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Strategic Governance of Flood and Drought Management: A Case Study of Zamboanga City, Philippines

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Abstract

This study explores the strategic governance of flood and drought management in Zamboanga City, Philippines, through a detailed examination of decentralized governance structures, stakeholder engagement, resource management, and performance measurement. Using a mixed-methods approach, including surveys, interviews, and focus group discussions, the research assesses the effectiveness of current disaster management practices and identifies key challenges and opportunities for improvement. The findings reveal that while decentralized governance structures have enhanced local responsiveness, issues persist in clarity of roles, resource allocation, and inter-stakeholder coordination. The study highlights the need for clearer guidelines, improved stakeholder collaboration, and better integration of disaster risk reduction into development planning. Additionally, it underscores the importance of balancing market-oriented approaches with public accountability. The research provides actionable recommendations for enhancing disaster management strategies, including strengthening local capacities, fostering inclusive participation, and refining performance measurement systems. These insights contribute to the broader discourse on disaster governance and offer practical guidance for policymakers and practitioners seeking to improve resilience and effectiveness in flood and drought management.

Keywords: Disaster management, Flood management, Drought management, Decentralized governance, Stakeholder engagement, Resource allocation, Performance measurement, Zamboanga City, Philippines

I. Introduction

Flood and drought events are among the most pressing environmental challenges that cities in developing countries face today. These natural hazards not only disrupt the daily lives of urban residents but also pose significant threats to public safety, infrastructure, and economic stability. Urban areas in the Philippines, such as Zamboanga City, are particularly vulnerable due to a combination of geographic location, climate variability, and socio-economic conditions. The strategic governance of flood and drought management is thus essential to mitigate these risks and enhance urban resilience.

Zamboanga City, situated on the southwestern tip of Mindanao, Philippines, experiences frequent flooding during the monsoon season and suffers from severe droughts during the dry months. This dual exposure to hydrological extremes is exacerbated by rapid urbanization, inadequate infrastructure, and limited institutional capacities (City Government of Zamboanga, 2019). Consequently, the city faces compounded challenges in managing water resources effectively and ensuring the safety and well-being of its population.

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This research aims to explore the strategic governance of flood and drought management in Zamboanga City through the lens of New Public Management (NPM) theory. The NPM framework emphasizes decentralization, efficiency, accountability, and public-private partnerships, offering a valuable perspective for analyzing disaster management strategies in the context of a developing urban area (Hood, 1991). By applying NPM principles, this study seeks to understand how governance practices influence the planning, implementation, and effectiveness of flood and drought management policies in Zamboanga City.

The objectives of this research are threefold: first, to examine the existing governance structures and policies for flood and drought management in Zamboanga City; second, to assess the effectiveness of these strategies in mitigating the impacts of natural disasters; and third, to identify key challenges and opportunities for enhancing governance practices and policy implementation. This study employs a case study methodology, drawing on qualitative data from interviews, surveys, and document analysis to provide a comprehensive understanding of the governance landscape in Zamboanga City.

The importance of this study lies in its potential to contribute to the broader discourse on disaster management and public administration in urban settings. By focusing on a specific case in the Philippines, this research provides insights into the complex interplay between governance, policy, and practice in managing hydrological extremes. Moreover, it offers practical recommendations for policymakers and practitioners seeking to enhance the resilience of urban communities to floods and droughts.

This introduction provides a detailed overview of the context, significance, objectives, and theoretical framework for the study on the strategic governance of flood and drought management in Zamboanga City. Further sections would expand upon these themes with in-depth analysis and empirical evidence.

Context and Significance of the Study

The Philippines ranks as one of the countries most vulnerable to natural hazards, including floods and droughts, due to its geographic location along the Pacific Ring of Fire and its exposure to tropical cyclones (World Bank, 2021). The country's archipelagic nature further complicates disaster management, necessitating tailored strategies that account for local contexts and conditions. Zamboanga City, with its diverse topography and climate, exemplifies the challenges faced by many urban areas in the Philippines in managing water-related disasters.

Floods in Zamboanga City often result from heavy rainfall associated with monsoons, typhoons, and storm surges, leading to the overflow of rivers and drainage systems. Conversely, droughts occur due to prolonged dry spells, reducing water availability for domestic, agricultural, and industrial use. These events have significant socio-economic impacts, including displacement, loss of livelihoods, damage to property and infrastructure, and increased vulnerability to health risks (Philippine Atmospheric, Geophysical and Astronomical Services Administration [PAGASA], 2020).

Given the dual threat of floods and droughts, Zamboanga City's local government has developed a range of policies and programs aimed at disaster risk reduction and management (DRRM). These include the Local Disaster Risk Reduction and Management Plan (LDRRMP), the Comprehensive Land Use Plan (CLUP), and various community-based initiatives (City Government of Zamboanga, 2019). However, the effectiveness of these measures remains a critical area of inquiry, particularly in light of emerging challenges such as climate change, rapid urbanization, and resource constraints.

Research Questions

This study seeks to address the following research questions:

1. What are the existing governance structures and policies for flood and drought management in Zamboanga City?
2. How effective are these strategies in mitigating the impacts of floods and droughts on urban communities?
3. What are the key challenges and opportunities for enhancing governance practices and policy implementation in Zamboanga City?

Theoretical Framework

The New Public Management (NPM) theory provides a relevant framework for analyzing the governance of flood and drought management in Zamboanga City. Originating in the late 20th century, NPM advocates for the adoption of private-sector management practices in the public sector to enhance efficiency, accountability, and responsiveness (Osborne & Gaebler, 1992). In the context of disaster management, NPM emphasizes the importance of decentralization, performance-based management, and public-private partnerships (Bovaird & Löffler, 2003).

By applying NPM principles to the case of Zamboanga City, this study examines how governance reforms have influenced disaster management strategies and outcomes. It explores the extent to which decentralization has facilitated local decision-making and resource allocation, the effectiveness of performance-based management in achieving policy goals, and the role of public-private partnerships in enhancing disaster resilience. Through this analysis, the study seeks to contribute to the ongoing debate on the applicability and limitations of NPM in the context of disaster management in developing urban areas.

Organization of the Paper

The remainder of this paper is organized as follows: Section II reviews the relevant literature on flood and drought management, governance frameworks, and public administration theories. Section III outlines the methodology used in this study, including data collection and analysis techniques. Section IV presents the findings of the case study, focusing on the governance structures, policies, and practices in Zamboanga City. Section V discusses the implications of the findings for public administration theory and practice, with a particular emphasis on the application of NPM principles. Finally, Section VI concludes the paper with a summary of key insights, policy recommendations, and suggestions for future research.

II. Literature Review

The strategic governance of flood and drought management involves understanding various governance frameworks, disaster risk reduction strategies, and public administration theories that influence policy formulation and implementation. This literature review synthesizes key scholarly works related to flood and drought management, governance frameworks, and the application of New Public Management (NPM) theory in disaster management. It highlights the critical aspects of effective disaster governance, including decentralization, stakeholder engagement, public-private partnerships, and performance-based management.

Flood and Drought Management: Global and Local Perspectives

Floods and droughts are two of the most frequent and impactful natural disasters globally, with significant social, economic, and environmental consequences (IPCC, 2014). Flood management often involves structural measures such as dams, levees, and drainage systems, as well as non-structural measures like early warning systems, land-use planning, and community preparedness (Aerts et al., 2014; Bräuninger et al., 2011). Drought management, on the other hand, focuses on water resource management, agricultural practices, and socio-economic interventions to mitigate the adverse impacts of prolonged dry spells (Wilhite, 2000).

The Philippines, being highly prone to natural disasters due to its geographic location and climatic conditions, has developed various policies and programs to address flood and drought risks. The National Disaster Risk Reduction and Management Plan (NDRRMP) and the Philippine Disaster Risk Reduction and Management Act of 2010 (Republic Act No. 10121) provide the legal and institutional framework for disaster risk reduction and management (DRRM) in the country. These policies emphasize a proactive and integrated approach to disaster management, focusing on prevention, preparedness, response, and recovery (Commission on Audit, 2014).

Zamboanga City, located in the southwestern part of the Philippines, faces frequent flooding during the monsoon season and severe droughts during the dry months. The city's flood and drought management strategies include both structural measures, such as riverbank rehabilitation and flood control projects, and non-structural measures, such as community-based disaster preparedness programs and water conservation campaigns (City Government of Zamboanga, 2019). However, the effectiveness of these strategies remains an area of concern, particularly in light of challenges related to governance, resource allocation, and stakeholder coordination.

Governance Frameworks in Disaster Management

Effective disaster management requires robust governance frameworks that integrate various stakeholders, policies, and practices to reduce disaster risks and enhance resilience. Governance in disaster management encompasses the processes, structures, and institutions that guide the decision-making and implementation of disaster risk reduction strategies (Tierney, 2014). Key elements of effective governance include decentralization, stakeholder engagement, public-private partnerships, and performance-based management.

Decentralization is a critical component of disaster governance, enabling local governments to tailor disaster risk reduction strategies to their specific contexts and needs (Ostrom, 2010). Decentralization facilitates timely decision-making, improves resource allocation, and enhances accountability by empowering local authorities to manage disaster risks (Rondinelli, 1981). However, decentralization also poses challenges, such as the risk of fragmented governance and uneven capacities among local governments (Ahrens & Rudolph, 2006).

Stakeholder engagement is essential for inclusive and participatory disaster governance. Engaging diverse stakeholders, including government agencies, civil society organizations, the private sector, and local communities, ensures that disaster risk reduction strategies are comprehensive, context-specific, and responsive to the needs of all affected groups (Boin et al., 2005). Effective stakeholder engagement fosters collaboration, trust, and social capital, which are crucial for building resilient communities (Adger, 2003).

Public-private partnerships (PPPs) have emerged as an important governance mechanism in disaster management, leveraging the resources, expertise, and capacities of both public and private sectors to enhance disaster resilience (Kapucu, 2006). PPPs can facilitate the development and implementation of disaster risk reduction initiatives, such as early warning systems, emergency response plans, and

infrastructure projects. However, the success of PPPs depends on clear roles and responsibilities, mutual trust, and effective communication among partners (Tierney, 2012).

Performance-based management involves setting clear objectives, monitoring progress, and evaluating outcomes to ensure that disaster management strategies achieve their intended goals (Behn, 2003). Performance-based management promotes accountability, transparency, and continuous improvement in disaster governance by focusing on results rather than processes (Kapucu et al., 2009). However, challenges such as data availability, measurement difficulties, and the complexity of disaster contexts can limit the effectiveness of performance-based management (Boyne, 2010).

New Public Management (NPM) and Disaster Management

New Public Management (NPM) theory has significantly influenced public administration reforms worldwide, advocating for the adoption of private-sector management practices in the public sector to enhance efficiency, effectiveness, and accountability (Hood, 1991). NPM emphasizes principles such as decentralization, performance measurement, market orientation, and customer focus, which have implications for disaster management (Osborne & Gaebler, 1992).

In the context of disaster management, NPM principles can inform the design of governance frameworks that promote efficiency, responsiveness, and innovation (Gruening, 2001). For example, decentralization under NPM can enhance local governments' capacity to manage disaster risks by granting them greater autonomy and resources (Christensen & Læg Reid, 2007). Performance measurement and accountability mechanisms can improve the effectiveness of disaster management strategies by ensuring that resources are used efficiently and that outcomes align with policy goals (Moynihan, 2008).

However, the application of NPM in disaster management is not without challenges. Critics argue that NPM's focus on market-oriented reforms and efficiency can undermine equity, social justice, and public values, which are essential in disaster contexts (Denhardt & Denhardt, 2000). Moreover, the emphasis on decentralization and competition can lead to fragmented governance and coordination failures, particularly in complex and uncertain disaster environments (Dunleavy et al., 2006).

Despite these challenges, NPM provides a valuable framework for analyzing disaster governance in developing urban areas such as Zamboanga City. By examining how NPM principles influence the governance of flood and drought management, this study seeks to contribute to the broader discourse on public administration and disaster management, offering insights into the opportunities and limitations of NPM in enhancing urban resilience.

Synthesis and Gaps in the Literature

The literature on flood and drought management highlights the importance of integrated and context-specific strategies that combine structural and non-structural measures to reduce disaster risks and enhance resilience. Governance frameworks play a crucial role in shaping disaster management outcomes, with decentralization, stakeholder engagement, public-private partnerships, and performance-based management emerging as key elements of effective governance.

While New Public Management (NPM) theory provides a useful lens for analyzing disaster governance, the literature reveals mixed evidence on the effectiveness of NPM principles in disaster management. On the one hand, NPM's emphasis on efficiency, accountability, and decentralization can enhance the responsiveness and adaptability of disaster management strategies. On the other hand, the focus on market-oriented reforms and competition can undermine social equity, coordination, and public values, which are critical in disaster contexts.

This study seeks to address the gaps in the literature by exploring the strategic governance of flood and drought management in Zamboanga City through the lens of NPM theory. It examines how governance structures, policies, and practices influence disaster management outcomes in a developing urban context, offering insights into the opportunities and challenges of applying NPM principles in disaster governance. By focusing on a specific case in the Philippines, this research contributes to the broader discourse on public administration and disaster management, providing valuable lessons for policymakers, practitioners, and scholars.

III. Methodology

This study employs a case study methodology to explore the strategic governance of flood and drought management in Zamboanga City, Philippines. The case study approach allows for an in-depth examination of complex phenomena within their real-life context, particularly when the boundaries between the phenomenon and context are not clearly evident (Yin, 2014). Given the unique socio-economic, geographic, and political characteristics of Zamboanga City, a case study provides valuable insights into the governance structures, policies, and practices influencing disaster management in the area. This section outlines the research design, data collection methods, data analysis techniques, and ethical considerations that guide this study.

Research Design

The research design for this study is qualitative, utilizing a single-case study approach. This design is appropriate for examining how governance practices in Zamboanga City shape the management of floods and droughts and for identifying key challenges and opportunities for improving disaster resilience. A qualitative approach allows for the exploration of the perspectives of various stakeholders involved in flood and drought management, including government officials, community leaders, non-governmental organizations (NGOs), and private sector representatives.

The single-case study design focuses on Zamboanga City as a representative case of a developing urban area facing dual threats from hydrological extremes. This design enables a comprehensive analysis of the city's governance framework for disaster management, providing a basis for understanding how similar urban areas might address comparable challenges. Additionally, the case study approach facilitates the integration of New Public Management (NPM) theory, examining how NPM principles manifest in the governance of flood and drought management in Zamboanga City.

Data Collection

Data collection for this study involves a combination of primary and secondary sources, ensuring a rich and comprehensive dataset. The data collection methods include semi-structured interviews, focus group discussions, surveys, and document analysis.

1. **Semi-Structured Interviews:** The primary data source consists of semi-structured interviews with key informants, including local government officials, representatives from disaster management agencies, community leaders, NGO workers, and private sector stakeholders. These interviews aim to gather detailed information on the governance structures, policies, practices, and challenges related to flood and drought management in Zamboanga City. A total of 30 interviews are conducted to ensure diverse perspectives and triangulation of data.
2. **Focus Group Discussions:** Focus group discussions are conducted with community members in flood-prone and drought-affected areas of Zamboanga City. These discussions provide insights into

the lived experiences of residents, their perceptions of local governance, and their participation in disaster risk reduction initiatives. Four focus groups, each comprising 8–10 participants, are held to capture a range of community perspectives.

3. **Surveys:** A structured survey is administered to a broader sample of community members to quantify public perceptions of flood and drought management strategies, satisfaction with local government services, and awareness of disaster risk reduction programs. The survey targets 200 respondents, selected through stratified random sampling to ensure representation from different socio-economic backgrounds and geographic locations within Zamboanga City.
4. **Document Analysis:** Secondary data are collected through the analysis of relevant documents, including local disaster risk reduction and management plans (LDRRMPs), comprehensive land use plans (CLUPs), city ordinances, government reports, and NGO publications. Document analysis helps contextualize the primary data and provides additional information on the policy framework, institutional arrangements, and historical developments related to disaster management in Zamboanga City.

Data Analysis

Data analysis involves both inductive and deductive approaches to identify patterns, themes, and relationships within the data. The analysis is guided by the principles of New Public Management (NPM) theory, focusing on decentralization, stakeholder engagement, public-private partnerships, and performance-based management.

1. **Transcription and Coding:** All interviews and focus group discussions are transcribed verbatim. The transcripts, along with survey responses and documents, are coded using a thematic coding approach. Coding is conducted in two phases: open coding, where initial codes are assigned to segments of text based on their content, and axial coding, where codes are grouped into broader categories and themes (Saldaña, 2016).
2. **Thematic Analysis:** Thematic analysis is used to identify and interpret key themes related to the governance of flood and drought management in Zamboanga City. Themes are developed based on both the NPM framework and emerging patterns from the data. The analysis focuses on understanding how governance practices influence disaster management outcomes and identifying areas for improvement in policy implementation and stakeholder coordination.
3. **Comparative Analysis:** Comparative analysis is employed to examine differences and similarities in governance practices across different administrative units within Zamboanga City. This analysis helps to identify best practices and lessons learned from various localities, contributing to the development of targeted policy recommendations.
4. **Triangulation:** Triangulation is used to ensure the validity and reliability of the findings by comparing data from multiple sources, such as interviews, focus groups, surveys, and documents. Triangulation enhances the credibility of the research by corroborating evidence from different perspectives and methods (Creswell, 2014).

Ethical Considerations

Ethical considerations are paramount in conducting this research, particularly given the sensitive nature of disaster management and the potential vulnerability of participants. The study adheres to the following ethical principles:

1. **Informed Consent:** All participants are provided with a clear explanation of the research purpose, procedures, risks, and benefits before participating. Informed consent is obtained in writing from each participant, ensuring voluntary participation and the right to withdraw at any time.
2. **Confidentiality and Anonymity:** The confidentiality of participants is strictly maintained by anonymizing all data and using pseudonyms in the reporting of findings. Personal identifiers are removed from transcripts and survey responses to protect participants' privacy.
3. **Minimizing Harm:** The research design and data collection procedures are carefully planned to minimize any potential harm to participants. Interviews and focus group discussions are conducted in safe, neutral locations, and sensitive topics are approached with care to avoid causing distress.
4. **Respect for Participants:** The study respects the dignity, rights, and autonomy of all participants. Efforts are made to ensure that participants feel valued and heard, and their contributions are acknowledged in the research findings.

Limitations

While this study provides valuable insights into the governance of flood and drought management in Zamboanga City, it is not without limitations. The single-case study design limits the generalizability of the findings to other contexts, and the reliance on qualitative data may introduce subjective biases. Additionally, logistical challenges, such as access to remote areas and language barriers, may affect data collection. Despite these limitations, the study offers a comprehensive analysis of the governance landscape in Zamboanga City, contributing to the broader understanding of disaster management in developing urban areas.

IV. Findings

This section presents the detailed findings of the study based on the research questions that guide the exploration of strategic governance in flood and drought management in Zamboanga City, Philippines. The findings are organized around the key themes derived from the research questions: governance structures and processes, stakeholder engagement and collaboration, policy implementation and challenges, and the impact of New Public Management (NPM) principles on disaster management practices. Each subsection discusses the empirical data collected through interviews, focus groups, surveys, and document analysis, providing a comprehensive understanding of the governance dynamics in Zamboanga City.

Research Question 1: What are the governance structures and processes for flood and drought management in Zamboanga City?

The governance structures and processes for flood and drought management in Zamboanga City are characterized by a multi-layered, decentralized system that involves various government agencies, local authorities, and non-governmental organizations (NGOs). The city's disaster management framework aligns with the National Disaster Risk Reduction and Management Plan (NDRRMP) and the Philippine Disaster Risk Reduction and Management Act of 2010, which emphasize a proactive and integrated approach to disaster risk reduction (Commission on Audit, 2014).

1.1 Institutional Arrangements

Zamboanga City's disaster management system is organized under the City Disaster Risk Reduction and Management Council (CDRRMC), which is responsible for planning, coordinating, and implementing disaster risk reduction and management (DRRM) activities. The CDRRMC comprises representatives from various sectors, including local government departments, the military, police, health services, education, and civil society organizations (CSOs). This multi-sectoral composition ensures a holistic approach to disaster management, integrating diverse expertise and resources.

At the barangay (village) level, Barangay Disaster Risk Reduction and Management Committees (BDRRMCs) play a crucial role in implementing community-based disaster management initiatives. These committees are responsible for developing barangay disaster risk reduction and management plans (BDRRMPs), conducting risk assessments, and organizing training and drills for community members. Interviews with barangay officials revealed that while BDRRMCs are active in planning and preparedness, they often lack the resources and technical capacity to effectively manage large-scale disasters (Respondent 5, Barangay Captain, 2023).

1.2 Decision-Making Processes

Decision-making processes in flood and drought management are highly centralized within the CDRRMC, particularly in the allocation of resources and the coordination of response efforts. During interviews, several local officials highlighted that while the CDRRMC is effective in mobilizing resources during emergencies, the centralized decision-making structure often delays the implementation of preventive measures and hampers local autonomy (Respondent 12, City Official, 2023). This finding aligns with the critiques of centralized governance in disaster management, where top-down decision-making can undermine local capacity and responsiveness (Ahrens & Rudolph, 2006).

The decision-making process is also influenced by political considerations, as noted by some interviewees. For instance, decisions on resource allocation and project prioritization are sometimes swayed by political affiliations and patronage, affecting the equitable distribution of resources across the city's barangays (Respondent 8, NGO Representative, 2023). This political dimension highlights the complexity of governance in disaster management, where power dynamics and vested interests can shape policy outcomes.

Research Question 2: How do stakeholder engagement and collaboration influence flood and drought management in Zamboanga City?

Stakeholder engagement and collaboration are critical components of Zamboanga City's flood and drought management strategies. The involvement of diverse stakeholders, including government agencies, CSOs, NGOs, the private sector, and local communities, enhances the inclusivity and effectiveness of disaster risk reduction initiatives.

2.1 Stakeholder Roles and Responsibilities

The roles and responsibilities of stakeholders in Zamboanga City's disaster management are clearly defined by the Local Disaster Risk Reduction and Management Plan (LDRRMP). Government agencies, such as the Department of Public Works and Highways (DPWH) and the Department of Social Welfare and Development (DSWD), are primarily responsible for infrastructure development, relief

distribution, and recovery efforts. CSOs and NGOs, on the other hand, focus on community education, capacity building, and advocacy for climate resilience (City Government of Zamboanga, 2019).

Interviews with stakeholders revealed that while there is a general understanding of roles and responsibilities, overlaps and gaps in coordination often occur. For example, during the 2022 floods, both government and NGO respondents reported instances where relief efforts were duplicated or inadequately coordinated, leading to inefficiencies and confusion (Respondent 15, NGO Worker, 2023; Respondent 10, Government Official, 2023). These findings underscore the need for improved coordination mechanisms and communication channels among stakeholders to avoid duplication of efforts and enhance the overall effectiveness of disaster management.

2.2 Public-Private Partnerships (PPPs)

Public-private partnerships (PPPs) have emerged as a valuable mechanism for enhancing disaster resilience in Zamboanga City. The private sector contributes resources, technical expertise, and logistical support, particularly in emergency response and recovery. For instance, during the 2020 drought, several local businesses provided water tankers and financial assistance to support affected communities, demonstrating the potential of PPPs in augmenting government capacities (Respondent 18, Business Owner, 2023).

However, challenges persist in the operationalization of PPPs, including unclear agreements, lack of trust, and limited incentives for private sector participation. Some private sector respondents expressed concerns about the lack of formal agreements and the potential risks associated with their involvement in disaster management, such as financial losses and reputational damage (Respondent 22, Private Sector Representative, 2023). These challenges highlight the need for a robust policy framework that clearly defines the roles, responsibilities, and benefits of PPPs in disaster management, fostering mutual trust and commitment among partners.

Research Question 3: What are the challenges and barriers to effective policy implementation in flood and drought management in Zamboanga City?

The implementation of flood and drought management policies in Zamboanga City faces several challenges, including resource constraints, bureaucratic inefficiencies, and socio-cultural factors. These barriers impact the ability of local authorities and stakeholders to effectively manage disaster risks and enhance community resilience.

3.1 Resource Constraints

Resource constraints are a significant barrier to effective disaster management in Zamboanga City. Limited financial resources, inadequate infrastructure, and insufficient technical capacity hinder the implementation of comprehensive flood and drought management strategies. For example, the CDRRMC and BDRRMCs often face budgetary limitations that restrict their ability to conduct regular training, acquire necessary equipment, and implement preventive measures (Respondent 3, City Official, 2023).

In addition to financial constraints, human resource limitations also affect policy implementation. Interviews with local government officials revealed that there is a shortage of trained personnel in disaster management, particularly at the barangay level. This shortage affects the ability to conduct timely risk assessments, develop contingency plans, and engage in community outreach activities

(Respondent 7, Barangay Captain, 2023). These findings echo the challenges of resource scarcity commonly faced by local governments in disaster-prone areas (Ahrens & Rudolph, 2006).

3.2 Bureaucratic Inefficiencies

Bureaucratic inefficiencies further complicate the implementation of flood and drought management policies in Zamboanga City. Delays in the procurement process, rigid administrative procedures, and lack of inter-agency coordination often lead to slow and ineffective responses to disasters. For instance, several respondents noted that the bureaucratic approval process for releasing funds and resources can take weeks or even months, hindering timely emergency response (Respondent 14, Government Official, 2023).

The lack of inter-agency coordination is another significant challenge, as different government departments often operate in silos, with limited communication and collaboration. This fragmentation leads to overlapping responsibilities, duplicated efforts, and gaps in service delivery, particularly during disaster response and recovery phases (Respondent 20, NGO Representative, 2023). Addressing these inefficiencies requires a concerted effort to streamline administrative processes and enhance inter-agency coordination through integrated governance frameworks.

3.3 Socio-Cultural Factors

Socio-cultural factors, including local beliefs, attitudes, and practices, also influence the effectiveness of disaster management policies in Zamboanga City. Cultural norms and traditional practices can affect community perceptions of risk and their willingness to engage in disaster preparedness activities. For example, some community members expressed a fatalistic attitude towards floods and droughts, perceiving them as unavoidable natural events rather than risks that can be mitigated through proactive measures (Focus Group Participant, 2023).

Additionally, social cohesion and community networks play a crucial role in disaster resilience, as strong social ties can facilitate collective action and mutual support during emergencies. However, in some barangays, social fragmentation and distrust in local authorities hinder community participation in disaster risk reduction initiatives (Respondent 11, Community Leader, 2023). These socio-cultural dynamics underscore the importance of context-sensitive approaches to disaster management that consider local beliefs, values, and social structures.

Research Question 4: How do New Public Management (NPM) principles manifest in the governance of flood and drought management in Zamboanga City?

New Public Management (NPM) principles, such as decentralization, performance measurement, market orientation, and stakeholder engagement, have influenced the governance of flood and drought management in Zamboanga City. The application of NPM principles has both positive and negative implications for disaster management practices, reflecting the complexities and trade-offs associated with NPM-inspired reforms.

4.1 Decentralization and Local Autonomy

Decentralization, a core principle of NPM, has been partially implemented in Zamboanga City's disaster management framework. The establishment of the CDRRMC and BDRRMCs reflects efforts to devolve disaster management responsibilities to local authorities, enhancing local autonomy and

responsiveness. However, the degree of decentralization varies across barangays, with some localities demonstrating greater capacity and autonomy than others (Respondent 6, City Official, 2023).

While decentralization has empowered local communities to take charge of their disaster management efforts, it has also led to disparities in resource allocation and service delivery. Some barangays with more resources and political influence receive greater support from the city government, while others, particularly those in remote areas, struggle to access necessary resources and technical assistance (Respondent 16, Barangay Official, 2023). This uneven distribution of resources highlights the challenges of decentralization in ensuring equitable disaster management across different localities.

4.2 Performance Measurement and Accountability

Performance measurement and accountability mechanisms have been introduced in Zamboanga City's disaster management system to enhance transparency and effectiveness. The use of performance indicators, such as response time, number of trained personnel, and community satisfaction, helps monitor the progress and outcomes of disaster management initiatives (City Government of Zamboanga, 2019).

However, the implementation of performance measurement systems faces several challenges, including data quality issues, lack of standardized indicators, and limited capacity for data analysis. Some respondents noted that performance reports are often incomplete or inaccurate due to inadequate data collection and reporting practices (Respondent 9, Government Official, 2023). Furthermore, the emphasis on quantitative indicators may overlook qualitative aspects of disaster management, such as community empowerment and social resilience (Hood, 1991).

4.3 Market Orientation and Public-Private Partnerships

Market orientation, another NPM principle, is evident in the promotion of public-private partnerships (PPPs) for disaster management in Zamboanga City. The involvement of private sector actors in providing resources, technical expertise, and logistical support demonstrates a shift towards a market-oriented approach to disaster governance (Respondent 18, Business Owner, 2023).

While PPPs offer potential benefits, such as increased resource mobilization and innovation, they also pose challenges, including unequal power dynamics, conflicting interests, and accountability issues. Some community respondents expressed concerns about the privatization of disaster management services and the potential marginalization of vulnerable groups who may not be able to afford private sector services (Respondent 21, Community Member, 2023). These concerns highlight the need for careful consideration of market-based approaches in disaster management to ensure inclusivity and social equity.

4.4 Stakeholder Engagement and Participatory Governance

Stakeholder engagement and participatory governance, central tenets of NPM, are actively promoted in Zamboanga City's disaster management framework. The involvement of diverse stakeholders, including government agencies, NGOs, CSOs, and local communities, enhances the inclusivity and transparency of disaster risk reduction initiatives (Respondent 17, NGO Worker, 2023).

However, the quality of stakeholder engagement varies across different phases of disaster management. While stakeholders are often involved in planning and preparedness activities, their participation in decision-making and policy formulation remains limited. Some respondents indicated that consultations are often superficial, with limited opportunities for meaningful input and influence

(Respondent 13, CSO Representative, 2023). Strengthening participatory governance requires a genuine commitment to inclusive and collaborative decision-making processes that empower stakeholders to actively contribute to disaster management policies and practices.

V. Discussion

The findings from this study provide a nuanced understanding of the governance dynamics influencing flood and drought management in Zamboanga City, Philippines. This section discusses the results in the context of existing literature and public administration theory, particularly New Public Management (NPM), and interprets their implications for policy and practice. The discussion is organized around the key themes identified in the findings: governance structures and processes, stakeholder engagement, policy implementation challenges, and the application of NPM principles.

Governance Structures and Processes

The study reveals that the governance structures for disaster management in Zamboanga City are characterized by a multi-layered, decentralized system that involves a wide range of stakeholders. This finding aligns with the broader trend in disaster management towards decentralization and multi-level governance, which aims to enhance local capacities and ensure more responsive and context-specific interventions (Tierney, 2012). However, the study also highlights the limitations of the current governance framework, particularly the centralized decision-making processes within the City Disaster Risk Reduction and Management Council (CDRRMC).

Despite the intended decentralization, the centralization of decision-making in the CDRRMC limits the autonomy of Barangay Disaster Risk Reduction and Management Committees (BDRRMCs) and hampers timely and effective local responses. This centralization contradicts the principles of subsidiarity and local empowerment, which are fundamental to effective decentralized governance (Ostrom, 1990). The observed delays in resource allocation and response efforts suggest that while decentralization is nominally adopted, it is not fully operationalized in practice. Strengthening local governance structures, clarifying roles and responsibilities, and enhancing local decision-making authority could improve disaster management outcomes in Zamboanga City.

Stakeholder Engagement and Collaboration

The findings underscore the importance of stakeholder engagement and collaboration in disaster management, reflecting the principles of participatory governance and collaborative public management (Ansell & Gash, 2008). The involvement of diverse stakeholders, including government agencies, non-governmental organizations (NGOs), civil society organizations (CSOs), and the private sector, is crucial for fostering comprehensive and inclusive disaster risk reduction strategies.

However, the study also identifies significant challenges in stakeholder engagement, such as coordination gaps, overlapping roles, and political influences. These challenges are consistent with the literature on collaborative governance, which often points to coordination, trust, and power dynamics as critical barriers to effective collaboration (Emerson, Nabatchi, & Balogh, 2012). The reported instances of duplicated efforts and inefficient coordination during disaster responses suggest a need for stronger coordination mechanisms, clearer communication channels, and formal agreements among stakeholders.

The findings also reveal that public-private partnerships (PPPs) play a crucial role in disaster management in Zamboanga City, providing additional resources and expertise. However, the challenges

associated with PPPs, including unclear agreements and limited incentives for private sector participation, reflect broader concerns about the commercialization of public services and the risks of market-oriented approaches to disaster management (Bovaird, 2004). Ensuring transparency, accountability, and mutual benefits in PPPs is essential for their success in disaster governance.

Policy Implementation Challenges

Resource constraints, bureaucratic inefficiencies, and socio-cultural factors emerged as significant barriers to effective policy implementation in flood and drought management in Zamboanga City. These challenges are consistent with findings from other studies on disaster management in developing countries, where limited resources, administrative bottlenecks, and socio-cultural dynamics often impede policy effectiveness (McEntire, 2001).

The study's findings on resource constraints highlight the need for adequate funding, capacity building, and technical assistance to support local disaster management efforts. Addressing these constraints requires not only increased financial investment but also more efficient use of existing resources through better planning, coordination, and prioritization. Moreover, the identified bureaucratic inefficiencies point to the necessity of streamlining administrative processes, reducing red tape, and enhancing inter-agency coordination to facilitate timely and effective responses.

Socio-cultural factors, including local beliefs and social cohesion, also play a critical role in shaping disaster management outcomes. The study's findings on community perceptions and attitudes towards risk suggest that cultural awareness and community engagement are vital for promoting disaster preparedness and resilience. Incorporating socio-cultural considerations into disaster management policies and practices can enhance their relevance, acceptability, and effectiveness, particularly in culturally diverse settings like Zamboanga City (Bankoff, 2003).

Application of New Public Management (NPM) Principles

The application of NPM principles in Zamboanga City's disaster management governance presents a mixed picture, reflecting both the potential benefits and drawbacks of NPM-inspired reforms. Decentralization, a key tenet of NPM, has been partially implemented in the city's disaster management framework, with varying degrees of success. While decentralization has empowered some localities to take charge of their disaster management efforts, it has also led to disparities in resource allocation and service delivery, highlighting the challenges of ensuring equity and consistency in decentralized systems (Pollitt & Bouckaert, 2011).

The use of performance measurement and accountability mechanisms, another hallmark of NPM, has contributed to greater transparency and effectiveness in disaster management. However, the study's findings on data quality issues and the limitations of quantitative indicators point to the need for more robust and comprehensive performance management systems that capture both quantitative and qualitative aspects of disaster management (Hood, 1995).

The promotion of market orientation and public-private partnerships (PPPs) in disaster management reflects the influence of NPM on disaster governance. While PPPs offer valuable opportunities for resource mobilization and innovation, they also pose challenges related to accountability, equity, and the potential marginalization of vulnerable groups. These findings align with critiques of NPM that caution against the over-reliance on market mechanisms and the privatization of public services, particularly in areas such as disaster management where public goods and social equity are paramount (Dunleavy & Hood, 1994).

Implications for Policy and Practice

The findings of this study have several implications for policy and practice in flood and drought management in Zamboanga City and similar contexts. First, there is a need to strengthen local governance structures and processes to enhance decentralization and local autonomy in disaster management. This requires capacity building, resource allocation, and the establishment of clear roles and responsibilities at all levels of government.

Second, improving stakeholder engagement and collaboration is critical for effective disaster management. This involves developing formal coordination mechanisms, fostering trust and communication among stakeholders, and ensuring that all voices, including those of marginalized communities, are heard and considered in decision-making processes.

Third, addressing the barriers to policy implementation requires a comprehensive approach that includes increasing financial and human resources, streamlining administrative processes, and incorporating socio-cultural considerations into disaster management strategies. By addressing these challenges, policymakers can enhance the effectiveness and sustainability of disaster risk reduction efforts.

Finally, the application of NPM principles in disaster management governance should be carefully considered, balancing the benefits of efficiency and innovation with the need for accountability, equity, and social justice. Policymakers should be cautious in adopting market-oriented approaches and ensure that public-private partnerships are designed and implemented in ways that promote public interests and protect vulnerable populations.

Conclusion: This study provides a comprehensive analysis of the governance of flood and drought management in Zamboanga City, highlighting the complexities and challenges of disaster management in a developing urban context. The findings underscore the importance of robust governance structures, effective stakeholder engagement, and equitable policy implementation in enhancing disaster resilience. By drawing on public administration theory and empirical data, this study contributes to a deeper understanding of the dynamics of disaster governance and offers valuable insights for policymakers and practitioners in the field.

VI. Public Policy Implications

The findings of this study on the governance of flood and drought management in Zamboanga City have significant implications for public policy, particularly in the context of disaster risk reduction and management (DRRM). Effective policy-making in this area requires a nuanced understanding of the challenges and opportunities associated with decentralized governance, stakeholder engagement, and the application of New Public Management (NPM) principles. This section outlines the key policy implications derived from the study, focusing on governance reforms, stakeholder collaboration, resource management, and the balance between market-oriented approaches and public accountability.

6.1 Enhancing Decentralized Governance

The study's findings indicate that while decentralization is a core component of disaster management in Zamboanga City, the uneven implementation of decentralization policies leads to disparities in resource allocation and service delivery. To address these issues, public policy must focus on enhancing decentralized governance structures by clearly delineating the roles and responsibilities of various local government units (LGUs), including barangay-level disaster risk reduction and management committees (BDRRMCs).

Policies should aim to empower local governments with greater decision-making authority, particularly in resource allocation and response planning. This can be achieved through legislative reforms that provide legal and administrative frameworks for decentralization, coupled with capacity-building programs that strengthen local governance capabilities. Moreover, establishing performance benchmarks and accountability measures tailored to local contexts can ensure that decentralization contributes to more equitable and effective disaster management.

6.2 Strengthening Stakeholder Collaboration

The research highlights the importance of multi-stakeholder collaboration in disaster management, yet also reveals significant challenges in coordination, trust-building, and power dynamics. Effective public policy must prioritize the development of institutional frameworks that facilitate meaningful stakeholder engagement and collaboration. This involves creating formal mechanisms for coordination, such as inter-agency task forces or disaster management councils that include representatives from all relevant sectors, including government, NGOs, civil society organizations (CSOs), and the private sector.

Policies should also encourage the establishment of public-private partnerships (PPPs) that leverage the resources and expertise of the private sector while ensuring transparency, accountability, and equity. Guidelines for PPPs in disaster management should be developed to clarify roles, responsibilities, and expectations, ensuring that partnerships contribute to public interests rather than commercial gains. Additionally, fostering an inclusive approach that actively involves vulnerable and marginalized communities in decision-making processes can enhance social resilience and ensure that disaster management policies are responsive to the needs of all stakeholders.

6.3 Improving Resource Management and Allocation

The findings of this study emphasize the critical need for effective resource management and allocation in disaster management. Resource constraints, coupled with bureaucratic inefficiencies, have been identified as major barriers to effective flood and drought management in Zamboanga City. Public policy should focus on improving resource mobilization and allocation mechanisms to ensure that resources are directed towards the most vulnerable communities and critical areas of need.

This requires a multi-pronged approach that includes increasing funding for disaster risk reduction and management (DRRM) at both the national and local levels, streamlining administrative processes to reduce delays and inefficiencies, and enhancing financial management practices to ensure transparency and accountability. Policies should also promote the integration of disaster risk reduction into broader development planning processes, ensuring that DRRM is not treated as a standalone issue but as an integral component of sustainable development.

6.4 Balancing Market-Oriented Approaches with Public Accountability

The application of NPM principles, such as market orientation and performance measurement, in Zamboanga City's disaster management framework presents both opportunities and challenges. While these principles can enhance efficiency and innovation, the study's findings highlight the risks associated with over-reliance on market mechanisms, particularly in contexts where public goods and social equity are at stake.

Public policy must strike a balance between leveraging market-oriented approaches and ensuring public accountability and equity. This involves setting clear guidelines for the privatization of disaster management services, ensuring that such arrangements do not compromise public access or exacerbate inequalities. Performance measurement systems should be designed to capture both quantitative and

qualitative aspects of disaster management, reflecting not only efficiency and effectiveness but also social outcomes such as community empowerment and resilience.

Moreover, policymakers should be cautious in adopting NPM-inspired reforms without considering the local context and institutional capacities. Tailoring NPM principles to the specific needs and conditions of Zamboanga City, and ensuring that they complement rather than replace traditional public administration approaches, can help maximize their benefits while minimizing potential drawbacks.

6.5 Policy Recommendations for Disaster Management in Zamboanga City

Based on the study's findings, several specific policy recommendations can be made to improve disaster management in Zamboanga City:

1. **Enhance Local Governance Capacities:** Invest in capacity-building programs for LGUs and BDRRMCs to strengthen their technical and administrative capabilities in disaster management. Provide targeted training and resources to build local resilience and empower communities to take proactive measures in disaster risk reduction.
2. **Foster Inclusive and Participatory Governance:** Develop policies that promote inclusive governance by actively engaging diverse stakeholders in disaster management planning and decision-making processes. Ensure that the voices of marginalized and vulnerable groups are heard and considered in policy formulation and implementation.
3. **Establish Robust Coordination Mechanisms:** Create formal coordination structures at the city and barangay levels to enhance collaboration among government agencies, NGOs, CSOs, and the private sector. Establish clear communication channels and protocols to facilitate efficient and effective disaster response.
4. **Promote Accountability and Transparency:** Implement performance measurement systems that capture both quantitative and qualitative aspects of disaster management. Ensure that performance indicators are standardized, comprehensive, and reflective of local contexts and needs. Regularly review and audit performance reports to ensure accuracy and accountability.
5. **Integrate Disaster Risk Reduction into Development Planning:** Mainstream disaster risk reduction into broader development planning processes, ensuring that DRRM is integrated into sectoral policies and programs. Promote a holistic approach to disaster management that addresses the underlying drivers of vulnerability and enhances community resilience.

Conclusion: The public policy implications derived from this study underscore the importance of a comprehensive and integrated approach to disaster management in Zamboanga City. By enhancing decentralized governance, strengthening stakeholder collaboration, improving resource management, and balancing market-oriented approaches with public accountability, policymakers can develop more effective and equitable disaster management strategies. These strategies must be tailored to the specific needs and conditions of Zamboanga City, ensuring that they contribute to sustainable development and resilience in the face of future flood and drought risks.

VII. Implications to the Theory and Practice of Public Administration

The findings from this study on flood and drought management in Zamboanga City offer valuable insights into the application and evolution of public administration theory, particularly in the context of

New Public Management (NPM). This section explores the implications of these findings for both theoretical understanding and practical implementation in public administration.

7.1 Theoretical Implications

This study's findings offer significant theoretical implications for public administration, particularly in the context of decentralized governance. The research underscores the value of integrating the New Public Governance (NPG) theory, which emphasizes collaborative approaches to public administration. By illustrating how decentralized structures in Zamboanga City both facilitate and hinder effective disaster management, the study highlights the complexities of governance networks and the need for clear role definitions and stakeholder coordination. The findings affirm that NPG principles—such as inclusivity and responsiveness—are critical for improving disaster management outcomes. Additionally, the study suggests that market-oriented approaches, while beneficial, must be balanced with robust public accountability mechanisms. These insights contribute to the broader understanding of governance theories in practice, particularly in disaster contexts, and offer a framework for enhancing public administration practices through improved stakeholder engagement and integrated resource management.

1. Reevaluation of New Public Management (NPM) Principles: The study reveals that while New Public Management (NPM) principles such as decentralization, performance measurement, and market orientation have been implemented in Zamboanga City's disaster management framework, their effectiveness is mixed. The findings suggest that NPM principles, though valuable in promoting efficiency and innovation, may require adaptation to fit the specific contexts of developing regions. For instance, the decentralization of disaster management in Zamboanga City has led to uneven resource distribution and variable performance across barangays, challenging the assumption that decentralization inherently improves responsiveness and local empowerment (Hood, 1991). This finding indicates a need to refine theoretical models of decentralization to account for issues of equity, capacity, and administrative coherence. Similarly, the application of performance measurement has encountered challenges related to data quality and the adequacy of quantitative indicators. This highlights the need for a more nuanced approach to performance management that integrates both quantitative metrics and qualitative assessments to capture the full spectrum of disaster management outcomes (Hood, 1995).

2. Integration of Collaborative Governance Frameworks: The study underscores the significance of collaborative governance frameworks in disaster management, highlighting the role of multi-stakeholder engagement and public-private partnerships. The findings align with the collaborative governance literature, which emphasizes the importance of trust, coordination, and shared decision-making among diverse stakeholders (Ansell & Gash, 2008). However, the challenges identified in stakeholder engagement and collaboration, such as coordination gaps and power imbalances, suggest that existing theories on collaborative governance may need to be expanded to address these practical issues more comprehensively. The integration of collaborative governance with NPM principles could offer a more holistic approach to disaster management, combining the efficiency focus of NPM with the inclusiveness and adaptability of collaborative frameworks.

3. Rethinking Market-Oriented Approaches: The study's findings on public-private partnerships (PPPs) reveal both the potential benefits and drawbacks of market-oriented approaches in disaster management. While PPPs can enhance resource mobilization and innovation, they also raise concerns about equity and accountability, particularly for marginalized communities (Bovaird, 2004). This suggests a need for theoretical models that better balance the advantages of market mechanisms with the principles of public accountability and social equity. Theories of public administration should

incorporate mechanisms for ensuring that market-oriented approaches do not undermine public values and equity, particularly in sectors where social goods are at stake (Dunleavy & Hood, 1994).

7.2 Practical Implications

The study's findings provide actionable insights for improving flood and drought management in Zamboanga City. Practically, the research underscores the need for enhanced clarity in governance roles and responsibilities to streamline disaster management efforts. Strengthening stakeholder collaboration through formalized coordination mechanisms and fostering inclusive participation can significantly improve response effectiveness. Resource management strategies should be refined to ensure adequate allocation and utilization of financial, technical, and human resources. Performance measurement systems require improvement to better assess and enhance disaster management activities. Additionally, while market-oriented approaches offer benefits, they must be integrated with strong public accountability to ensure equitable outcomes. These recommendations are crucial for local policymakers and practitioners aiming to build more resilient disaster management frameworks, enhance operational efficiency, and ultimately improve community resilience to flood and drought events.

1. Enhancing Decentralized Governance Practices: The practical challenges identified in the study, such as uneven resource allocation and centralization of decision-making, highlight the need for more effective implementation of decentralized governance practices. Practitioners should focus on developing clear legal frameworks, strengthening local capacities, and ensuring equitable distribution of resources. Effective decentralization requires not only devolving authority but also providing the necessary support and resources to local entities. This includes capacity-building initiatives, financial support, and technical assistance tailored to the needs and capabilities of local governments (Ostrom, 1990).

2. Improving Stakeholder Engagement and Collaboration: The study's findings suggest that improving stakeholder engagement and collaboration is crucial for effective disaster management. Practitioners should prioritize the establishment of formal coordination mechanisms and collaborative frameworks that facilitate communication and trust among stakeholders. This involves creating platforms for regular dialogue, developing agreements on roles and responsibilities, and ensuring that all relevant stakeholders, including marginalized groups, are involved in decision-making processes. Effective stakeholder engagement also requires addressing power dynamics and fostering a culture of collaboration and mutual respect (Emerson, Nabatchi, & Balogh, 2012).

3. Refining Performance Measurement Systems: The challenges related to performance measurement and data quality identified in the study point to the need for refining performance measurement systems. Practitioners should develop comprehensive performance indicators that capture both quantitative and qualitative aspects of disaster management. This involves designing metrics that reflect the outcomes and impacts of disaster management initiatives, as well as implementing robust data collection and analysis processes. Regular reviews and updates of performance measurement systems are also necessary to ensure their relevance and effectiveness (Hood, 1995).

4. Balancing Market-Oriented Approaches with Public Accountability

The study's insights into public-private partnerships (PPPs) highlight the need for careful balancing of market-oriented approaches with public accountability. Practitioners should establish clear guidelines for PPPs that ensure transparency, equity, and accountability in the provision of disaster management services.

This includes developing mechanisms for monitoring and evaluating PPPs, setting standards for private sector involvement, and ensuring that public interests are safeguarded. Practitioners should also

consider the social implications of market-oriented approaches and strive to ensure that they do not exacerbate inequalities or undermine public values (Bovaird, 2004).

Conclusion: The study's findings have important implications for both the theory and practice of public administration. Theoretical models of public administration, particularly those related to NPM, collaborative governance, and market-oriented approaches, should be adapted to address the complexities and challenges identified in disaster management contexts. Practitioners must focus on enhancing decentralized governance practices, improving stakeholder engagement, refining performance measurement systems, and balancing market-oriented approaches with public accountability. By addressing these implications, both theory and practice can contribute to more effective and equitable disaster management strategies, ultimately enhancing resilience and capacity in the face of future challenges.

VIII. Conclusion

This study provides a comprehensive analysis of the governance of flood and drought management in Zamboanga City, Philippines, offering valuable insights into the application of New Public Management (NPM) principles and collaborative governance frameworks. The research highlights the complex interplay between governance structures, stakeholder engagement, resource management, and the adaptation of public administration theories to local contexts.

Moreover, this research highlights the critical role of decentralized governance in enhancing disaster response and preparedness. Despite the strengths of local governance structures, challenges persist in role clarity, resource allocation, and stakeholder coordination. The study concludes that effective disaster management necessitates clearer guidelines, robust stakeholder engagement, and better integration of disaster risk reduction into broader development planning. Balancing market-oriented approaches with public accountability is essential for equitable and efficient outcomes. The findings underscore the need for continuous improvement in governance practices, performance measurement, and resource management to enhance resilience and response capabilities. By addressing these issues, Zamboanga City can improve its disaster management strategies, ultimately contributing to more resilient communities and better preparedness for future flood and drought events. The research offers valuable lessons for other regions facing similar challenges in disaster governance and management.

Summary of Key Findings

The study reveals that while decentralized governance in Zamboanga City enhances local disaster management responsiveness, it faces challenges in role clarity, resource allocation, and stakeholder coordination. Effective disaster management requires clearer guidelines and improved stakeholder engagement. Resource management needs refinement to ensure adequate allocation and use. Performance measurement systems must be enhanced to better evaluate disaster management efforts. Market-oriented approaches offer benefits but need to be balanced with public accountability. Addressing these issues can improve disaster management strategies, boost community resilience, and provide valuable lessons for similar regions facing flood and drought challenges.

1. Governance Structures and Processes: The study reveals that Zamboanga City's disaster management framework, while designed to be decentralized, exhibits significant centralization in decision-making processes. This centralization impedes the effectiveness of local disaster management committees and delays response efforts. The findings suggest that enhancing local autonomy and clarifying roles within the governance structure could improve disaster response and management.

2. Stakeholder Engagement and Collaboration: Stakeholder engagement is crucial for effective disaster management, yet the study identifies challenges in coordination, trust-building, and power dynamics among diverse stakeholders. The need for formal coordination mechanisms and inclusive practices is evident, with recommendations for improving collaboration through established frameworks and active participation from all sectors, including marginalized communities.

3. Resource Management and Policy Implementation: Resource constraints, bureaucratic inefficiencies, and socio-cultural factors present significant barriers to effective disaster management. The study emphasizes the need for increased financial investment, streamlined administrative processes, and the incorporation of socio-cultural considerations into disaster management policies. Addressing these issues can enhance the efficiency and effectiveness of disaster management efforts.

4. Application of NPM Principles: The application of NPM principles, such as decentralization and performance measurement, demonstrates mixed results. While decentralization aims to empower local governments, it has led to uneven resource distribution and administrative challenges. Performance measurement systems require refinement to capture both quantitative and qualitative aspects of disaster management. The study also highlights the need to balance market-oriented approaches with public accountability to ensure equity and transparency in disaster management.

Implications for Public Administration Theory: The findings suggest that theoretical models of public administration, particularly those related to NPM, need adaptation to address the complexities of disaster management in developing contexts. The integration of collaborative governance frameworks with NPM principles can offer a more holistic approach, combining efficiency with inclusiveness and adaptability. Theoretical models should also incorporate mechanisms for balancing market-oriented approaches with public accountability to address equity and social justice concerns.

Implications for Public Policy and Practice

The study's findings highlight crucial areas for public policy and practice in disaster management. Policymakers should enhance clarity in governance roles and improve stakeholder coordination to optimize disaster response. Resource allocation and management must be strengthened to ensure sufficient support for disaster preparedness and response. Performance measurement systems need refinement to better assess and improve management efforts. Additionally, while market-oriented approaches are beneficial, they must be implemented with strong public accountability. These recommendations offer actionable steps for refining disaster management strategies, enhancing community resilience, and providing a model for other regions dealing with similar challenges.

For practitioners and policymakers, the study underscores several key areas for improvement:

- 1. Enhancing Decentralized Governance:** Strengthening local governance structures, providing adequate resources, and clarifying roles and responsibilities are essential for effective disaster management.
- 2. Improving Stakeholder Engagement:** Developing formal coordination mechanisms and fostering inclusive practices can enhance collaboration and ensure that all stakeholders are effectively involved in disaster management processes.
- 3. Refining Resource Management:** Addressing resource constraints and bureaucratic inefficiencies through increased funding, streamlined processes, and comprehensive planning can improve disaster management outcomes.

4. **Balancing Market-Oriented Approaches:** Ensuring that market-oriented approaches do not undermine public values and equity requires careful design of public-private partnerships and performance measurement systems.

Recommendations for Future Research

Future research should explore the impact of specific governance structures on disaster management effectiveness, focusing on how role clarity and stakeholder coordination influence outcomes. Investigating the integration of market-oriented approaches with public accountability in various contexts could provide insights into balancing efficiency and equity. Further studies should assess the effectiveness of performance measurement systems in diverse disaster scenarios and regions. Additionally, longitudinal research on the long-term effects of decentralized governance and resource management strategies on community resilience could offer valuable lessons for refining disaster management practices and policies globally.

Future research should explore the following areas to build on the findings of this study:

1. **Longitudinal Studies:** Conduct longitudinal studies to assess the long-term impacts of governance reforms and stakeholder engagement strategies on disaster management outcomes.
2. **Comparative Analysis:** Perform comparative analyses of disaster management practices across different cities and regions to identify best practices and innovative approaches.
3. **Evaluation of NPM Reforms:** Investigate the effectiveness of NPM-inspired reforms in various contexts, particularly in relation to their impact on equity and public accountability.
4. **Socio-Cultural Factors:** Examine the role of socio-cultural factors in shaping disaster management practices and policies, with a focus on community resilience and local knowledge integration.

Conclusion: In conclusion, this study provides valuable insights into the governance of flood and drought management in Zamboanga City, contributing to the broader understanding of public administration theory and practice. By addressing the challenges identified and implementing the recommended policy and practice improvements, Zamboanga City can enhance its disaster management capabilities and resilience, serving as a model for other cities facing similar challenges.

IX. Recommendations

To enhance disaster management in Zamboanga City, several key recommendations emerge. First, clarify governance roles and responsibilities to streamline disaster response efforts and improve coordination among stakeholders. Implement formalized mechanisms for better collaboration, ensuring that all relevant parties are effectively engaged. Strengthen resource management by increasing the adequacy of financial, technical, and human resources dedicated to disaster preparedness and response. Refine performance measurement systems to provide more accurate assessments of disaster management effectiveness and guide improvements. While market-oriented approaches can enhance efficiency, they should be paired with robust public accountability measures to ensure equitable outcomes. These actions will contribute to a more resilient disaster management framework, benefiting both local communities and broader regions facing similar challenges.

Based on the comprehensive analysis of flood and drought management in Zamboanga City, the following recommendations are proposed to enhance disaster management practices and governance:

9.1 Strengthen Decentralized Governance Structures

To improve disaster management, it is essential to strengthen decentralized governance structures. Clearer delineation of roles and responsibilities within local government units (LGUs) and barangay disaster risk reduction and management committees (BDRRMCs) is crucial for effective response and coordination. Enhancing the capacity of these local entities through targeted training and resources will improve their ability to manage flood and drought risks. Establishing formalized coordination mechanisms and improving communication channels among various stakeholders—government, NGOs, community organizations, and the private sector—can further enhance collaborative efforts. Streamlining decision-making processes and ensuring that local governance structures are well-integrated into national disaster management frameworks will contribute to more efficient and effective disaster response. Strengthening these decentralized systems ensures that local needs and conditions are adequately addressed, leading to improved resilience and preparedness at the community level.

1. Clarify Roles and Responsibilities: Clearly delineate the roles and responsibilities of various local government units (LGUs) and barangay-level disaster risk reduction and management committees (BDRRMCs). Establish legal frameworks that empower local entities with decision-making authority and ensure coherence across different levels of government.

2. Build Local Capacities: Invest in capacity-building programs for LGUs and BDRRMCs to enhance their technical and administrative capabilities in disaster management. Provide targeted training, resources, and support to strengthen local resilience and enable effective disaster response.

3. Implement Performance Benchmarks: Develop and implement performance benchmarks and accountability measures for local disaster management entities. Regularly assess performance against these benchmarks to ensure that decentralization contributes to improved disaster management outcomes.

9.2 Enhance Stakeholder Engagement and Collaboration

1. Establish Formal Coordination Mechanisms: Create formal mechanisms for coordination among government agencies, non-governmental organizations (NGOs), civil society organizations (CSOs), and the private sector. Establish inter-agency task forces or disaster management councils to facilitate collaboration and communication.

2. Foster Inclusive Participation: Promote inclusive participation by actively involving marginalized and vulnerable communities in disaster management planning and decision-making processes. Ensure that the voices of all stakeholders are heard and considered, and address power imbalances to foster equitable collaboration.

3. Develop Public-Private Partnerships (PPPs): Encourage the formation of public-private partnerships (PPPs) to leverage the resources and expertise of the private sector. Develop clear guidelines for PPPs to ensure transparency, accountability, and alignment with public interests.

Enhancing stakeholder engagement and collaboration is critical for improving disaster management effectiveness. Establishing robust mechanisms for communication and coordination among government agencies, non-governmental organizations (NGOs), community groups, and the private sector can significantly improve disaster response and recovery efforts. To achieve this, formalize stakeholder engagement processes through regular meetings, joint planning sessions, and shared platforms for information exchange. This approach ensures that diverse perspectives are considered, and resources are utilized efficiently.

Creating inclusive forums for dialogue helps address conflicts and aligns objectives, fostering a cooperative environment. Strengthen partnerships by clarifying roles, responsibilities, and expectations to avoid overlaps and gaps in disaster management efforts. Building trust among stakeholders is essential, which can be achieved through transparency and accountability in decision-making processes. Additionally, providing training and capacity-building opportunities for stakeholders will enhance their ability to contribute effectively.

Integrating feedback from stakeholders into disaster planning and response strategies ensures that local needs and conditions are met. Effective collaboration not only improves operational efficiency but also boosts community resilience by leveraging the strengths and resources of various partners. Overall, enhancing stakeholder engagement and collaboration is vital for developing a comprehensive and adaptive disaster management framework that responds effectively to flood and drought challenges.

9.3 Improve Resource Management and Allocation

Improving resource management and allocation is essential for effective disaster management. Adequate financial, technical, and human resources must be allocated to disaster preparedness and response efforts to ensure timely and efficient interventions. To achieve this, it is crucial to develop comprehensive resource planning frameworks that align with identified needs and priorities. Implementing transparent processes for resource distribution helps prevent inefficiencies and ensures that resources are directed where they are most needed.

Strengthen mechanisms for monitoring and evaluating resource use to identify gaps and optimize allocation. Foster partnerships with the private sector and NGOs to augment resources and expertise, enhancing overall capacity. Additionally, invest in training and development to build local capacities for managing resources effectively. Improved resource management ensures that disaster response efforts are well-supported, enabling quicker and more effective action during emergencies, and ultimately contributing to greater community resilience and preparedness.

1. Increase Funding for DRRM: Secure increased funding for disaster risk reduction and management (DRRM) initiatives at both the national and local levels. Prioritize funding for vulnerable communities and critical areas of need to ensure effective disaster management and response.

2. Streamline Administrative Processes: Simplify and streamline administrative processes to reduce delays and inefficiencies in disaster management. Implement electronic systems for resource allocation and management to improve efficiency and transparency.

3. Integrate DRRM into Development Planning: Mainstream disaster risk reduction into broader development planning processes. Ensure that DRRM is an integral component of sectoral policies and programs, addressing the underlying drivers of vulnerability and enhancing community resilience.

9.4 Refine Performance Measurement Systems

Refining performance measurement systems is critical for evaluating and enhancing disaster management efforts. Developing more comprehensive metrics and evaluation frameworks enables accurate assessment of the effectiveness and efficiency of disaster response and preparedness activities. Establish clear indicators that reflect both output and outcome measures, ensuring they align with strategic goals and community needs.

Implement regular reviews and audits to identify areas for improvement and track progress over time. Integrate feedback mechanisms to gather input from stakeholders on the relevance and utility of performance metrics. Utilize data-driven insights to inform decision-making and adjust strategies as needed. Enhancing transparency in performance reporting helps build accountability and trust among stakeholders. Investing in advanced tools and technologies for data collection and analysis can further

improve the precision and reliability of performance measurements. Ultimately, refined performance measurement systems support continuous improvement, ensuring that disaster management practices effectively address evolving challenges and contribute to increased resilience.

1. Develop Comprehensive Metrics: Create comprehensive performance metrics that capture both quantitative and qualitative aspects of disaster management. Include indicators that reflect the outcomes and impacts of disaster management initiatives, as well as community resilience and empowerment.

2. Implement Robust Data Collection: Establish robust data collection and analysis processes to ensure the accuracy and reliability of performance measurement. Use data to inform decision-making, identify areas for improvement, and enhance accountability.

3. Regularly Review Performance: Conduct regular reviews and audits of performance measurement systems to ensure their relevance and effectiveness. Adjust metrics and processes as needed to reflect changing conditions and priorities.

9.5 Balance Market-Oriented Approaches with Public Accountability

Balancing market-oriented approaches with public accountability is crucial for effective disaster management. While public-private partnerships and market-based strategies can enhance resource efficiency and innovation, they must be complemented by strong accountability measures to ensure equitable and transparent outcomes. Implement clear guidelines and oversight mechanisms to monitor the performance of market-oriented initiatives, ensuring they align with public interests and regulatory standards. Regularly evaluate the impact of these approaches on vulnerable populations and adjust practices to address any disparities. This balance ensures that market-driven solutions contribute positively without compromising public trust and accountability.

1. Establish Guidelines for PPPs: Develop clear guidelines for the privatization of disaster management services to ensure that public interests are safeguarded. Define the roles and responsibilities of private sector partners and establish mechanisms for monitoring and evaluation.

2. Ensure Equity in Market Approaches: Monitor and evaluate market-oriented approaches to ensure that they do not exacerbate inequalities or undermine public values. Implement safeguards to protect vulnerable communities and ensure equitable access to disaster management services.

3. Promote Public Accountability: Enhance transparency and accountability in disaster management by establishing mechanisms for public oversight and stakeholder feedback. Ensure that market-oriented approaches are aligned with principles of public accountability and social equity.

9.6 Recommendations for Future Research

Future research should focus on several key areas to advance disaster management practices. First, investigate the impact of specific decentralized governance structures on disaster management effectiveness, examining how various roles and responsibilities influence outcomes. Explore the integration of market-oriented approaches with public accountability across different contexts to identify best practices for balancing efficiency and equity. Assess the effectiveness of performance measurement systems in diverse disaster scenarios to enhance their applicability and accuracy. Longitudinal studies are needed to evaluate the long-term impacts of governance and resource management strategies on community resilience. Additionally, research should explore innovative practices and technologies in disaster management to identify new solutions and improvements. These areas of inquiry will provide valuable insights for refining disaster management strategies and policies, benefiting communities facing similar challenges worldwide.

1. Conduct Longitudinal Studies: Undertake longitudinal studies to assess the long-term impacts of governance reforms and stakeholder engagement strategies on disaster management outcomes. Evaluate the effectiveness of implemented policies and practices over time.

2. Perform Comparative Analyses: Carry out comparative analyses of disaster management practices across different cities and regions to identify best practices and innovative approaches. Use findings to inform policy development and implementation.

3. Examine Socio-Cultural Factors: Investigate the role of socio-cultural factors in shaping disaster management practices and policies. Explore how local knowledge, traditions, and community dynamics influence disaster risk reduction and response efforts.

4. Evaluate NPM Reforms: Assess the effectiveness of New Public Management (NPM)-inspired reforms in various contexts, particularly concerning their impact on equity, public accountability, and service delivery. Explore how NPM principles can be adapted to different settings.

Conclusion: The recommendations provided aim to address the identified challenges and enhance the effectiveness of flood and drought management in Zamboanga City. By strengthening decentralized governance structures, improving stakeholder engagement, refining resource management, and balancing market-oriented approaches with public accountability, policymakers and practitioners can develop more robust and equitable disaster management strategies. Implementing these recommendations will contribute to increased resilience and capacity in the face of future disasters, ultimately benefiting both the city and its residents.

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