



# Marine biodiversity conservation in China up to 2020: achievements and new agenda

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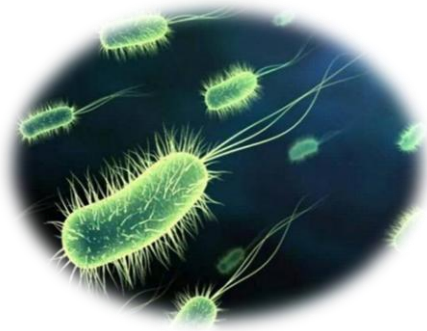
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**15/7/2019 Qingdao, China**

# Marine biodiversity

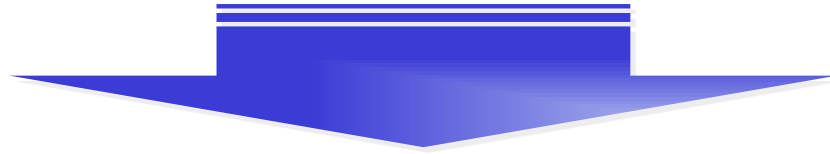
microorganisms



plants



animals



ecological goods and services

# Threats to marine biodiversity

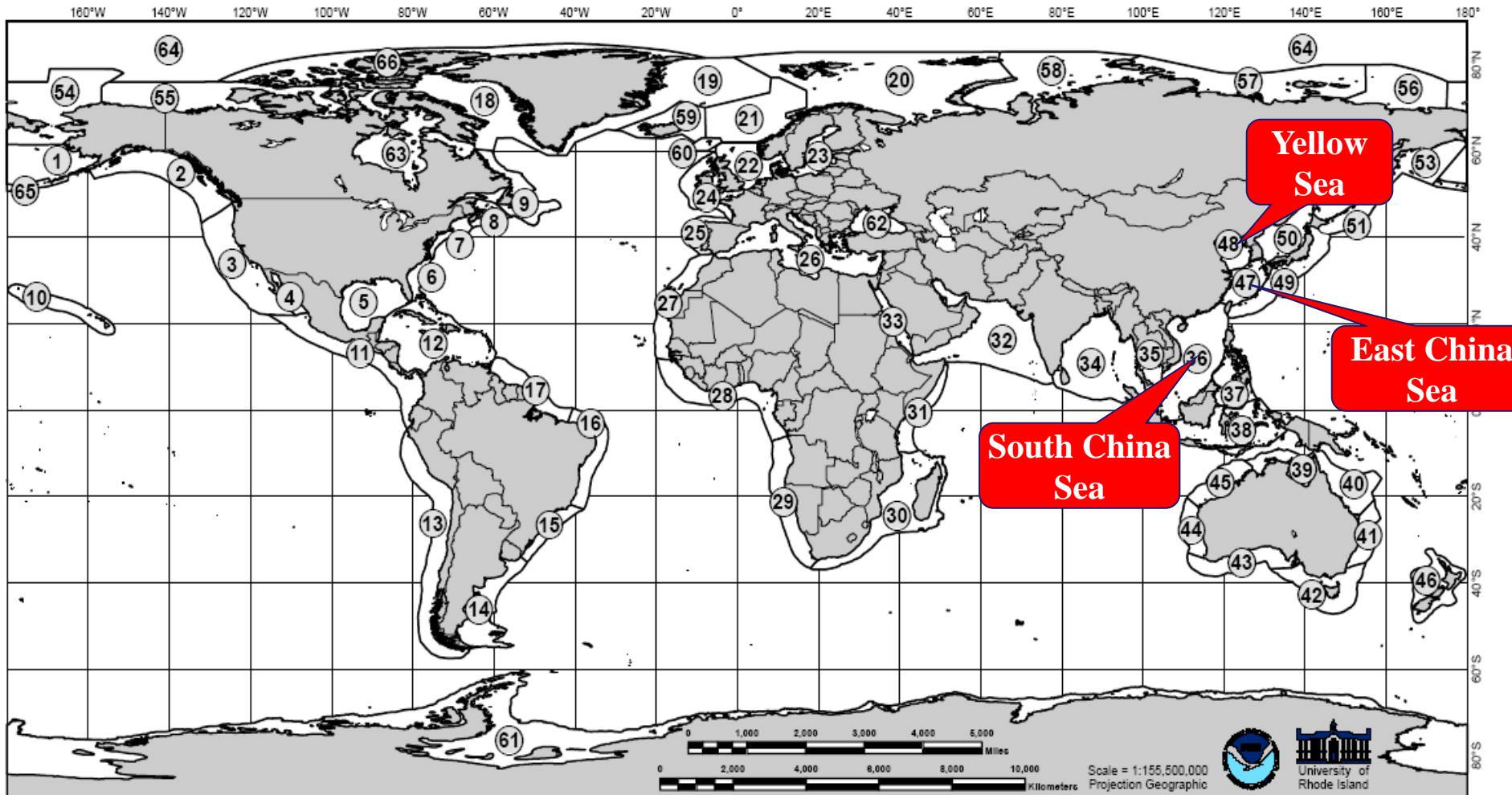
- Ocean environment pollution
- Overfishing
- Habitat loss and fragmentation
- Species invasion
- Climate change

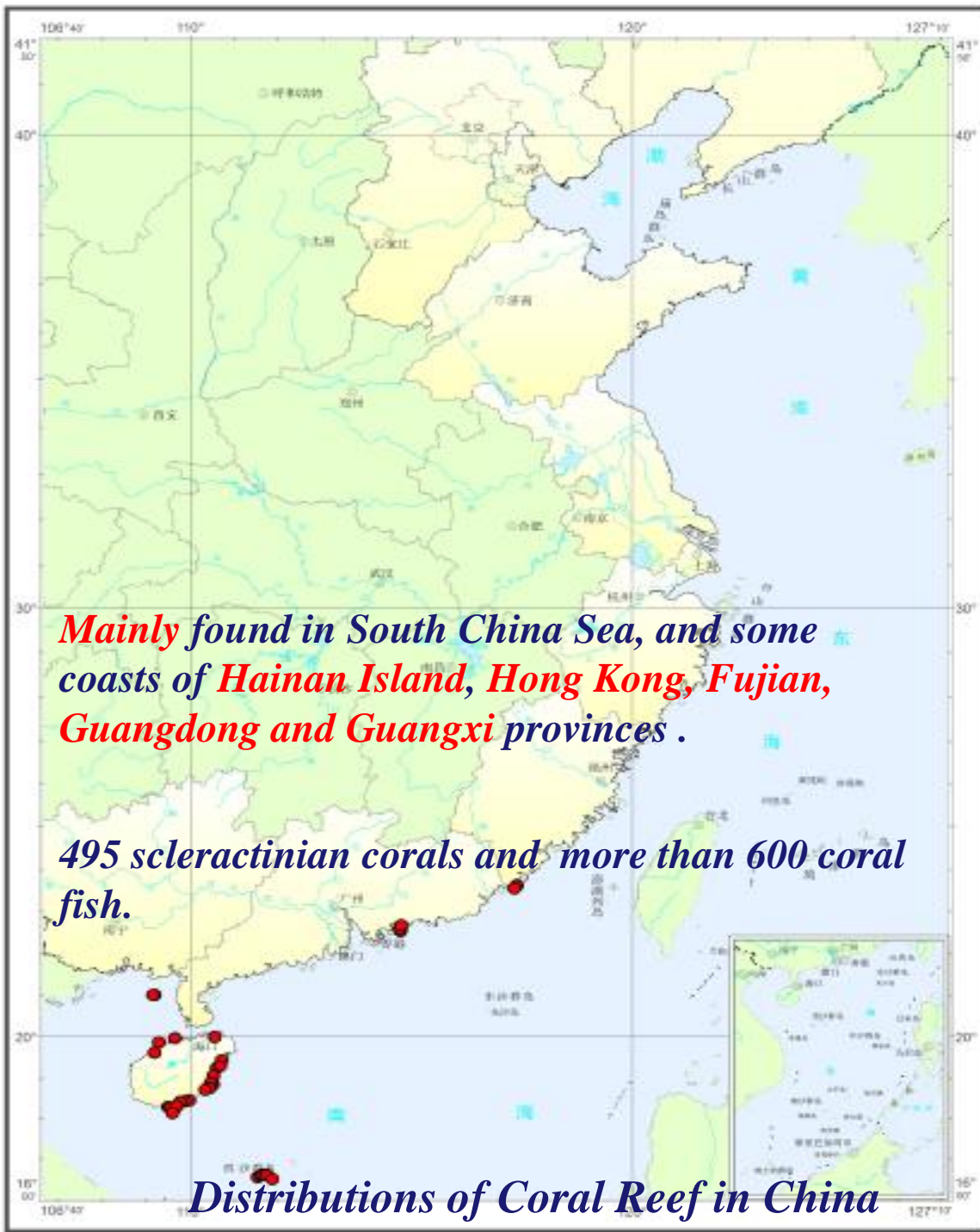


# Large Marine Ecosystem

## 64 LME of the world and linked watersheds

Source from NOAA





*Mainly found in South China Sea, and some coasts of Hainan Island, Hong Kong, Fujian, Guangdong and Guangxi provinces .*

*495 scleractinian corals and more than 600 coral fish.*

*Distributions of Coral Reef in China*

- Deep-sea
  - Coastal wetland
- m)
- ↓
- Salt marsh
  - Estuary
  - Mangrove
  - .....

m)

0

10

20

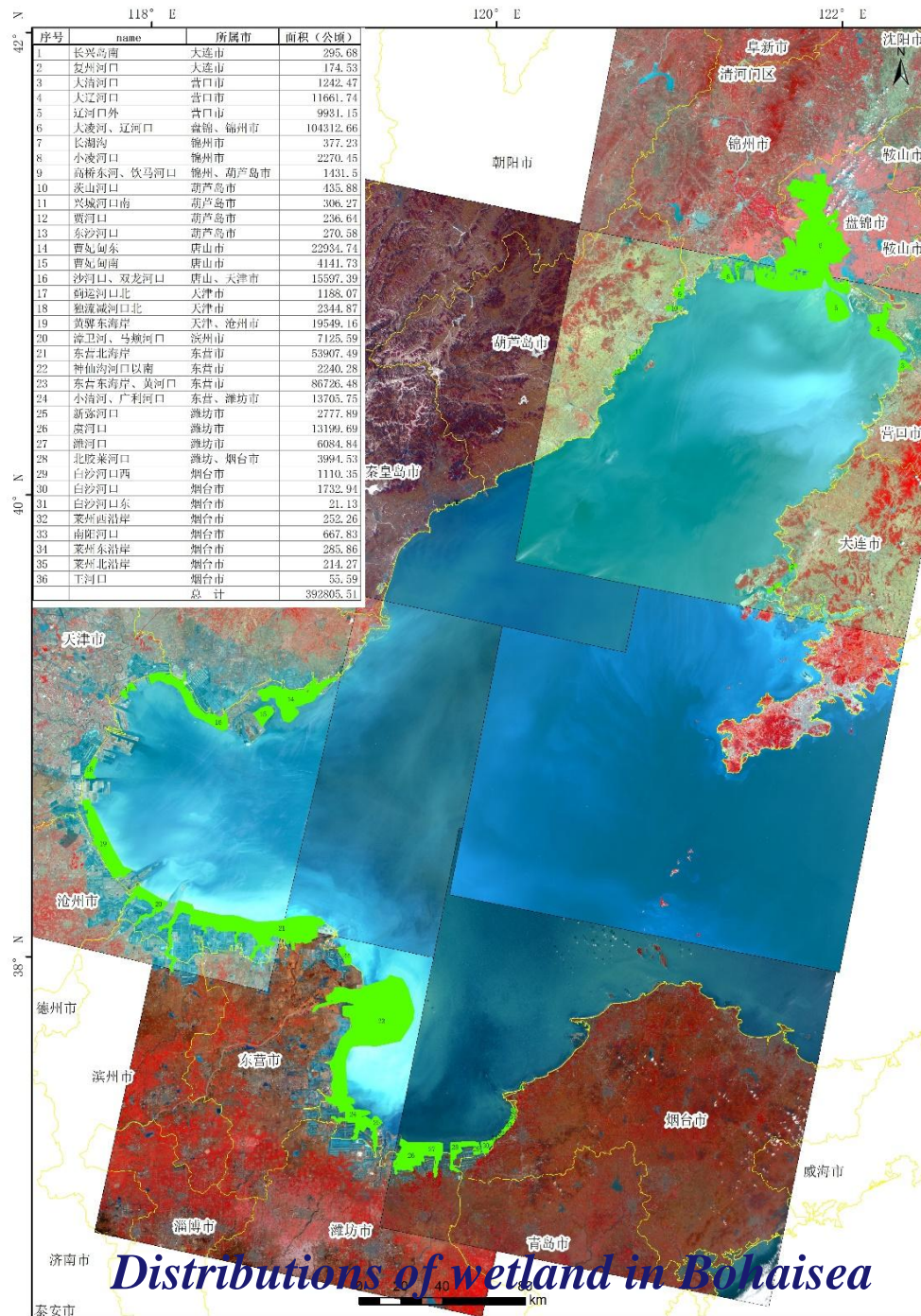
30

40

50

# Wetland in Bohai sea

- remote-sensing image
- More than 390, 000 ha



# *Mangroves*

Mangroves were naturally distributed in **Hainan, Guangxi, Guangdong, Fujian and Taiwan** in China, with current area of 220 km<sup>2</sup> .

There are a total of **27 mangrove species** (including 1 variety), 15 genera and 12 families of mangrove plants in China, which accounts for 37% of species, 60% of families, 56% of genera of mangrove plants in the world .

A total of **2,854 species of organisms** were recorded in mangrove wetlands in China







# Marine protected areas (MPAs)

- A marine protected area (MPA) is essentially a space in the ocean managed by all levels of government, where human activities are more strictly regulated than the surrounding waters.
- Effective protected tools
- Widespread application in the world



# MPAs in China

Strict management measure

Marine Natural  
Reserves

- Typical ecosystem
- Important and endangered species
- Natural relics and other resources

Marine Environment  
Protected Law

Marine Special  
Protected Areas

- Special geographical locations
- Marine ecosystem
- Marine resource
- Marine park

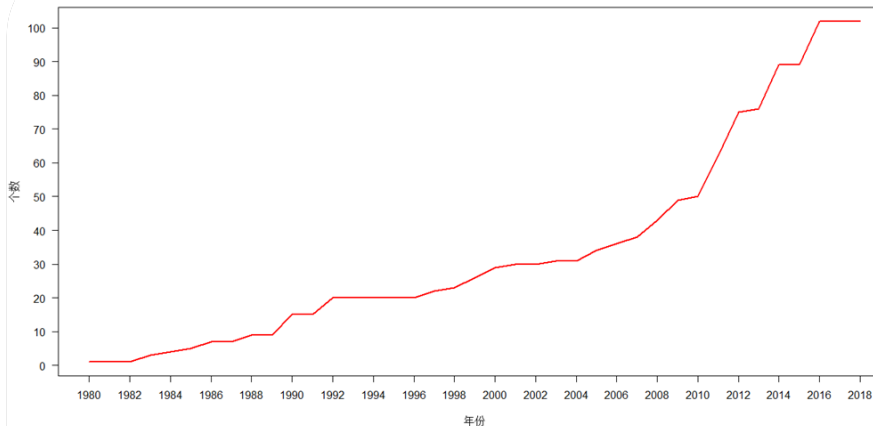
Sustainable utilization

MPAs



# MPAs in China

- First MPA established in 1963
- MPAs
  - Total number: 271
  - Total areas: 1, 240, 000km<sup>2</sup>
- National MPAs
  - Total number: 102
  - Total areas: 26, 275 km<sup>2</sup>



# MPAs in China

## Protection targets

- Endangered species: spotted seal, Chinese white dolphin, sea turtle ... ..
- Important ecosystem: coastal wetland, coral reef, mangrove ... ..
- Natural relics

Establishing a marine protected area network



# A case of MPAs network in China

2008

Shellfish marine special protected areas



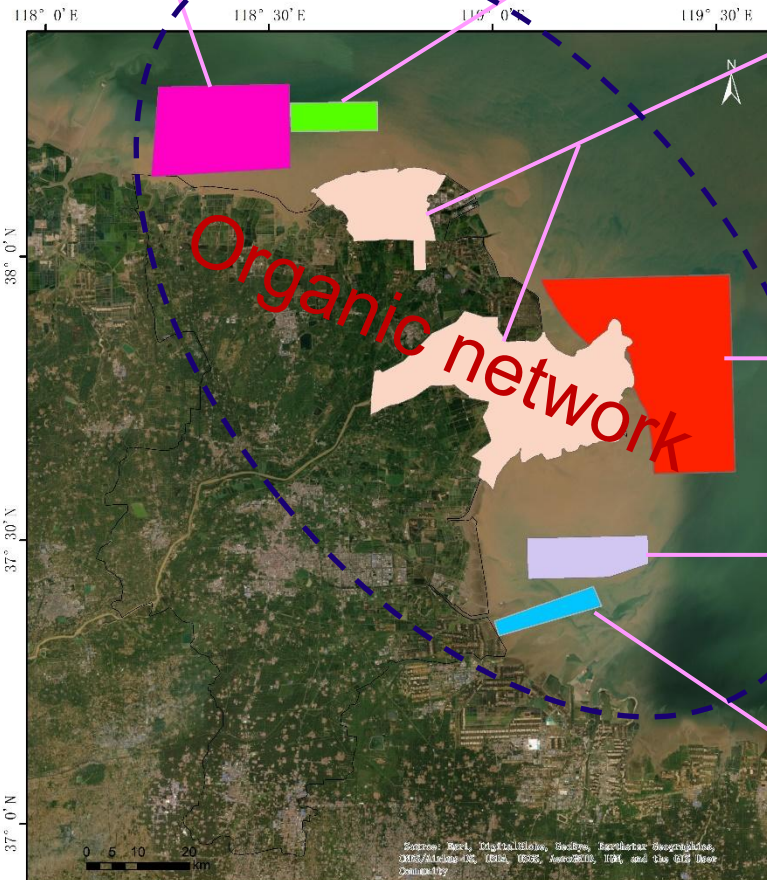
2008

Benthic fish marine special protected areas



1990

Yellow river delta national natural reserve



2008

Ecology marine special protected areas

2009

Razor clam marine special protected areas



2009

clam worm marine special protected areas



# Reforms of MPA management system

**previous**

- State oceanic administration
- Ministry of Environmental Protection
- State Forestry Administration
- Ministry of Agriculture

Institutional Restructuring  
of the Chinese Government  
in 2018



unified management

**now**

State forestry and grassland administration

# New agenda for MPAs

- General Office of the CPC Central Committee and General Office of the State Council published “Guiding opinions on the construction of natural protected areas system with national parks as the main body”
- programmatic document



The screenshot shows the official website of the Central People's Government of the People's Republic of China (www.gov.cn). The page features the national emblem and the text "中华人民共和国中央人民政府" (Central People's Government of the People's Republic of China) in red. Below this is a navigation bar with blue buttons for "国务院" (State Council), "总理" (Premier), "新闻" (News), "政策" (Policy), "互动" (Interaction), "服务" (Service), "数据" (Data), and "国情" (National Conditions). A search bar is located on the right side. The main content area displays the title of a policy document: "中共中央办公厅 国务院办公厅印发《关于建立以国家公园为主体的自然保护地体系的指导意见》" (The General Secretariat of the CPC Central Committee and the General Secretariat of the State Council issued the Guiding Opinions on the Construction of a System of Natural Protected Areas with National Parks as the Main Body).

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# classification system of MPAs

## National park

- National representative ecosystems
- Complete system
- Large scale

## Natural protected area

- Typical ecosystem
- Large area

## Natural park

- Important system
- sustainable utilization area



**Natural protected area system**



# New agenda for MPAs

- Optimize spatial distribution
- Solve overlaying problem
- Establish new MPA

海洋与海岸生物多样性保护优先区分布示意图



Conservation Priority Areas

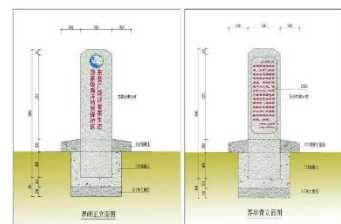
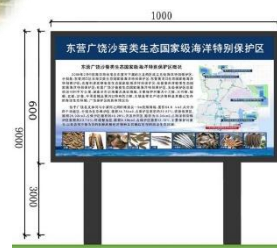
# New agenda for MPAs

- Ecological restoration
  - Fishery resources restore
  - Coastal wetland restoration



# New agenda for MPAs

- Increase capital input
- Management facilities
- monitoring equipment
- Publicity and education facilities
- Biological resources and environment survey



# New agenda for MPAs

- Community co-management
- Workshop training





Protecting Ocean is  
Protecting Ourselves

**Thanks!**