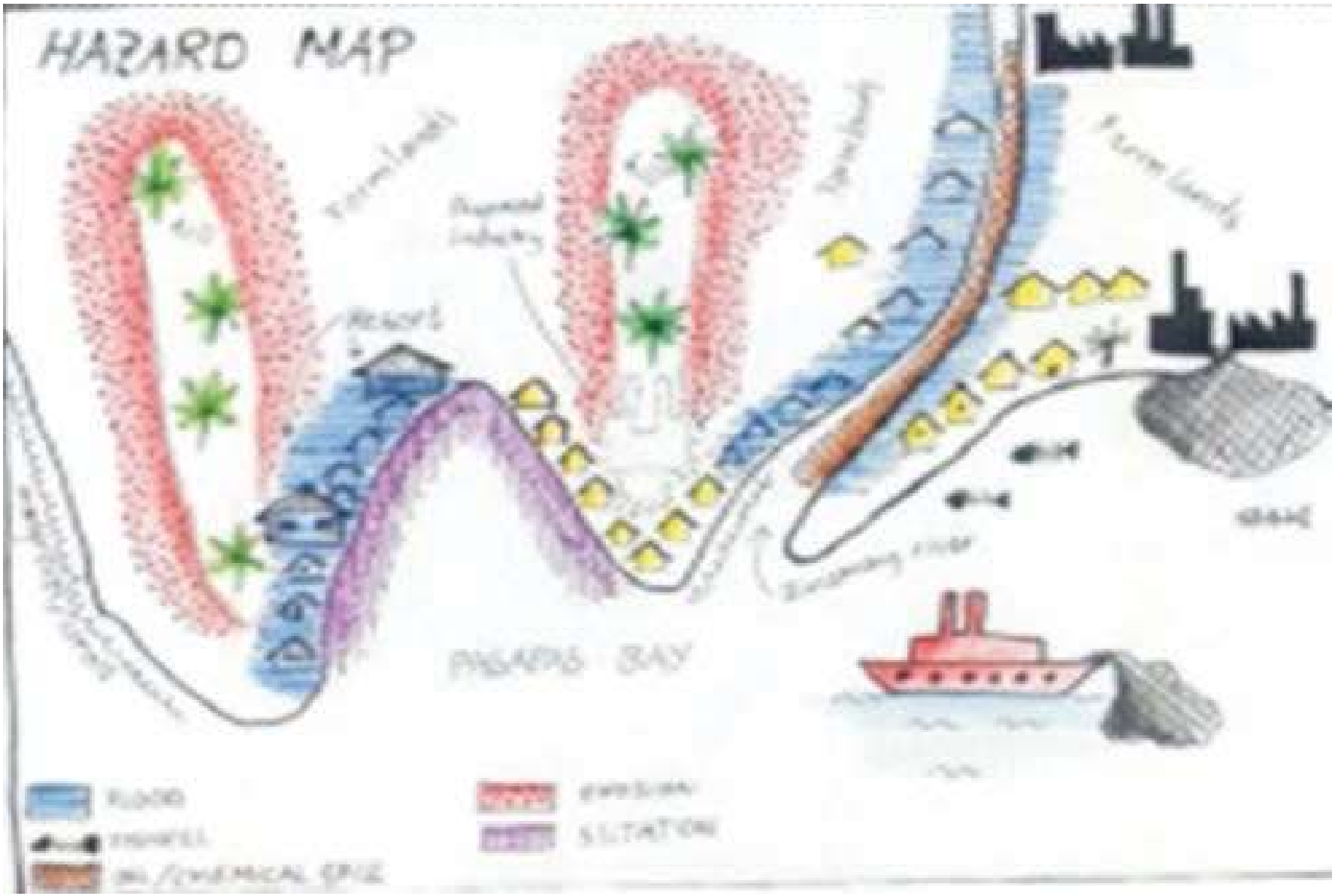
Community Based Disaster Risk Management

Disaster management

- **Disaster management** can be defined as the effective organization, direction and utilization of available counter-disaster resources.

- Disaster management is a multidisciplinary area in which a wide range of issues that range from forecasting, warning, evacuation, search and rescue, relief, reconstruction and rehabilitation are included.

- It is also multi-sectoral as it involves administrators, scientists, planners, volunteers and communities.

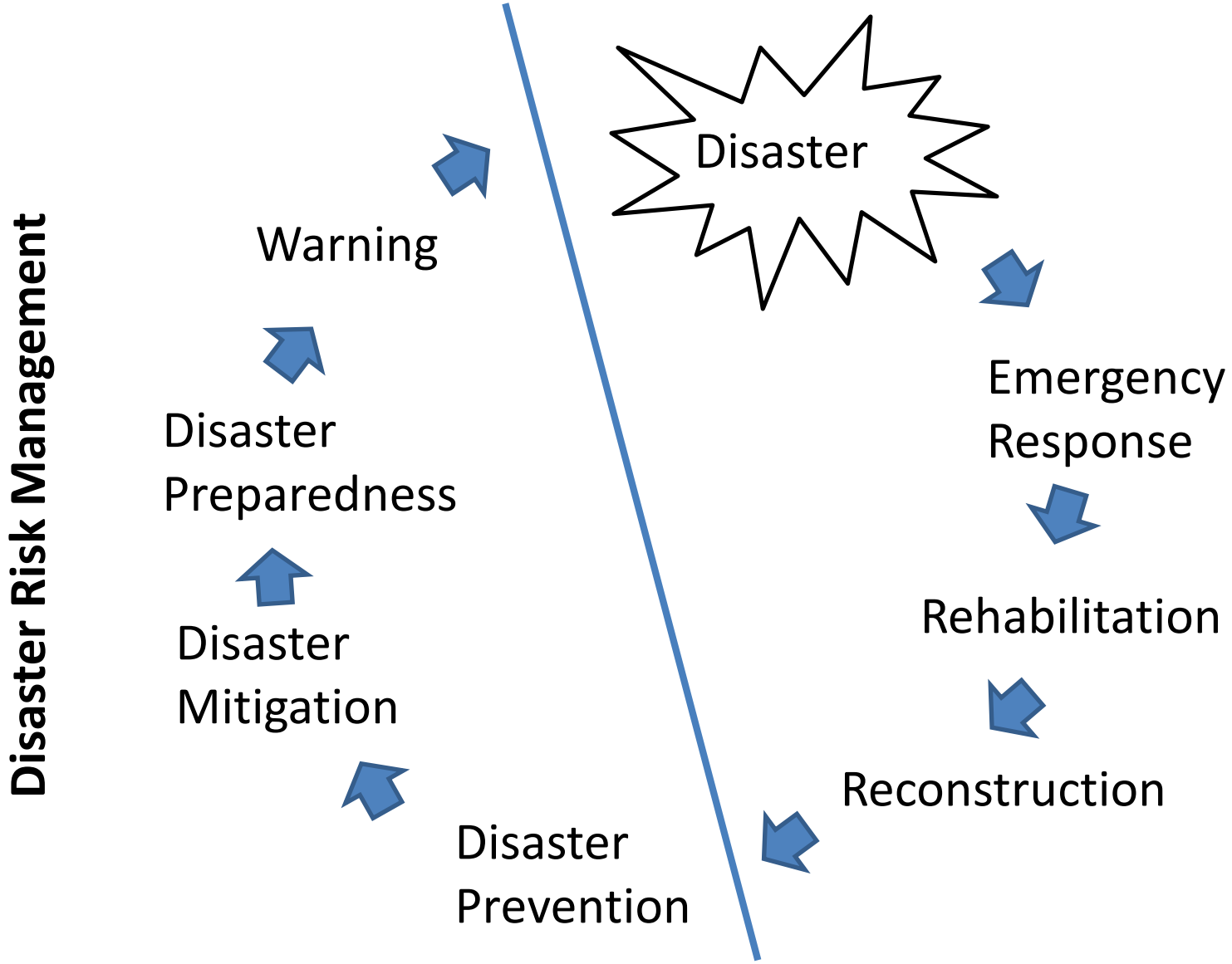

HAZARD MAP
PAGADIAN BAY

Disaster Risk Management

- The modern view is that there must be pre-disaster mitigation measures to avoid or reduce impact of disasters. Pre-disaster measures to prevent or mitigate disasters are called **Risk Management.**

- Disaster risk management includes administrative decisions and operational activities that involve-
  1. Prevention
  2. Mitigation
  3. Preparedness
  4. Response- SAR, First Aid
  5. Recovery and
  6. Rehabilitation

Disaster Management Cycle-Model



Disaster Response Activities

- Warning
- Evacuation/Mitigation
- Search and Rescue
- Assessment
- Emergency Relief
- Logistics and Supply
- Communication and information Management
- Survivor Response and coping
- Security
- EOC & coordination
- Expedite rehabilitation and reconstruction.

Floods and Water Hazards

Elements at Risk

- Everything in the flood plain.
- Earthen or soluble structures
- Buried services and utilities
- Food stores
- Crops and livestock

Main Mitigation Strategies.

- Land use control
- Engineering of strictures
- Elevation of structures
- Flood control structures
- Reforestation projects (watershed management)

Strong Winds

Elements at Risk

- **Lightweight structures.**
- **Elevated utilities (Power and communication lines)**
- **Fishing boats and other maritime industries.**

Main Mitigation Strategies.

- Structural engineering measures.
- Planting of windbreaks.

DEFINITIONS OF "VULNERABILITY"

- "The extent to which a community, structure, service or geographic area is likely to be damaged or disrupted by the impact of particular disaster hazard"
- "Vulnerability is the propensity of things to be damaged by a hazard".

DISASTER PREPAREDNESS

- Disaster preparedness aims at minimizing the adverse effects of a hazard -
- Through effective precautionary actions
- Ensure timely, appropriate and efficient organisation and delivery of emergency response following the impact of a disaster.

Preparedness

Preparedness is the knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions.

Disaster Preparedness Framework

COMPONENTS OF PREPAREDNESS		
Vulnerability Assessment	Planning	Institutional Framework
Information System	Resource Base	Warning Systems
Response Mechanisms	Public Education and Training	Rehearsals

Risk Management

- The process, by which assessed risks are mitigated, minimized or controlled through engineering, management of land use practices or other operational means.

- Risk management has three components.
  - Risk identification
  - Risk reduction
  - Risk transfer

Risk identification

- Risk identification has to be done through mapping and using other available technological options.

- It is usual to allocate risk management to a special body at national level. Usually it is a National Disaster Management Organization (NDMO) at national level.

- At local level it may be the responsibility of a Disaster Mitigation Committee, which administers risk management. This varies in different countries depending on administrative patterns and needs.

Risk reduction

- Effective risk reduction involves mitigation measures in hazard prone areas.
- It may also involve overcoming the socioeconomic, institutional and political barriers to the adoption of effective risk reduction strategies and measures.

Risk transfer

- Effective risk transfer involves different tools such as insurance, tax policies, special measures focused on land management.

How to prevent disasters by managing risks

- Understand behavior of hazards
- Reduce Vulnerabilities
- Reduce the possibility for exposure
- Increase / Improve Readiness (Capacity, Capability, Efficiency, Effectiveness)
- Mitigate the impact of hazards

Guidelines for an effective Mitigation Program

- Pre-disaster mitigation can help in ensuring faster recovery from the impacts of disasters.
- Mitigation measures must ensure protection of the natural and cultural assets of the community.
- Hazard reduction methods must take into account the various hazards faced by the affected community and their desires and priorities.
- Any mitigation program must also ensure an effective partnership between the Government, scientific, private sector, NGOs and the community.

Main elements of a Mitigation Strategy

- **Risk assessment and vulnerability analysis:**

  This involves the identification of hotspot areas of prime concern, collection of information on past natural hazards, information of the natural ecosystems and information on the population and infrastructure.

- **Applied research and technology transfer:**

  There is a need to establish or upgrade observation equipment and networks, monitor the hazards, properly, improve the quality, of forecasting and warning, disseminate information quickly through the warning systems and undertake disaster simulation exercises.

- **Public awareness and training :**

  One of the most critical components of a mitigation strategy is the training to be imparted to the officials and staff of the various departments involved at the state and the district level. This enables the sharing of information and methodology.

- **Institutional mechanisms:**

  There is a need to emphasize on proactive and pre-disaster measures rather than post-disaster response. It is, thus, essential to have a permanent administrative structure, which can monitor the developmental activities across departments and provides suggestions for necessary mitigation measures.

- **Incentives and resources for mitigation:**

  To a very large extent, the success of mitigation programs will depend upon the availability of continued funding. So there is a need to develop mechanisms to provide stable sources of funding for all mitigation programs.

- **Landuse planning and regulations:**

  Long-term disaster reduction efforts should aim at promoting appropriate landuse in the disaster prone areas.

- **Hazard-resistant design and construction :**

  In areas that are prone to disasters, protection can be enhanced by the careful selection of sites and building technologies.

- **Structural and constructional reinforcement of existing buildings:**

  It is also possible to reduce the vulnerability of existing buildings through minor adaptations or alterations, thereby ensuring their safety.

Block Disaster Management Committee

1. Chairperson, Panchayat Samiti
2. Vice Chairperson of the Panchayat Samiti
3. MLA
4. Key Department Officials at the Block Level
5. 2 Sarpanch/Mukhiya and 2 PS Members including 1 woman in each category
6. Representative of Cordinating Agency of Block NGO cell
7. One local NGO working in DM

- Asst Engineer of the Block
- Tahsildar
- BDO-as Member and Convenor

Aspects of CBDP

1. Formation of VDMC
2. Warning Team
3. Rescue and Evaluation Team
4. Shelter Management Team
5. Vigilance/Patrolling Team
6. Sanitation Team
7. First aid Team
8. Caracass Disposal Team

9. Damage Assessment Team
10. Counseling Team
11. Relief Team

PRA Tools

- Transact Walk
- Hazard Mapping
- Social Mapping
- Resource Mapping
- Hazard Seasonality
- Venn Diagram- Chapati diagram
- Focused Group Discussion (FGD)
- Semi-structured Interview etc

- Thanks