session 1:

INTRODUCTION TO DISASTER MANAGEMENT

general objectives:

At the end of the session, the participants should be able:

1. To appreciate the concepts in disaster management and how these are applied in the Philippine context
2. To realize the need for comprehensive and continuous disaster responses in the community
3. To scan the hazards and identify starting points for disaster management in respective communities
4. To understand the basics of community organizing and see its importance as an approach to disaster preparedness

Topic 1: Nature and Characteristics of Hazards

Hazards in the Philippines

Lecture-Discussion

The geographic location and physical environment of the Philippine islands make it prone to all kinds of natural disasters. It is strategically located in the path of turbulent and destructive cyclones. The country's coastline of 17,461 kilometers makes it particularly vulnerable to tsunamis and storm surges that endanger coastal communities. It experiences an average of 20 typhoons per year, half of which are destructive to seriously devastating.

The country is also surrounded by six major trenches and thousands of kilometers of faultlines which generate three to five non-perceptible to perceptible tremors a day, and major earthquakes at not so lengthy intervals. It lies between two of the world's major tectonic plates, the Pacific and the Eurasian plate making earthquakes, weak or strong, common occurrences.

In addition, the Philippines has more than 200 volcanoes distributed along five volcanic belts. Of these, at least 21 are considered active. The most active and destructive are Mayon in Region V, Taal in Region IV, Hibok-Hibok in Region X, Bulusan in Region V, Canlaon in Region VI and VII and Pinatubo in Region III.

This situation has adverse effects not only on the lives and properties of the Filipino people but on the entire economy of the nation as well. This has likewise resulted in widespread environmental damage. Between 1980 to 1990, a total of 213 typhoons crossed the country affecting over 25 million people and resulting in 5,952 deaths, about 14 thousand missing or injured, and environmental and property damage of about 45 billion.

HAZARDS are phenomena that pose a threat to people, structures or economic assets and which may cause a disaster. They could be either man-made or naturally occurring in our environment.

1. Natural Hazards

- **earthquake** - are ground vibrations caused by rock failure or volcanic activity· Tsunami - is a Japanese word meaning "harbor wave". It is popularly called tidal waves but they actually have nothing to do with the tides. The waves, which often affect distant shores, originate from undersea or coastal seismic activity, landslides and volcanic eruptions. Whatever the cause, sea water is displaced with a violent motion and swells up, ultimately breaking over land with great destructive power.

- **volcanic eruptions** - is the process wherein molten rock materials (collectively called magma or lava) are emitted or ejected in the form of flowing masses, (lava and pyroclastic flows), discrete particles (volcanic ash and pyroclastic) and steam (water vapor and gases) from a crater, vent or fissure.

- **thunderstorm** - thunderstorms are sometimes called cumulonimbus or local storms This occurs when towering cumulus clouds reach a height where the tempera· ture is well below the freezing point. Cumulonimbus clouds form when there is a continuous updraft of moist air.

- **monsoon** - During the summer of the Northern hemisphere, the Asiatic conti- nent becomes warmer than the surrounding seas and a low pressure cell deve lops over the continent. This causes a flow of moist southwest winds over th Philippine area which is called the southwest Monsoon. The Northeast Mon- soon is caused by winter in the Northern hemisphere, making the Asiatic con tinent snowbound. The high pressure cell over China sends northeasterly wind over the Philippines giving us cold temperature, and causing much rainfall ove the eastern coast of the Philippines.

- **cold front** - This is a region formed when cold air moves over areas of warm air Since cold air is heavier than warm air, the warm air is pushed aloft by the cold air giving rise to widespread cloudiness. The cold front affects the east ern part of the country from November to as far as late April or early May

- **intertropical convergence zone** - This is a region where the northern hemisphere trades meet the southern hemisphere trades. It is characterized by tower ing clouds of cumulonimbus accompanied with showers and widespread thun- derstorms. The axis of convergence, which is usually oriented in the east t west direction, does not remain stationary at the equator but migrates nort or south of the equator. It oscillates over the Philippines during the month of May to October. It can be breeding tropical cyclones.

- **easterly wave** - this is a weak westward propagating disturbance in the basic easterly current which are associated with alternating regions of enhanced convective activity and fair weather, and also with patterns of pressure rises and falls. It is most common during summer and affects the Philippines once or twice a week with a lifespan of about a weak.

- **tropical cyclones** - are the most destructive weather disturbances because they are accompanied by strong winds aside from voluminous rains which they release. They are characterized by a low pressure center called the eye of the storm with no rain and calm weather within. The winds of a tropical cyclone blow around this low pressure center in a counterclockwise direction in the northern hemisphere.

- **drought** - a temporary reduction in water or moisture availability significantly below the normal or expected amount for a specific period

  types of drought:

  1. Meteorological Drought - describes a situation where there is a reduction rainfall for a specific period (day, month, season or year) below a specified amount.

  2. Hydrological Drought - involves a reduction in water resources (streamflows, underground acquifiers) below specified level for a given period of time.

  3. Agricultural Drought - is the impact of meteorological and/or hydrological droughts on crop yields.

- **tornado** - is an intense rotating column of air of small horizontal extent, which appears as an extension of dark, heavy thunderstorm cloud system, in a familiar funnel shape. They do not always reach the ground. Technically, they must reach the ground to be classified as tornadoes. Otherwise, they are known as funnel clouds. These small short-lived storms are the most violent of all atmospheric phenomenon, and over a small area, the most destructive.

2. Man-Made Hazards

- **environmental**

  Red tide refers to the discoloration of water bodies due to the presence of extremely enermous amount of "bloom" of a group called dinoflaggelates, which are toxic and responsible for paralytic shellfish poisoning.

Environmental pollution includes three aspects: air and water pollution, ozone depletion, and possible global warming. Various parts of the environment are subjected to the effects of toxic (poisonous) chemical produced in the course of industrialization.

Deforestation is the removal or damage of vegetation in a region that is predominantly covered by trees. Deforestation is a slow onset hazard that may contribute to disasters caused by flooding, when large areas of vegetation are removed or damaged, harming the land's protective and regenerative properties.

- Technological
  - oil spill
  - radioactive fallout
  - boiling liquid evaporating vapor explosion

- Insurgency-Related Incidents
  - civil strife

- Other Hazards

Fire is a chemical reaction known as combustion. The main elements of burning includes fuel (reducing agent), oxygen (oxidizing agent), and heat (temperature). The usual origins of fire are arson, electrical, open flames/cooking, cigarette butts/smoking, fireworks/sparks, flammable liquids and LPG tanks.

Epidemic is defined as the occurrence of a disease, known or suspected to b of infectious or parasitic origin, that is unusually affecting a large number o the populace. However, the term is not restricted to sudden outbreaks. Slo epidemics such as leprosy or AIDS may spread and develop over generation

With the occurrences of these natural and man-made hazards, vulnerable com munities may be destroyed and lives claimed.

note to the facilitator: *If you want to give examples of natural hazards, you can refer to PNRC's Disaster Preparedness Training Manual (white manual). It discusses extensively natural hazards in the Philippines in pages 57 - 76.*

Hazards Specific to the Areas (Threats)

Game: The Boat is Sinking

process:

1. Assign an "it".
2. Instruct the participants that they must group together according to the number called out by the "it". For example, the "it" will shout "The boat is sinking. Group into 6!"
3. Several groupings may be done before settling to the number of groups desired by the facilitator for the next activity.

Workshop: Identify the Hazards

timeframe:
45 minutes

materials:
marker pens, copy of matrix, craft paper

process:

1. Divide the participants at random into four workshop groups. Participants may also be divided according to geographical location (e.g. ac-

cording to barangays or municipalities; lowland or upland; etc.)

2. Give them 20 minutes to discuss the following guide questions:
   - Enumerate hazards that are presently threatening your community.
   - How do these hazards affect your community?

3. Ask the participants to use the matrix below to summarize their discussion. The group should assign one member to report.

hazards	possible effects
1. 2.	

4. While the groups are reporting, the facilitator should write down key ideas or concepts on the board. After the reporting, the facilitator will then sum up the points and integrate these in the input-discussion that follows.

note to the facilitator: *The hazard situation of the area is dependent upon its geographical location. A resource person from PAG-ASA or local chapter of Red Cross might be helpful in providing this kind of information. Inform them that analyzing Hazards, Risks and Vulnerabilities will be discussed in detail in session 3.*

Synthesize discussions on Philippine hazards and threats to the areas by establishing the context and the importance of disaster management in the Philippines. By doing this you are preparing the participants for the next topic. You may start your synthesis with the points below.

Points for Synthesis

Based on the preceding discussions and workshop, the presence of hazards in the Philippines is inevitable. Filipinos have experienced major disasters that destroyed lives and properties during the last decade. The Mount Pinatubo eruption in 1991 is still a hazard factor for the communities near it because of its lahar flows. The flashfloods in Ormoc in 1991 and the Baguio earthquake in 1990 has claimed thousands of lives and damaged millions worth of property.

Natural disasters will always be a part of Filipino's everyday life if nothing is done in anticipation of these phenomena. Thus, disaster management becomes an imperative! The role of the community as well as government agencies is crucial in establishing a systematic disaster management whereby one of the goals would be to reduce the effects of disasters.

Topic 2: Definition and Objectives of Disaster Management

Introductory Input

Disaster management refers to the range of activities designed to maintain control over disaster and emergency situations, and to provide a framework for communities to avoid, cope or recover from the impact of disasters.

The objectives of disaster management are three-fold:

- To reduce or avoid the human, physical and economic losses experienced by the individuals, society and country at large
- To reduce impact of disasters on individuals
- To achieve rapid and sustainable recovery.

Traditionally, disaster management is thought of only in terms of post disaster activities such as relief and reconstruction. However, it encompasses the complete realm of activities and situations that occur prior to, during and after disasters. In fact, disaster managers find themselves far more involved in pre-disaster activities than in post disaster responses.

It is important to understand the several phases that comprise the range of disast management including the activities undertaken in each phase. These activities a implemented at specific time and periods, the length of any one period varying grea and dependent on the type of disaster and other factors.

Game: What Goes Where?

time frame:

15 minutes

materials:

2 sets of meta-cards with the phases of disaster continuum written on them

prize for the winning team

process:

1. Divide the participants into two groups. Give each group a set of meta-cards.
2. Ask the group to assign one metacard per member. Members will then reflect on how their meta-cards are related to each other. (i.e. what phase comes first, second, etc., and if it is linear or cyclical).
3. At a signal, ask the participants to start arranging themselves. The first group to finish wins.
4. Take note of the each group's arrangement in the board. Use it as a starting point in discussing the next topic.

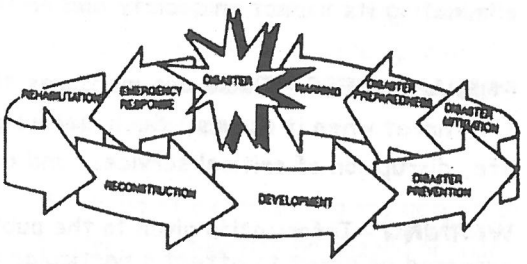
note to the facilitator: *This game aims to level-off understanding on the different phases of the disaster continuum. In synthesizing, it is important to ask why the group came out with such arrangement or interrelation of meta-cards. This will help participants understand each other's operative framework in dealing with disasters. Afterwards, discuss the Red Cross' disaster continuum.*

The Disaster Continuum

Lecture-discussion with visual

The scope and variety of tasks involved emphasize the need for a systematic approach to all aspects of disaster management. Here are the various stages of a natural disaster management in a continuum.

While asserting that all aspects of disaster management are interrelated, it is equally crucial to define each stage.



DISASTER - A serious disruption of the functioning of a society, causing widespread human, material or environmental losses which exceed the ability of the affected society to cope within its own resources

EMERGENCY RESPONSE - These are activities undertaken immediately following the disaster. It includes damage and needs assessment, immediate relief, rescue and debris clearance.

REHABILITATION - This involves activities that help the victims return to "normal" life and be reintegrated into the regular community functions. It includes restoration of repairable public utilities, housing, and resettlement inclusive of provisions for new livelihood activities.

RECONSTRUCTION - The return of community to pre-disaster situation which includes replacement of infrastructure, lifeline facilities and putting order in the physical environment, utilizing post-disaster assistance to improve long term development prospects. The activities that would be carried out during reconstruction are essentially development-oriented since they not only reduce the disaster impact but also provide socio-economic benefits.

DEVELOPMENT - This establishes relationship of disaster-related factors with national development planning. This planning should include mitigation measures and should consider potentials for increased disaster risks.

PREVENTION - Encompasses activities designed to provide permanent protectior from disasters. It includes engineering and other physical protection measures and also legislative measures

MITIGATION - Measures taken in advance of a disaster aimed at decreasing o eliminating its impact on society and on the environment.

PREPAREDNESS -These are measures that enables the community to deal witl the threat when it occurs. Such measures are usually aimed at minimizing loss o life, disruption of critical services, and damage.

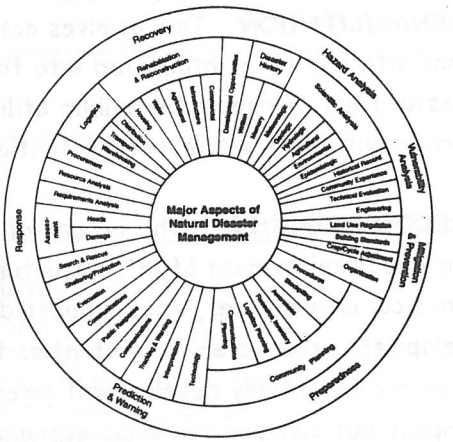
WARNING - Information given to the public when a threat has been identified an assessed as about to affect a particular area.

HAZARDS - The phenomena that pose threat/s to people, structure or economi assets and which may cause a disaster. They could be either man-made or natu rally occurring in our environment.

Elements of Disaster Management

Lecture-Discussion with visual

In disaster management there is a whole range of elements that commands attention depending on the nature of the disaster and the communities:



- Risk management
- Loss management
- Control of events,
- Equity of assistance
- Resource management
- Impact reduction

here are details of each element:

RISK MANAGEMENT - consists of identifying threats (hazards likely to occur), determining their probability of occurrence, estimating potential impact of the threat in the communities at risk, determining measures that can reduce the risk, and taking action to reduce the threat. This includes hazard mapping, vulnerability analysis, estimation of potential losses, and development of appropriate disaster prevention and mitigation strategies. There are three essential components in the determination of risks, each of which should be separately quantified:

- *Hazard occurrence probability* - the likelihood of experiencing any natural or technological hazard at a location or in a region. Quantifying hazard probability involves assessing not only the probability of occurrence but the probability of magnitude.

- *Elements at risk* - identifying and making an inventory of people or buildings or other elements which would be affected by the hazard if it occurrs, and when required, estimating their economic value.

- *Vulnerability of the elements at risk* - how damaged the buildings or people or other elements would be if they were to experience some levels of hazard. Vulnerability is the relationship between the severity of hazard and the degree of damaged caused. Each element will be affected differently by hazards of different severity.

LOSS MANAGEMENT - This addresses the human, structural and economic losses through both pre and post disaster actions designed to keep the losses to a minimum.

- Pre-disaster lost management activities focus on reducing the community's vulnerability to hazards. Actions include improving the resistance of physical structures, providing improved safety for the occupants, and increasing/diversifying the network of social support mechanisms available to communities in threatened areas.

- Post-disaster loss management focuses on improving the response and broadening the range of support given to victims that includes facilitation of relief delivery and stimulating a rapid recovery.

CONTROL OF EVENTS - This is the most critical element of disaster management Control is maintained through the following measures:

- Anticipation of disaster and the cause-effect relationship generated by each type of event
- Mitigation or reduction of the scope of disaster
- Disaster preparedness
- Accurate information collection and assessment
- Balanced response
- Timely actions
- Effective leadership
- Discipline among people in the relief and disaster management

EQUITY OF ASSISTANCE - Disaster assistance should be provided in an equitable and fair manner. Fairness must underlie uniform relief and reconstruction policies in order to ensure that disaster victims receive equal treatment and obtain adequate access to resources available.

RESOURCE MANAGEMENT - In order to meet all competing needs and demands of a post disaster environment, resource management becomes essential. The use of available resources should be maximized to the greatest advantage.

IMPACT REDUCTION - Disasters can have impacts far beyond the immediate human physical or economic losses. Disasters represent a loss of opportunity not only to individuals but also to the entire community. They can also be a setback to the entire development program of the country. Disasters should be managed to reduce their impacts to the minimum and that recovery is accomplished quickly and their effort contribute to the overall development needs of the country and its citizens.

note to the facilitator: *Provide as many concrete examples as possible when discussing each concept. Encourage the participants to share their experiences that are related to the concepts.*

Disaster Management System in the Philippines

Storytelling with visual for each period

materials:

visuals

process:

Storytelling always works even for adults. Tell the history of disaster management by composing a light and traditional story by using such phrases as "Once upon a time," "In a place far, far away," etc. Use the local language in creating the story.

Prepare visuals depicting each period and use these during storytelling. If possible, provide background music to create the ambience.

Leave the story hanging. Ask the three to four participants to provide the ending of the story.

pointers for the story

1946-1970 Reactive Approach

The disaster responses were limited to emergencies or to situations after the disaster have already affected a part of the country. Management efforts were highly centralized with minimum participation from the local government officials. Organization of Civil Defense units at the local level was mostly on paper and people were

content to wait for assistance from the national government.

1969-1973 Development of a Natural Disaster & Calamities Plan

The guiding principle for the development of the Natural Disaster and Calamities Plan was to use all available government resources, and encourage all concerned agencies to work together in addressing the issue of disasters and calamities. The plan assigned specific tasks or emergency functions to government agencies in addition to their primary day-to-day tasks. The NDCC was identified as the lead agency, and its functions include direction, control, coordination and supervision of the different government and private agencies, both local and foreign, in responding to natural and man-made disasters.

1970-1973 Reactive and Centralized Disaster Management

The Office of Civil Defense set up field stations in the 12 Administrative Regional Centers outside of Metro Manila. The field personnel started to convert the local civil defense units into local disaster coordinating councils and retained the leaders and members of these councils.

1973 - present Disaster Preparedness

In 1973, government agencies with training funds started conducting disaster preparedness program with the aim of preparing the populace in responding to any emergency. The OCD started organizing and training the chairpersons and members of the councils in the different levels. The DSWD trained community leaders on relief distribution, the PNRC trained community leaders on relief distribution and their volunteers on First Aid, while the DOH focused their training on barangay health workers.

1978 The Creation of the National Disaster Coordinating Council (NDCC)

To further strengthen the system, the government decided to formalize the AdHoc organizations at the national, regional and local levels and to allocate emergency tasks to the different governmental units pursuant to Presidential Decree 1566. Annex PD 1566

Late 1980 - Present **Disaster Mitigation**

In observance of the Decade for Natural Disaster Reduction, a conference was held in the late 1980s. Its objective is to reduce the loss of life, property damage, social and economic disruption caused by natural disasters through a concerted effort in the international and local fronts. The NDCC and its member agencies were identified as those responsible in addressing the concerns brought out in the conference. In support of the UN objectives, it created four committees: on Structural Measures, on Non-Structural Measures, on Disaster Research, and on Disaster Legislation.

At present, the scope of the country's disaster management system covers preparedness, prevention, mitigation and responses.

Topic 3: Community Organizing for Disaster Management

Concept, Elements, and Principles

Interactive Lecture

process:

Interactive lecture is an innovation of the straightforward, usually sleep-inducing lectures. The facilitator enlivens the discussions by posing questions to the participants before proceeding to the input proper. Provocative questions are also addressed together in between heavy inputs. This jumpstarts the exchange of ideas wherein participants are encouraged to reflect on their own experiences and views on the topic. These ideas are then related or integrated to the facilitator's input.

note to the facilitator: *There are questions in the text below that can be used for the interactive lecture. Feel free to devise your own questions..*

As a general rule you and the participants should both seek answers to the questions. This is the essence of learning from each other.

As a caution, you should be aware of the time limit while allowing the participants to pose or answer questions. Take note also if the discussion on community organizing is getting nowhere or out of hand.

What is Community Organizing?

As in formulation of definitions, community organizing has been described in severe ways. Take the following examples.

CO is a problem-solving approach whereby the community is empowered with know edge and skills to identify and prioritize its needs and problems, harness its re sources to deal with the problems and take actions collectively (CSWCD-UP, 1987)

CO is a continuous and sustained process of educating the people to understand an develop their critical consciousness of their existing conditions; organizing the peopl to work effectively and efficiently on their immediate and long term problems; an mobilizing them to develop their capability and readiness to respond and take actic on their immediate needs towards solving their long-term problems (Ferrer, 1982)

CO is a process by which a community identifies its needs and objectives, prioritize needs and objectives, takes action in respect to them; and in so doing extends ar develops cooperative and collaborative attitudes and practices in the community (Ros 1959).

What are the basic elements of CO?

- Awareness-building about the needs and problems of the people in the community that need to be addressed.
- Ehancing unity, cooperation, collaboration and organization of the people.
- Developing the capability and potentials of the people.
- People's participation in the collective actions that will respond to the community's needs.

What are the CO Principles?

Trust in the people and in their capacity to change and develop. If the people are to be organized, then they should be given the chance to have self-realization, and ultimately, to change towards their own empowerment and development.

Start where the people are, in terms of their needs, resources and capabilities. In initiating any intervention, changes and innovations should start from simple to complex, abstract to concrete, micro to macro and short-term to long-term. The people should be given a sense of victory to minimize frustration and discouragement.

Community Organizing should be based on the interests of the poor and the devastated. It should be responsive to the needs of the people.

Community Organizing should result in people working for a self-reliant community and society. It should be able to transform community conditions so that the people's capabilities are developed or enhanced to shape their own development.

In working with the people, the majority rules but the minority should be respected.

Community Organizing should be gender sensitive. It means recognizing the contribution and capabilities of women in the organizing efforts. It means being sensitive to their needs.

Emerging Roles of Development Workers in Managing Community Disasters

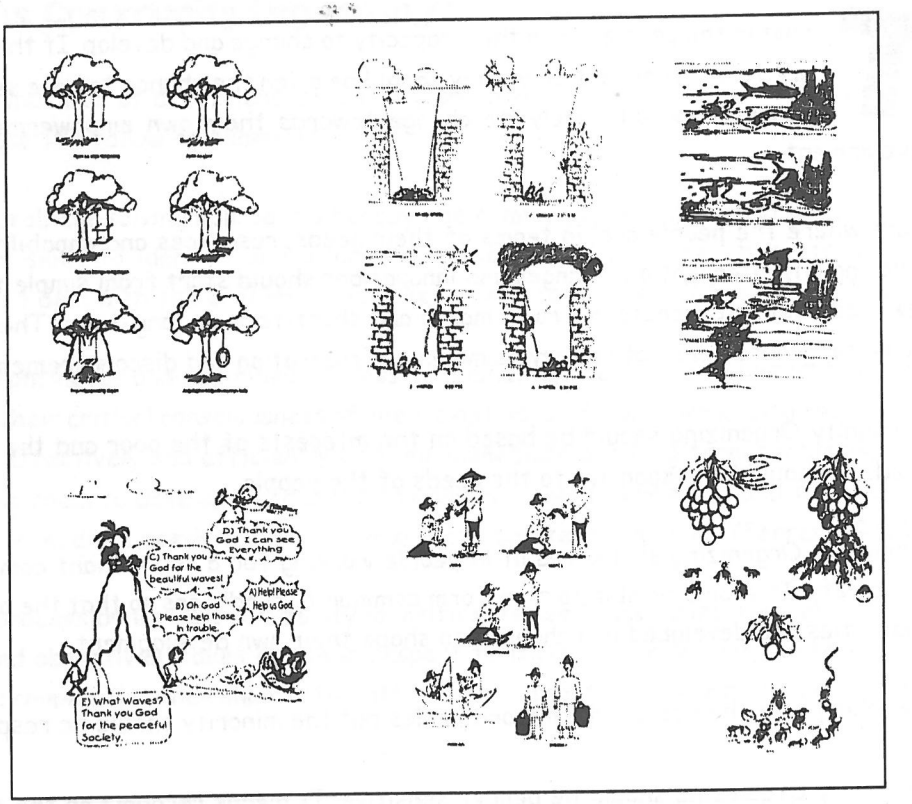
Interpretation of Illustrations

materials:

transparencies or illustrations

process

1. Divide the participants into six groups
2. Give each group a set of transparencies or illustrations and tell them to interpr the illustrations



3. During the presentation of the report, write on the blackboard the participants' insights on the roles of development workers.

4. Synthesize the reports of six groups by referring to the matrix and examples given in the following table.

Synthesis Points

Illustration	Insights	Implication: Emerging Roles of Volunteers
The Story of the Ants	• There are people who suffer from lack of basic resources. • Resources could be available but not accessible to the majority	• Facilitating access to resources through collective action of the people • Ensuring equitable distribution of resources to the people
The Story of the Fisherman	• Give a man a fish and you feed him for a day. Teach him how to fish, and you feed him for the rest of his life. • All people have inherent talents and potentials • There are people who tend to depend on others because their potentials and capabilities have not been developed	• Making the people aware of his potentials and capabilities in terms of knowledge, skills, and attitudes • Educating and training people towards self-reliance
The Story of the Small and Big Fish	• People find it difficult to have access to community resources because there are other people who block them • Community disasters can be the results of oppression and exploitation of people, systems and practices	• Organizing people to enable them to confront people, systems and practices that cause disasters in the community

Illustration	Insights	Implication: Emerging Roles of Volunteers
The Three Frogs in a Well	• There is only one reality but there could be many interpretations • A person's perception of the reality is affected by his/her experiences and his/her position in the society • Reality changes with time	• Facilitate towards having common understanding or perspective about reality, e.g., nature of disasters, how to prevent disasters • Helping people understand their own perspective and the possible directions to take
The Boat is Sinking	• People react to events such as disasters depending on how close or aware they are about the events • People's will to help in times of disasters can be limited by personal incapabilities, distance and time	• Creating public concern and awareness about disasters • Mobilizing people to provide support to victims of disasters
The Story of the Swing in Daryo Pinahayaan	• In planning and implementing development projects there is the tendency to consult only the educated members of the community, but not the actual users of the projects • The lack of consultation and coordination among various development agencies can lead to failure of the projects, and can even cause disasters in the community	• Consulting and mobilizing the people to participate in development projects that affect them • Enhancing coordination among the various agencies and organizations to ensure successful project implementation

CO Steps and Processes

Interactive Lecture

process

Before proceeding to the lecture, the facilitator can ask the participants to share their experiences in organizing — whether a success or failure. Give 20 minutes for this exchange and write their insights on the board. Then integrate these points in the lecture outline below.

Lecture Outline:

Self Assesment
Community Assessment
Social Investigation (initial community study i.e. RRA)
Introduction to the community

Identification of community leaders & key persons
Core group formation (leaders, potential leaders, and/or key persons)
Organization Building

Community Organization
Community Mobilization

Organizational Development (Capability building)

Phase-out
Overall Evaluation/Post-entry Planning

note to the facilitator: *For details and examples, you can get notes from PNRC's Community Organizing Manual (green manual) particulrly from pages 14 -16 and appendix B.*

Review and Synthesis

process:

1. Divide the participants into six groups.
2. Assign one sub-topic to each group.
3. Ask each group to make slogans that will describe the sub-topic assigned to them.
4. After 10 minutes of buzz session, convene the plenary. Ask the groups to shout their slogans with emotion.
5. Write down the slogans on the board.

6. Integrate these slogans with the facilitator's prepared highlights of each subtopic.

7. After the integration, encourage the plenary to think of a whole slogan for the whole session 2.

Highlights:

- **nature and characteristics of hazards**

  Nature of hazards depends on geographical location
  Hazards are both natural and man-made
  Knowing the community threats can inform us of how to go about community disaster management

- **disaster continuum**

  The continuum is composed of equally important stages
  It is a cycle that emphasizes the scope of tasks involved in a systematic disaster management system

- **disaster management definition (shorten)**

- **elements of dm (review the five)**

- **dm system in the philippines**

  From relief to comprehensive disaster management in partnership with communities

- **community organizing**

  Crucial is the varied emerging roles of the development workers in disaster management