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FACULTY OF NURSING



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Disaster Nursing

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DISASTER NURSING

Disaster is any occurrence that causes ecology disruption, loss of human life and deterioration of health services on a scale sufficient to warrant an extraordinary response from outside the community or area.



Definition

It is a natural or human caused event which causes intensive negative impacts on people, goods, services and/ or the environment, exceeding the affected community's capability to respond.

Is a serious disruption of the functioning of a society causing widespread human, material or environmental losses which exceeds the ability of affected society to cope using only its own resources.

Cont...

Disaster is the French word meaning

Des – Bad or Evil and

Aster – Star



Types of Disaster

Disasters can be classified as according to their speed of onset or according to their cause

Speed of onset

- Rapid Onset Disasters
- Slow Onset Disasters

Cause:

- Natural Disaster
- Manmade Disaster

Speed of onset

Rapid Onset Disasters: These disasters are classified according to the time sequence. In which the disaster will impact as early or quickly in no minutes or without expectation.



Cont...

Slow Onset Disasters: These disasters start slowly and impact later with severe damages. Ex: Famine, Drought, Deforestation.



Cause

Natural Disaster: These are the disaster occurring due to some natural calamities or by natural means.

Ex: Earth Quake, Land Slide etc.

Manmade Disaster: These are the disaster occurring due to some problems made by the man itself or by the mistakes of the man.

Ex: War, Riots etc.



Types of Disaster

1. Natural

2. Man made



Some Common Disasters

Water and Climate Related Disasters:

- Floods, Cyclones, Cloud Burst, heat or Cold Waves, Snow Avalanches, Droughts, Sea Erosion.

Geologically Related:

- Land Slide, Earthquake, Dam failures, Mine fires etc.

Chemical, Industrial and Nuclear Related:

- Chemical, Industrial related and Nuclear related disasters.

Cont...

Accidental Related Disasters:

- Forest Fire, Urban fire, Oil spill, Festival Related Disasters, Air, Road and Rail disasters.

Biological Disasters:

- Epidemics, Pest attacks, Cattle Epidemic, Food Poisoning.

Floods



Cyclones



Cloud Burst



Snow Avalanches



Droughts



Sea Erosion



Land Slide,,,



Earthquake



Dam failures



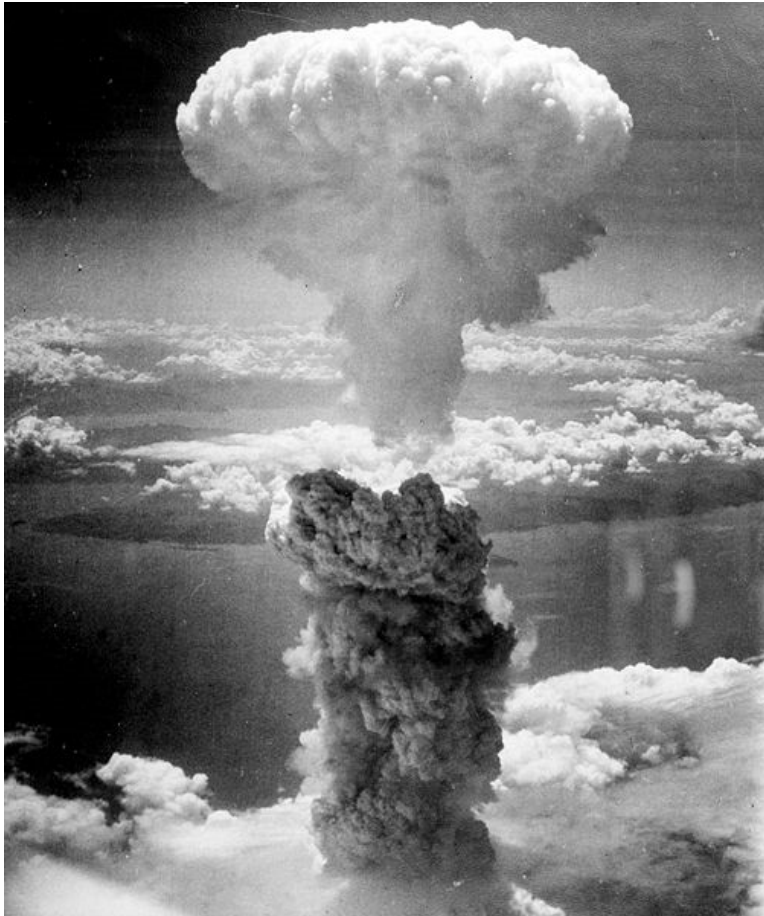
Mine fires



Chemical, Industrial related and Nuclear related disasters



Cont...



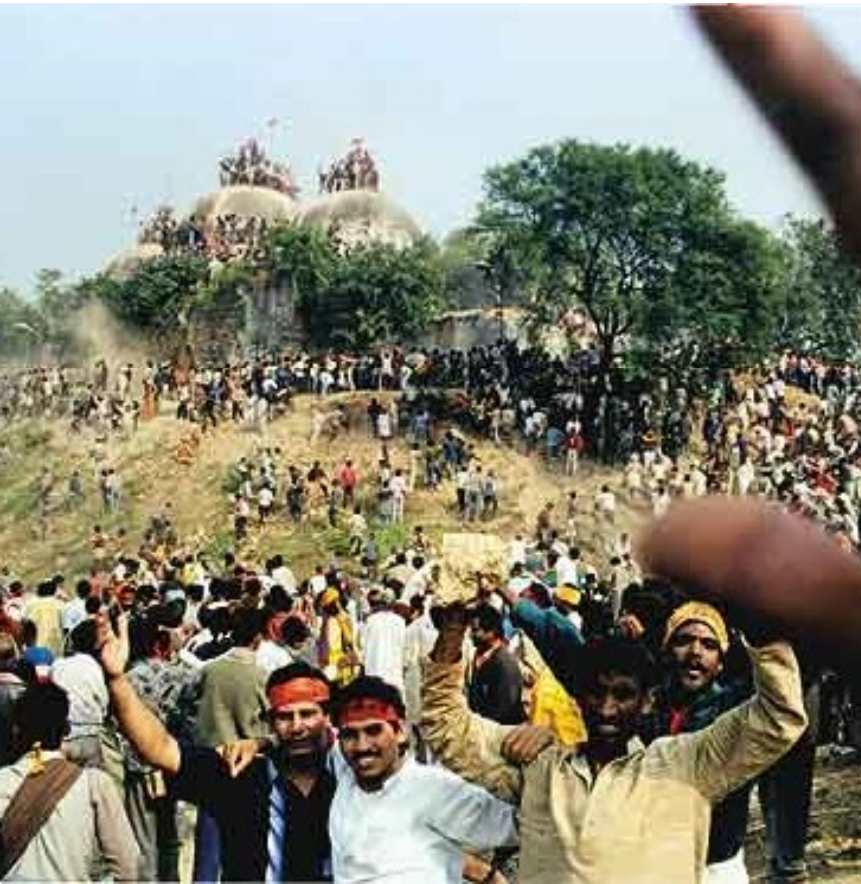
Forest Fire, Urban fire



Oil Spill



Festival Related Disasters



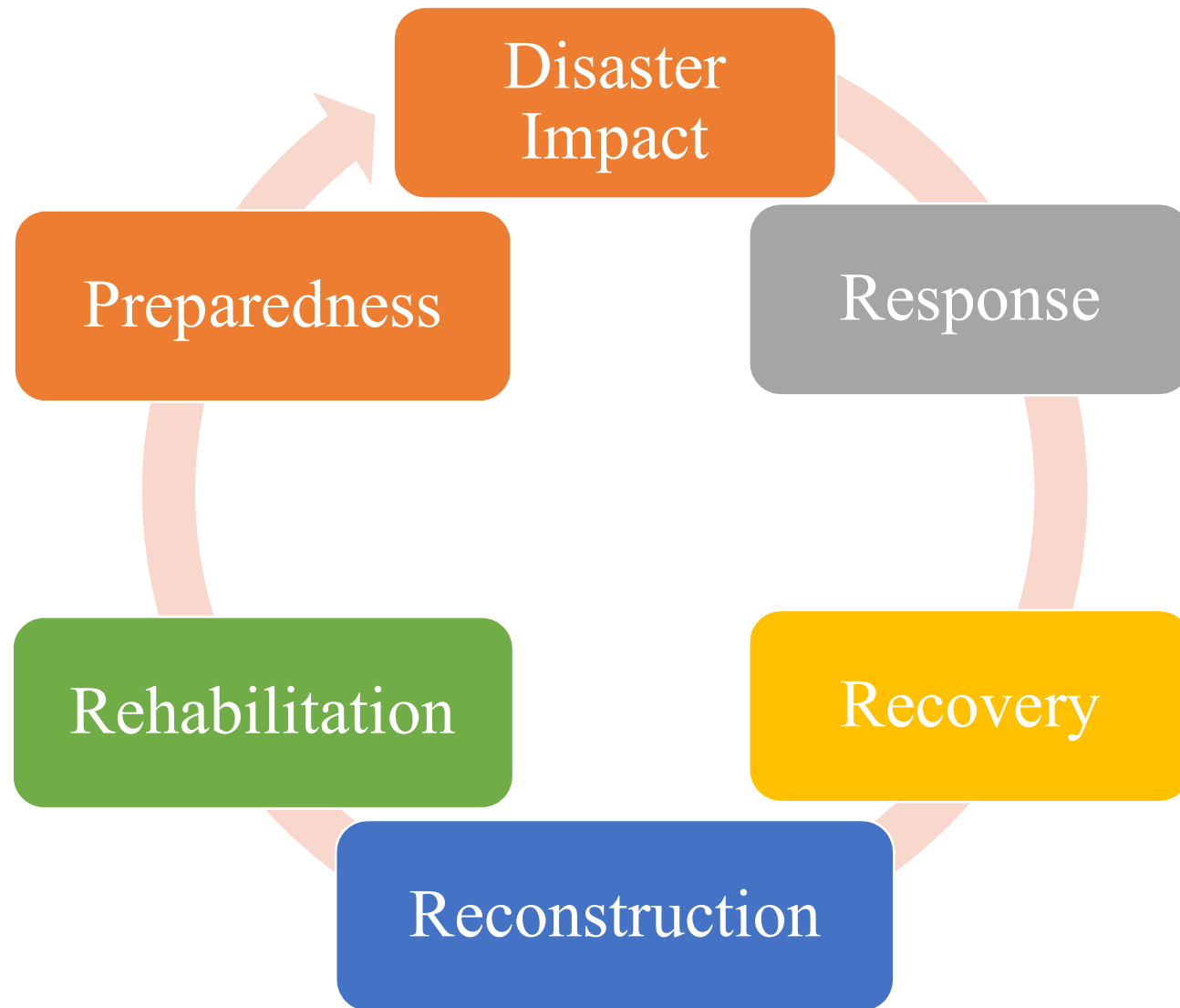
Air, Road and Rail disasters







Disaster Cycle



Common Disasters

Earthquake:

Causes:

- Slippage of crusted rock along fault or area of strain and rebound to new alignment.

General Characteristics:

- Shaking of earth caused by waves on & below the earth's surface causing, after shock, tsunami, tremors, vibration, land slides etc..

Cont...

Adverse effects:

- Damage or loss to structures, dam failures, and landslides may occur, damage to water systems, pollution of open wells.

Specific preparedness measures:

- Earth quake warning & preparedness programme.

Floods

Causes

Accelerated sun off, dam failure, river floods
coastal flood associated with tropical cyclones.

Adverse effects:

Structures damaged by washing away
contamination of wells and grounded water possible.

Specific preparedness:

Flood detection and warning systems, community
participation and education.

Epidemics

Causes

- Exposure to toxin in pronounced rise in number of cases of parasitic or infectious origin.

Adverse effects:

- Illness and death, social & political disruption, economic loss, Increased trauma in E.D.

Specific preparedness:

- Emergency medical assistance, international aid, i outbreak uncontained.

Cyclones

Causes:

Mixture of heat and moisture forms a low pressure center over oceans in tropical latitudes where a water temperature are over 26° C, wind current spin and organize around deepening low pressure over accelerating toward the center and moving along.

Adverse Effects:

Structures damaged by wind force, flooding, ground water may be contaminated, crop and food stock may be wasted malaria and other viral outbreaks may happen

Specific Preparedness:

Public warning systems, evacuation plans, training and community participation.

Droughts

Causes:

- Rainfall Deficit, Human Induced changes in ground surface and soil, higher sea surface temperature, increased atmospheric CO₂ and Green House Gases.

Adverse Effects:

- Reduced income for farmers, increase in price of staple foods, increased inflation rates, famine, illness, death, reduction of drinking water sources, migration, breakup of communities.

Preparedness:

- Development of Inter Institutional response plan.

Disaster Response

Disaster response is the sum total of actions taken by people and institutions in the face of disaster. These actions commence with the warning of an out coming threatening event or with the event itself if it occurs without warning.

The end of disaster response comes with the completion of disaster rehabilitation programme.

Aims

To ensure the survival of maximum possible number of victims.

To establish self sufficiency and essential services as quickly as possible.

To repair or replace damaged infrastructure and regenerate viable economic activities.

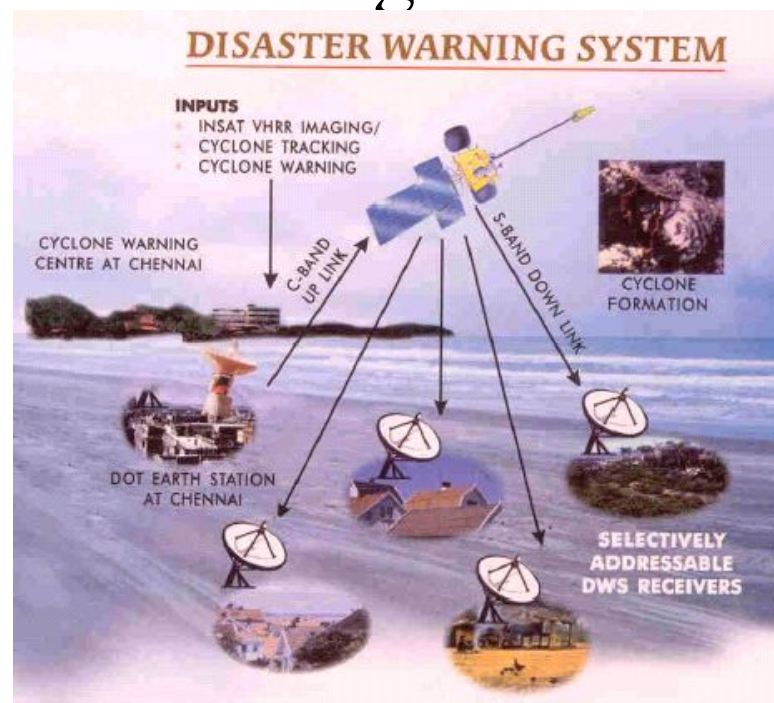
Steps

- Warning
- Evacuation and Migration
- Search and Rescue
- Post Disaster Assessment
- Emergency Relief
- Logistics and Supply
- Communication and Information Management
- Survivor Response and Coping
- Security

Cont...

arning:

It refers to arrangement of rapidly disseminate information concerning imminent disaster threats to government officials, institutions, and the population at large in the areas at immediate risk.



Cont...

Evacuation and Migration:

- It involves the relocation of population from zones of risk of an imminent disaster to a safer location.
- For evacuation to work there must be a timely and accurate warning system, clear identification of escape routes, an established policy that requires everyone to evacuate when an order is given.



Cont...

Search and Rescue:

- It is the process of identifying the location of disaster victims that may be trapped or isolated and bringing them to safety and medical attention.



Cont...

Post Disaster Assessment:

- The primary objective of assessment is to provide clear and concise picture of a post disaster situation to identify relief needs and to develop strategies for recovery.



Housing rebuilding in Banda Aceh, Indonesia



Housing rebuilding in Sichuan, China



Buildings rebuilding in Marysville, Australia

Cont...

Emergency Relief:

- Is the provision on a humanitarian basis of material aid and emergency care necessary to save and preserve human lives.
- It enables families to meet their basic need for medical and health care, shelter, clothing, water and food. These are provided free of cost for days to week immediately following sudden disaster.



Cont...

Logistics and Supply:

- A well-organized supply service is crucial for handling the procurement or receipt, storage and dispatch of relief supplies for distribution to disaster victims.



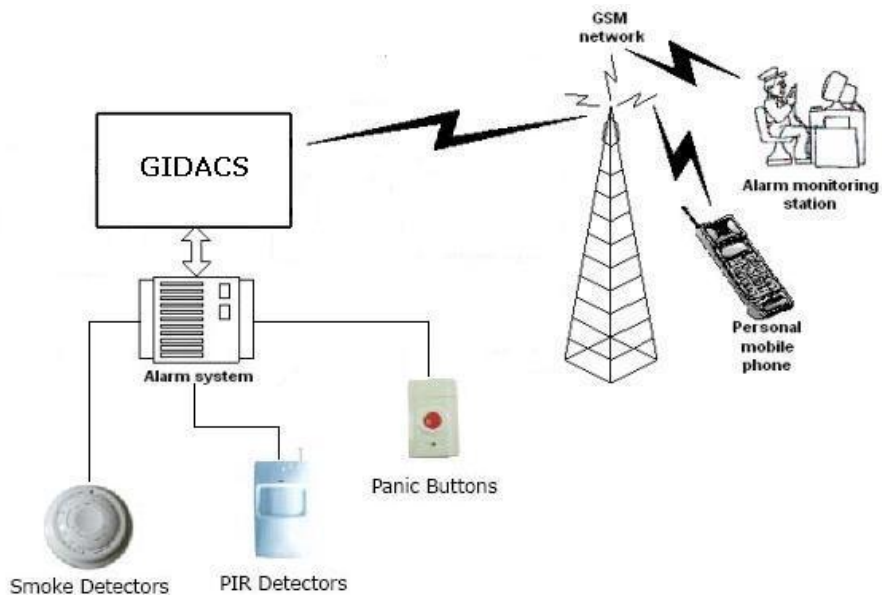
Cont...

Communication and Information Management:

- All the above activities are dependent on communication. There are two aspects in communication system in disaster.
- One is the equipment, which is essential for information flow such as radio, telephones and their supporting systems.

Cont...

Second is Information management, the protocol of knowing who communicates, what information to whom, what priority is given to it and how is disseminated and interrupted.



Cont...

Survivor Response and Coping:

- Disaster survivor may have new and special needs for social services to help adjust to the trauma and disruption caused by the disaster. It is easy to overlook the real needs and resources of the survivor.



Cont...

Security:

- It is not always a prior issue after natural disaster, the protection of human rights and safety of displaced populations and refugees can be paramount importance requiring international monitoring.

Rehabilitation and Reconstruction

Rehabilitation:

- It is the action taken aftermath of a disaster to enable basic services to resume functioning, assist victims, self-help efforts to repair dwellings and community facilities and facilitate the revival of economic activities.
- It focuses on enabling the affected populations to resume more or less normal patterns of life.

Cont...

Reconstruction:

- It is the permanent construction or replacement of severely damaged physical structures, the full restoration of all services and local infrastructures and the revitalization of the economy.
- It must be fully integrated into ongoing long term development plans, taking account the future disaster risk.

REHABILITATION & RECONSTRUCTION





REHABILITATION X RECONSTRUCTION



1

chair



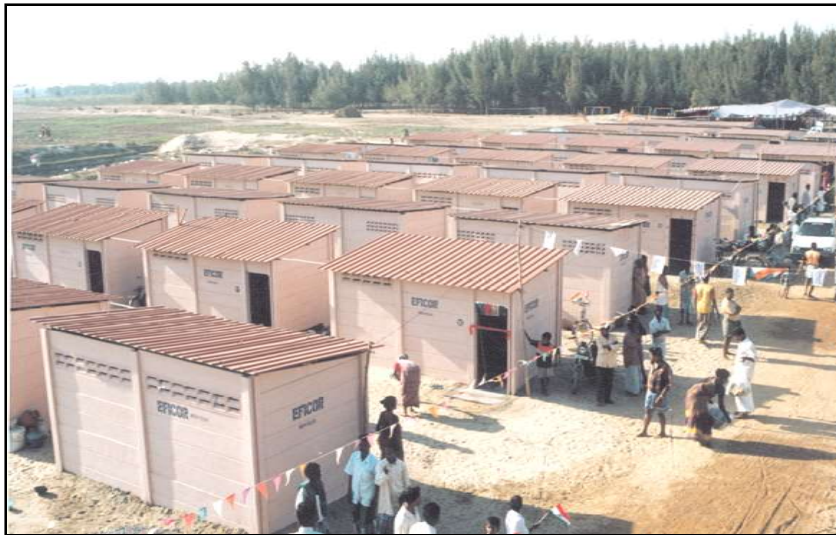
2

disaster



3

rehabilitation



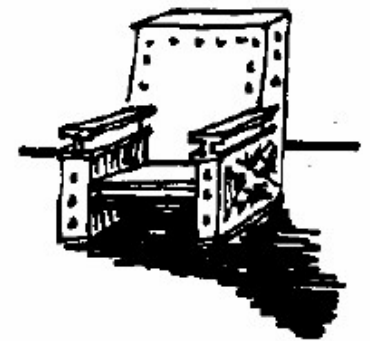
1

chair



2

disaster



3

reconstruction

Mitigation

The actions taken to reduce both human sufferings and property loss resulting from extreme natural phenomena.

It is one of the positive links between disaster and development resources to reduce the risks of hazards through migration process.

Cont...

Saving life and reducing economic disruption:

- The scale of disaster and the number of people they are capable of killing is the primary justification of the mitigation. Understanding the way that people are killed and injured in disasters is a prerequisite for reducing calamities.

Reduce the hazard and Reduce vulnerability:

- Protection against the threats of disaster can be achieved by modifying or removing the cause of the threat or by reducing the effects of the threat if it occurs.

Mitigation Action

Engineering

Spatial Planning

Economic

Management and institutionalization of disaster mitigation

Societal

Conflict Reduction

Cont...

Engineering:

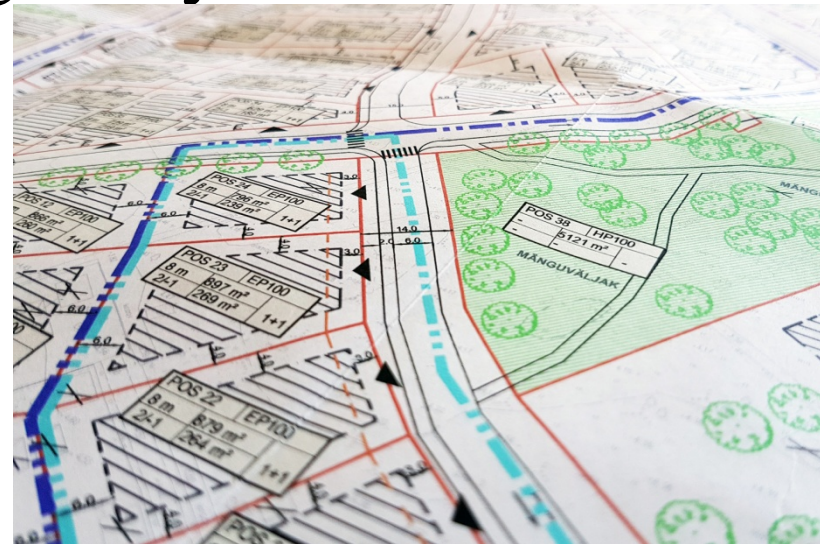
- Results in stronger individual structures that are more resistance to hazard forces. This is some time referred to as hardening facilities against hazard focus.



Cont...

Spatial Planning:

- Many hazards are localized with their likely effects confined to specific known areas. Urban planning needs to integrate awareness of natural disasters risk mitigation into the normal procedures of planning a city.



Cont...

Economic:

- Economic development is key to disaster mitigation. A strong economy is the best protection against a future disaster.
- Strong economy means more money to spend on stronger buildings, safer sites and large financial reserves to cope with future losses.

Cont...

Management and institutionalization of disaster mitigation:

- It also requires certain organizational and procedural measures. Education, training and development of professional expertise are necessary components of institutionalizing disaster mitigation.

Cont...

Societal

- The mitigation of disaster will only come about when there is a consensus that is desirable.
- The general public is fully aware of potential hazards, choose to protect itself as fully as possible and can readily support protective efforts made on its behalf.

Cont...

Conflict Reduction:

- It should be start with identifying and addressing the root of causes of the conflicts.
- The causes may be land tenure, employment access to resources and intolerance of ethnic or religious differences. These issues need to be anticipated through a form of early warnings and defused before conflict erupts.

Disaster Preparedness

Is a quiet straight forward, its objectives is to ensure that in times of disaster appropriate systems, procedures and resources are in place to assist those affected by the disaster and enable them to help themselves.

Aims

Minimize adverse effects of a hazard through effective precautionary action.

Ensure timely appropriate and efficient organization and delivery of emergency response following the impact of disaster.

Components

Assessing Vulnerability

Planning

Institutional framework

Information System

Resource Base

Warning Systems

Public Education and Training

Rehearsal (Drill)

Assessing Vulnerability

Fundamental of all aspects of disaster management is information. The manager may know that a particular .geographic region or community is susceptible to the impacts of sudden or slow onset hazards.

Planning

Throughout all the activities designed to promote disaster preparedness, the ultimate objective is to have plans in place that are agreed upon, that are implementable and for which commitment and resources are relatively assured.

Institutional framework

A coordinated disaster preparedness and response system is a prerequisite to any disaster preparedness plan. Each system design will depend upon the traditions and governmental structures of the country under review.

Information System

The preparedness plan must have an information system for collection and early warning and to monitor disaster.

Resource Base

The requirements to meet an emergency situation will clearly depend upon the types of hazards the plan anticipates.

Such requirements cover all aspects of disaster relief from recovery implementation some major requirements are shelter, medicines, food supplementary food, communication system, logistic system.

Warning Systems

A warning system can save many lives, by giving a vulnerable population adequate notice of an impending disaster, they can either escape the event or take precautions to reduce the danger.

Public Education and Training

The planning process will only be effective if those who are ultimate beneficiaries know what to do in times of disaster and know what to expect.

Public education in schools for children and young adults emphasizing what actions should be taken in case of a disaster threat.

Public information through mass media

Special training courses for adult population on preventive health care

Rehearsal (Drill)

Disaster preparedness portray the full dynamics and potential chaos of a disaster relief operation.

Cont...

Type of Disaster	Nodal Ministry	Support Ministry
Natural	Agriculture	Health
Chemical	Environment	Health
Nuclear	Atomic Energy	Health
Civil Strife	Home	Health
Biological	Health	Public Health Engineering

Disaster Management Act in India

Civil Defense Act 1968

Civil Defense Rules 1968

Civil Defense Regulations 1968

Disaster Management Act 2005

Disaster Management National Executive Committee 2006

Disaster Management rules 2006

National Institute of Disaster Management Regulations 2006

Disaster Management rules 2007 – 2008

Notification of National Disaster response Force Rules 2008

Nurses Responsibility in Disaster

Nurses Responsibility

Personal Preparedness:

Nurse must be as healthy as possible by physically, psychologically and must be certified in first aid and emergency management.

Professional Preparedness:

Should know and understand citywide disaster management plan and update as per need.

Cont...

Develop and provide educational material relevant to disaster specific to the area

She should organize disaster drills with Government and Non Government organizations and should take part in it.

Keep upto date record of vulnerable population.

Cont...

Understands available community resources and how the community will work together.

Public education about non preventable disaster

Should aware of different kind of tool kits and assessment tools and how to use them at the disaster site.

At Disaster Site

Locate the trapped victims and evacuate them to safe place

Triage or sorting to be done

The goal of triage is to maximize the no of survivors by sorting the treatable from the untreatable victims. It determines which client requires immediate treatment.

Do the dressing for minor wounds

Cont...

Provide adequate support to fracture site

Give immunization

Transport the victims to the health center by minimizing further risk.

In health Center

Supplies and equipments should be kept ready as soon as nurse get information about disaster

Receive victims and transfer them to casualty or ICU

Call for medical Attention

Do dressing for minor wounds

Check Airway, Breathing and Circulation

Cont...

Assist Doctor in providing medical Care

Provide psychological support to the relatives

Provide comprehensive nursing care

Proper recording and reporting of demographic data, medical care and nursing care to be done.

En Response

Assessment report should be given to manager it should contain.

Geographical extent of disaster

Population at risk

Presence of concurrent hazard

Injuries and death

Availability of shelter

Current level of sanitation

Status of health care infrastructure

Cont...

Deal with stress

Listen carefully to victims and retell the feelings

Encourage victims to share their feeling

Help them to take own decision

Delegate task to teenagers to avoid boredom

Provide basic necessity and dignity

Refer to counsellor, provide medical and nursing aid

Keep records safely

Ensure communication, transportation and safe environment

Rehabilitation Stage

Medical Rehabilitation:

Restoration of normal function by giving assisted medical care and comprehensive nursing measures.

Vocational Rehabilitation:

Restoration of capacity to earn a livelihood by minimizing further damage.

Cont...

Social Rehabilitation:

Restoration of family and social relationship by proper guidance and counselling.

Psychological Rehabilitation:

Restoration of personal dignity and confidence by making the victim independent on performing their daily activity.

Recovery Phase

There may be threat of communicable disease due to inadequate water supply and crowded living condition, nurse must teach proper hygiene and making sure immunization record upto date.

Referral services of mental health professional should be done for psychological stressed victims. Nurse needs to be alert for environmental health hazards during recovery phase of disaster.

Psychosocial Interventions

Community Level:

Provide social activity for new community.

Help survivors to recognize loss

Identify & discuss local problems

Work together towards and achievable specific goal.

Family Level:

Work together about their experiences, losses and feelings

Encourage families to resume normal activities to extent possible.