Anthroposia: Journal of Social and Human Development
Vol 1 No 3 September 2026, Hal 92-105
ISSN: 3125-0866(Print) ISSN: 3125-0769(Electronic)
Open Access: https://sovereignresearch.org/anthroposia

Local Government Governance in Disaster Risk Mitigation in Tanjungpinang City

Emha Rifaq Alhaqi[1*], Afrizal[2], Ella Afnira[3]
[1-3] Universitas Maritim Raja Ali Haji, Indonesia
email: emha.alhaqi23@gmail.com[1]

Article Info :
Received:
27-07-2026
Revised:
07-08-2026
Accepted:
13-08-2026

Abstract

This study aims to analyze local government governance in disaster risk mitigation in Tanjungpinang City based on the principles of Good Governance, namely accountability, transparency, participation, rule of law, responsiveness, effectiveness, and efficiency. The study employed a descriptive qualitative approach, with data collected through in-depth interviews, observation, and documentation. Informants consisted of representatives from the Tanjungpinang City Regional Disaster Management Agency (BPBD), Fire and Rescue Service, Regional House of Representatives (DPRD), and communities living in disaster-prone areas. The findings indicate that local government has implemented Good Governance principles through disaster socialization, community education, early-warning dissemination, interagency coordination, community volunteer development, and personnel preparedness. However, mitigation implementation remains suboptimal due to limited budgets, inadequate facilities and infrastructure, uneven program coverage, insufficient coordination among local government agencies, and the absence of an integrated Drainage Master Plan. These findings indicate that effective disaster governance requires stronger institutional coordination, adequate resource allocation, integrated infrastructure planning, and sustained community participation. Strengthening these dimensions is expected to improve the effectiveness, efficiency, and sustainability of disaster risk mitigation in Tanjungpinang City.

Keywords: *Accountability, Disaster Risk Mitigation, Good Governance, Local Government, Tanjungpinang City.*

INTRODUCTION

Changing patterns of disaster risk, increasing extreme events, and the growing complexity of social and environmental vulnerabilities have encouraged a shift in disaster management from a predominantly reactive paradigm toward risk governance that emphasizes prevention, mitigation, preparedness, and community resilience. Recent developments in disaster governance research indicate that local governments occupy a strategic position because decisions concerning spatial planning, infrastructure provision, public services, and community protection are largely implemented at the level of government closest to the population (Prianto & Abdillah, 2023). This shift positions disaster mitigation as an integral component of governance rather than merely a technical disaster-management activity, as the effectiveness of risk reduction depends on the ability of institutions to integrate policies, coordination, resources, and community capacities (Alhadi et al., 2025). Within Indonesia, decentralization provides local governments with authority to manage governmental affairs according to the characteristics and needs of their respective regions, making local governmental capacity increasingly important in responding to geographically differentiated risks (Wijaya, 2024). Public service provision within this framework extends beyond basic services to include efforts to protect communities through effective and sustainable disaster risk mitigation (Hadian & Pancasilawan, 2025). Mitigation encompasses a series of efforts to reduce disaster risk through physical development and capacity building among communities facing disaster threats, requiring connections between government policies and community capacity to manage risks. This perspective indicates that mitigation should not be assessed solely through the existence of programs, but also through the quality of local government governance that directs the processes of planning, coordination, implementation, and evaluation of risk reduction.

Law Number 23 of 2014 concerning Regional Government provides the foundation for local government administration in delivering effective, accountable, and welfare-oriented public services (Law Number 23 of 2014). Within local government administration, good governance principles are essential because decentralized authority must be accompanied by institutional capacity to produce policies that are responsive, transparent, accountable, and aligned with community needs (Nurhidayat, 2023). Law Number 24 of 2007 stipulates that mitigation constitutes an integral component of disaster management aimed at reducing disaster risks and impacts on communities (Law Number 24 of 2007). This provision demonstrates that disaster risk reduction has been institutionalized as part of governmental responsibility, requiring integration between local governmental authority and disaster-management institutions. This framework is reinforced by Regional Regulation of the Riau Islands Province Number 5 of 2024 concerning disaster management in the region (Regional Regulation of the Riau Islands Province Number 5 of 2024). From a governmental management perspective, risk management also requires integrated processes of risk identification, control, monitoring, and decision-making so that risks are not addressed only through fragmented responses after disasters occur (Amirya & Irianto, 2024). These arrangements demonstrate that regulatory frameworks provide an essential institutional foundation, while the effectiveness of mitigation remains dependent on the ability of local governments to translate normative mandates into consistent governance practices.

Tanjungpinang City is characterized by a coastal environment that is vulnerable to floods, tidal floods, extreme weather, and fallen trees (Dharmawangsa & Danil, 2021). These characteristics make risk management in Tanjungpinang increasingly complex because disaster risks in coastal areas are influenced not only by natural hazards but also by land-use changes, spatial vulnerability, and land-use planning compatibility (Febriany et al., 2026). Disasters constitute a series of events capable of threatening human life and causing casualties, environmental damage, and material losses (Budiman & Mulkan, 2023). Data from the Tanjungpinang City Regional Disaster Management Agency (BPBD) indicate that disaster occurrences reached 316 events in 2021, declined to 193 events in 2022 and 174 events in 2023, before increasing again to 270 events in 2024 (BPBD Kota Tanjungpinang, 2024). In 2024, these events were dominated by extreme weather with 116 occurrences, fallen trees with 83 occurrences, tidal floods with 13 occurrences, and floods with 4 occurrences. This pattern indicates that disaster risk in Tanjungpinang remains relatively high and recurrent, increasing the need for governance capable of anticipating multiple types of hazards. Research on coastal mitigation in Tanjungpinang also indicates that tidal flooding requires policies that consider coastal characteristics and the involvement of multiple actors in risk management (Kamarullah et al., 2024).

The Tanjungpinang City Regional Disaster Management Agency has implemented various mitigation measures, including drainage normalization, water-channel cleaning, the removal of trees considered at risk of falling, and disaster-awareness dissemination among communities (BPBD Kota Tanjungpinang, 2024). These measures demonstrate local government efforts to reduce risk through both structural and non-structural approaches, although program effectiveness is not determined solely by the number of activities undertaken. Research on the implementation of disaster-management programs indicates that mitigation at the local level continues to encounter challenges related to capacity and policy implementation, requiring stronger institutional and programmatic arrangements (Hadian & Pancasilawan, 2025). A study of extreme-weather mitigation strategies in Bintan Regency similarly indicates that local hazards require institutional strategies capable of adapting mitigation actions to regional conditions and local government capacity (Dhanni et al., 2025). Nevertheless, mitigation implementation continues to face various constraints, particularly limited facilities and infrastructure, which restrict program effectiveness. Effective governance is required to ensure that mitigation planning, coordination, implementation, and evaluation operate effectively and sustainably because governance quality is closely associated with the government's capacity to manage resources and remain accountable for policy implementation (Amane et al., 2025). This perspective indicates that local mitigation challenges are not limited to the availability of physical resources but also concern how governments organize resources, establish coordination, and ensure policy continuity. Such conditions are important because mitigation approaches focused predominantly on technical actions may be insufficient to address risks characterized by cross-sectoral interactions and institutional dependencies.

The literature on disaster governance indicates that local governments face substantial challenges in integrating multiple actors, authorities, and resources into a coherent risk-reduction system, particularly in coastal urban areas characterized by diverse forms of community vulnerability

(Prianto & Abdillah, 2023). Research on strengthening institutional frameworks for disaster risk governance also emphasizes institutional design, the distribution of authority, and coordination as important factors in ensuring that risk policies are translated into effective actions (Alhadi et al., 2025). In coastal disaster mitigation, a collaborative governance perspective demonstrates that interdependence among institutional resources limits the capacity of governments to act independently because risk reduction requires resource exchange and coordination among multiple actors (Suasa et al., 2026). These findings indicate that mitigation effectiveness cannot be assessed solely through the existence of regulations, the number of programs, or responses to disaster events, but must also be examined through governance mechanisms connecting policies with implementation. In contrast, studies focusing on Tanjungpinang have largely addressed specific hazard characteristics, particularly tidal flooding and flood risks associated with particular geographical areas, leaving limited understanding of how the local government manages the broader mitigation process through the BPBD. This condition creates an empirical gap because relatively little research has comprehensively examined the relationship between local government authority, institutional capacity, coordination, resources, and mitigation implementation in responding to diverse and recurrent disaster events in Tanjungpinang City. The gap also reveals a conceptual limitation in connecting good governance scholarship with the practical governance of disaster risk at the municipal level. From a practical perspective, this limitation may lead to policy recommendations that concentrate on addressing particular types of disasters rather than strengthening the governance system that supports sustainable mitigation.

Research on local government governance in disaster risk mitigation in Tanjungpinang City remains limited, creating a need for an analysis that places governmental processes at the center of inquiry rather than focusing exclusively on hazard characteristics or particular mitigation programs. This study positions the Tanjungpinang City Regional Disaster Management Agency as the empirical context for examining how local government governance functions in reducing disaster risks during 2024. The study aims to analyze local government governance in disaster risk mitigation at the Tanjungpinang City BPBD in 2024 by examining planning, coordination, implementation, resource management, and evaluation processes. Its position lies at the intersection of local government studies, good governance, and disaster risk governance, particularly within a coastal city experiencing recurrent and multidimensional disaster threats. Theoretically, the study is expected to extend understanding of how governance principles are applied to disaster risk management at the local level by demonstrating the relationship between institutional capacity and mitigation effectiveness. Methodologically, the study contributes an analytical perspective that connects governance dimensions with mitigation practices, enabling a more comprehensive understanding of policy processes from institutional arrangements to local implementation. Practically, the findings are expected to provide a basis for recommendations to strengthen coordination, institutional capacity, resource management, and the sustainability of disaster risk mitigation in Tanjungpinang City.

RESEARCH METHODS

This study employed an empirical qualitative research design using a descriptive qualitative approach to examine local government governance in disaster risk mitigation in Tanjungpinang City in 2024. The qualitative design was selected because the study seeks to develop an in-depth understanding of how planning, coordination, institutional roles, and mitigation activities are implemented within the local governmental context rather than measuring relationships among predetermined variables (Sugiyono, 2023). The research was conducted at the Tanjungpinang City Regional Disaster Management Agency (BPBD), the Tanjungpinang City Fire and Rescue Service, Commission III of the Tanjungpinang City Regional House of Representatives (DPRD), and communities located in areas affected by floods and fallen trees. Participants were selected using purposive sampling based on their institutional roles, involvement in disaster mitigation, direct knowledge of mitigation implementation, or experience with disaster impacts (Creswell & Creswell, 2023). The informants comprised representatives of BPBD, the Fire and Rescue Service, Commission III of the DPRD, and community members residing in disaster-prone areas. Data were collected through in-depth interviews, direct observation, and document analysis to obtain complementary evidence concerning mitigation planning, interinstitutional coordination, program implementation, and community-level experiences. The combination of institutional and community informants enabled the study to examine disaster mitigation governance from both governmental and affected-community perspectives.

The research instrument consisted primarily of an interview guide developed around the study objectives and the main dimensions of local government governance in disaster risk mitigation, supported by observation guidelines and documentation protocols. The interview guide addressed issues related to institutional responsibilities, mitigation planning, coordination mechanisms, resource availability, implementation of mitigation programs, community participation, and evaluation of mitigation activities. Data analysis followed the interactive model of Miles, Huberman, and Saldaña, involving data condensation, data display, and conclusion drawing or verification as interconnected processes throughout the research (Miles et al., 2014). Data obtained from interviews, observations, and documents were systematically organized, compared, and interpreted to identify recurring patterns, institutional relationships, implementation constraints, and governance practices relevant to disaster risk mitigation. Data credibility was strengthened through source triangulation by comparing information obtained from different categories of informants and corroborating interview findings with observations and documentary evidence (Hardani et al., 2020). The analysis was conducted iteratively so that emerging findings could be checked against the available evidence and alternative interpretations could be considered before conclusions were established. Ethical considerations were addressed by explaining the purpose of the research to participants, obtaining their voluntary participation and informed consent, maintaining the confidentiality of information provided, and using the collected data solely for academic purposes.

RESULTS AND DISCUSSION

Accountability in Disaster Risk Mitigation in Tanjungpinang City

Accountability in disaster risk mitigation refers to the capacity of local government institutions to perform their mandated responsibilities and demonstrate that mitigation policies and activities are directed toward reducing risks faced by the community. Field findings indicate that the Tanjungpinang City Regional Disaster Management Agency (BPBD) has implemented several pre-disaster mitigation activities, including disaster socialization, school-based education, coordination with the Meteorology, Climatology, and Geophysical Agency (BMKG) regarding extreme-weather information, dissemination of early warnings through social media, installation of evacuation-route signs, and coordination with the Housing and Settlement Agency for pruning trees considered vulnerable to falling. These activities demonstrate that accountability is expressed not merely through institutional declarations but through concrete programs intended to strengthen community preparedness before hazardous events occur. The implementation of these programs is consistent with the principle of accountability in *good governance*, which requires government institutions to remain responsible for the functions and public responsibilities assigned to them (Mangidaan, 2017). The findings also indicate that mitigation responsibilities are distributed among local government institutions according to their respective mandates, allowing disaster risk reduction to be addressed through different institutional capacities. This institutional distribution is important because disaster risks in coastal cities involve interconnected hazards that cannot be managed effectively through the actions of a single government agency (Prianto & Abdillah, 2023).

The accountability of BPBD is also reflected in its efforts to provide information and preparedness measures before disaster events occur, particularly in relation to extreme weather, flooding, and fallen trees. Interviews indicated that the agency uses information obtained through coordination with BMKG as a basis for communicating potential weather-related hazards to the public, while field observations identified the implementation of evacuation-route signage and tree-pruning activities as tangible mitigation measures. The following table summarizes the principal mitigation activities identified from interviews, observations, and documentary evidence.

Table 1. Local Government Mitigation Activities Related to Accountability

Institution	Main Mitigation Activities	Accountability Function
BPBD Tanjungpinang City	Disaster socialization, school education, early-warning dissemination, BMKG coordination, evacuation-route signs, coordination on hazardous trees	Fulfilling disaster prevention and preparedness responsibilities

Fire and Rescue Service	Fire-prevention socialization, school education, building inspections, fire-volunteer formation, equipment checks	Maintaining preparedness and operational responsibility
DPRD Commission III	Oversight of government programs and budget-related support	Monitoring implementation and governmental responsibility
Community	Reporting potential hazards and participating in mitigation activities	Supporting government accountability through community involvement

The pattern presented in Table 1 indicates that accountability operates through a distribution of responsibilities rather than through a single institutional mechanism. The Fire and Rescue Service, for instance, contributes through fire-prevention education, school-based awareness activities, building inspections, the establishment of fire volunteers in each urban village, and routine checks of operational vehicles and equipment. Such practices indicate that accountability is connected to institutional preparedness because agencies are expected to maintain the capacity required to perform their respective functions when risks emerge. This finding corresponds with the view that effective governance requires public institutions to manage responsibilities through clear functions, institutional commitments, and mechanisms that support the continuity of public services (Amane et al., 2025). The presence of routine equipment checks and volunteer development also suggests that accountability extends beyond immediate disaster response and encompasses organizational preparation for potential hazards. From a governance perspective, this distinction is important because an institution can only be considered accountable in disaster mitigation when its preventive commitments are supported by operational capacities.

The findings further demonstrate that accountability is influenced by the relationship between government institutions and legislative oversight. Information obtained from Commission III of the Tanjungpinang City DPRD indicates that local government agencies have implemented mitigation programs according to their respective functions, although budget limitations and the need for stronger cross-sectoral coordination remain significant constraints. This finding suggests that accountability cannot be separated from the availability of resources because institutional responsibility requires adequate financial, infrastructural, and organizational support to translate policy commitments into effective mitigation actions. The relationship between accountability and resource management is consistent with the governance perspective that public institutions must not only carry out their functions but also demonstrate responsible management of resources entrusted to them (Moenek & Suwanda, 2019). The DPRD's position is particularly relevant because legislative oversight provides an institutional mechanism through which governmental programs and resource allocation can be scrutinized. At the community level, informants acknowledged the existence of mitigation activities but indicated that their implementation needs to be expanded to areas with greater disaster vulnerability. This finding points to an accountability gap between the existence of government programs and their spatial reach, particularly when mitigation activities have not been experienced equally by communities across disaster-prone areas.

The accountability dimension is therefore evident in the existence of continuous mitigation programs, the distribution of institutional responsibilities, and the government's efforts to maintain preparedness before disaster events occur. The findings indicate that BPBD and the Fire and Rescue Service have translated their formal responsibilities into concrete activities involving public education, early-warning communication, environmental risk reduction, operational preparedness, and community capacity building. Such practices reflect the broader principle that good governance requires government institutions to be accountable for policy implementation and public service outcomes rather than merely complying with administrative procedures (Karso, 2022). Nevertheless, the findings reveal that accountability remains constrained by limited budgets, infrastructure, and coordination capacity, which affect the consistency and geographical coverage of mitigation activities. These constraints are particularly significant in a coastal city where recurrent hazards require sustained prevention measures rather than temporary interventions after disasters occur. The accountability of local government should therefore be assessed not only from the number of mitigation programs implemented but also from the

extent to which those programs reach vulnerable communities and are supported by adequate institutional resources.

Overall, the accountability of local government in disaster risk mitigation in Tanjungpinang City can be characterized as relatively well implemented, although important institutional limitations remain. The evidence demonstrates that BPBD, the Fire and Rescue Service, DPRD, and community actors perform differentiated roles that collectively support pre-disaster risk reduction. This finding reinforces the argument that accountability in disaster governance is multidimensional because responsibility is distributed across institutions with different mandates, resources, and forms of public engagement (Alhadi et al., 2025). The implementation of socialization, disaster education, early-warning dissemination, evacuation-route installation, hazardous-tree management, fire-volunteer development, building inspection, and operational equipment checks provides evidence of active governmental responsibility. At the same time, limited funding, infrastructure constraints, uneven program coverage, and coordination challenges indicate that formal responsibility has not yet been fully translated into uniformly strong mitigation capacity. Strengthening accountability therefore requires more than maintaining existing programs, as it also requires clearer cross-sectoral coordination, adequate resource allocation, systematic monitoring, and broader coverage of vulnerable communities. The empirical evidence positions accountability as an important foundation for improving the quality and sustainability of local government governance in disaster risk mitigation in Tanjungpinang City.

Transparency and Public Participation in Disaster Risk Mitigation in Tanjungpinang City

Transparency in disaster risk mitigation concerns the government's capacity to provide timely, accessible, and understandable information that enables communities to recognize potential hazards and make appropriate preparedness decisions. Field findings indicate that the Tanjungpinang City Regional Disaster Management Agency (BPBD) has implemented transparency through the dissemination of extreme-weather information obtained from the Meteorology, Climatology, and Geophysical Agency (BMKG), disaster socialization, school-based education, installation of evacuation-route signs, and public warnings when potential hazards are identified. The use of official social media channels has also expanded the means through which disaster-related information can reach residents without requiring direct interaction with government offices. This practice reflects the transparency principle of good governance, in which access to public information enables citizens to understand government actions and respond to issues affecting their safety (Nurhidayat, 2023). Interviews with the Head of the Prevention and Preparedness Section of BPBD indicated that information concerning potential hazards is communicated as quickly as possible to increase public awareness before disaster events occur. The findings suggest that transparency in Tanjungpinang's disaster governance is therefore closely connected to preparedness because information becomes a governance instrument that enables communities to anticipate rather than merely react to hazards.

The transparency mechanism is not limited to BPBD because the Tanjungpinang City Fire and Rescue Service also disseminates information concerning fire prevention and initial emergency response. Interviews indicated that the agency conducts socialization and educational activities from early childhood education through senior high school, provides training on the use of portable fire extinguishers, and develops fire volunteers in each urban village. These activities create direct communication channels between government institutions and communities, allowing technical information about fire prevention to be translated into practical knowledge. The following table presents the principal forms of information dissemination identified through interviews, observations, and documentation.

Table 2. Forms of Disaster Mitigation Information Dissemination

Institution	Information Dissemination	Target	Governance Function
BPBD Tanjungpinang City	Extreme-weather information, early warnings, disaster socialization, evacuation information	Communities and students	Increasing risk awareness and preparedness

Fire and Rescue Service	Fire-prevention education, APAR training, socialization	Communities and students	Increasing preventive capacity
Government social media	Weather and disaster-related information	General public	Expanding public access to information
Community volunteers	Local hazard information and preparedness practices	Neighborhood communities	Supporting two-way information exchange

The information presented in Table 2 demonstrates that transparency is implemented through multiple communication channels rather than through a single formal information mechanism. The combination of social media, direct socialization, school education, evacuation signs, and community-based activities provides opportunities for information to reach different segments of the population according to their circumstances. This approach is particularly relevant to disaster governance because effective risk communication requires information to be available before hazards materialize and to be communicated through channels that communities can access and understand. The findings also indicate that transparency has a participatory dimension because information dissemination creates opportunities for residents to recognize risks, report potential hazards, and become involved in mitigation activities. In this sense, transparency is not merely an administrative obligation but a mechanism for strengthening public capacity to participate in risk reduction. The relationship between transparency and service quality is consistent with the view that open governmental processes can strengthen public trust and improve the responsiveness of public institutions to community needs (Rahmawati et al., 2025).

The community dimension becomes more apparent in the findings concerning public participation in disaster risk mitigation. BPBD encourages residents to participate by reporting potential hazards such as trees at risk of falling, blocked drainage channels, and locations vulnerable to flooding, while also involving residents through disaster socialization and educational activities. The Fire and Rescue Service strengthens participation by establishing fire volunteers at the urban-village level and providing practical training concerning fire prevention and the use of portable fire extinguishers. These mechanisms indicate a movement from a government-centered model toward a shared risk-management arrangement in which communities are positioned as actors capable of contributing local knowledge and preventive action. Such collaborative arrangements are increasingly important in coastal disaster governance because local governments often depend on community knowledge, social networks, and locally available resources when managing complex and geographically dispersed risks (Suasa et al., 2026). The empirical evidence shows that participation is therefore facilitated through both formal programs and everyday community involvement in identifying and reporting potential hazards.

Nevertheless, the findings reveal that transparency and participation have not reached an equally strong level across all communities. Information from DPRD representatives indicates that the local government has attempted to disseminate mitigation information through various media and socialization activities, while community informants confirmed that they had received information regarding extreme weather and disaster preparedness. At the same time, several informants indicated that the intensity and coverage of information dissemination still need to be increased, particularly in areas with higher disaster vulnerability. This discrepancy suggests that the availability of information does not automatically guarantee equal access or effective public participation because geographical coverage, communication frequency, and community awareness influence whether information can be transformed into preparedness behavior. The finding is relevant to research on resilient coastal cities, which emphasizes that communities may remain vulnerable even when disaster-management institutions and policies are formally established (Prianto & Abdillah, 2023). A governance system that provides information but does not adequately reach vulnerable groups may therefore achieve formal transparency while producing uneven practical benefits.

The findings indicate that transparency and public participation in Tanjungpinang's disaster risk mitigation have developed through complementary mechanisms involving information dissemination, education, community engagement, and local volunteer structures. BPBD's use of weather information, early warnings, social media, and direct socialization provides an institutional basis for public awareness, while the Fire and Rescue Service's educational programs and fire-volunteer development expand opportunities for community involvement. These practices correspond with the broader conception of effective governance in which public institutions are expected to maintain openness while

creating opportunities for citizens to engage with governmental processes (Amane et al., 2025). The principal limitation identified by the study concerns the uneven intensity and reach of information and participation activities, particularly among communities exposed to recurrent hazards. This limitation is important because disaster mitigation depends not only on whether government information exists but also on whether communities can access, interpret, and use that information in preventive actions. Strengthening this dimension requires more systematic dissemination strategies, wider community-based education, improved utilization of digital communication, and stronger mechanisms for receiving community reports as inputs into government decision-making. Transparency and participation consequently function as interconnected governance mechanisms that can strengthen community preparedness while improving the capacity of local government to identify and respond to risks at the neighborhood level.

Rule of Law and Responsiveness in Disaster Risk Mitigation in Tanjungpinang City

The rule of law in disaster risk mitigation concerns the extent to which local government institutions implement mitigation policies and activities based on legally established mandates, institutional authority, and regulatory procedures. Field findings indicate that the implementation of disaster risk mitigation in Tanjungpinang City is guided primarily by Regional Regulation of Tanjungpinang City Number 3 of 2016 concerning Disaster Management, which provides an institutional basis for the division of responsibilities among local government agencies. BPBD, the Fire and Rescue Service, and other relevant agencies have carried out mitigation activities within their respective institutional functions, including disaster education, early-warning dissemination, community preparedness, building inspection, fire-prevention activities, and environmental risk reduction. The regulatory framework provides legitimacy for these activities while establishing the responsibilities that government institutions must perform in protecting communities from disaster risks. This institutional arrangement reflects the importance of a clear legal framework in disaster governance because effective risk reduction requires defined authority and coordination among governmental actors (Alhadi et al., 2025). The implementation of these responsibilities indicates that the rule of law has become an operational foundation for disaster mitigation rather than functioning solely as a formal administrative requirement.

The findings, however, indicate that regulatory compliance does not automatically guarantee the availability of comprehensive technical planning instruments. Interviews with the Public Works and Spatial Planning Agency (PUPR) revealed that Tanjungpinang City does not yet have a comprehensive Master Plan Drainage that can serve as an integrated reference for developing and managing the city's drainage system. Drainage construction and maintenance have consequently been implemented according to field requirements and available budget priorities, which limits the ability to establish an interconnected drainage system for long-term flood-risk reduction. This condition demonstrates an institutional gap between the existence of disaster-management regulations and the technical instruments required to translate regulatory mandates into systematic infrastructure planning. Risk management at the local government level requires integration between risk identification, planning, implementation, monitoring, and resource allocation rather than fragmented interventions based solely on immediate needs (Amirya & Irianto, 2024). The absence of an integrated drainage master plan is particularly significant because flooding represents one of the recurring hazards affecting Tanjungpinang's coastal environment.

The relationship between regulatory governance and flood mitigation becomes more complex because Tanjungpinang faces coastal and land-use conditions that influence the distribution of flood risk. Recent research on the Jang River watershed demonstrates that flood risk in Tanjungpinang is associated with interactions among land-use change, spatial-planning suitability, and community vulnerability (Febriany et al., 2026). This finding indicates that the rule of law in disaster mitigation needs to extend beyond disaster-specific regulations toward the consistent integration of spatial planning, infrastructure development, environmental management, and disaster-risk considerations. The following table summarizes the relationship between the principal regulatory and institutional arrangements identified in the research and their implications for mitigation implementation.

Table 3. Regulatory and Institutional Basis of Disaster Risk Mitigation

Regulatory/Institutional Basis	Implementing Institution	Mitigation Relevance	Identified Condition
Regional Regulation of Tanjungpinang City No. 3 of 2016	BPBD and relevant agencies	Establishes disaster-management responsibilities	Implemented as the main institutional basis
Disaster-management functions	BPBD	Prevention, preparedness, coordination, and risk reduction	Programs implemented according to institutional duties
Fire-prevention functions	Fire and Rescue Service	Prevention, education, preparedness, and emergency capacity	Implemented through education, inspections, and volunteers
Spatial and drainage management	PUPR	Flood-risk reduction and infrastructure planning	Integrated *Master Plan Drainage* not yet available
Legislative oversight	DPRD Commission III	Oversight and support for disaster-related policies and resources	Coordination and budget support require strengthening

As indicated in Table 3, the principal challenge lies not in the absence of a regulatory foundation but in translating regulatory authority into integrated technical and institutional arrangements. The existing division of responsibilities allows BPBD and other agencies to perform their respective functions, yet mitigation outcomes remain influenced by coordination, planning instruments, and resource availability. This condition corresponds with research emphasizing that institutional strengthening is essential for disaster risk governance because fragmented authority can weaken policy implementation even when formal regulations are already established (Alhadi et al., 2025). The rule of law should therefore be interpreted as encompassing both compliance with regulations and the capacity to establish operational mechanisms that enable those regulations to produce measurable risk-reduction outcomes. The absence of a drainage master plan illustrates how a legal mandate can coexist with an incomplete technical planning framework. Strengthening this dimension requires periodic evaluation of existing regulations, integration between disaster-management and spatial-planning policies, and development of technical planning instruments that provide long-term direction for flood mitigation.

Responsiveness constitutes a complementary dimension because the effectiveness of disaster governance also depends on the government's ability to recognize emerging risks and respond to community needs in a timely manner. The findings show that BPBD responds to potential hazards by monitoring information from BMKG, disseminating early warnings, coordinating with relevant agencies, and conducting field assessments in locations considered vulnerable to disaster impacts. The Fire and Rescue Service demonstrates responsiveness through 24-hour personnel preparedness, routine inspections of operational vehicles and equipment, and follow-up actions based on reports received from residents. These practices indicate that responsiveness is embedded not only in emergency intervention but also in pre-disaster preparedness and early risk management. Such an approach is important because disaster governance requires institutions to anticipate risks and maintain operational readiness rather than relying exclusively on post-event responses (Hadian & Pancasilawan, 2025). The empirical evidence therefore positions responsiveness as an institutional capacity that connects information, decision-making, and operational action.

The responsiveness of local government is supported by coordination among agencies and communication with communities, although the effectiveness of this process remains dependent on available resources and institutional coordination. DPRD representatives indicated that local government agencies have responded to disaster-related needs through programs within their respective mandates, while community informants acknowledged the government's efforts to provide warnings and respond to potential hazards. The findings are consistent with research on coastal disaster governance showing that vulnerable communities require government institutions capable of coordinating across administrative and sectoral boundaries because disaster risks frequently exceed the

capacity of individual agencies (Prianto & Abdillah, 2023). From this perspective, responsiveness should not be reduced to the speed of emergency action but should encompass the ability to transform risk information and community reports into preventive decisions. The existing practices demonstrate that Tanjungpinang's local government has developed several responsive mechanisms, particularly through early-warning communication and operational preparedness. Nevertheless, stronger cross-sectoral coordination, more adequate infrastructure, and improved human-resource capacity remain necessary to ensure that these mechanisms function consistently across different disaster-prone areas. The rule of law and responsiveness therefore operate as mutually reinforcing dimensions, in which legal authority provides the institutional basis for action while responsiveness determines how effectively that authority is translated into timely risk-reduction measures.

Effectiveness and Efficiency of Local Government Governance in Disaster Risk Mitigation in Tanjungpinang City

Effectiveness and efficiency represent the extent to which local government can achieve disaster-risk reduction objectives while utilizing available institutional, financial, human, and infrastructural resources appropriately. The findings indicate that the Tanjungpinang City Regional Disaster Management Agency (BPBD) and the Fire and Rescue Service have implemented a range of mitigation activities, including disaster socialization, education in schools and communities, dissemination of early-warning information, coordination with BMKG, establishment of fire volunteers, building inspections, and routine checks of operational vehicles and equipment. These activities demonstrate that the local government has developed both structural and non-structural approaches to reduce disaster risks before hazardous events occur. The combination of preventive education, institutional preparedness, risk communication, and operational capacity suggests that mitigation is not confined to emergency response but incorporates activities designed to reduce vulnerability in advance. Such an approach is consistent with the view that effective disaster governance requires local institutions to integrate prevention, preparedness, and risk-management functions within their governmental responsibilities (Hadian & Pancasilawan, 2025). The findings also indicate that the utilization of existing institutional capacities allows different agencies to contribute according to their respective mandates, which can reduce duplication of functions and support more efficient implementation.

The effectiveness of these activities can be observed from their capacity to address several types of risks affecting Tanjungpinang City, particularly extreme weather, flooding, tidal flooding, and fallen trees. BPBD's coordination with BMKG enables the government to utilize external meteorological information as an input for early-warning communication, while coordination with other local agencies supports responses to environmental hazards such as trees vulnerable to falling. The Fire and Rescue Service complements these activities through preventive education, community training, fire-volunteer development, building inspection, and operational equipment maintenance. This combination indicates that institutional effectiveness is supported by the distribution of responsibilities among agencies rather than by the performance of BPBD alone. Such institutional interdependence is particularly relevant to coastal disaster mitigation because complex risks require coordination among actors possessing different resources and forms of expertise (Suasa et al., 2026). The findings therefore suggest that effectiveness is partly determined by the government's ability to connect the capacities of different agencies into a coherent mitigation process.

The empirical findings also show that effectiveness remains constrained by several structural factors, particularly limited budgets, inadequate infrastructure, and uneven implementation across vulnerable areas. Community informants acknowledged the existence of mitigation programs but indicated that their coverage and intensity still need to be expanded, while DPRD representatives identified budget limitations and cross-sectoral coordination as continuing challenges. These conditions indicate that the existence of mitigation programs does not necessarily correspond to equal levels of risk reduction across the city. Research on disaster governance in coastal cities similarly demonstrates that institutional resilience does not automatically eliminate community vulnerability because the capacity of local governments to distribute resources and coordinate interventions influences the extent to which mitigation benefits reach exposed populations (Prianto & Abdillah, 2023). The following table summarizes the principal findings concerning effectiveness and efficiency identified from the field evidence.

Table 4. Effectiveness and Efficiency of Disaster Risk Mitigation

Mitigation Dimension	Implementation in Tanjungpinang City	Main Limitation	Governance Implication
Disaster Education	Socialization and education in communities and schools	Uneven coverage	Wider outreach is required
Early Warning	Coordination with BMKG and social-media dissemination	Information reach varies	Communication channels need strengthening
Flood Mitigation	Drainage maintenance and field-based interventions	No integrated *Master Plan Drainage*	Long-term infrastructure planning is required
Fallen-Tree Mitigation	Tree assessment and pruning coordination	Resource and coordination constraints	Cross-agency coordination needs strengthening
Fire Prevention	Education, building inspections, APAR training, fire volunteers	Limited resources	Community-based capacity should be expanded
Operational Preparedness	Routine vehicle and equipment checks	Budget constraints	Sustainable resource allocation is required

The conditions presented in Table 4 indicate that the local government has established multiple mitigation mechanisms, but their effectiveness is influenced by the quality and continuity of supporting resources. The absence of an integrated Master Plan Drainage is particularly important because flood mitigation requires long-term infrastructure planning rather than interventions determined exclusively by immediate field conditions. Recent evidence from Tanjungpinang demonstrates that flood risk is shaped by the interaction of land-use change, spatial-planning compatibility, and vulnerability, indicating that infrastructure-based mitigation needs to be connected with broader spatial governance (Febriany et al., 2026). From an efficiency perspective, fragmented interventions can increase the possibility of repeated expenditure because individual drainage problems may be addressed without resolving their relationship with the wider drainage network. A more integrated planning framework would allow available resources to be prioritized according to risk levels, infrastructure conditions, and the vulnerability of affected communities. This finding demonstrates that efficiency in disaster governance is not simply a matter of reducing expenditure but concerns the capacity to allocate limited resources toward interventions that generate sustained risk-reduction benefits.

The effectiveness of local government mitigation is also influenced by the extent to which policies are designed according to the specific characteristics of Tanjungpinang as a coastal city. Research on tidal-flood management in Tanjungpinang emphasizes the importance of policies that strengthen coastal resilience because tidal flooding involves environmental, infrastructural, and community dimensions that cannot be addressed through isolated interventions (Berryza et al., 2026). The findings of the present study reinforce this perspective by demonstrating that disaster mitigation requires coordination between BPBD, technical agencies, legislative institutions, and communities. Local government efforts to disseminate warnings, maintain operational preparedness, educate residents, and address physical hazards represent important components of risk reduction, but their outcomes depend on whether these activities are connected to longer-term infrastructure and spatial planning. This indicates that effectiveness should be evaluated through the continuity and integration of mitigation measures rather than through the number of activities completed within a particular period. The governance challenge is therefore to move from program-based mitigation toward a more integrated risk-management system capable of connecting preventive actions with long-term resilience planning. Such an orientation would also improve efficiency by reducing fragmented interventions and allowing institutional and financial resources to be directed toward priority risks.

Overall, the findings indicate that effectiveness and efficiency in local government governance for disaster risk mitigation in Tanjungpinang City have been implemented at a relatively adequate level but have not yet reached an optimal condition. BPBD and the Fire and Rescue Service have

demonstrated consistent preventive and preparedness efforts, while coordination with BMKG, DPRD, technical agencies, and communities provides additional institutional support for mitigation. The evidence confirms that effective disaster governance depends on institutional coordination, adequate resources, technical planning, and the ability to align mitigation programs with local risk characteristics (Amane et al., 2025). Budget limitations, infrastructure constraints, uneven program coverage, and the absence of an integrated Master Plan Drainage remain important barriers to achieving stronger and more sustainable outcomes. These constraints indicate that improving effectiveness requires simultaneous attention to institutional capacity, infrastructure planning, resource allocation, and community reach rather than concentrating on a single mitigation activity. Efficiency likewise needs to be understood as the strategic use of limited resources to address priority risks through coordinated and durable interventions. Strengthening these dimensions would provide a stronger foundation for local government to reduce recurrent disaster risks and develop a more resilient governance system in Tanjungpinang City.

CONCLUSION

Based on the findings, local government governance in disaster risk mitigation in Tanjungpinang City has implemented the principles of Good Governance at a relatively adequate level through institutional programs and collaborative practices involving BPBD, the Fire and Rescue Service, DPRD, technical agencies, and communities. Accountability is reflected in the implementation of disaster socialization, school-based education, early-warning dissemination, coordination with BMKG, hazardous-tree management, fire-prevention activities, building inspections, and operational preparedness according to the responsibilities of each institution. Transparency has been supported through the dissemination of extreme-weather information, early warnings, social media, evacuation-route signs, and direct community education, while participation has been developed through public reporting, disaster-awareness activities, and the establishment of community fire volunteers. The rule of law is reflected in the implementation of disaster mitigation based on applicable regulations, although the absence of an integrated Master Plan Drainage indicates that the regulatory framework has not yet been fully translated into comprehensive technical planning. Responsiveness is demonstrated through early-warning communication, field monitoring, interagency coordination, 24-hour preparedness, and follow-up actions in response to potential hazards and community reports. Effectiveness and efficiency are supported by the utilization of existing institutional capacities and the implementation of preventive and preparedness programs, although their outcomes remain influenced by resource limitations and uneven program coverage. The findings indicate that the governance of disaster risk mitigation in Tanjungpinang City has established an important institutional foundation for reducing disaster risks, but its performance still requires strengthening to achieve more integrated and sustainable risk governance.

The principal constraints identified in the study include limited financial resources, inadequate facilities and infrastructure, uneven distribution of mitigation programs, insufficient cross-sectoral coordination, and the absence of an integrated Master Plan Drainage to guide long-term flood-risk management. These limitations demonstrate that the existence of mitigation programs and formal institutional responsibilities does not automatically guarantee uniform risk reduction across vulnerable communities. Strengthening local government capacity requires more systematic resource allocation based on disaster-risk priorities, improved coordination among BPBD, technical agencies, DPRD, and community actors, and broader access to mitigation information and preparedness programs. The development of an integrated Master Plan Drainage is particularly important for connecting flood mitigation with infrastructure development, spatial planning, and long-term coastal resilience. Regulatory evaluation should also be undertaken to ensure that disaster-management policies remain responsive to changing hazard patterns and compatible with the institutional and spatial conditions of Tanjungpinang City. Greater community participation should be encouraged through continuous education, community-based preparedness, accessible reporting mechanisms, and the strengthening of local volunteer networks. These improvements are expected to strengthen accountability, transparency, participation, rule of law, responsiveness, effectiveness, and efficiency, thereby enabling Tanjungpinang City's local government to develop a more adaptive, integrated, and sustainable disaster risk mitigation governance system.

REFERENCES

Alhadi, Z., Riandini, O., Yusran, R., Eriyanti, F., Akmal, A. D., Fajri, H., & Syarief, A. (2025). Policy Design for Strengthening the Institutional Framework of Disaster Risk Governance in Padang City, Indonesia. *International Journal of Safety & Security Engineering, 15*(8), 1541. https://doi.org/10.18280/ijsse.150801

Amane, A. P. O., Malawat, S. H., Yuniarsih, R., Putri, N. A. D., Waliah, S., Tahir, S., & Subiyakto, R. (2025). *Tata Kelola Pemerintahan yang Efektif*. CV Eureka Media Aksara.

Amirya, M., & Irianto, G. (2024). Risk Management in Indonesian Local Government: A Literature Study. *Akuntansi: Jurnal Akuntansi Integratif, 10*(1), 34-44. https://doi.org/10.29080/jai.v10i1.1601

Badan Penanggulangan Bencana Daerah Kota Tanjungpinang. (2024). *Data Kejadian Bencana Kota Tanjungpinang Tahun 2024*.

Berryza, S. B. A., Subiyakto, R., & Okparizan, O. (2026). Strengthening Coastal Resilience Through Tidal Flood Management Policies: Evidence From Tanjungpinang City, Indonesia. *GOVERNANCE: Jurnal Ilmiah Kajian Politik Lokal dan Pembangunan, 13*(7), 352-363. https://doi.org/10.56015/gjikplp.v13i7.1084

Budiman, L., & Mulkan, L. (2023). Pengendalian Bencana Alam Banjir di Kabupaten Sumbawa Barat. *Jurnal Ilmiah Hospitality, 12*(1), 421–430. https://doi.org/10.47492/jih.v12i1.2802

Dhanni, T. R., Subiyakto, R., & Putra, A. (2025). *Strategi Mitigasi Badan Penanggulangan Bencana Daerah Dalam Penanggulangan Cuaca Ekstrem di Kabupaten Bintan Tahun 2024* (Doctoral dissertation, Universitas Maritim Raja Ali Haji). https://repositori.umrah.ac.id/9439/

Dharmawangsa, U., & Danil, M. (2021). Manajemen Bencana. *Jurnal Manajemen Bencana, 1(2021)*, 7–14. https://doi.org/10.46576/prosundhar.v1i0.2

Febriany, A., Wilis, R., & bin Fauzi, R. (2026). Flood Risk Analysis Integration of Land Use Change, RTRW Suitability, and Vulnerability in the Jang River Watershed, Tanjung Pinang City. *Sumatra Journal of Disaster, Geography and Geography Education, 10*(1), 14-23. https://sjdgge.ppj.unp.ac.id/index.php/Sjdgge/article/view/694

Hadian, M. F., & Pancasilawan, R. (2025). Implementasi Program Penanggulangan Bencana (Studi pada Sub Kegiatan Pelatihan Pencegahan dan Mitigasi Bencana Kabupaten/Kota di Kelurahan). *Jurnal Administrasi Publik, 17*(1), 10–19. https://doi.org/10.24198/jane.v17i1.61196

Kamarullah, N., Charin, R. O. P., Kurniawan, D., & Syakti, A. D. (2024, December). Disaster Mitigation Policy in Coastal Areas (Case Study: Managing Tidal Floods in Tanjung Pinang City's Coastal Region). *In Proceedings of the International Conference Social-Humanities in Maritime and Border Area* (Vol. 3, No. 1, pp. 10-24). https://shimba.fisip.umrah.ac.id/index.php/proceeding/article/view/9

Karso, A. J. (2022). *Good Governance*. Penerbit Samudra Biru.

Mangidaan, J. V. (2017). *Pengelolaan Keuangan Desa Berdasarkan Prinsip Good Governance*. Unsrat Press.

Moenek, R., & Suwanda, D. (2019). *Good Governance Pengelolaan Keuangan Daerah*. PT Remaja Rosdakarya.

Mujiyati. (2023). *Buku Ajar Penanggulangan Bencana Alam*. Penerbit Pusat Pengembangan Pendidikan dan Penelitian Indonesia.

Nurhidayat, I. (2023). Prinsip-Prinsip Good Governance di Indonesia. *Jurnal Hukum dan Pemerintahan, 1*(1), 40–52. https://doi.org/10.71128/e-gov.v1i1.5

Peraturan Daerah Kota Tanjungpinang Nomor 3 Tahun 2016 tentang Penyelenggaraan Penanggulangan Bencana.

Peraturan Daerah Provinsi Kepulauan Riau Nomor 5 Tahun 2024 tentang Penyelenggaraan Penanggulangan Bencana.

Prianto, A. L., & Abdillah, A. (2023). Resilient Cities, Vulnerable Communities: Disaster Governance in the Coastal Cities in Indonesia. *In International Handbook of Disaster Research* (pp. 311-322). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-19-8388-7_193

Rahmawati, N. B., Baharudin, M., & Tjenreng, Z. (2025). Peran Good Governance dalam Meningkatkan Kualitas Pelayanan Publik: Perspektif Teoretis. *Jurnal Ilmu Administrasi, 5*(1), 313–323. https://doi.org/10.37481/pkmb.v5i1.1302

Royke Singgih, H. C. (2022). Pengelolaan Tata Kelola Perusahaan dan Kaitan dengan Keberlangsungan Usaha: Sebuah Review Literatur. *Jurnal Transaksi, 14*(2), 16–25. https://ejournal.atmajaya.ac.id/index.php/transaksi/article/view/3976

Suasa, S., Rapi, M., Arabe, A. A., Mukarramah, M., & Amijaya, M. (2026). Managing Strategic Resource Interdependence for Coastal Disaster Mitigation: A Collaborative Governance Study in Palu. *Natapraja, 14*(1), 90-108. https://doi.org/10.21831/natapraja.v14i1.95834

Undang-Undang Republik Indonesia Nomor 23 Tahun 2014 tentang Pemerintahan Daerah.

Undang-Undang Republik Indonesia Nomor 24 Tahun 2007 tentang Penanggulangan Bencana.

Wijaya, M. A. (2024). Desentralisasi dan Otonomi Daerah: Pilar Penting dalam Membangun Indonesia. *Jurnal Ilmu Pemerintahan, 1*(6), 702–707. https://doi.org/10.56799/peshum.v1i6.6847