

I. Introduction

Indonesia's geographic location between two continents and two oceans contributes to the high biodiversity found within the country. With 13 types of terrestrial ecosystems and six aquatic ecosystems, such biodiversity puts Indonesia as the third largest megabiodiversity country behind only Brazil and Colombia (MEF, 2018, p. 11). This also places Indonesia in a vital position in maintaining the stability of the global ecosystem (MEF, 2020, p. 1). However, real threats to biodiversity, especially those found outside conservation forest areas, are often overlooked in the country. In particular, a gap analysis of the ecological representation of conservation areas in Indonesia conducted in 2010 estimated that around 80% of important biodiversity can be found outside the designated conservation areas (Ministry of Forestry and Ministry of Marine Affairs and Fisheries, 2010, p. 1). Such findings highlight the importance of conservation efforts outside traditional conservation areas. The effective management of biodiversity conservation outside these areas also mitigates climate change in accordance with Indonesia's Nationally Determined Contributions (NDC) (DG-NREC, 2016).

The areas with high biodiversity beyond the assigned conservation areas are known as the essential ecosystem areas (EEAs). This research uses the term 'EEAs' to refer to the areas outside conservation areas with significant biodiversity value, considering that it is commonly used in previous research. EEAs are defined as ecosystems of karst, wetlands (lakes, rivers, swamps, brackish and tidal areas not more than six metres), mangroves and peats located outside the nature conservation areas (NCAs) and nature reserve areas (NRAs). However, no uniform legal terminology has yet to be used to refer to such areas in Indonesia. Other legal definitions used are 'area of important ecosystem values' and 'area of important value for biodiversity conservation'. The former is used in the Act No. 23/2014 on Regional Government, whereas the latter is used in the Presidential Regulation No. 92/2020 overseeing the Ministry of Environment and Forestry (MEF). Unfortunately, this diversity of legal terminology has been an obstacle in ongoing efforts to establish EEAs. MEF statistics from 2019 indicate that 60 EEAs had been established, covering an area of 807,606.83 hectares (MEF, 2019, pp. 76–79). Yet, this figure is only about 0.77% of the estimated area that fulfils the EEA category of about 105 million hectares (DG-NREC, 2019, p. 1). The cause of Indonesia's slow progress may be linked to the overlapping authority between the central government and regional governments in establishing and managing EEAs.

The Government Regulation No. 28/2011 on the Management of Nature Reserve Area and Nature Conservation Area (hereafter referred to as 'Regulation No. 28') stipulates that the authority to exercise EEA protection is integrated with the NRA's and NCA's protection under the central government. In comparison, the Appendix of Act No. 23/2014 on Regional Government (hereafter referred to as the 'Regional Government Act') mandates that the establishment and management of 'areas with important ecosystem values' are included in the regional governments' affairs. The emergence of this dualism

of authority is closely linked with the differences in terminology employed in statutory regulations, resulting in the delegation of authority to two distinct institutions. Such differences have also caused confusion in the classification of areas that can be categorised as EEAs, given that there are varying classification regimes across regulations. An aftermath of this dualism is the legal 'tug of war' between regional governments and the central government. Such a conflict is demonstrated by the lack of commitment shown by most of the regional governments in issuing implementing regulations or guidelines, which in turn, hampers the progress of EEA implementation (Radiansyah, 2019, pp. 131-146; Angi, 2005, p. 9).

The authors observed that, as of January 2021, only three provinces out of 34 provinces in Indonesia have issued implementing regulations governing the technical implementation of guidelines for EEAs.¹ This trend will continue to exist as long as the existing regulatory instruments remain unclear as regards the division of roles between the central and regional governments on the implementation of EEA policies. Those three provinces are Central Java,² West Nusa Tenggara,³ and South Sulawesi.⁴ However, the statistics from MEF show that the existing EEAs are located in over 20 provinces (MEF, 2018, pp. 76-79).⁵ The low number of provinces that have issued implementing regulations for EEA indicates the dualism of authority despite the fact that the Regional Government Act has mandated the implementation of EEA policies to be carried out by the provincial governments since 2014.

Thus far, the issue regarding the dual nature of the implementation of EEA policies in Indonesia has received little attention. A literature review conducted by the authors revealed that very few scholarly articles have been published regarding this issue. One study (Radiansyah, 2019) addressed the issue of EEA and acknowledged the problem in EEA implementation by the regional governments, as there is a regulation vacuum to exercise the obligation delegated by the Regional Government Act. However, it did not address the legal implications of overlapping regulations resulting from the dualism of authority. Another article addressing the issue of EEAs is published by Sahide *et al.* (2020), who highlighted the issue of the classic conservation bureaucracy model being implemented in administering EEAs. However, this work also did not discuss the issue of regulatory overlapping and the existing dualism of authority to administer EEA.

Therefore, the current paper attempts to address this problem to highlight the urgency of the issue. Furthermore, this work extends the discussion by examining the division of authority between the central and regional governments, with the goal of formulating a recommendation to mitigate the main issue. There is an urgent need to resolve this issue, especially considering that the National Medium-Term Development Plan (*RPJMN*) 2020-2024 prioritises projects to establish and increase the management effectiveness of EEAs, among others.

The existing practices indicate that the establishment and management of EEAs are mostly carried out by regional governments, both at the provincial and district/city

levels.⁶ As a result, the central government's role remains unclear and there is a lack of assurance that the regional governments' exercise of authority will not be impeded. The clear division of roles between these two government levels is a vital aspect that must be settled to ensure the sustainable implementation of EEA policies.

The lack of certainty has hindered the implementation of EEA policies in Indonesia, as proven by the low number of established EEAs and regulations implemented. Therefore, this research aims to identify and offer alternative solutions to improve the implementation of EEA policies to enhance national conservation efforts. To find an alternative solution to the aforementioned problems, this study attempts to address the following questions: (1) What are the legal implications of the dualism of authority on the establishment and management of EEAs in Indonesia? and (2) What alternative regulatory scheme can achieve the effective establishment and management of EEAs in Indonesia?

II. Research Results and Discussion

A. The Overlapping Regulatory Regimes and Their Legal Implications on the Establishment and Management of EEAs in Indonesia

The dualism of authority to establish and manage EEA between the central and regional governments stems from the differences in terminologies used in referring to areas beyond the identified conservation areas that also need protection. The Regional Government Act, which uses the phrase 'areas with important ecosystem values', is implemented by the provincial government (Regional Government Act, 2014, Appx pp. 119–120). In comparison, the phrase 'essential ecosystem area' is used in various ministerial-level regulations that delegate or assign a part of central government affairs in the environmental and forestry sectors to the provincial government.⁷ Government Regulation No. 28 (amended by Government Regulation No. 108/2015) also uses the phrase 'essential ecosystem area' and stipulates that its protection is integrated with the NRA' and NCA's protection under the central government.⁸ Although the government has issued Act No. 11/2020 (*Omnibus Law*), which aims to resolve the overlap between regulations, there have been no changes relating to the implementation of EEA policies.⁹

The phrase 'essential ecosystem' is used in Presidential Regulation No. 16/2015 by the MEF (revoked by Presidential Regulation No. 92/2020), which stipulates that its implementation is within the authority of the Directorate General of Natural Resources and Ecosystem Conservation (DG-NREC). Other phrases are used in the statutory regulations, such as 'areas of important value for biodiversity conservation' and 'areas of high conservation value' (HCV). The diverse terminologies used in various regulatory instruments are presented in Table 1.

Table 1. Comparison of Terminologies Used in Statutory Regulations

No	Terminology	Regulatory Instrument	EEA Classifications
	Area of important ecosystem values	Regional Government Act (Appendix, pp. 119–120)	n/a
	Essential ecosystem area	Government Regulation No. 28/2011 on The Management of Nature Reserve Area and Nature Conservation Area (Article 27 par. 1)	Ecosystems of karsts, wetlands (lakes, rivers, swamps and brackish and tidal areas of not more than six metres), mangroves and peats outside the NCA NRA.
		Environment and Forestry Ministerial Regulation No. P.101/MENHUTII/2014 on the Implementation Guidelines for the Partial Delegation of Governmental Affairs (Decon-centration) in the Forestry Sector of the Year 2015 to the Governor as the Government Representative (Appendix, p. 3)* *No longer in effect	Ecosystems of karsts, wetlands (lakes, rivers, swamps and brackish and tidal areas of not more than six metres), mangroves and peats outside the NCA NRA.
	Essential ecosystem	Presidential Regulation No. 92/2020 on the Ministry of Environment and Forestry (Article 15)	n/a
		Some Environment and Forestry Ministerial regulations on partial delegation of governmental affairs in the forestry sector to regional governments ¹⁰	Ecosystems of karsts, wetlands (lakes, rivers, swamps and brackish and tidal areas of not more than six metres), mangroves and peats outside the NCA NRA.
		Regulation of DG-NREC No. P.8/KSDAE/B PE2/KSA.419/2016 on the Guidelines for Establishing Wildlife Corridor as Essential Ecosystem (Appendix, p. 3)	Four corridor types: a. Connecting conservation areas b. Connecting important ecosystems c. Connecting important ecosystems with conservation areas d. Connecting important ecosystems with protected areas (i.e. protection forests and conservation forests)
	Area of important value for biodiversity conservation	Environment State-Ministerial Regulation No. 29/2009 on the Guidelines for Biodiversity Conservation in Regional Level (Article 9)	Classified based on the: a. Level of ecosystems b. Level of species c. Level of genetics
	Area of high conservation value	Regulation of DG-NREC No. P.5/KSDAE/SET/KUM.9/1/2017 on the Technical Guidelines for Establishing Area of High Conservation Value Outside NRA and NCA and Hunt Parks (Appendix, p. 4)	Six types of HCV: a. Species biodiversity b. Landscape-level ecosystems and mosaics c. Ecosystems and habitats d. Ecosystems services e. Societal need f. Cultural value

Source: Compiled by the authors from the regulatory instruments mentioned.

Table 1 indicates the lack of uniformity of terminologies used in referring to areas outside conservation areas with high biodiversity value. This is true despite the fact that various terms and phrases used across different regulatory instruments refer to the same object, which is EEA as the most used term in practice. Terminologically speaking, Black's Law Dictionary defines the word 'essential' as 'important in the highest degree' (Black, 1990, p. 546). Therefore, 'important' areas and 'essential' areas in the conservation context have the same meaning. Table 2 below presents the timeline of EEA policy implementation in Indonesia, as implemented under different terminologies.

Table 2. The Evolution of EEA Policies in Indonesia

Year	Instrument	Note
1990	Act No. 5/1990 on Conservation of Biodiversity and Its Ecosystems	The concept of EEA is not yet acknowledged nor regulated. However, the provisions regarding 'the protection of life-supporting systems' is vaguely similar to EEAs.
1994	Act No. 41/1999 on Forestry	The concept of EEA is not yet acknowledged nor regulated.
2009	Environment State-Ministerial Regulation No. 29/2009 on the Guidelines for Biodiversity Conservation in Regional Level	The concept of biodiversity protection outside conservation areas has been acknowledged, under the 'Area of important value for biodiversity conservation' definition. The authority is given to all levels of regional governments.
2011	Government Regulation No. 28/2011 on the Management of NRA and NCA	The first time in which the terminology EEA is used. The authority – given to the central government – is to be exercised along with NRA and NCA protection.
2014	Act No. 23/2014 on Regional Government	The concept of 'EEA' is acknowledged but under a different definition, i.e. 'Area of important ecosystem value'. The authority is given to provincial governments.
2015	Presidential Regulation No. 16/2015 on the Ministry of Environment and Forestry	The phrase used is 'essential ecosystem' and the authority is given to the central government, i.e. the DG-NREC.
2017	Regulation of DG-NREC No. P.5/2017 on the Technical Guidelines for Establishing Area of High Conservation Value Outside NRA and NCA and Hunt Parks	The term used is 'Area of high conservation value' and the authority is given to regional governments.

Source: Compiled by the authors from the regulatory instruments mentioned.

Considering that the object is the same, the regulations that delegate the authority to establish and manage EEA to two different institutions raise a legal issue in the form of the dualism of authority. Aside from the dualism of authority between the Regional Government Act and Presidential Regulation No. 92/2020, the dualism can also be found in several implementing-level

regulations (i.e. ministerial regulations). The dualism of authority in various regulations is presented in Table 3.

Table 3. The Sources of Dualism of Authority Across Regulations

Authority of Central Government		Authority of Regional Government	
Instrument	Provision	Instrument	Provision
Act No. 5/1990 on the Conservation of Living Natural Resources and their Ecosystems (Article 38) ¹¹	By nature, the exercise of conservation effort is on the central government, although it may be partially delegated to the regional government	Regional Government Act (Appendix, pp. 119-120)	Provincial regional governments
Government Regulation No. 28/2011 on the Management of Nature Reserve Area and Nature Conservation Area (Article 12 [1] and Article 24)	The authority to exercise EEA protection is integrated with NRA and NCA's protection by the central government.	Environment Ministerial Regulation No. 29/2009 on the Guidelines for Biodiversity Conservation in Regional Level (Article 9 [1])	The regional government, i.e. provincial or district regional government
Presidential Regulation No. 16/2015 on The Ministry of Environment and Forestry ¹²	The central government, i.e. the DG-NREC. In practice, this authority was transferred to regional governments.	Several Environment and Forestry Ministerial Regulation on partial delegation of governmental affairs in the forestry sector to regional governments ¹³	The regional government, i.e. the Governor as the recipient of the delegation of authority
		Regulation of DG-NREC No. P.8/KSDAE/BPE2/KSA.419/2016 on the Guidelines for Establishing Wildlife Corridor as Essential Ecosystem. (Appendix, pp. 8-9)	The regional government, i.e. the Governor
		Regulation of DG-NREC No. P.5/KSDAE/SET/KUM.9/1/2017 on the Technical Guidelines for Establishing Area of High Conservation Value Outside NRA and NCA and Hunt Parks (Appendix, p. 2)	Regional government

Source: Compiled by the authors from the regulatory instruments mentioned.

The legal uncertainty caused by the dualism of authority has led to a conflict between the central and the regional governments in relation to EEA implementation. The most significant risk arising from this legal uncertainty is the further deterioration of biodiversity and ecosystems that should have been protected through the establishment of the EEA. The urgency is manifested in the fact that the Sumatran orangutan (*Pongo abelli*) have been added to the 'red list' after being classified as 'critically endangered' (Sofyan, 2013, p. 2). Meanwhile, the Bornean orangutan (*Pongo pygmaeus*) is also endangered according to the International Union for Conservation of the Nature (IUCN) (Rifqi, 2014, p. 7). These are significant findings given that 75% of orangutans are found outside the conservation areas and are experiencing severe population degradation due to several factors, including illegal logging, mining, palm oil plantations and forest fires (Wich, 2008, p. 366). These phenomena indicate that the protective purpose of EEAs has yet to be fully achieved.

Apart from affecting the authority to establish and manage, the dualism of authority is also influencing other aspects related to the EEA implementation, such as the administrative land-status of the established EEAs, the status in spatial planning and the financing obligations. The legal implications of the dualism of authority towards the other aspects are elaborated as follows:

1) The party responsible for conducting pre-establishing procedures

As previously discussed, the main issue surrounding the dualism mentioned above has to do with identifying which institution should establish and manage the EEAs. Based on regulatory studies, several stages must be followed: from identification up to the stage of EEA establishment. In other words, the procedure comprises desk study, preparation and field verification, evaluation of the area, delineation of boundaries, several rounds of public consultations and EEA establishment. This responsibility rests with the central government (i.e. the DG-NREC) through the Directorate of Essential Ecosystem Management Development (*Direktorat Bina Pengelolaan Ekosistem Esensial*), which should carry out the procedures in establishing and managing the EEAs.

Meanwhile, if the authority to establish and manage EEA rests with the regional governments, then they are obliged to carry out the procedures. When it comes to management, regional governments can establish collaborative forums that serve as the EEAs' management agencies. The practice of forming collaborative forums that combine the elements of local governments and other stakeholders in managing EEAs, such as the Environment and Forestry Ministerial Regulation No. P.101/MENHUTII/2014, is quite common. Stakeholders' interests in the areas

established as EEAs shall be better represented with their direct involvement in the management (Sahide, 2020, p.8). Meanwhile, if the EEA management is left to the central government, this will become the task of the DG-NREC through the local Natural Resources Conservation Agency.

2) The party responsible for the payment of compensation

Unlike the conventional conservation areas (i.e. NCA and NRA), EEAs are not determined according to their biodiversity value per se (not by nature). Instead, the main characteristic of EEAs is their location, which is usually outside of conservation areas. Thus, the identified areas (that fulfil the EEA characteristics) may be attached with certain ownership rights. Due to the scope of the paper, however, it will not discuss the transfer of ownership rights of an area to the state in this context. Rather, the crucial issue lies in the state's obligation to provide compensation payment to the rights holders, or the obligation to provide incentives if the rights holders choose to retain their rights and assume the responsibility of carrying out the management task (as collaborating partners) (Kartodihardjo, 2017, p. 110).

The concept of providing compensation or incentives is also applied in other conservation area-establishment regimes, such as the establishment of forest areas under Act No. 41/1999 on Forestry and the establishment of a cultural heritage site under the Act. No. 11/2010 on Cultural Properties. The obligation to provide compensation or incentives that arise in this case will depend on which party has the authority to determine and manage the identified EEAs.

3) The party responsible for conducting spatial planning adjustment

An EEA's characteristics, which is not by nature a conservation area, also affect the status of the area under a region's spatial planning. For instance, it is possible that a designated EEA has a different function under the region's spatial planning. However, this paper will not discuss whether a change in the existing spatial planning is necessary to establish EEAs in area with different functions under an existing spatial planning. In cases wherein adjustments (amendments) must be made, then the dualism of authority can lead to confusion as to which spatial planning should be adjusted (i.e. the national vs. regional spatial planning).

The formulation and the amendment to national and regional spatial planning are under the central and the local governments, respectively. Even if an adjustment is not necessary, dualism can still pose problems regarding which institution can grant legal status to the EEAs.

- 4) The party responsible for bearing financial expenses and is entitled to the economic benefits

All the aspects discussed up to this point are closely related to the issue of which entity is responsible for the financing and who is entitled to potential economic benefits from EEA management (e.g. income from EEA utilised as tourism sites and the services provided by the area to support specific activities). If the authority to manage EEAs rests on the central government, then it should also bear the financing burden (i.e. financing from the state budget). As the main contributor in financing the area's management, the central government would also be the primary recipient of the economic benefits gained from this activity. Conversely, if the authority to manage EEA rests on the regional governments, then they should bear the burden and the primary recipients of the economic benefits of good EEA management.

If the management of EEAs by regional governments is carried out based on the principle of deconcentration (Dutch: *deconcentratie*) or co-administration (Dutch: *medebewind*), the funds to be used in financing the management activities should come from the state budget.¹⁴ On the contrary, if management by the regional governments is based on the principle of decentralisation, then the budget to finance the management activities should be borne by the respective regional governments (Environment State-Ministerial Regulation No. 29/2009, Article 26). Nevertheless, the issue of whether each entity is financially well-off to bear the financing duty persists in either scenario.

As clearly demonstrated above, the existing dualism of authority can affect the effectiveness of EEA implementation. This causes confusion and uncertainty in various aspects of EEA implementation, such as which institution should be in charge of implementing the pre-established procedures and adjusting the relevant spatial planning, as well which source of financing, both for compensation payments and for financing the management, should be tapped. Such problems hamper efforts to achieve the objectives of EEA protection.

The four aspects mentioned previously are interrelated and constitute a necessary consequence of EEA implementation. These four aspects must be considered in determining the appropriate institution authorised to establish and manage EEAs in order to optimise the implementation of EEA policies in Indonesia. The next discussion elaborates on the compatible regulatory regimes to overcome the dualism of authority and foster an optimal scenario for EEA implementation.

B. Alternative Regulatory Scheme for the Effective Establishment and Management of EEAs in Indonesia

The previous discussion indicated that the dualism of authority in establishing and managing EEAs affects vital aspects of such an undertaking. The effects on these aspects can show the advantages and the shortcomings of each available option, as shown in Table 4.

Table 4. Comparison of the Advantages and Disadvantages of Various Options to Establish and Manage EEAs

No.	Aspect	Central Government		Regional Government	
		Advantage	Shortcoming	Advantage	Shortcoming
	Pre-establishing procedures	Better prepared in terms of facilities and infrastructure through the DG-NREC	a. Increases the workload, such as the need to form a special unit to conduct these procedures b. May have minimum knowledge of the prospective area	Better understand the history of the prospective area	a. Increases the workload, such as the need to form a special unit to conduct these procedures b. Not all regions are prepared with the necessary resources, e.g. lack of expert human resources
	Management/management body	a. Entitled to the right to enjoy the economic benefits generated from the area b. Better prepared in exercising management through the DG-NREC	Increases the workload of the DG-NREC and the local NRCA	a. Entitled the right to enjoy the economic benefits generated from the area b. Local communities' involvement within the Collaboration Forum, which eases the burden of the regional government	Not all regions have sufficient financial capacity to conduct optimum EEA management
	Financing: management, compensation, and incentive	Would be prioritised to enjoy the economic benefits generated from managing the area	Increases the burden on the state budget	Would be prioritised to enjoy the economic benefits generated from managing the area	Increases the burden on the local governments' funds

Source: Authors.

Based on the comparison provided in Table 3, we may infer that each of the options has advantages and disadvantages. Thus, the authors would not recommend directly adopting one option over the other without considering the advantages presented by other options. Thus, based on the utility approach, this study recommends strategically integrating the existing dualism of authority. Apart from addressing legal uncertainties due to the existing dualism, the integration can also help establish an effective authority scheme and provide the greatest benefits by maximising the advantages of the other two options.

The integration of dualism can also create a clear role division between the central and regional governments as they both strive to protect EEAs in a more targeted and sustainable way. On the one hand, the implementation of pre-establishing procedures (i.e. identification and data collection of the prospective EEA areas) will be facilitated by the regional governments, which have a better understanding of their local areas. On the other hand, the central government's involvement will strengthen efforts to achieve the objectives of EEA protection, such as by providing technical assistance and financial support, especially for the less well-off regions.

In this case, the clear division of authority between the central and regional governments is based on institutional theory. The theory emphasises the government structure's formal and legal aspects by observing the government's regulation, its legal standing and the rules underlying the decision making processes (Kraft & Furlong, 2013, p. 81). Furthermore, this theory posits that the basic rules in question cover certain characteristics, such as the level of access in decision making, the availability of information from government agencies and the division of authority between the central and regional governments. Following this theory, there must be a regulation reconciling each institution's scope of authority (i.e. the central government and regional governments) concerning the implementation of EEA policies to resolve the issue of the dualism of authority.

This paper proposes that the authority to establish and manage EEAs should rest on regional governments. However, the decision to establish an EEA should be preceded by approval from the central government. A similar practice can be found in the procedure regulated under Environment and Forestry Ministerial Regulation No. P.101/MENHUT-II/2014. However, in the context of this recommendation scheme, the relationship between the central and regional governments is no longer based on deconcentration or co-administration (*medebewind*). Rather, the implementation of EEA policies by the regional governments should be based on decentralisation.

The recommended scheme is based on the following consideration. First, the dualism of authority stems from Regulation No. 28/2011, which can be resolved using the *lex superiori derogat legi inferiori* principle (i.e. in the event of conflicting provisions, hierarchically higher regulation takes precedence). This principle indicates that the authority to establish and manage EEAs should be held by

the regional governments, (i.e. the provincial governments), as stipulated by the Regional Government Act. As such, the Regional Government Act is hierarchically higher than Regulation No. 28/2011, which means that the provision of the former must take precedence over the latter should a conflict arise.

Second, the room of involvement for the central government in granting approval, as proposed in this scheme is also in accordance with the authority of 'fostering essential ecosystem management', which is assigned to the DG-NREC, as referred to in Presidential Regulation No. 92/2020. The DG-NREC's authority to conduct EEA management under Presidential Regulation No. 16/2015 has been reduced to simply fostering EEA management under Presidential Regulation No. 92/2020. Nevertheless, such a change does not address the issue regarding the dualism of authority. This is due to the following reasons. First, the scope of the fostering duty remains unclear, which creates the potential for multiple interpretations during the implementation, especially because there is no specific regulation addressing the management of EEAs. Second, although the authority of the DG-NREC has been reduced under the Presidential Regulation No. 92/2020, the provisions of Act No. 5/1990 and Regulation No. 28/2011 are still in conflict with those of the Regional Government Act, thus indicating an overlapping of authority. Third, the use of different terminologies and definitions under the Regional Government Act and Presidential Regulation No. 92/2020 also contributes to the insolvency of the dualism of authority issue, even though the authority of the DG-NREC over EEAs has been adjusted to be consistent with the provisions of the Regional Government Act.

Based on the division of authority scheme recommended in the current study, the regional governments shall be the main actors dealing with the establishment and management of EEAs as well as a collaborative forum acting as a management body. They should also provide the funds to pay for compensations or incentives to acquire certain areas, to adjust spatial planning and to finance the entire management operation. The central government's involvement lies in approving the proposed EEAs, which can be understood as a manifestation of its 'fostering' authority. This can help resolve the issue of different capabilities of each region in exercising their authority. In this case, approval from the central government through the DG-NREC should serve as a secondary filter in assessing the feasibility of an area to be designated as an EEA. However, there should be a clear and objective set of criteria, both by the central and regional governments in exercising their respective authorities. Such criteria are crucial, as they are closely related to achieving protection objectives by implementing the EEA concept itself.

In the context of management, the authority of the DG-NREC to foster EEA management is manifested in the form of disseminating the implementation of EEA policies to regional governments. The central government's involvement also opens up opportunities for financial support coming from the state budget, especially for

regions that do not have adequate financial capacity to undertake such an activity. However, the respective regional governments should still provide the main source of financing as the central government's financial assistance is contingent upon its willingness and the state's financial capacity.

Aside from funding from the regional government budget and, possibly, the state budget, the funding for EEAs may also come from the allocated portions of economic benefits derived from the EEAs' management (e.g. levy taxes from tourism services). Other funding sources may also come from the involvement of local private corporations in exercising their corporate social responsibility (CSR). The involvement of such corporations must be encouraged by requiring contribution through relevant legal instruments. The government may also offer certain financial incentives for private corporations, such as tax deductions proportional to the amount of funding provided for the local EEA management. A similar concept has been practiced in the context of tax reduction for taxpayers who pay *zakat* (obligatory alms in Islam) (Bayinah, 2015, p. 84). Such an alternative source of funding may not only encourage societal participation in EEA management, but more importantly, help relieve the budgetary burden faced by regional governments.

Although the authority to establish and manage EEAs by provincial regional governments is mandated by the Regional Government Act, only a few have issued instruments or guidelines to exercise such authority. Therefore, there should be an appropriate instrument to accommodate the recommendations offered in this paper. Although the amendment draft to Act No. 5/1990 on the Conservation of Living Natural Resources and their Ecosystems has been included in the National Legislation Programme 2020–2024, the completion and enactment of an amendment generally requires a considerably long time. Therefore, this paper's recommendation must be formulated into a regulatory instrument that would require simpler administrative processes so as to solve the urgent problem of providing a clearer basis and legality for the implementation of EEA policies.

There are two options of regulatory instruments that can be considered: with a ministerial regulation or with a presidential regulation. On the one hand, sectoral implementation with a ministerial regulation may require less time than implementing a presidential regulation. This may happen when the formulation of a presidential regulation requires intensive coordination between ministries. Meanwhile, in terms of effectiveness, implementation with a presidential regulation has the advantage of having a higher hierarchy. Doing so may minimise the potential for the ego-sectoral interests between ministries, which often hinder the implementation effectiveness.

Between the two options, the implementation with a presidential regulation is preferable. In this case, the first consideration is that the recommended EEA management scheme offered in this paper requires coordination between ministries, including the MEF (in approving the establishment of the EEA), the Ministry of Agrarian Affairs and Spatial Planning (in adjusting the spatial planning), the

Ministry of Finance (in providing financial support and incentives) and the Ministry of Home Affairs (in facilitating coordination with regional governments). The second consideration is the persistence of the problem of dual authorities despite several attempts to solve the issue with ministerial regulations (see Table 2).

Various aspects and issues discussed previously can be considered in formulating the regulation's content. Other vital aspects to consider are the use of uniform legal terminology, clear procedural guidelines in establishing and managing EEAs and the use of uniform sets of criteria and categories of EEAs. Furthermore, the central government may consider assessing the performances and achievements of regional governments in managing EEAs as indicators to determine which regions should be entitled to receive regional incentive funds (*Dana Insentif Daerah*). Doing so can encourage regional government initiatives to identify, establish and manage potential EEAs in their respective regions. Regional incentive funds are an element of the *Transfer ke Daerah dan Dana Desa* programme funds,¹⁵ and are sourced from the state budget to reward autonomous regions for their improvements or achievements in general government services, financial management, community welfare and basic public services. In accommodating this incentive structure, it is necessary to review the Ministry of Finance Regulation No. 141/PMK.07/2019 on the Management of Regional Incentive Funds (as amended by Ministry of Finance Regulation No.67/PMK.07/2020).

Table 5. Recommendations on the Division of Authority in Establishing and Managing EEAs

Authority in the Establishment and Management of EEAs	
Provincial Regional Government	Central Government¹⁶
<ul style="list-style-type: none"> a. Establishment (i.e. desk study, field verification/survey, evaluating a site, drawing a site's boundaries, requesting approval from the central government, conducting a public consultation and issuing establishing guidelines) b. Management (Collaborative Forum, finance management activities, adjustment of regional spatial planning) 	<ul style="list-style-type: none"> a. Issuing approval for the establishment of an EEA (as secondary filter in assessing the suitability of an area) b. Fostering EEA management (e.g. conduct education and socialisation at the regional level, provide financial assistance)

Regulatory Instrument: Presidential Regulation

Required provisions:

- a. Role/authority division between the central and regional governments
- b. Source of funding from (1) state budget/regional government budget, (2) funds generated from the management activities (e.g. levies from tourism services), (3) CSR from local private entities and (4) other lawful sources of funding (e.g. donations, grants)
- c. Use of uniform terminologies and definitions*
- d. Procedures for establishing and managing EEAs
- e. Uniform criteria and classifications of EEAs*
- f. Incentives for regional governments and non-governmental entities

* This paper does not attempt to provide recommendations for these issues. However, those aspects must be addressed in the regulation instrument to implement EEA in Indonesia more effectively.

Source: Authors.

By resolving the issue of the dualism of authority in the context of implementing EEAs, the three legal objectives according to Gustav Radbruch may be satisfied: legal certainty, justice and purposiveness (Leawoods, 2000, p. 493). The legal certainty element would be satisfied by the clear division regarding the central and regional governments' roles in implementing EEAs. The involvement of the former in assisting regions that require help reflects the element of justice. Meanwhile, the clear division of authority will allow a more efficient implementation to protect the environment, which in turn, reflects the element of purposiveness.

III. Conclusion

The dualism of authority in the implementation of EEA policies in Indonesia has caused confusion in several implementing aspects (i.e. regarding which institution responsible for establishing, managing and funding EEA). Such problems prevent the effective implementation of EEA policies to protect the important biodiversity found outside conservation areas. To mitigate this issue, a new regulation instrument must be issued featuring two important provisions: (1) the authority to establish and manage EEA rests on the regional governments and (2) the involvement of the central government in approving the proposal to establish EEAs and fostering subsequent management efforts. Furthermore, there needs to be a clear division of authority between the central government and the regional governments relating to EEA implementation. Such division of authority must be implemented immediately to allow each institution to conduct its role optimally in the effective implementation and management of EEAs in Indonesia.

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