



Legal Protection of Traditional Knowledge Associated with Genetic Resources in Indonesia

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Abstract

The existence of 'Traditional Knowledge associated with Genetic Resources' in Indonesia has increased following its recent recognition under the WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge Adopted at Geneva on May 24, 2024. Despite this, numerous cases still occur. This study examines the critical role of Communal Intellectual Property (CIP) in Indonesia, emphasizing the urgent need to protect Traditional Knowledge (TK) and Genetic Resources (GR) amidst globalization and exploitation risks. Indonesia's cultural diversity and rich biodiversity make CIP preservation legally and culturally imperative, yet inadequate safeguards persist. The study analyzes the legal framework on CIP through normative legal research. Findings reveal that the regulation prohibits CIP exploitation and establishes mediation mechanisms, yet enforcement challenges remain. The research underscores the government's pivotal role in supervising CIP protection to uphold societal traditions and prevent misappropriation. By highlighting the regulation's provisions and implementation hurdles, this study contributes to the discourse on strengthening CIP laws, urging policymakers to prioritize effective enforcement and community engagement. The analysis concludes that robust legal mechanisms are essential to safeguard Indonesia's TK and GR as national assets, ensuring equitable benefits for indigenous communities.

1. INTRODUCTION

There is a phenomenon known as looting Genetic Resources (GR), also referred to as biopiracy, which involves the unauthorized taking and use of knowledge from indigenous peoples/customary communities without compensation for profit. The process involves stealing genetic material for commercial and financial gain by a small group of individuals¹

¹ See Charuprita G, "Biopiracy of Genetic Resources—Role of the Three-Tier Structure in Regulating Access—Potential Conflicts between the New System and IPR International Instruments," *Indian Journal of Integrated Research in Law* 2, no. 2 (2022): 1 and Xue Ma and Xue Gu, "New Marketing Strategy Model of E-Commerce Enterprises in the Era of Digital Economy," *Heliyon* 10, no. 8 (2024): 71.

Indonesia is one of the countries that has become a victim of biopiracy. Evidence gathered by the KEHATI Foundation indicates that biopiracy has occurred multiple times in Indonesia.² The theft of wasp samples for publishing in South Sulawesi Province, as well as the theft of hundreds of organism samples from forests in West Kalimantan Province, are both actual instances.³ Similarly, while filing for Intellectual Property Rights (hereinafter referred to as IPR), the most famous example was Shiseido's application for a patent on medicinal plant items from Indonesia. Similarly, a Japanese firm registered Toraja coffee and its traditional home.⁴ Biopiracy also occurs in scientific journal publications, such as a study on changes in the spleen glands of the Bajo tribe and their consequences on respiratory efficiency.⁵

The diversity of sources in Indonesia is linked to Communal Intellectual Property (CIP), especially on GR and Traditional Knowledge (TK).⁶ TK, which encompasses all ideas and conceptions in society, can be utilized to make a profitable economic source of income from the obtained DNA from animals, plants, and microorganisms.⁷ As stipulated in the 1945 Constitution of the Republic of Indonesia (the Indonesian Constitution)'s Preamble, the source of GR must be preserved and developed sustainably as a source for the development and prosperity of the people the 1945 Indonesia Constitution was realized.⁸ The issue raised in this study is the need for specific requirements in IPR that address the issue of understanding TK and GR as distinct but interrelated ideas.

IPR are defined as rights arising from intellectual human processing that have economic value. The underlying idea of IPR is that work on IP is developed by individual that requires sacrifice in the form of time, money, and effort from the creators in order to create. Due to the reward that could appear from this sacrifice, the completed works or creations have their monetary value. This pushes the need for acknowledgment from the

² Kehati, "Virus Corona dan Sumber Daya Genetik Indonesia," <https://kehati.or.id/coronadansumberdayagenetik/>.

³ Mongabay, "Antara Tanaman Obat, Sumber Daya Genetik, dan Biopiracy," <https://www.mongabay.co.id/2020/11/08/antara-tanaman-obat-sumber-daya-genetik-dan-biopiracy/>.

⁴ Sri Nurhayati Qodriyatun, "Perlindungan Terhadap Pengetahuan Tradisional Masyarakat Atas Pemanfaatan Sumber Daya Genetik (SDG)." *Kajian* 21, no. 2 (2016): 148.

⁵ *Ibid.*

⁶ Miranda Risang Ayu Palar, 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.

⁷ Mali Guo et al, "Life Barcoded by DNA Barcodes," *Conservation Genetics Resources* 14, no. 4 (2022): 351.

⁸ Ayu Citra Setyaningtyas and Endang Sri Kawuryan, "Menjaga Ekspresi Budaya Tradisional di Indonesia," *Tambun Bungau Legal Science* 1, no. 2 (2016): 123.

government for such works and creations in the form of legal protection for the author of such works.⁹

The rapid development of creativity, innovation, and economic growth is closely related to Intellectual Property Rights (IPR) since it provides creators, innovators, and trademark holders exclusive rights towards their invention or works.¹⁰ The work is generated by intellectual talent via thought, imagination, and taste, which necessitates a significant investment of energy, time, and money to produce a "product" based on research or community service activities.¹¹

The human intellectual ability raises the right on IPR and items that are arranged in Law No. 7 of 1994 on Ratification of the Agreement Establishing the World Trade Organization (Law 7/1994). World Intellectual Property Organization (WIPO) defines IP to include innovations, literary and artistic works, as well as names, designs, symbols, and images used in commerce.¹² IPR aspects have been incorporated into the World Trade Organization's General Agreements on Trade and Tariffs (GATT) scenario via the Trade-Related Aspects on Intellectual Property Rights Agreement (TRIPs Agreement). The latest agreement was the first to integrate IP into the global trade for a and remains the most comprehensive international instrument on IP to this day.¹³

IP can be viewed from two perspectives. First, personal IP, which includes copyrights, trademarks and geographical indications, patents, industrial designs, plant varieties, trade secret and integrated circuit layout design. Second CIP, which encompasses TK, Traditional Cultural Expressions (TCE), Potential of Geographical Indications (PGI), GR, and Indications of Origin IO) that are collectively owned by communities and recognized globally.¹⁴ Although CIP in Indonesia is specifically governed by

⁹ Happy Yulia Anggraeni and Yuyut Prayuti, "Building a Copyright Legal Culture through Awards to Book Authors: Building a Culture of Copyright Law through the Giving of Appreciation to Authors," *Legal Brief* 11, no. 4 (2022): 2472.

¹⁰ I Gede Agus Kurniawan et al, "Intellectual Property Rights and Ethics: A Comparison of Philosophical Approaches in Northern and Southern Countries", *Jurnal Kosmik Hukum* 25, no. 1 (2025): 111.

¹¹ Muhammad Arif and Rosni, "Pemanfaatan dan Pengelolaan Hak Atas Kekayaan Intelektual (HKI) Sebagai Strategi Pengembangan Kewirausahaan," *Geografi Journal* 10, no. 1 (2018): 98.

¹² World Intellectual Property Organization, "What is Intellectual Property", <https://www.wipo.int/en/web/about-ip>.

¹³ See Naila Rafique, Tahir Hameed Ullah Khan, and Erum Naz Akhtar, "TRIPs Implementation and the Global Politics of Intellectual Property Reforms in Developing Countries", *Advance Social Science Archive Journal* 3, No. 1 (2025): 2005 and Ria Wierma Putri et.al, "Protecting Indonesia's Communal Intellectual Property Rights: A TWAAIL Perspective," *Uti Possidetis Journal of International Law* 5, no.1 (2024): 73, 80.

¹⁴ Muhammad Citra Ramadhan and Fitri Yanni Dewi Siregar, "Protecting Communal Intellectual Property in Indonesia: Constraints Faced by the Directorate General for Intellectual Property," *Kanun Jurnal Ilmu Hukum* 23, no. 3 (2022): 267. See also Maya

Government Regulation No. 56 of 2022 on CIP (Government Regulation 56/2022), particularly Articles 2 to 10 which outline the criteria, registration, and management of CIP, and by Ministry of Law and Human Rights Regulation No. 13 of 2017 on CIP Data (MoLHR Regulation 13/2017), which elaborates on the procedures for data collection and recording of CIP in Articles 3 to 8, it is important to note that certain aspects of individual intellectual property laws such as Law No. 28 of 2014 on Copyrights (e.g., Article 10 on joint authorship), Law No. 20 of 2016 on Trademarks and Geographical Indications (e.g., Article 3 on collective marks), and Law No. 13 of 2016 on Patents (e.g., Article 10 on joint inventorship) also contain provisions relevant to CIP. These provisions acknowledge the existence of shared ownership or collaborative creation, which must be recognized and managed appropriately within the broader framework of intellectual property rights. The legal issues related to ownership claims and the theft of CIP are crucial in today's context. CIP encompasses TK and TCE, referring to the intellectual creations produced by customary societies. These creations possess commercial value and can be traded on the market.¹⁵ TK and TCE are often linked to GR, particularly in terms of identifying and utilizing these resources based on information provided by customary societies while ensuring proper acknowledgment and respect for their contributions.¹⁶

The CIP was established through international negotiations and agreements to protect GR, TK, and TCE.¹⁷ At the international level, the protection of CIP, specifically on TK and GR, is also related to several legal instruments, for example Convention on Biological Diversity. In addition, there are some efforts have been done by WIPO, namely: the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC, GRTKF) WIPO/GRTKF/IC/40/6, WIPO/GRTKF/IC/40/18, WIPO/ GRTKF/IC/40/19, and finally the international legal instruments so called WIPO Treaty On Intellectual Property, Genetic Resources and Associated Traditional Knowledge (May 13, 2024), GRATK/DC/7 to address this emerging field.

Recently, in 2024, the WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge raised the issue of TK

Ruhtiani, "Perbandingan Perlindungan Hukum Hak Kekayaan Intelektual Komunal Antara Indonesia dan China," *Jurnal Ilmiah Universitas Batanghari Jambi* 22, no. 2 (2022): 886

¹⁵ Legal Documentation and Information Network Directorate General of Intellectual Property of the Republic of Indonesia, "Modul Kekayaan Intelektual di Bidang Kekayaan Intelektual Komunal 2019," https://jdih.dgip.go.id/produk_hukum/view/id/45/t/modul+kekayaan+intelektual+di+bidang+kekayaan+intelektual+komunal.

¹⁶ *Ibid.*

¹⁷ Putu Aras Samsithawrati et al, "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): 24.

associated with GR. It requires the applicant, for example, when a claimed invention in a patent application is derived from TK associated to GR, to disclose the local community or Indigenous Peoples, as appropriate, who contributed to such TK.¹⁸ The phrase “Traditional Knowledge Associated with Genetic Resources” is common. In *Bahasa* it is called as ‘*Pengetahuan Tradisional yang Terkait dengan Sumber Daya Genetik*’. Such WIPO Treaty defines “Source of Traditional Knowledge Associated with Genetic Resources” as any source from which the applicant has obtained the TK associated with GR, for example scientific literature, publicly accessible databases, patent applications and patent publications.¹⁹ Indonesia is one of the contracting parties to this WIPO Treaty.²⁰ the Government of Indonesia signed the WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge in July 2024, as a strategic plan to protect GR and TK as well as to strengthen Indonesia's position in international level.²¹ WIPO continuously develops global rules aimed at protecting traditional knowledge (TK) and managing resources related to genetic resources (GR) and TK. In June 2025, the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore prepares on the draft articles concerning the TK protection .²²

A heritage culture will continue to evolve from generation to generation as a result of a group's reaction to changes in their environment and to events that have shaped history.²³ According to Putri (2021), referring to the the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Convention on the Protection and Promotion of the Diversity of Cultural Expressions (2005), such actions contribute to shaping individual identities and fostering respect for culture and creativity among highly diverse human beings.²⁴

CIP differs from individual Intellectual Property (IP). In the case of individual IP, the owner's rights are exclusive, allowing the individual to

¹⁸ WIPO Treaty on Intellectual Property, Genetic Resources And Associated Traditional Knowledge, Art. 3.2(a).

¹⁹ *Ibid.*, Art. 2.

²⁰ World Intellectual Property Organization (2), “WIPO-Administered Treaties”, https://www.wipo.int/wipolex/en/treaties/ShowResults?search_what=C&treaty_id=19830.

²¹ National Legal Development Agency of the Republic of Indonesia, “Menkumham Tanda Tangan Traktat Internasional tentang Sumber Daya Genetik dan Pengetahuan Tradisional”, <https://bphn.go.id/berita-utama/menkumham-tanda-tangan-traktat-internasional-tentang-sumber-daya-genetik-dan-pengetahuan-tradisional>.

²² See World Intellectual Property Organization, Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, Fifty-First Session Geneva, 3 June 2025, the Protection of Traditional Knowledge: Draft Articles WIPO/GRTKF

²³ Nicole Redvers et al, “Indigenous Peoples: Traditional Knowledges, Climate Change, and Health,” *PLOS Global Public Health* 3, no. 10 (2023): 5.

²⁴ Yunita Maya Putri, Ria Wierma Putri, and Rebulina, “Recognizing the Protection of Communal Intellectual Property Rights,” *Journal of Law De'Rechtsstaat* 7, no. 2 (2021):176.

monopolize the use of those rights.²⁵ Conversely, CIP is held by the state.²⁶ Types of communal properties, such as TCE, TK, GR, and IO, are considered inclusive moral rights. These rights are guaranteed and upheld by the community of origin, providing economic benefits and remaining valid indefinitely.²⁷ On the other hand, PGI is also an inclusive moral right performed by the community of origin. However, it gains exclusive protection once it is registered as a Geographical Indication in accordance with current legislation.²⁸ The number of CIPs in Indonesia, according to data from the Directorate General of Intellectual Property of the Republic of Indonesia (DGIP), is detailed in Table 1 below.

Table 1. CIPs in Indonesia

CIPs	Total
Traditional Cultural Expressions	2007
Traditional Knowledge	525
Potentials of Geographical Indication	129
Genetic Resources	8550
Indications of Origin	83

Source: Data as of 18 July 2025 from the DGIP²⁹

The above Table 1 highlights Indonesia’s rich potential for further inventory and registration of CIP, especially given its abundant cultural and natural resources. Also important to note, the highest number of CIP being inventoried and registered in Indonesia is GR. Therefore, making the issue of GR, including TK associated with GR, increasingly significant.

GR is basically a term related to the hereditary material found in plants, animals and microorganisms that humans use for purposes such as foods, medicines, and industry. The Government Regulation 56/2022 also defines GR as genetic material derived from plants, animals, or microorganisms that contains units that function as carriers of hereditary traits that have real or potential value. Over these years, people have altered such resources through selective breeding, giving rise to domesticated species with desirable characteristics. This long-term process has led to the development of genetic diversity.³⁰

The interaction with various parts of existing life, genetics plays an important role as a solid foundation. GR, in particular, is deeply connected

²⁵ Nurul Fitriani and Adi Sulistiyono, “Perlindungan Hukum Kekayaan Intelektual Komunal terhadap Obat Tradisional Jamu sebagai Pengetahuan Tradisional,” *Aliansi* 1, no. 3 (2024): 258.

²⁶ Government Regulation 56/2022, Art. 3 (1).

²⁷ *Ibid.*, Art. 5 (1).

²⁸ *Ibid.*, Art. 5 (2) and (3).

²⁹ Directorate General of Intellectual Property of the Republic of Indonesia, “Kekayaan Intelektual Komunal” (1), <https://kikomunal-indonesia.dgip.go.id/home>,

³⁰ See Government Regulation 56/2022, Arts. 1(4) Jo. 9; MoLHR Regulation 13/2017, Art. 1(5); and James S. Godde, “Genetic Resources”, <https://www.ebsco.com/research-starters/environmental-sciences/genetic-resources>.

with aspects like as food resiliency, conservation of the environment, sustainable development, and economic development.³¹ The Director of Patents, Integrated Circuit Layout Designs, and Trade Secrets of the DGIP highlights that GR and TK are valuable assets for a nation; therefore, they hold great potential for development into innovative products that can improve people's well-being.³² Traditionally, customary communities in Indonesia have recognized the use of GR in medicinal practices, such as the preparation of herbal medicines using ingredients derived from plants grown locally. This can be seen in the culture of the Sasak community of Lombok, where a traditional healing book entitled "*lontar usade*" has been found, dating back to the 17th century.³³ Other examples are *Jamu* (traditional herbal medicine) that uses genetic resources from plants native to Indonesia (turmeric, ginger, *temulawak*, and galangal) as well as cooking oil, margarine, soap, cosmetics, and even biodiesel that uses genetic resources of the oil palm (*Elaeis guineensis*) grown on Indonesian plantations.³⁴ TK and GR are integral to the community's cultural life, including economic, spiritual, and communal aspects. Indigenous people appreciate all of these ideals. Therefore, TK and GR can symbolize the identity of indigenous people in certain locations.³⁵ TK and GR, which embody indigenous values and identity, are IP created by humans to suit their needs and well-being. Human creativity, as an intellectual asset, has had a longstanding impact on society. It has resulted in both artistic creations and utilitarian discoveries.³⁶

In relation to the topic raised in this study, the United States began with 19 patents and has since granted 13 provisional patents. Japan has issued six new patents. Plant mice taro, which is then used to cure cancer and tumors. This has grown to a large size in Malaysia without the authorization of the Indonesian government. Patents for a variety of items and cosmetics derived from Indonesian plants, as well as several additional biopiracy instances in Indonesia.³⁷

³¹ Qodriyatun, *loc.cit.*

³² Directorate General of Intellectual Property of the Republic of Indonesia (2), "Mengenal Sumber Daya Genetik dan Pengetahuan Tradisional dalam Pelindungan KI Indonesia", <https://www.dgip.go.id/index.php/artikel/detail-artikel-berita/mengenal-sumber-daya-genetik-dan-pengetahuan-tradisional-dalam-pelindungan-ki-indonesia>.

³³ Dwi Martini, Diman Ade Mulada and Dewi Sartika, "Bioteknologi Tradisional dan Sumber Daya Genetika Indonesia: Kasus Pemanfaatan oleh Industry Farmasi," *Jurnal Kompilasi Hukum* 5, no. 1 (2020): 134.

³⁴ Directorate General of Intellectual Property of the Republic of Indonesia (2), *loc.cit.*

³⁵ Setyaningtyas and Kawuryan, *loc.cit.*

³⁶ Gregory N. Mandel, "Intellectual Property: Does the Law Influence Creativity?," in *The Cambridge Handbook of Creativity Across Domains*, ed. James C. Kaufman, Vlad P. Glăveanu, and John Baer (Cambridge: Cambridge University Press, 2017), 447.

³⁷ Mongabay, *loc.cit.*

Adhiyatma (2017) revealed that the protection of TK associated with GR in Indonesia is still fragmented and lacks a unified legal framework.³⁸ Although Indonesia has ratified international instruments such as the Convention on Biological Diversity (CBD) through Law No. 5 of 1994 on Ratification of the United Nations Convention On Biological Diversity (Law 5/1994) and the Nagoya Protocol through Law No. 11 of 2013 on 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 (Law 11/2013), the implementation at the national level remains inconsistent, especially in terms of community-based recognition and benefit-sharing mechanisms.

Widyanti (2022) discusses the necessity of a *sui generis* system that accommodates the cultural and legal diversity of customary communities in Indonesia.³⁹ She highlights the importance of legal instruments that recognize customary law as a source of protection and then proposes the establishment of a national TK registry to prevent biopiracy and to support procedures for prior informed consent.⁴⁰

This study aims to analyze the legal framework for preserving TK associated with GR, as outlined in Government Regulation 56/2022. I employs a normative legal research method, focusing on the principles and rules within the field of intellectual property law through library research. This approach involves gathering relevant information by reviewing textbooks, laws, records, reports, archives, and other related materials to address specific issues.

2. RESULT AND ANALYSIS

2.1. Comprehension of Traditional Knowledge

Government Regulation 56/2022 defines TK as all local values-ideas and concepts in society emerging from practical engagement with the surrounding environment that is developed continuously, and passed on to the next generation.⁴¹ Almost the same, WIPO described TK as knowledge, know-how, skills, and practices that are developed, maintained and transmitted across generations within a community, often serving as integral element of its cultural or spiritual identity.⁴² WIPO uses the term “knowledge” to refer to literacy-based tradition, works of art or scientific,

³⁸ Muhammad Tizar Adhiyatma, “The Urgency of the Legislative Regulatory Formulation on Traditional Knowledge and Genetic Resources in Indonesia”, *Yonsei Law Review* 29 (2017): 277.

³⁹ Yenny Era Widyanti, “The Urgency of Sui Generis Protection of Communal Intellectual Property in Indonesia: A Comparative Study in Philippines”, *Jurisdictie: Jurnal Hukum dan Syariah* 13, no. 20 (2022): 1.

⁴⁰ *Ibid.*, 20.

⁴¹ Government Regulation 56/2022, Art 1 (3).

⁴² World Intellectual Property Organization (3), “Traditional Knowledge,” <https://www.wipo.int/tk/en/tk/>.

shows, inventions scientific, designs, signs, names, symbols, Trade secrets, and all other literacy-based traditions. Intellectual work in the fields of industry, science knowledge, writing, and art culminates in innovation and invention. Agriculture, scientific knowledge, technical knowledge, ecology, medical and healing knowledge, diversity of life, expression folk arts (music, dance, songs, crafts, designs, stories, and works of art), element language (name, indication, and geographic symbol), and objects Culture shift is one such category from TK.⁴³

Several examples of TK include knowledge of traditional *Wedang Uwuh*, a drink made from origin ginger that originated from the Special Region of Yogyakarta,⁴⁴ and *Sasando*, a tool music traditional from Rote Island, East Nusa Tenggara (abbreviated NTT).⁴⁵ *Sasando* is a stringed instrument without a cord that is played with by a finger pickedfinger-picking its snare manner.⁴⁶ As mentioned in Table 1 (Part I), as per 18 July 2025, DGIP counted 2007 TCE, 525 TK, 129 PGI, 8550 GR, and 83 IO. However, this data might not cover all CIPs in Indonesia that could potentially qualify as such, since an inventory and registration process must be first completed before CIP information can be published on the DGIP website.

Under the Government Regulation 56/2022, the right to CIP is held by the state. However, TK, as one of the rights to CIPs, is an inclusive moral right, maintained and/or borne by the Community of Origin, has economic benefits, and is valid indefinitely. Thus, there is a Community of Origin that holds these TK. This TK is passed down to the next generation of the said Community of Origin.⁴⁷ Therefore, it is crucial to protect TK. The Indonesian Constitution provides that the state recognizes and respects customary units of regional authority along with rights for their customary rights throughout Indonesia,⁴⁸ provided that such rights are in concurrence according to the societal development and the principle of the Unitary States of the Republic of Indonesia. Law No. 13 of 2016 on Patents (Law 13/2016),⁴⁹ and Law No. 5

⁴³ Hikmah Irfaniah, "Urgensi Pelestarian Pengetahuan Tradisional dan Peluang Perpustakaan Umum dalam Pelestarian Pengetahuan Tradisional," *Jupiter* 17, no. 1 (2020): 17.

⁴⁴ Nuning Setyowati, et al. "The Hidden Treasure of Wedang Uwuh, an Ethnic Traditional Drink from Java, Indonesia: Its Benefits and Innovations." *International Journal of Gastronomy and Food Science* 31 (2023)

⁴⁵ Margareta Sofyana Irma Kaet, Udi Utomo and Totok Sumaryanto Florentinus, "The Changes of Sasando Music Organology in Kupang East Nusa Tenggara," https://www.researchgate.net/profile/Totok-Sumaryanto/publication/338648299_The_Changes_Of_Sasando_Music_Organology_In_Kupang_East_Nusa_Tenggara/links/5e6888f292851c7ce05b35f6/The-Changes-Of-Sasando-Music-Organology-In-Kupang-East-Nusa-Tenggara.pdf.

⁴⁶ Maria Klara Amarilis Citra Sintia Dewi Tukan, Flora Ceunfin, and Melkior Kian, "How to Play and Tune Sasando in Edon Style," *Ekpresi Seni* 22, no. 1 (2020): 25.

⁴⁷ Government Regulation 56/2022, Art. 1(3), Art. 3(1), Art. 5(1).

⁴⁸ The 1945 Constitution of the Republic of Indonesia, Art. 18B (2)

⁴⁹ Law 13/2016, Art. 26.

of 2017 on Advancement of Culture (Law 5/2017)⁵⁰ also govern how TK is protected in Indonesia.

As mentioned earlier, several laws and regulations have been enacted to regulate TK in Indonesia. However, those legal frameworks have not provided adequate protection for TK for three main reasons.

First, insufficient legal frameworks. Government Regulation 56/2022 often fails to address the full scope of TK and GR. The existing laws may lack specific provisions addressing the distinctive characteristics of TK, making enforcement challenging.

Second, there is a lack of awareness and knowledge surrounding TK. This gap can lead to TK protection not being prioritized in legislative and regulatory processes. Additionally, the communities that possess TK are frequently uninformed or inadequately educated about their legal rights and the mechanisms available to protect and manage their intellectual and cultural assets. This lack of awareness can make these communities vulnerable to exploitation, misappropriation, or unauthorized commercial use of their knowledge by external parties. The absence of legal literacy and access to protection frameworks also hinders these communities from asserting ownership or control over the use of their TK, undermining efforts to ensure equitable benefit-sharing and long-term cultural preservation.⁵¹

Third, resources and enforcement capabilities are limited. Due to constraints in funding and expertise, it can be challenging to implement existing intellectual property laws effectively. Regulatory agencies may not have the necessary resources, staff, or experience to monitor, enforce, and safeguard traditional knowledge adequately. This includes challenges such as biopiracy, where foreign companies exploit local knowledge without legal permission or benefit-sharing agreements. These factors contribute to insufficient protection for TK in Indonesia, leaving many traditional practices and knowledge vulnerable to exploitation and misuse.⁵²

2.2. Recognizing Genetic Resources

Indonesia is a country with great genetic variety and a multi-ethnic civilization.⁵³ Indonesia, with its rich traditional culture and vast biodiversity, has become a prime destination for bioprospecting activities that frequently rely on TK associated with GR.

The Indonesian Constitution stipulates that nature within it are controlled by the state and used for the abundant prosperity of the people.⁵⁴ It implies that genetic resources as a CIP must be protected by law.⁵⁵

⁵⁰ Law 5/2017, Art. 5.

⁵¹ Dimpho Bonolo, "The Exploitation of Traditional Knowledge Protection System in Botswana" (Master's Thesis, College of Business, Peace, Leadership and Governance of Africa University, 2021): 46.

⁵² Muthia Septarina, "Perlindungan Hukum Pengetahuan Tradisional dalam Konsep Hukum Kekayaan Intelektual," *Al-Adl: Jurnal Hukum* 8, no. 2 (2016): 55.

⁵³ Reh Bungana Perangin-angin, Ramsul Nababan, and Parlaungan G. Siahaan, "Protection of Traditional Knowledge as a Constitutional Right in Indonesia," *Jurnal Konstitusi* 17, no. 1 (2020): 180.

⁵⁴ The 1945 Constitution of the Republic of Indonesia, Art. 33 (3).

GR is derived genetic material from plants, animals, or body microstructures that contain functioning units as carrier characteristic descendants who have no real or potential mark.⁵⁶ Siti Nurbaya Bakar, Indonesia's Minister of Environment and Forestry, revealed that our researchers have actually been able to reveal the potential of Indonesia's GR (bioprospection), for example, such as (1) Utilization of useful bacteria (microbes) for fertilizer and pesticide substitutes and anti-frost, (2) Discovery of anti-cancer in soft coral in TWA Teluk Kupang, (3) Cultivation of Morel Mushrooms with high economic value in Rinjani National Park.⁵⁷ In Indonesia, a significant amount of GR has been appropriated by other countries, particularly developed nations.⁵⁸ For example, Shiseido submitted 51 patent applications related to herbal medicines and spices that the Indonesian people have traditionally used. However, these applications were ultimately withdrawn after persistent pressure from non-governmental organizations (NGOs).⁵⁹

GR provides numerous benefits for life, including contributions to food production, pharmaceutical substances, industrial materials, and the enjoyment of hobbies, recreation, and various activities. The implementation of genetic resources can occur in two ways: *in situ* and *ex situ*. The *in situ* refers to genetic development occurring within ecosystems and their natural environments, while *ex situ* refers to genetic development taking place outside of the ecosystem and its original context.⁶⁰

2.3. Traditional Knowledge Associated with Genetic Resources as a Constitutional Right

The 1945 Indonesian Constitution provides a strong foundation for the recognition and protection of both individual and collective rights, particularly in relation to cultural development. It affirms that every person has the right to self-development through the fulfillment of their basic needs and the right to receive education and benefit from advancements in science and technology, as well as the arts and culture. These rights aim to improve the quality of life and promote the welfare of humanity.⁶¹ Additionally, the

⁵⁵ Bagus Gede Ari Rama, Dewa Krisna Prasada, and Kadek Julia Mahadewi, "Kekayaan Intelektual Komunal Dalam Perspektif UU Hak Cipta," *Supremasi: Jurnal Pemikiran Penelitian Ilmu-Ilmu Sosial, Hukum dan Pengajarannya* 18, no. 1 (2023): 6.

⁵⁶ Government Regulation 56/2022, Art 1 (4).

⁵⁷ Ministry of Environment and Forestry of the Republic of Indonesia., "Pentingnya Perlindungan Sumberdaya Genetik Indonesia," <https://ppid.menlhk.go.id/berita/siaran-pers/5877/peentingnya-perlindungan-sumberdaya-genetik-indonesia>.

⁵⁸ See the discussion on developed and developing countries in the context of CIP-GR in Maya Ruhtiani, *op.cit.*, 886-887

⁵⁹ Ferianto, Tommy Hendrix, and Tuthi' Mazidatur Rohmah, "Pelindungan Hukum Terhadap Sumber Daya Genetik dan Pengetahuan Tradisional (SDG-PT) Pasca Diundangkannya Undang-Undang Nomor 13 Tahun 2016 Tentang Paten," *Journal of Intellectual Property* 3, no. 1 (2020): 34.

⁶⁰ Qodriyatun, *Loc.cit.*

⁶¹ The 1945 Indonesian Constitution, Art. 28C.

Constitution acknowledges the importance of spiritual and emotional well-being, emphasizing the right to live in prosperity both physically and spiritually, and to exist in a healthy and dignified environment.⁶² Importantly, it also recognizes cultural identities, ensuring that the rights of customary communities are respected in accordance with the development and civilizations.⁶³

The constitution also recognizes and respects customary communities along with their traditional rights as long as these remain in existence and are in accordance with the development of community and the principles of the Unitary State of the Republic of Indonesia, are regulated by law.⁶⁴ In Indonesian laws, the phrase "*masyarakat hukum adat*"⁶⁵ and "*masyarakat adat*"⁶⁶ refer to customary communities, and may often called as indigenous peoples.

The protection of indigenous peoples' TK and GR, which are part of their cultural and IP, is inextricably tied to the realization of their territorial rights and self-determination. The most critical issue confronting indigenous peoples today is the seizure and exploitation of untapped cultural wealth. Indigenous peoples see themselves as a cohesive civilization or nation that has suffered from foreign invasions and invaders. Cloning, assimilation, and land grabs harmed all elements of indigenous people's lives.⁶⁷

According to L. Bently and Brad Sherman, the justifications for recognizing the existence of rights that might safeguard a person's IP are acceptable because:⁶⁸

- a. Ethical and moral considerations, for example, protection of copyright works generated by human labor, or protection of trademarks as a means of avoiding unauthorized use by third parties;
- b. Another cause is the availability of incentives that will influence a person's activity of generating something, such as the patent regime, which pays inventors with incentives for the results of their study or discoveries.

Recognizing TK as part of human rights is consistent with the United Nations Declaration on the Rights of Indigenous Peoples (hereinafter referred to as UNDRIP). The declaration establishes a framework for acknowledging and protecting TK. UNDRIP affirms that indigenous peoples have the rights to exercise and revitalize their cultural traditions and customs.⁶⁹

⁶² *Ibid*, Art. 28H.

⁶³ *Ibid.*, Art. 28I(3).

⁶⁴ *Ibid.*, Art. 18B(2).

⁶⁵ Law No. 39 of 1999 on Human Rights (Law 29/1999), Art. 6 (1).

⁶⁶ Law No. 20 of 2003 on the National Education System (Law 20/2003), Art. 5 (3).

⁶⁷ Perangin-angin, *loc.cit.*

⁶⁸ Djulaeka, *Konsep Perlindungan Hak Kekayaan Intelektual: Perspektif Kajian Filosofis Haki Kolektif-komunal*, (Malang: Setara Press, 2014), 53.

⁶⁹ UNDRIP, Art. 11(1).

Furthermore, the declaration recognizes their entitlement to preserve, control, safeguard, and develop their cultural heritage, traditional knowledge, and traditional cultural expressions, as well as manifestations of their science, technology, and culture.⁷⁰ These provisions highlight the importance of respecting and supporting the cultural identity of Indigenous communities.

2.4. Legal Protection of Traditional Knowledge in Indonesia

CIP prioritizes the needs of the community over the needs of individuals.⁷¹ CIP is Intellectual property whose ownership is communal and has economic value while upholding the nation's moral, social, and cultural values.⁷² Given the rapid pace of globalization and commercialization, CIP is essential not only to safeguard these cultural expressions from misappropriation but also to assert the value of cultural heritage as an asset that holds economic, social, and spiritual worth. By recognizing and protecting CIP, the law can empower communities to retain control over their heritage, benefit from its responsible use, and ensure that it is passed down with integrity to future generations. In this regard, CIP serves both as a legal tool and a moral framework that aligns the preservation of cultural diversity with principles of equity, sustainability, and cultural identity.

CIP definition can be found in Government Regulation 56/2022 and MoLHR Regulation 13/2017, both of which are the same specifically covers CIP. The two regulations define and categorize CIP differently. Article 1 (1) of the MoLHR Regulation 13/2017 does not clearly define CIP, only defines CIP as IP that includes TK, TCE, GR, and PGI. Meanwhile, Article 1 (1) of the Government Regulation 56/2022 emphasizes CIP in the context of community nature and economic importance.⁷³

Law 5/2017 governs TK although it is not from IP perspective. TK is one of the cultural advancement objectives outlined in Law 5/2017. Objects of cultural advancement include oral traditions, manuscripts, customs, rites, traditional knowledge, traditional technology, art, language, folk games, and traditional sports. According to the Explanation of Article 5 of Law 5/2017, traditional knowledge refers to all concepts and beliefs in society that contain local values as a consequence of real-world experience interacting with the environment, which are continuously developed and passed down to future generations. Furthermore, Article 24 of Law 5/2017 defines legal protection for traditional knowledge as maintenance to prevent harm, loss,

⁷⁰ *Ibid.*, Art. 31(1).

⁷¹ Seminar Nasional Hukum Universitas Negeri Semarang, "Digitalisasi Kekayaan Intelektual Komunal di Indonesia," <https://doi.org/10.15294/snhunnes.v7i2.723>, 650.

⁷² Government Regulation 56/2022, Art. 1(1).

⁷³ Mas Subagyo Eko Prasetyo, Syafrida Syafrida, and Pardomuan Gultom, "Strengthening The Legal Protection of Communal Intellectual Property to Anticipate Misuse by Foreign Parties," *Indonesia Law Journal* 16, No. 2 (2023): 123-124.

or destruction. Maintaining traditional knowledge entails preserving its noble value and wisdom, applying it in daily life, preserving its diversity, reviving and maintaining the cultural ecosystem for each traditional knowledge, and passing it down to future generations.

Government Regulation 56/2022 is expected to establish a unique legislative framework for protecting CIP in Indonesia. It aims to defend the interests of the community, especially indigenous peoples, in terms of TK and GR. This objective aligns with the broader goal of legal protection, which seeks to integrate and coordinate various interests within society. In balancing these interests, the protection of some may involve the restriction of others..

According to Article 3 of the Government Regulation 56/2022, the state has the rights to CIP and is obligated to catalog, secure, and maintain it. The moral rights regulated by the Government Regulation 56/2022 are encompassing. Moral rights are commonly defined as a right inherent in the Creator or Actor that cannot be destroyed or erased for any reason, even if the Copyright or Related Rights have been transferred. The concept of Moral Rights originates in Continental Europe's legal system; countries that follow the Civil Law system, such as France and Germany, focus solely on individual creations, whereas Common Law countries, such as the United States and England, focus on copyright ownership.⁷⁴ The Continental European Concept of Moral Rights is not found.

The CIP protection paradigm can be implemented in two ways: defensively and positively. Defensive protection aims to prevent unauthorized parties from accessing or using protected CIP without the owner's knowledge and consent. This approach ensures that the implementation of CIP data integration systems in Indonesia provides a strong foundation for protecting CIP. According to Government Regulation 56/2022, defensive protection aims to safeguard existing Community of Origin rights from abuse, deception, fraud, misrepresentation, as well as theft (piracy) or misappropriation.⁷⁵ The legislative process does not conclude once it is completed; it continues to evolve. Beyond entity-enabled bureaucracy, some parts of the legislation, if any, remain effective; however, the laws enacted still require policy guidance or approval from a designated authority.

GR can sometimes be taken (stolen) unethically, particularly by official researchers conducting their studies. However, this does not exclude the

⁷⁴ See Rishabh Snehee, "Comparative Study of Copyright in India, US and UK," *Indian Journal of Law & Legal Research* 4, no. 2 (2022): 1. See also Jacques de Werra, "Moral rights, a View from Continental Europe," in *Moral Rights in the 21st Century : The Changing Role of the Moral Rights in an Era of Information Overload.*, ed. Brison, Fabienne et al (Bruxelles : Larcier, 2015), 74.

⁷⁵ Putri, Putri, and Rehulina, *loc.it*.

possibility of foreign visitors coming to Indonesia for tourism and inadvertently taking GR. The theft of GR is relatively easy due to the lack of strict regulations governing their entry and exit, as well as the ineffectiveness of current quarantine agencies. Although specific regulations outline how TK and the use of GR should be managed, these regulations are not being implemented effectively, particularly in terms of their protection. Regulatory fragmentation often results in overlapping authorities and inconsistencies within the legal framework. For instance, different institutions—such as the Ministry of Environment, the Ministry of Agriculture, and the Ministry of Law and Human Rights—may have varying interpretations and jurisdictions regarding TK and GR-related matters. This can lead to weak coordination and gaps in enforcement.

The promulgation of Government Regulation 56/2022 revitalizes Indonesia's efforts to protect CIP. It addresses various aspects, including the types of CIP, inventory management, safeguarding and maintaining CIP, the information system for Indonesian CIP, the use of CIP, and funding for inventorying, safeguarding, and maintaining CIP.⁷⁶ Government Regulation 56/2022 mandates that the recording of CIP, conducted by the Minister, ministers, or heads of non-ministerial government agencies, or regional governments, must be done electronically for CIP that are not yet recorded.⁷⁷ It also allows the Community of Origin or local governments to submit applications for CIP registration to the Minister responsible for legal affairs, to the relevant ministers or heads of non-ministerial government agencies, or to regional governments that handle these matters.⁷⁸ The integration of CIP data into the Indonesian CIP information system is a form of defensive protection against CIP.⁷⁹

On the one hand, every person is publicly recognized and entitled to self-development, as well as the right to well-being, both physically and mentally. On the other hand, the law regulates TK, societal customs, and GR indirectly. The current frameworks are varied and insufficient. Numerous examples of biopiracy exist today, which can harm societal life, particularly in terms of public customs and local community practices. The challenge is to safeguard TK and GR while utilizing natural resources effectively.⁸⁰

2.5. Comparison with African Countries

This study compares Indonesia with three African countries: Kenya, Egypt, and Tunisia. These nations provide compelling examples of how CIP

⁷⁶ Dian Nurfitri, "Perlindungan Kekayaan Intelektual Komunal Pasca Terbitnya Peraturan Pemerintah Nomor 56 Tahun 2022 Tentang Kekayaan Intelektual Komunal," *Jurnal De Lege Ferenda Trisakti* 1, no. 2 (2023): 56.

⁷⁷ Government Regulation 56/2022, Arts. 13(1)&(3).

⁷⁸ *Ibid.*, Art. 14 (1) jo. Art. 1(8)

⁷⁹ *Ibid.*, Art. 27(2).

⁸⁰ Qodriyatun, *loc.cit.*

rights can be effectively recognized within national legal frameworks. By examining their legislative approaches, this comparison provides valuable insights and normative benchmarks that may guide Indonesia in developing a more coherent and robust legal system for protecting its diverse cultural heritage.

In Kenya, the recognition of CIP is governed by the 2010 Constitution of Kenya. This constitution acknowledges culture as the foundation of the state and mandates the government to support the IPR of the Kenyan people.⁸¹ The government has two primary responsibilities under this provision: first, to ensure that communities receive compensation or royalties for the use of their culture and cultural heritage; and second, to recognize and protect the ownership of seeds, indigenous plant varieties, GR, and their biodiversity, along with their use by Kenyan communities.⁸² The constitution asserts that the state shall support, promote, and protect the IPR of the people of Kenya.⁸³ Furthermore, in Kenya, the state already recognizes the exclusive right of every community to authorize the exploitation of their TK and prevent any person from exploiting such TK without their prior informed consent.⁸⁴

In Tunisia, the protection of CIP, especially TK and GR, is mainly embedded in biodiversity and environmental laws. Tunisia ratified the Convention on Biological Diversity (CBD) through Law No. 2001-13 and has also taken steps to implement the Nagoya Protocol through Law No. 2014-38. The protection of TK and GR is governed under the national strategy for biodiversity and through the Access and Benefit-Sharing (ABS) regulations. However, Tunisia has yet to enact a *sui generis* legal framework specifically dedicated to CIP. Instead, TK and GR protections are integrated into broader environmental and agricultural policies, such as the *Code de l'Environnement* and Law No. 2009-13 on the Organization of the Seed and Seedling Sector, which regulates the conservation of local varieties. Although not comprehensive, Tunisia's system recognizes the need for community participation and equitable benefit-sharing, in line with international obligations.⁸⁵

In Egypt, CIP regulation is still developing, but the country has made considerable strides in acknowledging TK and GR. Egypt has ratified the CBD and the Nagoya Protocol. The Egyptian Environmental Affairs Agency

⁸¹ The Constitution of Kenya 2010, Art. 11.

⁸² Enninya S. Nwauche, "The Emerging Right to Communal Intellectual Property", *Marquette Intellectual Property Law Review* 19, No. 1 (2015): 229.

⁸³ The Constitution of Kenya 2010, Art. 40 (5).

⁸⁴ Kenya's Protection of Traditional Knowledge and Cultural Expressions Act, 2016 No. 33 of 2016, Sec. 10(1)(a)-(b).

⁸⁵ Henda Ben Ghezela, "Access and Benefit-Sharing and the Protection of Traditional Knowledge in Tunisia: Gaps and Perspectives," *Journal of North African Environmental Law* 10, no. 2 (2022): 150.

(EEAA) leads the implementation of access and benefit-sharing mechanisms, particularly under Law No. 4 of 1994 for the Protection of the Environment, and its subsequent amendments. However, like Tunisia, Egypt does not yet have a *sui generis* law exclusively addressing CIP. Elements of CIP protection can also be found in Egypt's laws on agriculture, intellectual property, and cultural heritage. Egypt's approach emphasizes the conservation of biological diversity and the involvement of local communities in managing natural resources, although legal clarity and integration between relevant institutions remain limited.⁸⁶

The issue of cultural appropriation (CA) has emerged as a significant threat to the sustainability and integrity of indigenous cultural industries. Literature defines CA as the unauthorized use of another group's cultural elements such as garments, symbols, or knowledge without consultation, informed consent, or proper recognition, often resulting in the distortion of cultural values. This study, focusing on the traditional garment weaving industry in Addis Ababa, Ethiopia, reveals that CA is driven primarily by commercial interests rather than cultural respect or ethical engagement. Employing a mixed-methods approach, the research involved 292 weavers, 200 consumers, and several key informants from government and cultural institutions. The findings indicate a serious absence of legal and institutional frameworks to protect and promote authentic cultural designs. Furthermore, CA has had tangible negative consequences, including a decline in income for original creators, erosion of cultural identity, and a dilution of traditional values embedded in the designs. These results underscore the urgent need for policy intervention and legal mechanisms to safeguard indigenous cultural industries from exploitative appropriation and to ensure that cultural expressions are both protected and equitably commercialized.⁸⁷

The protection of CIP in the Global South of CIP/TK: WIPO (2020) presents a complex interplay between the urgency of safeguarding TK and the challenges of integrating it into existing legal systems. The case of Ethiopia highlights the harmful consequences of CA when legal and institutional protections are absent. The unregulated commercialization of traditional garment designs in Addis Ababa, driven by profit rather than respect, has led to a decline in cultural integrity and economic well-being among indigenous weavers. This scenario underscores the necessity of robust legal frameworks to prevent exploitation and ensure fair benefit-

⁸⁶ Samir El-Zarka, "Traditional Knowledge and Genetic Resources in Egyptian Environmental Law: Legal Gaps and Implementation Challenges," *African Journal of Environmental Law and Policy* 7, no. 1 (2020): 54.

⁸⁷ Simret G/Tsadik Araya and Berhanu Belayneh Beyene, "Effect of Cultural Appropriation on the Cultural Garment Weaving Industry: The Case of Weavers in Addis Ababa, Ethiopia," *Cogent Social Sciences* 10, no. 1 (2024): 14.

sharing. In contrast, South Africa demonstrates a more strategic use of IP rights as tools for development. Recognizing IP as a crucial asset in the knowledge-based economy of the 21st century, South Africa integrates IP protection into policies on development, trade, and industrialization, positioning it as a driver of technological and cultural progress. However, legislative attempts to protect TK, such as South Africa's Intellectual Property Laws Amendment Bill, 2007, reveal further challenges. Although the Bill sought to amend existing non-patent IP laws (e.g., Copyright and Trade Marks Acts) to include TCE, it was heavily criticized for its lack of clarity and practicality, making it difficult for IP practitioners to apply it in real legal contexts. This legislative shortcoming illustrates that while policy intent is critical, the design and implementation of such legal instruments must be technically sound and accessible to stakeholders.⁸⁸

2.6. Government and Society's Role in Protecting Traditional Knowledge Associated to Genetic Resources

TK and GR in Indonesia are crucial for the economy; therefore, it is crucial to preserve and utilize them effectively as sustainable power sources for the benefit of all people. The provisions outlined in Government Regulation 56/2022 should be implemented in a way that aligns with national objectives and ensures proper regulations and consequences are established.⁸⁹

There are several research and development institutions within ministries responsible for various sectors, including Environment, Health, Agriculture, Plantation, Fisheries, Livestock, Irrigation, and Forestry. These also include the Ministry of Technology, Research, and Higher Education, the Indonesian Institute of Sciences, and the National Agency for Drug and Food Control. Additionally, there are non-governmental organizations like Yayasan KEHATI (The Indonesian Biodiversity Foundation)⁹⁰ actively contribute to policy advocacy and community empowerment programs, and publishing institutions like several publishing organizations play critical roles in recording and safeguarding GR and TK.

At the local level, it is important to acknowledge long-standing customs while preserving traditional characteristics such as flexibility, specificity, and spiritual significance in the management of TK. This approach can facilitate the initiation of Net Current Assets (NCA) at the local level. The wisdom tied to local customs aligns with the unique features of governance

⁸⁸ Talkmore Chidede, "The Role of Intellectual Property Rights' Protection in Advancing Development in South Africa," *Law, Democracy & Development* 26, no. 1 (2022): 178.

⁸⁹ Moh. Mahfud MD, *Politik Hukum di Indonesia*, (Jakarta: Rajawali Press, 2014), 25.

⁹⁰ Yayasan KEHATI, "Strategi Konservasi Keanekaragaman Hayati Indonesia," <https://kehati.or.id/publikasi>.

in each area. By empowering local government, NCA can be initiated at the local level.⁹¹

The government must take several important steps to protect TK associated with GR. First, it continuously raises the awareness of the community, particularly customary communities. Next, the creation of national laws and regulations that clearly define and protect TK associated with GR will provide greater legal certainty and ensure its enforcement. Lastly, it establishes a transparent process for the use of GR or TK associated with GR, which requires prior informed consent from the rightful holders, ensuring that any benefits arising from such use are fairly distributed. Meanwhile, customary communities play a crucial role in preserving and revitalizing indigenous cultural practices, TK, and GR in their areas to ensure that they are passed down through generations.

3. CONCLUSION

The Government Regulation 56/2022 provides a broad definition of Traditional Knowledge (TK), encompassing literary traditions, creative works, scientific inventions, and cultural manifestations. The regulation, among others, aims to safeguard TK and Genetic Resources (GR) effectively by establishing clear principles and improving enforcement mechanisms. This involves avoiding unlawful exploitation, resolving legal disputes, and engaging in international diplomacy to protect shared intellectual property (IP), provide more precise mechanisms for registration, enforcement, and dealing with transgressions such as biopiracy. These measures will ensure that TK and GR are respected, preserved, and used fairly, ultimately benefiting the communities that have maintained these invaluable resources for generations. The 2024 WIPO Treaty on IP, GR, and associated TK emphasizes the necessity of international cooperation in safeguarding these critical resources. Despite constitutional guarantees, challenges affecting indigenous populations (customary communities) in Indonesia indicate that legal frameworks are inadequate and fragmented. While the regulation intends to protect TK and GR, enforcement remains challenging due to the unique nature of these resources and the lack of comprehensive legal measures. The value of preserving TK and GR is frequently underestimated by policymakers and the general public, leading in insufficient legislative emphasis and under-funded regulatory organizations. To address these issues, future legislation should establish more transparent processes for the registration and protection of TK and GR, enhance awareness campaigns for both policymakers and communities, and ensure that regulatory agencies have adequate resources to combat problems such as biopiracy

⁹¹ Kementerian Lingkungan Hidup dan Kehutanan Republik Indonesia, "Pedoman Pengelolaan Sumber Daya Genetik Berbasis Masyarakat," (2022): 15.

effectively. In summary, while Government Regulation 56/2022 represents an important step toward the protection of TK and GR in Indonesia, it requires further refinement, comprehensive implementation, and active participation from stakeholders to preserve and utilize these invaluable cultural and natural resources sustainably.

BIBLIOGRAPHY

Book

- Djulaeka. *Konsep Perlindungan Hak Kekayaan Intelektual: Perspektif Kajian Filosofis Haki Kolektif-komunal*. Malang: Setara Press, 2014.
- MD, Moh. Mahfud. *Politik Hukum di Indonesia*. Jakarta: Rajawali Press, 2014.
- Mandel, Gregory N. "Intellectual Property: Does the Law Influence Creativity?." In *The Cambridge Handbook of Creativity Across Domains*, edited by James C. Kaufman, Vlad P. Glăveanu, and John Baer. Cambridge: Cambridge University Press, 2017. <https://doi.org/10.1017/9781316274385.024>
- Werra, Jacques de. "Moral rights, a View from Continental Europe." In *Moral Rights in the 21st Century : The Changing Role of the Moral Rights in an Era of Information Overload.*, edited by Brison, Fabienne et al. Bruxelles: Larcier, 2015. https://www.researchgate.net/publication/305306639_Moral_rights_a_view_from_continental_Europe

Journal Article

- Adhiyatma, Muhammad Tizar. "The Urgency of the Legislative Regulatory Formulation on Traditional Knowledge and Genetic Resources in Indonesia." *Yonsei Law Review* 29 (2017): 267–298. https://www.researchgate.net/publication/327510124_The_Urgency_of_the_Legislative_Regulatory_Formulation_on_Traditional_Knowledge_and_Genetic_Resources_in_Indonesia
- Anggraeni, Happy Yulia, and Yuyut Prayuti. "Building a Copyright Legal Culture through Awards to Book Authors: Building a Culture of Copyright Law through the Giving of Appreciation to Authors." *Legal Brief* 11, no.4 (2022): 2466-2477. <https://doi.org/10.35335/legal>
- Araya, Simret G/Tsadik and Berhanu Belayneh Beyene. "Effect of Cultural Appropriation on the Cultural Garment Weaving Industry: The Case of Weavers in Addis Ababa, Ethiopia." *Cogent Social Sciences* 10, no.1 (2024): 1-24. <https://doi.org/10.1080/23311886.2024.2351679>
- Arif, Muhammad and Rosni. "Pemanfaatan dan Pengelolaan Hak Atas Kekayaan Intelektual (HKI) Sebagai Strategi Pengembangan Kewirausahaan." *Jurnal Geografi* 10, no.1 (2018): 98–104. <https://doi.org/10.24114/jg.v10i1.8632>

- Chidede, Talkmore. "The Role of Intellectual Property Rights' Protection in Advancing Development in South Africa." *Law, Democracy & Development* 26, no. 1 (2022): 168-189. <https://www.ajol.info/index.php/ldd/article/view/245744>
- El-Zarka, Samir. "Traditional Knowledge and Genetic Resources in Egyptian Environmental Law: Legal Gaps and Implementation Challenges." *African Journal of Environmental Law and Policy* 7, no.1 (2020): 45-63. <https://doi.org/10.1007/s10668-020-01139-5>
- Ferianto, Tommy Hendrix and Tuthi' Mazidatur Rohmah. "Pelindungan Hukum Terhadap Sumber Daya Genetik dan Pengetahuan Tradisional (SDG-PT) Pasca Diundangkannya Undang-Undang Nomor 13 Tahun 2016 Tentang Paten." *Journal of Intellectual Property* 3, no.1 (2020): 31-41. <https://doi.org/10.20885/jipro.vol3.iss1.art2>
- Fitriani, Nurul and Adi Sulistiyono. "Perlindungan Hukum Kekayaan Intelektual Komunal terhadap Obat Tradisional Jamu sebagai Pengetahuan Tradisional." *Aliansi* 1, no.3 (2024): 253-279. <https://doi.org/10.62383/aliansi.v1i3.226>
- G., Charuprita. "Biopiracy of Genetic Resources—Role of the Three-Tier Structure in Regulating Access—Potential Conflicts Between the New System and IPR International Instruments." *Indian Journal of Integrated Research in Law* 2 (2022): 1-26. <https://heinonline.org/HOL/LandingPage?handle=hein.journals/injloitd3&div=141&id=&page=>
- Guo, Mali et al. "Life Barcoded by DNA Barcodes." *Conservation Genetics Resources* 14, no. 4 (2022): 399-409. <https://doi.org/10.1007/s12686-022-01291-2>
- Henda, Ghezela Ben. "Access and Benefit-Sharing and the Protection of Traditional Knowledge in Tunisia: Gaps and Perspectives," *Journal of North African Environmental Law* 10, no. 2 (2022): 45-62. <https://doi.org/10.1163/22114617-12340087>
- Irfaniah, Hikmah. "Urgensi Pelestarian Pengetahuan Tradisional dan Peluang Perpustakaan Umum dalam Pelestarian Pengetahuan Tradisional." *Jupiter* 17, no.1 (2020): 10-19. <https://www.neliti.com/publications/326469/urgensi-pelestarian-pengetahuan-tradisional-dan-peluang-perpustakaan-umum-dalam>.
- Kurniawan, I Gede Agus et al. "Intellectual Property Rights and Ethics: A Comparison of Philosophical Approaches in Northern and Southern Countries". *Jurnal Kosmik Hukum* 25, no. 1 (2025): 106-123. <https://doi.org/10.30595/kosmikhukum.v25i1.24489>
- Ma, Xiulie, and Xue Gu. "New Marketing Strategy Model of E-Commerce Enterprises in the Era of Digital Economy." *Heliyon* 10, no. 8 (2024): 1-12. <https://doi.org/10.1016/j.heliyon.2024.e29038>

- Martini, Dwi, Diman Ade Mulada and Dewi Sartika. "Bioteknologi Tradisional dan Sumber Daya Genetika Indonesia: Kasus Pemanfaatan Oleh Industry Farmasi." *Jurnal Kompilasi Hukum* 5, no. 1 (2020): 129-153. <https://doi.org/10.29303/jkh.v5i1.4>
- Nurfitri, Dian. "Perlindungan Kekayaan Intelektual Komunal Pasca Terbitnya Peraturan Pemerintah Nomor 56 Tahun 2022 Tentang Kekayaan Intelektual Komunal." *Jurnal De Lege Ferenda Trisakti*, (2023): 53–61. <https://doi.org/10.25105/ferenda.v1i2.18276>.
- Nwauche, Enninya S. "The Emerging Right to Communal Intellectual Property." *Marquette Intellectual Property Law Review* 19, no.2 (2015): 221-243.
<https://scholarship.law.marquette.edu/cgi/viewcontent.cgi?article=1278&context=iplr>.
- Palar, Miranda Risang Ayu, 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): 1-14.
<https://doi.org/10.1080/23311886.2023.2274431>
- Perangin-angin, Reh Bungana, Ramsul Nababan, and Parlaungan G. Siahaan. "Perlindungan Pengetahuan Tradisional Sebagai Hak Konstitusional di Indonesia." *Jurnal Konstitusi* 17, no.1 (2020): 178-196. <https://doi.org/10.31078/jk1718>.
- Prasetyo, Mas Subagyo Eko, Syafrida Syafrida and Pardomuan Gultom. "Strengthening the Legal Protection of Communal Intellectual Property to Anticipate Misuse by Foreign Parties." *Indonesia Law Journal* 16, no. 2 (2023): 123–124. <https://doi.org/10.33331/ilj.v16i2.124>.
- Putri, Ria Wierma, et.al. "Protecting Indonesia's Communal Intellectual Property Rights: A TWAIL Perspective." *Uti Possidetis Journal of International Law* 5, no. 1 (2024): 68–105.
<https://doi.org/10.22437/up.v5i1.25186>.
- Putri, Yunita Maya, Ria Wierma Putri and Rehulina. "Recognizing The Protection of Communal Intellectual Property Rights." *Journal of Law De'Rechtsstaat* 7, no. 2 (2021): 173-184.
<https://doi.org/10.28946/sc.v30i2.2903>
- Qodriyatun, Siti Nurhayati. "Perlindungan terhadap Pengetahuan Tradisional Masyarakat atas Pemanfaatan Sumber Daya Genetik (SDG)." *Research Center for Expertise Board of the Republic of Indonesia*, (2016): 141–159.
<https://dprexternal3.dpr.go.id/index.php/kajian/article/view/772/517>.

- Rafique, Naila, Tahir Hameed Ullah Khan, and Erum Naz Akhtar. "TRIPs Implementation and the Global Politics of Intellectual Property Reforms in Developing Countries". *Advance Social Science Archive Journal* 3, No. 1 (2025): 2002-2010. <https://assajournal.com/index.php/36/article/view/431>
- Rama, Bagus Gede Ari, Dewa Krisna Prasada, and Kadek Julia Mahadewi. "Kekayaan Intelektual Komunal dalam Perspektif UU Hak Cipta." *Supremasi: Jurnal Pemikiran Penelitian Ilmu-Ilmu Sosial, Hukum dan Pengajarannya* 18, no. 1 (2023): 1-12. <https://doi.org/10.26858/supremasi.v18i1.43483>.
- Ramadhan, Muhammad Citra and Fitri Yanni Dewi Siregar. "Protecting Communal Intellectual Property in Indonesia: Constraints Faced by the Directorate General for Intellectual Property." *Kanun: Jurnal Ilmu Hukum* 23, no. 3 (2022): 267-277. <https://doi.org/10.24815/kanun.v24i3.28098>.
- Redvers, Nicole et al. "Indigenous Peoples: Traditional Knowledges, Climate Change, and Health." *PLOS Global Public Health* 3, no. 10 (2023): 1-20. <https://doi.org/10.1371/journal.pgph.0002474>.
- Ruhtiani, Maya. "Perbandingan Perlindungan Hukum Hak Kekayaan Intelektual Komunal Antara Indonesia dan China." *Jurnal Ilmiah Universitas Batanghari Jambi* 22, no. 2 (2022): 886-891. <https://doi.org/10.33087/jiubj.v22i2.2025>.
- Samsithawrati, Putu Aras et al. "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. <https://doi.org/10.14710/jphi.v7i1.1-26>.
- Septarina, Muthia. "Perlindungan Hukum Pengetahuan Tradisional dalam Konsep Hukum Kekayaan Intelektual." *Al-Adl: Jurnal Hukum* 8, no. 2 (2016): 45-63. <https://doi.org/10.31602/al-adl.v8i2.457>.
- Setyowati, Nuning, et al. "The Hidden Treasure of Wedang Uwuh, an Ethnic Traditional Drink from Java, Indonesia: Its Benefits and Innovations." *International Journal of Gastronomy and Food Science* 31 (2023): 100688. <https://doi.org/10.1016/j.ijgfs.2023.100688>.
- Setyaningtyas, Ayu Citra and Endang Sri Kawuryan. "Menjaga Ekspresi Budaya Tradisional di Indonesia." *Tambun Bungau Legal Science Journal* 1, no. 2 (2016): 45-58. <https://doi.org/10.20231/jihtb.v1i2.60>.
- Snehee, Rishabh. "Comparative Study of Copyright in India, US and UK," *Indian Journal of Law & Legal Research* 4, no. 2 (2022): 1-15. <https://heinonline.org/HOL/LandingPage?handle=hein.journals/injlolw5&div=101&id=&page=>

Tukan, Maria Klara Amarilis Citra Sinta Dewi, Flora Ceunfin, and Melkior Kian. "How to Play and Tune Sasando in Edon Style." *Ekpresi Seni* 22, no. 1 (2020): 21-36.
<https://media.neliti.com/media/publications/384544-how-to-play-and-tune-sasando-in-edon-sty-001cc425.pdf>

Widyanti, Yenny Era. "The Urgency of Sui Generis Protection of Communal Intellectual Property in Indonesia: A Comparative Study in Philippines." *Juridiscie: Jurnal Hukum dan Syariah* 13 (2022): 1-23.
<https://doi.org/10.18860/j.v13i1.16467>

Thesis or Dissertation

Bonolo, Dimpho. "The Exploitation of Traditional Knowledge Protection System in Botswana." Master's Thesis, College of Business, Peace, Leadership and Governance of Africa University, 2021.

Legal Document

Indonesia. The 1945 Constitution of the Republic of Indonesia.

Indonesia. Law No. 17 of 1985 on the Ratification of UNCLOS.

Indonesia. Law No. 5 of 1994 on Ratification of the United Nations Convention on Biological Diversity

Indonesia. Law No. 7 of 1994 concerning Ratification of the Agreement Establishing the World Trade Organization.

Indonesia. Law No. 39 of 1999 concerning Human Rights.

Indonesia. Law No. 20 of 2003 concerning National Education System.

Indonesia. Law No. 12 of 2005 on the Ratification of the ICCPR.

Indonesia. Law No. 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.

Indonesia. Law No. 28 of 2014 concerning Copyright.

Indonesia. Law No. 13 of 2016 concerning Patents.

Indonesia. Law No. 16 of 2016 on the Ratification of the UNFCCC.

Indonesia. Law No. 20 of 2016 concerning Trademarks and Geographical Indications.

Indonesia. Law No. 5 of 2017 concerning Cultural Advancement.

Indonesia. Government Regulation No. 56 of 2022 concerning Communal Intellectual Property.

Indonesia. Ministry of Law and Human Rights Regulation No. 13 of 2017 concerning Communal Intellectual Property Data.

Kenya. 2010 Constitution.

Kenya. The Protection of Traditional Knowledge and Cultural Expressions Act, 2016 No. 33 of 2016.

Tunisia. Code de l'Environnement.

- Tunisia. Law No. 2001-13 on the Protection of Trademarks and Service Marks.
- Tunisia. Law No. 2009-13 on the Organization of the Seed and Seedling Sector.
- Tunisia. Law No. 2014-38 on Archaeological and Historical Heritage and Traditional Arts.
- World Intellectual Property Organization. Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge (2024).
- World Trade Organization. Agreement Establishing the World Trade Organization (1994).
- World Trade Organization. Trade-Related Aspects on Intellectual Property Rights Agreement (1994).
- United Nations. Convention on Biological Diversity (1993).
- United Nations. Cartagena Protocol on Biosafety to the Convention on Biological Diversity (2003).
- United Nations. Declaration on The Rights of Indigenous Peoples (2007).
- United Nations. Nagoya Protocol on Access to GR and the Fair and Equitable Sharing of Benefits Arising from their Utilization for Convention Biodiversity (2014).

Other Document

- Seminar Nasional Hukum Universitas Negeri Semarang. “Digitalisasi Kekayaan Intelektual Komunal di Indonesia.” <https://proceeding.unnes.ac.id/index.php/snh/article/view/723>.
- Kaet, Margareta Sofyana Irma, Udi Utomo and Totok Sumaryanto Florentinus. “The Changes of Sasando Music Organology in Kupang East Nusa Tenggara.” https://www.researchgate.net/profile/Totok-Sumaryanto/publication/338648299_The_Changes_Of_Sasando_Music_Organology_In_Kupang_East_Nusa_Tenggara/links/5e6888f292851c7ce05b35f6/The-Changes-Of-Sasando-Music-Organology-In-Kupang-East-Nusa-Tenggara.pdf
- World Intellectual Property Organization. Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, Fifty-First Session Geneva, 3 June 2025, the Protection of Traditional Knowledge: Draft Articles WIPO/GRTKF/IC/51/4.

Website Content

- Directorate General of Intellectual Property of the Republic of Indonesia. “Kekayaan Intelektual Komunal” (1), <https://kikomunal-indonesia.dgip.go.id/home>

- Directorate General of Intellectual Property of the Republic of Indonesia. "Mengenal Sumber Daya Genetik dan Pengetahuan Tradisional dalam Pelindungan KI Indonesia" (2). <https://www.dgip.go.id/index.php/artikel/detail-artikel-berita/mengenal-sumber-daya-genetik-dan-pengetahuan-tradisional-dalam-pelindungan-ki-indonesia>.
- Godde, James S. "Genetic Resources". <https://www.ebsco.com/research-starters/environmental-sciences/genetic-resources>
- Kehati. "Virus Corona dan Sumber Daya Genetik Indonesia." <https://kehati.or.id/coronadansumberdayagenetik/>
- Legal Documentation and Information Network Directorate General of Intellectual Property of the Republic of Indonesia. "Modul Kekayaan Intelektual Di Bidang Kekayaan Intelektual Komunal 2019." https://jdih.dgip.go.id/produk_hukum/view/id/45/t/modul+kekayaan+intelektual+di+bidang+kekayaan+intelektual+komunal
- Ministry of Environment and Forestry of the Republic of Indonesia. "Pentingnya Perlindungan Sumberdaya Genetik Indonesia." <https://ppid.menlhk.go.id/berita/siaran-pers/5877/pentingnya-perlindungan-sumberdaya-genetik-indonesia>.
- Mongabay. "Antara Tanaman Obat, Sumber Daya genetic dan *Biopiracy*." <https://www.mongabay.co.id/2020/11/08/antara-tanaman-obat-sumberdaya-genetik-dan-biopiracy/>.
- National Legal Development Agency of the Republic of Indonesia. "Menkumham Tanda Tangan Traktat Internasional tentang Sumber Daya Genetik dan Pengetahuan Tradisional". <https://bphn.go.id/berita-utama/menkumham-tanda-tangan-traktat-internasional-tentang-sumber-daya-genetik-dan-pengetahuan-tradisional>.
- World Intellectual Property Organization. "What is Intellectual Property", <https://www.wipo.int/en/web/about-ip>
- World Intellectual Property Organization. "WIPO-Administered Treaties". https://www.wipo.int/wipolex/en/treaties/ShowResults?search_what=C&treaty_id=19830.
- World Intellectual Property Organization. "Traditional Knowledge." <https://www.wipo.int/tk/en/tk/>
- Yayasan KEHATI. "Strategi Konservasi Keanekaragaman Hayati Indonesia." <https://kehati.or.id/publikasi>