

# A Case Analysis of Disaster Risk Reduction Preparedness of Iloilo Province: Basis for A Comprehensive Intervention Program

Asia Pacific Journal of  
Multidisciplinary Research  
Vol. 4 No.3, 150 - 159  
August 2016  
P-ISSN 2350-7756  
E-ISSN 2350-8442  
www.apjmr.com

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*Date Received: April 27, 2016 ; Date Revised: July 25, 2016*

**Abstract** - *This study determined the effectiveness of Disaster Risk Reduction Preparedness of Iloilo Province, Philippines in the areas of Dissemination, Implementation, and Resource Utilization and Operation as evaluated by the 390 citizens of the ten (10) selected municipalities from the five (5) Congressional Districts in the Province of Iloilo, Philippines.*

*This descriptive method of research employed researcher-made instruments and random interviews. Descriptive statistics used were the mean and standard deviation while inferential statistics employed T-test for independent samples and one-way analysis for variance set at .05 level of significances.*

*Findings revealed that Disaster Risk Reduction Preparedness of Iloilo Province, Philippines is “more effective” in terms of dissemination, implementation, and resource utilization and operation according to the assessment of the 390 respondents of the ten (10) selected municipalities from the five (5) Congressional Districts when they were grouped as to personal variables.*

*Finally, the findings revealed that three (3) out of ten (10) municipalities were very effective and among the five (5) districts, first district was very effective as to dissemination and resource utilization and operation of their respective Disaster Risk Reduction Preparedness Program but as a whole, Iloilo Province was more effective in its Disaster Risk Reduction Preparedness.*

**Keywords:** *Disaster Risk Reduction, Preparedness, Comprehensive Intervention Program*

## INTRODUCTION

There is no country that is immune from natural disasters. There may be differences in terms of disaster management strategies but no one and no place is exempted from disasters. Typhoons, earthquakes, floods, landslides, tsunamis and volcanic eruptions are natural disasters commonly experienced not only by the Philippines but also by other countries in the world. Taking into consideration the impact of natural calamities in China, Japan, USA, Taiwan and other countries including the Philippines, extent of damages in life and properties among victim countries vary depending on how government planned and prepared for the emergence of such disasters[1].

In the Philippines, the government has been working hard to reduce poverty among its people. It has initiated programs which can help alleviate the poor members of the society from the miserable life situations that they have. Yet, along this effort is the greatest factor that prevented the government to

realize its goal, “the high frequency of natural disasters that occur in the country” which incurred damages on lives and properties of the people[2].

In lieu with the above scenario, Republic Act (RA) No. 10121 otherwise known as “Philippine Disaster Risk Reduction and Management Act of 2010[3][5]” (PDRRM-2010) was enacted on May 27,2010 to strengthen the Philippine disaster risk reduction system. It specifically provides for the development of policies and plans, and the implementation of actions and measures pertaining to all aspects of disaster risk reduction and management including good governance, risk assessment and early warning, building and awareness raising, reducing underlying factors, and preparedness for effective response and early recovery. Included in this law is a mandate to create a separate office that will principally be responsible for the implementation of DRRM programs[4].

Taking into account the impact of natural calamities like typhoon Frank, the earthquake in Bohol, Philippines last October 15, 2013, the event of flood in Ormoc City, Philippines and the most recent typhoon Yolanda (November 8, 2013) which had destroyed the lives and properties of the people especially in the Visayas and specifically the province of Iloilo, Philippines are evidences that show how disasters impede the progress of the society [6]. It is therefore necessary for the national, regional and local government to have proper coordination in terms of disaster preparedness plans, mitigation, response and recovery programs for the victims of calamities.

With these untoward conditions, the researcher was motivated to conduct a case analysis of disaster risk reduction preparedness program of ten selected municipalities from the five congressional districts in the province of Iloilo, Philippines with a focus on the effectiveness of disaster risk reduction preparedness program in terms of dissemination, implementation, and resource utilization and operation respectively, as basis for a comprehensive intervention program which may contribute to the effort of the provincial government of Iloilo, Philippines in making DRRMC efficient and reliable at all times.

### **OBJECTIVE OF THE STUDY**

This study aimed to determine the effectiveness of disaster risk reduction preparedness of ten (10) selected municipalities from the five (5) congressional districts in the province of Iloilo, Philippines as basis for a comprehensive intervention program.

### **HYPOTHESES**

The Disaster Risk Reduction Preparedness of Iloilo Province, Philippines is “more effective” in terms of dissemination, implementation, and resource utilization and operation

### **RESEARCH DESIGN AND METHODOLOGY**

#### **Research Design**

The descriptive research design was used in this study. A methodology designed to depict the participants in an accurate way. More simply put, descriptive research is all about describing people who take part in the study.

There are three ways a researcher can go about doing a descriptive research project, and they are: (a) Observational, defined as a method of viewing and recording the participants; (b) Case study, defined as an

in-depth study of an individual or group of individuals; (c) Survey, defined as a brief interview or discussion with an individual about a specific topic [7].

### **Respondents of the Study**

The respondents of this study were the three hundred ninety (390) residents of the ten selected municipalities of Iloilo province based on the hazard identification conducted by the DRRMC province of Iloilo, Philippines, of which ninety (90) were personnel involved in the DRRM (municipality officials, school officials, and barangay officials), and three hundred (300) were evacuees (no. families) who experienced typhoon “Yolanda” November 8, 2013. The sample size was determined using Slovin’s formula for determining the appropriate sample size and the sub-samples sizes from the different towns were determined using stratified sampling. Moreover, the respondents in the actual survey were selected using simple random sampling.

### **Data Gathering Instrument**

To gather the data needed for the study, the researcher constructed a questionnaire checklist consisting of two parts: Part I consisted of items intended to gather personal information about the respondents and Part II, the questionnaire proper consisted of thirty four (33) items which will determine the effectiveness of the DRRM program of each municipality.

The researcher presented the draft of the instrument to the evaluators for approval and revised it based on the given comments and suggestions. The revised instrument was submitted to five jurors for validation whether the items in the questionnaire were appropriate for the study, not appropriate for the study, or needs revision. The validity of the instrument was determined using the percentage of agreement among jurors and an item is considered valid if at least eighty percent of the jurors agree that it is appropriate for the study. The overall mean percentage of agreement was 98.33 which implied that the instrument was valid. It was again revised incorporating the suggestions and recommendations of the jurors. All items in the draft obtained a percentage of agreement of at least 80 percent of the jurors so they were all retained during the revision.

The revised instrument still in draft form was pilot-tested for reliability to 30 respondents in the

town of Anilao, Iloilo, Philippines. The respondents possessed the same characteristics as the targeted respondents but they were not included as respondents in the actual conduct of the study. The gathered data in the pilot test were tabulated and the reliability was computed and determined using Cronbach alpha. The instrument will be considered reliable if it has a reliability coefficient of at least 0.80. The coefficient obtained was 0.84 which was interpreted as very high so the instrument was considered as highly reliable.

The instrument which was validated and found reliable was finally revised in its final form and reproduced for administration to the respondents of the study.

### Data Gathering Procedure

Prior to the actual conduct of the survey, the researcher sent letters requesting permission from the different offices concerned to conduct her study in their jurisdiction areas. The letter stated among others that the data obtained will be used for research purposes only and will be treated with utmost confidentiality. Upon approval of such request the researcher started the gathering of the data for the study. She went to the different towns and barangays to personally administer the questionnaires and retrieve the accomplished forms from the respondents.

### Data Processing Technique

The data gathered for the study were subjected to a computer processed statistics.

Mean was used to determine the respondents' assessment of the level of effectiveness of disaster preparedness programs of ten selected municipalities from the five congressional districts in the Province of Iloilo.

Standard deviation was utilized to determine the homogeneity and Heterogeneity of their assessment and T-test was employed to determine the significance of the difference in the assessment of the level of effectiveness of disaster preparedness programs of ten selected municipalities from the five congressional districts in the Province of Iloilo.

The gathered data in the survey were tallied, coded and analyzed using the following statistical tools:

Frequency count was used to determine the number and proportion of respondent's belongings to certain categories. The mean was also used to determine the level of effectiveness of disaster risk

reduction preparedness program of Iloilo Province in terms of dissemination of information, implementation, and resource utilization and operation.

The mean was computed and the obtained rating was interpreted and described using the scale that follows:

Range	Description	Interpretation
4.21 – 5.00	Very Effective	DRRPP has completely achieved its goals.
3.41 – 4.20	More Effective	DRRPP has essentially achieved its goals.
2.61 – 3.40	Effective	DRRPP has fairly achieved its goals.
1.81 – 2.60	Less Effective	DRRPP has achieved only a few of its goals.
1.00 – 1.80	Not Effective	DRRPP has achieved only very few of its goals.

The t – test for independent samples was used to compare means of groups in two categories such as elective and non-elective officials, victims and non-victims, and coastal and non-coastal residence. While, the One-way Analysis of Variance was used to compare means of group in three or more categories such as the level of effectiveness of DRRPP of Iloilo province in terms of dissemination, implementation, and resource utilization and operation.

Computations were done using the Statistical Package for Social Sciences (SPSS) software. All hypotheses were tested at .05 level of significance.

## RESULTS AND DISCUSSIONS

After all the data were obtained and analyzed, results show the effectiveness of disaster risk reduction preparedness of Iloilo Province, Philippines.

### Descriptive Data Analysis

Table 1 presents the over-all level of Effectiveness of DRRP of Iloilo Province, Philippines on the area of Dissemination.

The level of effectiveness of Disaster Risk Reduction Preparedness of Iloilo Province, Philippines in the area of Dissemination is “more effective” as reflected in the obtained over-all numerical mean rating of 4.02. In this area, item 1 “written disaster preparedness plan, and item 3” “Warnings to alarming situations” had the highest

ratings (M = 4.13, SD = .095) and (M = 4.13, SD = 0.98) respectively.

On the other hand item 9 “which is the information about availability of disaster aid / help from different agencies “and item 10, which is about distribution and delivery schedule and procedures of calamity aid / help” had the lowest ratings (M = 3.93, SD = 0.98) and (M = 3.94, SD = 0.95) respectively.

The above result in the area of dissemination implies that DRRMC in Iloilo Province, Philippines

with the cooperation of the Local Government Units of different municipalities are working hard to inform people about necessary preparations to be done prior to the coming of typhoon and flood. Every Municipal Risk Reduction Council coordinates with the PDRRMC and disseminates all advisories and precautionary measures to all its members and to the members of the community / barangay under their respective jurisdictions.

**Table 1. Level of Effectiveness of DRRP of Iloilo Province, Philippines as to Dissemination**

Items	How effective is the dissemination of information about the following:	Mean	Description	Sd	Rank
1	Written natural disaster preparedness plan	4.13	More Effective	0.95	1
3	Warnings for alarming situations (floods, typhoons, earthquakes, etc.)	4.13	More Effective	0.98	2
2	Disaster preparedness responsibility checklist	4.08	More Effective	0.94	3
7	Disaster Risk Reduction Management Council (DRRMC) members who will supervise the evacuation	4.08	More Effective	0.96	4
4	Evacuation Plan	4.01	More Effective	0.99	5
6	Evacuation routes and location	3.99	More Effective	0.97	6
5	Evacuation procedures	3.97	More Effective	1.00	7
8	Location of medical response team in cases of emergency	3.94	More Effective	1.02	8
10	Distribution and delivery schedule and procedures of calamity aid/help	3.94	More Effective	1.03	9
9	Availability of disaster aid/help from different agencies	3.93	More Effective	0.98	10
<b>Overall Rating</b>		<b>4.02</b>	<b>More Effective</b>	<b>0.85</b>	

**Table 2. Level of Effectiveness of DRRMP of Iloilo Province, Philippine as to Implementation**

Items	How effective is the implementation of the following:	Mean	Description	SD	Rank
1	Written disaster preparedness plan	4.03	More Effective	0.95	1
2	Disaster preparedness responsibility checklist	3.97	More Effective	0.97	2
3	Written evacuation plan	3.96	More Effective	0.95	3
4	Posted evacuation routes	3.96	More Effective	0.97	4
13	Safety, health and sanitation	3.93	More Effective	1.02	5
5	Evacuation procedures	3.91	More Effective	0.99	6
9	Dissemination/notification procedures	3.91	More Effective	0.98	7
12	Distribution and delivery policy of calamity aid to the victims	3.89	More Effective	1.07	8
7	Responsibilities of supervisory personnel for evacuation	3.88	More Effective	0.98	9
6	Constant inspection of emergency lighting	3.87	More Effective	1.05	10
11	Medical emergency response procedures	3.86	More Effective	1.07	11
8	Regular meetings of persons involved in the program	3.84	More Effective	1.03	12
13	Mock evacuation drills	3.66	More Effective	1.23	13
<b>Overall Rating</b>		<b>3.90</b>	<b>More Effective</b>	<b>0.86</b>	

**Table 3. Level of Effectiveness of DRRMP of Iloilo Province, Philippines as to Resource Utilization and Operation**

Items	How effective is the resource utilization and operation:	Mean	Description	SD	Rank
4	Designation of venues to be used as evacuation centers (schools, gyms, chapels, and etc.)	4.10	More Effective	0.92	1
8	Distribution of relief goods to the evacuees	4.01	More Effective	1.00	2
6	Involvement of Policemen and Barangay Officials and other volunteer groups	3.99	More Effective	0.97	3
5	Utilization of calamity funds and other resources for the victims of calamity	3.95	More Effective	0.98	4
7	Mobilization of patrol cars, ambulance and other utility vehicles to be used during calamity occurrences.	3.90	More Effective	1.05	5
2	Communication systems to be used during emergencies (cell phones, radio, etc.)	3.88	More Effective	1.05	6
9	Fair and equal distribution of resources	3.86	More Effective	1.06	7
8	Timeliness in the distribution of resources/aid to the recipients.	3.84	More Effective	1.08	8
3	Evaluation of Medical equipment	3.73	More Effective	1.10	9
1	Available equipment for First Aid (air splints, oxygen, stretcher etc.)	3.66	More Effective	1.22	10
Overall Rating		3.89	More Effective	0.89	

Table 2 presents the overall level of effectiveness of DRRP of Iloilo Province, Philippines in terms of implementation.

As shown in Table 2, the DRRP of Iloilo Province, Philippines in terms of implementation is likewise more effective with an over-all numerical mean rating of 3.90. In this area, Item 1, “Implementation of the written disaster preparedness plan had the highest mean rating (M =4 .03, SD =0.95) and item 10, “implementation of mock evacuation drills” had the lowest mean rating (M = 3.66, SD = 1.23) respectively.

The findings in table 2 is a proof that disaster preparedness as a priority area of Disaster Risk Reduction Management requires a long term action plan which should be implemented in order to provide key strategic actions that will give importance to activities revolving around community awareness and understanding; contingency planning; and conduct of local drills.

Table 3 presents the level of effectiveness of DRRP of Iloilo Province, Philippines as to resource utilization and operation.

As shown in table 3, the overall numerical mean rating of DRRMP of Iloilo, Philippines as to resource utilization and operation was 3.89 with the descriptive rating of “more effective”. Item 4 “Designation of venues to be used as evacuation centers (schools, gyms, chapels, and etc.)” and item 8 “Distribution of relief goods to the evacuees” had the highest ratings (M = 4.10,SD=0.92) and (M=4.01,SD=1.00)

respectively while item 3 “Evaluation of medical equipment” and item 1 Available equipment for first aid(air splints, oxygen, stretcher and etc.)” had the lowest ratings (M= 3.73,SD=1.10) and (M=3.66, SD= 1.22) respectively. The overall descriptive rating was “more effective”.

The findings in table 3 simply shows that DRRMC of Iloilo province, Philippines in terms of disaster preparedness was able to utilize available resources for the safety of probable victims of disaster impacts because evacuation centers were made available for evacuees of respective municipalities and barangays and relief goods were distributed to the evacuees for their subsistence during their stay in the evacuation centers.

Table 4 presents the level of effectiveness of DRRP among Congressional Districts in the Province of Iloilo, Philippines as to dissemination.

The findings in table 4 shows that the DRRPP of the first district, third district, and fourth district were “very effective” in terms of dissemination, but when they were ranked according to their numerical mean rating, the first district ranked number 1 (M=4.63) the third district ranked number 2 (M=4.44) and the fourth district ranked number 3 (M=4.24) respectively, while the fifth district ranked fourth with a mean rating of 3.66, and the last in rank was the second district with a mean rating of 3.59.

**Table 4. Level of Effectiveness of DRRMP among Congressional Districts in Iloilo Province, Philippines as to Dissemination**

Congressional District	Mean	Description	Rank
First	4.63	Very Effective	1
Third	4.44	Very Effective	2
Fourth	4.24	Very Effective	3
Fifth	3.66	More Effective	4
Second	3.59	More Effective	5
<b>Overall</b>	<b>4.02</b>	<b>More Effective</b>	

Thus, it can be implied that the first district having the highest mean rating was able to perform effectively their task of informing the people of the community regarding disaster preparedness and it can be understood that local chief executives with their LDRRMOs were actively involved in disaster management.

**Table 5. Level of Effectiveness of DRRP among Congressional Districts in Iloilo Province, Philippines as to Implementation**

Congressional District	Mean	Description	Rank
First	4.42	Very Effective	1
Fourth	4.17	Very Effective	2
Third	4.09	More Effective	3
Fifth	3.61	More Effective	4
Second	3.42	More Effective	5
<b>Overall</b>	<b>3.90</b>	<b>More Effective</b>	

Table 5 presents the level of effectiveness of DRRP among Congressional Districts in the Province of Iloilo, Philippines as to implementation.

Table 5 shows the first district was also “very effective” in the area of implementation and ranked number 1 with the highest numerical mean rating of 4.42, followed by the fourth district ranked no. 2 (M=4.17), third district ranked no. 3 (M=4.09), fifth district ranked no. 4 (M=3.61) and still the second district was the last in rank (M=3.42). As a whole the mean rating.

This finding implies that the same districts were consistently performing not only in terms of planning and dissemination but also in terms of implementing the programs and activities on disaster preparedness. Likewise, the lead implementing agencies in the local level seek partnership with other organizations and tried to increase their budget for disaster preparedness by building pleasant institutional relationships with NGOs and active private organizations. Effective

implementation is not possible without sufficient budget. is 3.90.

**Table 6. Level of Effectiveness of DRRP among Congressional Districts in Iloilo Province, Philippines as to Utilization and Operation**

Congressional District	Mean	Description	Rank
First	4.41	Very Effective	1
Fourth	4.20	More Effective	2
Third	4.16	More Effective	3
Fifth	3.56	More Effective	4
Second	3.39	Effective	5
<b>Overall</b>	<b>3.89</b>	<b>More Effective</b>	

Table 6 presents the level of effectiveness of DRRP among Congressional Districts in the Province of Iloilo, Philippines as to utilization and operation.

Table 6 shows the first district was also “very effective” in the area of resource utilization and operation and ranked number 1 with the highest numerical mean rating of 4.41, followed by the fourth district (M= 4.20) were consistently “more effective” in terms of resource utilization and operation and the second district still has the lowest rating and eventually the last in rank (M= 3.39).

This finding implies that the first and fourth districts were able to use their available resources to serve the needs of the victims of the calamities and for the operability of their respective disaster preparedness program.

Table 7 presents the overall level of effectiveness of DRRP among Congressional Districts in the Province of Iloilo, Philippines as to dissemination, implementation and utilization and operation.

**Table 7. Overall Level of Effectiveness of DRRP among Congressional Districts in Iloilo Province, Philippines as to Dissemination, Implementation and Utilization and Operation**

Congressional District	Mean	Description	Rank
First	4.48	Very Effective	1
Third	4.22	Very Effective	2
Fourth	4.20	More Effective	3
Fifth	3.61	More Effective	4
Second	3.46	More Effective	5
<b>Overall</b>	<b>3.93</b>	<b>More Effective</b>	

Table 7 shows that among the five congressional districts in Iloilo Province, Philippines, the first

district ranked number 1 (M=4.48), third district ranked number 2 (M= 4.22), and fourth district as number 3 (M= 4.20) respectively, which implies that the 3 district performed successfully the task of disaster preparedness which eventually had reduced the damages incurred on life and properties of the people during calamities in their respective district. On the other hand, the fifth district ranked number 4(M= 3.61) and the second district was the last in rank (M=3.46) with a descriptive rating of “more effective”, which implies that the DRRMC of the second and fifth district also performed their task on disaster preparedness despite of the fact that other districts surpassed their performance for some reasons.

**Table 8. Level of Effectiveness of DRRPP among 10 selected municipalities in Iloilo province, Philippines as to Dissemination**

Municipalities	Mean	Description	Rank
Town B	4.99	Very Effective	1
Town E	4.47	Very Effective	2
Town F	4.43	Very Effective	3
Town H	4.43	Very Effective	4
Town A	4.38	Very Effective	5
Town I	3.82	More Effective	6
Town D	3.64	More Effective	7
Town J	3.52	More Effective	8
Town C	3.47	More Effective	9
Town G	3.26	Effective	10
<b>Total</b>	<b>4.02</b>	<b>More Effective</b>	

Table 8 presents the level of effectiveness of DRRPP of the 10 selected municipalities in the Province of Iloilo, Philippines in terms of dissemination.

As shown in table 8, Town B, rank 1 (M= 4.99), E rank 2 (M=4.47), F rank 3 (M=4.43), H rank 4(M=4.43), and A rank 5 (M=4.38) respectively had a descriptive rating of “very effective” in the area of dissemination wherein Town B got the highest rating and ranked number 1 among the ten selected municipalities from the five congressional districts in Iloilo Province.

The findings simply imply that the towns whose DRRPP was able to established a high level of disaster awareness among people in the community especially those households/residents in hazard prone areas, that is why theywere rated “very effective” .Further, “these towns as observed, were led by active municipal chief

executives who are very concern with the welfare of their constituents, of good reputation, and leadership influence to their MDRRMCOs and barangay official.

**Table 9. Level of Effectiveness of DRRPP among 10 selected municipalities in Iloilo province, Philippines as to Implementation**

Municipalities	Mean	Description	Rank
Town B	4.93	Very Effective	1
Town H	4.36	Very Effective	2
Town E	4.18	More Effective	3
Town A	4.06	More Effective	4
Town F	4.04	More Effective	5
Town I	3.76	More Effective	6
Town J	3.47	More Effective	7
Town D	3.47	More Effective	8
Town C	3.31	Effective	9
Town G	3.21	Effective	10
<b>Total</b>	<b>3.90</b>	<b>More Effective</b>	

Table 9 presents the level of effectiveness of DRRPP of the 10 selected municipalities in the Province of Iloilo, Philippines in terms of implementation. Results reveal that Towns B(M= 4.93)and H(M= 4.36), were “very effective” in the implementation of their respective DRRPP, and ranked first and second respectively in the area of implementation of their DRRPP.

On the other hand , Towns E (M=4.18),ranked third, A (M=4.06), ranked fourth, F (M= 4.04) fifth, I (M=3.76) sixth, J (M= 3.47) seventh, D(M= 3.47) eighth, and C (M=3.31) ninth, were rated as “more effective” in terms of implementation respectively. The last in rank was Town G (M= 3.21) with a descriptive rating of “effective”.

This findings implies that the important components to ensure the quality and effectiveness of disaster preparedness programs in terms of implementation such as; leadership structure, institutionalized planning and budgeting and training existed in the municipalities with highest ratings and those towns who failed to work hard to meet the criteria for an effective DRRPP were given a lower descriptive ratings (DILG Memorandum Circular No. 2012-79).

Table 10 presents the level of effectiveness of DRRPP of the 10 selected municipalities in the Province of Iloilo, Philippines in terms of Resource Utilization and Operation.

**Table 10. Level of Effectiveness of DRRPP among 10 selected municipalities in Iloilo province, Philippines as to Resource Utilization and Operation**

Municipalities	Mean	Description	Rank
Town B	4.87	Very Effective	1
Town H	4.37	Very Effective	2
Town E	4.32	Very Effective	3
Town A	4.10	More Effective	4
Town F	4.08	More Effective	5
Town I	3.82	More Effective	6
Town D	3.49	More Effective	7
Town J	3.34	Effective	8
Town G	3.27	Effective	9
Town C	3.13	Effective	10
Total	3.89	More Effective	

As it appeared in Table 10, Town B with a mean rating of 4.87, Town H with a mean rating of 4.37, and Town E with a mean rating of 4.32, ranked first, second, and third respectively in the area of resource utilization and operation and garnered a descriptive rating of “very effective”.

Whereas, Towns A ranked fourth (M=4.10), F ranked fifth (M= 4.08), I ranked sixth (M=3.82), D ranked seventh (M = 3.49) respectively with a descriptive rating of “more effective”.

Towns J ranked eighth (M= 3.34) G ranked ninth (M=3.27) and C ranked tenth (M= 3.13) respectively with a descriptive rating of “effective” only.

These findings are aligned with the provision R.A. 10121 on the utilization of Local Risk Reduction Management Fund, the GAA fund and other resources of the municipal government to be used for the operation of their respective DRRPP especially for medical equipment and facilities for the on time delivery and distribution of goods and services to the evacuees during typhoon, flood and other emergencies.

Table 11 presents the overall level of effectiveness of DRRPP of the 10 selected municipalities in the Province of Iloilo, Philippines in terms of dissemination, implementation and resource utilization and operation.

Across municipalities, Town B rank first with an over-all mean rating of 4.93, Town H ranked second with an overall mean rating of 4.38, Town E ranked third with an overall mean rating of 4.31 respectively had a descriptive rating of “very effective” which implies that they all had a very effective Disaster Risk Reduction Preparedness Program and the DRRMC

members and officers had a very effective and efficient performance in disaster management.

As it appeared in table 11, Town A ranked number 4 with an overall mean rating of 4.17, Town F rank number 5 with an overall mean rating of 4.17, Town I ranked number 6 with an overall mean rating of 3.80, Town D ranked number 7 with an overall mean rating of 3.53, Town J ranked number 8 with an overall mean rating of 3.45, Town G ranked number 9 with an overall mean rating of 3.31 with a descriptive rating of “more effective” respectively, and Town C ranked number 10 or the last in rank with an overall mean rating of 3.25 and the only town with a descriptive rating of “effective”. It means that at least Town C has an existing DRRPP, but maybe it has exerted lesser effort in fulfilling other tasks in the areas of dissemination, implementation, and resource utilization and operation which made them as the last in rank among the 10 municipalities in Iloilo province, Philippines.

**Table 11. Overall Level of Effectiveness of DRRPP among 10 selected municipalities in Iloilo province, Philippines as to dissemination, implementation and resource utilization and operation**

Municipalities	Mean	Description	Rank
Town B	4.93	Very Effective	1
Town H	4.38	Very Effective	2
Town E	4.31	Very Effective	3
Town A	4.17	More Effective	4
Town F	4.17	More Effective	5
Town I	3.8	More Effective	6
Town D	3.53	More Effective	7
Town J	3.45	More Effective	8
Town G	3.31	Effective	9
Town C	3.25	Effective	10
<b>Total</b>	<b>3.93</b>	<b>More Effective</b>	

## CONCLUSIONS

Disaster risk reduction preparedness of Iloilo Province was more effective because it was able to increase the awareness of the people in the province of Iloilo, Philippines about the possible impact of Typhoon Yolanda last November 8, 2013. Damages in life and properties would have been greater if without the effort of PRDDMC to implement risk reduction preparedness strategies among the municipalities in the province of Iloilo.

Active leadership of municipal mayors with their designated MDRRMC officers and members



contributed to the success of disaster risk reduction preparedness programs in Iloilo Province, Philippines. The LGUs especially the Barangay officials who were the front liners in the task of dissemination, implementation, and resource utilization and operation of disaster preparedness played an important role during the impact of Typhoon Yolanda.

Political issues influenced the timeliness and fairness of distribution and delivery of disaster aid / help to evacuees and other beneficiaries. Goods and services were delivered late to barangays whose Barangay captains were not in good terms with their municipal mayors. Relatives and friends of municipal and Barangay officials who were not affected received assistance while victims did not.

Availability of funds for disaster risk reduction preparedness program of municipalities were limited only on relief goods for the evacuees. Very minimal amount was spent for other preparedness activities and needs like information education, evacuation drills on barangays, equipments and facilities for emergencies and for evacuation centers.

Proper monitoring, evaluation and reporting of disaster preparedness resource utilization and operation and distribution of disaster assistance to beneficiaries was not conducted that is why a lot of conflict happened in terms of utilization of donations and emergency assistance for victim families.

The ten(10) selected municipalities from the five (5) congressional districts in Iloilo province as evaluated by municipal officials, school officials, barangay officials and evacuees, revealed significant difference in the level of effectiveness of their DRRPP in terms of dissemination, implementation, and resource utilization and operation, therefore the hypothesis which states that there is no significant difference was statistically rejected.

The DRRPP of the five (5) congressional districts in the province of Iloilo as evaluated by municipal officials, school officials, Barangay officials, and evacuees, revealed significant difference in their level of effectiveness in the areas of dissemination, implementation, and resource utilization and operation, therefore the hypothesis which states that there is no significant difference was statistically rejected.

#### **RECOMMENDATIONS**

In the light of the research findings and conclusions, the following recommendations were given:

Since it was found out that there are municipalities and districts who were very effective in all aspects of their disaster risk reduction management in terms of preparedness, it is recommended that municipal disaster risk reduction management council officers and members should conduct a review of their DRRPP and enhance the program by adopting flexible intervention activities in order to improve the different aspects of disaster preparedness.

Municipal executives can initiate improvement in their respective DRRM through active involvement and immersion on disaster preparedness activities with the people of the community and most of all by learning from very effective disaster preparedness programs of other municipalities.

The municipal mayors of Iloilo Province should work hard to acquire a plantilla position for MDRRMO so that there will be somebody to focus on disaster management responsibilities of the council. It will also serve as motivation for MDRRMO to perform better and have opportunities to develop expertise in the field of disaster management.

It was observed and confirmed that only 10% of the municipal risk reduction council was able to formally organize a governing structure of Barangay risk reduction council, it is therefore recommended that a Barangay disaster risk reduction management council be organized as mandated by Republic Act 10121, in this way disaster preparedness will be facilitated and be properly coordinated from the provincial level down to the Barangay level.

Evacuation drills and simulation activities and other disaster trainings must be conducted not only among offices and schools but also among households in hazard prone barangays of every municipality.

Since sufficient / funding resources is a key factor in the success of disaster management, it is therefore recommended that LDRRMM of poor and disaster prone LGUs should be given priority by the national and provincial government during the distribution of disaster aid / help from private and foreign donors in order that their LDRRMF will be augmented.

In addition, municipal disaster risk reduction management council are encourage to acquire partnership with NGOs in order to increase support for disaster victims ,and most importantly ,political discrimination must not be a basis in giving disaster assistance.

Involvement of DepEd and CHED supervised schools is likewise recommended for them to help in

disaster education among children, parents, and members of the community. Teachers can help provide psychosocial preparedness among members of the community before disaster impacts and psychosocial care for recovery from trauma of adverse disaster experience among victims of calamities.

Community-based disaster practices and programs should be participated by people of barangays and year-round sustainable disaster intervention activities should be initiated in order to insure a continuous improvement of disaster management strategies and policies for the people to internalize and that they can act instantly on their own initiative during emergency situations.

Further studies about disaster risk reduction management is encouraged among future researchers in order to improve and broaden disaster management knowledge and skills.

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