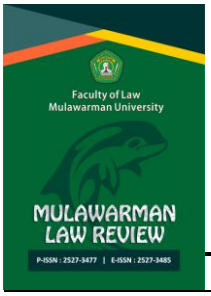

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Promoting Regional Strategic Area of Environmental for the Protection of Essential Ecosystem Areas in East Kalimantan

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ABSTRACT

This article investigates the legal framework of Essential Ecosystem Areas (EEAs) within Indonesian legislation and the regional government's authority to regulate EEAs to preserve and protect the essential ecosystem in its jurisdiction. By employing a normative juridical approach, this research found that the EEA is regulated in sectoral regulations, such as conservation, environmental, forestry, spatial planning, marine, and regional government, which give inconsistencies and legal gaps and can create legal uncertainty. This study also identified that district or city governments could protect and manage EEAs by stipulating an EEA as the strategic area of environmental (KSLH) or protected area through a decree, subsequently incorporating it into the spatial planning of the regency or city. Additionally, the regional government has the authority to provide policies regarding EEAs governance and institutional management, thereby establishing a comprehensive legal framework for the EEAs.

Keywords: *Essential Ecosystem Areas, Strategic Area of Environmental, Spatial Planning, East Kalimantan*

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INTRODUCTION

Indonesia has 490 conservation areas with a total area of around 22.5 million hectares and 76 coastal and marine conservation areas with around 13.5 million hectares managed by the central and regional governments. With such a number, much important biodiversity (ecosystems, species and genetics) exists outside the conservation areas. This condition can be seen in endangered wildlife habitats, and it is estimated that around 80% of them are still outside the conservation area system.[1]

In order to safeguard biodiversity beyond designated conservation areas, the Indonesian government introduced the Essential Ecosystem Areas (EEAs) through Government Regulation No. 28 of 2011 concerning the Management of Nature and Wildlife Conservation Areas. EEAs refer to natural or artificial ecosystems with significant conservation value and function as wildlife corridors and buffer zones. This area encompasses production forests, protected forests, and non-state forest regions. The

[1] Kementerian Kehutanan dan Kementerian Kelautan dan Perikanan, *Analisis Kesenjangan Keterwakilan Ekologis Kawasan Konservasi di Indonesia* (Jakarta: Kementerian Kehutanan dan Kementerian Kelautan dan Perikanan, 2010), 1.

central government can effectively implement this scheme by working in partnership with regional governments and relevant stakeholders.[2]

The EEAs framework holds great potential in protecting forest cover outside conservation areas, such as National Parks, Wildlife Sanctuaries, and Hunting Parks, without altering the function and status of the forest. This concept is not just vital but urgent for conservation in Indonesia. With only 18% of the land designated as conservation areas, compared to 57% as production forests and 25% as watershed protection forests, most of Indonesia's unique biodiversity is at risk.[3] For instance, it is estimated that about 75% of the orangutan (*Pongo pygmaeus*) population lives outside areas designated by the government for conservation purposes.[4]

In 2015, the Government enacted Regulation No. 108 of 2015, which amended Government Regulation (GR) No. 28 of 2011 regarding the Management of Nature Reserve Areas. However, it does not alter EEAs provisions as stated in Article 24. Comprehensive regulations governing EEAs are outlined in the Regulation of the Director General of Natural Resources and Ecosystem Conservation, Number: P.1/KSDAE/BPE2/KSA.4/2/2021, which provides Technical Instructions for Evaluating the Effectiveness of Management in Essential Ecosystem Areas (Perdirjen KSDAE No. 1 of 2021). This regulation defines EEA as areas outside of Nature Reserve Areas, Nature Conservation Areas, and Hunting Parks that hold significant ecological importance for biodiversity.

The current EEAs studies in East Kalimantan focus on three y areas: the wetlands in Mesangat-Suwi (East Kutai),[5] the Wehea-Kelay landscape, and the Sangkulirang-Mangkalihat Karst ecosystem,[6] which spans East Kutai and Berau Regencies.[7] These investigations examine the potential and functions of these regions without delving into policies, particularly regarding spatial planning. Additionally, Steni explored the significance of integrating EEAs into spatial planning initiatives[8] but does not cover East Kalimantan.

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[2] Kementerian Lingkungan Hidup dan Kehutanan, *Statistik Direktorat Jenderal Konservasi Sumber Daya Alam dan Ekosistem Tahun 2022* (Jakarta: Dirjen KSDAE KLHK, 2023), 189.

[3] Edi Purwanto, "Para pemangku kepentingan sepakat finalisasi Dokumen Rencana Aksi Perlindungan ABKT 2023-2027." www.tropenbos-indonesia.org. Available at https://www.tropenbosindonesia.org/news/483/para+pemangku+kepentingan+sepakat+finalisasi+dokumen+rencana+aksi+perlindungan+abkt+2023-2027. Accessed 26 October 2024

[4] Ishak Yasir and Edy Sudiono (Eds), *Koridor Orangutan Bentang Alam Wehea-Kelay Di Kabupaten Kutai Timur Dan Kabupaten Berau Provinsi Kalimantan Timur* (Samarinda: The Nature Conservancy, 2016), 3.

[5] See: Mislan et al, *Mengenal Lahan Basah Mesangat Suwi* (Jakarta, Media Nusa Creative, 2024); Mukhlisi, Tri Atmoko, and Priyono, *Flora Di Habitat Bekantan Lahan Basah Suwi, Kalimantan Timur* (Bogor: Forda Press, 2018).

[6] See: Grita Anindarini Widyaningsih, "Permasalahan Hukum Dalam Perlindungan Ekosistem Karst Di Indonesia (Studi Kasus: Ekosistem Karst Sangkulirang – Mangkalihat, Provinsi Kalimantan Timur)." *Jurnal Hukum Lingkungan 3*(2) (2017): 73–95, https://doi.org/10.38011/jhli.v3i2.44; Reza Erwandha and Muhammad Nur Sulton, "Analysis of Characteristics, Functions, and Problems in Karst Sangkulirang-Mangkalihat Region." *Journal of Global Environmental Dynamics,* 2(1) (2021): 19-24

[7] See: Tri Atmoko, Edy Sudiono, Mohamad Arif Rifqi, and Agus Pambudi Dharma, *Praktik Terbaik Pengelolaan Habitat Satwa Terancam Punah dalam Skala Bentang Alam: Sebuah Pembelajaran dari Kawasan Ekosistem Esensial Wehea-Kelay* (Bogor: IPB Press, 2021); Tri Atmoko, Mohamad Arif Rifqi, Mukhlisi, Teguh Muslim, Purnomo, and Amir Ma'ruf, *Warisan Alam Wehea-Kelay* (Bogor: Forda Press, 2018)

[8] Bernadinus Steni, "Pentingnya Integrasi KEE dalam Rezim Aturan Tata Ruang," mongabay.co.id. (3 Juni 2021). Available at: https://www.mongabay.co.id/2021/06/03/pentingnya-integrasi-KEE-dalam-rezim-aturan-tata-ruang/. Accessed 9 May 2024.

In recent developments, there have been noteworthy policy dynamics about EEAs. On July 2022, the Minister of Environment and Forestry issued Decree No. 682/MENLHK/SETJEN/KSA.4/7/2022, formally revoking Perdirjen KSDAE No. 1 of 2021. The consideration behind this revocation is the regulation not only pertains to technical matters binding the Ministry of Environment and Forestry (MoEF) but also imposes external obligations, thereby failing to adhere to the rules for formulating laws and regulations. Consequently, the revocation of Perdirjen KSDAE No. 1 of 2021 means there is currently no comprehensive legal framework governing EEA at the national level.

This situation will create a legal gap regarding the EEAs, particularly within its institutional and governance framework. This gap could be classified as a statutory gap arising from the absence of regulatory provisions for specific issues[9] or the guidelines delegated by higher regulations that do not exist.[10] Moreover, as Pistor and Xu note, in such a circumstance, a rule cannot be applied to cases without further clarification of its meaning.[11]

This study endeavours to address a significant gap by investigating two main issues. The first issue relates to the regulatory mechanisms governing EEA within Indonesia's legal framework. This review involves an analysis of the existing laws and regulations that shape EEA legislation at the national level. The second issue focuses on the capacity of regional governments to effectively regulate the EEA. It seeks to understand how local authorities can exercise their regulatory powers to safeguard and enhance the EEA within their jurisdictions.

In the East Kalimantan context, examining these issues is significant for two primary considerations. First, it highlights potential opportunities for regional EEAs regulation, offering legal certainty for areas designated or anticipated to be determined as EEAs in East Kalimantan. Second, East Kalimantan Province has established an indicative map of essential ecosystem areas covering 2,175,271 hectares, as per the Decree of the Governor of East Kalimantan No. 522.5/K.672/2020 (the 2020 Governor Decree). This decree requires further regulation to ensure adequate protection and management of EEA by examining opportunities for regional governments to regulate it following their authority.

METHOD

This study adopts a normative juridical approach, focusing on the inventory, review, analysis, and understanding of the law as a collection of regulations or positive norms that govern EEAs. As a normative study, this research is conducted in two distinct stages.[12] The first stage involves identifying the sources of law. This process aims to

[9] Maciej Koszowski, "Analogical Reasoning in Statutory Law." *Journal of Forensic Research* 08 (02) (2017): 327-372, https://doi.org/10.4172/2157-7145.1000372

[10] Alexius Andang Listya Binawan, "Lacunae Iuris dalam Hukum Kebebasan Beragama di Indonesia." *Gema Teologika: Jurnal Teologi Kontekstual dan Filsafat Keilahian*, Vol. 8 No. 1 (2023): 99-120

[11] Katharina Pistor and Chenggang Xu, "Incomplete Law." *International Law and Politics,* 35 (2003): 931-113. Available at: https://scholarship.law.columbia.edu/faculty_scholarship/1077

[12] Terry Hutchinson and Nigel Duncan, "Defining and Describing What We Do: Doctrinal Legal Research." *Deakin Law Review*, 17 (2012): 83-119. https://doi.org/10.21153/dlr2012vol17no1art70

ascertain how the EEAs issue is addressed within relevant legislation related to conservation and associated sectors. At the national level, a review was conducted of laws and regulations from several related sectors, including the Ministry of Environment and Forestry (MoEF), the Ministry of Agrarian and Spatial Planning (MoASP), and the Ministry of Marine and Fisheries Affairs (MoMFA).

At the regional level, this study examined the following regulations:

1. Provincial Regulation No. 1 of 2023 concerning the Spatial Planning Plan for East Kalimantan Province for 2023-2042;
2. Governor Regulation No. 67 of 2012 concerning the Protection and Management of the Sangkulirang-Mangkalihat Karst Ecosystem in Berau and East Kutai Regencies;
3. Governor Regulation No. 12 of 2021 concerning the HCVA Criteria;
4. Governor Regulation No. 43 of 2021 concerning Managing HCVA within Plantation Concessions;
5. Governor Decree No. 660.1/K.214/2016 concerning Establishing the Orangutan Corridor Essential Ecosystem Area Management Forum in the Wehea-Kelay Landscape across East Kutai and Berau Regencies;
6. Governor Decree No. 522.5/K.672/2020 concerning the Designation of the Indicative Map of the Essential Ecosystem in East Kalimantan Province;
7. East Kutai District Regulation No. 1 of 2016 concerning the Spatial Planning Plan of East Kutai District for 2015-2035; and
8. Regent Decree of the East Kutai No. 031/K.677/2016 concerning Establishing the Formation of EEA Management Forum in the Mesangat Wetlands.

Upon identifying the pertinent legal sources, the subsequent step involves interpreting and analyzing the text to comprehend how laws and regulations govern the EEA issue. This analysis is grounded in information obtained through a systematic review of the legal frameworks relevant to EEAs.

DISCUSSION

This section delves into the legal framework governing EEAs within Indonesian legislation, examining national legal structures and provincial regulatory practices. It also highlights the potential for districts and cities to incorporate EEAs into regional regulations and spatial planning initiatives, thereby identifying pathways for more integrated EEAs governance at local levels.

EEA Legal Framework

In conservation legislation, GR No. 28 of 2011 first introduced the term EEAs. Article 24 (1) specifies that protecting Nature Reserve Areas and Nature Conservation Areas, as outlined in Article 13 letter b, includes safeguarding essential ecosystem areas. According to this paragraph, EEAs refer to karst ecosystems, wetlands (such as lakes, rivers, swamps, brackish waters, and the tidal regions not exceeding 6 meters in depth), as well as mangroves and peatlands located outside the Nature Reserve Areas and Nature Conservation Areas boundaries.

Furthermore, within the framework of spatial planning legislation, the term "essential ecosystem" is used (without the word "area"). This term appears in various laws and

regulations, particularly in Appendix I, II, and III of the MoASP Regulation No. 1 of 2018, which provides guidelines for preparing spatial plans for provinces, districts, and cities. The phrase "essential ecosystem" is closely linked to the analysis of carrying capacity, encompassing evaluations of land capability units, assessments of natural resource balances, essential ecosystems, and the spatial requirements in terrestrial, marine, and aerial environments.

A term akin to EEAs is referenced in Appendix No. 23 of the 2014 Regional Government Law, as last amended by Law No. 11 of 2020 on Job Creation. This regulation uses the term "areas with significant ecological value." This term relates to the division of government responsibilities within the forestry sector. Under the sub-affairs concerning the conservation of biological natural resources and their ecosystems, it specifies that the Provincial Government has the task of managing areas with significant ecological value and buffer zones for nature reserves and conservation areas.

Lastly, Law No. 32 of 2024 concerning Amendments to Law No. 5 of 1990 concerning the Conservation of Biological Natural Resources and Its Ecosystems introduces such an area as a preservation area. It refers to a designated territory outside the Nature Reserve Area, Nature Conservation Area, and conservation zones within aquatic environments, coastal regions, and small islands. The ecological integrity of these areas is preserved to sustain vital life-support functions and ensure the survival of Biological Natural Resources and their associated Ecosystems. The Preservation Area may include the following types:

1. buffer zones adjacent to Nature Reserve Areas, Nature Conservation Areas, and conservation zones in aquatic, coastal, and insular contexts;
2. ecological corridors that promote connectivity among various ecosystems;
3. areas recognized as high conservation value;
4. community-managed conservation zones; and
5. zones established for the protection of traditional knowledge and local wisdom.

With regard to its typology, EEAs consists of five categories as follows:

1. Wetland Ecosystem: This encompasses bodies of water or designated areas for water storage characterised by terrestrial and aquatic elements. The identification and inventory of Essential Wetland Ecosystems are governed by the Director General of Forest Protection and Nature Conservation Regulation No. SK.151/IV/SET-3/2007, which provides comprehensive guidelines for this process. These guidelines delineate the criteria and methodologies necessary for effectively assessing and cataloguing critical wetland habitats essential for biodiversity and ecosystem services. Additionally, this regulation defines EEAs as an ecosystem or geographical area characterized by distinctive habitats or species of native flora and fauna. Furthermore, EEAs are recognized for their critical roles in supporting life systems.
2. Wildlife Corridor: This refers to pathways or areas, whether natural or artificial, that connect two or more habitats within and outside Forest Areas, excluding Nature Reserve Areas, Nature Conservation Areas, and Hunting Parks. In terms of wildlife corridors, the Director General of Natural Resources and Ecosystem Conservation issued Regulation No. P.8/KSDAE/BPE2/KSA.4/9/2016 to identify this corridor. This rule provides comprehensive guidelines for determining wildlife corridors that serve

as essential ecosystems. This regulation stipulates EEAs as ecologically significant areas outside designated conservation zones that are crucial for biodiversity preservation. This definition encompasses natural and anthropogenic ecosystems within forested regions or adjacent areas.

3. High Conservation Value Areas (HCVA): These regions are important for conserving biodiversity and ecosystems. They provide essential ecosystem services and hold notable social and cultural value for local communities. The legal basis for determining HCVA is outlined in the Regulation issued by the Director General of Conservation of Natural Resources and Ecosystems No. P.8/KSDAE/SET.3/KUM.1/11/2020. This regulation provides technical guidelines for identifying HCVA outside designated Nature Reserve Areas, Nature Conservation Areas, and Hunting Parks. According to this regulation, EEAs is an ecologically significant region situated beyond the boundaries of protected areas that play a critical role in preserving biodiversity.
4. Biodiversity Park (*Taman Kehati*): This area is specifically designated for preserving local biological resources outside forested regions. It supports both in-situ and ex-situ conservation, primarily focusing on plant species that rely on animal assistance for pollination or seed dispersal. Additionally, it promotes a vegetation structure that sustains these vital pollinators and seed-dispersing fauna. The guidelines that outline the development and execution of the Kehati Park program are stipulated in the Regulation of the Minister of Environment No. 03 of 2012 concerning Biodiversity Parks.
5. Landscapes with Geological and Geomorphological Distinctiveness: These areas are distinguished by unique physical features and exceptional geological attributes. According to MoEMR Regulation No. 17 of 2012 concerning the Determination of Karst Landscape Areas, karst landscapes are recognized for their unique geological components, which are natural regulators of water systems and possess significant scientific value. Therefore, preserving and protecting these ecosystems to prevent degradation and support both sustainable development and scientific advancement is imperative.

The preceding analysis highlights two key points: Firstly, there is a lack of consistency in terminology across the legal frameworks governing conservation, spatial planning, and regional governance. Secondly, the definition of EEAs varies across different regulations, as evidenced by the diverse classifications and typologies associated with EEAs outlined earlier.[13] This situation can give rise to legal uncertainty, as Nasir, Bakker, and Meijl

[13] Agustina Merdekawati, Marsudi Triatmodjo, Sandy Nurvianto, Irkham Afnan Trisandi Hasibuan, Vivin Purnamawati, and I Gusti Putu Agung, "Conservation Outside Forests in Indonesia: An Option to Untangle Authority Dualism in the Essential Ecosystem Area." *Yustisia*, [S.l.], v. 11, n. 1, apr. (2022): 54-72. http://dx.doi.org/10.20961/yustisia.v11i1.54789; Muhammad Alif K. Sahide, Micah Fisher, Nasri Nasri, Wiwik Dharmiasih, Bart Verheijen, and Ahmad Maryudi, "Anticipating a new conservation bureaucracy? Land and power in Indonesia's Essential Ecosystem Area policy," *Land Use Policy*, Volume 97, 2020, https://doi.org/10.1016/j.landusepol.2020.104789: Hariadi Kartodihardjo, "Designation and Regulation of Essential Ecosystem Areas", in Endang Sukara, Hadi S. Alikodra, Hariadi Kartodihardjo, Haryanto R. Putro, Roemantyo, and Setiawan Pindi (eds). (2017). *Management of Essential Ecosystem Areas - Pengelolaan Kawasan Ekosistem Esensial* USAID White Paper 1.

(2023) stated that employing varied terminology for the same entity may lead to legal uncertainty.[14]

Additionally, the regulations about the five categories of EEAs focus solely on the criteria for designating and recognizing an area as an EEA and do not address the governance and institutional issues. Notably, the previous rules concerning institutional governance have been revoked and led to a legal vacuum, as outlined at the outset of this discussion.

This study proposes three critical steps to establish legal certainty for EEA regulations at the national level. First, it is essential to standardize terminology when referring to areas that contain essential ecosystems, including a precise definition, to ensure consistency across laws and regulations. Second, given that the EEA represents an area of high conservation value yet falls outside designated conservation zones, its regulatory framework should be integrated within the spatial planning legal regime. This integration will ensure that the area's planning and utilization align with spatial planning policies at the national and regional levels. Third, since EEA regulations are primarily sector-specific and typically issued at the ministerial and director-general levels, there is a need for rules addressing institutional governance at the statutory or government level. This approach will help mitigate conflicts among existing regulations, as evidenced by the reasons behind the revocation of Perdirjen KSDAE No. 1 of 2021.

EEA in Regional Regulations in East Kalimantan

As previously outlined, the 2020 Governor Decree has enacted 15 indicative maps highlighting EEAs' potential across various ecosystems. These encompass wetlands, wilderness regions, conservation areas, biodiversity parks, and geological and geomorphological landscapes. Among the 14 indicative maps, two EEAs have been fully operational: EEA Wehea-Kelay and EEA Mensangat-Suwi. The remaining 12 indicative EEAs include Berau Delta, Karst Sangkulirang Mangkalihat, Sangkulirang Bay, Long Pahangai, the Habitat of the Mahakam Dolphin, the Habitat of the Sumatran Rhino, Mahakam Delta, Balikpapan Bay, Gunung Beratus, Karst Paser, Kehati Park, and the Habitat of the Karau Ibis.

Table 1. The area of EEA.

Status	Areas (ha)			
	2020	**2021**	**2022**	**2023**
EEA Existing	545.726	545.726	545.726	545.726
EEA Indikative	2.175.271	2.175.271	2.175.271	2.175.271

Source: the 2020 Governor Decree

The EEAs outlined in the 2020 Governor Decree has largely been incorporated into the Regional Regulation of East Kalimantan Province Number 1 of 2023 concerning the Spatial Planning Plan for East Kalimantan Province for the years 2023-2042 (The 2023

[14]Mohamad Nasir, Laurens Bakker, & Toon van Meijl, "Environmental Management of Coal Mining Areas in Indonesia: The Complexity of Supervision," *Society & Natural Resources,* Volume 36,- Issue 5, (2023): 534-553. DOI: 10.1080/08941920.2023.2180818

Provincial Spatial Planning). This integration includes recognising the area as a Provincial Strategic Area from the perspective of environmental function and carrying capacity (the Provincial Strategic Area of Environment/KSLH) and designating it as a Protected Area, specifically a Geological Protected Area and a Wildlife Migration Area. However, the Long Pahangai EEA has yet to be integrated into the 2023 Provincial Spatial Planning. The details of the integration of the EEAs into the 2023 Provincial Spatial Planning are outlined in Table 2 below:

Tabel 2. Integration of EEA into the 2023 Provincial Spatial Planning

No	The 2020 Governor Decree	the 2023 Provincial Spatial Planning			Location (District/City)
	EEA	KSLH	Wildlife Migration Zone	Geological Protected Area	
1.	Orang Utan Corridor Wehea-Kelay Landscape	√	√		East Kutai & Berau
2.	Mesangat Suwi Wetland		√		East Kutai & Berau
3.	Balikpapan Bay	√	√		Balikpapan & Penajam Paser Utara
4.	Sangkulirang Bay		√		Berau
5.	Mahakam Delta	√	√		Kutai Kartanegara
6.	Berau Delta		√		Berau
7.	The Habitat of the Mahakam Dolphin		√		East Kutai & Berau
8.	The Habitat of the Sumatran Rhino		√		Kutai Barat
9.	The Habitat of the Ibis Karau		√		East Kutai, West Kutai, & Kukar
10.	Karst Sangkulirang Mangkalihat	√		√	East Kutai & Berau
11.	Karst Paser		√		Paser
12.	Kehati Park		√		Paser
13.	Long Pahangai				Mahakam Ulu
14.	Gunung Beratus		√		Penajam Paser Utara

Source: Derived from the 2020 Governor Decree and the 2023 Provincial Spatial Planning

Table 2 highlights that of the 14 EEAs, only the Long Pahangai EEA has yet to be included in the 2023 Provincial Spatial Planning. Incorporating EEAs into the RTRW spatial planning framework can be explained as follows.

EEA is designated as a part of the Provincial Strategic Area of Environmental (KSLH) and Wildlife Migration Zone.

The 2023 Provincial Spatial Planning indicates the following areas into this classification.

1. EEA of Orang Utan Corridor Wehea-Kelay Natural Landscape
   With its strategic significance, the region is designated as a KSLH (Article 56, paragraph [1], letter e). The Sangkulirang Mangkalihat Karst Natural Landscape Area is promoted to preserve the karst landscape, supporting sustainable development

and advancing scientific research (Article 56, paragraph [5]). Moreover, Article 56, paragraph (6) clarifies that the objective of developing the Essential Ecosystem Area of the Wehea-Kelay Orang Utan Corridor Natural Landscape is protecting, rescuing and managing the Orang Utan habitat. It underscores the urgent need for conservation efforts in these areas.

2. EEA of Balikpapan Bay
   The 2023 Provincial Spatial Planning designates this area as KSLH (Article 56, paragraph [1], letter b). Under Article 56, paragraph [3], developing the Balikpapan Bay Area within the Penajam Paser Utara Regency and Balikpapan City aims to establish a vital ecosystem dedicated to marine and small island conservation. Furthermore, this area is recognized as a migration zone for various animal species, as outlined in Article 103, paragraph [1].
3. EEA of Mahakam Delta
   The Mahakam Delta area is designated as a KSLH by Article 56, paragraph [1], letter c of the 2023 Provincial Spatial Planning. Developing the Mahakam Delta area aims to establish a mangrove ecosystem that integrates various activities. Additionally, this region is recognized as a migration corridor for wildlife, as stipulated in Article 103, paragraph [1].

EEA is designated as a part of the Provincial Strategic Area of Environmental (KSLH) and Geological Protected Area

The 2023 Provincial Spatial Planning designates the Sangkulirang Mangkalihat Karst Landscape Area as a KSLH (Article 56, paragraph [1], letter d). The aim of developing this region is to protect and preserve the karst landscape while promoting sustainable development and advancing scientific research (Article 56, paragraph [5]). Furthermore, according to Article 38 of the 2023 Provincial Spatial Plan, this EEA is also categorized as a Geological protected Area, encompassing approximately 14,438 hectares. This area includes the Sangkulirang-Mangkalihat Karst Landscape Area and the adjacent groundwater recharge zone within East Kutai and Berau Regencies. Moreover, under Presidential Regulation No. 3 of 2012 regarding the Kalimantan Island Spatial Plan, this landscape is designated as a Geological Nature Reserve Area, which falls within the broader category of Geological Protected Areas (Appendix XII).

In terms of the area, there is a discrepancy compared to the number outlined in Governor Regulation No. 67 of 2012 concerning the Protection and Management of the Sangkulirang-Mangkalihat Karst Ecosystem in Berau and East Kutai Regencies. The area also differs from the findings of a study conducted by the Kalimantan Ecoregion Development Control Center (P3EK) of the MoEF in 2015.[15] The variations in the area are detailed in Table 3 below:

[15] P3EK, *Potret dan Rencana Pengelolaan Ekosistem Karst Kalimantan* (Jakarta: P3EK KLHK, 2016)

Table 3. Differences in the Area of the Sangkulirang-Mangkalihat Karst Ecosystem

	The 2023 Provincial Spatial Planning	Governor Regulation No. 67 of 2012	Study of P3EK (2015)
Area (Ha)	14.438	362.706,11	595.757,42

Source: Derived from the 2023 Provincial Spatial Planning, Governor Regulation No. 67 of 2012, & the Study of P3EK

EEA is designated as a part of the Wildlife Migration Zone.

The term "wildlife migration zone" is not explicitly defined in spatial planning legislation. However, Article 103 of the 2023 Provincial Spatial Planning identifies it as synonymous with corridors designated for the movement of wildlife. A similar concept is referred to as the "ecosystem corridor." According to Presidential Regulation No. 3 of 2012 concerning the spatial planning of Kalimantan Island, an ecosystem corridor is defined as an area designated for the migration of protected species of animals or marine biota. This corridor is a migration route connecting conservation areas and may be part of protected or cultivation areas. Moreover, Article 46, paragraph (1), indicates that the ecosystem corridor is included as part of another protected area.

The classification of ecosystem corridors as part of protected areas is detailed in Appendix I of Government Regulation No. 22 of 2021 concerning the Implementation of Environmental Protection and Management. This appendix clarifies that the protected areas outlined in the regulation encompass corridor zones designated for protecting specific animal species and marine biota. Furthermore, it underscores that the primary objective of these protected areas is to ensure environmental sustainability, including the conservation of natural resources. The relevant laws and regulations guide the designation of these protected areas. The wildlife migration zone serves the same purpose as corridors for protected species of animals or marine life. Therefore, "wildlife migration zone" can be classified as "other protected areas." In this regard, according to Article 103 paragraph (1) of the 2023 Provincial Spatial Planning, the EEAs enacted as wildlife migration zones are Berau Delta, Mesangat-Suwi Wetland, Sangkulirang Bay, Mahakam Dolphin Habitat, Sumatran Rhinoceros Habitat, Karau Ibis Habitat, Gunung Beratus, Paser Karst, Kehati Park.

Furthermore, regulations concerning EEAs at the provincial level are specified within regional plantation policies. For instance, Provincial Regulation No. 7 of 2018, which focuses on sustainable plantation development, includes provisions regarding HCVA. Article 56 defines HCVA as an area of significant biological, ecological, social, or cultural importance, applicable at local, regional, national, or global levels.

In cases where HCVA exist within the designated plantation permit area, the permit holder must protect these zones. This obligation entails maintaining these areas in optimal condition and rehabilitating any degraded sections, as stated in Article 58. To ensure effective compliance with regulations regarding HCVA, the Provincial Government issued Governor Regulation No. 12 of 2021, which outlines the criteria for identifying HCVA.

Additionally, the governor introduced Regulation No. 43 of 2021 concerning the Management of High HCVA within Plantation Concessions. Article 3 of this regulation emphasizes that a critical objective of HCVA management is to effectively preserve the balance and stability of essential ecosystems, thereby fostering a harmonious approach to plantation cultivation.

Integrating Essential Ecosystem Areas into Regional Spatial Planning and Regulations.

As previously noted, one of the 14 indicative EEAs identified have yet to be integrated into the 2023 Provincial Spatial Planning: Long Pahangai. Additionally, the regulation has stipulated four EEAs as the Provincial's KSLH. These include the Wehea-Kelay Orang Utan Corridor, Balikpapan Bay, the Sangkulirang Mangkalihat Hulu Karst Landscape, and the Mahakam Delta. Besides, the 2023 Provincial Spatial Planning categorizes the remaining nine EEAs as wildlife migration zones. Regarding these zones, the activity guidelines are broad, with prohibitive stipulations primarily focused on marine species.

The following account highlights the opportunities for EEAs regulation at the district or city level for those EEAs not included in the four designated KSLH within the 2023 Provincial Spatial Planning. This regulatory opportunity can be pursued through various mechanisms, as elaborated below:

The determination of EEAs under the authority of the regency/city through the decree of the regent/mayor as a KSLH or protected areas of the regency/city.

The designation of EEAs shall be established under the authority of the regency or city, as formalized through a decree issued by the regent or mayor. This designation is intended to recognize KSLH (Specific Protected Areas) within the jurisdiction of the regency or city. In reference to the five EEAs typologies, the government of the regency or city can assess and identify EEAs according to its jurisdictional as follows:

1. Kehati Park
   The Appendix of the 2014 Regional Government Law stipulates that districts and cities are authorized to oversee the management of Kehati Parks. As a result, areas that meet the criteria for Kehati Parks, as specified in the Regulation of the Minister of Environment No. 03 of 2012 concerning Biodiversity Parks, can be designated as EEA through a decree issued by either the regent or the mayor.
2. High Conservation Value Area (HCVA)
   The district or city authorities possess the jurisdiction to designate HCVA outside of forested zones (APL) if the proposed site is located within a plantation concession under the respective district or city jurisdiction. In such instances, the classification will adhere to Governor Regulation No. 12 of 2021, with management directed by Governor Regulation No. 43 of 2021. Suppose the area meets the required criteria; the regent or the mayor can officially recognize the HCVA as part of the regency or city's EEAs through a decree.
3. Natural landscapes with unique geological and geomorphological features require targeted protective measures.
   If a district or a city contains such a landscape, it may be suitable to designate it as a geological protected area and a regency or city's EEAs. This designation should be

based on an assessment confirming that the landscape meets a regency or city's EEA criteria. This approach is essential for safeguarding the landscape, which is vital for preserving its ecological significance.

The designation of landscapes and natural areas with geological and geomorphological characteristics as geological protected areas and their acknowledgement as EEAs of the regency or city can be formalized through a decree from the regent or mayor. For instance, in the Paser Regency, the karst landscape can be officially designated as a geological protected area and incorporated into the Regency's EEAs through such a decree. Similarly, the karst landscape areas in East Kutai and Berau regencies, in which the 2023 Provincial Spatial Planning does not include them as Geological Protected Area, may also be designated as geological protected areas of East Kutai and Berau regencies.

4. Wildlife Corridors

   The 2023 Provincial Spatial Planning introduces the term "Wildlife Migration Zone" to denote wildlife migration routes, with the possibility of further establishment through a regent's decree. However, the term "Wildlife Migration Zone" is not commonly used in spatial planning legislation. The regulations at the national level recognize such an area as "Wildlife Corridors." It refers to natural or artificial pathways connecting two or more habitats within and beyond forested areas. Although these terms may seem different initially, they represent the same concept. In this regard, provided that the area fulfils the criteria established for Wildlife Corridors, the decree issued by the regent or the mayor may formally designate it as part of the regency's or city's EEAs.

5. Wetland ecosystem

   The wetland ecosystem, managed by the relevant regional authority, is distinct from peat and mangrove ecosystems that fall under the jurisdiction of the Peat and Mangrove Restoration Agency (BRGM) and the Ministry of Environment and Forestry (MoEF). The regency or city has the authority to regulate the wetland ecosystem within a district or city territory. Therefore, the regent or mayor can recognise it as the regency or city's EEA through a decree.

The integration of EEA into the regency or city spatial planning (RTRW)

After the regent or mayor and their respective authorities designate the EEAs, the subsequent step is to integrate the identified EEAs into the spatial planning framework of the regency or city. The regional government can accomplish this by designating these areas as part of protected zones, such as geological protection areas or wildlife corridors, or by officially recognizing them as the regency or city's KSLH. The specific locations of these areas will be detailed in the decree issued by the regent or mayor.

Drafting Regional Regulations on EEAs Management.

Regional regulations concerning EEAs aim to establish a comprehensive legal framework for their governance and institutional oversight. This governance structure will harmonize planning activities with medium-term development plans across various levels, including village, sub-district, district, and provincial tiers. Furthermore, it

encompasses budget planning, which is crucial for ensuring sufficient financial resources are effectively allocated to manage the designated EEAs.

The regulation of institutional aspects must consider the authority and interests of various sectors and the community at large. Consequently, through multi-stakeholder forums, effective regulation should facilitate collaboration and cooperation among all stakeholders, including government agencies, non-governmental organizations, the private sector, and the community. Furthermore, it is essential to enhance the capabilities of community groups in proximity to the EEAs by improving their knowledge and assisting them in optimizing the sustainable potential of EEAs resources.

CONCLUSION

The legal framework of EEAs is dispersed across various sectoral regulations. The EEA should be integrated into the legal framework of spatial planning. This integration will facilitate alignment between the planning and utilization of the area and national and regional spatial planning policies. Additionally, legislation concerning institutions and governance related to the EEA should be at the law or government regulation level. This strategy would help resolve conflicts among the existing regulatory frameworks. In the context of East Kalimantan, the 2023 Provincial Spatial Planning has designated the Sangkulirang Mangkalihat Hulu Karst Landscape as the province's strategic area of environmental (KSLH) and Geological Protected Area. Additionally, the drafting of regional regulations concerning EEAs management is crucial. This policy will help establish a comprehensive legal framework for the EEAs governance and institutional management.

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