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Research Article

Disaster Risk Reduction Management Plan of Secondary Schools in Sta. Barbara, Philippines

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ABSTRACT

This study was conducted to determine the status of the disaster risk reduction management plan of secondary schools in Sta. Barbara, Pangasinan. Specifically, it looked into the profile of the technical working group (TWG) of school DRRM in terms of their sex, highest educational attainment, years of experience in the program, length of service, and trainings attended related to DRRM. Likewise, the study assessed the status of DRRM program in terms of the extent of compliance and level of implementation of school to the Philippine Disaster Risk Reduction and Management Plan (RA 10121). These factors were correlated to the profile of the TWG to test their significance to each other. Descriptive design was used in the study. The statistics used in the analysis of data were frequency counts, percentage distribution, average weighted mean (AWM) and Pearson-r. Results revealed that the respondents manifest diverse socio-demographic characteristics as their profile. The extent of compliance to RA 10121 and the level of implementation of RA 10121 of the secondary schools in Sta. Barbara, Pangasinan as perceived by the respondents were seen Highly Compliant and Highly Implemented. There was no relationship between the profile of the respondents and their perceived extent of compliance to RA 10121. Only length of service was found to be significant to the level of implementation of RA10121. It is recommended that schools should appoint members on the TWG those teachers who are most experienced in the school and should be sent to trainings related to DRRM.

KEYWORDS

Risk reduction, extent of compliance, level of implementation, education, secondary schools, Sta. Barbara, Pangasinan, Philippines

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INTRODUCTION

The international community must "risk proof" development because disasters are taking a heavy toll on rich and poor countries all over the world and are outpacing their ability to respond. The United Nation's Office for Disaster Risk Reduction (UNISDR) campaigns for the implementation of the framework for disaster risk reduction to achieve substantial reduction in mortality, number of people affected, direct disaster economic loss and disaster damage to critical infrastructures.

Disaster has been an annual problem for the Filipinos. The Philippines is one of the most disaster-prone countries in the world due to its geographical location and was ranked fourth in the world among countries hit by the highest number of natural disasters such as earthquake, flash floods, mudslides, typhoon and volcanic eruptions over the past 20 years (UNISDR, 2015). A total of 274 disasters were recorded in the Philippines from 1995-2015.

The Province of Pangasinan, in particular, is highly susceptible to natural disasters. The project, Mapping Philippine Vulnerability to Environmental Disasters, included the province in the list of top ten provinces that are at risk to earthquakes due to the Manila Trench. Moreover, the Department of Environment and Natural Resources Mines and Geo-Science Bureau (DENRMGB) ranked Pangasinan as third most flood prone and landslide prone province in the Philippines as of 2011. This concurs with the declaration of the Regional Disaster Risk Reduction and Coordinating Council (RDRRMC) that Pangasinan is the most flood prone province in Region I. Finally, in a 2013 report of the World Bank entitled, "Getting a Grip of Climate Change in the Philippines", Pangasinan is considered as one among those provinces which have very high risk for typhoons with strong winds and heavy rainfall and consequently, with very high risk to flooding.

In 2018, Pangasinan was declared in state of calamity due to typhoon Mangkhut. According to the Provincial Disaster Risk Reduction and Management Council, the top five disaster prone areas in Pangasinan are Calasiao, Dagupan City, Sta. Barbara, Urdaneta City and San Fabian. The geophysical location of these areas poses significant threats in the communities. Sta. Barbara is a flood prone place that was among the municipalities greatly affected by the typhoon. To ensure the protection and welfare of the people during disasters or emergencies, the municipality has organized the Sta. Barbara Disaster Risk Reduction Management Council (SDRRMC). According to UNISDR (2007), when a natural hazard strikes, children are among the most vulnerable population group, especially those attending school in times of disaster. Furthermore, during disasters school buildings are destroyed, taking away the precious lives of children and teachers and stalling access to education in the aftermath of disaster.

School is a place where children spend almost half of their day to learn from childhood to adolescence. The entire child body is immersed in school environment and learns most of their skills in this place. Hence, schools as stakeholder of the community, are responsible for implementing plans for reducing disaster risk. Education is a human right. Education is especially important in enabling people to reach their full potential and exercise other rights. This right does not disappear or get suspended because of disasters and emergencies. When education is interrupted or limited, students drop out, with negative and permanent economic and social impacts for students, their families, and their communities. Natural hazards are part of the context for educational planning. Since schools are our universal institution for sharing knowledge and skills, the expectations for schools to be role models in disaster prevention is high. Successful disaster mitigation is one of the ultimate tests of the success of the education we provide over generations. (World Bank, IFC)

Given this scenario, the Philippine government has mandated all national government agencies to institutionalize policies of Disaster Risk Reduction Management (DRRM) from national and local levels

through Republic Act No. 10121 entitled "The Philippine Disaster Risk Reduction and Management Act". Pursuant to RA 10121, DepEd issued D.O. No. 50, s. 2011 entitled "Creation of Disaster Risk Reduction and Management Office", which mandates the said office to (a) provide guidance to regions and schools division, including DRRM coordinators on how to act before, during, and after disaster, and (b) facilitate immediate and efficient information flow during disasters and emergencies.

With that, there is an urgent need for training in disaster management. Disaster risk reduction and management is the systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improve coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster. Schools disaster risk reduction and management refers to risk reduction and management activities that address and seek to avoid the development of new or increased disaster risks in school to ensure the safety of the learners. The program covers 4 aspects including disaster prevention and mitigation, preparedness, response, and rehabilitation and recovery.

This study aimed to determine the status of DRRM plan among secondary schools in Sta. Barbara, Pangasinan. Specifically, it provided answer to the following specific questions:

1. What is the profile of the members of technical working group (TWG) in school disaster risk reduction planning in terms of:
    a. Sex;
    b. Highest Educational Attainment;
    c. Number of year/s involved in School DRRM plan;
    d. Length of Service; and
    e. Number of trainings/seminars attended related to DRRM plan?
2. What is the extent of compliance to RA 10121 or "The Philippine Disaster Risk Reduction and Management Act" as perceived by the respondents along the following areas:
    a. Prevention and Mitigation;
    b. Preparedness;
    c. Response; and
    d. Recovery and Rehabilitation?
3. What is the level of implementation of DRRM plan of secondary schools in Sta. Barbara as perceived by the respondents along the following areas:
    a. Prevention and Mitigation;
    b. Preparedness;
    c. Response; and
    d. Recovery and Rehabilitation?
4. Is there a significant relationship between the profile of the TWG across the extent of compliance and level of implementation in the four thematic areas of DRRM?

METHODS

Research Design. The descriptive-survey design was employed. Descriptive research is concerned with the description of data and characteristics about a population. It is used to collect demographic data about people's behavior, interests, perceptions, practices, intentions, beliefs attitudes, opinions, judgment and the like, and then such data was analyzed, organized, and interpreted. The survey involves data regarding current conditions, which prevail in a group chosen for study. (Sevilla, 1978). Data on the members of the TWG's profile, extent of compliance as perceived by the respondents, and level of implementation were collected through questionnaire checklist. The latter were provided to the respondents to gather and analyze data. The survey method was chosen in order to determine the present situation of the DRRM plan in secondary schools of Sta. Barbara.

Sampling. Sta. Barbara is composed of 7 secondary schools, all of which were subjected to the study. The respondents of the study are the TWG, school heads, and teachers who have been in the service for at least 1 year. All of the TWG and school head were subjected to the study and only 50% of the teachers were involved in the study. The respondents were selected using strategized random sampling.

Data Collection and Analysis. The instrument used in this study is a questionnaire which was facilitated during vacant time of the respondents. The checklist questionnaire was patterned in DepEd's Comprehensive DRRM in Education Framework (DO No. 37 s, 2015) and Department of Education (2008) Disaster Risk Reduction Resource Manual. Revision and enrichment was done with the identified sources to ensure that the questions suited to the context of the study with particular emphasis in alignment to the objectives. The instrument was prepared by the researcher based on her readings of related literature and studies and was validated using 5 school DRRM TWG in Municipality of Villasis who are not included in the actual research. Proper scrutiny was applied to further improve and enrich the instrument before administering to the respondents. The questionnaire was presented in three parts: Part I - Profile of the Respondents, Part II – Extent of Compliance to the RA 10121, and Part III. Level of Implementation of the School Disaster and Risk Management Plan

The researcher has sought permission from the Schools Division Superintendent of Pangasinan I and the Secondary School Heads in the Municipality of Sta. Barbara for their approval and permit to conduct the study. The questionnaire was personally distributed by the researcher to the School DRRM TWG, teachers and school heads of Sta. Barbara. After one week, the researcher retrieved the questionnaires from the respondents. Appropriate statistical tools were employed in the analysis of data to get valid and reliable results. To answer the problem number 1, frequency count and percentages was used to establish the profile of the respondents. To answer problems 2 and 3, average weighted means (AWM) was computed based on the respondent's judgments in the 5-point Likert scale. To answer problem number 4 which is to determine the significant relationship of the profile of TWG across the level of implementation, Pearson-R was used.

RESULTS AND DISCUSSION

Profile of the Members of Technical Working Group of School DRRM

This part includes the profile of the members of the DRRM TWG group among the secondary schools of Sta. Barbara, Pangasinan. The profile of the respondents covered their sex, educational attainment, years of experience in the program, length of service and number of trainings in DRRM program in local, regional and national level.

Sex. As shown in Table 1 majority of the respondents were females with the frequency of thirty-four (34) or 52 per cent while thirty-two (32) or 48 per cent of them were males. The result supports the common notion that teaching is still a female dominated profession as supported by Thomas Dee's article "Gender Gap Growing in Teaching" that nearly 75 percent of teachers across the world are female. However, having the numbers close to each other proves gender equality in appointing members of the TWG of DRRM in schools.

Highest Educational Attainment. The table shows that almost half of the respondents were baccalaureate degree holders as indicated by the frequency of 32 or 48.48%, followed by baccalaureate degree holders with master's units with frequency of 24 or 36.36%, master's degree holders with frequency of 8 or 12.12%, only one or 1.52% is a master's degree holder with doctorate units and, only one doctor's degree, 1.52%. Since most of the TWG are new in the service, hence most of the TWG members were baccalaureate degree holders or still in the process of acquiring their master's degree.

Number of Year/s Involved in School DRRM Plan

Majority of the TWG were in the program for one-two years as indicated by the frequency of 36 or 54.55%. This may be linked to the policy that teachers may have credit over coordinatorship if they hold the position for at least two years as stated in Order No. 10, s. 1979. Also, most of the members of the TWG involved are new teachers.

Table 1. Profile of the Members of Technical Working Group of School DRRM n=66

Variables	Frequency	Percentage
Sex		
Male	32	43.48
Female	34	51.52
Highest Educational Attainment		
BS	32	48.48
BS with MA units	24	36.36
MA	8	12.12
MA with Doctoral Units	1	1.52
Doctoral	1	1.52
Number of year/s involved in School DRRM plan		
1-2	36	54.55
3-4	13	19.69
5-6	9	13.63
7-8	5	7.58
9-10	3	4.55

Length of Service		
1-5	42	63.64
6-10	20	30.30
11-15	1	1.52
16-20	2	3.03
21-25	1	1.52
Number of trainings/seminars attended related to DRRM plan		
National		
0	52	78.79
1	6	9.09
2	6	9.09
3	1	1.52
4	1	1.52
Regional		
0	35	53.03
1	20	30.30
2	9	13.64
3	1	1.52
6	1	1.52
Local		
0	18	27.27
1-2	31	46.97
3-4	11	16.67
5-6	4	6.06
7-8	1	1.52
9-10	1	1.52

Length of Service. Majority of the TWG are in the teaching service for five years and below as indicated by the frequency of 42 or 63.64 %, six-10 years of experience with frequency of 20 or 30.30%, only one or 1.52% with 11-15 years of experience, two or 3.03% with 16-20 years of experience and, only one or 1.52% with 21-25 years of experience.

It could be noted that the opportunity to be in the TWG of DRRM is usually given to teachers who are new in the service. As the DRRM Team is assigned to facilitate risk reduction and are expected to coordinate as fast as possible, membership is given to those younger teacher and thus, have lower length of service.

Number of Trainings/Seminars Attended Related to DRRM Plan. Most of the TWG have no national and regional trainings in DRRM. There were 31 or 46.97% with one or two local trainings which is followed by 18 or 27.77% TWG without local trainings. Due to the reason that almost 10% of the TWG are sent to attend seminars and are then expected to just relay the information they have learned through learning action cells in their locale the percentage of locale seminars attended is higher compared to national and regional.

Extent of Compliance to The Philippine Disaster Risk Reduction and Management Act as Perceived by the Respondents

In 2010, Republic Act No. 10121 entitled "The Philippine Disaster Risk Reduction and Management Act" mandated all national government agencies to institutionalize policies of Disaster Risk Reduction Management (DRRM). Consequently, the Department of Education aimed to strengthen the pillars of safe learning facilities, school disaster management, and risk reduction and resilience education for schools. The School Disaster Risk Reduction Management Program has four thematic areas namely: Prevention and Mitigation, Preparedness, Response and Recovery and Rehabilitation.

Extent of Compliance to The Philippine Disaster Risk Reduction and Management Act along Prevention and Mitigation

There were five (5) indicators under Prevention and Mitigation. The over-all mean was 3.66 described as Highly Compliant. The highest mean was the indicator "Establishment of Early Warning System" with the mean of 3.78. This was followed by the statement "Mainstreaming and integration of DRRM into developmental policies, plans and programs" (3.76). Rated the least was the indicator "Conduct Vulnerability and Risk Assessment" with the mean of 3.58. It can be noted that all indicators were rated Highly Compliant.

Similar to Jurilla's (2016), findings, dissemination of information was deemed "more effective". Early Warning System refers to the set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss. It can be perceived that advancement in technology such as the Internet helps a lot in warning others of disasters. As cited by Asio and Cagasan (2015), the use of ICT helps residents be exposed to various information before, during, and after a disaster.

Despite wide interest in disaster reduction at local scale approaches and the importance of understanding complex processes at these scales, vulnerability assessment commonly relies on mapping approaches at national to global scales. Vulnerability assessment activities, including mapping approaches, are widespread and may support allocation of resources and targeting of activities.

Table 2. Extent of Compliance to The Philippine Disaster Risk Reduction and Management Act as Perceived by the Respondents n=151

Indicators	FREQUENCY					Mean	DE
	VHC	HC	MC	SC	NC		
Prevention and Mitigation							
1. Establishment of Early Warning System	25	71	46	7	2	3.73	HC
2. Mainstreaming and integration of DRRM into developmental policies, plans and programs	19	77	46	9	0	3.70	HC
3. Identification of critical facilities in the School	30	64	37	18	2	3.68	HC
4. Availability of Facilities, equipment and emergency supplies to various hazard	22	65	47	16	1	3.60	HC
5. Conduct Hazard Mapping and Vulnerability and Risk Assessment	23	63	44	21	0	3.58	HC
Mean						3.66	HC
PREPAREDNESS							
Indicators	FREQUENCY					Mean	DE
	VHC	HC	MC	SC	NC		
1. Development of DRRM plan	37	59	40	15	0	3.78	HC
2. Development of enhancement guidelines for emergency response team	35	60	41	14	1	3.76	HC
3. Development or enhancement of manual of operation for DRRM	28	66	44	12	1	3.72	HC
4. Conduct of training and simulation exercises for all personnel and students	38	55	38	17	3	3.72	HC
5. Development of Contingency Plan	27	58	50	16	0	3.64	HC
Mean						3.72	HC
RESPONSE							
Indicators	FREQUENCY					Mean	DE
	VHC	HC	MC	SC	NC		
1. Conduct of Immediate School Clean Up	44	58	26	23	0	3.81	HC
2. Immediate Monitoring of the Effects of Hazard	36	48	56	11	0	3.72	HC
3. Ensure Safety of the School Personnel by Personnel Tracking	35	60	31	18	7	3.65	HC
4. Well established disaster response operation	29	59	44	18	1	3.64	HC
5. Provision of Psychosocial Support for Learners and Staff	24	65	37	24	1	3.58	HC
6. Setting Up of Temporary Learning Spaces	22	64	45	18	2	3.57	HC
Mean						3.66	HC

RECOVERY AND REHABILITATION

Indicators	FREQUENCY					Mean	DE
	VHC	HC	MC	SC	NC		
1. Seek support from NGO and LGU	30	63	40	17	1	3.69	HC
2. Review implementation of Safety and Preparedness Measures and Rehabilitation	31	59	40	20	1	3.66	HC
3. Improved Designs and Standards of School Buildings	27	67	32	21	4	3.61	HC
4. Conduct of inventory of losses and needs	29	57	40	23	2	3.58	HC
5. Integrated Assessment Results in School Planning	20	73	32	24	2	3.56	HC
Mean						3.62	HC
					Over-all Mean	3.67	HC

Legend: VHC- Very Highly Compliant (4.51- 5.00) HC- Highly Compliant (3.51- 4.50) MC- Moderately Compliant (2.51- 3.50) SC- Slightly Compliant (1.51-2.50) NC- Noncompliant (1.00-1.50)

Extent of Compliance to The Philippine Disaster Risk Reduction and Management Act along Preparedness

In terms of preparedness, there were also five (5) indicators. The over-all mean was 3.72 described as Highly Compliant. The respondents rated the indicator "Development of DRRM plan" with the mean of 3.78. This was followed by the indicator "Development of enhancement guidelines for emergency response team" (3.76). The least indicator rated was "Development of Contingency Plan" (3.64). All of the indicators under this were described as Highly Compliant.

The rating "Highly Compliant" can be linked to DEPED having a DepED Calamity, Disaster, and Risk Management Control Operations Manual in 2007 which serves as a blueprint for disaster risk reduction mechanisms. Furthermore, the rating proves that the SDRRM is doing well as UNISDR (2008) stated that these disasters can all be mitigated with knowledge and planning and response preparedness.

Extent of Compliance to The Philippine Disaster Risk Reduction and Management Act along Response

The Response have six (6) indicators. The respondents rated the indicator "Conduct of immediate school clean up" with the highest mean of 3.81. This was followed by the indicator "Immediate monitoring of the effects of hazard" (3.72). The least indicator rated was "Setting up of temporary learning spaces" (3.57). All of these indicators including the three others were rated Highly Compliant. The over-all was 3.66 described as Highly Compliant.

The primary duty of the TWG is to ensure the provision of safe learning environment and this is best recognized during disasters. Although, setting up of temporary learning space has the least indicator rated, it can be perceived that the over-all compliance of the TWG during response is highly commendable.

Extent of Compliance to The Philippine Disaster Risk Reduction and Management Act along Recovery and Rehabilitation

As far as recovery and rehabilitation are concerned, there were five (5) indicators along this area. The first two highest indicators were the statements" Seek support from NGO and LGU (3.69) and "Review implementation of safety and Preparedness Measures and Rehabilitation" (3.66). The least indicator rated was "Integrated Assessment Results in School Planning". (3.56). Further, all of these indicators were rated Highly Compliant including the other two indicators. The over-all mean was 3.63 described as Highly Compliant.

Pre-disaster Recovery planning help in sustainable development and risk reduction. Using these planning instruments, the introduction and implementation of measures and actions for increasing the resilience to disasters become the connection element between the pre and post planning process and the disaster management and recovery phases. Therefore, high compliance in Disaster Preparedness influenced the result in Disaster Recovery and Rehabilitation.

Over-all, the Extent of Compliance to RA 10121 among the secondary schools in Sta. Barbara as perceived by the respondents was Highly Compliant with over all mean of 3.67. Preparedness was ranked first, followed by Prevention and Mitigation and Response. This can also be supported by Lopez (2018) when he determined the extent of compliance to the Philippine Disaster Act as Moderately Complied as perceived by the teachers. This was a manifestation of the DepEd Division Order 37, s. 2015 or The Comprehensive Disaster Risk Reduction and Management (DRRM) in Basic Education Framework that the authorities in the basic education sector have made inroads in their efforts towards resilience-building in offices and schools, and ensuring that quality education is continuously provided and prioritized even during disasters and emergencies.

Table 3. Summary of Extent of Compliance to The Philippine Disaster Risk Reduction and Management Act as Perceived by the Respondents

Four Thematic Areas of DRRM Plan	Mean	Rank	Description
1. Prevention and Mitigation	3.66	Highly Compliant	2.5
2. Preparedness	3.72	Highly Compliant	1
3. Response	3.66	Highly Compliant	2.5
4. Rehabilitation and Recovery	3.62	Highly Compliant	4
	Overall Mean	3.67	Highly Compliant

Level of Implementation of the DRRM Plan as Perceived by the Respondents

In terms of the level of implementation, there were four (4) thematic areas included. These are Prevention and Mitigation, Preparedness, Response and Rehabilitation and Recovery.

Level of Implementation of DRRM plan along Prevention and Mitigation

as Perceived by the Respondents

As gleaned in Table 4, there were seven (7) indicators under Prevention and Mitigation. Of the seven indicators, the three highest means were "Establish and empower the establishment of school emergency and disaster committee" (3.72), "Identify all of the hazards that school community may face" (3.72) and "DRRM sensitive environment management through tree planting, etc." (3.59). The lowest mean was the indicator "Availability of the DepEd DRRM manual to the teachers and students for awareness in disaster". Moreover, all of the indicators were rated Highly Implemented. The over-all mean was 3.59 described as Highly Implemented.

Table 4. Level of Implementation of the DRRM Plan along Prevention and Mitigation as Perceived by the Respondents n=151

Indicators	FREQUENCY					Mean	DE
	VHI	HI	MI	SI	NI		
1. Establish and empower the establishment of school emergency and disaster committee	37	51	47	16	0	3.72	HI
2. Identify all of the hazards that school community may face	34	61	35	21	0	3.72	HI
3. DRRM sensitive environment management through Tree Planting, etc.	35	49	43	18	6	3.59	HI
4.Increase disaster resiliency of infrastructures	28	58	42	21	3	3.57	HI
5. Identify potential arrangements and assets that can directly minimize the associated threats such as hazardous material removal like trees	28	50	52	18	3	3.54	HI
6. Availability of the DepEd DRRM manual to the teachers and students for awareness in disaster	23	61	41	22	4	3.51	HI
7. Set designs and construction strategies	25	58	42	20	6	3.50	HI
Over-all Mean						3.59	HI

Legend: VHI- Very Highly Implemented (4.51- 5.00) HI- Highly Implemented (3.51- 4.50)
MI- Moderately Implemented (2.51- 3.50) SI- Slightly Implemented (1.51-2.50)
NI- Not Implemented t (1.00-1.50)

Establishment of school emergency and disaster committee does not only include teachers and school heads or administrators, but also students. Empowering student participation in disaster creates behavior on preparedness becoming an instinctive action for the whole member of school community. Through this, students become proactive in activities that identifies and prevents potential problems such as identifying hazards in school and tree planting.

In 2014, Toolkit for Building Disaster-Resilient School Communities in South East Asia identified the problem with disaster preparedness handbook/guidelines in educational sector as a challenge. But through the advancement of technology, internet and gadgets that may transfer/download the manual, and the creation of DRRM as a separate subject in Grade 12, the availability of DepEd DRRM manual to the teachers and students increased.

Level of Implementation of DRRM plan along Preparedness as Perceived by the Respondents

Under the second thematic area, Disaster Preparedness, there were four (4) sub components. These included Disaster Risk Plan, Component of School Emergency Disaster Plan, Emergency Evacuation Plan and Emergency Responsibility

Level of Implementation of the DRRM Plan along Preparedness: Disaster Risk Plan

Shown in Table 5a were the five (5) indicators under Disaster Risk Plan under level of Implementation in terms of Preparedness. The highest mean was the indicator "School disaster and emergency management plan is reviewed and updated at least annually" (3.92). This was followed by the indicator "Coordinate with concerned government offices for suggestions in DRRM plan like BFP or support for trainings, materials etc." The least indicator rated was "The plan provides specific directions for immediate action yet flexible enough to allow adjustments as unexpected situation develop" with the mean of 3.42. Moreover, all the indicators were rated Highly Implemented with the over-all mean of 3.68.

Table 5a. Level of Implementation of the DRRM Plan along Preparedness: Disaster Risk Plan n=151

Indicators	FREQUENCY					Mean	DE
	VHI	HI	MI	SI	NI		
1. School disaster and emergency management plan is reviewed and updated at least annually.	49	50	43	9	0	3.92	HI
2. Coordinate with concerned government offices for suggestions in DRRM plan like BFP or support for trainings, materials, etc.	40	59	44	8	0	3.87	HI
3. Conduct simultaneous drills and simulation exercises	30	61	41	19	0	3.68	HI
4. Provide teachers, pupils and community with in-service training and refresher courses on disaster risk reduction management	25	54	51	16	5	3.52	HI
5. The plan provides specific directions for immediate action yet flexible enough to allow adjustments as unexpected situation develop	23	49	53	20	6	3.42	MI
Over-all Mean						3.68	HI

Legend:VHI- Very Highly Implemented (4.51- 5.00) HI- Highly Implemented (3.51- 4.50)
MI- Moderately Implemented (2.51- 3.50) SI- Slightly Implemented (1.51-2.50)
NI- Not Implemented t (1.00-1.50)

Due to climate change, the type, strength, and damage caused by disasters experienced in each locale worsens each year. This event is the reason why the DRRM plan is reviewed each year. This is an important variable as Cuya-Antonio and Antonio's (2017) conclusion of the periodic evaluation of the DRRM plan also measures community involvement in disaster risk reduction. Coordination with other government offices also proves that disaster risk reduction management requires partnership in the community to be successful.

Level of Implementation of the DRRM Plan along Preparedness: Component of School Emergency Disaster Plan

There were six (6) indicators under the component of school emergency disaster plan. Among the indicators, the statement "Area evaluation and safe havens for family reunification" with a mean of 4.05 was the highest response. This was followed by "Prioritize individuals with disabilities" (3.89). The least indicator rated was "Maps and floor plans posted on designated area" with the mean of 3.49. This was the only indicator with the description of Moderately Implemented. All other indicators were rated Highly Implemented. The over-all mean was 3.72 described as Highly Implemented.

The indicator with highest response "Area evacuation and safe havens for family reunification" is similar to Tingco et al., (2014) findings that "Designation of evacuation" are highly implemented in the third district of Pangasinan which includes Sta. Barbara. This can be linked also to the fact that each barangay is expected to identify their evacuation area as part of their disaster risk reduction plan. However, maps and floor plans are moderately implemented. This could be a problem for first-time visitors in the school who may be trapped during disasters.

Table 5b. Level of Implementation of the DRRM Plan along Preparedness: Component of School Emergency Disaster Plan n=151

Indicators	FREQUENCY					Mean	DE
	VHI	HI	MI	SI	NI		
1. Area evacuation and safe havens for family reunification are identified	57	52	34	8	0	4.05	HI
2. Prioritize individuals with disabilities	44	58	39	8	2	3.89	HI
3. Prepare for immediate medical support	34	68	39	10	0	3.83	HI
4. Designate an assigned teacher/officer that will ensure everyone was informed of the emergency situation	32	57	49	11	2	3.70	HI
5. The school has complete contact information such as home/office phone numbers/email address of all members of the school emergency and preparedness committee	17	51	58	19	6	3.58	HI
6. Maps and floor plans posted on designated areas	20	58	50	22	1	3.49	MI
Over-all Mean						3.72	

Legend: VHI- Very Highly Implemented (4.51- 5.00) HI- Highly Implemented (3.51- 4.50)
MI- Moderately Implemented (2.51- 3.50) SI- Slightly Implemented (1.51-2.50)
NI- Not Implemented t (1.00-1.50)

Level of Implementation of the DRRM Plan along Preparedness: Emergency Evacuation Plan

There were five (5) indicators under this sub component. The first two highest indicators were "Simple rules for building evacuation route was made known to everybody" (3.62) and "Provide procedures to continue class and/or use Disaster and emergency Student Release" (3.62). The lowest mean was the indicator "Color coding for the identification of the various emergency response team such as first aid team, transport team,

communication team, etc." (3.24). All indicators were however, rated Highly Implemented with the over-all mean of 3.52.

Table 5c. Level of Implementation of the DRRM Plan along Preparedness: Emergency Evacuation Plan
n=151

Indicators	FREQUENCY					Mean	DE
	VHI	HI	MI	SI	NI		
1. Simple rules for building evacuation route was made known to everybody	32	48	54	15	2	3.62	HI
2. Provide procedures to continue class and/or use Disaster and Emergency Student Release	23	61	53	14	0	3.62	HI
3. The school has a site hazard and vulnerability assessment	39	37	53	20	2	3.60	HI
4. Provide protocol for reverse evacuation when inside is safer than outside	23	55	54	18	1	3.54	HI
5. Color Coding for the identification of the various emergency response team such as first aid team, transport team, communication team, etc.	14	41	66	27	3	3.24	HI
Mean						3.52	HI

Legend: VHI- Very Highly Implemented (4.51- 5.00) HI- Highly Implemented (3.51- 4.50)
MI- Moderately Implemented (2.51- 3.50) SI- Slightly Implemented (1.51-2.50)
NI- Not Implemented t (1.00-1.50)

Level of Implementation of the DRRM Plan along Preparedness: Emergency Responsibility

The last sub component under Disaster Preparedness is Emergency Responsibility. There are three responsible groups in terms of emergency: school head/admin, teachers and students.

In the emergency responsibility of teachers, there are five (5) indicators. The first two highest indicators were: "Always prepare a classroom go bag and class list" with the mean of (3.60), and "Disseminate information to follow instruction for building evacuation" (3.57). All other indicators were also rated Highly Implemented. The over-all mean was 3.55 described as Highly Implemented.

In case of an emergency evacuation, it is critical that every classroom and the teacher maintain a "go kit," a self-contained and portable stockpile of emergency supplies, often placed in a backpack and left in a readily accessible but secure location so that it is ready to "go." From the DepEd Memorandum No. 36 s. 2019 or the 2019 Brigada Eskwela Implementing Guidelines, at the start of the school year rooms should be checked for the availability of these go kit which includes first aid kits, flashlights, megaphones, and other supplies necessary in cases of emergency. It must be ensured that these items are highly accessible and can be easily located.

In terms of Emergency Responsibility of the school heads/administrative staff, there were six (6) indicators. The first two highest responses were the indicators "Sounds fire alarm and makes announcement to students and staff" with the mean of 3.83, and "Report structural defects and safety hazards to the school emergency committee" (3.73). The least response was "Announce "all clear" when emergency has ended." (3.64). Moreover, all indicators were rated Highly Implemented with the over-all mean of 3.71.

In emergency responsibility by the students, there were five (5) indicators. The highest response was "Cooperate during the emergency drills and exercise" with the mean of 3.79. This was followed by the indicator "Provide information of parents/guardians in case of emergencies" (3.72). The lowest was the indicator "Receive training on first aid procedure" (3.57). All the indicators were rated Highly Implemented with the over-all mean of 3.68.

Table 5d. Level of Implementation along Preparedness: Emergency Responsibility n=151

Indicators	FREQUENCY					Mean	DE
	VHI	HI	MI	SI	NI		
Faculty							
1. Always prepare a classroom go-bag and class list	29	56	47	14	5	3.60	HI
2. Disseminate information to follow instruction for building evacuation	31	44	59	14	3	3.57	HI
3. Participate in developing the DRRM plan	21	59	50	19	2	3.52	HI
4. Receive training on first aid procedure	25	54	52	15	5	3.52	HI
5. Inform everybody of the student-release protocols	25	52	54	17	3	3.52	HI
						3.55	HI
School Head/Admin							
1. Sounds fire alarm and makes announcement to students and staff.	39	61	38	12	1	3.83	HI
2. Report structural defects and safety hazards to the school emergency committee	35	56	48	8	4	3.73	HI
3. Shut off valves and switch down electricity during hazard	36	53	47	12	3	3.71	HI
4. Monitor and provide updates and instructions as available.	25	64	52	9	1	3.69	HI
5. Ensures the safekeeping of school files	36	52	47	10	6	3.68	HI
6. Announce "all clear" when emergency has ended	30	57	46	15	3	3.64	HI
						3.71	HI
Students							
1. Cooperate during the emergency drills and exercise	43	52	43	7	6	3.79	HI
2. Provide information of parents/guardians in case of emergencies	37	52	49	9	4	3.72	HI
3. Organize activities to promote safety awareness	40	45	49	16	1	3.71	HI
4. Engages in student-led school watching and hazard mapping	32	52	50	12	5	3.62	HI
5. Receive training on first aid procedure	26	61	44	12	8	3.57	HI
						3.68	HI
OVER-ALL MEAN						3.65	HI

Legend: VHI- Very Highly Implemented (4.51- 5.00) HI- Highly Implemented (3.51- 4.50) MI- Moderately Implemented (2.51- 3.50) SI- Slightly Implemented (1.51-2.50) NI- Not Implemented t (1.00-1.50)

Coinciding with the result, Edwards and Morris (2008) stated that by involving the children in the process, they become more aware of their local hazard and helps in reducing it. By having a Highly Implemented Emergency Responsibility from the three different groups, policies that reflect community values and priorities will be met with greater public acceptance and adherence.

Level of Implementation of the DRRM Plan along Response as Perceived by the Respondents

The third thematic area is Disaster Response. This was divided into three components namely, emergency drill exercise, school fire drill procedures and school earthquake drill procedures.

Level of Implementation of the DRRM Plan along Response: Emergency Drills Exercises

Under this component, the rules on emergency drills exercises were the indicators. The highest was the indicator "Drop, cover and hold for earthquake" with the mean of 4.24. This was followed by the indicator "Keep calm" (4.20). The least rated indicator was "Take shelter for typhoons or tornado" (3.99). All the indicators, however were rated Highly Implemented with the over-all mean of 4.13.

The positive result is contradicting to Guevarra et. al, (2008) conclusion that there are public schools in Luzon that are unprepared in disasters wherein special emphasis on drills and training to assess vulnerabilities and risk should be more focused. However, the difference in the time of conduct of study shows that there is improvement in disaster management in schools.

Table 6. Level of Implementation of the DRRM Plan along Response as Perceived by the Respondents n=151

INDICATORS	FREQUENCY					Mean	DE
The students are acquainted in safety procedures:	VHI	HI	MI	SI	NI		
Emergency Drills Exercises							
1. Drop, Cover and Hold for Earthquake	84	29	29	8	1	4.24	HI
2. Keep calm	79	33	30	8	1	4.20	HI
3. Identify fire exits and safe evacuation site where people will be directed	74	39	29	8	1	4.17	HI
4. Stop, Drop and Roll for Fire	70	32	38	10	1	4.06	HI
5. Take shelter for typhoons or tornado	64	37	36	13	1	3.99	HI
Over-all Mean						4.13	HI
School Fire Drill Operations							
Alarm Operating							
1. Teachers performs head count and makes sure the class is in-tact	68	47	23	11	1	4.14	HI
2. When fire is discovered the office nearest it immediately sounds the nearest fire alarm	56	48	33	11	2	3.95	HI
Calling for Fire Brigade							
1. Report the fire incident immediately to the nearest fire station	66	39	34	11	0	4.07	HI

2. Building floor plan or blueprints are displayed in prominent areas to help firefighters navigate the school	46	54	40	10	0	3.90	HI
Over-all Mean						4.01	HI
School Earthquake Drill Procedure							
Alarm Operating							
1. Teachers performs head count and makes sure the class is in-tact	74	36	35	5	0	4.18	HI
2. Pre-arrange signals such as a siren or bell set off by an assigned person near the alarm	62	46	32	10	0	4.05	HI
						4.12	HI
Response							
1. Occupants nearest the door should open it to facilitate prompt exit.	62	50	33	6	0	4.14	HI
2. Watch out for falling objects	65	49	29	7	1	4.13	HI
3. While the signal is on-going move away from windows, glass, and broken objects	61	51	34	5	0	4.11	HI
4. Take cover under a sturdy table or strongly supported doorway.	62	51	31	6	1	4.11	HI
						4.11	HI
Evacuation and Assembly							
1. First aid is given to injured persons.	68	48	32	2	1	4.19	HI
2. Communicate possible trapped victims and special needs of patients	68	46	33	4	0	4.18	HI
3. Start with head-count in the evacuation site.	70	41	35	5	0	4.17	HI
4. Once the shaking stops students must be instructed to leave the building in single file, and in calm, orderly manner	64	49	33	5	0	4.14	HI
5. Each teacher shall coordinate the accounting of their individual classes and report to the Evacuation Team Leader.	63	46	37	5	0	4.11	HI
						4.16	HI
Over-all Mean						4.13	HI

Legend: VHI- Very Highly Implemented (4.51- 5.00) HI- Highly Implemented (3.51- 4.50)
MI- Moderately Implemented (2.51- 3.50) SI- Slightly Implemented (1.51-2.50)
NI- Not Implemented t (1.00-1.50)

Level of Implementation of the DRRM Plan along Response: School Fire Drill Operations

In terms of School Drill Operations, all indicators for alarm operating and calling for fire brigade were rated Highly Implemented. The highest was the indicator "Teachers perform head count and makes sure the

class is in-tact" with the mean of 4.14. The lowest was the indicator "Building floor plan or blueprints are displayed in prominent areas to help firefighters navigate the school." (3.90). The over-all mean was 4.01.

Level of Implementation of the DRRM Plan along Response: School Earthquake Drill Procedure

As far as the earthquake drill procedure is concerned, this is divided to alarm operating, response, and evacuation and assembly. The highest mean was under Evacuation and Assembly indicator which states "First aid is given to injured persons". (4.19). This was followed by the indicator "Teachers perform head count and makes sure the class is intact". (4.18) and "Communicate possible trapped victims and special needs of patients." (4.18). The least rated response was the indicator "Pre arrange signals as a siren or bell set off by an assigned person near the alarm." (4.05). All the indicators were rated Highly Implemented with the over-all mean of 4.13.

Altogether, the results show that schools are directed to conduct hazard drills quarterly. It can be noted that a safe learning environment is being achieved in schools as the government coordinates with the department.

Level of Implementation of the DRRM Plan along Rehabilitation and Recovery as Perceived by the Respondents

The fourth thematic area is Rehabilitation and Recovery. There were five (5) indicators in this area. All of them were rated nearly with each other and were rated Highly Implemented. The over-all mean was 3.98. This shows that rehabilitation and recovery is still given importance as the other thematic area as seen in Tingco et al., (2014) research result of Moderately Implemented for post-disaster activities.

Table 7. Level of Implementation of the DRRM Plan along Rehabilitation and Recovery as Perceived by the Respondents n=151

Indicators	FREQUENCY					Mean	DE
	VHI	HI	MI	SI	NI		
1. The listed committee established a procedure to restore both the disaster site and damaged materials to stable and usable condition	48	67	27	9	0	4.02	HI
2. Define reporting mechanisms and communication lines, including an established chain of command for recovery operations.	55	50	35	11	0	3.99	HI
3. Establish priorities.	48	64	27	12	0	3.98	HI
4. Develop a schedule for implementation.	53	52	34	12	0	3.97	HI
5. Assemble supplies from the school and from concerned government agencies.	48	58	34	11	0	3.95	HI
Over-all Mean						3.98	HI

Legend: VHI- Very Highly Implemented (4.51- 5.00) HI- Highly Implemented (3.51- 4.50)
MI- Moderately Implemented (2.51- 3.50) SI- Slightly Implemented (1.51-2.50)
NI- Not Implemented t (1.00-1.50)

Over-all, the Level of Implementation as perceived by the respondents was Highly Implemented with over all mean of 3.83. Among the four thematic areas Disaster Response was ranked First. This was followed by Rehabilitation and Recovery, Disaster Preparedness and Prevention and mitigation, respectively. The result of this study, Highly Implemented Disaster Risk Reduction Plan in Secondary Schools for Sta. Barbara is

higher than Tingco et al., (2014) and Acueva's (2016) research on DRRM program of different city/municipalities both rated as moderately effective. This implies that the community gives special focus on the Disaster Risk Reduction Management (DRRM) Plan. Prospective DRRM is being achieved in the community and schools are establishing a more equitable future.

Table 8. Summary of Level of Implementation of the DRRM Plan

Four Thematic Areas of DRRM	Mean	Description	Rank
1. Prevention and Mitigation	3.59	Highly Implemented	4
2. Preparedness	3.64	Highly Implemented	3
Disaster Risk Plan	3.68		
Component of School Emergency Disaster Plan	3.72		
Emergency Evacuation Plan	3.52		
Emergency Responsibility	3.65		
3. Response	4.09	Highly Implemented	1
Emergency Drill Exercises	4.13		
School Fire Drill Procedures	4.01		
School Earthquake Drill Procedures	4.13		
4. Rehabilitation and Recovery	3.98	Highly Implemented	2
		Over-all Mean	3.83

Relationship between the Profile of the TWG across the Extent of Compliance to The Philippine Disaster Risk Reduction and Management Act

Table 9. Relationship between the Profile of the TWG across the Extent of Compliance to The Philippine Disaster Risk Reduction and Management Act

	PREVENTION AND MITIGATION		PREPAREDNESS		RESPONSE		RECOVERY AND REHABILITATION	
	R	sig	R	Sig	r	sig	R	sig
Sex	.010	.936	.120	.337	.050	.691	-.133	.285
Education	-.043	.734	.068	.589	.043	.731	-.066	.597
Number of year/s involved in School DRRM plan	-.040	.750	.126	.315	-.036	.775	.038	.762
Length of Service	-.022	.862	-.002	.985	.109	.385	-.025	.841

Number of trainings/seminars attended related to DRRM plan	-.043	.733	-.004	.975	.044	.725	.107	.390

Table 9 shows the correlation between the respondents' profile and the extent of compliance. It is shown that the four thematic areas were found to have no significant correlation to their extent of compliance. This means that their sex, educational attainment, years of experience, length of service and trainings attended in relation to DRRM have nothing to do with their extent of compliance which is Highly Compliant.

The null hypothesis stating that there is no significant relationship between the profile of the members of the Technical Working Group(TWG) across the extent of compliance was accepted indicating no relationship at all. Further, the profile of the TWG, may it be male or female has nothing to do with their compliance. The educational attainment, length of service, and trainings attended as far as DRRM is concerned have nothing to do with their extent of compliance.

Relationship between the Profile of the TWG across Level of Implementation of the DRRM Program

The profile of the respondents was correlated to their level of implementation of the DRRM program. All the profile except length of service were found to be not significant to their level of implementation in the four thematic areas. The length of service (p=.026) was specifically found to be significant to Recovery and Rehabilitation and to the Over All level of implementation*(p=0.017)*.

Table 10. Relationship between the Profile of the TWG across Level of Implementation of the DRRM Program

	PREVENTION AND MITIGATION		PREPAREDNESS		RESPONSE		RECOVERY AND REHABILITATION	
	r	sig	R	sig	r	sig	r	sig
Sex [α]	-.045	.720	-.153	.219	-.075	.552	.018	.889
Education [α]	-.149	.234	-.120	.338	.112	.372	.057	.647
Number of year/s involved in School DRRM plan [β]	-.014	.910	-.073	.558	-.077	.540	-.151	.225
Length of Service [β]	-.169	.174	-.226	.068	-.041	.746	-.273	.026
Number of trainings/seminars	.049	.695	-.036	.771	.165	.185	.121	.332

attended related to DRRM plan $^{\beta}$								

Legend: eta- Coefficients * Significant ($p \leq 0.05$)
b- Spearman Rho ns Not Significant ($p \geq 0.05$)

The null hypothesis stating that there is no significant relationship between the profile of the members of the Technical Working Group(TWG) across the level of implementation was accepted signifying that there was no relationship between them except for the variable length of service which was rejected implying a significant relationship between them. This means that the longer the length of service of the TWG members, the higher the level of their level of implementation. The result connives with the study of Riel (2016) on Disaster Preparedness Level in Tacloban that there is a significant relationship between certain socio demographic profile and the level of vulnerability and preparedness.

DISCUSSIONS

The findings of the current research proves that the Philippines has comprehensive set of disaster risk reduction (DRR) policies, frameworks and plans as evident on the result that school DRRM in Sta. Barbara are highly compliant to Philippine Disaster Risk Reduction and Management Act and highly implements the DRRM program. Similarly, Lopez (2018), found that public secondary schools were generally compliant in the aspects of safe learning facilities, school disaster management and disaster risk reduction in education despite challenges such as inadequate training materials and lack of training among the school disaster risk reduction management teams. It was also revealed that schools had a good compliance level on disaster preparedness which coincides with the current study's result that preparedness was highly given importance in compliance to Philippine Disaster Risk Reduction and Management Act. As Lopez has cited, the good results can be associated with the DepEd Division Order 37, s. 2015 or The Comprehensive Disaster Risk Reduction and Management (DRRM) in Basic Education Framework. Philippines has been one of the countries that takes disaster risk reduction management seriously because of its vulnerability to natural disasters and its well-established institutional and legal framework for disaster management can be the reason why disaster risk reduction management teams in schools are highly compliant.

Although the schools' personnel were hampered by a lack of risk reduction and disaster preparedness training among faculty members and those selected to be part of the school disaster management team, it did not hinder the schools to be highly compliant. Still, despite the high level of compliance, there is a need to maintain disaster preparedness training and seminars, as well as funding allocation to fund the printing and dissemination of the program's training materials for distribution to teachers and students as well. Dela Cruz (2012) also said that an agency should have disaster management training to prepare them to lead their local disaster coordination councils efficiently.

The study also made evident that the secondary schools in Sta. Barbara highly implements the school DRRM program. However, Tingco et al., (2014) showed that almost all of the disaster risk management activities conducted during disaster/calamity period in the third district of Pangasinan including Sta. Barbara are perceived by the respondents as "moderately effective" which is relatively lower than the current research.

The only exception is the "activation of evacuation centers" which are schools. This implies that schools as evacuation centers implements better in terms of disaster management and can be deemed more prepared.

Among the four thematic areas of DRRM, response had the highest level of implementation of DRRM Plan specifically emergency drill exercises. Conde (2020) found out that disaster risk reduction management of The University of Rizal System has a lot to do with drill actions as one of the DRRM aspects. Additionally, Guevarra (2008), evaluated that the bulk of exercises in DRRM are done in drills throughout 37 schools in Luzon. Drills are held to raise awareness among schoolchildren, school staff, and the general public. It also assessed key school personnel's knowledge of disaster preparation programs (both national and local) as well as Department of Education catastrophe policies. The majority of public school key employees were aware of national and local disaster management plans, according to the study's findings. This can also back up Edmund Husserl's Social Phenomenology, which explains the role of human awareness in the creation of social activities. The result of their awareness of disaster risk reduction program is reflected in their high implementation of the program.

The study revealed that only length of service was found to be significant to the level of implementation of DRRM plan as perceived by the respondents. The result of this study regarding the profile of the TWG of DRRM coincides with Valdez (2018) that members of the DRRM team are usually female who are college graduate but with a length of service of more than a decade. According to the study, those who served for more than a decade are well-versed in disaster management principles such as prevention and mitigation, preparation, response, and rehabilitation and recovery, and they are constantly putting them into practice. Furthermore, differences in knowledge, practice, and variables influencing disaster risk management were found based on the respondents' age, educational attainment, civil status, and duration of service. This supports the study that schools should appoint those who are tenured in the service in the TWG of DRRM.

CONCLUSIONS

Disasters are uncontrollable dangers to the world's schools, posing a serious threat to the safety of students, instructors, school staff, school property, and records. It is the school's responsibility to lead to increase resilience and reduce vulnerability. Through the country's comprehensive set of disaster risk reduction (DRR) policies, frameworks and plans, schools have been able to adapt well and manage disaster risk reduction. It is found out in this study that the males and females are almost the same in number as far as appointment in the DRRM program of the school and that the members of the TWG were relatively new in the school. However, only few of them have attended seminar and trainings related to DRRM in the regional and national levels. The extent of compliance to RA 10121 of the secondary schools in Sta. Barbara, Pangasinan as perceived by the respondents was Highly Compliant. Also, the level of implementation of the school DRRM plan of the secondary schools in Sta. Barbara Pangasinan as perceived by the respondents was Highly Implemented. The high results can be linked to the establishment of a republic act for disaster risk reduction management. There was no relationship between the profile of the TWG and their perceived extent of compliance to RA 10121. Only length of service was found to be significant to the level of implementation of DRRM plan as perceived by the respondents. All other variables were found to be not significant to the other thematic areas. It is recommended that schools should appoint those who are most experienced as they are well-versed in disaster management principles. Likewise, the administrators should praise and give rewards to teachers' achievements despite of the challenges to encourage excellent performance in the school. Future research is highly recommended by considering other variables that are related to problems encountered by

teachers and school administrators in implementing the DRRM plan and how it affects their teaching-related works.

Proposed DRRM Plan for Secondary Schools in Sta. Barbara. Pangasinan

Rationale. The Philippines is among top five high-risk countries which experienced natural disasters such as earthquake, flash floods, mudslides, typhoon and volcanic eruptions. The Philippines had experienced five floods, eight storms in form of tropical cyclones and earthquake in 2013. The landslides occurred in the areas which surrounded by the mountains and coastlines. Based on Department of Environment and Natural Resources, Mines and Geo-Science Bureau (DENRMGB) had listed top 10 landslides prone provinces such as Benguet, Mountain Province, Nueva Vizcaya, Kalinga Apayao, Southern Leyte, Abra, Marinduque, Cebu, Catanduanes, and Ifugao. Meanwhile, top flood prone provinces were Pampanga, Nueva Ecija, Pangasinan, Tarlac, Maguindanao, Bulacan, Metro Manila, North Cotabato, Oriental Mindoro, and Ilocos Norte. Besides,

Pangasinan province also listed as flood and typhoon -prone province and located in the west central area of Luzon, proved to be vulnerable to those disasters. Pangasinan is third biggest province in the Philippines which constituted almost 42% of the region and 2% of total Philippine area. There are 28% or 49 out of 175 typhoons that entered the Philippine area of responsibility directly affected the province.
Indeed, Pangasinan is susceptible to natural disasters such as typhoon, floods, and earthquakes. This plan aims to improve the capacity of the schools to better prepare for and protect themselves against natural disasters.

Objective. To increase resilience and reduce vulnerability of the schools and local communities through support to strengthen and enable them to better prepare to mitigate and respond to natural disasters.
Strategies to be Undertaken: (Per Thematic Area)

Prevention and Mitigation

Prevention and Mitigation measures are the things we do to prevent an emergency from happening, and if does, to reduce or eliminate.

1. The school should establish framework how they will manage emergency situations.
2. Coordinate with the authorities on how to invest in infrastructures to reduce threat and impact of a hazard.
3. The school should plan for effective land use.
4. The plan on routes for the transportation of dangerous goods should be coordinated with proper authorities/agencies.
5. To coordinate with the Department of Public Works and Highways or the constructors about strengthening building structures through following the Building Code.

Disaster Preparedness

This refers to measures taken to prepare for and reduce the effects of disasters, that is to predict and if possible prevent disasters and mitigate their impact in vulnerable populations and respond to and effectively cope with their consequences.

1. The school will calendar the preparedness plan and practice. Drills should be incorporated in the plan.
2. The school should have an “emergency plan”
3. The school should have contacts with local authorities. Post the contacts in strategic locations.
4. The school should know the school community vulnerabilities.

5. The school should also know the roles of the different agencies.
6. The school should conduct risk assessment.
7. Plan for all types of risks.

Disaster Response

Programs which include warning and evacuation, search and rescue, providing immediate assistance and assessing damage.

1. The school should coordinate with the Department of Social Work and Development (DSWD) and other agencies/foundations for the provision of foods and clean water and other basic needs.
2. The school should coordinate to the government or agencies on programs to restore livelihood.
3. The school should coordinate with government/agencies for safe and reliable housing program
4. The school, if possible, can provide guidance/counselling and psychological support to the victims.

Disaster Rehabilitation and Recovery

This encompass support strategies that are geared towards the restoration of human centered services and infrastructures as well as restoration of the physical and ecological integrity of the affected ecosystem.

1. The school should coordinate with the government/agencies on how to rebuild the affected communities.
2. The school should plan how to prevent the recurrence of the disasters.
3. The school should conduct seminar on Anti Stress Management, and Coping Mechanisms.

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