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Training on Disaster Preparedness and Contingency Planning

2

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and Contingency Planning

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Units 202-203, 1223 Casa Rafael
Quezon Avenue, Barangay Sta. Cruz
Quezon City 1104, Philippines
Phone (+63 2) 416 79 05
Fax (+63 2) 921 00 70
Email: phlaccordinc@gmail.com

Authors:

Celso B. Dulce, Jr., Sindhy B. Obias, Ansherina Grace Talavera, Jennifer N. Furigay, Xyla A. Ortinero, Remina P. Plomos, Athena Denise G. Gepte, Erica Chester A. Bucog, Marieta L. Alcid, Merdi Jean D. Arcilla and Ma. Stella A. Dulce.

Editors:

Celso B. Dulce, Jr., Merdi-Jean Arcilla and Elias Jayson R. Tolentino

Artworks: Jose Leon A. Dulce

Lay-out: Leo A. Esclanda/boy bagwis

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Table of Contents

Acknowledgement

The plan to publish an updated edition in English was suggested in a meeting amongst Wouter Bokdam, Anne te Molder, Merdi-Jean Arcilla and Celso Dulce Jr. on 23 May 2012 in Kupang, Indonesia, during the Fifth South-South Community-Based Development Academy. The idea was broached to Erik Rottier and Nok van de Langenberg, who quickly expressed support to the plan of updating *Pagsasanay sa Disaster Preparedness at Contingency Planning*, and translating the four-volume manual to English.

To meet a strict deadline, Sindhy Obias, Ansherina Grace Talavera, Jennifer Furigay, Xyla Ortinero, Remina Plomos, Athena Denise Gepte, Erica Chester Bucog and Marieta Alcid, all Assistance and Cooperation for Community Resilience and Development (ACCORD) staff, worked on the updating and translation of specific lesson plans. Jose Leon Dulce developed the artworks, while Leo Esclanda did the lay-out. Elias Jayson Tolentino, Merdi-Jean Arcilla and Celso Dulce were responsible for editing. Ma. Stella A. Dulce was responsible for coordinating the various tasks entailed in coming up with the English edition, while doing her share in the updating, translating, editing and proofreading.

The support of CARE Nederland, ACCORD and CNDR deserve acknowledgement, as well as that of the *Personele Samenwerking in Ontwikkelingslanden* (PSO) and the European Commission Humanitarian Aid and Civil Protection department (ECHO). These organizations are instrumental in the updating and translation to English of this manual, **Training on Disaster Preparedness and Contingency Planning**.

Introduction

This Manual was originally published in Filipino in 2009, bearing the title *Pagsasanay sa Disaster Preparedness at Contingency Planning*. The publication in Filipino was intentional. The targeted users of the manual were high-risk communities and local authorities in the Philippines. Moreover, the choice made by CARE and the Corporate Network for Disaster Response to propagate the community-based approach to disaster risk reduction dictated that the manual be published in Filipino.

Much has transpired since the manual's publication in 2009. The manual was a product of the Strengthening Assets and Capacities of Communities and Local Governments for Resilience to Disasters (ACCORD) project. Two follow-up community-based disaster risk reduction projects have since been completed, also supported by the European Commission Humanitarian Aid and Civil Protection department (ECHO). A five-year community-based disaster risk reduction programme was also started in 2011, with funding from the Ministry of Foreign Affairs of The Netherlands. These projects have served to enrich the content of the training manual.

Aside from the foregoing explicit DRR projects, other projects implemented by CARE and partners CNDR, Cordillera Disaster Response and Development Services (CorDisRDS), Agri-Aqua Development Coalition (AADC) and Assistance and Cooperation for Community Resilience and Development (ACCORD Inc.) have used *Pagsasanay sa Disaster Preparedness at Contingency Planning*. Five emergency response projects since Ketsana (Ondoy) and a food security and livelihood project funded by the EuropeAid have used the manual as a means for mainstreaming DRR in emergency response. This experience likewise contributed to the enrichment of *Pagsasanay*.

Over three years of practical experience later, frameworks, approaches and concepts have clarified and evolved. Tools and learning methodologies have vastly improved. These developments required that *Pagsasanay* be updated.

An updated *Pagsasanay* would feature the addition of sessions on climate change adaptation and ecosystem management and restoration. This is in recognition of

present realities – that disasters are becoming more frequent and more destructive because of climate change and environmental degradation. These aspects were not present in the original manual.

Other additions are the sessions on relevant DRR and CCA laws and the organization of functional Disaster Risk Reduction and Management Councils (DRRMCs). There were two push factors for these inclusions. One is the passage of the Philippine Disaster Risk Reduction and Management Act and the Climate Change Act. The second factor is closely linked to the first: village, municipal and school authorities wanted to know more about the new laws and are requesting assistance for them to be able to comply with the provisions of the laws.

So then why an English edition? Early on, there was already a demand for an English edition from those who do not read and speak Filipino. The lack of an English edition prevented the dissemination of the manual on a wider scale, within the Philippines and beyond.

Training on Disaster Preparedness and Contingency Planning is the response to the oft-received request for an English translation of the manual. Updating of the original manual in Filipino, and its translation and publication in English are a fulfilment of the obligation of CARE and partners to share what has been developed from experience and collaboration amongst high-risk communities and local authorities.

Session 1. Community Risk Assessment (CRA)

LEARNING OBJECTIVES:

After the session, participants are expected to be able to:

1. Explain the importance of CRA to ecosystem-based and climate-smart DRR.
2. Explain the use of participatory tools and participatory processes of CRA.
3. Identify climate and environmental factors that exacerbate disaster risks.
4. Come up with an initial analysis of CRA results for ecosystem-based and climate-smart DRR planning.

KEY MESSAGES

1. What is Community Risk Assessment (CRA)?

CRA is a participatory process of identifying disaster risks in a community.

1.1 CRA has two important features:

- It is a process – CRAs cannot be accomplished in one sitting. It is not a one-time activity but a process that has to be undergone to be able to understand the local hazards and socio-economic and political factors in a community that influence disaster risks. It is a continuing process because risks change over time and the most appropriate DRR measures that must be undertaken need to be adjusted over time, too.

- It is a participatory process that must be undertaken by the community to help them identify and understand the risks they are facing and might face in the future. This participatory nature gives importance to the community's involvement especially the most vulnerable members because it becomes a learning process for all of them.

1.2 CRAs are processes which involve the community members so that they will be able to:

• Identify the hazards that might affect their community, and analyse or gauge the probability or chances of a specific hazard striking them.

• Determine the severity of its effects on their community.

• Identify and analyse their vulnerabilities and capacities that largely determine the degree by which a hazard affects them, and therefore helps them understand the causes of disasters.

• Understand people's perception of risks. Risks are influenced by various socio-economic and political factors. People view risks differently depending on their status. Community members or insiders also view risks differently from outsiders.

• Consolidate and validate local experiences with scientific and outsiders' views to achieve a more realistic understanding of risks. This will serve as basis for the most appropriate interventions.

2. Importance of conducting CRAs

• CRAs play a very important role in community-based DRR. CRA provides the solid foundation upon which all DRR activities are built.

• CRA is a tool to raise people's awareness of risks. Drawing the participation of vulnerable groups in CRAs guarantees the increased awareness and knowledge of the community regarding risks.

• CRA introduces tools in analysing risks and equips community members with the capacity to concretely understand their situation and collectively build a resilient community.

• CRA provides the venue for community members to discuss and understand each other's perception of risks based on their own experience. It also gives community members the chance to understand why outsiders view risks differently. CRAs also seek

to combine indigenous and scientific knowledge and practices to be able to arrive at a more realistic and appropriate understanding of risks.

- CRA serves many purposes. The information generated in the process is essential to the development of community, schools, and municipal contingency plans. Specific information that is generated in the process of accomplishing the CRA also serves as input to the design of early-warning systems (EWS) and evacuation plans which help communities cope with emergencies.

- The information from the CRA is important to the design of small scale mitigation projects (SSM), inputs to development plans of LGUs, school improvement plans, design of community projects, and other plans and projects of NGOs and people's organizations.

- CRA is a tool for participatory planning, monitoring, evaluation and learning (PPMEL) for projects and programs.

- CRA outputs are also used as instructional materials and examples to help simplify concepts on DRR during the conduct of community trainings. By using these examples to help community members understand theories, the CRA outputs are further enriched with new inputs from the community.

- Consistent with the rights-based approach (RBA), CRA is a process that helps vulnerable people claim their right to acquire correct and timely information on risks that affect their communities, and helps them make informed decisions and actions.

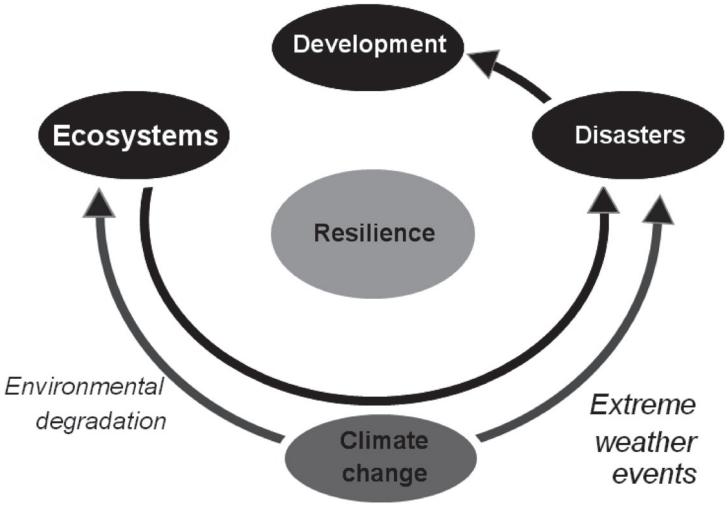
3. CRA methods and tools

Community Risk Assessment or CRA connotes community members taking the lead in assessing the risks in their respective communities. CRA is focused on the community. The increasing recognition of the links amongst disasters, climate change and ecosystem degradation, however, has made integration of DRR, CCA and EMR obligatory if resilience is to be achieved in a sustainable way. In CRA, integration of DRR, CCA and EMR means that

elements of CCA and EMR have to be incorporated into CRA methods and tools. Moreover, from focusing largely on the community, CRA now must look at ecosystems and bigger landscapes also, to take into account ecosystem services that play an important role in building resilience. CRA must also recognize that conditions outside communities may affect the level of risk within these communities.

Through the linkage of climate change and disasters, CRAs must also need to consider longer timescales, looking at trends and projections covering a few decades. These considerations are also factored into CRA methods and tools. The frequency and severity of extreme weather events and the emergence of new types of hazards – altering the understanding and traditional typology of hazards and disasters – are similarly taken into account in the CRA.

By expanding the scope and timescale of CRA, the design of risk reduction measures also becomes more relevant, and their sustainability enhanced.



A. Hazard assessment – is the process of determining which hazards are likely to occur in a community, and examines its characteristics. The following tools are used in hazard assessment:

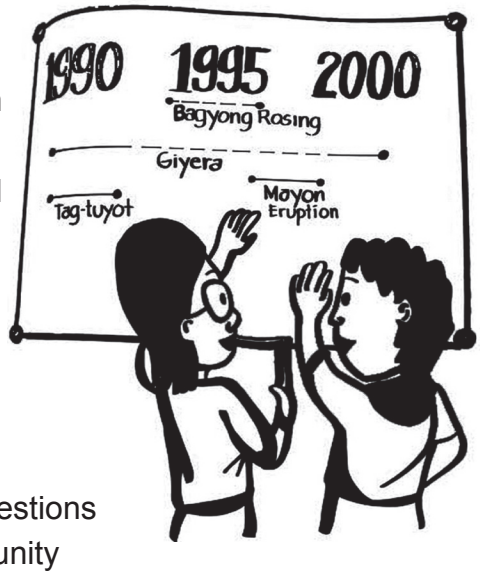
A1. Hazard History or Hazard Timeline

A hazard timeline outlines significant hazard events and corresponding community responses and behaviour, as well as changes in the environment. A hazard timeline is accomplished in order to get an insight into past hazards, changes in their nature, intensity and behaviour over time, and to understand trends or how things may continue to change in the future. The hazard timeline also facilitates understanding of the present situation in the community by showing the causal link between past and present in terms

Hazard Timeline
San Nicolas, Talacogon, Agusan del Sur
June 2012

Year	1960s	1970s	1980s	1990s	2000s	2010s
Population	130 HH	150 HH	200 HH	250 HH	384 HH	2010—427 HH 2011—522 HH 2012—564 HH
Environmental condition	There were still a lot of different trees and plants, such as fruit bearing trees, bananas and tiger grass Many trees still line the river banks Abundance of fish and shrimps in the Agusan River Water from Agusan River is potable There were known cases of schistosomiasis	There were still a lot of: -big bats, heron, turtle dove and wild duck -trees such as *banaba, kabak* and cassia -fish, shrimps and snails Riverside is cultivated for vegetable planting High school building was built	There were still a lot of: -big bats, heron, turtle dove and wild duck -trees such as *banaba, kabak* and cassia -fish, shrimps and snails Riverside is cultivated for vegetable planting	Significant decrease in the number of trees, including those lining the riverbanks Electrofishing is rampant Widespread use of chemical fertilizers and pesticides	Only a small number of trees, animals and fish remain Electrofishing is rampant Widespread use of chemical fertilizers and pesticides Janitor fish infestation	Only a small number of trees, animals and fish are left Soil erosion on riverbanks Illegal fishing and logging are done openly Crisis characterized by hunger, insufficient drinking water Increase in floating houses along riverside
Hazards/ Disasters experienced	1962— 3-meter deep floods that lasted for 3 months	1976—rat infestation	1982—flood lasted for three months 1987—7 months of *ting-init* (drought)	Yearly floods up to 2 meters in height, during 1st quarter of the year that last up to 2 months	Yearly floods up to 2 meters in height, during 1st quarter of the year that last up to 2 months	Yearly floods up to 2 meters in height, during 1st quarter of the year that last up to 2 months 2011—Typhoon Washi exacerbated flood; earthquake 2012—Flood, drought
Damages/ Effects on: **-Life** **-Health** **-Livelihood** **-Infrastructure** **-Environment**	1962 floods: All crops were damaged Animals drowned Affected population evacuated to higher ground	Crops were damaged including rice, corn, coconut and root crops Rice planting stopped	1982 floods: All crops were destroyed Houses submerged in flood waters, only roofs can be seen Those affected evacuated All sitios affected	Community is affected, particularly puroks 7 and 8 Crops such as root crops and vegetables were damaged Hunger	Community is affected, particularly puroks 7 and 8 Crops such as root crops and vegetables were damaged Hunger	Community is affected, particularly puroks 7 and 8 Crops such as root crops and vegetables were damaged Hunger 2011 typhoon and floods: Livelihoods were affected—trees and crops such as banana, falcata and root crops were damaged; livestock and farm animals killed Severe lack of potable water
Response/ Assistance of government, NGOs, community	Religious group provided food assistance 1962 flood: LGU distributed relief goods USAID used helicopter to deliver relief goods	Barangay LGU provided rat poison	LGU provided rice and canned goods, used helicopter	Municipal and barangay LGU and Red Cross provide relief assistance every year	Municipal and barangay LGU and Red Cross provide relief assistance every year	Municipal and barangay LGU and Red Cross provide relief assistance every year 2011 flood: Religious group, BLGU, MLGU and PLGU provided rice, canned goods and used clothing CARE provided cash assistance and drums for water storage
Lessons learned	1962 flood onward: Always be prepared Transfer animals to safer areas before flood waters rise	Harvest from second cropping are not sold, instead kept for family' s consumption				2011: Participate in DRR trainings

of health issues, vulnerabilities, climate change and environmental degradation.



A specific use of the hazard timeline is the identification of trends in the frequency and degree of impact in order to predict the likelihood of a hazard occurring and its possible magnitude of impact. The observed trends will provide useful information inputs to worst-case scenario building which is essential in developing a Contingency Plan.

To facilitate the preparation of a hazard timeline, major hazard events in the community are recalled. Guide questions are provided to guide subsequent discussion by community members of the hazard timeline.

Following are samples of guide questions:

- Are there any trends or changes in the frequency, severity of impacts or duration of events over time?
- Could these variations be related to land use changes?
- Has there been a change in frequency and severity of specific health problems? Have there been new emerging health problems?
- 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:

- Trends or patterns.
- Changes in probability and predictability of hazards.
- New hazards which were not considered as hazards in the traditional DRR typology (climate stresses)
- Changes in community responses or adaptation measures. Did responses change as the nature of hazards changed? How did the community react or adapt to changes?
- Causal relationships with environmental and climate change issues.

A2. Hazard Assessment Table (HAT)

The Hazard Assessment Table looks deeper into the nature and behaviour of each hazard affecting the community. The frequency, duration, seasonality, and relevant forewarning of each are examined. The HAT is important for devising early warning

systems (EWS), among others. Moreover, HAT subjects all major and new types of hazards to study. It helps to understand:

- The nature and behaviour of hazards affecting and might affect the community, and observed changes, if any.

Example of Hazard Assessment Table

FACTORS	Typhoon	Earthquake	Flood	Landslide
Warning or signal *Is there an official warning system for the hazard?* *Is there a local system followed by the community (indigenous warning system)*	Public storm warning system 1-4 from PAGASA Warning from radio, TV Black ants would infest home	No warning	Volume of rain reading from the rain gauge or water level gauge Local warning from MDRRMC or BDRRMC using megaphone or any improvised warning device *(batingting)*	No official warning system Continuous rains
Speed of Onset *Rapid onset?* *Slow onset?*	Rapid	Very rapid	Rapid	Rapid
Forewarning/ Time gap/Lead time *Time between having the first information of an oncoming hazard to actual occurrence?*	2-3 days	none	2-3 hours depending on volume of rain	none
Frequency *How often does the hazard strike, or occur?*	4-5 times a year	Cannot tell	Very frequent during rainy season	Frequent during rainy season
When *Season or period when hazard is most likely to occur*	June - December	Cannot predict	June - February	June - February
Duration *How long does it usually take for the hazard to happen?*	2-3 days	Normally from 10 -15 seconds only	3-5 days or depending on the volume of rain	Seconds only (less than a minute)

- The nature and behaviour of new types of hazards affecting or might affect the community due to climate change.
- The characteristics of hazards that might affect the community more frequently and which might cause severe damages too, due to climate change.

A3. Community Risk Map

The Community Risk Map is a visual presentation of geographical areas that are exposed to hazards, and the community resources located within these vulnerable areas. Aside from showing the exposed elements, Community Risk Maps also show existing capacities, including the land and water resources and dependence of the community on these resources. The Community Risk Maps also show safe areas. This information is essential in evacuation planning and designing mitigation measures.

Two versions of the map will be drawn to check for changes. One map will represent the current state of the area being drawn. Another will show how this same area looked like 30 years old.

Guidelines for mapping:

- Draw the barangay, including its boundaries, zones, or sub-villages (sitios); the adjacent barangays; and associated environmental features like rivers, hills, etc. in order to include the environmental factors that contribute to the increase or reduction of the impact of the hazards in the given barangay. For school maps, draw the school and nearby zones, or parts of the community where the hazard that may affect the school could originate.
- Draw houses, community resources such as roads, schools, barangay hall, health centre, day care centre, church, location of EWS equipment, farmlands, etc. (For school maps, draw classrooms, open spaces, clinic, comfort rooms/toilets, trees, condemned buildings, high-risk classrooms, etc.)
- Identify high-risk areas by using one colour for a particular hazard. In identifying high-risk areas, consider the influences of climate change and environmental degradation in defining the worst-case scenario.

- If other risk maps made by government agencies are available, use these as guide especially in identifying high-risk areas. Take note that these maps must be updated regularly.
- Colour safe areas so that community members will easily identify these during emergencies.
- Don't forget to put directions.
- Use official legends used by other agencies.

After the Community Risk Map is drawn, community members discuss the salient features of the map. Discussion will be guided by questions including:

- Who has access to the resources shown on the map? Who controls this access?
- What is the state of these resources; if they are degraded, why are they degraded? How does the degradation of these resources impact the community?
- What are the impacts of the hazards identified?
- Are the hazards different now than they were 10/20/30 years ago (depending on age of participants)? How different and why?
- Are there places in the community that are safe from the hazards?
- Who are the members of the community who are most at risk from the different hazards? Why?

A4. Seasonal Calendar

A seasonal calendar, as the name implies, demonstrates the seasonality, or the times of the year that specific events such as typhoons, floods or periods of drought, social and economic conditions, public events such as holidays and festivals and seasonal activities such as harvesting occur. It can show changes in seasonal activities, and identify periods of stress, hazards, diseases, debt, and vulnerability. It gives an overview of the natural resources used by the community and of changes in the availability of

Seasonal Calendar
San Nicolas, Talacogon, Agusan del Sur
June 2012

Events/ Months	J	F	M	A	M	J	J	A	S	O	N	D
Dry season												
Rainy season												
Hot days and nights												
Lean months												
Increased income												
Scarcity of food												
Floods												
HEALTH Cough and colds												
Dengue												
Diarrhea												
Sore Eyes												
Urinary Tract Infection												
LIVELIHOOD Land preparation for planting rice												
Planting rice *												
Harvesting rice *												
Land preparation for planting corn												
Planting corn												
Harvesting corn												

Legend: Black - present
Gray - past (30 years ago)
Note: * Planting and Harvest season remain the same but differ in volume of yield and income

these resources. It facilitates recognition and understanding of the vulnerability of livelihoods to hazard events and other shocks, and related coping strategies. It can also show major changes not only in climate, but also in land use/ecosystem use and in trends in the areas surrounding (influencing) the community.

The use of seasonal calendar in school helps teachers and administrators carry out risk reduction activities such as securing school records in anticipation of hazard events. The seasonal calendar also shows how the seasons affect students' behaviour, health, and class attendance. For example, students are most likely to drop out of school during planting and harvesting seasons as a result of productive or economic activities of their families.

After the Seasonal Calendar is prepared, community members discuss its salient features to further improve the content and analysis. Discussion will be guided by questions including:

- Are there changes in climate, weather, hazards, and other seasonal activities today compared to 10-30 years ago?
- Are there changes in production patterns? Volume of harvests? Decrease in variety of catch?
- Are there changes in the types of pests that attack crops?
- Are there changes in the kinds and types of existing/ surviving crops?
- Are there changes in the months when hazards occur?
- Is the season of specific ailments or sickness changing?

B. Capacities and Vulnerabilities Assessment (CVA)

Vulnerability assessment is the process of estimating the susceptibility of people, community facilities and services, livelihood and economic activities, the natural environment, etc. to various hazards and analysing the causes which place them at risk.

Capacities assessment looks at the same long-term factors and how these influence the ability of individuals, households and communities to cope with and recover from disaster events, and to engage in risk reduction activities.

Capacities and Vulnerabilities Matrix

CATEGORIES	Capacities	Vulnerabilities
Physical/Material Livelihood activities, people's various skills • Land, water, animals, access and control of land, capital and other production tools and equipment • Infrastructure, social services and facilities. (roads, schools, health facilities, electricity, communication, housing, transportation, , etc.) • Human capital: population, mortality, diseases, nutritional status, ability to read, write and count; level of poverty • Natural resources and environment: mountains, rivers, land productivity, situation of mountains and forests • Natural hazards: drought, flood, earthquake, typhoon, etc; coping or adaptation mechanisms • Location of the community – coastline, near fault line • Building materials for houses such as nipa, wood, galvanized iron sheets, concrete		
Social/Organizational • Family situation (chaotic or orderly, nuclear or extended, small, large) • Type of leadership (excellent, respected or not) • Formal and informal organizations in the community and types of projects; level of organizational consolidation of community members • Participation in decision-making (who are involved and excluded; how effective is the process of decision-making?) • Political affiliations and electoral practice and how they impact on the ability of community members and local authorities to work together for the common good • Cohesion, divisiveness among community members; conflicts in the community and system of resolution • Equality, system of punishment, and justice system in the barangay • Barangay policies and laws (what are these; fair implementation); • Level of commitment of government units and agencies to implement sustainable poverty-reduction programmes		
Motivational/Attitude • Perspective on life and on change, and confidence on capacity to change their situation • Initiative or volition among community members • Faith, determination and fighting spirit • Belief that things are pre-destined and nothing can be done to change these, hopelessness (fatalism) • Dependence (or lack of it) on others or on external assistance, self sufficient, works hard to do things by themselves, persistent • Level of awareness • Unity and cooperation, bayanihan system, helpfulness • Capacity or willingness to review past events, learn lessons from these; view of current situation and the future.		

Initial CVA results become part of the baseline from which subsequent CVAs will be compared to measure changes after DRR actions have been introduced.

3 Categories of Capacities and Vulnerabilities:

a. Physical/Material – these are conditions where people and their assets are exposed to risk.
Examples:

- Physical locations where people settle such as near the fault lines, coastal areas, foot of mountains, etc.
- Other elements include stability (or lack of it) of livelihoods.

b. Social/ Organizational – these are conditions in a society which compounds or exacerbates the effects of a hazard on a vulnerable community. These are the relationships, systems, and structures that perpetuate and heighten the conditions of vulnerability in a community.

Examples:

- Cohesion or divisiveness amongst community members;
- Level of organizational consolidation of community members;
- Political affiliations and electoral practice and how they impact on the ability of community members and local authorities to work together for the common good; and
- Level of commitment of government units and agencies to implement sustainable poverty-reduction programmes.

c. Motivational/ Attitudinal – these are vulnerabilities emanating from beliefs, culture, behaviour, or norms that do not help reduce vulnerabilities and obstruct development.

Examples:

- Confidence in a community's capacity to change its conditions;
- Initiative or volition amongst community members and leaders;
- Dependence (or lack of it) on others and on external assistance;
- Level of awareness; and
- Capacity or willingness to review past events, and learn lessons from these.

Points to remember when carrying out CVA:

- The biggest/strongest capacity and biggest/most unmanageable vulnerability must be examined.
- Many responses could both be vulnerability and a capacity.
- It is advised to use both primary data and secondary data. A good balance must also be achieved between community responses and other information sources.
- CVA is best carried out with representations from various sectors of a community (women, elderly, youth, PWD)
- It is important to consider the different views of community members and identify what is the view of the majority.
- Equal importance must be given on all three categories of CVA.
- Increasing capacities can reduce severity.
- As vulnerability increases, risk also increases.
- The strengths of a community can be the basis for building risk reduction measures for current identified risks.
- The results of a CVA change over time.
- A CVA is best conducted with all community groups/sectors represented to be able to determine their varying strengths and vulnerabilities. It is important to examine existing vulnerabilities so that they become aware and be motivated to address it.

C. Pressure and Release Model (PAR) or the Disaster Crunch Model

PAR is being introduced to help communities understand and analyse the complexity of their vulnerabilities. PAR guides community members in understanding the factors that place them in unsafe conditions, and the immediate causes of unsafe conditions. PAR helps communities understand the root causes of their vulnerabilities that lie in the social, economic, political, and cultural conditions/structures of a society.

The CVA process only identifies the vulnerabilities and capacities of a community while PAR further examines and analyses the conditions that give way to these vulnerabilities, and the cause and effect relationships of these vulnerability factors. This is visually presented in the Progression of Vulnerability.

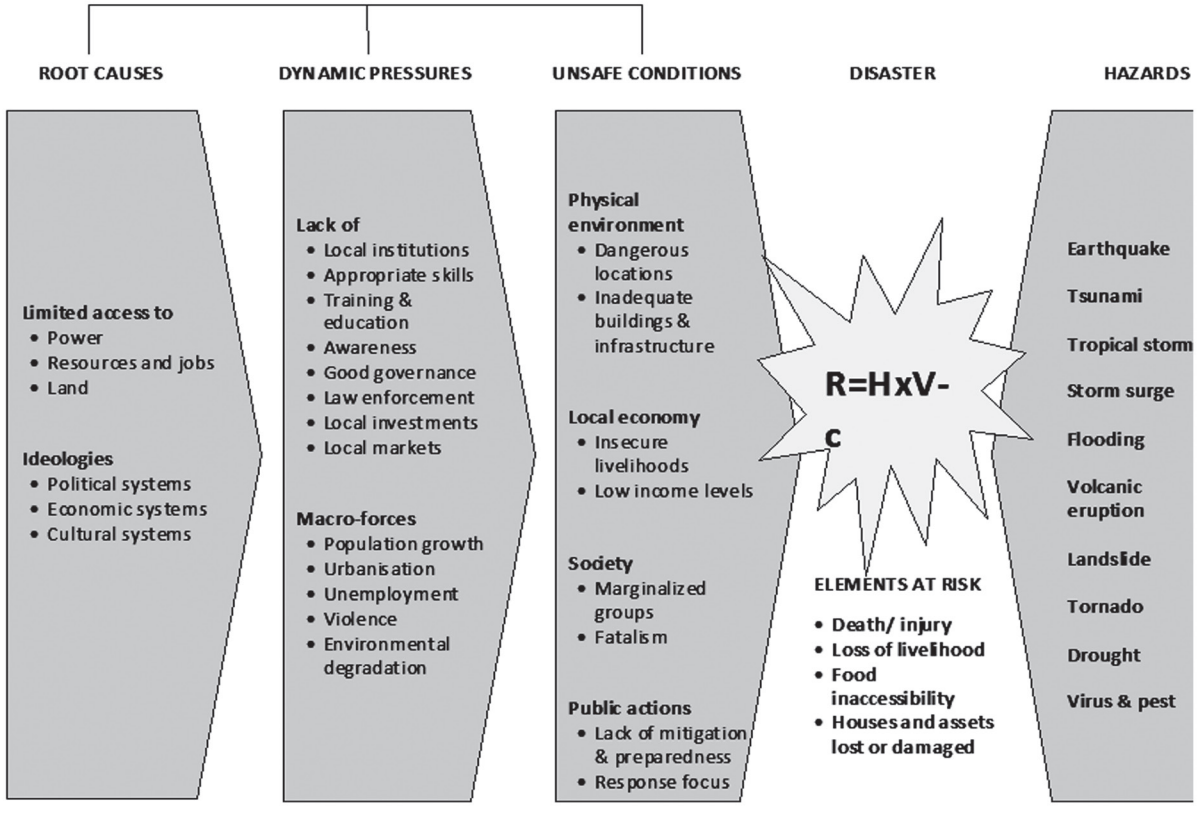
The PAR model also shows the reverse of vulnerabilities in the table Progression of Safety. It seeks to explain that to be able to reduce disaster risk, the pressures that cause disasters must be addressed (released) for DRR.

By identifying the vulnerabilities in each column, the viewer could visually understand the relationship of these problems. Furthermore, this forces the viewer to act on the root causes to significantly reduce vulnerabilities.

PAR serves as a tool to understand how a disaster happens when a hazard strikes a vulnerable community. It clarifies that a hazard is just a phenomenon that cannot cause a disaster unless it hits a vulnerable community. Also, a disaster doesn't happen in a vulnerable community if it is not hit by a hazard. A hazard is the event that triggers or sets off the disaster. This means that these two elements are needed for a disaster to happen. PAR illustration also helps to identify the related factors and processes in a society that causes vulnerability. The PRESSURE shows the relationship of different vulnerabilities while the RELEASE shows the relationships of the different capacities of a community.

There are three layers of causes of vulnerabilities which are interrelated and exacerbate the effects of a hazard resulting to disaster:

Progression of vulnerability *(adapted from Wisner et al. 1994)*



a. Unsafe conditions are the vulnerable context where people and their properties are exposed to risk of disaster. These are dangerous or high-risk physical conditions. Example: People living in waterways or very near the sea. They become highly vulnerable to floods and storm surges. Livelihoods such as deep-sea fishing by nature are high risk and are greatly affected by storms and strong rains.

However, these are only manifestations of underlying causes or outcomes of other deeper processes that result to vulnerable conditions. An underdeveloped economy is another element that produces vulnerability such as irregular and low wage occupations, underemployment, and unemployment which further results to switching to odd and dangerous jobs such as deep sea diving, prostitution, etc. Very low to no income further results to less food on the table, undernourishment, weakness, and unhealthy physical condition resulting to frequent sickness.

b. The second group is called dynamic pressures – these are the immediate causes why people and their properties end up in unsafe conditions. These are the conditions where processes and relationships in a society translate the effects of roots of vulnerabilities to unsafe conditions. These are conditions, processes, and relationships that were formed and prospered through periods of unequal distribution of wealth and power. These pressures come in the form of institutions, systems, methods, and policies of a society which are instruments of the current structures that maintain and further aggravate current unsafe conditions.

Examples:

- Lack or absence of responsible local institutions that strictly implement building codes to ensure sturdy buildings safe for humans to live in.
- The lack of technical training/capacities limiting the choice of jobs for the job seekers.
- The lack of local capacity to implement the DRRM Act of 2010 which results to absence of preparedness to disasters such as typhoons Ondoy and Pepeng for vulnerable communities. The lack of basic services, and press freedom, among others.

Macro forces like uncontrolled population, urbanization, unabated deforestation, larger allocation for debt servicing over social services in the national budget, and the likes are

under this category as well. These forces add to the pressure for widespread unsafe conditions.

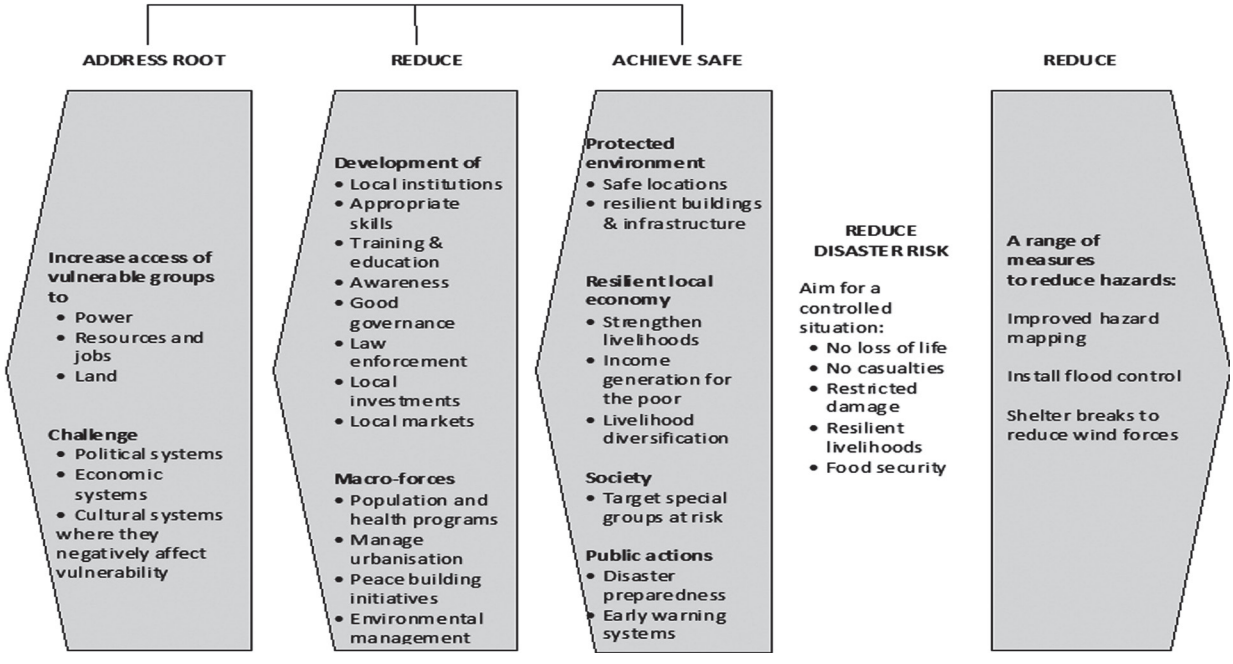
c. The last category is the root causes why communities remain vulnerable and why disasters continue to happen. This shows that the core or root cause of vulnerabilities lie with the unequal distribution of resources and power among countries, in a country, or in a community. It shows that the socio-economic, cultural, and political structures that rule a place, a country, or the world has something to do with the lack of participation or voice of the majority who are poor.

The root causes are basic ideologies or principles on which a society is built. Vulnerabilities are said to be a product of a time when political and economic powers were concentrated to specific sections of a society. This set-up gave birth to other vulnerabilities through the development of various processes, relationships, and systems that legalized different forms of vulnerabilities. This emphasizes that vulnerabilities did not just happen out of nowhere.

It has developed as a progression from the root causes (underlying) to dynamic pressure, to unsafe conditions. The root causes answer the question WHY dangerous locations or unsafe conditions persist. If the fundamental causes of disaster risk are not addressed, then the disaster situation will soon repeat itself.

The Progression of Safety, on the one hand, shows what needs to be pursued in order to reverse the conditions of vulnerabilities and build resilient communities. It also

Progression of safety *(adapted from Wisner et al. 1994)*



pushes one to attack the root causes if lasting change is desired. These should be the objectives of DRR.

Representatives of the general local population are the ideal participants in this activity. A broad mix of participants consisting of leaders, men, women and children, young and old is suggested. It is important also to have a relatively high ratio of elderly participants for purposes of recalling events that transpired decades earlier.

4. What is the right attitude towards the process of generating the information and the information itself from the CRA?

The process of carrying out a CRA is tedious. Most often, it is difficult to say that a CRA has been done because changes continue to happen. Changes happen because of fast-paced developments in communities. Additionally, it is because of the nature of the changing risks that the process of completing a CRA must be done meticulously with the different sectors of a community represented. For high-risk communities, CRAs must be prioritized and given importance because it becomes the basis from which risk reduction measures which will save lives and livelihoods are identified.

6. Lessons learned that should guide us when conducting CRAs

- The succeeding courses of actions in DRR greatly depend on CRA results.
- The participation of vulnerable and disadvantaged groups strengthens the quality of CRA. Through their involvement in CRA, their needs and aspirations are considered and their “voices” heard. As they participate, they enhance their understanding of risks as well as their capacities. Participation also helps build community ownership of the CRA outputs and of the DRR capacity-building process
- The situations of communities change over time, thus regular conduct of CRAs is important to determine if the RRMs are still appropriate.
- In light of changing situations, the CRA design itself should also be updated regularly.

- CRAs are important in hazard-prone communities to determine risk reduction measures and to protect lives and livelihoods. But for CRAs to become more accurate and useful, the experiences of the community must be combined with studies and viewed through scientific methods.
- That there is need to advocate for the government's responsibility to lead in collection and dissemination of information that will aid in reducing risks especially information related to climate change.
- To challenge LGUs, NGOs and other organizations to incorporate CRA in situational analyses where development plans are based. In order to mainstream DRR in development planning processes, it is necessary that hazards, capacities and vulnerabilities, i.e. risks, are explicitly taken into account in situational analysis (and in all phases of the project cycle).

Methodology and flow:

1. A review of the major basic concepts in DRR is required at start of session. It ensures that participants completely understand the meaning of the pseudo-formula R = H x V – c and the relationship of each entity to the other. If the training is being conducted in a community where an initial CRA was carried out at start of a project, the review will be conducted by utilizing actual examples from this. For first time participants, examples must be surfaced from the participants' experiences.

2. Discussion will then proceed to understanding the importance of the meaning of C in the term CRA that is community, emphasizing the need for participation and the implications of implementing CRA through a participatory process.

3. The importance of carrying out CRAs and its various purposes will follow. The facilitator will remind participants of these uses during the discussion and workshop of the different tools.

4. A thorough discussion will be conducted for each method or tool and a group workshop will follow after each tool to check that each participant understands what the tool is for and is capable of accomplishing it. The whole exercise need not be finished during the trainings as soon as the facilitator can gauge the sufficient understanding

by participants. Each group will be encouraged to report their accomplishments and the facilitator will urge the other groups to analyse and give their feedback on the reports. The facilitator will also give comments and suggestions on how to improve the work that was presented. Not all workshop groups are required to report for every tool carried out.

3. For the CVA workshop, facilitator must remind participants to identify and list the capacities and vulnerabilities of their community in all categories. They should be able to equally divide their allotted time to discuss all three categories. A list of guide questions will be given to each group but they need not answer all listed questions.

All answers from each group will be written in craft papers and posted on the walls of the classroom for other participants to look at.

4. After initially presenting PAR model, its use and the importance of the tool, workshop groups will be asked to study and analyse their community's vulnerabilities by answering the guide questions prepared specifically for the workshop. The guide questions will be posted on the board and will be discussed in plenary prior to break-up in groups.

In the plenary discussion, the facilitator will ask questions that will provoke responses from the group from the right part of the Progression of Vulnerability table up to the left-most column. After each question is asked and answered, the facilitator then discusses the progression of these vulnerabilities, their relationships, the causes and effects of these complex vulnerabilities and what the exercise seeks to achieve. Workshop groups will then break-up to discuss their community's vulnerabilities in detail using the guide questions on the board.

Guide questions for PAR:

The facilitator will ask the questions per column to the participants and their responses will be written in the appropriate column. Only after completing all columns will the facilitator say that it represents the Progression of Vulnerability table of the PAR model

and explains about this. The listing of capacities and vulnerabilities from the earlier CVA exercise may be used to identify the vulnerabilities that may be written in each column.

a. The first question to ask is about the worst disaster that the community experienced. The facilitator will ask what hazard caused a particular disaster and will write the response in the right-most column of the matrix. Example – typhoon or Typhoon Pedring.

b. Second question for the second column from the right would be: What were the effects of the disaster on the lives, livelihoods, properties, and overall way of life in the community.

Example: What were the damages caused by Typhoon Pedring in Benguet? (i.e. 5 people died, almost all vegetable gardens were washed out, some (please identify) barangays and towns were isolated for days, some (identify) major roads were destroyed, this percentage of houses were completely or severely damaged (put numbers), many areas were affected by landslides, this much number of people were afflicted with ailments, etc.

c. On the 3rd column from the right is the context within which the people, their properties, and community are vulnerable to disaster risk.

Questions to ask:

- Describe the physical location and conditions of the community. (i.e. mountainous, houses are located on the slope or foot of these mountains; some are living very near the banks of the river)

- What are considered as unsafe or dangerous locations where people inhabit?

- Describe types of community members who are living on the slopes of the mountains? What type of houses and housing materials do they have? (i.e. poor families, with houses made of light materials)

- What are the main types and secondary forms of livelihoods of the people and are these affected by hazards? (i.e. vegetable gardening, traders, that is affected by strong typhoons or incessant rains, frost)

- Are there measures to help them prepare for a hazard? Does the community have EWS? (i.e. evacuation plan, evacuation centres)
- Do they have an active BDRRMC?

d. On the fourth column from the right, the participants will be asked what they think are the immediate causes why there are unsafe conditions, why people are driven to such conditions.

- Why do people live on the slopes or on the foot of the mountains? (i.e. they have nowhere else to go, more and more parts of the mountains are being claimed by owners of large corporations, they have to move higher to settle, population keeps growing.)

- Why is vegetable garden farming their main source of livelihood? (i.e. market forces, tourists in Baguio City require these types of vegetables, and many traders buy these from them.)

- Why are their houses made of light materials? (i.e. prices of building materials have gone so high they cannot afford to buy them, frequent typhoons that destroy what they have and keeps them from saving money to buy better and stronger materials.)

- Why are roads easily damaged? (i.e. corruption, the budget for road construction is not spent fully due to corrupt practices; DRR is not considered in the planning and construction of these roads.)

- Why is there no BDRRMC, or why aren't the BDRRMC active? Why is there no EWS or evacuation plan? (i.e. DRR and disaster preparedness in not a priority of the local government, BDRRMC does not have the capability to implement DRR.)

- Why do landslides happen frequently? (i.e. wide scale logging, changes in land use plans.)

- What causes the river to overflow easily? And why is there a decreasing fish catch from these rivers? (i.e. highly silted because of soil erosion from the vegetable gardens upland, rain flow brings with it chemicals from pesticide sprays down to the rivers.)

e. On the left-most column of the table, participants will be asked to put what they think

are the root causes of their community being situated in unsafe and dangerous locations. Refer to the root causes of the vulnerabilities listed in the previous columns.

- What are the reasons and motivations that logging permits continue to be approved despite the log ban? Or mining permits continue to be approved despite the resistance of host communities? (i.e. profit, and more profit including under the table deals from corporations or individuals in the government.)

- Why are the perpetrators not arrested while the protesters get arrested instead?

- Why can't the government prioritize basic services for the poor (majority), over debt servicing or military spending in its national budget?

5. After all questions have been answered, the facilitator will sum up the discussion by showing the cause and effects that will show that disasters are indeed a product of two forces, the trigger event that is the hazard and the various layers of vulnerabilities that magnify its effects. The discussion on progression of vulnerability will close with the statement that unless the roots of vulnerabilities are addressed, disasters will continue to happen.

6. The second part of the PAR model is the Progression of Safety which simply means that when the pressures of vulnerabilities cause disaster, the community must do something to release these pressures by doing DRR. The same process as No. 5 will be done to be able to identify RRMs in every column to reduce the vulnerabilities of hazard-prone and poor communities. The list of capacities in the CVA workshop will also be referred to and used to fill in answers in each column.

After completing the tables, the workshop groups will report and present their outputs for comments by the facilitator and the other participants.

Closing the session:

In closing the session, the discussion will focus on the right attitude towards the conduct of CRAs, towards the information generated and results, and towards its purpose to reduce risks in the community. Using an example from the workshop groups, the plenary will discuss what they think should be done to develop their community to become resilient.

Suggestions will be listed on the board and the facilitator will group each response into activities that are doable at the community level, doable for a year or less than a year, and actions that will require longer period of time, budget, and special skills to implement.

Normally hazard-prone communities will immediately identify the need to develop their contingency plan (CP) and other mitigation projects such as tree/mangrove planting or gabions. The subsequent topics in this module will help in the development of a CP. The discussion should end with the facilitator showing them that the whole picture generated by the step by step tools of analysis they went through requires more than agreeing to develop their CP. The facilitator should help them look at the larger picture and the possibilities that they can do to achieve them.

Length of the session: 1. 5 days

Materials needed:
- Craft papers
- Marker pens
- Masking tape
- Scissors
- Colored pens and pencils
- Pencils
- Printed copies of Guide Questions
- Legend for mapping drawn on cartolina paper
- Examples of each tool drawn on cartolina paper

References:
1. Anderson, Mary and P. Woodrow, Capacities and Vulnerabilities Analysis, 1993.
2. Dulce, Celso B. Jr., Avian Influenza Rapid Assessment Tool, CARE Philippines, 31 January 2006
3. Guidelines in Mapping Exercise, CNDR-CARE Vietnam 2006
4. Manwal sa Pagsasanay ng Disaster Preparedness, CARE-CNDR-WB Project, 2006.
5. Hazard, Risk and Vulnerability Analysis Toolkit, British Columbia, January 2004.
6. Victoria, Lorna. Kahandaan, katatagan at kaunlaran ng komunidad: Gabay sa pagsasanay sa disaster management. Center for Disaster Preparedness, undated material.
7. Vulnerability and Capacity Assessment, DMC-32, Asian Preparedness Center, November 2005 (handout)
8. The Crunch Model (Pressure and Release Model), At Risk 2nd Edition, Natural Hazards, People's Vulnerability and Disasters. Ben Wisner, Piers Blaikie, Terry Cannon and Ian Davis.
9. Climate Change and Climate Change Adaptation Session, ASCEND Module, 2010-2011
10. Tools for Community Risk Assessment: how to integrate climate change adaptation and ecosystem management and restoration, Partners for Resilience Philippines, June 2012 (unpublished manuscript).
11. Safe, Resilient Communities: The ACCORD Model, Quezon City, Philippines; ACCORD, Inc. 2011

Session 2. Disaster Risk Reduction and Management Structures

LEARNING OBJECTIVES:

After the session, the participants are expected to be able to:
Explain the importance of DRRMC as an organization;

1. Understand and explain the different DRRMC structures particularly the BDRRMC, its committees and duties and delegation of tasks and responsibilities to its members; and
2. Compare and illustrate the relation and principles of work between MDRRMC and BDRRMC.

KEY MESSAGES

1. **Disaster risk reduction and management council (DRRMC)**

A DRRMC is the primary structure in the community that deals with issues concerning disaster risk reduction. Setting up of the DRRMC is based on Republic Act 10121 or the Philippine Disaster Risk Reduction and Management Act. A DRRMC has a key role in DRR work, so its members should know and understand their duties and responsibilities to the community.

Although it is an important and decisive organization, local DRRMC structures in some communities are only created for the sake of having one; they do not understand the weight of its purpose. For the DRRMC to be effective, officials should be familiar with their roles and the community should have strong support and participation.

1.1**. Legal basis**

Policies that require the formation of the Barangay Disaster Coordinating Council (BDCC) are the following:

- DILG Manual of 1977

States that the BDCC needs to be created and institutionalized to give protection to the lives and properties of the community against all kinds of emergencies.

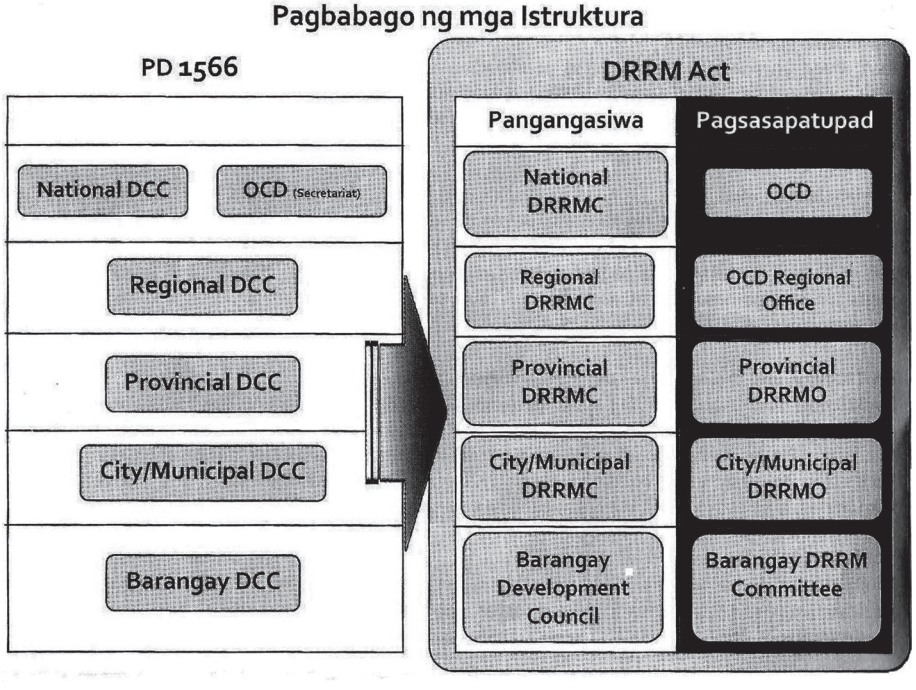
- **Presidential Decree 1566** or the **Strengthening the Philippine Disaster Control, Capability and Establishing the National Program on Community Disaster Preparedness (PD 1566)**

Institutionalizes the formation of the National Disaster Coordinating Council (NDCC) and its counterpart in the regional and local government levels. Three branches will be formed at the local government: the Metropolitan Disaster Coordinating Council, the Provincial Disaster Coordinating Council, and the City or Municipal Disaster Coordinating Council.

- **Republic Act 10121 or the Philippine Disaster Risk Reduction and Management Act (DRRM Act)**
  It is the policy that sets up the new structure and framework for addressing disasters, drawing attention to the shift from disaster response to disaster risk reduction. This was approved on May 27, 2010 and replaced PD 1566 that was signed on June 11, 1978.

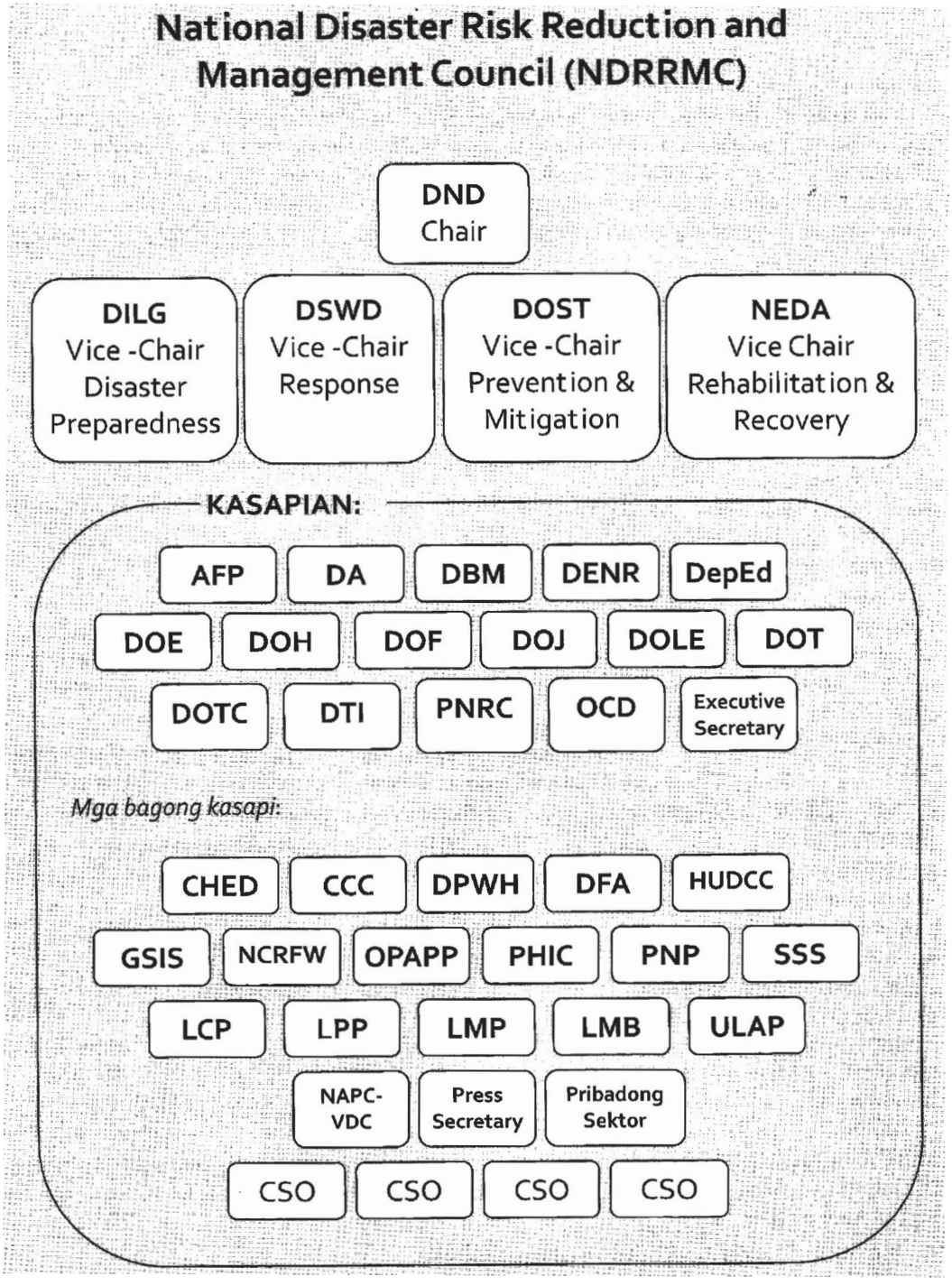
  The DRRM Act empowers the local government units by providing for the separation of management and implementation of DRRM. It also widens the membership of the DRRMC in different levels with the inclusion of CSOs and the private sector. (*Refer to the diagram below*)

1.2 Because of the new policy, the DRRMC structure also changed. Illustrated below is the comparison between the structure of the DCC and DRRMC based on PD 1566 and the DRRM Act:



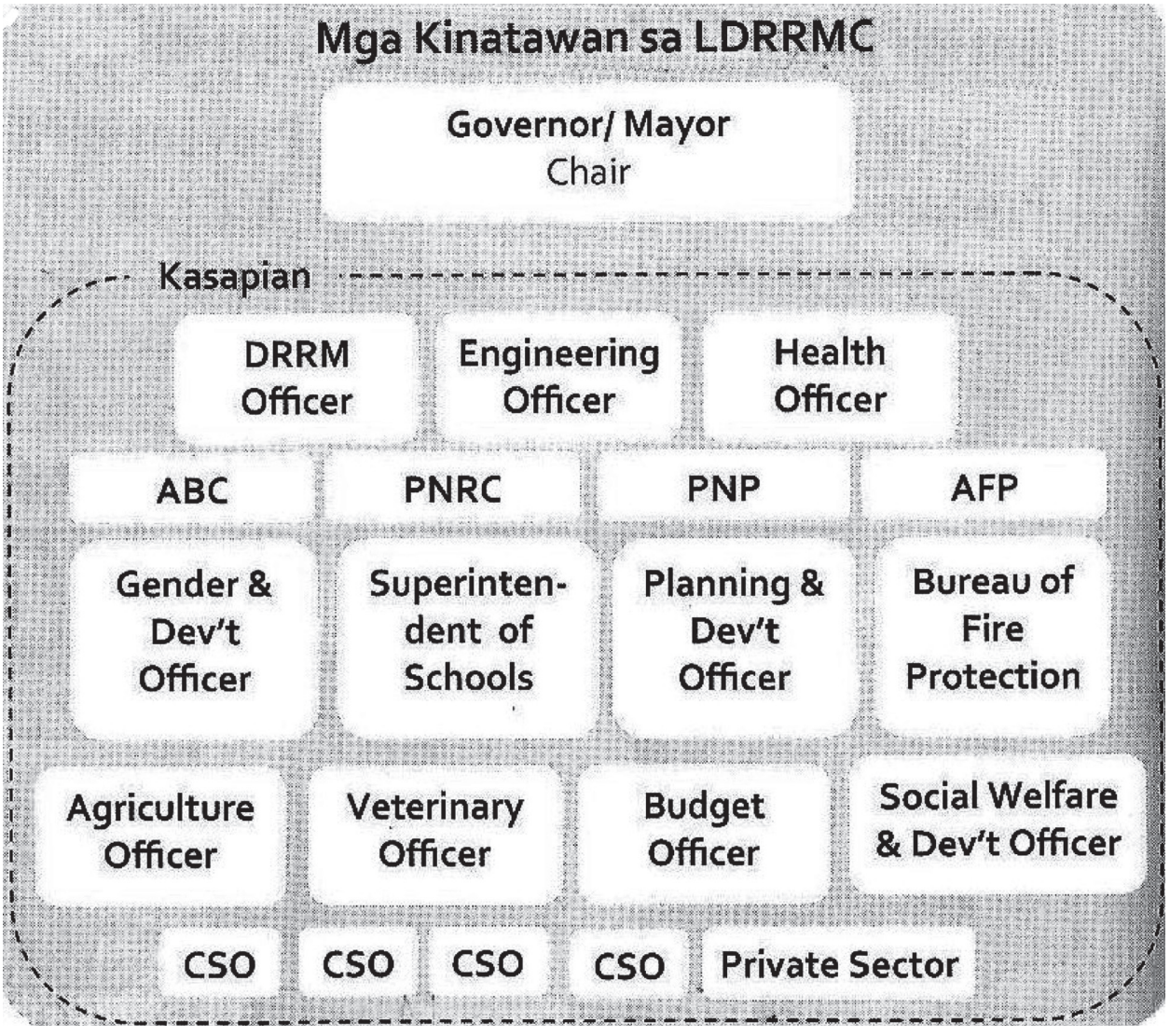
The National Disaster Risk Reduction and Management Council (NDRRMC) consist of the Chair, the highest officials from different government agencies, and representatives from different sectors.

Illustrated below is the structure of DRRMC at the national level:



2. DRRMC STRUCTURE AND THE FORMATION OF THE LOCAL DISASTER RISK REDUCTION AND MANAGEMENT OFFICES (LDRRMO)

The DRRM Act states the formation of Local DRRM Councils (LDRRMCs) that manage DRRM. These are established in the provinces, cities and municipalities. In the barangay, this is lodged under the Barangay Development Council (BDC). The LDRRMCs consist of the following:



Implementation of the Local DRRM Plan is however taken on by the Local DRRM Office or LDRRMO. The LDRRMO takes charge of the direction, development, implementation and coordination of DRRM programs in their geographical scope – province, city, and municipality. In the barangay, the Barangay DRRM Committee takes on the said functions as a regular committee of the BDC. The LDRRMO and BDRRMC are led by a DRRM Officer who is assisted by three other staff.

3. **MUNICIPAL DISASTER RISK REDUCTION AND MANAGEMENT COUNCIL (MDRRMC)**

- It is important to know the tasks of the MDRRMC and its relation to the BDRRMC for them to efficiently coordinate and assist each other during times of emergency.
- It is important for the BDRRMC to coordinate with the MDRRMC especially during the annual review and updating (if needed) of the Contingency Plan.

Tasks of the MDRRMC

- Construct a Disaster Operations Centre or DOC in times of disasters.
- Enforce the Provincial Disaster Risk Reduction and Management Council or PDRRMC policy in the whole municipality.
- Advice and educate the BDRRMC about disaster risk management.
- If needed, give recommendations to the PDRRMC.

Other Points Regarding DRRMC

- The duties of the DRRMC cover the period before, during, and after an emergency. The local DRRMC will be in charge of disaster preparedness, response and recovery according to the following criteria:
    - BDC – if only one barangay is affected
    - City/Municipal DRRMC – if 2 or more barangays are affected
    - Provincial DRRMC – if 2 or more municipalities/cities are affected
    - Regional DRRMC – if 2 or more provinces are affected
    - National DRRMC – if 2 or more regions are affected
- There is allotted funds in municipalities for disaster risk reduction activities.
- Every member of the DRRMC should have knowledge regarding the policies, system, duties and responsibilities of the DRRMC.
- It is every community's right to be safe during emergencies.

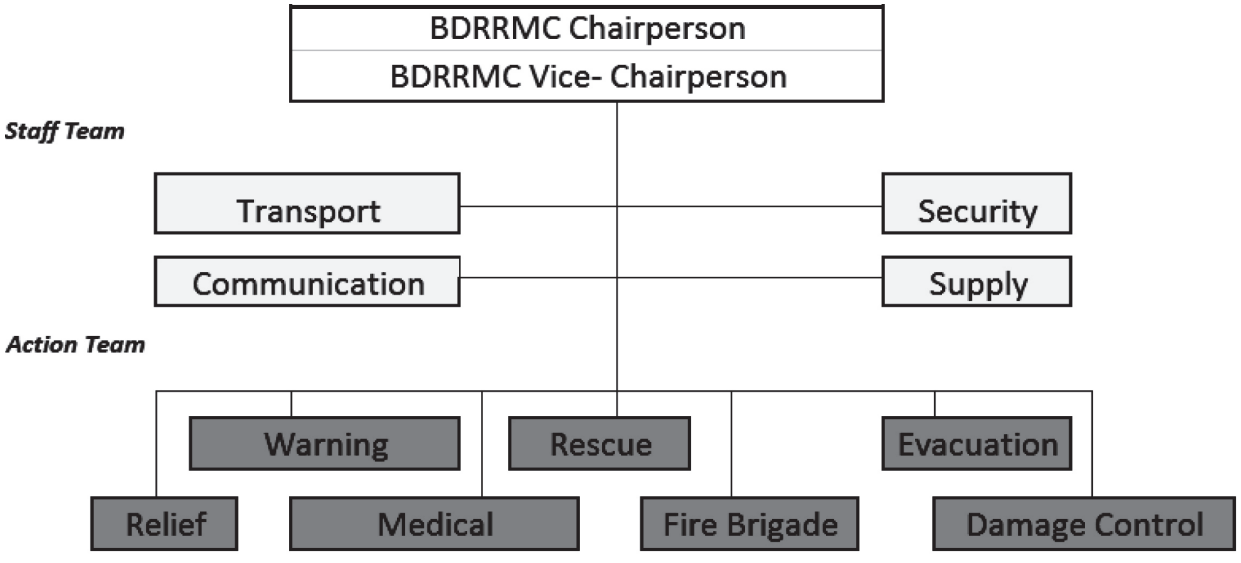
4. BARANGAY DISASTER RISK REDUCTION AND MANAGEMENT COMMITTEE (BDRRMC)

- Section number 25 of the DRRM Act states that the BDRRMC is a regular committee under the Barangay Development Council or BDC, so that its tasks will be part of the barangay development.
- The Barangay Chairman must ensure the participation of at least two civil society organizations (CSOs) from the active community organizations that represent the most vulnerable and marginalized groups in the barangay.
- The BDRRMC consists of the most qualified members of the community starting from the Barangay Council and regular members of the community who have the capacity, trained, or have experience and particular expertise, for the protection and safety of the community.
- Membership of one person in more than one committee must be avoided to be able to devote time to a particular committee. Multiple memberships lead to poor execution of duties.

Tasks and Responsibilities of the BDRRMC

The tasks and responsibilities of the members of the BDRRMC are stated in the local DRRM plan. Its committees have different tasks during emergencies. For them to be systematic, regular committee meetings must be scheduled and systematic guidelines must be created

Organizational Structure of the BDRRMC



The action and staff services serve as the BDRRMC's major committees. Each committee has 5 to 10 members or more, depending on the size of the barangay.

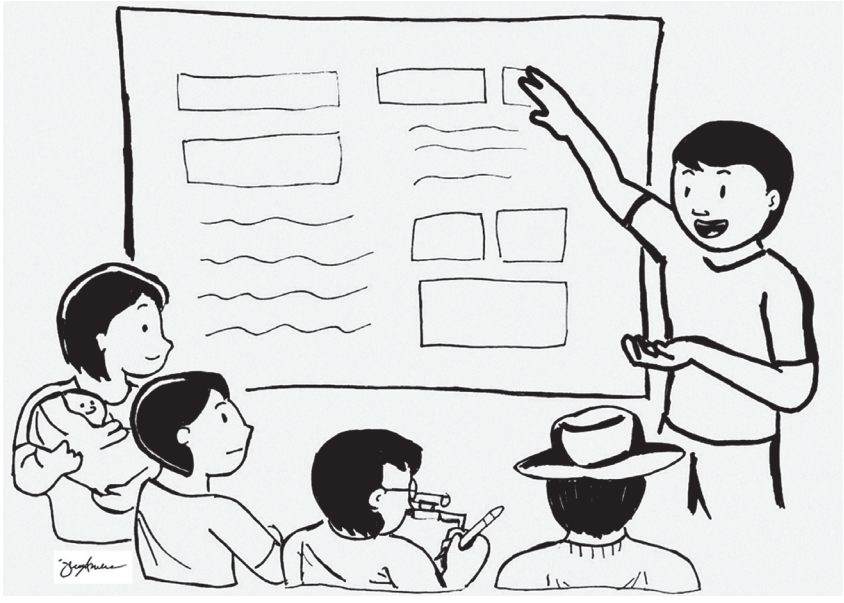
The following compose the Action Services:

- Warning Service
- Rescue Service
- Evacuation Service
- Disaster Relief Service
- Medical Service
- Fire Brigade Service – the existence of this committee depends on the situation of the community. Not all BDRRMCs have this type of committee.
- Damage Control Service

The Staff or Support Service is created to give support to the Action Service. The following are the Staff Services:

- Security Service
- Supply Service

- Transportation Service
- Communications Service



Aside from the members of these committees, volunteers are highly encouraged. There is need for help and it would be much better to have as many people register as volunteers of the BDRRMC. Volunteers are not only needed during disasters but also before and after the disaster. Hence, it is important that members and volunteers undergo DRRM trainings.

Reviewing the BDRRMC structure is not to measure the effectiveness of the current leadership and members of the committee. It is also not because of getting back at them for the things that the members may or may have not done. The review is intended to clarify their tasks and discuss how they could effectively perform these. It is also the opportunity to explain to the community the duties and responsibilities of the BDRRMC and give them the chance to be active participants in DRR activities.

Methodology and Flow

1. Review the current composition of the BDRRMC in the communities. Be familiar with the committees and the corresponding duties that they are familiar with, the members, and their current activities. After tackling the committees of the BDRRMC, create groups with ten members each. Every group will randomly pick and discuss a sub-committee. Based on the committee they chose, list down the tasks before, during, and after a disaster. Every group will share its outputs which will then be validated. The facilitator would then discuss the structure of the DRRMC based on the DRRM Act of 2010.

2. Compare the current structure of the BDRRMC from the one described in the DILG Manual. Discuss important parts that need to be clarified in the current system. Emphasize that the structure of the BDRRMC plays an important role.

3. Discuss the main points about DRRMC. Compare the similarities and differences between DRRM and the BDRRMC, particularly the committees and their duties. They have different scopes of geographical area and tasks. But there can be parallel committees that can coordinate for clear support systems during emergencies. The MDRRMC can also

designate a committee that will assist the BDRRMC committees for swift communications and efficient support systems.

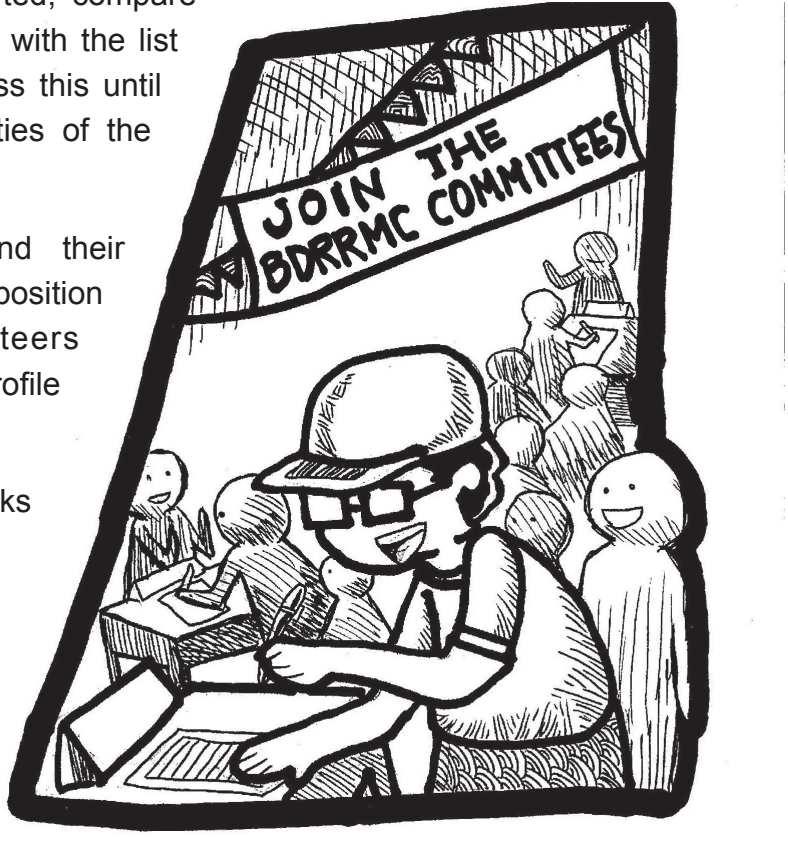
4. Show both the MDRRMC and the BDRRMC structures to aid in determining their differences and similarities.

5. It is important to understand that these structures are created to achieve the same goals. Thus, good coordination between the MDRRMC and BDRRMC will help both to become more effective.

6. After the discussion, identify participants who will volunteer as members of the committees. If the situation permits, ask all the participants to become members of different committees. As new members, they can play an important role especially because they have just completed the training and therefore have the capacity to perform their duties better.

7. Group the participants based on their committees and answer the question: *What do you think should you do if a disaster happens in your area?* The facilitator will help each committee to come up with initial actions to perform their duties well. (i.e. what preparations should they do while there is no impending danger, who should they coordinate with, and other activities that must be done before, during and after a disaster.)

8. After each group has reported, compare the list of duties they have drawn up with the list indicated in the DILG Manual. Discuss this until the participants understand the duties of the BDRRMC and its committees.



9. Review the committees and their responsibilities, and look at the composition of members. List down the new volunteers from the training participants and profile them based on their capacity.

10. Keep in mind that taking on tasks is voluntary. Participants who are not yet members of any committee must choose what committee they want to be part of. The improved list of duties and new list of members will be presented to the barangay council for discussion and final arrangements.

11. In the actual workshop, it is expected that barangay leaders will not readily agree to modify the BDRRMC. While the leaders try to comprehend the importance of including volunteers and non-leaders in the BDRRMC, the participants will agree on the matter that the results of the workshop such as the composition of the BDRRMC are only suggestions for the council to take action on.

Materials Needed

- DILG Manual
- BDRRMC and MDRRMC Structures Visual Aid
- Handout on Tasks of the DRRMC Officials
- Manila paper
- Marker Pens
- Masking Tape

Duration of Session: 2 hours

References:
1. Pagsasanay sa Disaster Preparedness at Contingency Planning: Pagbubuo ng Contingency Plan, ACCORD Project 2007 (Training on Disaster Preparedness and Contingency Planning: How to do the Contingency Plan)
2. Praymer ng Disaster Risk Reduction Management (DRRM) Act ng 2010, Disaster Risk Reduction Network Philippines
3. PD 1566
4. DILG Manual

Session 3. Early Warning System (EWS)

LEARNING OBJECTIVES:

After the session, the participants should be able to:
1. Explain EWS and its components;
2. Discuss warning signals and what these signify; and
3. Set up or improve the particular EWS of the barangay.

Early warning systems are an essential element of disaster preparedness. They help ensure the safety of a community when disasters strike. The workshop results in this session will form the initial design of the EWS and evacuation plan of a community. Usually, the system for issuing warnings culminates with the signal to evacuate. It is therefore important for participants to understand the steps that comprise an effective EWS. Providing examples for this session using the community situation will help participants understand EWS better. It is best that the facilitator is also familiar with and can cite examples from the experiences and situation of the community. Examples can also be cited from the experience of other communities that the participants are familiar with.

KEY MESSAGES

1. What is an EWS?

It is the set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities, and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss. (UNISDR)]

This definition encompasses the range of factors necessary to achieve effective responses to warnings. A people-centred EWS is necessarily composed of four key elements:

- Knowledge of the risks;
- Monitoring, analysis and forecasting of the hazards;
- Communication or dissemination of alerts and warnings; and
- Local capabilities to respond to the warnings received.

The expression “end-to-end warning system” is also used to emphasize that warning systems need to span all steps from hazard detection up to community response. (UNISDR 2007)

It is vital to adapt information coming from the appropriate government agencies to the local situation. The information gathered is combined with indigenous knowledge and capability to be of better use for preparedness.

2. What is community-based EWS?

Community-based EWS is a system of providing warning for a particular hazard based on the observations and indigenous knowledge of the community. It is developed, established and managed by the community for the safety of its residents, but it can also come from a national agency or a combination of both.

3. What are the elements of a community-based EWS?

The key elements of an effective community-based EWS are community risk assessment, monitoring and warning, warning dissemination, and awareness and action.

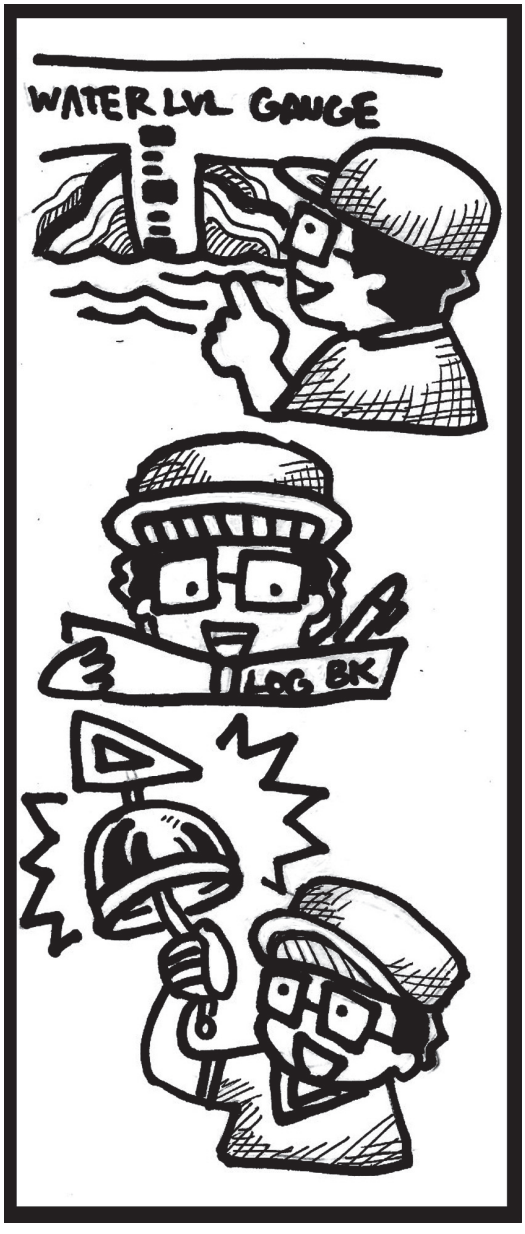
3.1 Community Risk Assessment

In CRA, hazards that are likely to affect a community are identified.

3.2 Monitoring and warning

Monitoring and warning combine both scientific (using information coming from

official monitoring and warning agencies like PAGASA and PHIVOLCS) and indigenous or traditional methods.



To formulate a warning, whether scientific or indigenous, the following process is adhered to:

- Observation;
- Data analysis;
- Prediction; and
- Establishing the warning.

This process is observed by PHIVOLCS and PAGASA as they develop a specific warning. Through monitoring stations, experts observe the hazards. The data gathered by these stations are analysed and form the basis for prediction or the approximation of the effects of the hazard. From the prediction, the warning is established and disseminated to the public.

The same process is followed in the development of indigenous warning systems. For example, fishermen observe the behaviour of the sea and the clouds. Based on their observation, they discuss the weather that they predict and advise other fishermen and communities accordingly. But there are other hazards like landslides that are difficult to predict. Due to this, issuing a warning can be very difficult. The gap is in monitoring the situation in the community due to lack of sufficient information on the hazard, technology, and equipment to monitor this type of hazard. For example, no government agency can give early warning for landslide based on scientific study. It is usually based on local experience or indigenous practices such as the following:

- Drop in water level of river due to presence of artificial dams
- Location of boulders along the slopes are shifting
- Flowing river water becomes muddy
- Presence of ground fracture

- Trees tilt, dwarf, and eventually die
- Monitoring of intensity and duration of rain

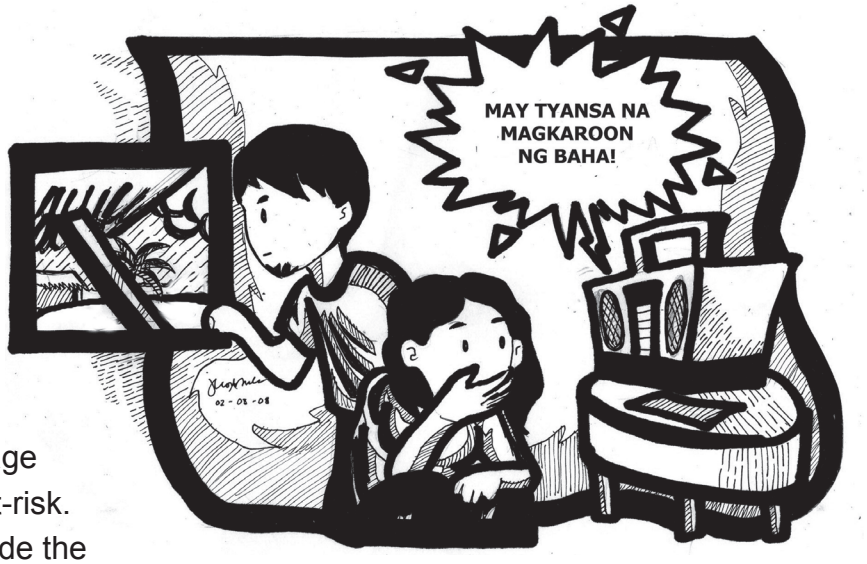
At present, studies are being undertaken in some earthquake-prone barangays to see how they monitor their situation using an earthquake sensor.

3.3 Warning dissemination

Dissemination is the means and system of giving out appropriate warning and safety advisories that people could easily understand. Warning should be simple, easy to recall, and with a clear message on what action to take. People should also realize the consequences if they will not pay attention to the safety measures.

For warning to be effective, the following points should be considered:

- Leadtime, Frequency, and Timing – Leadtime is the period when warning is disseminated while there is sufficient time for people to prepare. The warning should be given out repeatedly (frequency) at the appropriate time (timing).
- Locally-relevant – The warning is effective if it corresponds to the situation of the threatened area of the community. The warning should avoid a general message and instead, should indicate a specific message for the particular areas at-risk. (Example: Residents inside the 6-km permanent danger zone of Mt. Mayon are no longer allowed to return to their communities.)



- Simple and Clear – The warning is effective if it is clear and can be understood by an ordinary person. It has to be simple and with a particular message or warning for those who will be affected by the hazard.
- Locally actionable – The warning should include safety measures so the communities are informed about what actions to take. The safety measures

should contain clear and doable instructions. The warning should clearly state the consequences if the people do not heed the warning.

Awareness and action

Dissemination of a warning should lead to understanding and awareness about the developing situation. Awareness in turn should lead to appropriate action. Many EWS are not effective because the recipients are not able to respond appropriately to the warning.

2. Characteristics of an effective community-based EWS:

- Hazard-specific
- Target group-specific
- Location-specific
- Brief and clear (KISS Rule: “Keep It Short and Simple”)
- Updated so the people are informed and would not panic
- There are specially assigned persons in the community to disseminate the warning (Example: Communication Committee)
- Regular monitoring of the hazard
- Organized and clear dissemination of the warning
- Regular drill to determine whether the EWS is adequate or needs refining
- Regular assessment or review to identify the needed revisions

3. Issues on EWS:

    - The community lacks preparedness to understand the warning and to take the corresponding action. For example, the residents do not understand the meaning of “the typhoon has entered the Philippine Area of Responsibility.” It is also possible that there is no family or community contingency plan based on the warning received which clearly indicates the proper action to take.

    - Late dissemination of forecast that results to late action and not able to prevent heavy damages. This is also the reason why the response takes the form of rescue.

    - Lack or absence of means to acquire information or warning to reach remote areas.

- Use of scientific jargon that ordinary people do not understand.
- People have different understanding of risk based on their experience, knowledge, and socio-economic conditions. This is called people's perception of risk. For the poor, hazards are regular aspect of their life and they do not have the capacity and time to prepare for its adverse effects.
- Because of the difference in their perception of risk, people also have different appreciations for warning. There are times when individuals or the community just ignore warnings because they believe that their area is safe.

- For the community to heed the warning, the credibility of the institution or organization giving the warning should be considered. For example: There are instances when the forecasts of PAGASA do not happen. Many people also do not fully understand the nature of typhoons and the meanings of storm warning signals which are issued by PAGASA. Because of these, people often have misgivings about the warnings from PAGASA.
- Institutions issuing the forecast lack information on indigenous knowledge and practices. It would be better if these were integrated into the warning and safety advisories.
- Lack of institutional mechanism to disseminate the warning or forecast.
- Inadequate data analysis capability
- Warning dissemination in the community is not sustained due to the changes in leadership and lack of public awareness.

The EWS Process:

Observation or Monitoring / Data Analysis → Dissemination of Warning → Awareness / Action → Observation 2 → Monitoring / Data Analysis → Dissemination of Warning → Information / Action…

Methodology and Flow

1. Discussion/Lecture: What is Community-Based EWS?

In giving examples, refer to the discussion on Understanding Hazards (Module 1, Session 3) and give emphasis on the warning signals. Illustrate by explaining the Public Storm Warning Signal (PSWS) of PAGASA.

Public Storm Warning Signal (PSWS) of PAGASA

PSWS *Number* 1
Meteorological Conditions

- A tropical cyclone will affect the locality.
- Winds of 30-60 kph may be expected in at least 36 hours or intermittent rains may be expected within 36 hours. (When the tropical cyclone develops very close to the locality a shorter leadtime of the occurrence of the winds will be specified in the warning bulletin.)

Impact of the Winds

- Twigs and branches of small trees may be broken.
- Some banana plants may be tilted or downed.
- Some houses of very light materials (nipa and cogon) may be partially unroofed.
- Unless this warning signal is upgraded during the entire existence of the tropical cyclone, only very light or no damage at all may be sustained by the exposed communities.
- Rice crops, however, may suffer significant damage when it is in its flowering stage.
-

PSWS *Number* 2
Meteorological Conditions

- A tropical cyclone will affect the locality.
- Winds of greater than 60 kph and up to 100 kph may be expected in at least 24 hours.

Impact of the Winds

- Some coconut trees may be tilted with few others broken.
- Few big trees may be uprooted.
- Many banana plants may be downed.
- Rice and corn may be adversely affected.
- Large number of nipa and cogon houses may be partially or totally unroofed.
- Some old galvanized iron roofing may be peeled off.
- In general, the winds may bring light to moderate damage to the exposed communities.

PSWS *Number* 3
Meteorological Conditions

- A tropical cyclone will affect the locality.
- Winds of greater than 100 kph up to 185 kph may be expected in at least 18 hours.

Impact of the Winds

- Many coconut trees may be broken or destroyed.
- Almost all banana plants may be downed and a large number of trees may be uprooted.
- Rice and corn crops may suffer heavy losses.
- Majority of all nipa and cogon houses may be unroofed or destroyed and there may be considerable damage to structures of light to medium construction.
- There may be widespread disruption of electrical power and communication services.

In general, moderate to heavy damage may be experienced, particularly in the agricultural and industrial sectors.

PSWS *Number* 4
Meteorological Conditions

- A very intense typhoon will affect the locality.
- Very strong winds of more than 185 kph may be expected in at least 12 hours.

Impact of the Winds

- Coconut plantations may suffer extensive damage.
- Many large trees may be uprooted.
- Rice and corn plantations may suffer severe losses.
- Most residential and institutional buildings of mixed materials may be severely damaged.
- Electrical power distribution and communication services may be severely disrupted.

Overall, damage to affected communities can be very heavy.

The criteria for issuing flood warning based on the volume of rain (rainfall intensity) using the protocol of PAGASA may also be discussed. The flood warning system based on the amount of rain indicated by rain gauge is shown below:

Flood Warning	Meaning	Observed volume of rain
Ready	Awareness	Continuous rains of 15mm to 20mm every hour
Get set	Preparedness	Continuous rains of 60mm to 80 mm every 3 hours
Go	Response	Continuous rains of more than 80mm every 3 hours

2. Workshop 1: What is the current early warning system in the community?

Review the existing EWS in the community through a workshop. Ask the participants what their traditional EWS in the barangay is. Discuss whether this meets the requirements of a community-based EWS.

Worksheet 1: Review of Existing CBEWS

Question	Answer
What is the source of information on the hazard?	
Based on your experience, how do you do hazard monitoring? (i.e. how do you monitor the rise in floodwater level?)	
What is the early warning used for each hazard that the community experiences?	
How is the early warning disseminated in the community?	
How do you monitor whether the community does the corresponding action to the warning and who is tasked to do this?	
What are the strengths and weaknesses of the existing warning system?	
What needs to be done to improve it?	

Workshop 2: Drafting the Early Warning System

The EWS is hazard specific. Thus, if there are several hazards affecting the community, the community must determine which hazard is to be prioritized in drafting EWS. The following guide may be used in building the EWS of the community:

Based on the experiences and socio-economic profile of Barangay Tambis 1, the worst case scenario built and agreed upon is:

Strong rains or typhoons causes flash flood, while flooding also results from the overflowing of Lawigan River, Tagbaje Creek, and Katigahan Creek which affects a great portion of the barangay. Anticipated effects are:

- 70% of farm lands will be wiped out
- 90% of roads will be destroyed
- 100% of houses will be affected and properties will be washed out or damaged
- 100% of infrastructures such as drainage canals, barangay hall, church, day care centre, etc. will be affected and possibly damaged
- 90-95% of the population will evacuate
- 5-20% casualty count, those who will decide not to evacuate including persons with disability
- Flooded roads will not be passable isolating the barangay
- Suspension of all classes

The following is an example of a warning signal for flooding.

Worksheet 2: Warning Signal

Warning	Signal	Meaning	Description of the Situation	Appropriate Action
1 Ready	Alarm bell sounds in long intervals	Awareness	Southern Leyte is under public storm warning signal no. 1, or is affected by other weather systems (ITCZ, LPA, monsoons) Rain gauge reading in Malinao is at 80-100mm Rain gauge reading in Tambis1 is 90mm 3-8 hours of heavy rains Flood height in Purok 3 is 1 foot Colour of water in the river turns brown (mud-like)	**BDRRMC:** Continuous monitoring of news from radio and 2-way radio Regular reading of rain gauge and coordination with other barangays where rain gauges are also installed Conduct emergency meeting Make public announcements regarding the situation in the barangay Prepare materials needed by each committee Ensure that the master list, first aid kit, and vehicles are ready **Community:** Ensure that important documents, clothes, food (cooked), money, sleeping mat, blanket, rain coat, and vehicles are ready in case of evacuation Ensure safety of all family members especially the children Ensure that there is enough supply of food for pet and farm animals and move them to a safe area
Warning	**Signal**	**Meaning**	**Description of the Situation**	**Appropriate Action**
2 Get Set	Alarm bell sounds in shorter intervals	Preparedness	The MDRRMC has declared that residents must proceed to designated pick-up points Southern Leyte continues to experience bad weather conditions Rain gauge reading in Tambis 1 is 100-120mm Heavy rains continue to pour and lowest portions of puroks 2 and 3 are already in knee-deep floods Temporary damming (characterized by narrowing of river despite heavy rain fall) are reported from upstream barangays	**BDRRMC**: Continuous coordination with MDRRMC Make a public announcement informing residents to proceed to pick-up points **Community:** Proceed to pick-up points

Warning	Signal	Meaning	Description of the Situation	Appropriate Action
1 360	Alarm bell sounds in long intervals	Awareness	Vehicles that will be used for evacuation are ready Bad weather conditions prevail and flood waters continue to rise Residents in low-lying areas and near the mountains are starting to evacuate because of increased possibility of flash flood and landslide.	**BDRRMC**: Monitors weather conditions, the evacuation process, and situation at the evacuation centre **Community:** Residents are transferred to designated ECs
4 Stand down	Verbal instruction from the Barangay Captain		Warning has been lifted	Residents may return to their respective homes

When the community has decided on an appropriate warning system, ask them if it is an effective warning system and why, based on what they have learned from earlier discussions.

Workshop 3: Warning Dissemination

The following is an example of early warning dissemination plan:

How	When	Who	Remarks
General Assembly	September	Barangay Council and all residents	Attendance of all residents is required to ensure that they understand the early warning system
Monitor PAGASA announcement on the radio	Everyday	All community members	
Public Announcement	When bad weather conditions will most likely affect the community	Barangay Council, Youth Council, BDRRMC Communication Committee	

To ensure that questions on the EWS are clarified, the following information should also be disseminated:

If there are questions regarding the warning signal, contact Brgy. Captain _____ (mobile phone number) or Brgy. Councilor _____ (mobile phone number).

5. Conclude the session by discussing issues on community-based early warning system and always use examples based on their experiences.

Materials needed:

- Warning signals
- Flipcharts
- Questions formed by the training team for evaluative exercises
- Cartolina/ Manila paper
- Marker pens
- Masking tape

Duration of session: 2 hours

References:
1. Asian Disaster Preparedness Center, Disaster Management Course-32
2. Manwal Para sa Pagsasanay sa Disaster Preparedness (Manual on Disaster Preparedness Training), CARE-CNDR-WB Project, 2006
3. PAGASA Public Storm Warning Signals
4. Brgy. Tambis 1 Contingency Plan 2011

Session 4. Evacuation Planning

LEARNING OBJECTIVES:

After the session, participants are expected to be able to:

1. Discuss the stages of evacuation, its processes, and organizing an orderly evacuation.
2. Compare the concepts of evacuation from their own experiences and draw lessons from thereon.
3. Formulate an initial evacuation plan of their barangay or village.

KEY MESSAGES

1. What is evacuation?

An 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. A Community Risk Assessment (CRA) helps to 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 closely linked to a community-based EWS. The EWS serves as signal for people to evacuate before a hazard hits their area and indicates when to go back to their own houses or transfer to a safer location after the hazard.

An evacuation plan must be hazard specific because each hazard has specific characteristics that require corresponding specific actions.

2. **Types and Stages of Evacuation**

Evacuation types vary depending on the needs of different situations:

2.1 PREEMPTIVE EVACUATION – the type of evacuation that is conducted before a disaster happens. Pre-emptive evacuation might be temporary where people can go back after the hazard hits their area (e.g. eruption of Mayon Volcano.) Evacuation can also become permanent if the area will remain risky even after the occurrence of a hazard (e.g. villages near Barangay Guinsaugon were advised to leave the place due to possible recurrence of landslide.)

2.2 RESCUE EVACUATION – short-term evacuation during or immediately after the incidence of a hazard. This type of evacuation is what is usually done in the Philippines due to lack of preparedness. This normally happens when a typhoon or flood occurs in an area where people are encouraged to go to evacuation centres or transfer to safer locations.

2.3 RECONSTRUCTIVE EVACUATION – permanent or long-term evacuation after a disaster. This is done after a disaster when 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 residents of Barangay Paltic and other villages in Dingalan after a massive landslide in 2004; resettlement for the residents of Barangay Guinsaugon, after the whole village was buried due to a strong landslide in 2006)

3**. Stages of Evacuation**

- Warning to prepare for evacuation
- Order to leave the area at risk

- Actual evacuation
- Staying and remaining at the evacuation centre
- Order to return to their community or transfer to a safer location

4. The Evacuation Planning Process

4.1 Review of the CRA

Several data coming from the CRA is important for evacuation planning.

- CRA provides information that will be used for a Risk Ranking exercise. Risk Ranking is a contingency planning activity where hazards are ranked according to likelihood of occurrence and severity of impact. For the hazards that score high in both likelihood and severity, contingency plans are developed. EWS and evacuation plans are components of contingency plans, and therefore hazard-specific also, and guided by the result of the risk ranking exercise.

- Hazard maps provide information on particular areas within the village which are at risk, or have been affected by a disaster in the past and that might still be affected by a hazard. It also shows the areas that will most likely be the first to be affected by the hazard, areas that will be the most affected, and areas that will most likely be least affected.

Hazard maps will also show the households or families who are most at-risk and which of these families will need to be evacuated and prioritized. It also gives details on where to evacuate and other safe locations within the community. Evacuation centres must be situated or constructed in safe locations. Hazard maps help identify the safest and fastest, and alternative routes to take during evacuation.

- CRA provides information on the people and resources that are at-risk. Vulnerable sectors of the community such as youth, senior citizens, women, PWD, etc. are being

recognized through CRA. Indigenous or local practices are also identified through CRA. These information are important in creating an evacuation plan.

4.2 Identification of safe location

Using the hazard map, all the safe locations identified in the community will be marked and, if needed, the pick-up points. Pick-up points are pre-identified and accessible areas within the community where families converge during evacuation before proceeding or being transported to the ECs.

A sketch of the primary and alternative routes to the identified safe areas must also be drawn on the map.

Hazard maps are helpful in identifying possible evacuation sites. It is better to come up with an alternative site for evacuation. Having a back-up plan is essential in case the original evacuation site becomes at-risk or exposed to danger in the actual situation.

The safest location with the shortest route to the evacuation site will be identified. Make certain that said route is secured. Not all short routes are safe. Again, it is better to come up with an alternative route for evacuation as a back-up plan in case the first identified location turns out to be unsafe in the actual state.

It is also important to identify a safe area for work and house animals and other properties. Securing them is essential but it will not be sanitary to house them inside the evacuation centre. This could limit the space in the evacuation centre, and worse, it could be a source of diseases among evacuees. It is best to also identify safe locations for animals and other livelihood implements like boats, nets, and others when looking for possible evacuation centres.

4.3 Activating the warning system

For the evacuation plan to be more effective, hazard-specific warnings must be put in place. A hazard-specific EWS ensures that the community understands the meaning of

each warning. A warning will never be effective if it is generic or if one type of warning is given to all kinds of hazard. For example, people will not recognize whether the warning was given for flood, landslide, or tsunami if the warning is not hazard-specific. This will further result to wrong actions or response (a safe location for tsunami may not be suitable or safe for landslide).

In formulating a warning system, there is a need to refer back to the results of the hazard assessment conducted. From there, an EWS will be created based on the nature and behaviour of the hazard that the community observed. Lead time is essential in generating EWS for communities because it tells them how much time is left to prepare for evacuation or to evacuate safely.

For existing warning systems, they need to be regularly reviewed and updated according to the community's experiences in maintaining the system and the concepts obtained from the training. Creating a new EWS will not be beneficial if there is an existing one. Changing an existing EWS might confuse the people or community, especially if it is totally different from what they are used to. The system need not be complicated. EWS must be simple for everyone to understand easily.

REMEMBER*: An EWS need not be similar to the example/s provided in the training. An EWS depends on the particular situation of an area. An EWS, such as protocol for floods, may have three phases:* ***Ready, Get set,*** *and* ***Go.*** *For hazards with shorter leadtime, this protocol may be revised to consist of two phases only:* ***Ready/get set*** *and* ***Go.*** *Also, the first warning can immediately lead to the next warning depending on how fast the condition changes.*

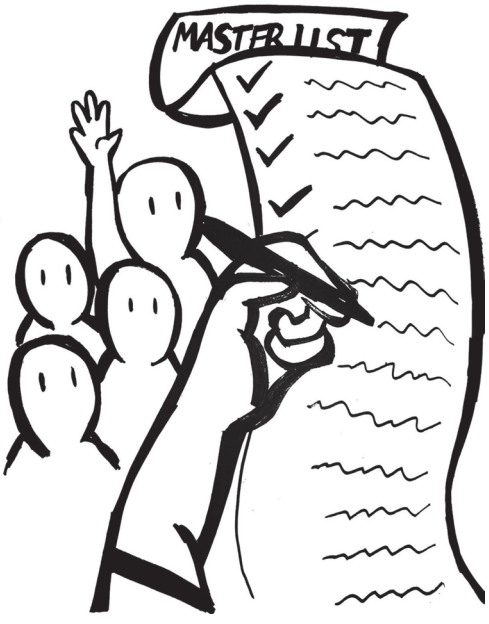
Materials used for warning may also differ, according to what is readily available in the community. Any device to be used should have the quality of being heard throughout the area even during heavy rains and during a storm.

4.4 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.

4.5 Ensuring organized or orderly evacuation

If using a vehicle for evacuation, the members of the community should be organized into groups and assigned with specific schedules. If needed, especially in bigger communities, identify pickup points where groups of households will converge. Prepare a list of families assigned to specific pick-up points to determine those who reached the evacuation centre and those yet to arrive. In some cases, there is no need for pick-up points because evacuees go directly to safe locations.

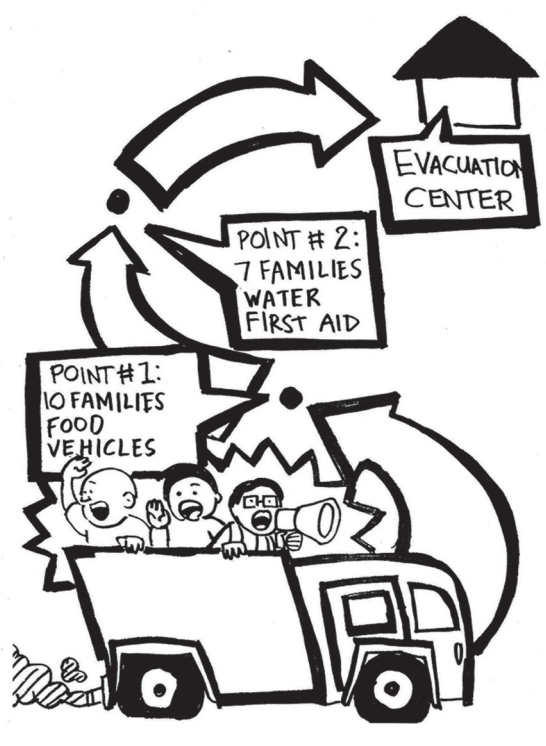


4.6 Preparing supplies needed for evacuation

Prepare requirements for evacuation such as vehicles, road signs, communication equipment and other supplies such as gasoline, canned food, water and medicines.

4.7 Reviewing the structure of the BDRRMC

The organization, composition, and distribution of tasks and responsibilities of the BDRRMC should be reviewed. Those responsible for managing evacuation centres should be aware of their duties.



DUTIES OF BDRRMC IN EVACUATION

Before evacuation:

- Prepare an evacuation plan
- Conduct training, education activities, and drill exercises
- Prepare the logistical requirements for evacuation
- Complete the master list of the community
- Conduct networking, coordination, and resource generation activities for evacuation

During evacuation:

- Manage the logistical needs for evacuation.
- Give the order to evacuate.
- Ensure orderly evacuation.

- Assign marshals during evacuation.
- Conduct a headcount by putting a mark in the master list of successful evacuees and those not able to reach the evacuation centre yet.
- Conduct search and rescue.

While at the evacuation centre

- Supervise activities of groups on health, food, cleanliness or sanitation, security, and information (refer to BDRRMC structure)
- Manage relief operations
- Conduct networking, public information, and resource generation

After evacuation

- Give the order to the evacuees to return, ensuring that it is safe to do so. Clean the evacuation centre with the help of the evacuees
- Help families in returning to their own houses
- Ensure safety in returning to the community
- Repair damaged facilities in the EC before leaving.

Methodology and flow

1. The primary method to be used for this session is through discussion and workshop. Several materials and examples will be used. These will be taken from the earlier workshop results of different sessions. These will mainly be used to source examples and become the basis for upcoming workshops.
2. For Key Message #1, show an example of a hazard that requires evacuation such as severe flooding, strong typhoons, and fire. Gather information of their evacuation experiences.
3. For Key Message #2, show photos of situations which will help to effectively illustrate the phases of evacuation
   It is important to review the past experiences of participants with regard to evacuation. Being a part of a DRR project means that their community is vulnerable to disasters and they have had real experiences with evacuation. Conducting a review on their experiences is a good start in knowing and

identifying their best and worst practices in evacuation. The facilitator must take note of varying interpretations of evacuation because of their specific experiences, perceptions of risk, available resources of the community, and culture of evacuation. (i.e. lack of evacuation centres which results to people staying with their relatives)

The following can serve as a guide in reviewing their experiences:

- Group participants into two or depending on what is appropriate.
- Each group will create a poster that will illustrate how they evacuated in the past.
- Posters have to be made in 10 minutes
- Each group is allotted 20 minutes to discuss the poster created by each group
- In presenting, make sure that the best and worst evacuation practices are identified and discussed.

4. For Key message #4, under *Activating the EWS*, a sample EWS will be shown or the output from the earlier session on EWS.

Evacuation Planning Workshop

Based on the correct process of evacuation planning, participants will try to develop their own evacuation plan.

Process:

1. Group participants into 5 or depending on the total number
2. Each group will be given different tasks referring to the list below. In plenary, each group will report on the result of their discussion and then all participants will go back to their grouping to try to formulate the evacuation plan
3. Provide participants a sample of an evacuation plan to serve as their guide.
4. Each group will be given 15 minutes to discuss and will allot 20 minutes for the creation of their evacuation plan.
5. Division of groups on the phases of evacuation plan:

Group 1: Review of the CRA.
Group 2: Review of the community hazard map. Identify safe locations for evacuation and secured routes to classify safe location for pets, animals, and other resources.
Group 3: Set a warning system.*
Group 4: Prepare a master list of evacuees. Ensure an orderly evacuation and identification of resources to be needed in preparation for evacuation.
Group 5: Review the structure, composition, and delegation of tasks and responsibilities of the BDRRMC.

**For Group 3, refer to the finished EWS worksheet- warning signal in the previous session.*

In formulating an evacuation plan, interaction and participation of representatives from government agencies like DepEd and LGU will be helpful. It is the opportunity to explain their possible roles in times of disaster and for participants to integrate this in their activities.

Duration of the session: 2 hours

Materials needed

- Copy of an Evacuation Plan (example for the evacuation planning workshop to be conducted)
- List of materials needed for each Worksheet
- Photos of hazard which requires/ demands for evacuation (severe flooding, strong typhoons, fire) and hazards that require no evacuation (infestation, light storms/typhoons)
- Manila paper or Cartolina
- Markers pens, crayons
- Visual example of a warning system
- Visual example of a checklist
- Handouts on the responsibilities of BDRRMC in evacuation

References:
1. Project documents, Youth Participation in Emergency Response and Disaster Preparedness Project, CARE-CNDR, supported by the Small Grants Division of the World Bank, 2005-2006.
2. Project documents, Disaster Preparedness Project in Dingalan, Aurora supported by the Corporate Network for Disaster Response (CNDR)

Session 5. Evacuation Centre Management (ECM)

LEARNING OBJECTIVES:

After the session, the participants must be able to:

1. Discuss proper management of an evacuation centre (EC) and compare this with their actual experiences;
2. Identify community members who will be part of each committee for ECM; and
3. Discuss anticipated difficulties and challenges in managing an EC and identify ways to resolve each.

KEY MESSAGES

1. **Evacuation Centre Management (ECM)**

ECM is the effective, appropriate, and proper management of an EC in which participation of evacuees and other community members is ensured.

A set of criteria must be considered in choosing an evacuation centre:

- Water source is available
- As much as possible, the EC is near the community and there is a safe route from the community to the EC.
- The EC is on stable land and there is a properly functioning drainage system.
- There is enough space for people, communal services and others.
- Safe
- There is a designated area for livestock and farm animals. Based on experience, schools in the communities often serve as the EC for the affected

population who have to evacuate. According to the DepED Educational Facilities Manual 2010, classrooms must be open for use by people as EC or temporary shelter during a disaster. However, it is important to note that schools are not always safe or in safe locations. (i.e. a school that is not flooded cannot be considered safe if it is isolated and not accessible to those who would render rescue and other services). Because of this and due to the lack of number of schools, some of those affected evacuate to houses of relatives and in other areas not affected by the disaster.

2. **ECM Tasks**

To ensure proper management of an EC, the community must perform the following tasks and responsibilities:

- Prior to a hazard (as part of evacuation planning):
  - In addition to identification of a safe evacuation site for the community, also ensure the following:
    - Issues on land rights or ownership (Is the land owned by the government or by private entities?)
    - Site assessment (Criteria on EC site selection cited above must be followed)
    - Site planning (Plan on where structures will be built; area designation for each purok/sitio, kitchen, laundry, bath, toilet, etc.)

  - 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:
  - 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 houses.
  - 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.
  -

3. COMMITTEES AND THEIR TASKS AND RESPONSIBILITIES DURING EVACUATION

ECM is the primary responsibility of the evacuation committee based on the structure of the BDRRMC.

The manual of the Department of Interior and Local Government (DILG) indicates that the BDRRMC shall be composed of seven (7) Action Committees and four (4) Staff

Committees. The responsibilities of each committee should be discussed to ensure common understanding among the community members.

The stated responsibilities and tasks of each committee may be modified to become appropriate or relevant to the situation in the EC. 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 the recommended tasks of the committees. Other items may be added or removed depending on the situation and needs in the EC and of the evacuees.

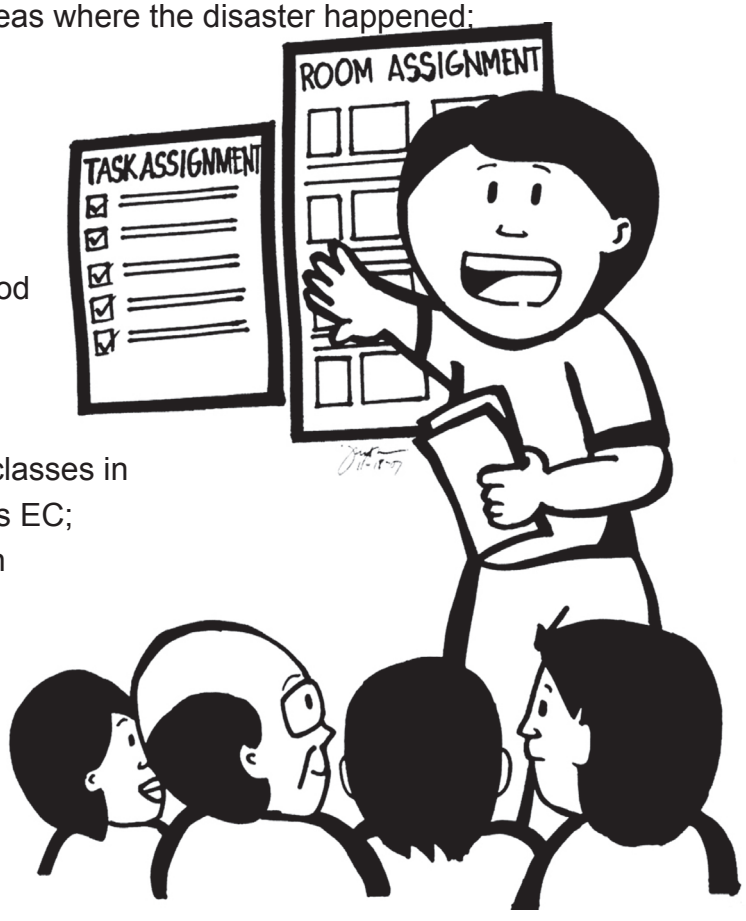
ACTION COMMITTEES

- Relief Committee
    - Manages relief distribution;
    - Ensures that needs of children, elderly, persons with disability, pregnant, and lactating women are attended to;
    - Manages the kitchen;
    - Ensures proper stockpiling of supplies; and
    - Coordinates with various agencies that provide relief assistance.

- Medical Committee
    - Ensures cleanliness and over-all order;
    - Provides first-aid and medical assistance;
    - Creates a referral system and refers/ endorses patients to the hospital if needed;
    - Prepares herbal medicine;
    - Prepares and stockpiles needed medicine; and
    - Coordinates with local health agencies.

- Warning Committee
    - Ensures that everyone is informed of and understands the EWS or the warning signals;
    - Ensures that there are warning devices that can be used; and
    - Coordinates with the local government regarding dissemination of information and warning.

- Rescue Committee
    - Conducts search and rescue operations for people who have been trapped in particular areas where the disaster happened;
    - Organises and trains rescue team members; and
    - Ensures that there is a complete set of rescue equipment that is in good working condition.



- Evacuation Committee
    - Ensures continuity of classes in schools which serve as EC;
    - Assigns a point person responsible for each room in the EC;
    - In charge of conducting orientation on the EC and physical fitness activities such as exercises and games;
    - Supervises conduct of seminars, issue discussions, and other education activities;
    - Lists evacuees entering and leaving the EC;
    - Helps evacuees locate missing relatives;
    - Coordinates with other organisations; and
    - Sources funds and other resources needed.

- Fire Brigade Committee
    - Organises fire-fighting team;
    - Organises trainings for the fire-fighting team;
    - Gives orders in case of fire emergencies; and
    - Leads fire suppression in case of fire at the EC.
- Damage Control Committee
    - Conducts disaster monitoring and provides updates;
    - Supports in identifying and addressing emergency situations;

- Identifies status of damaged infrastructure and other impacts of the disaster on the barangay.

STAFF COMMITTEES

- Security Committee
  - Ensures safety and security of the community;
  - Guards the EC;
  - Has the authority to do mediation and negotiation;
  - Monitors the situation in the community while the residents are in evacuation

- Supply Committee
  - Ensures that there is enough food and other supplies needed;
  - Looks for sources of needed supplies and receives goods being delivered; and
  - Coordinates with the relief team.

- Transportation Committee
  - Ensures that transportation means are available for use by the evacuees in going to the evacuation centre, and back to their respective communities after the emergency or to a different EC.

- Communications Committee
  - Receives all communications regarding weather conditions and updates on the disaster; and
  - Provides correct information to everyone.

Methodology and Flow

1. As an introduction, the facilitator may start by asking participants about their experiences in evacuation. It is imperative to remind them that it is their right and

an obligation of the state to assign safe and appropriate ECs in their community. Discuss some of the services they should expect from the government and compare these services with those being provided by the local and national governments. Discuss steps they can undertake to be able to access services not being provided to their community.

2. Keep in mind that ECs may have different set-ups depending on the situation and culture of the community. It is always important to discuss the need for and worth of an effective and proper ECM.

3. Discussion through workshops is the primary method for this session. Visual aids such as photos that illustrate examples will facilitate easier and better understanding.

   For Key Message 1 – Show photos of evacuation sites to illustrate whether they conformed to the criteria for selecting an ideal EC and the appropriateness of the criteria.

   For Key Message 2 – Visual aid showing a checklist of tasks for ECM.

   For Key Message 3, Workshop 1:
   a) Group the participants into five and assign two committees to each group (based on DILG Manual).
   b) Each group will enumerate functions of each committee based on their experiences and own ideas.
   c) Allot 15 minutes for this workshop.
   d) Each group will present its output which will be compared with the actual roles of the committees.

   Workshop 2: Initial formation of committees and identification of responsibilities
   a) For each of the identified committees and their corresponding tasks, the participants will identify community members who the capacity to perform each task.
   b) Encourage community members to volunteer as committee members.

4. In processing the discussions, ensure that anticipated problems will surface as well as initial ideas on how these may be resolved.

Materials needed

- Photos of evacuation sites that observe the criteria and guidelines and those that do not
- Visual aid of a sample checklist of tasks for evacuation centre management
- Photos that illustrate tasks and responsibilities of each committee
- Manila paper
- Marker pens

Length of session: 2 hours

References:
1. Department of Interior and Local Government Manual, 1977. (Electronic copy)
2. Contingency Plan of Tambis 1, St. Bernard, Southern Leyte, 2008.
3. DepED Educational Facilities Manual, 2010.

Session 6. Public Awareness (PA) and Advocacy

LEARNING OBJECTIVES:

At the end of the session, participants are expected to:

1. Discuss the concepts of PA and advocacy and explain the difference between the two concepts.
2. Relate the importance of conducting PA and advocacy to the overall DRR work.

KEY MESSAGES

What is Public Awareness in DRR?

1. **Public awareness (PA)**

Public awareness is the extent of common knowledge about disaster risks, the factors that lead to disasters, and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards.

Public awareness is a key factor in effective DRR. Its development is pursued, for example, through the development and dissemination of information through media and educational channels, the establishment of information centres, networks, and community or participation actions, and advocacy by senior public officials and community leaders. (ISDR, 30 Aug 2007)

2. The objective of PA is to create change in the behaviour of the public towards a culture of risk reduction or a culture of safety.

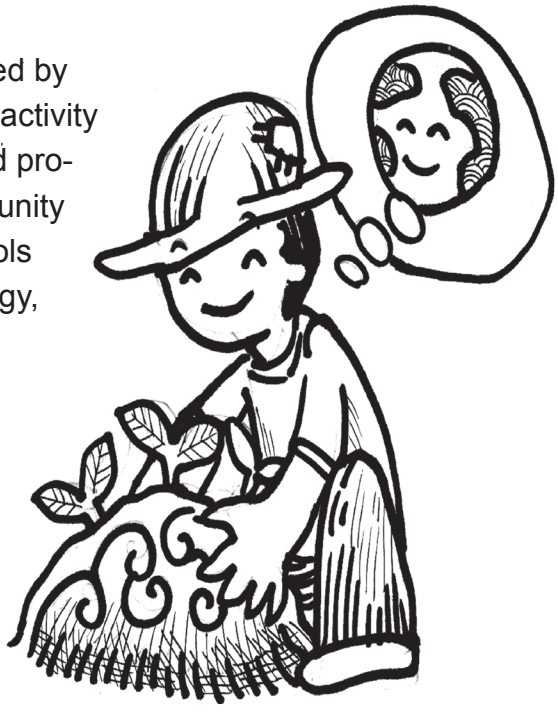
Therefore, PA aims to create, often through training and education, changes in:

- Knowledge (awareness)
- Skills (tools)
- Attitude (behavioural change)

The belief that PA and public education in DRR could bring about change stems from the success of major areas of work in the last few decades. Some of these are:

Public Health - This area emerged first boldly demonstrating that human behaviour can be changed and that diseases can be eradicated. The many examples of successful efforts where public health education has brought about dramatic changes in human behaviour include: potable water, hydration, hand washing, road safety, waterborne and airborne diseases, medication compliance, smoking cessation, tuberculosis treatment, and the wearing of seat belts.

Environmental stewardship – has been promoted by activists working to highlight the impact of human activity on the environment. As a result, there is increased pro-social behaviour, both at household and community levels. Education has also influenced policy controls on hazardous materials, safe and renewable energy, recycling and water conservation.



Earth science and geology – Earth scientists and geologists began to share their knowledge about natural hazard mechanisms in the 1970s leading to widespread introduction, and by the 1990s, of hazard awareness through science and geography curricula.

3. With the increasing number of disasters and of people affected, much more than just emergency response is needed. Public awareness carries out the obligation to share knowledge that helps in identifying risks, taking action to build safety and resilience, and reducing future hazard impacts.

PA and education for DRR can empower communities and individuals everywhere to participate in reducing future suffering.

Public awareness = education = empowerment!

4. PA can be any of the following:

- Public information
- Information dissemination

- Education
- Use of broadcast and print media
- Setting-up of centres of information and networks
- Community participation

Public information is just a small part of PA.

Public information – are information, facts, or knowledge from various studies and researches which can be disseminated to the public. It is the government's responsibility to generate relevant information on DRR. The government has the machinery and influence thus it is expected to disseminate the right information at the right time to the public. Its network is wide, from the national down to the barangay levels. There are government agencies responsible for data-gathering and research on hazards, monitoring, and developing the necessary safety measures to reduce the adverse effects. The government must also allocate funds to sustain these activities.

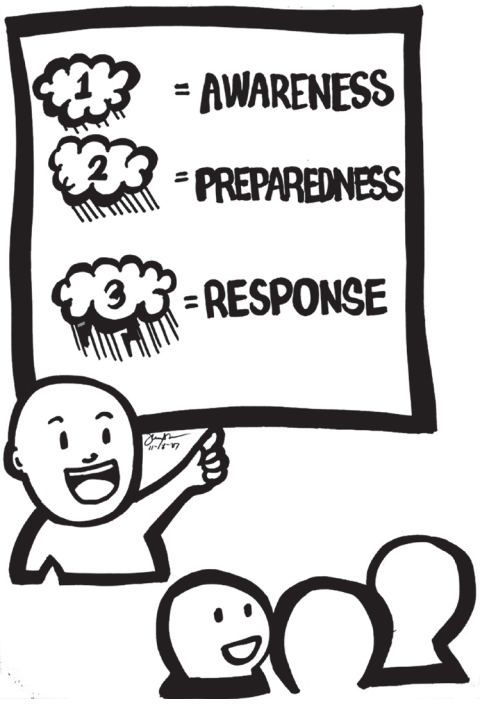
5. Basis of PA in DRR

Access to information is a basic right. It is important that correct and timely information is disseminated to the people so that they can make informed decisions. Wrong information, particularly on hazards and risks, will affect a household's or a community's decision and plan which might not meet the objective of saving lives and properties.

6. It is not only the public's right to access correct and timely information but also to be aware of the correct use of information. This will help to reduce the negative impacts of hazards on lives and properties.

7. PA in DRR is government's primary obligation in order for it to fulfil the obligation of saving lives, livelihoods, and properties before, during, and after a disaster. PA is essential, for example, in evacuation planning and EWS. Warning and evacuation will not be effective if these are not combined with creating public awareness about the EWS and evacuation plan.

8. PA in schools



Schools have an important role in raising the awareness of students on DRR. Children are one of the most vulnerable sectors especially during disaster situations. Children in schools learn from the information provided by their teachers. This helps to develop the awareness that gives importance to risk reduction and they carry throughout their life what they learn in school.

The correct information provided by teachers, coupled with several DRR activities such as earthquake drills, tree planting, recycling, reducing energy use, proper solid waste management instead of burning, and many other activities are important steps that will lead to a culture of safety. Children also help create awareness through the ripple effect or sharing the information with his peers and family.

9. The objectives of PA in DRM therefore are to:

- Increase knowledge and awareness on hazards, their characteristics, and effects
- Increase knowledge and awareness on risk reduction measures or safety measures before, during, and after a disaster
- Increase awareness on EWS, EP, and contingency planning
- Increase knowledge on CC and its effects especially on the frequency and severity of hazards
- Increase awareness on the current condition of the larger ecosystem where the communities are part of to be able to draw up appropriate measures for addressing environmental degradation

10. Guidelines in developing PA materials

- Objective – must have clear target results and audience
- Content or message - is precise, short but concise and considers the level of knowledge of its target audience
- Participatory process is observed in developing any PA material
- Timely and sustained
- Forms

- Publication - poster, primer, flyer
- Signage - billboard, streamer
- Multimedia - print ad, radio program, film showing, internet
- Education - seminar, training
- Other forms - drill, rally, competition, play, others

What is advocacy work and its relevance to DRR?

1. What is advocacy?

Advocacy is the deliberate process of influencing those who make policy decisions. (CARE)

CARE's use of advocacy will always:

- Improve the livelihood of significant numbers of people
- Target policy makers and implementers at levels above the household
- Be rooted in CARE's field experience and core values

Advocacy is:

- About influencing people, policies, structures, and systems so that change will happen
- About influencing those in power to act in more equitable ways
- Speaking out against injustice, defending the cause of the poor, holding those in power to account, and empowering people to speak out for themselves
- About creation or reform of policies, but also about effective implementation and enforcement of policies
- An integral part of development work

Advocacy is a strategy that CARE uses to complement our efforts to:

- Strengthen capacity for self-help
- Deliver relief in emergencies
- Address all forms of discrimination

Advocacy is a means to an end, another way to address the problems that we aim to solve through other programming strategies.

2. Why is advocacy important to DRR work?

- DRR work is not yet widely acceptable, despite the DRRM Law. Emergency response is still the most-supported and funded strategy by many donors. In the Philippines, DRR is not supported by most LGUs because it does not result to tangible and political outcomes compared to emergency response, which makes greater impact amongst political constituencies.

- Climate change and ecosystem management and restoration require the intervention of governments to hasten and make a significant dent because the work is enormous and would require a huge amount of resources.

- DRR is cheaper and builds capacities of vulnerable communities. For every dollar invested for DRR, $2-7 is saved for relief when disaster strikes.

- It is needed because project work does not necessarily address the cause of the problem.

- However, advocacy should not replace other development work because it does not usually meet people's other immediate needs.

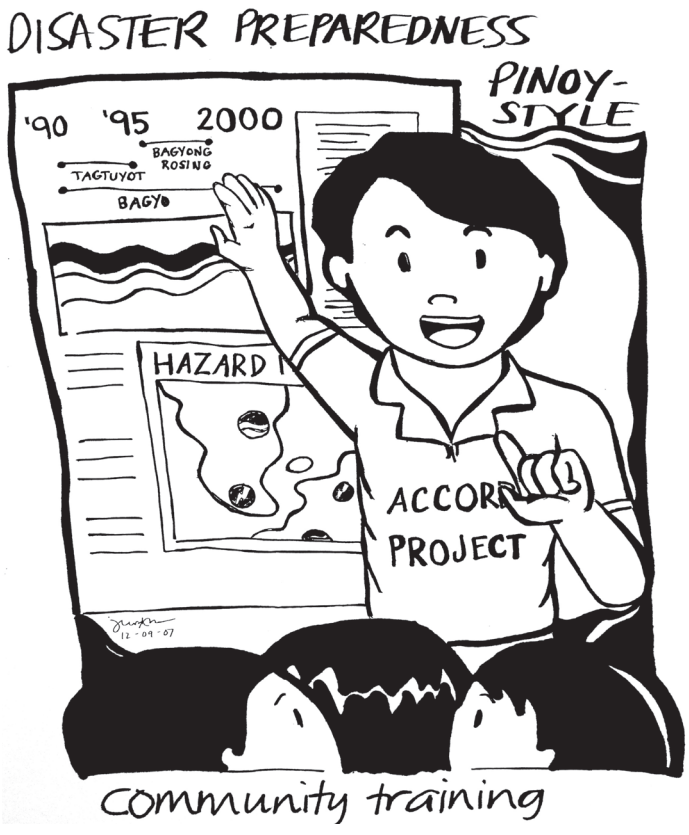
3. Who should be involved in advocacy work?

Advocacy can be done directly by people who experience injustice, on their behalf, or by a combination of both. Anyone can undertake advocacy work – it need not be left to professionals or experts.

4. Approaches in advocacy work:

There are three approaches to advocacy - advocacy **for**, **with** and **by** the poor or those affected by a situation.

- It is likely that most participants will initially focus on advocacy as 'doing something **for** someone else'.
- The most sustainable advocacy is often done **by** those who are directly affected by



a situation. Capacity building maybe needed before this can happen. This is where public awareness and education comes in to fill the gap.

- However, there may be situations when people cannot or will not, do advocacy for themselves due to several factors such as fear.
- Many advocacy initiatives will use all three approaches at different times.

5. Benefits of advocacy work to DRR

The aim of advocacy is often the same as for other development work:

To alleviate poverty and suffering, fight oppression, challenge injustice, and support long-term sustainable development.

However, development work is often not enough, because it does not tackle the root causes of the problem. Advocacy is therefore needed as it:

- Tackles root causes of poverty and injustice and brings long-term change
- Sees people as agents of change in their own communities
- Can help to generate more resources for other development work
- Can change power structures and systems of injustice

6. What is required of us to do advocacy work?

Advocacy involves:

- **ASKING WHY?** until you get to the root of the problem
- **ENSURING POWER IS USED WELL**, enabling those without power to gain access to it, and helping those who feel powerless to see what power they already have
- **EDUCATING** the powerless and the powerful

- **SEEKING JUSTICE** for those who are oppressed or treated unfairly
- **BRINGING CHANGE** for individuals, through changing their personal situation and through changing systems, structures, and policies
- **BEING A VOICE** for the voiceless and enabling the voiceless to find their own voice.

7. What should be done to carry out advocacy work?

Believing in CCA-EMR-DRR

- **Capacity-building** so that the poor will become agents of change themselves
- **Networking** in order to pool resources
- **Good research** so that the problem and potential solutions can be clearly identified

Advocacy is about working on individual cases, such as campaigning to release those who have been wrongly imprisoned, and about campaigning on issues, such as access to water.

The advocacy objectives are based on good research. These should be presented as a clear message directed at those who have the power to bring about change (the targets) or those who can influence them.

There is a need for development workers to keep in mind that advocacy work is important to widen support to DRR-CCA-EMR. However, advocacy must be viewed as just one of the many means to this end. Advocacy should be done together with capacity-building activities for communities such as trainings, public awareness, and others. Advocacy supports the process of raising awareness in a community but it may not bring about the delivery of basic needs within a short period of time. Advocacy can only be effective if carried out with other development efforts.

Duration of the session: 2 hours

Materials needed:

- Sample PA materials (flyer, poster, primer, flip chart, photo set, and others)
- Photos of other PA materials and activities (billboard, streamer, training, art competition, DRR quiz challenge, and others)
- Manila paper or cartolina
- Marker pens

References

1. Advocacy Tools and Guidelines: Promoting policy change. A Resource Manual for CARE program managers. CARE, January 2001.
2. Gordon, Graham, Advocacy Toolkit: Understanding Advocacy. ROOTS Resources, Tearfund 2002.
3. Public Awareness and Public Education for DRR: A guide. IFRC and Red Crescent Societies, Geneva, 2011.
4. ACCORD Project Disaster Preparedness Training Manual. 2007.

List of Abbreviations

BDC	Barangay Development Council
BDCC	Barangay Disaster Coordinating Council
BDRRMC	Barangay Disaster Risk Reduction and Management Committee
CCA	Climate Change Adaptation
CRA	Community Risk Assessment
CVA	Capacities and Vulnerabilities Assessment
DEPED	Department of Education
DILG	Department of Interior and Local Government
DRR	Disaster Risk Reduction
DRRMC	Disaster Risk Reduction and Management Council
EC	Evacuation Center
ECM	Evacuation Center Management
EMR	Ecosystem Management and Restoration
EWS	Early Warning System
HAT	Hazard Assessment Table
LDRRMC	Local Disaster Risk Reduction and Management Council
LDRRMO	Local Disaster Risk Reduction and Management Office
LGU	Local Government Unit
MDRRMC	Municipal Disaster Risk Reduction and Management Council
NDRRMC	National Disaster Risk Reduction and Management Council
PA	Public Awareness
PAGASA	Philippine Atmospheric, Geophysical and Astronomical Administration
PAR	Pressure and Release
PDRRMC	Provincial Disaster Risk Reduction and Management Council
PHIVOLCS	Philippine Institute of Volcanology and Seismology
PPMEL	Participatory Planning, Monitoring, Evaluation and Learning
PSWS	Public Storm Warning System
PWd	Persons with disability