JOURNAL OF INTELLECTUAL PROPERTY (JIPRO), (2024), pp.120
ISSN 2654-2889 (Online)

Available online ---
https://doi.org/10.20885/jipro.vol.7iss2.art2

Balancing Intellectual Property Protection and Release of Exclusive Rights for Sustainability Purposes

Ulya Yasmine Prisandani
Universitas Prasetiya Mulya
yasmine.prisandani@pmbs.ac.id

Abstract. This paper explores the balance between intellectual property protection and its release for sustainability purposes within the Indonesian legal framework. While intellectual property rights incentivize innovation by granting creators exclusivity, they can also hinder the accessibility of technologies essential for achieving sustainability goals, particularly in resource-constrained regions. The study mentions global examples, including open-source initiatives by Tesla and Toyota, and examines their implications for fostering innovation and promoting equitable access to sustainable technologies. Drawing from Indonesian laws on intellectual property and international frameworks, the paper investigates the extent to which Indonesia's legal regime accommodates intellectual property release mechanisms like compulsory licensing, patent pools, and creative commons. Using a normative legal research method, this study identifies the gaps and opportunities in Indonesia's intellectual property regime. It emphasizes the critical role of stakeholders such as corporations, the government, and international organizations in matching intellectual property protection strategies with sustainability objectives. This study finds that companies as intellectual property owners have the power to adopt sustainability-oriented approaches that integrate intellectual property release while safeguarding their commercial interests due to the contractual legal relationship that occur between patent owner and user, where governments have the authority to implement supportive policies, including incentives and regulations, to promote technology sharing. Furthermore, global entities like (World Intellectual Property Organization) WIPO are called upon to foster international frameworks that prioritize sustainable development. Ultimately, this paper advocates for a collaborative, multi-stakeholder approach to ensure intellectual property systems advance innovation while addressing urgent environmental and social challenges.
Keywords: Intellectual property; sustainability; open access

Abstrak. *Artikel ini mempelajari keseimbangan antara perlindungan kekayaan intelektual dan pelepasannya untuk tujuan keberlanjutan dalam kerangka hukum Indonesia. Meskipun hak kekayaan intelektual memberi insentif bagi inovasi dengan memberikan eksklusivitas kepada kreator, hak tersebut juga dapat menghambat aksesibilitas teknologi yang penting untuk mencapai tujuan keberlanjutan, khususnya di wilayah dengan keterbatasan sumber daya. Studi ini menyebutkan contoh-contoh di tingkat global, seperti inisiatif open-source oleh Tesla dan Toyota, dan mengkaji implikasinya dalam mendorong inovasi dan mempromosikan akses yang adil terhadap teknologi berkelanjutan. Dengan mengacu pada hukum Indonesia tentang kekayaan intelektual dan kerangka internasional, artikel ini menganalisis sejauh mana sistem hukum Indonesia mengakomodasi mekanisme pelepasan kekayaan intelektual seperti melalui compulsory licensing, patent pools, dan creative commons. Dengan menggunakan metode penelitian hukum normatif, studi ini mengidentifikasi kesenjangan dan peluang dalam sistem kekayaan intelektual Indonesia. Artikel ini menekankan peran penting para pemangku kepentingan seperti perusahaan, pemerintah, dan organisasi internasional dalam menghubungkan strategi perlindungan kekayaan intelektual dengan tujuan keberlanjutan. Perusahaan sebagai pemilik kekayaan intelektual memiliki kekuasaan untuk menggunakan pendekatan berorientasi keberlanjutan yang mengintegrasikan pelepasan kekayaan intelektual di samping menjaga kepentingan komersial dikarenakan hubungan hukum kontraktual yang muncul antara pemilik dan pengguna paten, sementara pemerintah memiliki wewenang untuk menerapkan kebijakan yang suportif, termasuk melalui pemberian insentif dan regulasi, guna mendorong pertukaran teknologi. Lebih lanjut, institusi internasional seperti WIPO juga diharapkan mengembangkan kerangka kerja internasional yang memprioritaskan pembangunan berkelanjutan. Sebagai penutup, artikel ini menyarankan pendekatan kolaboratif dan dari berbagai pihak untuk memastikan sistem kekayaan intelektual memajukan inovasi sekaligus mengatasi tantangan lingkungan dan sosial yang mendesak.*
Kata Kunci : *Hak kekayaan intelektual, keberlanjutan; akses terbuka*

Submitted: 15 Desember 2024 | Reviewed: 20 Desember 2024 | Revised: 28 Desember 2024 | Accepted: 30 Desember 2024

INTRODUCTION

In 2014, Elon Musk announced the open-source system for Tesla's electric vehicle patents in order to encourage the electric vehicle market to grow rapidly.[1] Tesla's patent pledge clearly states that the company "will not initiate a lawsuit against any party for infringing a Tesla patent through activity relating to electric vehicles or related equipment for so long as such party is acting in good faith."[2] While the terms of good faith as well as limits on patent use is further explained and elaborated by the company, this provision causes significant legal and business implications for Tesla in terms of its intellectual property rights and exercise.

Toyota followed suit by making free access to around 24,000 of its electrified vehicle technical patents to further promote widespread use of sustainable mobility and electrified vehicles, and consequently, help stakeholders to accomplish climate change and sustainability goals.[3] Despite intricacies in exercising the patent and further requirements of to some extent asking consent from the patent's owner, this also exhibits consistent trends of the changing intellectual property regime for bigger purposes.

Open innovation in electric vehicles has since becomes major discussion. The paper of Wang et.al. (2021) for example, presents on Tesla's leverage on open innovation including the impact of open-source strategies to innovation as well as implication of reduced resource dependency and generation of sustainable and competitive resources.[4] Previously, the article of Rimmer (2014) has situated Tesla's initiative

[1] Brian Solomon, "Tesla Goes Open Source: Elon Musk Releases Patents To 'Good Faith' Use," *Forbes* (New Jersey, 2014).
[2] Tesla, "Patent Pledge," Additional Resources, 2023. Accessible through https://www.tesla.com/legal/additional-resources#patent-pledge
[3] Toyota, "Toyota Promotes Global Vehicle Electrification by Providing Nearly 24,000 Licenses Royalty-Free," News Release, 2019. Accessed through: https://global.toyota/en/newsroom/corporate/27512455.html ; Naomi Tajitsu, "Toyota to Give Royalty-Free Access to Hybrid-Vehicle Patents," *Reuters*, April 3, 2019.
[4] Jianan Wang, Yuzhen Duan, and Guijian Liu, "A Study of Specific Open Innovation Issues from Perspectives of Open Source and Resources—The Series Cases of Tesla," *Sustainability* 142 (2022).

within the broader context of sustainable innovation and highlighted its potential to transform the transportation sector and address climate change.[5]

The interplay between strict intellectual property protection and open access frameworks is a critical issue in the context of sustainability. On one hand, intellectual property rights are designed to incentivize innovation by granting creators exclusive rights to their inventions and works.[6] For example, intellectual property rights protection has been found to affect sustainable urbanization in China.[7] This exclusivity can spur technological advancements that contribute to sustainable development,[8] such as the aforementioned clean energy transition. However, the very same exclusivity can also hinder the widespread adoption of these sustainable technologies by creating barriers to access, particularly in resource-constrained regions.[9]

Hence, the aim of this paper is to present an overview as well as analysis on the Indonesian regulations on intellectual property rights, especially with regard to balancing the release of exclusive rights for sustainability purposes. In order to fulfil such aim, the discussion section is divided into three sub-sections: (i) the dilemma between intellectual property protection and sustainability targets, (ii) Indonesian regulation on intellectual property protection and release, and (iii) a proposal for achieving the balance based on legal considerations and stakeholder roles in Indonesia.

Nevertheless, despite existing studies, there has been yet a study that focuses on the intellectual property regime and its application for sustainability purposes in

---

[5] Matthew Rimmer, "Tesla Motors: Intellectual Property, Open Innovation, and the Carbon Crisis" (Canberra, 2014).
[6] Miranda Forsyth and Sue Farran, "Intellectual Property and Food Security in Least Developed Countries," *Third World Quarterly* 34, no. 3 (2013): 516–33, https://doi.org/10.1080/01436597.2013.785345.
[7] Xing Gao, Jiaqian Zhu, and Bao-Jie He, "The Linkage Between Sustainable Development Goals 9 and 11: Examining the Association Between Sustainable Urbanization and Intellectual Property Rights Protection," *Advanced Sustainable Systems* 6, no. 3 (2022), https://doi.org/10.1002/adsu.202100283.
[8] *ibid.,*
[9] Forsyth and Farran, *op.cit.*, note 6, p. 529.

Indonesia. As such, this paper seeks to fill in the research gap and provide analysis to the following research questions:

1. To what extent has Indonesian regulation on intellectual property provide freedom to exercise patent release of exclusive rights?
2. To what extent can stakeholders play a role in balancing intellectual property protection with sustainability targets from the legal perspective?

METHODOLOGY

The method used in writing this article is the normative legal research method. The normative legal research method employed in this research is based on primary and secondary legal sources, although most consisting of secondary legal sources due to the lack of explicit and detailed regulations on the matter of intellectual property protection and sustainability, requiring interpretation from existing literatures and reports. The secondary legal sources referred in this article include academic articles, books, and other references written by both Indonesian and international scholars as well as national and international organizations due to the topic that has not been discussed vastly in the context of Indonesian law.

RESULT AND DISCUSSION

Dilemma between Intellectual Property Protection and Sustainability Targets

There exists a challenge in striking the right balance between protecting creators' rights and ensuring equitable access to resources. This has been discussed for example by Forsyth and Farran who argued that a coherent open access intellectual property policy could significantly enhance food security in least developed countries by promoting local agricultural innovation and distribution processes.[10] Similarly, Gao et. al. also brought up that effective regime of intellectual protection can stimulate industrial innovation, thereby contributing to sustainable urbanization and economic development.[11]

[10] *Ibid*
[11] Gao, Zhu, and He, *op.cit.*, note 7, p.8.

Ultimately, the path forward requires a collaborative approach that recognizes the value of innovation while also prioritizing equitable access to knowledge and resources. As Reichman suggests, developing countries should accommodate their national systems of innovation to the global intellectual regime in a way that maximizes global economic welfare.[12] Similarly, Kumar calls for a thoughtful reassessment of the current intellectual property framework to better accommodate the principles of open science, such as exploring flexible intellectual property models and supporting the creation of public knowledge commons.[13]

Specific intellectual property models for better sustainability targets may need to be implemented, different from general traditional intellectual property model. The existing example for this distinction would be the application for specific intellectual property regime for indigenous communities. The existing intellectual property regimes may not adequately recognize and protect the intellectual property rights of indigenous communities, which could hinder the preservation of traditional knowledge and practices,[14] and as such, the need for distinction for the protection of cultural heritage in relation to intellectual property protection has been discussed in various platforms.[15]

---

[12] Jerome H Reichman, "Intellectual Property in the Twenty-First Century: Will the Developing Countries Lead or Follow?*," 2014, 111–81, https://doi.org/10.1093/acprof:oso/9780199660759.003.0004.

[13] Nishant Kumar, "Rethinking Intellectual Property Rights in the Era of Open Science," *Isslp* 2, no. 3 (2023): 1–3, https://doi.org/10.61838/kman.isslp.2.3.1.

[14] Wanjiku Karanja, "Legitimacy of Indigenous Intellectual Property Rights' Claims," *Strathmore Law Review* 1, no. 1 (2016): 165–90, https://doi.org/10.52907/slr.v1i1.88.

[15] Article 31 of the United Nations Declaration on the Rights of Indigenous Peoples states that "Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.

Another example would be the ethical dilemma of strict intellectual protection for health purposes such as presented in Cohen & Illingworth,[16] Burger & Brunner (2007),[17] Blasi (2012)[18], as well as Kristin & Dewi (2022)[19].

The paper of Kristin & Dewi puts the specific context of Indonesia in the times of COVID-19 pandemic. The authors put perspective on how patent and trade secret protections have delayed vaccine distribution in developing countries, undermining fundamental human rights like the right to health and life while also highlighting the inequalities in vaccine access between the Global North and South, aggravated by the Trade-Related Aspects of Intellectual Property Rights (TRIPs) Agreement's patent protection framework. Moreover, comparison was made with South Africa's HIV/AIDS crisis, in which the authors further advocated for using TRIPs flexibilities like compulsory licensing and patent waivers to manage the pandemic. The authors then suggest that such measures are essential to ensure timely, affordable, and equitable access to vaccines and health technologies, emphasizing the urgency of adjusting intellectual property regulations to prioritize public health over corporate and business interests during global health crises.

Indonesian Regulation on Intellectual Property Protection and Release

Indonesia recognizes several types of intellectual property protection which applies to different types of innovations and creative work. The categories and corresponding regulation are as follows:

1. Copyright as regulated in Law Number 28 of 2014 on Copyright

   Law Number 28 of 2014 on Copyright regulates the protection of intellectual property rights for original works of authorship, including literature, art, music,

[16] Jillian Clare Cohen and Patricia Illingworth, "The Dilemma of Intellectual Property Rights for Pharmaceuticals: The Tension Between Ensuring Access of the Poor to Medicines and Committing to International Agreements," *Developing World Bioethics* 3, no. 1 (May 1, 2003): 27–48, https://doi.org/https://doi.org/10.1111/1471-8847.00058.

[17] Julie A. Burger and Justin Brunner, "A Court's Dilemma: When Patents Conflict with Public Health," *Virginia Journal of Law & Technology* 12, no. 7 (2007).

[18] Alexandra E Blasi, "An Ethical Dilemma," *Journal of Legal Medicine* 33, no. 1 (January 1, 2012): 115–28, https://doi.org/10.1080/01947648.2012.657939.

[19] Debby Kristin and Chloryne Trie Isyana Dewi, "The Dilemma in COVID-19 Pandemic: The Protection of Intellectual Property Rights or A Life?," *Media Iuris* 5, no. 2 (2022).

software, and other creative outputs. It grants exclusive rights to creators for reproduction, distribution, performance, and licensing of their works, with protection lasting for the creator's lifetime plus 70 years after their death. The law also addresses related rights for performers, producers, and broadcasters. It establishes procedures for registration, infringement penalties, and dispute resolution while promoting access to knowledge and balancing the interests of creators and the public.

2. Patent as regulated in Law Number 13 of 2016 on Patent

Law Number 13 of 2016 on Patents governs the protection of inventions that are new, inventive, and industrially applicable. It grants patent holders exclusive rights to use, produce, license, or sell their inventions for a period of 20 years for standard patents and 10 years for simple patents. The law details the registration process, ownership rights, and mechanisms for resolving disputes, while also allowing for compulsory licensing in cases of public interest or national emergencies.

3. Trademark as regulated in Law Number 20 of 2016 on Trademarks and Geographical Indication

Law Number 20 of 2016 on Trademarks and Geographical Indication provides the stipulations on the protection, registration, and use of trademarks, as well as its infringement, enforcement, cancellation, and revocation. Prohibited trademarks, such as the ones that contradict public order or morality, misleading, or are identical or similar to well-known trademarks are also provided herein. A trademark provides protection for signs that can be a distinguishing feature of goods and/or services produced. The protection period for registered trademarks is valid for 10 years.

4. Geographical Indication as regulated in Law Number 20 of 2016 on Trademarks and Geographical Indication

Law Number 20 of 2016 on Trademarks and Geographical Indication stipulates Geographical Indication’s protection, registration, terms, as well as its infringement, enforcement, cancellation, and revocation. Geographical indication

can be defined as a sign that can display the origin of a product where the distinguishing power of the product is caused by geographical environmental factors so that the product has a certain quality, characteristics, or reputation. Basically, geographical indications remain protected as long as the quality, characteristics, and reputation are maintained.

5. Industrial Design as regulated in Law Number 31 of 2000 on Industrial Design

Law Number 31 of 2000 on Industrial Design regulates the legal protection, registration, and enforcement of rights related to industrial designs. Industrial designs refer to the aesthetic or ornamental aspects of a product, including shape, configuration, pattern, or color that enhance the product's visual appeal and make it more marketable. Industrial design can be interpreted as a creative result related to configuration, shape, or line and/or color that is two and/or three dimensional so as to provide aesthetics to an industrial commodity. The term of protection for industrial design rights lasts for 10 years.

6. Trade Secret as regulated under Law Number 30 of 2000 on Trade Secret

Law Number 30 of 2000 on Trade Secrets provides for the protection of confidential business information that provides economic value and a competitive advantage, as long as it remains secret. It covers proprietary formulas, methods, processes, and business strategies, requiring owners to take reasonable measures to maintain their confidentiality. The law grants exclusive rights to use, license, or transfer trade secrets and prohibits unauthorized access, use, or disclosure, with remedies including civil and criminal penalties. Protection is indefinite, lasting as long as the information remains confidential and economically valuable, fostering innovation and ensuring fair competition.

7. Plant Variety Protection as regulated under Law Number 29 of 2000 on Plant Variety Protection

Law Number 29 of 2000 on Plant Variety Protection (PVP) regulates the legal protection of new plant varieties to promote innovation in agriculture and horticulture. It grants exclusive rights to plant breeders for creating new, distinct, uniform, and stable plant varieties, allowing them to produce, sell, or license their

varieties. Protection lasts for 20 to 25 years, depending on the plant type. The law also outlines the requirements for registration, dispute resolution, and penalties for infringement, while balancing breeder rights with public interest, particularly for food security and biodiversity conservation.

8. Layout Designs of Integrated Circuits as regulated under Law Number 32 of 2000 on Layout Designs of Integrated Circuits

Law Number 32 of 2000 on Layout Designs of Integrated Circuits provides stipulation for the protection of intellectual property rights for the unique and original layouts of electronic circuits. It grants exclusive rights to creators to manufacture, market, and license their designs, with protection lasting 10 years from registration or first commercial exploitation. The law specifies registration requirements, criteria for eligibility, and sanctions for violations, aiming to promote innovation in the electronics sector while protecting the rights of designers.

In addition to this, Indonesia has also ratified several international conventions on intellectual property rights, such as Paris Convention for the Protection of Industrial Property and Convention Establishing the World Intellectual Property Organization, Patent Cooperation Treaty, Trademark Law Treaty, Berne Convention for the Protection of Literary and Artistic Works, and World Intellectual Property Organization Copyrights Treaty.

Furthermore, moving on to intellectual property release, several categories can be detailed further to simplify the flow of this discussion. Intellectual property release includes public domain release, open-source licensing, patent pools, creative commons licensing, and compulsory government licensing.

Various definition of public domain is explained in Erickson et.al. (2019) but in essence includes the following definition:[20]

[20] Kris Erickson, Martin Kretschmer, and Dinusha Mendis, "Chapter 4: An Empirical Approach to the Public Domain," in *The Innovation Society and Intellectual Property: European Intellectual Property Institutes Network Series*, ed. Josef Drexl and Anselm Kamperman Sanders (Cheltenham: Elgar Online, 2019), 87–116.

> "(i) those works which do not qualify for copyright protection; (ii) those works which do but are out of copyright term; (iii) those works where permission to use has been granted by the copyright owner *a priori*; and (iv) such parts of works which fall on the unprotectable side of the idea-expression line, which are allowed for within the statutory framework (taking of an insubstantial part, the permitted acts), or which are permissible as a result of judicial intervention with the regime at common law (on public policy grounds, or as being in the public interest)."

The concept of open-source licensing and its definition are provided in *inter alia* Wen et.al. (2016),[21] Garg & Nisha (2023),[22] and Utama & Susanty (2023)[23] but basically it refers to a type of agreement that allows the creator of an intellectual property, usually software, to grant right to the users the freedom to access, modify, distribute, and use the source code or product under specific terms and conditions. Moreover, the publication of Beldiman et.al. (2024)[24] suggests that open-source and intellectual property rights can coexist and do not contradict with each other.

Open-source licensing can be regarded as one of the solutions to balance exclusivity and strict protection of patented innovations that contradict with public needs and broader societal benefits. Intellectual property owners can still control the exercise of such rights by for example requiring derivative works to remain open, because the open-source model provides opportunities for third parties to develop further based on the patented innovation, fostering quicker development and widespread applications of technology. By lowering barriers to access, such as licensing fees or restrictive terms, open-source licenses make critical technologies more widely available, particularly during public crises or for broader innovation ecosystems. Different from full relinquishment of intellectual property rights, open-source licenses

---

[21] Wen Wen, Marco Ceccagnoli, and Chris Forman, "Opening Up Intellectual Property Strategy: Implications for Open Source Software Entry by Start-up Firms," *Management Science* 62, no. 9 (2016).
[22] Aayush Garg and Nisha, "Open-Source Software and Intellectual Property Rights," *Jus Corpus Law Journal* 4, no. 2 (n.d.).
[23] Andrew Shandy Utama and Ade Pratiwi Susanty, "Legal Strategy for Intellectual Property Protection in the Era of Open-Source and Creative Commons in Indonesia," *The Easta Journal Law and Human Rights* 2, no. 01 SE-Articles (October 31, 2023): 17–24, https://doi.org/10.58812/eslhr.v2i01.149.
[24] Dana Beldiman, Fabian Flüchter, and Felix Tann, "Intellectual Property Rights in a Fab City/Open-Source Hardware Context BT - Global Collaboration, Local Production: Fab City Als Modell Für Kreislaufwirtschaft Und Nachhaltige Entwicklung," ed. Manuel Moritz et al. (Wiesbaden: Springer Fachmedien Wiesbaden, 2024), 135–47, https://doi.org/10.1007/978-3-658-44114-2_10.

allow creators to retain control through terms that ensure ethical use, proper attribution, or sharing improvements under the same license, as seen in copy left agreements. This approach has proven effective in addressing global challenges, such as open medical technologies during health emergencies or the aforementioned Tesla's patent-sharing initiative to promote sustainable transportation.

Moving on to the next category, patent pools and relevant discussions are presented in for example Vakili (2016),[25] Reisinger & Tarantino (2019),[26] and Ehrnsperger & Tietze (2019).[27] A patent pool refers to agreements where multiple patent holders collaborate and work together to license their patents collectively as a single package to third parties, by which this usually takes place when multiple patents are needed to produce a specific product or technology. Patent pools make technologies and innovation more accessible, and even though it is not considered as a complete release of intellectual property, to some extent it provides a more relaxed application of intellectual property protection that is not solely focused on exclusivity of a single party. The patent pools scheme reduces licensing complexity,[28] transaction costs,[29] and litigation risks,[30] making them particularly useful in industries where multiple overlapping patents are necessary for the creation of a single product or technology. By providing shared access, patent pools facilitate collaboration between industries and businesses, encouraging innovation as well as ensuring that members receive fair royalties for their contributions.

---

[25] Keyvan Vakili, "Collaborative Promotion of Technology Standards and the Impact on Innovation, Industry Structure, and Organizational Capabilities: Evidence from Modern Patent Pools," *Organization Science* 27, no. 6 (2016).

[26] Markus Reisinger and Emanuele Tarantino, "Patent Pools, Vertical Integration, and Downstream Competition," *The RAND Journal of Economics* 50, no. 1 (March 1, 2019): 168–200, https://doi.org/https://doi.org/10.1111/1756-2171.12266.

[27] Jonas Fabian Ehrnsperger and Frank Tietze, "Patent Pledges, Open IP, or Patent Pools? Developing Taxonomies in the Thicket of Terminologies," *PLOS ONE* 14, no. 8 (August 20, 2019): e0221411, https://doi.org/10.1371/journal.pone.0221411.

[28] Jay Pil Choi and Heiko Gerlach, "Patent Pools, Litigation, and Innovation," *The RAND Journal of Economics* 46, no. 3 (September 1, 2015): 499–523, https://doi.org/https://doi.org/10.1111/1756-2171.12095.

[29] Robert P. Merges and Michael Mattioli, "Measuring the Costs and Benefits of Patent Pools," *Ohio State Law Journal* 78 (2017).

[30] Choi and Gerlach, *op.cit.*, note 28, p.499.

Creative commons licensing is significantly developing especially in the current era of digitalization and artificial intelligence, which has been the discussion of for example Korbel (2018),[31] Ding (2019),[32] Seibert et.al. (2019),[33] Budileanu (2020),[34] and Muhammad (2023)[35]. Creative commons licenses have become options for many scholars and academics to manage distribution of knowledge in midst of intellectual property rights limitation. Creative commons licensing supports equitable access to knowledge, including through its application in Open Educational Resources (OERs) and open-access initiatives, enabling educators, researchers, and students to use, adapt, and distribute materials without legal or financial barriers. The license explicitly allows educational and non-commercial uses, fostering collaboration and innovation while ensuring creators receive proper attribution. By reducing the restrictions imposed by traditional intellectual property regimes, creative commons licenses democratize access to knowledge. The license is used by the majority of open-access journals to advance free flow of information while still granting authors the right to maintain control and recognition of their work.[36] This makes creative commons licensing a cornerstone of the modern knowledge-sharing ecosystem, effectively bridging the gap between traditional intellectual property protection and public access.

Last but not least, compulsory licensing refers to the case where government allows third party to use a patented invention with or without the consent of the patent owner

---

[31] Caroline Korbel, "Managing Copyright in Digital Collections: A Focus on Creative Commons Licences," *Dalhousie Journal of Interdisciplinary Management* 14, no. Spring (2018).

[32] Yi Ding, "Is Creative Commons a Panacea for Managing Digital Humanities Intellectual Property Rights?," *Information Technology and Libraries* 38, no. 3 SE-Articles (September 15, 2019): 34–48, https://doi.org/10.6017/ital.v38i3.10714.

[33] Heather Seibert, Rachel Miles, and Christina Geuther, "Navigating 21st-Century Digital Scholarship: Open Educational Resources (OERs), Creative Commons, Copyright, and Library Vendor Licenses," *The Serials Librarian* 76, no. 1–4 (June 14, 2019): 103–9, https://doi.org/10.1080/0361526X.2019.1589893.

[34] Cristiana Budileanu, "Copyright in the Digital Age. A Perspective on Common Licenses ('Creative Commons')," *Romanian Journal of Intellectual Property Law* 69 (2020), https://heinonline.org/HOL/LandingPage?handle=hein.journals/rjoinpl2020&div=10&id=&page=.

[35] Iqbal Muhammad, "Communal Intellectual Property in the Digital Age: Exploring the Relevance, Regulation, and Impact of Creative Commons Licenses," *Indonesian Law Journal* 16, no. 1 (2023), https://doi.org/https://doi.org/10.33331/ilj.v16i1.127.

[36] Pradeep Kumar Misra, "Creative Commons Licenses: Benefits and Implications in Teaching and Research," *Research Journal Social Sciences* 28, no. 1 (2020).

usually for public interest reasons. This mandatory strategy aims to balance the exclusive rights of the intellectual property rights owner with broader society needs such as public health or necessary technological development. Compulsory licensing is regulated under Article 31 of WTO TRIPs as follows:

> " Where the law of a Member allows for other use of the subject matter of a patent without the authorization of the right holder, including use by the government or third parties authorized by the government, the following provisions shall be respected:
>
> (a) authorization of such use shall be considered on its individual merits;
> (b) such use may only be permitted if, prior to such use, the proposed user has made efforts to obtain authorization from the right holder on reasonable commercial terms and conditions and that such efforts have not been successful within a reasonable period of time. This requirement may be waived by a Member in the case of a national emergency or other circumstances of extreme urgency or in cases of public non-commercial use. In situations of national emergency or other circumstances of extreme urgency, the right holder shall, nevertheless, be notified as soon as reasonably practicable. In the case of public non-commercial use, where the government or contractor, without making a patent search, knows or has demonstrable grounds to know that a valid patent is or will be used by or for the government, the right holder shall be informed promptly;
> (c) the scope and duration of such use shall be limited to the purpose for which it was authorized, and in the case of semi-conductor technology shall only be for public non-commercial use or to remedy a practice determined after judicial or administrative process to be anti-competitive;
> (d) such use shall be non-exclusive;
> (e) such use shall be non-assignable, except with that part of the enterprise or goodwill which enjoys such use;
> (f) any such use shall be authorized predominantly for the supply of the domestic market of the Member authorizing such use;
> (g) authorization for such use shall be liable, subject to adequate protection of the legitimate interests of the persons so authorized, to be terminated if and when the circumstances which led to it cease to exist and are unlikely to recur. The competent authority shall have the authority to review, upon motivated request, the continued existence of these circumstances;
> (h) the right holder shall be paid adequate remuneration in the circumstances of each case, taking into account the economic value of the authorization;
> (i) the legal validity of any decision relating to the authorization of such use shall be subject to judicial review or other independent review by a distinct higher authority in that Member;

(j) any decision relating to the remuneration provided in respect of such use shall be subject to judicial review or other independent review by a distinct higher authority in that Member;
(k) Members are not obliged to apply the conditions set forth in subparagraphs (b) and (f) where such use is permitted to remedy a practice determined after judicial or administrative process to be anti-competitive. The need to correct anti-competitive practices may be taken into account in determining the amount of remuneration in such cases. Competent authorities shall have the authority to refuse termination of authorization if and when the conditions which led to such authorization are likely to recur;
(l) where such use is authorized to permit the exploitation of a patent ("the second patent") which cannot be exploited without infringing another patent ("the first patent"), the following additional conditions shall apply:
    (i) the invention claimed in the second patent shall involve an important technical advance of considerable economic significance in relation to the invention claimed in the first patent;
    (ii) the owner of the first patent shall be entitled to a cross-licence on reasonable terms to use the invention claimed in the second patent; and
    (iii) the use authorized in respect of the first patent shall be non-assignable except with the assignment of the second patent."

As can be seen from above, under compulsory licensing, the patent holder is compensated with reasonable royalties, and the license is granted for specific purposes, durations, or markets to meet urgent needs without unjustly undermining the patent system. Compulsory licensing is for example discussed in Kristin & Dewi (2022)[37] in the context of providing a solution for COVID-19 pandemic in Indonesia.

Nevertheless, since intellectual property releases are mostly based on the legal relationship between the intellectual property owner and user in terms of the extent of grant or waiver given by the owner, merely regulating the release may not create an effective balance for the achievement of sustainability targets in Indonesia. The roles of each stakeholder especially with regard to their rights and obligations as well as responsibilities need to be examined further in order to optimize such balance.

Achieving the Balance: Legal Considerations and Stakeholder Roles for Indonesia

Achieving a sustainable balance requires nuanced understanding of the implications of both intellectual property protection and intellectual property release. In addition

[37] Kristin and Dewi, *op.cit.* note 19, p. 202.

to making sure the interests of all stakeholders are accommodated by way of striking a good balance of utilization of moral and economic rights of intellectual properties, strategies like specialized intellectual property authorities and flexible intellectual property models may help navigate the complexities.

One of the obvious reasons why intellectual property was created was to guarantee exclusive economic benefits for its creator, and regardless of how big or major society needs that require intellectual property release, this commercial purpose should still be taken into consideration. Going back to Tesla's and Toyota's motives, open-sourcing the patents turn out to still be giving economic benefits to both companies, namely (i) to some extent controlling the use of their patents by other companies and (ii) to ensure that they are still assuming the position of one of the biggest company in the industry.

As such, companies need to think about indirect benefits that may be resulting from releasing intellectual properties for sustainability purposes. First and foremost, companies may benefit from the positive image of being a green and eco-friendly business, answering current increasing need for sustainable products and services. This even extends to regulatory obligations such as sustainability report mandated by the Financial Services Authority (*Otoritas Jasa Keuangan*).[38] Therefore, company as intellectual property owner plays a significant role in (i) granting the release of intellectual property rights as well as (ii) setting out the terms and conditions that benefit the environment and sustainability targets, while ensuring that profitability and business continuance of the company are not being jeopardized.

Second stakeholder that play an important role in achieving the balance between exclusive intellectual property protection and its release for a purpose that serves public interest – in this context, sustainability – is of course the government. The government has the coercive power to compel intellectual property owners to share their inventions and innovations through compulsory licensing, as has been argued

[38] For example, see: Ulya Yasmine Prisandani, "Public Companies and Sustainability through Regulatory Reform in Indonesia," *International Journal of Environmental Studies* 80, no. 1 (January 2, 2023): 32–50, https://doi.org/10.1080/00207233.2021.2017182.

by for example Kristin & Dewi (2022)[39] for public health purposes. Less harsh strategies such as giving incentives or subsidies may also be employed to encourage intellectual property owners to share their intellectual property rights for the advancement of sustainability targets in certain sectors. For example, patents in technologies that are related to renewable energies may be subjected to compulsory licensing, or put in patent pool arrangements, to help accelerate Indonesia's emission reduction[40].

Other stakeholders such as the World Intellectual Property Organization can also play a role in encouraging intellectual property release for sustainability purposes. The Organization in its 2022-2026 Medium Term Strategic Plan specifically provided under Pillar 4 that it supports governments, enterprises, communities and individuals to use intellectual property as a tool for growth and sustainable development.[41] A global intellectual property protection system that provides leeway for sustainability purposes may help accelerate sustainable development achievements and targets.

Ultimately, a collaborative approach between all stakeholders that recognizes the economic value of innovation while prioritizing the public interest is crucial. This may involve developing countries accommodating their national innovation systems to be more sustainability-oriented, or international organizations regime that maximizes global economic welfare while paying attention to sustainability targets. It also requires a thoughtful reassessment of the current intellectual property framework to better align with legal and scientific principles.

CONCLUSION

The Indonesian legal regime has provided various laws and regulations on the protection of intellectual property rights. However, its release for sustainability

[39] Kristin and Dewi, *op.cit.* note 19, p.202.
[40] Indonesia submitted its first Nationally Determined Contribution (NDC) in 2016, committing to a 29% reduction in emissions through its own efforts and up to 41% with international support by 2030. In November 2021, the country updated its NDC, raising the unconditional target to 31.89% and the conditional target to 43.20%. See further: Ministry of Environment and Forestry, "FOLU NET SINK: Indonesia's Climate Actions Towards 2030" (Jakarta, 2023).
[41] World Intellectual Property Organization Program and Budget Committee, "Medium-Term Strategic Plan (MTSP) 2022-2026" (Geneva, 2021).

purposes presents a complex yet critical challenge for Indonesia. Flexible intellectual property models, such as open-source licensing, patent pools, and compulsory licensing, can serve as practical mechanisms to bridge this gap, particularly in addressing urgent societal needs like climate change and sustainability.

Further, since intellectual property release still mostly depends on the willingness of the intellectual property owner, a collaborative framework involving multiple stakeholders is essential to achieving this balance. Companies as intellectual property owners can play a vital role by adopting sustainability-oriented strategies that integrate intellectual property release into their broader business models. Additionally, the government must enact supportive policies, such as providing incentives for innovation sharing or mandating compulsory licensing for critical technologies. Last but not least, International organizations like WIPO can further contribute by fostering global frameworks that prioritize sustainability within intellectual property systems. Ultimately, Indonesia's ability to align its intellectual property framework with its sustainability agenda will depend on the collective efforts of these actors, ensuring that innovation serves both economic growth and the broader public good.

REFERENCES

Books

Beldiman, Dana, Fabian Flüchter, and Felix Tann. "Intellectual Property Rights in a Fab City/Open-Source Hardware Context BT - Global Collaboration, Local Production: Fab City Als Modell Für Kreislaufwirtschaft Und Nachhaltige Entwicklung." edited by Manuel Moritz, Tobias Redlich, Sonja Buxbaum-Conradi, and Jens P Wulfsberg, 135–47. Wiesbaden: Springer Fachmedien Wiesbaden, 2024. https://doi.org/10.1007/978-3-658-44114-2_10

Journals

Blasi, Alexandra E. "An Ethical Dilemma." *Journal of Legal Medicine* 33, no. 1 (January 1, 2012): 115–28. https://doi.org/10.1080/01947648.2012.657939.

Budileanu, Cristiana. "Copyright in the Digital Age. A Perspective on Common

Licenses ('Creative Commons')." *Romanian Journal of Intellectual Property Law* 69 (2020). https://heinonline.org/HOL/LandingPage?handle=hein.journals/rjoinpl2020&div=10&id=&page=.

Burger, Julie A., and Justin Brunner. "A Court's Dilemma: When Patents Conflict with Public Health." *Virginia Journal of Law & Technology* 12, no. 7 (2007).

Choi, Jay Pil, and Heiko Gerlach. "Patent Pools, Litigation, and Innovation." *The RAND Journal of Economics* 46, no. 3 (September 1, 2015): 499–523. https://doi.org/https://doi.org/10.1111/1756-2171.12095.

Cohen, Jillian Clare, and Patricia Illingworth. "The Dilemma of Intellectual Property Rights for Pharmaceuticals: The Tension Between Ensuring Access of the Poor to Medicines and Committing to International Agreements." *Developing World Bioethics* 3, no. 1 (May 1, 2003): 27–48. https://doi.org/https://doi.org/10.1111/1471-8847.00058.

Ding, Yi. "Is Creative Commons a Panacea for Managing Digital Humanities Intellectual Property Rights?" *Information Technology and Libraries* 38, no. 3 SE-Articles (September 15, 2019): 34–48. https://doi.org/10.6017/ital.v38i3.10714.

Ehrnsperger, Jonas Fabian, and Frank Tietze. "Patent Pledges, Open IP, or Patent Pools? Developing Taxonomies in the Thicket of Terminologies." *PLOS ONE* 14, no. 8 (August 20, 2019): e0221411. https://doi.org/10.1371/journal.pone.0221411.

Erickson, Kris, Martin Kretschmer, and Dinusha Mendis. "Chapter 4: An Empirical Approach to the Public Domain." In *The Innovation Society and Intellectual Property: European Intellectual Property Institutes Network Series*, edited by Josef Drexl and Anselm Kamperman Sanders, 87–116. Cheltenham: Elgar Online, 2019.

Forsyth, Miranda, and Sue Farran. "Intellectual Property and Food Security in Least Developed Countries." *Third World Quarterly* 34, no. 3 (2013): 516–33. https://doi.org/10.1080/01436597.2013.785345.

Gao, Xing, Jiaqian Zhu, and Bao-Jie He. "The Linkage Between Sustainable Development Goals 9 and 11: Examining the Association Between Sustainable Urbanization and Intellectual Property Rights Protection." *Advanced Sustainable Systems* 6, no. 3 (2022). https://doi.org/10.1002/adsu.202100283.

Garg, Aayush, and Nisha. "Open-Source Software and Intellectual Property Rights." *Jus Corpus Law Journal* 4, no. 2 (n.d.).

Karanja, Wanjiku. "Legitimacy of Indigenous Intellectual Property Rights' Claims." *Strathmore Law Review* 1, no. 1 (2016): 165–90. https://doi.org/10.52907/slr.v1i1.88.

Korbel, Caroline. "Managing Copyright in Digital Collections: A Focus on Creative Commons Licences." *Dalhousie Journal of Interdisciplinary Management* 14, no. Spring (2018).

Kristin, Debby, and Chloryne Trie Isyana Dewi. "The Dilemma in COVID-19 Pandemic: The Protection of Intellectual Property Rights or A Life?" *Media Iuris* 5, no. 2 (2022).

Kumar, Nishant. "Rethinking Intellectual Property Rights in the Era of Open Science." *Isslp* 2, no. 3 (2023): 1–3. https://doi.org/10.61838/kman.isslp.2.3.1.

Merges, Robert P., and Michael Mattioli. "Measuring the Costs and Benefits of Patent Pools." *Ohio State Law Journal* 78 (2017).

Misra, Pradeep Kumar. "Creative Commons Licenses: Benefits and Implications in Teaching and Research." *Research Journal Social Sciences* 28, no. 1 (2020).

Muhammad, Iqbal. "Communal Intellectual Property in the Digital Age: Exploring the Relevance, Regulation, and Impact of Creative Commons Licenses." *Indonesian Law Journal* 16, no. 1 (2023). https://doi.org/https://doi.org/10.33331/ilj.v16i1.127.

Prisandani, Ulya Yasmine. "Public Companies and Sustainability through Regulatory Reform in Indonesia." *International Journal of Environmental Studies* 80, no. 1 (January 2, 2023): 32–50. https://doi.org/10.1080/00207233.2021.2017182.

Reichman, Jerome H. "Intellectual Property in the Twenty-First Century: Will the Developing Countries Lead or Follow?*," 2014, 111–81. https://doi.org/10.1093/acprof:oso/9780199660759.003.0004.

Reisinger, Markus, and Emanuele Tarantino. "Patent Pools, Vertical Integration, and Downstream Competition." *The RAND Journal of Economics* 50, no. 1 (March 1, 2019): 168–200. https://doi.org/https://doi.org/10.1111/1756-2171.12266.

Seibert, Heather, Rachel Miles, and Christina Geuther. "Navigating 21st-Century Digital Scholarship: Open Educational Resources (OERs), Creative Commons, Copyright, and Library Vendor Licenses." *The Serials Librarian* 76, no. 1–4 (June 14, 2019): 103–9. https://doi.org/10.1080/0361526X.2019.1589893.

Utama, Andrew Shandy, and Ade Pratiwi Susanty. "Legal Strategy for Intellectual Property Protection in the Era of Open-Source and Creative Commons in Indonesia." *The Easta Journal Law and Human Rights* 2, no. 01 SE-Articles (October 31, 2023): 17–24. https://doi.org/10.58812/eslhr.v2i01.149.

Vakili, Keyvan. "Collaborative Promotion of Technology Standards and the Impact on Innovation, Industry Structure, and Organizational Capabilities: Evidence from Modern Patent Pools." *Organization Science* 27, no. 6 (2016).

Wang, Jianan, Yuzhen Duan, and Guijian Liu. "A Study of Specific Open Innovation Issues from Perspectives of Open Source and Resources—The Series Cases of Tesla." *Sustainability* 142 (2022).

Wen, Wen, Marco Ceccagnoli, and Chris Forman. "Opening Up Intellectual Property Strategy: Implications for Open Source Software Entry by Start-up Firms." *Management Science* 62, no. 9 (2016).

News

Solomon, Brian. "Tesla Goes Open Source: Elon Musk Releases Patents To 'Good Faith' Use." *Forbes*. New Jersey, 2014.

Tajitsu, Naomi. "Toyota to Give Royalty-Free Access to Hybrid-Vehicle Patents." *Reuters*. April 3, 2019.

Reports

Ministry of Environment and Forestry. "FOLU NET SINK: Indonesia's Climate Actions Towards 2030." Jakarta, 2023.

Rimmer, Matthew. "Tesla Motors: Intellectual Property, Open Innovation, and the Carbon Crisis." Canberra, 2014.

World Intellectual Property Organization Program and Budget Committee. "Medium-Term Strategic Plan (MTSP) 2022-2026." Geneva, 2021.

Webpages

Tesla. "Patent Pledge." Additional Resources, 2023. Accessed through: https://www.tesla.com/legal/additional-resources#patent-pledge

Toyota. "Toyota Promotes Global Vehicle Electrification by Providing Nearly 24,000 Licenses Royalty-Free." News Release, 2019. Accessed through: https://global.toyota/en/newsroom/corporate/27512455.html