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Managing Disasters with Preparedness

Using ICTs for Effective Disaster Management

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ICT IN DISASTER MANAGEMENT:

FUELLING THE CDM PROCESS

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SUMMARY OF EXPOSURE

- Three times more disasters in 1990's than 1970's
- Hazard impact every 4 ½ years
- Affects 9% of population
- Damage and loss – 14% of GDP
- 40 events a year
- US$ 3 billion losses

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CDERA MANDATE

- To make an immediate coordinated response by means of emergency disaster relief to an affected Participating State;
- To secure, coordinate and channel to interested inter-governmental and non-governmental organisations reliable and comprehensive information on disasters affecting a Participating State;

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CDERA MANDATE CONT'D

- To mobilize and coordinate disaster relief from governmental and non-governmental organizations for affected PS
- To mitigate or eliminate, as far as practicable, the immediate consequences of disasters in Participating States
- To promote the establishment, enhancement and maintenance of disaster response capabilities among PS.

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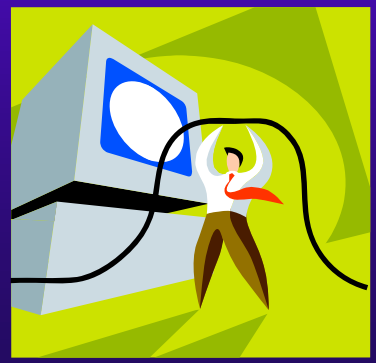
MAIN ACTIVITIES

- Information centred
- ICT Driven



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CDERA's INFORMATION POLICY

- Enhance CDERA's visibility as a leader in the promotion of disaster management.
- Promote acceptance and ownership of Comprehensive Disaster Management.

CDERA's INFORMATION POLICY CONT'D

- Enhance the Coordinating Unit's capacity to access, collate, analyze and disseminate information on all aspects of disaster management.
- Support the institutionalization of disaster management teaching and research in regional universities

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THE IMPORTANCE OF ICTS IN DISASTER MANAGEMENT

- To catalyze the process of preparedness, response and mitigation.
- Providing access to vital information during all phases of the disaster cycle to citizens.

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THE IMPORTANCE OF ICTS IN DISASTER MANAGEMENT

- Decision support systems for planning and policy making.
- To build a network of disaster management practitioners and people through communication networks.

INFORMATION SYSTEMS FRAMEWORK FOR DISASTER MANAGEMENT

Disaster Management integrated into Development Planning

Facilitating

elements

Planning & Policy decision for disaster preparedness & mitigation

1. Hazard mapping & Vulnerability Assessment
2. Database of disaster history for trend & pattern analysis
3. Database of disaster management plan.
4. Awareness & training materials
5. Inventory of legal, administrative and institutional framework

Quick emergency response & recovery

1. Human & material response resources database
2. Database of Infrastructure, lifelines & critical facilities.
3. Database of trained human resources.
4. Demographic information
5. GIS based information system

Knowledge base for disaster management

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ICT TOOLS

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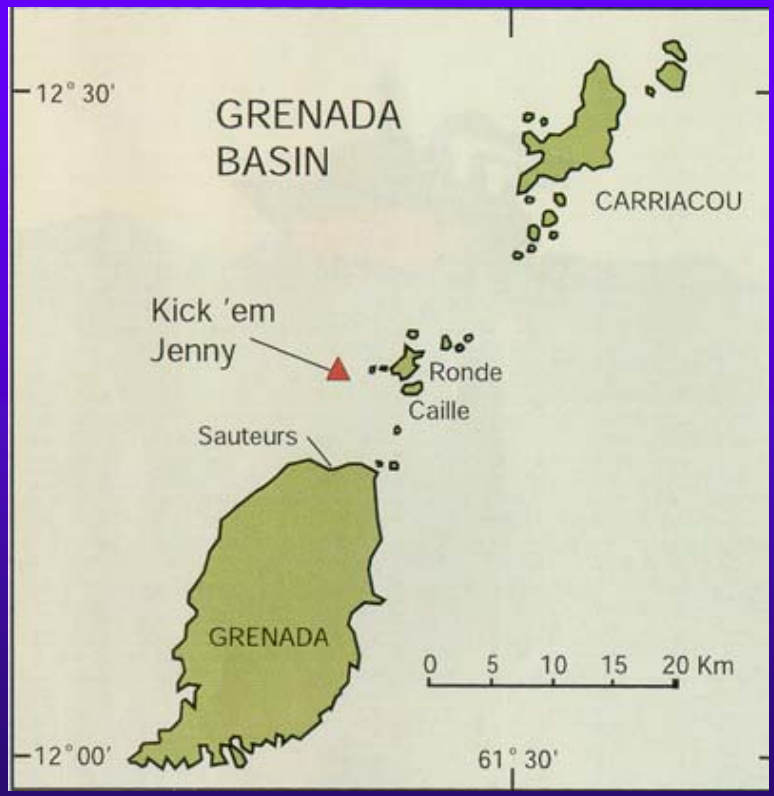
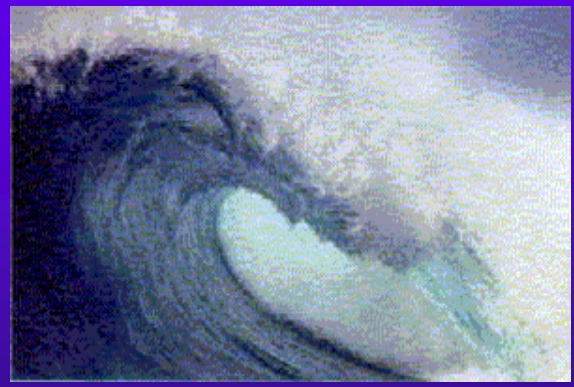


- **Early Warning Systems**



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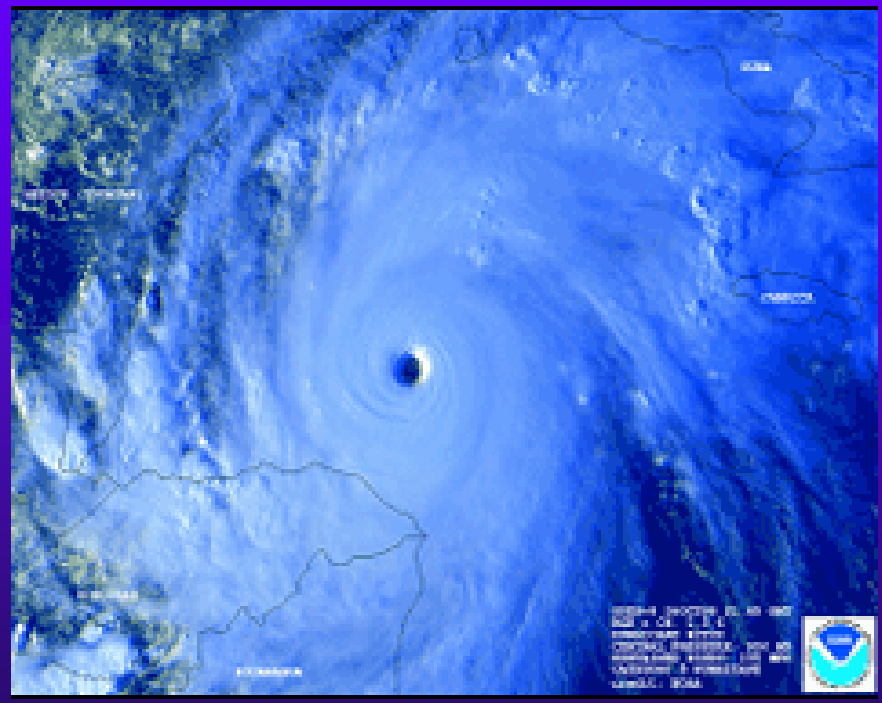
ICT Tools

- Monitoring Systems

- **Satellite imagery**

Mitch 1998



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COASTAL PLANNING PROJECT

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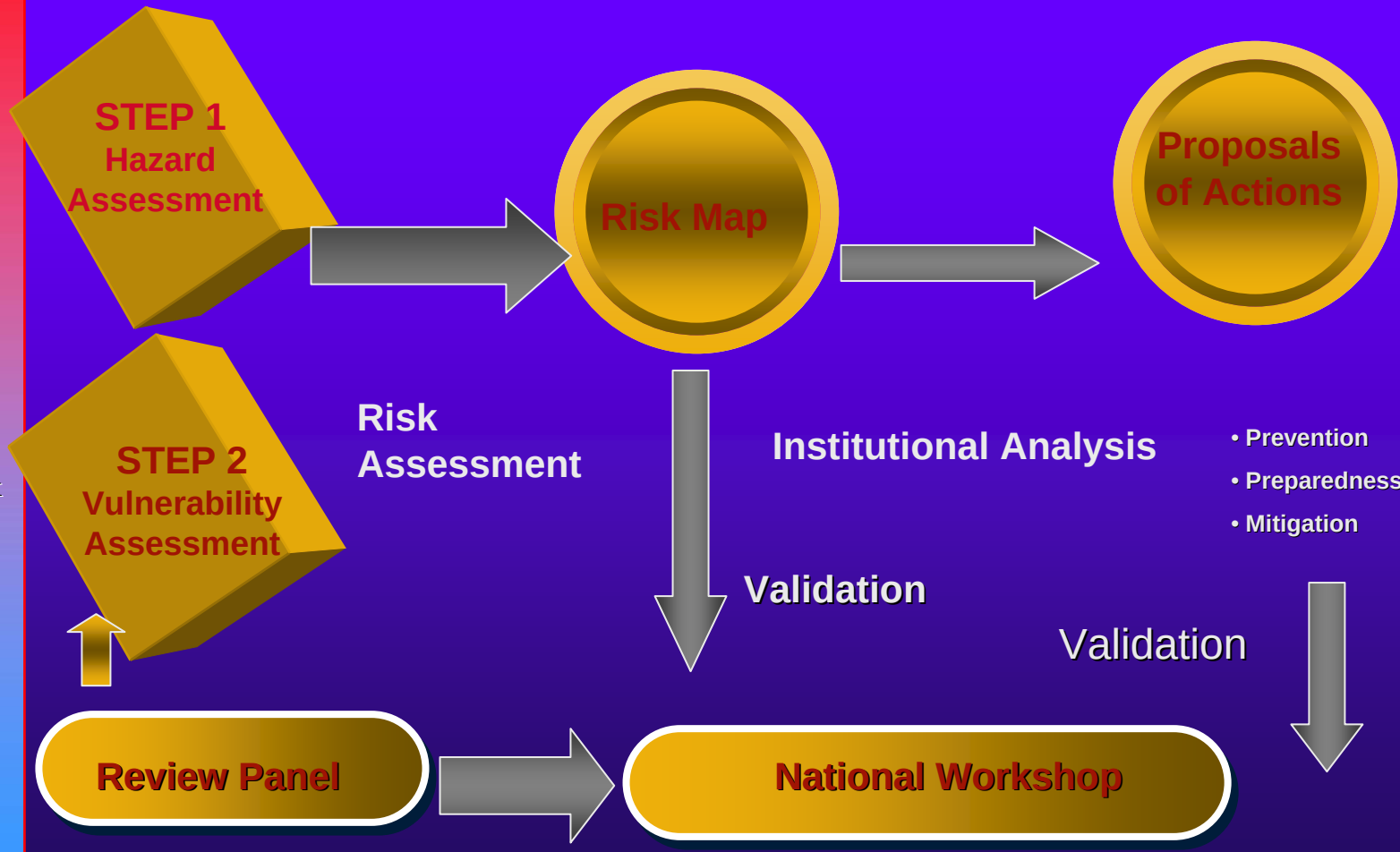

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Coastal Planning Project

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Component II- Toolkit Development

Component 1 | Component 2 | Component 3

Pilot Projects

- Risk Assessment
- Proposal Development

Toolkit Development

- Tailor information to 4 types of users

Dissemination

- Workshops
- Website

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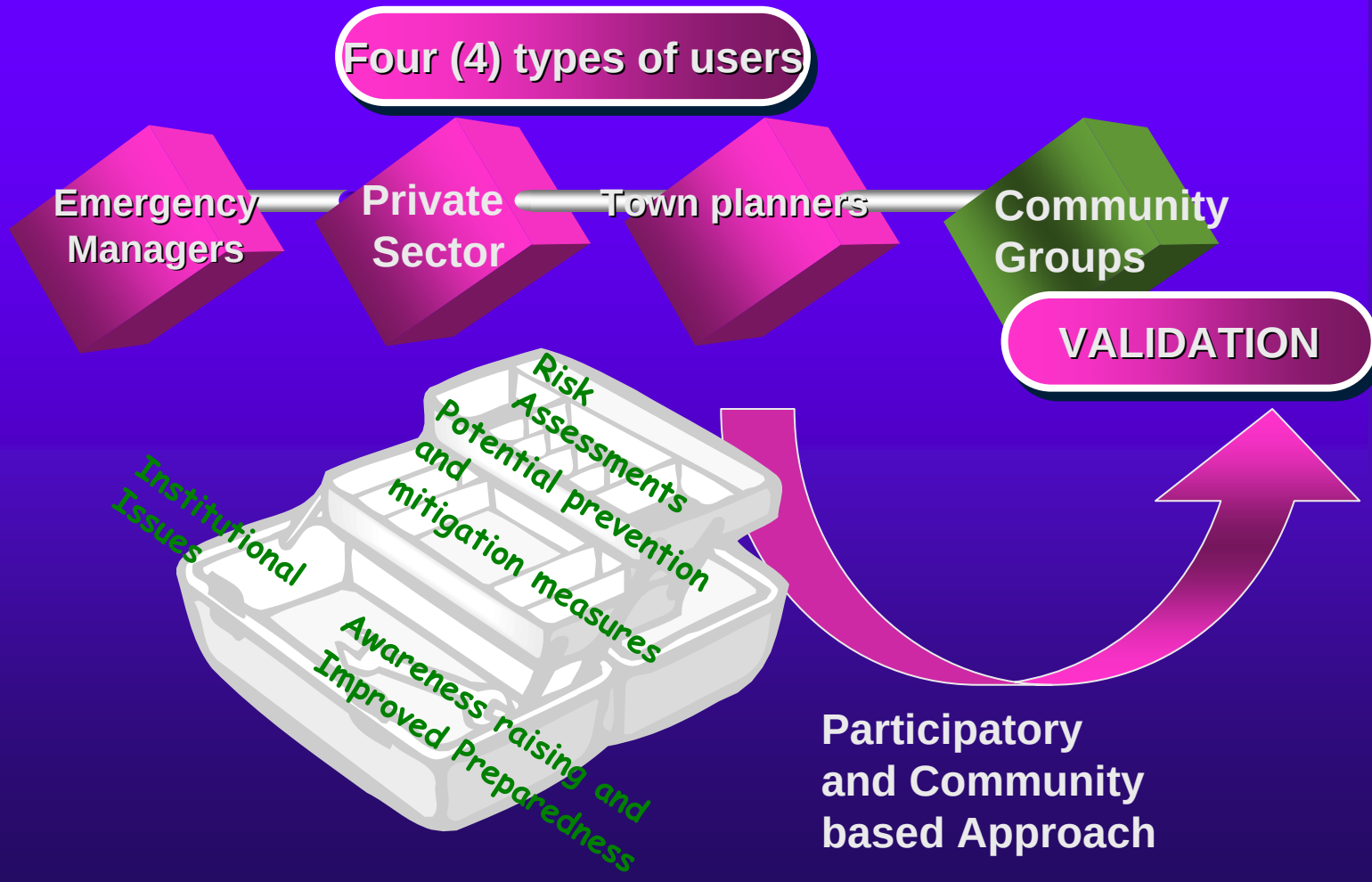
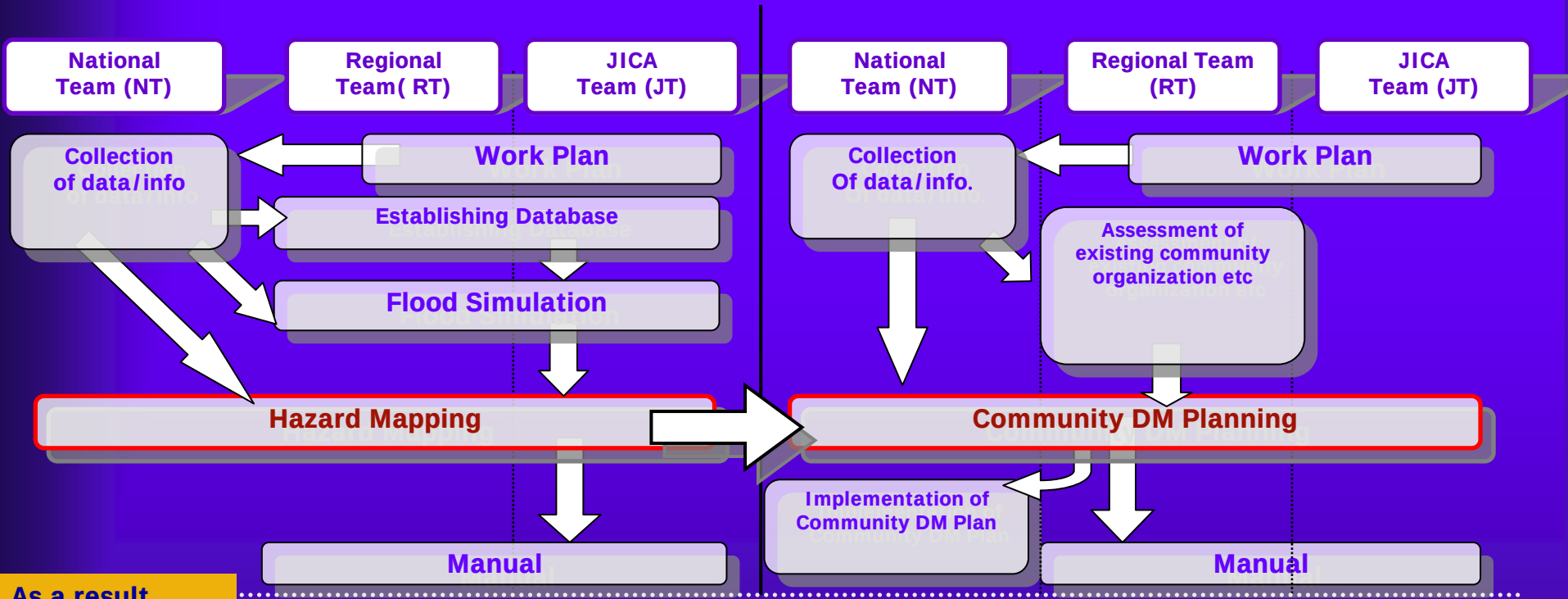


Hazard Mapping

Community DM Planning



As a result

1.Institution (RT,NTs)

2.Tool (Manuals)

3.Wide recognition of CDM

Promoting of Hazard Mapping and Community DM Planning

Enhancement of CDM in all CDERA member states

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Speightstown Catchment BARBADOS

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Indian Ground, St. Peter

Richmond Hill, St. Peter

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FHM: Speightstown, St. Peter

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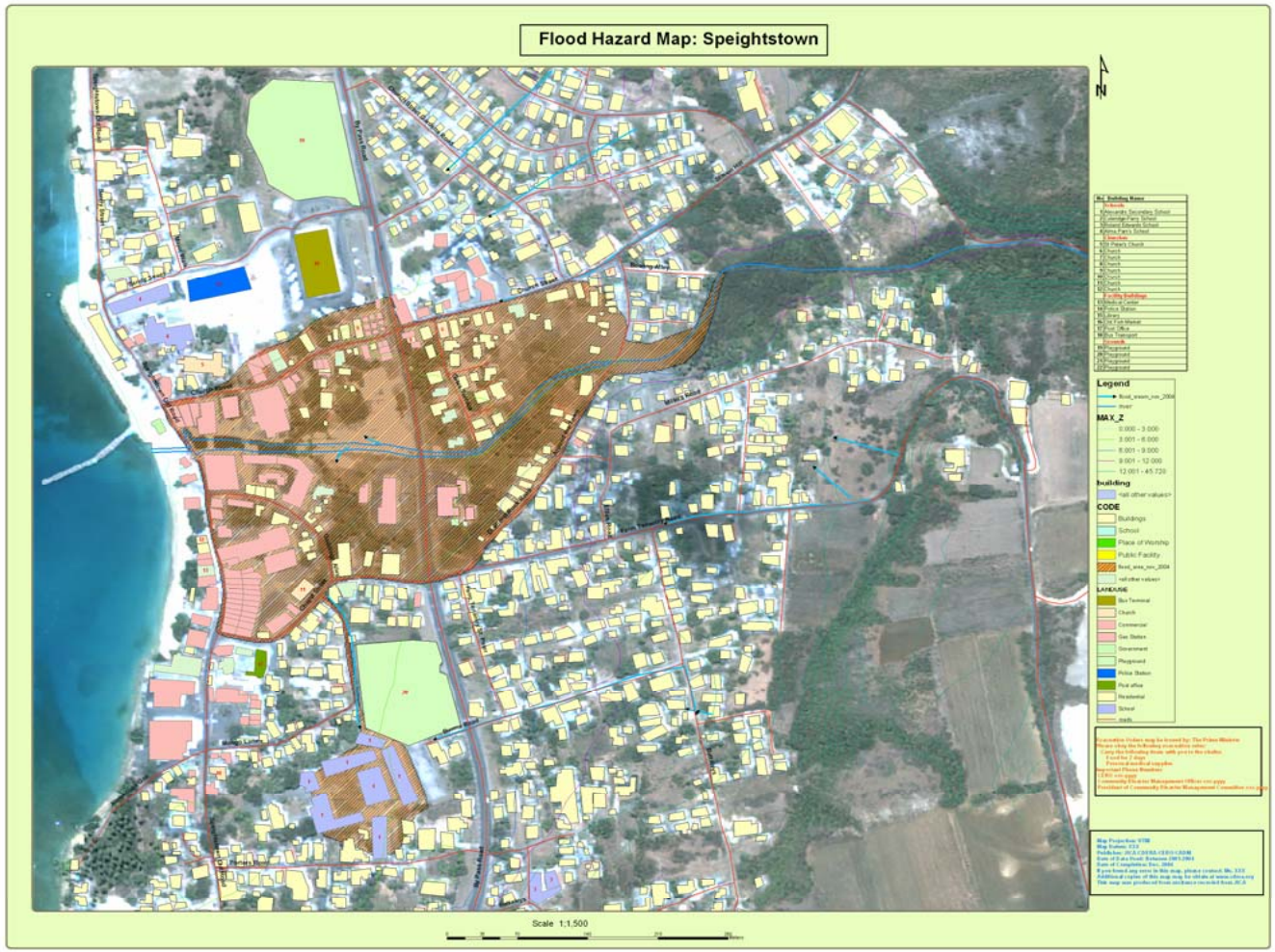
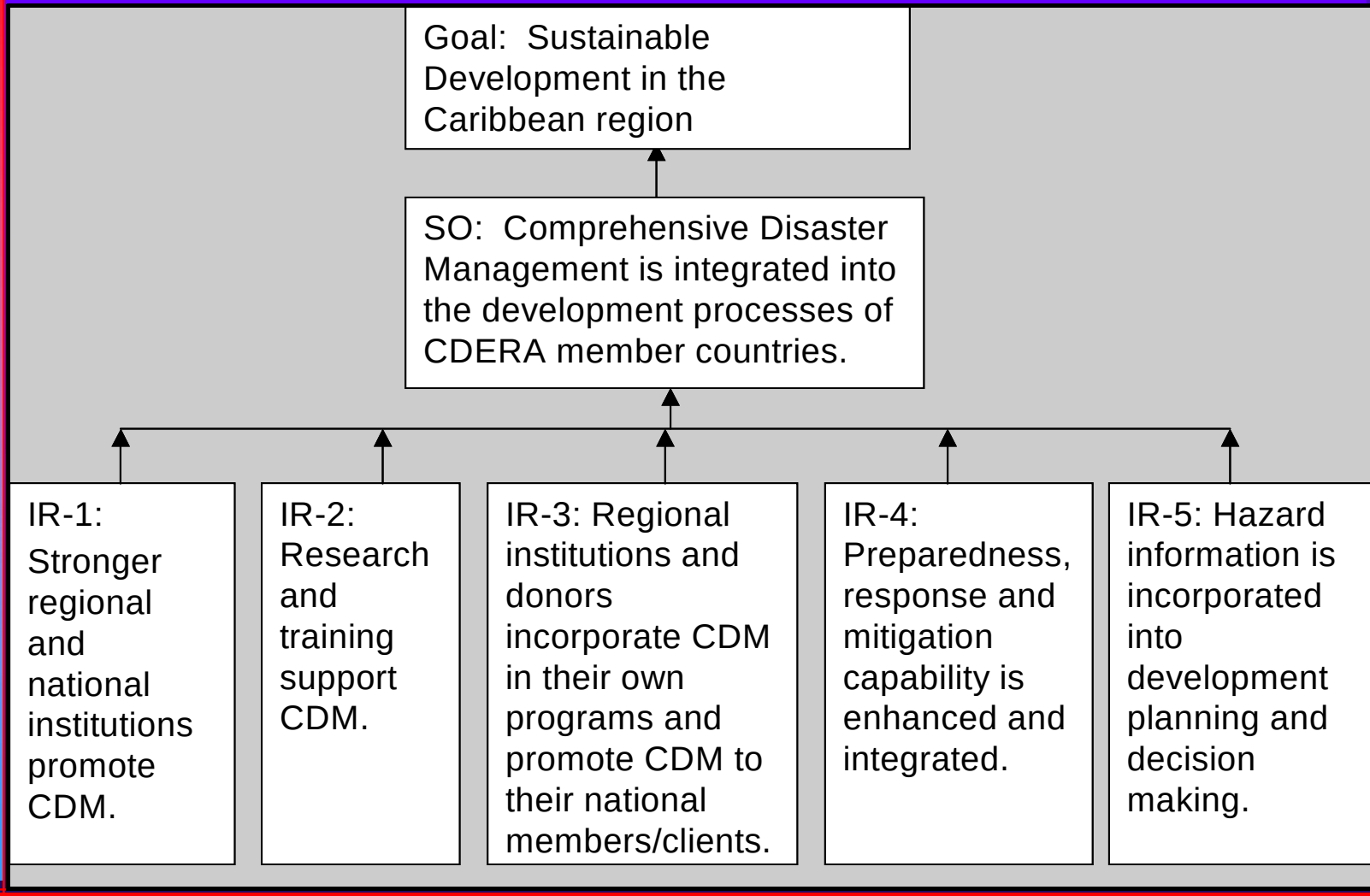


CARIBBEAN CDM STRATEGY



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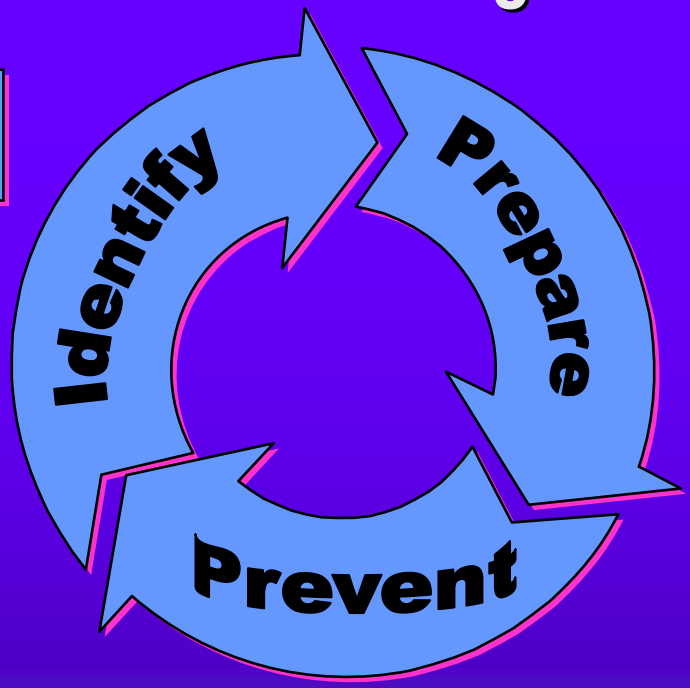
Role of Disaster Information Systems in Various Phases of Disaster Management



♦ **Risk & vulnerability identification**

- Events database and risks assessment.
- Zoning of hazards using GIS.
- Hazard maps and other external data for accuracy in risk assessment.

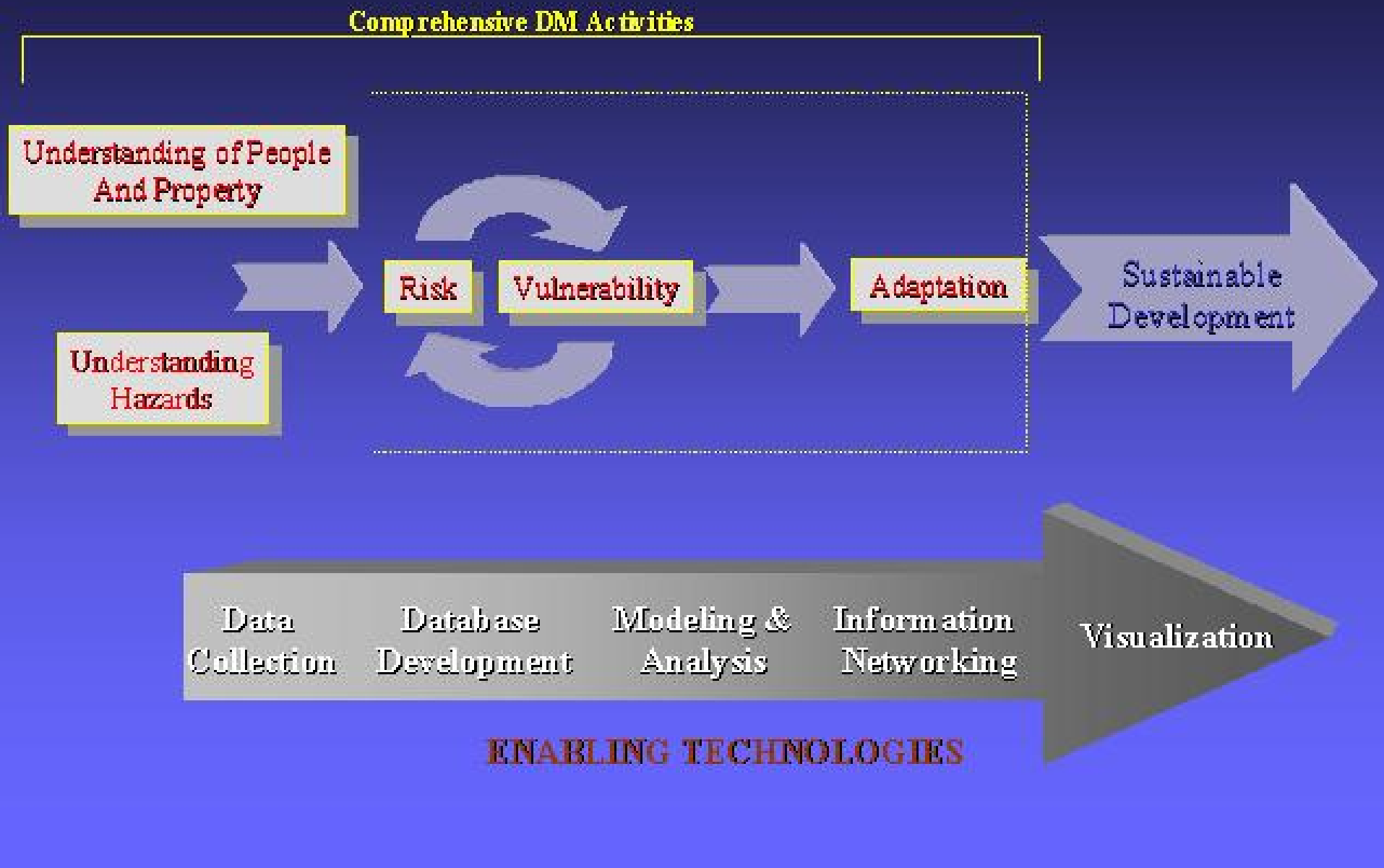
♦ **Preparedness for response & recovery**

- Skilled human & material resources inventories.
- Database on human resources trained on various aspects of disaster management.
- Development of Resourced sensitive plans

♦ **Mitigation strategies and policies**

- Fact based Mitigation strategies and policies
- Development of a virtual knowledge networks

Disaster Management Directions



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ISSUES AND RECOMMENDATIONS

- Limited or weak ICT infrastructure within most NDOs
- Embryonic common standards for use
- Use and classification of hazard data
- Limited investment in infrastructure maintenance and updating

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ISSUES AND RECOMMENDATIONS CONT'D

- Incipient ICT divide within and among organisations/institutions
- Misalignment between ICT systems and decision-making infrastructure
- Infrastructure incompatability

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WAY FORWARD

- Greater interaction between system developers and users
- More investment in harvesting and utilization of existing ICT products in key sectors
- Build commitment to ICT use through strategic application

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WAY FORWARD CONT'D

- Structure ICT intervention as a medium and not the solution
- Build capacity for business continuity planning
- Build capacity for data analysis

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OPPORTUNITIES

- **CWC**
  - CISNET
  - MACHINE READABLE DOCUMENTATION
- **TERRORISM**
  - BIOMETRIC VISA
  - CCTV

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THANK YOU

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