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Article Info

ABSTRACT

This study aims to analyze the obstacles to the implementation of the post-disaster Building Construction Permit (IMB) policy in Palu City, based on Regional Regulation No. 9 of 2022. The primary focus of this study is to analyze the extent to which the policy aligns with the post-disaster socio-economic and geographical context, and to identify factors that hinder its effective implementation. This study employed a descriptive qualitative method, with data collection techniques including in-depth interviews, participant observation, focus group discussions (FGDs), and documentation studies. Information was collected from 12 informants from government agencies, affected communities, and local stakeholders. The results indicate that policy implementation has not been optimal due to six main factors: a lack of understanding of the policy's objectives and standards, limited human resources and infrastructure, overlapping authority between agencies, unintegrated communication, limited authority and training for implementers, and socio-economic conditions that do not support regulatory compliance. These findings indicate a gap between national policy and local realities in disaster-affected areas. This research provides an empirical contribution to the study of public policy implementation in the disaster context and offers contextual and inclusive policy recommendations. The practical implications of this research include the need to simplify licensing procedures, strengthen inter-agency coordination, and adjust regulations to local post-disaster conditions.

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Introduction

Natural disasters often serve as critical turning points that compel governments to reassess their existing policies, particularly in areas such as spatial planning and building regulations (Nohrstedt et al., 2021). In the aftermath of a disaster, policymaking processes frequently involve ad hoc coalitions composed of government agencies, non-governmental organizations, and community-based groups. These actors often have divergent goals, resources, and operational structures compared to those typically found in more routine policy environments. As a result, the formation, coordination, and

effectiveness of these coalitions become crucial determinants of policy success yet remain relatively underexplored in disaster governance research (Atkinson & Curnin, 2020; Crow et al., 2021).

To be truly effective, post-disaster policies must strike a balance between immediate humanitarian assistance and long-term strategies for risk reduction. This includes creating sustainable incentives that not only support recovery but also encourage communities and institutions to invest in resilience before the next disaster strikes (Andor et al., 2017; Freebairn, 2024).

The devastating earthquake, tsunami, and liquefaction that struck Palu City on September 28, 2018, destroyed more than 2,700 buildings, displaced over 200,000 people, and caused thousands of deaths, extensive infrastructure damage, and long-term social and economic disruption (Allokendek & Ellisa, 2022; Amiruddin Amiruddin & Yulfa Lumbaa, 2024; Benjamin Mason et al., 2020; Handayani & Puspasari, 2020). These events revealed the extreme vulnerability of the city's urban infrastructure and underscored the inadequacy of existing building permit regulations in mitigating disaster risks. Consequently, post-disaster recovery policies must address the interdependence between physical infrastructure and social systems to promote resilient and inclusive urban development (Park et al., 2024). Furthermore, as Oliver-Smith (1990) warns, housing reconstruction efforts that neglect social justice concerns such as inequality and power imbalances risk undermining both temporary and permanent recovery outcomes (Oliver-Smith, 1990).

Local governments play a crucial role in disaster management by taking initiative in risk assessment and decision-making processes (Jeanne, 2007; Kobayashi, 2024). While local governments often gain practical insights from disasters such as improved grant management broader structural reforms that build long-term resilience and fiscal stability are less frequently realized (Crow et al., 2018).

In the case of Palu, prior to the 2018 disaster, the city was still operating under Regional Regulation (Perda) No. 10 of 2012 concerning Building Construction Permits (IMB), a legal framework that failed to consider the risks of disaster-prone land, especially in areas vulnerable to liquefaction. It was not until four years after the disaster that the local government enacted Regional Regulation No. 9 of 2022 concerning Buildings, which aligns with Government Regulation No. 16 of 2021 and the Job Creation Law (Law No. 11/2020). This new regulation replaces the IMB system with a Building Approval (Persetujuan Bangunan Gedung/PBG) mechanism, marking a shift toward standardized procedures and digital-based services.

Despite this regulatory shift, many residents are rebuilding homes in disaster-prone areas without permits. This is partly due to limited public understanding and poor socialization of the new policy. The lack of clarity in communicating the new regulatory framework, compounded by a lack of resources and institutional adaptation, has resulted in weak implementation. These challenges raise an important question: To what extent is this new building policy appropriate and effective in the context of post-disaster recovery in Palu?

The urgency of this policy reform becomes even clearer when considering the significant geological risks facing the city. According to the Geological Agency (Widyaningrum, R., 2012). Penyelidikan geologi teknik potensi liquifaksi daerah Palu, Provinsi Sulawesi Tengah. *Laporan Penelitian. Pusat Sumber Daya Air Tanah dan Geologi Lingkungan. Badan Geologi. Kementerian Enerji dan Sumber Daya Mineral*.

Palu has a 54.4% probability of experiencing liquefaction within a 50-year recurrence period. Understanding the frequency and intensity of past disasters is essential not only for predicting future events but also for shaping effective disaster-related policies (Smith & Petley, 2008). As mandated by Government Regulation No. 21 of 2008, disaster mitigation includes both physical development and capacity building to reduce risk. This is further emphasized in Presidential Instruction No. 10 of 2018, which calls for the acceleration of reconstruction in Central Sulawesi, including the development of earthquake-resistant housing.

To ensure effectiveness, disaster mitigation policies must integrate both structural and non-structural strategies. Structural measures include the construction of safer buildings and resilient infrastructure, while non-structural approaches involve land use planning, public education, and regulatory frameworks. Although insurance mechanisms may support recovery, their role in risk

reduction remains limited unless they are combined with proactive incentives for community-level mitigation efforts (Kousky, 2019).

To guide post-disaster spatial planning policies, the City of Palu developed a Disaster-Prone Zone (ZRB) map that divides the city into four risk-based zones: (1) Zone 1 (Current Development): Moderate liquefaction, low tsunami, low landslide, moderate-high flooding; (2) Zone 2 (Conditional Development): High liquefaction, moderate tsunami, moderate landslide, high flooding; (3) Zone 3 (Limited Development): Very high liquefaction, tsunami overshoot, and highland movement; (4) Zone 4 (Prohibited Development): Very high risk of liquefaction and tsunami, located along the Palu-Koro fault
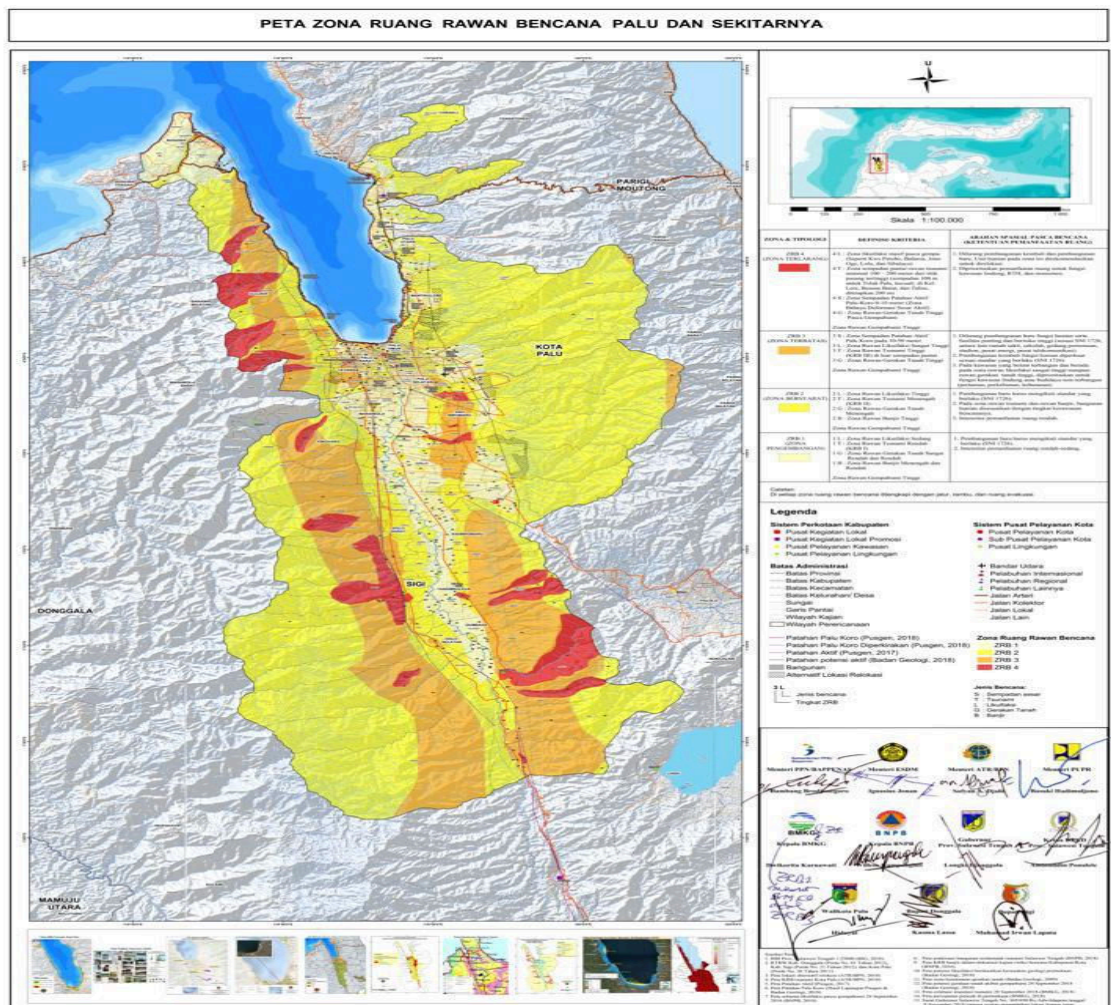
Picture 1. disaster-prone zones in Palu. Source : BNPB 2018

These spatial risks demand a robust regulatory response. However, the transition from national regulation to local enforcement remains problematic, particularly when disaster-affected communities rebuild independently without formal procedures. This mismatch between national policy design and the reality of local implementation underscores the need for a more context-sensitive approach to disaster recovery regulation.

To explore this issue, this study adopts Van Meter and Van Horn's (1975) policy implementation model, which identifies six key variables influencing policy success: (1) policy standards and objectives, (2) available resources, (3) characteristics of implementing organizations, (4) communication between actors, (5) attitudes/dispositions of implementers, and (6) the socio-economic and political environment. This model is well-suited to analyzing how policies formulated at the national level encounter complex obstacles at the local level, particularly in the context of post-disaster governance.

Although a new regulation (Regional Regulation No. 9 of 2022) has been issued to replace the outdated Building Permit (IMB) policy, its implementation in Palu faces critical challenges. Lack of inter-agency coordination, inadequate infrastructure, minimal public outreach, and top-down assumptions have weakened its effectiveness. As a result, the policy's intended objectives building safety, spatial order, and disaster risk reduction remain far from being achieved.

Existing studies on post-disaster governance often emphasize physical reconstruction and financial recovery, but few explore how national development policies align (or fail to align) with disaster-prone local contexts. Research on how the transition from IMB to PBG occurs in areas like Palu is still inadequate, where rebuilding occurs under social pressures, institutional constraints, and evolving regulations.

This study aims to evaluate the suitability and responsiveness of Palu City's post-disaster development policy (Regional Regulation No. 9 of 2022) within the complex socio-spatial recovery context. This study focuses on the extent to which national policy objectives and frameworks are realistically implemented at the local level. Using the Van Meter and Van Horn model, the study assesses six dimensions of policy implementation and identifies key discrepancies between policy design and real-world conditions in post-disaster Palu.

Existing studies on post-disaster governance, particularly post-disaster, often emphasize physical reconstruction (Bilau et al., 2017; Mannakkara & Wilkinson, 2013) and post-disaster recovery strategies (Agus Lukman Hakim et al., 2022). In Indonesia, most post-disaster policy studies focus on post-disaster responses (Leitmann, 2007) and post-disaster housing reconstruction (Setyonugroho & Maki, 2024), but few explore how national building policies align (or fail to align) with disaster-prone local contexts.

There is insufficient research on how the transition from IMB to PBG occurs in areas like Palu, where rebuilding occurs under social pressures, institutional constraints, and evolving regulations. Research Objectives and Focus: This study aims to analyze the suitability of Palu City's post-disaster building policy (Regional Regulation No. 9 of 2022) within the context of complex socio-spatial recovery. It focuses on the extent to which national policy objectives and frameworks are realistically implemented at the local level. Using the Van Meter and Van Horn model, this study assesses six dimensions of policy implementation and identifies key mismatches between policy design and real-world conditions in post-disaster Palu.

Method

This study uses a qualitative descriptive research design to explore the implementation of post-disaster building permit policies in Palu City, focusing on the alignment between the national regulatory framework and local realities. A qualitative approach was chosen to gain an in-depth understanding of actors' perceptions, institutional practices, and contextual challenges surrounding the implementation of Regional Regulation No. 9 of 2022.

This research was conducted in Palu City, specifically targeting key government agencies involved in the regulation and implementation of building permits, including the Spatial Planning and Land Agency (Dinas Tata Ruang dan Pertanahan), the Public Works Agency, and community representatives from relocation areas affected by the 2018 earthquake, tsunami, and liquefaction.

Sampling Techniques and Informants
This study used a purposive sampling technique, selecting participants directly involved in the policy implementation process or directly affected by it. A total of 12 informants were selected based on their expertise, position, and relevance to the research topic.

Informants included: 5 government officials from relevant agencies (e.g., the Spatial Planning Agency, Public Works). 3 community leaders from the disaster relocation sites. 2 NGO representatives working in post-disaster reconstruction. 2 academics or experts in urban planning and policy. The sample size was determined based on the principle of saturation, where additional interviews no longer yield new information. This strategy ensured adequate depth while maintaining the focus of the analysis.

Data Collection Techniques

Data were collected using several qualitative techniques to ensure richness and triangulation: (1) Semi-structured interviews: Conducted face-to-face, lasting between 45 and 90 minutes, and recorded with consent. Interviews followed a guide developed based on the six variables from the Van Meter and Van Horn model; (2) Non-participant observation: Conducted in government offices and in several post-disaster relocation zones to observe implementation practices, public service procedures, and citizen interactions with the permit system; (3) Focus Group Discussions (FGDs): Conducted with six participants representing various agencies to explore issues of inter-agency coordination; (4) Document Review: Involves government reports, SOPs, policy documents, and regulations relevant to building permits before and after a disaster.

Data Validation Techniques

To ensure validity and credibility, several verification strategies were used: (1) Source Triangulation: Comparing data from various types of informants (government, NGOs, communities, academics); (2) Method Triangulation: Using interviews, observations, focus group discussions (FGDs), and document analysis; (3) Member Checking: Selected informants were asked to review interview summaries to verify the accuracy of interpretations; (4) Peer Debriefing: The research design, coding categories, and thematic findings were discussed with academic colleagues to minimize researcher bias and strengthen the rigor of the analysis; (5) Reflexivity Journal: The researcher kept a reflexive journal to record assumptions and reflections during fieldwork, ensuring transparency in interpretations.

Data Analysis Procedures

Data analysis followed the interactive model of Miles and Huberman (2014), which consists of the following stages: (1) Data Collection: All transcripts, observation notes, and documents were collected and systematically organized; (2) Data Reduction: Relevant data were selected, coded, and categorized based on six thematic dimensions derived from the Van Meter and Van Horn model; (3) Data Presentation: Summarized in a thematic matrix and narrative diagram to compare patterns across informants and data sources; (4) Conclusion Drawing and Verification: Patterns are interpreted, conclusions are drawn, and repeatedly cross-checked with data sources (interviews, observations, and documents) to ensure accuracy and depth.

Results and Discussions

This study analyzes the implementation of the post-disaster building permit policy in Palu City (Regional Regulation No. 9 of 2022) using the Van Meter and Van Horn (1975) policy implementation model. Data were collected from 12 informants through in-depth interviews, field observations, focus group discussions (FGDs), and document analysis. Qualitative data were reduced and thematically categorized into six main components based on the model: (1) Policy Standards and Objectives, (2) Resources, (3) Characteristics of Implementing Organizations, (4) Communication Between Implementers, (5) Implementer Dispositions, and (6) Socio-Economic and Political Environment. This thematic organization provides a structured overview of the strengths, gaps, and contextual factors influencing policy implementation in the post-disaster context in Palu.

Table 1. Comparison of Old vs New Regional Regulation on Building Policy in Palu City

Aspect	Regional Regulation No. 10 of 2012	Regional Regulation No. 9 of 2022
Focus	Building Permit (IMB)	Building Approval (PBG)
System	Manual application process	Digital-based system (SIMBG)
Disaster Mitigation	Not specifically addressed	Includes disaster-prone zoning and risk considerations

The transformation of building regulation in Palu City reflects a significant policy shift in response to the 2018 natural disaster. Regional Regulation No. 10 of 2012, which governed the issuance of Building Permits (Izin Mendirikan Bangunan or IMB), relied on a manual system that lacked disaster risk considerations and failed to accommodate the specific challenges posed by liquefaction-prone

areas. The regulation did not incorporate spatial risk zoning or mitigation planning, making it inadequate for post-disaster recovery and resilience-building efforts.

In contrast, Regional Regulation No. 9 of 2022 introduced a more comprehensive and adaptive approach. This regulation replaced the IMB system with Building Approval (Persetujuan Bangunan Gedung or PBG), which is aligned with the national regulatory framework, particularly Government Regulation No. 16 of 2021 and the Job Creation Law (Law No. 11 of 2020). One of the most notable improvements is the adoption of the SIMBG, a centralized and digital-based permit system that standardizes building procedures across regions. Furthermore, the new regulation integrates disaster mitigation measures by mandating compliance with disaster-prone zoning maps, which is particularly crucial for a city like Palu that remains vulnerable to earthquakes, tsunamis, and liquefaction.

This policy evolution marks a critical step toward aligning local urban planning with national resilience strategies. However, as the research findings indicate, the implementation of this updated regulation still faces significant challenges in terms of communication, institutional readiness, and public awareness.

Policy Standards and Objectives

This indicator focuses on the clarity, consistency, and measurability of policy objectives. In Palu, Regional Regulation No. 9 of 2022 replaces the Building Permit (IMB) system with the Building Permit (PBG) system to align with Government Regulation No. 16/2021. However, the transition lacked detailed operational guidelines at the regional level. There was a gap between the objectives set by national regulations and the understanding of those objectives among implementers at the regional level and the community.

"We know there are new regulations, but we never received training or socialization on how to implement them in the field." (Informant 3, Spatial Planning Officer)

Furthermore, the lack of clear performance indicators, such as expected permit issuance targets or enforcement benchmarks, created ambiguity in implementation. As a result, implementers relied more on discretionary interpretations than structured guidelines, contributing to inconsistent implementation.

Resources

The resource component refers to the adequacy of financial, human, and infrastructure resources necessary for effective policy implementation. In Palu, significant gaps were identified in all three aspects. Human resources were inadequate; many officers lacked training in digital platforms like SIMBG. Financial resources were also limited, impacting the government's ability to socialize policies or provide technical assistance to residents.

"We only have two staff members who understand how to input data into SIMBG, even though there are so many requests from the public." (Informant 1, Public Works Officer)

Infrastructure limitations are also evident. Many residents lack internet access or digital literacy, making the online SIMBG process inaccessible to them. This systemic resource limitation hampers policy dissemination, service delivery, and monitoring.

Characteristics of the Implementing Organization

This indicator evaluates the structure, culture, and capacity of the implementing agencies. In the case of Palu, the Spatial Planning Agency and the Public Works Agency were primarily responsible for implementing the regulations. However, overlapping mandates and unclear standard operating procedures (SOPs) led to inefficiency.

"The SOPs overlap. We're confused about who should handle which stage." (Informant 5, Head of the Licensing Division)

The lack of a formal coordination framework between agencies such as the Regional Disaster Management Agency (BPBD), the Regional Development Planning Agency (BPBD), and the environmental unit contributed to fragmented implementation. Internal commitment existed, but the institutional structure lacked agility and interconnectivity, which are vital for post-disaster governance.

Communication Between Implementers

Communication refers to the flow of information between agencies, from decision-makers to field officers, and with the public. In Palu, communication between agencies was largely reactive and unstructured. There were no regular coordination meetings, shared information systems, or joint monitoring teams.

> "There hasn't been a joint meeting between agencies regarding the PBG (Building Safety Plan) since 2021." (Informant 7, BPBD Official)

This lack of communication has led to differences in interpretation and implementation practices across agencies. For example, one agency interprets technical drawings as mandatory for all buildings, while another agency grants exceptions for certain categories.

Implementer Disposition

Disposition involves the beliefs, understanding, and willingness of implementers to implement the policy. In Palu, the majority of implementers expressed a positive attitude toward the policy's objectives but were hampered by a lack of tools, authority, and training. There was a willingness to support building safety but frustration with structural limitations.

> "We want to implement the regulations properly, but the facilities and training don't support it." (Informant 2, Planning Officer)

Some officers adapted informally by assisting residents with filling out forms or bending requirements, reflecting good intentions but also indicating institutional failure. Their commitment was high, but their effectiveness was hampered by operational challenges.

Socio-Economic and Political Environment

This indicator assesses how external environmental factors influence policy implementation. In Palu, the socio-economic impacts of the 2018 disaster are still deeply felt. Many residents lost their homes and livelihoods, making compliance with permits a low priority. Public awareness of regulations is limited, and there is a general distrust of formal procedures.

> "Residents just want to have a place to live quickly. They don't really care about permits, especially if the process is long and expensive." (Informant 6, Community Leader)

Furthermore, digital inequality and economic hardship prevent many residents from fulfilling the technical requirements of the PBG process. Disaster trauma also contributes to a sense of urgency in rebuilding efforts, which often bypass formal channels. The Geological Agency estimates the probability of liquefaction in Palu at 54.4% over a 50-year recurrence period, yet risk perception remains low. This highlights the need for not only regulation but also community-based risk education.

Van Meter and Van Horn (1975) emphasized that policy success depends not only on the standards and disposition of implementers, but also on the alignment between policy and context. In Palu, this alignment was weak. Good intentions and regulatory reforms alone are insufficient when faced with poor communication, under-resourced institutions, and fragile communities.

Based on the above analysis, the following recommendations are offered: (1) Local Socialization and Trauma-Based Outreach: Provide empathetic community-based education on building safety and legal compliance, tailored to post-disaster trauma; (2) Simplified and Subsidized Permit Scheme: Offer a fast and low-cost pathway for disaster victims, including paper-based applications for those without internet access; (3) Harmonization of National and Regional Guidelines: Publish a technical manual that adapts national policies to local risk zones (ZRB) and capacity levels; (4) Establishment of a Multi-Stakeholder Task Force: Integrate spatial planning, the Regional Disaster Management Agency (BPBD), NGOs, and community leaders into a coordinating forum for joint licensing monitoring; (5) Monitoring and Evaluation Framework: Develop measurable indicators that assess not only the quantity of permits but also the quality, satisfaction, and safety outcomes.

Overall, the implementation of the post-disaster building policy in Palu City failed to meet the key indicators outlined by Van Meter and Van Horn. Five of the six indicators policy clarity, resources, organizational characteristics, inter-agency communication, and socio-economic conditions were not achieved due to overlapping institutional roles, poor coordination, limited capacity, and lack of public

awareness. Only the disposition of implementers showed partial success, with field officers expressing commitment despite lacking legal authority. These findings highlight the urgent need for strengthened institutional capacity, clear communication strategies, and policies that are better adapted to the local post-disaster context.

Table 2. Analysis of Policy Implementation Based on Van Meter and Van Horn Model

Implementation Indicator (Van Meter & Van Horn)	Achievement Status	Reasons for Incompletion / Notes
Policy Standards and Objectives	Not Achieved	The public was unaware of the change from IMB to PBG; there was no regular socialization; the objectives of the policy were not clearly communicated to implementers and citizens.
Resources	Not Achieved	Limited human resources (HR) who understood the SIMBG system; lack of technical training; supporting infrastructure not available at the sub-district or village level.
Characteristics of Implementing Agencies	Not Achieved	Overlapping authority between Dinas PUPR, BPBD, and village-level offices; no established coordination mechanisms; lack of standardized SOPs among institutions.
Communication among Implementers	Not Achieved	No routine interagency communication forums; agencies worked in silos; information shared only informally or after violations.
Disposition of Implementers	Partially Achieved	Field officers showed commitment to serve the public but were constrained by the absence of clear legal instruments and authority.
Social, Economic, and Political Environment	Not Achieved	Many disaster victims had not recovered economically; they could not afford permit costs or meet building standards; informal construction occurred out of urgent housing needs.

Conclusions

This research shows that the implementation of the post-disaster Building Permit (IMB) policy in Palu City, through Regional Regulation No. 9 of 2022, has not been optimal. Based on the Van Meter and Van Horn model, six main factors were identified that hampered the policy's effectiveness: (1) lack of understanding of policy standards and objectives, (2) limited human resources and infrastructure, (3) weak coordination between implementing organizations, (4) unstructured communication, (5) limited authority and support for implementers in the field, and (6) socio-economic challenges facing post-disaster communities that have not been adequately addressed in national policy.

This situation indicates a gap between the national policy design and local realities in Palu. Therefore, policy implementation needs to be adapted to the characteristics of disaster affected areas through a more contextual, participatory, and adaptive approach. Local governments are advised to simplify procedures, strengthen cross-sectoral coordination, increase the capacity of implementers, and provide technical guidance tailored to local needs. This will enable post-disaster development policies to be more inclusive and effective in supporting community recovery.

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