Collaborative Research Interests in Marine Spatial Planning in Yellow Sea and Progress between China and Korea

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Intergovernmental Oceanographic Commission

Outline

- **Background of China and Korea Coastal Area**
- **MSP Work in China**
- **MSP Work in Korea**
- **Collaborative Research Interests in Yellow Sea**
- **Challenge and Experience**

Background of China and Korea Coastal Area

- China

- No. of coastal province governments: 11
- No. of coastal local governments: 54

Land Area	9,600,000㎢
Territorial Sea	380,000㎢
EEZ	3.000,000㎢

Bays	160 (>10㎢)
Islands	6900 (>500m^2)
Coastline	18,000㎞

Coastal Pop.	884,630,000(65% of total Pop.)
Deepwater coastline	400 km
Port & Harbor	4811(cargo handling capacity>15,000,000t)

- Korea

- No. of coastal province governments: 11
- No. of coastal local governments: 74

Land Area	99,897㎢
Territorial Sea	71,000㎢
EEZ	447,000㎢

Tidal Flat	2,550㎢
Islands	3,170
Coastline	13,508㎞

Coastal Pop.	13,127,324(27% of total Pop.)
Fishing License	12,662
Port & Harbor	52 / 916

Background of China and Korea Coastal Area

Coastal Environment

- **Decrease of natural coastline by landfill, seawalls and coastal roads**
  - Artificial coastline, serious coastal erosion
- **Tidal flats lost during the last two decades**
- **Improvement in the average coastal water quality**
- **Harmful red tides as a common event parts areas**

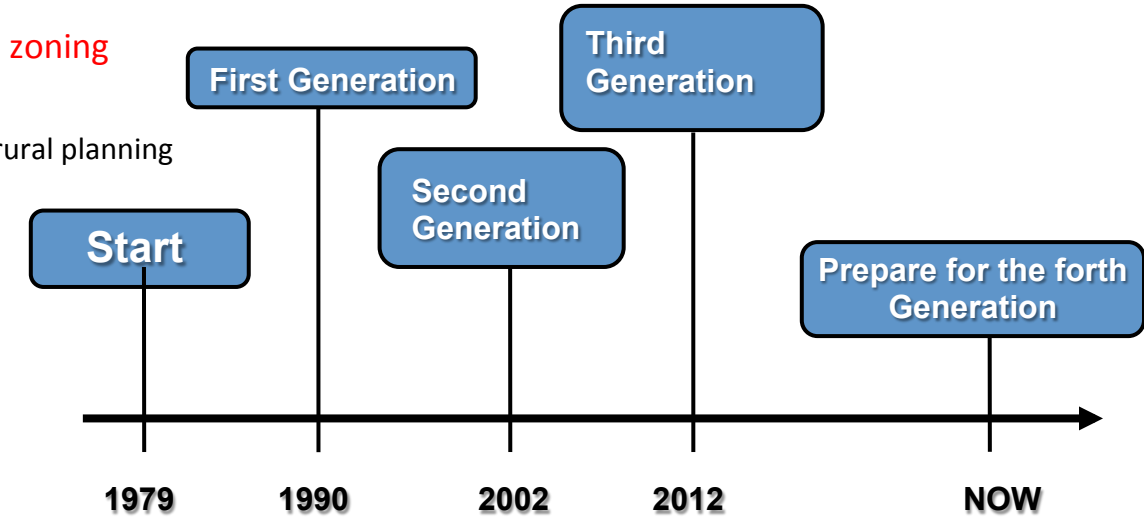
The Pressure of Coastal Use and Development

- **Population decrease in coastal areas**
- **Reclamation of tidal flats for agricultural and industrial uses**
- **Concentration of development activities and the emergence of new use activities in the coastal area**
  - increasing needs for industrial, marina and islands tourism uses
  - ocean energy complexes. ex wind, wave, current, tidal power
- **Deepening conflicts on the value of conservation and development**

MSP work in China

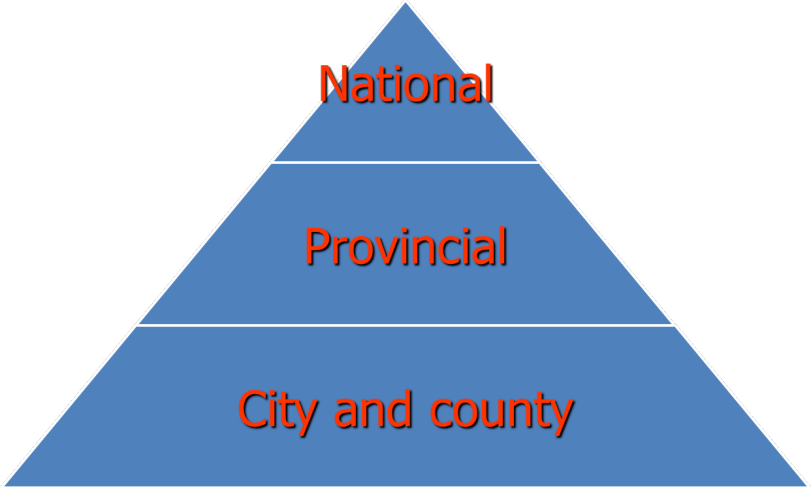
China's National Planning System

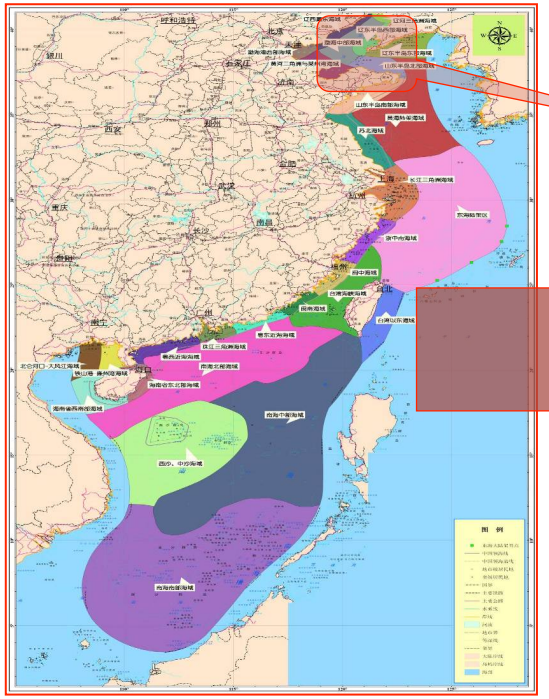
- Economy and Social Development Planning
  - Overall Planning
  - Special Planning
  - Regional Planning → Industry, forest, energy, transport
- Territory Spatial Planning
  - Land → overall plan for land utilization
  - Ocean → marine functional zoning
  - Cities and Towns → urban planning and rural planning
- Environmental Protection Planning
  - Land → environmental functional zoning, water functional zoning and environmental protection planning
  - Ocean → marine functional zoning and marine environmental protection planning
  - Sea Island → sea island protection planning



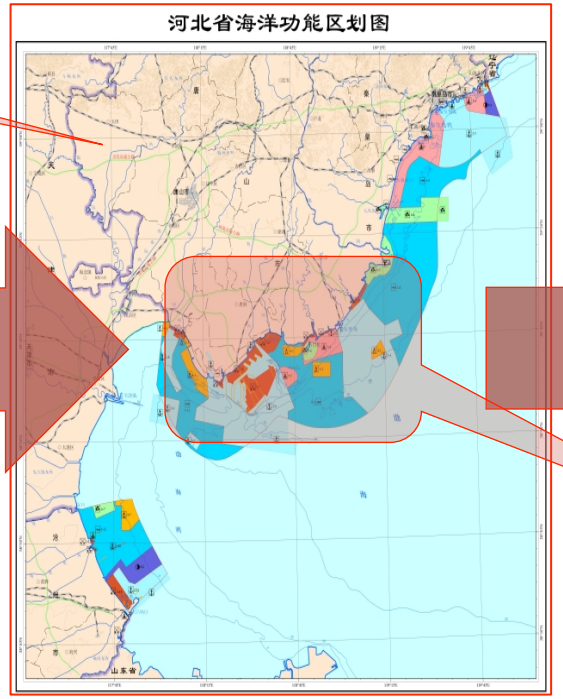
MSP work in China

China's third generation MFZ builds up a zone classification system, which includes **8 first categories and 22 sub-categories**. Provincial MFZ needs to divide zone of first level classifications whereas city and county MFZ second level.

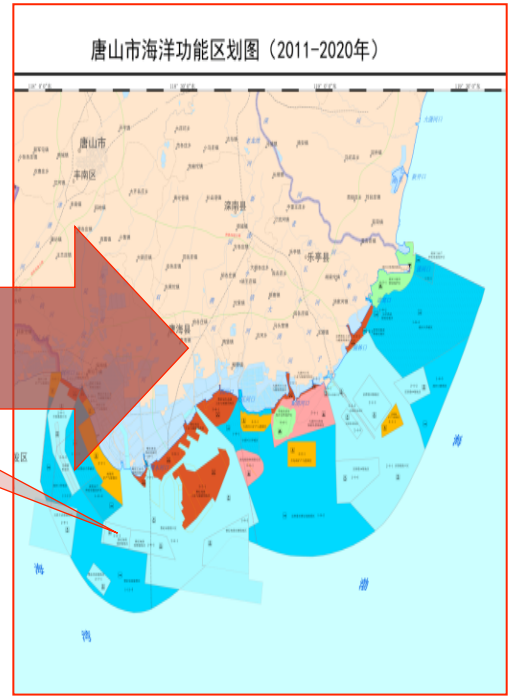




National

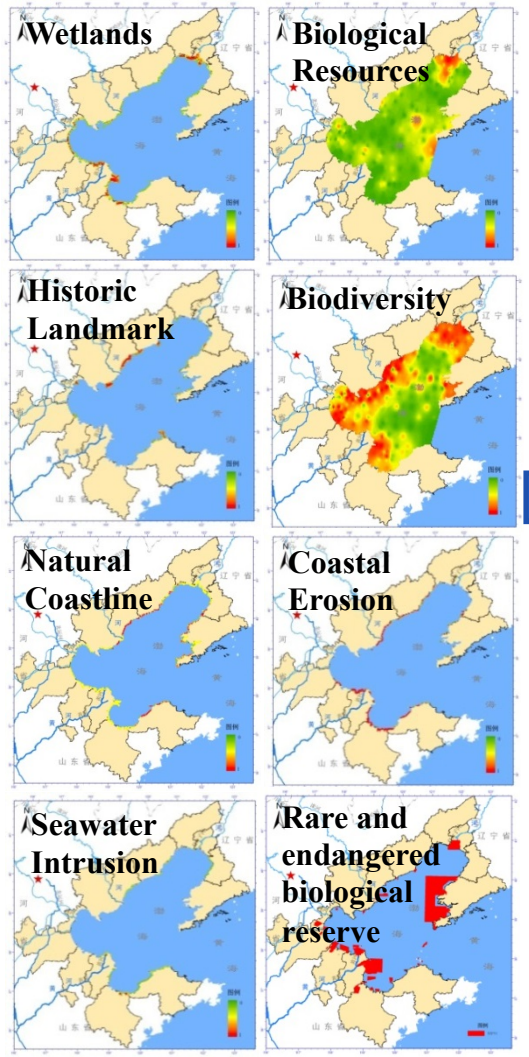


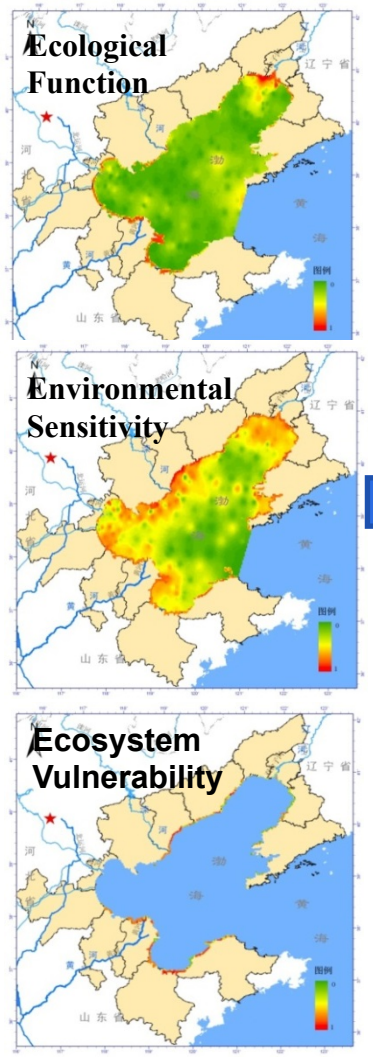
Provincial



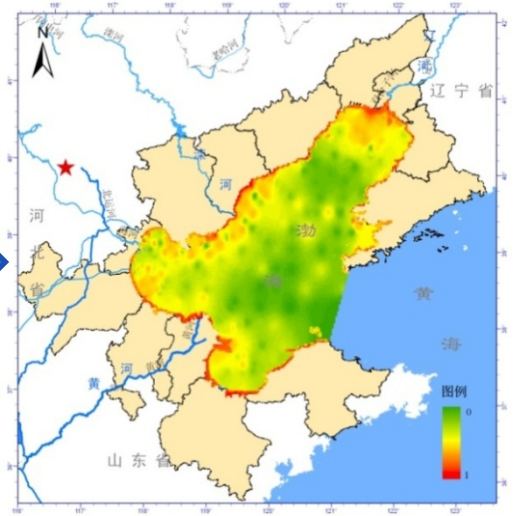
Local

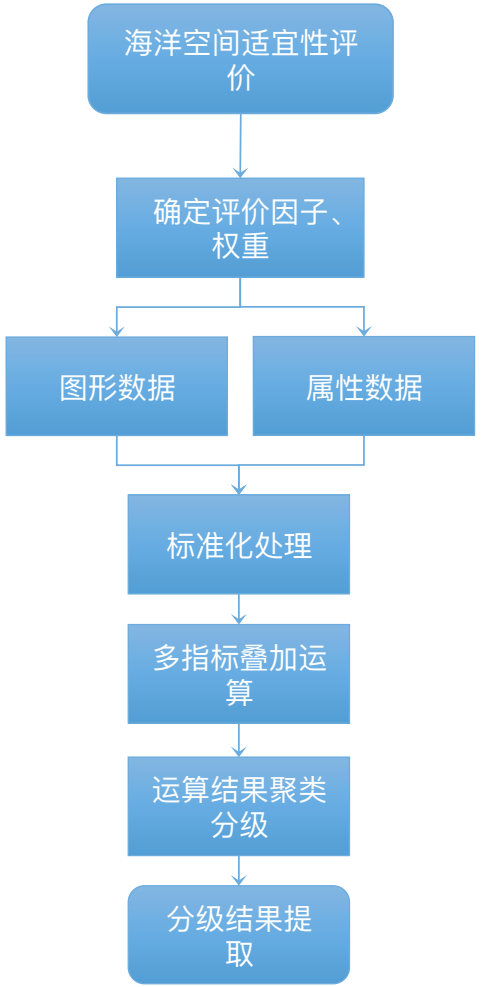
MSP work in China





Ecosystem based





MSP work in Korea

〈2016 ~ 2017〉 Pilot Project

- Project area : Gyeonggi Bay
- Data collection & spatial analysis
- Public and inter-ministerial consultation
- Preparation of integrated Marine Spatial Plan

〈2017 ~ 2018〉 Re-alignment of Legal & Institutional Mechanisms

- Enactment of the MSP Act
  + Plan Establishment guideline
  + Marine spatial management guideline
  + Statement of public participation
- Amendment of the CM Act
- Re-arrangement of Coastal & Marine Assessment (survey/monitoring)
- Foundation of Center for Marine Spatial Plan Assessment & Management (CMSPAM)
  + Standard guideline for data collection and management

〈2018 ~〉 Nationwide Application of MSP

- Selection for areas to be managed
- Planning & Implementation at the national & regional level

Collaborative Research Interests in Yellow Sea

China-Korea Marine Spatial Planning Collaborative Study Project has been approved in the 14th China-Korea Marine Science and Technology committee meeting in Xiamen in Nov. 2017.

Background

- Both China and Korea take marine spatial planning as a tool for coastal management.
- Different marine spatial planning system.
- Different procedures for marine spatial planning.
- Share Yellow sea , similar problems.

Content

➢Exchange and Cooperation of Policy system and Technology of Ocean Spatial Planning between China and South Korea

➢Developing forecasting and Evaluation Technology of Marine Spatial Planning based on scenario Analysis

➢Try to carry out cooperative or comparative research on marine spatial planning in pilot areas

➢Try to concerns some issues refers to transboundary MSP work

Collaborative Research Interests in Yellow Sea

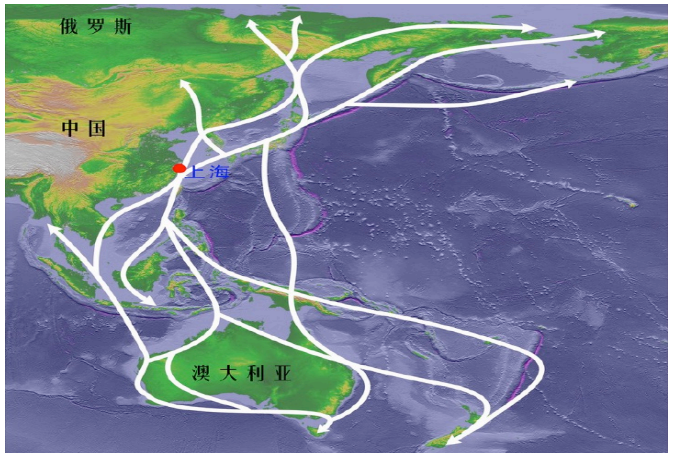
- YSLME

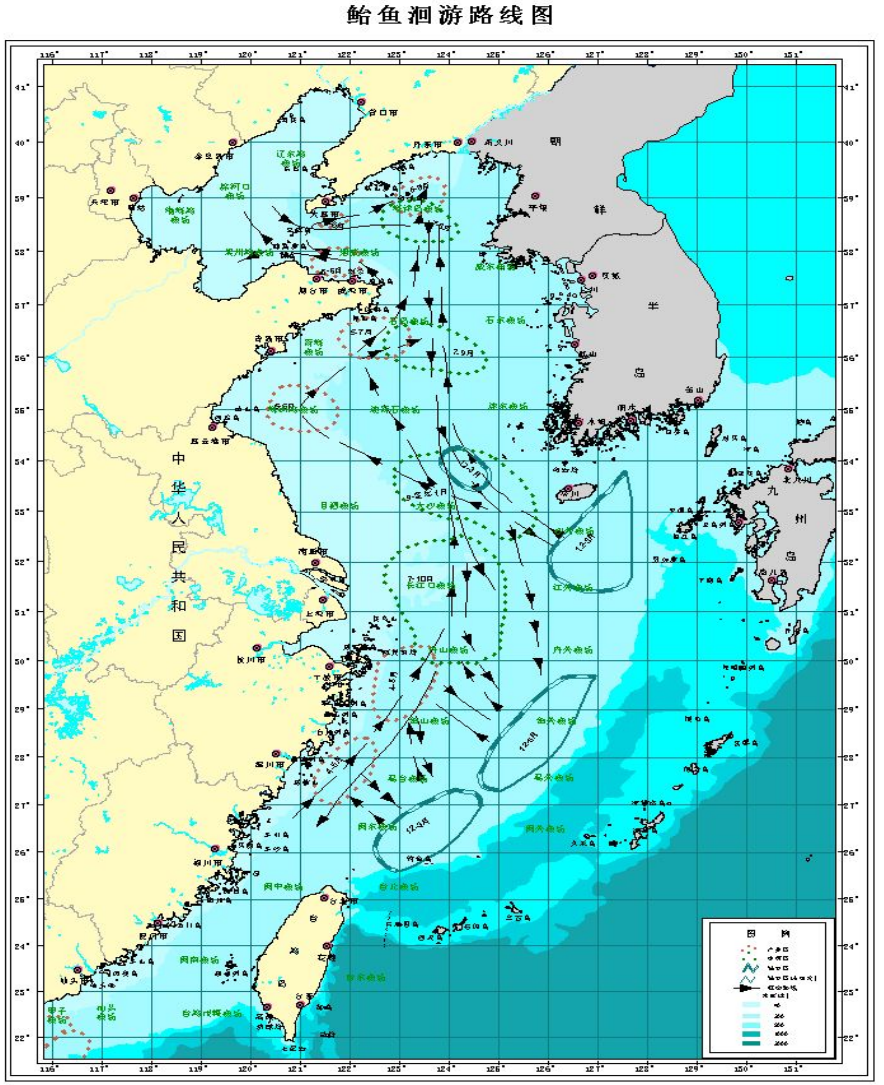
➢Migratory Birds:

The area is an important resting place for many types of migrant birds. Some important wetlands and islands.

➢Migratory fish.

From the point of view of marine spatial planning and management, we want to put forward the scheme and thinking of cooperative protection mechanism between highly migratory fish resources and straddling fish resources.





Challenge and Experience

- **Big area**

  The Yellow Sea is that semi-enclosed body of water bounded by the Chinese mainland to the west, the ROK Peninsula to the east, and a line running from the north bank of the mouth of the Yangtze River (Chang Jiang) to the south side of Cheju Island. It covers an area of about 400,000 km^2 and measures about 1,000 km (length) by 700 km (maximum width). How MSP could take efficiency in such big ecosystem.

- **Different policy background**

  China started marine functional zoning in 1979, and has a specific marine spatial planning system. Korea just started this work two years ago and marine spatial planning act approved in March 2018. Partial marine spatial planning system incompatibility

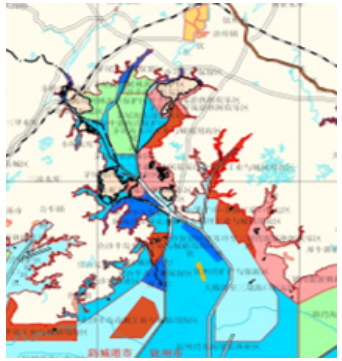
- **Region dispute the sea borderlines**

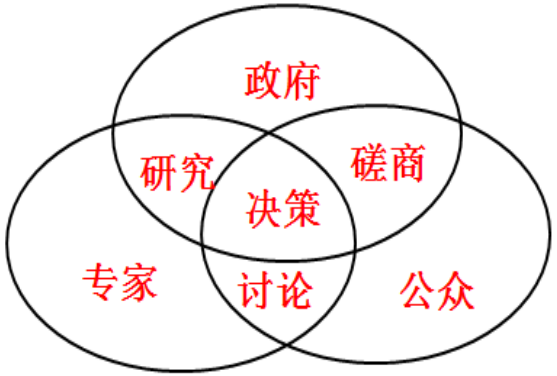
- **Data limited and can't meet the needs of MSP project**

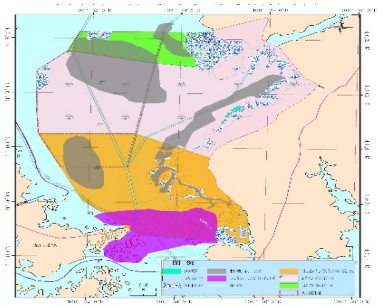
- **Some interests conflicts between different countries（national level stakeholders）**

Lessons learned and good practices from marine spatial planning projects

Social investigations in the process in MSP project

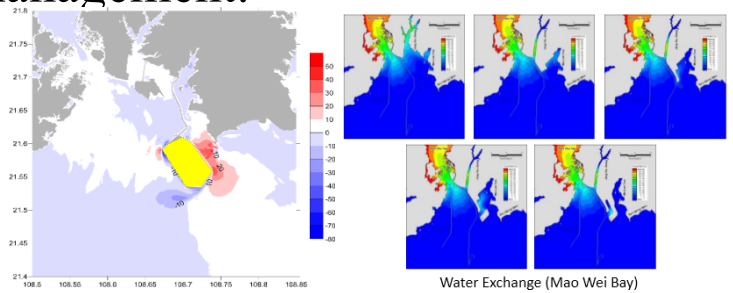




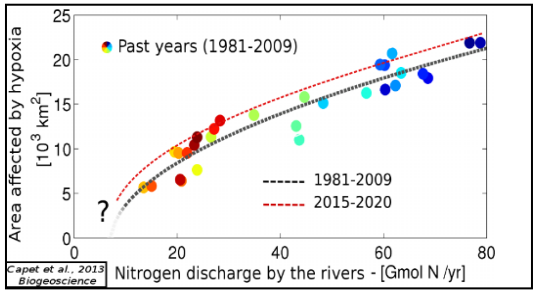


Lessons learned and good practices from marine spatial planning projects

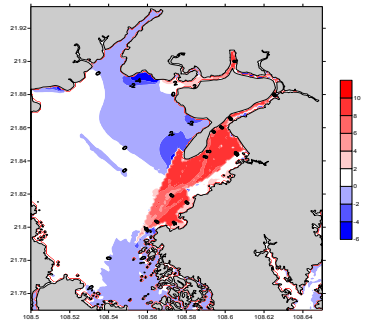
Take quantitative evaluation technology of marine dynamic model and scenario into the optimization of the layout of marine functional areas, and the bridge from natural science to management.



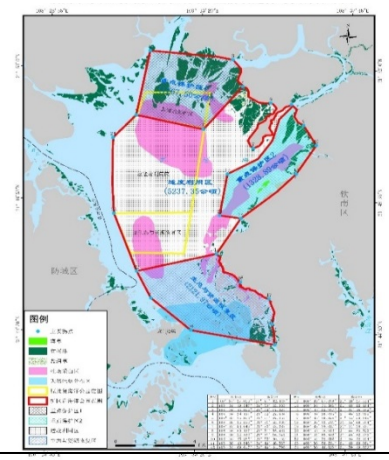
marine dynamic model



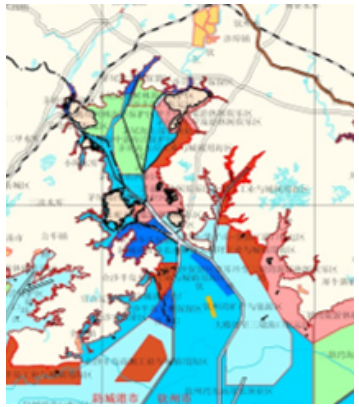
Scenario Analysis



Erosion Analysis



Ecosystem Zoning



Lessons learned and good practices from marine spatial planning projects

1. Knowledge is crucial for decision making
2. Local cooperation & public participation is a key success to conservation and sustainable uses
3. Marine Spatial Planning and/or ICM Plan is crucial for natural resources conservation and coastal communities
4. Big Data is needed for marine spatial planning


Thanks !