

Protecting Genetic Resources and Traditional Knowledge in Indigenous Communities and Government through Inclusive Moral Rights

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Abstract

The growing threat of biopiracy highlights the urgent need to protect Indonesia's genetic resources and traditional knowledge, particularly those belonging to indigenous communities. Indonesia's rich biodiversity and cultural heritage have long been targeted for exploitation without fair benefit-sharing or acknowledgment. This paper briefly explores the legal foundation for the protection of genetic resources and traditional knowledge at both international and national levels, including the Convention on Biological Diversity, the Nagoya Protocol, and Indonesian laws such as the Patent Law and Government Regulation No. 56/2022. Employing a doctrinal legal research method, the study examines relevant legal instruments and national policy documents, supported by secondary data and qualitative analysis. The findings reveal that despite progressive legal frameworks recognizing communal intellectual property and inclusive moral rights, implementation remains limited due to fragmented databases, lack of coordination among institutions, and absence of mechanisms for prior informed consent and benefit-sharing. Inclusive moral rights—which combine collective moral claims with intellectual property protections—are proposed as a normative foundation to empower local communities and the state in asserting sovereignty over their resources. The paper argues that such rights must be operationalized through an integrated database system, enforceable contracts, and regulatory bodies that facilitate equitable access and benefit-sharing. The novelty of this research lies in its conceptualization of inclusive moral rights as a transformative legal tool to bridge communal ownership and intellectual property regimes, ensuring that traditional knowledge and genetic resources are legally protected, ethically respected, and sustainably managed within a national and global framework.

Keywords: Genetic Resources, Traditional Knowledge, Inclusive Moral Rights, Intellectual Property, Biopiracy, Patent Law.

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1. INTRODUCTION

Traditional knowledge encompasses all ideas and concepts within a community that contain local values arising from real experiences in interacting with the environment, continually developed, and passed down to the next generation. Meanwhile, Genetic Resources refer to biodiversity at the genetic level [1]. Traditional knowledge and genetic resources are interconnected in producing high-quality products (bioprospecting). One form of genetic resources and traditional knowledge that can be utilized for community welfare is traditional medicine. The intrinsic value of

traditional knowledge and genetic resources, as well as the ecological, genetic, social, economic, scientific, educational, cultural, recreational, and aesthetic values of genetic resources, form an important foundation for sustainable development and human well-being [2].

Indonesia's rich biodiversity and genetic resources, coupled with the extensive social and cultural diversity of its population, present a significant potential for enhancing the welfare of its citizens. Furthermore, these resources are of considerable interest to countries that, while lacking in natural resources, possess the

¹ Article 2, the Law Number 5 of 1994 concerning the Ratification of the United Nations Convention on Biological Diversity.

² Irawan, Candra. "Protection of traditional knowledge: A perspective on Intellectual Property Law in Indonesia." *The Journal of World Intellectual Property* 20, no. 1-2 (2017): 57-67.

technological capabilities to exploit them. Therefore, biodiversity and genetic resources, along with the social and cultural diversity encompassing traditional knowledge, must be managed and protected to prevent the theft of genetic resources and traditional knowledge (biopiracy) in Indonesia.

Internationally, the recognition of sovereignty over the protection of genetic resources began in 1992 with the United Nations Convention on Biological Diversity, which was later followed by the Nagoya Protocol. These two international conventions affirm that a country has sovereign rights over its own territory and its biological resources, and that the country is responsible for conserving its natural resources, its biodiversity, and for the sustainable use of its biological resources. They also recognize the strong and traditional dependence of many indigenous peoples and local communities, who maintain traditional lifestyles, on biological resources, and the use of traditional knowledge, innovations, and practices that are relevant for the conservation of biodiversity and the sustainable use of components of genetic resources. The Nagoya Protocol was established as an international agreement regulating the implementation of the "Convention on Biological Diversity to bind the parties in managing access to Genetic Resources and ensuring the fair and equitable sharing of benefits arising from the utilization of Genetic Resources, including appropriate access to Genetic Resources and proper transfer of relevant technologies." [3].

In Indonesia, the management, regulation, and protection of natural resources are controlled by the state as stipulated in the 1945 Constitution of the Republic of Indonesia (UUD 1945), Article 33, paragraph (3), which states: "Land, water, and the natural resources contained therein are controlled by the state and used for the greatest prosperity of the people." Based on the above, protecting all the wealth owned by the Indonesian nation—including natural resources, biodiversity, mineral resources, genetic resources, as well as culture and knowledge, both traditional and modern—is very important and is the duty of the state and the Government of Indonesia [4].

Intellectual property serves as a legal mechanism to prevent unauthorized exploitation and to protect both economic and moral rights. The protection of intellectual property concerning Genetic Resources and Traditional Knowledge is specifically delineated in

Law Number 13 of 2016 regarding Patents, which confers exclusive rights to inventors for their inventions utilizing Genetic Resources and Traditional Knowledge. Additionally, Government Regulation Number 56 of 2022 concerning Communal Intellectual Property grants inclusive rights to the proprietors of these Genetic Resources and Traditional Knowledge.

According to this legal framework, and in pursuit of the welfare and prosperity of the populace, the rights to Communal Intellectual Property are vested in the state, which bears the responsibility to inventory, safeguard, and preserve such property. A noteworthy aspect of Government Regulation Number 56 of 2022 is that the rights to Communal Intellectual Property are characterized as moral rights of an inclusive nature.

2. METHOD

This study employs a doctrinal research methodology, utilizing secondary data derived from legal materials, including research reports and the findings of discussions held in both national and international forums. The analysis is conducted qualitatively through the application of the deductive method.

3. Protection of Genetic Resources and Traditional Knowledge under International Law

In intellectual property, the concept of moral rights originated from the 19th-century Continental European legal system as a response to the works of German philosophers Immanuel Kant and Georg Wilhelm Friedrich Hegel, as well as the individualist philosophy of the French Revolution. The law in France at that time began to protect artists' emotional investment in their works of art by prohibiting the alteration of these works without the consent of the original artist. Moral rights are an individual's right to have their personal expression recognized as an extension of their personality. Moral rights only include the right of attribution, or the creator's right to be acknowledged as the author of their own creation. Moral rights are a manifestation of society's recognition of another person's work that is non-economic in nature. In other words, moral rights are rights that protect the creator's personhood or reputation. These rights are inherent to the creator. While economic rights can be transferred to other parties, moral rights cannot be separated from the creator because they are personal and eternal [5].

Recognition of sovereignty over the protection of genetic resources began in 1992 with the United

³ United Nations Convention on Biological Diversity; Mila Hanifa, *Legal Protection of Access and Benefit Sharing of the Utilization of Genetic Resources*, (Thesis), Faculty of Law, University of Indonesia, 2012, p. 5.

⁴ Samsithawrati, Putu Aras, Ni Ketut Supasti Dharmawan, Made Aditya Pramana Putra, and Dewa Ayu Dian Sawitri. "Traditional Knowledge and Traditional Cultural Expressions as Communal

Intellectual Property: Are They Protected Under the WIPO Treaty on Intellectual Property, Genetic Resources, and Associated Traditional Knowledge 2024?." *Jurnal Pembangunan Hukum Indonesia* 7, no. 1 (2024): 1-26.

⁵ Rigamonti, Cyril P. "The conceptual transformation of moral rights." *The American journal of comparative law* 55, no. 1 (2007): 67-122.

Nations Convention on Biological Diversity, which was ratified through the Law Number 5 of 1994 concerning the Ratification of the United Nations Convention on Biological Diversity. This convention affirms that a country has sovereign rights over its own territory regarding its biological resources and that the country is responsible for conserving its natural resources, conserving its biodiversity, and utilizing its biological resources in a sustainable manner [6]. Furthermore, the convention also recognizes the close and traditional dependence of many indigenous peoples and local communities, who maintain traditional lifestyles, on biological resources, as well as the use of traditional knowledge, innovations, and practices relevant for the conservation of biological diversity and the sustainable use of the components of genetic resources. From this convention, it is clear that there is a close relationship between genetic resources and the traditional knowledge of indigenous peoples and local communities who utilize biological resources to produce high-quality products (*bioprospecting*).

The sovereign rights of a country over Genetic Resources are specifically regulated in Article 15 of the Convention on Biological Diversity, which grants each member country the authority to determine access to the Genetic Resources found within its territory through its national government and subject to national laws. Access to genetic resources is carried out based on the principles and obligations of the parties through "Prior Informed Consent" and mutually agreed terms. Anyone or any institution accessing Genetic Resources must obtain prior informed consent from the source of the Genetic Resources and traditional knowledge [7]. A mutual agreement between the parties can be made through a contractual mechanism with the aim of a fair and equitable distribution of the results of research and development, as well as the benefits arising from the commercial utilization of genetic resources.

The "Nagoya Protocol" serves as an international framework designed to implement the "Convention on Biological Diversity." It mandates that participating parties regulate access to genetic resources and ensure the equitable sharing of benefits derived from their use. This includes facilitating appropriate access to genetic resources and ensuring the effective transfer of relevant technologies. Furthermore, the protocol encompasses access to traditional knowledge linked to genetic resources. In this context, traditional knowledge refers to the comprehensive understanding of the

characteristics and applications of genetic resources held by indigenous communities, which plays a crucial role in the discoveries being claimed [8].

In accessing Genetic Resources, it is required to comply with the provisions set out in this protocol by using the principles of Prior Informed Consent and Mutually Agreed Terms, as well as the involvement of indigenous communities as previously mentioned in the "Convention on Biological Diversity." To implement these provisions, the Nagoya Protocol obliges member countries that possess genetic resources to take administrative, legislative, and policy measures in the form of domestic/national regulations regarding the rights established for indigenous peoples and local communities over these genetic resources [9]. Indonesia ratified the Nagoya Protocol through Law of the Republic of Indonesia Number 11 of 2013 concerning the Ratification of the Nagoya protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization to the convention on biological diversity. Another international forum aimed at protecting genetic resources is the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRA), which was ratified through Law of the Republic of Indonesia Number 4 of 2006 concerning the ratification of the international treaty on plant genetic resources for food and agriculture. This forum specifically aims to ensure the sustainable use of plant genetic resources for food and agriculture.

Intergovernmental Committee on IP GRTKF, as a forum for discussing Intellectual Property issues related to access and benefit sharing, focuses its discussions on providing adequate legal protection for Intellectual Property, recognizing and respecting indigenous peoples and local communities, including promoting and ensuring participation in decision-making as well as the obligations and responsibilities of states. This international forum has produced a Basic Draft Proposal for an International Legal Instrument related to intellectual property, genetic resources, and traditional knowledge. Some key points in the substance of the text include that this international legal instrument aims to enhance the effectiveness, transparency, and quality of the patent system and to prevent patents from being wrongly granted for discoveries or inventions that are not novel or not innovative.

Non-compliance with the disclosure requirement will result in effective and proportionate

⁶ Cragg, Gordon M., Flora Katz, David J. Newman, and Joshua Rosenthal. "The impact of the United Nations Convention on Biological Diversity on natural products research." *Natural product reports* 29, no. 12 (2012): 1407-1423.

⁷ Mila Hanifa, *Legal Protection of Access and Benefit Sharing of the Utilization of Genetic Resources*, (Thesis), Faculty of Law, University of Indonesia, 2012, p. 5.

⁸ Joint Recommendation on Genetic Resources and Associated Traditional Knowledge, IGC, Twenty-Forth Session, Geneva, 22-26 April 2013.

⁹ Kurnilasari, Dwi Tiara, Annalisa Yahanan, and Rohani Abdul Rahim. "Indonesia's traditional knowledge documentation in intellectual property rights' perspective." *Sriwijaya Law Review* 2, no. 1 (2018): 110-130.

sanctions according to the applicable national law. In addition, this instrument also recommends the establishment of an information system (such as a database), in consultation with relevant stakeholders. This information system will be accessible by the patent office for the purpose of searching and examining patent applications, as well as other issues related to technological advancements that impact the use of this instrument [10]. From the main points regarding the substance, the text of this international legal instrument focuses on protection within the patent system. The international legal instrument aims to position the conventional intellectual property system, which is exclusive in nature, to ensure effective and balanced protection, respect for human rights, sustainable development, and to promote fair and equitable Access and Benefit Sharing for countries that are producers or owners of genetic resources, such as Indonesia.

4. Protection of Genetic Resources and Traditional Knowledge in Indonesia

In Indonesia, the management, regulation, and protection of natural resources are controlled by the state. Law of the Republic of Indonesia Number 5 of 1983 concerning the Indonesian Exclusive Economic Zone, Article 4 paragraph (1) letter a states: "In the Indonesian Exclusive Economic Zone, the Republic of Indonesia has and exercises sovereign rights for the purpose of exploring and exploiting, managing and conserving both living and non-living natural resources from the seabed, the subsoil beneath it, as well as the overlying water, and other activities for the purpose of economic exploration and exploitation of the zone, such as generating energy from water, currents, and wind."

Special protection related to genetic resources and traditional knowledge is also regulated in Law Number 13 of 2016 concerning Patents, which states that "If an invention relates to and/or originates from Genetic Resources and/or traditional knowledge, the origin of such Genetic Resources and/or traditional knowledge must be clearly and accurately stated in the description." This provision is based on concerns regarding the frequent use of Indonesia's Genetic Resources and/or traditional knowledge by inventors or patent applicants, both domestic and foreign, to create new inventions without honestly disclosing the origin of the utilized Genetic Resources and/or traditional knowledge. The reason for requiring the disclosure of the origin of genetic

resources and/or traditional knowledge in the description is to support Access Benefit Sharing, or the equitable sharing of benefits arising from the utilization of genetic resources and/or traditional knowledge [11].

The Patent Law explicitly governs genetic resources and/or traditional knowledge associated with novel technological inventions that exhibit an inventive step and are applicable in industry, thereby qualifying for patent protection and utilization. Conversely, genetic resources and/or traditional knowledge not linked to new technological inventions are ineligible for patent protection. Consequently, the Patent Law does not extend protection to all forms of genetic resources and/or traditional knowledge [12].

The Regulation of the Minister of Law and Human Rights of the Republic of Indonesia, Number 13 of 2017, concerning Communal Intellectual Property Data, mandates the establishment of a Communal Intellectual Property Data Center. This center is designed to house information on traditional knowledge, traditional cultural expressions, genetic resources, and the potential for geographical indications. The primary objectives of this initiative are the protection, preservation, development, and/or utilization of these resources, which necessitate management and maintenance in the form of an inventory [13]. Subsequently, the government promulgated Government Regulation Number 56 of 2022 concerning Communal Intellectual Property. Fundamentally, this regulation aims to provide protection, preservation, development, and utilization of Communal Intellectual Property Rights. Notably, Government Regulation Number 56 of 2022 characterizes communal intellectual property rights as moral rights of an inclusive nature.

5. Assessing Inclusive Moral Rights Concept to Protect Genetic Resources and Traditional Knowledge

The concept of "inclusive" ownership rights was introduced by Dusolliere, where inclusive rights are legal rights over an object held by several people, characterized by communal/shared use. In the concept of inclusive rights, no one has the authority or privilege to exclude any of the inclusive owners from benefiting from the object. In this case, society should determine whether intangible property becomes inclusive [14].

¹⁰ Adhiyatma, Muhammad Tizar. "The Urgency of the Legislative Regulatory Formulation on Traditional Knowledge and Genetic Resources in Indonesia." *연세법학 (Yonsei Law)* 29 (2017): 267-98.

¹¹ Nurbintoro, Gulardi, and Haryo Budi Nugroho. "Biodiversity beyond national jurisdiction: current debate and indonesia's interest." *Indon. L. Rev.* 6 (2016): 283.

¹² Barizah, Nurul. "Indonesia's Patent Policy on the Protection of Genetic Resources related Traditional

Knowledge; Is it a Synergy to Fulfill the TRIPS agreement and CBD Compliance?." *Yuridika* 35, no. 2 (2020): 321-342.

¹³ Tanwir, Ranti Fauza Mayana, and Daniel Hendrawan. "Legal Protection on Genetic Resources and Traditional Knowledge as Business in Patent Law to Prevent Biopiracy." In *Papers of Third International Conference on Interdisciplinary Legal Studies 2017*, p. 49. 2017.

¹⁴ Mendis, Sunimal. "Wiki (POCC) authorship: The case for an inclusive copyright." *J. Intell. Prop. Info. Tech. &*

Miranda introduces a concept that stands in contrast to Dusolliere's perspective. She argues that the inclusivity of rights is vital because it facilitates the integration of all individuals into society. This integration is achieved by welcoming outsiders into the community, contingent upon their demonstration of good intentions, respect, and a fundamental connection with the society [15]. Thus, inclusivity can also be interpreted as the non-exclusive protection of intellectual property, especially when applied to Genetic Resources and traditional knowledge associated with Genetic Resources. As previously explained, moral rights are a person's rights to have their individual expression recognized as an extension of their personality.

Moral rights in intellectual property are a manifestation of human recognition of another person's work that is non-economic in nature, where moral rights can protect the creator's non-economic interests in their work. These moral rights are designed to safeguard the reputation, integrity, and personal relationship that an individual or creator has with their work [16]. Moral rights in intellectual property grant four rights, including:

- a. The right to be identified as the creator – this right ensures that the creator is acknowledged as the author of a work when it is used or published;
- b. The right to refuse derogatory treatment – the creator may object if their work is altered or mutilated in a way that harms their honor or reputation;
- c. The right to refuse false attribution – if someone falsely claims to be the creator of a work, the actual creator can raise an objection;
- d. The right to refuse the publication of a distorted work to the public – this right allows the creator to object if a work is published to the public in a way that harms their honor or reputation.

Inclusive Moral Rights in intellectual property can be understood as rights or protections that provide respect, recognition, and sovereignty to collective and communal use. Inclusive Moral Rights in intellectual property are granted to collective and communal use of jointly-owned objects or resources that are utilized to generate intellectual property. Regarding genetic resources and traditional knowledge related to genetic resources as objects or resources used to create intellectual works, protection to ensure respect, recognition, and sovereignty for the owners of those

objects or resources constitutes inclusive moral rights. As we all know, genetic resources, which are part of natural resources, are creations of God that can be possessed by all living beings inhabiting that environment. In positive law, it is generally stipulated that natural resources are owned and controlled by the state or local governments. Consequently, the objects or resources—in this case, genetic resources and traditional knowledge associated with genetic resources—used to produce intellectual works are the property of the state or local government where those objects are sourced.

The framework for inclusive moral rights aimed at safeguarding genetic resources and traditional knowledge is implemented in alignment with Law Number 13 of 2016 on Patents and Government Regulation Number 56 of 2022 on Communal Intellectual Property. These inclusive moral rights, as delineated in the Patent Law, are enforceable through a centralized database that catalogs all patent documents registered in Indonesia, which disclose the origins of genetic resources and/or traditional knowledge. This database is an essential tool for local communities, regional authorities, and the Indonesian government, facilitating their formal recognition as the rightful custodians of genetic resources and/or traditional knowledge. It also empowers them to oppose the exploitation of genetic resources if such actions result in harm or degradation.

Moreover, the government is vested with the authority to deny the use of Traditional Knowledge if it undergoes modifications or mutilations that damage its integrity or reputation [17]. The database further aids the government in challenging or preventing false claims by filing objections against patent applications. Additionally, this database plays a crucial role in executing Article 26 paragraph (3) of the Patent Law, which addresses the fair distribution of benefits and/or access to the utilization of genetic resources and/or traditional knowledge. However, Indonesia has yet to establish a comprehensive database that includes all patent documents registered in the nation, which disclose the origins of genetic resources and/or traditional knowledge, nor has it formulated the necessary regulations to govern the disclosure procedures in patents. As a result, the complete implementation of inclusive moral rights in the protection of genetic resources and/or traditional knowledge remains unrealized.

Elec. Com. L.13 (2022): 267–289.
<https://doi.org/10.2139/ssrn.4171852>

¹⁵ Ayu Palar, Miranda Risang, Laina Rafianti, and Helitha Novianty Muchtar. "Inclusive rights to protect communal intellectual property: Indonesian perspective on its new government regulation." *Cogent Social Sciences* 9, no. 2 (2023): 2274431.

¹⁶ Eristadora, Stephanie, Ahmad Habibi, Faisal Baehaqi, Tiyas Vika Widyastuti, and Anis Mashdurohaturun.

"Comparison of Moral and Economic Rights Between Indonesia and France." *Journal of Contemporary Law Studies* 1, no. 2 (2024): 30-41.

¹⁷ Kusumadara, Afifah. "Protection and sustainability of Indonesian traditional knowledge and folklore: Legal and non-legal measures." *US-China Law Review* 8 (2011): 548.

The absence of a database containing disclosures of the origin of genetic resources and/or traditional knowledge has allowed foreign researchers and pharmaceutical industries from developed countries to take advantage of this situation by benefiting from traditional medicinal knowledge without permission and compensation to the communities that own it. Some cases of genetic resource theft (biopiracy) that have occurred include: (1) Publication by foreign researchers without permission regarding the discovery of a new species, the Giant Wasp (*Megalara Garuda*), which has high economic value; (2) Patent registration of nine native Indonesian plants by Shiseido, a Japanese cosmetics company (which were later patented), although the patents have since been revoked; (3) Theft of the Pitcher Plant (*Nepenthes clipeata*) in the Gunung Kelam Nature Reserve, West Kalimantan, by foreign researchers; and (4) Unauthorized publication of research results on amphibians and reptiles in Lore Lindu National Park, Central Sulawesi, by foreign researchers. Therefore, the protection, management, and conservation of genetic resources and traditional knowledge are extremely important and must be implemented immediately to prevent the theft of genetic resources and traditional knowledge (biopiracy) in Indonesia [18].

In 2017, the Indonesian government began the process of establishing sui generis legislation to protect the utilization of communal intellectual property by issuing the Regulation of the Minister of Law and Human Rights of the Republic of Indonesia Number 13 of 2017 concerning Communal Intellectual Property Data. This regulation is intended to ensure that Communal Intellectual Property Data can be used for the purposes of protection, preservation, development, and/or utilization, which need to be managed and maintained in the form of an inventory. The Communal Intellectual Property Data Center consists of 1,414 Traditional Cultural Expression data, 455 Traditional Knowledge data, 113 Potential Geographical Indication data, 8,533 Genetic Resources data, and 18 Indication of Source data (Data sourced from the KIKOMUNAL database as of May 19, 2024) [19].

However, the Indonesian Communal Intellectual Property Database is currently only integrated with data from several ministries and government institutions in Indonesia. At present, cultural heritage databases are still scattered, which makes it

difficult for the public. These databases include intangible cultural heritage, which are managed by government institutions. The same applies to genetic resource data, which originate from databases of relevant agencies such as the Food and Drug Monitoring Agency (BPOM) Database, the Ministry of Environment and Forestry (KLHK) Database, the Ministry of Education, Culture, Research and Technology (Kemendikbudristek) Database, the Ministry of Agriculture Database, the Ministry of Marine Affairs and Fisheries (KKP) Database, and other related ministries, none of which are yet integrated with the KIKOMUNAL Data Center. This separation of data certainly makes public access very challenging. The Communal Intellectual Property Database is only able to provide supporting data as a result of the inventory of communal intellectual property in Indonesia. The Communal Intellectual Property Data Center is still unable to provide access for actual legal protection regarding communal intellectual property, especially genetic resources and traditional knowledge.

In response to the aforementioned reasons and considerations, the government enacted Government Regulation Number 56 of 2022, which pertains to Communal Intellectual Property. Fundamentally, this regulation is designed to ensure the protection, preservation, development, and utilization of Communal Intellectual Property, aligning with the principles enshrined in Pancasila and the 1945 Constitution of the Republic of Indonesia, as explicitly detailed in Article 2 of this regulation. As previously discussed, consistent with the aspirations of the Indonesian nation and in pursuit of the welfare and prosperity of its people, the rights to Communal Intellectual Property are vested in the state [20]. Consequently, the state is obligated to inventory, safeguard, and preserve Communal Intellectual Property. Notably, Government Regulation Number 56 of 2022 characterizes the rights to Communal Intellectual Property as moral rights of an inclusive nature [21].

In the same way as the concept of moral rights mandated in the Patent Law, in the Government Regulation on Communal Intellectual Property the application of the inclusive concept of moral rights is emphasized in terms of rights ownership, namely the government/state or parties committed to caring for, safeguarding, maintaining, developing, and utilizing Communal Intellectual Property. Thus, in the application

¹⁸ Press Release No. SP.090/HUMAS/PP/HMS.3/03/2021, The Importance of Protecting Indonesia's Genetic Resources, Ministry of Environment and Forestry, March 23, 2021, <https://ppid.menlhk.go.id/berita/siaran-pers/5877/pentingnyaperlindungan-sumberdaya-genetik-indonesia>.

¹⁹ KIKOMUNAL Data Center, <https://kikomunal-indonesia.dgip.go.id/home>, accessed Sunday, May 19, 2024.

²⁰ Nizwanaa, Yulia. "Protection of Communal Intellectual Property as the Identity of Indigenous People: Comparative Practice of the Roles of Indigenous Peoples of Indonesia and Vietnam." *Melayunesia Law* 7, no. 1: 69-80.

²¹ Arief, Sofyan, M. Fadli, Hanif Nur Widhiyanti, and Mochd Hakimi bin Ahmad Zainudin. "The principle of patent as an intangible asset as collateral objects in indonesia." *Indonesia Law Reform Journal* 5, no. 1 (2025): 94-111.

of the inclusive concept of moral rights to protect genetic resources and traditional knowledge, the government is required to provide an integrated data inventory that can be easily accessed by the community, enabling the provision of valid information related to genetic resources, traditional knowledge, and their utilization.

In addition, to carry out the care, safeguarding, maintenance, development, and use of genetic resources and traditional knowledge, the government is also required to implement the principles and obligations of all parties based on "Prior Informed Consent" and mutually agreed terms [22]. Anyone or institution accessing Genetic Resources must obtain prior informed consent from where the Genetic Resources and traditional knowledge originate. Mutual agreements between the parties can be established through a contract mechanism with the aim of ensuring the fair and equitable sharing of research and development results as well as the benefits arising from the commercial utilization of genetic resources. In this regard, the Indonesian government creates or appoints an agency or ministry specifically responsible for the implementation of licensing for the use of genetic resources and traditional knowledge.

The existence of "Prior Informed Consent" and mutually agreed terms in the form of a contract paves the way for the government and local communities to obtain comprehensive and inclusive moral rights. Through this contract, the government and local communities can refuse the use of genetic resources if there is any harmful treatment or damage to these genetic resources and natural resources. The government can also refuse the use of Traditional Knowledge if there is any degrading treatment; the government may also reject cases where Traditional Knowledge is altered or mutilated in ways that harm its honor or reputation. In addition to acquiring comprehensive and inclusive moral rights through the contract, the government and local communities also receive economic rights from access and benefit-sharing derived from the utilization of genetic resources and traditional knowledge.

The profits gained from the utilization of genetic resources and traditional knowledge can then be used to protect, maintain, and develop genetic resources and traditional knowledge, for example through conservation of genetic resources and preservation of traditional knowledge. In her presentation, Ani Mardiasuti stated that every exploitation and exploration of genetic resources must be followed by conservation, where exploitation and exploration of genetic resources

without conservation will result in genetic diversity erosion, loss of genetic resources from the origins of wild domesticated animals, and the emergence of new strains/subspecies/cultivars that are well adapted and highly resilient: to climate change, emerging diseases, pressure on feed and water supplies, and shifts in market demand. This poses a serious danger to the local communities living in the surrounding areas [23].

Nevertheless, the implementation or exercise of inclusive moral rights that protect genetic resources and traditional knowledge in the form of an integrated database, prior informed consent and mutual agreements in the form of contracts, and fair and equitable benefit-sharing have not yet been implemented or enforced in Indonesia. There is also no institution that regulates benefit-sharing, so the maintenance of genetic resources on land, in water, or in the air is still not optimal. Traditional knowledge, as a cultural heritage, has also not been fully inventoried, resulting in much traditional knowledge not yet being recorded in the KIKOMUNAL Data Center. The implementation and exercise of the concept of inclusive moral rights in the protection of genetic resources and traditional knowledge is still limited to the recognition of the sovereignty of the origin of genetic resources and traditional knowledge as expressed in patent descriptions and the data inventoried in the KIKOMUNAL Data Center.

6. CONCLUSION

The concept of inclusive moral rights is applied to safeguard genetic resources and traditional knowledge, guided by the provisions of the Patent Law and Government Regulations on Communal Intellectual Property. This approach involves recognizing the sovereignty of ownership rights, as detailed in patent descriptions and recorded in the KIKOMUNAL Data Center. It encompasses prior informed consent, mutual agreements formalized through contracts, and equitable benefit-sharing managed by a designated institution. In Indonesia, the current application of inclusive moral rights in protecting genetic resources and traditional knowledge is primarily focused on acknowledging the sovereignty over their origins, as documented in patent descriptions and cataloged in the KIKOMUNAL Data Center.

For this reason, it is crucial for the government and local communities to collaborate in compiling comprehensive data within the KIKOMUNAL Data Center. Moreover, the government should swiftly establish an institution tasked with preparing prior informed consent and mutual agreements in contractual

²² Visser, Coenraad. "Biodiversity, bioprospecting, and biopiracy: a prior informed consent requirement for patents: analyses." *SA Mercantile Law Journal* 18, no. 4 (2006): 429-439.

²³ Ani Mardiasuti, Faculty of Forestry and Environment, IPB University, Urgency, Potential, and Challenges of

Protecting Animal-Based Genetic Resources in Sustainable Development, Workshop of the Ministry of National Development Planning/Bappenas, March 24, 2024.

form, and ensuring fair and equitable benefit-sharing. Additionally, all Ministries, Government Agencies, Educational Institutions, Research Institutions, and local communities must work together to preserve, safeguard, maintain, and develop genetic resources and traditional knowledge.

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