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# DIGITAL DOCUMENTATION OF INDIGENOUS KNOWLEDGE: AN ARGUMENT FOR MODERN INTELLECTUAL PROPERTY AND CULTURAL RIGHTS

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## ABSTRACT

The preservation of the life-long heritage of the indigenous communities is the main gist of Traditional Knowledge, crossing over from generations after generations of various farming tactics, medicinal systems, folklore, crafts and music. In order to widen the horizon of accessibility, for the public protecting their interest, the innovate step of digital libraries and databases have been bought into the picture, with the main objective of increasing accessibility and visibility. However, this new endeavor comes with new challenges with respect to ownership, control and equal benefit sharing. The Intellectual Property Laws possesses a significant influence majorly based on the Western ideology of individual rights, which mostly fail to include the collective, evolving, and oral nature of traditional knowledge. By shortlisting and studying the legal doctrines, statutory provisions, and judicial decisions, the study examines whether, the existing laws adequately protect the indigenous communities or increases its exposure to misuse. This paper dives through safeguards such as prior informed consent, benefit sharing, and Community autonomy, and finding out ways to integrate these principles into the legal systems. The paper is trying to outsee, whether the evaluation of innovative steps like the Traditional knowledge Digital Library (herein after referred to as TKDL) efficiently brings a balance between preservation, recognition of community contributions, and fair benefits. By scrutinizing and reviewing overseas developments, the current Indian legal instruments, and the community-oriented approaches, this study proposes a framework ensuring that the community rights are protected to the maximum, while digital documentation takes a toll. Digital documentation reflects upon the significance of cultural survival and empowerment at the same time a medium for biopiracy and exploitation, without adequate legal frameworks.

**Keywords:** Community, Preservation, Biopiracy, Benefit Sharing, Ownership, Innovative.

## Introduction

With the growing technological developments, digital documenting of traditional knowledge has become a necessity. Modernization facilitated digital storage, preservation, sharing and protection of wisdom, practices, and cultural expressions which the indigenous and the local communities<sup>1</sup> have held possession from ages generations after generations. As per the opinion of the World Intellectual Property Organization (herein after referred to as WIPO),<sup>2</sup> traditional knowledge encompasses the skills, practices, and the technical know-how flowing down from generations within the respective community, backed by spiritual identity.<sup>3</sup> This can be witnessed through folklores, music, farming methods, environmental practices, crafts knowledge etc., which is commonly shared through oration or through real time demonstration. Ever since, the commercial interest lies in areas of bio-prospecting, pharmaceuticals and as the cultural industries grow, indigenous communities encounter significant risk for protecting their knowledge from misuse or exploitation by external factors.

India's TKDL is the perfect example which works towards facilitating patent examiners throughout the global forum to access age old traditional medical knowledge, while making it harder for the granting unauthorized patents for the same. This accessibility comes with multiple challenges. IP laws hold individualist perspective which is contradictory to the protection of communal rights, which are oral in nature. Safeguards with proper due diligence need to be bought into action against misappropriations. This onset may appear to be powerful on the face of it by preserving their heritage and autonomy, by incorporating informed free consent, benefit sharing and handling it with utmost sensitivity.

## Statement of Problem

Traditional knowledge mirrors the cultural, spiritual, and ecological identity of the communities but at the same time, it faces the danger of being exploited through global trade, research, and bioprospecting. The TKDL of India serves the purpose of preventing patent misuse but at the same time, digitalization is introducing new challenges, as Intellectual

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<sup>1</sup> Septika Laily Anti & Ifan Awanda, *Preserving Traditional Knowledge in the Digital Era: Challenges and Strategies*, Socio Sphere J. Soc. Sci. & Soc'y Stud., Jan. 2025, <https://synergizejournal.org/index.php/Sociosphere/article/download/46/37>.

<sup>2</sup> United States: Global intellectual property filings reached new records in 2021: WIPO. MENA Report (2022).

<sup>3</sup> Rachit Garg, *Traditional Knowledge in IPR*, iPleaders (Feb. 20, 2024), <https://blog.ipleaders.in/ipr-vis-vis-traditional-knowledge/>.

Property (IP) laws support individual ownership while traditional knowledge (TK) is collective and evolving. Digitization is a double-edged sword; while it helps in preserving the knowledge, at the same time it makes the knowledge more prone to misuse and the community less powerful in controlling it. This paper focuses on the digitalization and its part in traditional knowledge protection and community rights undermining, pointing out the legal gaps and the need for safeguards to guarantee the rights and interests of the communities, sharing of benefits, and Indigenous data sovereignty.

### **Research Objectives**

1. To study how existing intellectual property laws deal with traditional knowledge when it is digitally documented.
2. To discover whether the digital documentation bolstered or hampered the community rights regarding the traditional knowledge they had.
3. To address the lacunae in the existing legal structures, which might leave the communities vulnerable to misuse and their knowledge being misappropriated.
4. Discovering the way in which legal doctrines can help to maintain the equilibrium between community rights' protection and public interest's expansion in the access to traditional knowledge.
5. Recommending legal reforms that would work as a tool in facilitating protection of digital documents in an efficient manner.

### **Hypothesis**

The current IP laws fail to adequately protect the digitalized version of traditional knowledge because of their core individualist perspective and often fail to address the collective and evolving nature of community knowledge.

### **Research Questions**

1. Given that most of the intellectual property laws are built around individual ownership rather than community-based knowledge, will the existing intellectual property laws be able to cover traditional knowledge in its digital form?

2. What kind of legal protections would be essential for the digital documentation of traditional knowledge to not only allow for misuse or misappropriation but also to make the communities more vulnerable?
3. How far do current systems like India's Traditional Knowledge Digital Library go in balancing the objectives of preserving traditional knowledge, that is, recognizing the communities and sharing benefits fairly?

## Research Methodology

The methodology adopted for this paper is the doctrinal research methodology. The main focus was on the analytics of the legal framework, principles, statutes and judicial decisions with respect to the digitalization of traditional knowledge and its positive and adverse effects upon the community rights, its benefit sharing possibilities. This method is primarily theoretical and literature based, with the main objective is to interpret the laws, its efficient application and suggestions for maximizing efficiency.

### 1. Obstacles to the Protection of Traditional Knowledge

The rules of intellectual property emphasize personal possession, author determined, and specified periods, yet traditional knowledge is not under such a category. TK is a product of the community, it is handed over from one generation to another, and it is always changing. Because it does not have one recognizable writer or creator, the use of regular IP laws usually cuts off or weakens the very populations that brought it into being. The issue becomes even more complicated when traditional knowledge is put onto digital platforms. Consider the case of an oral narrative being recorded and hosted on an archive.<sup>4</sup>

The copyright of the digital representation of traditional knowledge is mainly given to the researchers or the institutions involved rather than the communities that have safeguarded it for ages. While the online access of TK assists in its preservation and sharing, it also puts it in a vulnerable position regarding its inappropriate use. What is uploaded is very often considered as belonging to nobody, leading to the extraction and commercialization of elements by the corporate sector, such as, for instance, developing medicines from traditional practices without

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<sup>4</sup> World Intellectual Property Organization, *Intellectual Property and Traditional Knowledge* (2022), <https://www.wipo.int/export/sites/www/tk/en/docs/ip-tk-introduction-en.pdf>

any consent, recognition, or fair sharing of benefits. Consequently, the originating communities become powerless regarding the manner of use and the worth of their heritage.

### 1.1 Mismatch of Ownership Models

The difference in ownership models is among the main obstacles to the protection of traditional knowledge. The rights under intellectual property law are individual and always linked to one specific creator or an entity, which limits the application of the protections such as copyright that last for the life of the author plus sixty years and patents that grant short term monopolies making them unsuitable for collective and eternal knowledge, thus the individual ownership remains a barrier. This works for contemporary creative and scientific work, but it is not for knowledge that doesn't have one point of origin or one owner.<sup>5</sup> Traditional knowledge is a product of a community that is created, and then it is passed on from one generation to the next, changed little by little over centuries by the common experiences of the community, e.g., healing methods, weaving, or storytelling. This kind of knowledge is not time limited, and it is not owned by specific individuals; thus, it is less compatible with strict patents and copyright laws. The incongruity becomes more pronounced once the knowledge is digitized.

To see an entire community's ancient oral history being transmitted from one generation to another, recorded and preserved in a digital safe, is a truly amazing experience. The legal protection of copyright law does not include the story itself as part of the people's heritage. ***“Rather, the copyright goes to the recording the medium, not the material. And whose copyright is it?”*** Generally, it is the person who did the recording or the organization that possesses the archive that holds the rights. So, the community, which has been caring for and carrying that history along for generations, tends to be excluded from legal claim and control over how their information is disseminated or used.

### 1.2 One of the Risks with Digital Access Is Misuse

The act of digitizing traditional knowledge is a double-edged sword, preserving it, but at the same time, it is opening the gates to its improper use. As soon as the knowledge is put online, it is very often considered to be public domain, thus giving the power to the communities who

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<sup>5</sup> HP Padmin, *Traditional Knowledge Versus Intellectual Property Rights: Who Are the True Victims of This Conflict?*, The Hague Peace Projects (Apr. 14, 2022), <https://thehaguepeace.org/site/traditional-knowledge-versus-intellectual-property-rights-who-are-the-true-victims-of-this-conflict/>.

own it. The corporations can misuse this data for their own benefit by creating and patenting new products for profit, while the original knowledge holders are left with nothing they are not even acknowledged, let alone receiving benefits, and the whole process of preservation turns into exploitation. Pharmaceutical or biotech companies, for example, research the documented applications of active ingredients and then through them get patentable drugs.<sup>6</sup> The law gives them a big advantage by permitting them to assert their rights over the "derived" product to the extent of the law.

### **1.3 Community Empowerment Is Not the Same as Protection of Knowledge**

Applying this risk protection transforms a different category of systems into defensive tools instead of compensatory systems. The best-known examples would be the Traditional Knowledge Digital Library (TKDL) of India. This library records age-old medical knowledge in the forms that are accessible to patent examiners across the globe, hence, it becomes tougher for the outsiders to file patents on the knowledge that is already there. It has aided in denial, but only partially. TKDL stands against exploitation by outside parties, but it does not provide positive rights to the originating communities for them to benefit, manage, or control the knowledge. In other words, it prevents the theft of knowledge, but does not establish ownership rights.

### **1.4 Limited Use of Existing IP Tools**

Moreover, the current intellectual property tools are not good enough. By example, copyright law grants its protection to the various forms in which the knowledge is recorded such as a video, a book, or a digital archive but not the knowledge itself. Patents are considered to be "prior art" for traditional knowledge; this means they can prevent another party from patenting the same thing but at the same time, new patents can still be issued for minor changes or "derived innovations." Geographical indications and trademarks have the potential to protect certain cultural products, for example, Darjeeling tea or Basmati rice, but these are protection measures that are still quite fair. The huge variety of community traditions, rituals, or their uses

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<sup>6</sup> Chern Li Liew, Jamie Yeates & Spencer Lilley, *Digitized Indigenous Knowledge Collections: Impact on Cultural Knowledge Transmission, Social Connections, and Cultural Identity*, 72 J. Ass'n Info. Sci. & Tech. 1575 (2021),

[https://www.researchgate.net/publication/352444593\\_Digitized\\_indigenous\\_knowledge\\_collections\\_Impact\\_on\\_cultural\\_knowledge\\_transmission\\_social\\_connections\\_and\\_cultural\\_identity/link/62559d83ef013420666d4f5b/download](https://www.researchgate.net/publication/352444593_Digitized_indigenous_knowledge_collections_Impact_on_cultural_knowledge_transmission_social_connections_and_cultural_identity/link/62559d83ef013420666d4f5b/download)

of plants for medicine remains unprotected.

### **1.5 Emerging Alternatives**

Experts are looking into means and ways to resolve the gaps. The sui generis laws which are mainly for traditional knowledge are being put into practice, and the indigenous peoples' digital tools such as Traditional Knowledge Labels give power to the communities to set terms for cultural usage. Support for the merging of customary laws with national and international legal frameworks is increasing, however, the majority of legal systems still favor the old-fashioned IP regulations rather than the community-based governance approach.

## **2. The conflict between traditional knowledge and modern IP laws.**

Once traditional knowledge (TK) gets digitalized, recorded, and stored in online databases, archives, or research projects, it is then more visible and accessible, but this visibility does not always mean legal protection. On the contrary, the digitization process usually puts TK at even more risk of being misappropriated because current intellectual property (IP) laws were never intended to address such a collective, ancient, and evolving knowledge.

### **2.1 Reasons behind Intellectual Property Laws Struggle with Traditional Knowledge**

#### **2.1.1 The Individual versus Collective Actors as Licensees by Law**

The majority of intellectual property systems, copyright, patent or trademark for instance, base their functioning on the assumption that an individual or a corporation can be identified and designated as the “owner” of the right. Conversely, TK seldom is a property of one person. It is generally kept and handed down through the community from one generation to the next, frequently with no distinct boundary between the point where it started and how it progressed. To illustrate, a healing method that involves a specific plant might have been honed through the input of many people over the course of the centuries. To fit this knowledge into the narrow idea of “ownership” under IP law is almost impossible.

#### **2.1.2 The Bar of Novelty and Inventiveness**

Novelty, non-obviousness, and industrial applicability all are three major demands of a patent system. Unfortunately, TK usually does not pass the novelty test although it is not because of

the lack of value; rather, it is the case that it has been around for a long time, or it has been slowly adapted instead of being invented at a single time. Hence, even if TK has evident medicinal or economic utility, it is nevertheless not patentable. India's Traditional Knowledge Digital Library (TKDL) was created to at least record TK as "prior art" so that no outsider can claim a patent over it. But this is a defensive mechanism it prevents theft, but does not actually give the community positive rights over their knowledge.

### **2.1.3 The inability to claim moral rights and share benefits**

Knowledge for communities entails more than the mere economic use; it is essentially their identity, spirituality and lifestyle. Yet IP systems focus narrowly on commercial exploitation. This discrepancy makes biopiracy possible, in which corporations take away TK or genetic resources and make profits out of them, while the community is left with nothing but silence and no recognition. Theoretically, benefit-sharing agreements and other similar mechanisms are in place (for example, at the Convention on Biological Diversity level and via the Nagoya Protocol), yet their implementation is not strong and is frequently biased in favor of corporations as opposed to local populations.

## **2.2 Defense and Sui Generis Methods**

### **2.2.1 Defensive Measures**

The TKDL and other similar databases are effective tools against wrongful patents, but their function is somewhat restricted. They legally consider TK as "prior art" that is publicly available to all, a situation that ironically causes the problem of the community's ownership being nonexistence to get worse.

### **2.2.2 Sui Generis Systems**

These technologies could allow for cognitive rights and younger generation ownership as well as for the acknowledgment of cultural values that are deeply rooted in the community. For instance, there are proposals that speak of laws which give the power to the communities to determine the use of their knowledge, make easy profit-sharing compulsory, and recognize TK both as a legacy and as a vibrant and growing knowledge system. The challenge, however, is that such laws vary from country to country, and international consensus is still far away.



### **2.2.3 Global Initiatives and the Aspect of Human Rights**

Internationally, the debates around traditional knowledge protection have taken place for a long-time which WIPO was one of the major bodies involved, but progress on this matter has been slow and a lot of it is due to the conflicting interests. The developing nations are working towards increasing safety measures while the developed countries are rigid towards major reforms. Some experts say that the protection of Traditional Knowledge should be pluralistic, aligning with Article 27 of the Universal Declaration of Human Rights. Viewing TK as a human right indeed shifts the focus from ownership to protecting community rights, yet it is still very difficult to convert these ethical principles into enforceable legal rules.

### **2.2.4 The two-sided characteristic of digitalization**

Acknowledging that digitization is a double-edged sword is also very necessary. In its role to preserve TK and to make it visible for defensive purposes, it is also stripping the knowledge off its cultural context, converting it into nothing but data. TK is just one click away, and it can be easily accessed, copied, and sold without the consent of the community. Sometimes, digital archives strangers with more power and resources to exploit TK for their benefit unintentionally.<sup>7</sup> In the absence of community participation and consent, digitization projects are very likely to be perceived as another form of dispossession.

## **3. Legal actions concerned with protecting digitalized traditional knowledge**

The process of digitizing traditional knowledge (TK) has both advantages and disadvantages at the same time: on the one hand, it can save, empower, and educate; on the other hand, it can make communities vulnerable to biopiracy, cultural appropriation, and corporate exploitation. In order to avoid these negative consequences, a layered legal framework of protections is required. These protections should not only be available in principle but also be applicable to the current scenario of the digital economy where AI, global data markets, and intellectual property systems are far ahead of the protections for indigenous and local communities.

### **3.1 Control and consent from the community (FPIC)**

The moment knowledge gets into a database or the internet, it is already a world news and the

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<sup>7</sup> Int'l J. of Sci. Research Sci. & Tech. (2025), <https://ijsrst.com/paper/v12i12.pdf>

artists cannot control the way it is used or how it is treated anymore. The loss of control implies that the communities might find themselves unable to safeguard their cultural heritage, moreover, their knowledge may be easily misinterpreted or even misused. To prevent this, any documentation project should begin with free, prior, and informed consent. To use a legal term, consent should not only be at the beginning but also at the critical times, like just before the knowledge is published or disclosed to the outsiders, which are the times when communities are to be asked for their permission. Moreover, they should be granted the right to retract their consent subsequently in case of the project turning out to be detrimental to their interests. The option of withdrawal seems to be a crucial step for the betterment of community autonomy.

Today, the United Nations Declaration on the Rights of Indigenous Peoples<sup>8</sup> already upholds the principle of free, prior, and informed consent as an important factor. The communities should still have the power over their knowledge in this case that the principle of free, prior, and informed consent is applied in the digital world with the emergence of digital platforms and archives as powerful entities.

### **3.2 Balancing ownership with Intellectual Property Rights**

The Western intellectual property rights system highlights the traits of individual authorship, originality, and a short duration of protection, rendering it useless for traditional knowledge which is collective, changing, and eternal. This situation lets the non-indigenous people take advantage of the digitized traditional knowledge through the patent or copyright system. A new system that recognizes the community ownership of the traditional knowledge and grants the community both the negative rights to prevent misuse and the positive rights to control licensing is necessary. Even though the World Intellectual Property Organization has been discussing global protections for traditional knowledge for many years, the progress is still very slow, thus allowing corporations to earn profit from the knowledge of the community without giving consent or sharing the benefits, which brings out the urgency of legal reform.

### **3.3 Access and Use Restrictions**

The idea of open access is often presented as progressive and inclusive, but when it comes to traditional knowledge, it can be very dangerous. Once traditional knowledge is available in the

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<sup>8</sup> Union of Canadian Transportation Employees, National Indigenous Peoples Day, <https://unioncte.ca/national-indigenous-peoples-day/>

internet and it becomes searchable, it can never be controlled by the communities that have it. A move to preserve heritage may turn into a situation where outsiders use the knowledge without permission or sharing the benefits. The design of digital archives with a layered access system is a more acceptable option. Knowledge should not all be treated alike. Some knowledge should remain restricted to community members only.

Parts of it may be presented to the public in a wider circle for educational purposes while others may only be accessed through formal licensing agreements that consider the community's conditions. The legal frameworks should be designed in such a way that they would recognize the differences among the users hence the restrictions would be implemented and violations could be punished. The tiered access would be just a symbol and not a protection without the legal support. This model is already in practice in certain places. The problem is that not all countries have such safeguards in place, which leaves serious gaps where traditional knowledge can still be taken and commercialized without accountability.

### **3.4. Benefit-Sharing Agreements**

In cases where the traditional knowledge leads to the discovery of new pharmaceuticals, agrochemical products, or even the inception of new designs, the respective communities that take care of this knowledge should be the first ones to receive the benefits. Otherwise, digitization becomes nothing more than extraction presented in a modern form. In order to avert this issue, the establishment of binding benefit sharing agreements should be mandated. These agreements will have to provide both monetary and non-monetary advantages, including but not limited to royalties, technology transfer, training, and the strengthening of community capacity. The Nagoya Protocol on Access and Benefit Sharing,<sup>9</sup> which was introduced in 2010, provides a global framework for this matter. Medication and biotechnological companies usually ignore its regulations by taking advantage of digital sequence information from repositories, thus emerging new global conflicts.

### **3.5. Cultural Integrity Protections**

Communities do not only risk losing money when their traditional knowledge is misused. When their ways of life and knowledge are caricatured, commercialized in detrimental ways,

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<sup>9</sup> (2014). India: India facilitates entry into force of Nagoya Protocol on Access and Benefit Sharing. MENA Report, (), n/a.

or divested of the sacredness they possess, the practitioners also encounter a lack of respect from the surrounding culture. This sort of abuse turns vibrant traditions into marketable items, thereby, a lot of times, completely losing the values associated with them. To have a safeguard against this, the communities must be granted moral rights to their knowledge by the law, and these moral rights should be the same as those granted to authors. Such rights will empower the communities to prevent any use that would distort or disrespect their culture. The rights should also confer the power to disallow the projects or products that would hurt spiritual or cultural values.

### **3.6. Data Sovereignty**

When their ways of life and knowledge are caricatured, commercialized in detrimental ways, or divested of the sacredness they possess, the practitioners also encounter a lack of respect from the surrounding culture. This sort of abuse turns vibrant traditions into marketable items, thereby, a lot of times, completely losing the values associated with them. To have a safeguard against this, the communities must be granted moral rights to their knowledge by the law, and these moral rights should be the same as those granted to authors. Such rights will empower the communities to prevent any use that would distort or disrespect their culture. The rights should also confer the power to disallow the projects or products that would hurt spiritual or cultural values.

### **3.7. Obligatory rules and remedies are well specified**

The exploitation will merely go on, and the communities will be left with nothing but the mentioning of their heritage while others gain the profit out of it. The communities are looking for the effective measures that implant accountability and dissuasion. Financial compensations for economic loss, legal prohibitions on the use of the material in question, and measures for cultural harm restoration are among the remedies that they seek. Moreover, the sources of the abuses should not only be liable but also the large companies, researchers, and digital platforms that allow or take advantage of the misuse royalties. Nowadays, the fashion industry is plagued by lawsuits over cultural appropriation, but the most common legal approach is through copyright and trademark laws which are not designed for traditional knowledge and thus leaving further areas of the gap unprotected.

### 3.8. Integration of Customary Law

Numerous communities already established their own regulations regarding traditional knowledge, which included its use, sharing time, and representation. Ongoing, such customary laws became an integral part of culture-especially based on spirituality and social values-and still continue to exist. The advent of modernity brought about the scenario where if such customary laws were overlooked, traditional knowledge would become meaningless and context-free, thus, being a community resource taken away from the governance of the community. To avoid this situation, national legislations and digital systems should recognize the customary laws as having authority in the management of traditional knowledge.<sup>10</sup> The embedding of community protocols straight into the digital rights management tools represents one method of achieving this goal. This practice will ensure that the community rules direct each and every step of access and utilization. The WIPO IGC has taken an active stance on this issue and is looking to the future of incorporating it into worldwide structures.<sup>11</sup>

### 3.9. Prohibitions on AI and Big Data "knowledge mining" as well as the latter's safeguards

One of the biggest threats to traditional knowledge today does not come from patents but from artificial intelligence. After the traditional knowledge has been translated into digital format, it can be pulled together into enormous datasets that can be used for machine learning.

Usually, this is done without the consent of the owners, without giving them credit, and without sharing the benefits in any way. To avoid this, the legislation must declare that the datasets of traditional knowledge cannot be accessed by AI companies unless free, prior, and informed consent is obtained along with fair benefit sharing. This implies treating traditional knowledge as protected data, and not as something that can be freely used by the public as soon as it is digitized.<sup>12</sup> The battles around the issue of digital sequence information in relation to genetic

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<sup>10</sup> Kazi Hossain, *Protecting Indigenous Traditional Knowledge Through a Legal Framework: Challenges and Opportunities*, 16 Scand. J. L. & Soc'y 1 (2021), <https://www.tandfonline.com/doi/full/10.1080/18918131.2021.194744>

<sup>11</sup> Convention on Biological Diversity, *Traditional Knowledge, Innovations and Practices* (Oct. 19, 2021), <https://www.cbd.int/traditional/intro.shtml>

<sup>12</sup> Lee Tiedrich, Karine Perset & Sara Fialho Esposito, *Intellectual Property Issues in Artificial Intelligence Trained on Scraped Data*, OECD Artificial Intelligence Papers No. 332, at 1 (Feb. 2025), [https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/02/intellectual-property-issues-in-artificial-intelligence-trained-on-scraped-data\\_a07f010b/d5241a23-en.pdf](https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/02/intellectual-property-issues-in-artificial-intelligence-trained-on-scraped-data_a07f010b/d5241a23-en.pdf)

resources under the Convention on Biological Diversity have definitely indicated the need to take action right away.

### **3.10. International Harmonization**

Traditional knowledge is a global phenomenon that often leads to complications because of the different legal protections that exist in various countries. Corporations usually take advantage of the countries with the least protection, which means that the communities are not safe even if they are protected in their own countries. International laws that are compulsory for all countries are necessary to make sure that the protection goes along with the knowledge and that there is worldwide enforcement against its wrongful use. WIPO is one of the organizations that are trying to establish such a global framework, but the work has been slow due to the political divides.

## **4. The scenario of preventing without the empowerment of India's Traditional Knowledge Digital Library (TKDL)**

India's Traditional Knowledge Digital Library (TKDL) is regarded as a major weapon against the issue of biopiracy, to the extent that the documentation of Ayurvedic, Unani, and Siddha as well as Yoga knowledge is done in several languages to aid patent examiners in finding "prior art." The library has been very successful in preventing patents from being granted on turmeric, neem, and basmati rice among others. Despite its strong defensive position, TKDL brings to the surface significant issues regarding the acknowledgment, ownership, and sharing of benefits for the people or communities that gave rise to the knowledge.

### **4.1 Preservation of Knowledge**

TKDL is primarily a huge digital repository. It brings together and arranges the centuries-old scattered traditional medical knowledge in a way that is easier to access and read. By doing this, not only the knowledge is protected from time but also the patent examiners have a trustworthy source to refer to before giving exclusive rights to private companies. In this regard, TKDL has made it possible for India to go from being the loser of biopiracy to an activist defender of its intellectual and cultural heritage. TKDL protects Indian traditions from being taken over by outsiders, but at the same time, it does not go as far as empowering the communities that have originated this knowledge and have been practicing it.

## **4.2 Recognition of Communities**

A key point against the TKDL is its decision to accept India's heritage as a nationwide but at the same time it does not give recognition to the certain communities that were responsible for this knowledge transmission and development on a long-term basis. The database does not make any distinction between the Northeast tribal healer, Siddha practitioner in Tamil Nadu, or Vaidya family in Kerala, as it just lists the remedies. The knowledge is summed up and showcased as a national resource that is shared among the public.

This creates two problems:

1. The system overlooks communities who actually are the real custodians.
2. Knowledge that was provided or safeguarded suffers no formal rewards or acknowledgment.

For communities, this could be considered a second round of dispossession, the knowledge that was once theirs is now consolidated into a national archive, which is controlled by government institutions, and there is hardly any space for their voice or agency.

## **4.3 The Challenge of Benefit Sharing**

One of the most important shortcomings of the TKDL scheme might be the lack of a proper system for sharing the benefits. Despite the Biological Diversity Act, 2002 and India's Access and Benefit Sharing (ABS) guidelines having given some legal basis, in reality, communities hardly ever get to experience any concrete benefits. The TKDL provides access to global patent offices for free. While this helps block unjust patents, it also means that when multinational corporations avoid a wrongful patent due to TKDL, they do not owe anything in return to the communities whose knowledge was used to block the claim. Furthermore, Free, Prior, and Informed Consent (FPIC), which is a principle accepted by international law for indigenous populations, has not been very well assimilated into India's TKDL framework. The communities seldom get the chance to say if they want their knowledge to be digitized, how it should be utilized, and what advantages they should gain. The absence of FPIC makes digitization a potential threat to becoming yet another kind of appropriation, this time by the state instead of foreign companies.

#### 4.4 With evolving reforms, it seems there is still some distance to go.

Moreover, international discussion on this issue has progressed and the policy barrier to access has become less strict in some jurisdictions. Among the proposals are:

- The purpose of **FPIC condition** is to ensure no data is published without the community's fair consent.
- Including monetary benefits of royalties, licensing of revenues, and non-monetary aspects of technology transfer, healthcare support, as an essential part of **benefit-sharing arrangements**.
- **Perceiving community ownership** at the level of the database itself plus not consolidating everything as a national resource will not only widen visibility, but also enhancing benefit distribution evenly.
- The **expansion mechanism in 2022 of the TKDL policies** towards granting access of the data to patent officers, researchers, industries and educational institutions uplift the worth of TKDL

#### 5. Suggestion

Protectionism should be the core binding force on behalf of the communities. For instance, the setting up of mechanisms for Free, Prior, and Informed Consent along with the acknowledgment of community data sovereignty might assure that the knowledge holders possess a significant control over the utilization of their traditional knowledge.

Moreover, consideration of the global cases and the indigenous-led initiatives could offer the practical models for the empowerment of the communities. The mentioned methods, like the labelling of traditional knowledge, the blockchain-based granting of consent and the participatory archives wherein communities set the access rules, depict the actual scenario where digital tools empower the knowledge holders instead of merely protecting them from misappropriation.

Besides, an exploration of national frameworks might spotlight the uncertainty of digital documentation in the case where the legal protections are inadequate. The digitization of the



knowledge sometimes may take the power from the local custodians unless recognition, benefit sharing and decision-making authority are well shield.

Lastly, a fully proven, context-specific recommendations for the policymakers, legal practitioners, and community leaders. All these will provide more weightage with respect to the actions and impact, along with the merger to theoretical and practical aspects. Backing criticisms with suggestions.

## **6. Conclusion**

The tussle in the current IP laws and the traditional knowledge becomes clearer when traditional knowledge is digitized. Present legislation provides very limited solutions, which are mostly of a defensive nature, and at the same time, it does not recognize the communities as the rightful custodians with the power to make decisions. A true guard is more than just digitization, it requires the coming up of new laws that will adequately reflect the collective, cultural, and intergenerational characteristics of the traditional knowledge. More than anything else, the communities must be allowed to make decisions regarding the preservation, sharing, and utilization of their knowledge. Until such time, the intellectual property law will not be able to protect the digitized traditional knowledge in a manner that is both fair and respectful. The digitization of traditional knowledge is beyond the confines of archives, it cuts across power, sovereignty, and survival issues.

The legal safeguards, therefore, must go beyond protecting the information to the extent of also protecting the very people and cultures that impart meaning to the knowledge. The absence of such safeguards means that the digitization of the indigenous knowledge would probably bring about the same colonial patterns of resource exploitation as it would be under the pretext of preservation. On the other hand, if safeguards are there, it would be possible for digitization to be the source of power, resilience, and intergenerational justice. It safeguards the ancient Indian knowledge, enhances the country's position in international patent disputes, and reveals the vastness of Indian culture. However, preservation and protection are only a part of the whole picture. If there are not enabled the ways for fair acknowledgment and sharing of benefits, it is going to be the very communities that were the bearers of this knowledge who would be kept out from the whole process.