Disaster management Module 3

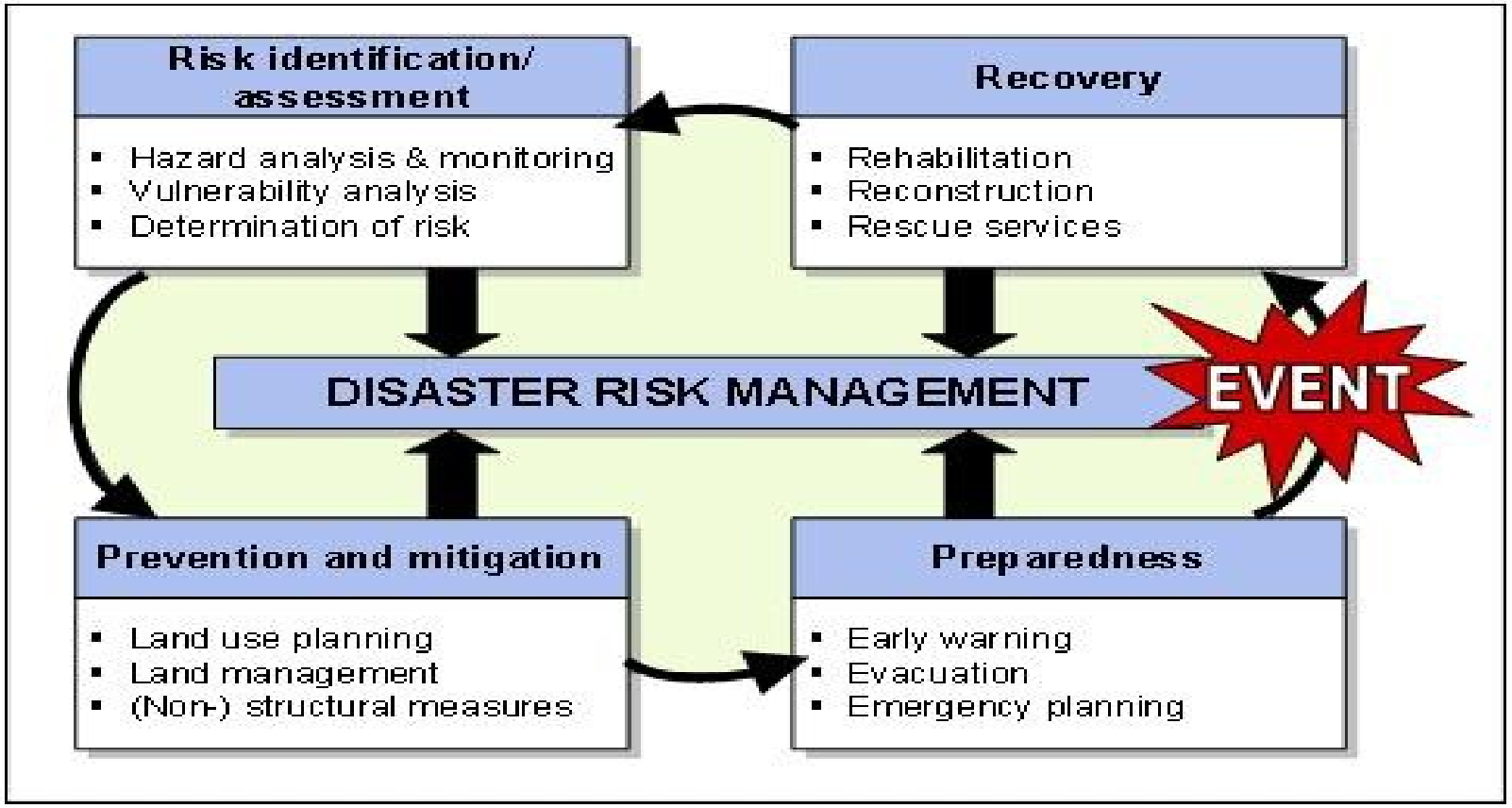
Disaster risk management

Disaster risk management

- The systematic process of using administrative directives, organisations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.

Disaster Risk Management Framework

- The disaster risk management process (cycle) comprises the following main elements:



Risk identification and assessment:

- This involves determining and analysing the potential, origin, characteristics and behaviour of the hazard
- E.g. frequency of occurrence/magnitude of consequences.

Application of risk reduction measures in mitigation:

- Planning and implementation of structural interventions (e.g. dams, sea defence) or nonstructural measures such as disaster legislation.

Disaster preparedness and emergency management:

- Activities and measures taken in advance to ensure effective response to the impact of a hazard, including measures related to timely and effective warnings as well as evacuation and emergency planning.

Recovery/Reconstruction:

- Decisions and actions taken in the post-disaster phase
- Having a view to restoring the living conditions of the affected population.


Prevention and Mitigation
Preparedness
Disaster Risk Management Cycle
Rehabilitation and Recovery
Disaster
Response

Disaster Risk Reduction (DRR)

- The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including

❖ Through reduced exposure to hazards

❖ Lessened vulnerability of people and property

❖ Wise management of land and the environment

❖ Improved preparedness for adverse events.

Given the importance of DRR in the international policy
arena, five (5) priority areas are underscored in the Hyogo Framework for Action (2005-2015):

- 1. Governance
- 2. Risk identification, assessment, monitoring and early warning
- 3. Knowledge management and education
- 4. Reducing underlying risk factors
- 5. Preparedness for effective response and recovery

- The Hyogo framework for action was succeeded by the Sendai Framework for Disaster Risk Reduction 2015-2030 at the Third United Nations World Conference on DRR which took place in March 2015 in Sendai, Japan.

The four (4) cornerstones of Disaster Risk reduction:

- Four parallel and complementary lines of actions can be considered to reduce exposure to disasters and achieve a more sustainable approach to development:

- 1. Community / stakeholder participation
- 2. Public policy actions
- 3. Safer construction and urban development
- 4. Development of a culture of prevention

Disaster Prevention

Definition:

- Disaster Prevention is defined as those activities taken to prevent a natural phenomenon or potential hazard from having harmful effects on either people or economic assets.
- Broadly, disaster prevention refers to measures taken to eliminate the root causes that make people vulnerable to disaster.

The Basis of Disaster Prevention

For disaster prevention to be successful, a priori planning is required.

- Planning of prevention hinges on two (2) issues:

1. Hazard identification (identifying the actual threats facing a community)
2. Vulnerability assessment (evaluating the risk and capacity of a community to handle the consequences of the disaster).

- Once these issues are put in order of priority, emergency managers can determine the appropriate prevention strategies.

Types of Disaster Prevention:

Disaster prevention may be considered as either primary or secondary.

- Primary prevention is to reduce, or avoid the risk of the event occurring, by getting rid of the hazard or vulnerability,

e.g. to avoid overcrowding, deforestation, choked drainage and to provide services.

- Secondary prevention means to recognise promptly the event and to reduce its effects,

e.g. by staying alert to possible displacements of population; by being ready to provide immunisation, food, clean water, sanitation and health care to the affected population.

Disaster Mitigation

Definition:

- Disaster mitigation refers to the lessening or limitation of the adverse impacts of hazards and related disasters.

Primary Objectives:

The primary objectives of disaster mitigation are two (2) fold, namely

- Hazard likelihood reduction
- Risk consequence reduction.

- Hazard likelihood reduction

This objective is only appropriate for a few natural hazards, as it is not possible to reduce the occurrence of many hazards. Eg: the likelihood of floods occurrence can be reduced by mitigation measures such as sea defence walls.

- Risk consequence reduction
- This is a reduction in the impact of a hazard, via a reduction in exposure and/or vulnerability.
- It involves ensuring that the population, structures, or other systems are able to withstand such an event with as few negative consequences as possible.

Example: the construction of the erosion-resistant sea defence wall in Keta, Volta Region of Ghana.

So in reducing both hazard likelihood and risk consequence,

- The primary aim is to decrease risk of death and injury to the population.
- The secondary aims are to decrease damage and economic losses inflicted on public sector infrastructure and to reduce private sector losses.

Types of Disaster Mitigation Measures:

Broadly, disaster mitigation measures can be categorised into two:

Structural Mitigation Measures:

- This refers to any physical construction to reduce or avoid possible impacts of hazards, which includes engineering measures and construction of hazard-resistant and protective structures and infrastructure.

Non-structural Mitigation Measures:

- This refers to policies, awareness, knowledge development, public commitment, and methods and operating practices, including participatory mechanisms and the provision of information, which can reduce risk and related impacts.


Ecosystem-based options
e.g. mangrove rehabilitation
EbA hybrid options
e.g. mangrove rehabilitation & bamboo fences
Infrastructure-based options
e.g. construction of dykes, dams, shore protection
Political and social options
e.g. development planning, early warning systems, land use planning
Overall Adaptation Strategy

Disaster Preparedness

Definition:

- Disaster preparedness encompasses the knowledge and capacities developed by governments, professional response and recovery organisations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions.

Components of a Comprehensive Disaster Preparedness Strategy includes:

- Hazard, risk and vulnerability assessments
- Response mechanisms and strategies
- Preparedness plans
- Coordination
- Information management
- Early warning systems
- Resource mobilisation
- Public education, training & rehearsals
- Community-based disaster preparedness

Types of Disaster Preparedness:

Target-Oriented Preparedness:

- Preparedness plans may be target specific, for instance, we may require different types of planning for the vulnerable groups of women, children, elderly and disabled.
- Task-Oriented Preparedness: Specific groups jointly develop activities based on one of the community's plans to evaluate the community's capability to activate the preparedness plan in a real emergency. Eventually, these tasks enable the development of plan revisions, employee training and material resources to support readiness.
- Disaster-Oriented Preparedness: This addresses the likelihood of occurrence of a specific disaster. Emphasis is placed on structural and non-structural mechanisms.

DISASTER RESPONSE AND RELIEF

- Disaster responses are the set of activities taken during a disaster or immediate following a disaster, directed towards saving life and protecting property.

Factors that Determine the Nature of Disaster Response:

- The type of disaster
- The ability to take pre-impact actions
- The severity and magnitude of disaster
- The capability of sustained operations
- Identification of likely response requirements

Requirement for Effective Response

- Information
- Resources

Disaster response planning

- Roles and responsibilities are defined, policies and procedures are developed and generic tools for responses are identified and developed.

Types of disaster responses:

- Search and rescue
- First aid and emergency medical care
- Evacuation
- Evacuation centre management
- Development of Standard Operation Procedure (SOPs)
- Immediate repair of community facilities and services
- Relief delivery
- Coordination and Communication
- Psycho-social counselling and stress debriefing
- Medical services

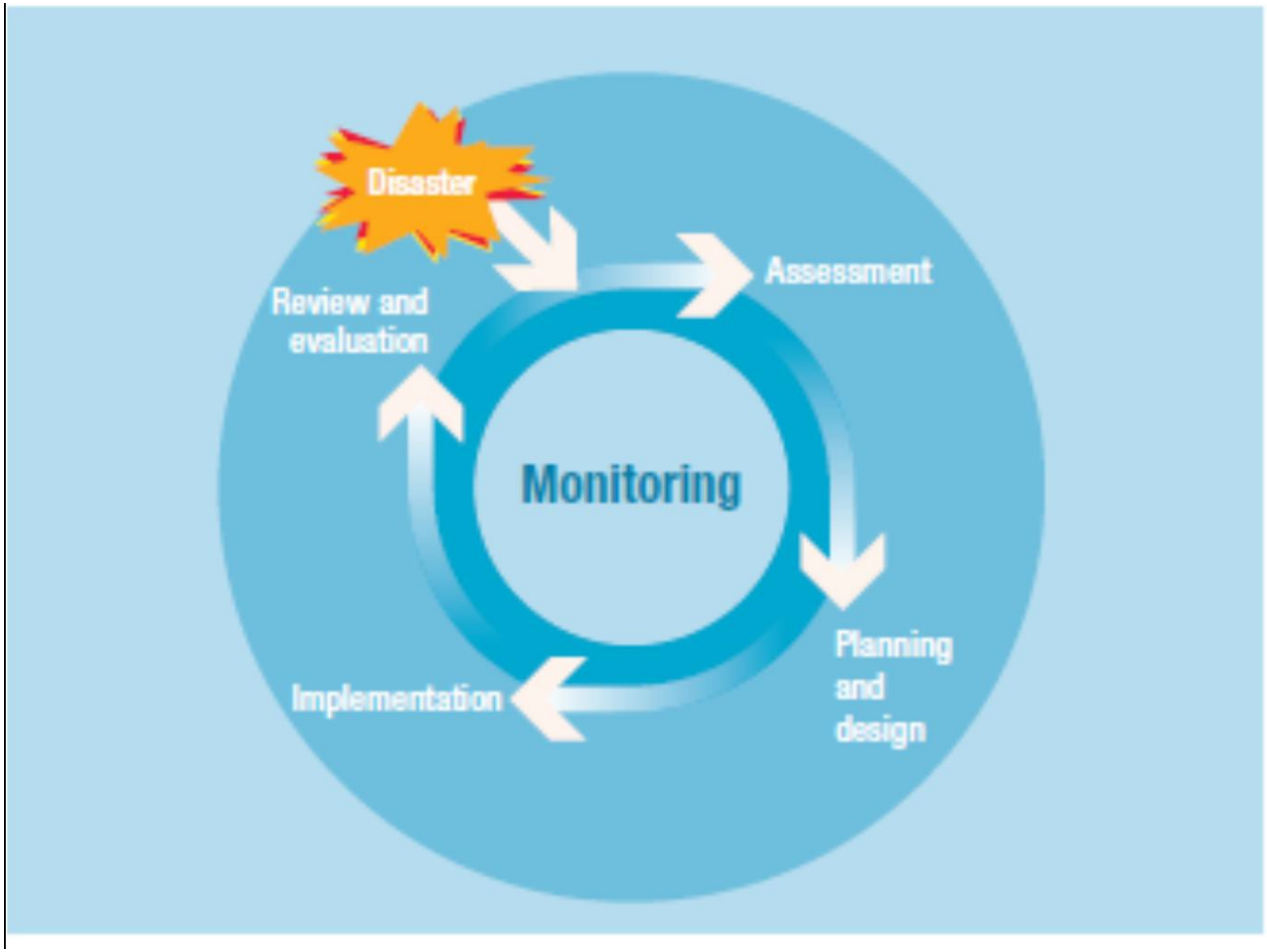
Relief

- It is defined as the provision of assistance or intervention during or immediately after a disaster to meet the life preservation and basic subsistence needs of those people affected.

Relief can be of an :

- immediate,
- shortterm,
- protracted duration

Project management cycle



The list of international relief response organisations is as follows:

- Action Against Hunger (AAH),
- CARE,
- Caritas Internationalis,
- Catholic ReliefServices, (CRS - USCC),
- Emergency Nutrition Network (ENN),
- Doctors Without Borders,
- Food For The Hungry International (FHI),
- Food For The Hungry,
- Hunger
- Plus, Inc., Interaction,
- International Committee of the Red Cross (ICRC), International
- Federation of Red Cross and Red Crescent Societies (IFRC), International Organisation
- for Migration (IOM), International Rescue Committee (IRC), Lutheran World
- Federation, Mennonite Central Committee (MCC), Mercy Corps (MC)
- ETC...