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## **Perception on the Preparedness of the Municipal Disaster Risk Reduction and Management Council (MDRRMC) of the Municipality of Aloran, Misamis Occidental**

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### **ABSTRACT**

*The Municipality of Aloran through Executive Order No. 2018 – 009C has reorganized the Municipal Disaster Risk Reduction and Management Council (MDRRMC). Municipal Risk Reduction and Management Plan (MRRMP) is a roadmap on how Disaster Risk Reduction contributes to sustainable development. It outlines the activities aimed to strengthen the capacity of the local government units together with partner stakeholders.*

*This study identified the level of preparedness of the MDRRMC in order to be able to address the factors affecting it and the people that are mostly affected.*

*This research employs the qualitative and quantitative approach to determine the respondent's selected profile and the level of preparedness of the MDRRMC in terms of Awareness/Dissemination, Implementation, Operation and Equipment/Facilities. The validated instrument was distributed and retrieved from 73 participants consisting of 13 local officials of Aloran, 35 Barangay Captains, 15 department heads, 6 MDRRMC personnel, and 10 community members/residents.*

*Based on the analysis of the data, the researcher concluded the following: That the Municipal Disaster Risk Reduction Management (MDRRMC) preparedness in terms of awareness/dissemination, organization, and implementation, is Moderately Prepared (MP), except the equipment and facilities which is Less Prepared (LP); and the overall level of MDRRMC preparedness of the Municipality of Aloran, Misamis Occidental is Moderately Prepared.*

*The following recommendations are drawn: The need to improve the existing practices of the MDRRMC through better coordination and working relationship among community members, community disaster volunteers, and departments within the LGU; Strengthen implementation of the MDRRMC policies, plans, and programs by making the people aware of disaster risk-reduction and disaster risk mitigation; and Equip the MDRRMC Office with the necessary equipment and facilities to prevent and respond to disasters.*

**KEYWORDS:** *Perceptions, Preparedness, Municipal Disaster Risk Reduction and Management Council (MDRRMC), Municipality of Aloran, Misamis Occidental*

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## INTRODUCTION

Disasters are serious disruptions on the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceed the ability of the affected community or society to cope using its own resources. Disasters are often described as a result of the combination of the exposure to a hazard; the conditions of vulnerability that are present; and insufficient capacity or measures to reduce or cope with the potential negative consequences. Disaster impacts may include loss of life, injury, disease and other negative effects on human, physical, mental and social well-being, together with damage to property, destruction of assets, loss of services, social and economic disruption and environmental degradation.

Disasters can strike anytime, anywhere. It can cause irrevocable damage to life and property if the right measures are not put in place to avoid the same. This can also bring out the best and worst of human nature. The manner in which action is taken goes along way to determine how people fair from the experience. Hence, there is a need for disaster risk reduction and management (DRRM). DRRM is the systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster. Prospective DRRM refers to risk reduction and management activities that address and seek to avoid the development of new or increased disaster risks, especially if risk reduction policies are not put in place (Philippines: Disaster Management Reference Handbook March) [1].

In an aftermath of a disaster, low-income families that are already struggling can be pushed into destitution because they have fewer assets, less diversified income sources and, as is often the case in low-income countries, inadequate financial protection (Vatsa) [2]. However, investing in disaster preparedness prior to a flood event can help mitigate the negative impacts of the flood catastrophe occurrence and, when selected well, be very cost-effective over time (that is, the reduction in expected losses is higher than the cost of implementing these measures) (Mechler et al.) [3]; (World Bank) [4].

People who live in poverty and adverse socio-economic conditions are highly vulnerable to disasters. The most vulnerable sectors include the poor, the sick, people with disabilities, older persons, women, and children. Although many people may be affected, these sectors will have the least capacity to recover from the impact of disasters. This situation is exacerbated by rapid urbanization, environmental degradation and the increasing risk of environmental disasters, whether as a result of direct human impact and or from climate change. The risks induced by these hazards have big effects on the country's economic development targets and programming as well as in the overall welfare of the people and their properties, especially on the poor and most vulnerable groups. The milestone towards disaster risk reduction- disaster risk management preparedness is prevention rather than recovery. The protection and security of houses, properties, and the life of every human individual, during a disaster, must be given utmost attention by the government (Robas) [5]. The risk is further exacerbated by inappropriate human practices contributing to still higher levels of natural hazards, such as deforestation, lack of drainage systems, and concrete and asphalt paving, all of which lessen the absorption capacity of the plant layer. For these reasons, disaster risk management means not only intervention in and control of natural

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phenomena, but also (and especially) modification of existing land-use practices, occupation practices, and economic activities that generate hazards and vulnerabilities; it also means strengthening the application of risk reduction criteria in development planning.

The milestone towards disaster risk reduction-disaster risk management preparedness is prevention rather than recovery. The protection and security of houses, properties, and the life of every human individual during a disaster, must be given utmost attention by the government.

In 1978, the National Disaster Coordinating Council (NDCC) was established through Presidential Decree (PD) 1566 as the highest policy-making body and the focal organization for disaster management in the country. This law also provided for the establishment of regional, provincial, city, municipal and barangay disaster coordinating councils. These DCCs were formed primarily to advise the President and/or the local chief executive on all-natural disaster preparedness and management plans; recommend the declaration of state calamity and the release of calamity funds for relief and rescue operations, among others.

In 2005, President Gloria Macapagal Arroyo approved the implementation of the National Disaster Coordinating Council (NDCC) Four-Point Plan of Action for Preparedness (4PPAP) which aimed to increase public awareness and involvement in measures put in place by the government to minimize the impact of disasters in the future (NDRRM) [8]. Republic Act No. 10121 was also legislated as a continuous policy prior to the SNAP program.

The researcher is very much interested in the topic on to know the disaster risk management-disaster risk reduction of the Municipality of Aloran, Province of Misamis Occidental is the Municipal Disaster Risk Reduction and Management Officer-Designate.

The Municipality of Aloran has formulated a three-year Comprehensive Disaster Risk Reduction and Management in order to be able to address the vulnerability and exposure of community against the hazards that regularly hit the municipality.

This study will serve as a wake-up call to the community and LGU officials to formulate or to improve necessary disaster management measures to reduce the vulnerability in risk reduction, risk recovery, relief and rehabilitation plan and the like. In addition, the vigilance of the public regarding disaster management preparedness and other related measures to protect their rights are the main concerns of the researcher because this will warrant saving and protecting life, property and conserving properly the natural environments (Robas) [5].

### **Statement of the Problem**

This study is focused on the preparedness of the Municipal Disaster Risk Reduction Management Council (MDRRMC) of the Municipality of Aloran, Misamis Occidental for Calendar Year 2019 – 2020. The level of preparedness of the MDRRMC of Aloran, Misamis Occidental was evaluated in terms of: awareness/dissemination; implementation; operation; and equipment and facilities.

### **METHODS**

This study employed the descriptive survey and the qualitative and quantitative approaches or the mixed method in determining the demographic information of the respondents and the level of safety preparedness of MDRRMC. This study was conducted in the Municipality of

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Aloran, Misamis Occidental for the Calendar Year 2019-2020. For the study, the targets are the 79 respondents: 13 LGU officials, 35 Barangay Captains, 15 department heads, 10 community members/residents, and 6 MDRRMC members. A modified questionnaire is the questionnaire used during the Case Analysis of Disaster Risk Reduction Preparedness of Iloilo Province by Victoria D. Jurilla of Iloilo Science and Technology University.

The weighted mean is used in analyzing the results of the survey conducted. These are the methods by which the number of respondents, responses, and occurrences of the subject is determined. The Mann-Whitney U test and analysis of variance or ANOVA were used in the tests of inference.

## **RESULTS AND DISCUSSIONS**

Table 1 presents average weighted mean according to study domain, Operations Preparedness ranks no. 1 with an Average Weighted Mean of 3.18 and having a descriptive rating of Moderately Prepared (MP). This means that MDRRMC operations preparedness is working and functioning but not so well. Preparedness must be improved as to designation of venues for evacuation centers, must have proper coordination with police officers and barangay officials and other volunteer groups, mobilization of vehicles and the utilization of Calamity Fund.

Dissemination Preparedness ranks no. 2 with an Average Weighted Mean of 3.12 having a descriptive rating of Moderately Prepared (MP). This means that there is a moderate response to a disaster when it comes to dissemination preparedness. The location for the medical response team and evacuation routes and procedures are not so clear to the residents and victims. The moderate level of preparedness of Disaster Risk Reduction Management implies the need for advocacy on disaster preparedness dissemination. Although, there is dissemination among the constituents in the local government unit, but this may have not reached to the farthest and widest scope or jurisdiction of the municipality. Also, it can be disseminated through different media of communication like the social media and radio communication. It can also be integrated in the curricula and disseminated through the schools so to make advocacy more effective.

Implementation Preparedness ranks no. 3 with an Average Weighted Mean of 3.00 with a descriptive rating of Moderately Prepared (MP). This means that there are no regular meeting with people and individuals involved, and not so clear medical emergency response procedures.

Equipment/Facilities Preparedness ranks 4<sup>th</sup> with a total AWM of 1.93 and having a descriptive rating of Less Prepared (LP). This reveals that there are still equipment and facilities that do not exist in the MDRRM office which is necessary for emergency response. The result of the study shows that the MDRRMC of Aloran has to equip its office with the equipment and facilities in order to be able to preserve and protect life and properties.

**Table 1.** *Municipal Disaster Risk Reduction Management Committee (MDRRMC) Preparedness*

Study Domains	Male	Female	Total	Description		Over All Rank
<b>I. Dissemination Preparedness</b>	AW M	AWM	AW M	RANK	DR	
1. Written natural disaster preparedness plan	3.50	3.57	3.54	1 <sup>st</sup>	P	
2. Warnings for alarming situations (floods, typhoons, earthquakes, etc.)	2.98	3.02	3.00	9 <sup>th</sup>	MP	
3. Disaster preparedness responsibility checklist	3.08	2.99	3.04	6.5 <sup>th</sup>	MP	
4. DRRMC members who will supervise the evacuation	3.04	3.08	3.06	4 <sup>th</sup>	MP	
5. Evacuation plan	3.37	3.44	3.41	2 <sup>nd</sup>	P	
6. Evacuation routes and location	3.18	3.13	3.16	3 <sup>rd</sup>	MP	
7. Evacuation procedures	3.11	2.98	3.05	5 <sup>th</sup>	MP	2
8. In case of emergency Location of the medical response team	2.96	3.11	3.04	6.5 <sup>th</sup>	MP	
9. Distribution and delivery of schedule and procedures of calamity aid or help	2.87	2.81	2.84	10 <sup>th</sup>	MP	
10. Availability of disaster aid/help from different agencies	2.92	3.12	3.02	8 <sup>th</sup>	MP	
<b>Total AWM</b>	<b>3.10</b>	<b>3.13</b>	<b>3.12</b>		<b>MP</b>	
<b>Rank</b>	<b>2<sup>nd</sup></b>	<b>1<sup>st</sup></b>				
<b>Descriptive Rating</b>	<b>MP</b>	<b>MP</b>	<b>MP</b>			
<b>II. Implementation Preparedness</b>						
1. Written disaster preparedness plan	3.47	3.60	3.54	1 <sup>st</sup>	P	
2. Disaster preparedness responsibility checklist	3.05	3.02	3.04	5 <sup>th</sup>	MP	
3. Written evacuation plan	3.20	3.25	3.23	2 <sup>nd</sup>	MP	
4. Posted evacuation routes	3.10	3.31	3.21	3 <sup>rd</sup>	MP	
5. Safety, health, and sanitation	3.00	2.99	3.00	6 <sup>th</sup>	MP	
6. Evacuation procedures	3.00	2.93	2.97	7.5 <sup>th</sup>	MP	
7. Dissemination/notification procedures	2.82	2.94	2.88	10 <sup>th</sup>	MP	
8. Distribution and delivery policy of calamity aid to the victims	2.87	3.01	2.94	9 <sup>th</sup>	MP	3
9. Responsibilities of supervisory personnel for evacuation	2.81	2.79	2.80	11 <sup>th</sup>	MP	
10. Constant inspection of emergency lighting	2.67	2.73	2.70	12 <sup>th</sup>	MP	
11. Medical emergency response procedures	2.97	2.96	2.97	7.5 <sup>th</sup>	MP	
12. Regular meetings of persons involved	3.07	3.08	3.08	4 <sup>th</sup>	MP	
13 Mock evacuation drills	2.79	2.56	2.68	13 <sup>th</sup>	MP	
<b>Total AWM</b>	<b>2.99</b>	<b>3.01</b>	<b>3.00</b>		<b>MP</b>	
<b>Rank</b>	<b>2<sup>nd</sup></b>	<b>1<sup>st</sup></b>				
<b>Descriptive Rating</b>	<b>MP</b>	<b>MP</b>	<b>MP</b>			

### III. Operations Preparedness

1. Designation of venues to be used as evacuation centers (schools, gyms, chapels, and etc.)	3.61	3.89	3.75	1 <sup>st</sup>	P
2. Distribution of relief goods to the evacuees	2.91	3.13	3.02	7 <sup>th</sup>	MP
3. Involvement of policemen and barangay officials and other volunteer groups	3.23	3.32	3.28	4 <sup>th</sup>	MP
4. Utilization of calamity funds and other resources for the victims	2.97	3.03	3.00	8.5 <sup>th</sup>	MP
5. Mobilization of patrol cars, ambulance, and other utility vehicles to be used during calamity occurrences	3.19	3.40	3.30	3 <sup>rd</sup>	MP
6. Communication to be used during emergencies (cell phones, radio, etc.)	3.45	3.51	3.48	2 <sup>nd</sup>	MP
7. Fair and equal distribution of resources	2.99	3.00	3.00	8.5 <sup>th</sup>	MP
8. Timeliness in the distribution of resources/aid to the victims	3.06	3.01	3.03	6 <sup>th</sup>	MP
9. Evaluation of medical equipment	2.84	2.84	2.84	10 <sup>th</sup>	MP
10. Available equipment for First Aid (air splints, oxygen, stretcher, etc.)	3.11	2.99	3.05	5 <sup>th</sup>	MP
<b>Total AWM</b>	<b>3.14</b>	<b>3.21</b>	<b>3.18</b>		<b>MP</b>
<b>Rank</b>	<b>2<sup>nd</sup></b>	<b>1<sup>st</sup></b>			
<b>Descriptive Rating</b>	<b>MP</b>	<b>MP</b>	<b>MP</b>		

### IV. Safety Preparedness as to Equipment/Facilities

1. Lifebouy	1.83	1.81	1.82	22.5 <sup>th</sup>	L
2. Life Jacket	2.18	2.05	2.12	14 <sup>th</sup>	L
3. Face Mask	2.52	2.51	2.52	7 <sup>th</sup>	E
4. Gas Mask	1.63	1.61	1.62	26 <sup>th</sup>	NE
5. Hand Glove	2.73	2.67	2.70	2 <sup>nd</sup>	E
6. Gum Boots	2.06	2.00	2.03	16 <sup>th</sup>	L
7. Safety Shoes	2.39	2.31	2.35	9 <sup>th</sup>	E
8. Helmet	2.57	2.40	2.49	8 <sup>th</sup>	E
9. Overall Combination	1.93	1.83	1.88	21 <sup>st</sup>	L
10. Dragon Light	1.35	1.51	1.43	30 <sup>th</sup>	NE
11. Emergency Light	2.34	2.29	2.32	11 <sup>th</sup>	L
12. Rappelling Rope	1.59	1.43	1.51	29 <sup>th</sup>	NE
13. Climbing Rope	1.59	1.54	1.57	27.5 <sup>th</sup>	NE
14. BOB Rope	1.51	1.32	1.42	31 <sup>st</sup>	NE
15. Descender	1.38	1.31	1.35	34 <sup>th</sup>	NE
16. Ascender	1.29	1.31	1.30	35 <sup>th</sup>	NE
17. Water Jell Blanket	1.46	1.31	1.39	33 <sup>rd</sup>	NE
18. Harness	1.30	1.31	1.31	36 <sup>th</sup>	NE
19. Safety Net	1.41	1.48	1.45	29 <sup>th</sup>	NE
20. Hand Tool Set	1.89	1.92	1.91	20 <sup>th</sup>	L

21. Safety Jacket	1.87	1.99	1.93	18 <sup>th</sup>	L
22. Spade	2.22	2.18	2.20	12 <sup>th</sup>	L
23. Pickaxe	2.21	2.06	2.14	13 <sup>th</sup>	L
24. Megaphone	2.19	1.99	2.09	15 <sup>th</sup>	L
25. Power Tool	1.66	1.47	1.57	27.5 <sup>th</sup>	NE
26. Manikin	1.58	1.23	1.41	32 <sup>nd</sup>	NE
27. Folding Shovel	2.11	1.80	1.96	17 <sup>th</sup>	L
28. Spine Board Stretcher	2.63	2.50	2.57	5 <sup>th</sup>	E
29. Emergency Rescue Blanket	1.86	1.77	1.82	22.5 <sup>th</sup>	L
30. Stretcher Extendable Baton	2.40	2.28	2.34	10 <sup>th</sup>	E
31. Drone	1.31	1.21	1.26	37 <sup>th</sup>	NE
32. Rescue Vehicles (land)	1.96	1.87	1.92	19 <sup>th</sup>	L
33. Rescue Boat	1.79	1.71	1.75	25 <sup>th</sup>	L
34. Flashlights	2.49	2.61	2.55	5 <sup>th</sup>	E
35. Whistles	2.70	2.64	2.67	3 <sup>rd</sup>	E
36. Evacuation Center/s	2.74	2.73	2.74	1 <sup>st</sup>	E
37. Handheld Radios	2.58	2.59	2.59	4 <sup>th</sup>	E
<b>Total AWM</b>	<b>1.94</b>	<b>1.91</b>	<b>1.93</b>		
<b>Rank</b>	<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>			
<b>Descriptive Rating</b>	<b>LP</b>	<b>LP</b>	<b>LP</b>		

**Table 2.** Tests for Significant Difference in the Preparedness of the Participants When Grouped According to Sex

Variables	Mann-Whitney U Value	p-value	Critical value	Decision
Dissemination	0.0985	0.923	2.12	Not Significant
Implementation	0.288	0.776	2.069	Not Significant
Operation	0.684	0.503	2.11	Not Significant
Equipment/Facilities	0.669	0.506	1.994	Not Significant

As gazed from Table 2, all p-values exceed the 0.05 threshold of level of significance which implies that the hypotheses were not significant. Hence, it can be infer that there is no significant difference in the level of preparedness among the participants in terms of dissemination, implementation, operation and equipment/facilities when they were grouped according to sex. This suggests that both male and female participants have almost similar perceptions at how they described the municipality of Aloran as a local government unit in terms of their Disaster Risk Reduction Management. The constituents of the municipality of Aloran were aware of the activities and programs in line with the implementation of MDRRM. Information were provided and guidance were extended to the public as to the activities and programs to prepare the people in cases when there are calamities that the municipal is confronted with. Information on disaster preparedness and risk reduction are being disseminated on air as well as risk hazards faced by the municipality in accordance with the provincial disaster board.

**Table 3.** *Test for Significant Difference in the Levels of Preparedness*

Source of Variation	Degree of Freedom	Sum of Square	Mean Squares	F-Value	
				Computed	Tabular
Between Groups	2	0.19	0.095	1.687	3.275
Within Groups	30	1.69	0.0563		
Total		1.88			

Decision: Not Significant

Using the Analysis of Variance presented in Table 3 to prove variance the computation resulted to a computed value of 1.687 which is lower than the tabular value of 3.275 at 32 df at 0.05 level of significance, implies that there is no significant variance among the MDRRMC level of preparedness. The data signifies that the municipal have addressed their preparedness along the different aspects of risk reduction. Programs and activities were carried and focused not only on the dissemination but as well as in the implementation and operation aspects of the risk reduction management. The local government was not only concentrating on dissemination of its programs and activities, rather it ensures the efficient and effective implementation of the local mandates. The activities and programs in line with the risk reduction management and measures were regularly monitored, assessed, and evaluated to identify some limitations and constraints in the effective implementation and operation of the programs.

### CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis of the data, the researcher concluded the following: That the Municipal Disaster Risk Reduction Management (MDRRMC) preparedness in terms of awareness/dissemination, organization, and implementation, is Moderately Prepared (MP), except the equipment and facilities which is Less Prepared (LP). The overall level of MDRRMC preparedness of the Municipality of Aloran, Misamis Occidental is Moderately Prepared.

From the salient conclusions, the following recommendations drawn are the following to be adopted by the concerned office, to wit: The need to improve the existing practices of the MDRRMC through better coordination and working relationship among community members, community disaster volunteers, and departments within the LGU; Strengthen implementation of the MDRRMC policies, plans, and programs by making the people aware of disaster risk-reduction and disaster risk mitigation; and Equip the MDRRMC Office with the necessary equipment and facilities to prevent and respond to disasters.



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