

Regulations Rights Intellectual Property Regarding Digital Works Created by Artificial Intelligence (AI)

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Abstract: This article examines the challenges of regulating intellectual property rights (IPR) in Indonesia for digital works produced by artificial intelligence (AI). Although Law No. 28 of 2014 on Copyright establishes the creator as the legal subject, works produced automatically by AI create ambiguity in copyright ownership. This uncertainty creates a legal loophole that could lead to disputes. This study employs a normative juridical approach to analyse the legal protection of AI works and finds that, absent specific regulations, these works lack adequate legal protection. Concrete steps are needed, either through revisions to laws or through the establishment of new rules, to accommodate the development of AI technology and provide legal certainty for the owners of works.

Keywords: artificial intelligence (AI), digital work, intellectual property rights.

1. Introduction

Advances in artificial intelligence (AI) technology have brought about fundamental changes in how intellectual work is created and distributed. AI no longer functions merely as a tool; it can independently produce digital works, including music, writing, illustrations, and visual design.¹ This

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¹ Ignas Kalpokas, "Work of Art In The Age of Its AI Reproduction," *Philosophy and Social Criticism* 51, no. 8 (2025): 1268–86, <https://doi.org/10.1177/01914537231184490>.



phenomenon raises new legal issues because the Intellectual Property Rights (IPR) system has historically been designed to protect works born from human creativity. The basic principle of copyright places the creator as a legal subject with will, consciousness, and moral responsibility.² The presence of AI as a creator challenges this assumption and raises questions about the legitimacy of legal protection for non-human digital works.³ These changes require conceptual and normative adjustments in the intellectual property legal system.

Intellectual Property Rights (IPR) are a set of exclusive rights granted by the state to creators or rights holders for the products of human thought that have economic value.⁴ Intellectual property rights protection aims to encourage creativity and innovation and to provide legal certainty regarding the use of philosophical works. One of the objects of intellectual property rights protection is copyright, which protects works in the fields of science, art, and literature.⁵ In their development, copyrighted works are not only conventional works but also include works produced through digital technologies. Digital works are works created, stored, and distributed in digital form via electronic systems.⁶ This characteristic renders digital works highly dependent on technology in their creation.

The development of artificial intelligence (AI) technology continues to expand the scope of digital creation. AI is defined as an algorithm-based system designed to mimic human cognitive abilities, such as learning,

² HM. Zaki Sierrad, “Larangan Pengalihan Hak Moral Dan Pembatasan Waktu Dalam Perjanjian Jual Putus Hak Cipta Buku Dalam Perspektif Hak Asasi Manusia,” *JURIS HUMANITY: Jurnal Riset Dan Kajian Hukum Hak Asasi Manusia* 1, no. 1 (2022): 24–44.

³ Hafiz Gaffar and Saleh Albarashdi, “Copyright Protection for AI-Generated Works: Exploring Originality and Ownership in a Digital Landscape,” *Asian Journal Of International Law* 15 (2025): 23–46, <https://doi.org/10.1017/S2044251323000735>.

⁴ Arso, “Hak Atas Kekayaan Intelektual (HAKI) Sebagai Harta Bersama Perspektif Kompilasi Hukum Islam,” *Al-Daulah: Jurnal Hukum Dan Perundangan Islam* 7, no. 1 (2017).

⁵ Neni Sri Imaniyati and Dkk, *Hukum Kekayaan Intelektual: Kekayaan Intelektual, Hak Kekayaan Intelektual, Hak Cipta, Paten, Dan Merek* (Jakarta: KENCANA, 2024).

⁶ Anwar Sulaiman Nasution, Yessi Kurnia, and Arjani Manik, “Analisis Yuridis Terhadap Isu Hak Cipta Dalam Perkembangan Teknologi Virtual Reality (VR),” *Jurnal Pendidikan Tambusai* 9, no. 1 (2025): 6205–9.

analysing, and producing specific outputs.⁷ In practice, AI is capable of producing digital works in the form of text, images, music, and visual designs without direct human involvement.⁸ This capability positions AI not merely as a tool but as an entity that actively participates in the creative process.⁹ This condition has brought about a paradigm shift in the concept of intellectual creation. This shift challenges the construction of IPR laws, which have thus far been oriented towards human creativity.

Law No. 28 of 2014 on Copyright stipulates that copyrighted works must be original and represent the intellectual expression of their creator.¹⁰ Analysis by K&K Advocates indicates that AI lacks personality or creativity because it only executes pre-programmed algorithms.¹¹ This condition makes it difficult for AI-generated works to qualify as objects of copyright protection under Indonesian positive law. The provision implicitly assumes that the creator is a human being as a legal subject. When AI generates works without direct human creative involvement, ambiguity arises regarding the legal status of such works.¹² This ambiguity is a source of legal uncertainty in the practice of IPR protection.

The lag in national regulations behind technological developments was also highlighted in a study by Intan Puspita Sari and Mochammad Calvin

⁷ Rony Sandra Yofa Zebua et al., *Fenomena Artificial Intelligence* (Jambi: PT. Sonpedia Publishing Indonesia, 2023).

⁸ Rita Puspita Sari, “AI-Generated Content: Antara Kreativitas Dan Tantangan Etis,” Cloud Computing Indonesia, 2025, <https://event.cloudcomputing.id/pengetahuan-dasar/ai-generated-content>.

⁹ Paulina Nordström, Riina Lundman, and Johanna Hautala, “Evolving Coagency between Artists and AI in the Spatial Cocreative Process of Artmaking,” *Annals of the American Association of Geographers* 113, no. 9 (2023): 2203–18, <https://doi.org/10.1080/24694452.2023.2210647>.

¹⁰ Rachmad Abduh and Fajaruddin, “Intellectual Property Rights Protection Function in Resolving Copyright Disputes,” *IJRS: International Journal Reglement & Society* 2, no. 3 (2021): 170–78.

¹¹ Justisiari P. Kusumah and Emil Zanadi Sasongko, “Copyright and Generative AI: Does Indonesian Copyright Law Protect AI-Generated Works?,” *K&K Advocates News* (Jakarta, Indonesia: K&K Advocates, 2023).

¹² Dibit Yuniar Ekawardani and Mochamad Cholil, “Copyright Protection of Scientific Works Produced By Artificial Intelligence Pelindungan Hak Cipta Atas Karya Ilmiah Yang Dihasilkan Oleh Kecerdasan Buatan,” *Rewang Rencang: Jurnal Hukum Lex Generalis* 6, no. 4 (2025): 1–34.

Putra Haryadi (2025). The study found that the fair use doctrine in Indonesian copyright law remains too narrow to accommodate AI use. This has caused Indonesia to lag behind the Fourth Industrial Revolution.¹³ Strict restrictions can hamper innovation and the development of artificial intelligence-based technologies. At the same time, the absence of adaptive regulations risks massive copyright infringement.¹⁴ This situation highlights the tension between the protection of exclusive rights and the need for technological development. Legal reform is necessary to strike a balance between legal certainty and innovation.

Another issue concerns determining the subject matter of copyright ownership for AI works. The Copyright Law does not clarify whether these rights can be attributed to programmers, system owners, or AI users, or whether they are not recognised at all.¹⁵ Research by I Gusti Ayu Agung Intan Liantari and Dewa Ayu Dian Sawitri (2025) indicates that most AI works lack originality. However, the study also opens up the possibility of protection if there is a significant human creative contribution. This suggests that the human role remains a key factor in the legal assessment of AI work. The ambiguity of these regulations creates the potential for disputes between parties involved in the digital creation process.¹⁶

Various conceptual approaches have been proposed to address this legal vacuum. Bagus Gede Ari Rama et al. (2023) propose recognising AI as a

¹³ Intan Puspita Sari and Mohammad Calvin Putra Haryadi, "Perlindungan Hukum Terhadap Karya Digital Di Era AI: Analisis Hak Cipta Dalam Konten Yang Dihasilkan Oleh Kecerdasan Buatan," *Jurnal Hukum Dan HAM Wara Sains* 4, no. 02 (2025): 257–66, <https://doi.org/10.58812/jhhws.v4i02.2034>.

¹⁴ Lilik Prihatin, Maria Yosepin Endah Listyowati, and Thomas Ichfan Hidayat, "Perlindungan Hak Kekayaan Intelektual: Sebuah Esensial Hak Cipta Pada Era Revolusi Industri 4.0," *UNES Law Review* 6, no. 4 (2024): 11321–29.

¹⁵ Muhammad Zidan Karimullah, Ria Wierma Putri, and Rohaini, "Hak Cipta Atas Hasil Tulisan Kecerdasan Artifisial: Tinjauan Etika Kekayaan Intelektual Dan Status Kepemilikannya," *AKADEMIK: Jurnal Mahasiswa Humanis* 5, no. 2 (2025): 1079–94.

¹⁶ I Gusti Ayu Agung Intan Liantari and Dewa Ayu Dian Sawitri, "Pengaturan Hak Cipta Terhadap Karya Cipta Yang Dihasilkan Oleh Artificial Intelligence," *Kertha Negara : Jurnal Ilmu Hukum* 13, no. 1 (2025): 1407–17.

limited legal entity or linking copyright to the AI system operator.¹⁷ Aghnia Rahmi et al. (2024) emphasise the importance of new legal parameters that place human creative control at the basis of copyright protection. This approach aligns with Rifai's view, which positions AI as a tool rather than an independent legal subject. On the other hand, Tanissa Mayra Tsabitha (2025) proposes classifying AI works as *sui generis* works in the public domain, subject to attribution requirements.¹⁸ Annisa Zerlina, Cindy Gayatri, et al. (2025) propose the concept of joint authorship as a form of human-machine collaboration in the creation of works.¹⁹

Furthermore, the absence of specific regulations governing the legal status of AI in Indonesia makes this issue urgent to study in depth.²⁰ An adaptive legal framework is needed that not only considers the technical and ethical aspects of AI but also provides legal certainty and protection for intellectual property rights generated by this technology. Therefore, this paper examines the challenges posed by IPR regulation for AI-based digital works in Indonesia and proposes alternative legal policy solutions to address these issues.²¹

In addition, several legal studies in Indonesia have highlighted the need to develop new concepts of ownership that encompass non-human works. Research by Nur Jamilah et al. (2024) emphasises the importance of establishing new legal parameters for AI works, arguing that algorithm-

¹⁷ Bagus Gede Ari Rama, Dewa Krisna Prasada, and Kadek Julia Mahadewi, "Urgensi Pengaturan Artificial Intelligence (AI) Dalam Bidang Hukum Hak Cipta Di Indonesia," *Jurnal Wawasan Yuridika* 12, no. 2 (2023): 209–24, <https://doi.org/10.56013/rechtens.v12i2.2395>.

¹⁸ Tanissa Mayra Tsabitha, "Perlindungan Hak Kekayaan Intelektual Atas Karya AI: Studi Kasus ChatGPT Dan DeepSeek Dalam Perspektif TRIPS Agreement," *Unes Law Review* 7, no. 3 (2025): 192–204, <https://doi.org/10.31933/unesrev.v8i1.2472>.

¹⁹ Annisa Zerlina Cindy Gayatri, Nuzulia Kumala Sari, and Jurnal Ilmu Sosial, "Kepastian Hukum Perlindungan Pemilik Hak Cipta Atas Penggunaan Karya Oleh Artificial Intelligence (AI)," *Al-Zayn: Jurnal Ilmu Sosial & Hukum* 3, no. 5 (2025): 7237–50.

²⁰ Feri Nugroho, "Artificial Intelligence Regulation and Political Ethics: An Analysis of Indonesia's Position in AI Governance," *Journal of Political Innovation and Analysis* 2, no. 1 (2025): 42–51.

²¹ Joko Susilo and Muhammad Zaki Mubarak, "Hak Kekayaan Intelektual Atas Terciptanya Karya Hasil Intelligence (AI) Ditinjau Dari Segi Sejarah Dan Terhadap Hukum," *Jurnal Esensi Hukum* 6, no. 1 (2024): 31–42.

based digital creation should remain subject to human creative control as a condition for copyright protection.²²

These diverse academic views indicate that there remains no consensus on the legal status of AI works. The absence of specific regulations results in suboptimal protection of intellectual property rights for AI-based digital works. This situation has the potential to hinder legal certainty for creators, users, and creative industry players. Countries are required to formulate legal policies that are adaptive to technological developments. Responsive regulations are needed to ensure that the principles of justice and legal protection are upheld. Therefore, studies on IPR regulations governing AI-generated digital works are essential for formulating comprehensive and sustainable legal solutions.

2. Methods

This study adopts a normative legal approach that examines written legal norms, including relevant legislation and legal doctrines. The main objective of this approach is to examine the legal principles and concepts governing the protection of Intellectual Property Rights (IPR), particularly in the context of digital works created by Artificial Intelligence (AI). A similar approach was also used by UNESCO (2024) in examining global trends in AI regulation, emphasising the importance of adapting national laws to developments in digital technology and cross-border copyright protection.²³

This study aims to examine the extent to which Indonesia's legal system, particularly through Law No. 28 of 2014 on Copyright, can address new challenges arising from the development of AI in the creation of works. In its implementation, this study uses primary legal materials, including laws,

²² Nur Jamilah et al., "Pengaruh Kecerdasan Buatan Terhadap Hak Cipta (Analisis Karya Kreatif Yang Dihasilkan Dari Bing Image Creator)," *Jurnal Hukum Dan HAM Wara Sains* 3, no. 1 (2024), <https://doi.org/https://doi.org/10.58812/jhhws.v3i01.931>.

²³ Juan David Gutiérrez, "Consultation Paper on AI Regulation: Emerging Approaches Across the World," ed. UNESCO (Paris, France: United Nations Educational, Scientific and Cultural Organization (UNESCO), 2024).

implementing regulations, and international legal instruments on intellectual property rights and digital technology. In addition, this study utilises secondary legal materials, including law books, scientific articles, journals, and expert opinions, as additional references to strengthen the legal analysis.

Data were collected through library research and analysed using descriptive qualitative methods to interpret applicable legal provisions in response to legal issues arising from the presence of AI in intellectual property.

3. Result and Discussions

3.1. Intellectual Property Rights (IPR) Regulations in Response to AI-Generated Works

Intellectual Property Rights (IPR) law in Indonesia still places humans at the centre of intellectual creation.²⁴ Law No. 28 of 2014 on Copyright explicitly defines a creator as a person or persons who produce a creation based on intellectual ability, imagination, and personal skills. This normative construction shows that the Indonesian copyright regime does not yet accommodate non-human entities as creators. Artificial Intelligence (AI), which operates through algorithmic systems and data processing, does not possess the characteristics of a legal subject, including will, consciousness, and responsibility.²⁵ As a result, AI-generated works lack a clear basis for copyright attribution. This condition creates a legal vacuum that directly impacts legal certainty in the protection of AI-based digital works.

A study by Ezra Pranata Tarigan and I Nyoman Prabu Buana Rumiartha (2025) confirms that this legal vacuum stems from the anthropocentric definition of the term "creator" in the Copyright Law.²⁶ This definition leaves no room for interpretation regarding the involvement of non-human

²⁴ Muhammad Afdan Rojabi, *Pengantar Artificial Intelligence (AI)* (Bogor: Afdan Rojabi Publisher, 2025).

²⁵ Eka Nanda Ravizki and Lintang Yudhantaka, "Artificial Intelligence Sebagai Subjek Hukum: Tinjauan Konseptual Dan Tantangan Pengaturan Di Indonesia," *Notaire* 5, no. 3 (2022): 351–76, <https://doi.org/10.20473/ntr.v5i3.39063>.

²⁶ Ezra Pranata Tarigan and I Nyoman Prabu Buana Rumiartha, "Kekosongan Hukum AI Di Indonesia: Kasus Deepfake Terhadap Sri Mulyani Dan Perbandingan EU AI Act," *Jurnal Media Akademik (JMA)* 3, no. 11 (2025): 1–19, <https://doi.org/10.62281/6vdqep64>.

entities in the creative process. As a result, positive law has not been able to respond to the reality of technology that enables the automatic creation of works. This normative vacuum is not only conceptual but also has legal implications, including uncertainty regarding the ownership of economic rights in AI works.²⁷ In practice, this situation complicates law enforcement in cases of infringement or disputes over the commercialisation of digital works. Therefore, it is necessary to refine legal concepts to ensure that copyright regulations remain relevant to technological developments.

The government's initial efforts in responding to the development of AI are evident in the issuance of the Circular Letter of the Minister of Communication and Information Technology Number 9 of 2023 concerning Artificial Intelligence Ethics Standards.²⁸ The circular letter regulates the principles of ethics, transparency, accountability, and respect for human rights in the implementation of AI. Although it demonstrates normative awareness of the urgency of regulating AI, this circular letter lacks the binding force of a law. In addition, its substance does not yet address the protection of intellectual property rights in AI-generated works. Research by Reynaldi Nugraha Prasetya et al. (2023) confirms that AI regulation in Indonesia continues to prioritise ethics over legal rights and obligations. This situation highlights the limitations of a sectoral, non-comprehensive regulatory approach.²⁹

The ambiguity surrounding copyright regulations on AI works raises questions about who holds the rights. The absence of explicit norms creates opportunities for unilateral claims by developers, system owners, and AI users. These claims are often not supported by a strong legal basis, which

²⁷ Yamani Naufal, "Kekaburhan Hukum Hak Cipta Pada Fotografi Berbasis Artificial Intelligence Dalam Bingkai Radburch Formula," *Sangaji: Jurnal Pemikiran Syariah Dan Hukum* 9, no. 2 (2025): 160–71.

²⁸ Natalie Tresye Rondonuwu, Donna O. Setiabudhi, and Carlo A. Gerungan, "Pengaturan Penggunaan Kecerdasan Buatan Dalam Tugas Profesional Hakim Di Indonesia," *Lex Privatum: Jurnal Fakultas Hukum, UNSRAT* 15, no. 2 (2025).

²⁹ Raynaldi Nugraha Prasetya et al., "Etika Dalam Pengembangan Artificial Intelligence: Tinjauan Pedoman Dan Penerapannya," *Juwara: Jurnal Wawasan Dan Aksara* 4, no. 1 (2024): 240–53, <https://doi.org/https://doi.org/10.58740/juwara.v4i1.271>.

can lead to disputes.³⁰ A study by Irsyad Maulana Achmadi et al. (2023) shows that Singapore has adopted a flexible approach by granting limited rights to AI users who have made significant contributions. This approach reflects a legal policy orientation that emphasises certainty and benefit. This comparison indicates that Indonesia still lags in addressing the challenges of AI regulation. This lag has the potential to hamper the competitiveness of the national creative industry.³¹

Thus, in the absence of specific provisions on the legal protection of AI works in the Copyright Law or other sectoral regulations, there is legal uncertainty about who should have rights in works created automatically by AI systems.³² In practice, copyright is often claimed by AI developers, owners, or users, but these claims lack an explicit legal framework.

Furthermore, several academics have proposed a reinterpretation of the concept of creator as a normative response to this legal vacuum. Indra Budi Jaya and Riska Rahmawati argue that human involvement in algorithm design, training data selection, and output control can provide a basis for copyright attribution.³³ This approach shifts the focus from AI entities to the role of humans as controllers of the creative process. This concept aligns with the principle of human-centric AI, which places humans at the centre of legal responsibility. This approach is also consistent with responsive legal theory, which emphasises the adaptation of law to social and technological changes. Therefore, IPR regulations on AI work need to

³⁰ Bhupinder Singh, “Unleashing Alternative Dispute Resolution (ADR) in Resolving Complex Legal-Technical Issues Arising in Cyberspace Lensing E-Commerce and Intellectual Property: Proliferation of E-Commerce Digital Economy,” *RBADR: Revista Brasileira de Alternative Dispute Resolution* 5, no. 10 (2023): 81–105, <https://doi.org/10.52028/rbadr.v5i10.ART04.Ind>.

³¹ Irsyad Maulana Achmadi, Aisha Tsabita Kamilah, and Feymi Angelina, “Penegakan Perlindungan Hak Cipta Bagi Karya Buatan Artificial Intelligence Menggunakan Doktrin Work Made For Hire,” *UPH Academic Journal* 1, no. 1 (2023): 1–23.

³² Rafly Nauval Fadillah, “Perlindungan Hak Atas Kekayaan Intelektual Artificial Intelligence (AI) Dari Perspektif Hak Cipta Dan Paten,” *Das Sollen: Jurnal Kajian Kontemporer Hukum Dan Masyarakat* 2, no. 2 (2023): 1–25, <https://doi.org/10.11111/dassollen.xxxxxxx>.

³³ Indra Budi Jaya and Riska Rahmawati, “Perlindungan Hukum Karya Cipta Derivtaif Yang Dibuat Dengan Artificial Intelligence (AI),” *Jurnal Rechten : Riset Hukum Dan Hak Asasi Manusia* 6, no. 3 (2024): 23–32, <https://doi.org/https://doi.org/10.52005/rechten.v6i3.209>.

be designed to strengthen the role of humans without ignoring the realities of technology.

3.2. Legal Protection for Works Produced by AI

In the Indonesian legal system, copyright protection is granted only to works produced by human legal subjects. Law No. 28 of 2014 stipulates that creators are individuals or groups who produce works through intellectual processes. AI does not meet these criteria because it lacks consciousness, will, and moral responsibility. Therefore, works produced entirely by AI cannot be qualified as objects of copyright protection.³⁴ This condition creates a legal vacuum in the protection of AI-based digital works. This vacuum affects the uncertainty surrounding ownership and the utilisation of economic rights.³⁵

Legal protection is possible when there is significant human involvement in the creation of AI-based works.³⁶ Human contributions can take the form of providing instructions, selecting data, setting parameters, or selecting output results. Such contributions must meet the element of originality to be categorised as creative works. This approach is known as AI-assisted creation, in which AI functions as a technical tool. In this scheme, the creator is still identified as the human being who controls the creative process. This approach provides a clearer legal basis for copyright protection.³⁷

The main challenge of the AI-assisted creation approach lies in determining the standards for human creative contribution. Indonesian positive law does not yet provide objective criteria for assessing the extent to which human

³⁴ Atif Aziz, “Artificial Intelligence Produced Original Work: A New Approach to Copyright Protection and Ownership,” *European Journal of Artificial Intelligence and Machine Learning* 2, no. 2 (2023).

³⁵ Ni Kadek Listya Anggarini et al., “Tinjauan Yuridis Terhadap Kebutuhan Pembaharuan Regulasi Hak Cipta Di Indonesia Dalam Menghadapi Perkembangan Karya Cipta Berbasis Artificial Intelligence (AI),” *Consensus: Jurnal Ilmu Hukum* 4, no. 1 (2025): 87–98.

³⁶ Rojabi, *Pengantar Artificial Intelligence (AI)*.

³⁷ Wiwin et al., “Assessing The Legal Position of Intellectual Property Rights in Artificial Intelligence Works,” *Alauddin Law Development Journal* 7, no. 2 (2025): 126–136, <https://doi.org/https://doi.org/10.24252/aldev.v7i2.56530>.

activity can be considered innovative.³⁸ The absence of standards creates considerable scope for interpretation in practice. As a result, law enforcement may be inconsistent, leading to injustice. Therefore, normative guidelines are needed to regulate the minimum limits of human contribution. These guidelines are essential to ensure legal certainty and the protection of rights.³⁹ As an alternative, contractual protection and licensing are increasingly regarded as pragmatic solutions. Under certain agreements, AI-generated works may be used commercially without relying on copyright protection. This approach provides flexibility for creative industry players. However, contractual protection is private in nature and does not replace the function of public protection in the IPR regime. This protection is also limited to the parties bound by the agreement. Therefore, the contractual approach cannot be used as a long-term solution.

The precautionary principle is also relevant in the protection of AI works.⁴⁰ Jufri and Murni's study emphasises the importance of strengthening legal responsibility for parties that initiate the use of AI. This principle ensures that humans remain accountable for the legal implications of AI-generated work. This approach is essential for preventing the misuse of technology. In addition, the principle of prudence supports the protection of public interests. This approach reinforces the urgency of updating intellectual property rights laws.⁴¹

³⁸ Ghazali Hasan Nasakti, "Karya Tanpa Pencipta: Tantangan AI Generatif Untuk Hukum Hak Cipta Indonesia," Hukum Online, 2025, <https://www.hukumonline.com/berita/a/karya-tanpa-pencipta-tantangan-ai-generatif-untuk-hukum-hak-cipta-indonesia-lt67e6186ca81e3/>.

³⁹ Asep Saiful Abdi and Ade Adhari, "Perlindungan Hak Cipta Atas Kecerdasan Buatan (Artificial Intelligence) Dapat Mewujudkan Kepastian Hukum Di Indonesia," *Kherta Semaya* 13, no. 10 (2025): 2310–22, <https://doi.org/10.24843/KS.2025.v13.i10.p12>.

⁴⁰ John Bailey, "Treading Carefully: The Precautionary Principle in AI Development," American Enterprise Institute, 2023, <https://www.aei.org/technology-and-innovation/treading-carefully-the-precautionary-principle-in-ai-development/>.

⁴¹ Ayu Purnamasari, "Kedudukan Hukum Atas Kecerdasan Buatan Di Indonesia Perspektif Kecerdasan Buatan Sebagai Subjek Dan Objek Hukum Dalam Konferensi Dathmouth , Kecerdasan Buatan Bertujuan Untuk Memahami Dan," *Majelis: Jurnal Hukum Indonesia* 2, no. 4 (2025): 130–35, <https://doi.org/10.62383/majelis.v2i4.1225>.

Legal protection for AI works ultimately requires an update to national legal policy. Existing regulations have not been able to balance copyright protection and technological development. Special arrangements are needed that provide legal certainty without hindering innovation. The policy direction could be in the form of limited economic rights or a *sui generis* regime for AI works. This approach would allow the law to adapt to technological developments. Legal reform is urgently necessary in Indonesia's intellectual property rights system.

4. Conclusions

The development of Artificial Intelligence has brought fundamental changes to the process of creating digital works, challenging the legal construction of Intellectual Property Rights in Indonesia. The national copyright regime remains based on an anthropocentric paradigm that positions humans as the sole legitimate creators. Law Number 28 of 2014 concerning Copyright does not yet account for the technological reality that enables the automatic creation of works by AI systems. This situation has created a legal vacuum regarding the status and protection of AI-based digital works. This vacuum has led to uncertainty regarding ownership rights and difficulties in law enforcement. Therefore, Indonesian copyright law is not yet fully adaptive to developments in AI technology.

Legal protection for works produced by AI is currently only possible if there is a significant human creative contribution in the creation process. The AI-assisted creation approach positions AI as a technical tool, while the creator is still identified as the human who controls the creative process. However, the absence of normative standards regarding the limits of human creative contribution gives rise to multiple interpretations in legal practice. Alternative protection through contractual mechanisms and licenses offers a pragmatic solution but is limited and does not replace public safety under the copyright regime. A cautious approach is also important to ensure legal responsibility for the use of AI. Comprehensive legal protection requires a more transparent and systematic regulatory framework.

Updating intellectual property law is urgently necessary to address the challenges posed by AI-generated digital works. Adaptive regulations are needed to balance copyright protection and technological innovation. Legal policy directions could include affirming the role of humans as controllers of AI, regulating limited economic rights, or establishing a *sui generis* protection regime for AI works. These updates must be based on the principles of legal certainty, fairness, and benefit. Without progressive legislative measures, copyright law risks falling behind technological developments. Therefore, specific regulations regarding AI work are an essential agenda in national legal development.

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