

## **Disaster Risk Management Practices and Readiness among Selected Science Teachers: A Baseline Framework for Developing Disaster Management Plan"**



**April Aura A. Cacho<sup>1</sup>, Elsa Z. Barniza<sup>2</sup>, Jereza D. Dasilao<sup>3</sup>, Jaica D. De Tomas<sup>4</sup>, Miemie Lanie B. Amaguin<sup>5</sup>, Rochelle A. Bermejo<sup>6</sup>**

<sup>1</sup> Associate Professor V, Northern Iloilo Polytechnic State College Lemery Campus, Lemery, Iloilo

<sup>2</sup> Assistant Professor IV, Northern Iloilo State University, Lemery Campus, Lemery, Iloilo

<sup>3,4,5,6</sup> Bachelor of Elementary Education, Northern Iloilo State University Lemery Campus, Lemery, Iloilo

**ABSTRACT:** This qualitative-quantitative research study determined the level of implementation of disaster management practices and readiness for disaster among selected elementary schools in the district of Lemery. There were 48 respondents comprised of elementary teachers and school heads who were further grouped into sex, age, and position. Results revealed that as an entire group, the respondents described the effectiveness of disaster risk management practices in terms of mitigation as “as highly practiced, in terms of preparedness, it was also “highly practiced”, in terms of response, it was described as “highly practiced” and in terms of recovery and rehabilitation plan, it was “highly practiced”. No significant difference was noted effectiveness of the disaster risk management practices of selected elementary school in the district of Lemery as to prevention and mitigation, Disaster Preparedness, Response, recovery and rehabilitation plans as perceived by the respondents when grouped into sex, age and position. The elementary teachers were very much ready in having operational smoke detectors on every level outside the classroom , having operational smoke detectors on every level of the classroom, all learners capable how to use it, all your learners aware of the CPR, having 72-hour minimum disaster supplies on hand.

**KEYWORDS:** disaster management practices, readiness, elementary public schools

### **INTRODUCTION**

"Disaster Risk Management Practices and Readiness for Disaster Among Selected Elementary Schools in the District of Lemery, Iloilo Philippines"

Nobody can predict when a disaster like earthquake, fire and flood will exactly occur. In as much as the Philippines is situated along the Pacific Typhoon Belt and is within the Pacific Ring of Fire, the country is vulnerable to natural hazards. According to the 2012 World Risk Report, as cited in the Disaster Management Practices in the Philippines: An Assessment (2013), the Philippines is ranked third among 173 countries in terms of disaster risk. As disasters can strike without warning, the importance of being ready should never be ignored. Every citizen is responsible for protecting himself and his family by knowing what to do before, during and after a disaster or calamity. To address the nation’s concerns of strengthening the country’s disaster risk reduction system, Republic Act No. 10121 otherwise known as “The Philippine Disaster Risk Reduction and Management (PDRRM) Act of 2010” was passed into law in May 2010. It seeks the reduction and better management of disaster risk. According to Ani, et al (2015) RA 10121 has taken disaster risk reduction and management at the forefront of national and local development plans and policies. RA 10121 mandates all national government agencies to institutionalize policies, structures, coordination mechanisms and programs with continuing budget appropriation on Disaster Risk Reduction Management (DRRM) from national to local levels. In line with this Act, the Department of Education (DepEd) constituted the DepEd DRRM Core Group to provide a venue to discuss issues on DRRM and Education in Emergencies (EiE), to recommend policy actions, and propose programs/projects which will mitigate and reduce the impact of disasters to DepEd teaching/non-teaching personnel/staff, learners and properties. The DepEd created the DRRM Office (DRRMO) to institutionalize the culture of safety at all levels, to systematize the protection of education investments and to ensure continued delivery of quality education services. It shall serve as the focal and coordinative unit for DRRM-related activities. The DRRMO shall perform the following specific functions which is to act as the focal point for DepEd in planning, implementing, coordinating and monitoring of activities related to DRRM, EiE and Climate Change Adaptation (CCA), to develop and recommend policy standards and actions to DepEd management on DRRM/EiE/CCA matters, and to initiate and coordinate cooperation and collaborative activities with the national government agencies, nongovernmental organizations (NGO) and civil society organizations (CSO).

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This study was anchored to Republic Act No. 10121 otherwise known as “The Philippine Disaster Risk Reduction and Management (PDRRM) Act of 2010” was passed into law in May 2010. It seeks the reduction and better management of disaster risk. Under this Act, the functions of the National Disaster Risk Reduction and Management Council (NDRRMC) include the development of a national disaster risk reduction and management framework, “which shall provide for comprehensive, multi-sectoral, inter-agency and community-based approach to disaster risk reduction and management. The National Disaster Risk Reduction Management Framework (NDRRMF) emphasizes that in time, resources invested in disaster prevention, mitigation, preparedness and climate change adaptation will be more effective in attaining the goal of adaptive, disaster-resilient communities and sustainable development.

## STATEMENT OF THE PROBLEM

This descriptive correlation study was undertaken to determine the Disaster Risk Management Practices and Readiness for Disaster Among Selected Science Teachers in the District of Lemery, Iloilo Philippines. Specifically, this study sought answers to the following questions.

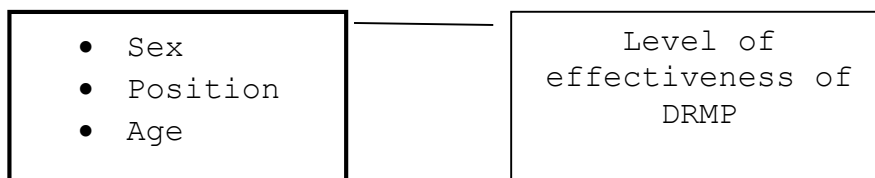
1. What is the level of effectiveness of the disaster risk management practices of selected elementary school in the district of Lemery as to prevention and mitigation, Disaster Preparedness, Response ,recovery and rehabilitation plans as perceived by the respondents taken as an entire group?
2. What is the level of effectiveness of the disaster risk management practices of selected science teachers in the district of Lemery as to prevention and mitigation, Disaster Preparedness, Response ,recovery and rehabilitation plans as perceived by the respondents when classified as sex, age, and position?
3. Is there a significance difference in the level of effectiveness of the disaster risk management practices of selected science teachers in the District of Lemery as to prevention and mitigation, Disaster Preparedness, Response ,recovery and rehabilitation plans as perceived by the respondents when classified as age, sex and position?

## HYPOTHESIS

Based on the statement of the problem in this study, a hypothesis was forwarded.

There is no significant difference in the level of effectiveness of the disaster risk management practices of selected science teachers in the district of Lemery as to prevention and mitigation, Disaster Preparedness, Response ,recovery and rehabilitation plans as perceived by the respondents when classified as age, academic rank and length of service.

## CONCEPTUAL FRAMEWORK



## METHODOLOGY

This study utilized the descriptive research in as much as it describes certain phenomena particularly the schools’ level of implementation of disaster risk management practices and level of readiness for disasters.

## RESPONDENT OF THE STUDY

The respondent of the study were 48 randomly selected science teachers from eight (8) Elementary Schools in Lemery, Iloilo. This included the school principals, and randomly selected teachers per school for the school year 2022-2023,

## DATA GATHERING INSTRUMENT

The researcher-made instrument used in this study was a three-part questionnaire. Part 1 covered the school’s profile while Part 2 dealt with the school’s level of implementation of disaster risk management practices. Part 3 dealt with the school’s level of readiness for disasters.

## PROCEDURE

The researcher prepared a letter of endorsement to the college administrator to permit the researcher to go out of school to conduct the test. The same letter was given to the Principal's of every schools in the District of Lemery, Iloilo Philippines to conduct the study. After the approval of the authority concerned, the researcher conducted or administered the study and personally gathered the instrument for interpretation and analysis.

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## STATISTICAL TOOLS

The statistical tools that used were mean, standard deviation, and frequency count of Mann Whitney U test and Kruskal Wallis U test for the for inferential statistics of the data gathered included percentage, which was used to describe the schools' profile, and weighted mean, was used to determine the schools' level of implementation of disaster risk management practices and level of readiness for disasters.

## RESULTS

**Table 2**

Level of effectiveness of the disaster risk management practices of selected science teachers in the District of Lemery as to prevention and mitigation, Disaster Preparedness, Response ,recovery and rehabilitation plans as perceived by the respondents taken as an entire group

Category	Mean	SD	Description
Mitigation	4.18	0.4524	Highly practiced
Preparedness	4.51	0.4481	Highly practiced
Response	4.55	0.4182	Highly practiced
Recovery and Rehabilitation Plan	4.33	0.4417	Highly practiced

**Table 3**

Level of effectiveness of the disaster risk management practices of selected science teachers in the district of Lemery as to prevention and mitigation, Disaster Preparedness, Response ,recovery and rehabilitation plans as perceived by the respondents when grouped into sex

Category	Male		
	Mean	SD	Description
Mitigation	4.15	.2517	practiced
Preparedness	4.65	.1915	Highly Practiced
Response	4.65	.1000	Highly Practiced
Recovery and Rehabilitation Plan	4.45	.4123	Highly Practiced
Female			
Mitigation	4.18	.4882	Practiced
Preparedness	4.50	.4635	Highly Practiced
Response	4.54	.4351	Highly Practiced
Recovery and Rehabilitation Plan	4.31	.4470	Highly Practiced

**Table 4**

Level of effectiveness of the disaster risk management practices of selected science teachers in the District of Lemery as to prevention and mitigation, Disaster Preparedness, Response ,recovery and rehabilitation plans as perceived by the respondents when grouped into position

	Teacher 1-3		
	Mean	SD	Description
Mitigation	4.12	.4237	Practiced
Preparedness	4.47	.4512	Highly Practiced
Response	4.50	.4172	Highly Practiced
Recovery and Rehabilitation Plan	4.30	.4459	Highly Practiced
Master Teacher 1-3			
	Mean	SD	Description
Mitigation	4.60	.0000	Highly Practiced
Preparedness	5.00	.0000	Highly Practiced
Response	5.00	.0000	Highly Practiced
Recovery and Rehabilitation Plan	4.80	.0000	Highly Practiced
School head			
Mitigation	4.75	.3786	Highly Practiced
Preparedness	4.80	.2828	Highly Practiced

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Response	4.90	.2000	Highly Practiced
Recovery and Rehabilitation Plan	4.50	.3830	Highly Practiced

**Table 5**

Level of effectiveness of the disaster risk management practices of selected science teachers in the district of Lemery as to prevention and mitigation, Disaster Preparedness, Response, recovery and rehabilitation plans as perceived by the respondents when grouped into age

Category	Less than 30		
	Mean	SD	Description
Mitigation	3.80	.2450	practiced
Preparedness	4.47	.4148	Highly Practiced
Response	4.56	.4336	Highly Practiced
Recovery and Rehabilitation Plan	4.04	.4099	Practiced
<b>31 to 40 yrs. Old</b>			
Mitigation	4.14	.4435	Practiced
Preparedness	4.53	.4653	Highly Practiced
Response	4.44	.5113	Highly Practiced
Recovery and Rehabilitation Plan	4.34	.5032	Highly Practiced
<b>41 to 50 yrs. Old</b>			
Mitigation	4.28	.4127	Highly Practiced
Preparedness	4.45	.4926	Highly Practiced
Response	4.53	.3531	Highly Practiced
Recovery and Rehabilitation Plan	4.42	.4236	Highly Practiced
<b>Above 50 yrs. Old</b>			
Mitigation	4.28	.5751	Highly Practiced
Preparedness	4.60	.3855	Highly Practiced
Response	4.80	.2138	Highly Practiced
Recovery and Rehabilitation Plan	4.25	.3162	Highly Practiced

**Table 6**

Difference in the level of effectiveness of the disaster risk management practices of selected science teachers in the district of Lemery as to prevention and mitigation, Disaster Preparedness, Response ,recovery and rehabilitation plans as perceived by the respondents when sex

Category	p-value	findings
Mitigation	0.850	Not significant
Preparedness	0.733	Not significant
Response	0.970	Not significant
Recovery and Rehabilitation Plan	0.545	Not significant

**Table 7**

Difference in the level of effectiveness of the disaster risk management practices of selected science teachers in the district of Lemery as to prevention and mitigation, Disaster Preparedness, Response ,recovery and rehabilitation plans as perceived by the respondents when position

Category	p-value	findings
Mitigation	0.026	Significant
Preparedness	0.733	Not significant
Response	0.970	Not significant
Recovery and Rehabilitation Plan	0.352	Not significant

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**Table 8**

Difference in the level of effectiveness of the disaster risk management practices of selected science teachers in the district of Lemery as to prevention and mitigation, Disaster Preparedness, Response ,recovery and rehabilitation plans as perceived by the respondents when age

Category	p-value	findings
Mitigation	0.096	Not significant
Preparedness	0.852	Not significant
Response	0.303	Not significant
Recovery and Rehabilitation Plan	0.396	Not significant

**Table 9**

Readiness for disaster risk management of science teachers in the district of Lemery

Item	F	%	Rank
Do you think your learners is relatively well prepared for a disaster?	4	8%	15
Have you discussed disaster preparedness with your students?	1	2%	16
Do you have 72-hour minimum disaster supplies on hand?	31	65%	5
Do you have a 72-hour classroom disaster supplies kit?	27	56%	6
Are all learners aware of the first aid?	15	31%	9
Are you aware of CPR?	11	23%	10
Are all your learners aware of the CPR?	39	81%	4
Do you have operational smoke detectors on every level of the classroom?	45	94%	2
Do you have operational smoke detectors on every level outside the classroom?	47	98%	1
Do you have at least one charged ABC fire extinguisher?	21	44%	7
Do you know how to use it?	17	35%	8
Do all learners capable how to use it?	42	88%	3
Do all responsible learners know when and how to turn off all utilities?	15	31%	9
Have you safeguarded the most important learners' records?	4	8%	15
Has your learners practice a fire drill within the last year?	15	31%	9
Have you discussed to your learners where to meet outside if there is a fire in your school or classroom?	6	13%	14
Have you discussed where to meet if you cannot get back to your school or classroom?	9	19%	12
Do you have an out of the school disaster telephone/phone contact?	10	21%	11
Do you know what the disaster plan is for your workplace?	8	17%	13

### ANALYSIS

Results revealed that as an entire group, the respondents described the effectiveness of disaster risk management practices in terms of mitigation as "as highly practiced, in terms of preparedness, it was also "highly practiced", in terms of response, it was described as "highly practiced" and in terms of recovery and rehabilitation plan, it was "highly practiced". No significant difference was noted effectiveness of the disaster risk management practices of selected science teachers in the district of Lemery as to prevention and mitigation, Disaster Preparedness, Response, recovery and rehabilitation plans as perceived by the respondents when grouped into sex, age and position. The elementary teachers were very much ready in having operational smoke detectors on every level outside the classroom , having operational smoke detectors on every level of the classroom, all learners capable how to use it, all your learners aware of the CPR, having 72-hour minimum disaster supplies on hand.

### DISCUSSION

1. Elementary teachers highly practiced disaster risk management in terms of mitigation, preparedness, response and recovery and rehabilitation plan. Hence, it can be considered that implementation of disaster management plan and program in school is effective.  
 2. The level of practice of the implementation of disaster risk management plan among teachers and school heads are not affected by their own attributes, whether they are male or female, of different ages, status and qualifications. The pursuit towards a safety environment for both the teachers and learners is the major priority of the school and everyone in school is given the equal benefits and privilege to avail a safe and well-protected place.

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3. In the advent of readiness, the public elementary schools are much prepared and ready for any disaster that may occur in the school. The mitigation program of the school are organized and they establish a strong connection with the local government units especially the office of the disaster risk management of the locality.

Recommendations:

Along with the results of the study, the following recommendations are advanced:

1. The school being the second home of the children may always be aware of prioritizing the safety of every entity inside the school premise. Thus, regular monitoring of the disaster risk management plan implementation be conducted in order to develop a culture of ensuring a safety environment for both the teachers and children.
2. Parents of the learners be also given the opportunity to take part in the implementation of disaster management plan of the school by advising their children to abide by the school rules and regulations.
3. The school heads and the teachers may regularly conduct orientation and awareness program of the disaster risk management program of the school in order for the learners to adhere on the rules being implemented.

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