



Customary law in the digital era: Safeguarding indigenous sovereignty in cyberspace

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ABSTRACT

This study examines the adaptation of customary law in the digital era and the legal protection of indigenous digital rights. Despite constitutional recognition in Article 18B(2) of the 1945 Constitution, the absence of specific regulations on communal digital data ownership exposes indigenous communities to risks of exploitation and marginalization. Using a normative legal method with statutory, conceptual, and comparative approaches, this study analyzes national and international legal frameworks, including UNDRIP (2007) and ILO Convention No. 169, while comparing regulatory models from Canada, New Zealand, and Australia. Findings indicate that while digitalization facilitates the preservation of customary law, it also enables unauthorized data use and limits indigenous participation in digital policymaking. Solutions such as blockchain-based documentation and community-driven licensing offer potential legal safeguards. This study concludes that legal reforms are needed to ensure explicit recognition of communal digital rights, integration of indigenous dispute resolution in digital law, and stronger indigenous participation in digital policymaking, reinforcing legal pluralism in the digital era.

Keywords: Customary law, Indigenous rights, Digitalization



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INTRODUCTION

Customary law is a legal system that has been rooted in the lives of indigenous peoples in various parts of the world, including Indonesia. As part of cultural heritage and legal identity, customary law functions as a regulatory instrument within indigenous communities, covering aspects of natural resource ownership, dispute resolution, and protection of social and cultural values. In Indonesia, the existence of customary law has received constitutional recognition through Article 18B Paragraph (2) of the 1945 Constitution, which affirms that the state recognizes and respects the unity of customary law communities and their traditional rights, as long as they are alive and in accordance with the principles of the Unitary State of the Republic of Indonesia (NKRI).¹ In addition, further recognition can be found in Law Number 6 of 2014 concerning Villages, which gives the authority for customary villages to carry out customary law autonomously within the scope of local government.²

Despite gaining legal recognition, customary law in Indonesia faces various challenges in the context of globalization and modernization. One of the main challenges is the rampant agrarian conflicts involving indigenous peoples, especially related to land and natural resource ownership claims. In practice, the national legal system still tends to prioritize positive legal interests, so customary law often does not receive adequate protection in land and resource disputes.

¹ Irpan Suriadiata, "Reconceptualization of the Recognition of the Unity of Customary Law Communities in Indonesian Legislation," *Pena Justisia: Media Komunikasi Dan Kajian Hukum* 23, no. 3 (2024): 2245–57.

² Ni'matul Huda and Muhammad Addi Fauzani, "Transformation Model of Institutional Arrangements of Indigenous People To Become Customary Villages: Experiences From Indonesia," *Journal of Law and Sustainable Development* 12, no. 1 (January 23, 2024): e2765, <https://doi.org/10.55908/sdgs.v12i1.2765>.

In the digital era, the challenges faced by indigenous peoples are increasingly complex. Digitalization presents opportunities for indigenous communities to document and disseminate customary law through various digital platforms.³

The use of technologies such as the Geographic Information System (GIS) has been used by a number of indigenous communities to map their customary territories to strengthen their claims to ownership of hereditary land.⁴ This technology is an important instrument in preventing overlapping claims with companies or governments that want to control customary territories for economic benefits.⁵ In addition, customary law archiving in the form of digital databases contributes to maintaining the sustainability of customary law norms and provides stronger legal evidence in dealing with disputes with external parties.⁶

While digitalization provides significant benefits to indigenous peoples, there are also challenges that threaten the sovereignty of customary law in cyberspace. One of the main problems is the exploitation of customary law data by external parties. Customary law documentation in digital format has the potential to be accessed and leveraged without the consent of indigenous communities, which can lead to a loss of their control over legal and cultural information of a communal nature.⁷ A number of companies have used indigenous information for commercial purposes without clear regulations related to the protection of indigenous peoples' rights in the digital ecosystem.⁸

In addition to data exploitation, the gap in access to digital technology is also the main obstacle in the implementation of digitalization of customary law in Indonesia. Many indigenous communities still face limited digital infrastructure, so they cannot make optimal use of technology.⁹ Low digital literacy in some indigenous communities has exacerbated this gap, ultimately leading to inequities in the documentation of customary laws.¹⁰ If this inequality is not addressed, indigenous peoples who do not have access to technology risk being further excluded from legal developments in the digital era.

From a legal perspective, the protection of indigenous peoples' digital rights in national regulations is still relatively minimal.¹¹ Although there are international legal instruments such as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) 2007 and ILO Convention No. 169, which explicitly recognize the rights of indigenous peoples to their lands and resources,

³ Handoyo Dhanudibroto and Tuti Widyaningrum, "The Impact of Digitalization on Indonesian's Living Law and Demographic Bonuses," in *Proceedings of the 4th International Seminar and Call for Paper* (SCITEPRESS - Science and Technology Publications, 2023), 486–97, <https://doi.org/10.5220/0012582800003821>.

⁴ Hunggul Y. S. H. Nugroho, Andrew Skidmore, and Yousif A. Hussin, "Verifying Indigenous Based-Claims to Forest Rights Using Image Interpretation and Spatial Analysis: A Case Study in Gunung Lumut Protection Forest, East Kalimantan, Indonesia," *GeoJournal* 87, no. 1 (February 23, 2022): 403–21, <https://doi.org/10.1007/s10708-020-10260-x>.

⁵ Agung Basuki, M Zaid, and Alnour Abobaker Mohamed Musa, "Establishing Ecological Justice in the Governance of Land Inventory, Ownership, and Utilisation in Indonesia," *Journal of Law, Environmental and Justice* 1, no. 2 (July 24, 2023): 137–54, <https://doi.org/10.62264/jlej.v1i2.12>.

⁶ Panca O. Hadi Putra et al., "A Framework for Integrated E-Notary Services Based on Blockchain for Civil Law Notaries: The Case of Indonesia," *JOIV : International Journal on Informatics Visualization* 9, no. 1 (January 30, 2025): 153, <https://doi.org/10.62527/joiv.9.1.3170>.

⁷ Andika Prawira Buana and Moch Andry Wikra Wardhana Mamonto, "The Role of Customary Law in Natural Resource Management: A Comparative Study between Indonesia and Australia," *Golden Ratio of Mapping Idea and Literature Format* 3, no. 2 (June 30, 2023): 167–86, <https://doi.org/10.52970/grmilf.v3i2.400>.

⁸ Desak Putu Dewi Kasih et al., "The Exploitation of Indigenous Communities by Commercial Actors," *Journal of Ethnic and Cultural Studies* 8, no. 4 (2021): 91–108.

⁹ Francisca Romana et al., "The Impact Of Information Communication Technology Developments In The Indigenous Law Community," *Journal of Syntax Literate* 9, no. 2 (2024), <https://doi.org/10.36418/syntax-literate.v9i2.14622>.

¹⁰ Sugeng Bahagijo et al., "Closing The Digital Gender Gap In Indonesia Through The Roles And Initiatives Of Civil Society Organizations," *JURNAL ILMU SOSIAL* 21, no. 1 (January 7, 2022): 14–38, <https://doi.org/10.14710/jis.21.1.2022.14-38>.

¹¹ Gusniarjo Mokodompit et al., "Ensuring the Rights of Indigenous Peoples: International Legal Standards and National Implementation," *The Easta Journal Law and Human Rights* 1, no. 03 (June 30, 2023): 127–36, <https://doi.org/10.58812/eslhr.v1i03.89>.

implementation at the national level has not been optimal.¹² Until now, there have been no specific regulations that explicitly regulate the ownership of communal data by indigenous peoples, so that information documented in digital systems does not have strong legal protections.

In addition to the regulatory aspect, the fundamental difference between the customary law system and digital law is also a challenge in itself. Customary law in Indonesia is generally based on the oral system and direct interaction in dispute resolution.¹³ On the other hand, in a digital space that tends to be anonymous and technology-based, custom-based dispute resolution mechanisms are less relevant. Therefore, the right strategy is needed so that customary law can adapt to the digital legal system without losing its fundamental essence.

Taking into account these challenges, this study examines how customary law can adapt in the digital era to maintain the sovereignty of indigenous peoples in cyberspace, as well as how the national legal system can accommodate the protection of indigenous peoples' digital rights in the digital era.

RESEARCH METHOD

This research uses normative methods with laws and regulations, conceptual, and comparative approaches.¹⁴ The approach to laws and regulations is carried out to analyze national and international regulations that regulate customary law and the protection of indigenous peoples' digital rights, such as Article 18B Paragraph (2) of the 1945 Constitution, Law No. 6 of 2014 concerning Villages, UNDRIP 2007, and ILO Convention No. 169. A conceptual approach is used to examine the adaptation of customary law in the digital ecosystem, including the application of the concept of Cyber Indigenous Rights. A comparative approach is applied to examine regulatory models from various countries that have integrated customary law with information technology policies, so that relevant approaches can be identified for Indonesia.

The analysis in this study was carried out by examining the alignment between customary law and digital regulation, identifying challenges in its implementation, and comparing legal practices from various jurisdictions. The findings obtained will be the basis for formulating policy recommendations to strengthen the position of customary law in the digital legal system and ensure more optimal protection for indigenous peoples in cyberspace.

RESULTS AND DISCUSSIONS

Adaptation of Customary Law in the Digital Era to Maintain the Sovereignty of Indigenous Peoples in the Cyberspace

Customary law, as a living legal system, has the flexibility to evolve and adapt to social, economic, and technological changes. However, the rapid development of information technology and digitalization presents new challenges for indigenous peoples in maintaining and managing their legal systems. The sustainability of customary law depends not only on normative recognition in the national legal system, but also on its ability to integrate in an increasingly complex digital legal ecosystem.¹⁵ In this context, the digitization of customary law can be a tool that strengthens the position of indigenous peoples, but on the other hand it also has the potential to be a threat that erodes their sovereignty in cyberspace.

In the Theory of Legal Pluralism put forward by Boaventura de Sousa Santos, the legal system is not single and exclusive, but rather an arena of interaction between various different legal systems, including customary law, state law, and information technology-based law.¹⁶ Thus, customary law

¹² Shahid Ahmed Dr Shahid Ahmed, "The Legal Status of Indigenous Peoples: Land Rights and Social Equity in International Law," *Fari Journal of Social Sciences and Law* 1, no. 02 (2024): 152–64.

¹³ Habib Fuqoha et al., "The Role of Community Traditional Institutions in Dispute Resolution in Multicultural Communities," *Journal of World Science* 3, no. 11 (November 13, 2024): 1403–8, <https://doi.org/10.58344/jws.v3i11.1224>.

¹⁴ Tunggul Ansari Setia Negara, "Normative Legal Research in Indonesia: Its Origins and Approaches," *Audito Comparative Law Journal (ACLJ)* 4, no. 1 (February 2, 2023): 1–9, <https://doi.org/10.22219/aclj.v4i1.24855>.

¹⁵ S.B. Sinay et al., "Legal Pluralism Of Spatial Rights Of Indigenous People In Arcipelagic Province In Indonesia," *Russian Journal of Agricultural and Socio-Economic Sciences* 121, no. 1 (January 26, 2022): 12–22, <https://doi.org/10.18551/rjoas.2022-01.02>.

¹⁶ Sara Araújo, "Legal Pluralism as Co-Presence," *Oñati Socio-Legal Series* 4, no. 1 (June 13, 2024): 1–9, <https://doi.org/10.35295/osls.iisl.1931>.

cannot be marginalized by the dominance of state law or growing digital regulations.¹⁷ On the other hand, customary law must obtain more concrete recognition in order to adapt to the digital world without losing its fundamental values.¹⁸ However, in practice, the digital legal system still tends to be dominated by a more formalistic and individual-based paradigm of state law, so customary law often has difficulties in accommodating the principles of communal ownership and community-based dispute resolution mechanisms.

The adaptation of customary law in the digital world requires stronger recognition in national and international regulations. Article 18B Paragraph (2) of the 1945 Constitution provides a constitutional basis for the recognition of indigenous peoples and their traditional rights, but the implementation of this norm in the digital context is still limited.¹⁹ Without specific regulations that accommodate the digital rights of indigenous peoples, their sovereignty in managing information, data, and digital resources is still vulnerable to exploitation and marginalization. In international law, Article 31 of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) 2007 affirms that indigenous peoples have exclusive rights to their traditional knowledge, including in digital form.²⁰ This statement is in line with the Cyber Indigenous Rights Concept developed by Kristen Carpenter, which asserts that indigenous peoples should have full control over their data, information, and cultural expressions in the digital space.²¹ However, although this principle has been internationally recognized, regulations at the national level still do not provide effective protection for indigenous peoples in facing the challenges of digitalization.

One of the biggest challenges in adapting customary law in the digital era is the exploitation of indigenous peoples' data and information by external parties. Digitization of customary law is often carried out without a clear legal mechanism in regulating the ownership and control of such data. In many cases, information on customary law, mapping of customary territories, and cultural expressions documented in digital systems has been used by governments or companies without the consent of the indigenous community concerned. This is contrary to the Theory of Communal Intellectual Property Rights developed by Darrell A. Posey, which emphasizes that the knowledge and culture of indigenous peoples should be treated as collective rights that cannot be exploited without the consent of their communities.²² Without clear regulations on the protection of indigenous peoples' data, digitalization can actually accelerate the exploitation and marginalization of customary law in the modern legal system.

In addition to the aspect of data ownership, another challenge faced in adapting customary law in the digital world is the lack of legal mechanisms that support the system of communal ownership in digital regulations. Customary law generally regulates the collective ownership and management of resources, while digital legal systems tend to be based on individual ownership.²³ This paradigm difference creates a legal gap that causes indigenous peoples to struggle to maintain their communal

¹⁷ Izmi Waldani, "Legal Sociology Review of the Development of Land Services in Indonesia," *JLAST: Journal of Law and Social Transformation* 2, no. 1 (2024): 32–43.

¹⁸ Stefan Koos, "Digital Globalization and Law," *Lex Scientia Law Review* 6, no. 1 (2022): 33–68.

¹⁹ Marthen B Salinding and Aris Irawan, "Legal Protection of Traditional Knowledge of Indigenous Peoples in Obtaining Economic Benefits, Human Rights Perspective," *Mahadi: Indonesia Journal of Law* 3, no. 2 (2024): 122–28.

²⁰ Lindsay Paquette, "Bill C-15 and the United Nations Declaration on the Rights of Indigenous Peoples: A Proposal for Intellectual Property Law Reform in Canada for the Protection, Preservation and Prosperity of Indigenous Traditional Knowledge and Cultural Expression," *Intellectual Property Journal* 34, no. 2 (2022): 181–205.

²¹ Kristen A Carpenter, "A Human Rights Approach to Cultural Property: Repatriating the Yaqui Maaso Kova," *Cardozo Arts & Ent. LJ* 41 (2022): 159.

²² Graham Dutfield and Uma Suthersanen, "Traditional Knowledge as Intellectual Property Subject Matter: Perspectives from History, Anthropology, and Diverse Economies," in *Handbook of Innovation and Intellectual Property Rights* (Edward Elgar Publishing, 2024), 270–90, <https://doi.org/10.4337/9781800880627.00026>.

²³ Rosa M. Garcia-Teruel and Héctor Simón-Moreno, "The Digital Tokenization of Property Rights. A Comparative Perspective," *Computer Law & Security Review* 41 (July 2021): 105543, <https://doi.org/10.1016/j.clsr.2021.105543>.

ownership principles in the digital world.²⁴ The principle of Communal Ownership, which is a key principle in customary law, must find a place in digital regulations so that indigenous peoples retain control over their resources in cyberspace.

To address these challenges, some indigenous communities have begun to implement blockchain technology as a mechanism to protect their digital rights. Blockchain allows for decentralized and transparent recording of information,²⁵ so that data related to customary law cannot be manipulated by outside parties without the consent of the indigenous community. In addition, this technology also allows the implementation of community-based licensing, which stipulates that digital information regarding customary law can only be used with the official permission of the indigenous people concerned. This approach can be a solution in ensuring that customary laws retain control over their digital resources, as well as preventing exploitation by external parties.

In addition to aspects of data ownership and protection, customary law also faces challenges in adapting dispute resolution mechanisms into the digital space. Customary law generally uses a dispute resolution system based on deliberation and direct community involvement, while digital law prioritizes formal and individual-based procedures. The adaptation of customary dispute resolution mechanisms in the cyber space requires a legal model that can bridge these differences, one of which is by developing a community-based dispute resolution platform that allows indigenous peoples to continue to run their legal systems in a digital format without losing their fundamental value. ILO Convention No. 169, specifically in Article 6, affirms that indigenous peoples should have the right to determine how their legal systems are applied, including in the context of digitalization.²⁶

Furthermore, the participation of indigenous peoples in the formulation of digital policies is no less important aspect in ensuring that customary laws can adapt well in the cyberspace. Currently, policies related to the digitization of customary law are still largely determined without the direct involvement of the indigenous community itself. The Data Sovereignty Principle emphasizes that indigenous peoples should have the exclusive right to determine how their digital information is managed and used.²⁷ Therefore, the involvement of indigenous peoples in the preparation of information technology regulations must be strengthened, one of which is by providing wider access for indigenous communities to participate in policy-making related to the digital space.

Taking into account these various challenges and opportunities, the adaptation of customary law in the digital era must be carried out with a more inclusive approach and based on the principles of social justice. The digitization of customary law should not only be a tool for modernization, but should also be an instrument that ensures that indigenous peoples retain full control over their own legal systems in cyberspace. Therefore, more progressive policies are needed to ensure that customary law not only survives as cultural heritage, but also becomes part of a recognized legal system in the ever-evolving digital ecosystem.

Legal Arrangements Related to the Protection of Indigenous Peoples' Digital Rights in the Digital Era

The development of information technology has provided opportunities for indigenous peoples to strengthen their legal existence through digitalization. However, without a clear legal framework, indigenous peoples face various challenges, such as data exploitation, marginalization of customary law in the digital legal system, and gaps in access to digital rights protection. Therefore, the national legal system needs to provide a comprehensive legal framework to ensure that the digital rights of indigenous peoples are effectively protected in the information technology ecosystem.

²⁴ Michael Max Bühler et al., "Unlocking the Power of Digital Commons: Data Cooperatives as a Pathway for Data Sovereign, Innovative and Equitable Digital Communities," *Digital* 3, no. 3 (June 29, 2023): 146–71, <https://doi.org/10.3390/digital3030011>.

²⁵ Yanjun Zuo, "Tokenizing Renewable Energy Certificates (RECs)—A Blockchain Approach for REC Issuance and Trading," *IEEE Access* 10 (2022): 134477–90, <https://doi.org/10.1109/ACCESS.2022.3230937>.

²⁶ Bas Rombouts, "The Quilombola Communities of Alcántara's International Legal Battle for Their Lands and Customs," *International Labor Rights Case Law* 11, no. 1 (March 12, 2025): 68–73, <https://doi.org/10.1163/24056901-11010013>.

²⁷ Erin Corston, Gonzague Guéranger, and Donna Lyons, "Exercising Rights over Data: A Journey towards First Nations Data Sovereignty in Canada," *Acta Borealia* 41, no. 2 (July 2, 2024): 72–79, <https://doi.org/10.1080/08003831.2024.2410113>.

In the Theory of Legal Pluralism developed by Boaventura de Sousa Santos, customary law cannot be considered as a legal system isolated from state law, but must be integrated into broader regulations, including in the realm of information technology.²⁸ In the Indonesian context, Article 18B Paragraph (2) of the 1945 Constitution provides a constitutional basis for the recognition and respect of customary law communities and their traditional rights.²⁹ However, the implementation of these norms in the digital realm still faces challenges, especially in ensuring that customary law remains a strong position in regulations governing digital rights and data protection of indigenous peoples.

Currently, there are several national regulations related to data and digital information protection, such as Law Number 11 of 2008 concerning Electronic Information and Transactions (ITE Law) and Law Number 27 of 2022 concerning Personal Data Protection (PDP Law).³⁰ However, the regulation is more oriented towards the protection of the individual and has not explicitly accommodated the Principle of Communal Ownership, which is a key characteristic in customary law. In the customary law system, information about laws, traditions, and cultural expressions is not owned individually, but collectively by indigenous communities. The inconsistency between the principle of individual ownership in national regulations and the principle of collective ownership in customary law creates a legal gap that can hinder the protection of indigenous peoples' digital rights.

In international law, several legal instruments have given recognition to the digital rights of indigenous peoples. Article 31 of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) 2007 affirms that indigenous peoples have the right to protect and control their traditional knowledge, cultural expressions, and data in digital format.³¹ In addition, ILO Convention No. 169 states that indigenous peoples should have the right to manage information relating to their own cultures and legal systems, as well as to participate in the formulation of policies that impact them.³² However, to date, Indonesia has not ratified ILO Convention No. 169 and does not have a national regulation that specifically provides protection for the digital rights of indigenous peoples as stipulated in the international instrument.

Comparisons with other countries' legal systems show that some countries have developed more advanced policies in protecting the digital rights of indigenous peoples. Canada, New Zealand, and Australia have implemented regulations that give indigenous peoples the right to control their digital data and information. Canada, for example, allows indigenous peoples to implement customary licensing mechanisms in the use of digital data, so that the data cannot be leveraged without the consent of the indigenous communities concerned.³³ In New Zealand, the recognition of Māori peoples in the Treaty of Waitangi provides a strong legal basis for the management of their digital resources, including the protection of digitised customary law information.³⁴ Meanwhile, in Australia, regulations such as the Indigenous Knowledge Protection Act give indigenous peoples the exclusive right to control their cultural and customary legal expressions in digital form.³⁵

²⁸ César Bazán Seminario, "Decolonising Legal Theory: The Rule of Law and the Legalisation of Legal Pluralism," *Revista Via Iuris*, no. 36 (January 20, 2024): 38–67, <https://doi.org/10.37511/viaiuris.n36a2>.

²⁹ Amri Panahatan Sihotang and Dominikus Rato, "Legal Status of Customary Communities, Customary Law Communities and Indigenous Communities as Custom Law Subjects," *Journal of Ecohumanism* 3, no. 6 (September 24, 2024): 1690–1702, <https://doi.org/10.62754/joe.v3i6.4128>.

³⁰ Lewiandy Lewiandy, Ariawan Gunadi, and Evan Tjoa Putra, "The Prohibition of Online Gambling in Indonesia: A Law and Economic Analysis," *Indonesia Law Review* 14, no. 2 (2024): 3.

³¹ Shana Birly, Angela Teeple, and Judy Illes, "The Realization of Portable MRI for Indigenous Communities in the USA and Canada," *Journal of Law, Medicine & Ethics* 52, no. 4 (January 31, 2024): 816–23, <https://doi.org/10.1017/jme.2024.159>.

³² Retno Kusniati, "Free, Prior, and Informed Consent Principles as Indigenous Peoples' Right: Soft Law or Hard Law?," *Jambe Law Journal* 7, no. 1 (2024): 169–93, <https://doi.org/10.22437/home.v7i1.350>.

³³ Andrew D Mitchell and Theodore Samlidis, "Protecting Policy Space for Indigenous Data Sovereignty under International Digital Trade Law," *Geo. J. Int'l L.* 55 (2023): 565.

³⁴ Christopher Burns, Maia Htaraka, and Alison Jones, "Te Tiriti o Waitangi: The Treaty of Waitangi, Principles and Other Representations," *New Zealand Journal of Educational Studies* 59, no. 1 (June 12, 2024): 15–29, <https://doi.org/10.1007/s40841-024-00312-y>.

³⁵ Jacqueline Paul, "Traditional Knowledge Protection and Digitization: A Critical Decolonial Discourse Analysis," *International Journal for the Semiotics of Law - Revue Internationale de Sémiotique Juridique* 36, no. 5 (October 25, 2023): 2133–56, <https://doi.org/10.1007/s11196-023-09989-8>.

When compared to these countries, Indonesia's national legal system still does not have a legal mechanism that provides explicit protection for indigenous peoples' digital data and information. Therefore, legal reforms are needed that can ensure that indigenous peoples retain control over their digital resources in the information technology ecosystem. One of the steps that can be implemented is to develop a legal framework that accommodates collective ownership of indigenous peoples' digital data. This approach could include the Data Sovereignty Principle, which gives indigenous communities exclusive rights to determine how their digital information is used. In addition, national regulations should include mechanisms that allow indigenous peoples to resolve digital disputes based on their own customary laws, so that they retain legal authority in the face of challenges in cyberspace.

In addition to regulatory aspects, the national legal system also needs to accommodate a protection mechanism against the exploitation of indigenous peoples' data. In many cases, information on customary law, mapping of customary territories, and cultural expressions has been digitized without a clear protection mechanism. The Theory of Communal Intellectual Property Rights developed by Darrell A. Posey asserts that indigenous peoples' knowledge and culture should be protected as collective rights that cannot be exploited without the consent of indigenous communities.³⁶ Without regulations that accommodate this principle, indigenous peoples will continue to experience data exploitation by governments, companies, and academics who document their traditional knowledge without official permission.

In this context, the use of technologies such as blockchain can be a solution in ensuring that indigenous peoples retain control over their information in the digital world. Blockchain allows for decentralized and transparent recording of information, so that digitized customary law data cannot be accessed or altered by outsiders without the consent of the indigenous community.³⁷ In addition, the national legal system also needs to develop a digital-based customary licensing mechanism, which ensures that the use of customary law data in the digital world must go through a legal consent process from the indigenous peoples concerned.

Indigenous peoples' participation in digital policy formulation is also a very important aspect in ensuring that customary laws can adapt in the information technology ecosystem. Article 6 of ILO Convention No. 169 affirms that indigenous peoples must be involved in any policy related to their legal systems, including in regulations on digital rights. However, in practice, indigenous peoples in Indonesia still do not have enough space in the process of formulating digital policies related to their customary laws. Therefore, the national legal system needs to provide wider access for indigenous communities to participate in the drafting of digital regulations, so that the resulting policies truly reflect the interests of indigenous peoples.

Taking into account these various challenges and opportunities, the national legal system needs to undergo regulatory adjustments in order to be more effective in protecting the digital rights of indigenous peoples. These reforms should include explicit recognition of collective ownership of digital data, protection against the exploitation of indigenous information, and the involvement of indigenous peoples in digital policy formulation. Without concrete steps to accommodate the digital rights of indigenous peoples, the national legal system will be further lagging behind in facing the challenges of the ever-evolving digital era. Therefore, a more progressive and social justice-based legal approach is needed, so that indigenous peoples can still maintain their sovereignty in the cyber world without losing control over their legal and cultural systems.

CONCLUSION

The adaptation of customary law in the digital era is essential to maintaining the sovereignty of indigenous peoples in cyberspace. While Article 18B(2) of the 1945 Constitution recognizes customary law, the absence of clear regulations on communal digital data ownership leaves indigenous communities vulnerable to exploitation. Without adequate legal protection, digitalization risks marginalizing customary law and weakening indigenous control over their knowledge and resources.

³⁶ S Prasanna and P Lavanya, "Navigating the Digital Age: Challenges in Indian Intellectual Property Rights Law," *ILE Law Letter* 1, no. 1 (2023): 34–44.

³⁷ Samir Bin Shibbir, "The Prospect of Data Ownership as Human Rights," *SSRN Electronic Journal*, 2023, <https://doi.org/10.2139/ssrn.4543574>.

According to Legal Pluralism Theory (Boaventura de Sousa Santos), customary law should be integrated into national and digital legal frameworks. Similarly, Communal Intellectual Property Rights Theory (Darrell A. Posey) asserts that indigenous knowledge is a collective right that must be legally safeguarded. International instruments, such as UNDRIP (2007) Article 31 and ILO Convention No. 169, affirm indigenous digital rights, Indonesia has yet to adopt a comparable regulatory framework.

To address these challenges, Indonesia must establish legal recognition of communal digital ownership, integrate customary dispute resolution into digital law, implement technological safeguards like blockchain, and ensure greater indigenous participation in digital policymaking. The digitalization of customary law should not merely serve as modernization but as a tool to preserve indigenous sovereignty in cyberspace. A progressive legal approach rooted in social justice and legal pluralism is necessary to protect indigenous rights within the evolving digital landscape.

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