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**Republic of the Philippines
Region VII
Province of Bohol**

**Provincial Government of Bohol
(PGBh)**

Provincial Disaster Risk Reduction Management Plan (PDRRMP)

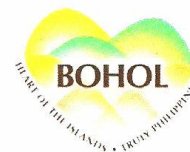
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Republic of the Philippines
PROVINCE OF BOHOL
Tagbilaran City



OFFICE OF THE GOVERNOR

23 May 2014



At the outset, allow me to congratulate and thank all the members of the Provincial Disaster Risk Reduction and Management Council (PDRRMC) and their representatives who actively participated in the Local Disaster Risk Reduction and Management Planning Workshop held at Panda Tea Garden, Tagbilaran City on 12 – 14 May 2014 for painstakingly crafting the first-ever participatory Provincial DRRM Plan, with assistance from the United Nations Development Programme (UNDP).

With this PDRRM Plan, which was presented to and approved by the PDRRMC last May 23, 2014 and endorsed further to the Sangguniang Panlalawigan for adoption, Bohol has now a road map towards disaster resiliency following its credo to BUILD BACK BOHOL BETTER.

We were all shocked by the tragic 7.2M that jolted our island province last year and saddened with the magnitude of the disaster we were and still are facing. The experience has made us learn and appreciate the value of disaster consciousness and disaster risk management. The disaster has made us increasingly aware of how vulnerable our island province not only to earthquakes but other multi-hazards.

Now we have a guide to make us more prepared to manage risks and hazards. We have a PDRRM Plan to prevent and mitigate the effects of disasters. We have a road map for effective disaster response and to rise up from the effects of a disaster through a comprehensive disaster rehabilitation and recovery plan.

I enjoin all to work hand in hand and demonstrate the Boholano resilient spirit for cooperation and collaboration so that we can productively and successfully implement this PDRRM Plan.

Good luck and God bless us all!

Sincerely yours,

ATTY. EDGAR M. CHATTO
Provincial Governor

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Executive Summary

The Philippines is exposed to natural and human-induced hazards due to its geography and geology as well as the presence of internal disputes in some areas. Between 1990 and 2006, the annual direct damages caused by disasters amount to PhP20 billion every year or roughly 0.5% of the GDP on the average, according to the National Disaster Risk Reduction and Management Council (NDRRMC). However, the losses caused by tropical storm Ondoy and typhoon Pepeng in 2009 is estimated to be about 2.7% of the GDP that year.

Hazards – both natural and human induced – happen due to geological, meteorological, hydrological, oceanic, biological, and technological sources, sometimes acting in combination. Hazards are of different intensities for different areas and levels of vulnerability, as determined from historical evidence and scientific analysis. Disasters can be avoided and mitigated

Recorded history tells us that the Filipino people have borne loss of lives, injury and other health impacts, property damage, loss of livelihoods and services, social and economic disruption or environmental damage, and the negative effects have even risen. Our communities, towns and cities have become more susceptible to the damaging effects of hazards.

Due to its geography and geology as an island, Bohol Province is likewise exposed to numerous natural and human-induced hazards in the past years. A major event that has put Bohol Province in the disaster map was the 7.2 magnitude (Ms) earthquake of tectonic origin that occurred in the province on October 15, 2013. The disastrous event, which is now called

“The Great Bohol Earthquake of 2013,” as this disaster has now been called, has caused extensive damages to service infrastructures, government facilities as well as centuries-old religious structures declared as national cultural treasures. Thousands of residential homes totally collapsed and several thousand others were partially destroyed. Bridges and access roads sustained considerable damages. Since then, Bohol gained a lot of attention and momentum in the area of disaster risk reduction.

The earthquake event, though disastrous and devastation, has brought a deep sense of awareness and realization to the Boholanos led by the indefatigable Governor Edgar M. Chatto to work together to “build back Bohol better” and to prepare a local disaster risk reduction and management plan for the Boholano communities to be more resilient and prepared for whatever disasters.

Bohol, being an island province, is vulnerable to natural disasters, e.g. drought, storm surges, tsunami, flooding, earthquake, tropical cyclones and landslide. As such, the province has been incurring significant economic and environmental damages from natural and man-made disasters estimated at an average annual direct damage at P14.0 million reaching a total damage of almost P 69 million from 2004-2008 (Table 27-Annex 1 of the PDPFP).

Notable calamities that hit the province include earthquakes, flash floods in Clarin, Tubigon, Loon and Calape; landslides in Balilihan, Loboc, Alicia, Cortes, Jagna, Sierra Bullones; severe rains in Getafe and typhoons “Frank” and “Lando” that left significant damage to Bohol’s agricultural assets. Manmade calamities were also recorded during the period ranging from fire incidents, diarrhoea outbreak and sea mishaps.

From 2006-2008, there were a total of 110 earthquakes, of which only 23% were perceptible and felt by the people in the affected location. Most of the quakes (77%) were not perceptible.

From October 2004 to December 2013, the Bohol Office of Civil Defence reported a total of 72 disaster incidence in the province with a total damage cost of P68.973 million. The geologic and hydro-meteorological disasters that hit Bohol were flash floods, landslide, and earthquake.

The risk and vulnerability assessment report estimates that there are 112 barangays in Bohol which are susceptible to flowing. As far as rain-induced landslides are concerned, there are about 298 barangays in Bohol which are highly susceptibility to rain-induced landslides, while 586 barangays have medium susceptibility and 812 barangay with low susceptibility. In terms of storm surges or big waves, a total of 316 barangays in Bohol are susceptible.

Geologic hazards result from geologic processes acting on or beneath the earth’s surface. These include movement of plate in the earth’s crust or from local concentration of heat and are source of hazards to people and their natural and built-up environment on the earth’s surface.

Bohol is prone to geologic hazards like ground shaking, liquefaction, earthquake- induced land slide and tsunami because of the presence of East Bohol Fault and another fault located in the Bohol Sea going to Mindanao Sea facing the southern part of Bohol. The presence of Negros Trench and PFZ Central Leyte Fault may also contribute to the generation of earthquake.

These disaster risks and vulnerability all the more point to the need for Bohol Province to prepare a provincial disaster risk reduction and management plan.

The PDRRM Plan is aligned with the goals and objectives of the National Disaster Risk Reduction and Management Plan (NDRRMP). It has four thematic areas or components to include:

1. **Disaster Prevention and Mitigation** This component provides key strategic actions that give importance to activities revolving around hazards evaluation and mitigation, vulnerability analyses, identification of hazard-prone areas and mainstreaming DRRM into development plans.
2. **Disaster Preparedness** This component pertains to the key strategic actions that give importance to activities revolving around community awareness and understanding; contingency planning; conduct of local drills and the development of a national disaster response plan.
3. **Disaster Response** This component gives importance to activities during the actual disaster response operations from needs assessment to search and rescue to relief operations to early recovery activities are emphasized.
4. **Disaster Rehabilitation and Recovery** This component covers areas like employment and livelihoods, infrastructure and lifeline facilities, housing and resettlement, among others.

The Bohol PDRRM Plan envisions a ***“disaster-resilient, climate change adaptive and safe Boholano community with a strong spirit of stakeholder commitment guided by effective local governance ensuring social protection, economic security and socially-inclusive disaster management towards sustainable development.”***

The objectives of the Provincial Disaster Risk Reduction Management Plan are best summarized as follows:

- Identify the multi-hazards affecting Bohol Province;
- Review the historical timeline in regard to the calamities that occurred in Bohol for the past five years and beyond;
- Review the recent Bohol Risk and Vulnerability Assessment results and the hazard maps from various sources;
- Assess Provincial Government’s strengths and weaknesses in DRRM;
- Craft DRRM Vision, Mission Statements including Goals and Strategies, and 3-Year Action Plan with Budget Estimates;
- Develop local policies specific to implementing the DRRM Plan; and
- Develop Monitoring and Evaluation Framework, Sustainability and Communication Plans

PDRRMC participants during the Local Disaster Risk Reduction Management Planning workshop saw that the key recommendations to attain a vision of building back Bohol better include the following key and basic DRRM reforms:

1. Good, accessible and accurate database system from data capture, to data processing and data storage and retrieval;
2. A legislated, well-supported and financed Provincial Disaster Risk Reduction Management Plan at all level that is monitored and assessed periodically;
3. A functional, financially supported, legislated and well-resourced / staffed Provincial Disaster Risk Reduction Management Office at all levels;
4. Pervasive disaster consciousness, awareness, prevention, preparedness and response institutionalized at the community level and supported by the civil society and private / business sector; and
5. A DRRM Governance Training Center that continually builds capacities of local governments and communities to plan, prevent, mitigate, prepare and effectively respond to disasters and undertake post disaster rehabilitation and recovery actions.

Acronyms and Abbreviations

BLGU	Barangay Local Government Unit
CCA	Climate Change Adaptation
CCC	Climate Change Commission
CDRRMC	City Disaster Risk Reduction and Management Council
CHED	Commission on Higher Education
CLUP	Comprehensive Land Use Plan
DA	Department of Agriculture
DANA	Damage and Needs Assessment
DAR	Department of Agrarian Reform
DBM	Department of Budget and Management
DENR	Department of Environment and Natural Resources
DepEd	Department of Education
DILG	Department of Interior and Local Government
DOE	Department of Energy
DOF	Department of Finance
DOH	Department of Health
DOLE	Department of Labor and Employment
DOST	Department of Science and Technology
DPWH	Department of Public Works and Highways
DRR	Disaster Risk Reduction
DRR-CCA	Disaster Risk Reduction - Climate Change Adaptation
DRRM	Disaster Risk Reduction and Management
DSWD	Department of Social Welfare and Development
DTI	Department of Trade and Industry
GDP	Gross Domestic Product
HFA	Hyogo Framework of Action
IEC	Information, Education and Communication
LDRRMF	Local Disaster Risk Reduction and Management Fund
LDRRMO	Local Disaster Risk Reduction and Management Office
LGUs	Local Government Units
MDG	Millennium Development Goals
MGB	Mines and Geosciences Bureau
MDRRMC	Municipal Disaster Risk Reduction and Management Council
MLGU	Municipal Local Government Unit
NCCAP	National Climate Change Action Plan
NDRRMC	National Disaster Risk Reduction and Management Council
NDRRMF	National Disaster Risk Reduction and Management Fund
NDRRMP	National Disaster Risk Reduction and Management Plan
NGO	Non-Government Organization
OPA	Office of the Provincial Agriculturist
OPSWD	Office of the Provincial Social Welfare and Development
OPV	Office of the Provincial Veterinarian
PAGASA	Philippine Atmospheric Geophysical and Astronomical Services Administration

PAR	Philippine Area of Responsibility
PDC	Provincial Development Council
PDP	Philippine Development Plan
PDRRMC	Provincial Disaster Risk Reduction and Management Council
PDRRMP	Provincial Disaster Risk Reduction and Management Plan
PDPFP	Provincial Development Plan and Physical Framework Plan
PENRO	Provincial Environment and Natural Resources Office
PGBh	Provincial Government of Bohol
PHIVOLCS	Philippine Institute of Volcanology and Seismology
PIA	Philippine Information Agency
PLGU	Provincial Local Government Unit
PNP	Philippine National Police
PPDC	Provincial Planning and Development Coordinator
PPDO	Provincial Planning and Development Office
PPP	Public-Private Partnership
RDRRMC	Regional Disaster Risk Reduction and Management Council
SAR	Search and Rescue
TaRSIER 117	Telephone and Radio System Integrated Emergency Response
TESDA	Technical Education and Skills Development Authority
UNDP	United Nations Development Fund

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1.0 Introduction

Background

The Philippines is exposed to natural and human-induced hazards due to its geography and geology as well as the presence of internal disputes in some areas. Between 1990 and 2006, the annual direct damages caused by disasters amount to PhP20 billion every year or roughly 0.5% of the GDP on the average, according to the National Disaster Risk Reduction and Management Council (NDRRMC). However, the losses caused by tropical storm Ondoy and typhoon Pepeng in 2009 is estimated to be about 2.7% of the GDP that year. These are compelling reasons why the Philippines should adopt disaster risk reduction and management (DRRM) and climate change adaptation (CCA).¹

Hazards – both natural and human induced – happen due to geological, meteorological, hydrological, oceanic, biological, and technological sources, sometimes acting in combination. Hazards are of different intensities for different areas and levels of vulnerability, as determined from historical evidence and scientific analysis. Disasters can be avoided and mitigated

Recorded history tells us that the Filipino people have borne loss of lives, injury and other health impacts, property damage, loss of livelihoods and services, social and economic disruption or environmental damage, and the negative effects have even risen. Our communities, towns and cities have become more susceptible to the damaging effects of hazards.

Due to its geography and geology as an island, Bohol Province is likewise exposed to numerous natural and human-induced hazards in the past years. A major event that has put Bohol Province in the disaster map was the 7.2 magnitude (Ms) earthquake of tectonic origin that occurred in the province on October 15, 2013. The disastrous event, which is now called “The Great Bohol Earthquake of 2013” has caused extensive damages to service infrastructures, government facilities as well as centuries-old religious structures declared as national cultural treasures. Thousands of residential homes totally collapsed and several thousand others were partially destroyed. Bridges and access roads sustained considerable damages. Since then, Bohol gained a lot of attention and momentum in the area of disaster risk reduction.

The earthquake event, though disastrous and devastation, has brought a deep sense of awareness and realization to the Boholanos led by the indefatigable Governor Edgar M. Chatto to work together to “build back Bohol better” and to prepare a plan Boholano

¹ Primer of the National Disaster Risk Reduction Management Plan, 2011-2018; p1

communities to be more disaster resilient. Although the Provincial Government of Bohol (PGBh) has already prepared what was then called a Provincial Disaster Risk Reduction Management (PDRRM) Plan, the 7.2M earthquake experience has inspired provincial leaders and stakeholders, especially the Provincial Disaster Risk Reduction Management Council (PDRRMC), to revisit the existing plan and make this more responsive to the risk and vulnerabilities of Bohol to multi hazards and disasters.

The enactment of Republic Act 10121 otherwise known as the Philippine Disaster Risk Reduction and Management Act of 2010 has laid the basis for a paradigm shift from just disaster preparedness and response to disaster risk reduction and management (DRRM). The National Disaster Risk Reduction Management Plan that was adopted to operationalize RA 10121 became the basis and main reference for the preparation of the Provincial Disaster Risk Reduction Management Plan.

The United Nations Development Programme (UNDP) has provided technical assistance to the Provincial Government of Bohol for increased disaster preparedness, resiliency and disaster risk reduction management to cope with emergency response during disasters through the preparation of the Provincial Disaster Risk Reduction Management Plan (PDRRMP) that is aligned with the National Risk Reduction Management Plan (NDRRMP) as well as with Provincial Development Plan and Physical Framework Plan (PDPFP).

Plan Objectives

The objectives of the Provincial Disaster Risk Reduction Management Plan are best summarized as follows:

- Identify the multi-hazards affecting Bohol Province;
- Review the historical timeline in regard to the calamities that occurred in Bohol for the past five years and beyond;
- Review the recent Bohol Risk and Vulnerability Assessment results and the hazard maps from various sources;
- Assess Provincial Government's strengths and weaknesses in DRRM;
- Craft DRRM Vision, Mission Statements including Goals and Strategies, and 3-Year Action Plan with Budget Estimates;
- Develop local policies specific to implementing the DRRM Plan; and
- Develop Monitoring and Evaluation Framework, Sustainability and Communication Plans

A three-day planning activity participated by the Provincial Disaster Risk Reduction Management Council was done last May 12 – 14, 2014. Workshop Documentation is attached in **Annex J**.

Legal Framework

The major references in the preparation of the Plan include the following:

- National DRRM Plan based on RA 10121 of 2010 that provides a legal basis for policies, plans and programs to deal with disasters;
- The Philippine Disaster Management System from the Office of Civil Defence – National Disaster Coordinating Council (OCD-NDCC)
- Bohol Provincial Disaster Risk Reduction Management Plan of 2012 was approved in December 2012 in compliance of the directive from the Department of Interior and Local Government (DILG).
- Executive Order No 40, series of 2012, reconstituting and strengthening the PDRRMC
- JMC (DILG, NDRRMC, DBM, CSC), 2014-01, dated April 4, 2014 providing guidelines for the creation of Local DRRM and Barangay DRRM Committees at all LGU levels
- Work and Financial Plan and Request for Budget Allocations for 2014 for the implementation of the DRRM Plan at the Governor's Office

2.0 Risk Profile and the State of the DRRM of the LGU

The Bohol Provincial Development and Physical Framework Plan (PDPFP, Volume 1 devotes two sections that describe the hazards and disasters faced by the island province. Section 3.2.5 discusses on areas prone to natural hazards) and Section 3.2.6 describes disaster risk management.

The island province of Bohol is predominantly a sedimentary island. It developed from the magmatic, tectonic mechanism that resulted from the under thrusting of the southwest Philippine Plate east of Samar and Surigao⁴. Ongoing erosion, transport and sedimentation continue to accumulate marine and terrestrial deposits in the Bohol basin.

Population growth and economic activities have created pressures on Bohol's environment and natural resources. High demand for physical infrastructure like roads, water systems and power, settlement areas as well as greater demand for goods and services are expected to add pressure on its environment that are looked upon as major necessities for the province's development but often create environmental stress. Such developments in the province need to pro-actively integrate a mechanism to prevent adverse impact on the critical resources and exposure of people and property to danger. Environmentally constrained areas are prone to natural hazards, severe erosion or more specifically, hydrological and geological produced changes.²

Understanding Basic DRRM Terms

A thorough risk analysis, vulnerability assessment as well as evaluation of the disaster risk reduction management capacity of the provincial government entail understanding of major terms related to disaster risk reduction management. These basic concepts³ are discussed below.

- **Hazards** An event that is either natural or man-made which brings damage to people, property, livelihood or temporary or permanent cessation to social and economic life or environmental destruction. This can result to a disaster. Examples: typhoon, earthquakes, floods, flash floods, landslide, volcano eruption, storm surge, tsunami, fire, wars, civil unrest.

² Provincial Development and Physical Framework Plan (PDPFP), Volume 1, p29

³ Community-Based Disaster Risk Management, *"Pagsasanay sa Disaster Preparedness at Contingency Planning,"* ACCORD Project 2007, pp 23-45.

Hazards could be alone or a solo occurrence. Hazards can also be successive or brought about by other hazards, e.g. Japan **earthquake** brought a fierce **tsunami**; or earthquakes bring landslide; or rains/ storms bring flooding. Hazards can be occurring as combination – typhoon/storm brings heavy rains and brings landslide or flooding.

- **Disasters** Results or effects of a HAZARD to a “vulnerable” community or to a poor community whose capacity and resources are not enough to meet the hazard. Disasters can also result from massive destruction to lives and property (i.e. Yolanda), social and economic life and environmental destruction putting a temporary stop to day-to-day life.

Not all hazards are disastrous. Hazards become disasters, if

- ✓ There is a massive effect; more populace are affected;
 - ✓ They affect a vulnerable community whose day-to-day social and economic life will temporarily stop
 - ✓ The community does not have adequate capacity and enough resources to manage the extent of damage of the hazard
 - ✓ “Disaster-consciousness,” which means the knowledge of people on disaster is lower /lesser than the actual or natural phenomenon or event and disaster preparedness is low.
- **Capacity** Collective effort and resources of people, families and communities, including government to work and collaborate to mitigate the effects of disasters, prepare for the emergency, and recover from the effect of the disaster. Resources increase the capacity of a community to deal with and manage the resources. Resources are anything or any event that has something to do with physical, social, livelihood, usual practices, abilities, knowledge, governance, institutions, customs and views/values of people and local communities.

These examples below are helpful to illustrate capacity:

- a) People who have stable jobs are better able to rise up and recover from a disaster than an ordinary daily-wager (**more resources and capacity**)
- b) A community that has the leadership, resources and cooperation by all is more able to mobilize for community response and recover from a disaster (**capacity and resources**)
- c) Strong and well-founded houses are not easily carried away by typhoons bringing strong winds
- d) Children who are healthy and well-nourished do not easily get sick when brought to evacuation centers than those who are malnourished and therefore vulnerable for illnesses during evacuations

- e) People who have more skills have bigger chances to find jobs and alternative work when disaster hits their communities

It is therefore evident that when people and local communities increase their capacity and resources to reduce risks and manage disasters, they become more disaster-prepared and less vulnerable to the effects of disasters and hazards.

- **Vulnerability** This refers to the tendency and chance that the effect of a hazard be more felt, intense and worst, uncontrollable in the community. Vulnerability includes set of conditions resulting from physical, social, economic, and environmental factors which increase susceptibility to losses from the impact of natural or human human-made hazards. Vulnerability can take a physical, social and economic form. Vulnerability puts people and communities in a situation where the effects (disaster) of a hazard will be greater.

Vulnerability puts local communities in a WORSENER condition or situation (compared to before the disaster) due to or at the time of the disaster and will continue to be worst even after the disaster.

- **Risk** It is the probability of harmful consequences or expected losses, resulting from interaction between natural or human human-made hazards and vulnerable conditions. Severity of the hazard increases the disaster risk.
- **Disaster Risk Management** This is a systematic process of using administrative decisions, organization, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activities, including structural and non-structural measures to avoid (prevention) or to limit (mitigation and preparedness) adverse effects of hazards.⁴

Risk Profile

Minor and major fault lines are evident on the island as shown by terraced escarpments occurring in its southern and central parts. The terraced escarpments in the Ilihan Formation as well as the graben at the Anda Peninsula are manifestations of these faults. Steep escarpments notably in Loon, Tagbilaran and in Anda Peninsula further prove vertical upliftment caused by tectonics.

⁴ Philippine Disaster Risk Management System, Office of Civil Defence (OCD) and National Disaster Coordinating Council (NDCC), PowerPoint Slide No. 42.

Prior to the October 15, 2013 7.2M earthquake in the province, earthquakes have been felt in Bohol but only an average of one perceptible shock is reported each year. Major faults usually trend towards the northeast. Three earthquakes with a magnitude above 4 of the Richter scale (highest was 4.7Ms which occurred in June) were reported in 1998 in the province of Bohol.

There are compelling and urgent reasons why the Province of Bohol should adopt disaster risk reduction and management (DRRM) and climate change adaptation (CCA). It is very obvious from the October 15, 2013 7.2 M earthquakes have jolted not only the island but also its leaders on the level of disaster risks that the province is faced with. It was dawned on the Boholanos that the province is exposed to disasters and hazards due to its geography and geology.

Environmental risk exists if an area is exposed to certain levels of danger because of its location, surrounding features or proximity to certain objects or activities such as the effects of natural phenomena like hurricanes, earthquakes, volcanoes landslides, flooding and tsunami which expose the lives and properties of people to undue harm with profound effect to ecological systems. Inappropriate development also leads to greater disaster risks.

The poor location of settlements, economic activities and infrastructures, inappropriate use of resources and rapid urban growth exert pressure resulting to further degradation to the environment and spawn more vulnerable communities. In the event of calamities due to natural hazards, vulnerable communities may not be able to cope and hence, will result in a disaster which will eventually lead to risk accumulation and bigger losses when disaster occurs in the area.

Bohol, being an island province, is vulnerable to natural disasters, e.g. drought, storm surges, tsunami, flooding, earthquake, tropical cyclones and landslide. As such, the province has been incurring significant economic and environmental damages from natural and man-made disasters estimated at an average annual direct damage at P14.0 million reaching a total damage of almost P 69 million from 2004-2008 (Table 27-Annex 1 of the PDPFP).

Notable calamities that hit the province include earthquakes, flash floods in Clarin, Tubigon, Loon and Calape; landslides in Balilihan, Loboc, Alicia, Cortes, Jagna, Sierra Bullones; severe rains in Getafe and typhoons “Frank” and “Lando” that left significant damage to Bohol’s agricultural assets. Manmade calamities were also recorded during the period ranging from fire incidents, diarrhoea outbreak and sea mishaps.

From 2006-2008, there were a total of 110 earthquakes, of which only 23% were perceptible and felt by the people in the affected location. Most of the quakes (77%) were not perceptible.

From October 2004 to December 2013, the Bohol Office of Civil Defence reported a total of 72 disaster incidence in the province with a total damage cost of P68.973 million. The geologic and hydro-meteorological disasters that hit Bohol were flash floods, landslide, and earthquake.

Table 1 Summary of Disaster Incidences in the Province of Bohol

Date/Year	Nature of Event (natural/man-made)	No. of Occur- rences	Location	Cost of Damage (million pesos)
October 2004	Flashflood	1	Jagna	Php 0.100
January to Dec. 2005	Heavy rains, landslide, fire incidents, typhoon, earthquake	7	Jagna, Getafe, Calape, Tagbilaran City	Php 15.048
January to Dec. 2006	Disease outbreak (diarrhea), lightning incidence, landslide, sea mishap, capsized vessel, tidal waves, land cracks, typhoons	18	Loon, Pilar, Tubigon, Ubay, Valencia, Loay, Panglao, Jagna, Candijay, Bien Unido, Getafe, Cortes, Alicia, Sierra Bullones, Batuan	Php 16.450
January to Dec. 2007	Landslide, fire incidents, whirlwind (alimpus), lightning incidents, poisoning, drowning, earthquake, capsized motor blanca, typhoon	18	Tagbilaran City, Jagna, Pres. Garcia, Talibon, Getafe, Trinidad, Pilar, Tubigon, Valencia, Ubay, Loon, Loboc, Loay, Candijay	Php 6.547
January to Dec. 2008	Flashflood, fire incident, landslide, typhoon, capsized vessel/fishing boat, airplane crash	28	Clarin, Tubigon, Tagbilaran City, Cortes, Buenavista, Panglao, Balilihan, Pilar, Talibon, Loon, Lila, Getafe, Dimiao, Loboc, Pres. CPG, Guindulman, Inabanga	Php 30.828
March 2010-October 2013	Earthquake	6	17 hardest municipalities: North and south-western part of Bohol; Maribojoc, Loon, Tubigon, Calape, Clarin Inabanga, Buenavista, Danao, Sagbayan, Catigbian, San Isidro, Antequera, Balilihan and Cortes; Southern municipalities of	7.8 Billions

Date/Year	Nature of Event (natural/man-made)	No. of Occurrences	Location	Cost of Damage (million pesos)
			Loboc, Carmen, Lila, Guindulman, Duero, Jagna, G-Hernandez, Valencia, Loay Albuquerque, Baclayon and Tagbilaran City	
Total		78		Php 7.949 billions

The Provincial Government of Bohol has created the Provincial Disaster Coordinating Council (PDCC) to prepare, promote and coordinate measures to protect human lives and property during these unforeseen events. Coordination among offices headed by the Governor is very vital on the event of disasters with support from 62 government offices and private establishments. Communication and warning mechanisms are already in-place through PAG-ASA, Philippine National Police, Bohol Law Enforcement Communication System (BLECS), radio stations, information and warnings that reach people in real time. The evacuation system is arranged with the Department of Education and other government offices where schools and other public buildings are utilized as evacuation centers. Table 28-Annex 1 of the PDPFP presents the existing facilities and services in the province thru its Provincial, City and Municipal Disaster Coordinating Councils.

Disaster Risk and Vulnerability Assessment Report⁵

In terms of hydro-meteorological hazards, Bohol is susceptible to flooding, rain-induced landslides, storm surges and big waves which are also brought about by climate change impacts.

Table 2 Trends in Climate Change Impacts in Bohol

Climate Change Impacts	Areas or location affected (Municipalities/Barangays)	Trend	Intensity	Frequency of Occurrence
Sea level rise	30 coastal towns including Tagbilaran City	same areas	every year	increasing every year
Prolonged drought	47 towns and 1-city	expanding to coastal areas	every year	every year

⁵This report is taken from the Office of Civil Defense (OCD)-Bohol and the rest come from the Mines and Geosciences Bureau – Region 7

Climate Change Impacts	Areas or location affected (Municipalities/Barangays)	Trend	Intensity	Frequency of Occurrence
El Nino events	47 towns and 1-city	expanding to coastal areas	every year	every year
Floods	336 out of 1,109 brgys (47 towns and 1-city)	expanding to other areas	Increasing	Increasing every year (flash flooding, seasonal, river overflow, coastal flooding due to heavy rains, dam overflow)
Storm surge	30 coastal towns and 1-city	same areas	Increasing	Increasing every year
Monsoon rains a) Southwest Monsoon or "Habagat" in the local dialect; b) Northeastern Monsoon or "Amihan" in the local dialect	47 towns and 1-city	expanding to interior part of the province	Increasing even dry season	Increasing every year

The risk and vulnerability assessment report estimates that there are 112 barangays in Bohol which are susceptible to flowing. As far as rain-induced landslides are concerned, there are about 298 barangays in Bohol which are highly susceptibility to rain-induced landslides, while 586 barangays have medium susceptibility and 812 barangay with low susceptibility. In terms of storm surges or big waves, a total of 316 barangays in Bohol are susceptible. Table 3 below shows past occurrences of storm surges and big waves in Bohol.

Table 3 Matrix for Past Storm Surges/Big Waves Events in Bohol

DESCRIPTION	POPULATION/AREAS AFFECTED	IMPACTS
June 25, 2008 Typhoon "Frank"	Talibon, Loon, Lila, Getafe, Dimiao, Guindulman	Total Damages – P3.2M Talibon – P1M Loon – P1.5M Lila – P0.1M Getafe – P0.3M

DESCRIPTION	POPULATION/AREAS AFFECTED	IMPACTS
		Dimiao – P0.2M Guindulman – P0.1M
May 12, 2008 Low Pressure Area	Province wide	No data
May 8, 2008 TD “Butchoy”	Province wide	No data
April 14, 2008 TD “Ambo”	Province wide	No data
Nov. 11-12, 2007 TS “Lando”	Pres. Carlos P. Garcia Bien Unido Zamora, Talibon Buenavista Getafe Trinidad	Total Damages – P1.387M Pres. Garcia – P0.472M Bien Unido/Getafe – No data Zamora, Talibon – P0.76M Buenavista – No data Trinidad – P0.055M
November 19, 2007 Whirlwind “Alimpus”	Pres. Carlos P. Garcia	Damaged houses – P1M
June 16, 2007 Whirlwind “Alimpus”	Loon	No data

Geologic hazards result from geologic processes acting on or beneath the earth’s surface. These include movement of plate in the earth’s crust or from local concentration of heat and are source of hazards to people and their natural and built-up environment on the earth’s surface.

Bohol is prone to geologic hazards like ground shaking, liquefaction, earthquake- induced land slide and tsunami because of the presence of East Bohol Fault and another fault located in the Bohol Sea going to Mindanao Sea facing the southern part of Bohol. The presence of Negros Trench and PFZ Central Leyte Fault may also contribute to the generation of earthquake.

Table 4 Matrix for Past Earthquake Events in Bohol

DESCRIPTION	POPULATION/AREAS AFFECTED	IMPACTS
October 15, 2013	17 hardest municipalities: North and south-western part of Bohol; Maribojoc, Loon, Tubigon, Calape, Clarin Inabanga, Buenavista, Danao, Sagbayan, Catigbian, San Isidro, Antequera, Balilihan and Cortes; Southern municipalities of Loboc, Carmen, Lila, Valencia, Loay Albuquerque, Baclayon and Tagbilaran City	Intensity 7.2 211 dead persons 877 injured and 8 missing persons Php 7.4 Billions damaged to major infrastructures, houses, government buildings, tourism facilities, properties and other businesses
July 18, 2011	09.64°N, 124.58°E - 17 km S 36° E of	Intensity II

DESCRIPTION	POPULATION/AREAS AFFECTED	IMPACTS
Earthquake	Guindulman (Bohol) 03:10 PM	No damage
	09.61°N, 124.53°E - 17 km S 15° E of Guindulman (Bohol) 05:02 PM	No damage
June 11, 2011 Earthquake Magnitude 3.3 hits in the Province of Bohol	Loboc, Bohol Tagbilaran City Cortes, Bohol	Intensity III Intensity II No Damage
August 28, 2010 Earthquake	Brgy. Tabahan, Brgy. Bulawan, Guindulman, Bohol	No damage
June 21, 2010 Earthquake	Dauis, Bohol	No damage
May 7, 2010 Earthquake	Jagna Garcia-Hernandez Duero Tagbilaran City	Intensity - III Intensity – III Intensity – II No Damage
March 26, 2010 Earthquake	Tagbilaran, Dauis, Corella	No data
January 8, 2009 Earthquake	Anda, Bohol	No damage

In terms of earthquake susceptibility, the same risk and vulnerability assessment report states that there are 381 barangays in Bohol which are susceptible to intensity 7 earthquakes and about 887 barangays which are susceptible to Intensity 8 earthquakes.

Landslides often accompany the occurrence of earthquakes. The risk and vulnerability assessment report estimates that there are about 215 barangays which are highly susceptible to earthquake-induced landslides; while 733 barangays have medium susceptibility and 887 barangay have low susceptibility.

The detailed data tables and matrices of the risk and vulnerability assessment report of Bohol Province can be found in **Annexures**.

Prior to the October 15, 2013 7.2M earthquake, Bohol Province has a complete repository of hazard maps to include soil erosion map, storm surge hazard map, tsunami hazard map, rain-induced landslide hazard maps, liquefaction maps, ground rupture, earthquake-induced landslide hazard map and the ground-shaking map. These Hazard Maps were acquired from the Hazards Mapping and Assessment for Effective Community-Based Disaster Risk Management (**READY**) Project through the Philippine Institute of Volcanology and Seismology (Phivolcs). The PDPFP, Volume one, from 30 – 33 shows a number of hazards maps. These maps can be viewed and downloaded at <http://www.ppdobohol.lgu.ph/maps/hazard-maps/>

It is obvious that these hazard maps need updating and revising, especially after the October 15, 2013 “Great Bohol Earthquake.” Figure 1 below, which is the ground-shaking map, shows the opposite of what happened during the October 15, 2013 7.2M earthquake where the lighter-shaded area in the ground shaking hazard map were the areas badly hit by the 7.2Ms earthquake. At present the PhilVolCS is currently updating these maps.

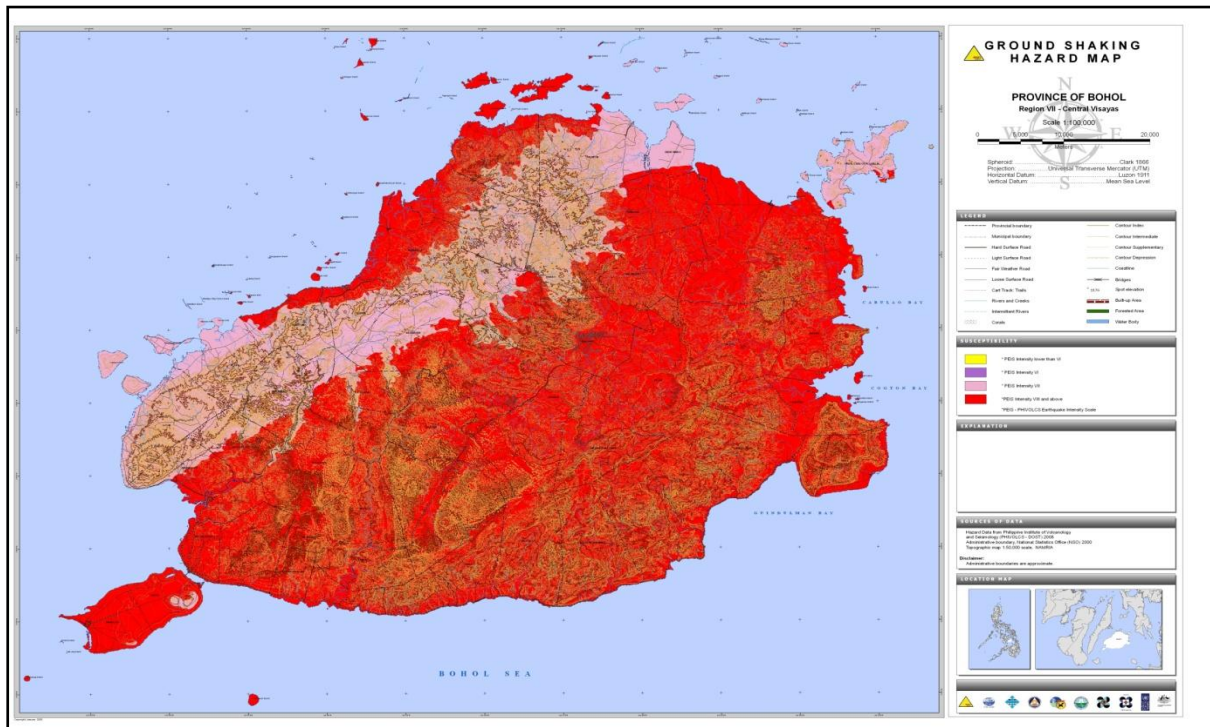


Figure 1 Ground-Sharing Hazard Map⁶

Assessment of Natural and Man-Made Hazards

During the May 12 -14, 2014 Local Disaster Risk Reduction Management (LDRRM) Planning Workshop for the Province of Bohol, the participants who were mostly members or representatives of the Provincial Disaster Risk Reduction Management Council (PDRRMC), identified two types of hazards that have occurred in Bohol Province over the years: (a) natural, such as earthquake, typhoons/storms, flooding, landslides, storm surges, tsunami, sink holes, subsidence, tornado, drought or El Niño phenomenon, and lighting; and (b) man-made hazards food poisoning, wars or armed conflicts, red tide, fires (land or sea-based) oil-spill, and collision / vehicular accidents

⁶ These Hazard Maps were acquired from the Hazards Mapping and Assessment for Effective Community-Based Disaster Risk Management (READY) Project through the Philippine Institute of Volcanology and Seismology (PhilVolCS).

These natural and man-made hazards were rated by workshop participants in terms of risks (likelihood of occurrence) and vulnerability (susceptibility and capacity of the community and populace to be adversely affected by the disaster caused by the hazard).

Participants used a color-coded scale from 1 – 4, where one means low and 4 means extremely high. Below is a table that results from the participants' analysis of disaster risks and the vulnerability assessments. The following table below shows the results of the risk analysis and vulnerability assessments made by workshop participants.

Table 5 Risk Analysis (R) and Vulnerability Assessment (V) of Hazards in Bohol

HAZARDS	Low (1)		Medium (2)		High (3)		Extremely High (4)	
	R	V	R	V	R	V	R	V
Natural								
Earthquake								
Typhoon/ Storm								
Flooding/ La Nina								
Landslide								
Storm Surge								
Tsunami								
Sink Holes								
Subsidence								
Tornado								
Drought / El Niño								
Lightning								
Man-Made								
Food Poisoning								
Wars /Armed Conflict								
Red Tide								
Fire (Sea & Land Base)								
Oil Spill								
Collision /Vehicular Accidents								
Low (1)	Medium (2)		High (3)		Extremely High (4)			

Source: DRRM Planning Workshop Participants' Risk Analysis and Vulnerability Assessment, May 2014

From the above-table it can be seen that Bohol is very high risk and vulnerability to a number of natural hazards. The PDRPMC participants see earthquakes, typhoon / storms, flooding and the La Niña phenomenon, landslides and drought or the El Niño phenomenon have greater risks and likelihood to occur and people and communities are extremely vulnerable and likely to greatly suffer from the effects and magnitude of disasters these

hazards can cause. The implications point to the urgent need to put in place short and long terms plans to prevent the disasters, mitigate their effects, put in place preparedness and response measures as well as post-disaster rehabilitation and recovery actions.

The State of the DRRM of the PLGU

The foremost goal of Republic Act No. 10121 (M 10121), otherwise known as the *Philippine Disaster Risk Reduction and Management (PDRRM) Act of 2010* is to strengthen the country's National DRRM System towards sustainable economic development, by mainstreaming the same in all national and local development processes.

Mainstreaming of DRRM in all these processes principally requires the institutionalization and organization of its structures, in all levels of government nationwide, where local DRRM plans and policies will be developed, and where implementation of actions and measures pertaining to all aspects of DRRM will be initiated.

It is therefore important to assess the state of disaster risk reduction management of local government units. During the May 12 – 14, 2014 LDRRM Planning Workshop, the PDRRMC participants assessed the state of the PLGU's DRRM in terms of strengths and weaknesses, which were further delineated into risks and vulnerabilities.

A. Strengths of the PLGU in PDRRM The following are the strengths that the PDRRMC:

- There is some level of available information and data on multi-hazards occurring in the province, as evidenced by
 - ✓ Faults are already identified
 - ✓ Hazard maps available
 - ✓ The actual experience of the 7.2M earthquake in October 15, 2013
 - ✓ Partial assessment of quake-related hazards like sink-holes using ground-penetrating radar (GPR) conducted by MGB
 - ✓ Presence of hazard profile and disaster risk assessment (DRA) Report for Bohol
 - ✓ Active provincial epidemiology surveillance unit (PESU)
- Trainings and awareness-raising activities conducted, such as
 - ✓ Constant DRRM training
 - ✓ High level of awareness on DRRM
 - ✓ Continuous awareness campaign on disaster consciousness

- ✓ Presence of Visayan/Boholano version of DRR-CCA Training modules
- Presence of quick response actions, tools and equipment as well as early warning devices to include
 - ✓ Tarsier 117
 - ✓ Early warning system advisories
 - ✓ Operational and functional Search and rescue teams
 - ✓ Available HURST tools/ Jaws of Life equipment
- Established organizational structures for DRRM and cooperation networks as can be seen by
 - ✓ Proactive and operational PDRRMC
 - ✓ Strong tie-up/linkages with NGAs, NGOs, I-NGOS
 - ✓ Presence of security forces in strategic areas of the province
 - ✓ Bohol is insurgent-free
 - ✓ PDRRMS's strong communication links with PAG ASA and MLGUs
 - ✓ Active stakeholder participation
 - ✓ Presence of PDRRMC inter-cluster coordination
- Presence of disaster management - related plans such as
 - ✓ El Nino contingency plan
 - ✓ Presence of draft earthquake contingency plan
 - ✓ Presence of post Great Bohol Earthquake Relief, Recovery and Rehabilitation Plan

B. Weaknesses of the PLGU in PDRRM:

Vulnerability Factors

- ✓ Un-institutionalized DRRM office
- ✓ Majority of MLGUs belong to 4th and 5th class municipalities; lack resources/funds
- ✓ Not all MLGUs/areas with internet access; thus difficult to communicate
- ✓ Poor capacities of district hospitals to respond to emergencies of bigger magnitudes such as during the 7.2M earthquake
- ✓ There is more need for equipment and tools for disaster preparedness
- ✓ PDRRMO not fully operational to provide information and increase awareness on DRR-CCA down to the "Purok" level

- ✓ PDRRM Plan needs revisiting / updating as this previous document was prepared only for compliance purposes and not well grounded on risk analysis and vulnerability assessments
- ✓ Zoning ordinance not strictly followed/implemented thus local communities are building on hazard prone areas like coastlines and mountain slopes
- ✓ Lack of flood control facilities
- ✓ LGUs not so conscious on the impact of tsunamis and storm surges
- ✓ Evacuation centers are not yet established
- ✓ Data capture and reporting template on extent of damage inadequate and not standardized
- ✓ No wastewater treatment facilities/disposal endangering water quality
- ✓ Households are without sanitary latrines threatening water and food safety
- ✓ Lack of fire-fighting facilities
- ✓ Lack of discipline among drivers, especially motorcycles, causing more vehicular accidents and unnecessary deaths

Risk Factors

- ✓ High risk areas/ flooding area nor properly identified
- ✓ Presence of sink holes
- ✓ Dams dependent on rainfall
- ✓ Typhoon prone
- ✓ Rice fields mostly rain-fed
- ✓ High percentage of contaminated water sources

Gaps in PLGU DRRM Capacity

The stakeholders participating in the May 12 – 14, 2014 Local Disaster Risk Reduction Management Planning workshop likewise analyzed the capacity gaps of the provincial government as far as disaster risk reduction and management is concerned. Identified gaps are summarized as follows:

- Different sources of data; no /lack centralized database system
- Data inadequacy related to DRRM
- Inadequacy of early warning system
- LDRRMOs are only designates
- Identification of relocation site
- No planned evacuation areas with affected families converging in any open field with less LGU assistance
- Delayed construction due to unavailable MGB clearance

- Not enough supply of agricultural products
- No clear responsibility in relief distribution/procedure
- Communities were not informed or made aware where to get relief assistance
- Timing, info dissemination and directions for determining route alternatives, especially to facilitate delivery of relief goods
- Bohol is dependent on outside power supply
- Lack of skilled manpower and equipment
- Limited supply of medicines to cater to the large scale disasters
- Delay in the replenishment of medical supplies from Tagbilaran to affected hospitals
- Limited services provided to the constituents due to extent of damage
- Limited DepEd Funds for emergency response, evacuation centers and re-building of school facilities and classroom damaged by earthquakes and other hazards
- Lack of trained search and rescue (SAR) personnel and equipment

PLGU DRRM Vision and Mission Statements

Vision

A disaster-resilient, climate change adaptive and safe Boholano community with a strong spirit of stakeholder commitment guided by effective local governance ensuring social protection, economic security and socially-inclusive disaster management towards sustainable development

Mission

To continuously build the resiliency and adaptive capacity of Bohol to reduce potential risks and manage the impacts of hazards ensuring safety of people and communities who will be assisted for rehabilitation and reconstruction back to normal lives

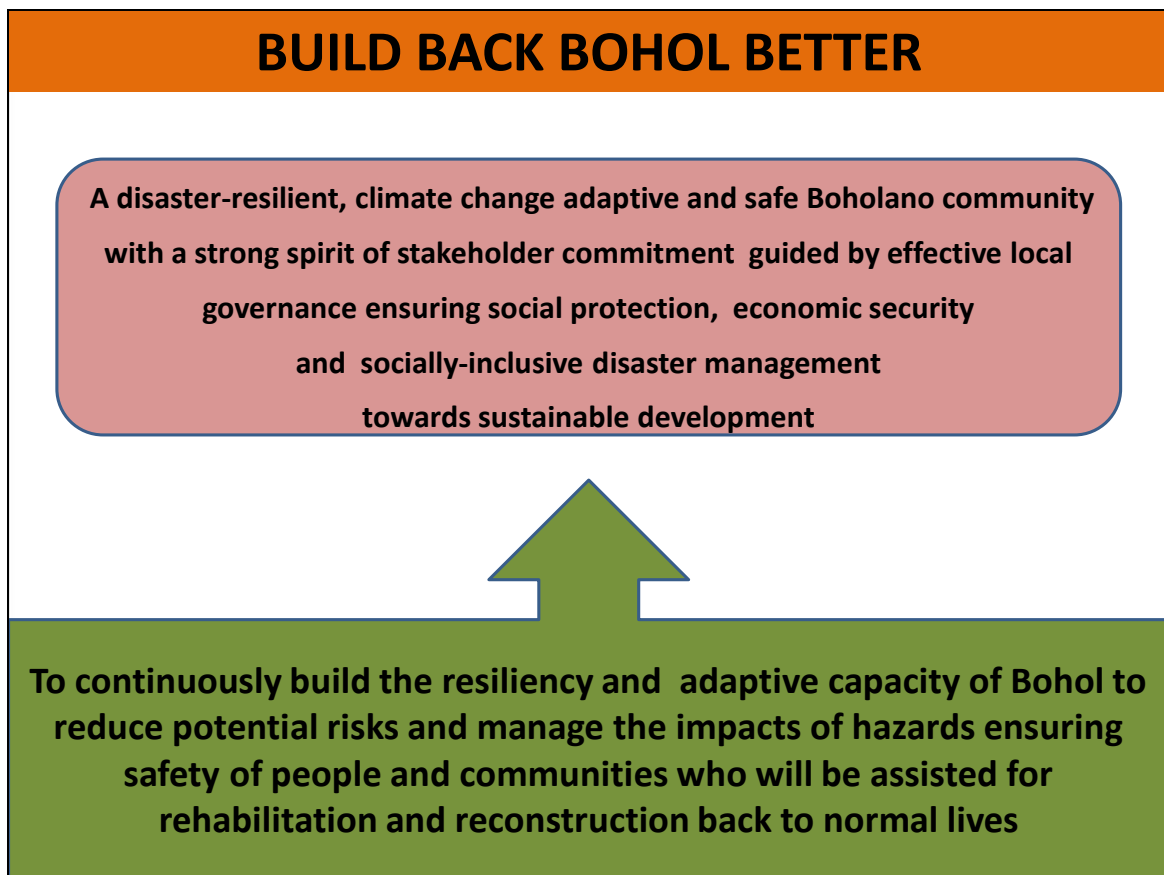


Figure 2 Bohol Disaster Risk Reduction Management Framework

In summary, the PDRRMC participants during the Local Disaster Risk Reduction Management Planning workshop saw that the key recommendations to attain a vision of building back Bohol better include the following key and basic DRRM reforms:

6. Good, accessible and accurate database system from data capture, to data processing and data storage and retrieval;
7. A legislated, well-supported and financed Provincial Disaster Risk Reduction Management Plan at all level that is monitored and assessed periodically;
8. A functional, financially supported, legislated and well-resourced / staffed Provincial Disaster Risk Reduction Management Office at all levels;
9. Pervasive disaster consciousness, awareness, prevention, preparedness and response institutionalized at the community level and supported by the civil society and private / business sector; and
10. A DRRM Governance Training Center that continually builds capacities of local governments and communities to plan, prevent, mitigate, prepare and effectively respond to disasters and undertake post disaster rehabilitation and recovery actions.

3.0 Provincial Disaster Risk Reduction Management (DRRM) Plan

The Provincial Disaster Risk Reduction Management (DRRM) Plan is closely aligned with the National NDRRM Plan. In this regard, the PDRRM Plan just like the NDRRM Plan serves as a road map on how disaster risk reduction and management will contribute to the attainment of sustainable development, build the adaptive capacities of communities, increase the resilience of vulnerable sectors and optimize disaster mitigation opportunities with the end in view of promoting people's welfare and security towards gender-responsive and rights-based sustainable development.⁷

Hyogo Framework for Action (HFA)

The PDRRM Plan, just like the NDRRM Plan, is also anchored on the Hyogo Framework for Action (HFA).

The Hyogo Framework for Action is a comprehensive, action-oriented response to international concern about the growing impacts of disasters on individuals, communities and national development. The HFA was adopted by 168 Governments at the World Conference on Disaster Reduction (WCDR) held in Kobe, Japan, on January 18-22, 2005. This is a global print for disaster risk reduction efforts during the next decade (2005 – 2015).



Photo 1 Hyogo Framework for Action

The goal of the Hyogo Framework for Action is to substantially reduce disaster losses by 2015 – in lives, and in the social, economic and environmental assets of communities and countries, thus building the resilience of nations & communities to disasters.

To be able to achieve this vision of building the disaster-resiliency among nationals and communities, three strategic goals are pursued:

1. Integrate disaster reduction into sustainable development;
2. Strengthen institutions and mechanisms to build resilience; and
3. Incorporate risk reduction into emergency management and recovery

The Hyogo Framework for Action (HFA) priority actions can be seen in Figure 4.

⁷ National Disaster Risk Reduction Management Plan (NDRRMP).

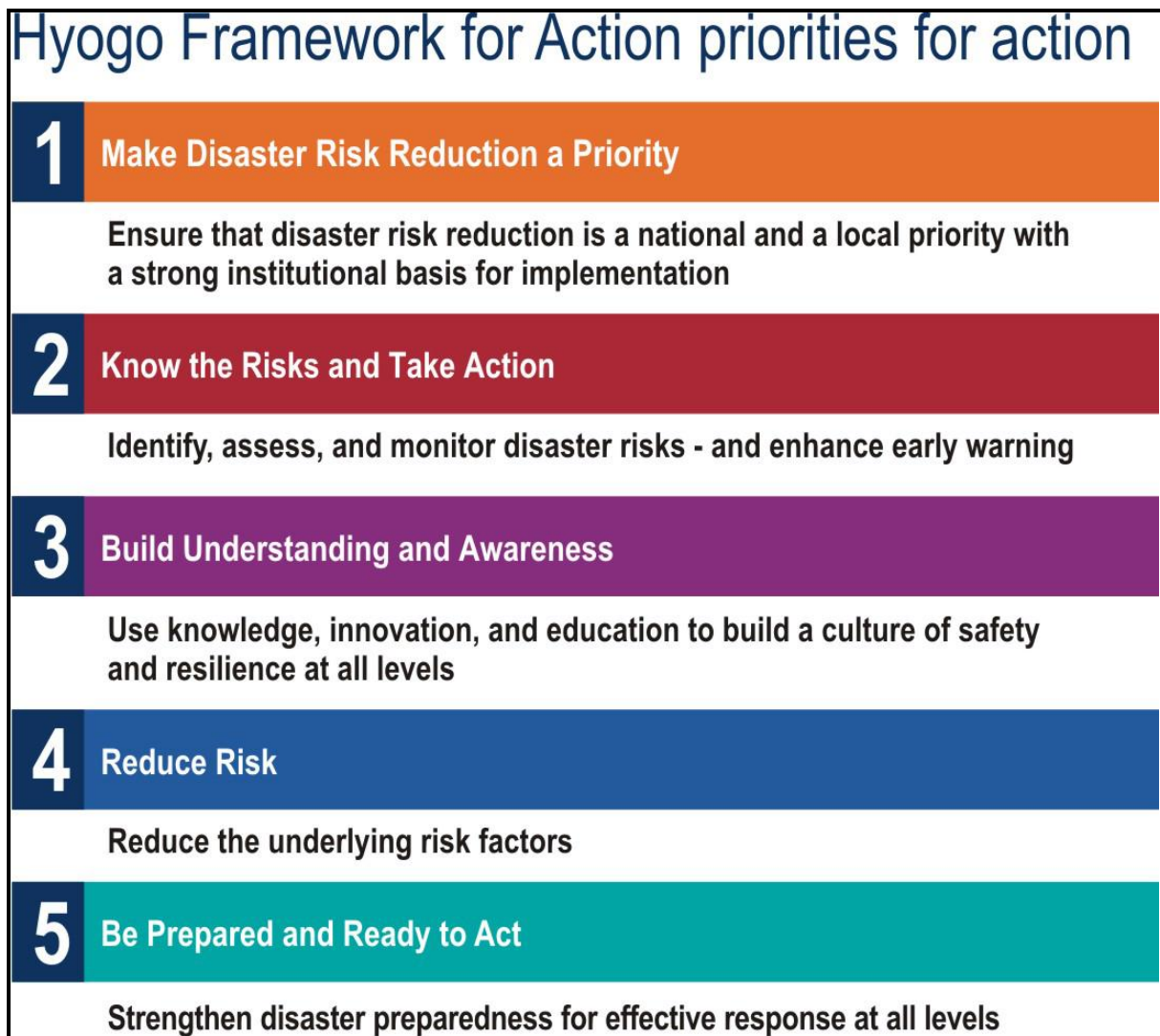


Figure 3 Hyogo Framework for Action Five Priority Actions

Provincial DRRM Plan Components

There are four (4) thematic areas or components of the Provincial Disaster Risk Reduction Management Plan. Each thematic area or component is briefly below⁸ as follows

1. **Disaster Prevention and Mitigation** This component provides key strategic actions that give importance to activities revolving around hazards evaluation and mitigation, vulnerability analyses, identification of hazard-prone areas and mainstreaming DRRM into development plans. It is based on sound and scientific

⁸ National Disaster Risk Reduction Management Plan, p7

analysis of the different underlying factors which contribute to the vulnerability of the people and eventually, their risks and exposure to hazards and disasters.

2. **Disaster Preparedness** This component pertains to the key strategic actions that give importance to activities revolving around community awareness and understanding; contingency planning; conduct of local drills and the development of a national disaster response plan. Risk-related information coming from the prevention and mitigation aspect is necessary in order for the preparedness activities to be responsive to the needs of the people and situation on the ground. Also, the policies, budget and institutional mechanisms established under the prevention and mitigation priority area will be further enhanced through capacity building activities, development of coordination mechanisms. Through these, coordination, complementation and interoperability of work in DRRM operations and essential services will be ensured. Behavioral change created by the preparedness aspect is eventually measured by how well people responded to the disasters. At the frontlines of preparedness are the local government units, local chief executives and communities.
3. **Disaster Response** This component gives importance to activities during the actual disaster response operations from needs assessment to search and rescue to relief operations to early recovery activities are emphasized. The success and realization of this priority area rely heavily on the completion of the activities under both the prevention and mitigation and preparedness aspects, including among others the coordination and communication mechanisms to be developed. On-the-ground partnerships and the vertical and horizontal coordination work between and among key stakeholders will contribute to successful disaster response operations and its smooth transition towards early and long term recovery work.
4. **Disaster Rehabilitation and Recovery** This component covers areas like employment and livelihoods, infrastructure and lifeline facilities, housing and resettlement, among others. These are recovery efforts done when people are already outside of the evacuation centers.

These priority areas are not autonomous from the other nor do they have clear start and end points. The 4 priority areas are NOT seen as a mere cycle which starts in prevention and mitigation and ends in rehabilitation and recovery. The best way to describe the four thematic areas is that they -

- a) Mutually reinforce each other and are interoperable.
- b) DO NOT, SHOULD NOT and CANNOT stand alone.

- c) Have no clear starting nor ending points between each of the aspects and overlaps are to be expected.
- d) Are problem-needs and asset-strengths centered.
- e) All point to one direction - reduce people's vulnerabilities and increasing their capacities.

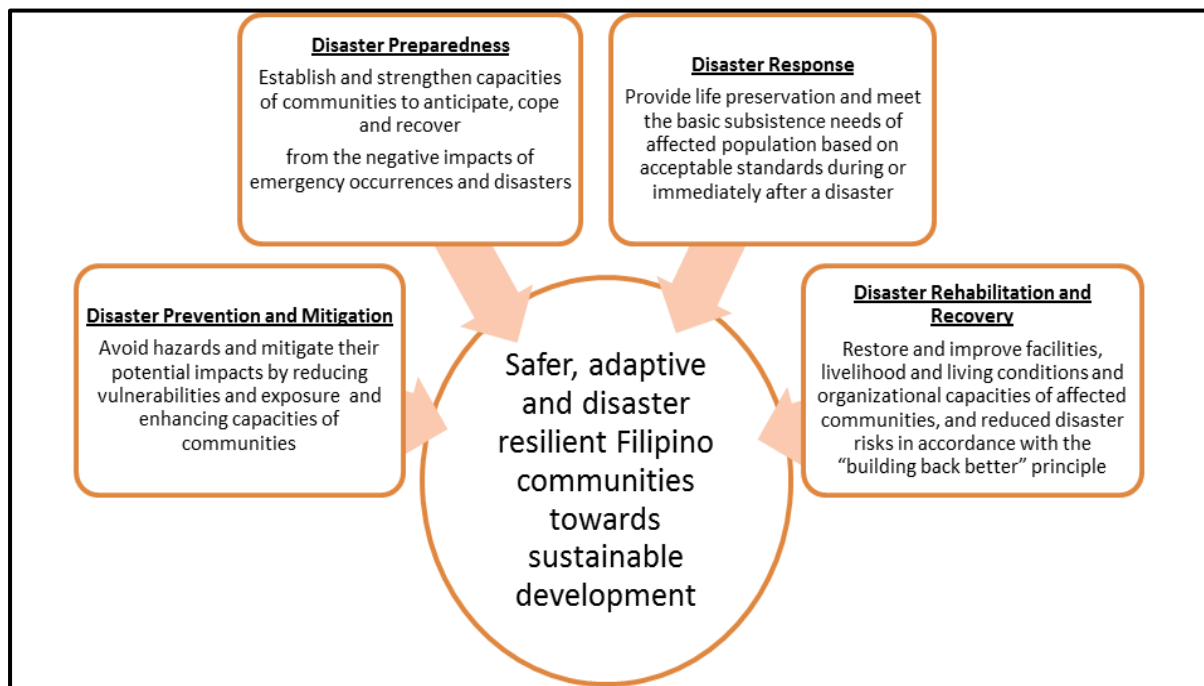


Figure 4 Four Mutually-Reinforcing Thematic Areas of the PDRRM Plan

Provincial DRRM Goals, Objectives, Outcomes and Outputs

The succeeding tables present the Provincial DRRM objectives, outcomes and outputs. Prior to the presentation of the provincial objectives, outcomes and outputs, the national goals and objectives contained in the National Disaster Risk Reduction Management Plan (NDRRMP) are stated to show that the provincial objectives, outcomes and outputs are aligned with the goals and objectives of the National Risk Reduction Management Plan (NDRRMP).

These outputs results from the LDRRM Workshop held Mary 12- 14, 2014 where participants were grouped into four and worked on each DRRM pillar to include disaster prevention and mitigation, disaster preparedness, disaster response and disaster rehabilitation and recovery.

Table 6 Objectives, Outcomes and Outputs for Disaster Prevention and Mitigation

PILLAR: PREVENTION AND MITIGATION		
GOAL	Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities	
National Objectives	Reduce vulnerability and exposure of communities to all hazards	Enhance capacities of communities to reduce their own risks and cope with the impacts of all hazards
Provincial Objectives	<ul style="list-style-type: none"> • Ensure strict implementation of existing laws & ordinance & other related issuances • Reduce vulnerability & exposure of communities to all hazards • Enhance capacities of communities / DRRM councils to reduce their own risks & cope with the impacts of all hazards. • Increase disaster consciousness and responsibilities of communities. • Establish and institutionalize PDRRM- CCA governance center/ office 	
Provincial Outcomes	<ul style="list-style-type: none"> • DRRM compliant and climate change adaptive LGUs and communities • Disaster-resilient roads and infrastructures • Reduced risks and vulnerabilities of people and communities to all hazards • Increased capacities of local communities to reduce and manage risks • Response-ready and capacitated LGUs and DRRM Councils • Green and adaptive agricultural and industrial technologies 	
Provincial Outputs	<ul style="list-style-type: none"> • Compliance reports and findings • Approved local ordinance for quality assurance and quality control in building and construction of infrastructures • Draft ordinance for earthquake Trust Fund • Installation of early warning devices and forecasting systems • Risk Analysis and Vulnerability Assessment Reports as basis for production of hazard maps at all levels • Disaster Response Manual • Implemented and Monitored DRRM Plans and functional Office / Committees at all LGU, including <i>Purok</i> level • Evacuation centers and relocation sites well-identified and established • DRRM / CCA Database established and functional • Scaling up use of solar panels, rain water collectors, climate-change resistant seeds, etc. 	

Table 7 Objectives, Outcomes and Outputs for Disaster Preparedness

PILLAR: PREPAREDNESS					
GOAL	Establish and strengthen capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters				
National Objectives	Increase the level of awareness of the community to the threats and impacts of all hazards, risks and vulnerabilities	Equip the community with the necessary skills to cope with the negative impacts of a disaster	Increase the capacity of institutions	Develop and implement comprehensive national and local disaster preparedness policies, plans and systems	Strengthen partnership among all key players and stakeholders
Provincial Objectives	<ul style="list-style-type: none"> • Ensure strict implementation of existing laws & ordinance & other related issuances • Reduce vulnerability & exposure of communities to all hazards • Enhance capacities of communities / DRRM councils to reduce their own risks & cope with the impacts of all hazards. • Increase disaster consciousness and responsibilities of communities. • Establish and institutionalize PDRRM- CCA governance center/ office 				
Provincial Outcomes	<ul style="list-style-type: none"> • DRRM compliant and climate change adaptive LGUs and communities • Disaster-resilient roads and infrastructures • Reduced risks and vulnerabilities of people and communities to all hazards • Increased capacities of local communities to reduce and manage risks • Response-ready and capacitated LGUs and DRRM Councils • Green and adaptive agricultural and industrial technologies 				
Provincial Outputs	<ul style="list-style-type: none"> • Compliance reports and findings • Approved local ordinance for quality assurance and quality control in building and construction of infrastructures • Draft ordinance for earthquake Trust Fund • Installation of early warning devices and forecasting systems • Risk Analysis and Vulnerability Assessment Reports as basis for production of hazard maps at all levels • Disaster Response Manual • Implemented and Monitored DRRM Plans and functional Office / Committees at all LGU, including <i>Purok</i> level • Evacuation centers and relocation sites well-identified and established • DRRM / CCA Database established and functional • Scaling up use of solar panels, rain water collectors, climate-change resistant seeds, etc. 				

Table 8 Objectives, Outcomes and Outputs for Disaster Response

PILLAR: RESPONSE			
GOAL	Provide life preservation and meet the basic subsistence needs of affected population based on acceptable standards during or immediately after a disaster		
National Objectives	To decrease the number of preventable deaths and injuries	To provide basic subsistence needs of affected population	To immediately restore basic social services
Provincial Objectives	<ul style="list-style-type: none"> • Deploy SAR teams and security forces to the scene with 8 hours. To conduct rapid damage and needs assessment (DANA) by the LDRRMC. • Conduct immediate relief operation w/in 24 hours (food & non-food items & deployment of WATSAN team. • Provide immediate medical services to disaster victims including psychological first aid • Conduct pre-emptive/ timely evacuation of vulnerable families/ families at risk. 		
Provincial Outcomes	<ul style="list-style-type: none"> • Zero preventable deaths • Low disabilities secondary to injuries • Crimes prevented • Timely and appropriate responses are provided and immediate relief for the affected families. 		
Provincial Outputs	<ul style="list-style-type: none"> • Rescue teams deployed, affected persons rescued and retrieved • Data validators/volunteers, medical teams deployed • Volunteers mobilized for relief operations and data gathering /validation / assessment • Relief goods delivered timely and appropriately • Amount of donations generated • Data on Damages accessible to all concerned like, casualties (death, injured, & missing), priority needs • Camp management committees organized • LGU ordinance mandating pre-emptive evacuation of vulnerable families 		

Table 9 Objectives, Outcomes and Outputs for Disaster Rehabilitation and Response

PILLAR: REHABILITATION AND RECOVERY				
GOAL	Restore and improve facilities, livelihood and living conditions and organizational capacities of affected communities, and reduced disaster risks in accordance with the “building back better” principle			
National Objectives	To restore people’s means of livelihood and continuity of economic activities and business	To restore shelter and other buildings/ installation	To reconstruct infrastructure and other public utilities	To assist in the physical and psychological rehabilitation of persons who suffered from the effects of disaster
Provincial Objectives	<ul style="list-style-type: none"> • Rehabilitate people, means of livelihood & sustain economic activities and business • Enhance the skills & capacity on livelihood related activities. To restore install shelter and other vertical structures/ buildings • To provide safer location appropriate engineering that can withstand DRR-CCA. To reconstruct infrastructures & other public utilities • To provide adequate road network & other infrastructure facilities • To provide assistance, physical & psychological depressed persons suffered from effects of disaster 			
Provincial Outcomes	<ul style="list-style-type: none"> • Stable and economic activities provided. Damages, losses & needs properly assessed & analyzed • Shelter/ buildings and living condition back to normal. Houses/ buildings rebuilt or repaired to be more resilient to hazards with safer sites for housing • Disaster & climate change resilient infrastructure constructed/ reconstructed & rehabilitated • Psychologically safe & secure populace protected from the effects of disasters is able to restore to normal functioning • Restored to normal, physical and psychological condition of affected people 			
Provincial Outputs	<ul style="list-style-type: none"> • Crops, livestock, fisheries livelihood assistance provided. • Number of P.Os member trained/ capacitated. Number of heads of livestock, poultry restocked • totally damaged houses constructed; partially damaged houses repaired & restored; classrooms constructed; temporarily learning spaces and schools provided/ installed • Post- harvest support facilities established • Number of children & adult provided with awareness child protection • Number of social workers provided with psychological care training 			

DRRM Priority Plans and Projects

From these provincial objectives, outcomes and outputs, the following priority plans and activities were formulated by the planning team for each DRRM pillar:

A. Disaster Prevention and Mitigation

- Review and integration of DRRM/CCA policies in LGU policies, plans, budgets
- Draft ordinance re QA/QC of infrastructure projects
- Draft ordinance for earthquake trust fund
- Seminar – workshops and capacity building
- Conduct training on green agriculture
- Conduct risk analysis and vulnerability assessment
- Updating hazard maps
- Installing warning and forecasting system
- Disaster Response Manual
- Designate resettlement sites and evacuation centers
- Construction of core houses in resettlement sites
- Flood control measures
- Promote establishment of CCA/DDRM offices in municipalities and DRRM committees in barangays
- DRRM/CCA database systems

B. Disaster Preparedness

- IEC
- Guides / Protocols for Emergency Response Team per Hazard/Disaster
- Conduct regular and periodic drills and simulation exercises
- Integration of DRRM/CCA in school curricula
- Capacity Building and DRRM skills training
- Establishment of Emergency Response Teams at all levels
- Installation of early warning systems, disaster command, communication centers
- Inventory of existing resources
- Provision of insurance to community disaster volunteer groups
- Continuous research on CCA/DDRM
- Establishment of CCA/DDRM – Governance Academy
- Purchase of CCTV Cameras
- Purchase of emergency rescue equipment, dive gears, gadgets
- Stockpiling of commodities
- Formulation of guidelines for the preparation and distribution of relief goods
- Mass blood letting

- IEC and training on food storage, food preservation, seedling and planting materials
- Creation of PDRRM Office
- DRRM Planning workshops for the entire province and preparation of contingency plans
- Monitoring compliance of RA 10121 and CCA RA 9729 and DRRM/CCA Plan implementation
- Enactment of ordinance for pre-emptive evacuation
- Enforcement of building codes
- Formulation of green technologies
- MOA with business / private sectors and NGOs

C. Disaster Response

- Activate Incident Command System (ICS)
- Deployment of SAR Teams & Search, Rescue & Retrieval operations
- Deployment of DANA Teams
- Submission of Disaster Report to the PDRRMC
- Repacking of goods
- Deployment of Relief Teams
- Relief goods distribution
- Conduct of coordination meeting
- Conduct of clearing operations
- Deployment of medical teams
- Deployment of psychosocial teams
- Establishment of first aid tents
- Organization of camp management committees
- Establishment of evacuation centers
- Pre-emptive evacuation
- Profiling of displaced families
- Assessment of factors to determine transition to recovery/ rehab phase
- Cloud-seeding

D. Disaster Rehabilitation and Recovery

- Profiling of displaced families
- Conduct DANA
- Livelihood trainings and projects
- Irrigation canals
- Housing projects
- Relocation sites

- Improvement / renovation of school facilities and procurement of equipment for schools
- skills training for early recovery
- construction and repair of major infrastructures
- Construction/ repair/ rehabilitation of roads, bridges & other vital, infrastructure
- Reconstruction of hospitals, health centers, day care centers Reconstruction of irrigation facilities. Rehabilitation of water
- Acquisition of health equipment Rehabilitation of back canals, dike, drainages, box culvert.
- Repair of flood control facilities
- Trainings/ briefing on stress debriefing

Provincial Disaster Risk Reduction Management Plan

Table 10 Indicative DRRM Plan Investment Per Pillar / Component

DRRM Thematic Area / Pillar	Indicative Budget Totals			
	2014	2015	2016	TOTAL
Disaster Prevention and Mitigation	1.5B	0.95M	0.57M	1.51B
Disaster Preparedness	15.32M	19.98M	1.06BM	1.095B
Disaster Response	.449M	21.97M	21.97M	44.39M
Disaster Rehabilitation and Recovery	3.5B	1.4B	3.5B	8.4B

Province of Bohol

Provincial Disaster Risk Reduction Management Plan 2014 – 2016

Table 11 PDRRM Plan for Disaster Prevention and Mitigation

PILLAR: PREVENTION AND MITIGATION																	
GOAL: AVOID HAZARDS AND MITIGATE THEIR POTENTIAL IMPACTS BY REDUCING VULNERABILITIES AND EXPOSURE AND ENHANCING CAPACITIES OF COMMUNITIES																	
Objective s	Outcom es	Outputs	Activities	THREE-YEAR TIMELINE AND INDICATIVE BUDGET										Sources of Funds	Partners/Links Networks		
				2014		2015				2016							
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Ensure Strict Implemen tation of existing laws, ordinance s, and other related issuances	infrastru cture are disaster resilient	Report and findings on the review of the ff: CLUP Bohol Env't. Code Water & Conservatio n Code Water Code Tourism Code Mining Ordinance Anti-GMO Ordinance Organic Agri Code	Conduct Workshop to Review various environmenta l plans & legislative measures for integration of DRR-CCA		10T	10T								MDRRMF	PPDO (Lead) BEMO, PHO, BTO, PAO, DILG, DA		

PILLAR: PREVENTION AND MITIGATION																	
GOAL: AVOID HAZARDS AND MITIGATE THEIR POTENTIAL IMPACTS BY REDUCING VULNERABILITIES AND EXPOSURE AND ENHANCING CAPACITIES OF COMMUNITIES																	
Objective s	Outcom es	Outputs	Activities	THREE-YEAR TIMELINE AND INDICATIVE BUDGET										Sources of Funds	Partners/Links Networks		
				2014		2015				2016							
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
		Bohol Sanitation Code															
		Approved Ordinance	Conduct workshop for the drafting of Ordinance Re Quality Control & Quality Assurance of Infrastructure Projects (commercial and residential) Note: suggestion to be captured in the draft ord: Safety Engineer must be designated in every LGU to conduct inspection of construction		15T		20T				25T			MDRRMF	SP, Committee on Infrastructure (Lead) PEO, PPDO, PDRRMC (All Members)		

PILLAR: PREVENTION AND MITIGATION																	
GOAL: AVOID HAZARDS AND MITIGATE THEIR POTENTIAL IMPACTS BY REDUCING VULNERABILITIES AND EXPOSURE AND ENHANCING CAPACITIES OF COMMUNITIES																	
Objective s	Outcom es	Outputs	Activities	THREE-YEAR TIMELINE AND INDICATIVE BUDGET										Sources of Funds	Partners/Links Networks		
				2014		2015				2016							
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
			materials OR Independent Inspector to check & evaluate construction materials DTI to check if construction materials sold in establishments are within standards														
		Approved Ordinance	Draft Ordinance Re Earthquake Trust Fund		15T									MDRRMF	SP, Committee on Infrastructure & Environment (Lead) PDRRMC (All Members)		
Enhance capacities of councils/communities to reduce their own	Capacitated PDRMMC/MDRRMCs/BD RRMCS are capacitated	PDRRMC MDRRMCs	Conduct seminar/workshops on geological and meteorological man-made hazards		15T		20T				25T			MDRRMF	TaRSIER 117 (Lead) MGB, PHIVOLCS PAGASA, PPDO BEMO, PNP, AFP		

PILLAR: PREVENTION AND MITIGATION															
GOAL: AVOID HAZARDS AND MITIGATE THEIR POTENTIAL IMPACTS BY REDUCING VULNERABILITIES AND EXPOSURE AND ENHANCING CAPACITIES OF COMMUNITIES															
Objective s	Outcom es	Outputs	Activities	THREE-YEAR TIMELINE AND INDICATIVE BUDGET										Sources of Funds	Partners/Links Networks
				2014		2015				2016					
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
risks and cope with the impacts of all hazards	ed,														
	Health risks caused by contami nated food/wa ter is minimize d	1 Provl. WSP	Conduct workshop to formulate Water Safety Plan (WSP)		20T									MDRRMF I-NGOs	PHO (Lead) BEMO, PPDO PDRRMC (All Members)
	Commun ities adopted green agricultu re/techn ologies and impleme nted CCA measure s	Radio Plugging Brochures TV/Social Network Exposures	IEC on Organic Natural & Green Agriculture/T echnologies and Sanitation		100T		150T				200T			MDRRMF	OPA (Lead) OPV, DA, PHO, BEMO

PILLAR: PREVENTION AND MITIGATION															
GOAL: AVOID HAZARDS AND MITIGATE THEIR POTENTIAL IMPACTS BY REDUCING VULNERABILITIES AND EXPOSURE AND ENHANCING CAPACITIES OF COMMUNITIES															
Objectives	Outcomes	Outputs	Activities	THREE-YEAR TIMELINE AND INDICATIVE BUDGET										Sources of Funds	Partners/Links Networks
				2014		2015				2016					
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
	Continued & Strong linkages between PEO & MEOs	1 league of municipal engineers	Organize & Institutionalize League of Municipal Engineers		25T									MDRRMF	PEO (Lead) MEOs
		1 City 47 Municipalities	Conduct capacity building on mainstreaming DRRM-CCA in development planning, investment programming /financing, and project evaluation and development		20T		20T				20T			MDRRMF	PPDO (Lead) PBMO, BEMO, PEO, PHO, OPSWD, OPA, OPV, TaRSIER, DILG, NEDA, OCD
		DRR-CCA Indicators	Develop criteria for DRR-CCA indicators for integration in the CBMS		50T			75t						MDRRMF NGAs	PPDO (Lead) DILG, OCD, DSWD, PNP, AFP

PILLAR: PREVENTION AND MITIGATION																	
GOAL: AVOID HAZARDS AND MITIGATE THEIR POTENTIAL IMPACTS BY REDUCING VULNERABILITIES AND EXPOSURE AND ENHANCING CAPACITIES OF COMMUNITIES																	
Objective s	Outcom es	Outputs	Activities	THREE-YEAR TIMELINE AND INDICATIVE BUDGET										Sources of Funds	Partners/Links Networks		
				2014		2015				2016							
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
		Guidelines/ Checklist	Formulate guidelines/Ch ecklist to determine level of capacity of affected families who will graduate to recovery & rehabilitation		50t			75t						MDRRMF NGAs	OPSWD (Lead) PPDO, PEO, PHO, DILG, OCD, DSWD		
		48 CDPs with CCA integration	Conduct Planning Workshops for Integration of CCA & Green Agriculture/ Technologies on LGU CDPs		200T									MDRRMF NGAs	OPA, OPV (Lead) DA, BFAR, PEO, PPDO, BEMO, PHO		
		3 Assessment Reports (By District)	Assessment on formulated LGUs CDPs with CCA										300T	MDRRMF NGAs	OPA, (Lead) OPV DA, BFAR, PEO, PPDO, BEMO, PHO		
		1 Benchmark	Benchmarkin g to Province with best					450T						ODA	OPA (Lead) SP Committee on Agri & Envi.		

PILLAR: PREVENTION AND MITIGATION																	
GOAL: AVOID HAZARDS AND MITIGATE THEIR POTENTIAL IMPACTS BY REDUCING VULNERABILITIES AND EXPOSURE AND ENHANCING CAPACITIES OF COMMUNITIES																	
Objective s	Outcom es	Outputs	Activities	THREE-YEAR TIMELINE AND INDICATIVE BUDGET										Sources of Funds	Partners/Links Networks		
				2014		2015				2016							
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
			practice on CCA & Green Technology Program												OPV		
Reduce Vulnerabil ity & Exposure of Communit ies to all hazards	Percenta ge of vulnerab le populati on is reduced	1 City 47 Municipaliti es	Conduct Training on Risk Assessment, Vulnerability Analysis & other Science-based technology and methodologie s		50T	50T								MDRRMF	TaRSIER 117 (Lead) PPDO, BEMO, PHO, PEO MGB, PHIVOLCS, PAGASA, PNP, AFP		
		1 Warning & Forecasting System	Install Warning and Forecasting System (Radio)		50T	100T									TaRSIER 117 (Lead) MGB, PHIVOLCS, PAGASA, PNP, AFP		
		4 Updated Hazard Maps (Earthquake, Typhoon/Sto rm,	Training on the updating of Hazard Maps			100T									PPDO (Lead) BICTU, TaRSIER 117 PEO, BEMO MGB, PHIVOLCS, PAGASA, PNP, AFP		

PILLAR: PREVENTION AND MITIGATION															
GOAL: AVOID HAZARDS AND MITIGATE THEIR POTENTIAL IMPACTS BY REDUCING VULNERABILITIES AND EXPOSURE AND ENHANCING CAPACITIES OF COMMUNITIES															
Objective s	Outcom es	Outputs	Activities	THREE-YEAR TIMELINE AND INDICATIVE BUDGET										Sources of Funds	Partners/Links Networks
				2014		2015				2016					
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
		Landslide, Flooding)													
		Report on List of priority identified areas for resettlement sites & evacuation areas Ordinance re resettlement sites & evacuation areas	Identify & assess for resettlement sites & evacuation areas			50T									PEO (Lead) PPDO, BEMO MGB, PHILVOLCS, PAGASA
			Purchase of lots for resettlement sites												PLO (Lead) GO, PEO
		1 evacuation center per BIAD	Construct evacuation centers											ODA	PEO (Lead) AFP, DepEd, I- NGOs, NGAs

PILLAR: PREVENTION AND MITIGATION																	
GOAL: AVOID HAZARDS AND MITIGATE THEIR POTENTIAL IMPACTS BY REDUCING VULNERABILITIES AND EXPOSURE AND ENHANCING CAPACITIES OF COMMUNITIES																	
Objective s	Outcom es	Outputs	Activities	THREE-YEAR TIMELINE AND INDICATIVE BUDGET										Sources of Funds	Partners/Links Networks		
				2014		2015				2016							
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
		100% of Families residing in identified highly critical areas	Construction of houses in resettlement areas for to relocate families residing in “No Build Zones” areas												PEO (Lead) AFP I-NGOs NGAs TaRSIER 117 PEO PNP, AFP, I-NGOs, NGAs		
		1 Risk Assessment tool	Develop tools on risk assessment		50T										PPDO (Lead) BEMO OPA DILG, MGB, PHIVOLCS, AFP, PNP		
			Construction of Flood Control Measures Construction of sea walls Planting of mangroves												PEO (Lead) NIA, NGAs, I-NGOs		
		1 Disaster Response Manual	Conduct workshop for the crafting of Disaster Response Manual				100T								PPDO (Lead) OPSWD, BEMO, PEO DILG, MGB, OCD, DSWD, PHIVOLCS, PAGASA, PNP, AFP,		

PILLAR: PREVENTION AND MITIGATION																	
GOAL: AVOID HAZARDS AND MITIGATE THEIR POTENTIAL IMPACTS BY REDUCING VULNERABILITIES AND EXPOSURE AND ENHANCING CAPACITIES OF COMMUNITIES																	
Objective s	Outcom es	Outputs	Activities	THREE-YEAR TIMELINE AND INDICATIVE BUDGET										Sources of Funds	Partners/Links Networks		
				2014		2015				2016							
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
															DepEd, DPWH, other NGAs, NGOs, CSOs		
Increase Disaster conscious ness and responsibi lities of communit ies	Commun ities know what to do, where to go in times of disaster Responsi ble commun ities	1,109 barangays	Intensify IEC on DRMM- CCA to the barangay level or purok level		100T									MDRRMF	ProTeam (Lead) TaRSIER 117 MGB, DILG		
		E.O DRR-CCA Modules	Include DRR- CCA into School Curricula												DepEd (Lead)		
		100% of the no. of newly appointed personnel	Provide orientation on DRR-CCA to newly appointed personnel in			20T									PHRMDO (Lead)		

PILLAR: PREVENTION AND MITIGATION																	
GOAL: AVOID HAZARDS AND MITIGATE THEIR POTENTIAL IMPACTS BY REDUCING VULNERABILITIES AND EXPOSURE AND ENHANCING CAPACITIES OF COMMUNITIES																	
Objective s	Outcom es	Outputs	Activities	THREE-YEAR TIMELINE AND INDICATIVE BUDGET										Sources of Funds	Partners/Links Networks		
				2014		2015				2016							
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
			the PLGU/MLGUs														
Establish and Institution alize PDRRM- CCA Governan ce Center/Of fice	Systemat ic disaster risk reductio n manage ment, response , rehabilit ation and recovery operatio ns	Approved ordinance PDRMM- CCA Center/Offic e operational	Draft Ordinance for the creation of PDRRM- CCA Center/Office												SP (Lead) PDRRMC		
	Accessibl e DRR- CCA Data	DRRM-CCA Database System	DRRM-CCA Database System Development			500T									PPDO (Lead) BICTU, BEMO, PEO, PHO, OPSWD DILG, NEDA, MGB, DOST, AFP, PNP, PHIVOLCS, PAGASA, INGOs, NGAs		

PILLAR: PREVENTION AND MITIGATION																	
GOAL: AVOID HAZARDS AND MITIGATE THEIR POTENTIAL IMPACTS BY REDUCING VULNERABILITIES AND EXPOSURE AND ENHANCING CAPACITIES OF COMMUNITIES																	
Objective s	Outcom es	Outputs	Activities	THREE-YEAR TIMELINE AND INDICATIVE BUDGET										Sources of Funds	Partners/Links Networks		
				2014		2015				2016							
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				

Table 12 PDRRM Plan for Disaster Preparedness

PILLAR : DISASTER PREPAREDNESS																
GOAL: Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters																
Objectives	Outcomes	Outputs	Activities	Indicative Budget (in Million Pesos)										Sources of Funds	Lead Agency	Partners / Links / Networks
				2014		2015				2016						
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
To fully strengthen community awareness on DRR CCA	Communities are fully capacitated and well informed on DRR CCA	Flyers, pamphlets and tarps prepared and produced	Preparation/ production of DRR CCA materials	.130		.500				.500				DRRM Fund	PDRRMO EDCom DILG DepEd	MLGU BLGU NGO
		IEC materials distributed	Distribution of IEC materials on DRR CCA			.050				.050					PDRRMO EDCom DILG DepEd	MLGU BLGU NGO
		IEC conducted at all levels: Municipal Barangay Purok Schools Stakeholders	Conduct regular awareness or IEC campaign on DRR CCA with regular radio plugging in local radio stations: - Standard Manual of Operations - Guide for Emergency				1.5				1.5				PDRRMO EDCom DILG DepEd	MLGU BLGU Purok Academe NGO

PILLAR : DISASTER PREPAREDNESS																
GOAL:		Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters														
Objectives	Outcomes	Outputs	Activities	Indicative Budget (in Million Pesos)										Sources of Funds	Lead Agency	Partners / Links / Networks
				2014		2015				2016						
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
			Response Team - Family Guide to Action - Distribution of Goods - Building Code Advocacy - Promotion of Green Technology													
		IEC conducted for Food Security	IEC on Enhanced Food Always in the Home - Organic Natural Backyard and Urban Gardening with Models - Inland Natural Fishery Production					.200				.200		Provl Fund	OPA, OPV	PHO OPSWD DA DOST BISU MLGU NGO

PILLAR : DISASTER PREPAREDNESS																
GOAL:		Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters														
Objectives	Outcomes	Outputs	Activities	Indicative Budget (in Million Pesos)										Sources of Funds	Lead Agency	Partners / Links / Networks
				2014		2015				2016						
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
			IEC on Food Preservation - Storage of dried root crops, etc. - Fruit/ Vegetable preserves - Fish/ Meat preserves											Prov'l Fund	OPA, OPV	PHO, OPSWD, DA, DOST, BISU, MLGU, NGO
			IEC on Storage of Seeds and Planting Materials											Prov'l. Fund	OPA, OPV	PHO, DA, , DENR MLGU, NGO
		Manuals, Guidelines readily available	Preparation of the ff Manuals or Guidebook: - Standard Manual of Operations for Operation Centers - Guide for Emergency Response Teams (specifying protocols, duties responsibility						1.0				1.0		PDRRMO EDCom DILG DepEd	MLGU NGO

PILLAR : DISASTER PREPAREDNESS																
GOAL:		Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters														
Objectives	Outcomes	Outputs	Activities	Indicative Budget (in Million Pesos)										Sources of Funds	Lead Agency	Partners / Links / Networks
				2014		2015				2016						
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
			ies) - Family Guide to Action in the vernacular - Distribution of goods													
		DRR CCA activities, etc posted in the website	Posting of DRR CCA activities, press releases, M&E reports, etc. in the PGBh website												PDRRMO BICTU	DILG
		Conducted drills and simulation exercises	Conduct Drills/ Simulation Exercises: - Fire Drills - Dissemination of Fire Safety Precautions - Earthquake Drill - Mass Casualties	.130		.130				.130				DRRM Fund	BFP TaRSIER PNP AFP PA PHO	DepEd CHED NGO

PILLAR : DISASTER PREPAREDNESS																
GOAL: Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters																
Objectives	Outcomes	Outputs	Activities	Indicative Budget (in Million Pesos)										Sources of Funds	Lead Agency	Partners / Links / Networks
				2014		2015				2016						
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
		Increased awareness of students on DRRM CCA	Integration of DRR CCA in school curricula, teachers' guides and manuals											DepEd	PDRRMO DepEd	MLGU Academe
To capacitate communities, and institutions to become disaster resilient and CC adaptive	Strengthened and functional institutions and communities are equipped with necessary skills to cope with the impacts of disaster	Capability Building Program on DRR/CCA Trainings conducted at all levels and for: Municipal Barangay Purok Schools Stakeholders	Conduct of the following Trainings: - Continuous Trainings for TaRSIER 117 - Emergency Response Team Organized and Trained at all LGU levels - Training for PDRRMC/ MDRRC and		1.860	2.5				2.5				DRRM Fund MLGU Fund	PDRRMO DILG OCD TaRSIER PRC OPA OPV	MLGU BLGU NGO

PILLAR : DISASTER PREPAREDNESS																
GOAL:		Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters														
Objectives	Outcomes	Outputs	Activities	Indicative Budget (in Million Pesos)										Sources of Funds	Lead Agency	Partners / Links / Networks
				2014		2015				2016						
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
			BDRRMC - Training for Incident Command System - Capacity Building for Alternative Staple Food and Alternative Medicine - Capability Building to Buffer Food Shortage in case of disaster - Training on Food Preservation and Storage Technology - Training on Health and													

PILLAR : DISASTER PREPAREDNESS																
GOAL:		Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters														
Objectives	Outcomes	Outputs	Activities	Indicative Budget (in Million Pesos)										Sources of Funds	Lead Agency	Partners / Links / Networks
				2014		2015				2016						
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
			Wellness - Trainings on Single Rope Technique , High Angle Rescue and First Aid/ CPR - Training on Psychosoci al Support and Stress Debriefing - Training for Municipal Engineers on Structural Design of Buildings - Training on 143 Mobilizati on at the barangay level - Training for													

PILLAR : DISASTER PREPAREDNESS																
GOAL: Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters																
Objectives	Outcomes	Outputs	Activities	Indicative Budget (in Million Pesos)										Sources of Funds	Lead Agency	Partners / Links / Networks
				2014		2015				2016						
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
			Accredited Community Disaster Volunteers - Training on Management of Dead and Missing Persons - Training on Damage Assessment Needs Analysis (DANA)													
		Teams established/ created	Establishment of the ff. at the M/B LGU: - Emergency Response Team - Search and Rescue, Retrieval Team - DANA			3.0				3.0				DRRM Fund	PDRRMO DILG OCD BFP TARSIER PHO OPA	MLGU BLGU NGO

PILLAR : DISASTER PREPAREDNESS																
GOAL: Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters																
Objectives	Outcomes	Outputs	Activities	Indicative Budget (in Million Pesos)										Sources of Funds	Lead Agency	Partners / Links / Networks
				2014		2015				2016						
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
			Team - Medical Team - Accredited Community Disaster Volunteers - Information Management Team - TWG on Enhanced Food Security													
		Systems/ centers established	Establishment/ Installation of the following: - Early Warning System - Disaster Command / Auxiliary Center - Disaster Operations Center - Incident Command System			5.0				5.0				PDRRM Fund Donors	PDRRMO DILG OCD BFP TaRSIER PHO	MLGU BLGU

PILLAR : DISASTER PREPAREDNESS																
GOAL:		Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters														
Objectives	Outcomes	Outputs	Activities	Indicative Budget (in Million Pesos)										Sources of Funds	Lead Agency	Partners / Links / Networks
				2014		2015				2016						
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
			- Communication System from TaRSIER 117 to all LGU levels - Evacuation Center			1.075 Billion								JICA		
		Integrated operations and essential services ensured	Conduct an Inventory of existing resources and services			.050				.050					PDRRMO	
		Accredited Volunteer Groups provided with insurance	Provision of Insurance to Accredited Community Disaster Volunteer Groups			.500				.500					PDRRMO MLGU	
		Research and Studies conducted	Continuous Research and Studies on DRR CCA												BCDS	Academe
		Disaster Preparedness Equipment and Gadgets purchased	Purchase of CCTV cameras for Disaster Emergency Monitoring for	.500										DRRM Fund	PDRRMO	

PILLAR : DISASTER PREPAREDNESS																
GOAL:		Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters														
Objectives	Outcomes	Outputs	Activities	Indicative Budget (in Million Pesos)										Sources of Funds	Lead Agency	Partners / Links / Networks
				2014		2015				2016						
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
			Public Safety													
			Purchase of Emergency Rescue Ambulance and All-terrain Rescue/ Utility Vehicle	2.2										DRRM Fund	PDRRMO	
			Purchase of Barangay Disaster Emergency Equipment and Kits	1.0						1.0				DRRM Fund	PDRRMO	
			Purchase of Paraphernalia/ Equipment and Gadgets (Generator Sets and Water Purifier, etc.)	.600			2.0				2.0			DRRM Fund	PDRRMO	
			Upgrading and procurement of Communication Facilities for PDRMMC/ TaRSIER 117 & MDRRC Integration for	8.9		1.0				1.0				DRRMC Fund	PDRRMO TaRSIER	

PILLAR : DISASTER PREPAREDNESS																
GOAL: Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters																
Objectives	Outcomes	Outputs	Activities	Indicative Budget (in Million Pesos)										Sources of Funds	Lead Agency	Partners / Links / Net-works
				2014		2015				2016						
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
			Quick Response thru UHF/VHF Radio System/IP Telephony													
			Purchase of Diving Gears					1.0				1.0		DRRM Fund	PDRRMO	
		Food and non-food items are readily available	Stockpiling of commodities				.500				.500			DRRM Fund DSWD	PDRRMC OPSWD NFA	Business Sector
		Persons blood-typed	Mass blood typing												PRC	NGO
		Blood bags donated	Mass blood donation												PRC	NGO
To develop and implement local policies, plans and systems	Better policies, plans and systems are in-placed	LGUs with approved DRRM CCA Plan and Contingency Plan	Conduct of Planning Workshop on LGU DRRM Plan			.500				.500				DRRM Fund	PDRRMO PPDO DILG	MLGU
			Development and conduct of regular review of Contingency Plans			.300				.300					PDRRMO PDRRMC	DILG

PILLAR : DISASTER PREPAREDNESS																
GOAL:		Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters														
Objectives	Outcomes	Outputs	Activities	Indicative Budget (in Million Pesos)										Sources of Funds	Lead Agency	Partners / Links / Networks
				2014		2015				2016						
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
		Tracking of LGUs compliance on RA 10121 and CCA RA 9729	Monitoring and Evaluation of LGUs compliance on RA 10121 and CCA RA 9729			.100				.100					PDRRMO DILG PPDO	
			M&E of DRR CCA Plan Implementation				.050				.050				PDRRMO DILG PPDO	
		Enactment of Local Policy Development	Enactment of Ordinance on Forced or Pre-emptive Evacuation												SP PDRRMC	
To forge partnership and cooperation to all stakeholders	Active partnership and cooperation to all stakeholders are established	Guidelines for partnership arrangements prepared	Formulation of coordination mechanisms and guidelines for partnership arrangements				.050				.050				PDRRMO PLGU GO	DILG NGO
		MOA/ MOU signed	MOA with Private Sector												PDRRMO PLGU	DILG Business Sector NGOs
		Directory created	Create Directory or database of PLGU, MLGUs, BLGUs, NGAs,			.050				.050					PDRRMODI LG TaRSIER	

PILLAR : DISASTER PREPAREDNESS																
GOAL:		Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters														
Objectives	Outcomes	Outputs	Activities	Indicative Budget (in Million Pesos)										Sources of Funds	Lead Agency	Partners / Links / Networks
				2014		2015				2016						
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
			Civic Organization Key Players and Stakeholders													
TOTALS				13.46	1.86	13.68	4.1	1.2	1.0	14.18	4.1	1.2	1.0			

Table 13 PDRRM Plan for Disaster Response

PILLAR : RESPONSE															
GOAL: Provide life preservation and meet the basic subsistence needs of affected population based on acceptable standards during or immediately after a disaster															
Objectives	Outcomes	Outputs	Activities	Three-Year Timeline and Indicative Budget										Sources of Funds	Partners / Links / Networks
				2014		2015				2016					
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
To deploy SAR Teams & Security Forces to the scene within 8 hours	Zero preventable deaths. Low disabilities secondary injuries. Crimes prevented	Number teams deployed. Number of persons recued. Number of retrieved	Activate ICS Deployment of SAR Teams & Search, Rescue & Retrieval operations Deployment of DANA Teams Submission of Disaster Report to the PDRRMC	1M	1M									C/M/PDRRM Funds- Quick Response Fund 30% Donations- Cash and in kind International Humanitarian Organizations	TARSIER 117, AFP, PNP, BFP, PCG, ACDVs OCD, MDRRMC PRC, DSWD, OPSWD, AFP, PCG, PAF, CSO, etc. Private sectors (BCCI), etc.
To conduct rapid Damage And Need Assessment (DANA) by the LDRRMC	Coordinated, integrated system & timely appropriate responses provided & implemented	DATA ON: -Damages (infra & others) -Casualties (dead, injured, missing) -Priority needs Number of data validators/ volunteers	Repacking of goods Deployment of Relief Teams Relief goods distribution Conduct of coordination meeting Conduct of clearing operations												PHO, Hospitals, PRC, TARSIER 117, Bohol Medical Society, CSOs
To conduct	Immediate	Number of	Deployment of	4.49M	4.49										MDRRMC,

PILLAR : RESPONSE															
GOAL: Provide life preservation and meet the basic subsistence needs of affected population based on acceptable standards during or immediately after a disaster															
Objectives	Outcomes	Outputs	Activities	Three-Year Timeline and Indicative Budget										Sources of Funds	Partners / Links / Networks
				2014		2015				2016					
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
immediate relief operation within 24 hours (food & non-food items) & deployment of WATSAN Team	relief provided to affected families. Inventory (list). Masterlist of donor	volunteers mobilized Number of relief goods delivered Number of beneficiaries served -Amount of donations raised	medical teams Deployment of psychosocial teams Establishment of first aid tents		M										PDRRMC, C/M/PDRRMOs
Number of cash/ food for work beneficiaries	Improved people’s spirit/ feelings	Monitoring reports	Organization of camp management committees Establishment of evacuation centers Pre-emptive evacuation												
To provide immediate medical services to disaster victims including	Help victims surpass mental & psychological trauma	Number of medical teams deployed Number of psycho-social teams deployed	Profiling of displaced families Assessment of factors to determine transition to												

PILLAR : RESPONSE															
GOAL: Provide life preservation and meet the basic subsistence needs of affected population based on acceptable standards during or immediately after a disaster															
Objectives	Outcomes	Outputs	Activities	Three-Year Timeline and Indicative Budget										Sources of Funds	Partners / Links / Networks
				2014		2015				2016					
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Psychological first aid		Number of first aid tents established	recovery/ rehab phase												
To conduct pre-emptive/ timely evacuation of vulnerable families/ families at risk		Number of ECs established. Number of IDPs settled in ECs. Number of camp management committees organized												12.0M 15.0M 10M Livelihood/ shelter, DANA, Relief to FF & FA. 8.0M 81.0M 324.0M 16.0M	
		Accomplished checklist													
TOTALS															

Table 14 PDRRM Plan for Disaster Rehabilitation and Recovery

PILLAR : REHABILITATION AND RECOVERY															
GOAL: Restore and improve facilities, livelihood and living conditions and organizational capacities of affected communities, and reduced disaster risks in accordance with the “building back better” principle															
Objectives	Outcomes	Outputs	Activities	Three-Year Timeline and Indicative Budget										Sources of Funds	Partners / Links / Net-works
				2014		2015				2016					
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
To rehabilitate people’s means of livelihood & sustain economic activities & business	Stable and economic activities provided	Standardized template on data gathering Crops, livestock, fisheries, livelihood assistance provided	- Conduct of post-disaster damage assessment report	.50M										PDRRM O Funds/ Municipal Funds	DSWD, PHIVOLCS, MGB, UNDP, ILO, DOLE, DTI, OPV, OPSWD, BFAR, BEMO, POS, DA, WORLD FOOD
To enhance the skills & capacities on livelihood related activities	Damages, losses, & needs properly assessed and analysed	Number of P.O members trained & capacitated Volume of seaweed seedlings provided Number of heads of livestock, poultry, chicken restocked 35 fishpond	Conduct disaster needs assessment (DANA) on capacity of building for LGUs & partners. Seaweeds Production, Mushroom Culture, Bangus	12.0M 15.0M 10M Livelihood/ shelter, DANA, Relief to FF & FA. 8.0M 81.0M 324.0M				588.0M						BFAR, PGBh, DRR Fund, DSWD, DA	BFAR, OPA, ILO

PILLAR : REHABILITATION AND RECOVERY															
GOAL: Restore and improve facilities, livelihood and living conditions and organizational capacities of affected communities, and reduced disaster risks in accordance with the “building back better” principle															
Objectives	Outcomes	Outputs	Activities	Three-Year Timeline and Indicative Budget										Sources of Funds	Partners / Links / Net-works
				2014		2015				2016					
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
		operators availed of bangus fingerling Number of basket & loom weaving assistance restored in 9 municipalities.	Culture in cages, Loom & Basket Weaving Bagging of assorted vegetables & fruit trees Cash for work program on coconut planting, bamboo planting, and seaweeds, mangrove. Cash for work program on the Irrigation Canals. Cash for work activities (emergency assistance to disaster	16.0M											

PILLAR : REHABILITATION AND RECOVERY															
GOAL: Restore and improve facilities, livelihood and living conditions and organizational capacities of affected communities, and reduced disaster risks in accordance with the “building back better” principle															
Objectives	Outcomes	Outputs	Activities	Three-Year Timeline and Indicative Budget										Sources of Funds	Partners / Links / Net-works
				2014		2015				2016					
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
			survivors) Crops, livestock & other agri-support facilities Rehab of markets & slaughter houses in 10 municipalities.												
To restore/ install shelter & other vertical structures/ buildings.	Shelter, buildings and living condition back to normal.	8, 083 totally damaged houses constructed. 34, 688 partially damaged houses repaired & restore. 1, 125 classrooms constructed. Debris management.	Housing project. Relocation sites for shelter project. Reconstruction/ repair of school buildings/ classrooms.	388.0M (source : NHA)										NHA	DPWH, DA, City Government, Municipal Government
To provide	Houses,	Number of ports/	Procurement	912.0M										DSWD,	UN-

PILLAR : REHABILITATION AND RECOVERY															
GOAL: Restore and improve facilities, livelihood and living conditions and organizational capacities of affected communities, and reduced disaster risks in accordance with the “building back better” principle															
Objectives	Outcomes	Outputs	Activities	Three-Year Timeline and Indicative Budget										Sources of Funds	Partners / Links / Net-works
				2014		2015				2016					
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
safer location & appropriate engineering design tool that can withstand DRRM- CCA	buildings rebuilt or repaired to be more resilient to hazards with safer sites for housing.	sub-ports repaired & constructed. Number of airport repaired Provincial, Municipal, Barangay, public buildings repaired/ reconstructed.	of school facilities/ equipment. Skills training program for early recovery Repair of Provincial/ City Municipal buildings Construction/ repair of various major ports & sub-ports & airports	(source : DSWD)										DOLE, DPWH	HABITAT For Humanity, DSWD, WORLD VISION, PRIVATE SECTOR, ILO, TESDA
To reconstruct infrastructures & other public utilities	Disaster & climate change resilient infrastructure construct and rehabilitated	Number of health facilities repaired & rehabilitated 1 hospital constructed Cultural heritage; i.e. churches	Construction/ repair/ rehabilitation of roads, bridges & other vital, infrastructure.	1.8 M 450M 737.0M										DPWH, PPA/ DOTC	DPWH, CAAP, NCCA

PILLAR : REHABILITATION AND RECOVERY															
GOAL: Restore and improve facilities, livelihood and living conditions and organizational capacities of affected communities, and reduced disaster risks in accordance with the “building back better” principle															
Objectives	Outcomes	Outputs	Activities	Three-Year Timeline and Indicative Budget										Sources of Funds	Partners / Links / Net-works
				2014		2015				2016					
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
		reconstructed/ restored Number of kilometers of road rehabilitated Number of Irrigation facilities rehabilitated													
To provide adequate road network & other infrastructure facilities	Passable & usable public utilities.	Number of canals, dike, drainage rehabilitated Number of water facilities rehabilitated Number of flood control facilities repaired		10.0M construction of roads & bridges 286.90 M				783.0 M(bridges)		234.0M (road)	3.3B (major roads)				
To provide to physical & psychological depressed persons suffered	Psychologically safe & secure populace protected from the	Number of children & adult provided with awareness & child protection.	Reconstruction of hospitals, health centers, day care centers	271.0M 80.5M 104.0M 37.0M				58.0 M						DOH, NIA, DPWH	PHO, RHU, WHO, UNICEF, PEO, MHO, OPSWD/ DSWD,

PILLAR : REHABILITATION AND RECOVERY															
GOAL: Restore and improve facilities, livelihood and living conditions and organizational capacities of affected communities, and reduced disaster risks in accordance with the “building back better” principle															
Objectives	Outcomes	Outputs	Activities	Three-Year Timeline and Indicative Budget										Sources of Funds	Partners / Links / Net-works
				2014		2015				2016					
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
from the effects of disaster	effects of disaster is able to restore to normal functioning Restored to normal physical & psychological condition of affected people	Number of social workers provided with psychological care training. Psychosocial intervention trainings & care provided	Reconstructio n of irrigation facilities. Rehabilitation of water supply in 26 Municipalities Acquisition of health equipment Rehabilitation of back canals, dike, drainages, box culvert. Repair of flood control facilities Trainings/ briefing on stress debriefing												PMO, UNI FPA IOM, DSWD, PNP, CFSI, Save the Children, DepEd, AFP, PAGCOR
TOTALS															

4.0 PDRRM Plan Monitoring and Evaluation

Feedback mechanisms are important aspects of gauging performance targets and learning from our experiences on the ground. The NDRRMP, being a long plan which transcends various administrations and leaderships, need to be constantly looked into in terms of its relevance and impact on the changing situations on the ground.⁹

The NDRRM Plan further suggests that -

1. Monitoring and evaluation are essential components of results-based programming in DRRM as these will ensure that the plan's on-time implementation and that learnings from past experiences become input to the plan altogether. Also, through monitoring and evaluation activities, appropriate and needed revisions and/or changes can be identified, from the identified activities to the implementation mechanisms, in case more appropriate ones are realized.
2. These will be led by the Office of Civil Defence, in close coordination with the four vice chairpersons of the NDRRMC by focusing on relevance, effectiveness, efficiency, impact and sustainability. A standard monitoring and evaluation template will be developed by the OCD together with the members of the Technical Management Group.
3. Primarily, monitoring and evaluation will be based on the indicators, targets and activities identified in each of the four priority areas on DRRM. The indicators set in the NDRRMP will be applicable to both the national and local levels. The national level targets will be monitored by the lead and implementing agencies, in close coordination with the regional and local DRRM councils. Each lead agency will in turn submit reports to the respective vice chairperson of the NDRRMC in charge of the specific priority area.
4. The local level targets will be operationalized depending on the needs and situation on the LGU. These will be captured in the respective local DRRM plans which the LGUs need to develop through their respective local DRRM offices and councils. Customization of the targets will depend on the risk assessments and analysis done in their respective local areas. The local DRRM plan will be mainstreamed into the CDP and CLUP and will form part of the LGU mandated plans.
5. Monitoring and evaluation will also include an audit report on the use and status of the National DRRM Fund and how the said fund contributed to the attainment of the NDRRMP.

The Provincial Government of Bohol has an institutionalized Provincial Monitoring and Evaluation System (ProMES) that will be used in the conduct of M&E for the PDRRM Plan.

⁹ NDRMM Plan, p35

LDRRM Planning participants agreed to periodically and regularly monitor outputs, tracking accomplishments vis-à-vis targets, and outcomes, which are significant changes in people's knowledge, skills and attitudes as well as transformations at the institutional and community level.

Monitoring and Evaluation Framework

The following table was agreed upon by LDRRM Planning Workshop participants as the M&E Framework of the Bohol PDRRM Plan:

Table 15 PDRRM Plan Monitoring and Evaluation Framework

Areas	Description
What are to be monitored:	<ul style="list-style-type: none"> • Kinds and types of plans, programs and activities • Targets versus accomplishments • Performance indicators • Fund utilization • Status of implementation whether ongoing, completed or spent / expended / disbursed or paid and not just earmarked • Percentage of accomplishments, both physical and financial • Facilitation factors • Hindering factors • Level of PLGU and stakeholder support and cooperation
Who will monitor?	<ol style="list-style-type: none"> 1. Provincial Monitoring and Evaluation Team (ProMES) led by the Project Development and Monitoring Unit (PDMU) of the Provincial Planning and Development Office (PPDO) 2. Administrative and Training Office of the PDRRMO (per Executive Order by the Governor) 3. Representative from the PDRRMO per Memorandum Order by the Governor 4. Head of the PDRRM Office 5. Civil Society and Private Sector representatives
How often is Monitoring and Evaluation done?	<ul style="list-style-type: none"> • Implementing offices conduct monthly progress monitoring of activities where their offices are the implementers • Quarterly performance monitoring • Semi-annual monitoring report • Annual assessment and evaluation
How will monitoring data and information be shared?	<ul style="list-style-type: none"> • Prescribed monitoring templates will be used by implementing offices / departments

Areas	Description
	<ul style="list-style-type: none"> ProMES monitoring templates will also be used, especially for quarterly, semi-annual and annual reporting for easy consolidation by the PDMU-PPDO Hard and soft copies of monitoring and evaluation reports
To whom will monitoring data be reported or shared? Who are the users of the data?	a) Provincial Governor b) Provincial Vice-Governor c) Sangguniang Panlalawigan d) Provincial Disaster Risk Reduction Management Council e) Management Executive Board (MEB) f) Office of Civil Defense (OCD) g) Provincial Development Council (PDC) h) General Public and Stakeholders
How and in what form will monitoring data be reported or shared?	<ul style="list-style-type: none"> Printed and hard copies of monthly, quarterly, semi-annual and annual report Electronic files posted in the PGBh website for web-based and online reporting and feedback Film shows and video clips through the Effective Development Communication (EDCom) Office Photo files and photo clips Activity documentation reports

Monitoring and Evaluation Template

Workshop participants agreed that the following monitoring template will be used for the quarterly, semi-annual and annual monitoring and evaluation report.

Table 16 PDRRM Plan Monitoring and Evaluation Template

Activity	Targets (Performance Indicators)	Actual Accomplishments (Actual vs Targets) In %		Facilitating Factors	Hindering Factors
		Physical	Financial		

5.0 PDRRM Plan Sustainability and Communication Plan

Sustainability Plan

The planning process is just the preparation of the LDRRM Plan. More needs to be done after the planning workshop to ensure plan sustainability. A Sustainability Plan aims to continue what has been started. Sustainability generally includes

- ✓ Institutionalization by legislation
- ✓ Increasing ownership by funding from own-sourced funds
- ✓ Providing permanent implementation arrangements and administrative support (people, offices, budgets, etc.)

Table 18 below summarizes the Sustainability Plan agreed by stakeholders:

Table 17 Sustainability Plan of the PDRRM Plan

Sustainability Plan	
Policy Support	Implementation Arrangements
<ul style="list-style-type: none"> An order institutionalizing PDRRM-CCA CTR/ OFFICE 	<ul style="list-style-type: none"> Adoption of IRRs for measures passed.
<ul style="list-style-type: none"> Resolution authorizing the governor to enter into MOA with private sectors for availability of foods/ services in times of calamity/ crisis. 	<ul style="list-style-type: none"> Appropriate structure within the PDRRMO recommending the 4 pillars with separate in-house monitoring officer. Network/ collaborate with private, business, civil society, NGA, International donors, humanitarian agency & other key players. PDRRMC secretariat OPSWD PDC secretariat- PPDO Sangguniang Panlalawigan.
<ul style="list-style-type: none"> Resolution penalizing the private sector/ establishment for refusal to provide goods/ services in the times of calamity. 	
<ul style="list-style-type: none"> Ordinance creating an earthquake trust fund. 	
<ul style="list-style-type: none"> Ordinance creating quality control assurance system ensuring compliance with construction standards or building code. PDRRMC resolution approving the DRRM/ CCA plan. PDC resolution approving the DRRM/ CCA plan SP resolution adopting the plan. Ordinance creating the PDRRMO 	<ul style="list-style-type: none"> A functional and operational Provincial Disaster Risk Reduction Management Office (PDRRMO) who will provide the steering structure to implement the Plan.

Communication Plan

Plans need to be communicated and shared to stakeholders to ensure their continuance and sustainability. This is to disseminate information to stakeholders about the plan and in the process generate “buy-in” from all sectors. The PDRRM Plan needs to be “owned” by Boholano leaders and communities to ensure its successful implementation. A plan that is known, understood, appreciated / valued will most likely generate more participation in its implementation.

- A plan to disseminate information about the Plan
- Generate “buy-in” from all sectors and stakeholders
- Intended to increase “ownership” of the Plan
- A plan that is known, understood, appreciated / valued will most likely generate more participation in its implementation

Table 18 PDRRM Communication Plan

Key Messages to be Communicated to Stakeholders for “buy-in” on the DRRM Plan	Communicators or Message Senders	Audience and Message Users	Communication Media, Channels and Approaches
<ul style="list-style-type: none"> • Prevention and mitigation action plan, 2014-2016. 	<ul style="list-style-type: none"> • PDRRMC, MDRRMCs , BDRRMCs 	<ul style="list-style-type: none"> • Communities • Students • General Populace • Tourists • Business Sectors 	<ul style="list-style-type: none"> • Social networks • SMS • Radio • Television
<ul style="list-style-type: none"> • Policies/ordinance / resolutions • Habang may buhay may pag-asa. • Be PREPARED! “LAGING HANDA” • “PANGANDAM KALUWASAN MATAGAMTAM” 	<ul style="list-style-type: none"> • Teachers • PDRRMO to lead in cascading the plan to the local level. • PDRRMC Council 	<ul style="list-style-type: none"> • PDRRMC, PDC, B-LGU, LFC, SP, Stakeholders, Partners • Communities MLGU/BLGU/ Purok, Schools & other stakeholders. 	<ul style="list-style-type: none"> • Barangay assemblies • Tarps • Posters • Sunday church bulletins • Newspaper • Magazines • Leaflets / brochure dissemination • Download thru Provincial website.

Key Messages to be Communicated to Stakeholders for “buy-in” on the DRRM Plan	Communicators or Message Senders	Audience and Message Users	Communication Media, Channels and Approaches
			<ul style="list-style-type: none"> • EDCOM to publish in local capitol bulletin. • Radio broadcast (Kita ug ang Gobernador , DYRD, kapihan sa PIA) • Radio plugging, local newspapers , IEC materials, billboards, tarpaulin.
<ul style="list-style-type: none"> • PDRRMO knowledge center. 	<ul style="list-style-type: none"> • ABC 		
	<ul style="list-style-type: none"> • SP, SBs 		

Annexures

- A. Matrix for Past Flood Events in Bohol**
- B. Matrix for Past Rainfall-Induced Landslide Events**
- C. Summary of Rainfall-Induced Landslide Susceptibility in Bohol**
- D. Summary for Storm Surge/Big Waves Susceptibility**
- E. Summary for Earthquake Susceptibility**
- F. Summary for Earthquake-Induced Landslide Susceptibility**
- G. Summary Matrix for Hazard Susceptibility**
- H. List of LDRRM Planning Workshop Participants**
- I. Group Photo of LDRRM Planning Workshop Participants for Bohol Province**
- J. Workshop Documentation (separate file)**

Annex A
Matrix for Past Flood Events in Bohol

DESCRIPTION	POPULATION/AREAS AFFECTED	IMPACTS
*March 24, 2011 Flashfloods	2 barangays each of Sierra Bullones, Jagna and Duero, 8 barangays of Dimiao and 12 barangays of Garcia Hernandez	2 dead due to drowning in Sierra Bullones 220 has. of crops damaged worth P700,000.00
March 16, 2011 Flashfloods	Mayana, Brgy. Centro Calabacita, Purok 7, Brgy. Alejawan, Jagna	2 families and 10 persons affected; 1 house each partially and totally damaged; No data available on cost
	Sitio Ilaya, Brgy. Matin-ao and Purok 1, Brgy. Danicop, Sierra Bullones, Bohol	2 dead and damaged road and spillway but no data available on damage cost
	Sitio Tiwi, Brgy. Manaba and Sitio Conveyor, Brgy. West Canayaon, Garcia Hernandez	No data available
	Sitio Ilawod and vicinities, Brgy. Balbalan, Dimiao, Bohol	No data available
*January 28, 2011 Flashfloods	7 barangays in Alicia and 4 barangays in Inabanga, Bohol	25 has. ricefields damaged P2.8M damage cost
*January 27, 2011 Floods	4 barangays in Guindulman, Bohol	25 households -knee depth Ricefields/fishponds (30 to 50 hectares affected) Fishpond (about 10 has. affected)
	5 barangays in Trinidad, Bohol	253 hectares of ricefields are damaged
	13 barangays in Inabanga, Bohol	Ricefields affected Evacuation of 16 households at the chapel
	5 barangays in Bien Unido, Bohol	5 hectares of crops affected 5 Residential houses living near the fishpond affected
	2 barangays in Clarin, Bohol	Water over flow at Bacani bridge
	Poblacion Sagbayan, Bohol	Rice fields are mostly affected estimated 60 to 70 hectares
*January 5, 2011 Floods	5 barangays in Guindulman 3 barangays in Alicia Brgy. Song-on, Loon, Bohol	Nipa plants and ricefields were damaged but no damage cost is available
*Oct. 15, 2010 Flashfloods	Brgy. Genomoan, Loon, Bohol	2 children dead
*February 9, 2009 Low Pressure Area/ Flashfloods	Garcia-Hernandez	Total Crop Damage- Php 4,240,000.00 Total Infra Damage- Php 15,000,000.00
	4 barangays in Loboc, Bohol	Php 704,290.00
*February 7, 2009 Low Pressure Area/ Flashfloods	Valencia, Bohol	Php 3,000,000.00-(40mtrs) rehabilitation; (100cu.m) 30,000.00 ; 100,000.00, 50,000.00 for removal Php 85,750,000.00 (Infra & Agri) Res.No. 30 Series of 2009

DESCRIPTION	POPULATION/AREAS AFFECTED	IMPACTS
	Antequera, Bohol	No data available
*Dec. 31, 2008 Flashfloods	Clarín and Tubigón, Bohol	P10.47 million damages
*March 5, 2008 Minor Flashfloods	Brgy. Pondol, Pananquilon, and Bagacay in Loon and Calape	P10.993 million damages
*January 2, 2008 Flashfloods	Tubigón, Bohol	No data available
Aug-Sept. 2007 Seasonal flashfloods with depths > 1m	So. Bunuga, Brgy. Danicop, Sierra Bullones, Bohol	No data available
	So. Pag-asa & Little Ilaod, Brgy. Poblacion, Sierra Bullones, Bohol	Several houses damaged but no data available on the worth of damage
	Purok 1 & 2, Brgy. Sta. Cruz, Sierra Bullones, Bohol	Several houses damaged but no data available on the damage cost
	Brgy. Camalian, Ubay, Bohol	Several houses damaged but no data available on the worth of damage
	Puroks 1 to 6, Brgy. Banlasan, Tubigón, Bohol	All households damaged but no data available on the worth of damage
	Puroks 4, 5 & 7, Brgy. Panadtaran, Tubigón, Bohol	No data available
	So. Sto. Nino, Suba, Brgy. Pinayagan Sur, Tubigón, Bohol	20 houses damaged but no data available on the worth of damage
Aug-Sept. 2007 Rare flashfloods with depths > 1m	Puroks 2, 4, 5 & 6, Brgy. Humayhumay, Ubay, Bohol	No data available
Aug-Sept. 2007 Seasonal flash floods with depths < 1m	Brgy. Canlusong, Valencia, Bohol	No data available
Aug-Sept. 2007 Rare flash floods with depths < 1m	Low-lying areas, Brgy. Banlasan, Tubigón, Bohol	Several houses damaged but no data available on damage cost
Aug-Sept. 2007 Seasonal flash floods with depths < 0.5m	Areas near Taug Creek, Brgy. Cutcutan, Valencia, Bohol	No data available
	Puroks near Catug-an Creek, Brgy. Poblacion Or., Valencia, Bohol	No data available
	Puroks 2, 3, 4 & 5, Brgy. Achila, Ubay, Bohol	Several houses damaged but no data available on the worth of damage
	Purok 4, Brgy. Potohan, Tubigón, Bohol	Several houses damaged but no data available on damage cost
December 2006 Flash floods/ extreme heavy rainfall with depths < 5m	Brgy. Pooc Occidental, Tubigón, Bohol	No data available
*December 2005– 2006 Severe Rains	Getafe, Bohol	P15.85 million damages
2005	So. Ingod, Brgy. Centro, Tubigón,	No data available

DESCRIPTION	POPULATION/AREAS AFFECTED	IMPACTS
Flashfloods/ extreme heavy rainfall with depths > 5m	Bohol	
*October 17, 2004 Flash floods	Brgy. Tubod Mar, Jagna, Bohol	No data available

Source: *Office of Civil Defence (OCD)-Bohol and the rest -Mines and Geosciences Bureau – Region 7

Annex B
Matrix for Past Rainfall-Induced Landslide Events

DESCRIPTION	POPULATION/AREAS AFFECTED	IMPACTS
July 31, 2011 Localized landslide in old limestone quarry	Brgy. Lincod, Maribojoc, Bohol (N9°43'42.0", E123°52'17.8")	1 family and 6 persons affected 2 dead, 4 injured; P600,000.00 damaged private and commercial properties
March 16, 2011 @ 3:30 p.m. Landslide/Slope failure, underlain by porous, cavernous, coralline limestone	Sitio Ilaya, Brgy. Bugang Sur, Bilar, Bohol; 1 partially damaged house	Damaged road but no available data on cost
March 2011 Landslide/Slope failure	Brgy. Can-ipol, Jagna, Bohol	Damaged road but no available data on cost
March 2011 Localized Slope failure underlain by weathered mudstone & limestone	So. Katiwian, Brgy. Calabacita, Jagna, Bohol	Damaged road but no available data on cost
March 2011 Road Slip/Subsidence, tension cracks along 200-m road length	Purok Caimito, Brgy. Cawayanan, Tubigon, Bohol	Damaged road but no available data on cost
March 2011 Landslide/Rockfall/Wedge failure, underlain by highly fractured/heavily jointed volcanic rocks	Tagbilaran North Road Km 102.000 Brgy. Burgos, Talibon, Bohol	Damaged road but no available data on cost
March 2011 Slump/Landslide, underlain by weathered agglomerate	Sitio Mabca, Brgy. Overland, Buenavista, Bohol	Damaged road but no available data on cost
March 2011 Landslide	Brgy. Libertad, Tubigon, Bohol	Damaged road but no available data on cost
March 2011 Landslide/Localized Slope failure, underlain by moderately weathered limestone	Km 82 Brgy. Lataban and So. Danao, Brgy. Magsaysay, Sierra Bullones, Bohol	Damaged road but no available data on cost
June 3, 2008 Minor Landslide	Brgy. Sagasa, Balilihan, Bohol	No available data
March 17, 2008 Landslide	Loboc, Bohol	No available data
Early March 2008 Landslide/Road Slip, underlain by shales interbedded with sandstone	Loboc-Carmen Road in Brgy. Gotozon, Loboc, Bohol (N9°39'03.50", E124°01'39.70")	Damaged road but no available data on cost
February 18, 2008 Landslide/Road Slip, recurred in early 2011/ steep slope cut in the '70's, underlain by limestone	National Highway in Poblacion Central (Liloan) Cortes, Bohol (N9°43'18.60", E123°52'28.20")	Damaged road but no available data on cost

DESCRIPTION	POPULATION/AREAS AFFECTED	IMPACTS
January 11, 2007 Minor Landslide	Loboc-Sikatuna, Bohol	No available data
September 13, 2006 Landslide	Mayana, Jagna, Bohol	No available data
August 23, 2006 Landslide	Mayana, Jagna, Bohol	No available data
March 20, 2006 Landslide	Mayana, Jagna, Bohol	No available data
March 6, 2006 Land cracks	Sierra Bullones, Bohol	No available data
March 2, 2006 Land cracks	Cortes, Bohol	No available data
February 27, 2006 Land cracks	Alicia, Bohol	No available data
December 16, 2005 Landslide underlain by tuffaceous sediments	Brgy. Imelda, Duero, Bohol (N9°45'19.7", 9°45'31.2", E124°22'46.5", 124°23'51.0") 1 family and 5 persons affected	1 house damaged; No available data on damage cost
October 15, 2005 Landslide/ Rotational Slip after heavy rainfall; underlain by limestone	So. Ilaya, Brgy. Labogon, Duero, Bohol (N9°44'44.4", 9°45'00", E124°23'03.6", E124°25'13")	No available data
July 11, 2005 Landslide	Mayana, Jagna, Bohol	P5M - damaged houses P4.5M – infrastructure P5.3M – agriculture Total damages – P14.8M
1980's/ July 11, 2005 Landslide/Rockfall, underlain by shale, tuffaceous siltstone and tuffaceous sandstone, with possible presence of a fault	Brgy. Mayana, Jagna, Bohol (N9°43'55.5", E124°20'56.1") More or less 255 persons affected	Damaged road and 51 residences but no available data on cost
November 2001 Landslide/ Rotational Slip	Brgy. Candasog, Loboc, Bohol (N9°38'50.0", E124°02'25.1") 15 has.	No available data
November 22, 1998 Debris/ Rock fall underlain by highly fractured & brecciated ultramatics, clastics and limestone	Tagbilaran-Guindulman Road, Bohol; 20 hectares; 30 families and more or less 150 persons affected	No available data
1070's/ July 1997 Landslide/rock fall/wedge failure/slope failure	DWRP/Angilan River, Duero, Bohol; 50 hectares	No available data

Annex C
Summary of Rainfall-Induced Landslide Susceptibility in Bohol

Municipality	High		Moderate		Low	
	No. of Barangay	Land Area (m ² .)	No. of Barangay	Land Area (m ² .)	No. of Barangay	Land Area (m ² .)
Albuquerque	1	1,467,095	4	3,396,862	11	18,840,460
Alicia	8	22,514,498	15	27,528,545	13	43,555,285
Anda	15	23,708,747	13	13,054,693	0	0
Antequera	0	0	12	17,019,805	20	33,037,297
Baclayon	0	0	12	18,167,373	11	7,900,230
Balilihan	3	1,054,966	22	39,141,677	31	81,323,007
Batuan	0	0	13	45,546,907	15	31,025,717
Bien Unido	0	0	0	0	7	2,586,672
Bilar	0	0	18	94,812,953	17	23,664,873
Buenavista	8	1,996,176	13	12,774,117	25	72,768,460
Calape	9	8,787,785	9	7,948,401	18	23,284,257
Candijay	13	16,937,247	17	20,621,433	17	15,720,233
Carmen	9	14,846,425	23	57,456,658	29	97,565,508
Catigbian	9	3,709,200	16	30,231,695	20	38,439,362
Clarin	2	928,878	6	3,051,958	22	32,337,400
Corella	0	0	5	16,963,839	8	20,554,599
Cortes	0	0	0	0	14	25,035,051
Dagohoy	2	1,225,878	7	21,205,591	14	42,471,552
Danao	12	24,333,738	15	56,541,908	15	55,392,127
Dauis	0	0	5	635,194	0	0
Dimiao	4	611,318	20	28351083	32	24,038,584
Duero	13	18,564,280	19	28,173,474	6	20,608,387
GHernandez	21	18,028,674	27	61,122,343	20	15,790,368
Getafe	2	340,792	6	14,565,467	14	51,318,364
Guindulman	14	34,880,127	13	31,260,000	13	11,470,434
Inabanga	9	5,183,626	21	26,639,192	30	18,027,733
Jagna	25	25,944,747	31	55,339,371	16	15,991,023
Lila	6	4,127,844	15	19,765,183	7	4,008,565
Loay	2	238,172	7	4,205,817	16	13,472,906
Loboc	8	2,742,857	21	31,446,898	25	18,457,576
Loon	19	15,746,036	27	18,618,690	35	36,720,320

Municipality	High		Moderate		Low	
	No. of Barangay	Land Area (m ² .)	No. of Barangay	Land Area (m ² .)	No. of Barangay	Land Area (m ² .)
Mabini	18	16,580,034	20	14,739,356	16	24,021,579
Maribojoc	8	16,023,736	8	6,376,459	15	18,136,374
Pilar	9	10,937,063	12	20,198,807	20	75,692,497
Pres. Garcia	0	0	0	0	20	17,495,289
Sagbayan	6	1,818,715	11	10,412,270	18	24,592,197
San Isidro	1	60,444	10	15,539,372	12	38,108,871
San Miguel	3	1,944,151	5	6,239,812	17	63,744,345
Sevilla	0	0	7	22,720,038	13	41,925,676
Sierra Bullones	12	6,065,677	17	24,883,581	22	45,029,349
Sikatuna	2	2,825,537	6	5,470,049	9	9,767,845
Tagbilaran City	0	0	2	733,829	12	17,298,159
Talibon	0	0	7	20,606,090	23	67,941,114
Trinidad	0	0	4	13,442,904	13	37,035,058
Tubigon	1	691,063	8	6,022,812	20	32,275,358
Ubay	5	18,466,171	6	8,868,368	30	52,117,300
Valencia	19	9,735,765	31	41,520,233	31	36,076,030
TOTAL	298	333,067,462	586	1,023,361,107	812	1,496,663,391

Annex D
Summary for Storm Surge/Big Waves Susceptibility

Municipality	No. of Barangay	Total Land Area (sq. m.)
Alburquerque	6	291,729
Anda	8	1,374,400
Baclayon	5	1,674,550
Bien Unido	14	4,024,686
Buenavista	4	142,768
Calape	14	1,170,617
Candijay	4	1,753,119
Clarin	6	266,912
Cortes	2	277,492
Dauis	5	26,788
Dimiao	8	99,534
Duero	9	336,343
G-Hernandez	11	383,157
Getafe	19	14,593,415
Guindulman	7	542,374
Inabanga	15	1,132,530
Jagna	13	398,066
Lila	10	393,233
Loay	13	680,983
Loon	26	1,088,480
Mabini	15	3,991,375
Maribojoc	9	883,488
Panglao	8	2,341,532
Pres. Garcia	21	4,092,553
Tagbilaran City	5	138,244
Talibon	17	11,812,330
Tubigon	14	633,596
Ubay	20	4,408,879
Valencia	8	234,231
TOTAL	316	59,187,404

Annex E
Summary for Earthquake Susceptibility

Municipality	Susceptibility Level			
	Intensity 7		Intensity 8	
	Barangay	Land Area (sq.m.)	Barangay	Land Area (sq.m.)
Albuquerque	0	0	11	26,363,037
Alicia	0	0	15	118,335,078
Anda	0	0	16	50,352,615
Antequera	15	24,866,419	15	29,964,269
Baclayon	0	0	17	31,713,811
Balilihan	9	6,157,300	31	119,741,019
Batuan	0	0	15	91,281,433
Bien Unido	13	23,101,895	2	3,508,681
Bilar	0	0	19	134,951,293
Buenavista	15	67,123,687	24	34,016,623
Calape	33	72,457,438	1	25,366
Candijay	0	0	21	93,105,632
Carmen	3	6,583,395	29	213,661,109
Catigbian	18	29,064,007	18	54,567,757
Clarin	18	37,562,022	18	14,856,951
Corella	0	0	8	38,897,600
Cortes	0	0	14	30,071,089
Dagohoy	1	446,576	15	73,252,428
Danao	16	88,452,260	13	55,673,469
Dauis	5	4,154,139	12	41,207,256
Dimiao	0	0	35	55,289,585
Duero	0	0	21	74,896,568
G-Hernandez	0	0	30	99,851,224
Getafe	3	27,517,032	24	68,482,136
Guindulman	0	0	19	101,428,262
Inabanga	20	32,837,220	40	67,876,210
Jagna	0	0	33	105,752,345
Lila	0	0	18	33,350,442
Loay	0	0	24	29,557,344
Loboc	0	0	28	57,331,014
Loon	67	97,036,882	1	452
Mabini	22	86,898,747	22	86,898,747
Maribojoc	12	26,971,346	16	25,889,135
Panglao	2	370,811	10	47,394,290
Pilar	0	0	21	121,179,717
Pres. Garcia	23	43,873,441	5	1,753,528

Municipality	Susceptibility Level			
	Intensity 7		Intensity 8	
	Barangay	Land Area (sq.m.)	Barangay	Land Area (sq.m.)
Sagbayan	19	60,020,017	15	33,410,205
San Isidro	12	53,139,434	3	6,429,688
San Miguel	4	7,231,765	18	107,238,612
Sevilla	0	0	13	66,822,158
Sierra Bullones	0	0	22	85,536,843
Sikatuna	0	0	10	20,895,668
Tagbilaran City	0	0	15	29,336,707
Talibon	21	110,386,546	12	24,218,837
Trinidad	6	36,300,744	20	80,045,239
Tubigon	23	46,385,787	19	14,309,698
Ubay	1	555,425	44	227,923,368
Valencia	0	0	35	94,094,544
TOTAL	381	989,494,335	887	3,022,739,082

Annex F
Summary for Earthquake-Induced Landslide Susceptibility

Municipality	Susceptibility Levels					
	High		Moderate		Low	
	No. of Barangay	Land Area (sq.m.)	No. of Barangay	Land Area (sq.m.)	No. of Barangay	Land Area (sq.m.)
Albuquerque	5	23,334	10	848,886	11	2,429,444
Alicia	7	63,089	15	3,537,428	15	8,279,021
Anda	0	0	15	618,817	15	5,238,640
Antequera	0	0	21	561,776	21	5,016,953
Baclayon	2	808	9	456,091	13	2,643,130
Balilihan	6	53,219	30	5,292,219	31	18,123,129
Batuan	8	67,663	15	7,570,349	15	19,401,609
Bilar	18	1,598,134	18	15,491,435	19	27,047,249
Buenavista	0	0	15	83,281	23	4,204,381
Calape	0	0	15	394,470	18	5,230,686
Candijay	6	28,671	20	2,280,024	20	7,574,727
Carmen	4	667,911	26	4,788,782	29	14,853,761
Catigbian	2	2,009	17	1,360,527	21	7,336,280
Clarín	0	0	10	95,594	18	1,763,915
Corella	1	1,179	7	816,122	8	3,653,257
Cortes	0	0	9	116,888	14	654,588
Dagohoy	1	8,032	10	1,041,130	14	5,067,418
Danao	2	4,914	14	1,565,781	17	12,898,827
Dauis	0	0	2	5,919	4	125,403
Dimiao	19	204,597	30	3,423,317	35	3,230,031
Duero	9	77,402	20	4,605,047	21	9,661,484
G-Hernandez	15	415,368	30	6,197,753	30	12,779,230
Getafe	0	0	4	65,338	11	2,708,909
Guindulman	5	115,586	15	5,189,652	17	12,403,464
Inabanga	0	0	18	126,594	28	3,674,513
Jagna	8	146,480	32	5,271,279	33	12,188,800
Lila	13	807,982	18	2,297,851	18	3,636,209
Loay	8	74,312	16	1,119,458	22	1,737,722
Loboc	22	725,685	28	5,068,279	28	8,313,832
Loon	0	0	31	363,684	52	7,359,600
Mabini	0	0	19	763,655	21	4,705,441
Maribojoc	0	0	11	281,738	17	341,704
Panglao	0	0	1	3,997	1	39,406
Pilar	7	177,593	19	2,362,107	21	4,129,137
Pres. Garcia	0	0	3	3,602	17	292,853
Sagbayan	0	0	22	684,339	24	4,021,605
San Isidro	1	393	12	1,150,989	12	7,946,250

Municipality	Susceptibility Levels					
	High		Moderate		Low	
	No. of Barangay	Land Area (sq.m.)	No. of Barangay	Land Area (sq.m.)	No. of Barangay	Land Area (sq.m.)
San Miguel	0	0	8	115,897	11	1,719,710
Sevilla	6	97,021	13	4,389,039	13	11,885,370
Sierra Bullones	15	428,626	19	2,863,919	22	4,292,093
Sikatuna	3	4,629	10	994,371	10	2,842,434
Tagbilaran City	0	0	6	38,746	8	194,467
Talibon	0	0	4	83,117	10	3,315,254
Trinidad	0	0	3	155,993	7	3,016,726
Tubigon	0	0	16	177,127	19	3,028,484
Ubay	0	0	13	822,881	19	4,699,798
Valencia	22	768,748	34	6,847,956	35	9,747,827
TOTAL	215	6,563,385	733	102,393,244	887	298,527,771

Annex G

Summary Matrix for Hazard Susceptibility

Municipality	Geologic Hazards				Hydro-meteorologic Hazards			
	EQ	Liquefaction	EIL	Tsunami	Floods	RIL	SS	Others
Albuquerque								
Alicia								
Anda								
Antequera								
Baclayon								
Balilihan								
Batuan								
Bien Unido								
Bilar								
Buenavista								
Calape								
Candijay								
Carmen								
Catigbian								
Clarín								
Corella								
Cortes								
Dagohoy								
Danao								
Dauis								
Dimiao								
Duero								
G-Hernandez								
Getafe								
Guindulman								
Inabanga								
Jagna								
Lila								
Loay								
Loboc								
Loon								
Mabini								
Maribojoc								
Panglao								
Pilar								
Pres. Garcia								
Sagbayan								
San Isidro								
San Miguel								
Sevilla								
Sierra Bullones								
Sikatuna								
Tagbilaran City								
Talibon								
Trinidad								
Tubigon								
Ubay								
Valencia								

Annex H
List of LDRRM Planning Workshop Participants

NAME	POSITION	AGENCY/ORGANIZATION
Tocmo, Rex Romani	Staff	SP/VGO
Delector, Vince P. Jr	Project Manager	Habitat for Humanity
Batoy, Francis Bernard	Assistant Executive Director	BIDEF
Quirog, Liza M		SEEM Cluster Head, G. O.
Butalid, Meinard	Operations Officer	TaRSIER 117
Orig, Valer	Provincial Budget Officer	Provincial Budget Office
Borromeo, Imelda	PO III	Provincial Planning and Development Office (PPDO)
Bunado, Ronilita	PDO III	PPDO
Evangelista, Aida	Planning Officer	PPDO
Caliao, Eustaquio	PEO Representative	Provincial Engineer's Office
Tecson, Carmelita	OPSWDO	OPSWD
Sodusta, Greg Julius	Provincial Health Officer I	Provincial Health Office
Pamugas, Larry	Provincial Agriculturist	OPA
Gultia, Epifanio Jr.	Aqua Technician II	BFAR
Awitan, Willie		UNDP
Buctolan, Jessie Mary	LGOO V	DILG
Nistal, John Paul	Program Officer	DOLE
Cayton, David	25FBn	SFRA
Yape, Joie Pacito Jr	Chief, PCR	Bohol Provincial PNP Office
Calipusan, Laurice	HEA	DENR
Doloritos, Glicerito		PGSO
Tuburan, Hector Jr.	Project Manager	UNDP
Malanog, E.	TSDS II	TESDA
Bernasor, Darwin	Head, 117 Dispatch	TaRSIER 117
Vidad, Corazon Z	Cluster Coordinator	WASH
Ganub, Florencia	AO IV	PHO
Garcia, Jose P		BEMO
Curato, Fe D	ACC IV	PACCO
Regacho, Remedios	Aqua II	BFAR
Dairo, Aladdin		GO
Calipusan, Laurice	HEA	DENR
Lamoste, Domingo Jr	Division Engineer	DepEd
Nemenzo, Victoria		DOLE
Bernasor, Al Emil		MGB-7
Arcamo, Romel		BM Office
Daquipil, Feriolo	SR	SP
Racho, Samuel		BEMO
Narvarte, Mary Lani		SP Sec/VGO
Piollo, Filipina Atty.	Chief of Staff	Vice-Governor's Office

Annex I

Group Photo of LDRRM Planning Workshop Participants for Bohol Province

