

Korea's Approaches to Climate Change in the Fisheries Sector

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Il Jeong Jeong



Ministry for Food, Agriculture, Forestry and Fisheries

An underwater scene with a large school of fish swimming in the water above a coral reef. The water is a deep blue color, and the fish are silvery with dark fins. The coral reef is visible at the bottom of the frame.

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I . CLIMATE CHANGE EFFECTS ON KOREAN FISHERIES

II . NATIONAL STRATEGY FOR CLIMATE CHANGE

III . ADAPTATION POLICY IN THE FISHERIES SECTOR

IV . SPECIFIC MEASURES

V . CONCLUSION

The background of the slide is a deep blue underwater scene. A large school of fish, possibly sardines or anchovies, is swimming in the middle ground, moving from left to right. In the foreground, there is a coral reef with various types of coral and some smaller fish. The lighting is somewhat dim, creating a serene and natural atmosphere.

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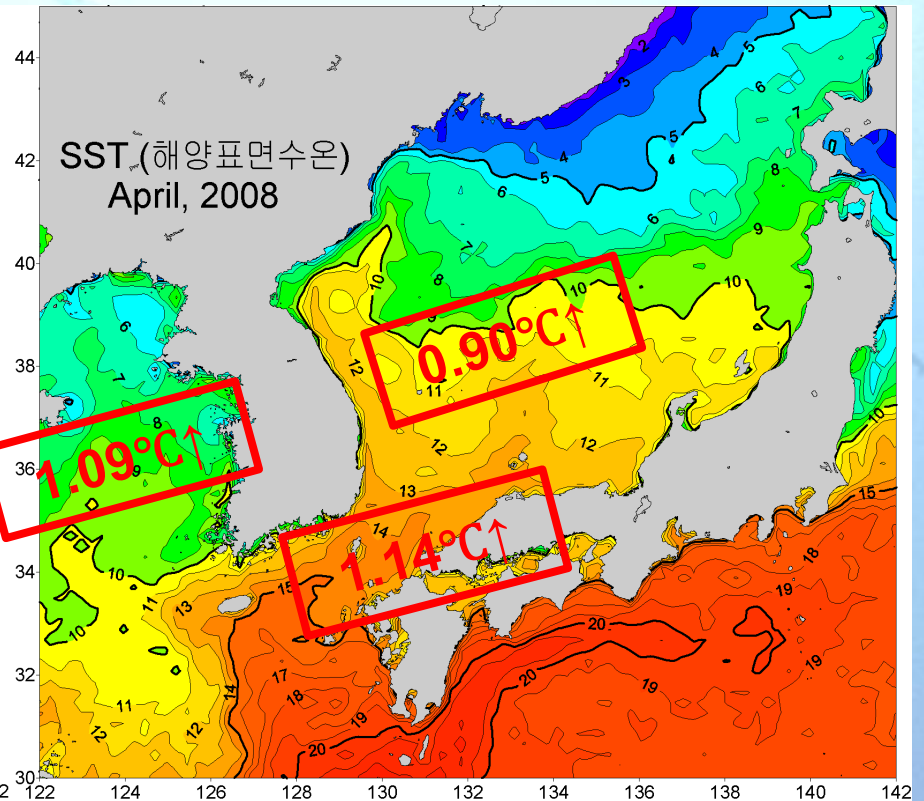
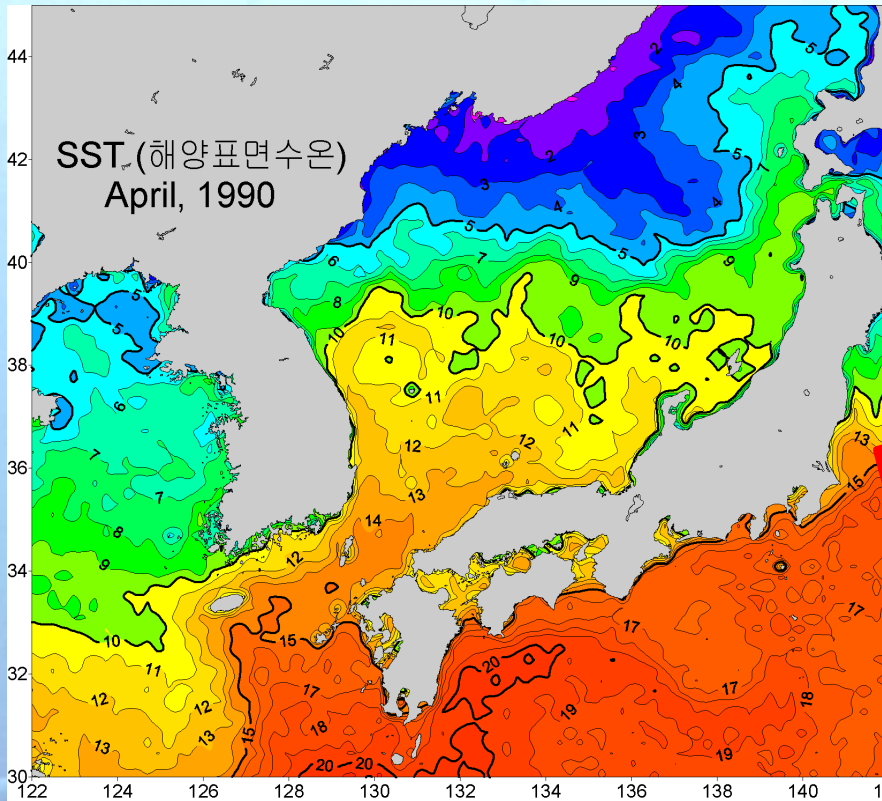
II . NATIONAL STRATEGY FOR CLIMATE CHANGE

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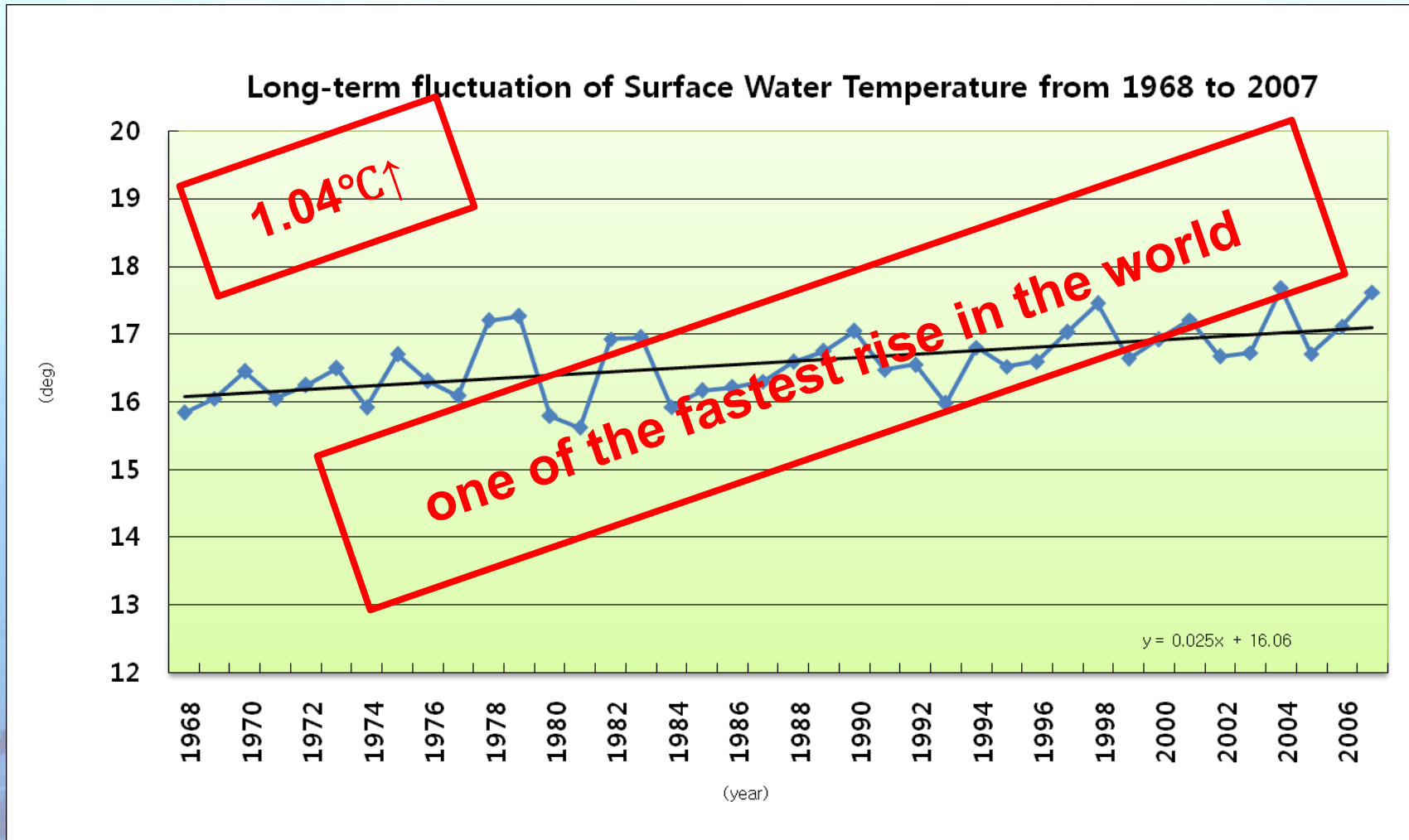
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Sea Surface Temperature Rise in the Korean Water



Temperature Rise in the Korean Water



Appearance of Sub-tropical species and toxic jellyfish

Hammerhead shark



Bluefin Tuna



Common paper nautilus

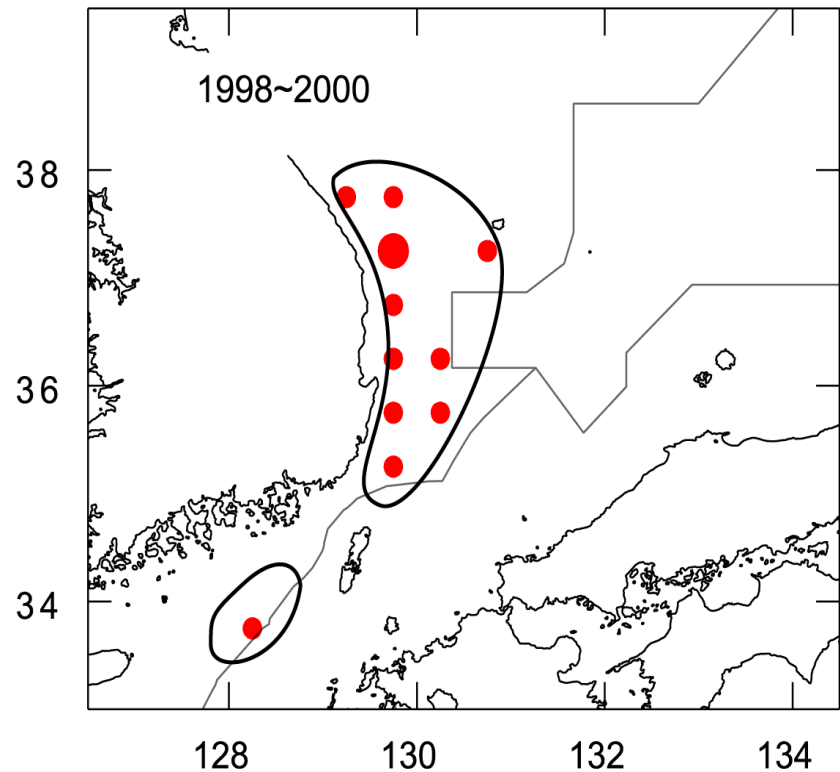
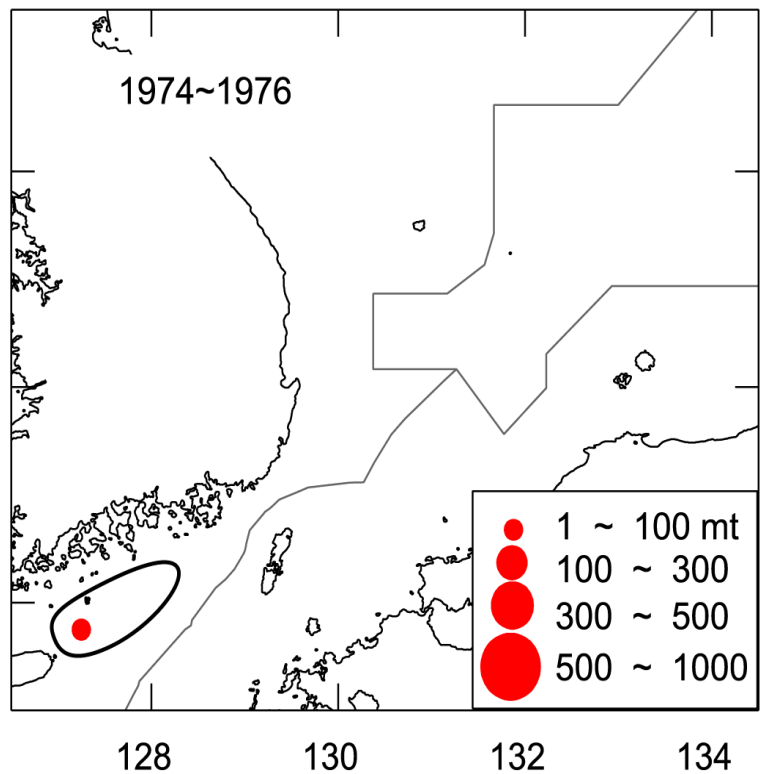


Giant Jellyfish



Changes in catches, distribution of fishes

- Increase : Squid, Mackerel, Anchovy
- Decrease : Alaska Pollock



On the other hand,,,

Alaska Pollack



A large advertisement for Alaska Pollack. The ad features a large image of a fish (Alaska Pollack) swimming in the water. The text is in Korean. At the top, it says "후손에게 풍부한 자원, 아름다운 바다 풍미를 물려주세요" (Pass on abundant resources for future generations, and the delicious taste of the beautiful sea). The main headline reads "동해안 살아 있는 명태를 찾습니다" (We are looking for live Alaska Pollack in the East Sea). Below the fish image, it says "연락처: 국립수산물품질관리원 동해수산물연구소" (Contact: National Fisheries Quality Management Agency, East Sea Fisheries Research Institute) and "전화 (033) 660-8546". A red banner at the bottom says "최고 10배까지 보장에 드립니다" (We guarantee up to 10 times more). At the very bottom, it says "농림수산식품부" (Ministry of Agriculture, Food and Forestry) and "해양수산부" (Ministry of Oceans and Fisheries).

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National Strategy for Green Growth

Declaration of “Low Carbon, Green Growth”

- ◇ President Lee Myung-Bak declared a vision of “Low Carbon, Green Growth” as the new national vision for the next 60 years
(On. Aug. 15. 2008 celebrating the 60th anniversary of Korean government’s foundation)
- ◇ Establishment of Presidential Committee on Green Growth
(Feb. 2009)
- ◇ Establishment of 5-Year National Action Plan for Green Growth
(July. 2009)

National Strategy for Green Growth

Three Objectives, Ten Policy Directions

Mitigation of climate change & energy independence

1. Effective mitigation of greenhouse gas emissions
2. Reduction of the use of fossil fuels and the enhancement of energy independence
3. Strengthening the capacity to adapt to climate change

Creating new engines for economic growth

4. Development of green technologies
5. The "greening" of existing industries and promotion of green industries
6. Advancement of industrial structure
7. Engineering a structural basis for the green economy

Improvement in quality of life and enhanced international standing

8. Greening the land, water and building the green transportation infrastructure
9. Bringing green revolution into our daily lives
10. Becoming a role-model for the international community as a green growth leader

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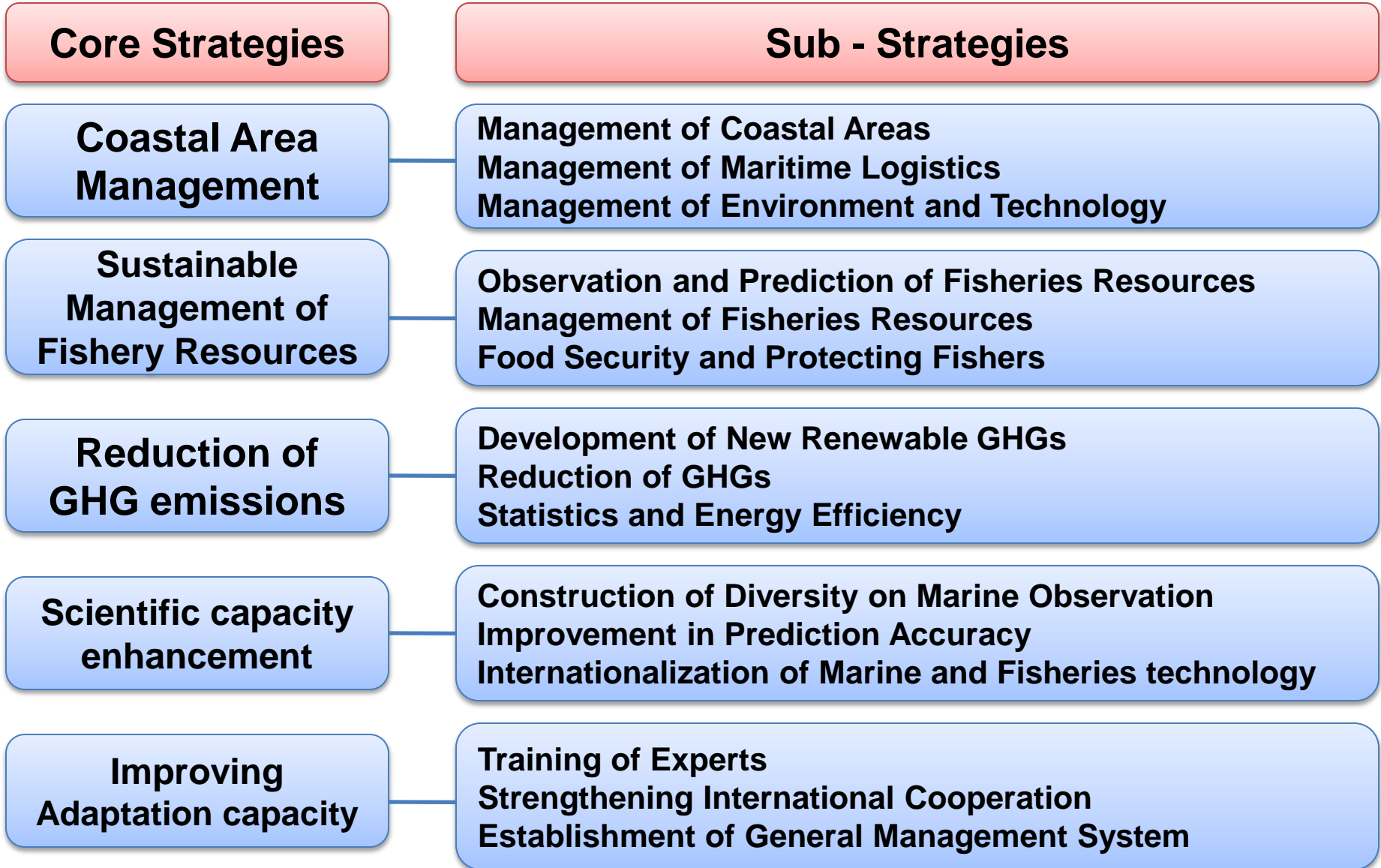
Necessity arises in monitoring climate change effects on the Korean water and fisheries sector



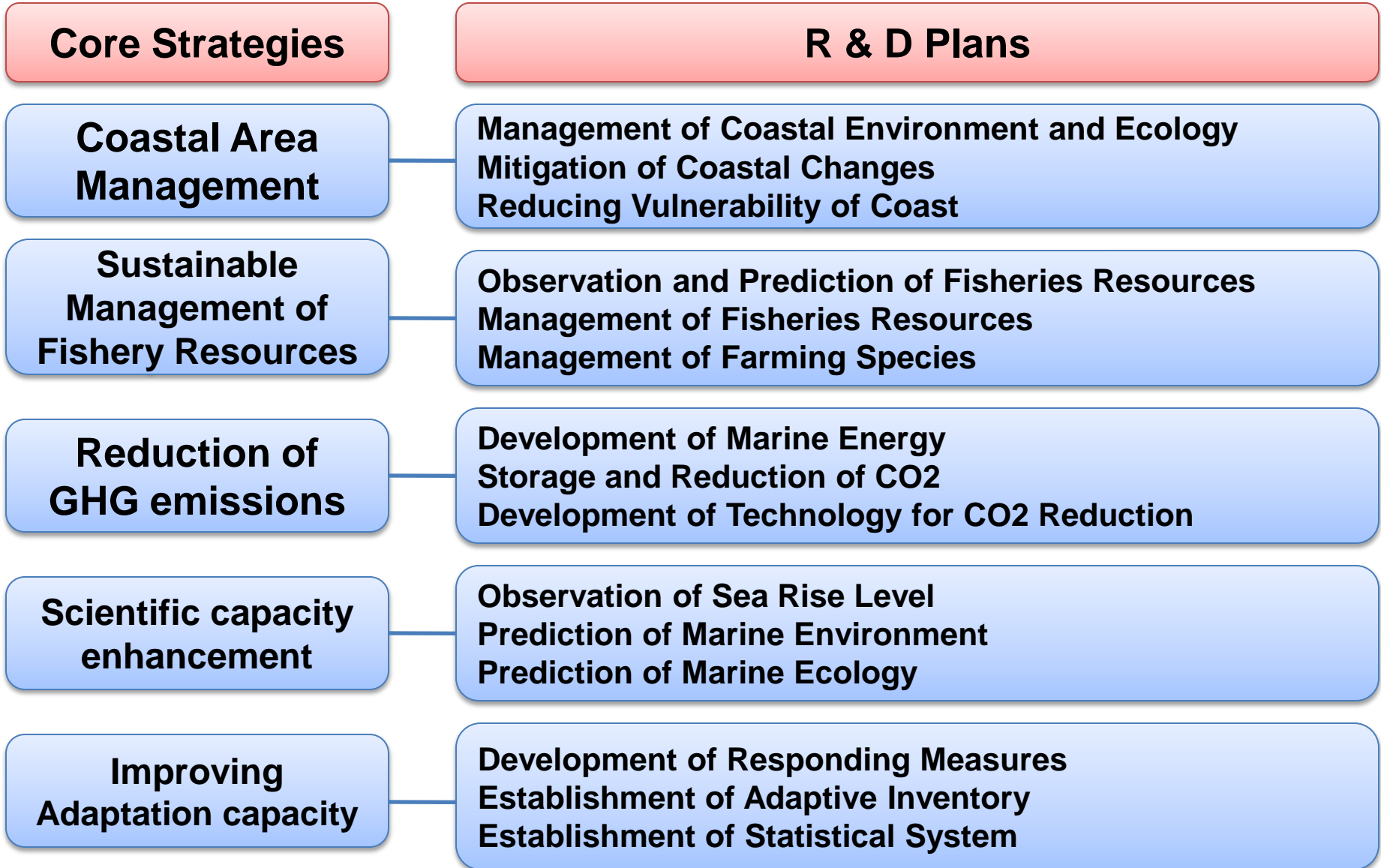
Establishment of Comprehensive Strategies for Climate Change in the Fisheries Sector

- ◇ **Comprehensive Marine and Fisheries Policy Strategies for Climate Change (2007)**
- ◇ **National Integrated Plan for Adapting to Climate Change (2008) and its Action Plan (2009)**

Comprehensive Marine and Fisheries Policy (2007)



Comprehensive Marine and Fisheries Policy (2007)



National Action Plan to Climate Change(2009)

Adaptation Policy in the Fisheries Sector

- ◇ **Development of new fisheries and farming technology**
- ◇ **Establishment of fish disease control system**
- ◇ **Development of fishery habitat base and stock enhancement techniques**

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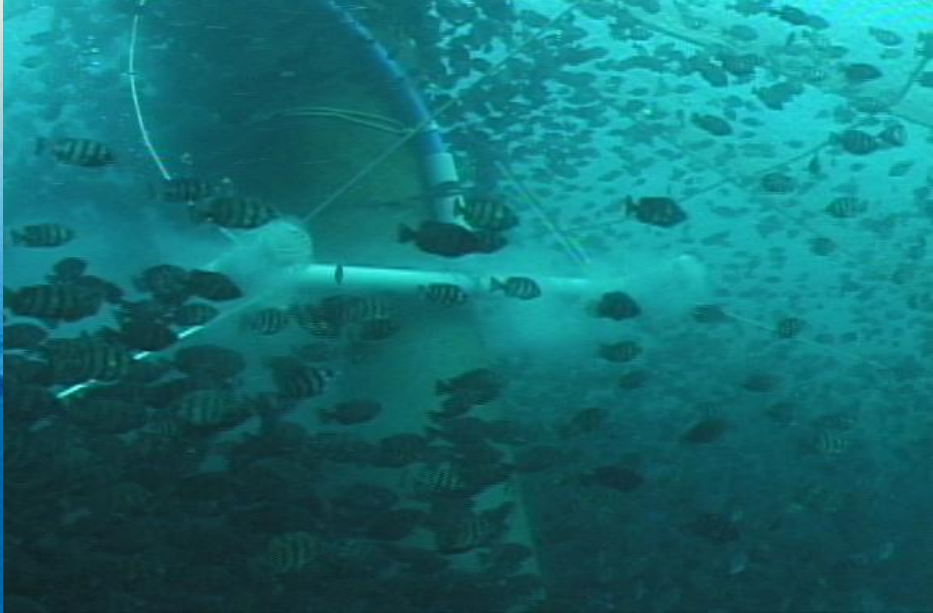
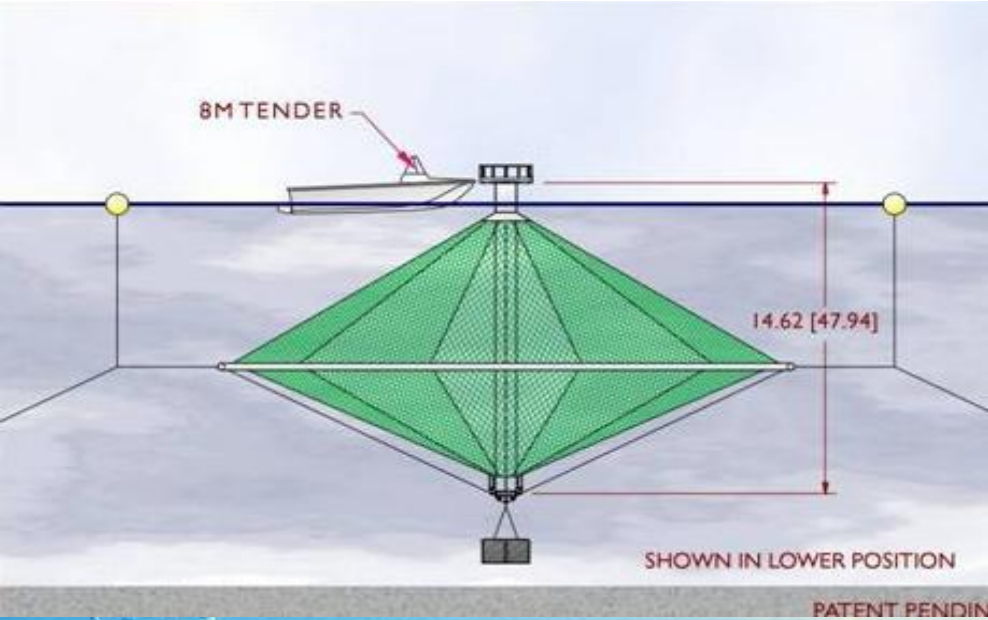
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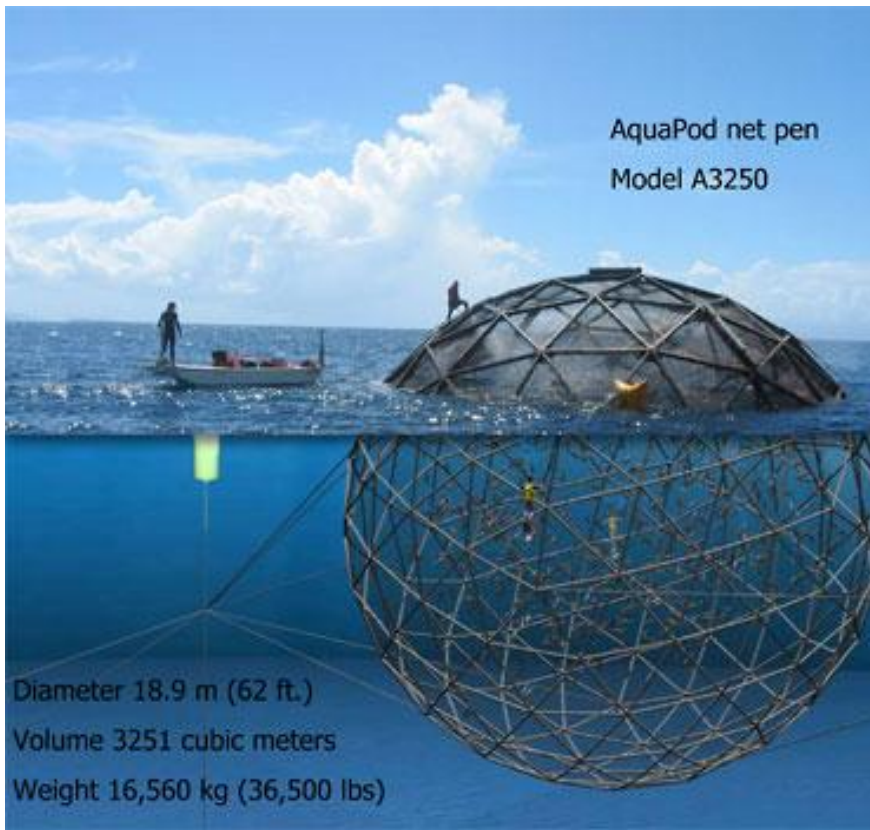
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Bluefin Tuna



Plan for Bluefin Tuna Farming

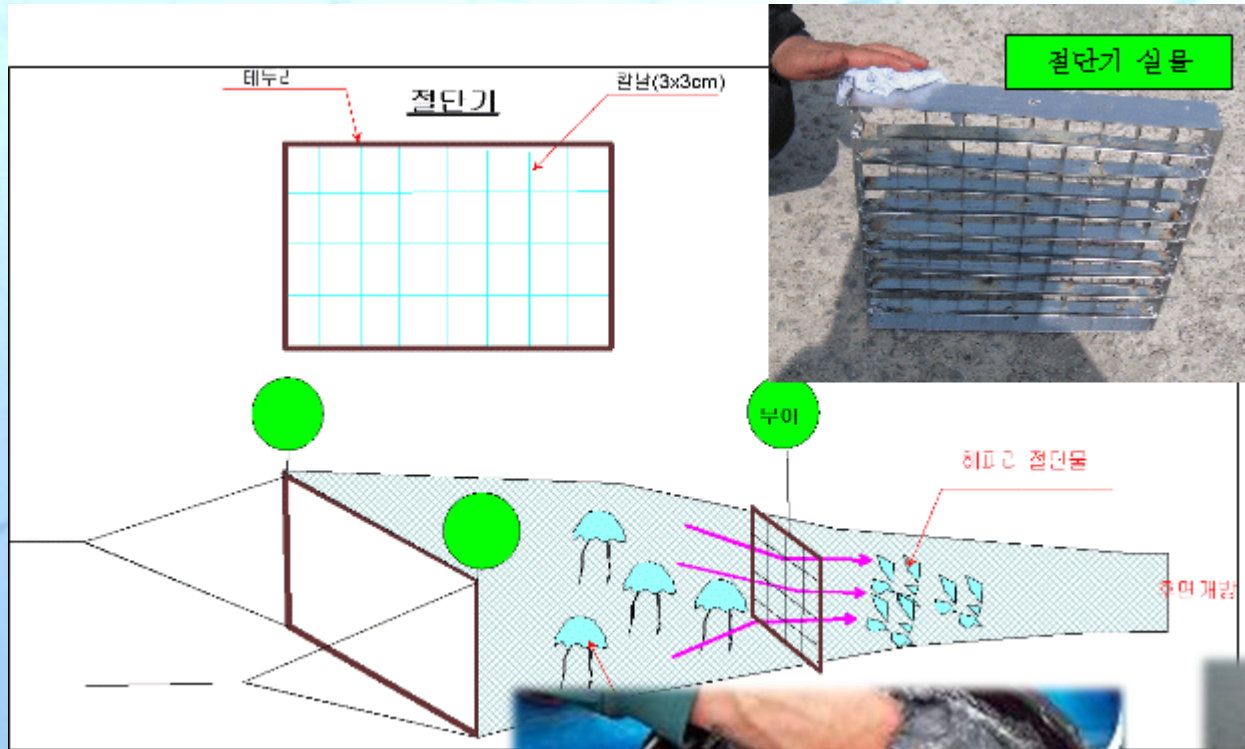




Measures for Toxic Jellyfish

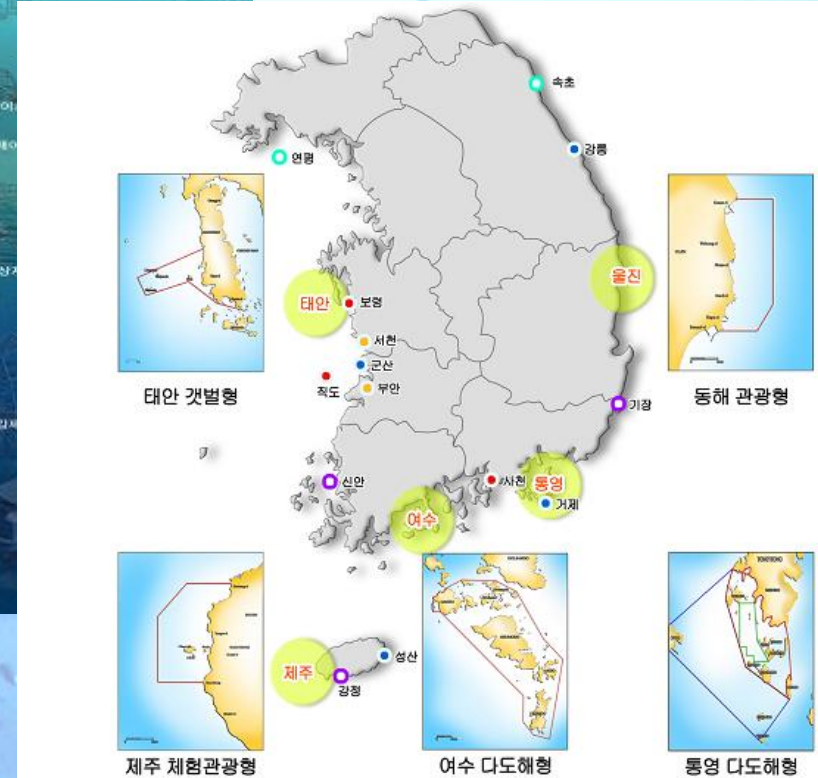


Measures for Toxic Jellyfish



Creation of Marine Ranch and Forest

울진 바다목장 개념도

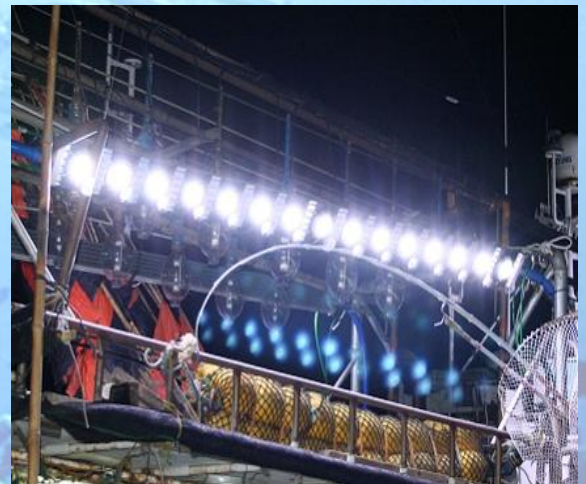


- '06년 소규모바다목장
- '07년 소규모바다목장
- '08년 소규모바다목장
- '09년 소규모바다목장 예정지역
- '10년 소규모바다목장 예정지역
- 시범바다목장 5개해역

Creation of Marine Ranch and Forest



Using LED as an alternative measure







Community-based Management System

❖ Need new system based on self-regulation

✓ Too many regulations on fisheries (mesh size, fishing ground, fishing period, size, etc)

✓ Too complex, fishermen do not know

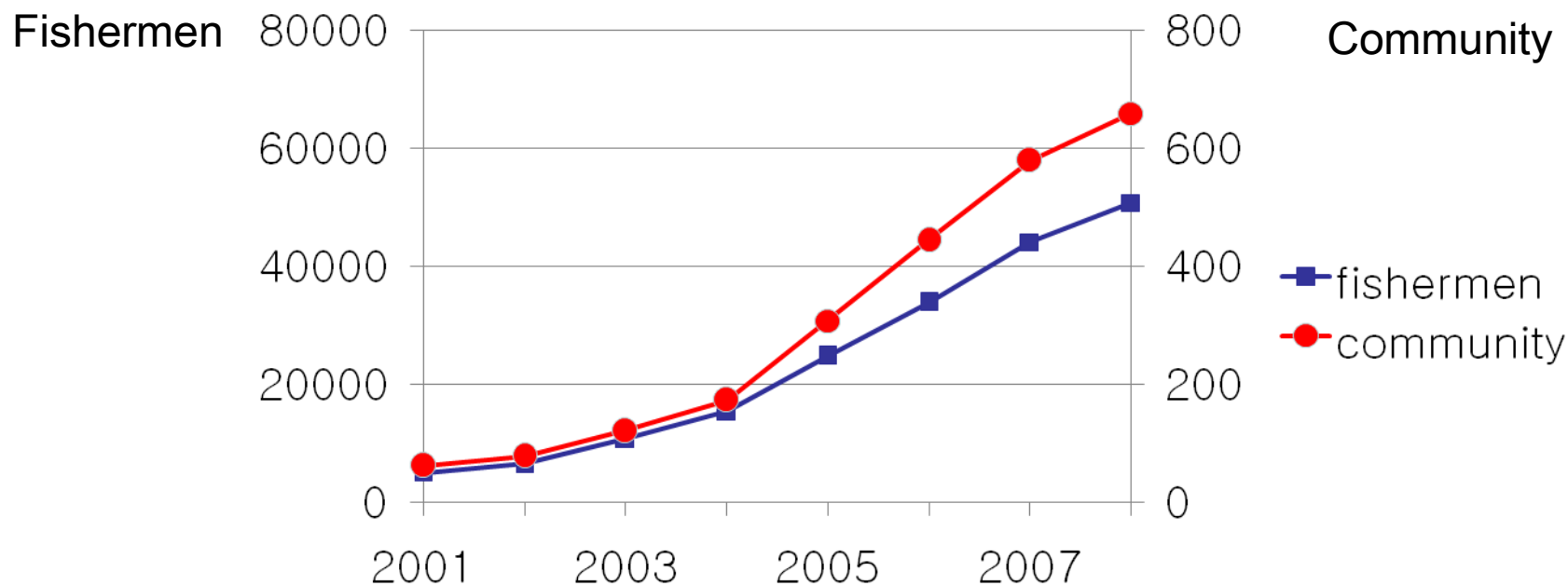
➡ to improve flexibility and make use of non-scientific knowledge for adaptation

Community-based Management

❖ Participation has increased 10 times since 2001

✓ Community : (01) 63 → (08) 659

✓ Fishermen : (01) 5,000 → (08) 51,000



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V. Conclusion – Policy Implications

- 1. Climate change is inevitable challenge for Korean fisheries and aquaculture**
- 2. Trough rigorous researches on impacts, mitigation and adaptation, Korean “Green Growth” strategies aim to provide new knowledge to inform solutions**

V. Conclusion – Policy Implications

- 3. The Korean government has established effective policies and strategic plans, including R&D activities by cooperating with stakeholders**
 - based on such plans, it is anticipated to adjust effectively and contribute much to promote constant and stable development of fisheries**
 - It is also looked forward to have great effects on stable supply of seafood as one of important national food industries**

V. Conclusion – Policy Implications

- 4. Research and technique development are to be continued to maximize the anticipated effects**
 - construction of legal base of national management system
 - environment monitoring and integrated waters management system
 - education public relation system etc.

- 5. Expanding the community-based management system**
 - It contributes to respond and adapt to climate change flexibly
 - It can also provide important non-scientific knowledge for making relevant policies and plans

Challenges and Opportunities



Thank you