Climate Change Initiative For Sihanoukville

Environmentally Sustainable Cities

21-22 March 2013, Hanoi, Vietnam

Meas Rithy, Cambodia


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Preah Sihanouk Background

Location	230 kilometers southwest of Phnom Penh
Coastline	140.5 Kilometers and the islands 32
Land area	2,536.68 sq. km and Density: 230/sq. km
	1 Municipality – Sihanoukville 3 Districts – Prey Nop, Stung Hav, Kampong Seila
Population	196,645 with a 2% annual increase
Employment	19, 613 (11,162 are women) Source Income: Factory, Agriculture, Port Development, Fishery, Business Service and Tourism establishment
Poverty	21.5% (2008)
Income Sources	Agriculture (forestry, fisheries), tourism industry, port and harbor, and oil exploration

Challenges and Problems

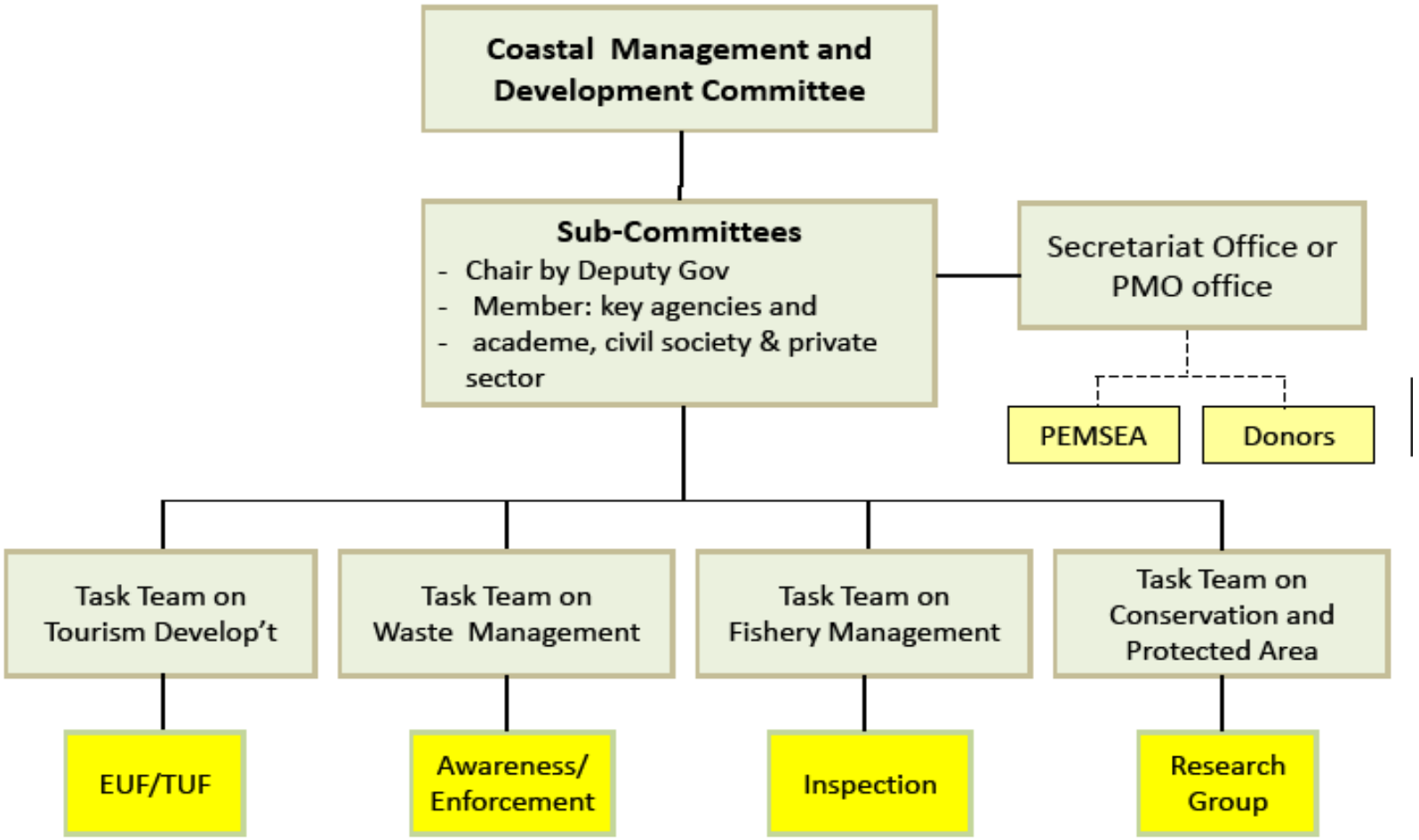
- **Waste Management**
  - Only 40% of the total waste in the province is collected by the waste collection company
- **Water supply and sanitation**
  - Increasing demand for freshwater due to increasing population
- **Destruction of marine and coastal habitats**
  - Illegal fishing
- **Uncontrolled tourism expansion**
  - Industries which promotes illegal construction
  - Extended the built-up zone under beach zone
  - Poor planning on construction beach
- **Coastal erosion**
  - Beach erosion and sea level rise

Challenges and Problems

- **Weekness of Governance**
  - Limited law enforcement
  - Capacity building and institutional arrangement
- **Livelihood**
  - Increasing hawkers
  - Living and coastal natural management at local level

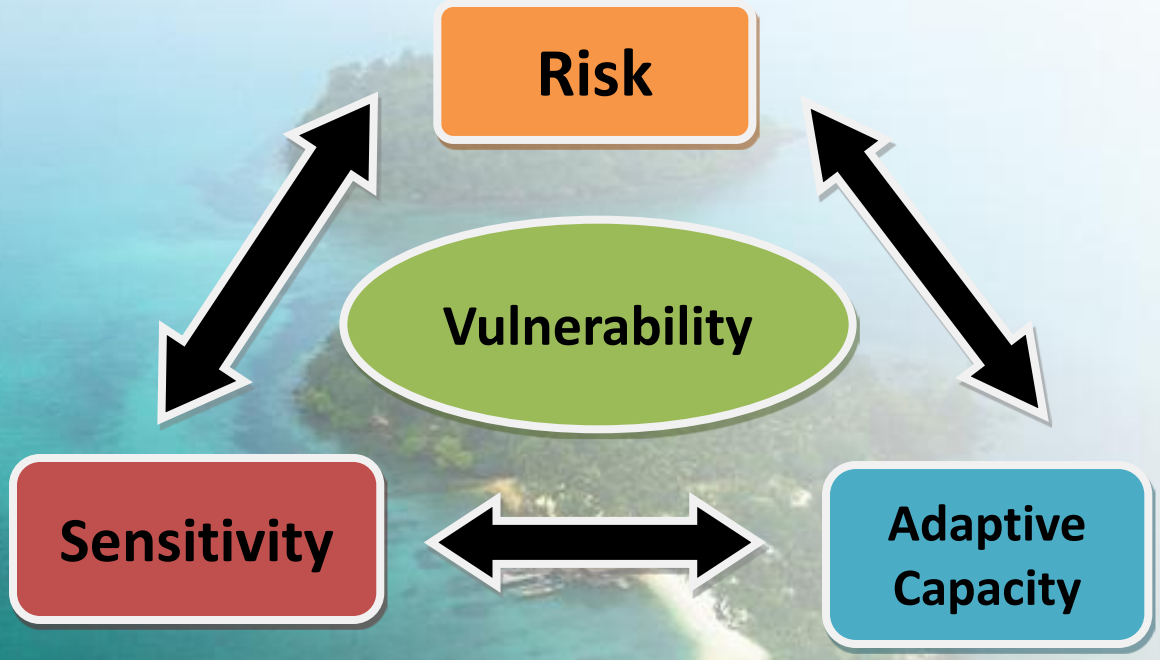
Institutional Structure

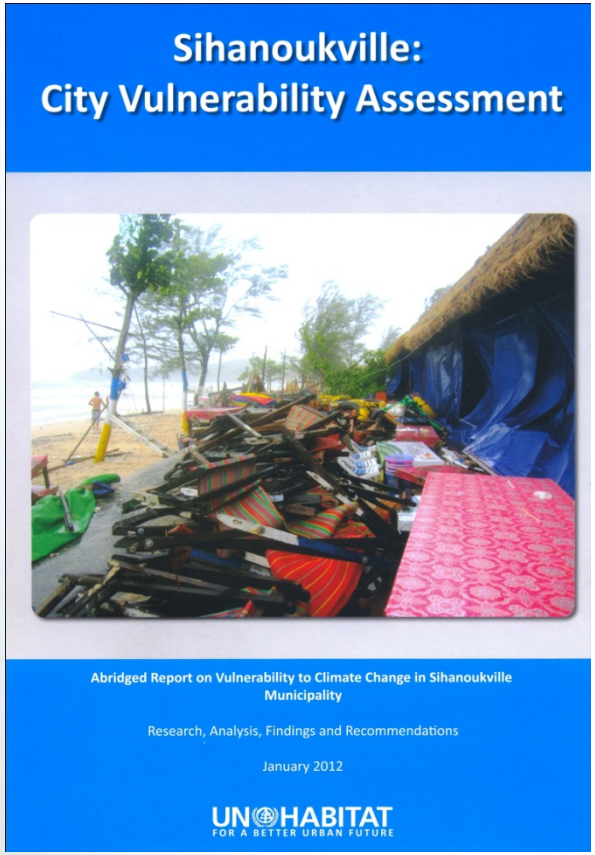
Coastal Management and Development Committee (CMDC), issued by decision



1. Vulnerability Assessment

Assessment Framework





Climate Change Exposure and Sensitivity in Sihanoukville

Hazard	Possible or observed impact in urban areas	Level Of Sensitivity		
		Current	2025	2050
Sea Level Rise	Damage to fishing boats	Low	Low	Medium
	Damage to homes	Medium	Medium	Potentially high
	Coastal Erosion	High	Very high	Very high
	Damage to roads and infrastructures	Medium	Medium	High
	Loss of agricultural land through sea-water incursion	Low	Low	Low
Heat/Drought	Damage to homes	Low	Low	Low
	Heat related health problems	Medium	High	High
	Loss of livestock (livelihood sources)	Low	Low	Low
	Lack potable water	Medium	High	High
	Damage to coral	High	Very high	Very high

Climate Change Exposure and Sensitivity in Sihanoukville

Hazard	Possible or observed impact in urban areas	Level Of Sensitivity		
		Current	2025	2050
Storm Activity	Damage to housing (particularly roofs)	High	Very high	Very high
	Damage to fishing boats	High	Very high	Very high
	Damage to crops	Low	Low	Low
	Loss of tourism potential	Medium	Medium	Medium
	Increased threat from lightening	Medium	Medium	Medium
Flooding	Vector Borne Disease	Low	Medium	High
	Water Borne Disease	Low	High	High
	Damage to roads and infrastructure	Medium	Medium	High
	Erosion and run-off from hilly ground	Medium	Medium	Medium
	Damage to homes	Medium	Medium	High

Tomnop Rorok Area

2. Storm Resilience enhanced through information systems and planning

1. **Staff capacity building, public awareness and dialogue have been conducted continually.**

2. **A local, automatic weather station (AWS):** has been installed within the area of Dept. WRM. The prediction parameters that can be accessed likely, Temperature, Humidity, Windspeed/Direction, Pressure, Solar Radiation, Rain, and Evaporation.

3. **Information campaign** including climate change video spot show, leaflet on storm and lightening protection and daily weather information broadcasting through radio (three time a day)

4. **Integrated climate change initiative into Provincial Development and City Masterplan**

…lessons

- ✓ **Climate Change** is a New Concept: Developing knowledge, skills and reorienting attitudes takes time and has to be continually addressed over time.
- ✓ **National level support** is very important in ensuring that policies are implemented at the local level
- ✓ Effective coastal and marine management, and climate change can not be implemented by a single sector alone. It requires coordination and cooperation among sectors.
- ✓ **Zoning as a model;** others see the benefit of moving back and are now voluntarily following similar scheme
- ✓ Understanding of the project and benefits take time; understanding of environmental importance comes after people see concrete economic benefits
- ✓ Commitment of staff & commitment of local communities


Thank you very much for your attention!