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UNDERSTANDING ON DISASTER PREPAREDNESS OF THE DIFFERENT SECTORS IN THE SELECTED HIGH-RISKS BARANGAYS IN THE PROVINCE OF MARINDUQUE: BASIS FOR A LOCALIZED DISASTER RESILIENCE ACTION PLAN

NOWELL P. MAAC
Marinduque State College
nowellmaac101995@gmail.com | +639813192684

ANNE GRACE M. LABATETE, DGM
Marinduque State College
annegracel175@gmail.com | +639618919227

Abstract

This study aimed to determine the level of understanding of disaster preparedness of the different sectors in the selected high-risk barangays in the Province of Marinduque. This is a descriptive research method participated by the barangay officials, non-government organizations and people's organizations, and communities' basic sectors such as labor groups, fisherfolks, farmers, women, senior citizens, youth, differently-abled individuals, and informal settlers. To determine the level of understanding on disaster preparedness of the different sectors, a survey questionnaire was designed to gather the needed data for the study. Based on the data analysis utilizing mean, it was found that different sectors have a high level of understanding of disaster preparedness. Also, it was concluded that the level of understanding of disaster preparedness of the different sectors is significantly different. It was then determined that the development of local knowledge in the community is the action taken by the respondents to address the challenges encountered in understanding disaster preparedness. Thus, a localized disaster resilience action plan must be formulated and implemented to build adaptive and resilient communities in the barangays.

Keywords: Disaster, Disaster Preparedness, High-Risks Barangays, Resilience, Understanding,

I. Introduction

Disaster, such as drought, fire breakout, earthquake, tsunami, windstorm, typhoon, or flood, is a natural or human-caused hazard that seriously disrupts a community's or society's ability to function, resulting in widespread losses and effects on people, property, the economy, and the environment (Bhat et al. 2017). This type of hazard is beyond what the

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community or society can manage with its resources, as it involves widespread human, material, economic, or environmental losses (Section 3, Republic Act No. 10121).

The devastation that can result from a disaster on a community is often staggering. Ironically, despite the rarity of calamities, many communities are frequently unprepared. Community preparedness is seldom a priority when there is no feeling of an impending emergency. Preparedness for disasters is the term used to describe actions made to prevent or lessen their consequences. This is done to foresee them, stop them, lessen their impact on more vulnerable groups, and effectively respond to and deal with their effects.

According to Intergovernmental Panel on Climate Change (2015, as cited in Merino et al., 2019), the Philippine archipelago experiences 20 typhoons on average annually due to its location in the typhoon belt and the Pacific Ring of Fire. The Philippines is the nation that has invested the most in its coastlines and was once regarded as one of the three nations in the world with the highest susceptibility to climate dangers (Merino et al. 2019).

In the local context, Marinduque, a “heart-shaped” island province known as the heart of the Philippines, is considered the geographical center of the Philippine Archipelago by the Luzon Datum of 1911. Marinduque is located approximately 170 kilometers south of Metro Manila, between the Bondoc Peninsula in the eastern portion of Luzon and Oriental Mindoro. It is bounded on the north by Tayabas Bay, on the northeast by Mongpong Pass, on the southeast by Tayabas Strait, and the south by Sibuyan Sea (Refer to Map 1. Location Map of Marinduque). Marinduque is located between Longitude 121.50° East and Longitude 122° East and between Latitude 13.10° North and Latitude 13.42° North.

Marinduque, being in the center of the Philippine archipelago, is in the path of Pacific tropical storms, wreaking havoc on the entire island. This small island province is surrounded by vast marine waters and is vulnerable to strong southwest and northeast monsoon winds and storm surge. In addition, it lies within the Pacific Ring of Fire, where two major tectonic plates collide, resulting in earthquakes and volcanic eruptions on a regular basis.

Furthermore, the province is surrounded by active faults and trenches from neighboring provinces, which could cause seismic waves or tsunamis in the bodies of water surrounding the province, and it is vulnerable to climate change. Based on the risk profile of the province, Marinduque is likewise potentially prone to tsunami considering the island is surrounded by bodies of water and very near to the Lubang Fault Line located between Batangas and Oriental Mindoro and the so-called Manila Trench. However, due to the lack of records of a tsunami in the province, there is no available hazard characterization and hazard map from concerned agencies.

Marinduque Island has largely undulated hilly and mountainous topography with rugged terrain. Alluvial low-lying land occurs as pockets between the skirts of mountainous areas and develops in narrow strips along the coast. The province’s land resources are distributed by slope categories as follows: 0-3%, 3-8%, 8-18%, 18-30%, 30%-50%, and above 50%, with land area coverage of 169.02 sq. km, 12.31 sq. km, 73.86 sq. km, 87.88 sq.

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km, 438.20 sq. km, and 177.98 sq. km respectively. Further, Marinduque has a total of 5.36 sq. km. of freshwater bodies from rivers and creeks, according to Japan-ASEAN Financial Technical Assistance (JAFTA) Land Cover Statistics. Considering the topography of Marinduque, the flood discharge can be assumed to be far greater (80% of annual discharge) than the normal one.

Furthermore, typhoon-prone areas encompass the entire province. In the seasonal distribution, two to three typhoons out of the average twenty-three typhoons that enter the archipelago have affected the province in the months of June, October, and December. Severe flooding frequently occurs in the rivers of Boac, Makulapnit, Tawiran, Mogpog, Libtangin, Sabang, and Buangan. There are a total of 18.32 sq. km. of severely eroded areas in Mogpog's Barangays Malusak, Balanacan, and Tarug; Dolores, Labo, Kilo-Kilo, and San Antonio, Sta. Cruz; Barangay Cagpo and Payanas, Torrijos; and Barangay Tungib, Buenavista, despite being part of the production lands, require protection from further deterioration (Provincial Development Council, Provincial Land Use Committee, and Provincial Planning and Development Office of Marinduque).

Typhoon Nina devasted Marinduque in 2016, leaving a trail of downed trees and lampposts, impassable streets, and demolished homes in its wake. Officials in charge of disaster risk reduction and management said that the initial cost of infrastructure damage in Marinduque and Oriental Mindoro had reached P38.4 million (ABS-CBN, 2016). Further, based on the Marinduque disaster historical data (2000-2010), four (4) floods occurred in the province with devastating impacts and damages to life, property, and the environment. (Provincial Hazard Profile, 2011)

The province had no recorded historical incidences of destructive earthquake events or their adverse effects. However, earthquakes of magnitude five and higher were felt, caused by active faults in neighboring areas. The presence of the Central Marinduque Fault, which has been observed as an active fault line, is thought to be a potential source of an earthquake within the province. Mallari et.al., (2015) reported that flash floods threatened the province of Marinduque as the Boac River continued to swell and sea levels rose due to Typhoon Ruby's heavy rains. Flooding is a risk in low-lying areas and near the coasts, which is exacerbated by high tides. The island Province of Marinduque is the third most denuded and recently ranked as the country's seventh hazard-prone province today, making it more vulnerable to other natural hazards (DRR-CCA Provincial Development and Physical Framework Plan 2016-2025). Marinduque experienced numerous typhoons, which caused the destruction of the livelihood and properties of the people but more than that, it sometimes resulted in some casualties.

As a hazard-prone province, it is deemed necessary to know and determine the understanding of disaster preparedness of the different sectors such as government through barangay officials, non-government organizations, community, and residents as to the actions needed before, during, and after the natural disaster which play a vital role on reducing and mitigating the impacts of disaster and secure the safety and security of the lives of the people in the high-risks communities and be able to respond and immediately recover.

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This study aimed to determine the level of understanding of disaster preparedness of the different sectors in the selected high-risks barangays in the Province of Marinduque in terms of Disaster Prevention and Mitigation, Disaster Preparedness, Disaster Response, and Disaster Rehabilitation and Recovery and if there is a significant difference in the level of understanding of disaster `preparedness among the different sectors. Also, this study aimed to identify the factors that influence and challenges encountered on the level of understanding of disaster preparedness of the different sectors in the selected high-risks barangays in the Province of Marinduque according to Disaster Risk Perception, Socio-demographic and Socio-economic Determinants, and Cultural and Religion Determinants. Further, it sought to determine the actions undertaken by the different sectors on the challenges encountered and the localized disaster resilience action plan to be proposed by the researcher based on the findings of the study.

II. Methodology

This paper used a descriptive method of research in gathering the data needed for the study. Marinduque, a province in the Philippines served as the primary research locale. The population of this study included the barangay officials, officials/members of Non-Government Organizations/People Organizations (NGO's/PO's), representatives of different communities or groups such as labor groups, fisherfolks, farmers, women, senior citizens, youth, differently-abled individuals, and informal settlers of the selected high-risks barangays of the six municipalities in the province of Marinduque. In the conduct of data gathering, a self-constructed questionnaire was used in distributed to the target respondents. The researcher retrieved 956 or 89% of the target respondents of the study in the 12 identified high risks barangays in the province. The data gathered from the study were subjected to various statistical treatments such as frequency, percentage, ranking, mean, standard deviation, ANOVA, and post hoc analysis were utilized in this study.

III. Results and Discussion

This chapter contains the presentation, analysis, and interpretation of the data gathered based on the answers of the respondents from the instrument used in the study and is presented according to the specific problem cited in the first chapter.

Table 1

Level of Understanding of the Different Sectors of Disaster Prevention and Mitigation

Indicators	Question	B.O.	NGOs	LG	FF	Far.	W	SC	Y	DAI	I.S.	Mean	VD

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		POs											
1.	Utilization of a family emergency plan is the best way to prepare for natural disaster.	1	3.05	2.90	2.86	2.84	2.90	2.97	2.71	2.93	2.78	2.94	**2.89**	**H**
2.	Actions to be done to reduce the possible effects of hazards and risks in the community (Non-structural).	2, 3, 4, 5, 6, 7, 9, 10, 13,14, 15, 17, 20	3.00	2.83	2.94	2.82	2.99	2.96	2.84	2.93	2.86	2.86	**2.90**	**H**
3.	Mitigating measures to consider in the construction and repair of facilities situated in high-risk areas (Structural).	11, 12, 16, 19	3.34	3.21	3.24	3.20	3.22	3.21	3.16	3.12	3.19	3.16	**3.21**	**H**
4.	Holistic and collective planning for disaster management.	8, 18	3.25	3.18	3.17	3.21	3.11	3.08	2.80	3.14	3.12	2.89	**3.10**	**H**
TOTAL													**3.03**	**H**

Legend: 3.26-4.00 -Very High (VH) 2.51-3.25 – High (H) 1.76-2.50 –Low (L) 1.00-1.75 - Very Low (VL)

Table 1 shows the level of understanding of the different Disaster Prevention and Mitigation sectors. In terms of "Utilization of family emergency plan as the best way to prepare for natural disaster", Barangay Officials got the highest mean score of 3.05 with a verbal description of "High", while Senior Citizens got the lowest mean score of 2.71 with a verbal description of "High". This implied that barangay officials have a high level of understanding in terms of the utilization of emergency plans which serve as an important measure to prepare in times of disaster. Also, barangay officials initiate the preparation and use of emergency plans which would help households and the entire community in coping with natural disasters.

In terms of the "Actions to be done to reduce the possible effects of hazards and risks in the community (Non-structural)", Barangay Officials got the highest mean score of 3.00 with a verbal description of "High". In contrast, the lowest mean score of 2.82 with a verbal description of "High" was observed from Fisherfolks. This revealed that barangay officials

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have a high level of understanding concerning the actions to be undertaken to reduce and mitigate the possible effects of hazards in the community to secure the safety of the residents within their jurisdiction. As first responders and frontliners in times of disaster, barangay officials attended various training and seminars on preventive and precautionary measures against natural disasters.

In terms of "Mitigating measures to consider in the construction and repair of facilities situated in the high risks areas (Structural)", Barangay Officials got the highest mean score of 3.34 with a verbal description of "Very High" while Youth got the lowest mean score of 3.12 with a verbal description of "High". This implied that the barangay officials have a very high level of understanding of disaster prevention and mitigation, and they consider different mitigating and structural measures concerning the construction and repair of facilities in high-risk communities. In addition, barangay officials received various training and seminars, particularly on hazard mapping and risk assessment, which helped them to establish a safety culture within the community.

In terms of "Holistic and collective planning for disaster management", Barangay Officials obtained the highest mean score of 3.25 with a verbal description of "High" while Informal Settlers got the lowest mean score of 2.89 with a verbal description of "High". This implied that barangay officials conduct holistic and collective planning for disaster management as an effective measure to prepare for any natural disasters. In addition, barangay officials are always involved in planning for disaster and emergency management to ensure the safety of their constituents and mitigate the possible impacts of disasters in the community.

This is relevant to the findings of Villanueva and Villanueva, Jr. (2017), where five barangays received more than 50% of the total score in the area of disaster preparedness, showing that the barangays are preparing themselves even before disaster strikes, which is one of the keys to good disaster management. In addition, this demonstrates that they have grown as a result of their mistakes and are now equipped to deal with any disasters that may occur.

Table 2

Level of Understanding of the Different Sectors of Disaster Preparedness

Indicators	Question	B.O.	NGOs	POs	LG	FF.	Far.	W	SC	Y	DAI	I.S.	Mean	VD
1. Actions to be undertaken before, during, and after a natural disaster.	1, 2 7, 9	3.29	3.24	3.26	3.15	3.24	3.29	3.16	3.32	3.22	3.30	**3.25**	**H**	
2. Dissemination of an														

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advisory from authority to reinforce evacuation due to potential risks of disaster.	3, 4, 6	3.66	3.66	3.46	3.68	3.23	3.58	3.48	3.62	3.55	3.64	**3.56**	**VH**
3. Capacitation and education of residents in terms of actions and measures to be undertaken.	8	2.86	2.71	2.67	2.88	2.77	2.54	2.55	2.66	2.82	2.60	**2.71**	**H**
4. Facilitation of community planning to discuss possible actions to be undertaken.	10	2.88	2.84	2.71	2.84	2.67	2.45	2.49	2.82	2.65	2.68	**2.70**	**H**
5. Understanding the importance of being prepared for an emergency.	5	3.62	3.61	3.30	3.37	3.32	3.38	3.11	3.38	3.01	3.18	**3.33**	**VH**
TOTAL												**3.11**	**H**

Legend: 3.26-4.00 -Very High (VH) 2.51-3.25 – High (H)1.76-2.50 –Low (L) 1.00-1.75 - Very Low (VL)

Table 2 shows the level of understanding of the different sectors of Disaster Preparedness. In terms of "Actions to be undertaken before, during, and after a natural disaster", Youth got the highest mean score of 3.32 with a verbal description of "Very High". In contrast, Fisherfolks got the lowest mean score of 3.15 with a verbal description of "High". This revealed that Youth has a very high level of understanding of the actions to be undertaken before, during, and after a natural disaster. It also implied that Youth highly expressed their engagement in the planning process and preparedness efforts, such as conducting and attending various training on disaster management as part of their programs.

Contradictory to the findings of the United Nations Office for Disaster Risk Reduction (2020), children and young people under 30, who account for more than half of the world's population, stand to gain the most from lowering the risk and effect of disasters. Children and youth are frequently the first victims of disasters, suffering disproportionately severe consequences on their physical and mental health, nutritional requirements, access to education, economic possibilities, exposure to violence, and many other debilitating side effects. Particularly as the severity and frequency of disasters around the world rise due to

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climate change, children and teenagers living in poverty and other vulnerable circumstances face even greater dangers.

In terms of "Dissemination of an advisory from authority to reinforce evacuation due to potential risks of disasters", Fisherfolks got the highest mean score of 3.68 with a verbal description of "Very High". In contrast, Farmers got the lowest mean of 3.23 with a verbal description of "High". This implied that the fisherfolks manifested a very high level of understanding of the importance of following the advisory dissemination of local officials regarding pre-emptive and forced evacuation in the community to ensure safety and security against the potential risks of disasters. Also, fisherfolks attended and participated in various disaster prevention and mitigation programs, such as simulation drills that enhanced their evacuation capacity and guaranteed safety and security during disasters.

This is related to the National Council of Churches in the Philippines (2017) article where more than 900 Yolanda survivors, including farmers and fisherfolks, women, youth, children, the elderly, and differently-abled individuals, participated in a simulation drill facilitated by the NCCP Disaster Relief and Rehabilitation team in 2017. At the sound of the siren signaling evacuation, more than half of the village's total population came out of their homes to participate in the activity.

In terms of "Capacitation and education of residents in terms of actions and measures to be undertaken", Fisherfolks got the highest mean score of 2.88 with a verbal description of "High" while women obtained the lowest mean score of 2.54 with a verbal description of "High". This implied that Fisherfolks have a high level of understanding of the importance of capacitation and education on the necessary actions and measures to be undertaken. Fisherfolks were notified and aware of the possible hazards because of their active participation and involvement in the different awareness and knowledge-raising programs of the community.

This is contradictory to the findings of Monteclaro et al. (2018), where government officials notified people of impending storm surges in their community. Local fishermen appeared to be unable to comprehend the notion of a storm surge and its impending risks. Despite the storm warnings, people, municipal authorities, and fishermen looked unconcerned.

Further, in terms of "Facilitation of community planning to discuss possible actions to be undertaken", Barangay Officials got the highest mean score of 2.88 with a verbal description of "High", while Women got the lowest mean score of 2.45 with a verbal description of "High". This revealed that barangay officials have a high understanding of the importance of facilitating community planning to actively and thoroughly discuss the possible actions to be undertaken. As basic responders and frontliners in times of disasters,

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barangay officials possessed high knowledge and understanding of facilitating and preparing for community planning for disaster preparedness which would help and capacitate not only their members but also the other vulnerable sectors in the barangay.

This is contradictory to the findings of Malalgoda et al. (2022) that Local government's efforts to build disaster resilience are largely ineffective. The capacity of local governments to plan and manage development activities depends on their capacity, emphasizing the importance of capacity development for local governments to implement appropriate disaster risk reduction initiatives.

In terms of "Understanding of the importance of being prepared for an emergency", Barangay Officials got the highest mean score of 3.62 with a verbal description of "Very High", while Differently-abled Individuals obtained the lowest mean score of 3.01 with a verbal description of "High". This revealed Barangay Officials have a very high understanding of the importance of being prepared for an emergency, specifically on reducing and mitigating the impacts of natural disasters. As involved in disaster management and emergency planning, barangay officials are aware, capacitated, and well-equipped in terms of the necessary measures to be undertaken and the importance of disaster preparedness in the community to attain zero casualties in the aftermath of natural disasters.

This supports the findings of Carpio (2020) who concluded that the disaster preparedness programs and activities in the selected Barangays in Rizal, Nueva Ecija are effective; however, it needs improvement in implementing the programs will be more effective. Everyone may become more aware of the challenges of executing disaster preparedness actions and programs through local government initiatives. Also, the barangay may conduct training or seminars for the barangay officials about disaster preparedness.

Table 3

Level of Understanding of the Different Sectors of Disaster Response

Indicators	Question	B.O.	NGOs POs	LG	FF	Far.	W	SC	Y	DAI	I.S.	Mean	VD
1. The action of the government concerning evacuation in the aftermath of a disaster.	1	3.13	2.78	2.98	2.95	3.14	3.29	3.21	3.00	3.30	3.25	**3.10**	**H**
2. Impacts on infrastructure, facilities, and communication	2	3.47	3.33	3.39	3.31	3.38	3.45	3.26	3.22	3.51	3.46	**3.38**	**VH**

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networks.													
3. Community response in the aftermath of a disaster.	3, 4	3.26	3.09	3.07	3.04	3.18	3.09	3.04	3.11	3.31	3.07	**3.13**	**H**
4. Dissemination of timely and relevant information to the public.	5	3.37	3.16	3.18	3.25	3.46	3.35	3.39	3.29	3.43	3.44	**3.33**	**VH**
TOTAL												**3.24**	**H**

Legend: 3.26-4.00 -Very High (VH) 2.51-3.25 – High (H)1.76-2.50 –Low (L) 1.00-1.75 - Very Low (VL)

Table 3 shows the level of understanding of the different sectors of Disaster Response. In terms of "Action of the government concerning evacuation in the aftermath of disaster", Differently-abled Individuals got the highest mean of 3.30 with a verbal description of "Very High". In contrast, NGOs/POs got the lowest mean score of 2.78 with a verbal description of "High". This implied that the PWDs have a very high level on the actions of the government and other concerned authorities in implementing evacuation and disaster response measures in times of disasters. As one of the vulnerable sectors in the community, Differently-abled Individuals possessed a very high level of knowledge and awareness of the measures and actions to be undertaken in the aftermath of natural disasters.

In terms of "Impacts on infrastructure, facilities and communication networks", Differently-abled Individuals got the highest mean score of 3.51 with a verbal description of "Very High", while Youth was observed to have the lowest mean score of 3.22 with a verbal description of "High". This implied that differently-abled individuals have a very high level of understanding regarding the destructive impacts of disasters on infrastructures, facilities, and communication networks in the community. In view of the fact that differently-abled individuals are equipped with the necessary knowledge and skills for disaster preparedness, it helps them establish a safety culture for themselves to ensure their protection and well-being against destructive and impactful disasters.

In terms of "Community response in the aftermath of disaster", Differently-abled Individuals got the highest mean score of 3.31 with a verbal description "Very High"; however, Senior Citizens and Fisherfolks got the lowest mean score of 3.04 with a verbal description of "High". This also implied that differently-abled individuals have a very high level of understanding of the importance of community response in the aftermath of natural disasters. Furthermore, as vulnerable sectors, their disaster experience contributes to and increases their capacity for disaster response and strictly follows or complies with the advisory of local officials for pre-emptive and forced evacuation.

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Contradictory to the findings of Craig et al. (2019), who elaborated that due to a lack of knowledge about how to handle people with disabilities during or after a disaster, as well as a general underestimation of people with disabilities as a deficient and weak group, it turns out that people with disabilities, who are the group most vulnerable to disasters, are not handled properly. Their restricted access makes it more challenging for them to develop and participate in the development process. Disability-related vulnerability is complicated by physical restrictions, a lack of education, and poverty.

Further, in terms of "Dissemination of timely and relevant information to the public", Farmers got the highest mean score of 3.46 with a verbal description of "Very High", while NGOs/POs got the lowest mean score of 3.16 with a verbal description of "High". This revealed that farmers highly understand the importance of timely dissemination of relevant information pertaining to disaster preparedness measures to the public. Farmers in the community strictly and religiously comply with the orders and advisories issued by local officials that are being disseminated to the general public for their information and observance.

This is related to Meludu's (2021) findings, where he discussed that although farmers in the study area are extremely unaware of disaster management measures, they are well aware of the risks of disasters. However, there are many obstacles they must overcome to reduce risk in the areas of health promotion, immunization, and advocacy; mitigation in the areas of information, education, communication, and insurance advocacy; preparedness in the areas of situation analysis, hazard mapping, contingency planning, early warning, and education; and during disaster management in the areas of drug distribution, personnel deployment, and counseling.

Table 4

Level of Understanding of the Different Sectors of Disaster Rehabilitation and Recovery

	Indicators	Question	B.O.	NGOs POs	LG	FF.	Far.	W	SC	Y	DAI	I.S.	Mean	VD
1.	Rehabilitation and recovery measures to assist the communities in restoring damaged	1, 2, 3, 4	2.76	2.54	2.41	2.73	2.54	2.54	2.43	2.43	2.52	2.48	**2.54**	**H**

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	properties and facilities.												
2.	Implementation of government measures in providing assistance to the needs of the residents in re-building livelihood.	5	3.30	3.25	3.22	3.51	3.00	3.17	3.18	3.22	3.27	2.92	**3.20**	**H**
TOTAL													**2.87**	**H**

Legend: 3.26-4.00 -Very High (VH) 2.51-3.25 – High (H)1.76-2.50 –Low (L) 1.00-1.75 - Very Low (VL)

Table 4 shows the level of understanding of the different Disaster Rehabilitation and Recovery sectors. In terms of "Rehabilitation and recovery measures to assist the communities in restoring damaged properties and facilities", Barangay Officials got the highest mean score of 2.76 with a verbal description of "High", while the Labor Group got the lowest mean score of 2.41 with a verbal description of "High". This implied that barangay officials always observed all rehabilitation and recovery measures, particularly in assisting in restoring damaged properties and facilities in the community. As basic responders and frontliners in times of disaster, barangay officials are capacitated and well-equipped to properly manage resources and provide necessary assistance to affected residents in the community.

This is related to the findings of Malalgoda et al. (2022), where they discussed that in program development, the government provides direct guidance and assistance to its local jurisdictions and channels guidance and assistance down to the local level. In an emergency, the government ensures a coordinated response by bringing together local government, local agencies, the private sector, and non-governmental organizations. State governments are tasked with preparing for and responding to disasters.

In terms of "Implementation of government measures in assisting with the needs of the residents in re-building livelihood," Fisherfolks got the highest mean of 3.51 with a verbal description of "Very High", while Informal Settlers obtained the lowest mean score of 2.92 with a verbal description of "High". This also implied that fisherfolks possessed a very high level of understanding on implementing government measures to provide assistance and address their needs through re-building livelihood programs, which may serve as their source of income. Moreover, as one of the most affected sectors in times of disaster, fisherfolks are aware and knowledgeable about the programs and projects the government offers to recover their livelihood projects in the community.

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This supports the findings of Balaan (2021) that omen and micro-entrepreneurs, farmers, weavers, and fisherfolk were among the primary beneficiaries of the livelihood recovery project launched by the Provincial Government of Albay with support from United Nations Development Programme (UNDP). The provincial government understood the significance of restoring livelihoods and sowing the seeds of sustainable economic development in relation to the relief operations through UNDP's involvement.

Table 5

Result of the Test for Significant Difference on the Level of Understanding of Disaster Prevention and Mitigation

		Sum of Squares	df	Mean Square	F	Sig.	Remarks
Indicator_A1 Utilization of a family emergency plan is the best way to prepare for a natural disaster.	Between Groups	8.022	9	0.891	1.363	0.201	No Significant Difference
	Within Groups	618.664	946	0.654			
	Total	626.686	955				
Indicator_A2 Actions to be done to reduce the possible effects of hazards and risks in the community (Non-structural).	Between Groups	4.092	9	0.455	3.526	0.000	Difference is Significant
	Within Groups	121.963	946	0.129			
	Total	126.055	955				
Indicator_A3 Mitigating measures to consider in the construction and repair of facilities situated in high-risk areas (Structural).	Between Groups	3.647	9	0.405	1.358	0.203	No Significant Difference
	Within Groups	282.203	946	0.298			
	Total	285.851	955				
Indicator_A4 Holistic and collective	Between Groups	16.325	9	1.814	3.159	0.001	Difference is Significant
	Within	543.141	946	0.574			

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planning for disaster management.	Groups						
	Total	559.467	955				

Table 6 shows the result of the test for the significant difference in the level of understanding of Disaster Prevention and Mitigation. Regarding indicator A1 "Utilization of family emergency plan as the best way to prepare for natural disaster", Barangay officials have the highest reported mean, while the lowest mean was observed from senior citizens. ANOVA table shows that there is no significant difference between groups at the $p>0.05$ for the three conditions [$F(9,946) = 1.36$, $p= 0.201$]. On the other hand, in terms of indicator A2, "Actions to be done to reduce the possible effects of hazards and risks in the community (Non-structural)", Barangay officials have the highest reported mean, while the lowest mean was observed from Fisherfolks. ANOVA table shows that there is a significant difference between groups at $p<0.05$ for the three conditions [$F(9,946) = 3.53$, $p= 0.000$].

In terms of indicator A3, "Mitigating measures to consider in the construction and repair of facilities situated in high-risk areas (Structural)", Barangay officials manifested the highest mean, while youth obtained the lowest mean. ANOVA table shows that there is no significant difference at the $p>0.05$ for the three conditions [$F(9,946) = 1.36$, $p= 0.203$]. In terms of indicator A4, "Holistic and collective planning for disaster management", Barangay Officials have the highest reported mean, while the lowest mean was observed from Informal Settlers. ANOVA table shows that there is a significant difference between groups at $p<0.05$ for the three conditions [$F(9,946) = 3.16$, $p= 0.001$].

This is relevant to the findings of Villanueva and Villanueva Jr. (2017), where five (5) barangays received more than 50% of the total score in the area of disaster preparedness, showing that the barangays are preparing themselves even before disaster strikes, which is one of the keys to good disaster management. Furthermore, this demonstrates that they have grown as a result of their mistakes and are now equipped to deal with any disasters that may occur.

Table 6

Result of the Test for Significant Difference on the Level of Understanding on Disaster Preparedness

		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**	**Remarks**
Indicator_B1	Between	2.724	9	0.303	1.776	0.069	No Significant

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Actions to be undertaken before, during, and after a natural disaster.	Groups						Difference
	Within Groups	161.272	946	0.170			
	Total	163.996	955				
Indicator_B2 Dissemination of an advisory from authority to reinforce evacuation due to potential risks of disaster.	Between Groups	5.231	9	0.581	2.118	0.026	Difference is Significant
	Within Groups	259.663	946	0.274			
	Total	264.894	955				
Indicator_B3 Capacitation and education of residents in terms of actions and measures to be undertaken.	Between Groups	12.566	9	1.396	1.171	0.310	No Significant Difference
	Within Groups	1128.274	946	1.193			
	Total	1140.840	955				
Indicator_B4 Facilitation of community planning to discuss possible actions to be undertaken.	Between Groups	19.993	9	2.221	1.936	0.044	Difference is Significant
	Within Groups	1085.246	946	1.147			
	Total	1105.238	955				
Indicator_B5 Understanding the importance of being prepared for an emergency.	Between Groups	31.702	9	3.522	3.272	0.001	Difference is Significant
	Within Groups	1018.519	946	1.077			
	Total	1050.222	955				

Table 6 shows the result of the test for the significant difference in the level of understanding of Disaster Preparedness. In terms of Indicator B1, “Actions to be undertaken before, during and after a natural disaster”, Youth got the highest reported mean, while the lowest mean was observed from Fisherfolks. ANOVA table presents that there is no

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significant difference between groups at the p>0.05 for the three conditions [F (9,946) = 1.78, p= 0.069]. Regarding indicator B2, "Dissemination of an advisory from authority to reinforce evacuation due to potential risks of disaster", Fisherfolks manifested the highest mean while Farmers obtained the lowest mean. ANOVA table shows that there is a significant difference between groups at p<0.05 for the three conditions [F (9,946) = 2.12, p= 0.026].

In terms of Indicator B3, "Capacitation and education of residents in terms of actions and measures to be undertaken", Fisherfolks got the highest reported mean, while the lowest mean was observed from Women. ANOVA table shows that there is no significant difference between groups at the p>0.05 for the three conditions [F (9,946) = 1.17, p= 0.310**]**. In terms of Indicator B4, "Facilitation of community planning to discuss possible actions to be undertaken", Barangay Officials got the highest reported mean, while Women obtained the lowest mean. ANOVA table shows that there is a significant difference between groups at p<0.05 for the three conditions [F (9,946) = 1.94, p= 0.044**]**. Further, regarding indicator B5 "Understanding of the importance of being prepared for an emergency ", Barangay Officials got the highest reported mean, while Differently-abled Individuals got the lowest. ANOVA table shows that there is a significant difference between groups at p<0.05 for the three conditions [F (9,946) = 3.27, p= 0.001**]**.

These findings are also parallel to the findings of Yu et al. (2020) about individuals with greater disaster preparedness knowledge being more likely to adopt disaster preparedness measures after receiving DRR information from local officials. It was found that a higher level of disaster preparedness knowledge promoted disaster preparedness. It was concluded that increasing villagers' preparedness knowledge through communicating DRR information with local officials is an important practical approach to encourage disaster preparedness.

Table 7

Result of the Test for Significant Difference on the Level of Understanding of Disaster Response

		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**	**Remarks**
Indicator_C1 The action of the government concerning evacuation in the aftermath of the disaster.	Between Groups	25.149	9	2.794	2.448	0.009	Difference is Significant
	Within Groups	1080.009	946	1.142			
	Total	1105.158	955				
Indicator_C2 Impacts on	Between Groups	8.188	9	0.910	1.976	0.039	Difference is Significant

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infrastructure, facilities, and communication networks.	Within Groups	435.497	946	0.460			
	Total	443.685	955				
Indicator_C3 Community response in the aftermath of the disaster.	Between Groups	6.965	9	0.774	2.132	0.025	Difference is Significant
	Within Groups	343.414	946	0.363			
	Total	350.379	955				
Indicator_C4 Dissemination of timely and relevant information to the public.	Between Groups	9.897	9	1.100	0.767	0.647	No Significant Difference
	Within Groups	1355.651	946	1.433			
	Total	1365.548	955				

Table 7 shows the result of the test for the significant difference in the level of understanding of Disaster Response. In terms of indicator C1, "Action of the government concerning evacuation in the aftermath of disaster", Differently-abled Individuals got the highest reported mean, while the lowest mean was observed from NGOs/POs. ANOVA table shows that there is a significant difference between groups at $p<0.05$ for the three conditions [$F(9,946) = 2.45$, $p= 0.009$]. In terms of indicator C2, "Impacts on infrastructure, facilities and communication networks", Differently-abled Individuals got the highest reported mean, while Youth obtained the lowest mean. ANOVA table presents that there is a significant difference between groups at $p<0.05$ for the three conditions [$F(9,946) = 1.98$ $p= 0.039$].

In terms of indicator C3, "Community response in the aftermath of disaster", Differently-abled Individuals manifested the highest mean, while Senior Citizens and Fisherfolks got the lowest mean. ANOVA table shows that there is a significant difference between groups at $p<0.05$ for the three conditions [$F(9,946) = 2.13$, $p=0.025$]. Regarding indicator C4, "Dissemination of timely and relevant information to the public", Farmers got the highest reported mean, while the lowest was observed from NGOs/POs. ANOVA table shows that there is no significant difference between groups at $p>0.05$ for the three conditions [$F(9,946) = 0.77$, $p= 0.647$].

Contradictory to the findings of Craig et al. (2019), who elaborated that due to a lack of knowledge about how to handle people with disabilities during or after a disaster, as well as a general underestimation of people with disabilities as a deficient and weak group, it turns out that people with disabilities, who are the group most vulnerable to disasters, are not handled properly. It is more challenging for them to develop and participate in the

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development process because of their restricted access. Disability-related vulnerability is complicated by physical restrictions, a lack of education, and poverty. Participation of people with disabilities in disaster risk reduction will improve the provision of services for people with disabilities and their management in the event of a disaster.

Further, this is related to the findings of Meludu (2021), where he discussed that although farmers in the study area are extremely unaware of disaster management measures, they are well aware of the risks of disasters. Nevertheless, there are many obstacles they must overcome to reduce risk in the areas of health promotion, immunization, and advocacy; mitigation in the areas of information, education, communication, and insurance advocacy; preparedness in the areas of situation analysis, hazard mapping, contingency planning, early warning, and education; and during disaster management in the areas of drug distribution, personnel deployment, and counseling.

Table 8

Result of the Test for Significant Difference on the Level of Understanding of Disaster Rehabilitation and Recovery

		Sum of Squares	df	Mean Square	F	Sig.	Remarks
Indicator_D1 Rehabilitation and recovery measures to assist the communities in restoring damaged properties and facilities.	Between Groups	12.401	9	1.378	4.750	0.000	Difference is Significant
	Within Groups	274.403	946	0.290			
	Total	286.804	955				
Indicator_D2 Implementation of government measures in providing assistance to the needs of the residents in re-building livelihood.	Between Groups	21.201	9	2.356	2.725	0.004	Difference is Significant
	Within Groups	817.791	946	0.864			
	Total	838.992	955				

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Table 8 shows the result of the test for the significant difference in the level of understanding of Disaster Rehabilitation and Recovery. In terms of indicator D1, "Rehabilitation and recovery measures to assist the communities in restoring damaged properties and facilities", Barangay officials got the highest reported mean, while the Labor Group got the lowest mean. ANOVA table shows that there is a significant difference between groups at $p<0.05$ for the three conditions [$F(9,946) = 4.75$, $p=.0.000$]. In terms of indicator D2, "Implementation of government measures in providing assistance to the needs of the residents in re-building livelihood", Fisherfolks manifested the highest reported mean, while Informal Settlers obtained the lowest mean. ANOVA table shows that there is a significant difference between groups at $p<0.05$ for the three conditions [$F(9,946) = 2.73$, $p=0.004$].

These findings are also parallel to the findings of Yu et al. (2020) about individuals with greater disaster preparedness knowledge being more likely to adopt disaster preparedness measures after receiving DRR information from local officials. It was found that a higher level of disaster preparedness knowledge promoted disaster preparedness. It was concluded that increasing villagers' preparedness knowledge through communicating DRR information with local officials is an important practical approach to encourage disaster preparedness.

Table 9

Factors that Influence the Level of Understanding on Disaster Preparedness of the Different Sectors

INDICATORS	Mean	Verbal Description
Disaster Risk Perception		
1. Inadequacy of the informal training received.	3.61	Very Influential
2. Utilization of information and communication technology.	4.31	Extremely Influential
3. Community participation in risk assessment, mitigation planning, capacity building, implementation, and the development of a monitoring system.	4.32	Extremely Influential
4. Participation in National Disaster Resilience Month.	4.22	Extremely Influential
5. Utilization of pamphlets for typhoons, flashflood, storm surges, and tsunamis.	4.13	Very Influential
6. Availability of a standard emergency preparedness brochure.	4.10	Very Influential
7. Lack of knowledge about the guidelines and procedures used by their local disaster management authorities.	3.58	Very Influential
8. Development and utilization of social media applications for disaster management containing various information flows.	4.13	Very Influential
TOTAL MEAN	**4.05**	**Very Influential**
Socio-demographic and Socio-economic Determinants		

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1. Lack of assets, social capital, and social network.	3.40	Somewhat Influential
2. Residents use their disaster risk perception in managing and preparing for possible risks brought by natural or man-made disasters.	4.03	Very Influential
3. The elderly have more experience and knowledge of disasters.	4.06	Very Influential
4. Residents have a high level of education.	3.99	Very Influential
5. Residents have how a level of education.	3.45	Very Influential
6. Residents have a low-income level.	3.39	Somewhat Influential
TOTAL MEAN	**3.72**	**Very Influential**
Cultural and Religion Determinants		
1. There is a presence of developed ideas of active citizenship among vulnerable groups under the guidance of dialogue moderators or community leaders.	3.52	Very Influential
2. Lack of religious beliefs and customs.	3.05	Somewhat Influential
3. Continuous use of people's cultural practices and religious beliefs.	3.47	Very Influential
4. Connecting with faith leaders to build trustful relationships and facilitate the implementation of a DRR framework with inputs from both civic and religious actors.	3.62	Very Influential
5. Influence of religious actors and religious places.	3.53	Very Influential
6. Integration of religious groups within local communities.	3.53	Very Influential
TOTAL MEAN	**3.45**	**Very Influential**

Table 9 shows the factors that influence the level of understanding of disaster preparedness of the different sectors. In terms of Disaster Risk Perception, the indicator "Community participation on risk assessment, mitigation planning, capacity building, implementation, and the development of a monitoring system" got the highest mean of 4.32 with a verbal description of "Extremely Influential". In contrast, "Lack of knowledge about the guidelines and procedures used by their local disaster management authorities" got the lowest mean of 3.58 with a verbal description of "Very Influential". This result revealed that community participation in risk assessment, planning and capacity building, and development of monitoring systems is crucial and influential on the knowledge and understanding of the people before the occurrence of any natural disaster. These activities are considered significant in promoting disaster prevention and preparedness as they establish resiliency among community members.

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This supports the findings of Cornell et al., 2018, who mentioned the feedback process and how, after a disaster, a process of social learning can occur in which communities can modify preparedness and mitigation strategies to be better prepared for a future disaster. Community empowerment for disaster risk management demands community participation in risk assessment, mitigation planning, capacity building, implementation, and developing a monitoring system that ensures their stake.

In terms of Socio-demographic and Socio-economic Determinants, the indicator "Elderly have more experience and knowledge of disaster" got the highest mean of 4.06 with a verbal description of "Very Influential", however, "Residents have low-income level" got the lowest mean of 3.39 with a verbal description of "Somewhat Influential". This implied that the elderly's disaster experience contributes to their knowledge and understanding of the different needed measures. The significant disaster experience of the elderly provides life-long learning and enhances their capacity and engagement in emergency planning and relationship building between community members.

This result is related to the findings of Howard et al. (2017), where the group discovered that the elderly could make valuable contributions to disaster response. It was found that the elderly contribute their experience, resources, and relationship-building capacity to prepare themselves and to support others during an emergency. Particularly during a disaster, older folks create and deploy social capital locally.

Further, in terms of Cultural and Religion Determinants, the indicator "Connecting with faith leaders to build trustful relationships and facilitate the implementation of a DRR framework with inputs from both civic and religious actors" obtained the highest mean of 3.62 with a verbal description of "Very Influential", while the indicator "Lack of religious beliefs and customs" got the lowest mean of 3.05 with a verbal description of "Somewhat Influential". This implied that establishing a connection with faith leaders is influential in terms of what to do in times of disaster. It also proved that people somehow depend on their religious beliefs and culture. Also, this result acknowledges the importance of establishing connections and relationships with faith leaders, as some of them are engaged in disaster risk reduction and management programs and projects.

This is also reflected in the findings of ACT Alliance (2022), where Faith-based organizations (FBOs) play a crucial role in the relief, response, and recovery phases of a disaster wherein people establish a connection with faith leaders to build trustful relationships and facilitate the implementation of Disaster Risk Reduction framework with inputs from both civic and religious actors. Because they are among those on the front lines of averting preventable disasters, faith-based organizations are essential to localizing risk reduction, resilience-building, and humanitarian action.

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Table 10

Challenges Encountered by the Different Sectors on the Level of Understanding of Disaster Preparedness

INDICATORS	Mean	Verbal Description
Disaster Risk Perception		
1. Absence of a dedicated institution with authority and resources.	2.58	Rarely Encountered
2. Lack of disaster-related education, training, and resources.	2.56	Rarely Encountered
3. Poor risk understanding, community risk and vulnerability, and insufficient resources for disaster education, training, and preparedness measures.	2.44	Rarely Encountered
4. Lack of communication and available actual information from barangay.	2.43	Rarely Encountered
5. Lack of community-based information system.	2.35	Rarely Encountered
6. Misinformation, false information, and rumors during disasters.	2.28	Rarely Encountered
TOTAL MEAN	**2.44**	**Rarely Encountered**
Socio-demographic and Socio-economic Determinants		
1. Generational differences between the members of the family and the community in general.	2.56	Rarely Encountered
2. Residents have a low level of education.	2.52	Rarely Encountered
3. Low level of socioeconomic status.	2.59	Rarely Encountered
4. The residents belong to low-income family.	2.70	Sometimes Encountered
5. Residents belong to poor urban households.	2.68	Sometimes Encountered
6. Residents lack the resources to cope with disasters.	2.66	Sometimes Encountered
TOTAL MEAN	**2.62**	**Sometimes Encountered**
Cultural and Religion Determinants		
1. Lack of institutional coordination between and within government and non-governmental organizations in planning and implementation of disaster preparedness and mitigation measures	2.38	Rarely Encountered
2. Lack of community participation and attention in disaster preparedness, hazards monitoring, warning, and information dissemination	2.38	Rarely Encountered
3. There is mistrust and miscommunication among social groups, which include the people and local government	2.34	Rarely Encountered
4. There is a language difference exists between the people, local government, and experts	2.23	Rarely Encountered

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TOTAL MEAN	**2.33**	**Rarely Encountered**

Table 10 shows the challenges encountered by the different sectors on the level of understanding of disaster preparedness. In terms of Disaster Risk Perception, "Absence of a dedicated institution with authority and resources" got the highest mean of 2.58 with a verbal description of "Rarely Encountered, while the indicator "Misinformation, false information, and rumors during disasters" obtained the lowest mean of 2.28 with a verbal description of "Rarely Encountered". This result revealed the importance of having a dedicated institution with the resources to solve problems and provide assistance and their needs during a disaster. Therefore, the presence of dedicated institutions and organizations with the capacity and available resources to give essential services and basic needs to the affected people is deemed necessary for effective disaster risk reduction and management program implementation.

This is related to the findings of Pandey (2017), which stated that in the absence of a dedicated institution with authority and resources, it had become an enormous challenge to respond in a timely, effective, efficient, and coordinated manner to disaster management.

In terms of Socio-demographic and Socio-economic Determinants, the indicator "The residents belong to the low-income family" got the highest mean of 2.70 with a verbal description of "Sometimes Encountered", while "Residents have a low level of education" got the lowest mean of 2.52 with a verbal description of "Rarely Encountered". This implied that family belonging to a low-income group affects their level of understanding of disaster preparedness measures because of the lack of needed resources. The family belonging to low-income groups will allocate their money for their daily needs instead of utilizing it for disaster preparedness.

This result supports the findings of Al-rousan et al. (2014) that those in their sample with lower income levels were significantly less prepared for natural disasters. Urban settings were pervasive with both disaster danger and poverty. There aren't many exact statistics on urban poverty because most or all of the income in poor urban households comes from jobs in the informal economy.

Furthermore, in Cultural and Religion Determinants, the indicators "Lack of institutional coordination between and within government and non-governmental organizations in planning and implementation of disaster preparedness and mitigation measures" and "Lack of community participation and attention in disaster preparedness, hazards monitoring, warning, and information dissemination" obtained the highest mean of 2.38 with a verbal description of "Rarely Encountered", however, the indicator "There is a language difference exists between the people, local government and experts" got the lowest mean of 2.23 with a verbal description of "Rarely Encountered". This result implied that lack of coordination between institutions in terms of implementing disaster risk reduction and

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management programs and community participation dramatically affects the level of disaster preparedness of individuals. In addition, a lack of coordination between institutions, organizations, and different sectors will influence the planning, preparation, and implementation of disaster risk reduction and management programs, which in the long run, will affect the entire community.

This supports the finding of Pandey (2017), which stated that a lack of institutional coordination between and within government and non-governmental organizations frequently impedes effective and efficient planning and implementation of preparedness and mitigation measures. In addition, in the study of Gumiran and Daag (2021), there is also a lack of community participation and attention in disaster preparedness, hazard monitoring, warning, and information dissemination. Poor risk understanding, community risk and vulnerability, and insufficient resources for disaster education, training, and preparedness measures have been identified as major barriers to communities and local initiatives engaging in disaster risk reduction.

Table 11

Actions Undertaken by the Different Sectors on the Challenges Encountered

INDICATORS	Frequency	Percentage	Ranking
Disaster Risk Perception			
Development of local knowledge in the community.	783	81.90%	1
Development of hazard map and vulnerability map.	535	55.96%	4
Deployment of an early warning system.	663	69.35%	2
Usage of innovative and traditional media in the dissemination of right information.	641	67.05%	3
Implementation of DRRM plan, contingency plan, and evacuation plan.	546	57.11%	5
Socio-demographic and Socio-economic Determinants			
Communication and intervention with the government.	485	50.73%	2
Prioritization of Disaster Prevention, Mitigation, and Preparedness activities.	587	61.40%	1
Cultural and Religion Determinants			
Active collaboration among stakeholders in the community	572	59.83%	1
Conduct or participate in DRRM information, education, and communication campaign, drills, and training.	501	52.41%	2

Table 11 shows the actions undertaken by the different sectors on the challenges encountered. In terms of Disaster Risk Perception, “Development of local knowledge in the

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community" got the highest rank with a frequency of 783 or 81.90%, while "Implementation of DRRM plan, contingency plan and evacuation plan" got the lowest rank with a frequency of 546 or 57.11%. This implied that the development of local knowledge in the community is deemed significant and necessary to establish a high level of knowledge and understanding of disaster risk reduction and management measures. In addition, the development of local knowledge will establish a safety culture among members of the community and will mitigate or reduce the impacts of natural disasters.

This result is reflected in the study of Ayuningtyas et al. (2021), where they found out that the community develops local wisdom during interactions with nature, which is locally bound, context-specific, non-formal, and dynamic. Local people's indigenous wisdom was still beneficial in comprehending the nature of environmental risks as information evolved through lengthy experiences. This local or traditional knowledge could be put to good use in determining the best mitigation strategy, how to respond in an emergency, and recovery choices

In terms of Socio-demographic and Socio-economic Determinants, "Prioritization of Disaster Prevention, Mitigation, and Preparedness activities" got the highest rank with a frequency of 587 or 61.40%, while "Communication and intervention with the government" got the lowest rank with a frequency of 485 or 50.73%. This implied that prioritization of disaster prevention, mitigation, and preparedness programs, projects, and activities would support and benefit the different sectors in addressing their needs. In addition, these activities will help residents to efficiently and effectively manage the impacts of disasters and provide life-long results such as building adaptive, self-reliant, and resilient communities.

This result is also reflected in the study of Villanueva and Villanueva (2017), where they recommended that the barangay should prioritize Disaster Prevention and Mitigation and Disaster Preparedness activities to effectively and efficiently manage any type of disaster.

In terms of Cultural and Religion Determinants, "Active collaboration among different sectors in the community" got the highest rank with a frequency of 572 or 59.83%, while "Conduct or participation in DRRM information, education and communication campaign, drills and training" got the lowest rank with a frequency of 501 or 52.41%. This result implied that establishing active collaboration and partnership with key community stakeholders will help people develop their knowledge and understanding of disaster risk reduction and management measures. Establishing and strengthening collaboration and partnerships between community members will enhance their capacity for disaster preparedness and readiness, resulting in efficient and effective disaster risk reduction and management implementation.

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This supports the findings of Ayuningtyas et al. (2021) that active collaboration among stakeholders, including the community, is essential for an integrated approach. Disaster Risk Management (DRM) in the community should strive to improve disaster readiness, increase community awareness, and plan a more effective and efficient emergency response.

Localized Disaster Resilience Action Plan

The vulnerability of the high-risks barangays in the Province of Marinduque must be given attention, and appropriate programs to ensure their resiliency against the impacts of natural disasters. Disaster risk reduction measures must be formulated to reduce vulnerabilities by decreasing the community and its people's exposure to risks and hazards and implementing programs and projects to establish resilient communities and strengthen their capacities in mitigating, preparing for, responding to, and recovering from the impacts of disasters. Even though high-risk barangays possessed and obtained a high level of understanding of disaster preparedness measures, they must be capacitated more and strengthen their capabilities in the four thematic areas of disaster risk reduction. With this, a Localized Disaster Resilience Action Plan will be formulated to serve as a basis for implementing various programs, activities, and measures to help local communities.

The Localized Disaster Resilience Action Plan aims to enhance the capacity and capability of high-risk barangays in the Province of Marinduque to prevent, mitigate, prepare, respond, and recover from natural disasters. The Localized Disaster Resilience Action Plan (LDRAP) has been designed as a strategic plan to provide information to various key players and stakeholders necessary to cope with natural disasters. This plan aims to strengthen the capacity of LGUs, non-government organizations, people's organizations, and communities to build a disaster-resilient environment and institutionalize arrangements and necessary measures to prevent and mitigate disaster risks and other possible hazards and improve disaster preparedness and response capacities at local settings.

This action plan may guide stakeholders such as local government units, non-government organizations, people's organizations, residents, and other key players who have a significant role in disaster planning, prevention, mitigation, preparedness, response, rehabilitation, and recovery. It also ensures continuity of operation in the most vulnerable and high risks areas so that essential services, projects, and programs may continue to be provided before, during, and after a disaster.

With a Localized Disaster Resilience Action Plan, high-risk barangays will build resiliency to respond, withstand and recover from the adverse effects of disasters. This will enable local communities to address disaster prevention, mitigation, preparedness, response,

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and recovery needs. It is crucial to have effective and efficient disaster risk reduction and management to save lives and protect properties and livelihoods and other possible losses.

IV. Conclusion and Recommendation

Conclusion

Based on the summarized findings, it was concluded that the different sectors, namely barangay officials, NGOs/POs, labor groups, fisherfolks, farmers, women, youth, senior citizens, differently-abled individuals, and informal settlers, have a "High" level of understanding of disaster preparedness in terms of Disaster Prevention and Mitigation, Disaster Preparedness, Disaster Response, and Disaster Rehabilitation and Recovery. Moreover, this study concluded that there is a significant difference in the level of understanding of disaster preparedness among different sectors. Thus, the null hypothesis is rejected.

Recommendations

Based on the conclusion drawn, the following recommendations are presented:

For the Local Government Officials

1. Lgovernment units may continuously conduct community risk and vulnerability assessment and planning together with the barangay officials and other stakeholders to assess the community and create comprehensive projects and programs anchored to the National Disaster Risk Reduction and Management Plan.
2. Local government units may continuously educate and promote disaster preparedness programs to increase the knowledge, awareness, and skills of local officials and community residents in different disaster risk reduction measures.
3. Local government, through the participation of other stakeholders, may formulate and implement a Localized Disaster Resilience Action Plan that will serve as basis in the formulation of policies and implementation of different disaster preparedness projects, and programs

For the Non-Government Organizations / People's Organizations:

4. Non-Government organizations, people's organizations, religious groups, and community members may actively participate in the process of developing, monitoring and evaluating the local disaster preparedness activities of their respective locality.

5. Strengthen the involvement in the process of planning, preparation, response, and recovery and be an effective partner of the local and national government in the building resiliency among local community.

To the Community

6. Community and barangay officials may reinforce disaster risk reduction and management efforts to establish a safety culture within the community.
7. Continuously learn and improve knowledge and skills through attendance on different community-based disaster management initiatives in order to increase the level of awareness and understanding on the different aspect of Disaster Risk Reduction and Climate Change Adaptation.
8. Community may continue to acknowledge the role of the elderly who still have the knowledge and capacities o be part of the planning process in terms of disaster management.

To Future Researchers

9. Conduct a similar study having other high-risk barangays in the province as subjects and include additional possible sectors present in the community in order to produce a complete set of respondents and to draw a wide range level of understanding on disaster preparedness.
10. Conduct a study focusing on the effectiveness of disaster risk reduction and management policies, programs and practices of local communities in response to natural disasters.

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