

Disaster Preparedness Among Households in the Municipality of Pura, Tarlac: An Analysis

Edwin T. Caoleng¹, Roswald G. Fermin²

Abstract

This research endeavors to evaluate the level of disaster preparedness among households in the Municipality of Pura, Tarlac, employing a quantitative descriptive research approach. A survey questionnaire was utilized to gather data from 112 household respondents, selected through random sampling across barangays most vulnerable to disasters. Data analysis, facilitated by SPSS analytical statistics software, focused on identifying trends and correlations between disaster preparedness levels and encountered challenges. The findings reveal both strengths and challenges in disaster preparedness. While emergency plans, risk awareness, and response capacity demonstrate commendable efficacy, deficiencies in emergency supplies, community engagement, and infrastructure persist. Correlation analysis underscores the positive relationship between proactive measures and mitigation of challenges, emphasizing the importance of investing in comprehensive disaster management strategies. Recommendations are proposed based on the research findings. Strengthening emergency supplies and resources through equitable distribution mechanisms and community collaboration is advised. Fostering greater community engagement and collaboration, enhancing emergency plans, and improving response and recovery capacity are also recommended. These measures, encompassing workshops, collaboration initiatives, and resource provisions, aim to empower households with the necessary knowledge and resources for effective disaster preparedness, response, and recovery. Implementation of these recommendations is crucial for enhancing disaster resilience and readiness in the Municipality of Pura, Tarlac. By addressing identified challenges and bolstering proactive measures, the community can better safeguard its residents and infrastructure against future disasters, ensuring their safety and well-being.

Keywords: *Disaster Preparedness, Households, Municipality of Pura, Natural Disasters.*

Introduction

Disaster preparedness includes preparation efforts that minimize the impact of disasters and preparation measures that anticipate future disasters. The objective is to anticipate these problems and take steps to reduce their effect on the most vulnerable people in society. A wide range of departments must be involved, from education and logistics to health care and institutional growth (Izumi, 2015). According to Hagelsteen & Becker (2014), "If there were no losses, they would not be considered disasters in the first place". For example, a disaster may directly affect infrastructure, agriculture, and homes, as well as indirectly influence the local economy due to the loss of income and job losses. Understanding the "nature" of natural disasters is essential for those involved in disaster preparation and mitigation, given the damage and expenses they may cause.

According to the study of Tomio et al. (2014), the primary objective of disaster management initiatives at the national and local levels is to improve catastrophe preparation. On the other hand, recent calamities have highlighted limits in the timing and mobility of government help to the public. Because of this, preparation plans for families and communities based on individual and household responsibility and those based on community cooperation have been identified as areas for improvement.

As one of the world's most disaster-prone countries, the Philippines is no exception. A typhoon belt runs through the center of its islands, which are often hit by flooding, landslides, earthquakes, volcanoes, and drought. According to the study by Tamayo (2016), establishing community-based disaster management has reduced the loss of lives and property during disasters. The Philippines is among the world's top three countries regarding its people's exposure and vulnerability to disasters. During the current disaster

¹ College of Public Administration and Governance, Tarlac State University, Tarlac, Philippines.

² University Research Office, Tarlac State University, Tarlac, Philippines, College of Public Administration and Governance, Tarlac State University, Email: rgfermin@tsu.edu.ph, (Corresponding Author)

preparedness activity in Davao City, several schools are educating their students to assist one another in the event of an upcoming catastrophe. The Department of Education (DepEd) uses the contingency aspect of the DRRM Act of 2010 to support and encourage preparation activities in school curriculums and other school programs and to raise the degree of resilience of students (Kohn et al., 2012).

As stated by Fernandez and Shaw (2013), an approach known as disaster risk reduction (DRR) that incorporates the views and perspectives of many actors and stakeholders has been advocated. Previous studies on disaster preparedness were primarily concerned with the Disaster Risk Reduction and Management (DRRM) of Tarlac City and the city's disaster risk reduction and management organizational structure (Mohammed, 2018). Additionally, CDRRMO maintains a hazard map showing barangays prone to floods, lahar flow, and earthquakes. According to Mano et al. (2019), the goals of the city government are linked with the Sendai Framework for Disaster Risk Reduction, as shown by the list of programs and initiatives included in their action plans. The City Government has assisted the barangay level by educating local officials on responding to disasters.

The Municipality of Pura, Tarlac, is the locale of the study. The researchers focused on disaster preparedness. Hence, the study was conducted to determine the level of readiness among households in the Municipality of Pura, Tarlac. It deals with their preparation measures when there is an unforeseen calamity. The researchers identified the significant challenges associated with disaster preparedness, such as inadequate public and worker education on the risks of disasters and a lack of funds for disaster-related equipment, tools, and infrastructure. The study's result would benefit the Municipality of Pura Tarlac and its constituents. Lastly, it is within the scope of the study to look at the implementation of programs to improve the delivery of services for the welfare and safety of the community.

Research Method

This research aimed to analyze the level of disaster preparedness among households in the Municipality of Pura, Tarlac. A quantitative descriptive research approach was employed, utilizing data collected from a survey questionnaire to focus on the participants and their perceptions of the problems encountered. Correlation analysis was utilized to determine the relationship between the level of disaster preparedness among households and the problems they face.

Respondents and Sampling Technique

This study involved a total of one-hundred twelve (112) household respondents who were selected in each of the barangays in Pura. The households were most vulnerable to disaster. The respondents of the study were chosen using the random sampling method. Random sampling is a categorization method where sample members are selected by chance but with a well-known selection.

Research Instrument. The researchers used a survey questionnaire and documentary analysis to gather data from the respondents regarding disaster preparedness. An interview was also done to validate the responses.

Data Collection. The researchers formally communicated to the Municipality of Pura for their approval. The researchers then distributed the questionnaire face-to-face with the help of the LGU to organize and facilitate the survey. Respondents' participation shall be voluntary; data gathering commences with their approval to participate in this research. The documentary analysis consisted of supporting papers from the Municipality of Pura. The researchers also sought permission from the LGU to obtain official documents relevant to the study. Upon completion, the researchers tabulated and processed results upon consultation with a statistician.

Data Analysis. Data analysis will be conducted using SPSS analytical statistics software, focusing on identifying trends within the collected data. Correlation analysis will be employed to determine the relationship between the level of disaster preparedness among households and the problems encountered in their disaster preparedness efforts. Results will be tabulated and processed in consultation with a statistician to ensure accuracy and reliability.

Results and Discussion

The following were accumulated results through the aggregate method of data collection. Organization of results through systematic representation was done in detail to the elevated research problems in the study with the corresponding analysis and drawn interpretations.

Disaster Preparedness of Households in the Municipality of Pura

Disasters continue to be a primary concern for developing countries. It causes significant suffering and death, harms developing local economies, and impedes development. Governments, organizations, communities, and individuals all take part in disaster preparedness to better respond and deal with the immediate aftermath of a disaster, whether it has been caused by human activity or natural catastrophes. The objective is to reduce the number of persons injured and the number of individuals who lose their livelihood because of the disaster. Simple measures, such as training for search and rescue, creating early warning systems, or preparing for contingencies and storing supplies, may make all the difference in an emergency. For communities to be more resilient in disasters, disaster preparation is essential.

The Disaster Preparedness in every household in the Municipality of Pura was analyzed along with four indicators, namely, (1) Hazards Exposure, (2) Household Preparedness, (3) Public Awareness, and (4) Governance.

Hazards Exposure

It deals with a condition where an individual or a gathering stay in an inescapable gamble of peril. Such perils relate to the work environment, well-being, security, and climate or everyday life.

Table 1 Disaster Becoming Common

Statement	Yes	Do not know
Disasters are becoming increasingly common.	100	12

Table 1 shows that 100 respondents agreed that disasters are becoming more common because, according to the respondents, there are months in a year when disasters happen, specifically storms and floods, which are more frequent than in other months. They also said they are experiencing excessive rains in June since it is the rainy season and extreme temperatures in May since it is summer. According to some respondents, storms and floods happen a maximum of seven (7) to ten (10) times yearly. Furthermore, 12 respondents do not know which disaster is becoming more common because some cannot anticipate or predict the disaster that hit them. According to them, it is difficult to predict when a disaster is coming since it is a natural phenomenon, and we do not know when or where it will happen; that is why it is always important to be prepared. When disaster strikes, being prepared may save your property and allow entire populations to recover more quickly than if unprepared. Disaster preparation may save lives if you break it down. It may take some time to prepare ahead, but it ensures the family's safety in the long run.

This research output is related to the study conducted by Bolletino et al. (2018) on disaster resilience and preparedness in the Philippines, which unveiled a notable discrepancy in disaster management capabilities among various regions within the nation. Surprisingly, the study revealed a relatively low local readiness and disaster resilience. Moreover, it underscored the imperative of implementing evidence-based disaster management practices, particularly at the grassroots level, while emphasizing community involvement and active participation in mitigating disaster risks.

Also, Shi et al. (2020) study emphasized the complexity and uncertainty of disaster risks and the need for interdisciplinary and transdisciplinary approaches to understand and reduce them³. The study also suggested that disaster risk science should contribute to the global agenda of sustainable development and disaster risk reduction.

After discussing this finding with the local disaster management unit in Pura, it became evident that proactive disaster management strategies play a crucial role. Utilizing community knowledge, rectifying preparedness shortcomings, and nurturing a resilient mindset are vital steps the Disaster Management Unit can take to bolster disaster preparedness and response efforts. These actions are essential for safeguarding residents' well-being and mitigating the impacts of future disasters.

Table 2 The Community was affected by the Disaster

Statement	Yes
The community was affected by a disaster.	112

Moreover, table 2 shows that 112 of the respondents agreed that their community was affected by the disaster because, according to the respondents, they experienced disasters such as excessive rains and extreme temperature; the respondents said that they experienced earthquakes ten (10) to fifteen (15) times from past five years, severe storms, and floods of the barangays in the Municipality of Pura. Also, they said that every area of the world is vulnerable to disasters, which may occur at any time of year and in various ways. Natural disasters like excessive rains, earthquakes, floods, hurricanes, etc. might leave you needing aid. The individuals and organizations could lessen the hazard's impact and utilize their resources until help was available because of community preparedness.

These findings emphasize the Statistica Research Department's (2024) claim that the Philippines is one of the most vulnerable and susceptible countries to the effects of natural disasters due to its location within the Pacific Ring of Fire, where it faces earthquakes, volcanic eruptions, typhoons, and floods every year. In 2022, damages caused by natural disasters amounted to about 30 billion Philippine pesos, mainly due to storms that occurred during the year.

In response to these findings, the local disaster management unit in Pura will focus on enhancing disaster preparedness education, strengthening early warning systems, building capacity for disaster response, and fostering collaborative partnerships with stakeholders. The unit can bolster the community's disaster resilience by addressing these areas and ensuring a more coordinated and effective response to future incidents.

Table 3 Number of Disasters and Types of Concerns

Type of Disaster	No of respondents affected
Excessive rains	77
Extreme temperature	35
Earthquake	8
Severe storm	56
Floods	106

Table 3 shows the number of disasters and the type that the household experiencing. It can be observed that 77 of the respondents experienced excessive rain in the barangays in the Municipality of Pura. According to the respondents, sometimes they experience rainfall, but they have a more challenging time during the rainy season since some respondents said that their house has a hole in the roof where the water is leaking. On the other hand, regarding extreme temperatures, according to 35 respondents, the extreme temperature they experience during the summer does not have a good effect on them. It is also one of the things that are difficult for them since extreme temperatures, such as extreme heat, can cause heat exhaustion, heavy sweating, and stroke, which can lead to death.

Furthermore, an earthquake is one of the most difficult to predict when it will strike, but fortunately, the barangays in the Municipality of Pura are not prone to earthquakes. According to 8 respondents who said they experienced an earthquake but not because the Municipality of Pura is no longer prone, individuals need to be prepared because all kinds of disasters must be prepared to ensure safety. Moreover, severe storms according to 56 of the respondents said they would be affected by severe storms, which is one of the causes of lending and damage to their property. Some respondents said their houses were not solid or durable enough to cope with the strong wind.

Lastly, flood is one of the most common disasters experienced in every barangay in the Municipality of Pura, 106 of the respondents said that they are affected by floods since the Municipality of Pura is prone to floods since some of the barangays have an insufficient and inadequate drainage system, some of the creeks are overflowing, clogged drainage canals, and the excessive surface run-off coming from the areas with a higher elevation. Also, according to them, floods are one of the most difficult to live in and cause various kinds of diseases, such as typhoid fever, leptospirosis, dengue, and malaria, which can cause death to people if not treated immediately.

These findings emphasize that hazards pose significant risks to people's lives, livelihoods, health, and well-being, especially the poor and marginalized sectors lacking adequate resources and capacity to cope and adapt, as stated in the 2019 Status Report of Disaster Risk Reduction in the Philippines (UNDRR, 2019)

In response to these findings, the local disaster management unit in Pura underscored the urgent need for the local disaster management unit to implement targeted interventions aimed at enhancing resilience to various hazards, including improvements to infrastructure, community education on disaster preparedness, and coordinated response plans to mitigate the adverse effects of disasters on residents' lives and livelihoods.

Table 4 Families Affected by Disasters

Statement	Yes
Families affected by disasters - past 5 yrs.	112

Finally, Table 4 shows that 112 of the respondents agreed that their families are affected when it comes to disaster. According to them, when a disaster is coming, they prepare themselves for the possibilities or dangers that might occur when the disaster comes, such as minor injury, loss of their homes and livestock investments, trauma, and even stress. Unexpected disasters might occur at any time and without any warning. To protect yourself and your family, you must be prepared. The respondents experienced injury, loss of their house and livestock investments, and traumas due to Typhoon Haima, also known in the Philippines as Super Typhoon Lawin 2016. According to them, it was one of the strongest typhoons they experienced after Typhoon Yolanda. They also said that natural calamities are unavoidable and cannot be stopped by anybody, but you can prepare for them and plan time. It may be beneficial to be prepared for a disaster to protect your house, family, and loved ones.

These findings emphasize that disasters in the Philippines often significantly damage infrastructure, agricultural lands, and businesses, leading to loss of livelihoods for affected families. The report may highlight how disasters disrupt economic activities and exacerbate household poverty and vulnerability (UNDRR, 2019).

In response to these findings, the local disaster management unit in Pura will prioritize community-based preparedness initiatives that empower residents with the knowledge, resources, and support needed to safeguard themselves and their families against the adverse effects of disasters. This may include comprehensive disaster preparedness education campaigns, training programs on emergency response and first aid, and establishing community-based early warning systems. By fostering a culture of preparedness and resilience at the grassroots level, the disaster management unit in Pura can effectively enhance the community's capacity to mitigate, respond to, and recover from disasters, ultimately safeguarding the well-being and livelihoods of its residents.

Table 5 Number of Households Affected by the Disaster

Statement	f	%	R
Property damage	110	98.21	1
Disruption of loss of income	109	97.32	2
Minor injury	29	25.89	3
Lack of evacuation center	26	23.21	4

Table 5 shows the number of families affected by the disaster that the household is experiencing. Property damage significantly impacts people; 110 or 98.21% of respondents said they were severely affected because their properties were damaged due to the disaster they experienced. According to them, their house has been destroyed; the outdoor lights and windows are damaged, and the trees have been cut off from the disaster they experienced. Furthermore, when it comes to disruption or loss of income, 109 or 97.32% of the respondents said that the disaster they experienced also caused their lack of source of income, and because of this, they have many difficulties. According to some of them, they cannot provide the things they need, such as food, clothes, and other essentials, due to the loss of income because of the disaster.

Moreover, minor injury according to 29 or 25.89% of respondents, said they would suffer a minor injury due to the disaster for various reasons, such as when they were injured in a body part because some of the households from Barangay Purok and Barangay Naya when there is excessive rain their roof has a hole that is why the water is dripping. Some of them have slipped down and have been injured. This figure only shows that we can all be affected by disasters, so our whole family must be ready and know how to be safe in any disaster.

Lastly, 26 or 23.21% of the respondents are affected by evacuations. According to them, they needed to evacuate and go to a safer place to ensure the safety of their entire family due to the disaster. Some barangays such as barangay Estipona, barangay Manguib, barangay Dos, barangay Maasin, and barangay Singat are lacking when it comes to evacuation center.

These findings emphasize that disasters in the Philippines frequently necessitate the evacuation of families from their homes, leading them to seek temporary shelter in evacuation centers or with relatives. Adequate provision of shelter, food, and hygiene facilities is crucial to meet the immediate needs of displaced families and ensure their safety and well-being. Furthermore, disasters in the Philippines often cause significant damage to infrastructure, agricultural lands, and businesses, resulting in the loss of livelihoods for affected families. This disruption of economic activities exacerbates poverty and vulnerability among households. Additionally, families affected by disasters face various health risks, including injuries, waterborne diseases, and mental health issues such as trauma and stress. Timely access to medical care, psychosocial support, and sanitation facilities is essential to address these health challenges. Moreover, in the aftermath of disasters, families encounter challenges in rebuilding their lives and recovering from losing assets and livelihoods. Strategies for promoting long-term recovery and resilience include livelihood support, housing reconstruction, and social protection measures (UNDRR, 2019).

In response to these findings, the local disaster management unit in Pura will prioritize enhancing disaster preparedness and response efforts, focusing on providing adequate shelter, food, and medical care during evacuations. Addressing deficiencies in evacuation center availability and implementing long-term strategies for recovery and resilience are crucial steps toward ensuring the safety and well-being of all residents in Pura.

Household Preparedness

Preparing for each household is essential to decrease the people's dependence on the government and others during a disaster. Preparedness refers to having food, water, and other essential survival supplies that may last several days.

Table 6 Household Preparedness in a Disaster

Statement	Yes	Do not know
Be prepared to help your family in a disaster or emergency.	102	10

Table 6 shows that 102 respondents agreed that being prepared for disaster or emergency helps their family be safe since they know what to do and what not to do amidst the disaster. According to the respondents, being prepared can reduce fear and lessen the losses of damages because some residents do not know what to do when the disaster comes, resulting in injuries. On the other hand, ten respondents do not know the importance of being prepared for disasters. If you are not prepared for an emergency, you might lose something. Those you care about the most may suffer long-term consequences if you do not plan. Foreseeing what will happen next when Mother Nature is involved is impossible. It is hard to predict the entire impact of any natural occurrence.

These findings emphasize that individuals who reported being adequately prepared for disasters or emergencies expressed a heightened sense of security and safety for their families. This finding underscores the importance of proactive preparedness measures in mitigating the impact of disasters and enhancing the resilience of communities in the Philippines (Bollettino et al., 2018).

It is evident from the findings that being prepared for disasters or emergencies significantly contributes to the safety and well-being of families in Pura. The knowledge and readiness acquired through preparedness efforts empower individuals to navigate disasters confidently and confidently. Knowing what to do and what not to do amidst a disaster enables families to make informed decisions, take appropriate actions, and mitigate potential risks effectively. This underscores the critical importance of the local disaster management unit's ongoing education and training initiatives. By equipping residents with the necessary tools, resources, and skills to prepare for and respond to disasters, the local disaster management unit of Pura can enhance the overall resilience of our community. Moving forward, Pura's local disaster management unit will remain committed to fostering a culture of preparedness and ensuring that every household in Pura is adequately equipped to face the challenges posed by disasters, thereby safeguarding the safety and security of residents.

Table 7 Preparedness to Handle a Disaster or Emergency

Statement	Very prepared	Somewhat prepared	Not prepared
Preparedness of your family to handle a disaster or emergency.	78	26	8

Table 7 shows the respondents and their families how prepared they are to handle disasters or emergencies. It can be observed from Table 8 that 78 of the respondents are very prepared when it comes to a disaster or emergency. According to the respondents, they are well prepared when the disaster comes since they have enough supplies such as they stock food, first aid kits that they can use when someone gets injured, flashlights that can be used when the power goes out, whistles that can be used when you want to signal to others around you that you require help, and even radio so that they can still get news when they need to evacuate due to the disaster. On the other hand, 26 of the respondents said that they are somewhat prepared when it comes to a disaster or emergency. They are prepared, but they are not complete when it comes to the supplies. Some of them do not have flashlights and first aid kits. Additionally, 8 of the respondents are not prepared for disaster. Some respondents do not have first aid kits, which are essential when someone gets injured, and some said that their food is insufficient due to the lack of money.

This underscores the significance of proactive preparedness measures in mitigating disaster impacts and bolstering community resilience, as noted in Bollettino et al.'s study (2018).

These findings underscore the need for targeted efforts from the local disaster management unit to enhance community-wide preparedness levels. By conducting educational campaigns and training sessions and

providing resources to bolster household preparedness, the local disaster management unit can ensure that every family in Pura is equipped to handle disasters or emergencies effectively. The local disaster management unit remains committed to supporting and empowering the residents to navigate through crises with resilience and confidence, ultimately safeguarding the safety and well-being of the community.

Table 8 Number of the Respondents Able to Handle Disaster

Statement	More able	Less able
A family can handle a disaster or emergency.	96	16

Table 8 shows that 96 of the respondents are more able to handle a disaster or emergency. According to the respondents, when it comes to disasters, understanding what to do and how to avoid them are both crucial. It is too familiar for dire circumstances to worsen at work or home when people are unprepared for the negative things that might happen. Keeping you calm and understanding how to respond to an emergency might save your life or the lives of others around you. When an emergency happens, life safety always comes first. The second priority is to stabilize the situation and minimize the possible damages. On the other hand, 16 respondents cannot handle a disaster or an emergency. According to them, one of the reasons why they are not able to handle a disaster is the loss of a job or when it comes to a lack of income and reduced earnings. Some of the respondents do not have jobs to provide the need to buy some supplies, such as food and some tools and equipment they can use.

According to a study by Johnson, R., & Smith, T. (2020), individuals who reported understanding what to do and how to avoid disasters demonstrated higher levels of disaster preparedness. This underscores the importance of education and awareness in equipping individuals with the knowledge and skills to respond effectively to emergencies. Furthermore, the study revealed that life safety is consistently prioritized in emergency response, emphasizing the importance of remaining calm and knowing how to respond during crises to save lives.

According to Pura's local disaster management unit, they must address these disparities and ensure that all residents receive the necessary support and resources to enhance their resilience in adversity. Through targeted interventions and community engagement initiatives, the local disaster management unit remains steadfast in its commitment to fostering a culture of preparedness and ensuring the safety and well-being of all residents in Pura.

Table 9 Family Less Able to Handle a Disaster or Emergency

Statement	Lost job or income source	Family is worse off financially than before because the cost of living has increased.
Family less able to handle a disaster or emergency	11	5

Table 9 shows why their family is less able to handle a disaster or emergency before it shows in Table 8 that 16 respondents are less able to handle a disaster or emergency. If your family is less able to handle a disaster, what are the reasons why you are less able. 11 respondents are less able to handle a disaster due to losing a job or income source. According to the respondents, they are less able to prepare for a disaster because some of them lost a job, so they do not have the money to provide for their needs and buy goods and first aid kits. It is not easy to provide the things that you need if you do not have a job. On the other hand, five respondents are less able to prepare for a disaster due to being worse off financially and increased cost of living. According to them, they find it challenging to prepare for a disaster because they do not have enough money to buy what is needed due to the increase in food and household goods. Some of them said that their income was not enough to buy goods, etc.

Research conducted by Patel, S., & Brown, L. (2019) highlighted the impact of financial instability on disaster preparedness, with loss of employment or reduced income cited as significant barriers to handling

emergencies. This underscores the need for targeted support and resources to address individuals' financial challenges in disaster preparation.

According to Pura's local disaster management unit, they must address these barriers and provide targeted support to vulnerable households. By offering assistance programs, resource allocation, and community outreach initiatives, they can empower families in Pura to enhance their resilience and better prepare for emergencies, ensuring the safety and well-being of all residents.

Table 10 Family Planning on Disaster

Statement	<i>f</i>	%	R
I am prepared for a disaster or emergency	96	85.71	1
I have just recently begun preparing for a disaster or emergency	16	14.29	2

Table 10 shows that 96 of the respondents of the barangays in the Municipality of Pura are prepared for a disaster or emergency. According to the respondents, they are well prepared since they have supplies that can be needed after and during disasters. Being prepared for disaster helps people survive since they know what they need to do and what not to do. Some people panic when a disaster comes, which results in injuries since they do not have enough knowledge or experience in disaster. On the other hand, 16 respondents have just recently begun preparing for a disaster or emergency. With the adverse effects of the previous disaster, other households are already planning to prepare for the upcoming disaster. However, due to lack of funding, the respondents must save up to buy emergency medical kits and some canned goods to store and use during a disaster.

This finding is consistent with the literature that suggests that the Philippines is a leading regional actor in disaster risk management, with various policies and initiatives to build disaster capacity and reduce population exposure and vulnerability nationally and locally (Alcayna et al., 2016).

As a local disaster management unit, efforts will be made to explore avenues for funding and resources to assist households in acquiring essential supplies, thereby enhancing overall community resilience. Together, efforts will continue to work towards building a resilient and prepared community in Pura, where every household is equipped to face and overcome the challenges posed by disasters and emergencies. The proactive approach and determination of the residents are key to ensuring the safety and well-being of the entire community.

Table 11 Household Preparedness in a Disaster

Statement	Yes
Supplies in your home that can be used in a disaster.	112

Moreover, table 11 shows that 112 respondents agreed that home supplies can be used when a disaster comes. According to the respondents, they have packaged food which is essential because in the midst of disaster you cannot leave your house that is why having stock foods is necessary, bottled water, which is something they are able to consume since bottled water is necessary for survival. After the evacuation and taking care of any injuries, finding clean water would be your first priority, radio that can be used to get information during and after the disasters, first aid kit which is also essential when someone got injured, flashlight that can give light when no other source is available in a manner that's much safer than exposed candles, cash is also essential since when the disaster comes some ATM machines are not working that is why you need cash to buy goods, medicine which is also useful when some of your family member are having fever, headache etc., and essential documents, disaster may strike at any moment, therefore keeping important documents and certificates in a secure location is essential.

A key finding of the study is that the respondents have various home supplies that can be used in a disaster, which indicates their high level of preparedness. Having these supplies can help the respondents survive and cope with the impacts of a disaster, such as food insecurity, water scarcity, communication disruption,

injury, darkness, financial difficulty, illness, and identity loss. These supplies are also consistent with the recommendations of FEMA (2022), which conducts the annual National Household Survey to track progress in personal disaster preparedness in the United States.

In line with these findings, Pura's local disaster management unit efforts will raise awareness about the importance of these home supplies and guide their procurement and storage to enhance community resilience and preparedness.

Table 12Number of Supplies at Home

Supplies	Number of Supplies
Packaged food	107
Bottled water	112
Radio	86
First Aid kit	67
Flashlight	103
Cash	112
Medicine	87
Important documents	112
Other	23

Table 12 shows the available supplies in the respondents' houses during the disaster. According to the 107 respondents, they have packaged foods they can eat during a disaster. This is vital since, in a disaster, you cannot leave your home, so having a food supply is essential. Disasters and calamities necessitate the need for emergency food to retain financial stability. Another way to save money in an emergency is to have a well-stocked pantry. During times of crisis, panic-buying may lead to a rise in prices and a reduction in supply. On the other hand, 112 respondents have bottled water that they can drink because bottled water is essential for living. After evacuation and taking care of injuries, finding clean drinking water was your primary concern.

Next, 86 respondents have a radio, which is very important for us to get information and news and to know when they need to evacuate. According to the respondents, radio is essential because it provides information such as times and places for delivering emergency water and food supplies and the distribution of relief supplies in the immediate aftermath of a disaster. Moreover, 67 respondents have first aid kits, which are essential when someone also gets injured; first aid kits may help avoid further harm. As per the respondents, when you have a medical emergency, first-aid supplies can help you deal with it as fast as possible. In an emergency, even a single minute of delay might result in lasting harm to the victim. These kits provide essential and immediate treatment for common medical injuries such as cuts, burns, and other wounds and bruises. Furthermore, 103 respondents have a flashlight they can use when the power goes out. Flashlights may be used to find people in need of help and to signal for help. The respondents said that a flashlight is a must-have in every emergency bag. Having the capacity to see what is going on and how you can move yourself and others out of danger is essential in an emergency.

In addition, 112 respondents have cash since keeping a small amount of cash in a secure area at your home is essential. According to the respondents, keeping a little money on hand in a disaster is essential since ATMs and credit cards may not function well when you need to buy supplies, gasoline, or food during a disaster. Furthermore, 87 of the respondents have medicine in their house. According to the respondents, having medicine in your home, just like a first aid kit, is essential since it helps you prevent disease and remedy your fever, especially when some family members have a fever during a disaster.

In line with this, 112 respondents said securing your documents is very important. According to the respondents, personal safety and peace of mind are at stake if these records are not organized and protected before a disaster occurs. Vital records, insurance policies, property records, medical information, financial data, and other critical personal papers may be stored securely. Lastly, 23 of the respondents said that it is

essential to have a whistle. According to them, a whistle is one of the most vital tools in an emergency or survival situation. Whistles provide a powerful sound with a minimum of effort. Rescue personnel arrived faster if you blew a whistle. Also, having a cell phone during a disaster is essential since it gives you an update on what is happening and the dissemination of early warning signals to those in danger in distant areas on immediate and direct premises.

The respondents also reported having various home supplies that can be used during a disaster, such as packaged food, bottled water, radio, first aid kit, flashlight, cash, medicine, and essential documents. These supplies are in line with the recommendations of FEMA (2022), which conducts the annual National Household Survey to track progress in personal disaster preparedness.

According to Pura's local disaster management unit, they will strive to emphasize the critical significance of these supplies and urge residents to ensure they have sufficient quantities on hand. This entails raising awareness about the essential nature of these items and actively promoting the idea of keeping a well-stocked inventory. By doing so, Pura's local disaster management unit aims to bolster the resilience of our community and bolster its readiness to confront disasters effectively.

Table 13 Household Preparedness in a Disaster

Statement	Yes	No
Spoken about or planned what to do in a disaster.	92	20

Additionally, table 13 shows that 92 respondents agreed that they talked about what to do during the disaster and planned where they would go when the disaster came. According to the respondents, when the disaster comes, they gather their family members to give instructions on the things that they need to do, such as listen to the radio so that they know if they need to evacuate as soon as possible, call the emergency hotlines or essential person in case someone got injured, they also tell everyone where is the safest place where they can go in case the disaster become stronger. In addition, 20 respondents do not talk about what to do during a disaster, which results in injuries because some are panicking since they do not know what to do during the disaster. According to them, one of the reasons they do not talk about or plan a meeting on what they need to do when the disaster comes is that they are complacent about themselves and know what to do, which results in casualties or injuries.

This finding is consistent with the literature that suggests that households or communities where members actively engage in discussions about disaster preparedness and plan for potential scenarios are better equipped to respond effectively during disasters. Such proactive measures include gathering family members to discuss emergency protocols, identifying safe evacuation routes, and designating communication channels for coordinating responses. These findings underscore the critical role of communication and planning in mitigating the impact of disasters and reducing the likelihood of injuries or casualties (Bollettino et al., 2018).

According to Pura's local disaster management unit, a focus will be placed on assisting the community in preparing for disasters and ensuring safety. Discussions about what to do during a disaster and planning evacuation routes are already engaged in by many community members. It is understood that it is important to listen to the radio for updates, contact emergency hotlines in case of injuries, and identify safe locations in the event of escalating disasters. However, instances exist where individuals do not engage in such discussions, leading to potential injuries due to panic and lack of preparedness. Some individuals may feel overly confident in their knowledge of what to do, which can pose risks. Measures such as organizing educational events, offering training sessions, and establishing neighborhood support groups can be undertaken to promote disaster preparedness. Additionally, easily understandable information will be provided, and regular assessments will be conducted to evaluate the effectiveness of preparedness efforts. Through collective action, readiness for any potential disaster in Pura can be ensured.

Table 14 Plans in a Disaster

Statement	<i>f</i>	%	R
Emergency supplies or go bag kit	112	100	1
Evacuation	112	100	2
Going to a shelter/place to stay	112	100	3
List of significant phone numbers or contacts	109	97.32	4
Agreed meeting place for family members	96	85.71	5
House retrofitting to reduce risk/damage to your property	36	32.14	6

Table 14 shows what methods or plans they use when there is an impending disaster to be prepared to ensure everyone's safety. According to 112 respondents, they have emergency supplies or a planned list of items to bring if the family leaves in a hurry. If they need to evacuate due to a disaster, they are ready and know the equipment needed. The respondents have emergency supplies, such as flashlights, that they can use when the power goes out. Also, it can provide light when there is no other available source in a way that is far safer than using exposed candles; they also have first aid kits, which are essential to have emergency kits in case someone gets injured you can treat the wound so that it does not get infected before going to the hospital, they also have a whistle that they can use when you want to call someone's attention since whistle create a loud sound, and also they have the list of item that they need to bring in case they need to evacuate such as the essential documents, and some of the respondents said that they also bring their pets when they need to leave their house since it becomes part of their family they cannot leave them alone and watch them die. For the evacuation plan, 112 respondents said that they have an evacuation plan to be safe in any disaster. According to the respondents, all family members know the evacuation plan and where to go in case of an emergency so they can get safe. Having an evacuation plan is essential during a disaster since it can help you know where you need to go when the disaster comes, and it also gives every family member a safe place to stay.

Furthermore, 112 respondents are willing to go to the shelter or where they stay because of the disaster to ensure their safety. As they said, shelter is essential since it gives them a temporary place to stay after the disaster since their house might be destroyed due to the disaster. According to the respondents, since their barangay has an evacuation center that can be used after the disaster, such as the barangay hall, covered court, health center, school, and even church, the respondents know where the routes are on how to get there as soon as possible since they already discuss this with their family members. They said that the route in every barangay is close to the barangay hall, which makes it easy for them to go there. On the other hand, 109 respondents have a list of significant phone numbers or contacts to maintain communication with their loved ones and with emergency hotlines to seek help if needed. As per them, they already listed the crucial contacts that they can call during and after the disaster.

Moreover, 96 of the respondents were able to plan a meeting place for family members to plan what they do during and after the disaster as a whole family. According to the respondents, they are already planning with every member of the family before the disaster comes on where the safest places that they need to go because you must know the place that you can go during a disaster since it can help you to go to the safe place since when the disaster is about to strike having a place that you can stay is important. Lastly, 36 respondents carried out activities to strengthen their house or reduce the property damage risk. According to them, awareness, education, and preparedness can help reduce the impact of the disaster. Before the disaster, some of the household members had already tied and overlaid their roofs so that they would not fly because some of their roofs were not sturdy, so the wind quickly blew them.

The study by Chukwuka et al. (2023) on analyzing risk factors in emergency supply chains provides insights related to the preparedness behaviors observed in the findings described. Specifically, the study highlights the importance of having emergency supplies and evacuation plans in place, which aligns with the respondents' behaviors of having emergency kits stocked with essential items such as flashlights, first aid kits, and whistles. This preparedness not only ensures readiness for immediate needs during a disaster, such as power outages and injuries, but also facilitates safe evacuation by having a predetermined list of necessary

items to bring and knowing where to go. Additionally, the study emphasizes the significance of shelters in providing temporary refuge post-disaster, echoing the respondents' willingness to seek shelter for safety and accommodation. Moreover, the respondents' initiative to plan family meetings to discuss disaster preparedness and response further underscores the importance of proactive planning and coordination within households, which aligns with the study's focus on analyzing risk factors and preparedness strategies in emergency supply chains.

According to Pura's local disaster management unit, it's important to note that many residents are already prepared for emergencies. However, there's always room for improvement. They will encourage everyone to have a more comprehensive emergency kit that includes not just basic items like flashlights and first aid kits, but also water, food, and other essentials. They will remind people to plan for their pets too, making sure they have what they need in case of evacuation. Families should practice their evacuation plans regularly and can help them with that. They will also make sure that the community shelters are ready to help people when disasters happen. Lastly, families need to talk about their plans together, so everyone knows what to do. These steps will help make sure that everyone in Pura stays safe during emergencies.

Public Awareness

Public awareness refers to the public's understanding of the significance and implications of the effects and spread of notice about a disaster. Raising public mindfulness is not equivalent to instructing the general population. It is clearing up issues and spreading information to individuals so they can settle on their own choices.

Table 15 Number of Family Members Involvement in the Following Activities

Statement	Yes	No
Attended a meeting on how to be better prepared for a disaster.	26	86
Attended a First Aid training.	64	48
Participated in a disaster or evacuation drill.	84	28
Participated in a community or volunteer activity.	49	63
You were given a pamphlet or flyer, or a person visited you.	72	40

Table 15 shows the number of family members who attended the meeting, first aid training, disaster or evacuation drills, and community or volunteer activities. According to the respondents, 26 attended a disaster preparedness meeting. According to them, knowing what to do when a disaster comes is essential because it can save lives. Also, it is better to attend a meeting since it gives you knowledge of the things that need to be done amidst the disaster; most of us think that we already know what to do when the disaster strikes, but still, it is essential to be more prepared before and after the disaster. On the other hand, 86 of them do not attend a meeting; per the respondents, they do not have time to attend because they are busy doing other things; most of them said that they have priorities such as work, and some of them said that they have errands that need to do, and some of them did not know the importance of knowing what are the things that needed to do before the disaster comes.

On the other hand, 64 of the respondents attended first aid training. According to them, first aid training is beneficial because it can prevent the situation from worsening. You can stabilize a patient by providing primary care until emergency medical services arrive. Hence, 48 of them do not attend. As per them, they know what to do when someone gets injured. The respondents also said that when some of their family members got injured, they knew how to handle it since they knew how to treat it because they watched it on the news or social media.

Moreover, 84 of the respondents participated in a disaster or evacuation drill. As per the respondents, everyone must be aware of and familiar with the evacuation procedure because, in an emergency, you must know where to evacuate. They also said having an evacuation drill in every barangay is essential since it helps people prepare and every community member familiarizes themselves with what needs to be done. On the other hand, 28 of the respondents do not attend disaster or evacuation drills. Some said they already

knew what to do when the disaster came, and some were busy running errands, so they did not have enough time.

Furthermore, 49 of the respondents are participating in community or volunteer activities. According to the respondents, participation in community activity can also enhance the effectiveness and results of post-disaster recovery. On the other hand, 63 of the respondents do not participate in the activity. Some of them said that they do not have time and they focus more on their priorities.

Lastly, 72 respondents said the barangay officials visited them from house to house to give information regarding the disaster. When they needed to leave their house, they were well-informed about where the evacuations were. On the other hand, 40 were not visited by the barangay officials or did not get any flyers regarding the disaster.

Domingo and Manejar's (2018) study on disaster preparedness and local governance in the Philippines likely explores similar themes of community engagement and the role of local authorities in disaster risk reduction and management. The findings concerning attendance at disaster preparedness meetings and the importance of community involvement resonate with the emphasis on local governance and community participation in disaster preparedness efforts.

Johnson et al.'s (2014) evaluations of disaster education programs for children may relate to the findings on first aid training participation. Both studies highlight the importance of educational initiatives in equipping individuals with the knowledge and skills necessary to respond effectively to emergencies and mitigate the impact of disasters.

Villanueva's (2017) examination of the role of barangay officials in disaster risk reduction and management likely aligns with the findings regarding the receipt of information from barangay officials. Both studies emphasize the significance of local leadership and information dissemination in enhancing community preparedness and response capabilities.

According to Pura's local disaster management unit, these findings highlight the importance of enhancing community engagement and education in disaster preparedness efforts. It is evident that attending disaster preparedness meetings and participating in first aid training, drills, and community activities play crucial roles in equipping individuals with the knowledge and skills necessary to respond effectively to disasters. The insights from respondents who attended these activities underscore the value of proactive preparation and the ability to mitigate the impact of emergencies. However, the significant number of respondents who did not attend such activities due to time constraints or a lack of awareness emphasizes the need for targeted outreach and education initiatives. By increasing accessibility to these opportunities and raising awareness of their importance, Pura's local disaster management unit can empower more community members to become actively involved in disaster preparedness efforts. Additionally, the positive feedback regarding visits from barangay officials highlights the effectiveness of personalized communication in disseminating vital information. Leveraging such approaches can further enhance community readiness and resilience in the face of disasters. Therefore, as a local disaster management unit, prioritizing community engagement, education, and outreach strategies can significantly contribute to building a more resilient and prepared community in Pura.

Table 16 Alert Warning System

Statement	Yes	No	Do not know
The community has an early warning system.	84	9	19
The community has a disaster response or emergency plan.	98	0	14
The community has a committee or organized group that decides what to do in disasters.	83	0	29
Community members have been trained to assist others in a disaster.	71	0	41
The community has evacuation routes.	112	0	0

The community has a shelter identified where people can go in a disaster.	112	0	0
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Table 16 shows that most respondents responded that their community has an early warning system, with 84 responses. According to the respondents, Barangay Estipona, Barangay Singat, Poblacion 1, Poblacion 2, Poblacion 3, Barangay Cadanglaan, and Barangay Matindeg, have an early warning system such as the barangay officials go house to house to give a warning that the disaster was going. They need to evacuate as soon as possible when they give a signal. Also, they have groups on Facebook that give information regarding the disaster. Lastly, the respondents said they received text messages before the disaster. Early warning systems were either announced through social media, or sometimes, it was a house-to-house distribution of warnings and preparation for upcoming disasters. On the other hand, nine respondents from Barangay Buenavista, Nilasin 1st, Nilasin 2nd, and Barangay Linao answered negatively because they were not up to date on the announcement of their community through social media and were not aware or did not take the alert warning seriously because they were more focus on their priorities such as work, etc. This is like the respondents who do not know their community has an alert warning system. At the same time, 19 respondents did not know that their community had an alert warning system. According to them, they are not informed by the barangay officials or their community members regarding the warning system; they only get information by watching the news or on social media.

Furthermore, 98 of the respondents agreed that they have disaster response or emergency plans such as the Barangay Estipona, Barangay Naya, Barangay Singat, Poblacion 1, Poblacion 2, Poblacion 3, Barangay Maungib, Barangay Cadanglaan, and Barangay Maasin. As per the respondents, having an emergency plan in a community is very important since being prepared can save people. These emergency plans were designed to inform people where evacuation centers and safe places can be. These plans also instruct them on what to do during, before, and after a disaster. On the contrary, 14 respondents do not know if they have a disaster response or emergency plan. They say no one tells them what emergency plans are available in their barangay.

Moreover, 83 respondents agreed that their community has a committee that decides what to do in a disaster. According to the respondents, BDRRMC is the primary organization that regulates the community during a disaster. It trains the residents in Pura to know what they need to do when a disaster comes. Also, it does not only regulate the community but also monitors the peace and order of the evacuees and spearheads the search and rescue of the victims. While 29 respondents have no idea what agency or organization they can go to during a disaster.

Additionally, 71 of the respondents said that the community members have been trained to assist others in the event of a disaster. According to the respondents, some of the citizens from Pura are trained because in every barangay, they have meetings, orientation, and drills regarding the disaster that happens three (3) to six (6) per year for them to prepare themselves, and they know what to do when the disaster comes. On the other hand, 41 respondents do not know whether their community members are trained in disaster because some are not well informed about whether they have meetings, orientation, or drills.

In line with this, 112 respondents agreed that their community has evacuation routes. According to the respondents from all the barangay, the routes of every barangay to the evacuation centers in Pura are also close to the barangay hall, and the others to the courts and schools are close to each other. They also said that since they know where the evacuation route is, it is easy for them to go to the evacuation centers. It is essential to have an evacuation route since it gives you another way to go to the evacuation center when the other way is blocked due to the disaster. That is why everyone in the barangay must know where the evacuation routes are.

Lastly, all the respondents affirmed that there are designated temporary shelters for the evacuees. According to them, the most common evacuation areas that can be used after the disaster are the covered courts and schools since they can accommodate many people. Most respondents answered that the health center, barangay hall, and even church is the evacuation centers they are familiar with and can use after the disaster.

Magtibay and De Guzman's (2017) study on community-based flood early warning systems likely explores similar themes of early warning systems and disaster preparedness initiatives at the barangay level. The findings concerning the presence of early warning systems, such as house-to-house warnings, social media alerts, and text messages, resonate with the effectiveness of such systems in enhancing community resilience and response capabilities.

Domingo and Manejar's (2018) research on disaster preparedness and local governance likely delves into the role of local authorities and community organizations in disaster preparedness and response efforts. The findings regarding the existence of disaster response plans, community committees, and training initiatives align with the emphasis on local governance structures and community participation in disaster risk reduction and management.

Gaillard, Liamzon, and Villanueva's (2007) study on natural disasters and people's resilience, particularly the case of the Mt. Pinatubo eruption and the Aetas of the Philippines, may relate to the findings on citizen training initiatives and the establishment of evacuation routes and temporary shelters. Both studies highlight the importance of community-based approaches and local knowledge systems in building resilience and adaptive capacities in disaster-prone areas.

According to Pura's local disaster management unit, it's evident that there are both strengths and areas for improvement in the community's disaster preparedness efforts. The existence of early warning systems, such as house-to-house warnings, social media alerts, and text messages, demonstrates proactive measures taken by certain barangays to alert residents of impending disasters. However, there is a notable discrepancy in awareness among respondents from different barangays, with some lacking knowledge of their community's alert warning system. This underscores the need for more comprehensive and consistent communication channels to ensure all residents are informed and prepared.

Similarly, while a significant number of respondents acknowledge the presence of disaster response or emergency plans in their communities, there are still individuals who are unaware of such plans. This highlights the importance of transparent communication and education initiatives to ensure residents understand the procedures and resources available to them in times of crisis. Additionally, the presence of committees like the BDRRMC demonstrates a coordinated approach to disaster management, but there is room for improvement in ensuring residents are aware of the roles and responsibilities of such organizations.

Furthermore, while many respondents report receiving training in disaster response, there are still individuals who lack awareness of these opportunities. Strengthening outreach efforts and increasing the frequency of training sessions can help ensure more residents are equipped with the necessary knowledge and skills to assist others during emergencies.

Regarding evacuation routes and temporary shelters, the respondents affirm their existence, indicating a fundamental aspect of disaster preparedness infrastructure. However, ongoing maintenance and accessibility of these routes and shelters should be prioritized to ensure their effectiveness in times of need.

Governance

It involves the community coordinating in their LGU on how they govern, monitor, and regulate during calamity. It is essential to have a collective effort between the community members and the government to disseminate valuable information effectively.

Table 17 Organization and Local Government

Statement	Yes	Do not know
Community members are involved in planning or coordinating with local government.	53	59

The government has been involved in any projects or activities related to reducing risk or vulnerability in the event of a disaster in your community.	97	15
Community access to government resources or disaster response and recovery programs.	84	28

Table 17 shows that 53 respondents agreed that their community members are involved in planning or coordinating with the local government. According to the respondents, when the LGU conducted meetings, webinars, seminars, drills, etc., to disseminate information regarding disaster awareness and preparedness, the respondents usually took their time to participate because, according to them, participating in every activity that was being conducted is very important since it helps everyone to be prepared when before the disaster comes. On the other hand, 59 respondents do not have any idea or do not participate in or coordinate with the local government. According to the respondents, they do not have time to participate because some of them have an important errand that must be done.

In addition, it shows that most of the respondents affirmed that their LGU has been involved in projects and activities related to reducing risk or vulnerability in the event of a disaster in the community. According to the respondents, the barangay officials conducted seminars, orientations, and drills related to disaster preparedness. They discussed the importance of having disaster preparedness and what they needed to do when the disaster came. The LGU needs to push projects that may help or reduce a disaster's devastating effect or risk. On the contrary, 15 respondents do not know if the government has been involved in any projects or activities related to reducing risk in their community. The respondents said they are unaware that their barangay has a project, or any activities related to reducing risk or vulnerability in the event of a disaster.

Lastly, 84 respondents agreed that their community can access government resources or disaster response programs. According to the respondents, it is accessible for the community to use and utilize the resources of their LGU when it comes to disaster response. On the other hand, 28 of the respondents do not know that their community can access government resources or programs for disasters. The respondents said that they only know that only the government and not the community can access the resources or programs regarding the disaster response.

The findings reveal several parallels with existing studies on disaster preparedness and local governance. Similar to the study by Gaillard et al. (2017), which emphasizes participatory approaches to disaster risk reduction, respondents in this study indicate varying levels of involvement in planning and coordinating with local government units (LGUs). This underscores the importance of community engagement and collaboration in disaster preparedness efforts. Additionally, Domingo and Manejar (2018) highlight the role of local governance in disaster preparedness, echoing the findings that LGUs play a significant role in conducting activities such as seminars, orientations, and drills related to disaster preparedness. Both studies underscore the critical role of LGUs in disseminating information and facilitating community involvement in disaster preparedness initiatives.

Moreover, the findings align with Domingo and Israel's (2018) examination of access and utilization of disaster risk reduction and management funds. Just as respondents in this study express awareness of government resources and disaster response programs, Domingo and Israel emphasize the importance of communities being able to access and utilize available funds for disaster risk reduction. Both studies highlight the significance of ensuring that communities are aware of and able to leverage government resources to enhance their resilience to disasters.

According to Pura's local disaster management unit, the findings underscore the importance of fostering greater community engagement, enhancing communication channels, and promoting transparency between local government agencies and community members in disaster preparedness and response efforts. By addressing these gaps, Pura's local disaster management unit can better ensure the resilience and safety of the community in the face of disasters.

Table 18 Organizations that Respond and Provide Assistance

Statement	Number of People and Organization
The government	103
Community members/organizations	87
NGOs or other civil service groups that work in the community	42
The Red Cross	9
My Family	13

Table 18 shows the number of people and organizations responding to and aiding in disaster. One hundred three respondents said the government is ready to help or assist with disaster. According to the respondents, the government is the one that gives a budget to the barangays for necessities like relief goods, tools, equipment, etc.

Furthermore, 87 of the respondents said that the community members of the organization can also assist. As per them, simple donations would do, like giving water, food, and clothes. They can help rebuild and help others return to their everyday lives after a disaster. Moreover, 42 respondents said NGOs or other civil service groups that work in the community can also help. Some respondents said they could also give such a donation drive.

In addition, 9 of the respondents said that the Red Cross can assist with medical checkups and emergency supplies. Lastly, 13 of the respondents said that their family is the one that gives them strength. They can also support by giving food, water, clothes, shelter, and cash.

The research findings indicate that various entities play crucial roles in disaster assistance and recovery efforts. Similarities can be drawn from the studies conducted by Domingo and Manejar (2018), Enriquez (2019), and Reyes (2017). In all these studies, there is an acknowledgment of the importance of multiple stakeholders in disaster response and recovery. For instance, in the current findings, respondents highlight the government's role in providing resources and funding for disaster relief efforts, which aligns with the emphasis on local governance in Domingo and Manejar's study. Similarly, Enriquez's study on social capital in disaster recovery resonates with the respondents' recognition of community members and organizations as vital contributors to post-disaster assistance. Furthermore, Reyes's study on family resilience echoes the sentiment expressed by some respondents who emphasized the role of family support in providing strength and assistance during disasters. These similarities underscore the interconnectedness of various actors and resources in facilitating effective disaster preparedness and recovery efforts.

According to Pura's local disaster management unit, the findings underscore the several steps that can be taken to improve disaster readiness and response efforts in Pura. Firstly, the government's role in disaster assistance should be strengthened, with a focus on training barangay officials and ensuring adequate budget allocation for relief efforts. Community empowerment programs can also be implemented, including training sessions and collaborative projects to build resilience among residents. Partnering with NGOs and civil service groups can mobilize additional support for disaster response, such as donation drives and specialized services. Awareness campaigns and education initiatives should be conducted to inform the public about disaster preparedness and available resources. Family preparedness programs can promote household resilience through informational materials and emergency planning. Finally, establishing collaborative networks and coordination mechanisms among stakeholders can enhance the efficiency of disaster response efforts.

Table 19 Level Of Disaster Preparedness Among Households

Statement	Mean	R
Emergency Plan Existence and Implementation	4.2	2
Emergency Supplies and Resources	3.8	4

Risk Awareness and Mitigation Measures	4.5	1
Community Engagement and Collaboration	3.6	5
Response and Recovery Capacity	4.0	3

Legend: 5-4.5 – Very high, 3.5-4.49- High, 2.50-3.49 - Moderate, 1.50-2.49- Low, 1.0-1.49 – Very Low

The assessment of disaster preparedness among households in the Municipality of Pura, Tarlac, considers five key criteria, each providing unique insights into the community's readiness and resilience.

Firstly, the criterion of "Emergency Plan Existence and Implementation" reflects the extent to which households have developed and implemented comprehensive emergency plans. The mean rating of 4.2 indicates a high level of readiness in terms of emergency plan existence and implementation. Most households have comprehensive emergency plans in place, regularly reviewed and practiced. However, this criterion ranks second among the five criteria assessed.

Secondly, "Emergency Supplies and Resources" evaluates the availability and adequacy of essential supplies and resources for disaster response. With a mean rating of 3.8, households demonstrate a moderate level of preparedness in this regard. While many have basic emergency supplies, there is room for enhancement in maintaining and accessing additional resources, as indicated by its fourth-ranking position among the criteria.

The third criterion, "Risk Awareness and Mitigation Measures," encompasses households' awareness of potential hazards and their efforts to mitigate associated risks. With a high mean rating of 4.5, households exhibit a strong awareness of hazards and proactive measures to mitigate risks, positioning this criterion at the top rank. This indicates a robust foundation for disaster resilience within the community.

Fourthly, "Community Engagement and Collaboration" evaluates the extent of households' involvement in community-based disaster preparedness initiatives. A mean rating of 3.6 suggests a moderate level of engagement, indicating opportunities for increased collaboration with neighbors and community organizations. Despite its fifth-ranking position, enhancing community engagement can foster collective resilience and strengthen disaster response efforts.

Lastly, "Response and Recovery Capacity" assesses households' ability to effectively respond to and recover from disasters. With a mean rating of 4.0, households demonstrate a high level of readiness in this aspect. Most possess the necessary skills and resources for effective response and recovery, highlighting the community's resilience. While ranking third among the criteria, continued efforts to reinforce response capabilities can further enhance overall disaster preparedness.

Problems Encountered in Disaster Preparedness of The Households in The Municipality of Pura Tarlac

Table 24 presents the five (5) problems encountered by the Barangays in the Municipality of Pura Tarlac, which are related to (1) relief goods, (2) tools and equipment, (3) evacuation centers, (4) lack of barangay officials on the street, and (5) uncooperative citizens.

Table 20 Problems Encountered

Problems	Mean	R
Lack of relief goods	4.8	1
Lack of tools and equipment	3.6	4
Lack of adequate evacuation centers	4.0	3
Lack of barangay officials on the street	2.3	5
Uncooperative citizens	4.5	2

Legend: 5-4.5 – Most frequent, 3.5-4.49- Frequent, 2.50-3.49 - Occasional, 1.50-2.49- Sometimes, 1.0-1.49 – Rare

Following the response of our one-hundred twelve (112) respondents, they shared insights on the problems encountered in disaster preparedness of the barangays in the Municipality of Pura Tarlac. Lack of relief goods ranked first among other problems encountered by the respondents in each barangay. The 4.8 AWM indicates that, on average, households in the Municipality of Pura, Tarlac perceive the lack of relief goods as the most frequent problem encountered in disaster preparedness efforts. This suggests that there is a significant concern among households regarding the availability of essential relief supplies during disasters

On the other hand, uncooperative citizens ranked second (2) with 4.5 AWM. The high mean rating of 4.5 suggests that households perceive uncooperative citizens as a frequent problem in disaster preparedness efforts. This indicates challenges in community cooperation and coordination during disaster situations, which can hinder effective response and recovery efforts.

Furthermore, the lack of adequate evacuation centers ranked third (3) with 4.0 AWM. With a mean rating of 4.0, households consider the lack of adequate evacuation centers as an occasional problem in disaster preparedness efforts. This suggests that while evacuation centers may exist, there are concerns about their capacity, accessibility, or suitability during disaster situations.

Another problem the residents of Pura encountered was the lack of tools and equipment with 3.6 AWM. The mean rating of 3.6 suggests that households perceive the lack of tools and equipment as a frequent problem in disaster preparedness efforts. While not as severe as the lack of relief goods, this indicates that there is still a notable issue with the availability or accessibility of necessary tools and equipment for disaster response and recovery.

Finally, the lack of barangay officials on the street with 2.3 AWM. The mean rating of 2.3 indicates that households perceive the lack of barangay officials on the street as a problem that is not frequent in disaster preparedness efforts. This suggests that households may feel that barangay officials are generally present and accessible during disaster situations, although improvements may still be needed.

Based on the research findings, it is evident that there are several significant similarities with the study by Abon, David, and Tabios (2016) on factors affecting the distribution of relief goods after Typhoon Haiyan. Both studies highlight the crucial issue of lack of relief goods, indicating that this problem persists in disaster response efforts. Similarly, the findings regarding the shortage of tools and equipment in barangays align with the challenges identified in the study by Gaillard and Cadag (2009) on the experiences of victims of the Payatas trash slide. The lack of evacuation centers and the need for more effective barangay officials' presence on the streets are also shared concerns that underline the importance of disaster preparedness and local governance, as emphasized in the study by Domingo and Manejar (2018). Overall, these similarities underscore the ongoing challenges faced by communities in disaster-prone areas and the need for continued efforts to improve disaster preparedness and response strategies.

According to Pura's local disaster management unit, the findings underscore the following initiatives to address the problems encountered in disaster preparedness in the Municipality of Pura Tarlac. Firstly, to tackle the issue of lack of relief goods, efforts should be made to ensure equitable distribution to all families in need, particularly those most affected by disasters. This may involve enhancing coordination between barangay officials and relief organizations to improve the targeting and delivery of relief goods to affected areas. Additionally, raising awareness among the community about the importance of proper disaster preparedness and the role of relief goods in mitigating the impact of disasters could help promote more effective distribution.

Secondly, addressing the shortage of tools and equipment in barangays is crucial for enhancing disaster response capabilities. Investments should be made to ensure that each barangay is equipped with essential tools such as generators, ambulances, and emergency kits. Collaborative efforts between local government units, NGOs, and relevant stakeholders can facilitate the provision of necessary resources and infrastructure to improve disaster preparedness at the barangay level.

Moreover, the establishment of evacuation centers in barangays without adequate facilities is essential to ensure the safety and well-being of vulnerable populations during disasters. Efforts should be made to identify suitable locations for evacuation centers and allocate resources for their construction and maintenance. Community engagement and participation in the planning and development of evacuation centers can help ensure their effectiveness and accessibility to all residents.

Furthermore, addressing the shortage of barangay officials on the streets during disasters requires strengthening the capacity and readiness of local government units to respond promptly to emergencies. This may involve training barangay officials in disaster response protocols and establishing communication systems to facilitate timely updates and information dissemination to the community. Additionally, fostering community partnerships and volunteerism can help augment the presence of barangay officials and enhance community resilience in times of disaster.

Lastly, addressing the resistance of uncooperative citizens to evacuation orders necessitates comprehensive risk communication and awareness campaigns to educate the public about the importance of evacuation in saving lives during disasters. Engaging with local communities to understand their concerns and addressing them through targeted interventions and support mechanisms can help alleviate fears and encourage greater cooperation with evacuation efforts. Additionally, providing incentives and support for livelihood protection and property security can help alleviate concerns about leaving homes unattended during evacuations.

Relationship Between the Level of Disaster Preparedness Among Households in The Municipality of Pura, Tarlac, And the Problems Encountered in Their Disaster Preparedness Efforts.

Disaster preparedness is a critical component of community resilience, ensuring that households can effectively mitigate, respond to, and recover from natural and man-made hazards. In the Municipality of Pura, located in the province of Tarlac, the level of disaster preparedness among households plays a pivotal role in safeguarding lives and livelihoods in the face of potential disasters. Understanding the relationship between the level of disaster preparedness and the challenges encountered in preparedness efforts is paramount for enhancing overall community resilience and guiding targeted interventions. This aims to explore the nexus between the level of disaster preparedness among households in the Municipality of Pura, Tarlac, and the problems they encounter in their disaster preparedness endeavors. By examining the existing level of preparedness and identifying prevalent challenges, this research seeks to provide valuable insights for policymakers, emergency responders, and community stakeholders to formulate effective strategies and initiatives aimed at bolstering disaster resilience at the household level. Through a comprehensive examination of these dynamics, this study contributes to the advancement of disaster risk reduction efforts and the promotion of sustainable development in the Municipality of Pura, Tarlac, and beyond.

Table 21 Relationship between the Level of Disaster Preparedness among Households in The Municipality of Pura, Tarlac, And the Problems Encountered in Their Disaster Preparedness Efforts

Disaster Preparedness		Lack of relief goods	Uncooperative citizens	Lack of adequate evacuation centers	Lack of tools and equipment	Lack of barangay officials on the street	Average
Risk Awareness and Mitigation Measures	Pearson r	0.7908	0.9539	0.7282	0.7475	0.6858	0.78124
	Sig. (2-tailed)	< .00001	< .00001	< .00001	< .00001	< .00001	< .00001
	DV	HPC	HPC	HPC	HPC	HPC	HPC
	N	112	112	112	112	112	112
Emergency Plan Existence and Implementation	Pearson r	0.76	1	0.7323	0.7786	0.7027	0.79472
	Sig. (2-tailed)	< .00001	< .00001	< .00001	< .00001	< .00001	< .00001

	DV	HPC	VHPC	HPC	HPC	HPC	HPC
	N	112	112	112	112	112	112
Response and Recovery Capacity	Pearson r	0.6689	0.7323	1	0.9422	0.8298	0.83464
	Sig. (2-tailed)	< .00001	< .00001	< .00001	< .00001	< .00001	< .00001
	DV	HPC	HPC	VHPC	VHPC	VHPC	VHPC
	N	112	112	112	112	112	112
Emergency Supplies and Resources	Pearson r	0.6885	0.8866	0.9124	0.9137	0.8606	0.85236
	Sig. (2-tailed)	< .00001	< .00001	< .00001	< .00001	< .00001	< .00001
	DV	MPC	VHPC	VHPC	VHPC	VHPC	VHPC
	N	112	112	112	112	112	112
Community Engagement and Collaboration	Pearson r	0.6016	0.7786	0.9356	0.9963	0.8909	0.8406
	Sig. (2-tailed)	< .00001	< .00001	< .00001	< .00001	< .00001	< .00001
	DV	HPC	HPC	VHPC	VHPC	VHPC	VHPC
	N	112	112	112	112	112	112
0	(+0.20)	Very Low Positive or Negative Correlation					
(+0.21)	(+0.40)	Low Positive or Negative Correlation					
(+0.41)	(+0.60)	Moderate Positive or Negative Correlation					
(+0.61)	(+0.80)	Highly Positive or Negative Correlation					
(+0.81)	(+1)	Very High Positive or Negative Correlation					

The findings presented in the table depict the correlation coefficients (Pearson's r) between different aspects of disaster preparedness and various challenges encountered in disaster preparedness efforts among households in the Municipality of Pura, Tarlac. Each correlation coefficient is accompanied by its corresponding significance level (Sig.), indicating the probability of observing the correlation by chance.

Firstly, considering the relationship between "Risk Awareness and Mitigation Measures" and the identified challenges, all correlations exhibit statistically significant positive relationships at $p < .00001$. Specifically, risk awareness and mitigation measures demonstrate strong positive correlations with all the mentioned challenges, ranging from 0.6858 to 0.9539. These correlations suggest that households with higher levels of risk awareness and proactive mitigation measures tend to encounter fewer issues related to the lack of relief goods, uncooperative citizens, inadequate evacuation centers, lack of tools and equipment, and absence of barangay officials on the street.

Similarly, "Emergency Plan Existence and Implementation" shows significant positive correlations with all the identified challenges, ranging from 0.7027 to 1, indicating a strong relationship. This implies that households with well-established and regularly practiced emergency plans are less likely to face challenges such as lack of relief goods, uncooperative citizens, inadequate evacuation centers, lack of tools and equipment, and absence of barangay officials.

Furthermore, "Response and Recovery Capacity" exhibits significant positive correlations with all the mentioned challenges, ranging from 0.6689 to 0.9422, indicating that households with higher response and recovery capacities tend to encounter fewer problems related to disaster preparedness.

Additionally, "Emergency Supplies and Resources" and "Community Engagement and Collaboration" both display significant positive correlations with the identified challenges. These correlations suggest that households with sufficient emergency supplies, as well as active engagement and collaboration within the community, are less likely to experience challenges in disaster preparedness efforts.

These findings underscore the importance of proactive risk awareness, comprehensive emergency planning, robust response and recovery capacities, sufficient emergency supplies, and active community engagement in mitigating challenges and enhancing disaster preparedness among households in the Municipality of Pura, Tarlac.

Proposed Measures to Improve the Disaster Preparedness of Households in The Municipality of Pura

In response to the critical need for enhanced disaster preparedness among households in the Municipality of Pura, Tarlac, the following proposed measures aim to address existing challenges and strengthen resilience within the community. Recognizing the imperative of proactive measures in mitigating the impact of natural and man-made hazards, these initiatives are designed to empower households with the knowledge, resources, and collaborative networks necessary to effectively prepare for, respond to, and recover from disasters. By fostering a culture of preparedness and building capacity at the grassroots level, these proposed measures seek to ensure the safety, security, and well-being of residents in the face of unforeseen emergencies. Through concerted efforts and community-wide engagement, the Municipality of Pura endeavors to emerge as a model of disaster resilience, equipped to confront and overcome the challenges posed by a dynamic and uncertain environment.

Table 22 Proposed Measures to Improved Disaster Preparedness of the Barangays in the Municipality of Pura

Objectives	Strategy	Persons Involved	Expected Outcomes
Enhance Risk Awareness and Mitigation Measures	Conduct community-wide risk assessment workshops to educate households about potential hazards and mitigation strategies.	Local government officials, community leaders, disaster risk reduction experts	Increased awareness of risks and implementation of proactive mitigation measures among households.
Strengthen Emergency Plan Existence and Implementation	Develop and distribute comprehensive emergency preparedness guides and templates for households to create and implement emergency plans.	Disaster management agencies, community organizations, local leaders	Increased adoption and regular review of emergency plans, leading to improved preparedness and response capabilities.
Improve Response and Recovery Capacity	Organize training sessions and drills for households on first aid, search and rescue techniques, and disaster response protocols.	Emergency responders, medical professionals, community volunteers	Enhanced skills and knowledge among households, enabling effective response and recovery efforts during disasters.

Ensure Adequate Emergency Supplies and Resources	Establish community-based emergency supply depots and distribution systems for essential supplies such as food, water, and medical supplies.	Local businesses, NGOs, community volunteers	Improved access to emergency resources, ensuring households are adequately prepared to withstand disasters.
Promote Community Engagement and Collaboration	Facilitate regular community meetings and forums to encourage collaboration, information sharing, and joint disaster preparedness initiatives.	Local government officials, community leaders, residents	Strengthened social cohesion, collective action, and mutual support networks, fostering a resilient community.

The proposed measures as shown in Table 22 aim to enhance disaster preparedness among households in the Municipality of Pura, Tarlac, by addressing key areas of concern and implementing targeted strategies. The first objective focuses on increasing risk awareness and promoting proactive mitigation measures among households. This will be achieved through community-wide risk assessment workshops, where local government officials, community leaders, and disaster risk reduction experts will educate households about potential hazards and mitigation strategies. The expected outcome is heightened awareness of risks and the implementation of proactive measures, contributing to improved resilience against disasters.

Another critical objective is to strengthen the existence and implementation of emergency plans among households. To achieve this, comprehensive emergency preparedness guides and templates will be developed and distributed to households, and facilitated by disaster management agencies, community organizations, and local leaders. This initiative aims to increase the adoption and regular review of emergency plans among households, ultimately enhancing preparedness and response capabilities during disasters.

Furthermore, efforts will be made to improve response and recovery capacity by enhancing the skills and knowledge of households. This will involve organizing training sessions and drills on first aid, search and rescue techniques, and disaster response protocols, led by emergency responders, medical professionals, and community volunteers. The expected outcome is enhanced skills and knowledge among households, empowering them to respond effectively and recover efficiently from disasters.

In addition, ensuring adequate emergency supplies and resources is paramount. Community-based emergency supply depots and distribution systems will be established, with involvement from local businesses, NGOs, and community volunteers. This initiative aims to improve access to emergency resources, ensuring households are adequately prepared to withstand and recover from disasters.

Lastly, promoting community engagement and collaboration will be prioritized to foster social cohesion, collective action, and mutual support networks within the community. Regular community meetings and forums will be facilitated to encourage collaboration and joint disaster preparedness initiatives, involving local government officials, community leaders, and residents. The expected outcome is strengthened social cohesion, collective action, and mutual support networks, creating a resilient community capable of effectively responding to and recovering from disasters.

Conclusion

The assessment of disaster preparedness among households in the Municipality of Pura, Tarlac, highlights strong points such as the existence and implementation of emergency plans, high-risk awareness, and effective response and recovery capacity. However, areas for improvement include enhancing emergency supplies and resources and fostering greater community engagement and collaboration, which could further strengthen the community's overall resilience and readiness for disasters.

The assessment of disaster preparedness in the Municipality of Pura, Tarlac, reveals significant challenges faced by households. These include the lack of relief goods, uncooperative citizens during disasters, inadequate evacuation centers, shortages of tools and equipment, and a perceived absence of barangay officials on the streets. These findings underscore the need for improved coordination, distribution, and infrastructure to enhance disaster response capabilities. Initiatives such as equitable relief distribution, resource investment, evacuation center establishment, capacity building for local officials, and community awareness campaigns are crucial for addressing these challenges and building a more resilient community.

The correlation analysis conducted on disaster preparedness aspects and challenges faced by households in Pura, Tarlac, reveals strong positive relationships between proactive measures such as risk awareness, emergency planning, response capacity, emergency supplies, community engagement, and the mitigation of various challenges. The findings underscore the importance of investing in proactive disaster management strategies to enhance resilience and address challenges effectively. Prioritizing initiatives that promote risk awareness, comprehensive emergency planning, response capacity building, resource provision, and community collaboration is crucial for building a more resilient community in Pura, Tarlac, and ensuring the safety of its residents in future disasters.

The proposed measures aim to enhance disaster preparedness among households in Pura, Tarlac. They focus on increasing risk awareness, promoting proactive mitigation measures, strengthening emergency plans, improving response and recovery capacity, ensuring adequate emergency supplies, and fostering community engagement. Through workshops, guides, training sessions, supply depots, and collaboration initiatives, these measures seek to empower households with the knowledge, skills, and resources needed to effectively prepare for, respond to, and recover from disasters, ultimately creating a safer and more resilient community.

Recommendations

Based on the findings of the assessment of disaster preparedness in the Municipality of Pura, Tarlac, and the correlation analysis conducted on disaster preparedness aspects and challenges faced by households, several recommendations are proposed to enhance disaster resilience and readiness in the community.

Firstly, there is a need to strengthen emergency supplies and resources by implementing initiatives to ensure equitable distribution and availability of relief goods during disasters. This could involve investing in the establishment of emergency supply depots and distribution systems, as well as collaborating with local businesses, NGOs, and community volunteers to bolster emergency resource provisions.

Secondly, fostering greater community engagement and collaboration is essential. This can be achieved through regular community meetings and forums to encourage collaboration and joint disaster preparedness initiatives, as well as engaging with local government officials, community leaders, and residents to promote collective action and mutual support networks.

Thirdly, efforts should be made to enhance emergency plans and preparedness by developing comprehensive guides and templates for households, conducting community-wide risk assessment workshops, and encouraging households to adopt and regularly review emergency plans.

Lastly, there is a need to improve response and recovery capacity by organizing training sessions and drills on first aid, search and rescue techniques, and disaster response protocols, and collaborating with

emergency responders, medical professionals, and community volunteers to enhance skills and knowledge in disaster response and recovery. By implementing these recommendations, the Municipality of Pura, Tarlac, can enhance its disaster preparedness and resilience, address challenges effectively, and ensure the safety and well-being of its residents in future disasters.

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Biographies and Contributions of Authors

	<p>Dr. Edwin T. Caoleng is the Dean of the College of Public Administration and Governance at Tarlac State University. He was sent on an International Course on Local Economic Development at the Weitz Center for Development Studies in Rehovot, Israel. He is also a licensed professional teacher and a registered nurse. He was awarded the Most Outstanding Marketing Student of the Philippines and received the GMA Channel 7 Award for Academic Excellence. Before joining the academe, he was a tourism officer and banker and served as a consultant in various projects.</p>
	<p>Dr. Roswald G. Fermin is currently an Assistant Professor II at Tarlac State University. He graduated from the Bachelor of Public Administration, Masters and Doctor of Public Administration programs at Tarlac State University. He was assigned as MPA- Chairperson, Coordinator for Sports, Culture and the Arts.</p>