



Safeguarding Heritage: Preserving Traditional Knowledge in Global Patent Law

Muhamad Sigit Al Furqon

Master of Legal Studies Postgraduate Program, Faculty of Law, Universitas Indonesia, Depok, West Java 16424, Indonesia.

ABSTRACT: The present study investigates the defensive safeguarding of traditional knowledge within the framework of international patent law. The chosen research methodology is evaluative, employing secondary data sources. The primary emphasis of this study is on primary and secondary legal materials. The process of data analysis involves the utilisation of qualitative juridical analysis techniques. The findings suggest that traditional knowledge has distinct attributes intricately linked to traditional communal elements and spans diverse areas of human existence. The safeguarding of traditional knowledge is paramount to uphold principles of fairness, environmental preservation, cultural heritage, prevention of misappropriation, and the advancement of sustainable utilisation. In international patent law, there is a notable incongruity between traditional knowledge and patent systems that prioritise human ingenuity and originality. The efficacy of patent systems in protecting traditional information is limited by the inherent characteristics of traditional knowledge, which is often collective and transmitted orally. The safeguarding of traditional knowledge necessitates a harmonious integration of both legal and practical dimensions. These endeavours encompass the acknowledgement of pre-existing knowledge and inventions, the creation of organisations to oversee safeguarding, and the implementation of pragmatic strategies to guarantee availability and equitable utilisation. The ability to patent novel discoveries derived from traditional knowledge is possible; nevertheless, conflicts often occur due to disparities between patent regimes and the inherent characteristics of traditional knowledge. In the present situation, it is imperative to adopt a comprehensive and equitable strategy to safeguard traditional knowledge's long-term viability within the intellectual property framework.

KEYWORDS: Defensive Protection, International Patent Law, Traditional Knowledge.

INTRODUCTION

Traditional knowledge has come under investigation in the field of Intellectual Property Rights (IPR), offering national and international issues, particularly within the domain of responsibility of the World Intellectual Property Organisation (WIPO) (Meyer & Naicker, 2023). Understanding that traditional knowledge is passed down from one generation to the next within a community, civilisation, or nation is an essential part of defining what is meant by the term "traditional knowledge." The complexity of addressing legal developments in the modern period has increased because its nature constantly shifts in response to shifting environmental conditions.

The absence of domestic legal tools that provide appropriate protection for traditional knowledge is the primary factor contributing to the growing importance of traditional knowledge as a legal issue. The widespread exploitation of traditional knowledge by parties that are not responsible for their actions is the primary source of the problem. Although intellectual property regulations in the Trade-Related Aspects of Intellectual Property Rights (TRIPs) have yet to accommodate the intellectual wealth of indigenous or traditional communities fully, no international agreement recognises and provides legal protection for traditional knowledge. This is the case even though there is no agreement (Reddy & Lakshmikumaran, 2015).

The preservation of traditional knowledge is becoming increasingly vital as a result of the distinctive qualities that it possesses (Gadgil et al., 1993). The primary grounds for forming this protection are the prohibition of unauthorised appropriation, considerations of justice, conservation, cultural preservation, traditional practises, and the development of interests in using traditional knowledge. The community's efforts to maintain their traditions are boosted by this protection, which is a beneficial development.

Indonesia, the country with the world's second-largest biodiversity after Brazil, also boasts a vast range of traditional knowledge in medicine. These medicinal practices have been passed down from generation to generation. Thanks to its exceptional biodiversity and 42 distinct ecosystems, Indonesia can significantly advance its traditional knowledge. Inadequate legal protection will



discourage the creation and utilisation of this traditional knowledge. Adequate legal protection will encourage these activities (Yulia, 2021).

The enormous economic worth of traditional knowledge acquires legal protection, an absolute necessity. Traditional knowledge in Indonesia can become a valuable economic resource if well-protected. This would help the country's overall economic standing. This opportunity takes on a greater level of importance when one considers the instances of intellectual property theft committed by foreign corporations that have shown the potential value of Indonesia's traditional knowledge (Deshpande, 2022).

In this light, Indonesia has a priceless chance to capitalise on the potential richness of its traditional knowledge. When equipped with the appropriate safeguards, Indonesia can actively formulate legislative laws, both on the national and international levels, to secure the continuity of its traditional knowledge and the equitable utilisation of such knowledge. In addition, active engagement in international forums such as the WIPO can serve as a platform to fight for the wider acknowledgement and preservation of Indonesia's traditional knowledge (Yulia, 2021).

In order to prepare for the challenges brought about by globalisation and technology, Indonesia needs to make sure that the legal laws that are formed not only satisfy the needs of the present but are also flexible enough to accommodate changes and problems that may arise in the future. In order to establish policies that are comprehensive and sustainable concerning traditional knowledge, collaboration between the public sector, civil society, and the corporate sector is essential.

In its current form, the TRIPS tends to favour the requirements of industrialised countries. Therefore, to serve the interests of developing countries and maintain justice within the framework of the current WTO system, there is a need for innovation in intellectual property rights (Menezes, 2018). In addition, this would ensure that traditional knowledge and genetic resources are treated with the same respect regarding intellectual property rights in international trade.

As was previously mentioned, traditional knowledge refers to the intellectual creativity of indigenous communities and local organisations. Indigenous communities and local groups produced this creativity throughout generations through observational research and natural experimentation. Some nations have proposed in the WTO that the TRIPs Agreement should be modified to require patent applicants related to biological material or traditional knowledge to provide the following information as a condition for obtaining a patent: first, Patent Disclosure: the source and country of origin of biological resources and traditional knowledge used in the invention; second, Evidence of prior informed consent through approval from authorities under the relevant national regime; and third, Evidence of fair and equitable benefit-sharing (Plahe & Nyland, 2003).

At the fourth World Trade Organisation Ministerial Conference, which took place in Doha, Qatar, in November of 2001, the explicit inclusion of concerns about traditional knowledge was included on the agenda of the TRIPs Council. In paragraph 19 of the Doha Ministerial Declaration, the ministers instructed the TRIPs Council to investigate various topics, one of which was the protection of traditional knowledge. The disclosure obligations in patent law have been the principal focal point of the anticipated examination in paragraph 19, which may be found here (Abbott, 2005).

In addition, indigenous peoples and local communities' contribution to biodiversity protection is expressly acknowledged in the Convention on Biological Diversity's (CBD) Article 8(j), which can be found here. It emphasises the necessity of respecting and protecting Traditional Knowledge, innovations, and practises; acknowledges indigenous communities' rights to their Traditional Knowledge; and ensures that benefit-sharing is fair and equitable. Similarly, the Nagoya Protocol emphasises access to genetic resources and the equitable distribution of the benefits derived from their usage (Mauro & Hardison, 2000).

Furthermore, the Nagoya Protocol, in Article 6.2. (2) and (3) support national sovereignty by allowing the sovereign to take legislative, administrative, and policy measures per national law to regulate access to genetic resources and Traditional Knowledge. These measures are intended to ensure that access to genetic resources and Traditional Knowledge is managed in a manner that is consistent with national law. According to the Nagoya Protocol, governments must acknowledge the presence of Indigenous Peoples and local communities, their rights and the customary norms that govern access to Traditional Knowledge related to genetic resources. This must be done in conformity with the laws and regulations of the respective nation (Zheng, 2023).

Additionally, the WIPO has made an effort to protect traditional knowledge by establishing the WIPO Traditional Knowledge Fact-Finding Missions (WIPO-FFMs) and the WIPO Intergovernmental Committee (IGC) on Intellectual Property and Genetic Resources Traditional Knowledge and Folklore (Xia, 2023). WIPO undertook both of these initiatives. In general, the WIPO defines three different models of protection. The first model protects traditional knowledge by forbidding others from awarding intellectual property rights to traditional knowledge without the knowledge and approval of the traditional knowledge holders. The second type



of defensive protection for traditional knowledge affects patent registration regarding the duty to reveal the origin of any genetic resources and traditional knowledge associated with the invention(Sofyarto, 2018). Third, two legal avenues can be pursued to implement positive protection. These are the effective use of intellectual property laws and the enactment of specific laws.

At the eighth meeting of the IGC, the subject of disclosing the origin source was discussed. Disclosure of the Origin of Genetic Resources and Related Traditional Knowledge in Patents was proposed by the European Community and the nations that make up its membership. This disclosure would indicate the country of origin of genetic resources and Traditional Knowledge regarding its application(Yulia, 2021). The Patent Law of Indonesia has been updated to comply with international rules. In addition, the explanations accompanying patent applications are required, according to Article 26 of Law Number 13 of 2016, respecting Patents, to include a reference to the original genetic source and any Traditional Knowledge that was utilised as a material. This article will investigate the concept of defensive protection for traditional knowledge within the context of international patent law.

RESEARCH METHODS

Normative legal research is an analytical technique that centres on examining and elucidating legal standards. The research methodology utilised in this context is evaluative, intending to assess and gain a deeper understanding of the law comprehensively. The evaluation methodology employed in this study seeks to discern the superior or optimal form of legislation.

The research methodology employed in this study involves using secondary data, primarily focusing on primary and secondary legal sources. The primary legal materials encompass legislative regulations about patent law. In addition, the use of secondary legal resources encompasses pertinent literature such as books and scholarly publications that pertain to the subject of enquiry.

Qualitative judicial analysis procedures are employed to do data analysis. This methodology enables scholars to explore the significance and legal ramifications, encompassing the process of interpretation and a more profound comprehension of pertinent legal matters. This methodology has the potential to offer significant insights into current regulatory frameworks. It can serve as a foundation for the comparative analysis and evaluation of different types of extant legislation.

Within this study's framework, secondary data sources, such as books and journals, contribute to the comprehensive analysis by combining the viewpoints and interpretations of legal scholars. In general, this research methodology offers a robust framework for investigating and gaining a complete understanding of certain legal matters in a critical fashion.

RESULTS AND DISCUSSION

A. Preserving the Essence: Safeguarding Traditional Wisdom

The international community is currently engaged in extensive debates and discussions over advancing comprehension and safeguarding traditional knowledge. Before engaging in subsequent discourse, it is essential to understand the fundamental elements of the vocabulary and definitions associated with conventional knowledge.

The vocabulary associated with traditional knowledge comprises a range of phrases employed to denote knowledge present within particular groups for an extended period. This composition encompasses the identification of around 20 distinct terminologies, including but not limited to "local knowledge," "indigenous knowledge", "traditional knowledge," "traditional ecological knowledge," "folklore," and "cultural property"(Antweiler, 1998).

Notably, international organisations such as the WIPO and the Secretariat of the Convention on Biological Diversity commonly employ the term "traditional knowledge" within their official documentation. Despite extensive deliberations spanning over four decades, there still needs to be more consensus on a universally recognised concept about safeguarding traditional knowledge(Nemogá et al., 2022).

The literature has a range of concepts about traditional knowledge, which international organisations and scholars have put out. The Secretariat of the CBD defines traditional knowledge as an assemblage of knowledge, innovations, and practices originating from local and indigenous populations across the globe. Knowledge acquisition is a gradual process that spans ages, is shaped by various experiences, and is tailored to specific cultural and environmental contexts(Subramanian, 2010). Traditionally, knowledge transmission occurs orally, wherein information is passed down from one generation to the next. This knowledge is conveyed through various mediums such as narratives, musical compositions, folklore, aphorisms, cultural principles, convictions, ceremonial practises, communal regulations, vernacular dialects, and agricultural methodologies.



In the interim, the Director-General of UNESCO characterises traditional knowledge as the wisdom indigenous populations possess, derived from extensive periods of residing near the natural environment (Stimac, 2022). These societies possess knowledge regarding the properties of plants and animals, the activities of ecosystems, and specialised procedures for their use and control, typically with a high level of detail. In rural areas of developing nations, the inhabitants heavily depend on indigenous species to fulfil a range of requirements, including sustenance, medicinal purposes, energy sources, construction materials, and other commodities. The understanding and perspectives of the community towards the environment and its interconnectedness are frequently fundamental components of cultural identity.

Within safeguarding traditional knowledge, it is imperative to recognise that despite ongoing endeavours to deliberate and tackle associated concerns, a globally standardised definition has yet to be established. Ongoing enhancements are necessary to effectively address the imperative of safeguarding traditional knowledge, thereby ensuring the global recognition and preservation of the intellectual riches held by local and indigenous populations.

The concept of traditional knowledge, which lacks a universally accepted and singular definition, continues to be a subject of extensive debate and investigation within the global sphere. Despite multiple definitions proposed by government organisations, non-governmental organisations (NGOs), and experts, it is evident that these definitions generally align and support one another (Simon, 2005).

One salient attribute of traditional knowledge lies in its association with customs grounded on ingenuity, originality, and methodologies that constitute the bedrock of indigenous societies. In its unaltered state, acquiring this information becomes an intrinsic component of the livelihoods within these communities. It is noteworthy that traditional knowledge is commonly transmitted orally throughout several generations. This phenomenon gives rise to a dynamic and non-static nature, wherein knowledge undergoes ongoing adjustments throughout time to adapt to the evolving demands and advancements of the community. Moreover, it is commonly observed that traditional knowledge tends to be communal, held collectively by the community rather than attributed to specific individuals. The primary objective of this endeavour typically revolves around fostering communal well-being rather than pursuing individual benefits. The notion of nonprofit orientation is prominently evident in applying traditional knowledge.

Additional attributes encompass the extensive range of conventional wisdom about diverse facets of human existence, encompassing but not limited to arts, healthcare, culinary practices, agricultural methods, and housing arrangements. Hence, conventional knowledge extends beyond a particular topic and embraces the entirety of human existence.

It is imperative to remember that these attributes do not exist in isolation but contribute to a way of life abundant in indigenous knowledge. The preservation and transmission of traditional knowledge has a significant role in shaping the identity of indigenous communities. Within this particular framework, it is imperative to acknowledge that traditional knowledge holds significance beyond its historical value, as it serves as a fundamental pillar for a particular group's sustainability and identity.

The evolution and growth of traditional knowledge frequently transpire within the geographical location of its origin. In addition to cultural background, the inclusion of spiritual aspects constitutes a significant determinant. Over time, the traditional wisdom of some societies incorporates and internalises their respective ideas. As an illustration, the wood carving crafts in Bali represent the community's spirituality, as depicted through the utilisation of hand forms in prayer positions. This artistic expression reflects the seamless integration of spirituality into the fabric of daily life.

Wood carving crafts in different locales, such as Jepara, exhibit distinct motifs that set them apart from crafts produced in other regions. Each producing location also exhibits distinctiveness in its batik motifs. Collectors can readily recognise the origin of batik through visual analysis of its distinctive patterns. Wood carving, woodcraft, and batik themes illustrate the vastness of traditional knowledge.

Indeed, numerous facets of everyday existence, such as using conventional remedies or curative techniques passed down by preceding generations, are encompassed within traditional knowledge. The manifestation of traditional culture in a particular location can frequently be observed through aesthetically pleasing home objects or intricately crafted handwoven fabrics.

The significance of effectively managing traditional knowledge should be considered. Traditional knowledge can be a valuable resource for a nation when effectively administered. The practice not only serves to promote cultural legacy but also possesses the capacity to improve the overall well-being of the populace. Through the comprehension, conservation, and advancement of



traditional knowledge, it is possible to guarantee the continued relevance and advantageous nature of local values and wisdom in the face of evolving circumstances.

The safeguarding of traditional knowledge encompasses various primary justifications that necessitate careful consideration. This essay will examine five primary rationales: equity, conservation, preservation of traditional practises and culture, prevention of misuse and bio-piracy, and promotion of the utilisation and advancement of traditional knowledge.

Equity plays a pivotal role in safeguarding traditional knowledge, encompassing principles of fairness and justice in the remuneration of traditional knowledge holders whose information is utilised and commercialised. The compensation may take the form of either monetary or non-monetary remuneration (Gebu, 2017).

Additionally, the conservation component serves as a fundamental cornerstone. The safeguarding of traditional knowledge includes not only the preservation of the knowledge itself but also the consideration of environmental concerns, biodiversity, and the promotion of sustainable farming practices. The preservation of traditional knowledge indirectly contributes to the conservation of natural resources.

Furthermore, preserving traditional practices and culture is an additional justification. Preserving traditional knowledge can bolster the societal worth and credibility of these customary norms, both within the community and outside.

An essential purpose is to prevent unauthorised usage and mitigate bio-piracy risk. Avoiding bio-piracy is imperative, and safeguarding traditional knowledge is a viable approach to mitigate the potential hazards associated with this practice. Crucial measures to mitigate the risk of misuse include establishing databases dedicated to traditional knowledge and implementing legal mandates mandating the explicit identification of the source of the content that warrants safeguarding.

Furthermore, an additional good component involves promoting the use and advancement of traditional knowledge. In conjunction with protective endeavours, the government must provide backing for using traditional knowledge and establish measures to prevent misappropriation.

The WIPO elucidates two distinct kinds of protection within this particular setting. The initial model pertains to preventative protection, also known as defensive protection, which encompasses endeavours to prevent the authorisation of intellectual property rights for traditional knowledge without obtaining consent. The second model pertains to positive protection, which the implementation of legislation about intellectual property rights or the establishment of dedicated legal frameworks can achieve.

The Indonesian government is developing sui generis legislation, divided into three bills. These bills pertain to traditional knowledge and traditional cultural expressions, the conservation and management of genetic resources, and biodiversity.

While implementing these protection measures may require a significant investment of time, it is imperative to acknowledge the vital role played by the state in upholding cultural rights. The state has the potential to enhance its collective capacity to safeguard human rights by implementing effective legal and institutional measures.

In addition, safeguarding intellectual property rights about traditional knowledge as collective rights of indigenous groups necessitates the establishment of authorised entities to oversee, administer, and harmonise the preservation of such knowledge. Several pertinent entities, such as the Ministry of Environment, the Ministry of Foreign Affairs, the Ministry of Research and Technology, and the Directorate General of Intellectual Property Rights, can be identified.

One of the measures that can be undertaken to safeguard intellectual property about traditional knowledge is the process of inventorying or documentation. Documenting and disseminating traditional knowledge widely can be a viable strategy for achieving comprehensive legal and economic safeguards.

Defensive protection within traditional knowledge encompasses a range of initiatives that impede the bestowal of intellectual property rights on traditional knowledge or associated genetic resources. The objective is to establish measures that prevent unauthorised individuals from engaging in such activities without the awareness and consent of the custodians of traditional knowledge. In order to attain defensive protection, it is essential to take into account two primary facets (Curci, 2009).

The initial part pertains to the legal dimension, encompassing strategies to guarantee adherence to criterion constraints of prior art in the context of conventional knowledge. One such measure that can be implemented involves formally recognising oral transmission of traditional knowledge as previous art within legal frameworks. This statement highlights the recognition that current knowledge cannot be utilised as a foundation for allocating novel intellectual property rights.

The second facet pertains to the practical dimension, encompassing strategies to preserve the availability, accessibility, and comprehensibility of traditional knowledge for relevant authorities and patent officials. These pragmatic measures aim to guarantee



the legal acknowledgement of traditional knowledge while facilitating its accessibility and utilisation by authorised entities within the framework of intellectual property granting procedures.

When formulating a defensive protection strategy, it is imperative to establish a harmonious relationship between the legal and practical dimensions. As mentioned, the endeavours strive to establish a milieu whereby traditional knowledge is accorded due reverence and safeguarded while ensuring equitable and suitable access for anyone interested in said information. Therefore, the establishment of defensive protection serves as both a legal framework and a practical measure to safeguard the long-term viability and ongoing utilisation of traditional knowledge.

B. Defensive Protection of Traditional Knowledge in the International Patent Legal Landscape

The investigation into novel elements might be considered a progression concerning diverse dimensions of traditional knowledge, formerly utilised as a creative manifestation. For instance, identifying active principles in plants can be facilitated by observing specific applications in plant traditional knowledge that possess these active principles. These discoveries are not mere replicas of traditional knowledge; they do not fit under the realm of “biopiracy” allegations but rather stem from traditional knowledge. In the present environment, discoveries based on traditional knowledge exhibit novelty, innovation, and industrial applicability characteristics, rendering them suitable for patent protection (Reid, 2009). Nevertheless, it should be noted that the current patent system does not offer any remuneration or advantages to traditional knowledge holders. Consequently, this lack of recognition and support often results in legal disputes arising from the intersection between the patent system and traditional knowledge (Robinson et al., 2021).

At the outset, it may be observed that traditional knowledge is characterised by its collective ownership and the inherent difficulty in ascribing specific attribution. In contrast, the patent system provides a precise mechanism for identifying ownership. Furthermore, traditional knowledge frequently needs more essential elements of innovation fostered by intellectual property (Télléz & Johnsson, 2014). In addition, patents provide a relatively short protection duration when contrasted to traditional knowledge enduring nature. The task of fulfilling innovation requirements in meetings poses a significant challenge but with variations observed among different countries. In the United States, it is essential to note that disclosures that are not in written form, such as oral information or usage outside the country, are not regarded as previous art when determining novelty. The fulfilment of novelty requirements for Traditional Knowledge-related discoveries is more straightforward in the United States than in Europe, as the former adopts a narrower definition of previous art in this context.

Notwithstanding these issues, the patent system may not represent the optimal approach for safeguarding conventional knowledge. Acknowledging the economic, social (human rights), and cultural dimensions inherent in safeguarding and conserving traditional knowledge underscores the necessity of establishing a legal framework to protect traditional knowledge (Dagne, 2010).

The UN Declaration on the Rights of Indigenous Peoples, adopted in 2007, places significant emphasis on the legal dimensions of the rights of indigenous communities. Specifically, it highlights the entitlements of indigenous peoples to exercise authority over, foster the growth of, and safeguard their cultural heritage and intellectual assets, which encompasses traditional knowledge. This proclamation acknowledges the significance of implementing specific measures to empower indigenous communities in exercising control over their sciences, technology, and cultural expressions (Carpenter & Riley, 2014).

The significance of patent rights in safeguarding inventions, particularly discoveries, underscores the necessity for alternative methodologies due to the constraints and clashes between the patent system and traditional knowledge. The United Nations Declaration of Human Rights about Indigenous Human Rights establishes a fundamental basis for acknowledging and honouring the intellectual property rights of Indigenous communities. This declaration plays a significant role in advancing discussions surrounding safeguarding traditional knowledge.

In furthering the discourse about legal dimensions, it is imperative to grasp the import of patent rights in safeguarding human innovations, specifically within the realm of inventions and discoveries. Nurturing and demonstrating reverence towards these inventions is paramount in establishing patent rights, as it facilitates the provision of incentives, acknowledgement, and safeguarding for inventors and their groundbreaking ideas.

Economic rights significantly influence the assignment of value to patent rights, as inventors are granted entitlement to financial rewards when others utilise their ideas. This highlights the significance of patent protection, a legal right bestowed by the government upon inventors or potential patent holders through the submission of applications. The premise of the first-to-file system underscores the need to immediately submit patent applications, as it confers ownership rights to the initial applicant.



The patent system in Indonesia functions under an open framework, permitting the patenting of many technological innovations, albeit with certain limitations on eligibility for patent protection. This system encompasses both procedural methodologies and patented merchandise.

The configuration of patent rights worldwide is influenced by the domestic legislation of individual nations and international standards, as exemplified by agreements such as TRIPs. TRIPs mandates that member states must uphold patent rules within their legal frameworks, promoting a standardised approach to safeguarding intellectual property (Correa & Yusuf, 2016).

The Patent Cooperation Treaty (PCT) is pivotal in facilitating patent collaboration. The treaty provides comprehensive instructions for the process of submitting, conducting searches on, and evaluating patent applications on an international scale (Caffrey & Valentini, 2020). The patent application process can be made more efficient by utilising the PCT system, which allows applicants to file applications in various nations. This approach enhances accessibility and effectively minimises duplicate expenses.

In brief, the comprehension of patent rights, economic safeguarding, a transparent patent system, global engagement through agreements such as TRIPs, and collaborative mechanisms like the PCT are fundamental elements of intellectual rights' intricate yet indispensable realm. Comprehending and effectively traversing this terrain is paramount for innovators, governmental entities, and international organisations.

Submitting a patent application under the PCT yields comparable outcomes to national patent applications in each PCT member country included in the application. After an international application is filed under the PCT, it goes through an examination procedure to assess its novelty. This involves searching previous patents and technical literature. Subsequently, the application is delivered to the national patent office of each desired country.

Patent law constitutes a facet of intellectual property rights that safeguards advancements in diverse technological domains, including food technology, machinery, pharmaceuticals, and related areas. Hence, the patent system strongly correlates with conventional knowledge, particularly in pharmaceutical inventions, encompassed within the purview of patent legislation.

Nevertheless, in practical application, the protection provided by patent law has yet to be entirely adequate in preserving conventional knowledge. The constraints associated with this safeguard primarily arise from the inherent disparities between traditional knowledge and intellectual property regulations, particularly patents. Traditional knowledge is typically a manifestation of culturally shared ideals held communally rather than individually. Consequently, the authority to regulate the utilisation of traditional knowledge resides not within particular entities but within the collective community responsible for its preservation.

The transmission of traditional knowledge commonly occurs through oral means, resulting in a significant portion of this knowledge needing to be recorded. This attribute starkly contrasts contemporary intellectual property legislation, which prioritises systematic, exact, and individualised principles. Hence, it is unsurprising that contemporary intellectual property frameworks, particularly patents, need to be revised in their ability to incorporate and safeguard traditional knowledge comprehensively.

Preserving a society's intellectual property necessitates the essential component of safeguarding traditional knowledge and cultural manifestations. The WIPO has implemented various initiatives to safeguard traditional knowledge, including the International Patent Classification system and the Patent Cooperation Treaty. These efforts and defensive measures are integral to a broader strategy to protect traditional knowledge.

Certain nations and communities also contribute to the establishment of databases pertaining to traditional knowledge, serving as substantiating evidence of pre-existing intellectual property prior to initiating patent claims. The primary objective of this programme is to incorporate traditional knowledge into legal frameworks that prioritise individualistic and commercial approaches to safeguarding intellectual property.

Defensive protection ideologies also consider the modalities of employing conventional knowledge and the utilisation of traditional cultural manifestations (Njatrijani, 2018). Positive protection encompasses two primary components: firstly, the establishment of positive rights for traditional knowledge grounded in principles of collectivity, and secondly, the implementation of legal frameworks that safeguard traditional knowledge by incorporating cultural elements and existing intellectual property systems.

Positive protection can be effectively established using enforceable legal frameworks, such as intellectual property legislation or targeted regulations that control traditional knowledge, cultural manifestations, and genetic resources. Certain countries have implemented specific legislation to offer affirmative safeguards for traditional knowledge.

Positive protection practises for traditional knowledge are not limited to legal frameworks but can also be established through contractual agreements or by leveraging existing intellectual property protection mechanisms. Safeguarding cultural expressions is



a significant focal point, given that these manifestations constitute an essential component of a society's cultural and social identity. The safeguarding of cultural expressions encompasses not only legal dimensions but also entails promoting creativity, preserving cultural history, and fostering cultural diversity.

While the protection of cultural expressions is a subject of concern at both national and regional levels, differing intellectual property laws have necessitated ongoing evaluation and resolution of relevant issues by WIPO. This achieves a comprehensive and equitable approach to protecting cultural expressions.

The TRIPS sets forth minimum requirements for several aspects of intellectual property governance. The document delineates the necessary criteria that must be satisfied by the legislations of nations regarding intellectual property while also detailing the prescribed methods for implementation, available remedies, and mechanisms for resolving disputes. Article 27 of the TRIPs pertains to the issue of patentable subject matter. Part 1 of this article stipulates that patents should be accessible for all inventions, encompassing products and processes across all technological domains. However, it is required that the invention meets the criteria of novelty, inventiveness, and industrial applicability.

Additionally, Part 3 of the document outlines that patentability may be banned for plants and animals, except microorganisms, as well as biological processes necessary for producing plants or animals, excluding non-biological and microbiological processes. However, it is necessary to anticipate establishing a sui generis system to save plant types. Within this framework, the sui generis system encompasses a collection of laws and mechanisms officially acknowledged at the national level, serving as an alternative means to grant protection to plant varieties, distinct from the conventional patent system. Article 27 of the TRIPs pertains to the utilisation of traditional knowledge in purifying or characterising active pharmaceutical substances and in the development or alteration of compounds derived from traditional knowledge. As a result, member nations of the World Trade Organisation (WTO) must ensure the provision of patent protection for these particular ideas.

The CBD is a globally recognised treaty formally adopted in Rio de Janeiro in June 1992 (Morgera et al., 2012). Its primary objective is to promote the conservation of biological variety, facilitate the sustainable utilisation of its many components, and establish mechanisms for the fair and equitable distribution of benefits derived from genetic resources (as stated in Article 1 of the CBD). This convention represents a significant milestone in the field of international law as it acknowledges the notion that the preservation of biological diversity is a shared responsibility of all individuals and a fundamental component of the process of societal advancement. Significantly, it is crucial to note that the convention holds legal weight, as countries, commonly referred to as parties, that become signatories are obligated to enforce its requirements. In addition to other elements, the CBD stipulates that nations possess authority over their biological resources. This authority is intended to safeguard and uphold the knowledge, innovations, and practises of indigenous and local communities that embody traditional ways of life pertinent to the conservation and sustainable utilisation of biological diversity. Furthermore, the CBD aims to promote the broader application of such knowledge, innovations and practises with the consent and involvement of the holders of this knowledge. Additionally, it seeks to foster the fair and equitable sharing of the benefits arising from utilising this knowledge, innovations and practises (Article 8(j) CBD). The key aspect of benefit-sharing, as outlined in Article 15 of the CBD, pertains to the requirement that access to genetic resources should be contingent upon obtaining prior informed consent (PIC) and obtaining agreement from the Party providing the resources. Therefore, benefit-sharing and PIC are two effective mechanisms that developing nations might employ to tackle the intellectual property rules of rich nations. The Doha Declaration serves as a framework for analysing the interplay between the TRIPs and the CBD, as well as the safeguarding of traditional knowledge within TRIPs member states. This initiative was prompted by the apprehensions expressed by developing nations regarding the improper exploitation of genetic resources and traditional knowledge. The amendment of Article 27.3 of the TRIPs, as delineated in section 2.2.2, pertains to discretionary patents for plants and animals (Wesna, 2020). Nevertheless, there exist apprehensions over the integration of CBD provisions inside patent law, leading to the emergence of other solutions. One proposed measure involves modifying the TRIPs agreement to incorporate additional patent disclosure obligations about genetic resources and associated traditional knowledge. The modifications as mentioned earlier are found in the convergence of Article 29 of the TRIPs, which stipulates that patent applications must provide

1. a comprehensive and unambiguous disclosure of the invention,
2. enabling a person with expertise in the relevant field to replicate it and
3. the PIC requirement is outlined in Article 15 of the CBD.



In light of this, it is worth noting that Article 29 of the TRIPs may provide a foundation for the requirement of acknowledging traditional knowledge that has been utilised in the creation of inventions derived from traditional knowledge. Furthermore, the PIC principle is a pertinent aspect to consider within the context of the fourth criterion for patent evaluation. Anticipated outcomes may include imposing restrictions on biopiracy, enhanced benefit-sharing mechanisms, facilitated knowledge transfer, and provision of financial compensation. Certain nations have initiated the practice of soliciting, as part of the patent application process, a statement that discloses the source of the invention, specifically whether it derives from the traditional knowledge of a particular country. One example of a country implementing similar rules is Brazil, which incorporated these provisions by adopting Brazilian patent resolutions 134/2006 and 135/2006 (Romandini, 2016).

Nevertheless, this proposed solution could be better, as implementing PIC presents numerous challenges. Determining the necessity of PIC for specific innovations and identifying the relevant Traditional Knowledge owners involved in such inventions pose considerable challenges. Additionally, establishing a legislative framework to validate the acquisition of PIC would be paramount. It is imperative to acknowledge an ongoing discourse surrounding the interplay between the TRIPs and the CBD, with a particular focus on the potential exploitation of genetic resources and traditional knowledge. Certain nations have implemented measures to safeguard their intellectual property, shown as Brazil's implementation of declaration requirements inside the patent application process.

Nevertheless, the presence of limitations and obstacles associated with PIC, such as the intricacy in ascertaining which findings necessitate PIC and discerning the rightful proprietors of the associated traditional knowledge, suggests that resolving these concerns remains a formidable task. However, benefit-sharing and prior informed consent continue to serve as valuable mechanisms for poor countries to navigate the complexities of intellectual property politics originating from affluent nations.

The concerns mentioned above exemplify the intricate interplay between safeguarding intellectual property rights, biodiversity, and traditional knowledge. Continued endeavours are being made to attain a globally equitable and impartial consensus that satisfies all stakeholders.

CONCLUSION

Within the framework of safeguarding traditional knowledge in international patent law, there exists a set of obstacles and prospects that warrant attention and resolution. The primary emphasis of safeguarding pertains to traditional knowledge, which encompasses communal attributes and cultural legacy encompassing diverse facets of human existence. As mentioned earlier, the attributes give rise to dynamic and sustainable dynamics that necessitate recognition and reverence within the framework of patent law.

Protecting traditional knowledge is motivated by several critical factors, including considerations of justice, conservation, preservation of traditional practices and culture, prevention of misuse and bio-piracy, and promoting traditional knowledge utilisation and development. These protection endeavours must consider two distinct models: defensive protection and positive protection.

Nevertheless, the inadequacies of patent law in addressing the needs of traditional knowledge result in a discrepancy between the attributes of traditional knowledge and the principles of patent law. Managing unrecorded and collectively orientated traditional knowledge poses challenges within an individualistic patent law framework.

In order to rectify this discrepancy, it is imperative to implement a defensive protection strategy that considers both legal and practical considerations. The convergence of legal considerations, such as the acknowledgement of oral disclosure as previous art, and practical considerations, such as the inventorying and documentation of traditional knowledge, can foster a conducive climate for the sustainable utilisation of traditional knowledge.

As significant stakeholders in the evolution of patent law and the safeguarding of traditional knowledge, governments must undertake proactive measures. The implementation of sui generis regulations and the establishment of authorised institutions have the potential to address the discrepancy between traditional knowledge and patent law. Inventorying traditional knowledge and establishing comprehensive databases can serve as effective mechanisms for attaining comprehensive protection.

In the global arena, collaborative efforts facilitated by TRIPs and conventions like the CBD can serve as a framework to tackle concerns about the safeguarding of traditional knowledge effectively. Developing nations should strategically utilise PIC mandates and equitable benefit-sharing mechanisms provided by the CBD to safeguard their intellectual property.



Therefore, these measures will facilitate the reconciliation of valuable traditional knowledge with the global patent law framework, promoting fairness, preservation, and the promotion of long-term sustainability in the face of evolving circumstances.

REFERENCES

1. Abbott, F. M. (2005). The WTO Medicines Decision: World Pharmaceutical Trade and the Protection of Public Health. *The American Journal of International Law*, 99(2), 317–358. JSTOR. <https://doi.org/10.2307/1562501>
2. Antweiler, C. (1998). Local Knowledge and Local Knowing. An Anthropological Analysis of Contested 'Cultural Products' in the Context of Development. *Anthropos*, 93(4/6), 469–494. JSTOR.
3. Caffrey, C., & Valentini, C. (2020). *Applications of technology in the Patent Cooperation Treaty (PCT) translation division of the World Intellectual Property Organization (WIPO)*. Routledge New York.
4. Carpenter, K. A., & Riley, A. R. (2014). Indigenous Peoples and the Jurisgenerative Moment in Human Rights. *California Law Review*, 102(1), 173–234. JSTOR.
5. Correa, C. M., & Yusuf, A. A. (2016). *Intellectual Property and International Trade: The TRIPS Agreement: The TRIPS Agreement*. Kluwer Law International BV.
6. Curci, J. (Ed.). (2009). The defensive protection of traditional knowledge in international patent law. In *The Protection of Biodiversity and Traditional Knowledge in International Law of Intellectual Property* (pp. 131–274). Cambridge University Press; Cambridge Core. <https://doi.org/10.1017/CBO9780511770685.007>
7. Dagne, T. W. (2010). Law and Policy on Intellectual Property, Traditional Knowledge and Development: Legally Protecting Creativity and Collective Rights in Traditional Knowledge-Based Agricultural Products Through Geographical Indications. *Estey Centre Journal of International Law & Trade Policy*, 11(1), 68–117.
8. Deshpande, G. (2022). Traditional Knowledge and TWAAIL. *Indonesian Journal of International Law*, 19(3), 399–424.
9. Gadgil, M., Berkes, F., & Folke, C. (1993). Indigenous Knowledge for Biodiversity Conservation. *Ambio*, 22(2/3), 151–156. JSTOR.
10. Gebru, A. (2017). *Intellectual Property, Traditional Knowledge, and Bioprospecting: Searching for Efficient Balance of Rights*. University of Toronto.
11. Mauro, F., & Hardison, P. D. (2000). Traditional Knowledge of Indigenous and Local Communities: International Debate and Policy Initiatives. *Ecological Applications*, 10(5), 1263–1269. JSTOR. <https://doi.org/10.2307/2641281>
12. Menezes, H. Z. D. (2018). South-South Collaboration for an Intellectual Property Rights Flexibilities Agenda. *Contexto Internacional*, 40(1), 117–138. <https://doi.org/10.1590/s0102-8529.2017400100006>
13. Meyer, C., & Naicker, K. (2023). Collective intellectual property of Indigenous peoples and local communities: Exploring power asymmetries in the rooibos geographical indication and industry-wide benefit-sharing agreement. *Research Policy*, 52(9), 104851. <https://doi.org/10.1016/j.respol.2023.104851>
14. Morgera, E., Buck, M., & Tsioumani, E. (2012). *The 2010 Nagoya Protocol on Access and Benefit-sharing in Perspective: Implications for International Law and Implementation Challenges*. Brill | Nijhoff. <https://doi.org/10.1163/9789004217201>
15. Nemogá, G. R., Appasamy, A., & Romanow, C. A. (2022). Protecting Indigenous and Local Knowledge Through a Biocultural Diversity Framework. *The Journal of Environment & Development*, 31(3), 223–252. <https://doi.org/10.1177/10704965221104781>
16. Njatrijani, R. (2018). Defensive Protection Traditional Cultural Expressions (TCE) Masyarakat di Kabupaten Blora. *Law, Development and Justice Review*, 1(1), 39–68. <https://doi.org/10.14710/ldjr.v1i1.3572>
17. Plahe, J. K., & Nyland, C. (2003). The WTO and Patenting of Life Forms: Policy Options for Developing Countries. *Third World Quarterly*, 24(1), 29–45. JSTOR.
18. Reddy, P., & Lakshmikumar, M. (2015). Protecting Traditional Knowledge Related to Biological Resources: Is Scientific Research Going to Become More Bureaucratized? *Cold Spring Harbor Perspectives in Medicine*, 5(10), 1–11. <https://doi.org/10.1101/cshperspect.a020974>
19. Reid, J. (2009). Biopiracy: The Struggle for Traditional Knowledge Rights. *American Indian Law Review*, 34(1), 77–98. JSTOR.



20. Robinson, D., Raven, M., Makin, E., Kalfatak, D., Hickey, F., & Tari, T. (2021). Legal geographies of kava, kastom and indigenous knowledge: Next steps under the Nagoya Protocol. *Geoforum*, 118, 169–179. <https://doi.org/10.1016/j.geoforum.2020.11.001>
21. Romandini, R. (2016). Flexibilities Under TRIPS: An Analysis of the Proposal for Reforming Brazilian Patent Law. *UIC Review of Intellectual Property Law*, 15(2), 149–212.
22. Simon, B. S. (2005). Intellectual Property and Traditional Knowledge: A Psychological Approach to Conflicting Claims of Creativity in International Law. *Berkeley Technology Law Journal*, 20(4), 1613–1684. JSTOR.
23. Sofyarto, K. (2018). Legal Protection of Intellectual Property Rights Over Traditional Knowledge Acquisition Against Economic Benefits. *UNTAG Law Review*, 2(1), 25–37. <https://doi.org/10.56444/ulrev.v2i1.719>
24. Stimac, Z. (2022). Indigenous Peoples through the Lens of UNESCO. *Religions*, 13(10), 957. <https://doi.org/10.3390/rel13100957>
25. Subramanian, S. (2010). *Traditional Knowledge in Policy and Practice: Approaches to Development and Human Well-being*. UNU Press.
26. Téllez, V. M., & Johnsson, D. Z. (2014). Traditional Knowledge as a Source for Innovation. In D. Gervais (Ed.), *Intellectual Property, Trade and Development* (p. 0). Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199684700.003.0012>
27. Wesna, P. A. S. (2020). Doha Declaration sebagai Perlindungan Masyarakat atas Akses Obat Esensial di Negara Berkembang Pasca Trips Agreement. *KERTHA WICAKSANA: Sarana Komunikasi Dosen dan Mahasiswa*, 14(1), 56–62. <https://doi.org/10.22225/kw.14.1.2020.56-62>
28. Xia, N. (2023). Intellectual property protection for traditional medical knowledge in China's context: A round peg in a square hole? *Medical Law Review*, 31(3), 358–390. <https://doi.org/10.1093/medlaw/fwad006>
29. Yulia. (2021). The Protection of Traditional Knowledge Under Indonesian Patent Law: Between Opportunities and Challenges. *Indonesian Journal of International Law*, 18(2), 351–374.
30. Zheng, X. (2023). *The Complementarity Between the Nagoya Protocol and Human Rights: Genetic Resources, Traditional Knowledge and the Rights of Indigenous Peoples and Local Communities*. Springer Nature.