

# THE PROTECTION OF TRADITIONAL KNOWLEDGE UNDER INDONESIAN PATENT LAW: BETWEEN OPPORTUNITIES AND CHALLENGES

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## Abstract

*The protection of traditional knowledge through patents is still an interesting issue on an international level. Indonesia revised Patent Law in 2016 (Law Number 13 of 2016 concerning Patent or Indonesian Patent Law). This Law has confirmed that patent is an exclusive right that the country gives for the inventor to the invention in technology, for a certain amount of time, to implement itself or give other parties to implement it. The patent can be submitted if required terms of the patent application, there are novelty, inventive steps, and industrially applicable. That provision cannot be fulfilled by traditional knowledge, where traditional knowledge is the knowledge passed down from generation to generation. This study is a doctrinal study that will analyze Article 26 of the Indonesian Patent Law. The study found that Indonesia has required the mention of sources of origin in traditional knowledge under Indonesian Patent Law. This article provides opportunities for the protection of traditional knowledge. It is also a challenge for communities to obtain protection and benefit-sharing from traditional knowledge that the original source has stated when filing a patent.*

**Keywords** : Patent Law, protection, traditional knowledge.

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Submitted : 15 June 2020 | Revised : 7 December 2020 | Accepted : 15 January 2021

## I. INTRODUCTION

Legal protection of traditional knowledge (TK) is still an interesting issue to be internationally debated,<sup>1</sup> that can be seen in the agendas of IPR council meetings at the WTO.<sup>2</sup> The existence of a long debate related to whether or not the protection of traditional knowledge is regulated by itself or incorporated into the IPR legislation of each member country. There is a tug of war between developed and developing countries in the legal protection of traditional knowledge.<sup>3</sup> Then debate in the academic ranks about the protection of TK

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<sup>1</sup> Miqdad Abdullah Siddiq, "Dilema Komersialisasi Pengetahuan Tradisional Dalam Sistem Hukum Indonesia: Antara Perlindungan Dan Pembagian Manfaat [The Dilemma of Commercialization of Traditional Knowledge in the Indonesian Legal System: Between Protection and Benefit Sharing]," *Jurnal Hukum & Pembangunan* 4, no. 1 (2018): 83.

<sup>2</sup> Aman Gupta and Ravi Prakash, "Indian Traditional Knowledge: Leeway towards Sustainable Development," *Journal of Intellectual Property Rights Law* 1, no. 2 (2018): 39.

<sup>3</sup> Christoph Beat Graber and Martin A. Girsberger, "Traditional Knowledge at the International Level: Current Approaches and Proposals for a Bigger Picture That Includes Cultural

of interests between developed countries and developing countries that occur in international forums, especially relating to trade and economics laden with momentary, negative, and political interests.<sup>4</sup>

The Existence of TRIPs Agreements (Trade-Related Intellectual Property Rights) which are the result of negotiations conducted by member countries of the World Trade Organization (WTO), has required all member countries to sign and ratify TRIPs. Article 27 TRIPs emphasize that WTO members must provide patent protection for any invention, whether in the form of products or processes, in all technology areas without discrimination, depending on novelty testing, inventive steps, and industrial use. Under these provisions, each member country that signed the agreement must contain or meet the standard provisions regarding patents in or specifically in national legislation in member countries.<sup>5</sup> However, the TRIPs Agreement does not directly mention TK as a subject of protection within its field of activity. It does not explicitly prohibit the protection of TK as a form of intellectual property right. As a result, it is possible to interpret the Agreement so that TK, practices, and innovations that meet the protection criteria in the existing intellectual property category are not excluded from the scope of the TRIPs agreement. To determine the possibility of recognizing TK as intellectual property according to the existing property rights regime. It is said that some TK, such as technological processes related to weaving, metalworking, or designing musical instruments, as well as the use of herbal medicines, can be patented. To get a patent, each person must fulfill three requirements. Many traditional methods are suitable for using technology, but they are unlikely to meet legal criteria related to new things because they are already available to the public. Although traditional medicines have many opportunities to be used, they usually do not meet the new and unclear requirements.<sup>6</sup>

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Diversity” in *Recht des ländlichen Raums, Festgabe für Paul Richli, J.Schmid/Hansjörg Seiler, (Schulthess Zürich, 2006): 248.*

<sup>4</sup> Rosa Gianina Alvarez Nunez, “Intellectual Property and The Protection of the Traditional Knowledge, Genetic Resources, and Folklore: the Peruvian Experience” in *Max Plank, A. von Bogdandy and R. Wolfrum, (Yearbook of United Nation Law, 2008): 489.*

<sup>5</sup> Dwi Martini, et al, “Perlindungan Hukum Terhadap Pengetahuan Obat-Obatan Tradisional Dalam Rezim Hak Kekayaan Intelektual Indonesia, Studi Pada Masyarakat Tradisional Sasak [Legal Protection of Traditional Medicines Knowledge in Indonesian Intellectual Property Rights Regime, Studies on Sasak Traditional Communities Legal Protection of Traditional Medicines Knowledge in Indonesian Intellectual Property Rights Regime, Studies on Sasak Traditional Communities],” *Jurnal Hukum Dan Peradilan 6, no. 1 (2017): 69.*

<sup>6</sup> Adel Ilsiayrovich, et al, “Traditional Knowledge and Intellectual Property Rights, Turismo: Estudos & Práticas (UERN)” *Mossoró/RN 2, (2019): 5.*

TRIPS agreement in its present form largely favors the needs of developed countries only.<sup>7</sup> Therefore, there is a need for innovation in intellectual property that serves developing countries' needs and provides justice for the existing WTO system. It will also ensure equality and fairness in international trade and intellectual property involving TK and genetic resources. As discussed, kindergarten is the intellectual creativity of indigenous peoples and local communities. People developed TK for generations through observational research and natural experiments.<sup>8</sup> In cases such as the neem trees, ayahuasca, or quinoa, examples show how IPR is granted to individuals or research companies. However, indigenous peoples in developing countries initially developed the use and knowledge of these plants.<sup>9</sup>

Countries have proposed in the WTO that the TRIPS Agreement should be amended to stipulate that members shall require that an applicant for a patent relating to biological materials or TK shall provide, as a condition for obtaining patent rights: first, Disclosure of patents: source and country of origin of biological resources and TK used in the invention; second, Evidence of agreement based on prior information through approval of authorities under the relevant national regime; and third, Evidence of fair and equitable distribution of benefits under the national regime of the country of origin.<sup>10</sup> Then, the issue of TK was explicitly included in the agenda of the TRIPS Council at the fourth Ministerial Conference of the WTO held in Doha, Qatar, in November 2001. In paragraph 19 of the Doha Ministerial Declaration, the Ministers instruct the TRIPS Council to examine, among others, the protection of TK. Until now, the main focus of the examination foreseen in paragraph 19 was on disclosure requirements under patent law.<sup>11</sup>

Next, in Article 8j Convention on Biological Diversity (CBD),<sup>12</sup> explicitly recognizing the contribution of indigenous and local communities to biodiversity conservation that requires respecting and protecting TK, innovations, and practices that affirm the rights of indigenous peoples to the TK they have,

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<sup>7</sup> Cottier, T. and Panizzon M., "Legal Perspectives on Traditional Knowledge: the case for intellectual property protection," *Journal of International Economic Law* 7, no. 2 (2004.): 381.

<sup>8</sup> Pushpa Lakshmanan and Shanmugamurthy Lakshmanan, "Protecting Traditional Knowledge: Can Intellectual Property Rights help?," *Anc. Science* 2, no. 2 (2014): 34.

<sup>9</sup> Rosa Gianina Alvarez Nunez, "Intellectual Property and the Protection of the Traditional Knowledge, Genetic Resources, and Folklore: the Peruvian Experience" in *Max Plank, A. von Bogdandy and R. Wolfrum, (Yearbook of United Nation Law, 2008), 549.*

<sup>10</sup> Roohi Mohiuddin, et al., "Legal Framework on Protection of Traditional Knowledge: A Review," *International Journal of Advance Research in Science and Engineering* 8, no. 1 (2019): 105.

<sup>11</sup> WIPO Working, IP/C/W/370 and IP/C/W/443, accessed on 10 January 2020.

<sup>12</sup> Indonesia has ratified CBD by Law of Number 5 Year 1994.

so there should be benefit sharing.<sup>13</sup> Likewise in the Nagoya Protocol, it emphasizes access to benefit sharing on the use of genetic resources and TK.<sup>14</sup> Moreover, State sovereignty is supported by Article 6 Paragraphs (2) and (3) of the Nagoya Protocol that the State's sovereign right to take legislative, administrative, and policy actions in accordance with national law to regulate access to Genetic Resources and Traditional Knowledge. So, the Nagoya Protocol requires the state to recognize the existence of Indigenous and Tribal Peoples, their rights, and customary laws that regulate access to traditional knowledge related to genetic resources as long as it is following national laws and regulations.<sup>15</sup>

WIPO has also carried out efforts to protect TK by forming WIPO Fact-finding Missions (WIPO-FFMs) and The WIPO Intergovernmental Committee (IGC) on Intellectual Property and Genetic Resources TK and Folklore. WIPO generally describes three models of protection, namely: first, protection that is preventing the granting of intellectual property rights to TK by other parties without the knowledge and permission of TK owners. Second, defensive protection of TK influences patent registration in terms of the obligation to disclose the origin of genetic resources and/ or TK related to the invention. Third, positive protection is carried out in two forms of legal remedies: making effective use of intellectual property rights laws or establishing special laws.<sup>16</sup> Disclosure of source of origin was presented at the 8th IGC meeting. European Community and its member countries submitted proposals, namely Disclosure of Origin on Sources of Genetic Resources and Associated TK on Patent Application essence, which disclosed countries of origin of genetic resources and TK in their use.

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<sup>13</sup> Article 8j CBD: (j) Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices.

<sup>14</sup> Article 7 Nagoya Protocol: Access to Traditional Knowledge Associated with Genetic Resources In accordance with domestic law, each Party shall take measures, as appropriate, with the aim of ensuring that traditional knowledge associated with genetic resources that is held by indigenous and local communities is accessed with the prior and informed consent or approval and involvement of these indigenous and local communities, and that mutually agreed terms have been established.

<sup>15</sup> Daniel Robinson, Maegaret Raven, et al., "Legal geographies of kava, kastom and indigenous knowledge: Next steps under the Nagoya Protocol," *Geoforum* 118, no. 1 (2021): 169-179.

<sup>16</sup> Carlos M. Correa, "Traditional Knowledge and Intellectual Property: Issues and options surrounding the protection of traditional knowledge," *Discussion Paper*, no. 4 (Genebra, Suiza: Quaker United Nations Office, 2001), 20.

In order to adjust to international provisions, Indonesia has revised the Indonesian Patent Law. Furthermore, Article 26 Law Number 13 Year 2016 regarding Patents (Indonesian Patent Law 2016)<sup>17</sup> emphasizing the necessity of stating the original source of genetic resources and TK used as material for the invention used in the description of a patent application.<sup>18</sup> This article will analyze opportunities and challenges the legal protection of TK according to Article 26 of Indonesia Paten Law 2016.

## II. THE CONCEPT OF ‘TRADITIONAL KNOWLEDGE’

TK is not so-called because of its antiquity. It is a living body of knowledge developed, maintained, and passed on from generation to generation in a community, often forming part of its cultural or spiritual identity. It is not easily protected by the current intellectual property system, which usually provides protection for a limited period for original inventions and works by the individuals or companies mentioned. Its lively nature also means that “traditional” knowledge is not easy to define.<sup>19</sup> TK is part of all knowledge systems in the world. This refers to the knowledge that people in a community, based on experience and adaptation to the local culture and environment, have evolved and maintained and improved the community. That keeps changing when people innovate, discover, discover, experiment, and interact with other knowledge systems.<sup>20</sup>

In WIPO, TK is a living body of knowledge passed on from generation to generation within the community. It often forms part of a people’s cultural and spiritual identity. WIPO’s program on TK also includes know-how, practices,

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<sup>17</sup> Article 26 Indonesia Patent Law 2016, (1) if the invention relates to and/or comes from genetic resources and/or traditional knowledge, it must be clearly and correctly stated the origin of genetic resources and/or knowledge mentioned in the description; (2) Information about genetic resources and/or traditional knowledge is determined by official institutions recognized by the government; (3) the sharing of results and/or access to the utilization of genetic resources and/or traditional knowledge shall be carried out in accordance with the laws and international agreements in the field of genetic resources and traditional knowledge.

<sup>18</sup> Besides Indonesia, other countries that have adopted disclosures of original sources in Patents are: Belgia, Bolivia, Brazil, China, Costa Rica, Denmark, Egypt, the European Community (EC), the most European Countries, India, The Kyrgyz, New Zealand, Norwegia, Panama, Filipina, Portugal, Romania, South Africa, Switzerland, Thailand, Venezuela.

<sup>19</sup> “Traditional Knowledge and Intellectual Property, Background Brief No. 1,” WIPO, accessed on 10 January, 2020, <http://www.wipo.pdf>.

<sup>20</sup> Hansen, Stephen and Justin Van Fleet, *Traditional Knowledge and Intellectual Property: Handbook on Issues and Options for Traditional Knowledge Holders in Protecting and Maintaining Biological Diversity*, (Washington DC: American Association for the Advancement of Science, 2003), 141.

and skills that are developed, sustained, and passed on within a community. This is included knowledge related to agriculture, health, or biodiversity. Traditional culture is expressed, such as dances, songs, handicrafts, designs, ceremonies, tales, or other artistic or cultural expressions. Moreover, the genetic material of plant, animal, microbial, or other origin containing functional units of heredity, such as medicinal plants, agricultural crops, and animal breeds.<sup>21</sup>

According to Carlos M. Correa, TK consists of information on the use of biology and other materials for medical and agricultural medicine, production processes, design, literature, music, traditional ceremonies, arts, and other techniques, including intangible cultural values. Agus Sadjono defines TK as the knowledge owned or controlled and used by a particular community, community, or ethnic group that is hereditary and develops following environmental changes.<sup>22</sup>

In contrast, TK is stereotyped as verbal or even manifested, rather united and homogeneous, bound holistically to religious or mystical beliefs embedded in traditional social relations and power structures. For this reason, it is not too dynamic or responsive to change. Indeed, it is often painted as inferior, invalid, mythological, ancient, irrational, and non-scientific. Furthermore, because part of the myth of colonialism is to portray indigenous cultures as dying, TK has often been presented as in decay or doomed, particularly as it is tied to indigenous languages.<sup>23</sup>

The character of TK is very different from the legal system of modern intellectual property rights, which emphasizes concepts that are systematic and precise, and individualistic, so it is not surprising that the system of modern intellectual property rights, especially patents, cannot reach TK.<sup>24</sup> TK, including: first, TK is the knowledge that includes traditions that are based on innovation, creation, and practices which are the initial form and are used by indigenous communities; Second, TK is passed down orally from generation to generation. This condition ultimately creates TK that is non-static. As a non-static knowledge, this knowledge always undergoes modifications that are then adopted with changes according to the wearer's needs; Third, TK is also mostly owned by the community (communal), not by individuals. Even

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<sup>21</sup> "Traditional Knowledge", WIPO, accessed on 10 January 2020, <https://www.wipo.int/tk/en/tk/>.

<sup>22</sup> Agus Sardjono, *Hak Kekayaan Intelektual & Pengetahuan Tradisional [Intellectual Property Rights and Traditional Knowledge]* (Bandung: Alumni, 2010), 1.

<sup>23</sup> Andrew Cox, et al, "Reassessing the LIS approach to traditional knowledge: Learning from Xochimilco, Mexico City," *Journal of Documentation* 76, no. 5 (2020): 981.

<sup>24</sup> Suyud Margono, *Hukum Hak Kekayaan Intelektual [Intellectual Property Rights Law]* (Bandung: Pustaka Reka Cipta, 2015), 230.

more useful to support the life of the owner or creator of TK, not for profit orientation (non-profit orientation); the fourth, the subject of TK is very broad, covering almost all fields of human life such as art, health, food, agriculture, and housing.<sup>25</sup>

TK, which is inter-generational, meaning that it draws upon centuries of creative processes by previous generations. Because of this, it is difficult for the relevant community to refer to certain TK creation actions. Besides, it may be difficult for community members today to identify someone involved in TK creation unless they claim to be descended from a generation ago.<sup>26</sup> The concept of community habits in managing their own TK. Ownership in this society is every person or group that produces, acquires, and develops knowledge and has the right and authority to practice, maintain and transfer to others. So, ownership of a TK is very much determined by the provisions that apply in a society.<sup>27</sup>

In international debates, there are also differing views on the basis and aspects of ownership of TK. The basic concept of western is individualistic capitalistic view TK as wealth that can be owned individually. Meanwhile, indigenous peoples attach TK as a cultural heritage or expression and do not see it economically. Communities as owners of TK do not take economic advantage into account and have no desire to protect their TK from being taken by others. Society has the notion that knowledge is shared property.<sup>28</sup> This condition is very vulnerable to acts of free use by industries to gain economic benefits without considering the contribution to society as the owner of knowledge.

Moreover, one reason why TK from indigenous communities should be specifically protected a reason that both sides may have shared was stated in the discussion: In modern sectors, original inventors or holders of “traditional” knowledge need no protection because they are included in the flow of indirect benefits that come from the free use of their knowledge that is, benefits in terms of new products (e.g., medicines), new technology, and economic growth. In accord with this argument, therefore, holders of TK in in-

<sup>25</sup> Christoph Beat Grabet and Martin A. Girsberger, “Traditional Knowledge at the International Level: Current Approaches and Proposal for a Bigger Picture That Includes Cultural Diversity” in *Recht des ländlichen Raums, J.Schmid/Hansjörg Seiler (Schulthess: Zürich, 2006)*, 282.

<sup>26</sup> Francis Kariuki, “Notion of ‘Ownership’ in IP: Protection of Traditional Ecological Knowledge vis-a-vis Protection of T K and Cultural Expressions Act, 2016 of Kenya,” *Journal of Intellectual Property Rights* 24, no. (2019): 91.

<sup>27</sup> Fiona Martin, et al., “An international approach to establishing a Competent Authority to manage and protect traditional knowledge,” *Alternative Law Journal* 44, no. 1 (2019): 50.

<sup>28</sup> Johnsson and Hai-Yuean Tualima, Indigenous Peoples’ Cultural Heritage Rights, Debates, Challenges, in *Indigenous Peoples Cultural Heritage*, Alexandra Xanthaki, et al., (Brill-Nijhof Publisher, 2017), 228.



digenous communities would require special protection of their knowledge because they are largely excluded from any benefits derived from unrestricted use of TK outside the community.<sup>29</sup>

Because there are differences in the concept between TK with IPR, Dutfeld raised several objections related to the possibility of implementing a patent regime for the protection of genetic resources and TK. First, patents are protection for creative individuals who discover new things in the field of technology. Patents are only granted to individual inventors, while genetic resources and TK are not owned by certain individuals but rather the community's common property. Second, patents require certain evidence regarding the invention in question, while the TK system does not recognize the evidence. Proof in patents is mainly carried out on three patentability requirements: novelty, non-obviousness, and industrial applicability. Local people will not prove the novelty element if they want patent protection for their TK because the knowledge itself is not something new. Likewise, concerning proving that there is an inventive step, people will encounter difficulties because of their knowledge by imitating them from previous people. Third, patents require that the invention or invention for which patent protection is requested must be written down in the written form. This will make it difficult for shamans to obtain patents because they do not understand and have the tradition of writing as required in the patent. Fourth, applying for patents and enforcing patents requires a significant amount of money, while the public does not.<sup>30</sup>

### III. EXISTENCES TK IN INDONESIA

Indonesia is an archipelago that has 13487 islands (a total of 17,504 islands, including 9,634 unnamed islands and 6,000 uninhabited islands) spread from Sabang to Merauke; 740 ethnic groups / ethnic groups; 583 languages and dialects from 67 parent languages; 6 religions and several other religions and beliefs with total area: 1,904,569 km<sup>2</sup> and 237,556,363 according to 2010 census data.<sup>31</sup> The Indonesia population diversity is directly proportional to the diversity of customs and culture and the perspective of each tribe in each region. Indigenous peoples have TK that they have used for generations, in-

<sup>29</sup> Achim Seiler, et al., "Protection of Traditional Knowledge - Deliberations from a Transnational Stakeholder Dialogue between Pharmaceutical Companies and Civil Society Organizations," *Wissenschaftszentrum Berlin für Sozialforschung Discussion Paper*, no. 4 (2003): 46.

<sup>30</sup> Graham Dutfeld, "TRIPS - Related Aspects of Traditional Knowledge," *Case Western Reserve Journal International Law* 33, no. 2 (2001): 237.

<sup>31</sup> Putu Tantri Kumala Sari, "Melihat Indonesia Dari Sisi Lain [Seeing Indonesia from the Other Side Seeing Indonesia from the Other Side]," *Buletin Lentera Surabaya*, 6 Agustus 2014.



cluding their TK in using genetic resources. The results of the island's inventory and naming carried out by the Directorate General of Coastal and Small Islands of the Ministry of Maritime Affairs and Fisheries in 2010, Indonesia consisted of more than 13,487 (thirteen thousand four hundred eighty-seven) islands. One island and the other are separated by the ocean to produce forty-seven very different ecosystems.<sup>32</sup> These results illustrate the spread of community life on various islands with their habits, including TK's existence.

Indonesia also has agricultural products which are relied on by regions, including rice, crops, horticulture, plantations, livestock, capture fisheries, aquaculture, forestry, and agricultural services. However, potential commodities can be developed and utilized, in this case, relating to TK in agriculture include rice, crops, horticulture, plantations, and livestock. Utilization of TK relating to agriculture, among others, in TK about plant use, plant conservation strategies, pests (pest) and disease healing, environmental monitoring of ecological changes, and traditional selection and methods of plant breeding.<sup>33</sup>

The utilization of genetic resources so far has been done traditionally, and some are already modern. Traditional use is mostly done by indigenous peoples or local communities, most of which are used as part of their TK of genetic resources in their area. While, the industry mostly does modern use in producing something, such as medicine, cosmetics, food ingredients, and others, by utilizing the development of science. Some of the utilization of genetic resources is done for commercial purposes, and some are non-commercial. For commercial purposes, it is carried out by the biotechnology industry (such as pharmaceuticals/ medicines, textiles, detergents, food, animal feed, seeds) and the horticulture industry. At the same time, non-commercial uses include taxonomies (fields of science that describe and give species names) and conservation.<sup>34</sup>

Madura communities in their daily lives have used various herbs with TK in Madura herbal medicines, including Tongkat Madura, Tongkat Nikmat, Tongkat Ajimat Madura, Jamu Empot-empot, Jamu Harumita, Jamu Sari Rapet, Jamu Perkasa Pria, Jamu Kuat Lelaki.<sup>35</sup> Mentawai people use natural

<sup>32</sup> Sri Nurhayati Qodriyatun, "Perlindungan Terhadap Pengetahuan Tradisional Masyarakat Atas Pemanfaatan Sumber Daya Genetik [Protection of the Traditional Knowledge of the Community on the Utilization of Genetic Resources]," *Jurnal Kajian* 21, no. 2 (2016): 145.

<sup>33</sup> Cita Citrawinda Priapantja, *Hak Kekayaan Intelektual: Tantangan Masa Depan [Intellectual Property Rights: The Challenge future]* (Jakarta: Fakultas Hukum Universitas Indonesia, 2003), 136.

<sup>34</sup> Achirul Nditasari, et al., *Paket Informasi Keanekaragaman Hayati, Seri: Sumber Daya Genetik [Biodiversity Information Package, Series: Genetic Resources]* (Jakarta: Kementerian Lingkungan Hidup, 2011), 26.

<sup>35</sup> Mufarrijul Ikhwani, et al., "Pengaturan Hukum Pengetahuan Tradisional (Traditional Knowl-

medicine knowledge or formulated by the herbalist. The monastic knowledge about medicines develops in line with the development of diseases suffered by the community to find a lot of the latest medicines. The discovery of these drugs is passed on again to the next generation.<sup>36</sup>

Communities on the Wawonii Island, Southeast Sulawesi, have knowledge about natural resources in the vicinity like other inland communities in Indonesia. Generally, this knowledge system is inherited from generation to generation. In addition to utilizing the fruit and leaf buds as vegetable ingredients, it is also used as traditional medicine and pest control.<sup>37</sup>

The Minahasa, Bolaang Mongondow, and Sangir people in North Sulawesi utilize various forest trees as raw materials for traditional medicine, starting from the types, the parts used for their use, and evaluating the scarcity status of the trees utilized. Found as many as 46 species of forest trees used as raw materials for traditional medicine where the bark is the most widely used tree in medicine. Utilization is still very simple and has not yet reached the stage of commercialization. Inheritance of medical knowledge is obtained from generation to generation and only verbally.<sup>38</sup>

Sasak people in West Lombok use traditional medicine to treat diseases that use plants for their treatment, including coughing, diarrhea, wounds, intestinal worms, itching due to nettles, fever, itching, smallpox, exposure to scorpion bites, malaria, red eyes, *keloh*, *dysentery*, *shortness of breath and snake bites with various types of plants*.<sup>39</sup> The great potential of TK in Indonesia makes it one of the main research destinations for scientific and other

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edge) Sebagai Upaya Perlindungan Kearifan Lokal Madura Oleh DPRD Bangkalan [Regulation of Traditional Knowledge Law as an Effort to Protect Madurese Local Wisdom by DPRD Bangkalan],” *Yustisia* 2, no. 1 (2013): 86.

<sup>36</sup> Zainul Daulay, “Konsep Perlindungan Hukum Terhadap Pengetahuan Tradisional Masyarakat Asli Tentang Obat di Indonesia [The Concept of Legal Protection Against Traditional Knowledge of Indigenous People About Drugs in Indonesia],” *Jurnal Media Hukum* 19, no. 2 (2012): 189.

<sup>37</sup> Mulyati Rahayu dan Rugayah, “Pengetahuan Tradisional dan Pemanfaatan Tumbuhan Oleh Masyarakat Lokal Pulau Wawonii Sulawesi Tenggara [Traditional Knowledge and Utilization of Plants by Local Communities in Wawonii Island, Southeast Sulawesi],” *Berita Biologi* 8, no. 6 (2007): 490.

<sup>38</sup> Diah Irawati Dwi Arini, “Pengetahuan Lokal Masyarakat Sulawesi Utara Dalam Pemanfaatan Pohon Hutan Sebagai Bahan Obat Tradisional [North Sulawesi Community Local Knowledge in Utilizing Forest Trees for Traditional Medicines],” *Jurnal Masyarakat dan Budaya* 19, no. 2 (2017): 167.

<sup>39</sup> Soedarsono Riswan and Dwi Andayaningsih, “Keanekaragaman Tumbuhan Obat Yang Digunakan Dalam Pengobatan Tradisional Masyarakat Sasak Lombok Barat [Diversity of Medicinal Plants Used in Traditional Medicine of the Sasak Community of West Lombok],” *Jurnal Farmasi Indonesia* 4, no. 2 (2008): 102.

purposes. Not surprisingly, many foreign companies engaged in the field of medicine often research Indonesia to find sources of manufacturing new medicines.<sup>40</sup> Thus the diversity of traditional community knowledge in Indonesia is increasingly being used by industries.

#### IV. LEGAL PROTECTION OF TK UNDER PATENT IN INDONESIA

IP rights are often regarded as the most effective legal mechanism to safeguard the products of human creativity. However, the Western notion of individual ownership of IP philosophically conflicts with the collective nature of TK rights. While sharing knowledge with several communities rooted in their cultural values and customary laws and systems, IP law regards this tradition and belief as IP used to protect TK. It requires major changes in how people build their cultural practices and values alone. In addition to these theoretical differences, the amorphous nature of TK also limits the scope for using IP rights to protect TK related to biodiversity.<sup>41</sup>

In many cases, TK possessed by developing countries is often utilized by foreign parties through similar invention patents to develop pre-existing inventions. Although legally formal, innovative inventions have been patented as long as they meet the elements of renewal and can be applied in the industry. For inventors in developed countries with expertise, mastery of technology, and a very supportive budget, it is not difficult to conduct reform research based on the inspiration of ideas from TK. Although the owner of TK is compensated by exploring the living natural resources it possesses, it is necessary to pay attention to the law underlying the agreement between the owner of TK and the party who will use local resources.<sup>42</sup>

In the Indonesian Patent Law, a Patent is an exclusive right granted by the state to an inventor for his invention in the field of technology for a certain period carrying out the invention himself or approving other parties to implement it.<sup>43</sup> The exclusive right grants authority to the Patent Holder for his in-

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<sup>40</sup> Agus Sardjono, "Pembangunan Hukum Kekayaan Intelektual Indonesia: Antara Kebutuhan dan Kenyataan [Development of Indonesian Intellectual Property Law: Between Need and Reality]," *Professor Inauguration Speech, Fakultas Hukum Universitas Indonesia, 27 Februari 2008*, 15.

<sup>41</sup> Loretta Feris, "Protecting Traditional Knowledge in Africa: Considering African Approaches," *African Human Rights Law Journal* 4, no. (2004): 245.

<sup>42</sup> Sulasi Rongiyat, "Hak Kekayaan Intelektual atas Pengetahuan Tradisional [Intellectual Property Rights over Traditional Knowledge]," *Jurnal Negara Hukum* 2, no. 2 (2011): 233.

<sup>43</sup> See, article 1.1 Indonesia Patent Law 2016.

vention to monopolize the implementation of patents or give licenses to others or forbid others to use their inventions without permission.

Every invention in technology can be patented, so the inventors have the opportunity to register their inventions to have exclusive rights, including inventions relating to the use of genetic resources and TK. Although not all inventions can be filed for patent applications, this exception does not relate to the use of genetic resources and TK.<sup>44</sup> Patent protection for the invention can be in the form of protection of the process or patented products. In Article 8 of the 2016 Patent Law it is stated that:

*“...The Invention may be industrially applicable if the Invention can be implemented in the industry as described in the Application ...”*

The description in the application for registration in the 2016 Indonesian Patent Law has emphasized that the source is derived from genetic resources and TK used in the invention material.<sup>45</sup> And patents will be granted if the invention is novelty, has an inventive step and can be applied in industry.<sup>46</sup> Certainly the nature of the novelty specified in the granting of the patent cannot be fulfilled by the TK of the community which is passed on from generation to generation.

In patent registration, Indonesia is one of the countries that adhered to the first to file system in patent registration. This system that causes an invention or invention that has been applied for a patent will get legal protection from the receipt of the patent application, because the first to file system

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<sup>44</sup> See, article 9 Patent Law Indonesia 2016. Inventions which cannot be granted Patent include: a. any process or product of which its publication, usage or implementation contravenes the prevailing legislation, morality, public order, or decency; b. any method of examination, treatment, medication, and/or surgery applied to humans and/or animals; b. any theory and method in the field of science and mathematics; c. all living organisms, except microorganism; or d. any biological process which is essential to produce plant or animal, except non-biological process or microbiological process.

<sup>45</sup> See article 26 Indonesia Patent Law 2016, Article 26 Indonesia Patent Law 2016.

<sup>46</sup> Article 5 Patent Law Indonesia 2016, (1) An Invention is deemed to be novel as referred to in Article 3 section (1) given that on the Filing Date, pertinent Invention is not similar to any previously disclosed technology. (2) Previously disclosed technology as referred to in section (1) is one which has been published in Indonesia or outside Indonesia in writing, by a verbal description, or by a demonstration, by usage, or in other ways which enable a skilled expert to implement the Invention before: a. Filing Date; or b. priority date for Application filing with Priority Right. (3) The previously disclosed technology as referred to in section (1) includes technology in other documents of Applications filed in Indonesia and have been published on or after the Filing Date for applications being substantively examined but the Filing Date of other application documents filed in Indonesia is prior to the Filing Date or priority date of Application.

states that the date of receipt of a patent is the date the Directorate General of Intellectual Property Rights receives a patent application letter that has met the minimum requirements, namely in the form of fulfilling administrative requirements. This is intended to facilitate the applicant in obtaining the date of receipt which is very important for the status of the application because it will determine when the discovery will get legal protection.<sup>47</sup>

The consequence of the first to file system in the receipt of this patent is that every patent application that has been filed and received automatically has a strong legal force, because it has received legal protection from the government even though the patent application for which the patent has been requested has not yet been issued its patent certificate.<sup>48</sup> Thus, the right to a Patent will be given to the applicant for the first time the submission will be processed and becomes the right holder if it meets the requirements. Regarding the patent protection system which is based on a first to file system, many inventors immediately register their inventions to advance each other to complete the invention and submit their patent applications to the government.

Indonesian Patent Law 2016 has implemented the protection of TK with a defensive protection system. This refers to efforts aimed at preventing the granting of intellectual property rights to TK or genetic resources related to TK by other parties without the knowledge and permission of the owners of TK.<sup>49</sup> Disclosure of source of origin in Article 26 of the Indonesian Patent Law 2016, also must ensure that the criteria for prior art for TK orally are prior art. Furthermore, the permission from the owner of TK has not been confirmed in the Indonesian Patent Law 2016. Therefore, special rules are needed to support the follow-up of the disclosure of sources of TK. However, the explanation in Article 26 emphasizes the reasons for disclosing the origin of genetic resources and /or TK in the patent registration description so that genetic resources and / or TK are not recognized by other countries and in order to support Access Benefit Sharing (ABS).<sup>50</sup> This affirmation shows that Article 26 of the 2016 Indonesian Patent Law is in line with Article 29 of the TRIPs Agreement which regulates the obligation to disclose the source of ori-

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<sup>47</sup> Insan Budi Maulana, *A-B-C Desain Industri Teori dan Praktek di Indonesia [A-B-C Industrial Design Theory and Practice in Indonesia A-B-C Industrial Design Theory and Practice in Indonesia]* (Bandung: Citra Aditya Bakti, 2011), 15.

<sup>48</sup> "PATENT", Portal Informasi HKI, accessed on 10 June 2020, <http://www.hki.co.id/Patent.html>.

<sup>49</sup> See, Article 26 Indonesia Patent Law 2016.

<sup>50</sup> Explanation of Article 26.1 Alasan pengungkapan asal dari sumber daya genetik dan/atau pengetahuan tradisional dalam deskripsi supaya sumber daya genetik dan/atau pengetahuan tradisional tidak diakui oleh negara lain dan dalam rangka mendukung Access Benefit Shannng (ABS).

gin in a patent application.

Thus, the Indonesian Patent Law 2016 has provided the media to protect the use of TK in industries including the faramsi industry. Where, the pharmaceutical industry that registers its products must clearly state information as the source of origin of the product. Whereas on the other hand, TK of the community is obtain directly registered in the IPR system because there is no novelty element as required in patent registration. Thus the protection of TK in the IPR system is constrained.

## V. ARTICLE 26 OF INDONESIA PATEN LAW 2016: OPPORTUNITIES AND CHALLENGES

IPR has a valid rationality to justify the protection of works containing intellectual property. What stands out is the existence of economic value for the intellectual work produced. The greater the economic value of intellectual property, the stronger the need to obtain legal protection. The rationality of legal protection needs is the same as the necessity for the guarantee of protection for our tangible assets. If IPR legal instruments are able to guarantee protection of intellectual property, reward cycles will work without problems. This cycle works with economic logic. Namely, the economic benefits gained from his work will trigger the spirit to produce more and further. Economic benefits will be a stimulus that drives the cycle of creativity and innovation continuously. Conversely, the interpretation of a contrario will depict the breakdown of the cycle and the stagnation of enthusiasm and the bluntness of creativity if economic interests are not maintained and protected.<sup>51</sup>

Patents can be better designed in several ways. Some are done during the application procedure (pre-grant phase), while other changes can be made after the patent is granted by the relevant bureaucracy (post-grant phase). At present, add two options available to user countries in the pre-grant phase: Return to the current novelty and introduction of additional requirements for the provision of patents, specifically combining original complaints. And approval requirements based on prior information. Several routes are also available in the post-grant phase, mostly related to the effects of patents granted, through governance agreements responsible for patents.<sup>52</sup>

<sup>51</sup> Henry Soelistyo Budi and Bintan Regen Saragih, "IPR, Subsidy, and Competition Policy: Potential Disharmony on Economic Regulations, Advances in Economics," In *The 3rd International Conference on Law and Governance*, 2019, edited by Heru Susetyo (Netherlands: Atlantis Press, Netherlands, 2020), 54-62.

<sup>52</sup> Geertrui Van Overwalle, "Protecting and sharing biodiversity and traditional knowledge: Holder and user tools," *Ecological Economics* 53, no.4 (2005): 585.

Protection of TK is important to prevent biopiracy and missappropriation by developed countries to gain benefits without providing benefit sharing to indigenous peoples or ethnic groups who have TK. On the other hand the use of TK is actually a protection of TK itself. There are three reasons for the importance of using TK, including: (1) TK has economic value so that it will bring benefits if used appropriately and correctly; (2) utilization aims to prevent; further actions of biopiracy and missappropriation by developed countries; and (3) TK is the cultural identity of a nation so that it utilizes TK.<sup>53</sup>

The need to protect TK for Indonesia as a developing country is:<sup>54</sup> (1) The potential of traditional Indonesian knowledge that has economic advantages that are factually widely used by developed countries including the United States and Japan for the pharmaceutical and cosmetics industry without any benefit sharing with Indonesia; (2) Injustice experienced by Indonesia as a developing country over the ownership of TK that is not protected as IPR, while developed countries commit acts of biopiracy and misappropriation of Indonesia's TK; and (3) Local people do not know that the TK they have for generations has economic benefits, especially TK about medicines, so the government must provide protection to the rights of the local community.

Based on the reasons for the need for protection of TK, the disclosure of sources of origin for the use of TK and knowledge in the description of patent registration under the 2016 Indonesian Patent Law, is an opportunity as well as a challenge for the government to protect TK and can contribute to the community of knowledge owners and TK. Because, the law has been require disclosure of the source of origin and access to benefit sharing.<sup>55</sup>

Article 26 of the Indonesian Patent Law 2016 also provides recognition of the sovereign rights of the state as the party authorized to determine access to genetic resources based on the prevailing laws and regulations in the country of origin of genetic resources. With the principle of state sovereign rights, it is an opportunity for Indonesia, where it supports the application of disclosure of sources of origin and benefits sharing in patent applications. This provision is in line with the CBD and the Nagoya Protocol, which emphasize

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<sup>53</sup> Romesh Kumar Salgotra and Bharat Bhushan Gupta, "Plant Genetic Resources and Traditional/Indigenous Knowledge: Potentials and Challenges", in *Plant Genetic Resources and Traditional Knowledge for Food Security*, Romesh Kumar Salgotra and Bharat Bhushan Gupta eds. (Singapore: Springer, 2016), 1-21.

<sup>54</sup> Agus Sardjono, *Hak Kekayaan Intelektual & Pengetahuan Tradisional [Intellectual Property Rights and Traditional Knowledge]*(Bandung: Alumni, 2010), 3.

<sup>55</sup> M. Hawin, Budi Agus Riswandi, *Isu-Isu Penting Hak Kekayaan Intelektual di Indonesia [Important Issues of Intellectual Property Rights in Indonesia]* (Yogyakarta: UGM Press, 2020), 89.



state sovereignty as a major factor in providing access to genetic resources based on national law, namely the principle of prior informed consent (PIC) between owners or providers of genetic resources. Based on this description, this shows that Indonesia has the opportunity to get benefit sharing through the principle of State sovereignty over ownership of genetic resources as confirmed in the CBD. Likewise, people who live around genetic resources and possess traditional knowledge have the opportunity to benefit economically.<sup>56</sup>

The application of article 26 by stating the origin of the material used in the patent can be an opportunity for the public to gain recognition and contribution from the use of TK. TK has the potential value that has been shown by various processes of misappropriation by industries. The purpose of disclosure obligations is to avoid claims from foreign parties when filing a patent. This statement is one of the state's commitments in preventing theft of genetic resources and TK of Indonesian by other countries. In this case the government and non-government institutions must jointly support the community to get contributions for the use of TK. This provision is expected that the utilization of genetic resources and TK will not be misused and exploited by foreign parties to claim their patents. In addition, Indonesia has the right to benefit from a share of inventions originating from Indonesian genetic resources.

The challenge for the Indonesian government is to apply how disclosure of the origin of TK and knowledge contributes to the community as owners of TK and knowledge. Disclosure must be made clearly and honestly if the materials used in the invention are related to and / or derived from genetic resources and/ or TK mentioned in the description. The manifestation of the disclosure of the source of origin is not just recognition of the existence of TK and knowledge of the community, but must provide benefits to people's lives. Therefore, it is necessary to follow up, which means adding formal requirements to the patent application. These requirements are stated in the patent application form in the form of additional information on the invention which uses genetic resources or TK of certain communities. Regulations for providing access to TK (prior informed consent) are absolutely necessary to prevent biopiracy and bioprospecting by foreign parties. Regulations for providing access to traditional medicinal knowledge (prior informed consent) are absolutely necessary to prevent biopiracy and bioprospecting by foreign parties.<sup>57</sup>

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<sup>56</sup> Mas Rahmah, *Kewajiban Disclosure Of Origin Untuk Permohonan Pendaftaran Patent Yang Berasal Dari Tanaman Lokal [Obligation to Disclose Origin for Applications for Patent Registration Originating from Loka Plants Obligation to Disclose Origin for Applications for Patentt Registration Originating from Loka Plants]*, (Boyolali: Markumi, 2019), 82.

<sup>57</sup> Anggraeni Maulia Vidyastutie, Ika Riswanti Putranti, and Andi Akhmad Basith Dir "Analisa Komparasi Penanganan Kasus Kejahatan Transnasional *Biopiracy* antara India dan Amerika

So, the application of this article also poses a challenge in avoiding biopiracy, including in bioprospecting activities through cooperation between the user and the traditional knowledge provider.

Access and benefit sharing is basically a concept to gain access to genetic resources and how to share the benefits derived from the use of genetic resources from countries using genetic resources to countries providing genetic resources, including indigenous peoples.<sup>58</sup> Access and benefit sharing arrangements aim to ensure facilitated access to the targeted genetic resources, and a fair and balanced distribution of benefits from the utilization of the genetic resources that have been used. Access and benefit sharing is basically a concept to gain access to genetic resources and how to share the benefits derived from the use of genetic resources from countries using genetic resources to countries providing genetic resources, including indigenous peoples. Access and benefit sharing arrangements aim to ensure facilitated access to the targeted genetic resources, and a fair and balanced distribution of benefits from the utilization of the genetic resources that have been used.<sup>59</sup> Arrangements regarding access and benefit sharing are one of the goals to be achieved in the CBD and the Nagoya Protocol.

The challenge in realizing not just the recognition of TK is whether the user's honesty in expressing invention material. Then, the government must formulate special provisions for the follow-up of the disclosure of the source of origin. The government can work together with academics and non-governmental organizations to assist the community in conducting negotiations with users of TK. This stage is certainly not an easy thing to reach for negotiations with TK users. And this process will require time, energy and costs so that the process reaches the agreement until the contribution will be received by the community.<sup>60</sup>

Follow-up related to the disclosure of the source of origin to the benefit of the community can also be taken, where the user must provide information in advance to the indigenous peoples related to the purpose of using the TK. Commercial user groups and users for academic purposes are required to ask permission from traditional communities who have TK. This permit

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Serikat di Bawah Rezim Internasional [Comparative Analysis of Transnational Crime Case Handling Biopiracy between India and the United States under an International Regime],” *Journal of International Relations Universitas Diponegoro* 4, no. 2 (2018): 190.

<sup>58</sup> Deepa Kharb, “The Legal Conundrum over Regulation of Access and Benefit Sharing Obligations in Digital Sequence Information over Genetic Resources-Assessing Indian Position,” *Journal of World Intellectual Property Rights* 24, no. 1 (2021): 34.

<sup>59</sup> Fran Humphries, John A.H. Benzie, et al., “A review of access and benefit-sharing measures and literature in key aquaculture-producing countries,” *Aquaculture* 13, no. 1 (2021): 1–18.

<sup>60</sup> Indonesia has ratified Nagoya Protocol by Law of Number 13 Year 2011.

application is a form of respect for the culture owned by the traditional community. In this regard, it is needed immediate special regulations governing the implementation of licensing procedures for TK users.<sup>61</sup> If the use and utilization of TK is carried out for commercial purposes, the users (commercial and academic users) are required to make benefit sharing agreements with the use of the TK with related parties, for example the state, local government or the indigenous people where the TK originated. The benefit sharing route can be directly to indigenous people through the customary institutions that overshadow them. This source of origin and completeness of the permit documents from the community must be disclosed so that the community can benefit from sharing. Completeness of documents in the form of community licenses requires positive legal arrangements that support the implementation of benefit sharing.<sup>62</sup>

Another challenge in the application of Article 26 of the Indonesian Patent Law 2016, is where the community as the owner of TK and knowledge still sees that TK as a legacy that can be used by anyone. The issue of ownership and who is the custodian of TK is more important than the financial issues obtained from the use of TK. The statement and acknowledgment of the parties to their knowledge as custodians has injured those who have preserved the knowledge.<sup>63</sup> In addition, the lack of understanding of local communities regarding IPRs makes local communities not interested in taking advantage of the economic value of the knowledge of traditional medicine.<sup>64</sup> This is indeed

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<sup>61</sup> Ferianto, et al., "Pelindungan Hukum Terhadap Sumber Daya Genetik Dan Pengetahuan Tradisional Pasca Diundangkannya Undang-Undang Nomor 13 Tahun 2016 Tentang Patent [Legal Protection of Genetic Resources and Traditional Knowledge after the Enactment of Law Number 13 Year 2016 Concerning Patents]," *Journal of Intellectual Property 1 no. 1 (2020)*: 38.

<sup>62</sup> Akih Hartini, "Perlindungan Hak Kekayaan Masyarakat Adat: Mekanisme Pembagian Keuntungan terhadap Pengetahuan Tradisional Masyarakat Adat dalam Pemanfaatan Tumbuhan Obat Tradisional secara Lestari [Protection of Indigenous Peoples' Wealth Rights: Benefit Sharing Mechanism for Traditional Knowledge of Indigenous Peoples in the Sustainable Use of Traditional Medicinal Plants]," *Tesis Magister Hukum, (Jakarta: Universitas Indonesia, 2001)*, 125.

<sup>63</sup> Afifah Kusumadara, "Pemeliharaan dan Pelestarian Pengetahuan Tradisional dan Ekspresi Budaya Tradisional Indonesia: Perlindungan Hak Kekayaan Intelektual dan non-Hak Kekayaan Intelektual [Maintenance and Preservation of Traditional Knowledge and Expressions of Indonesian Traditional Culture: Protection of Intellectual Property Rights and non-Intellectual Property Rights]," *Ius Quia Iustum Law Journal of Islamic University of Indonesia 18, no. 1 (2011)*: 31.

<sup>64</sup> Trias Palupi Kurnianingrum, "Pelindungan Hak Patent atas Pengetahuan Obat Tradisional Melalui Pasal 26 UU No. 13 Tahun 2016 tentang Patent [Patent Protection for Traditional Medicines Knowledge Through Article 26 of Law no. 13 of 2016 concerning Patents]," *Negara Hukum 10, no. 1 (2019)*: 59.

a tough task for the government and also the public in making access to and sharing of benefits for the use of TK revealed by the source of origin through the description of patent registration.

## **VI. CONCLUSION**

TK is an intellectual property in the fields of knowledge, technology and art that contains elements of traditional inheritance characteristics developed by indigenous peoples for generations. The characteristic elements of traditional heritage from TK are considered by the people as a form of their cultural identity. TK is knowledge developed by indigenous peoples or traditional intellectual work. As an intellectual work, legal protection of TK is needed as a form of respect for the work of the community.

TK needs to be protected from uses that do not respect the rights of TK owners. One of the protections raised at the international level is through the intellectual property regime approach. Where is the principle of disclosure of origin in the description of patent registration is a requirement that has been affirmed in the Indonesian Patent Law. The disclosure of the original source in the patent application is a form of disclosure of information regarding the use of TK owned by the public.

The principle of information disclosure on inventions is an opportunity as well as a challenge in protecting TK and encouraging access to benefit sharing for the community. The follow up to get this opportunity is to design an appropriate access and benefit sharing obligation mechanism related to the utilization of TK. And this is a big challenge in realizing access and benefit sharing in the use of traditional knowledge of the community.

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