



EFFECTIVENESS AND EFFICIENCY OF DISASTER RECOVERY FRAMEWORKS IN VULNERABLE COMMUNITIES AT BALETE BATANGAS: BASIS FOR DEVELOPING DISASTER RECOVERY ACTION PLAN

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ABSTRACT

Natural disasters, both natural and human-induced, disproportionately impact vulnerable communities, particularly in disaster-prone regions like Balete, Batangas, which faces frequent typhoons, floods, and volcanic eruptions. This study evaluates the effectiveness and efficiency of disaster recovery frameworks in this municipality, aiming to identify challenges and recommend improvements. Using a mixed-method approach, the research combines interviews with local stakeholders and an assessment of existing disaster recovery strategies. Findings highlight significant gaps in financial resources, inter-agency coordination, and the timely distribution of relief goods, which hinder recovery efforts. Despite these challenges, community awareness of disaster recovery frameworks is generally positive, though there is a lack of in-depth understanding of their operational details. Based on the study's results, the research proposes a comprehensive Disaster Recovery Action Plan (DRAP) tailored to Balete's specific needs. Key recommendations include strengthening local governance and community participation, enhancing training programs, improving resource mobilization, and promoting sustainable, eco-friendly recovery practices. By integrating community-specific socio-economic and cultural factors into disaster recovery planning, this

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study aims to create more resilient and inclusive recovery systems, contributing to improved

long-term outcomes for vulnerable communities in disaster-prone areas.

Keywords: *disaster recovery frameworks, vulnerable communities, disaster risk management, community participation, local governance, sustainable recovery*

INTRODUCTION

Disasters are a global challenge that affect vulnerable communities disproportionately, worldwide disaster recovery frameworks are vital for restoring normality and reducing the longer-term socio-economic disaster relief impacts. The effectiveness of disaster recovery frameworks differs markedly from region to region due to different governance, resources, and community resilience. This global assessment describes the challenges and successes from across continents reported to shed light on the status of disaster recovery efforts. Asia, as the most disaster vulnerable continent, faces natural calamities such as typhoons, earthquakes, and tsunamis more often than not. The countries of the Philippines and Indonesia have active disaster recovery frameworks but the capacity for implementation for recovery is low despite having strong policy frameworks. The National Disaster Risk Reduction and Management Plan (NDRRMP) of the Philippines make substantial commitments to developing resilience for those affected by disaster. However, the local government IF half an applies the resources into reconstruction, again the limited capacities are a major factor (Bankoff, 2019). Japan's advanced technological infrastructure and practices of community

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engagement demonstrate the potential of a whole of society approach to consider the practical

limits to implementation (Shaw & Takeuchi, 2020).

Beyond the climate limits and the destructive natural challenge, members of the Association of Southeast Asian nations (ASEAN) are faced with an underlying challenge of disaster management strategy development and the entire cooperation policy. Flood recovery, particularly shown in Thailand and Vietnam is the epitome of achievement through a bottom-top community based and cross-border approach (Nguyen et al., 2018). Nonetheless, other nations are faced with policy framework exaggerations more than recovery of unsettled expenditures, and also disparities in the recovery efforts between the members. Combining the governance frameworks, the local structures and cultural practices is one way to handle the over centralized monument of illiteracy the world is buried in (Iskandar et al., 2020). The essence of the policies outlined in the region indicates that ASEAN advocacy is in dire need of collaborative recovery strategies, capacity improvement techniques and resource optimistic approaches.

The Philippines is one of the countries more exposed to disasters, mainly because of its geographic location on the Pacific Ring, which induces frequent earthquakes and volcanic eruptions, and its mouthing to typhoons. The country is on average hit by 20 typhoons, and of these 5 to 7 are markedly severe. The comprehensive framework on disaster preparedness, response, recovery, and mitigation is The 2010 National Disaster Risk Reduction and Management Act alongside the NDRRMP. In the Philippines, challenges are apparent, such as lack of coordination, lack of local government capabilities, and a shortage in funding. Recovery

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is almost always inequitable; vulnerable groups in remote and coastal areas are far more likely to be disregarded, indicating a greater demand for recovery processes. (Perez, 2020)

Region IV-A CALABARZON in the Philippines is particularly susceptible to the impacts of natural disasters, including but not limited to typhoons, floods, and volcanic eruptions. Vaughan and his team attributed the 'exacerbating factors in the Philippines' to the region's rapid urbanization and socio-economic inequalities. The region slashed off the red tape brought upon by The Philippine Disaster Risk Reduction and Management Act of 2010 to hasten the region's relief efforts. Even so, 'strategies of recovery' fail to incorporate the 'lower' administrative divisions. Research points to the chronic issues of CALABARZON emerging from insufficient funds, lack of relevant skillsets, and minimal participation of the primary stakeholders involved in planning. One of the primary examples is Batangas, the very province where The Taal Volcano is located. Batangas experiences severe post-eruption recovery problems due to the intricate web of evacuating and resettling the refugee population (Yumul et al., 2021). Investing in the local administrative divisions of Batangas while maintaining the qualitative aspects of their frameworks, enhancing the active role of citizenry, and addressing clan-oriented politics would go a long way.

The study examines the outcomes and competence of disaster recovery frameworks in the context of vulnerable populations in the community of Balete, Batangas, and more specifically how well the frameworks fulfill the recovery needs of at-risk groups. The study in particular intends to analyze the available disaster recovery frameworks and measure the extent to which they aid in the short term and long-term recovery. It will also evaluate the

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effectiveness of the operations in regard to the speed, cost, resources, and coordination of local institutions and stakeholders. By doing so, the research hopes to discover the shortfalls, missing elements, and barriers of implementation which leads to the failure of recovery supports to sustain the recovery processes. The research also hopes to construct a narrative around the recovery case studied and the perceptions of local officials, responders, and community people in order to extract more information about the relative practicality and real ramifications of the frameworks. It aims to offer actionable recommendations for improving recovery processes with particular regard to the evidence derived from the outcomes. It will culminate in the form of a local and accessible Disaster Recovery Action Plan that will incorporate the realities and weaknesses of recovery frameworks in the region of Balete.

RELATED LITERATURE

Disaster Recovery Frameworks

A disaster recovery system is the lifeline for the community which allows them to re-establish their valuable social and human connections with the world which are the basic needs after a disaster have struck these aspects. Recovery frameworks are basically the restoration of essential services, social connections, and infrastructure which were disrupted by disaster incidence. The effectiveness or success of these systems is measured by the community susceptibility or vulnerability to the disaster. Communities living in Balete, Batangas, are in particular very susceptible to vulnerability and thus after any disaster, they face enormous issues related to poverty, poor infrastructure, and may also suffer from

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repeated exposure to disasters such as typhoons and volcanic eruptions (United Nations Office for Disaster Risk Reduction [UNDRR], 2021). These are the challenges that will make the recovery process more complicated and thus longer recovery times and more extensive social impacts are usually the outcomes.

The 2020 eruption of Taal Volcano, alongside other natural hazards in Balete, Batangas, has shown the importance of a framework that combines the first response needs and the durability over time. In the absence of such sorts of frameworks, the affected populations are likely to be trapped in a cycle of vulnerabilities in which they are unable to recover entirely before another disaster occurs. This, in turn, brings about the need for focusing on adaptive recovery measures that, apart from solving the specific problems of vulnerable communities, also facilitate the future resilience.

Recent research on disaster recovery frameworks is more attentive to the necessity of context specific, participatory approaches. The traditional, top-down models that mainly involve government administrations in the recovery process have been frequently criticized as ineffective in the cases of particularly vulnerable communities. The findings by Kellett and Sayers (2023) and Soriano (2022) indicate that a more inclusive, locally driven approach may result in recovery being more sustainable and efficient.

One of the previous disaster recoveries studies that has been conducted provides important information about the success of different recovery frameworks. For instance, Tierney (2020) has done research comparing the recovery actions after natural catastrophes

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in Southeast Asia and concluded that it would be more successful if the local stakeholders have been involved in the decision-making processes. Social capital was the main point that Aldrich (2019) referred to where disaster recovery was concerned, as shown in the study that those communities which possess strong social networks recovered quicker because they could rely on each other for help and the sharing of resources.

An additional comparison study by Patel et al. (2021) of disaster recovery frameworks in the Philippines and Japan discloses the significance of community-based, decentralized approaches in expediting rehabilitation and strengthening of resilience. The study discovers that Japan efforts to prepare for disasters, along with recovery projects led by the communities, have resulted in rebuilding efforts that are more productive than those most affected by the centralized approach of some parts of the Philippines.

Types of Disaster Recovery Frameworks

Disaster recovery frameworks are classified as top-down, bottom-up, and hybrid approaches. A top-down framework is predominantly a government-run system in which there is a centralized control over the decision-making process, resource allocation, and recovery strategies. Such frameworks generally are inclined to concentrate on the providing of emergency assistance and the refurbishment of infrastructure but tend to overlook the detailed needs of local communities. Gaillard et al. (2020) state that top-down solutions may reflect their capacity to operate in the short run but lack the ability to be self-sustainable over time, thus, they are dependent on the communities for actual recovery.

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However, bottom-up disaster recovery frameworks are more focused on involving the community and local actors. The main theme of these frameworks is local knowledge and the identified community agency in developmental changes. Aldrich (2020), suggests that bottom-up approaches are inevitable in developing social resilience since they give power to local communities to be the leaders of their recovery and strengthening their bonds in the community. The involvement of the locals also guarantees that the community recovery process is based on their actual needs which lengthens the possibility for sustainability in the long run.

Hybrid disaster recovery mechanisms combining the principles of top-down and bottom-up are gaining traction as a most feasible solution. They incorporate government-led assistance with community-driven activities thus balancing a more adaptable approach. This combination tends to be quite effective in dealing with disaster issues. Research by Kellett and Sayers (2023) proves that the success rate of such hybrid frameworks is higher because they use the advantages of both top-down and bottom-up models. For Batangas, the survival of such a recovery process could not only be prompt but also be able to address the needs of the locals and consequently, increase their perseverance and readiness to deal with natural disasters in the future.

Vulnerable Communities in Disaster Recovery

The struggle of vulnerable communities to survive disaster recovery includes different aspects that create complexity in the restoration of the usual way of life. Scarcity of resources,

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poor infrastructure, and economic instability are some of the factors which delay recovery progress in Balete, Batangas. The case of Taal Volcano eruption in 2020 is a perfect example showing how these problems can slow down the recovery of communities in Balete. Soriano (2022) points out that the inadequacy of public services and infrastructure made it very hard for locals to get their livelihoods back as farmlands and homes were destroyed which led to their economy taking a big hit. The findings of Bankoff et al. (2021) confirm this interconnection and underscore economic vulnerability as a pivoting factor affecting the pace and the effectiveness of recovery efforts.

Besides, elderly people, women, and persons with disabilities who are already vulnerable become even more so in the recovery process since they face a lot of additional difficulties. These groups are often left out of the recovery programs because of both physical and social barriers. Research by Gaillard et al. (2020) underlines that these isolated groups need special assistance for them to be included in the recovery plan which gives them the necessary help they require. For instance, the provision of healthcare, social services, and safe housing are very important towards the goal of recovery being inclusive and fair for the whole community. A study by Peek and Stough (2022) similarly points out that disabled people suffer more during a disaster due to the inadequacy of evacuation plans and recovery policies which do not consider their needs.

In addition to the material losses, the disaster may cause emotional and psychological suffering of the same magnitude. Dissonance survivors, however, usually endure such a trauma that it is difficult for them to become fully engaged in recovery programs. Pelling et

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al. (2021) are of the opinion that provision of mental health services should constitute a major part of recovery programs especially in deprived areas. The emotional suffering that involves post-traumatic stress disorder (PTSD), anxiety, and depression among others, is the occurrence that is highly prevalent in the survivors setting of disasters (Norris et al., 2020). Psychosocial interventions and peer support programs are community-based resources that have been empirically demonstrated to contribute to the acquisition and development of resilience and the facilitation of the recovery process over time (Bonanno et al., 2019). The problem of meeting the needs of survivors, however, requires a large-scale intervention that integrates economic, social, and psychological resource systems. Disaster policy and recovery programs should, first and foremost, be fundamentally based on the inclusiveness and sustainability concepts that, in practice, would make it possible for the most vulnerable communities to actually recover well from disasters.

Disaster Recovery in the Philippines

Current disaster recovery measures in the Philippines provide a wealth of knowledge about the different recovery frameworks and their challenges and achievements. The devastating Typhoon Haiyan, ranked as one of the most lethal typhoons in the history of the Philippines, uncovered a multitude of inadequacies in the country disaster recovery system. The recovery step for the populations of Leyte and Samar was quite a slow one because of the red tape and poor coordination amongst the government agencies and non-governmental organizations (NGOs). Kellett and Sayers (2023) argue that the lack of a unified disaster

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management framework resulted in agencies working separately and not being able to coordinate their activities effectively thus, the recovery process being halted.

The inefficiencies in the post-Haiyan recovery have been studied deeply. To illustrate this point, Smith et al. (2021) researched disaster recovery models in the Southeast Asian region through a comparative lens and concluded that the Philippines partitioned plan was the main cause of delays in rebuilding the houses and the restoration of people livelihood. Those researchers argue that community-driven programs, when coupled with resources from the government, are more likely to have sustainable recovery outcomes. Correspondingly, Jones and Cruz (2020) affirm that decentralization in disaster management resulted in lack of funding allocations due to incomplete financial plans, which further led to uneven recovery rates across the affected provinces.

On the other hand, the eruption of Taal Volcano that happened in 2020 caused recovery issues of a different nature with a large number of displaced people and the destruction of their means of living. Soriano (2022) highlighted that despite the presence of prompt responses, governance inefficiencies and the lack of proper disaster risk management frameworks were the primary reasons that eventually led to the slow recovery of the community. Apart from this, there were also separations between the governments and NGOs in the way they dealt with the issue of transfers. This lack of unity among recovery efforts delayed the return of normalcy to affected areas which further exposed the need for integrated frameworks that are capable of handling not only the immediate relief but also the long-term recovery.

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Extra evidence to these acknowledgements, is specifically, the latter that they derive from logical research. The main issues identified by Rodriguez et al. (2021) in a survey on post-Taal recovery process were psychological distress among forcibly displaced people, confusion about rehabilitation plans, and prolonged displacement. These authors stress the need for mental health programs to be incorporated in disaster recovery camps. Furthermore, Lopez and Santos (2023) by reviewing recovery activities in Batangas, came to the conclusion that the procedures for financial support were very unsystematic thus, a large number of families were left without funds or with insufficient funds to rebuild their houses and businesses. They do so by bringing out the need for an emergency response system that is centrally managed to bring about the distribution of resources in a fair way.

Though, certain communities in the Philippines have undergone smoother recoveries when they applied hybrid disaster recovery frameworks. The occurrences of communities after Typhoon Haiyan, as studied by Kellett and Sayers (2023), provide evidence that recovery becomes more participatory and adapted to the distinct needs of each community when local knowledge is combined with government support. Such a method enables less time for recovery while ensuring that the roots of the vulnerability are overcome, thus equipping communities with the capacity to withstand future disasters.

Additional research supports the effectiveness of such hybrid frameworks. Mendoza et al. (2022) examined a community-driven recovery project in Eastern Visayas through a case study and concluded that the rebuilding of homes got a major boost with the combination of native knowledge and modern-day disaster risk reduction strategies. Moreover, Tan and

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Villanueva (2021) examined the significance of social capital in disaster recovery situations and pronounced that the presence of strong community networks had a big influence on the drawing in of funds, speeding up of rehabilitation, and promotion of long-term resilience. Taken together, these studies suggest that the Philippine disaster recovery should lean towards a more cohesive and seamless framework design. The country not only can become more resistant to disasters and more efficient in the aftermath of disasters by integrating top-down government support with bottom-up community-driven initiatives.

Role of Community Participation in Disaster Recovery

It is clear that community involvement is the core of a disaster recovery, which is a process that allows local needs and priorities to be considered. Community involvement in Batangas is necessary as it provides a way for the recovery, particularly when the case is the Taal Volcano eruption aftermath. According to Aldrich (2020), community-led recovery practices make local residents empowered to have a say in decision-making and be a part of the efforts to rebuild. These kinds of active participations lead to more significant levels of ownership of the recovery process, which in turn, elevates the chances of the recovery interventions to be both sustainable and culturally appropriate.

The roles of community participation in the recovery process have been highlighted through numerous well-put examples of such involvement. One such example was the research work of Nakagawa and Shaw (2004) on Kobe, Japan post-earthquake recovery, where it was found that neighborhoods with well-established and active social networks

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recovered at a faster rate and in a more sustainable manner than those with weaker ties.

Similar findings have been echoed in research by Chamlee-Wright and Storr (2009) conducted on Hurricane Katrina aftermath, where community-led initiatives served as the main vehicle for the restoration of livelihoods and the clearance of neighborhoods for the fastest reestablishment of the area, next to interventions by government alone.

Community participation, moreover, can lead to the creation of social cohesion and the building of resilience, the major factors for long-term recovery, according to the views put forward by Pelling et al. (2021). The authors claim that engaging local communities in recovery activities does not only bring about the restoration of the physical infrastructure but also has the effect of deepening social relations and the trust between community members. Local populations are engaged in recovery activities; the process can therefore contribute towards the reconstruction of social ties that are disrupted by disasters and thus help communities to be better prepared for future shocks. In Batangas, ordinary people have skills related to their surroundings and ways of coping with that can give ideas on how to plan for recovery. Research findings by Patel et al. (2017) in post-disaster Nepal provide the grounds for such a claim, showing that on-the-ground knowledge and self-organization have a very significant role in recovery work.

Nevertheless, problems still exist in the issue of widespread and inclusive participation, especially that of the vulnerable. In particular, women, the elderly, and persons with disabilities, points out Gaillard et al. (2020), usually endure challenges that hinder them from fully participating in the recovery process. If we are to have recovery frameworks that are

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truly inclusive, we need to put in place interventions that effectively remove the impediments to participation, such as providing services to targeted groups and creating accessible platforms for participation. Using a gender-sensitive approach to disaster response as an example, Enarson and Fordham (2001) have extensively studied this aspect and identified the need to involve marginalized groups in disaster recovery plans as a step towards achieving more equitable outcomes. Besides this, research from the Philippines like that of Bankoff (2007) is another area where studies illustrating the role of civil society in the implementation of local disaster response policy are evident. It is by this method of inclusion that recovery programs can be effective and just. Communities' active participation during the whole process of recovery is always associated with the sustainability of outcomes by various studies.

Assessing the Effectiveness of Disaster Recovery Frameworks

One of the main things one should do to decide if disaster recovery frameworks are working is to analyze the speed of recovery, the sustainability of interventions, and community engagement levels. Ramos et al. (2024) recovery work after the Taal eruption is a case in point on how the physical rebuilding of the devastated infrastructures should not be the centerpiece of the evaluation. Recovery processes ought to be crafty enough to adjust to changed situations while being firms that the communities affected would regain their socio-economic rights and co- existence.

Empirical studies have also revealed the secrets behind the effectiveness of disaster recovery and the means of their implementation. Such as, the investigation conducted by

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Fernandez and Rivera (2023) that delved into the post-disaster recovery of Eastern Samar after Typhoon Haiyan. Their study showed that the success of the recovery was to a great extent dependent upon community involvement, and the capability to efficiently mobilize local resources. Moreover, communities that were well-prepared for disasters with their plans had a lot of their recovery efforts completed in far less time as compared to those with no plans. The statement also points out the significance of active planning and community resilience in recovery operations.

Alongside these factors come stakeholder coordination as among them are the governments, NGOs, and the communities. Soriano (2022), in his statement declared the coordination activities as the main factor for success of disaster recovery in Batangas. The dis-coordinated attempts during the Taal recovery process were among the causes of delays in recovery outcomes and at the same time resulted in the inefficient allocation of resources. A comparative study by Liu et al. (2021) investigated how well different disaster recovery coordination systems in Southeast Asia operated and found that countries with a centralized structure were the ones that could allocate resources most efficiently and best avoid overlaps in aid distribution.

Accordingly, Pelling et al. (2021) comment that efficient recovery frameworks do not stop at community restoration but extend their scope to solve the community underlying vulnerability thus, ensuring that the impact of future disasters will not be the same. This is also supported by a later study by Gupta and Sharma (2022) that delves into the aftermath of the 2015 Nepal earthquake and further develops the idea that recovery schemes should

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include disaster risk reduction measures to enhance resilience in the long run. Resilience-building through disaster risk reduction and community capacity building are some of the ways recovery frameworks could end up playing a role in transforming communities in which natural disasters keep occurring into more resilient ones.

In summary, disaster recovery frameworks in vulnerable communities like Balete, Batangas, not only need to be adaptable, participatory, and implement the integrated approaches that blend both top-down and bottom-up strategies but also local knowledge and active community participation have to be considered as necessary elements of recovery. It is proven by the research of Kellett and Sayers (2023) and Soriano (2022) that the hybrid frameworks which are predominantly a combination of government- and community-driven efforts give the best results compared to the outcomes from the solely top-down or bottom-up models. Such recovery procedures are not only relief-getting but also provide the possibility of long-term resilience and disaster preparedness.

Synthesis

The literature on disaster recovery schemes highlights that the key to success is the use of adaptive, inclusive, and hybrid methods that could efficiently meet both the immediate relief that the disaster-affected people require and the long-term resilience of the local areas. Research indicates that traditional top-down structures, though advantageous for fast response, tend to disregard the needs of the vulnerable communities. On the other hand, bottom-up strategies that put local participation first have been proved to have more

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sustainability and resilience-building capabilities. The government-civic partnership models, which meld public sector-led programs with community-based recovery activities, are now the most stable choice as they draw the advantages of both systems while solving their individual weaknesses.

Meanwhile, in spite of the enormous advancement made in the field of disaster recovery, research has still some large gaps to overcome. These include, in particular, the narrowness of research on the long-term social, economic, and psychological recovery of the least privileged groups, for instance, in Balete, Batangas. Though the major trend in the studies is to highlight the role of social capital, community engagement, and decentralized governance in disaster recovery, there remains a shortage of sufficient research that delves into the detailed interaction of these elements over time in the recovery process. Additionally, the lack of a thoroughly socio-economic and environmentally sensitive disaster recovery plan from Balete, Batangas, prompts further research.

This research is designed to fill these voids by looking at how successful the hybrid recovery frameworks are in the case of Balete, Batangas. Examining community involvement, stakeholder coordination, and resilience strategies will offer critical perspectives in attaining a disaster recovery framework that is more holistic and inclusive. The findings will, in the end, be a rationale for the more integrated and community-centered approach to disaster recovery to be used. Hence, affected populations will have the chance to recover sustainably and be equipped with resilience against subsequent disasters.

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METHODOLOGY

Research Design

The study shall implement a mixed methods design that integrates both quantitative and qualitative approaches. This research will follow an explanatory sequential design whereby the quantitative phase to be implemented initially through the channel of surveys will focus on the assessment of the effectiveness of the existing disaster recovery frameworks. Next, the qualitative phase will be conducted employing an interpretative phenomenological analysis to tap into the experiences and the understanding of the participants more profoundly. This methodological plurality will promote comprehensive apprehension of the disaster recovery process in Balete, Batangas.

Research Site

This research is focused on the indigent people in Balete, Batangas. The study will be based on the participants chosen using a purposive sampling scheme. Through this sampling method, people who have direct experience in disaster recovery shall be targeted. These people may include barangay officials, local disaster risk management officers, community members, and NGO representatives who are involved in recovery activities. The study attempts to collect detailed descriptions of how disaster recovery frameworks have been applied by gathering information from respondents with relevant experiences.

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Participants

First-hand experience of the past disasters in Balete would be shared by barangay officials, local DRRM officers, and community residents, who will be the respondents of this study. These people form the basis for understanding how recovery frameworks have been rolled out as well as their effect on the local population. Besides, NGO representatives and other key players in disaster response and recovery will be open to interview questions about the recovery process and inter-agency coordination to get an understanding of the recovery process and inter-agency coordination from a wider angle.

Instrumentation

The research shall commit a mixed method of survey questionnaires and interview guides to be the instruments for data collection. While the survey seeks to collect quantitative data, perceptions of respondents concerning disaster recovery frameworks efficiency and effectiveness are the focus. Qualitative data through participant interviews provide an opportunity to get closer to an account of participant experiences, challenges, and suggestions for the disaster recovery process to be improved.

Research Ethics Protocol

The research will incorporate ethical standards that are of the highest level, which assures the rights and welfare of the participants. The participants will receive an informed consent form and are required to comprehend and agree to the study's objective, methods,

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and their rights. Privacy and confidentiality will also be part of the participants rights guaranteed by the research through the depersonalization of the data and the elimination of any personal identifiers. Ethical issues shall be one of the main components of the research design to support the maintenance of trust and moral uprightness in the study.

Data Collection

Data will be collected within 4–6 weeks starting the process of seeking approval from the local authorities in Balete. The targeted barangays will get access to the survey, which will be distributed to residents and officials, and the key informants, such as local government representatives and NGO staff, will be engaged in-depth interviews. The event will be planned in a way that will allow for the participation of all persons concerned on the feasibility of the research process and thus assure the reliability of the data collected.

Statistical Treatment

Descriptive Statistics will be used to analyze the quantitative data in order to demonstrate and describe the basic features of the data. It would involve showing frequencies, percentages, means, and standard deviations. These figures would serve as a survey of the respondents' views regarding the efficiency as well as the effectiveness of disaster recovery frameworks. Descriptive statistics will be employed to underscore the dominant tendencies in the data, such as the overall level of satisfaction with recovery efforts and the variation in responses across different community groups.

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Qualitative data will be analyzed using the Thematic Analysis method to identify the themes, patterns, and insights that recur throughout the researchers' interpretations of the participants experiences that they report, regarding disaster recovery. Thematic analysis will enable an extensive comprehension of the subjective accounts of community members and officials, which assists with the provision of context for, and the explanation of, the quantitative results. This analysis will offer plentiful clues on the challenges and achievements of the present disaster recovery frameworks while facilitating the organizing of the recommendations for the improvement of disaster recovery.

RESULTS AND DISCUSSION

1. Demographic Profile of the Respondents

Table 1.1 Age

Distribution of Respondents' According to Age

AGE	FREQUENCY	PERCENT
18–25 years old	54	54.0
26–35 years old	28	28.0
36–45 years old	13	13.0
46–55 years old	5	5.0
Total	100	100.0

It can be gleaned from the table above that 54 out of 100 among the respondents are in the age of 18-25 years old. On the other hand, 5 or very few among them are in the age

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of 46-55. This indicates that most of the respondents in this study are in the young adult stage

of their life and possess an active lifestyle.

Table 1.2. Gender

Distribution of Respondents' According to Gender

AGE	FREQUENCY	PERCENT
Male	66	66.0
Female	34	34.0
Total	100	100.0

As seen in the table 1.2 66 out of 100 respondents are male. On the other hand, the remaining 34 respondents are female. This indicates that the group is composed of two-thirds males and one-third females.

Table 1.3. Role in Disaster Recovery

Distribution of Respondents' According to Role in Disaster Recovery

AGE	FREQUENCY	PERCENT
Community member	35	35.0
Barangay official	35	35.0
Volunteer	18	18.0
DRRM Officer	7	7.0

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Local government official	4	4.0
Student	1	1.0
Total	100	100.0

Table 1.3 states that an equal of 35 are community members and barangay officials. On the other hand, only one respondent was identified as a student. This means that the respondents are equally distributed in terms of role in disaster recovery.

Table 1.4. Level of Disaster Preparedness Training

Distribution of Respondents' According to Level of Disaster Preparedness

Training

AGE	FREQUENCY	PERCENT
None	13	13.0
Basic	58	58.0
Intermediate	18	18.0
Advanced	11	11.0
Total	100	100.0

The table 1.4 deals with the level of disaster preparedness training. The table shows that 58 among the 100 respondents have basic training while only 11 among the respondents

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have advanced training. Mainly because it is specialized, technical and expensive training.

Thus there is a limitation in terms of participation.

Table 1.5. Years of Residency

Distribution of Respondents' According to Level of Years of Residency

AGE	FREQUENCY	PERCENT
1–3 years	13	13.0
4–6 years	19	19.0
Less than 1 year	8	8.0
7–10 years	7	7.0
More than 10 years	53	53.0
Total	100	100.0

The table 1.5 above shows that 53 of the 100 respondents have been residing within the community for more than 10 years. Meanwhile, only 7 respondents have been residing within the community for around 7-10 years.

2. Effectiveness and Efficiency of Disaster Recovery Frameworks in

Vulnerable Communities at Balete Batangas

2.1. Disaster Recovery Framework

Table 2.1.1. Policy Framework for Disaster Recovery

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ITEMS	WEIGHTED MEAN	VERBAL INTERPRETATION
There are clear and comprehensive policies guiding disaster recovery efforts	3.44	Strongly Agree
Policies are regularly reviewed and updated to address emerging challenges.	3.41	Strongly Agree
Policies align with national and local disaster risk reduction management plans.	3.38	Strongly Agree
Stakeholders are aware of and understand the disaster recovery policies.	3.42	Strongly Agree
Policies ensure inclusivity and address the needs of vulnerable groups	3.47	Strongly Agree
Composite Mean	3.42	Strongly Agree

Legend: 3.26-4.00 Strongly Agree; 2.51-3.25 Agree; 1.76-2.50 Disagree; 1.00-1.75 Strongly Disagree

It can be gleaned from the table 2.1.1. that inclusive policies shall be addressed due to its weighted mean of 3.47 and a verbal interpretation of Strongly Agree. On the other hand, the indicator policies align with national and local disaster risk reduction management plans obtained the lowest weighted mean of 3.38 but still have a verbal interpretation of strongly agree. Overall, the composite mean of 3.42 with a verbal interpretation of strongly agree was still obtained in the table above indicating a strong policy framework for disaster recovery.

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Table 2.1.2. Post-Disaster Recovery Framework

ITEMS	WEIGHTED MEAN	VERBAL INTERPRETATION
The framework provides a structured approach for post-disaster recovery.	3.39	Strongly Agree
Recovery processes are implemented promptly after disasters.	3.43	Strongly Agree
The framework addresses both short-term relief and long-term rehabilitation.	3.35	Strongly Agree
The framework ensures community participation in recovery efforts.	3.37	Strongly Agree
Post-disaster recovery measures are sustainable and resilient.	3.36	Strongly Agree
Composite Mean	3.38	Strongly Agree

Legend: 3.26-4.00 Strongly Agree; 2.51-3.25 Agree; 1.76-2.50 Disagree; 1.00-1.75 Strongly Disagree

It can be gleaned from the table above that the presence of prompt recovery process is seen as post-disaster recovery framework due to its weighted mean of 3.43. In contrast, the presence of framework in addressing both short-term and long-term relief obtained the lowest weighted mean of 3.35 and a verbal interpretation of strongly agree. Overall, the composite mean of 3.38 and a verbal interpretation strongly can be observed in the table above.

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Table 2.1.3. Adoption of the Framework in the Recovery Program

ITEMS	WEIGHTED MEAN	VERBAL INTERPRETATION
The framework is consistently applied in all recovery programs.	3.44	Strongly Agree
Recovery programs reflect the priorities identified in the framework.	3.40	Strongly Agree
Stakeholders are trained to implement the framework effectively.	3.28	Strongly Agree
Adoption of the framework improves recovery outcomes.	3.41	Strongly Agree
There is evidence of successful application of the framework in past disasters.	3.38	Strongly Agree
Composite Mean	3.38	Strongly Agree

Legend: 3.26-4.00 Strongly Agree; 2.51-3.25 Agree; 1.76-2.50 Disagree; 1.00-1.75 Strongly Disagree

The table 2.1.3. above indicates that there is consistent recovery programs due to its weighted mean of 3.44 and a verbal interpretation of strongly agree. In contrast, training of stakeholders in the implementation of framework effectively obtained the lowest weighted mean of 3.28 and a verbal interpretation of strongly agree. Overall, the composite mean for the table above is 3.38 and a verbal interpretation of strongly agree indicates that the framework was adopted by the respondents.

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2.2. Planning Process and Plan Structure

Table 2.2.1. Pre-Disaster Activities

ITEMS	WEIGHTED MEAN	VERBAL INTERPRETATION
Pre-disaster risk assessments are regularly conducted.	3.31	Strongly Agree
Community awareness and preparedness activities are in place.	3.36	Strongly Agree
Resources for potential recovery are pre-identified and allocated.	3.30	Strongly Agree
Pre-disaster planning includes simulations and drills.	3.39	Strongly Agree
Preventive measures are integrated into community development plans.	3.37	Strongly Agree
Composite Mean	3.34	Strongly Agree

Legend: 3.26-4.00 Strongly Agree; 2.51-3.25 Agree; 1.76-2.50 Disagree; 1.00-1.75 Strongly Disagree

The table 2.2.1. presents the pre-disaster activities, the table above shows that pre-disaster planning includes simulations and drills due to its weighted mean of 3.39 and a verbal interpretation of strongly agree. In contrary, resources for potential recovery are pre-identified and allocated obtained the weighted mean of strongly agree. The table above concludes pre-disaster activities concludes by the respondents positively due to its composite mean of 3.34 and a verbal interpretation of strongly agree.

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Table 2.2.2. Post-Disaster Activities

ITEMS	WEIGHTED MEAN	VERBAL INTERPRETATION
Post-disaster needs assessments are conducted promptly.	3.31	Strongly Agree
Plans are adjusted based on the scale and nature of the disaster.	3.36	Strongly Agree
Recovery planning involves multi-sectoral collaboration.	3.30	Strongly Agree
Post-disaster plans prioritize urgent needs without neglecting long-term goals.	3.39	Strongly Agree
Lessons from past disasters are integrated into new plans.	3.37	Strongly Agree
Composite Mean	3.34	Strongly Agree

Legend: 3.26-4.00 Strongly Agree; 2.51-3.25 Agree; 1.76-2.50 Disagree; 1.00-1.75 Strongly Disagree

The table 2.2.2. above presents the data on post-disaster planning. The table shows that post-disaster plans prioritize urgent needs without neglecting long-term goals with a verbal interpretation of 3.39 with a verbal interpretation of strongly agree. Recovery planning involves multi-sectoral collaboration obtained a lowest weighted mean of 3.30 but still got a verbal interpretation of strongly agree. Overall, the composite mean for this table is 3.34 with a verbal interpretation of strongly agree indicates a strong post-disaster planning.

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2.3. Institutional Arrangements

Table 2.3.1. Coordination Structures

ITEMS	WEIGHTED MEAN	VERBAL INTERPRETATION
There are clearly defined coordination structures for disaster recovery.	3.33	Strongly Agree
Coordination between national, local, and community levels is effective.	3.39	Strongly Agree
Roles and responsibilities in coordination are well understood.	3.36	Strongly Agree
Coordination structures enable timely decision-making.	3.36	Strongly Agree
Coordination mechanisms reduce duplication of efforts.	3.43	Strongly Agree
Composite Mean	3.37	Strongly Agree

Legend: 3.26-4.00 Strongly Agree; 2.51-3.25 Agree; 1.76-2.50 Disagree; 1.00-1.75 Strongly Disagree

The table 2.3.1 deals with the coordination structure of coordination mechanisms reduce duplication of efforts 3.43 with a verbal interpretation of strongly agree. In contrast, there are clearly defined coordination structures for disaster recovery obtained the lowest weighted mean of 3.33 and a verbal interpretation of strongly agree. Overall, the composite mean for coordination structures obtained a weighted mean of 3.37 and a verbal interpretation of strongly agree.

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Table 2.3.2. Roles of Stakeholders

ITEMS	WEIGHTED MEAN	VERBAL INTERPRETATION
Stakeholders have clearly defined roles in disaster recovery.	3.41	Strongly Agree
Roles are assigned based on expertise and capacity.	3.38	Strongly Agree
Stakeholders collaborate effectively in implementing recovery actions.	3.43	Strongly Agree
Stakeholder participation is inclusive and representative.	3.45	Strongly Agree
Roles are regularly reviewed to adapt to changing conditions.	3.47	Strongly Agree
Composite Mean	3.42	Strongly Agree

Legend: 3.26-4.00 Strongly Agree; 2.51-3.25 Agree; 1.76-2.50 Disagree; 1.00-1.75 Strongly Disagree

The table above indicates that the roles are regularly reviewed to adapt to changing conditions with a weighted mean of 3.47 and a verbal interpretation of strongly agree. In contrast, the roles are assigned based on expertise and capacity have the lowest weighted mean of 3.38 and a verbal interpretation of strongly agree. Collectively, the table above obtained a weighted mean of 3.42 and a verbal interpretation of strongly agree.

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2.4. Implementation Mechanisms

Table 2.4.1. Implementation Strategies

ITEMS	WEIGHTED MEAN	VERBAL INTERPRETATION
There are clearly defined coordination structures for disaster recovery.	3.33	Strongly Agree
Coordination between national, local, and community levels is effective.	3.39	Strongly Agree
Roles and responsibilities in coordination are well understood.	3.36	Strongly Agree
Coordination structures enable timely decision-making.	3.36	Strongly Agree
Coordination mechanisms reduce duplication of efforts.	3.43	Strongly Agree
Composite Mean	3.37	Strongly Agree

Legend: 3.26-4.00 Strongly Agree; 2.51-3.25 Agree; 1.76-2.50 Disagree; 1.00-1.75 Strongly Disagree

As seen in the table 2.4.1, strategies are evaluated for effectiveness and improved as needed as the most important implementation strategy due to its weighted mean of 3.44 and a verbal interpretation of strongly agree. In contrast, recovery strategies are adaptable to different disaster scenarios obtained to the lowest weighted mean of 3.36 and a verbal interpretation of strongly agree. In summary, the table 2.4.1 obtained a composite mean of 3.39 and a verbal interpretation of strongly agree.

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Table 2.4.2. Financing Post-Disaster Recovery

ITEMS	WEIGHTED MEAN	VERBAL INTERPRETATION
Funding sources for recovery are identified and secured.	3.42	Strongly Agree
Funds are allocated based on priority needs.	3.48	Strongly Agree
Financial resources are managed transparently.	3.36	Strongly Agree
Sufficient funding is available for both immediate and long-term recovery.	3.37	Strongly Agree
Community contributions and partnerships help finance recovery.	3.43	Strongly Agree
Composite Mean	3.41	Strongly Agree

Legend: 3.26-4.00 Strongly Agree; 2.51-3.25 Agree; 1.76-2.50 Disagree; 1.00-1.75 Strongly Disagree

The table 2.4.2 shows that funds are allocated based on priority needs obtained the highest weighted mean of 3.48 and a verbal interpretation of strongly agree. On the other hand, management of financial resources obtained the lowest weighted mean of 3.36 with a verbal interpretation of strongly agree. The table above obtained a composite mean of 3.41 with a verbal interpretation of strongly agree.

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Table 2.4.3. Communications Strategy

ITEMS	WEIGHTED MEAN	VERBAL INTERPRETATION
Communication channels are established before disasters occur.	3.38	Strongly Agree
Recovery updates are regularly communicated to stakeholders.	3.40	Strongly Agree
Communication strategies are inclusive and accessible to all.	3.44	Strongly Agree
Information shared is accurate and timely.	3.39	Strongly Agree
Feedback from the community is integrated into communication plans.	3.41	Strongly Agree
Composite Mean	3.40	Strongly Agree

Legend: 3.26-4.00 Strongly Agree; 2.51-3.25 Agree; 1.76-2.50 Disagree; 1.00-1.75 Strongly Disagree

2.5. Monitoring and Evaluation

Table 2.5.1. Progress Monitoring

ITEMS	WEIGHTED MEAN	VERBAL INTERPRETATION
Progress of recovery activities is regularly tracked.	3.37	Strongly Agree
Monitoring indicators are clearly defined.	3.34	Strongly Agree
Monitoring results are shared with stakeholders.	3.31	Strongly Agree

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Monitoring ensures timely adjustments in recovery activities.	3.40	Strongly Agree
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Monitoring involves both quantitative and qualitative measures.	3.41	Strongly Agree
---	------	----------------

Composite Mean	3.36	Strongly Agree
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Legend: 3.26-4.00 Strongly Agree; 2.51-3.25 Agree; 1.76-2.50 Disagree; 1.00-1.75 Strongly Disagree

The table 2.5.1 above shows that monitoring involves both quantitative and qualitative measures had the highest weighted mean of 3.41 and a verbal interpretation of strongly agree. In contrast, monitoring results are shared with stakeholders obtained the lowest weighted mean of 3.31 and a verbal interpretation of strongly agree. Overall, the composite mean for the table 16 is 3.36 and a verbal interpretation of strongly agree.

Table 2.5.2. Outcome Evaluation

ITEMS	WEIGHTED MEAN	VERBAL INTERPRETATION
Evaluation focuses on both outputs and outcomes of recovery.	3.41	Strongly Agree
Evaluation results are used to improve future recovery plans.	3.44	Strongly Agree
Evaluation involves all relevant stakeholders.	3.45	Strongly Agree
Evaluation considers the long-term sustainability of recovery measures.	3.42	Strongly Agree

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Evaluation findings are documented and disseminated.	3.43	Strongly Agree
Composite Mean	3.43	Strongly Agree

Legend: 3.26-4.00 Strongly Agree; 2.51-3.25 Agree; 1.76-2.50 Disagree; 1.00-1.75 Strongly Disagree

The data in table 2.5.2 shows that evaluation involves all relevant stakeholders obtained the highest weighted mean of 3.45. On the other hand, evaluation focuses on both outputs and outcomes of recovery obtained the lowest weighted of 3.41. Both indicators obtained a verbal interpretation of strongly agree. Overall, the composite mean for the table above is 3.43 and a verbal interpretation of strongly agree.

To gauge the efficiency of disaster recovery Frameworks in Vulnerable Communities at Balete, Batangas: Basis for Developing Disaster Recovery Action Plan, the researchers decided to validate the data through interviews. This study finds socially diverse respondents as also evident in their quantitative data. On the role of the respondent in the community, the interviewees were asked and gave different answers. Among other data, the respondents being barangay officials, students, and members of the community enriched the data pool with the diversity and comprehensive nature of it.

The researchers conversely gauged the knowledge of the local community about the disaster recovery framework. The response they usually provide is that they are aware of the recovery framework which suggests that they have an idea in its objective. Yet, this also

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reveals that the respondents are not quite aware of the details of the disaster recovery framework.

Another query during the interview basically challenged the framework's efficiency in the community's recovery as issue. The answers show that the framework were of assistance in getting out of the catastrophe. Recovery from it is the point that the respondents talk about. Their involvement ranges from coordination to getting resources. Moreover, the researchers also inquired how efficient the recovery process after the disaster is. The response suggests the same.

Another symptom of accurate measurement of the effectiveness of disaster recovery frameworks is the problem identification by respondents. The respondents' point out that the issues lie in lack of coordination, lack of money, and shortage of relief goods. In view of this, the respondents lay down the challenges while also suggesting solutions among which are budget allocation and drills. Besides that, the respondents emphasized LGU-NGO collaboration as the key to its successful implementation.

Disaster Recovery Action Plan (DRAP) for Vulnerable Communities in Balete, Batangas

1. Strengthening Policy and Governance

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- Regular Policy Review: Develop a yearly institutionalization of disaster repose policies that run through the latest needed lessons from recent disasters and local DRRM baselines or standards.
- Social Approaches: Giving special attention to the requirements of vulnerable groups in disaster recovery initiatives of local governments such as the elderly, persons with disabilities, children and pregnant women.
- Empowerment of Barangay DRRM Councils: Support and energize the barangay-level DRRM councils with the provision of clear mandates and accountability.

2. Capacity Building and Training

- Scaled Training Programs:
 - Basic training for community members and students (since 54% are youth, ages 18–25, and 58% only have basic preparedness training).
 - Barangay officials, volunteers, and DRRM officers get intermediate and advanced training.
- Simulation Drills: Conduct community-wide quarterly drills (earthquake, typhoon, fire, flood response) to rehearse preparedness.
- Youth Mobilization: Tap into the youth demographic to set up Youth Disaster Action Teams (YDAT) that could assist with evacuation, first aid, and information dissemination.

3. Enhancing Pre- and Post-Disaster Planning

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- Pre-Disaster
 - Introduce a Community Risk Resource Mapping System for safe zones, supply hubs, and evacuation centers to be pre-identified.
 - Get ready a stock of basic relief goods (food, medicines, and hygienic kits) at the village level to make sure the waiting time is minimized.
- Post-Disaster
 - Form the Rapid Needs Assessment Teams (RNAT) with the barangay officials, volunteers, and NGOs to survey the damage and needs quickly within the 24–48 hours period.
 - Create recovery checklists for the short, medium, and long term to arrest emergency relief while ensuring proper abatement of rehabilitation.

4. Institutional Coordination and Collaboration

- LGU-NGO Partnerships: Enhance the cooperation of local government units (LGUs), NGOs, and private sectors through logistics, funding, and workforce that might result.
- Unified Coordination Hub: Found a Balete Disaster Recovery Operations Center (BDROC) that will act as a central station for issuing commands, making communications, and mobilizing resources.
- Stakeholder Role Reviews: Carry out biannual appraisals of the stakeholder roles with the aim of changing according to unfolding needs and adopted capacities.

5. Financing and Resource Mobilization

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- Priority-Based Budgeting: Allocate money for disaster recovery strictly according to immediate and long-term needs revealed during the planning phase.
- Community-Based Fundraising: Let the people invest in the community and tie up with private institutions.
- Transparency Mechanism: For open financial management and distribution of relief aid, posting of online and barangay bulletin boards are two means of publication for the public to check on resources allocated for the recipients of relief goods and services.

6. Communication and Information Management

- Early Warning System Enhancement: Put to use an all-out communication network which includes SMS alerts, social media, and loudspeakers of the barangay - before and after disasters.
- Feedback Loops: Set up hotlines and suggestion boxes where residents can entrust their feedback about relief and recovery operations.
- Information Accessibility: Fit diverse groups with the tools to understand communication by translating them into Filipino and Batangueño dialect.

7. Monitoring and Evaluation

- Progress Monitoring: Set up tangible indicators of success.
- Participatory Evaluation: Collect representatives of the community, barangay councils, and NGOs as a cohort to analyze the disaster response and recovery results.

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- *****
- Documentation: Make and publish an annual Balet DRRM Report that briefly presents the wins, vacancies, and parts for upgrading of the program.

8. Proposed Innovative Programs

- Barangay Disaster Recovery Brigades (BDRBs): Purpose-built groups per barangay are made up of locals who have undergone a series of community practice trainings, volunteers, and youth.
- Community Recovery Fund (CRF): A fund which is collected from the Local Government Unit (LGU), Non-Governmental Organizations (NGOs), and private donors for immediate use following a disaster.
- "Adopt-a-Barangay" Program: Offer NGOs and private companies the chance to take a particular area under their wing and provide support there for the recovery process post-disaster.
- Green Recovery Initiatives: Recover with the environment through mangrove restoration, tree planting, and eco-friendly construction in post-disaster reconstruction.

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Timeline:

Objectives	Strategies	Activities	Responsible Agencies/Stakeholders	Timeline
1. Strengthen Policy and Governance	Regular review & updating of policies	Conduct annual review of DRRM & recovery policies; integrate inclusivity measures	LGU Balete, Barangay Councils, MDRRMO, DILG	Annual (Every January)
	Strengthen barangay DRRM councils	Orient officials on roles & responsibilities in recovery frameworks	Barangay Councils, MDRRMO	Quarterly (Jan, Apr, Jul, Oct)
2. Build Community Capacity & Training	Scale-up disaster preparedness training	- Conduct Basic Training for youth & community members- Intermediate/Advanced training for officials & volunteers	MDRRMO, DepEd, TESDA, NGOs	Basic: Bi-Annual (Jun & Dec) Advanced: Annual (Aug)
	Community-wide simulation drills	Conduct earthquake, typhoon, fire, and flood drills	MDRRMO, Barangay Councils, Schools	Quarterly (Mar, Jun, Sep, Dec)
	Youth mobilization	Establish Youth Disaster Action Teams (YDAT)	SK Federation, MDRRMO, NGOs	Within 6 months (by June 2026)

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3. Enhance Pre- and Post-Disaster Planning	Pre-disaster resource mapping	Identify safe zones, evacuation centers, and resource hubs	Barangay DRRM Councils, MDRMO	Within 6 months, update annually
	Stockpile essential goods	Pre-position relief goods at barangay halls	LGU Balet, NGOs, DSWD	Ongoing; replenish every 6 months
	Rapid post-disaster assessments	Deploy Rapid Needs Assessment Teams (RNAT) within 24–48 hrs after disaster	Barangay Councils, Volunteers, NGOs	Immediate (within 24–48 hrs post-disaster)
4. Improve Institutional Coordination	Establish central recovery hub	Set up Balet Disaster Recovery Operations Center (BDRM)	LGU Balet, MDRMO	Within 1 year (by Sept 2026)
	Strengthen partnerships	Create LGU–NGO–Private Sector MOUs for recovery support	LGU, NGOs, Private Companies	Within 1 year, renew annually
5. Secure Financing & Resource Mobilization	Priority-based budgeting	Allocate LGU disaster funds based on urgent/long-term needs	LGU, Barangay Councils, DSWD	Annual Budget Cycle (Oct–Dec)
	Community-based contributions	Launch Community Recovery Fund (CRF)	LGU, NGOs, Civic Groups	Within 6 months (by June 2026), ongoing

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				contributions
	Transparency & accountability	Publish DRRM funds & relief distribution reports	LGU, Barangay Councils	Quarterly
6. Strengthen Communication Systems	Early warning system	Install barangay loudspeakers, SMS alerts, & social media updates	MDRRMO, Telcos, Barangays	Within 1 year (by Sept 2026)
	Feedback & accessibility	Set up hotlines, suggestion boxes, and community feedback forums	Barangay Councils, NGOs	Within 6 months, ongoing
7. Monitoring & Evaluation (M&E)	Regular tracking of recovery activities	Develop indicators & track progress	MDRRMO, LGU, NGOs	Quarterly Reports
	Outcome evaluation	Conduct annual evaluation with all stakeholders	LGU, Academe, NGOs	Annual (Every November)
	Publish documentation	Release Balet DRRM Annual Report	LGU, MDRRMO, Academe	Annual (December)
8. Promote Innovative & Sustainable Programs	Barangay Recovery Brigades (BDRBs)	Form barangay-level recovery teams	Barangay Councils, SK, Volunteers	Within 1 year

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	Adopt-a-Barangay Program	Partner NGOs/private sector with barangays	LGU, NGOs, Private Companies	Within 1 year, review annually
	Green recovery	Launch mangrove rehabilitation & tree planting	DENR, NGOs, Schools	Every June (Environment Month)

Summary of Timeline:

Immediate (0–6 months): Capacity building, youth activation, community relief fund, accountability measures, pre-disaster resource identification.

Short-Term (6 months–1 year): Setup of BDROC, Adopt-a-Barangay Program, enhancement of communication systems.

Medium-Term (1–2 years): Regularized drills, revision of policies, advanced training, livelihood programs with sustainability.

Long-Term (Annual & Continuous): Budget allotment, monitoring and evaluation, publications of findings, ecological restoration initiatives.

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CONCLUSIONS

1. The demographics of respondents suggest that most of them are young adults and barangay officials. This implies that there is a solid manpower pool for disaster recovery initiatives but with a lack of advanced training.
2. The disaster recovery frameworks put in place in Balete are seen as effective especially in terms of inclusivity, community participation, and continuity of post-disaster interventions.
3. While these recovery frameworks are efficient, there are still some problems with financial resources, coordination between agencies, and timely relief distribution that make the whole process less efficient than it could be.
4. The community is quite knowledgeable about the disaster recovery framework; however, they do not have a thorough understanding of its processes and policies.
5. Balete recovery plans have been working well and are still relevant but to be able to achieve a more sustainable outcome, these plans need to be strengthened through capacity building, resource allocation, and stakeholder collaboration.

RECOMMENDATIONS

1. To fully utilize the potential of the community manpower resources, provide not only advanced disaster preparedness training but also regular simulation exercises.

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2. Open up recovery programs to more stakeholders not only in the planning stage but also during implementation in order to sustain and expand programs that are inclusive and participatory.

3. Along with the establishment of a community recovery fund and setting up of mechanisms for better inter-agency coordination, an increase in budget allocation is the best way of dealing with shortages of financial and logistical resources.

4. By means of early warning systems, awareness campaigns, and easily accessible reports, information dissemination will be improved, which in turn will deeply educate the community on disaster recovery policies.

5. Using various eco-friendly recovery initiatives, involving others in the corporate world and the formation of rescue teams at barangay level will surely equip us in facing natural disasters in the long run.

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