

## **LEGAL PROTECTION OF YEI PEOPLE'S KNOWLEDGE OF LOCAL MEDICINES AND MEDICINAL PLANTS FROM EXTINCTION**

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### ***Abstract***

*Food security investments have brought conflict between local indigenous communities and the government in South Papua. The research aims to encourage protection and recognition efforts from the state towards indigenous peoples' entities. This research uses socio-legal studies. The research found sixteen plants that function as medicine. Inventory in the form of "recording" communal intellectual property is the first step to protecting all communal intellectual property that has never been recorded before. The Yei Indigenous People or the local government should work together to register with the Ministry to obtain rights to communal intellectual property, which will impact state action in protecting and defending communal intellectual property rights.*

**Keywords:** *Legal Protection; Local Medicine; Medicinal Plants; Traditional Knowledge.*

### **A. Introduction**

The subject of Intellectual Property rights protection is not only about a person's individual rights to creations and inventions, but can also be communal intellectual property (Koto, Hanifah, & Perdana, 2022) rights. The Convention on Economic, Social and Cultural Rights (ICESCR) (Petel & Putten, 2021) has provided clarity on such rights. At that time, the EU countries took more concrete tactical steps. The UN Convention on Biological Diversity (CBD) (Prip, 2018) was used as a "first step" to agree on rules regarding a *sui generis* system in terms of intellectual property protection. The concept of *sui generis* system (Simatupang, 2022) provides for self-regulation of intellectual property protection according to the needs of each country that has intellectual property rights (Adawiyah & Rumawi, 2021). Ultimately, the convention recognizes and protects intangible cultural heritage (Chainoglou, 2017) in the form of expressions, representations, practices, skills, knowledge and instruments. In addition, artifacts and cultural environments associated with different groups or communities are also included in this convention as part of intangible cultural heritage (Putri, 2021). The purpose of recognition and protection is also an effort to affirm the special identity fought for by a vulnerable group (Iser, 2019), including in the context of protecting indigenous peoples' communal intellectual property.

While these regulations have provided flexibility for the registration of communal intellectual property, the reality is that registration of this type is still minimal in Indonesia. As of

August 2024, the number of registered traditional knowledge stood at 486 registrations (DJKI, 2024a). The number is still relatively far when compared to communal intellectual property types of Traditional Cultural Expressions (Marc, 2017) 1,795 registrations (DJKI, 2024b) and Genetic Resources (Astley, 2018) 8,486 registrations (DJKI, 2024e). Of all the provinces, Papua Island has the lowest rate of communal intellectual property registration. Out of six provinces, only one province in Papua Island has registered. West Papua Province recorded 6 registrations (DJKI, 2024d), and Papua Province (status not yet regionalized) recorded 13 registrations of traditional knowledge types (DJKI, 2024c). This needs to be observed, considering the richness of genetic, cultural and multi-ethnic resources on the island of Papua is so rich and diverse. This article explores and encourages the need for registration of rights so that the state recognizes and protects the rights of its citizens. In addition, our fear of extinction will gradually subside with recognition (Muganyizi, 2017) and protection from the state. The same applies to forced or unilateral expropriation by foreign authorities or parties. The expropriation of communal intellectual property rights is likely to be more difficult in the future, as indigenous peoples have legal certainty that has been registered as communal intellectual property rights.

We choose Kweel Village-South Papua as our research location because this village is the cultural center of the Yei Tribe (Prasetya, Nisfur, & Adam, 2024). In this village, traditional houses are surrounded by a green field large enough to accommodate traditional meetings and celebration rituals. Nowadays, no research can observe what forms of traditional knowledge are recorded as part of Indigenous people's lives in South Papua. Communal intellectual property of traditional knowledge types in the South Papua Province region is generally very rich and diverse (Ondikeleuw et al., 2016) (PVTTP, 2023), but still not well explored. The lack of fully disclosed data is the first reason we need to explore. The second reason, we believe, is that there are conflicting interests between indigenous peoples and the government in South Papua. The presence of large investments (food security projects) (Tuter, 2024) (Lahay, 2024a) by President Jokowi's administration in the customary forest area of the Yei Tribe is another problem that has the potential to threaten the survival of the indigenous people who live there. The potential for conflict encourages the need to explore communal intellectual property rights in the Yei Tribe's customary territory. The daily practices of traditional knowledge that intersect with nature need to be identified and authenticated so that the data found can later be registered as part of communal intellectual property rights that must be protected and recognized by the state.

Furthermore, some recent research findings on the issue of communal intellectual property protection, which have both similarities and significant. There are at least five research articles that address this issue. The first, closest research to this article comes from (Bustani, 2018), this article emphasizes the need for protection of traditional intellectual property rights in the current era of globalization. Bustani finds challenges in protecting indigenous peoples', communal rights and the need for a comprehensive legal framework, coupled with a suggestion to establish a special institution whose role is to coordinate communal interests with the authorities. The second comes from (Adawiyah & Rumawi, 2021), the reserach also emphasizes the need for a strong legal protection mechanism in protecting communal intellectual property in Indonesia. Both found that Indonesia faces challenges in protecting traditional knowledge due to public perception, limited data and documentation that hinder the protection of traditional knowledge. They found weaknesses in protecting communal communities due to the limited rule of law.

The third, (Putri, 2021) found that there is an awareness from the community that recognizes communal intellectual property as common property that must also be safeguarded together through defensive efforts and positive law. According to her, although the Trade Related Aspects of Intellectual Property Rights agreement recognizes communal intellectual property globally,

the recognition does not have a specific regulatory basis. The fourth (Prathama, Onassis, & Komara, 2023), this article aims to protect communal intellectual property as Indonesia's cultural heritage in general through comprehensive legal regulations, especially in Bali. According to the author, the government must seek legal protection for communal intellectual property to prevent it from being claimed by foreign parties. The last, (Sofari, 2023) in his research, the World Intellectual Property Organization has agreed on the importance of protecting traditional knowledge despite ownership challenges; the Indonesian government needs to preserve traditional knowledge by ratifying international treaties and harmonizing it with the existing characteristics of traditional knowledge.

Although the five articles share similar research themes, our study highlights key differences concerning communal intellectual property. While the existing literature primarily emphasizes strengthening regulations and establishing specialized institutions for communal intellectual property protection, we focus on the lack of data and digital documentation in South Papua. We believe these findings should be expanded, as effective regulations require active community engagement to recognize and protect communal intellectual property. A robust legal framework can only effectively function if data on the rights to be protected is available. Without such data, however, protecting these rights risks becoming futile—what is there to protect?

In addition, another distinguishing point is the fact that there has not been a single registration of communal intellectual property in the South Papua region. This fact encourages the need for exploration to protect the communal intellectual property rights of communities in the South Papua region. However, the good practices in the life of the Yei Tribe in Kweel Village that have been running so far have not been legally protected and need special attention. Exploratory actions that lead to the need for registration of rights have scientific benefits and new findings that we can offer in this article. Thus, the research focus in this article seeks to reveal the results of the exploration of traditional knowledge of the Yei Tribe in Kweel Village, South Papua, related to “medicinal plants and traditional medicine”.

The purpose of this traditional knowledge exploration is to document the available data which is then transformed into digital data that can be encouraged to be registered on a digital website (Tuter, 2024) (Lahay, 2024a) Ministry of Law. Communal intellectual property rights stored in the digital repository of communal intellectual property at the Ministry of Law are expected to encourage legal recognition and protection from the state to indigenous entities. This recognition will later become material property rights or exclusive rights (Purwanda, 2022) of the Yei indigenous people relating to the moral and economic sides. These rights can become an intangible heritage that is inseparable from the daily practices of the Yei indigenous people until the future. This is also in line with the 17 Sustainable Development Goals (SDGs) in 2015, where a key goal of true sustainable development is to protect the traditional knowledge and territories of indigenous peoples (Campbell, 2019).

## **B. Method**

This research uses an interdisciplinary approach in legal science or commonly called socio-legal research (Schiff, 1976) (Banakar & Travers, 2005) (Purwanda & Wulandari, 2023). Socio-legal studies are legal studies that use approaches, concepts, and theories of law and social sciences based on an interdisciplinary approach or from various disciplines that are combined simultaneously, which are used to examine legal phenomena that are not isolated from the social, political, economic and cultural context in which the law is located. Thus, it can be interpreted that this article uses interdisciplinary research, which can be construed as research using various disciplines' approaches. Meanwhile, the information or data found in the article is critically examined and selectively interpreted. Critical review is the initial stage in assessing the validity level of a source's accuracy. The data is then selectively interpreted. At this stage, the selected

data is interpreted through analysis and synthesis. The analysis controls the interpretation's objectivity level by using theories and concepts that are not trapped in subjective viewpoints but, as much as possible, in objective results.

### **C. Result and Discussion**

Intellectual property is divided into two types: personal intellectual property consists of, copyright, patent, trademarks, trade secrets, etc.; while those included in communal intellectual property (Bustani, 2018) are traditional culture expressions, traditional knowledge, indication of origin and geographical indication), and genetic resources (Effida, 2019). Communal intellectual property can be defined as works resulting from the creative activity of human thinking ability, based on the values lived and practiced by indigenous peoples (Arizona, 2023) orally or in writing from generation to generation that constitute collective ownership (Bustani, 2018). Traditional knowledge includes methods or techniques for cultivating and processing plants, medicine, arts, and food and beverage recipes. In addition, traditional knowledge can also be interpreted as part of the scope of intellectual works that refer to anything written or recorded that is the result of thoughts, theories, or creations of a person, organization, or nation (Samaloisa, 2020).

One of the many lists of communal intellectual property in Indonesia is the type of "Traditional Knowledge". Communal intellectual property rights such as traditional knowledge are a form of intellectual work that grows and develops from within the communal community (Prathama et al., 2023). Traditional knowledge can be in the form of literary, artistic, or scientific works resulting from intellectual activities from one generation to the next (Sofari, 2023). The concept of traditional knowledge refers to indigenous knowledge from a long tradition (Ray, 2023). Traditional knowledge can be classified as traditional forms of cultural expression and traditional knowledge (Ibe & Obiany, 2021), whether related to rituals (magical), medicine, genetic resources, handicrafts, innovation, and so on (Adawiyah & Rumawi, 2021). Awareness of the importance of protecting traditional knowledge in Indonesia dates back to the ratification of the Nagoya Protocol (Ridwan, 2018). The ratification carried out by the Government of Indonesia is in line with the contents of Article 28I paragraph (3) of the 1945 Constitution of the Republic of Indonesia (The 1945 Indonesian Constitution), as well as Law No. 28 of 2014 on Copyright, Law No. 13 of 2016 on Patents, Law No. 5 of 2017 on the Promotion of Culture, and Government Regulation No. 56 of 2022 on Communal Intellectual Property.

#### **1. Exploration of the Yei People's Knowledge of Local Medicine and Medicinal Plants**

In South Papua, the Yei people are spread across six villages. They live in Tanas, Bupul, Kweel, Erambu, Toray and Poo. Tanas, Bupul and Kweel villages are in the northern part of Merauke Regency and are known as Upper Yei villages, while the other three are in the southern part of Merauke or known as Lower Yei villages (Pegan, 2017). Several previous studies have identified the presence of the Yei Tribe in Merauke. It is generally assumed that they are part of the Malind or Marind tribe. However, this general assumption needs to be rectified, as they are different and not a sub-tribe of the Malind (the most dominant tribe in Merauke) (Pegan, 2017). Culturally (language) they have differences (Evans, 2018) with the Malind people (Baal, 1966). We also found that identification is not only a matter of language that is different from some tribes in Merauke such as Malind and Kanum who are directly adjacent to them, but also for food and clothing processing. This identification leads us to the fact that the Yei do have their own authentication of traditional medical knowledge.

On the basis of the in-depth research conducted by Baal (1966), we found that in the past, any treatment process related to mystical matters was not a major concern for the Yei people.

They asked and suggested better to the Kanum people for things that are mystical (black magic). The Yei people only believe that all diseases come from *Yevale*, who is the guardian or protector of community morals. Black magic is so foreign to them, there is no place for any reason when someone from the Yei Tribe gets sick or dies and then blames black magic (Baal, 1966). Baal's research gave us a clue that the Yei people have an authentic belief in healing that is visible (empirical evidence) and has been processed into traditional knowledge in terms of local medicine. We were even astonished by this bizarre fact, as most traditional societies usually believe in the mystical.

Leader of Kweel Village, Egenius Beljai (Interview on July 20, 2024), elucidated that traditional medicine remains a continuing tradition in the village. The types of medicinal plants that are also used have not undergone many significant changes, because they all still grow naturally and are abundantly available in the forest. According to Egenius, in general, the Yei people in Kweel Village still prefer to use leaves or plant roots that are boiled and then drink the water to compensate for internal diseases suffered, rather than having to go to a community medical health centre far from the village. The use of plant leaves or roots as medicinal materials is a form of community response to the existence of nature around them. Generally, medicinal plant habitats can be found in the wild or growing along village roads or cultivated in gardens or vacant lots, and home yards (Pamungkas, Mekiuw, & Yusuf, 2023). Forests are the natural and primary habitat of most medicinal plant species (Haryanto, Tanjung, & Kameubun, 2009).

Up to this point, according to Egenius (Interview on July 22, 2024), the community in Kweel Village still uses forest plants as medicine for everyday diseases. During data collection in Kweel Village, sixteen types of medicinal plants were found. These plant species have local designations (vernacular names) using the daily language used by the Yei people. These diverse types of medicinal plants are believed to be able to cure various diseases. The types of medicinal plants found were grouped into two healing functions, as internal medicine and external medicine. Of the sixteen plants, seven of them, all parts can be used as medicine. For the rest, only the leaves, the roots, the bark or the water collected in the stem are used as medicine. The process of taking medicinal plants can be done either individually or by traditional elders who know about medicine.

**Table 1.** Medicinal Plants: Treatment Methods and Functions

Medicinal Plants Local Designation & Sources	Treatment Methods	Treatment Functions	
		External Medicine	Internal Medicine
Alphitonia incana / <i>Bai Bai</i> (Royal Botanic Gardens, 2023b)	The roots and bark of the plant are boiled then the boiled water is drunk	-	Relieves bladder stone disease
Cryptocarya / <i>Bebekpare</i> (ALA, n.d.)	The bark of the plant is boiled then the boiled water is drunk	-	Relieves cough
Flindersia amboinensis / <i>Bejel Bejel</i> (Royal Botanic Gardens, 2023e)	All parts of the plant are boiled then the boiled water is drunk	-	Relieves shortness of breath and cough
Bryophyta / <i>Buldi</i> (Sriwiyati, 2010)	All parts of the plant are rubbed all over the body affected by insect stings	Relieves bee stings	-
Agavecea / <i>Bulusaku</i> (Pedley & Forster, 1986)	All parts of the plant are boiled then the boiled water is drunk	-	Blood vessel cleansing
Dianella ensifolia / <i>Elipasrei</i> (Royal Botanic Gardens, 2023d)	Leaves wrap wounds or abrasions on the body	Dries wounds or abrasions	-
Bambusa multiplex / <i>Jakmeui</i> (Royal Botanic Gardens, 2023c)	The leaves and stems of the plant are boiled then the boiled water is drunk	-	Relieves asthma
Breynia cernua / <i>Katu Katu</i> (Zich & Crayn, 2020a)	The leaves and stems of the plant are boiled then the boiled water is drunk	-	Blood enhancer
Guioa sp. / <i>Keispuer</i> (University, n.d.)	The leaves are chewed until mixed with saliva then the saliva is swallowed, while the pulp of the	-	Relieves malaria

	leaves is rubbed all over the body		
Phyllanthus niruri / <i>Meniran</i> (Royal Botanic Gardens, 2023f)	All parts of the plant are boiled then the boiled water is drunk	-	Relieves malaria
Tetracera nordiana / <i>Sebru Seburu</i> (Zich & Crayn, 2020c)	Directly drink the water contained in the plant stem	-	Relieves asthma
Chionanthus macrocarpus / <i>Teb Tebpoen</i> (List, 2010)	All parts of the plant are boiled then the boiled water is drunk	-	Relieves postpartum haemorrhage
Voacanga grandifolia / <i>Tem Tem</i> (Zich & Crayn, 2020d)	The leaves of the plant are pounded and then applied to the wound	Relieves swollen feet	-
Abrus precatorius / <i>Wajeipur</i> (Royal Botanic Gardens, 2023a)	The bark is chewed until it is mixed with saliva, then the saliva is swallowed, while the pulp is discarded	-	Relieves snake venom
Pyrrosia longifolia / <i>Yekaoeper</i> (Parks, 2023)	All parts of the plant are chewed until mixed with saliva, then the saliva is swallowed, while the pulp is discarded	-	Relieves diarrhea disease
Polyosma sp. / <i>Yamudap</i> (Zich & Crayn, 2020b)	The leaves of the plant are pounded and then applied to the wound	Relieves burns	-
	Total	4	12

Sources: Interview Results during late July to August, 2024 (edited).

Based on the data collected related to local medicine and medicinal plants of the Yei Tribe in Kweel Village, we can witness the existence of traditional knowledge in the form of traditional methods or processes with technical skills and knowledge in the field of medicine (Article 8 of Government Regulation No. 56 of 2022). Some conventional elders in the village can still concoct traditional medicinal plants. They still understand which parts are used for the wound healing process.

## 2. Forms of Legal Protection of Communal Intellectual Property Rights of Traditional Knowledge to Avoid Extinction

Registration of communal intellectual property types of traditional knowledge to the Ministry of Law must be encouraged. Registration is carried out according to the inventory that has been passed through exploration and data collection in the field. Inventory in the form of “recording” is the first step for all communal intellectual property that has never been recorded at all. Regarding the recording, it must be requested by the Yei Customary Community or Merauke Regency Government. Recording communal intellectual property requires several administrative requirements. The entitled party needs to fill out a registration application form, then describe the traditional knowledge that has been documented, along with supporting data on communal intellectual property and a written statement of support for protection, preservation, development and utilization efforts signed by the local government (Syafi’i, 2023). Communal intellectual property rights stored in the digital repository of communal intellectual property at the Ministry of Law will later encourage acts of legal recognition and protection from the state to the indigenous people of the Yei Tribe. This recognition will later become property rights in the form of intangible heritage that is inseparable from the daily practices of the Yei Tribe community until the future. There are protection goals that target several interests.

Apart from ecological reasons, the purpose of protection is also based on philosophical, cultural, legal, and administrative reasons. The answer to this holistic goal can be found in (Naess, 2019) which teaches us the need to prioritize the sustainability of ecological communities. In the concept of Deep Ecology, environmental protection, and rescue carried out by humans stems from the realization that humans are part of nature. Thus, it is fitting that the state knows this and is obliged to protect it.

Referring to the views of Djumhana and Djubaedillah who mapped five reasons (Djumhana & Djubaedillah, 2014) why traditional knowledge should get legal protection. Firstly, for reasons of equity (Purwanda, Ambarwati, Darmawati, & Prayudi, 2024) for indigenous peoples, secondly for reasons of conservation, which wants sustainability, thirdly for reasons of consistency of traditional cultural activities amid foreign cultural flows, fourthly for preventive reasons that anticipate irresponsible intellectual property profiteering, and reasons for recorded records that can prevent extinction. These four reasons can be a 'shield' of protection against government discrimination against indigenous peoples. Suppose these four things have been 'disarmed' by the government with various instruments that support its actions. In that case, the Yei Tribe is just waiting for the extinction of its traditions like the traditional knowledge of tribes that have gone extinct before them. The takeover of their natural environment will erase their collective memory (Purwanda, 2022) of their traditional knowledge.

The urgency of registering communal intellectual property rights aims to gain recognition from the state. If the government through its minister approves, then the indigenous people of Yei Tribe will get moral rights that are inclusive, have an economic impact, and without time limit. Then, the state is obliged to protect and maintain the communal intellectual property rights that have been registered. The phrases "safeguard" and "maintain" are phrases related to the "inclusive meaning", Article 5 of Government Regulation No. 56 of 2022. So, as long as the indigenous people of the Yei Tribe have these rights, the state through the ruling government must be involved and committed to caring for, preserving, maintaining, developing, and using the traditional knowledge of its citizens.

However, President Joko Widodo's government made an investment interests, massive and reckless, have changed the seventh president's already counter-populist way of doing politics. Because of national food security projects or included in national strategic projects, customary forests, especially those in South Papua, have been converted into vast expanses of land planted with sugar cane (Kelen, 2024) and oil palm (Abubar, 2012). Two million hectares of land that was once home to several species of flora is now home to only one-two type of plant. According to Sarjan Lahay, millions of hectares of Papua's forests are under threat. The pretext of "sugar self-sufficiency" and "bioethanol" risks clearing natural forests on a large scale in the remaining natural forests available (Lahay, 2024b). This problem is also read by the indigenous Yei people. They see the potential danger of this national food security project. In fact, they have witnessed the reality of oil palm plantations that have deprived them of part of their living space from the forest (Batbual, 2016). Moreover, the rivers (Abubar, 2012) have changed color and emit a bad smell. The indigenous people of the Yei Tribe fought back, considering that some parts of their customary forests are included in the two million hectares of sugarcane plantation project.

The resistance to investment from the indigenous people of the Yei Tribe was called out through a joint agreement sheet that they had agreed on June 7, 2024. This sheet of agreement is titled "*Kesepakatan Bersama Perwakilan Masyarakat Adat Suku Yei dan Rencana Tindak Lanjut*". This agreement includes family, clan and tribal ties which basically agree on four important points (Source: Yei Tribe Community): (1) The indigenous people of the Yei Tribe must not live in poverty on their own land; therefore, the indigenous people of the Yei Tribe must maintain, protect and care for the surrounding nature (forests, water, land, sacred places, ritual places, medicinal plants, trees and all natural resources); (2) The indigenous people of the Yei Tribe must be strong and united in clans and tribes so that there is unity in preserving livelihood sources and protecting the existing and remaining living space for the progress and welfare of the indigenous people of the Yei Tribe; (3) The indigenous people of the Yei Tribe must rebuild the fractured brotherhood between families, clans, and tribes that has occurred due to social conflicts caused by the presence of oil palm and sugar cane plantation investments; and

(4) the indigenous people of the Yei Tribe must be open and honest with each other in the family, clan, and tribe, especially in accepting investments that will invest in the customary territory of the Yei Tribe.

The collective agreement has opened our consciousness to the fact that the political and social stability of South Papua's indigenous forests is in turmoil. They are pitted against each other, pro-investment and counter-investment, against each other. Who has the most to lose from this, the indigenous people and the natural ecology of Papua of course, and who has the most to gain from this besides the financiers and elites in power in the government. Forests are natural laboratories for indigenous medicine and life. Taking over the forest is tantamount to paralysing their traditional medical knowledge. Knowledge will only remain in their collective memory, while local medicine practices and knowledge of medicinal plants will only remain in the memory of the last person who still retains the collective memory of their predecessors. Collective memory will never be passed on to the next generation, if the forest no longer provides the tools. The tools that have disappeared are taken away by the hands of the authorities, only waiting for extinction. Extinction events take place not only because of changing natural conditions, but also because of the greed of the rulers.

#### **D. Conclusion**

The exploration of traditional knowledge found in the Yei community in Kweel Village needs to be encouraged to receive legal protection and state recognition of communal intellectual property rights. The data documentation found can be evidence and reference material for communal intellectual property rights in the village. The acquisition of rights from the government will further strengthen the influence of local indigenous peoples to be legally protected and recognized by the state as customary entities that must be preserved and defended by the state. The threat of extinction due to the weakening position of indigenous peoples towards the government through a series of programs launched will increasingly fade along with the presence of legal protection as well as state recognition of the acquisition of intellectual property rights obtained by indigenous peoples. Efforts for legal protection and recognition from the state need to be carried out continuously because the behavior of the ruling government can change at any time by the will of the power being exercised.

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