A Disaster Preparedness Handbook

Facilitating Community Readiness

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Table of Contents

List of Acronyms

ACDV	Accredited Community Disaster Volunteer
CCA	Climate Change Adaptation
CERT	Community Emergency Response Team
CMDRR	Community Managed Disaster Risk Reduction
CP	Contingency Plan
DEMOCORE	Demonstrating Community Resilience
DRRM	Disaster Risk Reduction and Management
FEMA	Federal Emergency Management Administration
HLA	Humanitarian Leadership Academy
IEC	Information Education Campaign
IIRR	International Institute of Rural Reconstruction
JDC	The American Jewish Joint Distribution Committee
NDPP	National Disaster Preparedness Program
PACAP	Philippine-Australia Community Assistance Program
PDRA	Participatory Disaster Risk Analysis
PLA	Participatory Learning and Action
PRC	Philippine Red Cross
PSP	Psychosocial Support Program
QRF	Quick Response Fund
RDI	Rural Development Institute
SCORE	Strengthening Community Resilience and Disaster Preparedness
TAF	The Asia Foundation
UMCOR	United Methodist Committee on Relief

Definition of Terms

Capacity	Individual and collective strengths as well as the physical, social, economic, and community resources that can be enhanced, mobilized, and accessed by individuals and communities to reduce disaster risk. These include prevention, mitigation, "survivability" of the individual, and readiness of the community.
Community-Managed Disaster Risk Reduction	A process in which communities are actively engaged in the identification, analysis, monitoring, and evaluation of risks to reduce people's disaster risk and enhance their capacities. It places communities at the heart of the decision-making process and in managing disaster risk reduction measures.
Disaster	The serious disruption in the function of society causing widespread human, material, or environmental losses, which exceed the ability of affected communities to cope using their own resources. It occurs when the negative effects of the hazards are not well-managed.
Disaster Preparedness	Involves measures taken in anticipation of a disaster to ensure that appropriate and effective actions are taken in the aftermath. It attempts to limit the impact of a disaster by structuring the response and effecting a quick and orderly reaction to the disaster.
Disaster Risk	The probability of meeting danger or suffering, harm or loss.
Disaster Risk Reduction	A framework and tool that determines the degree of risk and describes measures to increase capacities and reduce hazard impact on the elements at risk so that disaster can be avoided.

Hazard	A potential event that could cause loss of life or damage to property or the environment.
Vulnerability	The degree to which elements at risk (area, people, physical structures, or economic assets) are exposed to hazards that cause loss, injury, or damage.

About this book

Local government units (LGU) play a pivotal role in bridging relief, recovery, and resilience building in communities harshly affected by disasters. While LGUs are mandated by the Philippine Disaster Risk Reduction and Management Law to craft plans and programs on disaster risk reduction, many of them lack the capacity and knowledge on how to conduct risk assessment and disaster risk reduction management (DRRM) planning. Therefore, high-risk communities become more vulnerable to disasters. Hence, it is important to capacitate all levels of LGUs on community disaster preparedness to help them face and manage future risks.

The International Institute of Rural Reconstruction (IIRR) has conducted various initiatives in the Philippines that capacitated LGUs on Disaster Risk Reduction (DRR). IIRR believes that effective reduction of disaster risks and adaptation are best achieved by supporting the implementation of community-led disaster and climate risks interventions and building the capacities of both the vulnerable members of the community and the government structures to identify, manage, and respond to their own risks.

From the experiences and insights gathered by IIRR from its projects and key partners, IIRR therefore deems it vital to strengthen pre-disaster preparedness and risk reduction, build capacity for internal response mechanisms, and integrate relief, recovery and development efforts of LGUs in the Philippines. Extreme weather events are likely to be the new normal for the country therefore, it is integral to capacitate LGUs in the country on community disaster preparedness.

This handbook is intended to serve as an easy-to-follow reference material for LGUs and local NGOs on how to do community managed disaster preparedness and disaster risk reduction. It also aims to highlight the experiences of IIRR and its partners in implementing community disaster preparedness in the Philippines. Chapter 1 highlights the relevance of doing disaster preparedness that is managed by the community. Chapter 2 provides tools and outlines

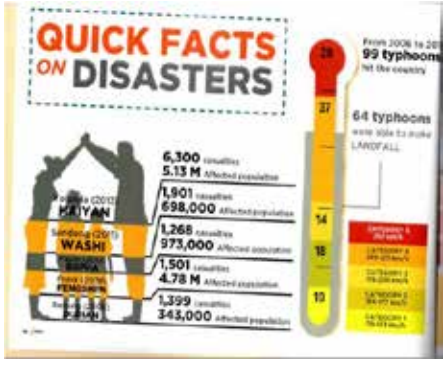
steps on how to conduct Participatory Disaster Risk Assessment. Chapter 3 provides a blueprint on how to develop a contingency plan. Chapter 4 discusses the principles in setting up early warning systems and shares sample tools used in some communities. Chapter 5 emphasizes the importance of community drills and outlines the process on how to conduct it. Chapter 6 provides guidance on the role of community emergency response teams and how to organize one. Chapter 7 outlines steps on how to develop information, education and communication materials in a participatory way. Finally, Chapter 8 discusses how disaster preparedness strengthens institutions and lead to community resilience. In some of the chapters, case stories from IIRR and partner organizations are presented.

Preface

Disaster Preparedness in the Philippines

Hazard context in the Philippines

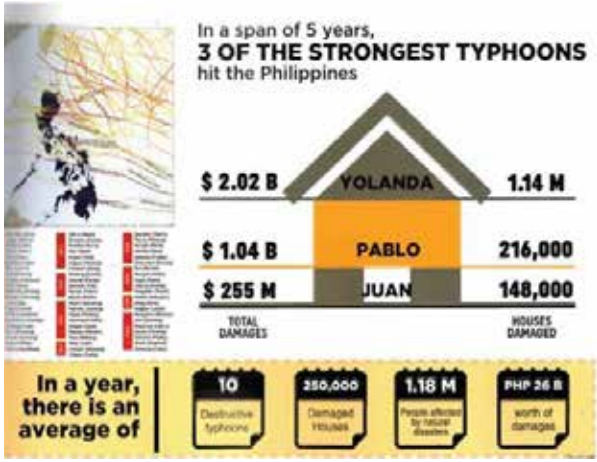
The Philippines is ranked 5th in the world that is most affected by long term (1998-2017) climate risk (Germanwatch, 2018). Sitting along the typhoon belt and the Pacific Ring of Fire, this archipelagic country is a hotspot for disaster risks. It is vulnerable to effects of typhoons, storm surges, floods, tsunamis, earthquakes, volcanic eruptions, landslides, and droughts. The Philippines is hit with an average of 20 earthquakes per day and hosts 300 volcanoes - 22 of which are active and five of which are most active.



Between 2006 to 2016, 99 typhoons entered the Philippine Area of Responsibility (PAR) and 64 of them made landfall. Ten were Category 1 typhoons (119-153 km/h), 18 were category 2 typhoons (154-177 km/h), 14 were category 3 typhoons (178-208 km/h), 37 were category 4 typhoons (209-251 km/h) and 20 were category 5 typhoons (more than 252 km/h).

In a year, the country is confronted with an average of 10 destructive

typhoons, 250,000 damaged houses, 1.18million affected people, and PHP26 billion worth of damages.[1] Three of the strongest typhoons that hit the Philippines were Typhoon Haiyan (Yolanda), Typhoon Bopha (Pablo) and Typhoon Megi (Juan). Together, these caused USD3.315 billion worth of total damages and losses.



The DRRM Act

When Typhoon Ondoy (international name: Ketsana) caused deadly in Metro Manila in 2009, the Philippine Government changed the way it manages disasters. Along with other institutions, it realized that the institutionalization of more programmatic and proactive approaches is the best way to deal with hazard events. This led to the establishment of Republic Act No. 10121 (RA10121) or the Philippine Disaster Risk Reduction and Management (DRRM) Act of 2010, which transformed the country's disaster management system from disaster relief and response to disaster risk reduction. It was approved on May 27, 2010.[2]

The DRRM Act shifts the paradigm from a top-down, centralized disaster management to a bottom-up participatory disaster risk reduction that takes a more integrated approach to social and human development to reduce disaster risk. Disaster preparedness is one of its thematic areas, along with disaster prevention and mitigation, disaster response, and disaster rehabilitation and recovery.

1 Access to benefits and claims after disaster (ABCD), volume 2, IDEALS, HLA

2 Primer on the Disaster Risk Reduction and Management (DRRM) Act of 2010, DRRNetPhils

The salient features of the DRRM Act are as follows:

- Coherence with international framework
- Adherence to universal norms, principles, and standards of humanitarian assistance
- Good governance through transparency and accountability
- Integrated, coordinated, multi-sectoral, inter-agency, and community-based approach to disaster risk reduction
- Empowerment of local government units and civil society organizations as key partners in DRR
- Integration of the DRRM into the educational system
- Establishment of the DRRM Fund at the national and local levels (LGUs must akkit at least 5% of their Internal Revenue Allotment where 70% is for pre-disaster activities and 30% for Quick Response Fund)
- Providing of provisions on the declaration of a state of calamity, remedial measures, prohibited acts and penalties.

On November 27, 2015, the National Disaster Risk Reduction and Management Council (NDRRMC) issued Memorandum No. 52, s. 2015, which enforces the utilization of the National Disaster Preparedness Plan (NDPP) and "Oplan Listo". The NDPP ensures that the work of government and non-government institutions, complement each other to avoid loss of lives and assets during disasters.[3]

Below are international and local policy frameworks on disaster preparedness:

- Sendai Framework for Disaster Risk Reduction
- The Hyogo Framework of Action on Preparedness
- The ASEAN Agreement on Disaster Management and Emergency Response (AADMER)
- The Philippine Disaster Risk Reduction and Management Act of 2010
- The National Disaster Risk Reduction and Management Plan
- NDRRMC, DBM, DILG Joint Memorandum Circular

3 NDPP primer, LGA, DILG

(JMC) 2013-1: Allocation and utilization of the Local Disaster Risk Reduction and Management Fund (LDRRMF)

The NDPP is anchored on the National DRRM Plan and other DRR-related policies and its seven key components are:

- Information education and campaigns
- Capacity building
- DRRM localization
- Risk assessments and plans
- Preparedness for emergency and disaster response
- Continuity of essential services
- Partnership

IIRR on Disaster Preparedness

With the ratification of the DRRM Act, implementation gaps on the ground were revealed. For one, some local governments units (LGU) did not know how to operationalize their DRRM Plans. They also needed guidance on how to proficiently utilize the DRRM Fund. With these gaps, IIRR saw an opportunity to educate LGUs on how to model disaster preparedness through the Community Managed Disaster Risk Reduction (CMDRR) framework. This framework takes on a "holistic approach" to DRR to empower people and steer development towards a culture of safety. IIRR developed this with the support of Cordaid, whose networks and partners also use the framework.

Evolution of IIRR's Disaster Preparedness Program in the Philippines

Disaster Risk Reduction is one of the key programmatic areas of IIRR in the Philippines since 2009. Using the CMDRR framework, its five key components are: Participatory and Disaster Risk Assessment and Analysis (PDRAA), Community Emergency Response Teams (CERT), Early Warning System (EWS), and Monitoring and Evaluation. After more than five years of implementation with partner LGUs, it matured into a program scalable to other LGUs and integrated with livelihoods and nutrition.

Children of IIRR staff learning basic first aid

The DRR capacity building initiatives of IIRR began in 2010 through a 2-day in-house training on basic emergency response. This led to the development of related training programs that were enhanced and contextualized to the Philippine setting. The following year, IIRR trained the children of IIRR staff on CERT. It led to a training package for the youth using simple methodologies and approaches. In 2011, IIRR initated the SOLVE Project in San Jacinto, Masbate through the support of the Metrobank Foundation. This project established and developed an emergency response team for Tacdugan Elementary School. The initiative included IEC activities, development of a contingency plan for storm surge, conduct of participatory disaster risk assessments, and development of action plans integrated in the school's investment plans.

IIRR's implemented its first DRR project in the Municipality of Rosario in Cavite. It was supported by the United Methodist Committee on Relief (UMCOR) Philippines. Using the CMDRR process, the project initally covered nine out of the 20 barangays in Rosario. LGU officials were trained on CMDRR and how to facilitate Participatory Disaster Risk Assessment and Analysis. They used their learnings to develop their Barangay Disaster Risk Reduction and Management Plans. Due to the success of this project, it was replicated in Tanauan, Leyte in 2014 after Typhoon Haiyan. UMCOR supported this 6 month project and IIRR partnered with the Rural Development Institute, a civil society organization.

Contingency Planning workshop piloted in 3 barangays co-facilitated by the Philippine Red Cross - Cavite Chapter

The PDRA results of the nine barangays in Rosario, Cavite showed a capacity gap on the formation and establishment of CERTs and the need to strengthen BDRRMCs on procuring disaster preparedness equipment and utilizing their resources for capacity building. To resolve

these issues, IIRR initiated a project focusing on disaster preparedness activities in three most-at-risk communities in Rosario. The project was supported by the Philippine Australian Community Assistance Program (PACAP) of the Australian Aid program in the Philippines. In this project, the complete disaster preparedness components were implemented: CERT, EWS, Contingency Planning, and Information and Education Campaigns (IEC). The communities were able to develop contingency plans for typhoons and install EWS in coordination with nearby municipalities located along the same rivers and creeks.

BLGU officials from barangays in Rosario Cavite actively participate in the Local Flood Early

During the conduct of Training of Trainors on Community Emergency Response Team participated by the barangay LGUs of Ivisan, Capiz and public high school teachers

The disaster preparedness program implemented in Rosario, Cavite was replicated in Ivisan, Capiz in 2014 after the onslaught of Typhoon Haiyan. This project titled Bridging Relief and Recovery towards resilience building in disaster affected areas in Panay (BRIDGE) was supported by the American Jewish Joint Distribution Committee (JDC) and American Jewish Federations of North America (JFNA). Psychosocial support and livelihood recovery and resilience were included in the program. IIRR partnered with the Ivisan LGU and Philippine Red Cross - Capiz Chapter in conducting a CERT training participated by 15 barangays. Now, all barangays in the municipality have trained CERTs organized. There are aso frontline local psychosocial service facilitators trained and equipped with psychosocial support kits.

Through these projects, IIRR gleaned rich knowledge and experiences on disaster preparedness activities. This handbook aims to share lessons learned from the field and outline processes that can be easily followed by communities wanting to be better prepared from disasters too.

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Municipality of Rosario, Cavite
Municipality of Tanauan, Leyte
Department of Education – Division of Cavite
Municipal Disaster Risk Reduction and Management Office – Ivisan, Capiz; Rosario, Cavite; and Tanauan, Leyte
Office of the Civil Defense – Region IV-A
Provincial Disaster Risk Reduction and Management Office of Capiz, Cavite and Laguna

Other partners
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DRRNet
Eastern Visayas State University

Israel Trauma Coalition
Loma Linda University, California
Lutheran World Relief

Partners for Resilience
Philippine Red Cross – Cavite and Capiz Chapter
Rural Development Institute in the Island of Leyte
San Jacinto Elementary School, Tacdugan, Masbate
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Chapter 1
Disaster Preparedness

UN bodies and different organizations have various interpretations on the term "disaster preparedness". To UNISDR, preparedness is "*the knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions.*" It describes "readiness" as the ability to quickly and appropriately respond when required. For the International Federation of Red Cross (IFRC), disaster preparedness refers to measures taken to prepare for and reduce the effects of disasters. That is, to predict and, where possible, prevent disasters, mitigate their impact on vulnerable populations, and respond to and effectively cope with their consequences.

For IIRR, disaster preparedness involves "*measures taken in the anticipation of a disaster to ensure that appropriate and effective actions are taken in the aftermath. Preparedness means attempting to limit the impact of a disaster by structuring the response and effecting a quick and orderly reaction to the disaster*".[1]

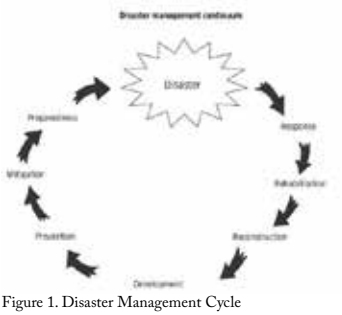


Figure 1. Disaster Management Cycle

IIRR developed its own Community Managed Disaster Risk Reduction (CMDRR) framework to guide its DRR program. In CMDRR, disaster preparedness is one component that communities need to learn and institute in their development planning process

1 IIRR, Cordaid. 2013. Building resilient communities. A training manual on community managed disaster risk reduction, Philippines.

to reduce disaster risk. But a bigger picture of disaster preparedness is "Community Readiness". To deepen this, we have to first understand the steps in analysing disaster risks.

Figure 2. The resilience framework. Developed by Rusty Binas

The first step is to first identify the hazards. This can be done through the use of participatory risk assessment (PRA) tools such as mapping, timeline, ranking, and focus group discussions.

The second step is to assess the community's level of vulnerability. Vulnerability can be viewed in two different perspectives: condition and location. Some development organizations see it according to conditions but for IIRR, vulnerability should be location specific. In this perspective, human and non-human vulnerable elements can be categorized as *high*, *medium*, or *low*. Non-human elements may include critical support and vital facilities and assets, environment and natural resource, and livelihood resources while human elements include infants, children, young adults, adults, elderly and differently-abled persons segregated by gender. Assessing this component can be best done using mapping exercises and focus group discussions (FGDs).

The third step is to assess the community's capacity in relation to hazards and vulnerabilities. Specific elements will be analyzed to identify prevention and mitigation measures. Human and non-human elements will also be analyzed to identify existing and required capacity. Specific community readiness capacities can be analyzed using THE CIELO components: Transportation, Health, Early Warning, Communication, Internal Response, Livelihoods and Organizational Development.

Having said these, Disaster Preparedness in building community readiness plays important role on Community Disaster Risk Reduction framework.

Chapter 2
Participatory disaster risk assessment

Participatory disaster risk assessment (PDRA) is the process of identifying and assessing the hazards, vulnerabilities, and capacities in the community. It involves identifying the elements-at-risk based on their degree of exposure and analyzing the relationship among the three variables.

PDRA uses the formula:

$$\text{Disaster Risk} = \frac{\text{Hazard x Vulnerability}}{\text{Capacity}}$$

PDRA aims to thoroughly understand and be aware of hazards, vulnerabilities, capacities and degree of risk. It is a reflective thought process among community members leading towards formation of organizations that will plan, implement, and evaluate DRR and CCA measures in the community.

Risk assessment becomes participatory if it is the community itself that assesses and analyzes these three variables using participatory learning and action tools.

What is Participatory Learning and Action ?

Risk assessment reminders:

- Perception of risk enables community members to have common DRR and CCA measures where full community participation is required.
- DRR and CCA measures must build the capacities of both men and women.
- DRR and CCA measures must respond appropriately to the needs of the community members across age, gender and sector.

Participatory learning and action (PLA) combines various approaches and methods to enable local people to share, enhance, and analyze their knowledge of life and conditions to plan and act. The tools used are community friendly. It uses visual and other learning aids that encourage community involvement and engagement for learning, decision-making, and action. PLA tools are used in conducting hazard, vulnerability, and capacity assessments. PLA is also known as participatory rural appraisal (PRA).

Below are different PLA tools used in conducting PDRA:

Historical timeline outlines the chronological description of significant events in the community: major disasters, socio-economic, political and cultural events, development changes on landscapes, good and negative impacts, and coping capacities and mechanisms. It also establishes trends and patterns of events and hazards and baseline of community impacts of disaster.

Seasonal calendar shows the seasonality of climate patterns, different livelihood activities in the community, water and food availability, pest and diseases affecting crops and livestock, income, health issues among children and adults, and annual social and cultural activities. It may also be used to identify changes in climate patterns and trends over time i.e 10 years ago and 20 years ago. The changes will serve as benchmark and baseline of community information. The tool can also be used to plot the climate change projections and scenarios.

Community map (hazards, population, resources) describes what and where are the common hazards, who and what are exposed to the hazards based on location, and existing resources needed to reduce and manage the impacts.

Story-telling enables community participants to identify the behavior (characteristics) of a hazard in terms of warning signs and signals, forewarning, speed of onset, frequency, period of occurrence, duration, and impacts.

Transect walk identifies and analyzes hazards, available resources and ecosystem, and physical attributes of the community through direct observation.

Matrix lists down the common hazards, who and what are at risks, impacts, and coping capacities.

Venn diagram enables the community to identify different agencies or individuals that provide disaster preparedness services and assistance to the community as well their influence, effectiveness, and relationship. It also allows participants to identify the organizations or actors working in the community and to analyse their importance. Participants use their own criteria to determine influence, effective, and ineffective services and actors.

How to conduct Community Hazard Assessment

This assessment brings out information on the characteristics of climate and non- climate hazards, specifically warning signs and signals, forewarning, speed of onset, frequency, period of occurrence, and duration. It also guides the community on how climate-related hazards may affect or impact the them in the future.

Types of Hazards		
Natural Hazards	Human-Related Actions	Climate Change Drivers
Volcanic eruption Earthquake Fires (settlement/forest) Drought Typhoon, hurricane Flood	Violence, war and conflict Deterioration of basic services/ obstacles to realization of human rights Famine Failing of industrialize societies i.e. nuclear reactor meltdown, oil spills, offshore explosions, etc Environmental degradation: Flood, Drought, Food insecurity, insect infestation, fish kill	Sea level rise Increasing temperature Changing rainfall pattern and intensity Extreme climate events i.e. stronger typhoon, frequent El Nino

Steps in community hazard assessment

1. *Identify* prevalent hazards in the community. Many hazards interact and can trigger another hazard.

2. *Prioritize* prevalent hazards that will be analysed. The community develops the criteria to be used in comparing and ranking the various hazards that will be prioritized.

3. *Characterize* prioritized hazards using the following characteristics:

    - Force - the power that is produced when something moves.
    - Warning signs and signal - the official warning system for the hazard. It may be a local or indigenous warning system followed by the community.
    - Forewarning - the time gap or lead time between having the first information of an oncoming hazard to actual occurrence.
    - Speed of on-set - the rapid or slow arrival of a hazard.
    - Frequency - how often does the hazard strikes or occurs in the community.
    - Period of occurrence - the months, season, or period when hazard is most likely to occur.
    - Duration - how long it usually take for the hazard to happen.

Sample of a Community Hazard Assessment

The table below is a PDRA held on December 2, 2016 at Tanauan Central II Elementary School in Tanauan, Leyte. It was participated by community members mainly from Zones 3 and 7 of Barangay Canramos. These zones were identified as most-at risk to floods and were heavily affected by Typhoon Haiyan. The PDRA was part of the UMCOR-funded project Strengthening Community Resilience through Community Based Disaster Risk Reduction and Disaster Preparedness (SCORE Project) in Tanauan, Leyte implemented in September 2015 to April 2016.

Table 1. Typhoon Assessment of Barangay Canramos, Tanauan, Leyte

Characteristics of Hazard	Elements of Characteristic of Hazard (historical trends & observed conditions)	Analytical Description of Hazard (Narrative of Column2)	Elements Variables	How it affected the community?	How it affected the livelihoods of the community?	How did community cope with the impacts of hazards?
Cause/Origin	Heavy rains, strong winds	The people of Tanauan are used to typhoon due to their location in the Pacific. About 15 typhoons cross the area from June to December with stronger typhoons from September to December. Typhoons bring heavy rains and strong winds. Typhoon Yolanda was the strongest typhoon they experienced.	People are traumatized; many people drowned and died; infrastructures, houses, schools were destroyed; water, communication and electricity were down; there were no food, many people left the community to look for food and jobs, pedicabs were washed out	Many people lost their jobs and livelihoods; rice farms and other farms were devastated, boats were washed out; bamboos and nipas were damaged as well		Some people left the community to look for food, shelter and jobs. Many international NGOs responded and helped the community to recover from the disaster
Force	Strong winds, heavy rains					
Warning signs and signal	Typhoon advisory from PAGASA-DOST; Formation of dark clouds, strong winds, thunderstorms and uneasy behavior of animals; the sea is calm a day before Typhoon Yolanda came					
Forewarning	3 – 5 days					
Speed of on set	Very rapid					
Frequency	15 times a year;					

Period of occurrence	June to December with stronger typhoons from October to December					
Duration	1-3 days					
What climate change effects (i.e increasing temperature and rainfall pattern, sea level rise) do the community experience? How it will change or affect the hazard's occurrence in the near future?			How it will affect the community?	How it will affect the livelihoods of the community?		What are the needed capacities to address and manage future risks?
Frequency of strong typhoon will likely to hit Tanauan						

Table 2. Forces behind select hazards

Hazard Types		Force
Natural Hazards	Typhoon, hurricane, cyclone	Water – flash floods, storm surge, tidal waves Wind – flying objects, uprooting material objects Land – landslides, mudflow
	Volcanic eruption	Ash falls, rocks, lava, gases
	Earthquake	Falling hard objects, tsunami, liquefaction
	Flood	Water – flashes of volume of water, epidemics
	Fires (settlement/ forest)	Heat – burns
	Drought	Heat
Human Related Actions	Violence war and conflict	Guns and bullets, fire from burning houses
	Declining health, education and other social services; environmental degradation, etc.	Malnutrition – inadequate food intake, inadequate access to food, illness, diseases and death Harsh environmental changes - heat waves
	HIV-Aids	Virus – infections, epidemics
	Transport collisions industrial explosions oil spillage Technological failures	Physical hard object Pollution, radio-activity, biological weapon Pollution, chemical contamination of air, land and water, mechanical accidents fire, gas leakage contamination in the air, land and water.
Environmental Degradation	Flood	Flashes of volumes of water, debris, water borne diseases, epidemics
	Drought	Heat
	Food insecurity	Inadequate food intake and food access, illness, diseases
	Insect infestation	crop failure

How to conduct Community Vulnerability Assessment

Community vulnerability assessment is the process of determining the susceptibility of people, facilities and services, livelihood, assets and economic activities, natural resources and environment and organizations and systems in the community to various hazards. It identifies who and what groups and assets in the community are most at risk.

PLA tools for vulnerability assessment (see Annex for PLA tool guide)

- Social and resource mapping
- Vulnerability matrix
- Ranking and scoring

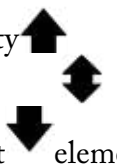
Steps in conducting a community vulnerability assessment

1. Explain to the participants that vulnerability is based on location. Use the following criteria:

    - High Vulnerability - element at risk is within the hazard zone
    - Medium Vulnerability - element at risk near the hazard zone
    - Low Vulnerability - element at risk far from hazard zone

2. Ask the groups assigned earlier for ecosystems, livelihoods, and infrastructure to put symbols beside the elements at risk according to their level of vulnerability. These are the symbols:

    - High Vulnerability
    - Medium Vulnerability
    - Low Vulnerability



After identifying the different elements at risk and their vulnerability using the maps, historical timeline, and seasonal calendar, use the Vulnerability Assessment Tool to summarize them.

You may group or classify them according to risk (see Table 3).

Table 3. Classifying Elements of Risk

Human Elements	Non-Human Elements at Risks
Geography or location – lowland farmers, upland farmers Ecological or climatic Economic – income, sectoral, livelihood i.e farmers, fishers, professionals Demographic- population, age, gender i.e children, women, youth, Vulnerable – elderly, PWD, pregnant, etc Social groups and organizations – church-based organization, women's group, private sector	Livelihoods and assets i.e boats, rice land, vegetable plots, livestock Ecosystem services or environmental resources i.e watershed, river system, mangrove areas Physical infrastructure, facilities and services i.e school buildings, water system, day care center, bridges, roads, irrigation facility, dam Financial and economic resources / elements i.e. cooperative banks, markets

How to conduct Community Capacity Assessment

Community capacity assessment identifies the strengths and resources present in individuals, households, and the community to cope with, withstand, prevent, prepare for, mitigate, or quickly recover from a disaster. Capacity refers to knowledge, attitude, skills, and access to resources for individuals to survive and bounce back as well as the capacity of a community's systems and structures to absorb, manage, and bounce back to continue to help individuals survive and function normally.

Communities, over time, have been able to mobilize resources to cushion themselves against adverse effects of particular hazards. In the process of facilitating the capacity assessment, it is important for the community to reflect on their socio/resource map and identify the location of particular resources that can be accessed to cope with the hazard. The assessment also identifies the needed capacities to cope and adapt to future climate related impacts.

Table 4 Vulnerability Assessment of Zone 7, Barangay Canramos, Tanauan, Leyte

Hazard profile	Elements at risk	M	F	Location of element at risk vis-à-vis the hazard			Why the elements at risk are in that location
				<x	>x <z	> z	
Flood	Human Elements						
	Infants (0-4 m/o)	36	27	x			
	Children (5-15yo)	83	84	x			
	Youth (16-35 y/o)	78	74		x		
	Adult (36-59 y/o)	70	62		x		Home and livelihoods are there
	Elderly (60-up)	17	23		x		
	PWD	8	4	x			
	Sick	3	2	x			
	Pregnant	x	x				
	Non-human Elements						
	Nipa/bamboo			x			Along the river
	Tanod Outpost					x	
	Road				x		
	School				x		
	Houses			x	x	x	
	Sari-sari store				x		
	Motorbike			x			
	Hogs/chicken			x			

*Facilitator's notes:
- X, Y, and Z mark the distance of the location of the element at risk from the epicenter of the hazard. During the actual assessment with the target community, it will be replaced by actual measures like meters, kilometers , acres, and hectares.
- < greater than or equal to; < greater than; > less than or equal to; and > less than to

PLA Tools for capacity assessment

- Social and resource mapping
- Venn diagram
- Strengths, weaknesses, opportunities and threats analysis
- Experience stories
- Individual and community capacity matrix

Table 5. Vulnerability Assessment of Rosario, Cavite

Elements at Risk per Sector	How is it affected by disaster and climate change?	Vulnerability level based on its location
Physical Sector:		
Municipal Hall	• Building structure can be damaged by floodwater which may result to the delivery of government services to be delayed. • Floods can damage roads • Building can be damaged because of floodwater	Medium
Roads		High
School building		Medium
Social Sector:		
Women	• Can get sick due to unclean water	High
Children	• Can get sick due to unclean water especially when children are under-nourished	High
Men	• Can get sick due to unclean water	High
Economic Sector:		
Market building	• Buildings can be damaged and the livelihood of many people will be disrupted	Medium
EPZA	• Buildings in EPZA can be damaged	Medium
Smoked fish production areas	• Decrease in production as there is no sunlight which is needed for dying, while when there are rains, areas can get flooded	High
Environment Sector:		
Coral reefs along coastline and remaining mangrove areas	• The reefs and mangroves can be destroyed because of strong currents and the flowing of freshwater into the sea due to heavy rain.	High
Malimango River	• Riverbanks can be destroyed due to the big volume of floodwater from higher grounds.	High

Source: IIRR and UMCOR. 2013. Must be 100% Ready to be Resilient. International Institute of Rural Reconstruction and United Methodist Committee on Relief. Philippines

Steps in conducting community capacity assessment

1. Review the Vulnerability Assessment Tool.
2. List down the human elements, community organizations functioning as a system or structure, and non-human elements that are identified with low, medium and high vulnerability (first column).
3. On the second column, write down the existing capacities of individuals to survive the hazard. You may refer to previous tools (Venn, timeline).
4. On the third column, write down the required capacities needed to prevent, mitigate, and adapt to future hazard or risk.
5. On the fourth column, write the capacity gaps.
6. Identify whether the risk is Low, Medium or High.
7. Write down recommended actions and measures.
8. Repeat the same process for community readiness and non-human elements.

Note: The Degree of Risk is based on the level of capacity. If there are plenty of capacity gaps then the level of risk is also high.

Disaster and Climate Risk Analysis

Disaster and climate risk analysis refers to the analysis of the findings of the hazard, vulnerability and capacity assessment, and subsequently drawing conclusions on the degree of risk. It serves as basis for recommending appropriate DRR and climate change adaptation (CCA) measures. It is also when the community decides on the appropriate form and substance of the organization that is required to champion the mission of DRR and CCA.
Below are guide questions to facilitate analysis of data:

- What are common hazards experienced by the community on which risk reduction measures have to be given priority?
- What are the behaviors of these hazards?
- What are the possibilities that these may occur and affect in the near future?

Table 6. Capacity Assessment of Zone 7, Barangay Canramos, Tanauan, Leyte

Human Elements	**Degree of Risk**	**What are the needs/ required to be safe and to survive**	**What are existing capacities?**		**What are the gaps?**
Infants (0-4yo)	H	Infant's milk, Medicine kit, Grab bag		Infant's milk	Grab Bag
Children (5-17yo)	H	Food, clothing, Person that will assist in times of evacuation		Food and clothing	Person that will assist
Youth (18-35yo)	M	Seminar on preparedness			Seminar on preparedness
Adult (36-59yo)	M	First aid kit, Rescue equipment, Training on preparedness, Basic needs	Basic needs		First aid kit Rescue equipment Preparedness seminar
Elderly (60-up)	H	Person to assist them, Go bag	First aid kit		
Sick	H	First aid kit, Rescue Boats			
Pregnant		Rescue, Person to assist them			

- How will climate change effects such as increasing temperature, change in rainfall pattern, sea level rise, extreme events affect behavior and occurrence?
- What are the sources or causes of hazards (consider climate, non-climate and human induced)?
- How did climate change effects contribute to the causes of the hazards?
- What climate change effects are already being felt by the community?
- What are the future trends of climate change effects?
- What are the elements at risk (human and non-human) that were identified as high?
- Why are the most-at-risk elements (human and non-human) located or situated in the unsafe/high risk location?
- What are the **existing capacities** in the most-at-risk elements (human and non-human) in terms of **prevention measures** to the hazards and future risks?
- What are the **lacking and required capacities** in the most-at-

Table 7: Capacity Assessment on Community Readiness of Zone 7, Brgy. Canramos, Tanauan, Leyte (Non-human elements)

Required	Existing Capacities	Gaps
Transportation	Pedicab, Ambulance Barangay (Village) Patrol	
Health and Medical Services health worker, first aid, health center, first aid kit	5 barangay health workers 1 Medical doctor	First aid kit
Early warning system bell and siren, EWS alert level, IECs	Bandilyo, Megaphone	Bell, Siren, IEC on EWS
Communication rescue team or volunteers, cellphone, handheld radios, generator, flashlights	Cellphone, Generator, 7 rescue volunteers, Flashlight	Handheld Radio, Heavy flashlight, Rescue equipment, Training for rescue volunteers
Evacuation Centers	Church, Gym, Tanauan Central II Elementary School, Tanauan National High School, Eastern Visayas State University	Evacuation plan
Provision of food water and security	From Municipality	
Functional Barangay Disaster Risk Reduction and Management Committee (BDRRMC) leader and members	Not functional	BDRRMC tasks and functions defined
Effective BDRRM Plan Appropriate use of fund Coordination at incidence command system	None	BDRRMC tasks and responsibilities ICS and coordination training

risk elements (human and non-human) in terms of **prevention measures** to the hazards and future risks?

- What are the **existing capacities** in the most-at-risk elements (human and non-human) in terms of **mitigating** the impact of the hazard and its future risks?
- What are the **lacking or required capacities** in the most-at-risk elements (human and non-human) in terms of **mitigating** the impact of the hazard and its future risks?
- What are the **existing capacities** in the most-at-risk elements (human and non-human) in terms of **readiness and preparedness to reduce vulnerability**?
- What are the **lacking and required capacities** in the most-at-risk

elements (human and non-human) in terms of r**eadiness and preparedness** to reduce vulnerability?

- What are the **existing capacities** in the most-at-risk elements (human and non-human) required for **adaptation** to manage impacts of future risks?
- What are the **lacking and required capacities** in the most-at-risk elements (human and non-human) required for **adaptation** to manage impacts of future risks?
- What actions are commonly suggested by the community members?

The existing and lacking or required capacities determine the level of degree of risks and adaptive capacities of the most-at risk elements. The existing capacities may need strengthening or enhancement while the inadequacy may need to be addressed and translated to measures and programs.

Case Story

Capacitating Communities to Understand Risks

Jeszha Falguera, a 26 year old Criminology graduate, is a community youth leader in Barangay Canramos, Tanauan, Leyte and a lector and choir member in their parish. She was chosen to represent the youth of Barangay Canramos in the Trainer's Training (ToT) on Participatory Disaster Risk Assessment (PDRA). The ToT was intended for community volunteers and facilitators to lead the community in identifying and assessing hazards and risks and how they can reduce and manage them.

The ToT is one of the activities of the SCORE Project funded by UMCOR. It was implemented in September 2015 to April 2016 in partnership with the Rural Development Institute in the Island of Leyte (RDII), a local non-government organization, and the LGUs of Tanauan. The project helped strengthen the capacities of vulnerable communities and schools on disaster preparedness systems and mechanism to complement UMCOR-funded evacuation shelters built at Tanauan Central II Elementary School and Eastern Visayas State University (EVSU). Vulnerable barangays like Canramos and San Roque were identified based on their hazard and vulnerabilities and were the potential users of the evacuation shelters built. San Roque is prone to storm surge while Canramos is prone to floods. Both barangays were heavily affected by Typhoon Haiyan in 2013.

According to Jeszha, the training increased her awareness and knowledge and concepts on hazards, disaster, capacities, and vulnerabilities. She also learned different participatory tools to facilitate sharing of experiences and learning. Prior to Typhoon Haiyan, she didn't know anything about storm surges even though their town is frequented by typhoons. She added that apart from understanding risks and hazards like flooding, typhoon, and storm surge, she also realized the importance of identifying the most at risk community members. Jeszha is now aware of capacities that need to be strengthened so that they

will not be victims of another strong typhoon in the future.

Jehza is now a PDRA community facilitator serving Canramos and San Roque. She said, "I want to share with other people the concepts, knowledge and skills I have learned from IIRR's trainings and the experience I gained in facilitating PDRA. I want our community to be enlightened and understand the risks and hazards they are facing. I want them to know how to prepare and save their lives from these hazards to avoid another Haiyan in our community. Information and better understanding are important to be prepared, ready, and safe."

At of writing, Jeszha is seeking regular employment but while waiting, she continues to attend other activities of the SCORE Project.

Jeszha shared, "I continue to attend and participate in the SCORE Project activities out of curiosity and eagerness to learn new knowledge and skills. I really saw the value of risk assessments as basis in developing our disaster preparedness plans. The information and learnings I discovered are not materials things that will be easily lost. They are for keeps. I even encourage other people to continue attending for their own good - for their safety in the near future. Seminars and trainings like these are very rare. They are not always given by the government or other organizations."

Chapter 3
Contingency Planning

A contingency plan could save lives, properties, and services.

A contingency plan is a written document that can be accessed and should be disseminated to community leaders, volunteers, and members. It should be easily understood by all community members. It guides the action of community leaders and members in response to a hazard. It is tailor-made according to the needs of the community. It should also be properly documented to facilitate review at any time.

A contingency plan needs also to be tested, evaluated, adapted, and updated regularly. This will ensure that people and the community will always be prepared for the hazards which come in the most unpredictable ways.

Characteristics of a community contingency plan

- Hazard-specific;
- Produced in advance of an emergency;
- Developed by the BDRRMC, volunteers, and community members including representatives of the most vulnerable households in the community;
- Simple, short and can be easily understood;
- Accessible and available to the members of the community;
- Familiar to community members as a result of public awareness activities through the practice of community drills;
- Should be regularly reviewed and revised; and
- Formally integrated in the barangay and municipal development plans for funding allocation and for sustainability

Source: Training on Disaster Preparedness and Contingency Planning. ACCORD, Care Nederland and CNDR. 2012

What is contingency planning?

Contingency planning is a management tool used to analyze the impact of potential crises and ensure that adequate and appropriate arrangements are made in advance to respond in a timely, effective, and appropriate way. As soon as hazard strikes, it triggers the operationalization of the contingency plan, which has been formulated with agreed upon common strategy or standard operating procedures (SOPSs).[1]

Contingency planning should be done sensibly. It is not simply an academic exercise neither is it an activity. It is a mechanism to mobilize resources and effective actions from inter-agency coordination at the advent of early warning signals of an impending emergency.

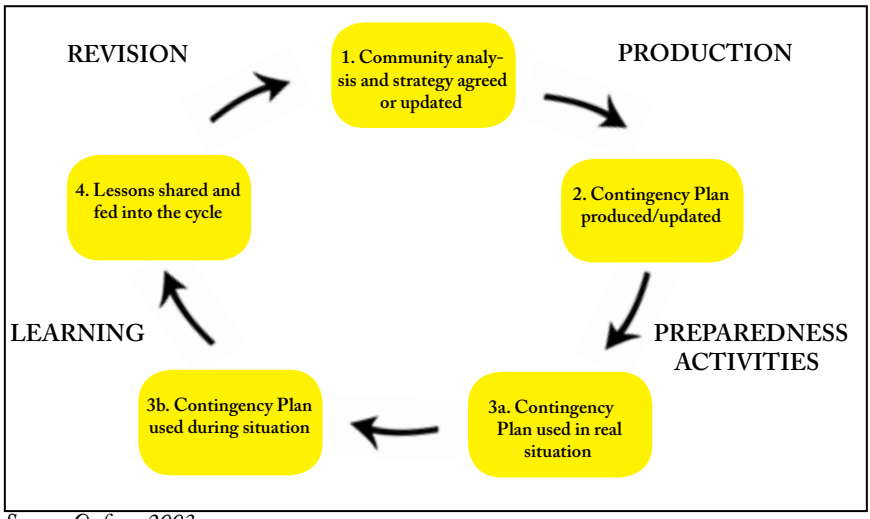
It also generates commitment among parties involved to act in a coordinated manner before the emergency occurs. It is also a design for a concrete and continuous plan until the emergency occurs and which can be discontinued when the hazard is considered to be no longer threatening.

Table 1. Contingency Planning compared with other Planning

Aspects	Preparedness Planning	Contingency Planning	Operational Planning
When	Planning phase	Before emergency	During emergency
Scope of plan	General	Time-frame specific	More specific
Involved Partners	Everybody within system	People knowledgeable	People actually involved
Focus	All types	Specific/Projected	Specific, actual
Planning style	Long term, Global	Specific time frame	Actual
Allocation	Estimated	Quantified	Precise
Planning level	All level	Managerial level	Actual/field level
Time frame	Annual (1 year)	Specific (but uncertain) Developing	Executed right time
Relationships	Long term	Developing	Utilizing

Source: Contingency Planning for Emergencies. DILG. 2003

1 IIRR and UNCRD, 2011. DRR and CCA for Community Workers. Philippie User's Guide. International Institute of Rural Reconstruction ad United Nations Center for Regional Development.



Source: Oxfam, 2003

How to do contingency planning

Contingency planning will involve a group of people, organizations, and stakeholders working together on an ongoing basis to identify shared objectives and define respective actions. Thus, the formulation of a contingency plan is often best carried out through a workshop so assumptions, action plans, and commitments are made together. Series of workshops and meetings can be carried through round table discussions, working groups, and sectoral teams. Secondary data collection is also important to guide and support the planning and formulation process. A secretariat and core team maybe organized to lead the activities in formulating and developing the contingency plan.

An ideal size for a two to three day contingency planning workshop is 20 to 25 participants. Participating organizations should have at least two representatives each: a permanent representative and an alternate representative. Participants should be members of the local DRRM council, accredited community disaster volunteers (ACDV), school DRRM coordinators (especially if school is being used as evacuation shelter), emergency response or rescue groups, and most-at risks community members and sectoral groups.

The contingency planning process can be broken down into three simple questions:

- What is going to happen?
- What are we going to do about it?
- What can we do ahead of time to get prepared?[2]

Below are the information to be developed in the process:

- Community profile, situational analysis, disaster risk assessment
- What-if scenario
- Objectives and strategies
- Operational and action points

I. Situational analysis: community profile and disaster risk analysis

Situational analysis provides past and present political, economic, social, environmental, and technological information about the community. It also presents the results and analysis of the PDRA generated through the use of PLA tools.

Steps:

1. During the workshop, assign people who will present the community profile and PDRA results.
2. After the presentation, divide the participants according to sectors or groups. Ask them to validate and update the information and data presented.
3. Participants may use metacards and flipcharts for presentation. These will be included in the community profile and risk assessment and analysis.

II. What is worst-case scenario?

Scenarios are descriptions of situations that could occur and which the community is likely to respond. These are sets of informed assumptions about a situation that may require attention in

2 Contingency Planning Guide. International Federation of Red Cross and Red Crescent Societies, Geneva, 2012

enhancing coping capacities. There are different case scenarios: bad, worse, and worst. A contingency plan is built on the worst-case scenario assumptions. The information and assumptions are drawn from the PDRA analysis which shows the capacity gaps of human and non-human elements.

The worst-case scenario also provides a detailed description of the force of hazard and the likely impact on elements at risk, clearly stating the assumptions. It project the various characteristics of the hazards such as force of the hazard against the elements at risk versus the existing capacity to cope, duration, frequency, and period of occurrence. It is important to include climate change projections and impacts of environmental degradation in making assumptions to get a clear dimension of the possible emerging gaps the contingency plan should address.[3]

Some of the most important elements to consider in developing a scenario are:

- Impact on human lives
- Impact on housing, properties and livelihood
- Impact on infrastructure, facilities
- Impact on basic services
- Impact on political structures/systems
- Response capacities

How to develop the worst-case scenario?

After defining the worst-case scenario, the next step is to develop the event with fuller feature based on the following information in Table 2.

Activities:

- Divide the group into three.
- Using the PDRA analysis, the participants will define the assumption on three scenarios for a particular hazard. (See Table 2)

3 Building Resilient Communities. A training manual on Community Managed Disaster Risk Reduction

- Should the group build scenarios for multi-hazard, they may refer to sample format and include the important elements in each scenario. (See Table 3)
- The participants may use metacards and flip charts for presentation.

Table 2. Scenario building for a particular hazard

Scenarios	Bad	Worse	Worst
Description of event			
Impact on human lives (death, injured, missing)			
Impact on housing, properties and livelihood			
Impact on infrastructure, facilities			
Impact on basic services			
Impact on geographical location, access and logistics			
Impact on political-structures/systems			
Response capacities			

Table 3. Sample scenario building for multi-hazards

Scenario	Drought	Flood	Earthquakes
Bad	Prolonged dry spell	Normal seasonal flooding	Earthquake measuring 4.5 on the Richter scale; no damages
Worse	Moderate drought affecting some parts of the country	Major flood affecting thousands of people	Earthquake measuring 6.5 causing some major damages in infrastructures and houses
Worst	Severe drought affecting the whole country	Extreme flooding affecting hundreds of thousands of people, properties	Earthquake measuring 7.6 in Richter Scale causing massive destruction

Source: Adapted from Contingency Planning Guide. International Federation of Red Cross and Red Crescent Societies, Geneva, 2012

III. Goal, objective and strategies

A contingency plan should have clear vision of what it wants to achieve and a direction that will guide the overall operation. It should also define the principles that will guide the vision and direction of its implementation. Some of the questions that may help in shaping the goals, objectives and strategies are the following:

- What are the needs to be addressed?
- What the community and local government and other groups can do to address these needs?
- What are the ranges of approaches to be adopted in the implementation? Partnerships?

Activities:

- Divide the groups into five groups and assign each to work on a policy concern.
- Each group may formulate three to five policy statements. It would be helpful if materials of the SPHERE Handbook on Protection Principles and Core Standards will be given as reference materials.
- The group may present using metacards.
- After the group's presentation, synthesize the statement into a set of policies according to goal, objectives and strategies.

Five policy statements:

- Overall goal of the contingency plan
- Basic principles to be applied in contingency plan operation
- Coordination arrangement with/among key players
- Differentiation of roles of government agencies, non-government organization (NGO), international NGOs, and humanitarian agencies
- Resources generation and utilization

IV. Operational and Action Plans

A. Resources and Needs Analysis

Using the agreed upon worst-case scenario, the corresponding needs when such scenario will occur are estimated and determined based on the available resources and capacities of the community or LGU. The resulting gaps between anticipated needs and resources available should be filled and addressed in the contingency plan. These needs may include food and non-food items, water, sanitation, medicine, evacuation centers and temporary shelters, transportation and communication equipment, alternative livelihood, repair materials

The SPHERE HANDBOOK: Humanitarian Charter and Minimum Standards in Humanitarian Response

The Sphere Handbook puts the right of disaster-affected populations to life with dignity, and to protection and assistance at the centre of humanitarian action. It promotes the active participation of affected populations as well as of local and national authorities, and is used to negotiate humanitarian space and resources with authorities in disaster-preparedness work.

It has become one of the most widely known and internationally recognised common principles and universal minimum standards in life-saving areas of humanitarian response, inter-agency communication and coordination tool.

The minimum standards cover four primary life-saving areas of humanitarian aid: water supply, sanitation and hygiene promotion; food security and nutrition; shelter, settlement and non-food items; and health action. It is designed for planning, implementation, monitoring and evaluation during humanitarian response. It is also an effective advocacy tool when negotiating for humanitarian space and for the provision of resources with authorities.

Source: http://www.sphereproject.org/handbook/

for shelters and other community facilities, repair of roads, bridges, schools, and lifelines, among others.

Activities:

- Divide the group into groups according to sectors or clusters they are involved in i.e. food and social welfare, education, health, livelihood, basic social services, etc.
- Using the template below:
  - Write the worst case scenario assumption (Column 1),
  - Identify the anticipated needs (Column 2) based on the assumptions;
  - List down all available resources in the community or LGU (Column 3);
  - Identify the gaps (Column 4) between the needs and resources.
  - Identify possible sources or agency in-charge(Column 5)

Worst Case Scenario	Anticipated Needs	Available Resources	Gaps	Sources
	Food items:			
	Rice			
	Sardines			
	Water			
	Non-food items:			
	Bath soap			
	Blanket			

Standard Relief Pack

Food for 7 days

Item	Standard
Rice	15 kilograms
Sardines	6 cans
Noodles	6 pieces
Coffee	1 piece (50 grams)
Dried Fish	1 kilogram
Salted Fish	0.25 kilogram
Brown Sugar	2 kilograms

Non-food items

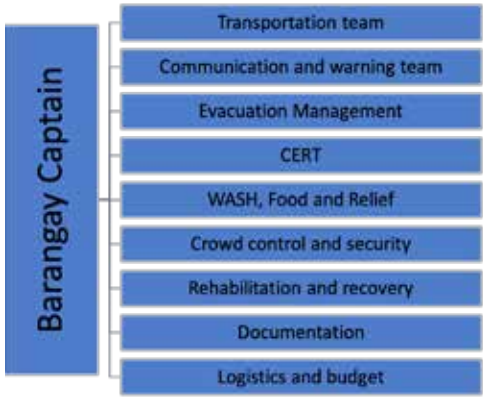
Item	Standard
Mat	2 pieces (family size)
Bath Soap	1 bar (family size)
Laundry Soap	1 bar
Blanket	2 pieces (family size)
Mosquito Net	2 pieces
Tarp	1 piece (10x14 meters)
Candle	5 pieces
Match	1 piece

B. Structure and Functions of the Local Disaster Risk Reduction and Management Committee

Republic Act 10121 defines policy as setting up news structures and framework to address DRR. It states the formation of Local DRRM Councils (LDRRMCs), the primary structure in the community that deals and manages issues concerning disaster risk reduction and

management DRRM. These are established in provinces, cities, and municipalities. In the barangay, this is lodged under the Barangay Development Council (BDC). Members should know and understand their duties and responsibilities to the community. Good coordination among committees and LDRRMCs is important for effective DRRM.

Sample of Barangay Disaster Risk Reduction and Management Coordinating Committee in Barangay Muzon I, Rosario, Cavite



What is the Standard Operating Procedures and Protocols (SOPs)?

This is a set of standard procedures that 'operationalize' the contingency plan when it is triggered. SOPs ensure that certain tasks are carried out in a specific way by key people or units according to pre-agreed criteria. SOPs constitute the link between these plans and the actual operational response. The SOPs set out what should be done, how it should be done, who is responsible for implementing what, and specifies available resources.

SOPs must:

- be simple and easy to understand (preferably in checklist format);
- be able to stand on its own;
- clearly indicate how a task is to be done, who is responsible for ensuring that it is done, and who actually performs it;
- be approved and disseminated within the organization, and used in training; and
- include the use of flow charts to help in visualizing the entire body of response-related SOPs or the specific SOPs relating to a particular sector.[4]

4 Contingency Planning Guide. International Federation of Red Cross and Red Crescent Societies, Geneva, 2012

SOPs should specify the responsibilities and contact details of:

- the emergency response focal point
- team leader and members of each cluster/committee operational level
- coordinating and liaising with other agencies and services and administrative work.

Steps:

1. Discuss the structure of the LDRRMC based on the DRRM Act of 2010.
2. Review the current composition of the BDRRMC, the committees, and the corresponding duties they are familiar with, the members, and their current activities.
3. After discussing, identify action committees that will comprise the BDRRMC.
4. Group the participants into identified sub-committees. Identify the primary roles of the group or cluster (Column 2).
5. Identify the tasks or protocols according to level warning. (Column 3-Level 1; Column 4-Level 2, at Column 5-Level 3)
6. Identify lead person and community members who will volunteer as committee members including their contact number (Column 5)

After the SOPs has been developed, the BDRRMC finalizes and approves it.

Table 4. Sample BDRRC SOP of Barangay San Roque (Tanauan, Leyte)

Committee	Primary Roles	Before			During (at the EC)	After	Lead Person	Members
		Level1	Level2	Level3				
Community Emergency Response	Provides first aid and medical and search and rescue assistance; Creates referral or endorses patients to hospital or to Red Cross if needed	CERT members and volunteers report to Barangay Op Cen for meeting, update, monitoring. Prepare rescue and response equipment; ensure they are in clean and good condition	CERT team stand-by at the OpCen Ensure medical kits are enough Assist evacuate households Prioritize vulnerable sectors Preparedness equipment and documents needed for response and monitoring	Assist families in evacuating Stand-by for possible emergency needs	Monitor updates and development Prepare and stand by for the emergency response	Conduct search and rescue Monitor ECs and community for medical assistance Provide first aid Document # of victims assisted Refer or endorse injured Attend BDRRMC meeting; provide updates (victims assisted, etc.) Ensure equipment are properly returned and accounted	Hon. Felmer Pica, Kagawad	Benjamin Camarillo, Victoriano Villero, Evelyn Costiniano, Marissa Songalia

What is evacuation?

Evacuation is an organized process of transferring from a dangerous place to a safer location. An orderly and proper evacuation saves lives and properties or resources. Not all hazards, however, require an evacuation.

The PDRA helps identify the type of hazard and the particular situation that needs an evacuation plan. An evacuation plan is an important component of the Contingency Plan. It is also closely linked to a community-managed early warning system (CMEWS).

The CMEWS serves as signal for people to evacuate before a disaster hits their area and indicates when to go back to their own houses or transfer to a safer location after the hazard event. An evacuation plan must be hazard specific because each hazard has specific characteristics that require specific actions.

Types of Evacuation

Evacuation types vary depending on the needs of different situations:

Preemptive Evacuation is conducted before a hazard happens. It can be temporary where people can go back after the hazard hits their area (e.g. eruption of Mayon Volcano.)

Rescue Evacuation is done during or immediately after the incidence of a hazard. This usually happens in Philippines if the communities are not prepared for hazards such as typhoons and flashfloods.

Reconstructive Evacuation is the permanent or long-term evacuation after a disaster happened. Families are prohibited from returning to their communities or houses because authorities have declared their place as no longer safe (e.g. resettlement for the coastal communities living in the danger zones or no build zones in Tacloban City after Typhoon Yolanda in 2013).

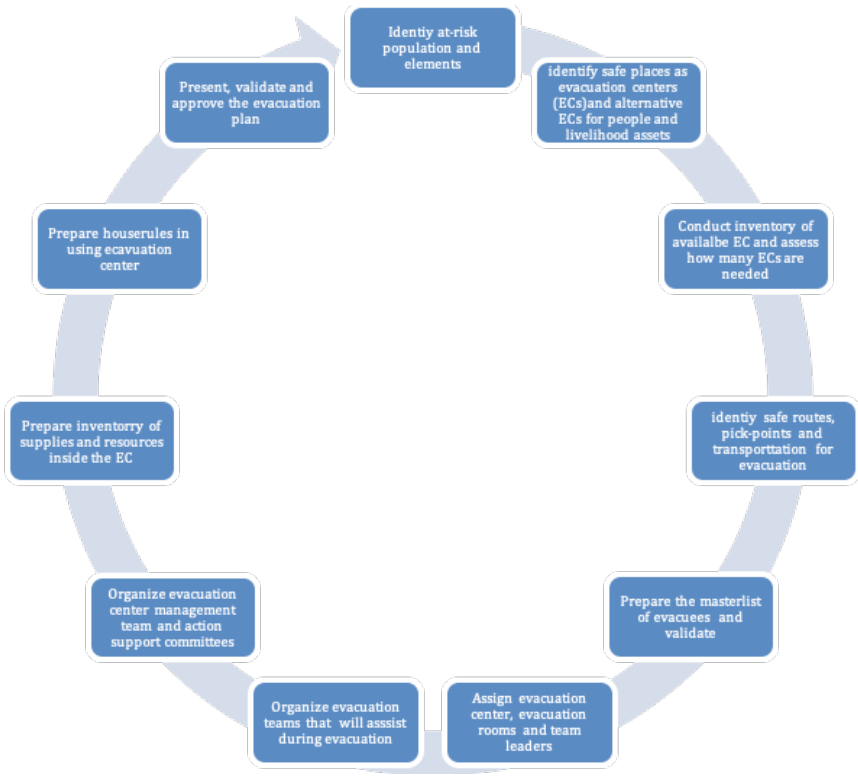
What are the stages of evacuation?

1. Warning to prepare for evacuation
2. Order to leave the area at risk
3. Actual evacuation
4. Staying and remaining at the evacuation centre
5. Order to return to their community or transfer to a safer location

How to do Evacuation Planning

The evacuation committee of the LDRRMC leads the formulation

of evacuation plan with participation from representatives of community members at risk, community volunteers, Social Welfare and Development Office (MSWDO), school DRRM Coordinator (especially if the school is identified as an evacuation center).



Using PDRA for evacuation planning

The PDRA is one of the important documents for evacuation planning because it provides needed information for planning. The community hazard map identifies safe locations that can be used as evacuation centers (ECs) and alternate routes during evacuation. PDRA also who and what are most likely be the first affected by a hazard and who needs to be evacuated or transferred to a safer location.

Steps:

1. Using the hazard map, identify and mark the human and non-human elements that need to be evacuated. Mark the vulnerable sectors that should be prioritized.

2. Identify and mark all the safe locations that can be used as ECs.
3. Identify alternate ECs in case the original EC becomes at-risk or exposed to danger in actual situation.
4. Identify and mark the designated routes going to the ECs. The routes should be the safest and shortest. It is better to assign alternate routes for evacuation as back-up plan in case the original route becomes at risk or exposed to danger during actual situation.
5. If needed, mark the pick-up points that are accessible and where families converge during evacuation before proceeding or being transported to the ECs.
6. Identify a safe area for livelihood, work and house animals, and other assets and properties.

Preparing a master list of evacuees

A prepared master list serves as guide or basis of knowing if all the expected evacuees have reached the evacuation centre safely, or if someone was left behind or was unaccounted for.

After identifying and marking, prepare the masterlist using the template below. A separate list can be made for priority or vulnerable sectors, other most-at risk members and livelihood, assets and properties.

Ensuring an organized or orderly evacuation

If using a vehicle for evacuation, community members should be organized into groups and assigned with specific schedules. If needed, especially in bigger communities, identify pickup points where households will converge and list of families assigned. In some cases, there is no need for pick-up points because evacuees go directly to safe locations. It is also important to assign community members who will assist the vulnerable sectors during evacuation.

Table 5. Sample template of a master list of evacuees

Cluster/barangay											
Evacuation center											
Evacuation center contact person											
Head of the family	Total # of family members						Evacuation Center	Pick up point	Safe route	Cluster or zone leader contact #	Vehicle to be used
	Children	Y	A	PWD	Sr.	Pregnant or lactating					

Likewise, the list can be prepared according to the most prioritized vulnerable members of the community.

Cluster leaders should always account and report to the BDRRMC and evacuation center management committee the families evacuated to designated ECs.

Preparing for evacuation and supplies needed for evacuation

The evacuation committee prepares evacuation requirements such as vehicles, road signs, communication equipment, and supplies like gasoline, canned food, water, and medicines. Likewise, the evacuation committee regularly coordinates and updates with BDRRMC and the evacuation center management committee head of ECs to ensure organized and well-prepared evacuation and delivery of services.

What to bring during an evacuation:

How to coordinate and manage an evacuation center

An evacuation center is any safe location where affected families

can take shelter during times of an impending hazard. This can be a school, covered court, barangay hall, multi-purpose hall, church, or a house in the community. It can also be established 'tent cities'. In the Philippines, public schools often serve as ECs for affected community members.

Checklist of criteria in choosing an evacuation centre:

- EC is on safe and stable land or area
- Water source is available
- If possible, the EC is near the community and there is a safe route from the community to the EC
- Drainage system is functioning well
- There is enough space for people, communal services and others.

Evacuation center management or camp management is the primary responsibility of the evacuation committee based on the structure of the LDRRMC. It is a mechanism through which relief assistance and other humanitarian initiatives can be coordinated, collaborated, and cooperated among stakeholders to ensure efficient delivery of services to the affected population. It also includes systems and procedures installed from planning, organizing, assessing, and coordination. It defines roles, functions, duties and responsibilities, and lines of coordination of task implementation. Thus, participation and membership of evacuees, other community members, BDRMMC, and government agencies (i.e. MSWDO, MDRRMO and DepEd) are important for effective, appropriate, and proper management of an EC.

What is an Evacuation Center Management Team

Each EC should organize an evacuation center management team (ECMT) that will implement the evacuation plan and oversee the management, coordination, and delivery of services for affected population. The ECMT will assign an EC manager who will be the overall head and will serve as the EC focal person. If the EC is hosted by the school, the EC manager may be the school principal or school DRRM coordinator. The ECMT is composed of the following: At least 1 barangay kagawad; day care worker; principal or head teacher; midwife or barangay nutrition scholar (BNS); chief tanod; private sector representative; and community members' representatives.

Based on the needs of the evacuation center, the ECMT will organize different action committees that will ensure the set-up, operation,

and coordination of the following services inside the EC:

Camp set up and life saving measures	Basic facilities and services	Thematic concerns on protection, health and education
• Activation of Camps/ Evacuation Centers • Establishment of Evacuee Welfare Desk • Registration, Profiling and Masterlisting • Reports and Record keeping • Organizing of IDP Leaders and Committees • Food and Nutrition • NFIs and Relief Distribution	• Accommodations • Cooking • Facilities • Water access • Drainage • Garbage • Hygiene • WASH • Facilities for women and children • Common public areas • Camp security	• Health • Mental health and Psychological Services • Education • Protection of Women • Child protection • Protection of the elderly and PWDs • Security and public safety • Community activities

Source: DSWD, IOM

Action committees shall be led by the community leaders and volunteers. The tasks of each committee should be discussed to ensure common understanding among the evacuees, volunteers, BDRRMC, and ECMT members. Evacuees are strongly encouraged to be part of the committees to ensure that needs in the EC are addressed and to make their stay in the EC productive.

The following are some of the important action committees. The creation of action committees will depend on the situation and needs of the evacuation center.

Table 6. Sample template of Evacuation Center Management Action Support Committee

Name of Evacuation Center:		
Address:		
ECMC Head:		**Phone number:**
Committee Activities	**Roles and Functions**	**Team Leader and Members**
Registration/masterlist		
Relief distribution		
Command post/welfare desk		
Education		
Safety and security		
First aid & medical needs		
WASH		
Communication		
Logistics		

Inventory of facilities and prepositioning of supplies

The ECMT conducts mapping and inventory of facilities prior to evacuation of affected communities. Among the facilities are rooms for evacuees, bathing and hand washing facilities for men and women, community kitchen, laundry area, child-friendly spaces, space for lactating mothers, storage/supply area, worship or praying room, and entertainment. The ECMC also identifies the command center, welfare desk, and registration area.

Likewise, prepositioning of supplies such as food and non-food items is important prior to the hazard event. The masterlist of evacuees will be useful in planning and prepositioning of stockpile. The LGU can refer to the SPHERES Handbook for standards in providing relief assistance.

Room assignment and activity areas

Steps:

1. Draw the physical map or lay-out of designated evacuation center.

2. Mark the entrance and exit points.
3. If the EC is a school, identify and mark the rooms that will be used as EC.
4. Estimate the capacity of each designated room.
5. Using the evacuation masterlist, assign families or individuals to specific rooms. When assigning, consider vulnerable sector's needs.
6. Assign and mark rooms that are child-friendly, good for women and lactating mothers, and for worship/praying.
7. Assign and mark rooms for registration, command center and welfare desk, food distribution, supply storage area, laundry area, cooking area, washing and restroom for men and women, psycho-social and counselling, and entertainment.

Assigning specific rooms and location will help for organized evacuation.

Steps:

1. Using the masterlist, designate families or individual to specific room assignment.
2. Identify room leader who will coordinate with cluster leader and other concerned committees.

If the identified EC is a school, the following must be considered:

- Disruption or continuity of classes
- Lack of facilities in the school for the evacuees
- Maintenance and ensuring orderliness of the school
- Safety and security of teachers and students
- Coordinate with the BDRRMC or MDRRMC for harmonized planning and preparation.

While in the EC, the ECM members must:

- Keep a master list of evacuees and monitor their condition.
- Assign space for each of the families of evacuees.
- Conduct an orientation for the evacuees.
- Maintain orderliness.
- Conduct training and other education activities.

- Conduct networking and resource generation.

After the evacuation:

- Ensure safe return of evacuees to their respective homes.
- Repair or fix school facilities, furniture, and fixtures that have been damaged in the EC.
- Clean up the evacuation site.
- Return to the community or look for a relocation site if it is unsafe to return.

House rules at the evacuation center

Establishing guidelines or house rules in ECs is important to ensure safety, protection, and security of the evacuees and their belongings as well as the facilities and properties of the EC.

Steps:

1. Participants representing the school, evacuees, BDRRMC members and volunteers, MSWDO, MDRRMO, and other groups will identify the problems and challenges they encounter inside the evacuation center.
2. Afterwards, participants will identify solutions.
3. Present and discuss the solutions in the plenary for comments.
4. Agree on the set of guidelines and house rules that will be implemented inside the EC.

What is an Information Board

An information board must be installed in every EC for easier access to information and updates on displaced and affected communities. The following are the information included in the board:

Table 7. Sample template of an information board

Name of Evacuation Centre (EC) **Location of EC**	
Name of Camp Manager or ECMC Leader, agency and contact details	
No. of Families No. of Individuals No. of Males No. of Females No. of Lactating Mothers No. of Pregnant Women No. of Children Disaggregated by Age Bracket and Sex Skills (Identify the skills; carpentry, mason, manicurist, hairdresser, plumbing, vendor, tricycle driver, licensed driver, dressmaker, auto mechanic, technician, electrician)	No. of Schoolchildren No. of Elderly Disaggregated by Sex No. of PWDs Disaggregated by Sex No. of Persons with Serious Illnesses No. of 4Ps Beneficiary No. of Families with Damaged Houses Disaggregated whether Partially or Totally Damaged No. of Families Living in Hazardous Areas Prohibited to Return in Place of Origin No. of Casualties (Dead, Missing, Injured) Weekly Schedule of Activities Common Diseases No. of Facilities: toilets, bathing cubicles, community kitchen, washing area, women-friendly and child-friendly spaces, multipurpose

Source: Dissemination of DepE-DSWD-DILG-DOH Joint Memorandum Circular No. 1 Series of 2013 (Guidelines on Evacuation Center Coordination and Management)

Community consultation and validation

After the ECMT has been organized and the masterlist has been prepared, the BDRRMC should consultate and validate with community members, presenting and informing them about the evacuation plan, different committees of the BDRRMC and ECMC, assigned EC, room assignments, safe routes, pick up points, and cluster leaders. This is also an opportunity for community members to volunteer to be members of BDRRMC and ECMC committees.

Once the contingency plan, evacuation pland, and CMEWS have been finalized, the BDRRMC presents and discusses the content of the contingency plan with community members during a barangay meeting or assembly to get their comments and feedback. After consolidating the comments, the BDDRMC reviews and approves the contingency plan. A corresponding local ordinance will be passed for implementation. The CP is now ready for testing and evaluation through community drill. The CP is tested, evaluated and updated annually.

Case Story

The Contingency Plan: Key to Disaster Readiness
By: Rogel P. Paje, Barangay Muzon 1, Rosario Cavite

Our village Muzon 1 in Rosario, Cavite is located along Manila Bay covering a total land area of 11.9 hectares. In 2013, we have a population of 3,439 people (1,599 male and 1,840 female). Fishing, smoked fish production, industrial employment, and vending are our primary livelihood. We live below the sea level so we usually experiencing flooded between June to August during the southwest monsoon.

Due to our high risk to flooding, it is important for our village to have a contingency plan - a blueprint for effective response to disasters to prevent deaths and minimize damage to property. Through the support of UMCOR and PACAP and guidance of IIRR, we were able to create a contingency plan. We tested its effectiveness through a simulation and community drill. We carefully observed and identified parts of the plan that needed revision to adapt to the needs of the community.

Muzon 1 BLGU is directly managed by the BDRRMC headed by the village chairman. Each village councilor leads assigned committees based on his or her forte or skills acquired during the training. The committees implementing our contingency plan are the following:

1. *Community Emergency Response Team* - Trained by Red Cross and IIRR on first aid, bandaging, water rescue and survival, etc. Members administer first aid to victims. They are the "frontliners";
2. *Evacuation Committee* - Responsible for warning and assisting families that need to be evacuated;
3. *Early Warning Committee* - Warns barangay residents through sirens or bell, depending on the level of flood;
4. *Transportation and Communication Committee* - Leads the coordination of different committees and ensures a vehicle is available to transport the evacuees and/or the injured;

5. *Crowd Control Committee* – composed of the barangay security force to maintain peace, order, and safety of evacuees in the evacuation centers
6. *WASH, Food and Relief Committee* – manages the relief goods and ensures availability of potable water and food for affected families.

Our contingency plan also included the Flood Early Warning System (FEWS). The barangay captain, councilors, and accredited community disaster volunteers were taught how to use the different equipment, set and agree on the warnings and equipment to be used, and identify expected actions for every warning level and the steps in evacuation. The following are the equipment and devices for FEWS:

a. Rain gauge to measure the amount of rainfall over a certain period of time and serve as basis for raising warning levels.
b. Tide monitor to observe the level of seawater during high and low tides.
c. Megaphone to warn the residents and serve as signal warning Level 1.
d. Bell is made from an empty oxygen tank cut in half and is used to signal Warning Level 2.
e. Manually operated siren signals are Warning Level 3.

In April 30, 2013, after the EWS was set up and FEWS were taught to the committee members, we performed a simulation and community drill. We tested the awareness and understanding of our community members on the EWS and our readiness and knowledge of proper evacuation procedures.

The contingency plan is a big help for us in the barangay council because it serves as our guide in implementing the correct process in disseminating warnings, evacuation, and addressing the needs of those affected by the disaster. Before, the barangay council and residents knew nothing about EWS and contingency plans but now, little by little, we learn more about preparedness. We should do more simulation, community drill, and information dissemination to familiarize the community with the right process in preparedness and readiness.

Chapter 4
Community-managed Early Warning Systems

The word "early warning" refers to the information provided to people and communities exposed to an impending danger. This information is useful in taking actions that will save them and their properties when the actual danger comes. Time and quality of information are important elements of a good early warning. The earlier the information is given, poeple and communities will have more time to act in advance. The better the information, the more effective people's and community's actions will be.

The early warning system (EWS) is an important component of the community-managed disaster risk reduction (CMDRR). It enhances community readiness and is embedded in the community's Contingency Plan. The EWS is the trigger that will activate the Contingency Plan during a hazard event. A good EWS reduces disaster risks, thereby saving lives and properties.

The UN-ISDR defines EWS as a set of capacities needed to generate and disseminate timely and meaningful warnings that enable individuals, communities and organizations threatened by hazards to take the necessary preparedness measures and act appropriately in sufficient time to reduce the possibility of harm and losses. Guided by this definition, community-managed EWS has four basic components:

Knowledge of the risks and hazard

The design and contents of the EWS should be based on a sound and accurate assessment of the community's risks and the hazard (for more information, refer to Chapter 2: Participatory Disaster Risk Assessment). The EWS must target those most at-risk members of the community.

Based on the information gathered from the assessments, the EWS system will identify thresholds, indicators, or stages of the development of the hazard and raft different levels of warning information that will be relayed to the most at-risk members of the community. For example, in a flood early warning system, the level of water in the river can be the basis for creating thresholds or stages. It can also be the amount of rain measured in a rain gauge. If the hazard is drought, the basis for staging or thresholds might be the number of months without rain or the number of animals that are dying.

Monitoring and warning procedures

This component includes procedures of monitoring the development of hazard on a regular basis. The community must be able to assign a permanent monitor that will oversee regularly the equipment that measures the progress of a hazard such as flood water level markings, rain gauges, etc. The warning procedures include what the warning levels are and the appropriate indicators for each level.

For example, a common warning procedure in flood is the three-warning levels: "Ready, Get Set and Go". "Ready" is the level one warning, which calls people to be vigilant for a possibility of flood. "Get Set" is the level two warning, which calls people to ready their evacuation kits because of flood can occur within two to three hours. "Go" is the final warning, which calls people to evacuate as floodwaters are coming in less than two hours. These warning procedures must be constantly updated based on observations of the hazard and forecasting. For instance, in a flood hazard, it is observed that an increase of one foot in water level upstream causes knee-deep floods downstream in a span of two hours. This means that people downstream will have two hours to prepare once the water

level upstream has increased by a foot.

Dissemination and communication

This component is the method of giving the warning to targeted people and areas most at-risk. The tools and mechanisms for dissemination and communication must be understood well by the target audience. The process of consultation and ownership of such tools and mechanisms must rest with the community. Some examples of tools are the use of the community public broadcast system, community bells, use of flags and whistles.

Response capacity

This component refers to the actions taken after the different warnings have been disseminated and communicated. The EWS must be clear on what the individual, the entire household, and the community leaders will do whenever the warning is given to them. To increase readiness, community members and leaders, especially the most at-risk, must be well informed and educated about these actions or responses to the warnings.

Important principles of CM-EWS

To make the EWS truly community-managed, community facilitators must ensure that the process of setting up the EWS follows these principles:

- The EWS must be based on a genuine process of participatory disaster risk assessment.
- The EWS must balance the use of indigenous and scientific knowledge, thereby increasing the knowledge of the community on the nature of the hazards.
- The actual control and management is made by the community; community members are given assignments in the entire EWS components.
- The EWS ensures that internal response capacities are identified and maximized so that people become more empowered to help themselves.

- The choice of communication tools and mechanisms must be acceptable and effective at the community level.

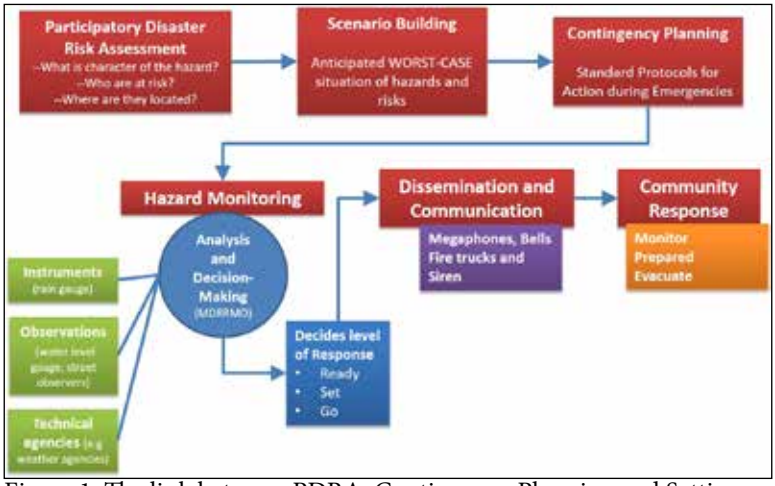


Figure 1. The link between PDRA, Contingency Planning and Setting up Early Warning Systems

The following are the methodologies and tools in facilitating community organizations in setting up their CM-EWS:

Participatory Disaster Risk Assessment (PDRA)

The first step in CM-EWS is the conduct of the PDRA (for guidance on how to do it, refer to Chapter 2). Data gathered from its key three assessments will be considered in the design of the EWS.

Hazard Characterization

Hazard characteristics (causes of the hazard, warning signs, forewarning, speed of onset, frequency, and period of occurrence) will use in designing the monitoring and warning procedures. For instance, if the flood is caused by too much rain in the upstream areas, a water level monitor in the main rivers upstream may be the monitoring mechanism to be employed. Another example is if the warning is given three hours after an increase in the water levels upstream, then that would the time element to be considered in deciding the responses and actions that should be done within three hours.

Vulnerability Assessment

In vulnerability assessment, the information that will be provided to the CM-EWS is the number and location of the most at-risk people and properties in the communities. This information is useful in deciding what is the most effective communication channels to reach the most at risks in the most effective and efficient manner.

Capacity Assessment

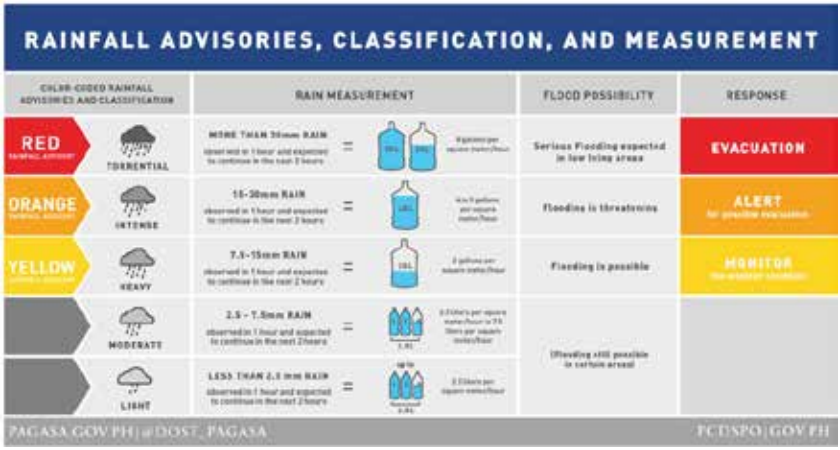
The capacity assessment gives information about the internal response capacity of at-risk individuals and the community in general. The CM-EWS will build upon these existing response capacities as well as inform the DRR plans on what capacities are still needed to be created or enhanced.

Identifying Existing Observation and Monitoring Systems for the Hazard

In this step, the community is identifies existing hazard observation or monitoring systems. Most governments have this, especially if the hazard is a significant event in the country. For example, most storms, typhoons, and other weather disturbances have existing warning systems both in the country and sometimes regionally. Volcanic eruptions and tsunamis are also closely monitored by governments. The rationale for this step is to maximize linkages with existing initiatives on early warning so that the CM-EWS will be more institutionalized and sustainable.

In the Philippines, the government's hydrometeorological agency, Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), has existing EWS applied for the entire country like the typhoon warning systems and rainfall warning system. Local communities can tap into these systems when making their own localized EWS.

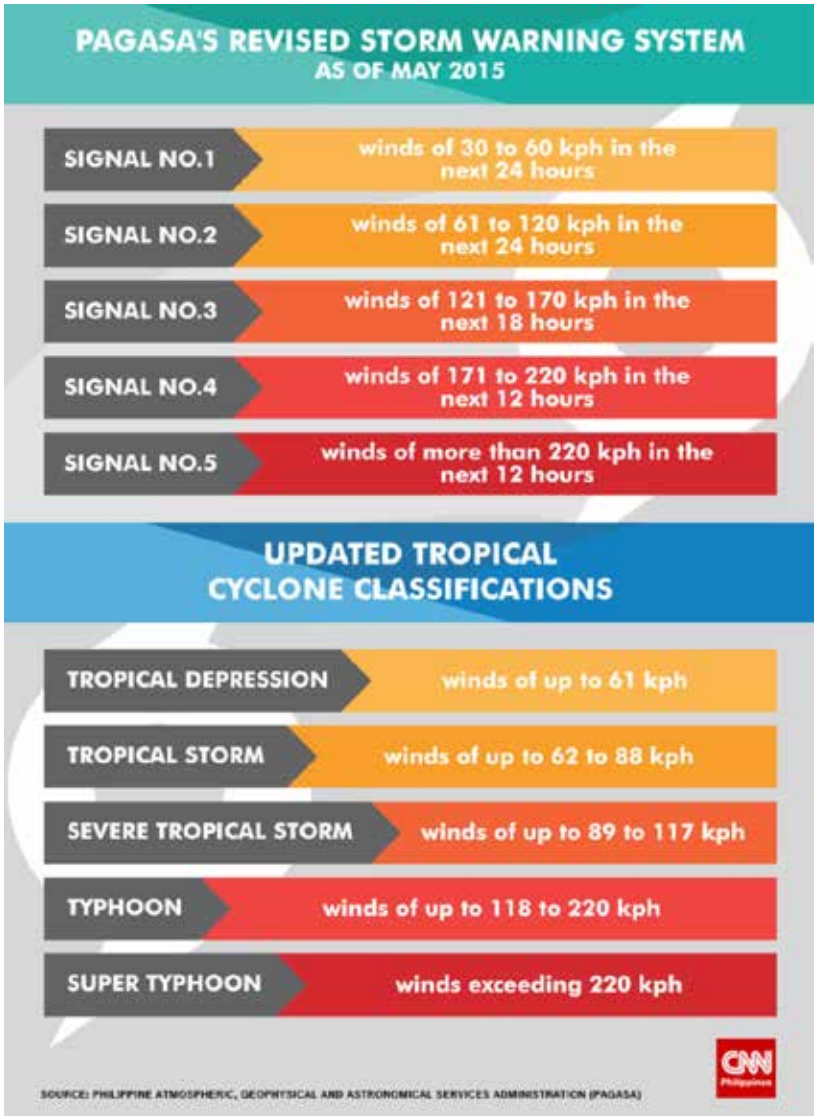
In case there are no existing observations and monitoring systems in place in the country, the community can skip this step and proceed to the next step.



Creating/Enhancing Observation and Monitoring Systems

A Digital Rain Gauge used to measure rainfall. With technical assistance, communities can correlate amount with rainfall and flooding which then will be the basis for the early warning information.

This step is directed at establishing a system that will regularly gather information about the hazard. It will be the basis for the warning procedures and responses of the targeted people to be warned. This system can be created or be an enhancement of an existing one. Important elements are the observation and monitoring equipment and the people who will take charge of it. Examples of equipment are rain gauges, water level monitor, seismographs, and the like. Some of these equipment require technically skilled people but there are also technologies that the community can use and manage. The basis for deciding on what observation and monitoring equipment to use are the information about the cause of the hazard and the hazard forces. The warning signs and forewarning are also important to determine what to observe during the hazard event. Lastly, the observation and monitoring system must be owned, operated, and managed by the community members.


PAGASA'S REVISED STORM WARNING SYSTEM
AS OF MAY 2015
SIGNAL NO.1
winds of 30 to 60 kph in the next 24 hours
SIGNAL NO.2
winds of 61 to 120 kph in the next 24 hours
SIGNAL NO.3
winds of 121 to 170 kph in the next 18 hours
SIGNAL NO.4
winds of 171 to 220 kph in the next 12 hours
SIGNAL NO.5
winds of more than 220 kph in the next 12 hours
UPDATED TROPICAL CYCLONE CLASSIFICATIONS
TROPICAL DEPRESSION
winds of up to 61 kph
TROPICAL STORM
winds of up to 62 to 88 kph
SEVERE TROPICAL STORM
winds of up to 89 to 117 kph
TYPHOON
winds of up to 118 to 220 kph
SUPER TYPHOON
winds exceeding 220 kph
SOURCE: PHILIPPINE ATMOSPHERIC, GEOPHYSICAL AND ASTRONOMICAL SERVICES ADMINISTRATION (PAGASA)
CNN Philippines

Early warning and monitoring devices installed at Rosario, Cavite

Building agreements on warning procedures and responses

Once the hazard observation and monitoring system is established, the next step is to agree on how the observations of the hazards will be interpreted as warning information. The community should also agree on the expected actions of the individual and the community for the warning information. An example of agreements is the "ready, get set and go" three-step warning procedures.

Establishing mechanisms for disseminating and communicating warning

The mechanisms for disseminating and communicating the warning is all about how to bring the warning to the targeted people and

location of the community at the most efficient and effective way. The approach to be used must be acceptable and clear for the community members. Some of the communication tools that have worked in many communities are the use of community billboards, flags, sirens, bells and the like.

Simulation and Regular updating and enhancement of the CM-EWS

In this step, all the agreed warning procedures, responses and communication mechanisms are subjected to a test through simulation. Simulation can be done first as an announced practice meaning the community members are informed that simulation exercises will be conducted and they are expected to participate. The subsequent simulation exercises should be unannounced so that community members will be on their toes all the time. After every simulation exercise, the community should evaluate the systems and improve it to address issues that have been identified.

Chapter 5
Community Drills

A contigency plan (CP) could not be assumed effective if it had not been tested. A community drill is performed to test the CP, or certain parts of it. Short of an actual hazard event, only through a community drill can the CP be assessed for its effectiveness.

Community simulations and drills are useful tools that will facilitate in evaluating, testing and updating the contingency plans and the early warning systems (EWS).

Simulations and drills are two distinct tools. A simulation is more of an exercise for decision-making based on a given information or scenario. In a simulation exercise, participants are given a task or role that they will most likely do in an actual hazard situation. The scenario and information given to the participants are representations of the actual hazard event experienced in the past.

Simulation exercises are best used for the community organization that will take the lead in the implementation and activation of the CP. Regular conduct of simulation exercises can help increase the confidence of community leaders and stimulate their critical thinking skills and situational analysis before decision-making. Simulations show the coordination and analysis skills of the key people taking charge of the various systems and procedures stipulated in the CP.

Community drills, on the other hand, are practical and physical exercises that will allow the community to perform actions required

during a hazard. Drills are actual mobilization of people, response teams and resources, such as equipment. These actions are those

The three basic elements of a simulation exercise are:

- *The participants*. These are people who will be receiving the scenarios and making decisions. These may be the community organizations or leaders tasked to perform systems and procedures in the contingency plan, or the people assigned in the observation station and communication and dissemination system under the EWS.

- *The observers*. These are the people who will not participate in the simulation but will keenly observe how the participants handle information and make decisions. Observers should take down notes while the simulation is ongoing. A video camera may be used to record the simulation for later playback and to let the participants see how they performed their simulated discussions and decision making.

- *The scenario*. It is conceived before the actual simulation. The scenario is a set of assumptions and information given to the participants. The scenario must be hazard-related to the contingency plan and must be targeted to a specific decision making area.

stipulated in the CP and community EWS. Drills are useful in evaluating and enhancing the mobilizing skills of people, the tools the community have to use during the hazard, and the overall understanding of the community on what actions to take during the hazard. Common examples of drills is the fire drill where the community simulates the actions of the fire fighters' response to a fire in the community as well as the actions of the people in evacuating properties and people out of the danger of fire. Other examples would be the earthquake and evacuation drills.

A community drill also has the same components as simulation exercises and these are the participants, the observers, and the scenario. A community drill may either be announced, whereby the community is informed of the schedule and the scenario, or unannounced, whereby the community is not informed or is informed only in the middle or end of the exercise. Unannounced drills are useful in testing and evaluating EWS. The purpose of unannounced drills is to test the targeted participants' state of preparedness to act. At end of each simulation and drills, the experience must be assessed to identify the strengths and gaps of the participants. Recommendations for improvements should be identified and implemented as soon as possible so that in the next scheduled simulations and drills there

will be improvements.

Why is there a need to conduct a community drill?

A community drill is conducted to:

- Familiarize and enable the BDRRMCs and the entire community to practice their specific roles during emergencies using the contingency plan as their guide;
- Measure the effectiveness of the various parts of the CP, in the process identify problems that may be encountered and the possible steps to resolve them; and
- Improve parts of the CP to make it effective by adjusting it to the actual conditions and capacity of the community.

For communities often beset by disasters, a community drill is an effective way of training community members on how they can take appropriate and organized actions to prepare for and respond to disasters. Situations during emergencies are simulated to make the community members and leaders see the possible problems that may occur and be prepared for such.

By improving the ability of the community to take fast and appropriate actions in an organized manner, lives will be saved and assets and livelihoods will be protected. In an area vulnerable to floods for example, each minute counts as floodwaters rise. A slight delay in appropriate response could result to a large casualty and high cost of damage to properties and livelihood.

A drill can be conducted yearly to improve the contingency plan and to familiarize the community on what to do during emergencies. This helps to instil disaster preparedness in their consciousness.

Types of drill

A drill can be done according to the type of hazard e.g. earthquake drill, fire drill, flood drill and others. A community may also decide to conduct drills for more than one hazard if need be. It can also be classified as evacuation or table top drill. In the evacuation drill, participants act out or show actual response to a scenario in real time.

What is tested?

- Early Warning System - to test its approximates to the actual conditions, if it is easily understood by the community members, and if it is carried out as planned by the community.
- Contingency Plan and Evacuation Plan – to determine if the plans can be followed easily and if the processes are simple, doable and efficient.
- Capacity of the BDRRMC – evaluate the members' efficiency to analyze, decide, and respond to the emergency situation and how familiar they are with their duties and responsibilities.
- Community preparedness – The community members' preparedness, indicated by their familiarity with the steps that they have to undertake prior, during, and after an emergency; participation in the community drill; and ability to respond and comply with orders and instructions made by the BDRRRMC. The participation of the entire community also shows the level of their appreciation and ownership of the CP.

Meanwhile, a table top drill does not require participants to act out their response. Instead, they will recite what they will do under a particular situation.

Preparatory activities for community drill

1. Formation of a control group and observers
2. A control group will provide direction to the community drill. Specifically, it will:
    - Lead the planning activity and develop the drill design and scenarios.
    - Work with the BDRRMC and selected community members for public awareness activities on the CP and drill.
    - Organize the observers and documenters.
    - Announce the start of the drill and present the scenarios to drill participants.
    - Monitor the progress of the drill and issue reminders based on the design and scenario.
    - Facilitate the evaluation process.

The control group may be composed of three to five persons with adequate experience and knowledge on facilitating a drill. This may

include community facilitators, barangay and municipal officials, teachers, and others. It will be best if someone from the community is part of the team to encourage self-reliance. The barangay captain or village chief may also be a member if he/she wants to see how fellow BDRRMC members and barangay officials will respond to the scenarios. Apart from sufficient experience, the members of the control group should have:

- completed the series of trainings on DRR;
- time and interest in conducting drills;
- capacity to lead the activity; and
- knowledge about the contingency plan.

Aside from the control group, evaluators must also be identified and chosen. Evaluators are tasked to witness and monitor the drill process. They will give their observations on the weaknesses and strengths of the exercise and their recommendations on how future drills can be improved. These observations and recommendations will also be helpful in improving the contingency plan. By participating in the drill, evaluators also learn from the exercise.

Documenters focus on the process of the exercise and come up with written notes, video footage and photos of the activity. They can also provide insights and recommendations on the drill.

Creating the community drill design and scenario

The drill design developed by the control group gives details on the rationale (background and objectives), mechanics, participants (control group, evaluators, BDRRMC and community members), and drill scenario. An important part of the design is the drill scenario that will serve as the "script" of the situations that will be simulated in the community.

The worst-case scenario developed during the contingency planning will be the basis of the drill scenario. The script must include the exact time when the warning signal will be issued to indicate the need to evacuate. The script must also simulate common episodes that happen during emergencies such as people unwilling to evacuate, some residents getting injured, the elderly being helped

out, or pregnant women with small children in tow. This will not be discussed with the BDRRMC and the community. The control group will secretly plan this with selected residents who will act out these "roles."

Planning for a community drill

After the contingency and evacuation planning have been completed, planning for the community drill starts. The following are some of the activities that must be done and included in the checklist:

1. Develop the drill design and scenario;
2. Conduct information, education and campaign activities with the community to raise public awareness and understanding:
    - Disseminate the copies of contingency plan to BDRRMC and community members, particularly the evacuation plan (evacuation routes, assigned evacuation centres) and early warning system;
    - Explain to the community the evacuation plan, assigned EC, early warning system and EC guidelines)
    - Explain to the community the details of the drill - when it will be held, why it is important, who will be the participants, etc.
    - Explain to the community the preparedness measures they have to do;
    - A period of at least two weeks is needed to inform all community members and those who will directly be involved in the conduct of the drill.
    - IEC activities will involve holding barangay or community meetings, house visits, putting up of posters, distribution of flyers, and printing of t-shirts that carry the details of the drill are also done as build-up activities;
    - Prepare and update the masterlist of community members and the total count of participants to the drill;
    - Coordinate with proper authorities or the ECMC to prepare the evacuation centres;
    - Identify the evacuation routes and conduct actual dry runs to estimate how long it will take to reach the evacuation sites;
    - Coordinate with local government units (MDRRMO,

RHU, PNP, BFP), schools, NGOs, volunteer groups, etc. to secure support;
- Prepare equipment needed to issue warnings like handheld megaphones and bells. The warning signal/ system to be used must be the same system agreed upon by the community and stated in their CP;
- Prepare communication equipment for easier coordination;
- Prepare the transportation needed to evacuate the residents such as trucks, or boats;
- Identify and form the team of evaluators and documenters and prepare the guidelines for these teams;
- Meet and orient the team of evaluators and documenters about the design, scenario and evaluation tool;
- Prepare supplies such as food for the participants and first aid kits;
- Other important things that may be identified by the BDRRMC, control group and community.

Review of the CP, EP and EWS

Process of preparing a community drill

A meeting for all BDRRMC members is conducted to review the contents of the CP, EP and EWS and to refresh all participants about the important parts of the CP. The control group also participates in this meeting. It will also be an opportunity to clarify the goals of the community drill. A review of the community's plan to address a disaster situation is a must, and emphasis is given on EWS and evacuation plan.

In reviewing the evacuation plan, note the committee responsible for particular actions during an emergency and actual evacuation. Review the responsibilities of each committee and discuss how they can effectively implement these.

Activities on the day or a day before the drill

Prior the start of the drill, the BDRRMC quickly discusses the flow

of the drill; review the early warning system (including warning signals) and evacuation plan; and quickly review the duties and responsibilities of BDRRMC.

The control group conducts orientation for the evaluators, documenters and media persons (if there are any) about the drill design and evaluation tool.

Procedure and flow:

- Make sure that all participants, evaluators, and security support are at their respective posts before starting the drill.
- Make sure that the first aid team and standby ambulance are ready should their services be needed during the drill.
- Once all the requirements for the drill have been checked, start the drill by sending the warning signal and following the prepared script. Once the warning is given, let the BDRRMC members perform their roles and observe the entire duration of the drill. The control group remains at their posts so that they are easily located by people seeking help or clarification.
- Every step and action done by the BDRRMC and the whole community from their homes to evacuation centres must be monitored. At the evacuation site, they will also observe the process of registration, room assignments, and distribution of relief bags.
- Once participants are accommodated in their room assignments, the relief and evacuation committee will facilitate the distribution of packed food to each household. The distribution will be based on the masterlist. This simulates actual distribution of food or other assistance to evacuees in a real emergency situation.
- The participants wait for the signal ending the drill. Help the participants go back to their community.
- The control group, evaluators and members of the BDRRMC convene for the post-drill reflections, assessment and evaluation.

Post-drill reflections with evaluators and community

Once the drill ends, the BDRRMC, control group, evaluators, documenter, and select community representatives must meet to

further assess and evaluate the drill based on the evaluation tool.

The meeting aims to review and assess the exercise and draw lessons from it. The lessons will be the basis for improving the contingency plan of the community, ensuring that it matches the capacities and actual community conditions.

The facilitator ensures the smooth flow of the assessment with feedback and inputs are shared.

The evaluators share their insights, identify the strengths and competencies of the implementation that can be the basis for setting up the standards and weaknesses and gaps that need to improve.

They also share recommendations and corrective measures for enhancement and improvement of community capacities.

The BDRRMC and community members also share their insights and learnings. The facilitator summarizes the positive and negative observations, focusing on the recommendations on how to improve the conduct of community drill and make the contingency plan better.

The documentation of the process of the drill should be completed including the results of the assessment and the photographs.

How to evaluate the actual drill

There are two stages of evaluating the the drill. First is involving a large number of people or the drill participants. They will be asked to give their feedback and identify the lessons they learnt from the experience in conducting and participating in a drill. They will also be encouraged to give recommendations on how they can prepare better for emergencies. This can be done while the participants are in their respective rooms inside the designated evacuation sites.

The second evaluation is done by the control group, the BDRRMC, the evaluators, and the documenter(s). The drill plan or design is reviewed to determine which parts were followed during the drill and which were not. The participants also discuss which parts of the

Reminders:

- The timing of the drill is important in relation to other community activities. Set the drill according to the availability of the community members. It is recommended to do it on a Saturday or Sunday so that residents who are out working during weekdays can join.
- It is best to conduct the drill prior to the expected time or season that the hazards usually occur to give the community enough time to prepare and allow children and elderly to participate.
- Make the drill scenarios as simple as possible when conducting a community drill for the first time. The drill aims to familiarize the BDRRMC and community members with the importance and the process of doing a community drill.
- Community drills should be held annually for the BDRRMC and the whole community to further improve their skills in disaster preparedness and response.
- Succeeding drills can be designed to be more complex. For the MDRRMC, they can start with one community participating in a drill, and later on graduate to simultaneous drills of several communities.
- Inviting evaluators and observers from other high-risk communities will also encourage them to make their own contingency plans. Participation of the MDRRMC members will also help improve the coordination between BDRRMC and MDRRMC particularly during emergencies.

design are applicable and those that need improvement.

Guide to evaluation

Using the evaluation tool, the following questions may be used as a guide for the group assessment and evaluation:

- What were the problems encountered? How were they resolved? What else could have been done to solve the problems identified?
- How did the BDRRMC perform its duties? Which task groups functioned and did not function well? Why? What

Reminders:

One of the important aspects to be reviewed in the conduct of a drill is the capacity of a community to access resources needed to effectively undertake the drill. One thing always noted is the use of privately owned vehicles and equipment for free in the drill. It is also important to utilize other resources and capacities (e.g. bayanihan spirit) which will enable a whole community to mobilize during disasters and to help other members of the community in times of need.

Every year, there are changes in a community. These include environmental changes or the state of its ecosystems, the frequency of strong typhoons, and the denudation of forests, the worsening standard of living, shortage in rice supply, the price increase of oil and consumer goods, among others. All these may affect the level of preparedness of a community during times of disaster.

A contingency plan that is improved yearly through conducting a community drill ensures the preparedness and ability of a community to be prompt. It can perform early emergency measures against an impending disaster. Effective and timely help and prompt organizing means the protection of life, property, and livelihood in the community.

other aspects in BDRRMC functions can be further improved?
- What was the level of participation from the whole community? Were they enthusiastic?
- What percent of the population participated? Was the information dissemination sufficient?
- What are the lessons learned from this experience?
- What improvements can be done in the conduct of the drill?

Based on the results of the evaluation, discuss which parts of the CP must be changed or updated. After updating, the barangay council will approve the improved plan.

Lastly, conduct meetings with the whole community to inform them of the results of the drill, including the lessons learned and the basis of the changes in the CP.

Case Story

Investing on Community Preparedness
By: Joycen Sabio

Barangay Bagbag I in Rosario, Cavite was heavily flooded when Typhoon Ruby hit in December 2014. Floodwaters reached to about 3-5 feet high in some parts of the community, trapping some number of families. Barangay officials and trained members of the community emergency response team (CERT) had a hard time rescuing and transferring people to safer and higher ground due to lack of emergency response equipment. The barangay only had one rescue and response equipment and one fiber boat that can carry 10 individuals.

A few days after the typhoon, Bagbag I, together with the villages of Bagbag II and Ligtong IV, conducted their first announced flood drill. The drill was part of the DEMOCORE project that aimed to simulate and practice the communities' preparedness and response capacity. Through the flood drill, the three communities realized the importance of having proper response equipment, a skilled community emergency response team, and timely dissemination of early warning information.

"Before, we don't purchase preparedness and response equipment because we only requested for a fiber boat from the municipal local government. We don't pay much attention to early warning information. But after typhoon Ruby and the community flood drill, we realized their importance to our community," said Barangay Captain Rodrigo Balbin.

In time for the monsoon season, Barangay Bag-bag I had utilized 70% of their Disaster Risk Reduction Fund to procure emergency response equipment. They now have 22 life vests that are also equipped with whistles, a stretcher, six pieces of handheld radio, two megaphones, and an emergency rope. They are now prepared and ready to respond. Barangay Bag-bag I officials and trained CERT members are now confident to

respond better and are now capable of preventing disasters from happening. The CERT members are not only equipped with knowledge and skills to prevent potential hazards and respond to emergency but they are also now equipped with personal protection devices when they respond. The barangay police can now easily disseminate early warning information and advice to community members through their handheld radio and megaphone. They can also safely transfer possible victims using their stretcher.

Although Barangay Captain Balbin admits that the equipment are still not enough for their community, they are planning to purchase additional equipment such as heavy duty flashlights, ropes, and stretcher to strengthen the preparedness measures in their community.

Chapter 6
Community Emergency Response Teams

Overview and Roles

What is CERT?

Community Emergency Response Teams (CERTs) are formed by members of a neighbourhood or workplace colleagues who want to be better prepared against the hazards that threaten their respective communities or workplace. Emergency response teams can also be established in schools and can be called SERT or School Emergency Response Teams. In some communities, the church or any religious organizations or affiliations form their own emergency response teams for their major events or activities.

According to US statistics, 95% of all the rescues performed in times of disaster are performed by spontaneous rescuers. Thus, the concept of neighbors helping neighbors or survivors helping each other play a crucial role in increasing the survivability of individuals or communities.

Who and what are their roles?

Any institution, community or school can organize their own community-based emergency responders. A group of six emergency responders can be called CERT. The primary role of CERT includes identification of potential hazards in their homes and/or in their communities; reduce potential hazards where possible; develop their

personal, at home or at the community disaster supply kits and lastly; and, educate family members or their neighbors on disaster preparedness.

Some of their responsibilities include the locating and shutting down of utilities that may cause potential secondary hazards, extinguishing small fires, treating minor injuries, conducting light or basic search and rescue techniques and helping relieve survivors' stress.

When deployed appropriately, CERTs can complement and enhance the first-response capability in neighbourhoods and workplaces by ensuring their own safety as well as the safety of their families; working outwards to the neighbourhoods and/or to the offices and beyond until the first responders arrive. CERTs can then assist the first-response personnel as directed. CERTs are considered "Good Samaritans". Unfortunately in the Philippines, there is no existing law that protects volunteers and provide authority beyond serving when helping others.

CERT standards and protocols

The best sources of help in an emergency or disaster are the paid or volunteer professional responders. However, if they are not present to address immediate life-saving needs or to protect properties, then CERT members can help. CERTs are not intended to replace a community's response capability; rather, they serve as an important supplement. CERT personnel must keep their safety as their first priority. CERT volunteers must know their capabilities and the limitations of their training, equipment, and work.

Limitations of CERT personnel

As the community's or institution's first-responders, CERT members should keep in mind their primary roles and responsibilities. Keeping their adrenaline high may constitute in putting themselves to harm's way that may lead to injury or death.

CERT members DO NOT:

- Suppress large fires;

- Enter structures that are considered heavily damaged and dangerous (e.g leaning or moved from foundation);
- Perform hazardous materials clean-up or respond to incidents involving radiological, chemical, or biological agents;
- Perform medical, fire, or search and rescue operations beyond their level of training; and
- Activate or deploy unless called for based on their procedures.

CERT training contents: Preparing for Emergency Response

CERT training modules are the prime and basic foundation of being a community-based first responder. It does not entail technical terminologies used in higher education but utilized simple or popular form and contextualized key terminologies that can be easily understood. Using the basic curriculum, trained CERT personnel can prepare for a disaster or overwhelming event through the following:

- Identifying and mitigating potential hazards in the home and workplace;
- Initiating plans to prepare themselves and their loved ones for the hazards that they face;
- Learning skills to help themselves, loved ones, and neighbours or fellow employees until professional response resources arrive;
- Working cooperatively as a team within their neighbourhoods or workplaces;
- Maintaining a relationship with the agency that sponsors the CERT program;
- Participating in continuing education and training;
- Volunteering for projects to enhance the public safety of their communities; and,
- Understanding their capabilities and limitations when deployed.

However, if a CERT personnel wanted to be certified first responder in his or her institution or community, he or she may undergo trainings such as: the 5-day Standard First Aid and Basic Life Support – Cardio Pulmonary Resuscitation (BLS-CPR) for healthcare providers; or, the 2-days First Aid training and BLS-

CPR training for industrial employees from Philippine Red Cross (PRC). The PRC trainings are pre-requisite certificates for the Department of Labor and Employment (DOLE) for industries and can be accepted for individuals for healthcare providers.

CERT Training in the US and as Adapted in the Philippine Context

CERT training in the US consists of eight modules and are conducted for approximately 20 hours. Hands on and lecture-based facilitation are key methods of their training and learning system. The contextualized CERT training developed by IIRR consists of the same modules. However, instead of the 20 hour training, IIRR adapted the training design is such a way that it can be conducted in two days only or approximately 16 hours. Some of the topics that were excluded from the US CERT training program to CERT Philippines are topics on hazard materials from Fire Suppression and terrorism. However, the disaster psychology module was enhanced with the inputs from the handbook developed by IIRR on Psychosocial Support Program.

Target audience

Any motivated individuals interested in preparing to help their community, active community members currently participating in disaster preparedness or relief programs, administrators, managers, or faculty responsible for a group of individuals can participate and be trained on CERT. The average number of community members of participants per training is between 15-20 only.

Legal Basis

There is no legal mandate on the establishment of CERT but based on Republic Act 10121 (Philippine Disaster Risk Reduction and Management Act of 2010), under Section 13, the Philippine government agencies, CSOs, private sectors, and LGUs may mobilize individuals or organized volunteers to augment their respective personnel complement and logistical requirements in the delivery of disaster risk reduction and management activities.

CERT Roles During Emergencies

When a disaster or overwhelming event occurs and responders are not immediately available, CERTs can assist by:

- Conducting an initial size-up in their homes or workplaces.
- Reducing immediate dangers by turning off utilities, suppressing small fires, evacuating the area, and helping others.
- Treating people in the immediate area.
- Working with CERT members and volunteers to establish a command post, staging area, and medical triage and treatment areas.
- Collecting damage information and developing a plan of operation based on life-saving priorities and available resources
- Applying their training to situations where CERT members can make a difference.
- Establishing and maintaining communication with responders.

CERT personnel will have a crucial role in the preparation, implementation, and evaluation of disaster preparedness activities. The above mentioned responsibilities are crucial in the implementation of contingency plans.

Organizing CERT

Starting a CERT

Any community, organization, school, or even church can organize and establish a CERT. Here are prescribed steps to start one:

1. Assessing needs

   This includes the conduct or review of the community hazard analysis. In IIRR's experience, CERT is the third component of the Disaster Preparedness. Therefore, a review of hazard assessment is only needed. IIRR usually just validates if there are needs reflected in a community's DRRM Plan. If validated, then the need to establish a CERT is confirmed. Remember, a Participatory Disaster and Climate Risk Assessment is a pre-requisite before setting up and starting a CERT.

2. Identifying resources

This includes identifying how a CERT program will be funded and determining ideas how to obtain resources, personnel, and sample resource requirement. Resource funding maybe difficult for some communities if they have to outsource the financial requirements but for local government units at the barangay, municipal, city and provincial level, implementation of trainings and purchase of materials and equipment can be allocated in their annual investment plan specifically in the Disaster Risk Reduction and Management Fund (DRRMF) which has an allocation of at least 5% of the Internal Revenue Allotment. The 70% of the 5% can solely utilized for the capacity building and purchase of equipment depending on the priority of the LGU. However for schools, they can secure the implementation of the CERT program if they can lobby to the school administration the inclusion of activities to their School Investment Plans. Organizations and companies however can allocate resources charge to staff development plans or human resource development plans.

3. Gaining support and recruiting

For an organization starting a CERT program, the activities should contribute to the overall programmatic objectives and target outcomes. It should coincide and be guided with a framework or program strategies defined by an organization.

For LGUs in the Philippines, there are references and legalities in the establishment of CERTs. They can be called Accredited Community Disaster Volunteers (ACDV). The creation of the ACDV can be found on Rule 9 of the Implementing Rules and Regulation of the PDRRM Act of 2010. Rule 9 explicitly states the accreditation, mobilization and protection of disaster volunteers and national service, reserve corps, CSOs, and private sectors. Under Section 1, it states that the government agencies, CSOs, the private sector, and LGUs may mobilize individuals or organized volunteers to augment respective personnel complement and logistical requirements in the delivery of disaster risk reduction programs and activities.

Moreso, LGUs can support the enhancement, recruitment, and mobilization of CERTs or ACDVs as each LGU can allocate specific activities or programs under the disaster preparedness component in the 70% of their Internal Revenue Allotment or IRA.

4. Acquiring training materials

   For a CSO working with humanitarian or development organizations that have the capacity to provide or implement such program or project, support for training materials can be accessible. IIRR has been fortunate to get funding and provide for its partner communities.

   For LGUs, acquiring training materials can be easy but certain pre-requisites must be observed to fully utilize the Disaster Risk Reduction and Management Fund. Prior to the development of CERT-related disaster preparedness training materials, LGUs must establish its own disaster preparedness and response materials, tools, equipment, and accessories first and identify hazards in their community. An established PDCRA reflects needs and gaps in the community that can be highlighted in the Barangay, Municipal, or City DRRM Plan. Once the DRRM Plan has been achieved, each LGU should come up with the Annual Investment Program (AIP) required to utilize on a per year basis. (The PDCRA can develop a 3 to 5 year DRRM development plan as some of the activities can take longer than one year to do (i.e. prevention and mitigation activities).

   The development of the AIP on barangay, municipal or city level will be programmed. Therefore, it can be utilized on the first quarter of every year. If materials cannot be acquired due to inadequate IRA funding, the LGU can still allocate another layer of funding for the materials in the succeeding years.

5. Tailoring training

   For organizations, trainings can be tweaked, revised, or enhanced depending on the capacity of the organization.

For some, trainings can be acquired from organizations or institutions that specialise on disaster preparedness. CERT training is the very basic program ideal for communities who can respond to multi-hazard situation.

ACDVs can be capacitated directly from humanitarian organization such as the Philippine Red Cross, which offers basic first aid trainng. But first aid alone is not enough. They should also acquire knowledge in other areas such as fire suppression and psychosocial support from organizations offering disaster management service and social service.

For IIRR, a CERT program is a holistic approach that can be delivered in 2 to 3 days. However, organizing a community, recruiting members, and implementing and maintaining the program can take time and it needs immersion in the community.

6. Establishing a training cadre

Identify a training cadre or pool of CERT members from community leaders per sitio, cluster or purok. It is best to ask barangay officials to propose possible CERT members. This ensures that the selected members are cooperative and can be trusted to lead the culture of safety in their communities.

Village officials are the pre-set training cadres of CERT. They are highly probable CERT leaders due to their mandate, roles, and responsibilities as elected community officials. The identification of training cadres on CERT plays a crucial role in the sustainability of the project. But note that in reality, not all identified training cadres become as committed as expected due to other priorities, responsibilities, and concerns that are usually well-founded.

Based on IIRR's experience, in ten targeted training cadres in one community, usually only 4 to 5 people continue and became CERT ambassadors or advocates who are confident to facilitate.

7. Delivering training

Building the capacity of communities is crucial to sustain efforts and initiatives to build their resilience. Before a community can deliver CERT trainings, its training cadre needs to undergo a series of skills enhancement and capacity building activities in order to master the skills and techniques first.

In IIRR's experience in Rosario, Cavite, they community's training cadres first underwent a 3-day CERT training where they were provided with non-technical and basic survival techniques and methods to safely assist people from any hazard. The training was followed by quarterly refresher trainings. Afterwards, they underwent a 3-day training on first aid and basic life support from the Philippine Red Cross. They also underwent a 2-day basic water safety and rescue training because the community is prone to flooding and storm surges. Once they were confident and ready, the training cadres delivered the message and began training the community. The skills enhancement and community trainings were supervised by IIRR together with the Philippine Red Cross.

Case Story

CERT Experience of the Philippine Red Cross
By: Dennis S. Mancilla and Joel M. Panelo
Philippine Red Cross - Cavite Chapter

Brief history

The Philippine Red Cross (PRC) is the premier humanitarian organization in our country which begun in 1899 as the Philippine Women's Red Cross during the Katipunan.

It continued to exist during the American and Japanese period and was officially founded on April 15, 1947 through Republic Act 95 (now presidential Decree 1643).

Republic Act No. 10072
This act shall be known as the "Philippine Red Cross Act of 2009" *An act recognizing the Philippine National Red Cross as an independent, autonomous nongovernmental organization auxiliary to the authorities of the Republic of the Philippines in the humanitarian field, to be known as the Philippine Red Cross.*

The PRC's vision is to be the foremost humanitarian organization in the country in services provided and number of people served.

Its mission is to provide timely, efficient, and responsive humanitarian services to the most vulnerable in accordance with the principles and values of the Red Cross and Red Crescent Movement.

The PRC has 6 major services to cater the needs of our Kababayan. These are the National Blood, Safety, Disaster Management, Social, Health and volunteer services. Each service has a unique role in assisting person or group of people that are in need of our help.

PRC Services and their respective roles:

1. National Blood Service: To save lives by providing safe and quality blood and blood products as a fulfilment of the corporate social responsibility of the PRC.
2. Safety Service: To conduct an educational campaign to ensure the health and safety of the Filipino people.
3. Health Service: To improve the health situation of the most vulnerable and under-served on health care services.

Basic water safety and rescue course

4. Disaster Management Service: To provide relief in times of disasters and to carry out measures to minimize the suffering of victims.
5. Social Service: To carry out assistance program that provides various welfare services to individuals, families, and communities.

Disaster relief operation

6. Volunteer Service: To educate and empower the community, children and youth in the spirit of Red Cross through relevant training and effective leadership, and to provide opportunities for directing and harnessing their energy and idealism into worthwhile humanitarian activities. It is divided into 2 sectors: the Red Cross Youth and RC 143 Project.

Red Cross Youth First Aid Olympics

Under the Volunteer Service of the PRC, they created a project called Red Cross 143. Its mission is to promote a culture of self-help in communities by developing a formidable network of Red Cross volunteers who will prepare the community for disasters and respond rapidly in emergencies. They also serve as the eyes, ears, hands, and feet of the organization in their respective areas in times of calamities so that the PRC can response timely and efficiently.

The Concept of this project is to have 44 volunteers in every barangay. 1 of them will serve as the team leader and the remaining 43 will be the members. The 44 members will be divided into 4 geographical locations, i.e., 11 each in the North, South, East and West area of the community. The 11 members are further subdivided to have the following functions: 2 First Aiders, 2 Blood Donors, 2 Health Workers, 2 Emergency Responders, 1 Social Worker/ Tracer, 1 Communications Focal Person, and 1 International Humanitarian Law Coordinator.

The main battle cry for 143 Creation is: ***First to Prepare, First to Know, First to Report, First to Respond, First to provide Relief, Recovery and Rehabilitate.***

PRC 143 Project

With full funding from AusAid, PRC launched Project 143 in 2009. This partnership aimed to train vulnerable groups to become resilient in times of disasters in the grass root level. Cavite, being one of the top ten most disaster prone provinces in the country, was selected as one of the recipient of the said program.

The project started with a Training of Trainors about the designed program. PRC Cavite implemented the project in 2010 and trained volunteers and select individuals from the province's 23 cities and municipalities. It was an intensive 5 day training that focused on disaster preparedness, emergency response, rehabilitation, prevention, mitigation, reporting, first aid training, and assessment among others.

One of the participants from Bailen, GMA, Cavite. was Marilyn Golimlim Dinlasan. She was a barangay health worker and administrative aide at the Municipal Health Office. She made ser significant efforts that caught the attention of the Chapter and PRC's National Headquarters. After she joined the training in 2010, Ate Malou or Mayora, as she was fondly

called, aggressively disseminated the 143 Project.


Relief drop during Typhoon Ondoy

Little by little, Ate Malou was able to recruit her fellow barangay health workers. Each time she was able to comply with the minimum requirements of 44 members, she would call the chapter to present the members. The chapter harnessed their skills through different trainings. Ate Malou continued recruiting volunteers nearby barangays until all 14 barangays were trained.

Recruitment is never easy, as shared by Ate Malou. To succeed, she put dedication, commitment, and discipline to the task at hand. With the help of chapter personnel, the idea of volunteerism was slowly imbued in the minds of her fellow constituents. Giving the members free trainings that will prepare them from disasters, Bailen 143 slowly but surely became a sucess. From a single volunteer, Bailen 143 now boasts of 461 active members implementating the program. Several follow up trainings on such as first aid and basic life support, disaster risk reduction, psychosocial support program, and HIV/AIDS awareness were conducted for the new members. To retain members, monthly meetings are regularly held to discuss 143 matters. Open fora, brainstorming, evaluation, and recognition were conducted.


Blood donation drive in Baylen, Gen. Emilio Aguinaldo, Cavite

Fourteen Mobile Blood Donation (MBD) activities were conducted collecting more than 500 bags of blood. The Municipality of Gen. Emilio Aguinaldo (GMA) recognized their contribution to the town that Bailen 143 was given a free commercial space located at the heart of the municipality to serve as its satellite office where assessment and first aid are conducted. This office is manned by dedicated volunteers 24/7. Numerous accidents, both major

and minor, have been catered in this satellite office. Whenever the chapter calls for backup, Bailen 143 always lends a helping hand.

Million Volunteer Run 2016

In the fundraising activities of the Chapter, Bailen 143 actively participates by endorsing and assisting in reaching target groups. Some of the fundraising activities they have been involved in were the Million Volunteer Run, Mr. and Ms. Red Cross, Bingo Social for a Cause, and Bike for Humanity. Each member is insured in the Membership with Accident Assistance Benefits (MAAB) Program.

Brgy. Kabulusan, GMA, Cavite

The AusAid and the National Headquarters acknowledged Ate Malou's commitment. In 2012, barely 2 years after 143's kickoff, an award was given to Bailen 143. NHQ constructed a footwalk connecting its 3 barangays. This project cost an estimated amount of half a million pesos.


Ate Malou with PRC Chairman and CEO Richard Gordon

Ate Malou's story was published in the Red Cross' Official Newsletter in 2013 and has been around circulation to the different chapters nationwide. Just last December 2016, PRC Cavite Chapter awarded her with a Certificate of Commendation as Volunteer of the Year for her selfless contribution to Red Cross.

Benefits of being a volunteer:

- Gets a sense of self-satisfaction because you render free

service without asking for something in return.

- Skills and capacities are enhanced through trainings and seminars.
- Increase in social and emotional quotient because you will meet a lot people (co-volunteers and victims) in different situations.
- Respected and honored by others, especially those you have helped.

"You don't get paid not because you're worthless, but because you're priceless."

"There's nothing stronger than the heart of a volunteer."

"Volunteers are ordinary people doing ordinary things under extra ordinary circumstances."

"Walang saysay ang buhay kung hindi laan sa iba"
- Kara David, Journalist and TV Host

Advantages of having a Red Cross 143:

- Helps the local government realize the goals and objectives of disaster risk reduction
- The well trained Red Cross volunteers will act as an auxiliary arm during calamities.
- Assessment and reporting accidents will be more accurate and timely.
- Having skilled 143 members in your neighbourhood increases sense of safety and security.
- 143 members are more resilient before, during, and after disasters.
- The coping mechanisms of 143 members are organized and focused.
- Its volunteerism spirit embodies positivity and optimism.
- Red Cross 143 volunteers are "Always First, Always Ready, Always There."

Chapter 7
Information, Education and Communication

What is IEC?

Information, education, and communication (IEC) is a broad range of strategy that includes creative activities and the use of materials such as (but not limited to) posters, booklets, comics, campaigns, video documentary, role playing, song making, and many others. IEC materials and activities are integrated approaches to effectively communicate and promote certain messages/information to educate target stakeholders. If successfully designed, tested, and implemented, it helps solve identified issues/problems to reinforce capacity development and knowledge formation.

Importance of IEC in Community Readiness

Awareness and active participation of the community are essential components for building resilience and DRR. It may be achieved through the development and dissemination of IEC materials through mass media platforms and establishment of core group communicators and community mobilizers for advocacy and learning. Participatory IEC development aims to enhance knowledge, skills, and attitude of community members towards preparedness and risk reduction in times of hazards. IEC materials (ie. posters, booklets, etc.) help teach key DRR and preparedness principles and practices of DRR. To develop an effective communication design, different sectors (ie. age group, children, farmers, teachers, etc.) in the

community must be considered.

Kinds of IEC interventions

1. Print (ie. poster, primer, booklet, brochure, streamer, etc.)
2. Multimedia (ie. film showing, social media, role playing, radio program, etc.)
3. Training (ie. seminar, learning visits, exposure trips, etc.)
4. Other forms (ie. short film making, singing, dancing, poster-making contests, etc.)

Participatory Process of IEC Materials Development

1. *Defining objectives*: must know *what* type of IEC material will be produced, *who* will be the target audience and stakeholders, *why* it must be produced (expected outcomes), *where* will the material be disseminated or posted, *when* will the material be developed and be available (timeframe), and *how* the team will develop the material (work plan for development towards implementation).
2. *Data Gathering and Content Development*: considers age, sector, and level of understanding of target audience
3. *Rendition/Layout of Developed Material*
    - Relevant skills needed: software (computer), eye for detail, etc.
    - Color coordination (ie. background, font, etc.)
    - Use of appropriate font style
    - Selection/use of good action photos
    - Use of proper branding and logos of relevant stakeholders
4. *Printing/Publication and Dissemination*
5. *Testing, Feedback and Evaluation:* Gathering feedback from the target stakeholders will help improve the material and make it useful for the community.

Case Story

Participatory IEC Development about Typhoon Disaster Preparedness with Student Representatives (8-12 years old)

Children were interested to develop IEC materials

Children's participation is crucial in resilience building since they comprise the majority of core members in the school community. Their knowledge and perceptions of risks can be translated into IEC posters to effectively communicate to vulnerable sectors. Using their creativity, they can communicate resiliency in an understandable medium. The process of engaging children empowers them to be involved in community interventions and decision-makings.

IIRR and the Department of Education (DepEd)-Cavite were partners in the project Safe Schools to Offset Vulnerabilities and Increase Empowerment of Children (SOLVE Urban) implemented on November 2014-February 2016. The Aguinaldo Elementary School (AES) in Kawit, one of the flood-prone municipalities in Cavite, was one of the partner schools.

Selected AES students ages 8-12 years old participated in a series of activities where they learned about disaster preparedness, environmental protection, and importance of proper hygiene and sanitation. One activity of the students was to develop IEC materials for their school. A total of 35 students (12 boys and 23 girls) participated while a teacher supervised and guided them.

Initial dialogue with children was conducted to have common understanding of the objectives, which were:

1. To increase awareness and participation of children on DRR through participatory IEC development; and
2. To develop IEC materials for disaster preparedness made

by children for school community.

A short film about disaster preparedness *Tales of Disasters: Handa Ka na ba? (Typhoon episode)*" was shown to the students for them to learn what to do before, during, and after typhoons. Plenary discussions and synthesis were conducted after. A structured learning exercise made the activity more fun and enjoyable. A brief orientation on what IEC is was discussed. The students identified IEC materials that were familiar to them like posters, banners, short film, and comics. They were then tasked to deesign IEC materials for the whole school.

Students watching the film "Tales of Disasters"

Short film, comics, and posters were some of the IEC materials the students wanted to develop. To prioritize, they ranked the suggested materials and posters came up at the top. Workshop and skills assessment followed to determine the drawing ability of children and what specific support should be provided to them. Children were grouped into three, where they were instructed to draw what to do before, during, and after hazard events. Raw drawings were collected and synthesized to validate their learnings and experiences. A post-activity evaluation concluded the activity, where feedback and suggestions were collected from participants.

This child titled his original comics, "Pag-iwas sa sakuna"

The children's drawings were then scanned, laid out and designed into a poster. Hard copies and electronic copies of the poster were disseminated to and used by partner schools.

Artworks of the students

This poster contains all of the artworks designed by the students.

Chapter 8
Strengthening Institutions

Institutions who are engaged in disaster preparedness of communities are in the realm of humanitarian action. Therefore, a voluntary code is necessary to strengthen the institutions by way of describing essential elements of principled, accountable, and quality humanitarian action. This voluntary code may be utilized for aligning internal procedures that seek to strengthen the institution(s). We may call it self-assessment and external validation of their performances related to CMDRR.

At the center of our general steps is the Community and People affected by crisis. Four principles are applied here :

1. Humanity
2. Impartiality
3. Neutrality
4. Independence.

We have the Core Humanitarian Standards (CHS) to guide us in the strengthening of institutions in the conduct of our humanitarian actions related to DRR:

1. Humanitarian response is appropriate and relevant;
2. Humanitarian response is effective and timely;
3. Humanitarian response strengthens local capacities and avoids negative effects;
4. Humanitarian response is based on communication, participation and feedback;
5. Complaints are welcomed and addressed;
6. Humanitarian response is coordinated and complementary;

7. Humanitarian actors continuously learn and improve;
8. Staff are supported to do their job effectively, and are treated fairly and equitably;
9. Resources are managed and used responsibly for their intended purpose.

Buklod Tao, Inc. institutionalized its community-initiated, community-managed disaster risk reduction way back in 1997. Community awareness raising was first undertaken (known as community risk assessment or CRA), followed by organizing three Buklod Tao DRR teams, and then capacity building activities very relevant to the nine core humanitarian standards.

Humanitarian response is appropriate and relevant.

Buklod Tao's community is at the juncture of two rivers that overflow during rainy seasons. North Libis and South Libis are very much congested with informal settlers living along the riverbanks. Flooded narrow alleys have to be managed with 4 ft by 8 ft fiber glass rescue boats fabricated by Buklod Tao for flood-prone communities. The community/localized fabrication of fiber glass boats were more appropriate for rescue since 1997 rather than the wide bamboo balsa (raft) developed by the barangay. It is also more appropriate to the rescue and evacuation needs of the community people. Buklod Tao, as an institution, is strengthened.

Humanitarian response is effective and timely.

Because Buklod Tao DRR Teams were equipped (capacity building initiatives) with fiber glass and two-way radios, plus the innovative move to dock each of the fiber glass boats right at the vicinity of the flood-prone area/community. The responders are also the vulnerable people who already know the terrain and the whereabouts of other high risk families. Always, humanitarian response is there at "ground zero." They never stand to wait for responders who are eleven kilometers away. Buklod Tao as an institution is strengthened.

Humanitarian response strengthens local capacities and avoid negative effects.

Rescue boats were fabricated by the community people, utilizing local skills and local materials. The fiber glass boats were durable and long lasting and not vulnerable to punctures or other damages. DRR teams were composed of informal settlers vulnerable to flooding and soil erosion. Mothers who cooked food for evacuees are members of Buklod Tao's community kitchen. The project management cycle delineated for the community by Buklod Tao generated positive results. Buklod Tao as an institution is strengthened.

Humanitarian response is based on communication, participation and feedback.

Buklod Tao has 10 participating DRR teams for its community-initiated/community-managed DRR in Brgy. Banaba, San Mateo, Rizal. They are activated when Alert Level 1 is raised at the Marikina River vicinity. Via text blasts, water level monitoring, communication linkages with Brgy. Banaba BDRRMC, and sounding of megaphones and siren, one can visualize heightened communication for humanitarian response. Feedback is needed as to the number of evacuees to enable Buklod Tao's community kitchen members to prepare enough food for the evacuees and to keep other partners informed. Buklod Tao as an institution is strengthened.

Complaints are welcomed and addressed.

Relief Delivery Operations (RDO) were undertaken during the aftermath of Tropica Storm Ondoy (Ketsana). Numerous Aid organizations pursued RDOs for flood-affected families in Brgy. Banaba. Observation and complaints reached Buklod Tao that RDOs were only distributed at the two sides streets of Dona Pepeng subdivision in Brgy. Banaba, some fifty meters away from the National Road General A. Luna. Buklod Tao welcomed this complaint and immediately sent its RDO team to peripheral communities in Banaba that are also affected by flood and needed relief goods. RDOs were pursued in those 77communities/sitios for inclusivity. Buklod Tao as an institution is strengthened.

Humanitarian response is coordinated and complementary.

DRR members of Buklod Tao are coordinated – from early warning to actions to be taken by the families, BDRRMC of Banaba, and the Sangguniang Barangay. Banaba BDRRMC evacuates flood-affected families during typical flooding. But during overwhelming disaster events, Buklod Tao will support them.

Humanitarian actors continuously learn and improve.

Buklod Tao continually joins learning events and module development writeshops to learn more about community-based disaster risk reduction. The technologies already being applied by the organization are being improved. They also innovate. They also develop a crossbreed of the two designs of fiber glass rescue boats. Buklod Tao as an institution is strengthened.

Staff are supported to do their job effectively, and are treated fairly and equitably.

In times of impending floods, Buklod Tao would go around its ten DRR Teams to provide the staff with packs of coffees, biscuits, SMS loads, and even extra life vests. During non-flood days, staff are provided with transportation assistance for showing up at the Buklod Tao Center. Buklod Tao as an institution is strengthened.

Resources are managed and used responsibly for their intended purpose.

Fiber glass rescue boats distributed to Buklod Tao DRRM Teams are never used for joy trips to the river. They are only used for rescue and evacuation assistance. Buklod Tao's Banaba Livelihood and Evacuation Center, since its inception in late 2013, have been improved, managed, and stewarded by successive, responsible Buklod Tao Board of Trustees to date. Buklod Tao as an institution is strengthened.

Annex

Annex 1. Sequence of Activities in Conducting PDRA using PLA Tools at the Community/Village

Step 1: Community Mapping

1. Secure a copy of their village or community for a template
2. Ask for at most 5 volunteers from the participants to draw the village or community map
3. In making the map, consider the following:
    a. Draw the orientation of the map, show the North and South pointers
    b. Show the boundaries of the barangay
    c. Indicate the total land area of the barangay

Step 1.1: Identification of Elements at Risk or Resource Mapping

1. Ask the participants to identify the houses into the map according to their actual location.
2. Divide the participants into 3 small groups the participants
3. Assign each group according to the following:
    a. Ecosystem Services- identify the natural resources in the village or community. Show in the map by drawing symbols (example: trees for forest, mangroves, etc). Example of natural resources are forest, rivers, lakes, mangroves, waterfalls, corals, etc
    b. Repeat the process (a) for the:
        i. Livelihoods (the source of income of the people)- rice farms, livestock, rice mills, dryers, market, fish port, fish cages, fish ponds, vegetable gardens, processing facilities, etc.
        ii. Infrastructure (vital services, basic needs of people)- example: water points, health center, school, barangay hill, bridge, ports, police station, fire station, churches, roads, irrigation, etc.
        iii. Social institutions – banks, government offices, agencies, , church, etc.
4. You can use plastic cover to overlay the different elements identified (variables identified).

Step 1.2: Hazard Mapping

1. After identifying all the houses, infrastructures, ecosystems, livelihoods and among others, ask the participants what are the hazards they have experienced in the village or community for the past 30 years. Use the tool Historical Timeline to identify these hazards.
2. Hazards are events that cause or potentially cause a lot of damage to the community. Hazards can be natural, based on environmental systems and process. There are also human-induced hazards such as armed conflict.
3. Using different colors of markers or crayons, draw into the map the areas of the village or community affected by the hazards. In the case of complex hazards, hazards that lead to other hazards e.g. Typhoon primary hazard can lead to landslide, floods, storm surges. For these complex hazards, identify in the map the areas affected by the secondary hazards.
4. Use a pair-wise ranking tool to identify the priority hazard if multiple hazards are reflected in the map.
5. Select the prioritized hazard as a reference for the vulnerability assessment.

Step 2: Historical Timeline

1. Ask 5-8 participants to do the timeline. List down the different disaster or hazard events that happened in the community. It would be best to invite the oldest community member to help recall these events.
2. After each event, list down the impacts to people, livelihood and among others. On the next column, identify what are the coping mechanisms of the community in addressing the impacts.

   The following are some guide questions for further discussion:
   - Are there any trends or changes in the frequency, severity of impacts or duration of events over time?
   - Have weather & climate related events such as flood, drought and cyclones changed in number or severity?
   - Could these variations be related to land use changes? Please provide some examples by pinpointing on a map of

the community and its surroundings any land use changes people may consider could be linked to hazards such as landslides, flashfloods, floods, fires, droughts or water shortages.
- What are current strategies to cope during the difficult events? Are they working?
- Have coping strategies changed based on the changing frequency of events?

In analysing the hazard timeline, community members look into:
- What events do you expect will occur in the future? When? Why?
- How do the change in rainfall pattern (intensity, duration and amount) increasing temperature and sea level rise will affect the behaviour and character of climate hazards identified? How will it affect or impact the community's lives, resources and livelihoods?
- Can you think of anything you or the community can do to prevent these events from causing severe damages? Can you think of anything you or the community can do to reduce the impacts caused by these events?
- What do you think are needed capacities to adapt or manage the future risks?

Step 3: Seasonal Calendar

1. You can conduct gender-specific, age-specific, sector-specific focused group discussions to see the different perceptions. Identify how they differ from each other and use this information when drawing up programs and planning events.
2. Mark off the months of the year on the horizontal axis and list down on the vertical axis the seasons, events, conditions, etc.

Guidance Notes:
- If possible, compare and verify these findings with other data sources on climate and environmental degradation/ conservation.
- Indicate changes induced by climate in the seasonal calendar through color coding or shading where seasons

and activites are getting longer or shorter (see example).
- Incorporate changes induced by ecosystem degradation: if some resources are diminishing and what are the alternatives the community has identified.
- You can do the seasonal calendar according to current conditions, 20-30 years ago and future climate projections (increasing temperature, frequent extreme events, changes in rainfall and sea level rise) to assess the changes and trends. You can use plastic cover to overlay the different years.

When the calendar is complete, ask the following questions:
- What are the most important livelihood strategies employed at different points of the year?
- What are current strategies to survive and bounce back during the difficult times? Are they working? Are more people seeking work overseas? Outside of the community?
- Are there any differences in the timing of seasons and events as compared to 10/20/30 years ago? A key event in the past can be used as a benchmark in time.
- Have livelihoods/survival and bouncing back strategies changed due to changing seasons or events? If so, how? Have the changes been due to natural habitats and species loss? If so, how?
- How are decisions made on timing of livelihoods strategies?
- Does the community use weather-warning systems to harvest the crops?
- Has the temperature and rainfall pattern changed?
- Is there a positive or negative outcome from this change?
- When discussing survival and bouncing back strategies and changes, explore whether existing strategies work in the context of the changing environment. Take the opportunity to discuss the need for new strategies due to climate change and introduce the concept of adaptation.
- Look at climate variations (rainfall changes, times of drought) or real changes (timing of monsoon has changed, more diseases in the community).
- A diagram could be used to indicate how things like planting and harvesting seasons are changing, new weather and health related hazards may be emerging or old ones

appearing at unexpected times of the year. Explore positive as well as negative outcomes.

Step 4: Problem Tree

This is another tool for the community to identify the factors that catalyze and force of hazards and its effect on their life, livelihoods and environment.

Another group may be formed to simultaneously do the tool.

1. Draw a huge tree, the trunk symbolizing the hazard.
2. Identify the causes of the hazard and write them on the roots of the tree.
3. Then identify the negative effects of a hazard on the community and write them on the branches of the hazard three.
4. Discuss the relationship between the roots (causes), trunk (hazard) and branches (effects of the hazard.

Step 5 Venn Diagram

1. Draw a big circle representing the community (or livelihood). Put it at the center.
2. Identify and list down the different social groups, organizations and institutions that provide links, services and assistance on DRR and livelihoods of the community.
3. Assign a size of circle and color for each organization depending on their importance to the community.
4. Put the organization near or far from the big circle depending on their relationship with the community.

Step 6 Livelihood Matrix

1. Using the resource map and historical timeline, list down all the important assets and resources.
2. On the second column, write the impacts and effects of the hazards and climate change drivers.
3. Then write down the coping mechanism or solutions done by the community to address the impacts.
4. On the fourth column, write down the capacities needed by each assets and resources to address and manage future risks.

Participatory Disaster Risk and Vulnerability Assessment (PDRVA)

Summary of steps, tools and outputs

Steps	Tools	Outputs
Hazard assessment	Hazard assessment form PRA tools: Community mapping of hazard Historical timeline Seasonal calendar Ranking/scoring Story telling Problem tree	Hazards identified Hazard profile and characterization
Vulnerability assessment	Vulnerability assessment form Social and resources mapping Historical profile Transect trend map Matrix of Livelihood assets	Element/s at risk identified and their location described in relation to hazard and their reason/s for being in that location Degree of vulnerability determined
Capacity assessment	Capacity assessment form Community resource mapping Wealth ranking Venn diagram Story telling (experience stories) Problem tree Matrix of Livelihood Assets	Existing capacity gaps identified vis-à-vis hazard prevention and mitigation measures and at the level of individual (survivability) and community readiness of element/s at risk
Disaster Risk analysis	Disaster risk analysis form	Degree of risk determined Number of priority element/s at risk and DRR-CCA measures identified

Annex 2. Community Flood Scenario Sample

Demonstrating Community Resilience to Climate Change and Disasters to Vulnerable Communities in Cavite, Philippines (DEMO-CORE)

TECHNICAL DETAILS OF THE ANNOUNCED CONTINGENCY PLAN DRILL

Type and name of drill	Community Drill for Contingency Plan, EWS , Evacuation and CERT		
Barangay committees involved	Barangay councils, Community Emergency Response Teams, Early Warning System teams, Evacuation management team, WASH food and relief team, coordination and communication, transportation system and barangay peace and order team (security and crowd control team)		
Location	Cluster 5 (Barangay Muzon I, II, Kanluran and Poblacion Rosario, Cavite	Date	November 14, 2014
Responsible party/ ies	Barangay Disaster Risk Reduction and Management Councils of Barangay Muzon I, II, Kanluran and Poblacion	Time	8:00 am to 12:00 nn
Purpose	Evaluate the management and response of the barangays to a flood situation using their contingency plans		
Specific objectives	• Assess the management of barangay operation center • Evaluate the coordination and communication from the operation center to barangay committees involved in the contingency plan • Promote community participation in disaster preparedness and response • Evaluate the recommended protocols in the contingency plan		
Type of drill	Announced; Multiple scenarios: • Tabletop simulation at operation center • Early warning system • Evacuation (mobilization and registration) system • Emergency response (Pre-hospital care for victims and water rescue) • Coordination and reporting		

Brief description of the situation, including the events being simulated and their locations	Scenario # 1 In the mid-week of June, in a report from PAGASA a low pressure area is expected to hit Metro Manila after 2 days. Drills at the barangays of Muzon 1 and Muzon 2 will simulate the following: 1. A BDRRMC meeting for each barangay conducting a preparatory meeting for the anticipated event attended by the team leaders from each committee. 2. A Level 1 early warning signal will be raised to warn the community members with some barangay officials using megaphone. Muzon 1 will warn all the five clusters while Muzon 2 will warn the dreamland area. 3. CERT equipments and materials and transportation vehicles will be readied. Scenario # 2 After 24 hours, the LPA became a typhoon signal 1 with wind speed of 30-40kph and is expected to bring in 20-30mm of rainfall within 5 hours in Rosario. In Rosario, the digital rain gauge registered 15mm of rainfall and the tide monitor registered 1 foot high. Drills at the barangays of Muzon 1 and 2 will simulate: 1. EWS team will monitor the tide and digital rain gauge. 2. Barangay Captain will send a message to signal the flood early warning system Level 2 using its batingaw. 3. Coordination and communication team will send the stress signal to other barangays using SMS text, telephone or hand-held radio. 4. CERT teams with equipments and materials will be on stand-by at the operation center. 5. Evacuation team will remind the community members what to prepare and bring in during the evacuation. 6. Transportation vehicles will be readied. 7. Community members will prepare important documents to bring and basic necessities for their family consumption for 2-3 days. 8. Barangay peace and order committee will also be stand-by. Scenario # 3 After 48 hours, the typhoon signal 2 is raised with wind

	speed of 60-70kph and will bring 40-50mm of rainfall within the next 5 hours. At Rosario, the digital rain gauge registered 40mm of rainfall that resulted to ankle-deep to knee-deep flood waters and at tide monitor registered 3 feet high of tide. Drills at the barangays of Muzon 1 and 2 will simulate: 1. EWS team will monitor the tide and digital rain gauge. 2. Barangay Captain will command to signal the flood early warning system Level 3 using the hand operated siren. 3. Coordination and communication team will send the stress signal to other barangays using SMS text, telephone or hand-held radio. 4. CERT teams at response mode to attend to water rescue and multiple injuries. 5. Evacuation teams will assist the community members to the identified evacuation center. They will assist community members to register at the evacuation area. 6. Transportation vehicles will be readied for immediate evacuation if necessary. 7. Community members at high risk areas will be evacuated bringing their family members, important documents and basic necessities for their family good for 2-3 days. 8. Barangay peace and order committee will assist and monitor peace and order at evacuation area. 9. WASH, food and relief will prepare hot meals. At the operation center, they will simulate: 1. Reporting from each committee team leaders on the progress and update of the event. 2. Barangay secretary will develop a progress report for the BDRRMC chair.
Signal to begin exercise	After the orientation to the evaluators and observers of the drill, IIRR will announce the commencement of the event to the two barangays.
Signal concluding the exercise	Announcement of the end of the drill after receiving and reporting of BDRRMC chair on the progress of the scenario.
Location of central control for exercise	At the second floor of Muzon 1 barangay hall.

Location of meeting point for participants	For barangay Muzon 1, the 2nd and 3rd floor of barangay hall while for barangay Muzon 2, at the 2nd floor of their barangay hall.
Distribution and number of victims according to triage categories and damage	Life-threatening injury: Red tag (3 people) 1. Female adult: no apparent injuries. Symptoms of myocardial infarction. 2. Male adult: spine trauma; unable to move; multiple lacerations. 3. Male adult: multiple traumatic injuries; signs of shock Non-life threatening injury: Yellow tag (3 people) 1. Pregnant woman: multiple lacerations at leg 2. Child: abrasions on left leg 3. PWD: abrasions on the body Minor injury: Green tag (4 people) 1. Multiple small abrasions and lacerations
Type and number of another players	5 people looking for their relatives and children 3 people identified as trained first aiders 1 journalist walking around restricted areas
Plan for medical care and safety of players (in event of actual emergency)	1 stand-by ambulance with 3 ambulance operators, 1 stand-by firefighting vehicle with 3 firefighters 3 police on stand-by located in areas close to site of the drill

Annex 3. Contingency Plan Sample

Contingency Plan ng Barangay Muzon-1

PANIMULA

Ang contingency plan na ito ay binuo bilang isang mahalagang parte ng sa mga initiatibo sa disaster risk reduction ng Barangay Disaster Risk Reduction and Management Council (BDRRMC) ng barangay Muzon I. Ang planong ito ay nabuo pagkatapos maisagawa ang participatory disaster risk assessment sa tulong ng International Institute of Rural Reconstruction (IIRR) at ng buong konseho ng barangay. Ang contingency planning workshop ay naisakatuparan sa tulong ng mga miyembro ng barangay at ng ilang representatives ng lokal na organisasyon tulad ng MOMSLI na silang sumuri at nag-analisa sa resulta ng risk assessment na siyang naging batayan sa paggawa sa isang worst case scenario batay sa kanilang hazard na pagbaha at storm surge.

Ang contingency plan na ito ay isang dokumento na naglalahad ng mga sistema at mga hakbang na kung saan ito ay magsisilbing gabay at batayan sa pagsasagawa ng community drill para sa mga miyembro ng komunidad ng Muzon I at ng barangay council.

ANYO NG PANGANIB

Ang barangay Muzon 1 ay isa sa mga barangay na malapit sa tabing dagat. Ang pangunahing panganib sa barangay ay ang pababaha kung saan ang mga pangunahing dahilan ay ang below sea level, mababaw ang kanal, baradong kanal at basura. Ang mga palatandaan at senyales ng pagbaha ay kapag ang mga LGU at Barangay Officials ay nagbibigay na ng babala, PAG-ASA monitoring, kalmada, malansa ang tubig, lutang ang basura, mga nakatayong kawayan, ang

paglabas ng bundok ni barok at pagbilog ng buwan na nagkakaroon ng rainbow. At puwang ng panahon bago dumating ang peligro ay 3 araw at ang bilis ng pagdating ay sa loob ng 4 na oras. Karaniwang nagaganap ang panganib ng pagbaha sa panahon ng Hunyo hanggang Agosto at tumatagal ng isang araw ang pagbaha. Ang mga epekto ng peligro sa komunidad ay sakit ng tiyan, pagtatae, dengue, ubo, sipon, alipunga sa paa, hindi pagpasok sa eskwela, paglabo ng tubig at paglakas ng tubig.

Ang ikalawang panganib sa barangay ay ang storm surge kung saan ito ay nararanasan kung mayroong pagbagyo. Ang puersa na dulot ng storm surge ay ang malakas nitong tubig na humahambas sa dalampasigan na may dalang basura. Ang naturang storm surge ay nangyayari sa buwan ng June hanggang Agosto o sa mga panahong may bagyo. Kadalasan, aabot ng 3 araw ang hagupit ng storm surge at ang lakas ay naka depende sa storm signal ng bagyo. Pag may storm surge, ito ay nagdudulot ng sumusunod na epekto sa barangay: Pagkasira ng Bangka at hanap buhay; Pagkasira ng bahal (total at partial na pagkasira); Wash out ang lupa malapit sa kabahayan.

PINAKAMALALANG SITWASYON NA MAAARING MANGYARI

Batay sa kanilang ginawang workshop na scenario building patungkol sa pagbaha, ang mga sumusunod na sitwasyon ay lumabas patungkol sa barangay Muzon I.

- Na ang tubig baha ay maaaring umabot lagpas ng anim na talampakan (feet).
- Na ang lahat ng tao sa anim na clusters ay maaapektuhan at posibleng may mamatay.
- Na maaaring maraming bahay ang masisira at maaapektuhan ang mga pangkabuhayan. Dadami ang magugutom at magkakaroon ng mga insidente ng nakawan.
- Na maaaring hindi kayanin ng barangay ang pagresponde dahil sa lawak at dami ng pinsala.

STANDARD OPERATING PROCEDURES AT PROTOCOL

<table>
<tr><th>Teams</th><th colspan="2">Recommended Protocols</th><th>Recommended Person Involved</th></tr>
<tr><td rowspan="3">Early warning system</td><td colspan="2">Level 1</td><td rowspan="3">Persons to be involved are members of the Early Warning Team</td></tr>
<tr><td>Barangay Action</td><td>Community Action</td></tr>
<tr><td>• Mag meeting ang barangay council at pag-usapan ang napagkasunduang contingency plan.
• Ipatupad ang napag kasunduang plano at kaukulang trabaho ng mga kagawa, cluster leader, ACDV, mga tanod at CERT.
• Puntahan ng mga cluster leader ang nakatalagang cluster sa kanila.
• Ipaalam sa mga cluster na level 1 gamit ang trompa at megaphone.
• Ihanda ang evacuation center.
• Magtalaga ng lugar na pag iipunan ng mga evacuees para sa pagsundo ng MDRRMO sa hindi magkakasya sa barangay hall</td><td>• Ipunin ang mga pamilya
• Ayusin / likumin ang mga importanteng dokumento na pwedeng mabasa
• Makiramdam
• Making ng balita</td></tr>
<tr><td></td><td colspan="2">Level 2</td><td></td></tr>
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	Barangay Action	Community Action	
	• Patunugin ang alarma sa level 2 sa pamamagitan ng batingting o batingaw. • Patuloy na pag ikot ang mga cluster leader and member. • Ihanda ang mga sasakyan na gagamitin sa posibleng paglikas. • Siguraduhin na kumpleto ang gamit sa paunang lunas. • Ipaalam sa MDRRM Office ang posibleng paglikas at pangangailang ng sasakyan o ambulansya.	• Ihiwalay ang gamit na puwedeng mabasa. • Maghanda sa paglikas. Ihanda ang mga gamit sa paglikas. • Ipunin ang mga alagang hayop • Alamin kung saan ang evacuation center ng barangay. • Patuloy na makinig sa balita.	
	Level 3		
	Barangay Action	Community Action	
	• Patunugin ang alarma sa level 3 gamit ang sirena. • Mag ikot ang rescue team para ilikas ang mga apektado ng baha • Patuloy na mag ikot ang mga tanod para bantayan at protektahan ang mga bahay na walang tao	• Lumikas na. Sundin ang inihandang ruta sa paglikas papuntang evacuation center. • Sa mga hindi babahain manatili sa loob ng bahay at patuloy na makinig ng balita	

	• Ipaalam ang plano sa bawat bahay/ evacuee's para sa agarang pag aksyon • Assessment	• Sa mga babahain maghintay ng tulong sa paglikas lalo na ang mga buntis, bata, nakakatanda at may kapansanan. • Dapat alamin ang plano ayon sa nais iparating ng barangay council	
Evacuation	Sa pagdinig ng mga hudyat, ang mga tao ay kikilos sa mga sumusunod na pamamaraan: 1. Tiyakin na may sapat na emergency kit na sasapat sa bilang ng miyembro ng pamilya. 2. Marahang lumakad at sundan ang mga nakamarkang evacuation markers patungo sa ligtas na evacuation area. 3. Tiyakin na naaalalayan ng Evacuation team upang mas masiguro ang kaligtasan ng mga bata, buntis, nakakatanda at PWDs. 4. Siguraduhin na maisulat at mailista sa logbook ang mga miyembro ng inyong pamilya. 5. Ang lahat ng nag-evacuate ay matatalagahan ng lugar sa loob ng evacuation center. 6. Ang lahat ng evacuees na hindi magkakasya sa itinilagang evacuation center ng barangay ay ililipat sa evacuation center ng munisipyo na matatagpuan sa New Market sa Tejeros Convention. 7. Ang evacuation team ay magbibigay ng ulat sa BDRRMC sa loob ng 24 oras pagkabukas ng evacuation center. Ang ulat ay maglalaman ng kumpletong listahan ng pamilya at mga miyembro nito na nasa loob ng evacuation area sa barangay gayundin sa mga nailipat sa New public market.		Evacuation team
Communication and coordination	Habang isinasagawa ang contingency plan, ang lahat ng miyembro ng communication team ay mag-iistasyon at poposte sa mga nasabing lugar: • Isang tao sa taas ng barangay hall kung saan naroon ang digital rain gauge • Isang tao ang magbabantay sa tide monitor • Sa mga evacuation areas		Communication Team BDRRM Committee Chair

	• Isang tao sa operation center na makikipag-coordinate sa ibang barangay, sa MDRRMO, Red Cross at munisipyo kung kailangan ng ambulansya Ang BDRRM Coordinating committee ay magpupulong sa unang hudyat ng alarma	
Transportation	1. Ang mga nakatalagang tao sa mga sasakyan (service vehicles) ay maghihintay sa operation center ng barangay hall at mag-aabang sa utos ng kapitan. 2. Ang transportation team members ay magbibigay ng ulat sa BDRRMC sa loob ng 24 oras at sa mga pangangailang pang-transportasyon.	
Search and Rescue	1. Ang mga miyembro ng CERT team ay ipapatawag at pag-uulatin sa operation center ng barangay hall pagkatapos madinig ang unang hudyat ng alarma. 2. Ang lahat ng miyembro ay maghahanda ng kagamitang pang-responde at tutugon sa mga pangangailang medical kung kinakailangan. 3. Ang CERT team leader ay mag-uulat sa BDRRMC sa loob ng 24 oras pagkatapos madinig ang unang hudyat. Ang ulat ay maglalaman ng detalye tulad ng bilang ng nasugatan, uri ng pinsala o sugat na natamo, pangalan at edad ng biktima, pangunahing lunas na binigay, bilang ng nawawalang biktima kung mayroon at ospital na pinagdalhan ng mga biktima. 4. Ang ulat ay maglalaman din ng mga pangunahing pangangailangan ng CERT team.	Barangay Community Emergency Response Team (CERT) and ACDV
Relief (Food and Water)	1. Ang mga miyembro ng WASH, food at relief team ay itatalaga ng kapitan sa isang lugar sa evacuation ng barangay.	WASH and Food Relief Team

Damage Assessment and Needs Analysis (DANA)	1. Ang BDRRMC ay magpapatawag ng pagpupulong sa unang alarma upang ma-monitor at makagawa ng desisyon at aksyon upang mabawasan ang pagkawala ng buhay at pagkasira ng ari-arian. 2. Sa loob ng 24 oras pagkatapos madinig ang unang alarma, ang BDRRM Committee ay maghahanda ng DANA report at patuloy na i-uupdate sa susunod na 24 oras. 3. Ang mga impormasyon na kakapalooban ng DANA report ay halaw sa mga ulat na binigay ng bawat grupo sa BDRRMC.	BDRRM Committee Chair, barangay secretary

Barangay Disaster Risk Reduction and Management Coordinating Committee

Chairperson: Conrad V. Abutin
Secretary: Ma. Glenda Lee Cupino
Members: Barangay Council of Barangay Muzon 1
Team Leaders: CERT - Rogel P. Paje, Early Warning System - Marlon Hernandez, Evacuation Management - Roldan Abanilla, Transportation and Communication - Ferdinan Baquiran, WASH and Food Relief - Irene de Silva
Representatives from the MDRRMO and CSO

Community Emergency Response Team Members

1. Rosevie Layaban
2. Mario O. Piano
3. Romeo Gonje
4. Katherine Perocillo

Early Warning Team Cluster Members

A – Rolito Abutin/ Jay dela Cruz/Myrna de Luna
B – Esther Diloy/Linda Sablan
C – Reynaldo Gamier
D – Francis Mojica
E – Florence Cupino / Analyn Yangos

Evacuation Management Team Members

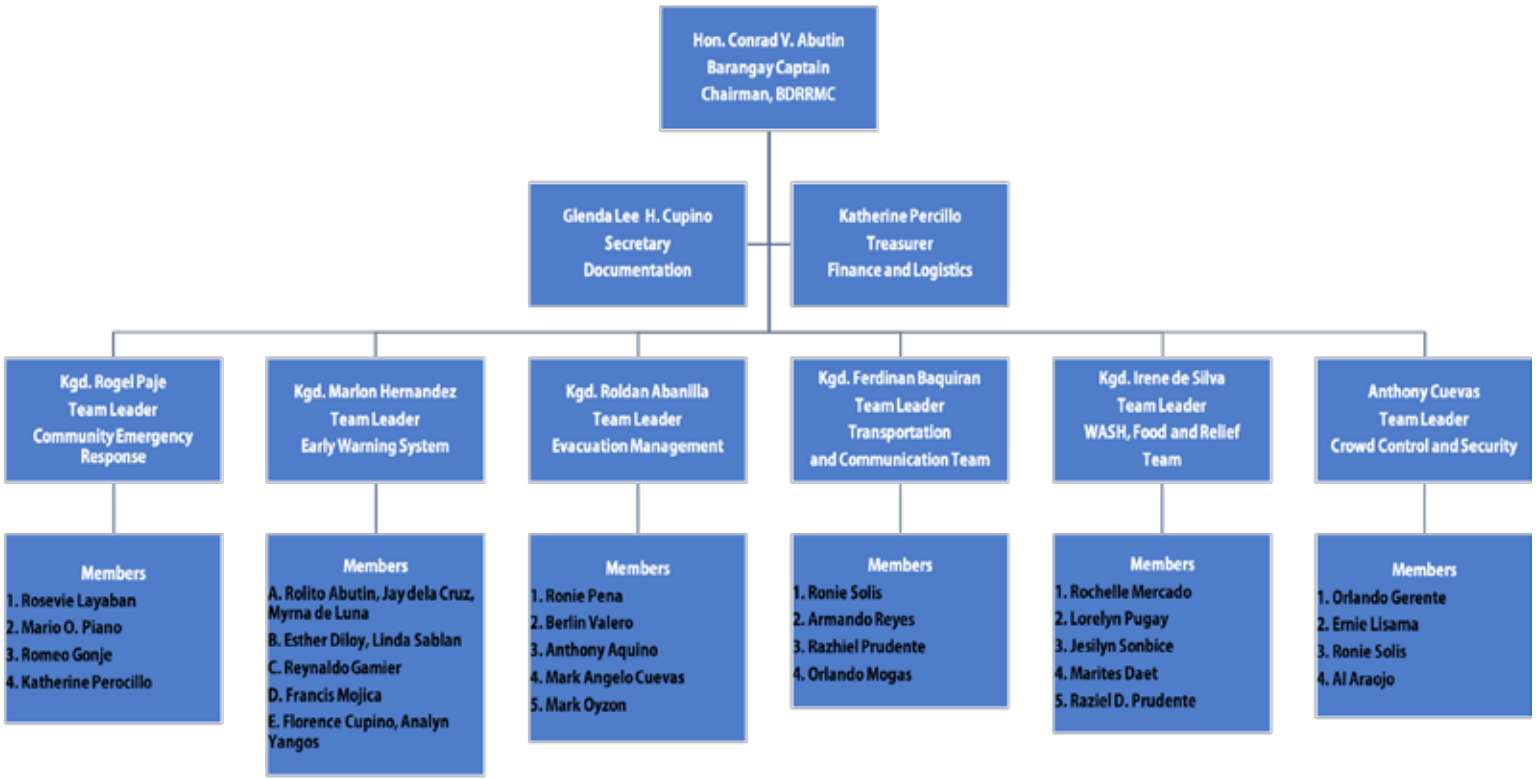
1. Ronie Pena
2. Berlin Valero
3. Anthony Aquino
4. Mark Angelo Cuevas
5. Mark Oyzon

Transportation and Communication Team Members

1. Ronie Solis
2. Armando Reyes
3. Razhiel Prudente
4. Orlando Mogas

WASH and Food Relief Team Members

1. Rochelle Mercado
2. Lorelyn Pugay
3. Jesilyn Sonbice
4. Marites Daet
5. Raziel D. Prudente


Hon. Conrad V. Abutin
Barangay Captain
Chairman, BDRRMC
Glenda Lee H. Cupino
Secretary
Documentation
Katherine Percillo
Treasurer
Finance and Logistics
Kgd. Rogel Paje
Team Leader
Community Emergency Response
Members
1. Rosevie Layaban
2. Mario O. Piano
3. Romeo Gonje
4. Katherine Perocillo
Kgd. Marlon Hernandez
Team Leader
Early Warning System
Members
A. Rolito Abutin, Jay dela Cruz, Myrna de Luna
B. Esther Diloy, Linda Sablan
C. Reynaldo Gamier
D. Francis Mojica
E. Florence Cupino, Analyn Yangos
Kgd. Roldan Abanilla
Team Leader
Evacuation Management
Members
1. Ronie Pena
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3. Anthony Aquino
4. Mark Angelo Cuevas
5. Mark Oyzon
Kgd. Ferdinan Baquiran
Team Leader
Transportation and Communication Team
Members
1. Ronie Solis
2. Armando Reyes
3. Razhiel Prudente
4. Orlando Mogas
Kgd. Irene de Silva
Team Leader
WASH, Food and Relief Team
Members
1. Rochelle Mercado
2. Lorelyn Pugay
3. Jesilyn Sonbice
4. Marites Daet
5. Raziel D. Prudente
Anthony Cuevas
Team Leader
Crowd Control and Security
Members
1. Orlando Gerente
2. Ernie Lisama
3. Ronie Solis
4. Al Araojo

BARANGAY MUZON UNO
FLOOD EARLY WARNING SYSTEM

Level 1

Barangay Action

- Mag meeting ang barangay council at pag usapan ang napagkasunduang plano
- Ipatupad ang napag kasunduang plano at kaukulang trabaho ng mga kagawa, cluster leader, ACDV at mga tanod
- Puntahan ng mga cluster leader ang nakatalagang cluster sa kanila
- Patunugin ang alarma na naghuhudyat ng level 1
- Ihanda ang evacuation center
- Magtalaga ng lugar na pag iipunan ng mga evacuees para sa pagsundo ng MDRRMO sa hindi magkakasya sa barangay hall

Community

- Ipunin ang mga pamilya
- Ayusin / likumin ang mga importanteng dokumento na pwedeng mabasa
- Makiramdam
- Making ng balita

Level 2

Barangay Action

- Patuloy na pag ikot ang mga cluster leader and member
- Ihanda ang mga sasakyan na gagamitin sa posibleng paglikas
- Siguraduhin na kumpleto ang gamit sa paunang lunas

Community

- Ihiwalay ang gamit na puwedeng mabasa
- Maghanda sa paglikas
- Ipunin ang mga alagang hayop
- Alamin kung saan ang evacuation center
- Patuloy na makinig sa balita

Level 3

Barangay Action

- Mag ikot ang rescue team para ilikas ang mga apektado ng baha
- Patuloy na mag ikot ang mga tanod para bantayan at protektahan ang mga bahay na walang tao
- Ipaalam ang plano sa bawat bahay/evacue's para sa agarang pag aksyon
- Aseessment

Community

- Lumikas na
- Sa mga hindi babahain manatili sa loob ng bahay at patuloy na makinig ng balita
- Sa mga babahain maghintay ng tulong sa paglikas
- Dapat alamin ang plano ayon sa nais iparating ng barangay council

Municipality of Rosario
Province of Cavite
Barangay Muzon-1

TEAM REPORT
EARLY WARNING TEAM

Period:_____
Date prepared:_____
Prepared by:_____

INSTRUMENT READINGS

Date	Time	Digital Rain Gauge (in millimeters)	Tide Monitor (High, Medium, Low)

SUMMARY/REMARKS

Guide questions:

1. Ano po status ng mga intrumento? Ito po ba ay gumagana pa?
2. Anong alarma ang itinaas sa period na ito?

Municipality of Rosario
Province of Cavite
Barangay Muzon-1

TEAM REPORT
COMMUNITY EMERGENCY RESPONSE TEAM (CERT)

Period:_____
Date prepared:_____
Prepared by:_____

Cases/ Incidents	Number	Male	Female	Age	Address
Wounds/ Cuts					
Burns					
Drowning					
Search and rescue					
Etc.					

SUMMARY/REMARKS

1. Ano po status ng CERT members? Ilan ang active duty?
2. May mga kaso po bang di nakayanan ng CERT? Anong ginawang hakbang?
3. Ano-ano ang mga pangangailangan ng CERT sa susunod na 24-oras?

Municipality of Rosario
Province of Cavite
Barangay Muzon-1

TEAM REPORT
EVACUATION TEAM

Period:_____
Date prepared:_____
Prepared by:_____

STATUS OF EVACUATION

	Evacuated at the BLGU	Evacuated at the municipal LGU
Total number evacuated		
Number of Men		
Number of Women		
Number Children		
Number of PWDS		
Number of Elderly		

STATUS OF PEOPLE WHO REFUSED TO EVACUATE

	Male	Female
Total number of persons who refused to evacuate:		
Cluster A		
Cluster B		
Cluster C		
Cluster D		
Cluster E		

SUMMARY/REMARKS

- Ano ang sitwasyon sa panahon ng paglikas? Maayos ba ito o magulo?
- Ano ang mga nakatulong para mas maayos na paglikas? Ano din ang naka gulo?
- Ano ang sitwasyon sa mga taong di lumikas? Saan sila nanatili? Ligtas ba sila?

TEAM REPORT
WASH and Food Relief Team

Period:_____
Date prepared:_____
Prepared by:_____

Number and Location of Affected Population

	Male	Female
Total number of affected people		
Total number located in the barangay evacuation center		
Total number outside the evacuation center		

Needs Assessment

Needs	General Status	Detailed items needed	Quantity
Food	Ano po ang sitwasyon sa pagkain? Nakakaluto ba sila? May mga dala ba silang pagkain? Sapat po ba ang stock ang barangay?	Rice	
		Fish	
		Meat	
		Vegetables	
		Others	
Water	Saan po sila kumuha ng maiinom na tubig? Ligtas ba ito? Ano ang ginagawang hakbang dito?	Drinking water	
		Hygiene use	
Non-food items	May mga dala ba sila? Saan sila natutulog? Naliligo? Ligtas ba ang lugar para sa mga babae? Bata? Etc?	Cooking and eating utensils (kaldero, plates, etc)	
		Hygiene Kits (soap, towel, toothbrush, toothpaste, detergent)	
		Sleeping materials (mats, blankets, etc)	

Summary/Remarks

Ano ang pangkalahatang sitwasyon sa mga apektado? Sinu-sino po ang tumutulong sa barangay?

Municipality of Rosario
Province of Cavite
Barangay Muzon-1

TEAM REPORT
TRANSPORTATION AND COMMUNICATION

Period:_____
Date prepared:_____
Prepared by:_____

Transportation

		Number	**Purpose**
Trips made	Trip 1		
	Trip 2		
	Trip 3		
Status of vehicles	Active and functional		
	Damaged and non-functional		
	Active drivers on standby		
	Number of volunteer vehicles		

Communication

		Number	Purpose
Communication made	To the MDRRMC/O		
	To the CSO partners		
	To the media		
Status of Communication Equipment	Active and functional		
	Damaged non-functional		
	Number of volunteer radio owners assisting		

Summary/Remarks

- Ano ang pangkalahatang sitwasyon sa komunikasyon at transportation?
- Ano ang mga naranasang problema o isyu?
- Ano ang ginawang mga paraan para mas mabalis ang komunikasyon at transportation?

Province of Cavite
Municipality of Rosario
Barangay Muzon I

DAMAGE ASSESSMENT AND NEEDS ANALYSIS (DANA) REPORT

Date: _____
As of (time): _____
Prepared by: _____

1. **Account of the Hazard**

What	
When	
Areas affected	
Level of EWS sounded	

2. **Effects and Damages**
   - Ano-ano ang mga puwersa ng hazard ang naka-apekto sa komunidad?
   - Isalarawan ang mga epekto ng hazard sa komunidad? Halimbawa: "Dahil sa malakas na hangin, nagliparan ang mga bubong sa mga bahay sa apektadong cluster sa barangay." "Ang matinding pag-ulang din nagdulot ng pagtaas ng tubig sa mga kalsada na abot hanggang baywang."
   - Saang parte sa komunidad ang lubos na tinamaan ng hazard?
   - Ilan ang bilang nga mga sumusunod:
     - » Apektadong mga tao
     - » Ilan ang babae at lalaki
     - » Ilan ang nasugatan o namatay dahil sa hazard
     - » Ilang bahay ang nasira
     - » Ilang banca ang mga nasira, tinapahan, o pedicabs etc (ito ay mga kabuhayan ng mga tao)
     - » Ilan ang nag-evacuate? Ang hindi nag evacuate at nanatili sa mga bahay nila
   - Napapasok ba ng tulong na galing sa labas ang komunidad? Nadaanan ba ang mga kalsada? May komunikasyon ba sa labas?

3. **Capacity Assessment and State of Disaster**

Needs	Community Capacities (Ano ang kakayahan ng BDRRMC para tugonan ito?)	Gaps and Constraints (Ano-ano ang hindi kayang tugonan ng BDRRMC?)
Food security		
Health		
Shelter/evacuation		
Transportation		
Communication		
Education		
Livelihoods		
Protection		

*Base sa kakayahan na inilahad sa taas, ANO ANG DESISYON NG BDRRMC? Nasa "State of Disaster" ang komunidad o hindi?

4. **Needs Assessment**
   - Ano-ano ang mga pangangailangan ng komunidad para makabangon sa disaster?
   - Isulat dito lahat ng impormasyon na galing sa Evacuation Team, CERT at WASH and Food Relief
   - Ilahad ng detalye ang mga pangangailangan.

Needs	Ano ang ginagawa o binibigay ng barangay?	Ano ang mga kailangan pang ibigay o gawin na hindi kaya ng barangay?
Food security		
Health		
Shelter/evacuation		
Transportation		
Communication		
Education		
Livelihoods		
Protection		

5. **Coordination Mechanisms**
   - Ano ang nagawa na at gagawin pa ng BDRRMC?
   - Sino-sino ang tumutulong sa barangay kung meron man?

Contact Details:
Pangalan
Address
Contact number

Prepared by:
Signed by Barangay Secretary

Approved by:
Signed by Barangay Captain as BDRRMC Chairperson

Annex 4. Evaluation Tool Sample

Announced Community Flood/ Storm Surge Drill on Disaster Preparedness in Barangays San Roque and Canramos, Tanuan Leyte

Part 1: Technical Details of Community Drill

Type and name of drill	Community Drill for Standard Operating Procedure, EWS , Evacuation and CERT				
Barangay committees involved	Barangay councils, Community Emergency Response Teams, Early Warning System teams, Evacuation management team, WASH food and relief team, coordination and communication, transportation system and barangay peace and order team (security and crowd control team) and Evacuation Center Management Committee (composed of school and community members)				
Location	Tanauan, Leyte		Date	April 20, 2016	
Responsible party/ies	Barangay Disaster Risk Reduction and Management Councils of _____		Time	9:00am to 10:00 am	
Purpose	To execute the evacuation plan through drill and simulation of management, response, and capacity of the barangay using the SOP on flood situation.				
Specific objectives	• Assess, and evaluate the management of barangay/school operation center • Evaluate the effectiveness of coordination and communication systems from the operation center down to the barangay/ school committees involved in the SOP • Promote community participation in disaster preparedness and response • Evaluate protocols and relevance of their contingency plan				
Type of drill	Announced; Multiple scenarios: Tabletop simulation at operation center, Early warning system, Evacuation (mobilization and registration) system, Emergency response (Pre-hospital care for victims and water rescue), Coordination and reporting				
Evaluation Score	**1 = Poor** (The process does not exist; serious problems)	2 = Average (Elements of the process observed, but with deficiencies and gaps)	3 = Good (The entire process is evident, but gaps are observed)	4 = Very Good (The complete process is observed)	5 = Excellent (Additional elements are created and complementary to the guidelines established)

Part 2: Evaluation Form

Areas to be evaluated	Score	General comments and recommendations
Flood Early Warning System		
1. Data capture and collection from flood level monitor *(Observed actual monitoring of flood level and report it the operation center)*		
2. Verification and classification of data from MDRRMO/ PDRRMO, PAGASA, news *(BDRRMC / Operation center gather secondary data from radio, television or information from M/PDRRMO)*		
3. Processing information *(Analyze Information and generate decision based on the information gathered)*		
4. Updating information *(BDRRMC secretariat regularly updates generated information)*		
5. Decision-making based on available Early Warning System information *(BDRRMC decides on raising alert status based on information)*		
6. Effectivity of the warning signals and communication to the public *(EWS can be adequately heard from distances)*		
Evacuation System, Process and management		
1. Orderly movement of people *(Evacuation team assisted people towards evacuation center and moved properly according to evacuation routes)*		
2. People with special needs safely evacuated *(Safely prioritized differently abled persons using available materials i.e. wheel chair, improvised wheel chair)*		
3. Route of the evacuation is safe and sufficient visa a vis volume of people *(Crowd control team clears obstructions in the evacuation route. Properly designates parking areas for vehicle and transportation)*		

4. Efficient processing of evacuees at the school evacuation center *(Families identified in evacuation areas secured registration at the welfare / information desk)*		
5. Established mother and child friendly space *(Adequately provide mother and child-friendly space in the evacuation area)*		
Emergency Response		
1. Management of life-threatening injuries *(Performs safe procedure in handling life-threatening emergencies and properly endorse it to a medical facility)*		
2. Management of non-life threatening injuries *(Performs safe management skills of injuries with adequate protection from the responder)*		
3. Extrication, transporting and endorsement of the injured *(Performs safe extrication and lifting of patient with adequate information of the victim in the endorsement form)*		
Coordination, Organization and Management		
1. Protocols in the SOP followed		
2. Coordination between zone leaders and committee members		
3. Coordination of barangay with school evacuation center management committees and/or MDRRMO/PDRRMO		
4. Coordination among various barangays and teams (transport, communication, evacuation, EWS, etc)		
5. Coherence of the actions made to the scenario provided		
Performance of the BDRRMC		
1. Identification of problems		
2. Delegation of roles and responsibilities		
3. Prioritization of actions to be done		

4. On time and effective decision making		
5. Control and confidence to manage the scenario		
6. Ability to bring about coordinated actions among teams		
Community Participation		
1. Percentage of participation of the targeted community members *(Observable participation of different sectors of the community i.e. women, men, children, differently abled person, farmers, fisherfolks, etc)*		
2. Participation of other community members *(nearby zones that are not targeted for the drill)*		
3. Level of awareness of the conduct of drill *(Interview community member and ask question on their awareness of the activity)*		

Name and Signature of Evaluator	
Organization	
Date	

Writeshop Participants

Manuel "Ka Noli" Abinales is the founder and now concurrent Adviser of community-initiated organization Buklod Tao. Inc. He started community-based disaster management with Buklod Tao in 1997, and established alliances with the Center for Disaster Preparedness, the EcoWaste Coalition, DRRNET-Philippines, Coastal Cities at Risk, No Burn Pilipinas, Global Network of Civil Society Organizations for Disaster Reduction, among others. Ka Noli is now into Earthquake Resilience and Preparedness with the Asian Disaster Risk Reduction Network, the NIF-EHRLA, CDP, and PHIVOLCS.

Angelita Algo is the Project Assitant of IIRR's Cavite-based projects. She provides administrative and logistic lead in the implementation of Cavite learning community projects and provides logistics support to IIRR's Panay Learning Community.

Wilson John Barbon is IIRR's Myanmar Country Director and former Disaster Risk Reduction and Climate Change Program Manager. As the DRR-CCA Program manager, he designed and supervised programs and projects on community-managed disaster risk reduction, preparedness, early warning systems, and resilient livelihoods. He is still the lead trainer and specialist of IIRR's DRR-CCA applied learning program and he manages a 3-year regional disaster preparedness project with Give2Asia, a US-based non-profit organization.

Joanna Dalusag has 20 years of experience in rural development work. She has been with IIRR's Philippine Program since 2015. She provides technical support and development in DRR-CCA programs in Cavite, Panay and Quezon Learning Communities. She also oversees IIRR's Family Farming Project in Maragondon, Cavite.

Jonna Ellaine A. Jordan is former IIRR program staff supporting Disaster Risk Reduction and Climate Change Adaptation, Food Security and Resilient Livelihoods, Integrated School

Nutrition and Climate-Smart Agriculture interventions. She also supported IIRR's information, education and communication, publications, knowledge generation, learning and advocacy, capacity development and promotion of participatory development strategies in working with target communities. She is also skilled in arts and graphic design.

Dennis S. Mancilla is a Red Cross 143 facilitator since 2010. He is also an International Humanitarian Law Coordinator since 2012, a First Aid/Basic Life Support/Disaster Management Service Trainer since 2004, a Caregiving Instructor since 2005, a Caregiving NC2 Assessor since 2007, and an Emergency Medical Technician since 2009.

Rogel P. Paje is a 3-termer barangay councilor in Muzon 1. He is now a full-time volunteer of the Philippine Red Cross – Cavite Chapter servicing the Red Cross 143 Program, Safety Services and Disaster Management Services.

Joel M. Panelo is a Philippine Red Cross Trainer (First Aid, Basic Life Support, Disaster Management, 143 Red Cross, Swimming, Water Search and Rescue) since 2006. He is also an environmentalist and former president of the Unified Cavite Mountaineers Incorporate, a rescuer of the 505TH Search and Rescue Group, Philippine Air Force since 2008, a volunteer rescuer of the Metro Manila Development Authority (MMDA)since 2011, and a Wilderness Search and Rescue (WISAR) Philippines B2 instructor since 2014.

Joycen Sabio is a former DRR and Climate Change Adaptation Field Project Coordinator from 2014 to 2015 and a DRR Training Program Associate in 2018. She has a master's degree in Development Management and Governance specializing in Program Management and graduated in 2016. After completing her degree, she joined ADRA as DRR Officer for a post-Haiyan development project in Iloilo. In 2017, she travelled to South America for 6 months to learn more about international development.

Gonzalo Servano Jr. has more than a decade of experience on humanitarian and development work. He joined IIRR in 2010

as an intern and went on to became a project staff and field coordinator handling Disaster Risk Reduction projects in Cavite. His expertise includes community disaster preparedness and risk reduction programming, participatory assessments, planning, monitoring, evaluation and learning. He handled IIRR's Panay Learning Community in the Philippines, which implemented Food Security and Resilience Livelihoods programs.

Giulia Erika Soria is IIRR's Development Communication Specialist. She develops communication strategies and knowledge products for the Institute, designs communication materials, and leads IIRR's participatory publication development, or the Writeshop.

Local government units (LGU) in the Philippines play a pivotal role in bridging relief, recovery, and resilience building in communities harshly affected by disasters. This handbook is an easy-to-follow reference material for LGUs and local NGOs on how to do community managed disaster preparedness and disaster risk reduction. It aims to highlight the experiences of IIRR and its partners in implementing community disaster preparedness in the Philippines.

IIRR