec's patent, acknowledging that Basmati rice was indeed an Indian product and that the use of the term "Basmati" by RiceTec was misleading. This ruling was considered an important victory for India's traditional knowledge and the protection of Geographical Indications Internationally.⁵⁷

Recommendations and the Way Forward

While commendable efforts have been made by different countries, there always exists room for improvement. India can take inspiration from Peru and South Africa to implement benefit-sharing arrangements, creating mandatory royalties to be paid to the communities.

The international community as a whole would benefit from adopting mandatory licensing and a repository of traditional knowledge, such as the TKDL, while ensuring public access, preventing misuse of traditional knowledge to gain patents. Efforts must be made to increase awareness among the general public to prevent the unintentional misuse of traditional knowledge, as well as stop any such instances which they encounter.

Furthermore, a blend of defensive and positive mechanisms would prove to be the most prudent choice owing to the different nuances of Traditional Knowledge, focusing on community-led

⁵⁷ Shahnaz Kaushar, *Bio-Piracy In India: A Practice Of Patenting Traditional Knowledge For Profit*, 1 IPR Journal of Maharashtra National Law University, Nagpur 54–61 (2023).

initiatives. The states must act promptly as guardians and ensure that the specialised laws covering all aspects of traditional knowledge, whether they are medicinal, cultural, art, etc, are protected under existing IP laws or a specialised mechanism is created for the same.

Conclusion

Traditional knowledge is a living part of the identity, culture, and survival of many communities. As this project has explored, although India has tried to protect traditional knowledge through creating systems and laws like the Traditional Knowledge Digital Library, Geographical Indications, and certain IP laws, these measures often do not actually empower the communities from whom we get such knowledge.

Looking at other countries like Peru and South Africa shows us that it is possible to build stronger systems that focus on community rights, benefit-sharing, and obtaining valid consent. India, and the world, can learn from these approaches to protect the knowledge and these communities.

Thus, protecting traditional knowledge is not just about preventing misuse. It is about respecting the knowledge holders, ensuring they benefit from how their knowledge is used and provide them the choice of whether they want to share such knowledge with the world and on what terms to prevent exploitation. Effective Laws and Policy measures, drawing experience from cases such as the neem case, the basmati rice case, etc, must be formulated and implemented by both domestic and international communities to give it fruition.