

*Good
Afternoon!*



SEMINAR

ON

DISASTER NURSING

INTRODUCTION:-

- Disaster are not confined to a particular part of the world .They can occur any where and at any time. There are many types of disaster such as earthquake , cyclone, floods ,tidal waves, landslides, volcanic eruptions, tornadoes, fire etc



General objective:-

- At the end of the seminar the student will be able to understand the disaster nursing.

Specific objective:-

- Define disaster
- Define disaster nursing
- Explain the types of disaster
- Classify the disaster agent
- Explain the phases of disaster
- Discuss the management of disaster

- Enlist the role of nurses in disaster
- Enumerate the ethical & legal implication for nurses
- Describe the role of community health nurse in disaster preparedness, response & recovery.
- Enlist the levels of disaster prevention
- State psycho-social intervention in the aftermath of the disaster.

Disaster alphabetically means:-

- D- destruction
- I- incidents
- S- suffering
- A- administrative, financial failure
- S- sentiments
- T - tragedies
- E- eruption of communicable diseases
- R – research programme & its implementation

DISASTER :-

1. Any occurrence that causes damage economic disruption, loss of human life deterioration in health & a health services on a scale sufficient to warrant an extraordinary response from outside the affected community or area.

- WHO, 1995

Cont.....

2. A disaster can be defined as an occurrence either nature or manmade that causes human suffering & creates human needs that victims can not alleviate without assistance.

-American Red Cross

Disaster nursing:-

Disaster nursing can be defined as the adaptation of professional nursing skills in recognized and meeting the nursing physical and emotional needs resulting from a disaster.

**TYPES
OF
DISASTER**

1. NATURAL DISASTER

BRIGHT LIGHTING



CYCLONE CATARINA



EARTHQUAKE



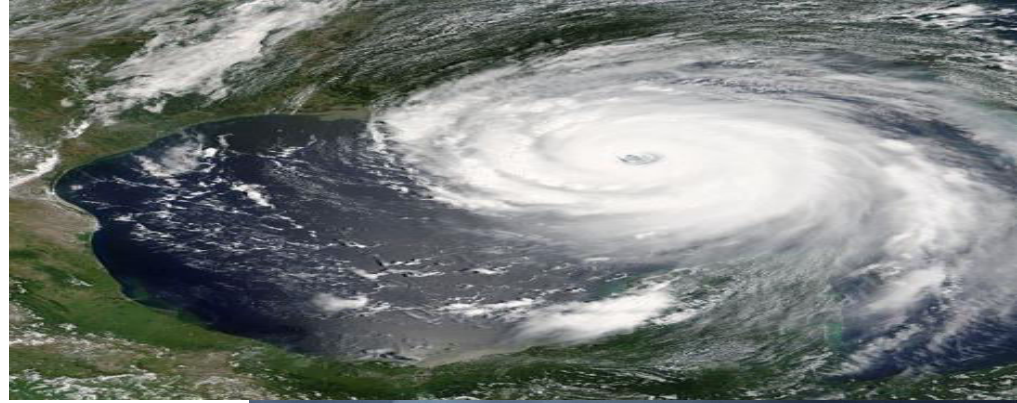
TSUNAMI



- Droughts
- Forest fires
- Landslides & mudslides
- Blizzards



- Hurricanes



- Tornadoes

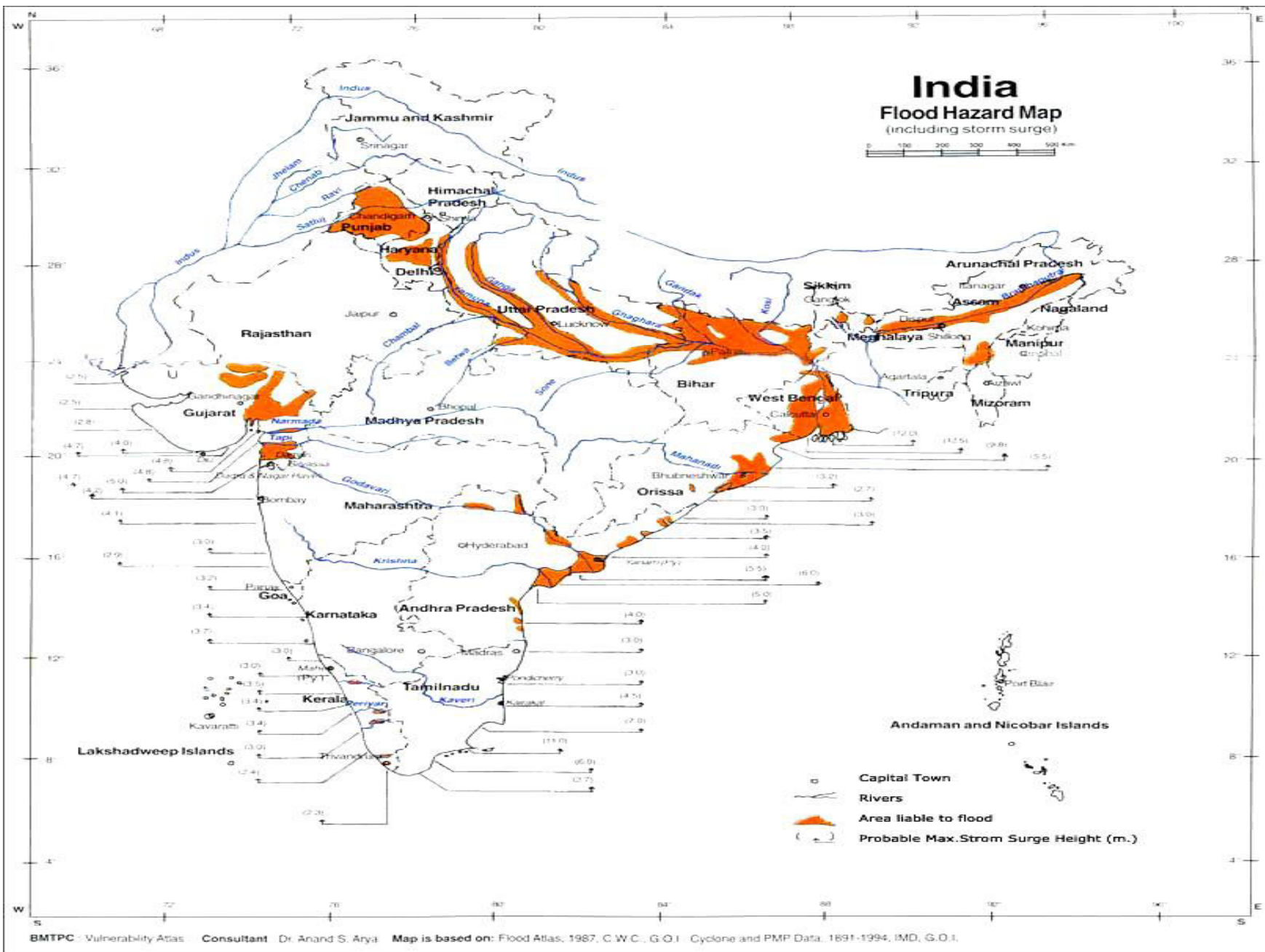


- Floods



- Volcanic disruptions

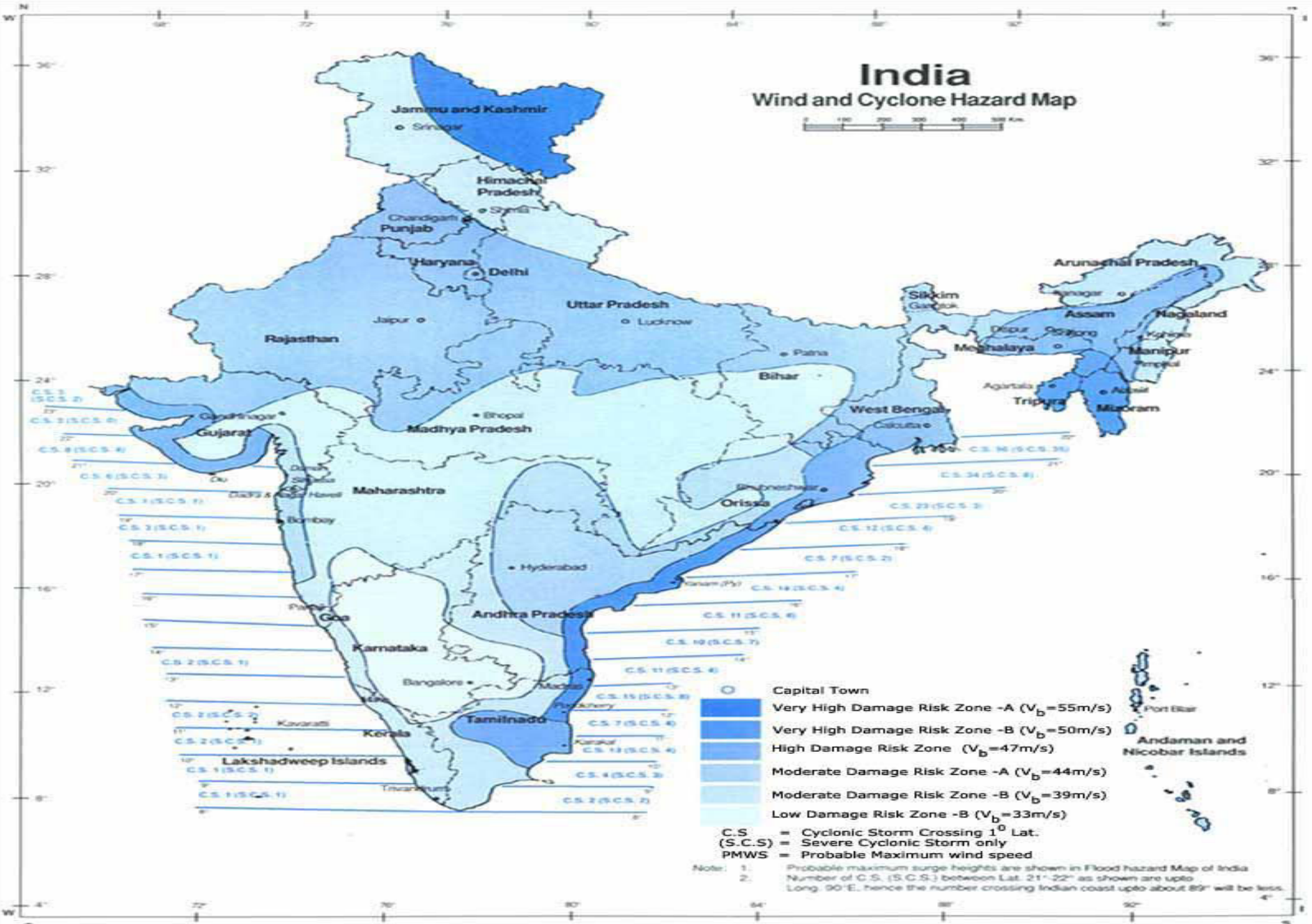




BMTPC : Vulnerability Atlas Consultant Dr. Anand S. Arya Map is based on: Flood Atlas, 1987, C.W.C., G.O.I. / Cyclone and PMP Data, 1891-1994, IMD, G.O.I.

India

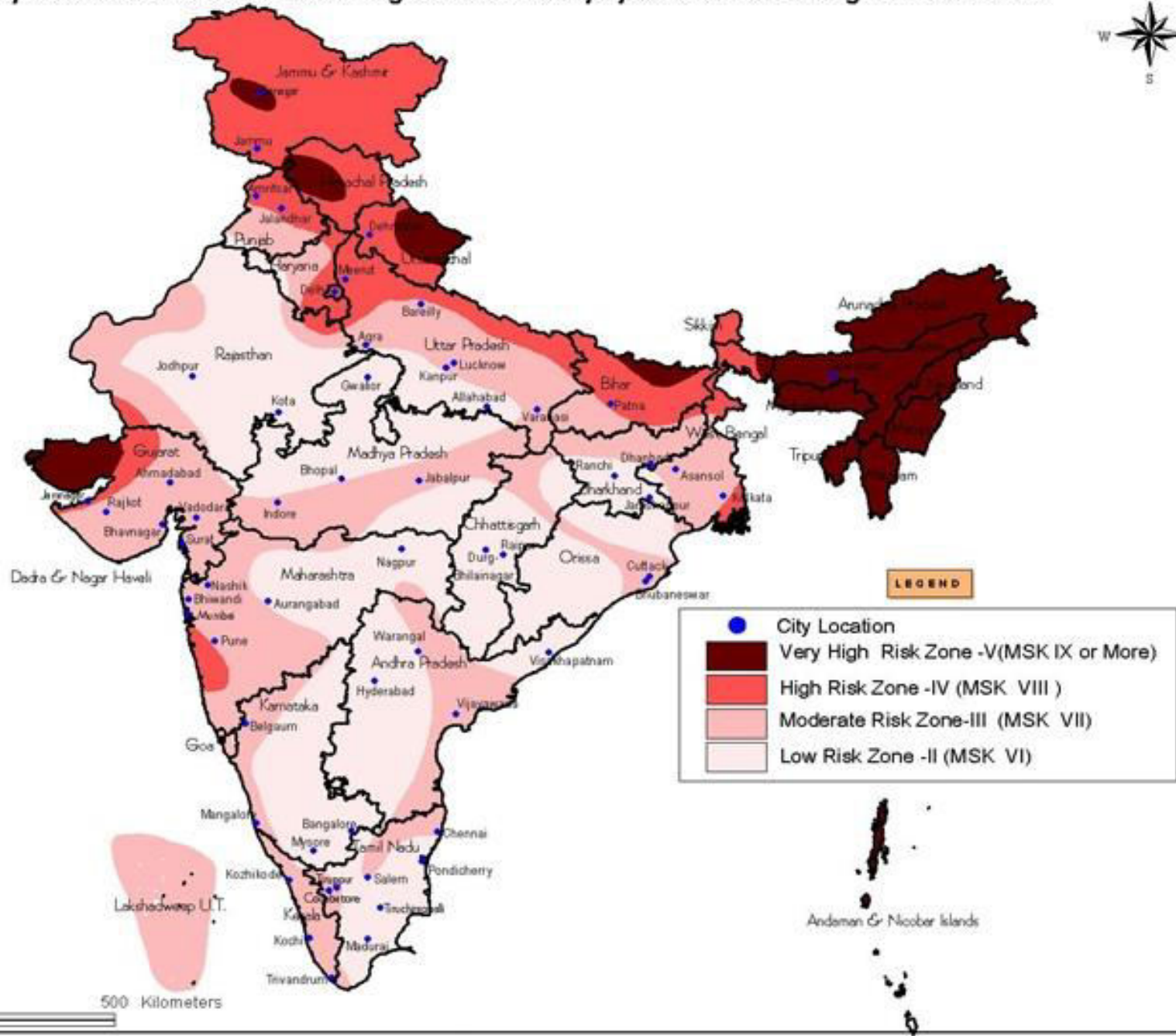
Wind and Cyclone Hazard Map



- Capital Town
- Very High Damage Risk Zone -A ($V_b=55\text{m/s}$)
- Very High Damage Risk Zone -B ($V_b=50\text{m/s}$)
- High Damage Risk Zone ($V_b=47\text{m/s}$)
- Moderate Damage Risk Zone -A ($V_b=44\text{m/s}$)
- Moderate Damage Risk Zone -B ($V_b=39\text{m/s}$)
- Low Damage Risk Zone -B ($V_b=33\text{m/s}$)
- C.S.** = Cyclonic Storm Crossing 1° Lat.
- (S.C.S.)** = Severe Cyclonic Storm only
- P.M.W.S.** = Probable Maximum wind speed

Note: 1. Probable maximum surge heights are shown in Flood hazard Map of India
 2. Number of C.S. (S.C.S.) between Lat. 21° - 22° as shown are upto Long. 90° E. hence the number crossing Indian coast upto about 89° will be less.

Earthquake Zones of India indicating 60 cities with population exceeding half a million.



2. MAN-MADE DISASTER

- Hazardous substance accidents
- Radiologic accidents
- Dam failures
- Resource shortage
- Structural fire & explosion
- Domestic disturbances
- Bioterrorism

3. Hybrid disaster:-

- Spread of disease in community
- Global warming

Global warming: Causes and effects

The infographic features a central globe with a large yellow arrow pointing upwards, symbolizing rising temperatures. A hand is shown holding a smaller globe that is on fire, representing the impact of global warming. Text boxes are arranged around the globe, providing information on causes and effects. At the bottom, there are two small images: a satellite view of a hurricane and a close-up of a mosquito.

Earth's temperature has risen about 1 degree Fahrenheit in the last century. The past 50 years of warming has been attributed to human activity.

Burning fuels such as coal, natural gas and oil produces greenhouse gases in excessive amounts.

Greenhouse gases are emissions that rise into the atmosphere and trap the sun's energy, keeping heat from escaping.

The United States was responsible for 20 percent of the global

Most of the world's emissions are attributed to the United States' large-scale use of fuels in vehicles and factories.

During the past 100 years global sea levels have risen 4 to 8 inches.

Some predictions for local changes include increasingly hot summers and intense thunderstorms.

Damaging storms, droughts and related weather phenomena cause an increase in economic and health problems. Warmer weather provides breeding grounds for insects such as malaria-carrying mosquitoes.

Source: Environmental Protection Agency

NATE OWEN/ISTOCK

LEVELS OF DISASTER

- Level III- Minor disaster
- Level II- Moderate disaster
- Level I- Massive disaster

Disaster Agents

1. Agent –

- Primary
- Secondary

2. Host

Cont.....

3. Environment-

- Physical factors
- Chemical factors
- Biological factors
- Social factors

4. Psychological factors

PHASES OF DISASTER



1. Pre
impact
phase



2. Impact
phase



3.
Post
impact
phase

The victims of a disaster go through four stages of emotional response:

- Denial
- Strong emotional response
- Acceptance
- Recover

Dimensions of a disaster

Predictability

Controllability

Frequency

Time

Scope and
Intensity

Effects of disaster:-

- **General effects of disaster**
- **Health effects of disaster**

General effects of disaster

- Loss of life
- Injury
- Damage of property
- Damage of cash
- Loss of livelihood
- Disruption of livelihood
- Disruption of lifestyle
- Disruption of essential services
- Loss/ Disruption of infrastructure
- National/state economic loss
- Sociological/ psychological effect

Health effects of disaster

- Accidents & trauma
- Loss of life
- Spread of diseases eg. Bloody diarrhea, hepatitis A & E, meningitis , etc.
- Spread of vector born diseases eg. Malaria dengue etc.
- Nutritional problems eg. Malnutrition anemia
- Psychological trauma
- Problems of orphan and shelter

DISASTER MANAGEMENT

- Disaster response
- Disaster preparedness and
- Disaster mitigation

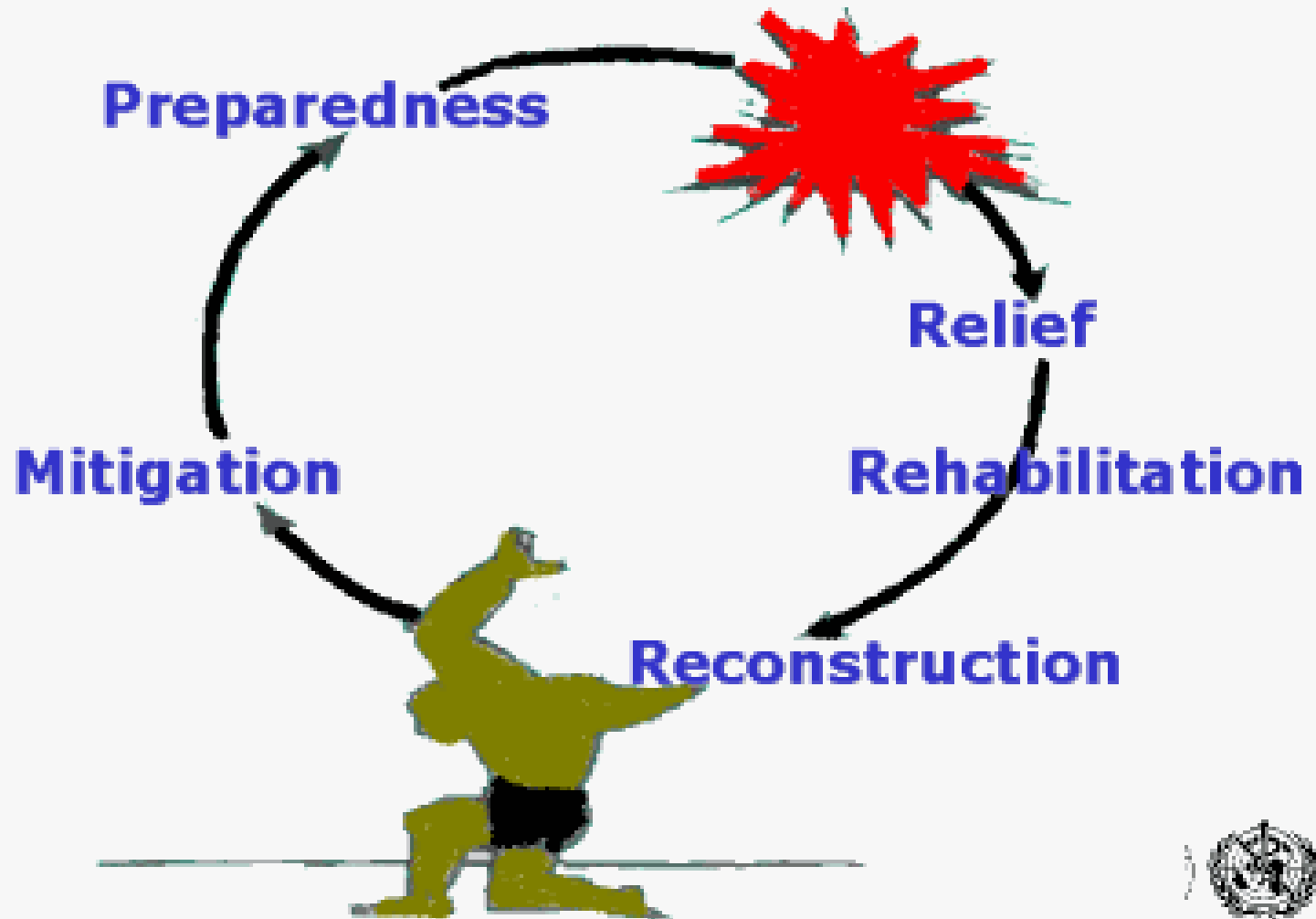
Principles of Disaster Management

Sanford (1984) listed 8 principles of disaster management

1. Prevention of occurrence
2. Minimizing casualties
3. Preventing further casualties
4. Rescue the victims/injured
5. First aid
6. Evacuating the injured
7. Providing definitive Medical care
8. Facilitating Reconstruction- recovery

Disaster Cycle

Disaster Impact



Disaster impact and Response

1. Search, rescue and first aid
2. Field care
3. Triage -

Red	High priority treatment or transfer
Yellow	Medium priority
Green	Ambulatory patient
Black	Dead or moribund patient

What is Triage?

- French verb “Trier” means to sort
- Assigns priorities when resources limited
- Do the best for the greatest number of patients



Personal Property Receipt
Evidence Tag

Destination _____
Via _____

TRIAGE TAG

S L U D G E
Salivation Laceration Urinoblast Defecation E.L. Distress Emesis

AUTO INJECTOR 1 2 3 4 5

Yes	No	Chest Deced
Yes	No	Secondary Deced
Solution		
<input type="checkbox"/>	Blunt Trauma	
<input type="checkbox"/>	Burn	
<input type="checkbox"/>	C-Spine	
<input type="checkbox"/>	Cardiac	
<input type="checkbox"/>	Cryoping	
<input type="checkbox"/>	Fracture	
<input type="checkbox"/>	Laceration	
<input type="checkbox"/>	Penetrating Injury	

Age _____
 Male Female

Other: _____

VITAL SIGNS			
Time	B/P	Pulse	Respiration

Time	Drug Solution	Dose

MORGUE
Pulseless/Non-Breathing

IMMEDIATE
Life Threatening Injury

DELAYED
Serious, Non Life Threatening

MINOR
Walking Wounded

CONTAMINATED

EVIDENCE

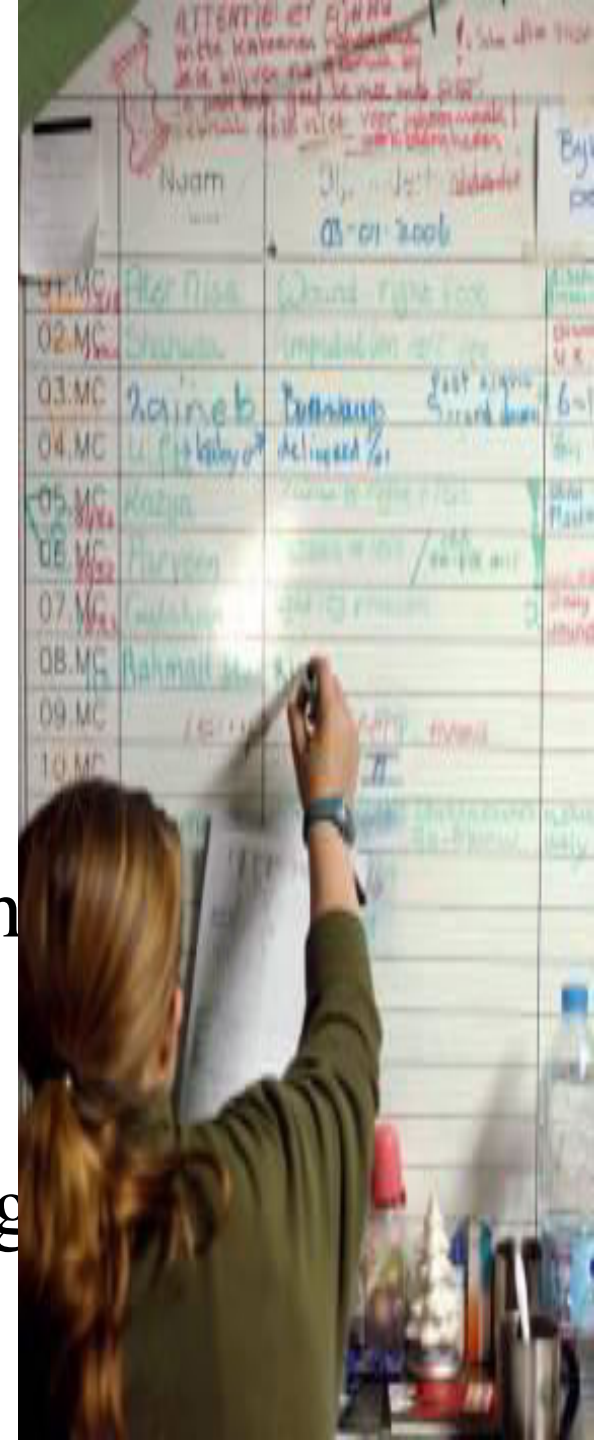
Why is Disaster Triage needed

- Inadequate resource to meet immediate needs
- Infrastructure limitations
- Inadequate hazard preparation
- Limited transport capabilities
- Multiple agencies responding
- Hospital Resources Overwhelmed



Advantages of triage

- Helps to bring order and organization to a chaotic scene.
- It identifies and provides care to those who are in greatest need
- Helps make the difficult decisions easier
- Assure that resources are used in the most effective manner
- May take some of the emotional burden away from those doing triage



Response / Relief phase:-

This phase begins when assistance from outside start to reach disaster area. The type and quantity of humanitarian relief supplies are usually determined by two main factors-

- The type of disaster, since events have different effects on the population.
- The type and quantity supplies available locally.

Cont....

There are four principles component is managing humanitarian supplies-

- acquisition of supplies
- transportation
- Storage
- distribution

Natural Disaster Response- Government of India(GOI)

- **National Crisis Management Committee(NCMC) under Cabinet Secretary**
- **Crisis Management Group(CMG) under Central Relief Commissioner**
- **Group of Ministers, Group of Secretaries and High Level Committees-Need base**

GOI Departments for Disaster Response

- **Armed Forces-Ministry of Defense**
- **Central Para Military Forces- Ministry of Home Affairs**
- **International Response- Ministry of External Affairs**

GOI Departments for Disaster Response

- **Ministries/Departments:**
Rural Development, Drinking Water Supply
Power, Telecom , Health, Urban Development
Food & Public Distribution, Shipping
Surface Transport, Railways, Civil Aviation
Women & Child Development
Water Resources, Animal Husbandry
India Meteorological Department(IMD)

Epidemiologic surveillance and disease control

Transmission of diseases:-

- Overcrowding and poor sanitation
- Population displacement
- Disruption & contamination of water supply
damage to sewerage system & power systems.

Cont.....

- Disruption of routine control programme
- Ecological changes
- Displacement of domestic wild animals
- Provision of emergency food , water & shelter

Principles of preventing & controlling communicable diseases after disaster:-

- Implement as soon as possible all public health measures , to reduce the risk of disease transmission.
- Organize a reliable disease reporting system to identify outbreaks and to promptly initiate control measures.
- Investigate all reports of disease outbreaks rapidly eg. Gastroenteritis acute respiratory tract infection ,vector born diseases.

Vaccination

Cont...

- **Nutrition:-**

- Immediate steps for ensuring that the food relief programme will be effective include
- Assessing the food supplies after disaster
- Gauging the nutritional needs of the affected population
- Calculating daily food rations and needs for large populations groups
- Monitoring the nutritional status of the affected population.

REHABILITATION

- Water supply
- Food safety
- Basic sanitation & food safety
- Vector control

MITIGATION

Emergency prevention and mitigation involves measures designed either to prevent hazards from causing emergency or to lessen the likely effects of emergencies , these measures include

- Flood mitigation works
- Appropriate land-use planning
- Improved building codes
- Reduction or protection of vulnerable population & structures



Vulnerable group



DISASTER PREPAREDNESS

- Objectives of disaster preparedness
 - to ensure that appropriate system
 - procedures & resources are in place to provide prompt effective assistance to disaster victims, thus facilitating relief measures & rehabilitation of services.



Cont...

- Reasons of community preparedness

- Members of the community have the most to lose from being vulnerable to disaster & the most to gain from an effective & appropriate emergency preparedness programme.
- Those who responds to an emergency come from within the community when transfer & communications are disrupted ,an external emergency response may not arrive for days.

Cont..

- Resources are most easily pooled at the community level and every community possesses capabilities. Failure to exploit these capabilities is poor resource management.
- Sustained development is best achieved by allowing emergency- affected communities to design, manage & implement internal and external assistance programme.

Disaster preparedness of country :

1. Evaluate the risk of the country or particular region to disaster.
2. Adopt standards and regulation.
3. Organize communication, information & warning system.
4. Ensure co-ordination and response mechanism.
5. Adopt measures to ensure that financial & other resources are available for increased readiness & can be mobilized in disaster situation.

Cont.....

6. Develop public education programme.
7. Co-ordinate information sessions with news, media etc.
8. Organize disaster simulation exercises that test response mechanisms.

POLICY DEVELOPEMENT

- Policy development is the “formal statement of course of action”. Policy is strategic in nature and performs the following functions
 1. Establish long term goal
 2. Assign responsibility for achieving goals
 3. Establish recommended work practice
 4. Determine criteria for decision making

Cont....

While policies tend to use to be “top-down” that is authorized by higher levels, implementation of the strategies that arise from a policy tend to be “bottom –up” with the higher level assisting lower levels.

Six sectors are required for response and recovery strategies:-

1. Communication
2. Health
3. Social welfare
4. Police and security
5. Search and rescue
6. Transport

Personal protection in different types of emergencies:-

- Do not use telephone, except to call for help, so as to leave telephone lines free for the organization of response.
- Listen to the message broadcast by radio & the media so as to be informed of development.
- Carry out the official instructions given over the radio or by loudspeaker
- Keep a family emergency kit ready

**What to do ? before-hand
During
After Disaster**

Cont.....

1. Floods

2. Storm ,hurricane & tornadoes

3. Earthquake

4. Clouds of toxic fumes

MANMADE DISASTER

1. Sudden disaster
2. Insidious disaster
3. Wars & civil conflict

GOVERNMENT OF INDIA : NODAL MINISTRIES / DEPARTMENT FOR DISASTER MANAGEMENT

DISASTERS

Natural Disasters

Air Accidents

Civil Strife

Railway Accidents

Chemical Disasters

Biological Disasters

Nuclear Accident

NODAL MINISTRIES

Agriculture

Civil Aviation

Home Affairs

Railways

Environment

Health & family Welfare

Atomic Energy

Man-made disaster agencies providing health humanitarian assistance:-

1. United nations agencies
2. Inter-governmental organizations
3. Non- governmental organizations

United nations agencies

- Office for the coordination of humanitarian affairs (OCHA)
- World health organization (WHO)
- United nations integrated child development services (UNICEF)
- World food programme (WFP)
- Food and agriculture organization (FAO)

Inter-governmental organizations

- European community “humanitarian office” (ECHO)
- Organization of American States(OAS)
- Center of coordination for prevention of natural disaster in central America
- Caribbean Disaster Emergency Response Agency

Non- governmental organizations

- CARE
- International committee of Red-Cross
- International Council of Voluntary Agency (ICVA)
- International Federation of Red-Cross (IFRC)

Are nurses prepared??



DISASTER NURSING

OBJECTIVES OF DISASTER NURSING

- To effectively reduce the impact of disaster on human life and health.
- To participate in the coordinated efforts of all groups to reduce loss of life , property damage , social and economic disruption .
- To initiate rehabilitation

The symptoms related to trauma produced by disaster usually occur in five phases

- Impact phase
- Heroic phase
- The honeymoon
- Dellusionment phases
- Reconstruction and reorganization phase

Community measures in disaster

- Community participation
- Mock drills / training
- Mass awareness
- Education

Nurses preparation to face disaster

1. Personal preparedness
2. Professional preparedness

1. Personal preparedness

- A 3 day supply of water
- One change of clothing & footwear per person & blanket or sleeping per person.
- A first aid kit
- Emergency tools
- Candles & matches
- An extra set of car keys & credit cards ,cash or traveler's checks.

Cont.....

- Sanitation supplies, including toilet paper, soap feminine hygiene items & plastic garbage bags.
- Special items for infant elderly or disabled family members.
- An extra pair of eyeglasses, important documents should always be kept in a waterproof container

2. Professional preparedness

- Copy of professional license
- Personal equipment eg. Stethoscope
- Flash light & extra batteries
- Cash
- Warm clothing & a heavy jacket for weathers, appropriate clothes
- Record keeping materials
- Pocket sized references books

Responsibilities of Nurse In charge

Nurses role in psychological needs of victims

Ethical & Legal Implications For Nurses

Nurses' roles in disasters

- Determine magnitude of the event
- Define health needs of the affected groups
- Establish priorities and objectives
- Identify actual and potential public health problems
- Determine resources needed to respond to the needs identified
- Collaborate with other professional disciplines, governmental and non-governmental agencies
- Maintain a unified chain of command
- Communication



Role Of Community Health Nurse In Disaster

- Disaster preparedness
- Disaster response
- Disaster recovery

LEVELS OF DISASTER PREVENTION

- Primary prevention
- Secondary prevention
- Tertiary prevention

1.PRIMARY PREVENTION

Measures of primary prevention are

- Awareness of risk factors
- Individual & community preparedness
- Safety practices

2. SECONDARY PREVENTION

- Immediate rescue
- Prevention of additional injury or death after initial occurrence.
- First-aid
- Organized community response
- Definitive medical care
- Shelters & family location
- Identification services

3. TERTIARY PREVENTION

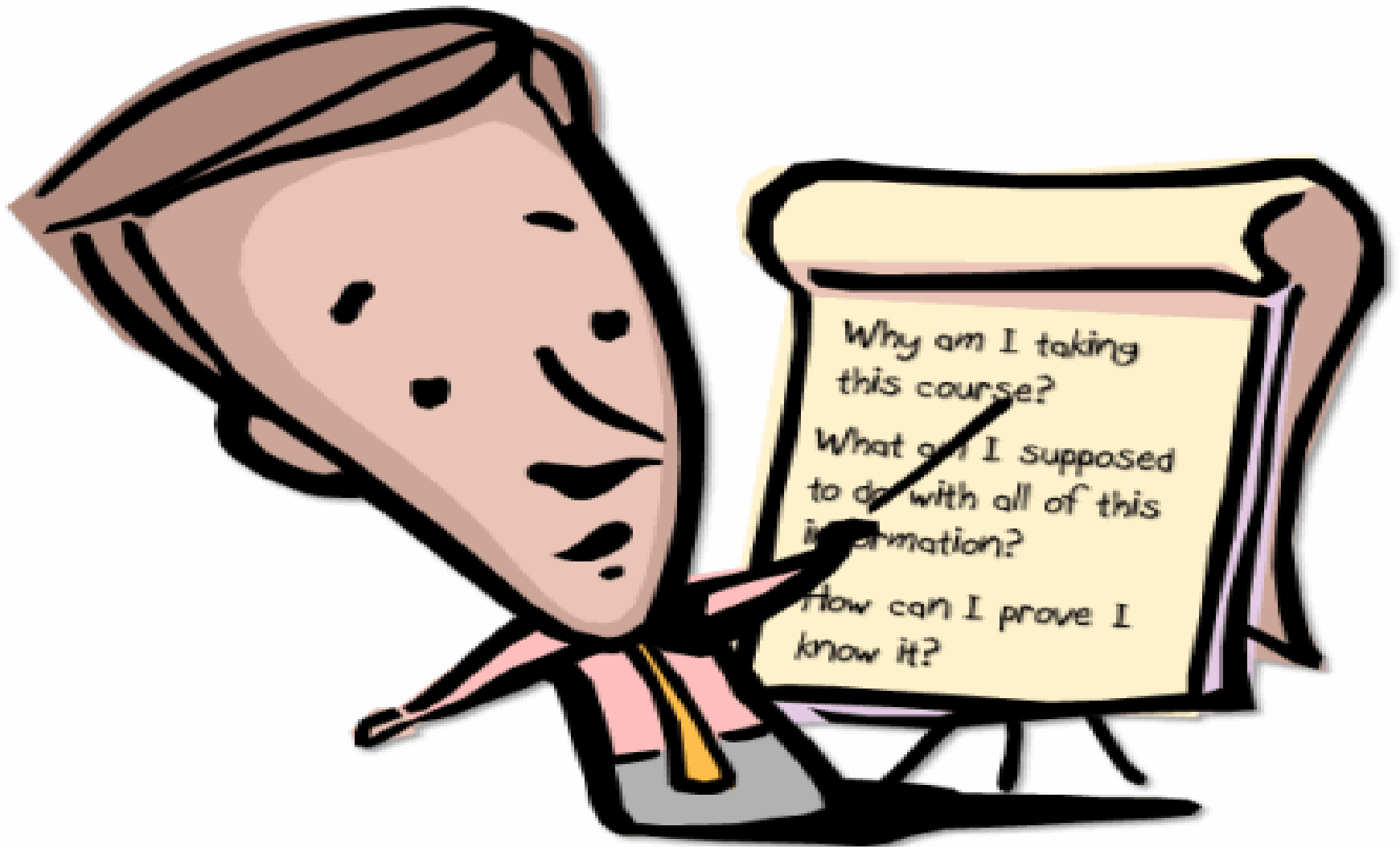
- Long term alternative shelter
- Relocation services
- Family and community rehabilitation

Psycho-social intervention in the aftermath of disaster

- Community level interventions
- Family level interventions



SUMMARY



Space

Num
Lock

Scroll
Lock

Pause

conclusion ↵

Insert

Home

Page
Up



Thank you
for being my friend