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EVALUATION OF NATURAL DISASTER MITIGATION POLICY BY BPBD

Analysis of Pre-Disaster Policy and Suitability of Mitigation Procedures in Tanggamus Regency Based on the Perspective of State Administration Law and Edwards III Theory

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Abstract

Tanggamus Regency is very prone to geological disasters due to the Semangko Fault and hydrometeorological disasters such as flash floods and landslides. This study analyzes the policies of the Regional Disaster Management Agency (BPBD) of Tanggamus Regency in natural disaster mitigation based on the legal framework of disaster management, as well as the suitability of mitigation procedures in the field with laws and regulations. This empirical legal research uses normative, legislative, conceptual, and sociological juridical approaches, with interview data of BPBD technical officials and legal materials, which are analyzed through the theory of the implementation of the Edwards III policy and the doctrine of the authority of the State Administrative Law. The results of the study show that BPBD has legitimate authority and has prepared risk assessment documents and disaster management plans, but there is no technical SOP for pre-disaster mitigation, risk zoning maps have not been included in the RTRW Regional Regulation, and the preventive mitigation budget is only 3.43%. The dissemination of disaster-prone maps is not inclusive and Disaster Resilient Villages have only been formed in 3 out of 302 pekons (0.99%).

Keywords: *Disaster mitigation, BPBD, policy implementation, Edwards III, Tanggamus Regency*

A. INTRODUCTION

The Unitary State of the Republic of Indonesia is geographically located at the confluence of three active tectonic plates, namely the Indo-Australian Plate, the Eurasian Plate, and the Pacific Plate. This condition makes Indonesia one of the countries with the highest level of geological disaster vulnerability in the world and is dubbed as a "disaster laboratory" because of its location in the *Pacific Ring of Fire* region. The national threat is specifically escalated at the regional level, such as in Tanggamus Regency, Lampung Province, whose topography conditions include mountainous areas, steep hills, and coastal waters of Watermelon Bay. Based on data from the Disaster Management Operations Control Center (Pusdalops) of BPBD Tanggamus Regency and the Indonesian Disaster Information Data (DIBI) of BNPB.

Disaster events in Tanggamus Regency in the 2019-2023 period were dominated by hydrometeorological disasters, namely floods as many as 42 events, landslides 35 events, and extreme weather or strong winds 28 events, in addition to the threat of tectonic earthquakes (4 events) and high waves or abrasion (1 event). The high frequency of this disaster is confirmed by the Tanggamus Regency Disaster Risk Assessment Document (KRB) for the 2022-2026 period and the 2023 BNPB Indonesian Disaster Risk Index (IRBI) which recorded the IRBI score of Tanggamus Regency of 148.80 (high risk class).[1] The trend of disaster events has also increased significantly, from 12 incidents throughout 2023 to 30 incidents in 2024.

In Indonesia's positive legal framework, the implementation of disaster management by local governments is a mandatory authority based on the mandate of Law Number 24 of 2007 concerning Disaster Management jo. Article 12 paragraph (1) letter e of Attachment Letter E of Law Number 23 of 2014 concerning Regional Government (as amended by Law No. 6 of 2023), which stipulates the sub-affairs of disasters as Compulsory Government Affairs

[1] Tanggamus Regency Regional Disaster Management Agency, *Tanggamus Regency Disaster Risk Assessment (KRB) Document for 2022–2026* (Kota Agung: BPBD Tanggamus Regency, 2022).

related to Basic Services.[2] To carry out this affair at the regional level, the Tanggamus Regency Government established the Regional Disaster Management Agency (BPBD) based on the Tanggamus Regency Regional Regulation Number 07 of 2010 (as updated in Regional Regulation No. 08/2016 jo. Regional Regulation No. 09/2022) and the Tanggamus Regent Regulation Number 63 of 2022 concerning the Position, Organizational Structure, Duties, Functions, and Work Procedures of BPBD.[3]

Although the normative framework has required BPBD to carry out its pre-disaster mitigation function in an integrated and proactive manner (as affirmed in Article 47 of Law No. 24/2007 and Article 22 of the Tanggamus Regional Regulation No. 06/2016),[4] the facts on the ground show that there is a gap between normative provisions (*das sollen*) and operational realization (*das sein*). This gap can be seen from the lack of accommodation of the 2022–2026 KRB Document Disaster Risk Zoning Map into the Tanggamus Regency RTRW Regional Regulation No. 16 of 2011,[5] the lack of allocation of the APBD DPA for pre-disaster prevention or mitigation activities (only 3.43% of the total budget of the BPBD FY 2024), and the lack of a Technical Operational Procedure (SOP) for pre-disaster mitigation until August 31, 2026.

This article aims to analyze the policies of the Tanggamus Regency BPBD in natural disaster mitigation from the legal framework of disaster management, and assess the suitability of the mitigation procedures implemented in the field with the provisions of laws and regulations and the factors that affect them. This research is an empirical legal research with normative, statutory (statute *approach*), conceptual, and sociological approaches, which utilizes primary data in the form of in-depth interviews with technical

[2] Law Number 24 of 2007 concerning Disaster Management; Law Number 23 of 2014 concerning Regional Government.

[3] Tanggamus Regent Regulation Number 63 of 2022 concerning the Position, Organizational Structure, Duties and Functions, and Work Procedures of the Tanggamus Regency Regional Disaster Management Agency.

[4] Law No. 24 of 2007, Article 47; Tanggamus Regency Regional Regulation Number 06 of 2016 concerning Regional Disaster Management, Article 22.

[5] Tanggamus Regency Regional Regulation Number 16 of 2011 concerning the Tanggamus Regency Regional Spatial Plan for 2011-2031.

officials of the Tanggamus Regency BPBD as well as secondary data in the form of primary, secondary, and tertiary legal materials. The analysis was carried out through the George C. Edwards III Policy Implementation Theory, which includes communication, resources, disposition, and bureaucratic structure,[6] as well as the doctrine of the authority of the State Administrative Law. The results of this study are expected to provide input for strengthening regulations, budgets, and pre-disaster mitigation procedures at the district level.

B. RESULTS AND DISCUSSION

1. Tanggamus Regency BPBD Policy in Natural Disaster Mitigation Reviewed from the Legal Framework

The implementation of disaster mitigation policies by the Tanggamus Regency BPBD is essentially a form of implementing attributive authority and legitimate delegation based on the State Administrative Law.[7] Based on Article 18 jo. Article 21 of Law Number 24 of 2007, the BPBD Implementing Element has the normative authority to compile and establish disaster-prone maps, prepare fixed procedures, and coordinate the implementation of pre-disaster mitigation.[8] At the regional level, this authority is strengthened by the Regional Regulation of Tanggamus Regency Number 06 of 2016 concerning Regional Disaster Management and the Regulation of the Regent of Tanggamus Number 63 of 2022 concerning BPBD Work Procedures.[9]

In fulfilling policy instruments, the Tanggamus Regency BPBD has formulated several strategic documents, namely the 2023–2027 BPBD Strategic Plan (Renstra), the 2022–2026 Disaster Risk Assessment Document (KRB), the 2023–2027 Disaster Management

[6] George C. Edwards III, *Implementing Public Policy* (Washington DC: Congressional Quarterly Press, 1980).

[7] Ridwan HR, *State Administrative Law*, Revised Edition (Jakarta: Rajawali Pers, 2014).

[8] Law No. 24 of 2007, Article 18 jo. Article 21.

[9] Regional Regulation No. 06 of 2016 concerning Regional Disaster Management; Tanggamus Regulation No. 63 of 2022 concerning Position, Organizational Structure, Duties and Functions, and BPBD Work Procedures.

Plan (RPB), the Flood and Landslide Contingency Plan (Renkon), and the determination of the location of the Disaster Resilient Village (DESTANA).[10] However, the results of the juridical evaluation show that the fulfillment of these normative obligations has not been fully optimal and leaves operational gaps as summarized in Table 1 below.

Table 1. Juridical evaluation of the fulfillment of normative obligations for BPBD mitigation of Tanggamus Regency

No.	Normative mandate of regulation	Empirical evidence and juridical gaps	Evaluation categories
1	Preparation of the 5-Year RPB (Article 36 of Law 24/2007)	The 2023–2027 RPB document has been prepared, but the program content has not been optimally integrated into the RPJMD and RKPD of Tanggamus Regency.	Partially compliant
2	Determination and dissemination of disaster-prone maps (Article 21 of Law 24/2007)	The disaster-prone map has been formulated in the 2022–2026 KRB Document, but it has not been determined through a special Perbup and dissemination to pekon is still limited.	Partially compliant
3	Preparation of Permanent Mitigation Procedures (SOP) (Article 21 of Law 24/2007)	Perbup No. 16/2024 contains the Emergency Preparedness and Response Protocol. However, until August 31, 2026, no special SOPs have been found for pre-disaster mitigation.	Partially compliant
4	Adequate budget allocation (Article 8 of Law 24/2007)	The allocation of the 2024 DPA APBD for pre-disaster activities is minimal, amounting to IDR 165 million (3.43%) of the total BPBD budget of IDR 4.8 billion.	Partially compliant
5	Integration of risk maps into	The 2022–2026 KRB document has been prepared, but the Risk	Partially compliant

[10] Tanggamus Regency BPBD, *Disaster Risk Assessment Document (KRB)...* ; Tanggamus Regency Regional Disaster Management Agency, *Tanggamus Regency Disaster Management Plan (RPB) Document for 2023–2027* (Kota Agung: BPBD Tanggamus Regency, 2023).

	RTRW (Article 47 of Law 24/2007)	Zoning Map has not been accommodated to RTRW Regional Regulation No. 16/2011 because the revision process is still ongoing.	

Source: Primary and secondary thesis of Marshall Satria Putra (data processed, 2026).

2. Conformity of natural disaster mitigation procedures and policy implementation analysis (Edwards III)

The evaluation of pre-disaster mitigation procedures in the field was analyzed using the George C. Edwards III Policy Implementation Theory, which includes four main variables: communication, resources, disposition, and bureaucratic structure.[11] *Communication.* The transmission of information and regulatory orders in the context of mitigation is carried out through two main channels, namely tiered coordination to the sub-district and pekon levels and the formation of DESTANA. However, quantitatively, the establishment of DESTANA in Tanggamus Regency has only reached 3 pekons (Pekon Sri Purnomo, Pekon Baros, and Pekon Way Pring in Semaka District) out of a total of 302 administrative units (0.99%). Regarding *the Early Warning System* (EWS), the existence of automatic sirens is very limited (2 units) and has experienced technical problems due to coastal corrosion in Pekon Baros.

However, early warning communication at the community level is effective by utilizing the WhatsApp network of volunteer groups and loudspeakers of places of worship, with response times ranging from 15–30 minutes. The availability of resources is the main bottleneck in the implementation of mitigation by the Tanggamus Regency BPBD. From the financial aspect, the budget allocation of the BPBD FY 2024 for Prevention and Preparedness Sub-Activities is only IDR 165,000,000.00 (3.43%) of the total BPBD APBD of IDR 4.81 billion. Most of the regional budget is concentrated on Unexpected Expenditure (BTT) of IDR 12.5 billion, which juridically (Permendagri No. 77/2020) can only be used during reactive emergency response. In terms of human resources, BPBD

[11] Edwards III, *Implementing Public Policy*

only has 25 Rapid Reaction Team (TRC) personnel to serve 20 sub-districts (ratio of 1 personnel per 12 pekon), with only 4 personnel certified by LSP BNPB.

Disposition. BPBD's Prevention and Preparedness Apparatus shows a positive disposition and commitment to work. This is evidenced by the initiative of disaster Communication, Information, and Education (KIE) self-management activities in Pekon Way Kerap and Pekon Baros, the responsiveness of the Pusdalops standby post 24 hours in responding to hazard reports (less than 30 minutes), and the integration of KRB recommendations into the BPBD Annual Work Plan. However, this positive disposition is hampered by the limited allocation of operational resources. Institutionally, Tanggamus Regulation No. 63 of 2022 has clearly divided technical functions into three areas, namely Prevention and Preparedness, Emergency and Logistics, and Rehabilitation and Reconstruction.[12]

However, the bureaucratic structure has not been equipped with technical operational SOPs specifically for pre-disaster mitigation, because the current Tanggamus Regulation No. 16 of 2024 only regulates fixed procedures at the emergency preparedness and response stages.[13] Regarding the post-disaster stage, the Tanggamus Regency BPBD applies the principles *of Build Back Better*, *Safer, and More Sustainable* as a form of long-term mitigation. This is realized through the preparation of the 2026 Semaka District Post-Disaster Rehabilitation and Reconstruction Plan (R3P) Document (after the May 2026 flash flood) with a proposal to relocate residents' settlements from the landslide red zone, as well as physical repair projects such as the rehabilitation of bridges and cliffs of the Way Semaka River constructed with flood-resistant reinforced concrete.

[12] Tanggamus Regulation No. 63 of 2022...

[13] Tanggamus Regent Regulation Number 16 of 2024 concerning Permanent Procedures for Disaster Management.

C. CONCLUSION

Based on the results of the analysis, the Tanggamus Regency BPBD formally-normatively has the legality of its legal authority based on Law No. 24 of 2007, Government Regulation No. 21 of 2008, and Regional Regulation No. 06 of 2016, and has prepared the 2022–2026 KRB and 2023–2027 RPB instruments. However, substantively there is a juridical-operational gap because there is no special technical SOP for pre-disaster mitigation (Perbup No. 16 of 2024 focuses on emergency preparedness and response), the KRB zoning map has not been integrated into the RTRW Regional Regulation No. 16 of 2011, and the pre-disaster budget in the DPA is very minimal (3.43%).

The suitability of mitigation procedures in the field has also not been optimal due to limited communication in the dissemination of disaster-prone maps, limited TRC personnel (25 people for 302 pekons), damage to EWS facilities, and the formation of a new formal DESTANA covering 0.99% of the area (3 pekon). Based on these findings, the Tanggamus Regency Government together with the DPRD need to accelerate the harmonization of the 2022–2026 KRB Risk Zoning Map into the revision of the RTRW Regional Regulation and issue a special Regent Regulation on technical SOPs for pre-disaster mitigation that are binding across OPDs. The Regional Government Budget Team (TAPD) is advised to rearrange the portion of the APBD in the BPBD DPA so that preventive mitigation activities obtain a balanced allocation, including for the modernization of EWS sensors in major watersheds (watersheds). In addition, BPBD needs to encourage the gradual expansion of DESTANA in high-risk pekon along the Semangko Fault through the collaboration of APBPekon funding and the State Budget Village Fund.

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