

COMPLIANCE INDEX OF LGU-MALITA WITH DILG MEMORANDUM CIRCULAR 2015-76

Narciso S. Birondo II¹, Michael M. Alferez², Gedrick M. BAliog³, Silverio V. Magallon Jr⁴

^{1,2,3,4}University of Southeastern Philippines, Davao City, Philippines.

ABSTRACT

The study investigates the compliance level of Malita Local Government Unit (LGU) with disaster preparedness policies, referencing the DILG Memorandum Circular 2015-76. Employing a descriptive statistical approach, the research evaluates the LGU's compliance across early preparedness components, including system and structure, institutionalization of plans and policies, competency building, and resource management. The study reveals an overall satisfactory compliance index of 60.71% for the LGU, notably in their structural and resource management components. The study draws guidance from the Health Benefit Model, providing insights on factors and behaviors influencing LGU compliance. This research offers practical insights and policy recommendations to strengthen disaster preparedness efforts within local governance, contributing to the wider discourse on the implementation of effective strategies for disaster risk reduction and management.

Keywords: Compliance Level, Descriptive Statistical Approach, Health Benefit Model

1. INTRODUCTION

Background of the Study

In recent years, the Philippines has experienced an alarming increase in the frequency and intensity of natural disasters, including typhoons, earthquakes, floods, and landslides. These catastrophic events have resulted in significant loss of lives, destruction of infrastructure, and severe disruption of livelihoods across the country (Warren 2016). The devastating impacts of these disasters have underscored the pressing need for proactive measures to reduce the risks associated with such events (Mojtahedi and Oo 2017). Recognizing the urgency of disaster risk reduction and management, the Philippines' Department of the Interior and Local Government (DILG) has taken decisive action. In response to the growing threat of natural disasters, the DILG has incorporated the principles of Republic Act 10121, known as the Philippine Disaster Risk Reduction and Management Act of 2010, into their initiatives. Aligned with the provisions of Republic Act 10121, the DILG issued Memorandum Circular No. 2015-76, titled "Early Preparedness Actions to Reduce Disaster Risks," on July 21, 2015. This policy specifically focuses on early preparedness actions and serves as a comprehensive guideline for Local Government Units (LGUs) to enhance their capacity in preparing for and mitigating the impacts of disasters (DILG Memorandum Circular No. 2015-76, 2015). Drawing from the principles of RA 10121, the memorandum circular highlights key aspects of effective disaster risk reduction and management. It emphasizes the importance of instituting disaster preparedness in LGUs by establishing structures and systems, institutionalizing plans, and policies, building competencies, and resource management. As indicated by state policies, establishing structures and systems will enable timely evacuation and preparedness. By integrating, for example, early warning systems into their disaster risk reduction efforts, LGUs can effectively communicate disaster-related information to the public and improve response coordination, thereby reducing the risks associated with disasters (Gumiran and Daag 2021). The memorandum circular also underscores the significance of institutionalizing plans and policies which involves developing strategies and procedures to address potential disaster scenarios. By adopting this approach, local governments can anticipate and prepare for various risks, ensuring a more effective and timely response when disasters strike (Inam 2013). In addition, the memorandum circular stresses the need for building LGU competencies for confronting disasters. Enhancing competencies enables local governments to address vulnerabilities within their respective areas and prioritize mitigation efforts accordingly. This approach facilitates targeted and proactive measures to reduce the risks posed by disasters (Gil-Rivas and Kilmer 2016). Significantly, the memorandum circular also recognizes resource management as a vital component of disaster risk reduction efforts. It acknowledges, for instance, that prepositioning of equipment and supplies are essential for successful outcomes in disaster risk reduction. Through this initiative, local governments can initiate early preparedness action thereby enhancing the overall resilience of communities in the face of disasters (Rodríguez-Espíndola, Albores et al. 2018). By incorporating the principles of RA 10121 into their policies and guidelines, such as Memorandum Circular No. 2015-76, the DILG empowers LGUs to adopt a proactive and comprehensive approach to disaster risk reduction and management. This integration ensures that LGUs prioritize early preparedness actions and, by doing so, the DILG strengthens the country's resilience to natural disasters and fosters a culture of safety and preparedness across the Philippines.

2. OBJECTIVES

This research aims to accomplish the following goals:

1. Evaluate the existing disaster preparedness structures and systems within the local government of Malita to identify any gaps or deficiencies.
2. Assess the extent to which the local government of Malita has institutionalized its plans and policies in preparing for disasters to reduce risks.
3. Identify gaps in knowledge, skills, and capacities necessary for effective LGU preparedness to reduce disaster risk.
4. Examine the local government of Malita's resource management practices concerning allocation, utilization, and optimization of relief and technical resources to identify any inefficiencies or challenges.

THEORETICAL BASIS

This study utilizes the Health Belief Model (HBM) as the theoretical reference in examining policy compliance. HBM is a well-established and widely known theoretical framework that explains health behaviors. It has a long history and is commonly used to understand how people behave in relation to their health. Additionally, the HBM can be utilized in disaster preparedness initiatives that primarily center around human behavior (Ebru, Altintas et al. 2018).

The HBM is based on the following key components (Skinner, Tiro et al. 2015):

Perceived Susceptibility: This refers to an individual's belief in their susceptibility to a particular health condition or disease. People are more likely to take preventive measures if they perceive themselves to be at risk. **Perceived Severity:** This component reflects an individual's perception of the seriousness or severity of a health condition or disease. The perception of a severe health threat increases the likelihood of taking preventive or protective actions. **Perceived Benefits:** The HBM suggests that individuals are more likely to adopt health-related behaviors if they believe that the recommended action will result in significant benefits, such as reducing the risk of illness or improving overall well-being. **Perceived Barriers:** This component refers to the perceived obstacles or barriers that individuals may face in adopting health behaviors. Perceived barriers can include factors such as cost, inconvenience, or fear of side effects. **Higher perceived barriers may reduce the likelihood of adopting health-related actions.** **Cues to Action:** The HBM proposes that certain triggers or cues can prompt individuals to take action. These cues can be internal (e.g., experiencing symptoms) or external (e.g., advice from a healthcare professional, media campaigns) and play a role in motivating individuals to adopt health behaviors. **Self-efficacy:** Self-efficacy refers to an individual's belief in their ability to successfully perform the recommended health behavior. Higher self-efficacy is associated with a greater likelihood of engaging in health-related actions. The Health Belief Model suggests that individuals weigh these factors and make rational decisions about whether or not to adopt health beneficial behaviors (Skinner, Tiro et al. 2015).

CONCEPTUAL FRAMEWORK



Figure 1: Health Benefit Model in Disaster Preparedness

3. RESEARCH ASSUMPTIONS

Individuals within the local government of Malita are rational decision-makers who weigh the perceived susceptibility to and severity of potential disasters in relation to compliance with DILG Memorandum Circular 2015-76, thereby being compliant with the said policy.

The perceived benefits of complying with DILG Memorandum Circular 2015-76 also influences the likelihood of compliance of the local government of Malita, thus being compliant with the said policy. Cues to action will prompt the local government of Malita to act and improve their compliance with DILG Memorandum Circular 2015-76, hence the LGU will be compliant with the said policy.

The perceived barriers to compliance with DILG MC 2015-76, on the other hand, will negatively impact the level of compliance of the local government of Malita, in that way the LGU will not be compliant with the said policy.

These theoretical assumptions draw upon the Health Belief Model (HBM) as a framework to understand the motivations, perceptions, and behaviors of the local government of Malita regarding compliance with DILG Memorandum Circular 2015-76. The HBM provides a direction through which to examine the LGU's compliance and guides the overall design of this research.

4. METHODOLOGY

This research employs descriptive statistics. In particular, percentages and proportions are used to express compliance rates or the extent of adherence of LGU-Malita to DILG Memorandum Circular 2015-76. This statistical method provides a clear representation of the compliance index in terms of the proportion of conformity of LGU-Malita with regards to the said policy.

Percentages and proportions provide a clear representation of the compliance index in terms of the proportion of conformity with regards to a particular policy.

The variables that are indicative of compliance with the memorandum circular were also identified. These variables include the indicators as specified in the memorandum under the following components: a) Establishing Structures and Systems, b) Institutionalizing Plans and Policies, c) Building Competencies, and d) Resource Management.

Relevant data were then collected from the LGU regarding their compliance with the DILG memorandum circular. This involves reviewing documents related to the said policy, reports, and records, as well as conducting interviews with key stakeholders, officials, and employees.

Finally, to determine the compliance rates or proportions of the LGU to the memorandum, the percentage of the complied vs. not complied indicators were computed. A score of 1 is given if the LGU is compliant with a certain indicator and 0 if the LGU is not compliant. The compliance rate or percentage was then computed. These methods have provided a clear representation of the compliance index in terms of proportions or percentages. Patterns, trends, or variations in compliance levels across different variables or dimensions were then identified.

For the purpose of this research, the following compliance index categories will also be used to describe the policy compliance level of LGU-Malita. Although these categories do not have standardized reference, they are still use for the purpose of describing the level of compliance in this study.

0 – zero compliance

01% – 20.99% - very poor compliance

21% - 40.99% - poor compliance

41% - 60.99% - satisfactory compliance

61% - 80.99% - good compliance

81% - 100% - excellent compliance

5. RESULTS AND DISCUSSION

Based on the data collected, compiled, and summarized, the following results have been obtained:

1. Compliance Index of LGU-Malita on Disaster Preparedness Systems and Structures

Table 1 shows that the local government of Malita, Davao Occidental has complied with 2 out of 3 indicators or 66.67% compliance rate for disaster preparedness systems and structures. This means that the LGU is “satisfactorily compliant” in terms of systems and structures related to disaster preparedness. Specifically, based on the reviewed documents and interviews with stakeholders, the LGU has issued an Executive Order Establishing the Incident Command System. However, with regards to the filling up of positions in the Municipal DRRM office pursuant to Joint Memorandum Circular 2014-1 of DILG, Dept of Budget and Management (DBM), and National Disaster Risk Reduction and

Management Council (NDRRMC), only 1 out of 2 indicators was complied. The LGU has filled up its MDRRM Officer position but has not completed the filling up of 3 MDRRM staff positions (NDRRMC, DILG, DBM, CSC JMC 2014-1, 2014).

Table 1: Early Preparedness Index of LGU-Malita to Reduce Disaster Risk in Terms of Systems and Structures.

INDICATORS		COMPLIANCE
1	Issuance of Executive Order Establishing the Incident Command System	1
	Filling up of Plantilla Positions of MDRRM Office Pursuant to JMC 2014-1:	
2	1 DRRM Officer	1
3	3 DRRM Staff	0
	TOTAL	2/3

2. Compliance Index of LGU-Malita on Disaster Preparedness in terms of Institutionalizing Policies and Plans

In terms of Institutionalizing Policies and Plans, as shown in Table 2, the local government of Malita has complied with 11 out of 19 indicators or 57.90% compliance rate. This means that the LGU is “satisfactory” in compliance with Institutionalizing Policies and Plans related to disaster preparedness. The component “Institutionalizing Policies and Plans” is composed of 4 major indicators, viz. Formulated a Contingency Plan, Institutionalized Preemptive and Forced Evacuation, Forge Memorandum of Agreement, and Establish Partnership with other LGUs.

With regards to the indicator “Formulated a Contingency Plan”, the LGU has scored 4 out of 8 or 50% compliance rate. This component was assessed based on the integration of 1) Activation scheme on Early Warning System (EWS), 2) Activation system on pre-designated evacuation centers, 3) Evacuation route/map system, 4) Search and Rescue procedures, 5) Emergency Response procedures, 6) Methods on medical and counseling services, 7) System on distribution of relief goods, and 8) Evacuation center management system, in the DRRM Contingency Plan.

Moreover, the local government of Malita has an existing Preemptive and Forced Evacuation policy. With regards to this area, the LGU scored 1 out of 1 or 100% compliance rate.

The indicator “Forge Memorandum of Agreement (MOA)” was evaluated based on the existence of MOA with 1) Supermarkets, 2) Pharmacies, 3) Hospitals, 4) Volunteer groups/Transportation groups, 5) Telecommunications company, 6) Local construction companies, 7) Humanitarian organizations, 8) Faith-based organizations, 9) Funeral parlors. In this area, the LGU has forged MOA with 6 out of 9 specified establishments or 66.67% compliance rate.

Finally, LGU-Malita does not have an established partnership with other LGUs for DRRM and emergency response initiatives. With this, the LGU scored 0 out of 1 or zero compliance.

Table 2: Early Preparedness Index of LGU-Malita to Reduce Disaster Risk in Terms of Institutionalizing Policies and Plans

	INDICATORS	COMPLIANCE
	Formulated a Contingency Plan with:	
1	Activation scheme on EWS	0
2	Activation system on pre-designated evacuation centers	1
3	Evacuation route/map system	0
4	Search and Rescue procedures	1
5	Emergency Response procedures	1
6	Methods on medical and counseling service	0
7	System on distribution of relief goods	0
8	Evacuation center management system	1
9	Institutionalized Preemptive and Forced Evacuation	1
10	Supermarkets	1
11	Pharmacies	1

12	Hospitals	1
13	Volunteer groups/Transportation groups	1
14	Telecommunications company	0
15	Local construction companies	0
16	Humanitarian organizations	0
17	Faith-based organizations	1
18	Funeral parlors	1
19	Establish partnership with other LGUs for DRRM and Emergency Response initiatives	0
	TOTAL	11/19

3. Compliance Index of LGU-Malita on Disaster Preparedness in terms of Building Competencies

As demonstrated in Table 3, the LGU-Malita has met one of two indicators in establishing competencies, with a compliance rate of 50%. This signifies that the LGU has "satisfactory compliance" in developing disaster preparedness competencies among the populations it serves. The component "Building Competencies" has two (2) primary indicators: (1) CBDRRM training facilitation to all Barangays, and (2) deployment of critical information on various hazards and relative actions to be undertaken for every family. In this area, only the facilitation of CBDRRM Training has been complied by the LGU of the two indicators.

Table 3: Early Preparedness Index of LGU-Malita to Reduce Disaster Risk in Terms of Building Competencies

	INDICATORS	COMPLIANCE
1	CBDRRM Training to all Barangays	1
2	Important information on different hazards and actions to be undertaken pre, during, and post-calamity is disseminated to every family	0
	TOTAL	1

4. Compliance Index of LGU-Malita on Disaster Preparedness in terms of Resource Management

According to Table 4, the LGU-Malita has exhibited compliance with three (3) of its four (4) indicators, or a 75% compliance rate, indicating a "good compliance" rating in terms of resource prepositioning. The assessment made for this category was based on the availability, installation, and maintenance of (1) a stockpile of basic emergency equipment and supplies, (2) signages in identified hazard zones, (3) water level markers, and (4) rain gauge systems. For this area, the local government of Malita is compliant with the first three indicators.

Table 4: Early Preparedness Index of LGU-Malita to Reduce Disaster Risk in Terms of Resource Management

	INDICATORS	COMPLIANCE
1	Stockpile of basic emergency equipment and supplies	1
2	Installation of signages in identified hazard zones	1
3	Install and maintain water level markers	1
4	Install and maintain rain gauge systems	0
	TOTAL	3/4

5. Overall Disaster Preparedness compliance of LGU-Malita

Table 5 shows that the local government of Malita's overall level of compliance in disaster preparedness is "satisfactory" based on the issued memorandum circular by the DILG. The LGU has scored 17 out of the 28 indicators stated in the provisions, with an equivalent of 60.71% compliance rate. Furthermore, of the four major indicators, the LGU's level of compliance is highest in terms of the prepositioning of resources, and lowest in terms of building competencies (Fig.5). The figure below suggests that the LGU has a lot to work to achieve excellent compliance on its disaster preparedness requirements, with a greater emphasis on the complete establishment of a concrete contingency plan, coordination with other LGUs, and deployment of a comprehensive IEC plan in vulnerable areas to raise disaster awareness.

Table 5: Overall Early Preparedness Index of LGU-Malita to Reduce Disaster Risk

	INDICATORS	COMPLIANCE
1	Systems and Structures	2/3
2	Institutional Policies and Plans	11/19
3	Building Competencies	1/2
4	Prepositioning of Resources	3/4
	TOTAL	17/28

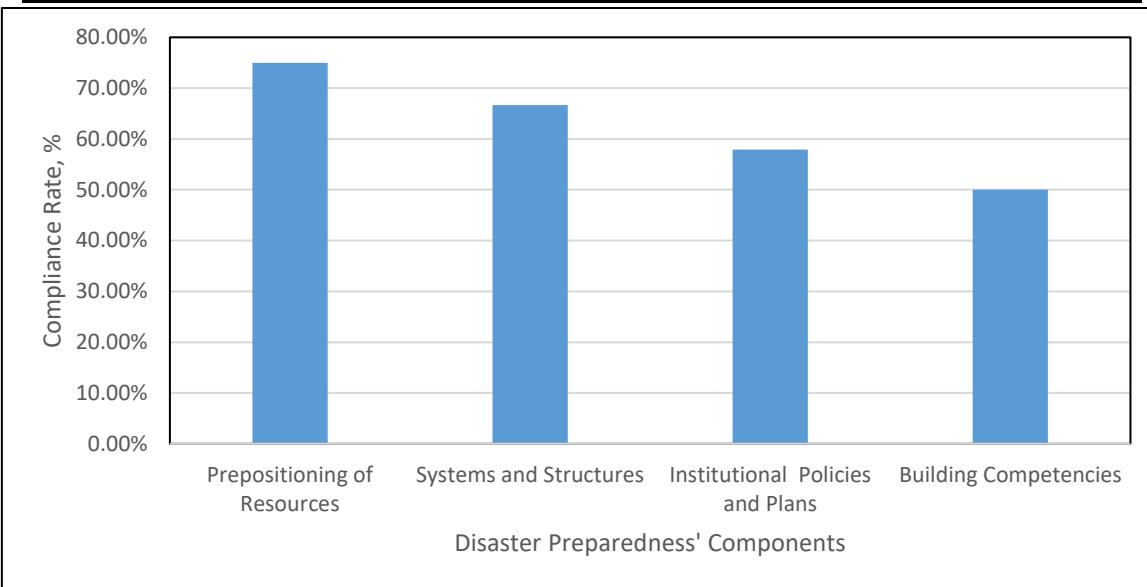


Figure 2. LGU Malita's Level of Compliance on Disaster Preparedness

6. CONCLUSION

The local government unit (LGU) of Malita, Davao Occidental has “satisfactorily” complied with the disaster preparedness systems and structures policy. However, there is a need to complete the filling up of positions in the Municipal DRRM office to fully comply with the requirements. Regarding the institutionalization of policies and plans, the LGU is also “satisfactory” in compliance. While the LGU has formulated a contingency plan and established a preemptive and forced evacuation policy, there is room for improvement in terms of forging memorandums of agreement with various establishments and establishing partnerships with other LGUs. In terms of building competencies, the LGU is also “satisfactory” in its compliance. Despite this, there is still work to be done in terms of deploying critical information on hazards and relative actions to be undertaken by the community. For resource management, the LGU has demonstrated “good” compliance. This indicates that the LGU has adequately prepositioned resources such as emergency equipment, supplies, and hazard signage. There is, however, one indicator related to rain gauge systems maintenance where compliance is lacking.

Overall, the LGU's level of compliance in disaster preparedness is “satisfactory”, with a compliance rate of 60.71%. The areas that require more attention and improvement include the establishment of a concrete contingency plan, coordination with other LGUs, and the deployment of a comprehensive information, education, and communication (IEC) program to raise disaster awareness in vulnerable areas.

It is also worth mentioning that while this study uses the HBM as a theoretical basis in projecting the compliance rate of LGU-Malita with the subjected policy, the research does not establish the relationship between the HBM components and the compliance behavior of the DRRM stakeholders of the municipality of Malita. The HBM only served as a reference to anchor the possibilities of complying with the particular DILG memorandum circular.

7. RECOMMENDATIONS

The local government unit (LGU) of Malita should focus on the following areas of disaster preparedness. By implementing these recommendations, the LGU can further strengthen its disaster preparedness efforts and enhance its overall compliance in line with the provisions set by the DILG.

- 1) Complete Staffing in the Municipal DRRM Office: The LGU should prioritize the filling up of the remaining vacant positions in the Municipal DRRM office as required by the Joint Memorandum Circular 2014-1. This will ensure the availability of a competent and dedicated team to handle disaster preparedness and response.
- 2) Strengthen Contingency Planning: The LGU should improve its compliance in formulating a comprehensive contingency plan. This plan should include detailed procedures and protocols for early warning systems, systems on pre-designated evacuation centers, evacuation routes, search and rescue operations procedures, emergency response protocols, systems on distribution of relief goods, and evacuation center management systems and structures. A well-developed contingency plan will enhance the LGU's preparedness and response capabilities.
- 3) Establish Partnerships with Other LGUs: Collaboration and coordination with neighboring LGUs are crucial in disaster management. The LGU of Malita should actively seek partnerships with other local government units to foster information sharing, resource pooling, and joint response efforts. This will strengthen the overall disaster preparedness and response capacity in the municipality.
- 4) Enhance Building Competencies: The LGU should prioritize the deployment of critical information on various hazards and relative actions to be undertaken by every family. This can be achieved through community-based disaster risk reduction and management (CBDRRM) training programs. By empowering individuals and households with the necessary knowledge and skills, the LGU can improve community resilience and response capabilities.
- 5) Improve Rain Gauge Systems: The LGU should address the lack of compliance in terms of rain gauge systems. These systems are essential for monitoring and predicting rainfall patterns, which play a significant role in assessing flood risks and implementing timely preventive measures. The installation and maintenance of rain gauge systems should be prioritized to enhance early warning capabilities.
- 6) Enhance Information, Education, and Communication (IEC) Program: The LGU should develop and implement a comprehensive IEC program to raise disaster awareness in vulnerable areas. This program should include targeted campaigns, community engagement programs, and the dissemination of educational materials on disaster preparedness, response, and mitigation measures. By improving public awareness, the LGU can foster a culture of preparedness and proactive participation in disaster management.

Finally, to fully understand the relationship between HBM and policy compliance behavior, a correlation study is also recommended.

8. REFERENCES

- [1] DILG Memorandum Circular No. 2015-76 (2015). Early Preparedness Actions to Reduce Disaster Risks - Issuances - DILG. Accessed 22 May 2023.
- [2] Ebru, I., K. H. Altintas and N. Dogan (2018). "The development of a general disaster preparedness belief scale using the health belief model as a theoretical framework." International Journal of Assessment Tools in Education 5(1): 146-158.
- [3] Gil-Rivas, V. and R. P. Kilmer (2016). "Building community capacity and fostering disaster resilience." Journal of clinical psychology 72(12): 1318-1332.
- [4] Gumiran, B. A. and A. Daag (2021). "Negotiated participatory action research for multi-stakeholder implementation of early warning systems for landslides." International Journal of Disaster Risk Reduction 58: 102184.
- [5] Inam, A. (2013). Planning for the unplanned: Recovering from crises in megacities, Routledge.
- [6] Mojtabaei, M. and B. L. Oo (2017). "Critical attributes for proactive engagement of stakeholders in disaster risk management." International journal of disaster risk reduction 21: 35-43.
- [7] NDRRMC, DILG, DBM, CSC Joint Memorandum Circular 2014-1 (2014). Guidelines_for_the_Establishment_of_LDRRMOS_or_BDRRMCs_in_LGUs-JMC2014-1.pdf. Accessed 23 May 2023.
- [8] Philippine Disaster Risk Reduction and Management Act of 2010 (2010). Republic Act No. 10121 Official Gazette of the Republic of the Philippines. Accessed 23 May 2023.
- [9] Rodríguez-Espíndola, O., P. Albores and C. Brewster (2018). "Disaster preparedness in humanitarian logistics: A collaborative approach for resource management in floods." European Journal of Operational Research 264(3): 978-993.
- [10] Skinner, C. S., J. Tiro and V. L. Champion (2015). "Background on the health belief model." Health behavior: Theory, research, and practice 75: 1-34.
- [11] Warren, J. F. (2016). "Typhoons and the inequalities of Philippine society and history." Philippine Studies Historical & Ethnographic Viewpoints: 455-472.