Regional Spatial Regulation in Riau Province: Policy Formation Problems and Solutions



E-ISSN: 3031-7045

P-ISSN: 3031-7215

Suparto Suparto a,1,*, Jose Gama Santos b,2

- ^a Faculty of Law, Universitas Islam Riau, Pekanbaru, Indonesia
- ^b Faculty of Law, Universidade Dili, Dili, Timor Leste
- * corresponding author: suartofhuir@yahoo.com

Article Info

Received: 05 August 2024 Revised: 09 September 2024 Accepted: 25 September 2024

Keywords:

Regional Regulation; Spatial Planning; Environmental Policy; Riau Province.

Abstract

Regional Regulations (Perda) are statutes enacted by the Regional Head and DPRD that govern the welfare and utility aspects of the region. The Regional Spatial Planning (RTRW) rule is a crucial local ordinance that governs land allocation according to specified functions throughout various regions. The formulation of a Provincial Spatial Planning Regulation is significantly more intricate than other rules, necessitating the consideration and integration of diverse interests and the participation of several institutions, as demonstrated in the development of the Riau Provincial Spatial Planning Regulation. Following an extensive process, the Governor of Riau promulgated Regional Regulation (Perda) No. 10/2018 concerning the Regional Spatial Plan of Riau Province, with the subsequent particulars: 1. Area under cultivation measures 8,067,344 hectares. The protected region encompasses 945,532 hectares of a total expanse of 9,012,876 hectares. Despite the Regional Regulation concerning the Regional Spatial Plan and establishing the Regional Regulation on the Regional Spatial Plan of Riau Province, some concerns persist, specifically the clearance of land allocated for oil palm plantations within forested regions or for reforestation initiatives. This is difficult as it necessitates the deforestation of hundreds of thousands of hectares of oil palm plantations. Consequently, if executed meticulously, this will safeguard the ecosystem, particularly in the lack of legislation governing the restoration of land formerly converted to oil palm farms. The Government should promptly establish an implementing regulation as the legal foundation for oversight, preferably in the form of a presidential regulation.

This is an open-access article under the CC BY-SA 4.0 license



1. Introduction

Law No. 12/2011 on the Formation of Laws and Regulations stipulates that one type of legislation enacted to manage regional administrations is Regional Regulations





(Perda).¹ Perda is a regulation established by the local government in conjunction with the DPRD that addresses the elements of welfare and utility within a territory. The presence of local legislation is attributable to Indonesia's foundation on regional autonomy. Numerous longstanding local policies have been identified as conflicting with central government regulations, necessitating the establishment of documentation routes between the central authority and regional entities for effective monitoring by the central government.² Regarding its formulation, it is fitting to regard the status of this Perda, at both the provincial and district or municipal levels, as analogous to that of a Law, as both represent legal outputs of the legislature. Accordingly, pursuant to the stipulations of Law Number 12 Year 2011, Regional Regulations are legislation enacted by the Regional People's Representative Council with the concurrent consent of the Regional Head (Governor and Regent/Mayor). Regional Regulations comprise Provincial Regional Regulations and Regency/City Regional Regulations.³

Subordinate laws and regulations must not conflict with superior laws and regulations. If subordinate legislation conflicts with superior legislation, the subordinate legislation may be legally challenged for annulment (*Van Rechtswege Nietig*). The order or hierarchy of rules and regulations in a legal system, as articulated by Hans Kelsen, is referred to as the Grundnorm. Local rules currently hold a robust and strategic position due to their explicit constitutional basis as outlined in Article 18, paragraph 6 of the 1945 Constitution.⁴ A key local regulation with a strategic purpose is the Regional Spatial Plan (RTRW) at both the province and district/city levels, as it governs land allocation in accordance with the designated functions of the area. Unlike other local laws, the formulation of the RTRW local rule is complex due to the multitude of interests that must be addressed and reconciled, as well as the involvement of several state institutions. The RTRW regulation must align with and reference the National Spatial Plan.⁵

Wirastuti Widyatmanti and others, 'Codification to Secure Indonesian Peatlands: From Policy to Practices as Revealed by Remote Sensing Analysis', *Soil Security*, 9 (2022), 100080 https://doi.org/10.1016/j.soisec.2022.100080.

Margarita Ignatyeva, Vera Yurak, and Natalia Pustokhina, 'Recultivation of Post-Mining Disturbed Land: Review of Content and Comparative Law and Feasibility Study', Resources, 9.6 (2020) https://doi.org/10.3390/RESOURCES9060073>.

³ Ridwan Arifin, Sigit Riyanto, and Akbar Kurnia Putra, 'Collaborative Efforts in ASEAN for Global Asset Recovery Frameworks to Combat Corruption in the Digital Era', *Legality: Jurnal Ilmiah Hukum*, 31.2 (2023), 329–43 https://doi.org/10.22219/ljih.v31i2.29381.

⁴ Suharyo Suharyo, 'Pembentukan Peraturan Daerah, Dan Penerapan Sanksi Pidana Serta Problematikanya', *Jurnal Rechts Vinding: Media Pembinaan Hukum Nasional*, 4.3 (2015), 431 https://doi.org/10.33331/rechtsvinding.v4i3.15.

R. I. Maczkowiack and others, 'Grazing as a Post-Mining Land Use: A Conceptual Model of the Risk Factors', *Agricultural Systems*, 109 (2012), 76–89 https://doi.org/10.1016/j.agsy.2012.03.002>.

The Provincial RTRW serves as a complement to the Regency/City RTRW. Similar to the Regency/City RTRW, the Provincial RTRW serves as a foundation for the formulation of the National RTRW, encompassing objectives and strategies for the execution of provincial spatial utilization, structural plans, spatial utilization patterns, general spatial plans, and guidelines for spatial utilization control.⁶ The formulation of the Provincial RTRW must take into account the directives outlined in the National RTRW. The National RTRW was designed to delineate the trajectory of national development previously established in the GBHN and Propernas while also considering the Regency/City Properda. Spatial planning and the environment encompass a wide range of meanings. However, they sometimes carry a restricted connotation, confined to physical planning and construction. Spatial planning, particularly urban spatial planning, is intricate and multifaceted due to the unavoidable conflict of technical, commercial, and humanistic perspectives.⁷

The constrained and relatively static supply of land will engender numerous issues in its utilization. Conversely, the demand for land is rising.⁸ The issues arising from the demand for land are becoming increasingly intricate and are on the rise, particularly those pertaining to ownership and control. This will incite anger and friction within the community, thereby impeding further development. Consequently, there is a necessity for safety and legal assurances from the government, particularly at the municipal level.⁹

Recent developments in its implementation reveal several strategic challenges in national spatial planning.¹⁰ Firstly, there are conflicts of interest among sectors such as mining, environment, forestry, and regional infrastructure. Secondly, the effective functioning of spatial planning is necessary to harmonize, synchronize, and integrate various sector plans and programs. Thirdly, there are deviations in land use from the established provisions and norms. Fourthly, there is a lack of clear functional allocation

⁶ Surahman et All, 'Retributive Justice in Law Enforcement Against Land Mafia in Indonesia', *International Journal of Criminal Justice Sciences*, 18.2 (2023), 259–74 https://doi.org/10.5281/zenodo.4756317.

Dianto Bachriadi and Edward Aspinall, 'Land Mafias in Indonesia', *Critical Asian Studies*, 55.3 (2023), 331–53 https://doi.org/10.1080/14672715.2023.2215261>.

⁸ Ali Shahaab and others, 'Public Service Operational Efficiency and Blockchain – A Case Study of Companies House, UK', *Government Information Quarterly*, 40.1 (2023) https://doi.org/10.1016/j.giq.2022.101759>.

⁹ D. F. Pershke and P. E. Elliott, 'Post-Closure Land Uses - Defined through a Strategic Land Use Planning Approach', Proceedings of the International Conference on Mine Closure, 2019-Septe (2019), 983–96 https://doi.org/10.36487/ACG_rep/1915_77_Pershke.

Lita Tyesta Addy Listya Wardhani, Muhammad Dzikirullah H. Noho, and Aga Natalis, 'The Adoption of Various Legal Systems in Indonesia: An Effort to Initiate the Prismatic Mixed Legal Systems', Cogent Social Sciences, 8.1 (2022) https://doi.org/10.1080/23311886.2022.2104710.

in the National Spatial Plan (RTRWN).¹¹ Fifthly, there is a deficiency in transparency and sincerity regarding the prioritization of sectoral and regional interests within spatial planning. Lastly, there is an inability to moderate the excessive defense of individual interests.¹² Moreover, spatial planning necessitates the consideration of three principal components, specifically: (a) the overall physical environment and the particular utilization of natural resources. (b) Societal aspects, encompassing user desires, and (c) Elements of physical environment control by governmental and community entities.¹³

Riau Province is one of the provinces in Indonesia that has established a Regional Spatial Planning Regulation. The formulation of the Regional Spatial Plan (RTRW) for Riau Province commenced with the administrative separation of Riau Province into Riau Islands Province. In response to the 2004 secession of Riau Province, the Riau Provincial Government amended the RTRW to modify land use and delineate forest area status. The Riau Provincial Government suggested modifications to the forest area, increasing it to 3.65 million hectares and designating the non-forest land at 5.39 million hectares, resulting in a total forest area of 3.49 million hectares.

In response to the Riau Provincial Government's proposal, the Forestry Department established an integrated team at the end of 2012. The integrated team proposed modifications to the forest area of 2.726 million hectares, resulting in a total forest area of 4.411 million hectares and a non-forest area of 4.62 million hectares. In 2014, following two years of minimal advancement, the Ministry of Forestry promulgated Decree No. 673 of 2014. Subsequently, Decree No. 878 of 2014 stipulated that the forest area in Riau Province was allocated 5.499 million hectares, reflecting a modification of merely 1.638 million hectares from the 2.726 million hectares recommended by the integrated team.

On 20 April 2016, the Ministry of Environment and Forestry (MoEF) promulgated Decree No. 314, which reclassified an additional 65,125 hectares of forest area to nonforest status. Subsequently, SK No. 393 of 2016 was promulgated as a revision of SK No.

Marnel Arnold Ratio, Jillian Aira Gabo-Ratio, and Yasuhiro Fujimitsu, 'Exploring Public Engagement and Social Acceptability of Geothermal Energy in the Philippines: A Case Study on the Makiling-Banahaw Geothermal Complex', *Geothermics*, 85.August 2019 (2020), 101774 https://doi.org/10.1016/j.geothermics.2019.101774.

¹² L. Aldieri and others, 'Waste Recycling Patents and Environmental Innovations: An Economic Analysis of Policy Instruments in the USA, Japan and Europe', *Waste Management*, 95 (2019), 612–19 https://doi.org/10.1016/j.wasman.2019.06.045>.

¹³ M Yazid Fathoni and Acasio Fernandez, 'Establishment of Land Court in Indonesia: An Effort to Realise Justice Based on Pancasila', *Journal of Law, Environmental and Justice*, 1.2 (2023), 86–104 https://doi.org/10.62264/jlej.v1i2.6.

¹⁴ Arifin Ma'ruf, 'Legal Aspects of Environment in Indonesia: An Efforts to Prevent Environmental Damage and Pollution', *Journal of Human Rights, Culture and Legal System*, 1.1 (2021), 2021.

314; however, the total area remained unchanged. In October 2016, the Governor of Riau submitted the draft Regional Regulation (Raperda) for the Riau Spatial Planning (RTRWP) 2017-2037 to the Minister of Home Affairs for assessment. The Minister of Home Affairs submitted the Ranperda RTRW Riau Province to pertinent ministries and agencies for significant approval. The Ministry of Environment and Forestry (KLHK) rejected the draft Regional Regulation for the Riau Province RTRW. A significant concern was the reclassification of forest lands to non-forest areas, which prolonged the process. This situation garnered national attention, prompting Indonesian President Joko Widodo to act and convene the pertinent parties to address the matter. The author will examine the challenges associated with the establishment of Regional Regulations (Perda) concerning the Regional Spatial Plan of Riau Province and its environmental repercussions.

2. Research Methods

This study employs normative legal research methodologies through literature analysis. ¹⁵ The utilized data is secondary, specifically Regional Regulation Number 10 of 2008, About the Regional Spatial Plan of Riau Province, together with periodicals, books, and pertinent laws and regulations. ¹⁶ The analysis of data is conducted qualitatively. The analysis phase commences with data gathering, followed by methodical, logical, and legal classification of the data to elucidate a precise depiction of the issues under investigation, following which the author provides an interpretation. ¹⁷ The author subsequently contrasts theories and notions derived from secondary material, which includes scientific literature, periodicals, pertinent laws and regulations, and legal opinions from specialists in the field.

3. Results and Discussion

Problems of Regional Regulation on Spatial Planning in Riau Province

Regional Regulations (Perda) are categorized into two types: Provincial Regional Regulations and Regency/City Regional Regulations. Article 7, paragraph (1) of Law No. 12 of 2011 states that Regional Regulations are a kind of legislation subordinate to Presidential

¹⁵ Januar Rahadian Mahendra, Rizal Akbar Aldyan, and Silas Oghenemaro Emovwodo, 'Examining Indonesian Government Policies in Tackling Deforestation: Balancing Economy and Environment', *Journal of Law, Environmental and Justice*, 2.1 (2024), 42–62 https://doi.org/10.62264/jlej.v2i1.93.

Suparto and Santos: Regional Spatial Regulation in Riau Province.....

¹⁶ Rian Saputra, Albertus Usada, and Muhammad Saiful Islam, 'Ecological Justice in Environmental Criminal Sanctions for Corporations in Indonesia: Problems and Solution', *Journal of Law, Environmental and Justice*, 2.1 (2024), 1–17 https://doi.org/10.62264/jlej.v2i1.19.

Agung Basuki and others, 'Establishing Ecological Justice in the Governance of Land Inventory , Ownership , and Utilisation in Indonesia', *Journal of Law, Environmental and Justice*, 18.2 (2023), 137–54 https://doi.org/10.62264/jlej.v1i2.12.

Regulations.¹⁸ Regional Regulation (Perda) is a legislative instrument created with the involvement of representative institutions. This sort of law possesses advantages regarding its content. Local rules have the authority to incorporate criminal provisions within their content; they are also a form of law whose classification and status are governed by the 1945 Constitution.¹⁹

The implementation of the hierarchy of laws and regulations is inextricably linked to the political influences that subsequently molded Indonesia's constitutional structure. According to Satjipto Rahardjo, the law is not an independent institution; rather, it is interconnected with other sectors of societal life.²⁰ The hierarchy of laws and regulations is intrinsically linked to the constitutional framework in Indonesia. This commenced during the Dutch colonial era in Indonesia, specifically from 1800 until 1942, similar to the Japanese occupation from 1942 to 1945.²¹

Regional rules have been a component of the Indonesian legislative system since the era of the Dutch East Indies government. The current legislative system is inseparable from that of the Kingdom of the Netherlands. Following Indonesia's independence, the 1945 Constitution was established as the Constitution of the Republic of Indonesia, becoming the foundation of the Indonesian legal system and government.²² The essence of local rules as a mechanism for addressing specific regional situations is a distinctive feature not possessed by other laws and regulations, which regard laws and regulations as formal legal instruments serving national goals. Local regulations serve to address specific area problems, functioning as both an extension of national laws and a legal instrument that considers regional

-

Defira Martina Adrian, Fence M. Wantu, and Abdul Hamid Tome, 'Racial and Ethnic Discrimination in the Perspective of International Law', *Jurnal Legalitas*, 14.1 (2019), 1–17.

¹⁹ I Made Wimas Candranegara, I Wayan Mirta, and I Nyoman Mangku Suryana, 'Government Collaboration Of Pentahelix Models In The Management Of Ecotourism D'Bendungan View Telaga Tunjung (Case Study Management of Ecoutourism D'Bendungan View Telaga Tunjung in Timpag Village, Tabanan Bali)', *Iapa Proceedings Conference*, 2019, 68 https://doi.org/10.30589/proceedings.2019.222>.

²⁰ Tumpal Silitonga and others, 'Implementation of ICAO Standards for Civil Aviation Security in Indonesia', *Journal of Positive School Psychology*, 2022.5 (2022), 8193–8203.

²¹ Indah Dwi Qurbani, Ilham Dwi Rafiqi, and Ilham Dwi Rafiqi, 'Prospective Green Constitution in New and Renewable Energy Regulation', *Legality: Jurnal Ilmiah Hukum*, 30.1 (2022), 68–87 https://doi.org/10.22219/ljih.v30i1.18289.

²² Tanja Masson-Zwaan and Steven Freeland, 'Between Heaven and Earth: The Legal Challenges of Human Space Travel', *Acta Astronautica*, 66.11–12 (2010), 1597–1607 https://doi.org/10.1016/j.actaastro.2009.12.015>.

features.23

Draft Local Regulations, jointly authorized by the DPRD and the Governor or Regent/Mayor, are submitted by the DPRD leader to the Governor or Regent/Mayor for enactment as Local Regulations.²⁴ The draft local regulation must be submitted within seven days of joint approval. The Governor or Regent/Mayor shall stipulate the proposed local regulation within a maximum of 30 days following its joint approval. If the Governor or Regent/Mayor does not approve the draft local rule within 30 days, it becomes legal as a local regulation. It must be published in the regional gazette. The ratification of the local regulation must include a statement declaring, 'This local regulation is declared valid,' along with the legal date, which should be affixed to the final page of the local regulation prior to its publication in the regional gazette.²⁵

To ensure government oversight of local regulations, the local regulations must be presented within seven days of implementation.²⁶ The government may annul local regulations deemed inconsistent with the public interest and/or superior laws and regulations. The cancellation of the local regulation shall be mandated by a Presidential Regulation no later than 60 days following the receipt of the pertinent local regulation. Within a maximum of seven days following the decision to annul the local regulation, the regional head must cease its implementation, after which the DPRD, in conjunction with the regional head, shall revoke the pertinent local regulation.²⁷

Local regulations are the most significant component among other regional legal instruments. Local regulations serve as the primary source of regional legal products, as they not only interpret the superior laws and regulations but also reflect area necessities. Local regulations are established to facilitate autonomy and assistance tasks, serving as a detailed extension of superior laws and regulations while considering the unique peculiarities of each

²³ S. Cooper, 'Maximising Post-Mining Land Use: Queensland Government Reforms', *Proceedings of the International Conference on Mine Closure*, 2019-Septe (2019), 969–81 https://doi.org/10.36487/ACG_rep/1915_76_Cooper>.

²⁴ J. Ferejohn and P. Pasquino, 'The Law of the Exception: A Typology of Emergency Powers', *International Journal of Constitutional Law*, 2.2 (2004), 210–39 https://doi.org/10.1093/icon/2.2.210.

²⁵ Michał Matusiak, 'Use of the International Rivers As the Challenge for the International Law in Xxi Century', *International Journal of Legal Studies* (*IJOLS*), 12.2 (2022), 175–86 https://doi.org/10.5604/01.3001.0016.2390>.

²⁶ Hong-Hai Lim, 'Improving Administrative Performance in Malaysia: The More Difficult Next Steps in Reform', *Policy and Society*, 26.2 (2007), 33–59 https://doi.org/10.1016/s1449-4035(07)70107-8>.

²⁷ R. Cohen-Almagor, 'Sur Les Fondations Philosophiques de l'éthique Médicale : Aristote, Kant, JS Mill et Rawls', *Ethics, Medicine and Public Health*, 3.4 (2017), 436–44 https://doi.org/10.1016/j.jemep.2017.09.009>.

region.²⁸ The local ordinance on spatial planning is one of the most significant and crucial local regulations. Spatial planning encompasses three imperatives:²⁹

- 1. The optimization of resource utilization (principles of productivity and efficiency)
- 2. The mechanisms and frameworks for resource distribution (principles of equality, balance, and justice)
- 3. Sustainability (principles of sustainability)

The formulation of the Draft Regional Regulation (Raperda) on the Regional Spatial Plan (RTRW) for Riau Province 2017-2037 encompassed multiple phases adhering to the procedures outlined in Minister of Home Affairs Regulation (Permendagri) Number 80 of 2015 regarding the Establishment of Regional Legal Products. The procedure commences when the Governor of Riau presents the proposed Raperda RTRW for Riau Province to the Riau Provincial DPRD. Subsequently, the Raperda underwent examination by the Riau Province BP2D, designated by the DPRD leadership to perform a comprehensive analysis. The outcomes of the BP2D study are presented as suggestions and then submitted during a plenary session via the Deliberation Body (Bamus) of the Riau Provincial DPRD.

Following the proposals presented in the plenary session, the DPRD established a Special Committee (Pansus) assigned to further deliberations on the draft regulation. The Special Committee operated in compliance with the regulations of the Riau Provincial DPRD by conducting discussions with pertinent Regional Apparatus Organisations (OPD), including BAPPEDA Riau Province, BPN Riau Province, the Regents of Riau Province, LAM, the Riau Province Legal Bureau, Kadin, and the Forestry Service. The summary outcomes of the Special Committee's dialogue with pertinent OPDs are presented to the Riau Provincial DPRD plenary session for consensus attainment. The plenary session necessitates a quorum of two-thirds of DPRD members to decide on the agreement between the Riau Provincial DPRD and the Governor of Riau.

The Riau Provincial DPRD's decision on approval during the plenary meeting is submitted to the Governor of Riau within three days following the session. Subsequently, the Governor of Riau submits the Draft Regional Regulation (Raperda) concerning the Spatial and Regional Plan of Riau Province to the Ministry of Home Affairs for assessment. The Ministry of Home Affairs subsequently summoned pertinent ministries, including the Ministry of Environment and Forestry, Directorate General of Planology, Coordinating Ministry for Economic Affairs,

²⁹ Sudharto P Hadi, Rizkiana S Hamdani, and Ali Roziqin, 'A Sustainability Review on the Indonesian Job Creation Law', *Heliyon*, 9.2 (2023), e13431 https://doi.org/10.1016/j.heliyon.2023.e13431.

²⁸ Indah Nur Shanty Saleh and Bita Gadsia Spaltani, 'Environmental Judge Certification in an Effort to Realize the Green Legislation Concept in Indonesia', *Law and Justice*, 6.1 (2021), 1–18 https://doi.org/10.23917/laj.v6i1.13695>.

Riau Province BPN, National Development Planning Agency, Ministry of Agrarian Affairs and Spatial Planning, Ombudsman RI, and Geospatial Information Agency.

Following the evaluation results, the Minister of Home Affairs promulgated Decree No. 188.34-8552/2017 about assessing the Draft Regional Plan for Spatial and Regional Planning of Riau Province for 2017-2037. The Governor of Riau, via his regional machinery, subsequently conferred with the Riau Provincial Parliament to elucidate the evaluation results. The Governor of Riau submitted a letter to the Ministry of Environment and Forestry seeking approval for the Riau Province Spatial and Regional Plan Document. The Head of the Geospatial Information Agency and the Ministry of Agrarian Affairs and Spatial Planning sanctioned the creation of the Riau Province Spatial and Regional Plan, which was in alignment with the outcomes of the meeting with the Regional Government. BAPPENAS (National Development Planning Agency) has authorized and issued a recommendation letter for formulating the Riau Province Spatial and Regional Plan Map. The Directorate General of Planology and Sustainable Forest Management of the Ministry of Environment and Forestry issued a letter indicating ongoing disparities between the 2017-2037 Riau Province Spatial and Regional Plan and its quality assurance measures. The Governor of Riau issued a subsequent letter about validating the Spatial and Regional Plan document.

The Ministry of Environment and Forestry subsequently dispatched a letter to the Governor of Riau concerning the endorsement of the Riau Province Spatial and Regional Plan. The Regional Secretary of Riau Province requested a Ranperda (Draft Regional Regulation) registration number from the Ministry of Home Affairs via the Director of Regional Legal Products. Following a coordination conference to validate the evaluation results 26 notes by the Kepmendagri, the Riau Provincial Government affirmed that it had addressed all the notes. Subsequently, the Director of Regional Legal Products issued a letter assigning the Regional Regulation Register Number 10.105/2018 to the Regional Secretary of Riau Province. The Governor of Riau promulgated Regional Regulation No. 10/2018 concerning the Regional Spatial Plan (RTRW) of Riau Province. The implementation of Regional Regulation No. 10/2018 concerning the Regional Spatial Plan (RTRW) of Riau Province signifies the conclusion of the extensive draughting process for this regulation. This legislation is a crucial framework for regional spatial management in Riau Province from 2017 to 2037. The legislation addresses multiple facets of development, land utilization, environmental conservation, and the interplay between economic advancement and natural resource safeguarding.³⁰

³⁰ Bayu Dwi Anggono and Fahmi Ramadhan Firdaus, 'Omnibus Law in Indonesia: A Comparison to the United States and Ireland', *Lentera Hukum*, 7.3 (2020), 319–36 https://doi.org/10.19184/ejlh.v7i3.19895.

The Spatial and Regional Plan is anticipated to serve as a legislative foundation for local governments to systematically and integratively organize the Riau Province region. It also serves as a reference for several sectors, both governmental and commercial, in formulating development and investment strategies in this region. The ratification of the Spatial and Regional Plan is a strategic measure to guarantee that economic expansion, infrastructure development, and natural resource management in Riau Province are executed sustainably and in alignment with established spatial planning.³¹ The Riau Provincial Government must ensure that the implementation of the Spatial and Regional Plan adheres to existing regulations. Cross-sector cooperation, oversight of spatial policy implementation, and community engagement in supervision are critical elements for attaining the goals of this Spatial and Regional Plan. With the collaboration of all stakeholders, the Spatial and Regional Plan for Riau Province is anticipated to positively influence regional development and enhance the quality of life for the residents of Riau in the long run.³²

The development of local legislation is a complex endeavor, particularly with regard to land use or zoning. Establishing local laws necessitates precision in systematics, organization, language, terminology, and the diversity of materials to be governed in alignment with requirements.³³ Consequently, preparation necessitates a profound understanding of the subject matter to be governed, along with thorough investigation and observation. Furthermore, it must identify the fundamental nature of the existing and evolving facts in the domain to be articulated in a succinct regulation using precise language.³⁴

The delay in the establishment of the Riau Province RTRW Regional Regulation primarily stems from the requirement for the Ministry of Home Affairs to obtain recommendations from pertinent agencies and ministries, including the chairman of BAPPENAS, the Geospatial Information Agency, and the relevant ministries, specifically the Ministry of Agrarian Affairs and Spatial Planning and the Ministry of Environment and Forestry.³⁵ The Ministry of

Ngesti Prasetyo and others, 'The Politics of Indonesias Decentralization Law Based on Regional Competency', *Brawijaya Law Journal*, 8.2 (2021), 159–84 https://doi.org/10.21776/ub.blj.2021.008.02.01.

-

³² Adator Stephanie Worlanyo and Li Jiangfeng, 'Evaluating the Environmental and Economic Impact of Mining for Post-Mined Land Restoration and Land-Use: A Review', *Journal of Environmental Management*, 279.xxxx (2021), 111623 https://doi.org/10.1016/j.jenvman.2020.111623.

Claudia Parra-Paitan and others, 'Deforestation and Climate Risk Hotspots in the Global Cocoa Value Chain', *Environmental Science & Policy*, 158 (2024), 103796 https://doi.org/https://doi.org/10.1016/j.envsci.2024.103796>.

Weiqiang Lin, 'Transport Geography and Geopolitics: Visions, Rules and Militarism in China's Belt and Road Initiative and Beyond', *Journal of Transport Geography*, 81.May (2019), 102436 https://doi.org/10.1016/j.jtrangeo.2019.05.001>.

³⁵ Bagus Setiabudi Wiwoho, Neil McIntyre, and Stuart Phinn, 'Assessing Future Land-Uses under Planning Scenarios: A Case Study of The Brantas River Basin, Indonesia', *Environmental Challenges*, 15 (2024), 100873 https://doi.org/10.1016/j.envc.2024.100873.

Environment and Forestry is reluctant to offer advice due to the Local Government's failure to adhere to the maps utilized by the Ministry. Concurrently, the Ministry of Environment and Forestry cites the Agreed Forest Use Map (TGHK). However, the issue is that the facts in the field have altered as the studied area has been converted into oil palm plantations and other uses.³⁶

Consequently, the Riau Provincial Government's policy is to transform the region into a non-forest or plantation area; however, the Ministry of Environment and Forestry maintains its position that the Regional Government should revert the plantation area to forested land through deforestation of oil palm plantations or reforestation efforts.³⁷ Ultimately, the Regional Government consented to the policy put out by the Ministry of Environment and Forestry, which subsequently endorsed the Riau Province Regional Spatial Planning Regulation. On 25 April 2018, the Riau Province RTRWP Regional Regulation was sanctioned by the Ministry of Home Affairs via the Director of Regional Legal Products, Directorate General of Regional Autonomy, which assigned the Riau Province RTRW Regional Regulation Registration Number 10.105/2018. Subsequently, the Governor of Riau enacted Regional Regulation Number 10 of 2018 pertaining to the Riau Province Regional Spatial Plan.³⁸

Law Number 12 of 2011 regarding the Formation of Legislation does not delineate the distinction in status between Provincial Spatial Regulations and other local regulations, indicating that both possess equivalent standing in the legislative formation process.³⁹ In actuality, the formulation of the Riau Provincial Spatial Regulation involved numerous pertinent agencies and ministries, including the Ministry of Environment and Forestry, the Ministry of National Development Planning (BAPPENAS), the Ministry of Agrarian Affairs and Spatial Planning, the Geospatial Information Agency, and the Ministry of Home Affairs, all of which participated in discussions and the draughting process. The formulation of RTRW regulations is intricate and time-consuming. This differs from other municipal regulations

Michalis Tsepapadakis and Damianos Gavalas, 'Are You Talking to Me? An Audio Augmented Reality Conversational Guide for Cultural Heritage', *Pervasive and Mobile Computing*, 92 (2023), 101797 https://doi.org/https://doi.org/10.1016/j.pmcj.2023.101797.

Rini Astuti and others, 'Making Illegality Visible: The Governance Dilemmas Created by Visualising Illegal Palm Oil Plantations in Central Kalimantan, Indonesia', *Land Use Policy*, 114 (2022), 105942 https://doi.org/https://doi.org/10.1016/j.landusepol.2021.105942.

Rini Astuti, 'Governing the Ungovernable: The Politics of Disciplining Pulpwood and Palm Oil Plantations in Indonesia's Tropical Peatland', *Geoforum*, 124.May 2019 (2021), 381–91 https://doi.org/10.1016/j.geoforum.2021.03.004>.

³⁹ Calli P VanderWilde and others, 'Deforestation, Certification, and Transnational Palm Oil Supply Chains: Linking Guatemala to Global Consumer Markets', *Journal of Environmental Management*, 344 (2023), 118505 https://doi.org/10.1016/j.jenvman.2023.118505.

that do not engage many agencies or institutions.⁴⁰

Given the significance of local regulations, particularly those pertaining to spatial plans, it is fitting that the implementing regulations for the establishment of local regulations on provincial spatial plans be governed by Presidential Regulations (Perpres) rather than by the regulations of the Minister of Home Affairs. The formulation of provincial spatial planning rules necessitates the involvement of multiple state agencies and ministries, including the Ministry of Home Affairs, the Ministry of Environment and Forestry, the Ministry of Agrarian Affairs and Spatial Planning, Bappenas, and the Geospatial Information Agency, among others.

Solutions for the Formation and Implementation of Regional Regulations on Spatial Planning in Riau Province

The primary issue that prolonged the establishment of the Riau Provincial Spatial Regulation was the conflict of interest between the central government, specifically the Ministry of Environment and Forestry, and the Riau Provincial Government concerning land designation from Forest Area to Non-Forest Area.⁴¹ The Riau provincial government's plan, derived from the Integrated Team's recommendations, was not accepted by the Ministry of Environment and Forestry. This proposal involved the reclassification of land from a Forest Area to a Non-Forestry Area, encompassing 2,726,901 hectares. According to the Minister of Forestry's letter No. SK.673/Menhut-II/2014, regarding the conversion of forest area to nonforest area, the Ministry of Environment and Forestry (LHK) allowed just 1,638,249 hectares. This occurs despite the substantial conversion of land retained by the Ministry of Environment and Forestry into oil palm plantations and other uses.⁴²

The Riau province government aims to address these issues by proposing a Holding Zone or Outlet of 405,874 hectares designated for residential areas, transmigration, infrastructure, public facilities, social facilities, and smallholder plantations, among others. Nevertheless, about 700,000 hectares must be reinstated to its previous classification as a forested region.⁴³ This will undoubtedly provide a future issue, as the reality is that the region has been

⁴¹ Darío Gerardo Zambrano-Cortés and Jelle Hendrik Behagel, 'The Political Rationalities of Governing Deforestation in Colombia', *Forest Policy and Economics*, 154 (2023), 103029 https://doi.org/https://doi.org/10.1016/j.forpol.2023.103029.

⁴⁰ Abdulaziz I Almulhim and Patrick Brandful Cobbinah, 'Can Rapid Urbanization Be Sustainable? The Case of Saudi Arabian Cities', *Habitat International*, 139 (2023), 102884 https://doi.org/https://doi.org/10.1016/j.habitatint.2023.102884>.

⁴² Johanna Koehler, 'Exploring Policy Perceptions and Responsibility of Devolved Decision-Making for Water Service Delivery in Kenya's 47 County Governments', *Geoforum*, 92 (2018), 68–80 https://doi.org/https://doi.org/10.1016/j.geoforum.2018.02.018>.

⁴³ Xiaoyan Chang and others, 'Scenario Simulation of Land Use and Land Cover Change in Mining Area', *Scientific Reports*, 11.1 (2021), 1–12 https://doi.org/10.1038/s41598-021-92299-5>.

converted into an oil palm plantation, which is unlawful due to its location on forest territory. If the government adheres to this strategy, the oil palm plantations must be dismantled, allowing the region to revert to forest or undergo reforestation.⁴⁴

The indiscriminate felling of oil palm trees to facilitate land clearing for reforestation, if not executed with meticulous planning, will undoubtedly have a detrimental effect on the environment, particularly due to the smoke generated from land fires. Riau Province is the foremost producer of forest and land fire smoke in Indonesia. Dry, felled oil palm trees constitute combustible debris, particularly in the dry season. Consequently, it is imperative to consider methods for disposing of this palm tree debris to prevent accumulation in the forest.⁴⁵

Alongside technical challenges in the field, a significant concern is the allocation of responsibility for the reforestation process as it pertains to budgetary considerations. The central government, local government, or the party that governs the territory. If the government is accountable, this will necessitate a substantial financial investment, and presently, there is no budget allocated at either the federal or regional levels to address this issue. Conversely, if the management of the property is entrusted to the governing party, it becomes evident that certain entities possess legal permits to control land within the forested region. This indicates that he will not vacate or relinquish the region freely due to the substantial financial investment made in establishing oil palm crops and managing permits. Consequently, the Ministry of Environment and Forestry, as the authoritative body in the forestry sector, must establish regulations delineating the procedures and timelines for the deforestation and reforestation of oil palm land; failure to do so will create a detrimental precedent and result in legal ambiguity due to the ineffectiveness of local regulations.

Enforcement of spatial planning legislation is crucial in the spatial planning process. This method is essential to maintaining the intended spatial configuration in a compliant manner to ensure the attainment of development objectives. Nevertheless, in certain areas, this

⁴⁴ Robert Müller and others, 'Policy Options to Reduce Deforestation Based on a Systematic Analysis of Drivers and Agents in Lowland Bolivia', *Land Use Policy*, 30.1 (2013), 895–907 https://doi.org/https://doi.org/10.1016/j.landusepol.2012.06.019>.

Salvador Santino F Regilme, 'Contested Spaces of Illiberal and Authoritarian Politics: Human Rights and Democracy in Crisis', Political Geography, 89 (2021), 102427 https://doi.org/10.1016/j.polgeo.2021.102427.

⁴⁶ Tom Perreault, 'The Plantation and the Mine: Comment on "After the Land Grab: Infrastructural Violence and the 'Mafia System' in Indonesia's Oil Palm Plantation Zone" by Tania Li', *Geoforum*, 96 (2018), 345–47 https://doi.org/10.1016/j.geoforum.2018.02.025>.

⁴⁷ Rezki Purnama Samad, A. M. Yunus Wahid, and Hamzah Halim, 'Urgensi Partisipasi Masyarakat Terhadap Izin Usaha Pertambangan Pasir', *Al-Ishlah: Jurnal Ilmiah Hukum*, 24.1 (2021), 143–62 https://doi.org/10.56087/aijih.v24i1.87.

spatial design needs more effective implementation.⁴⁸ The implementation of sanctions is sometimes minimal, failing to produce a deterrent effect on offenders. The indirect consequence is diminished public attention to regional planning, leading to frequent violations of the pattern.⁴⁹

Law enforcement is a tactical measure in spatial planning. Deficient spatial development requires the imposition of legal penalties. To achieve spatial planning that facilitates the effective implementation of regional autonomy, it is essential to formulate a spatial planning utilization strategy aligned with the principles of regional autonomy, thereby ensuring that the regional development process yields optimal results through efficient resource utilization.⁵⁰ Moreover, the regulation of sustainable spatial planning is a multifaceted phenomenon that includes diverse legal, social, political, economic, and cultural dimensions. It must meet the needs of the community and government while ensuring spatial harmony, environmental sustainability, and the carrying capacity of natural resources.⁵¹

The execution of the Provincial RTRW is significantly affected by the dedication of the local administration, as conflicts of interest frequently exist. The government aims to establish optimal spatial arrangements while simultaneously seeking to leverage market dynamics.⁵² Consequently, the government frequently adopts a conciliatory approach, specifically by amending the spatial plan prior to the expiration of its validity period.⁵³

The development of municipal legislation is a complex endeavor, particularly concerning land or territory. The establishment of local regulations necessitates precision in systematics, organization, language, terminology, and the diversity of materials to be regulated based on

50 Carlos Primero D. Gundran and others, 'Simulation Training Needs Assessment for Disaster Preparedness and Disaster Response among Selected Agencies in National Capital Region, Philippines', International **Journal** of Disaster Risk Reduction, 94.April (2023),103824 https://doi.org/10.1016/j.ijdrr.2023.103824>.

⁴⁸ Bachriadi and Aspinall.

⁴⁹ Prasetyo and others.

⁵¹ Mara Tignino and Christian Bréthaut, 'The Role of International Case Law in Implementing the Obligation Not to Cause Significant Harm', International Environmental Agreements: Politics, Law and Economics, 20.4 (2020), 631–48 https://doi.org/10.1007/s10784-020-09503-6.

⁵² Haneen Khreis and others, 'Urban Policy Interventions to Reduce Traffic-Related Emissions and Air Pollution: A Systematic Evidence Map', Environment International, 172 (2023), 107805 < https://doi.org/https://doi.org/10.1016/j.envint.2023.107805>.

⁵³ Nugroho Agung Pambudi and Desita Kamila Ulfa, 'The Geothermal Energy Landscape in Indonesia: A Comprehensive 2023 Update on Power Generation, Policies, Risks, Phase and the Role of Education', Renewable and Sustainable Energy Reviews, 189 (2024),114008 https://doi.org/https://doi.org/10.1016/j.rser.2023.114008>.

requirements.⁵⁴ Consequently, preparation necessitates an extensive understanding of the subject matter to be regulated, along with thorough investigation and observation. Moreover, it must be capable of identifying the fundamental nature of the existing and evolving facts in the domain to be articulated in a succinct rule using precise terminology.⁵⁵

The delayed establishment of the Riau Province RTRW Regional Regulation primarily stems from the requirement for the Ministry of Home Affairs to obtain recommendations from pertinent agencies and ministries, including the chairman of BAPPENAS, the Geospatial Information Agency, and the relevant ministries, specifically the Ministry of Agrarian Affairs and Spatial Planning and the Ministry of Environment and Forestry. The Ministry of Environment and Forestry is reluctant to offer advice due to the Local Government's failure to adhere to the maps utilized by the Ministry. Concurrently, the Ministry of Environment and Forestry cites the Agreed Forest Use Map (TGHK).⁵⁶

However, the issue is that the conditions in the area have transformed into oil palm farms and other developments following the study of the realities on the ground. Consequently, the Riau Provincial Government's policy is to transform the region into a non-forest or plantation area; however, the Ministry of Environment and Forestry maintains its position that the Regional Government should revert the plantation area to forested land by deforesting or clearing oil palm plantations or through reforestation efforts.⁵⁷ Ultimately, the Regional Government consented to the policy put out by the Ministry of Environment and Forestry, which subsequently endorsed the Riau Province Regional Spatial Planning Regulation. On 25 April 2018, the Ministry of Home Affairs approved the Riau Province RTRWP Regional Regulation via the Director of Regional Legal Products, Directorate General of Regional Autonomy, assigning it Registration Number 10. 105/2018. Subsequently, the Governor of Riau enacted Regional Regulation Number 10 of 2018 concerning the Riau Province Regional Spatial Plan.

Umi Muawanah and others, 'Going into Hak: Pathways for Revitalizing Marine Tenure Rights in Indonesia', Ocean & Coastal Management, 215 (2021), 105944 https://doi.org/https://doi.org/10.1016/j.ocecoaman.2021.105944>.

Suparto and Santos: Regional Spatial Regulation in Riau Province.....

⁵⁵ Jiaxin Guo, Zhenqi Hu, and Yusheng Liang, 'Causes and Countermeasures for the Failure of Mining Land Use Policy Reform: Practice Analysis from China', *Land*, 11.9 (2022), 1–19 https://doi.org/10.3390/land11091391.

Muhammad Alif K Sahide and others, 'The Boom of Social Forestry Policy and the Bust of Social Forests in Indonesia: Developing and Applying an Access-Exclusion Framework to Assess Policy Outcomes', Forest Policy and Economics, 120 (2020), 102290 https://doi.org/https://doi.org/10.1016/j.forpol.2020.102290.

⁵⁷ Alexandra Mallett and others, 'Environmental Impacts of Mining in Brazil and the Environmental Licensing Process: Changes Needed for Changing Times?', Extractive Industries and Society, 8.3 (2021) https://doi.org/10.1016/j.exis.2021.100952.

According to Law Number 12 of 2011 regarding the Formation of Legislation, the Provincial Spatial Regulation holds an equivalent status to other local regulations, as both are treated equally in the legislative formation process. In actuality, the formulation of the Riau Provincial Spatial Regulation involved numerous pertinent agencies and ministries, including the Ministry of Environment and Forestry, the Ministry of National Development Planning (BAPPENAS), the Ministry of Agrarian Affairs and Spatial Planning, the Geospatial Information Agency, and the Ministry of Home Affairs, all of which participated in the discussions and draughting process. The formulation of RTRW regulation is complex and time-consuming. This differs from other municipal regulations that do not engage numerous agencies or institutions.

Given the significance of local regulations, particularly those concerning spatial plans, it is fitting that the implementing regulations for the establishment of provincial spatial plans be governed by a Presidential Regulation (Perpres) rather than by a regulation from the Minister of Home Affairs. The formulation of provincial spatial planning regulations necessitates the involvement of multiple state institutions and ministries, including the Ministry of Home Affairs, the Ministry of Environment and Forestry, the Ministry of Agrarian Affairs and Spatial Planning, Bappenas, and the Geospatial Information Agency, among others.

4. Conclusion

The formulation of the Provincial Spatial Regulation engaged multiple agencies and ministries, including the Ministry of Home Affairs, the Ministry of Environment and Forestry, the Ministry of National Development Planning/BAPPENAS, the Ministry of Agrarian Affairs, and the Geospatial Information Agency. Following an extensive process, the regional regulation (Perda) of the Regional Spatial Plan (RTRW) for Riau Province has been approved by the Ministry of Home Affairs and enacted by the Governor of Riau as Perda Number 10 of 2018, which delineates the subsequent details: Cultivation Area = 8,067,344 ha; Protected Area = 945,532 ha; Total Area = 9,012,876 ha. Despite the enactment of the Regional Regulation on Riau Province's RTRW, issues persist, namely over the vacating of regions designated as oil palm plantations within forested areas for subsequent reforestation. This endeavor is challenging as it necessitates the deforestation of hundreds of thousands of hectares of oil palm trees. The discarded oil palm trees, when stacked and desiccated, will serve as a breeding ground for pests and combustible materials, resulting in smoke that significantly disrupts environmental health. Consequently, failure to adhere to appropriate methods and techniques will result in significant environmental issues. According to Riau Province's experience in developing spatial plans, the regulations governing the establishment of Provincial Spatial Planning Regulations should be enacted as a Presidential Regulation (Perpres) rather than only a Minister of Home Affairs Regulation. The establishment of the Provincial Spatial Planning Regulation necessitates the involvement of multiple entities and ministries. The Ministry of Environment and Forestry must establish regulations governing the procedures, technical implementation, and deadlines for abandoning forest areas turned into oil palm plantations to mitigate significant environmental damage.

5. References

- Adrian, Defira Martina, Fence M. Wantu, and Abdul Hamid Tome, 'Racial and Ethnic Discrimination in the Perspective of International Law', *Jurnal Legalitas*, 14.1 (2019), 1–17
- Aldieri, L., Giuseppe Ioppolo, Concetto Paolo Vinci, and Tan Yigitcanlar, 'Waste Recycling Patents and Environmental Innovations: An Economic Analysis of Policy Instruments in the USA, Japan and Europe', *Waste Management*, 95 (2019), 612–19 https://doi.org/10.1016/j.wasman.2019.06.045>
- Almulhim, Abdulaziz I, and Patrick Brandful Cobbinah, 'Can Rapid Urbanization Be Sustainable? The Case of Saudi Arabian Cities', *Habitat International*, 139 (2023), 102884 https://doi.org/10.1016/j.habitatint.2023.102884
- Anggono, Bayu Dwi, and Fahmi Ramadhan Firdaus, 'Omnibus Law in Indonesia: A Comparison to the United States and Ireland', *Lentera Hukum*, 7.3 (2020), 319–36 https://doi.org/10.19184/ejlh.v7i3.19895
- Arifin Ma'ruf, 'Legal Aspects of Environment in Indonesia: An Efforts to Prevent Environmental Damage and Pollution', *Journal of Human Rights, Culture and Legal System*, 1.1 (2021), 2021
- Arifin, Ridwan, Sigit Riyanto, and Akbar Kurnia Putra, 'Collaborative Efforts in ASEAN for Global Asset Recovery Frameworks to Combat Corruption in the Digital Era', *Legality: Jurnal Ilmiah Hukum*, 31.2 (2023), 329–43 https://doi.org/10.22219/ljih.v31i2.29381
- Astuti, Rini, 'Governing the Ungovernable: The Politics of Disciplining Pulpwood and Palm Oil Plantations in Indonesia's Tropical Peatland', *Geoforum*, 124.May 2019 (2021), 381–91 https://doi.org/10.1016/j.geoforum.2021.03.004
- Astuti, Rini, Michelle Ann Miller, Andrew McGregor, M Dedy Pratama Sukmara, Wiko Saputra, Sulistyanto, and others, 'Making Illegality Visible: The Governance Dilemmas Created by Visualising Illegal Palm Oil Plantations in Central Kalimantan, Indonesia', *Land Use Policy*, 114 (2022), 105942 https://doi.org/https://doi.org/10.1016/j.landusepol.2021.105942
- Bachriadi, Dianto, and Edward Aspinall, 'Land Mafias in Indonesia', *Critical Asian Studies*, 55.3 (2023), 331–53 https://doi.org/10.1080/14672715.2023.2215261

- Basuki, Agung, M Zaid, Alnour Abobaker, and Mohamed Musa, 'Establishing Ecological Justice in the Governance of Land Inventory , Ownership , and Utilisation in Indonesia', *Journal of Law, Environmental and Justice*, 18.2 (2023), 137–54 https://doi.org/10.62264/jlej.v1i2.12>
- Candranegara, I Made Wimas, I Wayan Mirta, and I Nyoman Mangku Suryana, 'Government Collaboration Of Pentahelix Models In The Management Of Ecotourism D'Bendungan View Telaga Tunjung (Case Study Management of Ecoutourism D'Bendungan View Telaga Tunjung in Timpag Village, Tabanan Bali)', *Iapa Proceedings Conference*, 2019, 68 https://doi.org/10.30589/proceedings.2019.222
- Chang, Xiaoyan, Feng Zhang, Kanglin Cong, and Xiaojun Liu, 'Scenario Simulation of Land Use and Land Cover Change in Mining Area', *Scientific Reports*, 11.1 (2021), 1–12 https://doi.org/10.1038/s41598-021-92299-5>
- Cohen-Almagor, R., 'Sur Les Fondations Philosophiques de l'éthique Médicale : Aristote, Kant, JS Mill et Rawls', *Ethics, Medicine and Public Health*, 3.4 (2017), 436–44 https://doi.org/10.1016/j.jemep.2017.09.009
- Cooper, S., 'Maximising Post-Mining Land Use: Queensland Government Reforms', *Proceedings of the International Conference on Mine Closure*, 2019-Septe (2019), 969–81 https://doi.org/10.36487/ACG_rep/1915_76_Cooper
- Fathoni, M Yazid, and Acasio Fernandez, 'Establishment of Land Court in Indonesia: An Effort to Realise Justice Based on Pancasila', *Journal of Law, Environmental and Justice*, 1.2 (2023), 86–104 https://doi.org/10.62264/jlej.v1i2.6
- Ferejohn, J., and P. Pasquino, 'The Law of the Exception: A Typology of Emergency Powers', *International Journal of Constitutional Law*, 2.2 (2004), 210–39 > a href="https://doi.org/10.1093/icon/2.2.210">> a href="https://doi.org/10.1093/icon/2.2.210">> a href="https://doi.org/10.1093/icon/2.2.2.2.2.2
- Gundran, Carlos Primero D., Hilton Y. Lam, Anna Cristina A. Tuazon, Jerome V. Cleofas, Fernando B. Garcia, and Trisha Ericka M. Puli, 'Simulation Training Needs Assessment for Disaster Preparedness and Disaster Response among Selected Agencies in National Capital Region, Philippines', *International Journal of Disaster Risk Reduction*, 94.April (2023), 103824 https://doi.org/10.1016/j.ijdrr.2023.103824
- Guo, Jiaxin, Zhenqi Hu, and Yusheng Liang, 'Causes and Countermeasures for the Failure of Mining Land Use Policy Reform: Practice Analysis from China', *Land*, 11.9 (2022), 1–19 https://doi.org/10.3390/land11091391>
- Hadi, Sudharto P, Rizkiana S Hamdani, and Ali Roziqin, 'A Sustainability Review on the Indonesian Job Creation Law', *Heliyon*, 9.2 (2023), e13431 https://doi.org/https://doi.org/10.1016/j.heliyon.2023.e13431
- Ignatyeva, Margarita, Vera Yurak, and Natalia Pustokhina, 'Recultivation of Post-Mining

- Disturbed Land: Review of Content and Comparative Law and Feasibility Study', *Resources*, 9.6 (2020) https://doi.org/10.3390/RESOURCES9060073
- Khreis, Haneen, Kristen A Sanchez, Margaret Foster, Jacob Burns, Mark J Nieuwenhuijsen, Rohit Jaikumar, and others, 'Urban Policy Interventions to Reduce Traffic-Related Emissions and Air Pollution: A Systematic Evidence Map', *Environment International*, 172 (2023), 107805 https://doi.org/10.1016/j.envint.2023.107805
- Koehler, Johanna, 'Exploring Policy Perceptions and Responsibility of Devolved Decision-Making for Water Service Delivery in Kenya's 47 County Governments', *Geoforum*, 92 (2018), 68–80 https://doi.org/10.1016/j.geoforum.2018.02.018>
- Lim, Hong-Hai, 'Improving Administrative Performance in Malaysia: The More Difficult Next Steps in Reform', *Policy and Society*, 26.2 (2007), 33–59 https://doi.org/10.1016/s1449-4035(07)70107-8
- Lin, Weiqiang, 'Transport Geography and Geopolitics: Visions, Rules and Militarism in China's Belt and Road Initiative and Beyond', *Journal of Transport Geography*, 81.May (2019), 102436 https://doi.org/10.1016/j.jtrangeo.2019.05.001>
- Maczkowiack, R. I., C. S. Smith, G. J. Slaughter, D. R. Mulligan, and D. C. Cameron, 'Grazing as a Post-Mining Land Use: A Conceptual Model of the Risk Factors', *Agricultural Systems*, 109 (2012), 76–89 https://doi.org/10.1016/j.agsy.2012.03.002
- Mahendra, Januar Rahadian, Rizal Akbar Aldyan, and Silas Oghenemaro Emovwodo, 'Examining Indonesian Government Policies in Tackling Deforestation: Balancing Economy and Environment', *Journal of Law, Environmental and Justice*, 2.1 (2024), 42–62 https://doi.org/10.62264/jlej.v2i1.93>
- Mallett, Alexandra, Erica Lima Barros França, Ítalo Alves, and Lisa Mills, 'Environmental Impacts of Mining in Brazil and the Environmental Licensing Process: Changes Needed for Changing Times?', *Extractive Industries and Society*, 8.3 (2021) https://doi.org/10.1016/j.exis.2021.100952
- Masson-Zwaan, Tanja, and Steven Freeland, 'Between Heaven and Earth: The Legal Challenges of Human Space Travel', *Acta Astronautica*, 66.11–12 (2010), 1597–1607 https://doi.org/10.1016/j.actaastro.2009.12.015
- Matusiak, Michał, 'Use of the International Rivers As the Challenge for the International Law in Xxi Century', *International Journal of Legal Studies (IJOLS)*, 12.2 (2022), 175–86 https://doi.org/10.5604/01.3001.0016.2390
- Muawanah, Umi, Michael De Alessi, Robert Pomeroy, Nendah Kurniasari, Nensyana Shafitri, and Christina Yulianty, 'Going into Hak: Pathways for Revitalizing Marine Tenure Rights in Indonesia', *Ocean & Coastal Management*, 215 (2021), 105944 https://doi.org/https://doi.org/10.1016/j.ocecoaman.2021.105944

- Müller, Robert, Till Pistorius, Sophia Rohde, Gerhard Gerold, and Pablo Pacheco, 'Policy Options to Reduce Deforestation Based on a Systematic Analysis of Drivers and Agents in Lowland Bolivia', *Land Use Policy*, 30.1 (2013), 895–907 https://doi.org/10.1016/j.landusepol.2012.06.019
- Pambudi, Nugroho Agung, and Desita Kamila Ulfa, 'The Geothermal Energy Landscape in Indonesia: A Comprehensive 2023 Update on Power Generation, Policies, Risks, Phase and the Role of Education', *Renewable and Sustainable Energy Reviews*, 189 (2024), 114008 https://doi.org/10.1016/j.rser.2023.114008
- Parra-Paitan, Claudia, Patrick Meyfroidt, Peter H Verburg, and Erasmus K H J zu Ermgassen, 'Deforestation and Climate Risk Hotspots in the Global Cocoa Value Chain', Environmental Science & Policy, 158 (2024), 103796 https://doi.org/10.1016/j.envsci.2024.103796
- Perreault, Tom, 'The Plantation and the Mine: Comment on "After the Land Grab: Infrastructural Violence and the 'Mafia System' in Indonesia's Oil Palm Plantation Zone" by Tania Li', *Geoforum*, 96 (2018), 345–47 https://doi.org/https://doi.org/10.1016/j.geoforum.2018.02.025
- Pershke, D. F., and P. E. Elliott, 'Post-Closure Land Uses Defined through a Strategic Land Use Planning Approach', *Proceedings of the International Conference on Mine Closure*, 2019-Septe (2019), 983–96 https://doi.org/10.36487/ACG_rep/1915_77_Pershke
- Prasetyo, Ngesti, Moh Fadli, Tunggul SN, and Muchamad Safaat, 'The Politics of Indonesias Decentralization Law Based on Regional Competency', *Brawijaya Law Journal*, 8.2 (2021), 159–84 https://doi.org/10.21776/ub.blj.2021.008.02.01
- Qurbani, Indah Dwi, Ilham Dwi Rafiqi, and Ilham Dwi Rafiqi, 'Prospective Green Constitution in New and Renewable Energy Regulation', *Legality: Jurnal Ilmiah Hukum*, 30.1 (2022), 68–87 https://doi.org/10.22219/ljih.v30i1.18289>
- Ratio, Marnel Arnold, Jillian Aira Gabo-Ratio, and Yasuhiro Fujimitsu, 'Exploring Public Engagement and Social Acceptability of Geothermal Energy in the Philippines: A Case Study on the Makiling-Banahaw Geothermal Complex', *Geothermics*, 85.August 2019 (2020), 101774 https://doi.org/10.1016/j.geothermics.2019.101774
- Regilme, Salvador Santino F, 'Contested Spaces of Illiberal and Authoritarian Politics: Human Rights and Democracy in Crisis', *Political Geography*, 89 (2021), 102427 https://doi.org/10.1016/j.polgeo.2021.102427
- Sahide, Muhammad Alif K, Micah R Fisher, J T Erbaugh, Dian Intarini, Wiwik Dharmiasih, Muliadi Makmur, and others, 'The Boom of Social Forestry Policy and the Bust of Social Forests in Indonesia: Developing and Applying an Access-Exclusion Framework to Assess Policy Outcomes', Forest Policy and Economics, 120 (2020), 102290 https://doi.org/https://doi.org/10.1016/j.forpol.2020.102290

- Samad, Rezki Purnama, A. M. Yunus Wahid, and Hamzah Halim, 'Urgensi Partisipasi Masyarakat Terhadap Izin Usaha Pertambangan Pasir', *Al-Ishlah: Jurnal Ilmiah Hukum*, 24.1 (2021), 143–62 https://doi.org/10.56087/aijih.v24i1.87
- Saputra, Rian, Albertus Usada, and Muhammad Saiful Islam, 'Ecological Justice in Environmental Criminal Sanctions for Corporations in Indonesia: Problems and Solution', *Journal of Law, Environmental and Justice*, 2.1 (2024), 1–17 https://doi.org/10.62264/jlej.v2i1.19
- Shahaab, Ali, Imtiaz A. Khan, Ross Maude, Chaminda Hewage, and Yingli Wang, 'Public Service Operational Efficiency and Blockchain A Case Study of Companies House, UK', Government Information Quarterly, 40.1 (2023) https://doi.org/10.1016/j.giq.2022.101759>
- Shanty Saleh, Indah Nur, and Bita Gadsia Spaltani, 'Environmental Judge Certification in an Effort to Realize the Green Legislation Concept in Indonesia', *Law and Justice*, 6.1 (2021), 1–18 https://doi.org/10.23917/laj.v6i1.13695>
- Silitonga, Tumpal, R Widya, Setiabudi Sumadinata, Arfin Sudirman, and Taufik Hidayat, 'Implementation of ICAO Standards for Civil Aviation Security in Indonesia', *Journal of Positive School Psychology*, 2022.5 (2022), 8193–8203
- Suharyo, Suharyo, 'Pembentukan Peraturan Daerah, Dan Penerapan Sanksi Pidana Serta Problematikanya', *Jurnal Rechts Vinding: Media Pembinaan Hukum Nasional*, 4.3 (2015), 431 https://doi.org/10.33331/rechtsvinding.v4i3.15
- Surahman et All, 'Retributive Justice in Law Enforcement Against Land Mafia in Indonesia', International Journal of Criminal Justice Sciences, 18.2 (2023), 259–74 https://doi.org/10.5281/zenodo.4756317
- Tignino, Mara, and Christian Bréthaut, 'The Role of International Case Law in Implementing the Obligation Not to Cause Significant Harm', *International Environmental Agreements: Politics, Law and Economics*, 20.4 (2020), 631–48 https://doi.org/10.1007/s10784-020-09503-6>
- Tsepapadakis, Michalis, and Damianos Gavalas, 'Are You Talking to Me? An Audio Augmented Reality Conversational Guide for Cultural Heritage', *Pervasive and Mobile Computing*, 92 (2023), 101797 https://doi.org/10.1016/j.pmcj.2023.101797
- VanderWilde, Calli P, Joshua P Newell, Dimitrios Gounaridis, and Benjamin P Goldstein, 'Deforestation, Certification, and Transnational Palm Oil Supply Chains: Linking Guatemala to Global Consumer Markets', *Journal of Environmental Management*, 344 (2023), 118505 https://doi.org/10.1016/j.jenvman.2023.118505
- Wardhani, Lita Tyesta Addy Listya, Muhammad Dzikirullah H. Noho, and Aga Natalis, 'The Adoption of Various Legal Systems in Indonesia: An Effort to Initiate the Prismatic Mixed

- Legal Systems', *Cogent Social Sciences*, 8.1 (2022) https://doi.org/10.1080/23311886.2022.2104710>
- Widyatmanti, Wirastuti, Budiman Minasny, Disyacitta Awanda, Deha Agus Umarhadi, Zealandia Sarah Nurul Fatma, William Krista Mahendra, and others, 'Codification to Secure Indonesian Peatlands: From Policy to Practices as Revealed by Remote Sensing Analysis', Soil Security, 9 (2022), 100080 https://doi.org/https://doi.org/10.1016/j.soisec.2022.100080
- Wiwoho, Bagus Setiabudi, Neil McIntyre, and Stuart Phinn, 'Assessing Future Land-Uses under Planning Scenarios: A Case Study of The Brantas River Basin, Indonesia', Environmental Challenges, 15 (2024), 100873 https://doi.org/https://doi.org/10.1016/j.envc.2024.100873
- Worlanyo, Adator Stephanie, and Li Jiangfeng, 'Evaluating the Environmental and Economic Impact of Mining for Post-Mined Land Restoration and Land-Use: A Review', *Journal of Environmental Management*, 279.xxxx (2021), 111623 https://doi.org/10.1016/j.jenvman.2020.111623
- Zambrano-Cortés, Darío Gerardo, and Jelle Hendrik Behagel, 'The Political Rationalities of Governing Deforestation in Colombia', *Forest Policy and Economics*, 154 (2023), 103029 https://doi.org/https://doi.org/10.1016/j.forpol.2023.103029