Intellectual Property Rights of Traditional Knowledge

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Abstract. As a developing country rich in natural resources, art and culture, Indonesia has a wide range of traditional knowledge. Therefore, as a national creation that has received international recognition, there is a need for legal recognition and protection that can take into account the ownership of traditional knowledge. Regulations in intellectual property rights, especially in patent law, aim to provide legal protection for inventions and economic benefits for inventors. However, patent laws adopted from IPR developed countries have not been able to provide optimal recognition and protection of traditional knowledge in its implementation. This is due to the difference between the concept of exclusive and individual patents and traditional knowledge that has traditional, communal, and open characteristics. Lack of general knowledge about IPR, inadequate technical acquisitions and low budgets are also obstacles in patenting traditional knowledge

Keywords: intellectual property rights, patents, traditional knowledge

1 Introduction

Globalization, advances in science, technology and information have made the world borderless. Various developments in science and technology in a country can spread quickly and easily accessible to people in other parts of the world. This situation has encouraged the development of intellectual property rights (IPR) as an effort to protect inventors through monopoly rights granted by law to obtain economic benefits from their findings. IPR protection is designed to protect inventors, creators, and other parties who are authorized to exploit intellectual property rights individually and collectively as property rights arising from human intellectual abilities.[1]

Traditional knowledge belongs to the scope of intellectual work derived from ideas, conceptions and inventions of national societies. The scope of traditional knowledge itself refers to literary works, works of art, scientific works, performances, inventions, scientific discoveries, designs, signs, names and symbols, unpublished information and all other tradition-based innovations and creations resulting from intellectual activities in the industrial, scientific, literary, or artistic fields. The tradition-based concept refers to a system of

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knowledge, creation, innovation, and cultural expression that is generally passed down from generation to generation, considered relevant for a particular society or region, and has evolved continuously in response to environmental changes in unsystematic ways.

Therefore, traditional knowledge recognizes not only the discovery of ideas, but also their dissemination and utilization by others. As an archipelagic country with a population consisting of diverse ethnic groups with different customs, arts and cultures, Indonesia has great potential in terms of traditional knowledge, including art, culture, and other local wisdom. This extraordinary potential is essentially an asset of the nation and state that must be protected and preserved so that its existence and development bring positive benefits to society. In practice, much of the traditional wealth owned by the people of the archipelago simply disappeared or changed hands to other countries. For example, since the time of our ancestors we have known tempeh, a traditional Indonesian food made from soybeans.

Unfortunately, at a time when tempeh began to be widely known abroad, other countries that were more aware of technological advances and intellectual property rights patented it as domestically made intellectual property. In fact, tempeh patented in other countries is not traditional tempeh like in Indonesia, but tempeh that has been developed. For example, the United States patented anti-cholesterol tempeh and Japan patented tempeh containing antioxidant compounds, but the lack of public awareness to patent tempeh as a native Indonesian product can cause economic losses for Indonesia in the long run. Tempeh is just one of the traditional knowledge possessed by the people of Indonesia. There are still many other products that are the work of the Indonesian people but have not received legal protection, such as traditional medicines, works of art and literature. The reasons why the works and products of the nation's children have not received legal protection in terms of IPR recognition and appreciation include regulations that do not support IPR enforcement, low public awareness to register their works and ideas, lack of data documentation, and the generally communal nature of traditional knowledge, There are various obstacles.

The issue of protecting traditional knowledge as a field of intellectual property rights is of concern to local communities and various international organizations. The World Intellectual Property Organization (WIPO), a global intellectual property organization headquartered in Geneva, Switzerland, has established an international forum on the Genetic Resources of Traditional Knowledge and Folklore (GRTKF). The forum obliges its member states to discuss the issue. Some countries, especially developing countries, have individually tried to protect traditional knowledge by enacting laws, such as in Panama, where users of traditional knowledge must abide by regulations issued by indigenous peoples who possess or master such traditional knowledge. In addition, Peru has passed a law requiring that anyone who wants to use traditional knowledge must obtain the consent of the society that possesses the traditional knowledge and sign a contract for its use.[2]

Although intellectual property rights have been known in developed countries for more than a century, intellectual property rights in Indonesia are relatively new compared to other countries. During Dutch colonial rule, Octroi Wet 1910 Staatblad No. 33 was enacted, but later revoked after independence. Regulations regarding intellectual property rights were first established in Indonesia in 1982 with the enactment of Law No. 6 on Copyright. Currently, regulations regarding intellectual property rights include Law No. 14 of 2001 concerning Patents (Patent Law) and Law No. 15 of 2001 concerning Trademarks (Trademark Law). Law No. 15 of 2001 concerning Trademarks (Trademark Law), Law No. 19 of 2002 concerning Copyright (Copyright Law), Law No. 29 of 200 concerning Protection of Plant Varieties (PVP

Law), Law No. 30 of 2000 concerning Trade Secrets (Trade Secret Law) and Law No. 29 of 2000 concerning Plant Variety Protection (PVP Law). (PVP Law). The Trade Secret Law (Trade Secret Law) and the Law on the National System of Research, Development and Application of Science and Technology (UU Sisnas Ristek) No. 18 of 2002 refer to the regulation of traditional knowledge. In practice, despite the existence of intellectual property laws, many works of Indonesian people that have been jointly owned for generations have been patented by foreign parties.[3]

Some requirements for obtaining legal recognition of traditional knowledge works and products are constrained by the characteristics of traditional knowledge that are not in sync with the requirements for granting or recognizing intellectual property rights such as patents. The concept of IPR recognition originating from developed countries contained in various international agreements such as the General Agreement on Tariffs and Trade (GATT) and Trade-Related Aspects of Intellectual Property Rights (TRIPs) does not take into account the sharp gap between developing and developed countries in the ability to obtain knowledge, technology and information, but rather prioritizes economic and investment interests.[4] TRIPs prioritize the interests of developed countries, which ultimately creates a monopoly for them. As a developing country rich in natural resources, arts and culture, Indonesia has a diverse range of traditional knowledge and needs legal recognition and protection to be able to maintain ownership of traditional knowledge as an internationally recognized national work.

Based on this, the formulation of the problem analyzed in this paper is as follows:

1. What is the legal protection of traditional knowledge?

2. What are the advantages and limitations of legal protection against traditional knowledge?

The purpose of this paper is to explain how legal protection of traditional knowledge and what are the implications of legal protection of traditional knowledge. Furthermore, this paper is expected to add insight to readers and can be a reference to know and understand IPR in Indonesia, especially those related to legal recognition and protection of traditional knowledge.

2 Method

The writing method of this article is descriptive analysis method. This article explains the importance of legal recognition and protection of traditional knowledge in Indonesia, especially related to intellectual property rights (IPR) and patent law. This article also analyzes the obstacles faced in the implementation of legal protection of traditional knowledge, such as the difference in concept between patents which are exclusive and individual and traditional knowledge which is communal and open. This method is used to provide an overview of the problems faced and evaluate the shortcomings of existing regulations in providing protection for traditional knowledge in Indonesia.

3 Discussion

3.1 Legal protection of traditional knowledge

The concept of IPR management involves two processes that interact in one system: the process of developing ideas to obtain inventions for legal protection and the process of commercializing inventions for profit. The government focuses on promoting legal protection and commercialization to encourage invention and innovation.14 The protection efforts provided by governments, especially through regulatory channels, are actually motivated by the pressure of globalization, led by developed countries. This can be seen clearly and straightforwardly when we see the enactment of laws and regulations in the field of intellectual property rights. Law No. 14 of 2001 on Patents, which repealed Law No. 6 of 1989 on Patents, as amended by Law No. 13 of 1997 on Amendments to Law No. 6 of 1989 on Patents, stated in its study: 'Indonesia's ratification of international treaties, the rapid development of technology, industry, and trade requires patent laws that provide reasonable protection for inventors.[5]

Globalization is inevitable and therefore it is imperative to harmonize intellectual property law with various international treaties. As is known, in 1994, Indonesia has ratified the Agreement Establishing the World Trade Organization (WTO) through Law No. 7 of 1994 concerning the Ratification of the Agreement Establishing the World Trade Organization, including the TRIPs Agreement. As a member of the WTO, Indonesia is obliged to coordinate various national laws and regulations regarding the regulation of intellectual property rights. Indonesia is obliged to do so. The question then is whether Indonesia, as a developing country, is ready to apply the IPR principles set out in TRIPs.[6] The inequality of position between developed and developing countries initially raised concerns that developing countries would not be able to play an active role in global markets or even just be spectators to the business done by developed countries. Joseph E. Stiglitz, in his book Making Globalisation Work, argues that under the banner of TRIPs set by developed countries, all member states are forced to implement IP regimes that require certain standards that are considered high, especially for developing countries[7].

They argue that they are forced to The conditions and capabilities of countries around the world are not equal or balanced, and applying high standards in IPR recognition under the pretext of providing recognition and protection to those who have works and intellectual capacities, without regard to the limitations and conditions faced by developing countries, will only benefit developed countries. Furthermore, Joseph E. Stiglitz stated that,16 First, protection facilities are provided as desired by developed countries, but traditional knowledge in developing countries is not protected. Second, TRIPs reduce developing countries' access to knowledge and force them to pay hefty royalties. For example, developing countries are promised greater access to agriculture, while developed countries cut subsidies. Setting high standards as a requirement for obtaining IPR can make it difficult for people and governments in developing countries to fight for IPR over traditional knowledge.

At first glance, IPR registration indicates the benefits and uses that IPR owners can obtain from interest and appreciation for the existence of intellectual works carried out by individuals and community groups. However, please note that the requirements that must be met to obtain IPR rights, such as complicated and lengthy bureaucratic procedures that require knowledge and understanding of IPR rights from inventors who apply for IPR, as well as the relatively high cost of submitting IPR rights. This can be an obstacle in registering IPR for

inventions arising from national intellectual works, especially for goods and products unique to Indonesia, such as findings in agriculture. In matters relating to authentic Indonesian goods, IPR protection, especially patents and brands, becomes very important, especially where these goods have the potential to bring high economic benefits.[8]

Indonesia's natural wealth, customs, and diverse ethnic groups are also sources of traditional knowledge. For example, various plants native to Indonesia have long been used as basic ingredients for cosmetics and traditional medicines. Literature and artwork are original creations from various tribes, including local handicrafts that are now the target of many art collectors. All this requires attention from central and local governments to ensure that its existence is protected and local communities, as owners of traditional knowledge, can benefit from their intellectual property.[9] This is especially true if traditional knowledge turns out to be a source of inspiration for new innovations for researchers to discover and develop. However, in addition to low public awareness of the urgency of IPR to protect knowledge, government efforts to support the existence and development of traditional knowledge have also not been optimal. Policies in the field of IPR are still oriented to developed countries so that they have not been able to improve and protect national intellectual property, especially traditional knowledge. Applying the Western IPR concept without regard to the potential conditions of IPR only gives countries with high-tech capabilities and large budgets the opportunity to 'steal', or at least give up national inventions and apply them as IPR in other countries, with inappropriate rewards. It is other countries that benefit from the commercialization of IPR. With reference to laws and treaties in the field of intellectual property rights, the legal protection afforded to IPR includes patents (including simple patents), trade secrets, trademarks, industrial designs, plant variety protection, integrated circuit layout design, geographical indications and indications of origin and copyright protection. There are no specific laws governing traditional knowledge. Therefore, if traditional knowledge is to be recognized as an intellectual work, then the provisions in the field of intellectual property rights, spread across various laws, will apply.

This situation is very unfavorable for local (adat) communities, owners of traditional knowledge with various characteristics in local communities, to get respect and benefit from the knowledge they have, especially when viewed from the perspective of the concept of intellectual property rights which have different requirements and criteria depending on traditional characteristics and the nature of traditional knowledge. To obtain these rights, inventors, brand owners, and creators must be proactive in applying for intellectual property rights to the government. In other words, without an application for registration of IP, the owner of the IP cannot obtain the right to recognition of IP rights. For example, the granting of patent rights is processed through the Directorate General of Intellectual Property Rights (Ditjen HAKI) of the Ministry of Law and Human Rights, where the registration procedure is carried out by submitting a patent application with the following procedure: the patent application is submitted using the form provided, filled in with Indonesian and typed in duplicate 4 (four). The applicant must include the following documents: a special power of attorney if the application is filed on behalf of a registered patent consultant; if the application is submitted by another person who is not the inventor, the assignment of rights, specifications, claims, and abstracts: three copies each; if there is a drawing, three duplicate copies; if the application is submitted with priority rights, the original Proof of priority, 4 copies of the description Indonesian in duplicate: 3 copies of drawings, if any; priority certificate, 4 copies of the description of the Indonesian in duplicate, if the application is submitted with priority rights; 2 copies of the English description in duplicate, if the invention

is described in a foreign language other than English; Certificate of having paid a patent application fee of Rp. 575.000,- (Rp. 570.000,-), and a simple patent application fee of Rp. 125.000,- (Rp. 1.225.000,-) and a simple patent substantive examination fee of Rp. 350.000,- (Rp. 350.000,-). [10] In addition to these formal requirements, IPR applications must also meet substantive requirements; The substantive requirements to be met in an IPR application include Novelty: i.e. the invention for which the patent is requested must have not been previously disclosed in any place or by any means. This requirement can be either absolute novelty (worldwide novelty) or relative novelty (national novelty). In terms of absolute novelty, an invention loses its novelty if it has been published in any form in any country before the patent application was filed. In relative novelty, on the other hand, an invention loses its novelty if it has been published in one of the countries or known for local use before the patent application is filed. Novelty requirements are determined based on certain restrictions, such as geographic region, the time at which the invention became publicly known and of publication.

Article 3 of the Patent Act states as follows: An invention is considered new if it is not identical to the previously disclosed technology on the date of receipt. Technology that has been previously disclosed as referred to in paragraph (1) is technology that has been published before the date of receipt or priority date, either in writing or orally, demonstration, or in other means that enable an expert to carry out the invention, both inside and outside the territory of Indonesia. The previously disclosed technology referred to in paragraph (1) includes applications submitted in Indonesia that have been published after the date of receipt on which the substantive examination is conducted, but before the date of receipt of the application or priority date. Furthermore, Article 4 of the Patent Law states that:

1) An invention is not considered to have been announced if it has been announced within a period of at least six months prior to the date of receipt:

2) The invention has been exhibited in an official or officially recognized Indonesian or foreign international exhibition or in an official or officially recognized Indonesian national exhibition; or

3) The invention is used by inventors in Indonesia for experimental purposes in the context of research and development.

4) An invention is not considered published if, within 12 months prior to the date of receipt, it has been published by another party in breach of the invention's confidentiality obligations.

5) Industrial applicability: this means that inventions that are the subject of a patent application can be mass-produced of the same quality or can be used practically in industry. Article 5 of the Patent Act provides that an invention is industrially available if it can be industrially worked out as described in the application.[11]

Inventive step.

Based on Article 2 (2) and (3) of the Patent Law, an invention is considered to have an inventive step if it is considered unexpected by people who have certain expertise in the technical field. The assessment that the invention is unexpected should take into account the expertise available at the time of filing the application or, in the case of applications submitted

under the right of priority, the expertise present at the time of filing the first application. These substantive requirements are set out in Government Regulation IX. According to Article 34 of 1991 concerning the procedure for granting patents, the consideration of granting patents is based on, inter alia, the following

novelty of the invention the degree of novelty contained in the invention The novelty of the invention, the stages of novelty contained in the invention and the industrial application of the invention; that the invention does not belong to the group of inventions for which a patent cannot be granted; that the inventor or person over entitled to the inventor is entitled to a patent for the invention; and

The invention is not contrary to law or regulation, public order or morality; and To find out whether the substantive requirements are met, the Directorate General of Intellectual Property conducts a substantive examination, which may involve cooperation with other agencies or summoning experts. A substantive examination is conducted at the request of the patent applicant. The application for substantive examination of the patent is submitted using the form specified in the Indonesian, filled in completely and accompanied by proof of payment of the application fee of IDR 2,000,000 (two million rupiah). If a substantive examination is not conducted or the cost of the substantive examination is not paid, then the patent application is considered withdrawn.

The subject of IPR is a patent recipient or a person authorized by the patent recipient, in accordance with the definition of a patent in Article 1 (1) of the Patent Law (Law No. 14 of 2001), which states: "A patent is an exclusive right granted by the State to an inventor for an invention in the field of technology, and the inventor must work on his invention or authorize others to work on it for a certain period of time".

Inventor in the definition of patent is an idea, which is the inventor's idea that is poured into the activity of producing an invention, or the refinement or development of a product or process, or someone who alone or together with several other people, to solve a specific problem in the field of technology that is tangible a product or process. (Article 1, verses 2 and 3). Understanding or defining Article 1 of the Patent Law from a legal aspect, patents can be granted to certain legal entities (in this case inventors as inventors of ideas through the activity of generating intellectual ideas, or other people who obtain the right to use and exploit these intellectual property rights based on a license agreement with the inventor (intellectual property owner) of the idea), which is exclusive, i.e. it can only be granted to certain legal entities (in this case parties) only, which is an exclusive right granted by the state. In the case of IPR owners, such rights are attached to their owners and last for a period of time prescribed by law. In the case of a patent, the term granted by the State to the owner is 20 years, and if the owner wants to continue the patent rights, he must reapply. In the case of a patent holder under a licensing agreement, the term granted is temporary, depending on the terms of the agreement.

The difficulty in obtaining intellectual property rights over traditional knowledge, although it is intended to reward inventors and creators of ideas, is due to the nature of customary law, whereas most traditional knowledge is common property invented by society and used for generations, the requirement to obtain a patent for an invention for which a patent is requested, This is because it must be novelty, has never been previously published in any country in any way. In addition, the requirement that the invention to be patented must have an

inventive step and must be industrially available is difficult to apply to traditional knowledge. Progressivity in traditional knowledge refers to progressivity that has become public domain to be discovered and used by all citizens, maintained together and kept relatively open for a relatively long time so that other societies can easily access it.[1]

The communal, concrete, cash, and open characteristics of traditional knowledge are not in accordance with the concept of intellectual property rights as stipulated in the Law. In practice, the characteristics of traditional knowledge that in the context of Western IPR concepts do not qualify as inventions that can be claimed by IPR, are exploited by other countries that have high expertise and technology and are modified, identified, and concocted to become new inventions that combine traditional knowledge and meet the criteria for filing IPR frequently. When traditional knowledge with some new innovation is patented, the economic benefits are of course owned and enjoyed solely by IPR holders. Even the original owners, traditional communities, have to go through certain procedures and incur high costs if they want to reuse traditional knowledge. For example, the basic ingredients of traditional medicines derived from plants and plants native to Indonesia have been patented by foreign parties, so if Indonesian companies need cosmetic ingredients derived from these plants, they must import them from the country where the plants are patented at a high cost.

There was also a case in India where the US granted a patent for turmeric, but the State of India, claiming that medicinal turmeric was an invention based on traditional Indian knowledge, filed a lawsuit over the case after a long and costly and time-consuming struggle, which was later revoked. India and the United States commented on the case from different points of view. According to India, this case is a bad example of a patent, where a patent on turmeric was granted and then revoked because it was proven that the invention was not new, and the process was also very expensive and time-consuming. For example, a turmeric patent must be challenged in a court in the country where it was granted. The US, on the other hand, argues that disclosure obligations and requirements do not prevent bad patents. Moreover, according to the US, even if there is a bad patent, the patent can be revoked.

Apart from the debate regarding the implementation of IPR, the government's interest in providing IPR protection from its own country is absolutely necessary, both in the form of formal legislation, enforcement, and supervision.

3.2 Benefits and Barriers to the Implementation of Traditional Knowledge Protection

Within the framework of civil law, intellectual property rights fall within the scope of immaterial property law in the form of ideas invented or created by individuals or groups as a result of intellectual work. As with other objects, exploitation or use of IPR by its owner or by others under license can yield economic benefits. Therefore, IPR contains economic rights. The economic rights available to IPR holders depend on the type of IPR a person has. For example, with patents, economic rights include the right to use the patent itself and the right to use the patent through licensing; With copyright, the copyright holder has reproductive rights, the right to adapt or convert the work into another form of work through language transfer, distribution, broadcast, and performance.

Intellectual property protection is motivated by a desire to protect inventors and others who invest capital in developing the creative process, and for inventors to receive a return on their investment. In the concept of IPR originating from developed countries, the protection afforded to inventors creates a monopoly that distinguishes individuality. This means that such rights are only owned and used by the inventor or licensee for a specified

period of time as prescribed by law. If someone uses someone else's intellectual property rights without permission, they may be subject to criminal penalties and civil sanctions. For example, with patents, the exclusive rights granted by the State to the patentee or licensee are valid for 20 years. Within this 20-year period, only the patentee can exercise his right to commercialization. The other party may only use the patents of the person or entity licensed through an agreement between the patent holder and the party seeking the patent. If all traditional knowledge is officially recognized by the state without barriers, local people as owners of traditional knowledge will not only get legal recognition nationally and internationally, but will also benefit economically. But in reality, traditional knowledge has to face various obstacles due to its nature and characteristics that cannot meet the requirements for IPR submission. Therefore, the Government needs to make efforts to protect traditional knowledge by providing exceptions in IPR laws and regulations, especially in setting IPR submission requirements for traditional knowledge.

The existing IPR laws and regulations are still very dominated by developed country concepts. This is because Indonesia as a WTO member must comply with and implement the TRIPs Agreement, including adjusting existing IPR laws and regulations with the TRIPs Agreement. However, the Government needs to make efforts to protect Indonesia's IPR, especially traditional knowledge that is harmed by the application of IPR concepts in developed countries. Some provisions of international treaties on IPR are unfair to Indonesia, such as priority rights contained in the Paris Convention. The right of priority allows the patent holder to register a patent in the country of convention within one year from the date of filing in the country where the invention was first registered. If a patent recipient from a developed country registers a patent in a developing country that is a signatory to the Convention, the patent may be revoked if the patent is similar or identical to a patent registered by an inventor in a developing country.[2]

In order to protect national interests, IPR policy should not only adopt the provisions of TRIPs as standard provisions, but also should be able to provide legal certainty to individual Indonesian citizens for IPR inventions and works which ultimately have an impact on improving the welfare of the nation while improving the national economy.

Therefore, in addition to negotiations at various meetings of international organizations that discuss IPR agreements, some provisions in the WTO can be used by governments in their efforts to protect traditional knowledge. Its exclusive nature and always belonging to its owner makes IPR a monopoly and allows foreign companies holding IPR to abuse their position to get as much profit as possible. This is clearly contrary to the philosophy of patent protection, which is to encourage invention. Traditional knowledge is not managed for the benefit of the individual or community that owns the intellectual property, but is open to access by parties outside that community. The communal nature of indigenous peoples who always prioritize communal interests above individual interests is another obstacle or barrier that makes it difficult to apply intellectual property rights to traditional knowledge. For indigenous peoples, sharing knowledge, skills and expertise with others is part of life, and it is a matter of pride if their achievements are disseminated and used for the benefit of others, including other communities.

The issue of documenting IPR material is one of the important issues that requires the attention of various groups, both government and society, especially in documenting traditional knowledge. In accordance with its traditional nature, legal acts and legal relationships that occur in traditional societies are cash or cashless, completed immediately at

the time the deed is done and simple. As a result, deeds in traditional societies are generally not documented, even though they have accumulated over a very long period of time and have been preserved for generations in society. Complete documentation of traditional knowledge can influence the success of formal IPR protection efforts as arguments and evidence if there are claims from other parties against our traditional knowledge. The case of 'the use of tumerin to treat wounds' is proof of the importance of traditional knowledge documentation in IPR protection of traditional knowledge. The success of the Indian Council of Scientific and Industrial Research in revoking Suman K. Das and Hari Har P. Kohli's tumerin patents from the University of Mississippi Medical Centre that has been patented by the United States Government is based on 32 public documents filed by the Indian Council of Scientific and Industrial Research.[12]

In Indonesia, an initiative to document traditional knowledge data is a Ministry of Research and Technology program called the Traditional Knowledge Protection Program (LINTRAD). The program aims to catalog a variety of traditional knowledge documents, including documents that have entered the public domain and restricted documents, to help protect and manage traditional knowledge. In connection with the LINTRAD program, in 2003, WIPO issued a guidance document on defensive protection measures of traditional knowledge and genetic resources to prevent the acquisition of intellectual property rights to traditional knowledge and genetic resources by parties other than owners or stakeholders of traditional knowledge and genetic resources. It is expected that this document will serve as a reference for traditional knowledge protection programs, so that national traditional knowledge protection programs will be aligned with formal traditional knowledge protection programs at the international level.

Documentation is essential in the formal protection of traditional knowledge. In all IPR applications, the search for documentation pertaining to similar previously existing patents, commonly referred to as prior inventions, is an important process that inventors must undertake before applying for IPR registration. This is to avoid the existence of identical IPR or similar elements that are not new. Unfortunately, although many IPRs in developing countries have the potential to have IPR, these countries are generally not supported by adequate databases, which creates obstacles when searching for existing IPR-related documents. Prior art documents can also be useful as arguments when making claims for IPR that has been issued or, conversely, when defending IPR that is already owned. India's success in patent claims for tumerin issued by the U.S. and in the process of revoking patents granted to the U.S. Department of Agriculture and W.R. Grace Company for the use of antifungal agents produced from neem tree extract (azadirachta indica) is due to the fact that those claims are supported by good data.

In many cases, traditional knowledge held by developing countries is often exploited by foreigners by patenting similar inventions as a development of existing inventions. However, it is legally possible to innovate on previously patented inventions, as long as the elements of renewal are met and can be applied in industry. For inventors in developed countries with expertise, technical expertise and highly cooperative budgets, it is not difficult to conduct renewal research inspired by traditional knowledge. In this case, owners of traditional knowledge are compensated for their exploration of biological resources, but it is necessary to pay attention to the laws on which agreements between owners of traditional knowledge and users of local resources are based. In other words, in an effort to protect traditional knowledge, not only legal instruments related to IPR need to be adapted to the

conditions and characteristics surrounding traditional knowledge, but also legal instruments related to the use of traditional knowledge to ensure that the original owners of traditional knowledge, namely local communities, are respected and receive commensurate economic benefits. This means that contract law relating to agreements is also included.

4 Conclusion

Various traditional knowledge that is an intellectual activity of Indonesian society that has existed since the time of the ancestors and has been developed and maintained for generations as part of intellectual property rights still does not get optimal legal protection. In addition to the absence of laws that specifically regulate traditional knowledge, existing laws and regulations in the field of intellectual property rights have also not been able to provide protection and economic benefits for owners of traditional knowledge. Intellectual property rights as a form of recognition and appreciation of rights to intellectual works have not been fully applicable to traditional knowledge. This is due to the difference between the concept of IPR introduced from developed countries and adopted into IPR laws and regulations in Indonesia with traditional knowledge itself which is part of customary law. Customary law concepts that give vitality to traditional knowledge, such as communality, secularity, casuality, and openness, are different from the characteristics of IPR concepts, such as exclusivity, which create IPR monopolies.

IPR arrangements in national law are intended to respect and protect IPR in Indonesia, but these benefits are not optimized in traditional knowledge IPR due to several constraints, such as poor understanding of IPR and lack of documentation. In addition, some requirements for obtaining IPR recognition through IPR registration, such as the obligation to apply IPR that has been registered in the industry, are also obstacles in providing IPR protection for traditional knowledge.

Given the importance of traditional knowledge as a national asset that needs to be protected and developed according to its characteristics, policies oriented towards strengthening the existence of traditional knowledge are needed, recognizing traditional knowledge as intellectual property rights that are internationally recognized and have economic potential. For this reason, specific laws governing traditional knowledge and their protection need to be enacted and comprehensive regulations on traditional knowledge need to be made. In addition, governments, as members of international organizations, need to continue to cooperate with other countries to protect traditional knowledge from acts of theft and expropriation of IPR that harm local communities.

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