



DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

A large, stylized logo for the Department of Environment and Natural Resources (DENR) is positioned in the center. It consists of a blue wave-like shape on the left, a green leafy branch in the middle, and a blue wave-like shape on the right, all interconnected.

Integrated Coastal Management

Learning Event: Mindanao Cluster

02-06 April 2018

Davao City

Outline of Presentation



- I. Background
- II. Concepts and Principles
- III. Elements of ICM
- IV. Goals
- V. ICM in Philippine Context
- VI. Why ICM?
- VII. How is ICM achieved?

Coastal Resource Management in the Philippines

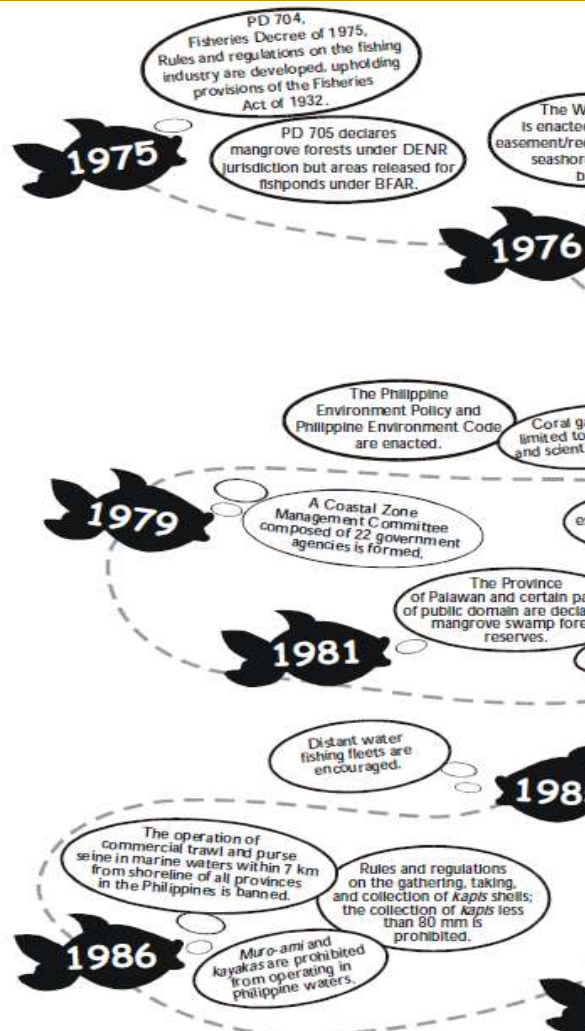
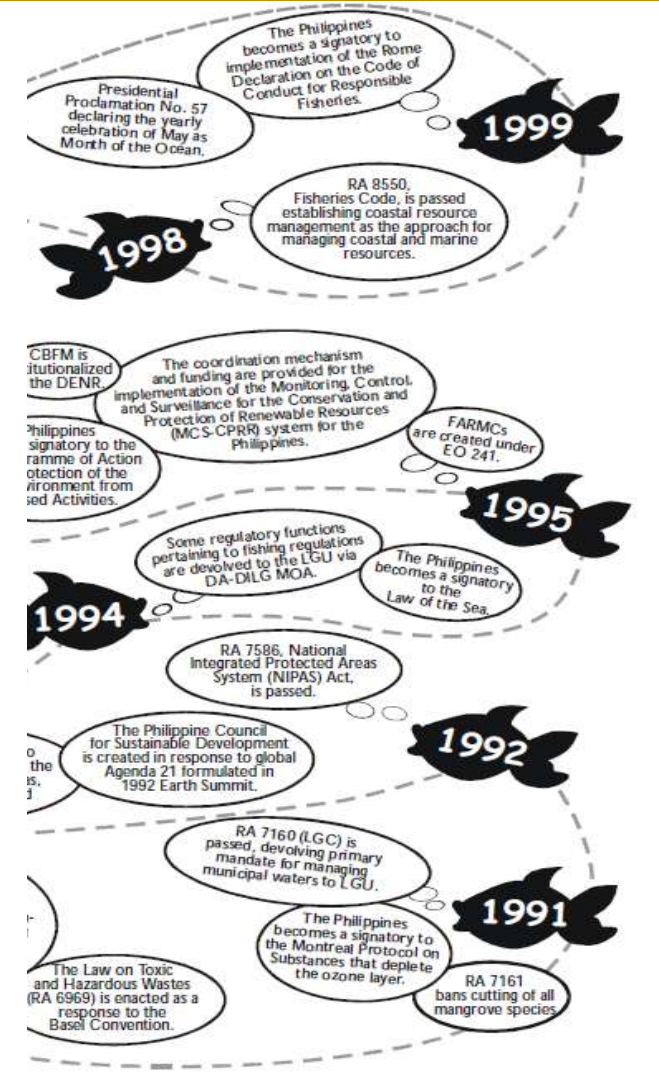
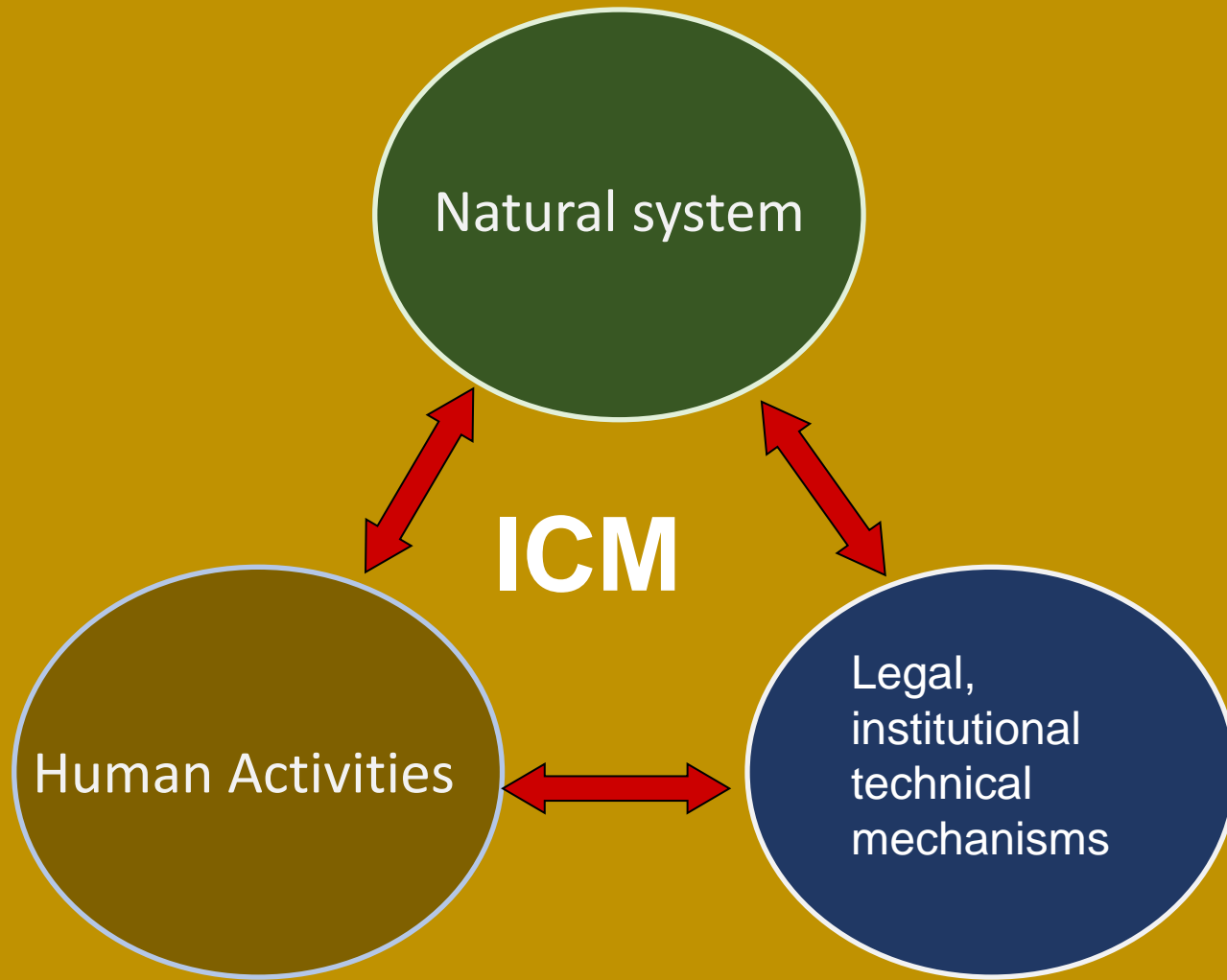


Figure 2. History of the laws and policies on coastal resources in the Philippines.

Integrated Coastal Management refers to a natural resource and environmental **ecosystem-based** management framework which employs an **integrative**, **holistic** management approach and an **interactive planning** process in addressing the complex management issues of the coastal area.



What does ICM manage?



- ICM evolved from the practical need :
 - To plan and manage the various economic activities that rely on the natural resource base
 - To regulate human behavior
 - For a clear and functional coordination and implementation mechanism

Ecosystem means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit". ([Article 2, CBD](#))



Concepts of ICM

1. ICM Approach offers the following:

- Alternative and effective management system that recognizes the links between and among ecosystems and stakeholders
- Gives emphasis to the interrelatedness and the dynamism of socioeconomic and political factors with respect to coastal and marine resources. This approach will be situated within a broader framework for sustainable development of coastal areas



Concepts of ICM

2. **ICM overcomes the weakness of conventional sectoral management approach**
 - Facilitating a better understanding of the uniqueness of the coastal resource system
 - Integrating ecological, social, and economic information
 - Promoting interdisciplinary approaches and cross-sectoral cooperation and coordination to address complex development issues



Concepts of ICM

3. What limits the success of ICM?

- Local capacity
- Political commitment
- Inter-agency cooperation
- Financing mechanisms
- Local champions
- Human management



Principles of ICM

1. **Adaptive Management**

- Emphasizes the importance of adjusting strategies and approaches to suit changing conditions and uncertainties

2. **Integration and Coordination**

- Emphasizes the importance of consistency and complementarity among management actions

3. **Ecosystem-based management**

- Focuses on the importance of preserving the integrity of ecosystems



Elements of ICM



an **inter-agency, multi-sectoral mechanism** to **coordinate** the efforts of different agencies, sectors, and administrative levels



peoples' participation in the formulation and implementation of the National ICM Framework



coastal strategies and action plans that provide a long-term vision and strategy for sustainable development of the coastal areas; and a fixed-term program of actions for addressing priority issues and concerns



Public awareness programs to increase level of understanding and appreciation of coastal and marine resources of the area

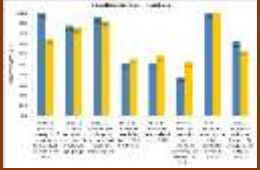


Mainstreams the ICM Strategy to the national and local government planning and development programs to increase level of understanding and appreciation of coastal and marine resources of the area

Elements of ICM



Builds human resource skills, scientific input to policy and planning process; **enforcement mechanisms** to ensure compliance



integrated environmental monitoring for the purpose of measuring, evaluating, and reporting the status, progress and impacts of management programs against established sustainable development indicators



Investment opportunities and sustainable financing mechanisms for environmental protection and improvement; and resource conservation



Maintains disaster risk reduction and management as well as climate change adaptation and resilience programs



Elements of ICM



knowledge management, research and development programs in such areas as carrying capacity, limits to acceptable change, and enhancement of the analytical and predictive value of scenarios for protecting sustainable futures



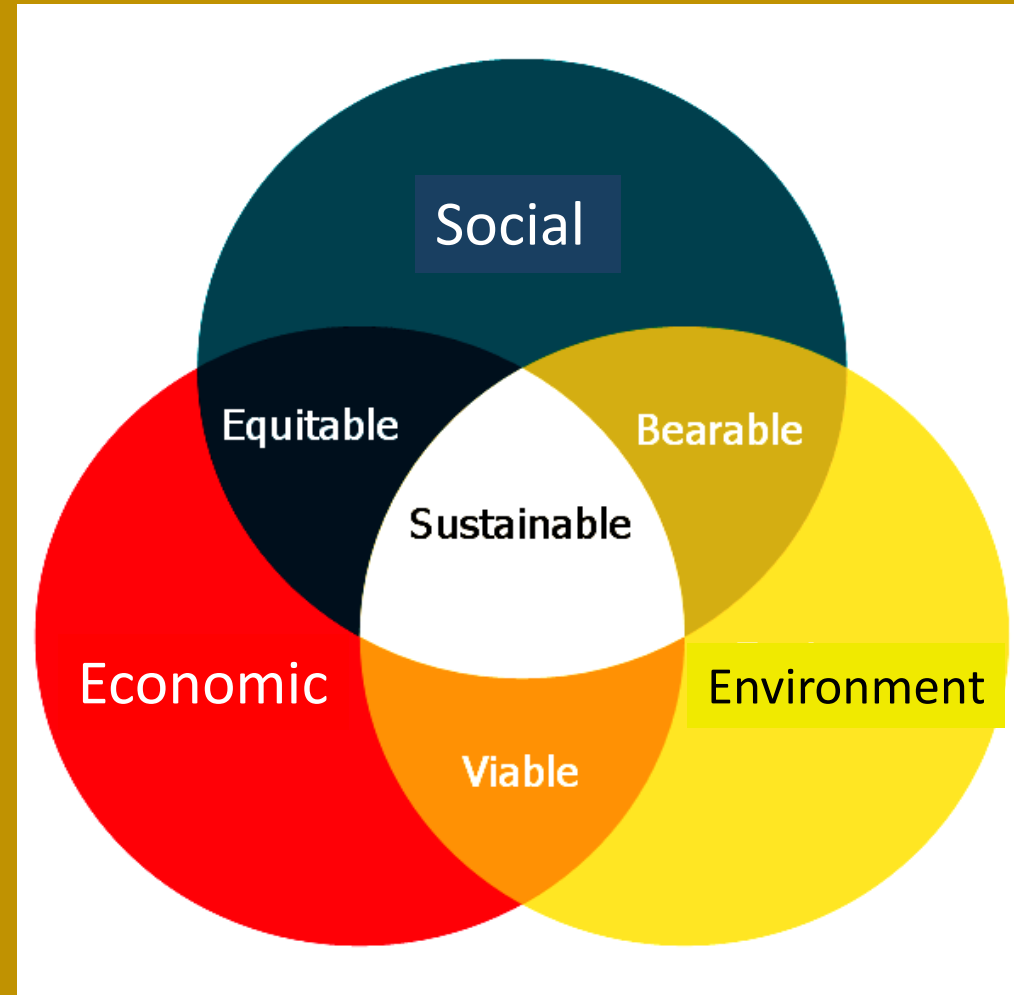
It promotes best practices, such as, but not limited to:

- Coastal and marine use zonation as a management tool;
- Sustainable fisheries and conservation of living resources;
- Protection and rehabilitation of coral reefs, mangroves, seagrass, estuaries and other habitats, particularly through establishment of marine protected areas, nature reserves and sanctuaries;
- Development of watershed, catchment areas and basin wide management approaches;
- Integrated waste management, including, sewage and solid, hazardous, toxic and other wastes by major sources;
- Integrated management of port safety, health, security and environmental protection; and
- Involvement of the private/business sector as a partner in ICM.

Goals of ICM

Attain **sustainable development** through integrated planning and management and interagency, multi-sectoral collaboration and partnership to:

- Improve standard of living
- Maintain/improve functional integrity and health of the ecosystems
- Promote efficient and equitable economic growth



Source: PEMSEA

ICM in Philippine context



- Longest coastline, next to Indonesia

37,008 km

- Coastal Population

55.3 million or 60% of the country's total population (as of 2012)

Provinces

81

Coastal

66

Landlocked

15

Philippines Biodiversity



Photo Credits (L-R): Philippine Eagle (Klaus Nigge/National Geographic); *Hoya melliflua* (Leonardo Co); Mts. Iglit-Baco (PAWB); *Platymantis polillensis* (GTZ-DENR)

5th in the number of *plant species in the world*

5 of 7 *endangered marine turtles species the world are found in the Philippines*

Improving biodiversity increases resilience of ecosystems

Higher levels of biodiversity provides more and better ecological goods and services

Marine lifeforms actively seeks good quality habitats during settlement



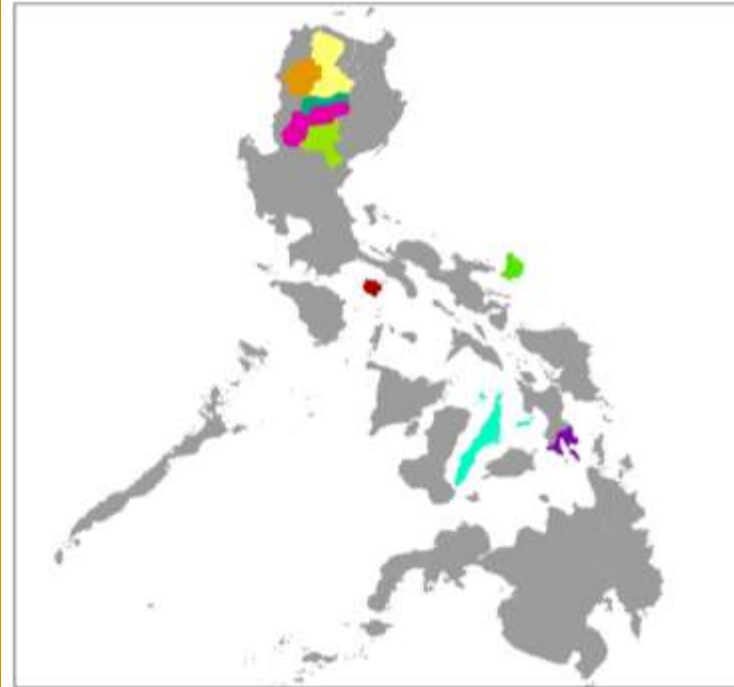
High Vulnerability of the Country to Impacts of Climate Change



**TOP 10 PROVINCES
VULNERABLE FOR FLOODS**

Legend

	Ilocos Norte
	Oriental Mindoro
	North Cotabato
	Metro Manila
	Bulacan
	Maguindanao
	Tarlac
	Pangasinan
	Nueva Ecija
	Pampanga
	Other Provinces



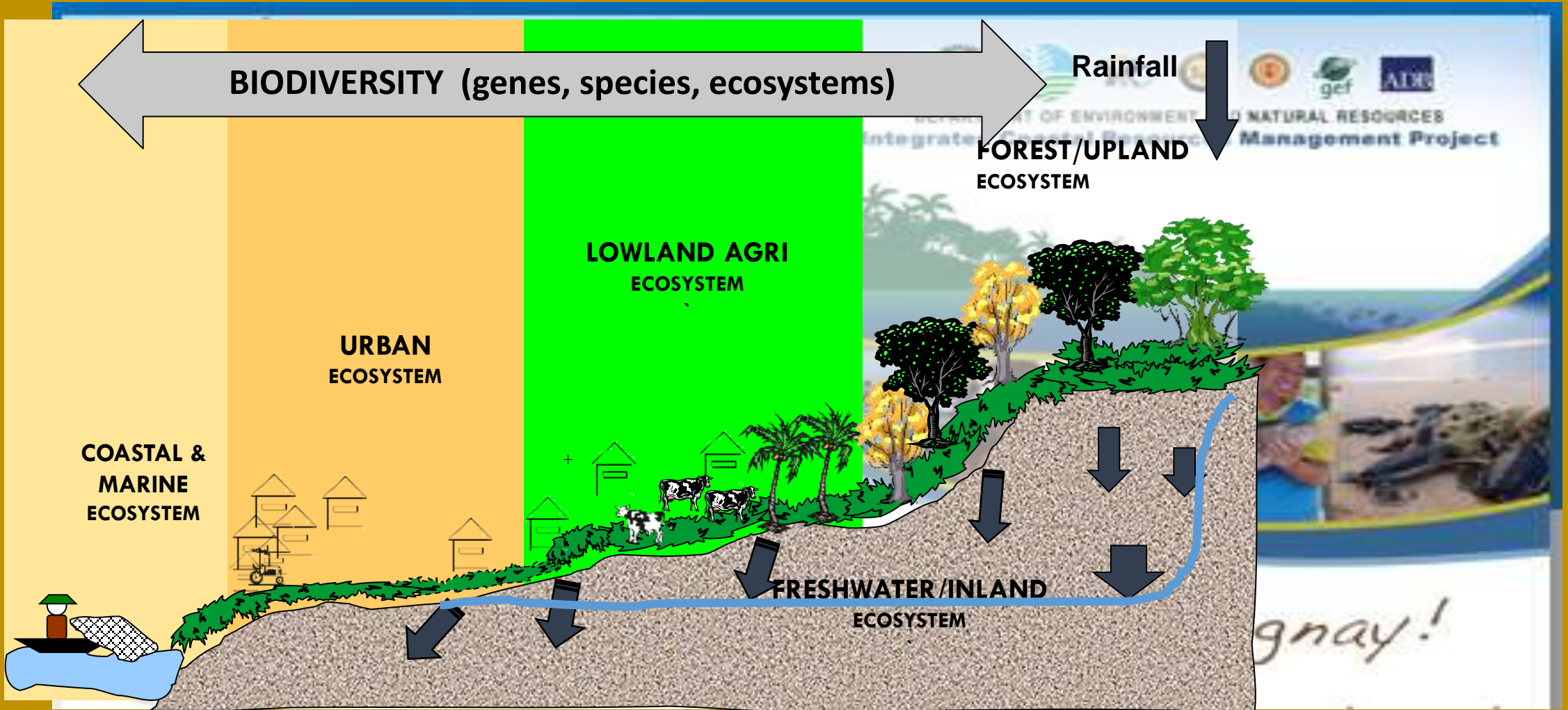
**TOP 10 PROVINCES
VULNERABLE FOR LANDSLIDES**

Legend

	Ifugao
	Catanduanes
	Cebu
	Marinduque
	Abra
	So Leyte
	Kalinga Apayao
	Nueva Viscaya
	Mt_Province
	Benguet
	Other Provinces

Why ICM?

1. Interconnectivity

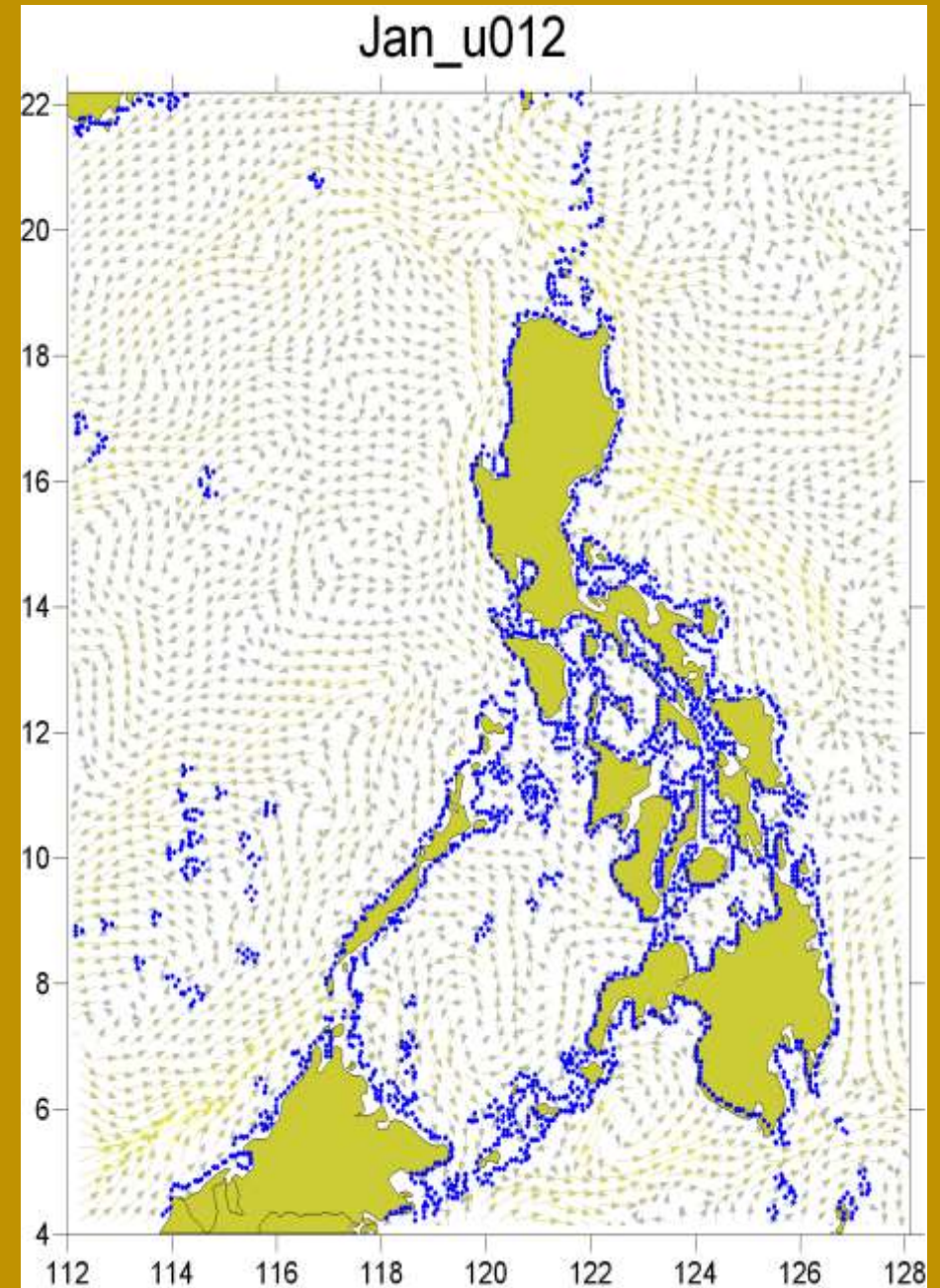




Why ICM?

1. Interconnectivity

- All habitats connected by water circulation
 - Reproduction
 - Nutrients
 - Genetics
 - Efforts in one region contributes to the adjacent region
 - Cooperation and complementation of efforts
-
- The connectivity of the marine ecosystems makes it imperative that we collectively manage, protect, restore and rehabilitate our ecosystems.

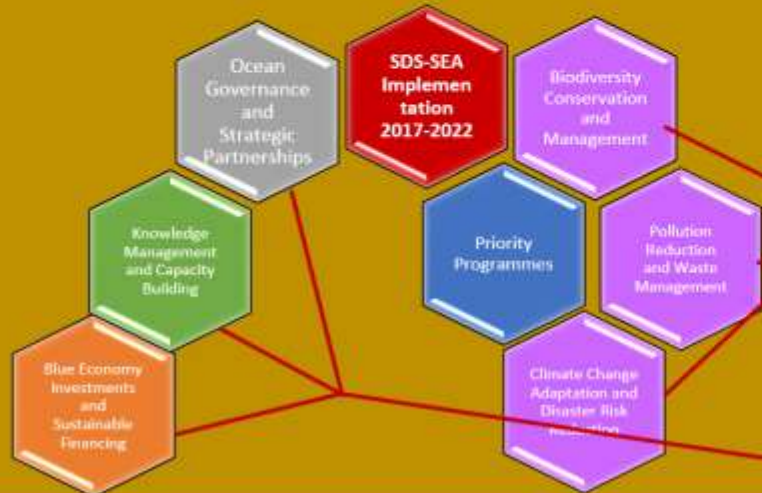


Why ICM?

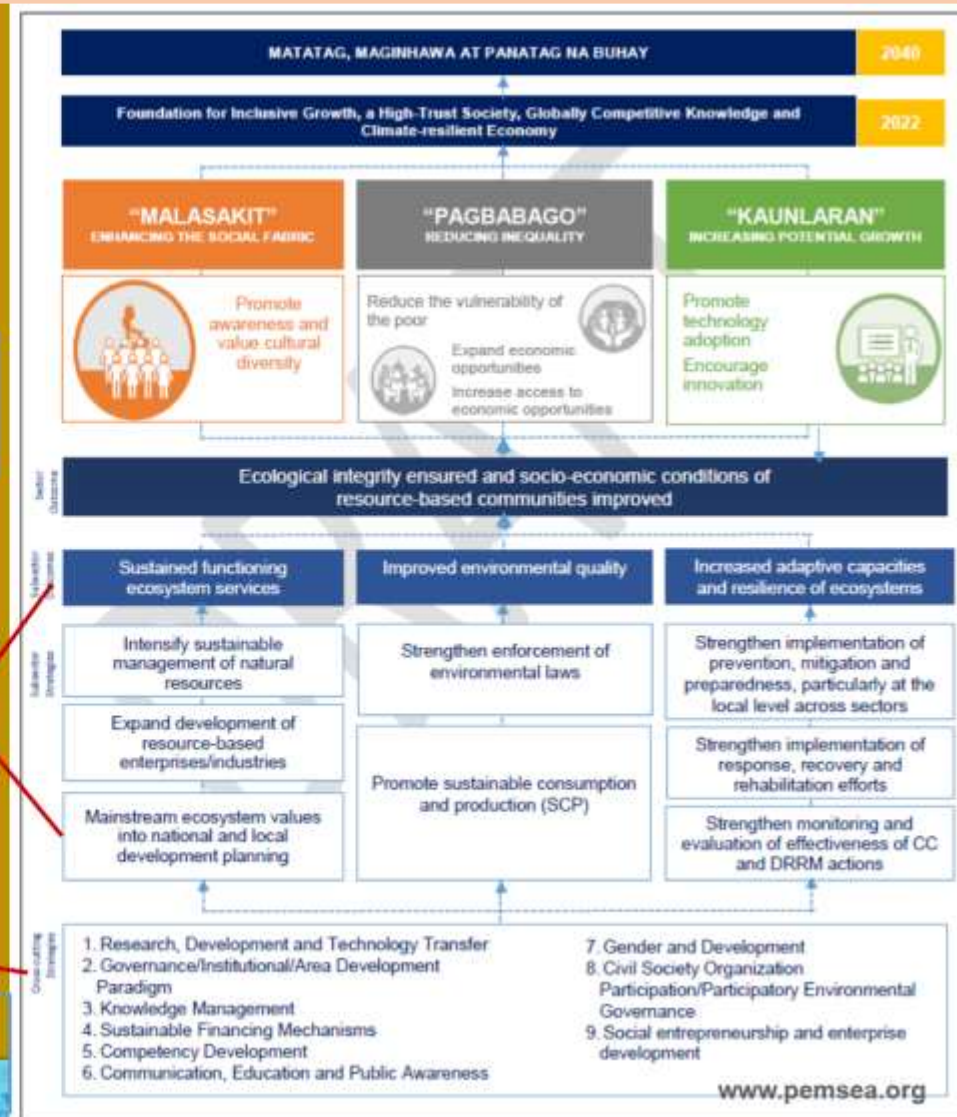
2. Responsive to PDP and Regional/Global Goals



- Mainstreaming National ICM Program into the PDP



- Chapter 20: Ensuring Ecological Integrity, Clean and Healthy Environment





Why ICM?

- ICM proven as effective, efficient and doable

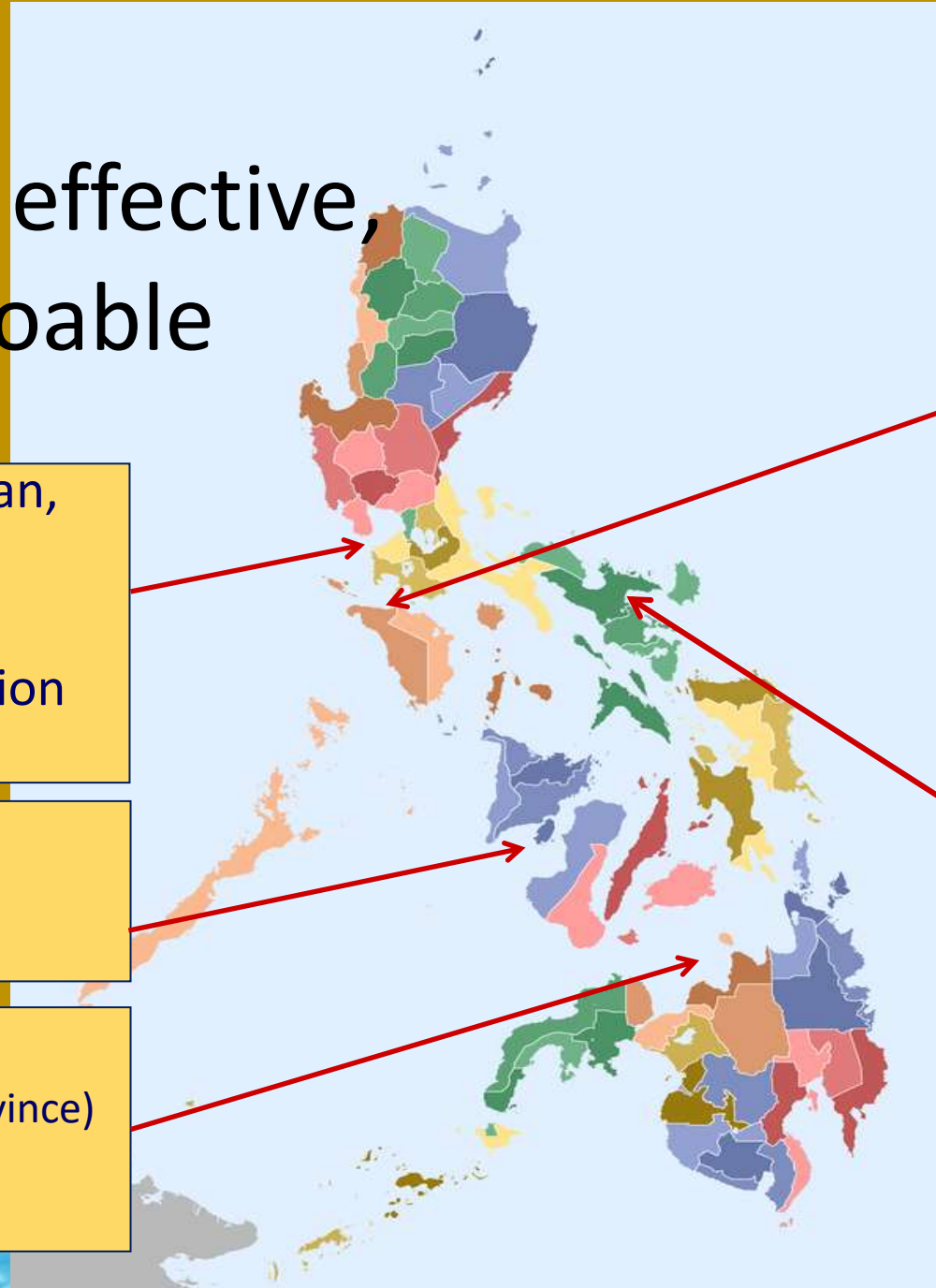
- **Manila Bay Area:** Bataan, Bulacan, Cavite and Pampanga
- CCA/DRR
- Water use & conservation
- Pollution management

- **Guimaras Province**
- Biodiversity/MPA

- **Macajalar Bay:**
- 14 coastal LGUs (1 province)
- EAFM

- **Verde Island Passage:** Batangas, Marinduque, Oriental Mindoro, Occidental Mindoro, Romblon
- Biodiversity/MPA networking

- **Camarines Sur**
- Biodiversity/MPA networking
- Rehabilitation of Watershed
- ClimateChange Adaptation and DRR



Why ICM?

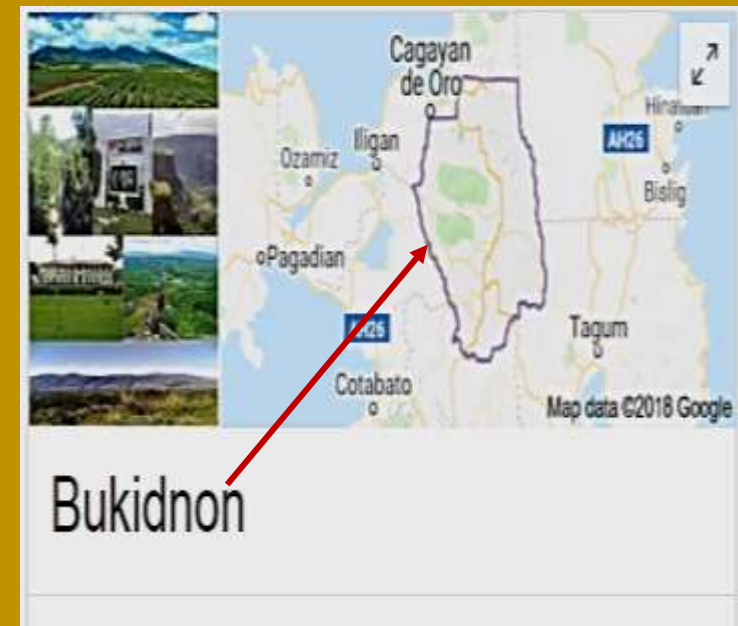
➤ *activities from Landlocked areas do impact*

Landlocked Provinces	Landlocked Municipalities and Cities
15	231

Coastal Provinces	Landlocked Municipalities and Cities
66	459

Landlocked municipalities and cities in the Philippines

690



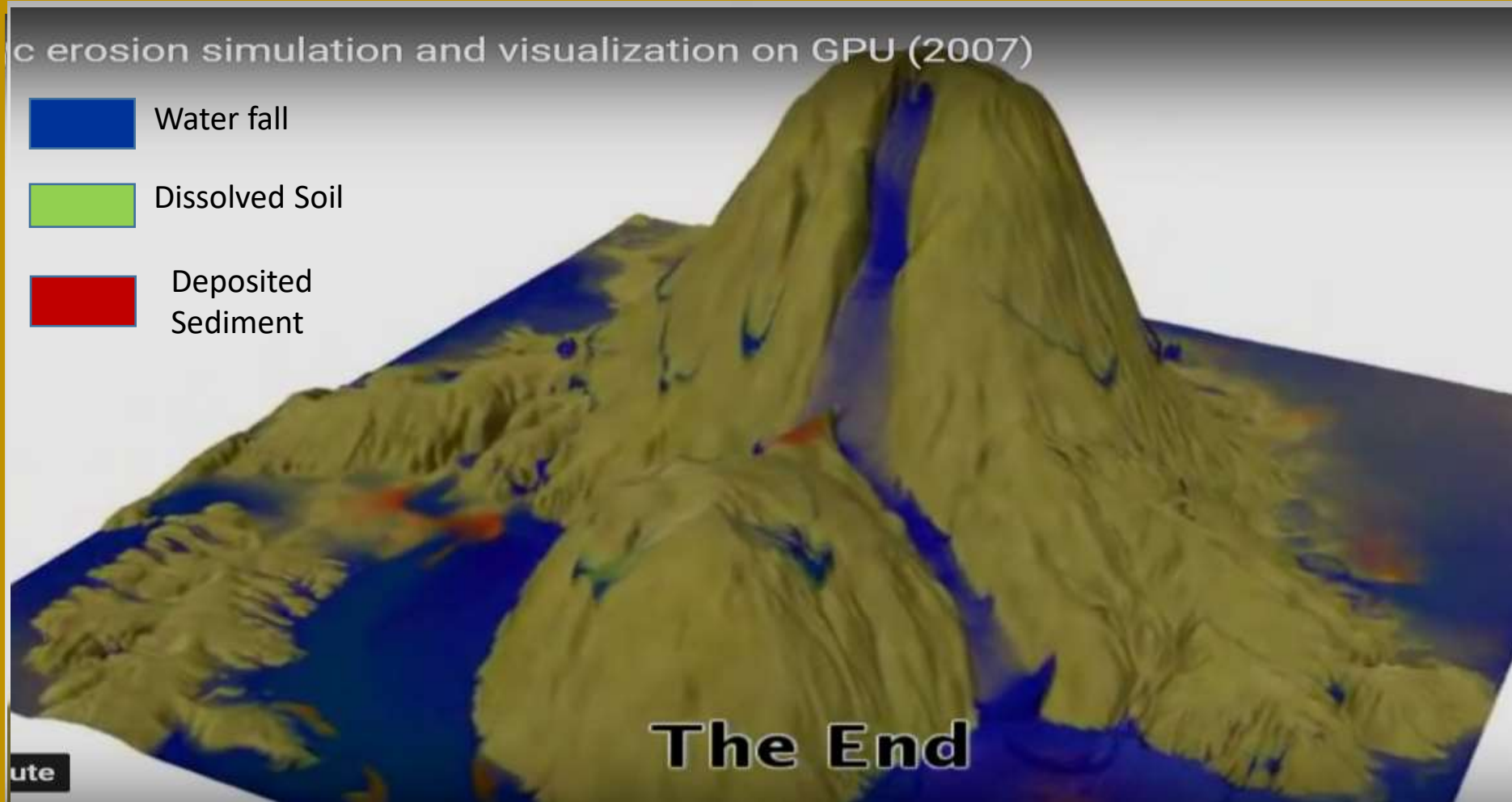
BENEFITS FROM THE LANDLOCKED PROVINCES

- ❖ **Transport of nutrients**
- ❖ **Salinity regulation**
- ❖ **Freshwater supply**



Why ICM?

- Reduce drivers of degradation



Why ICM?

- *It addresses threats to the coastal zone addressed*

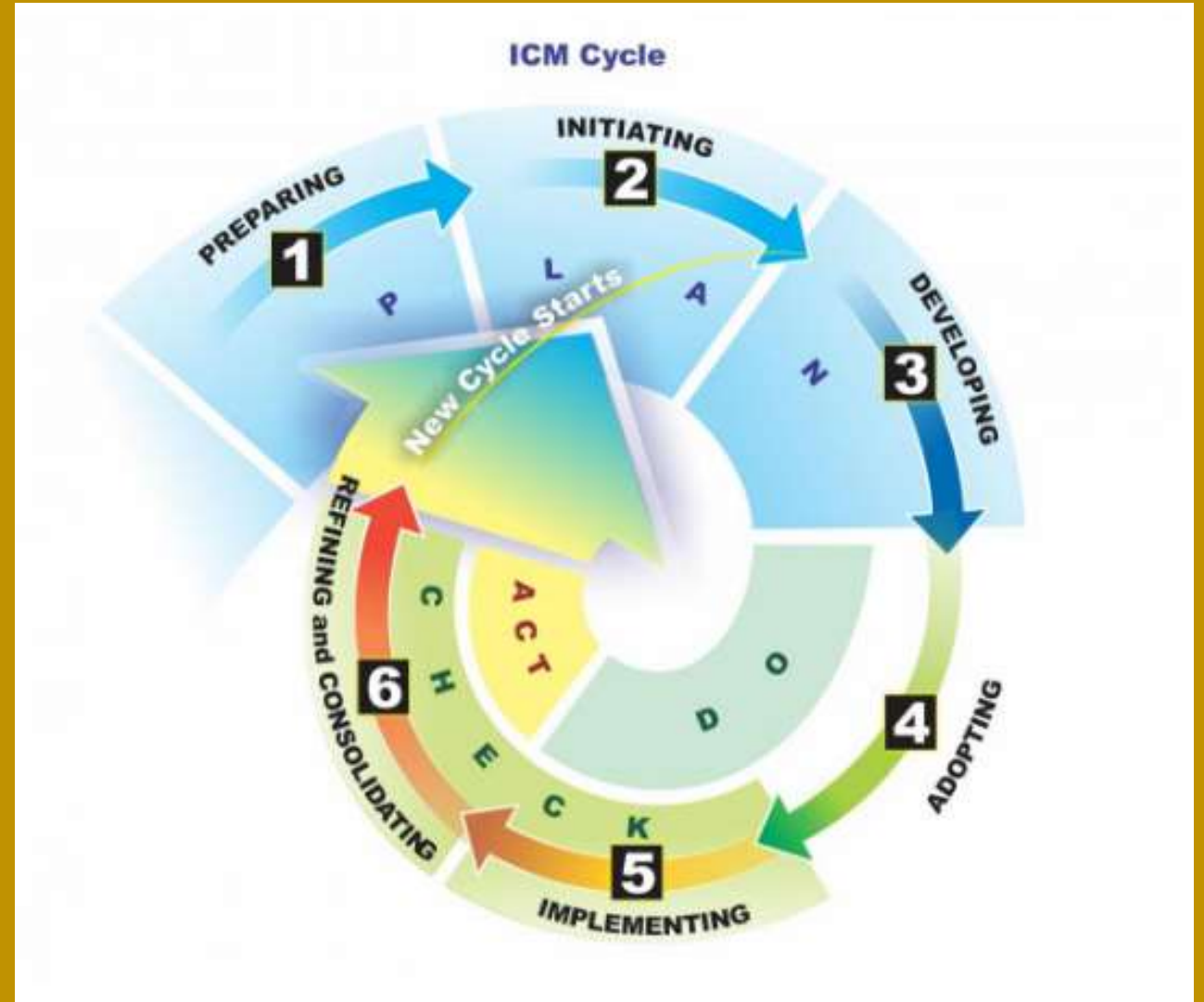
Land-use and human population
Pollution – point and non-point sources
Coastal industries and constructions
Freshwater input (river runoff)

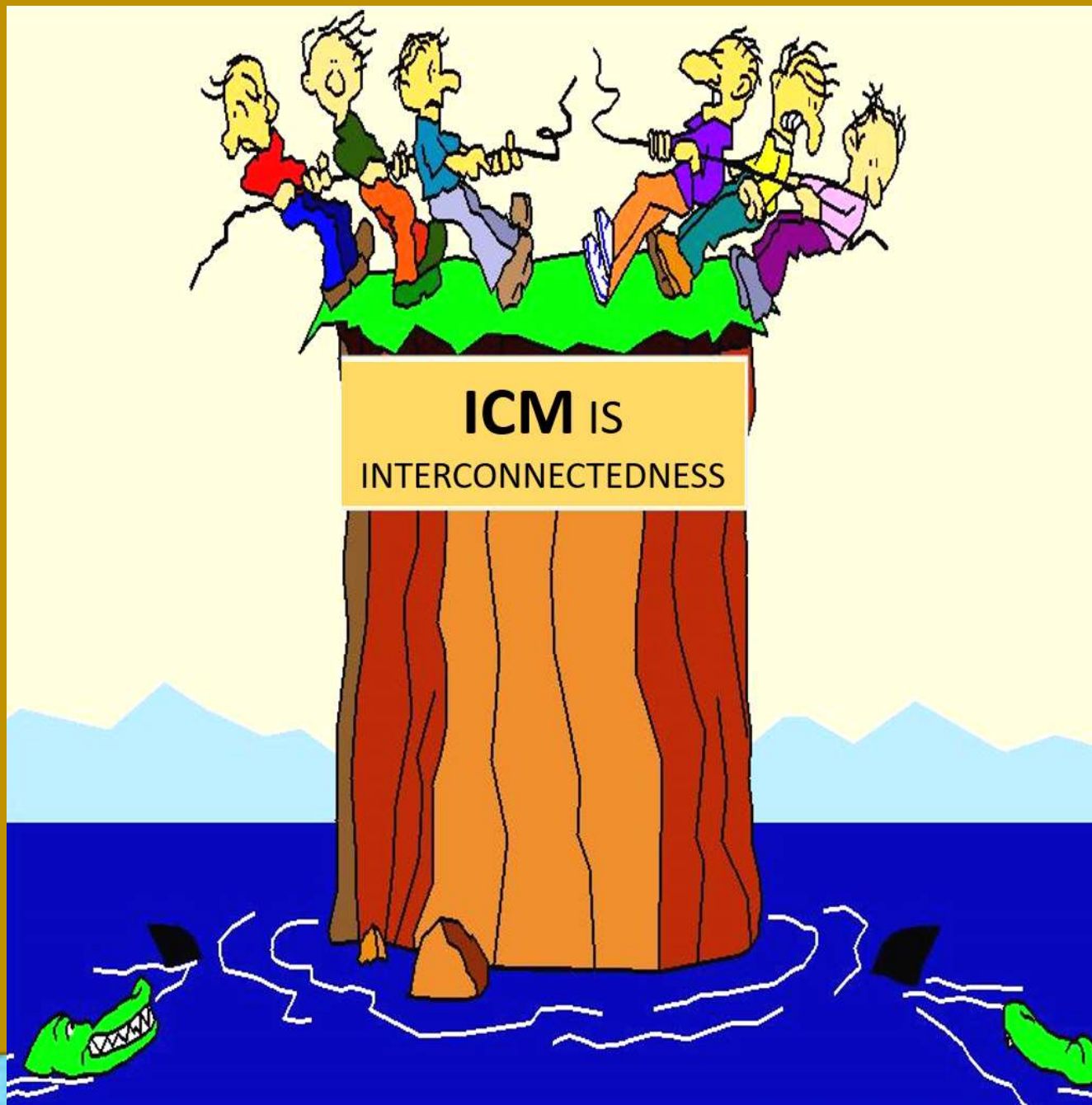
- *Helps Local Governments **achieve** their social and economic development targets in a number of areas, benefitting millions of people living in coastal and watershed area*



How is ICM achieved?

- Capacity building and engagement of communities and other local stakeholders in policy planning and implementation, and to create local support for coastal management policies.
- Assess and monitor progress in the implementation of related plans and use results in building advocates.
- Create and enforce a strong legal and institutional framework, including economic incentives to reinforce desired behaviors and outcomes





Importance of an ICM Legislation

- Mainstreaming into the local and national decision-making processes, plans and programs recognized – i.e. biodiversity conservation, climate change, food security
- Strengthens and establishes a clear governing and implementing mechanisms among all concerned agencies
- Sustainability of initiatives and gains beyond PDP and terms of office of national and local executives



*Maraming
salamat po!*