



UN-GGIM | United Nations Committee of Experts on  
Global Geospatial Information Management

AMEXCID  
AGENCIA MEXICANA DE  
COOPERACIÓN INTERNACIONAL  
PARA EL DESARROLLO



# UN GGIM Forum on Geospatial Information and Services for Disasters and WG-Disasters Meeting

**Session 2 B Experiences, Practices, Approaches and Challenges.**

**Experiences and Recommendations for the Stage 'Response'.**

**The Contribution of a Disaster Manager.**

by

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**Director of Transport and Disaster Risk Reduction.**

**Association of Caribbean States**

- Barbados 4-8, September 2016



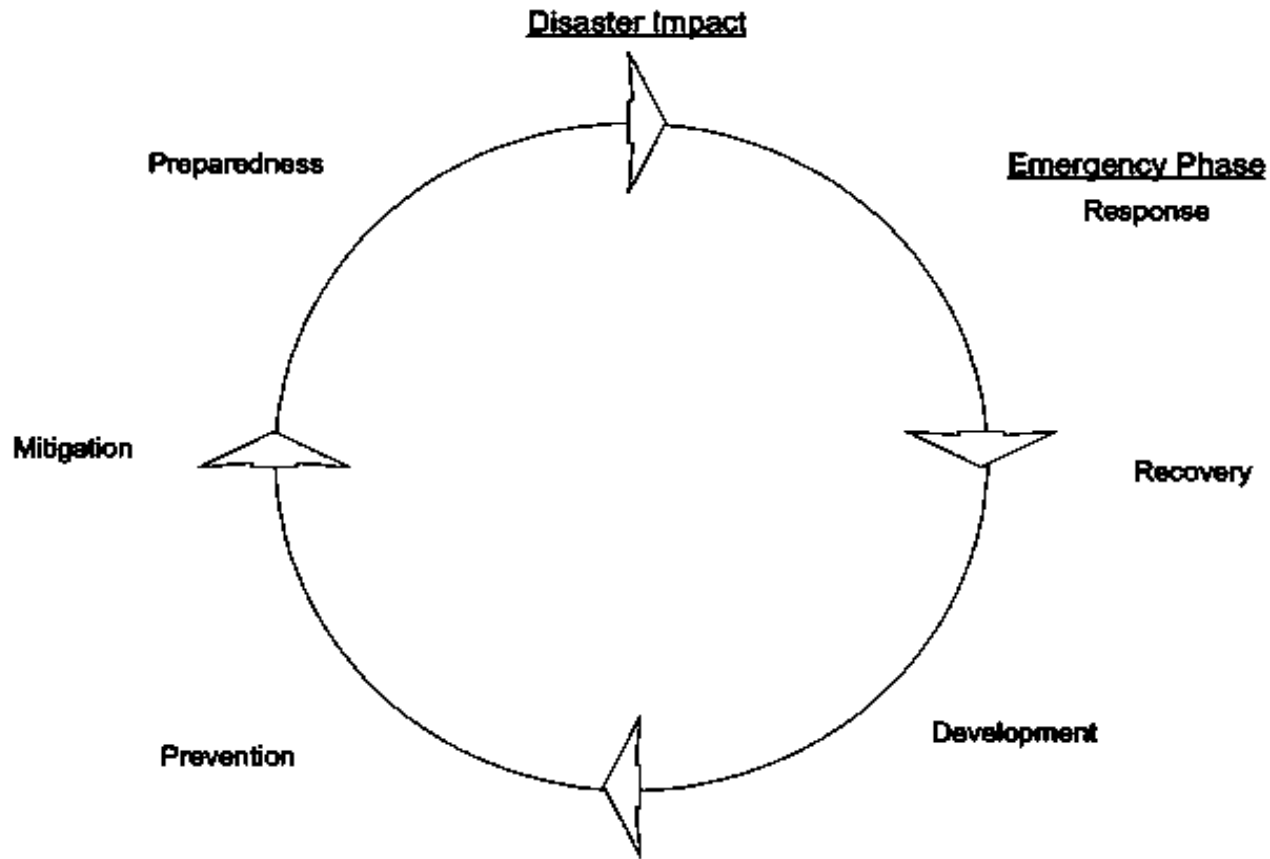
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# What is Response?

- Phase response
  - Emergency cycle
  - Disaster cycle
  - During disasters
  - Stage response of Disaster Risk
  - Stage response of Disaster Management
- 
- Response
  - The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected. (UNISDR 2009) ??
  - Unforeseen or sudden occurrence especially danger, demanding immediate action

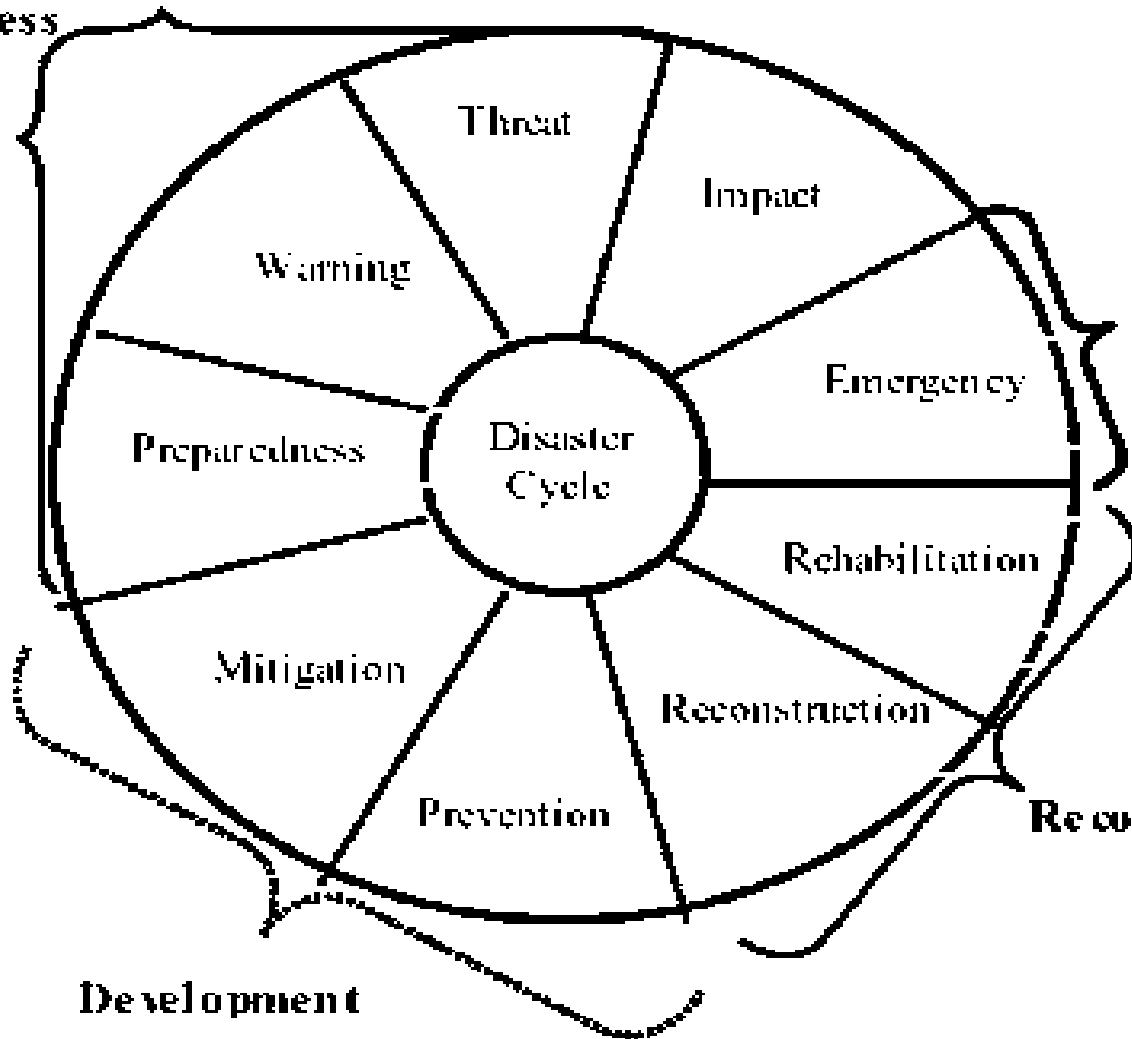
# DISASTER CYCLE



- From 'Carter, Nick. Disaster Management. ADB. 1992.'

# DISASTER CYCLE

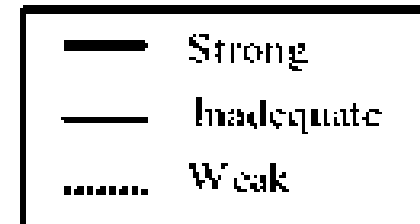
Preparedness



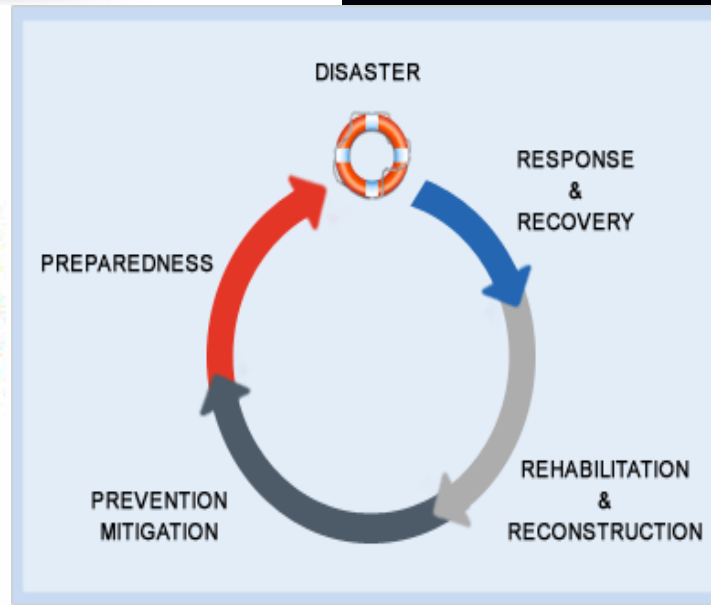
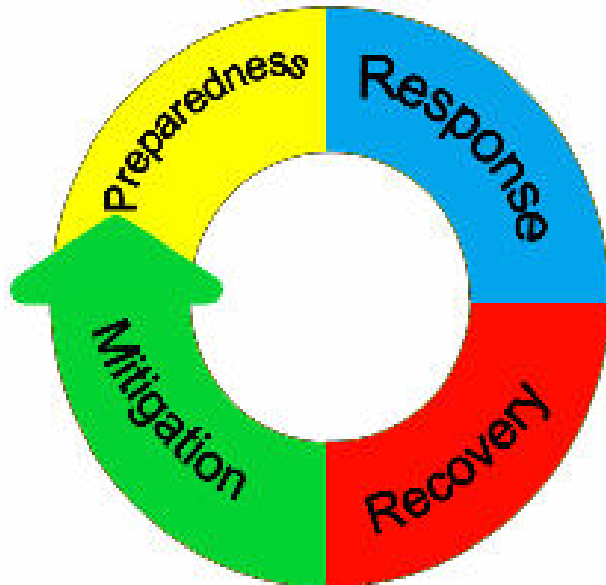
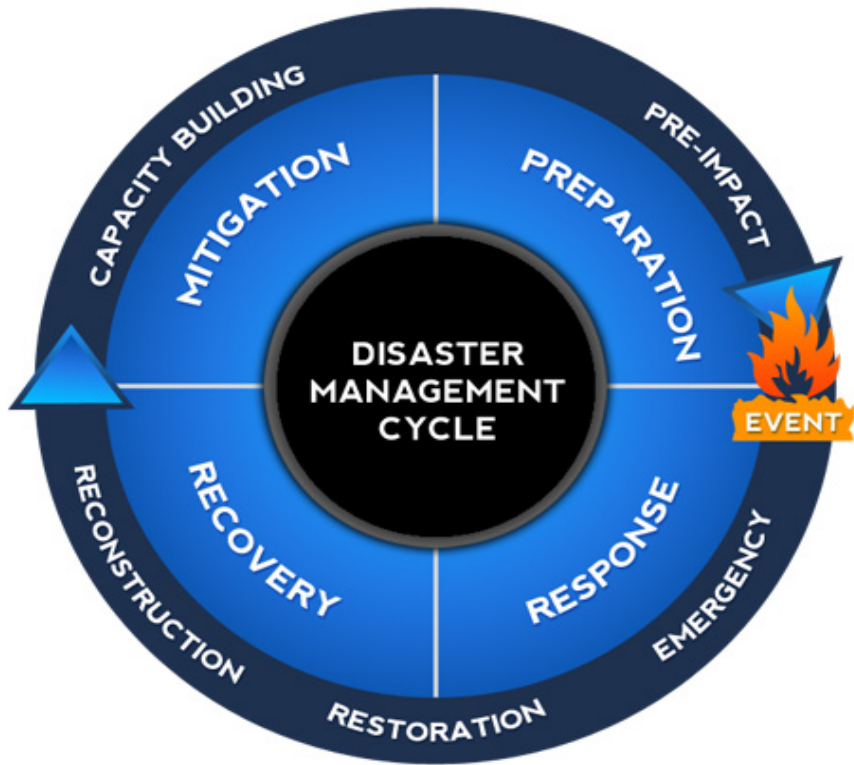
Response

Recovery

Development



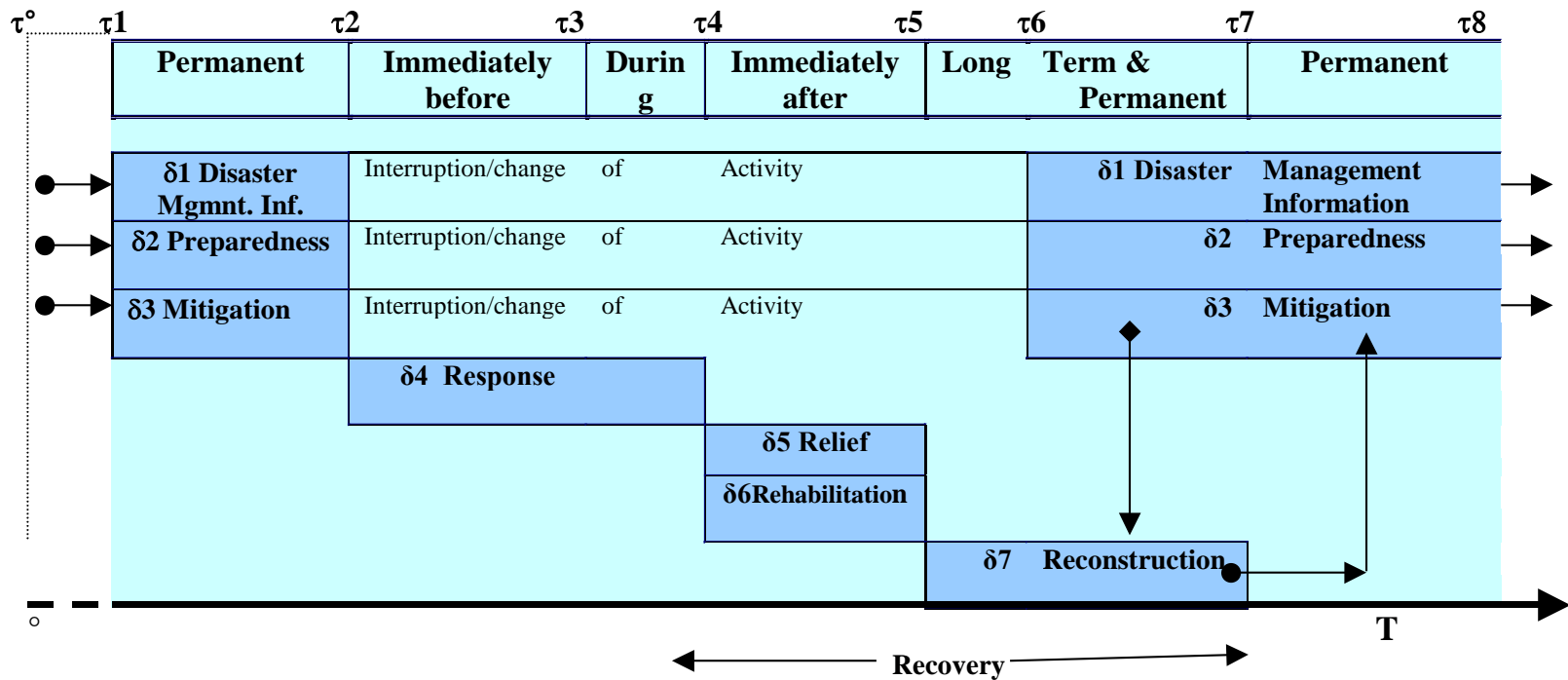
From 'Carter, Nick. Disaster Management. ADP. 1992.



# Disaster Cycle

- Disaster management components are not all sequential
- Not all disaster management activities necessary occur in a hazard impact.
- Not all hazards create a disaster
- Assumes disaster cannot be avoided.
- Creates the idea that disasters will occur for ever

# Disaster Management Continuum





# Stages/Phases of Disaster Management

- Disaster Management (Every phenomenon) activities can be divided into three stages:
- **Before** the threat or impact of a hazard
- **During** an emergency or a disaster
- **After** an emergency or a disaster

# Stage «During» = Response

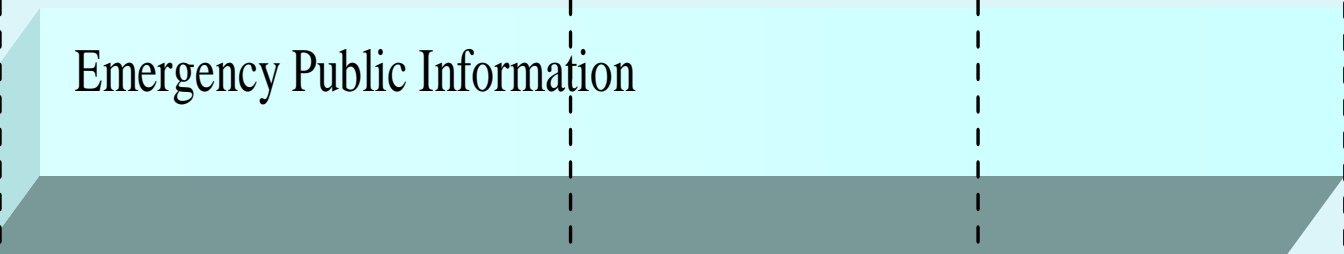
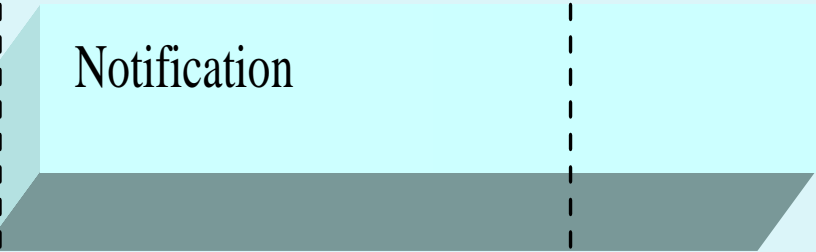
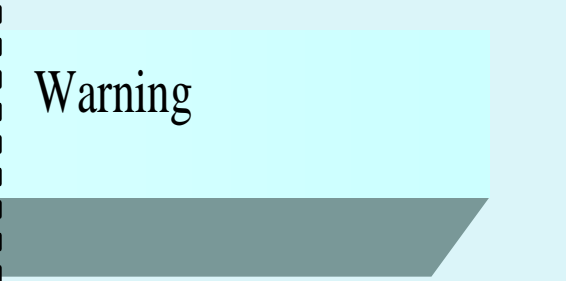
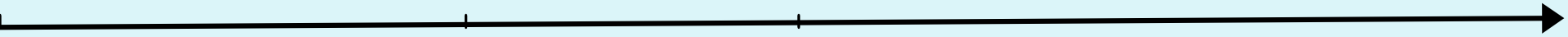
- The stage that comprises activities taken from warning to the finalization of the damage and needs assessment report (damage and loss assessment or PDNA) that allows the reconstruction to start.
  - Hazards → Impact → Effects, consequences
  - Response activities (functions) → Responsibilities
-

**t0**

**t1**

**t2**

**t3**



t0 Threat

t1 Impact

t2 Disaster

Relief starts

t3 Rehabilitation

t4 Reconstruction

**Warning**

**Notification**

**Emergency Public Information**

**EOC Coordination**

**Evacuation**

**Security**

**Shelter Management**

**Damage and Needs Assessment**

**Search and Rescue**

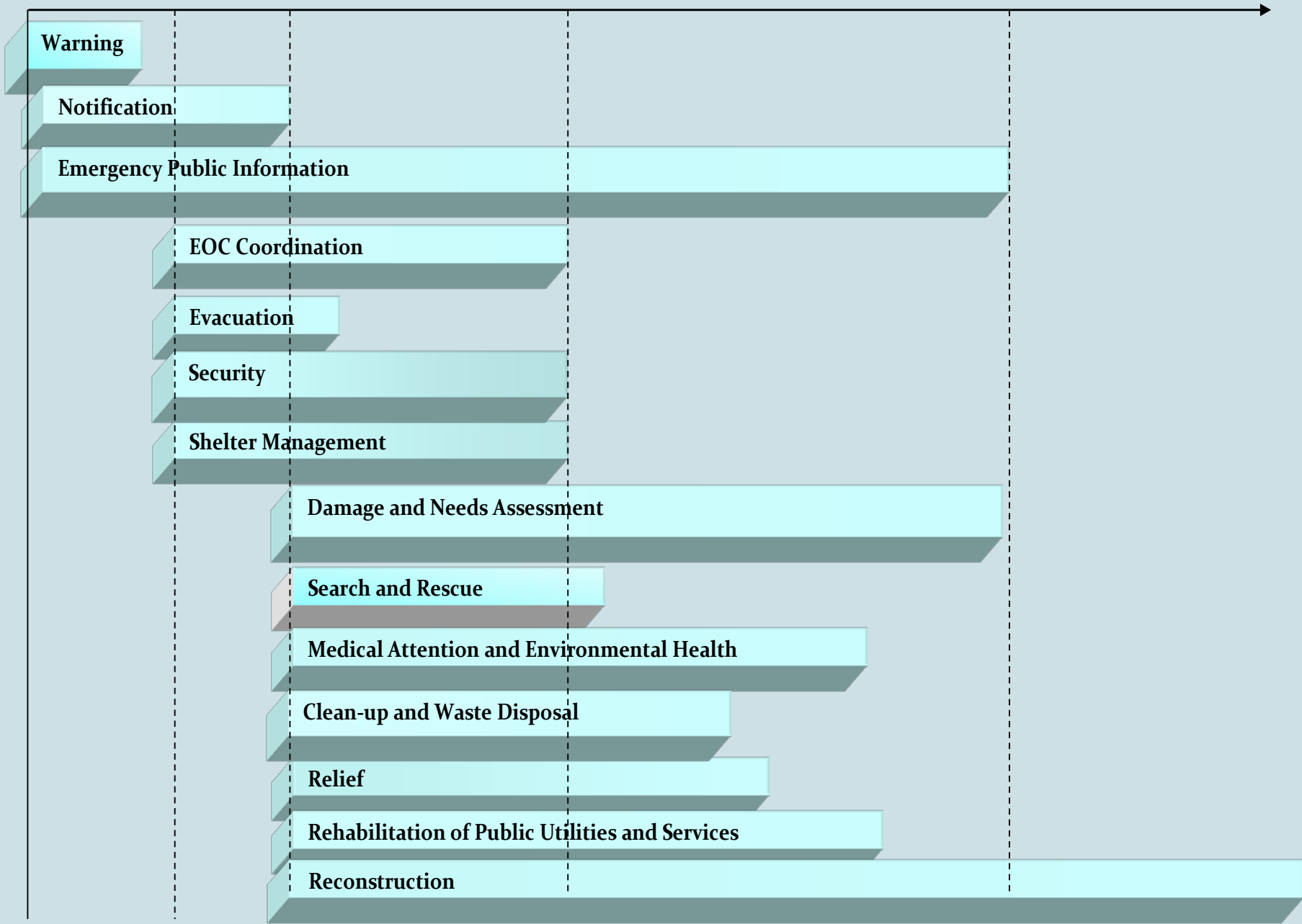
**Medical Attention and Environmental Health**

**Clean-up and Waste Disposal**

**Relief**

**Rehabilitation of Public Utilities and Services**

**Reconstruction**



# What information is needed for Disaster Risk Management?



# Warning

- Areas at risk
- Floodplains
- Scope of impact for volcanic eruptions and tsunami, etc.
- Coastal areas affected
- Vulnerable settlements
- Population (age, gender, language, etc)
- Housing
- Critical infrastructure



# Notification

- Government offices
- Critical infrastructure
- National DRM organisations at all levels
- All government, private and social responders



# Emergency Public Information

- General public
- Media TV Networks radio stations





# Evacuation

- Population at risk
- Location of shelters
- Routes



# Shelter Management

- Location of shelters
- Capacity
- Needs



# Security

- Critical facilities
- Prisons
- Supermarkets
- Stores



# Search and Rescue

- Areas impacted
- Buildings collapses
- Areas flooded
- Boats lost in the sea



# Medical Attention and Environmental Health

- Hospitals
- Clinics
- Ambulances
- Areas impacted
- Population affected
- Cemeteries
- Routes



# Clean up and waste disposal

- Roads blocked
- Areas impacted
- Critical facilities
- Hospitals
- Shelters
- Areas covered with debris
- Waste disposal areas



# Relief

- Airports
- Maritime ports
- Warehouses
- Hotels
- EOCs
- Areas impacted
- Needs
- Shelters and needs



# Rehabilitation of Public Utilities and Services

- Damage to PU
- Status of roads
- Warehouses
- Response teams
- Antennas, communications equipment
- Power generation sub stations
- Water storage and supply





# Emergency Operations Centres

- All information!
- General coordination
- Resource management
- Monitoring evolution of the hazard/disaster
- Monitoring of IDPs, shelters, relief goods, etc.
- Status of PU
- Damage and needs
- Back to normalcy



# How can it be done?

- Coordination GI & S – DRM: all the time
- Committees participation of DRM Office
- Participation of Ministries/Sectors. Education, Security, Health, Tourism, etc.
- Everything prepared in the stage before. Protocol.

# How can it be done?

- Establish a Committee
- Members: GI & S; NEMO, Ministries, Private Sector, NGOs
- Identify needs based on hazard and effects
- Identify responsibilities based on response needed (Emergency Response Functions)
- Identify items to be mapped
- Update
- Design and update (Stage before)
- Access
- USE: Stage during : Response.
- Improve

# Final Recommendations

- Replace the term «emergency cycle» by emergency phase (or stage) of Disaster Risk Management (or Disaster Risk Reduction)
- replace «phases of the emergency cycle» by phases (or components) of DRM
- Include a section on Disaster Risk Management suggesting information that could be included in Gi & S (See previous slides)
- The phrase «before, during and after disasters» is ok.
- In this section some suggestions for the process to assist disaster managers could be includes: GI & S and DRM committee, with specific members (see previous slides)
- Design of a protocol in this committee that indicates responsibilities, information needed for DRM etc. (Chile's presentation)

# Association of Caribbean States

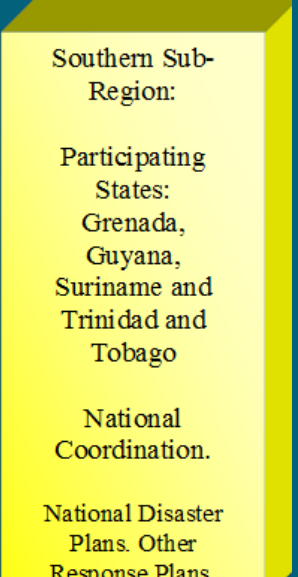
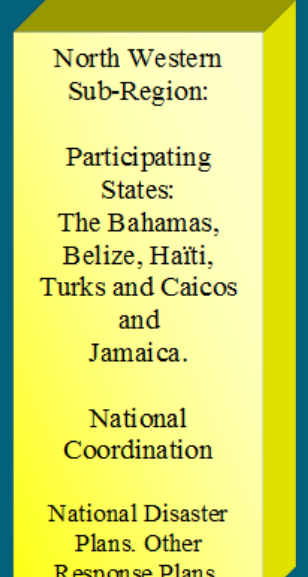
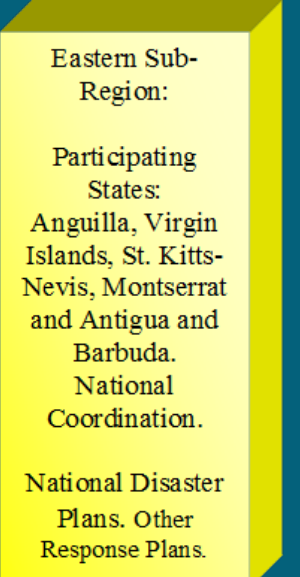
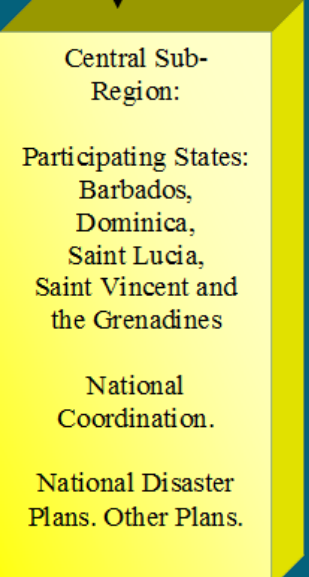
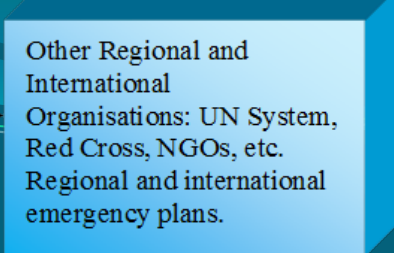
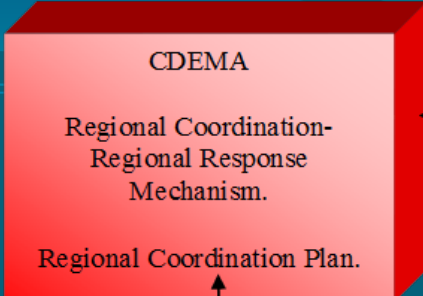
- 25 member states:
- Antigua and Barbuda, Bahamas, Barbados, Belize, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Venezuela.
- Associate Members: Aruba, Curacao, France on behalf of (French Guiana, Saint Barthelemy and Saint Martin), Guadeloupe, Martinique, Sint Maarten and The Netherlands Antilles on behalf of (Saba and Sint Eustatius).

# Association of Caribbean States

- Collaboration and technical cooperation amongst country members. Disaster Reduction, Transport, Trade, Tourism.
- Disaster Reduction projects:
  - UNGGIM: 19 countries.
  - Caribbean Territorial Information Platform for Disaster Prevention (PITCA)

# Association of Caribbean States

- Disaster Projects:
  - 19 countries with GI & S and Disaster Management Information.
  - Disaster Management supported by GI & S
    - In countries
    - Subregional
    - Regional
    - UWI





# CARIBBEAN

Gulf of Mexico

Florida (U.S.)

Miami

Bahamas

Key West

Cuba

Turks & Caicos (U.K.)

Atlantic Ocean

TROPIC OF CANCER

25°N

20°N

Mexico

Cancun  
Cozumel

Isle of Youth (Cuba)

Caribbean Sea

Cayman Islands (U.K.)

HISPANIOLA

Haiti

Dominican Rep.

Virgin Islands (U.K.)

Puerto Rico (U.S.)

Saba (Neth.)

Anguilla (U.K.)

St. Martin/Sint Maarten  
St. Barts (France)

Jamaica

Virgin Islands (U.S.)

St. Kitts and Nevis  
St. Eustatius (Neth.)

Antigua and Barbuda

Guadeloupe (France)

Dominica

15°N

Honduras

Isla de Providencia (Col.)

Isla de San Andres (Col.)

300 mi  
300 km

Caribbean Sea

Lesser Antilles

Netherlands Antilles  
Aruba  
Bonaire  
Curacao

Isla Los Roques (Ven.)

St. Vincent and the Grenadines

Grenada

St. Lucia

Martinique (France)

Barbados

CENTRAL AMERICA

Nicaragua

Costa Rica

80°W

Venezuela

Isla La Tortuga (Ven.)

Isla de Margarita (Ven.)

Trinidad and Tobago

10°N

Pacific Ocean

PANAMA CANAL

Panama

Colombia

SOUTH AMERICA

Atlantic Ocean

# Association of Caribbean States

- Countries Members and Associates
  - Meetings (Heads of State, Presidents)
  - UNGGIM 3-7 October Mexico City.
  - Special Committees (21 October TnT)
- CARICOM
- CDEMA
- UWI sustainability
- Countries

4:58



4:59



5:00



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