



# Integrated Coastal Management as a Tool for Enhancement of Local Community Coastal Resources

## - A Case Study of Munakata Coastal Zone -

- 📖 Review of the history of integrated coastal management practices in Japan
- 📖 Backgrounds and objectives of a case study for developing an ICM program
- 📖 Development of the Integrated Management Plan of the Munakata Coastal Zone
  - ❑ Coordination of recreational use related conflicts on the sea surface in the Munakata coastal zone
  - ❑ Creation of experience-oriented, overnight-stay coastal tourism

# History of coastal-related events and coastal management in Japan

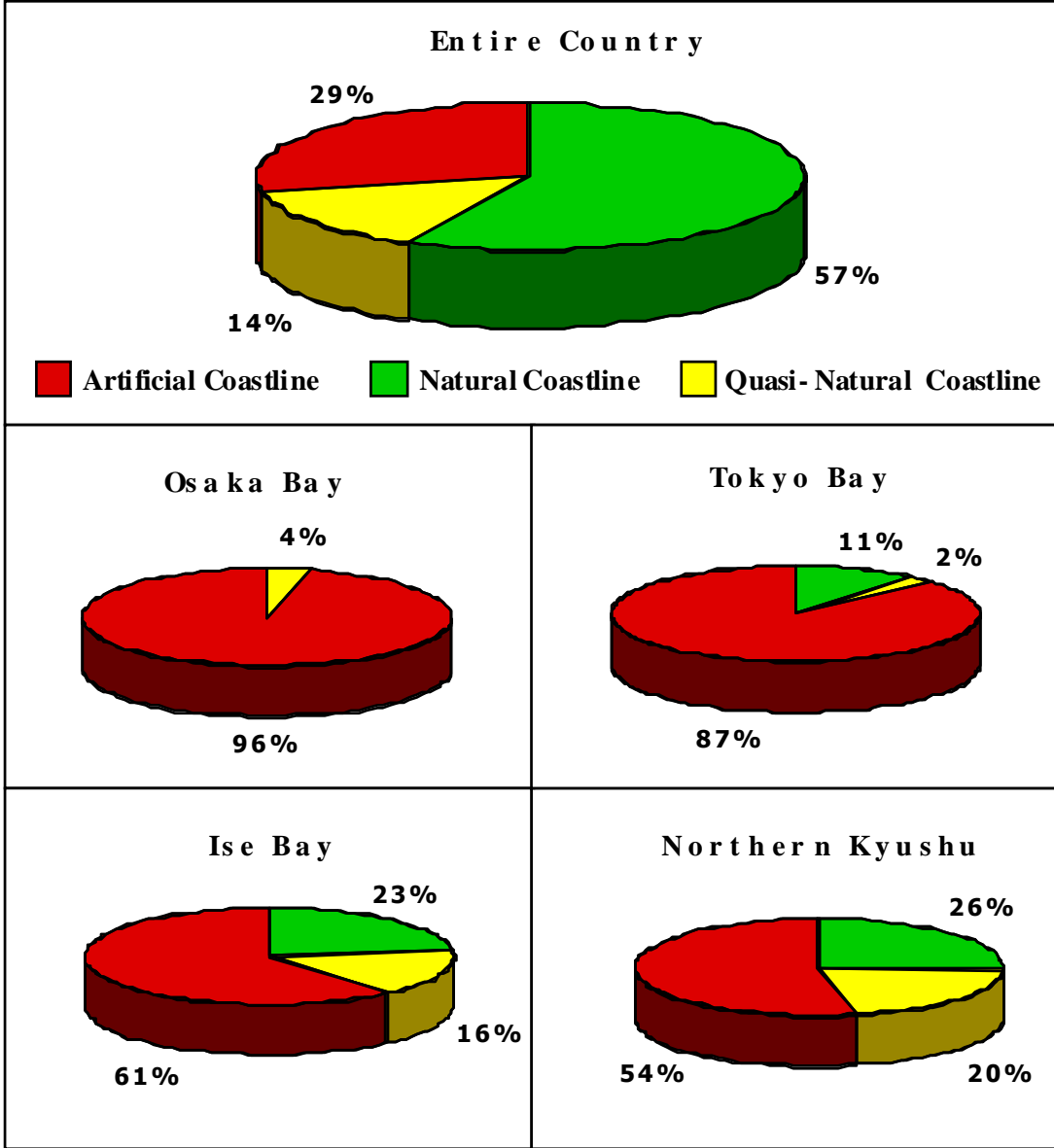
Year	Events
<p>Before WWII</p> <p>Post WWII high economic growth era</p>	<p>Construction of reclamation and polder for new rice field development</p> <p>Individual development plans</p> <p>Comprehensive National Land Development Act enacted in 1950.</p> <p>Destructed coastal hazards by several typhoons (1945 to 1961) &amp; Nankai (1946), Chile (1960) Tsunamis</p>
1956	Coastal Law enacted
1973	Public Water body Reclamation Law amended
1979	The first report of the Ocean Development Committee
1987	The fourth Nation Comprehensive Development Plan mentioned a coastal zone
1988	Waterfront development-redevelopment and various projects
~1990	<p>Tentative guidelines for formulation of an integrated coastal zone utilization plan</p> <p>Proposition by the coastal zone management committee</p>
1993	Basic Environment Law enacted
1994	Formulation of the guideline for coastal preservation and utilization
1995	Coastal-related government agencies studied introduction of mitigation practices
1996	Proposition on Long-term coastal vision
1998	The Law of the Sea (UNCLOS) enacted
1999	The 5th Comprehensive Nation Development Plan "Ground Design for The 21 <sup>st</sup> Century" provides formulation and promotion of an integrated coastal zone management plan
2000	<p>Coastal Law amended to include perspective of environments and proper use of seacoasts</p> <p>Port Law amended to include consideration of environmental preservation in port development</p> <p>The National Land Agency drew up "The guideline for comprehensive management of coastal area"</p> <p>Japanese Association for Coastal Zone Studies made "Proposition for Sustainable Utilization and Environment Preservation of Coastal Zones"</p>
2001	River Bureau of the MILT formed "Proposition of coastal Management Committee"
2002	The Nippon Foundation made "Proposition on Japanese Ocean Policy in the 21st century"
2003	PEMSEA adopted the <i>Sustainable Development Strategy for the Seas of East Asia</i> "j" "j"
2006	The MILT formed the "Schemes for Ocean-Coast Policy"
2007	Basic Act on Ocean policy enacted: to clarify Japan's basic stance on ocean policy and to establish the Headquarters for Ocean Policy within the Cabinet
2008	The Cabinet approved "Basic plan on Ocean Policy"

# Artificial Modification & Utilization of the Coastline

	<b>Japan</b>	<b>U.S.A.</b>	<b>U.K.</b>
<b>No. of Commercial Harbors</b>	<b>1,094</b>	<b>168</b>	<b>600</b>
<b>No. of Fishary Harbors</b>	<b>2,950</b>	<b>—</b>	

Since 1945

	<b>Area (km<sup>2</sup>)</b>
<b>Reclaimed Land</b>	<b>1,483</b>
<b>Loss of Tidal Flat</b>	<b>288</b>
<b>Remaining Tidal Flat</b>	<b>540</b>



Environmental Agency(1996)

# The recent trend of Integrated Coastal Management in Japan

- Enactment of the Basic Environment Law in 1990 led to amendment of other coastal-related laws, such as the Port Law and Coastal Act, so that preservation of the natural environments of the coastal zones should be taken into consideration in planning and implementation of any coastal works pertaining to port development and coastal hazard protection.
- In 2000 the former National Land Agency (the present National and Regional Planning Bureau of the Ministry of Land, Infrastructure, Transport and Tourism) issued “the Guidelines for Comprehensive Management of Coastal Zones”
- In April of 2007, the Basic Act on Ocean Policy was enacted, from which Article 25 stipulated the integrated coastal zone management (ICZM).

## Creation of a case study program on development of the ICM plan

### Its objectives are:

- To help local government to develop a local framework for ICM and identify local issues in coastal zones.
- To achieve one of the priority targets of the Haikou Partnership Agreement on the implementation of the SDS-SEA, that is, implementation of integrated coastal management (ICM) programs in at least 20 percent of the Region's coasts by 2015.

# Case studies for formulating, developing and implementing an ICM program

## Consideration on planning elements through case studies

- ❑ Setting up structural framework
- ❑ Identifying local issues
- ❑ Arranging planning policies
- ❑ Arranging important items for enhancing local efforts

**Local  
community &  
government  
involvement**

**Formulation and Implementation of  
actual, legitimate planning by local  
governments**

Collect, organize and analyze  
domestic case studies and foreign  
coastal policies

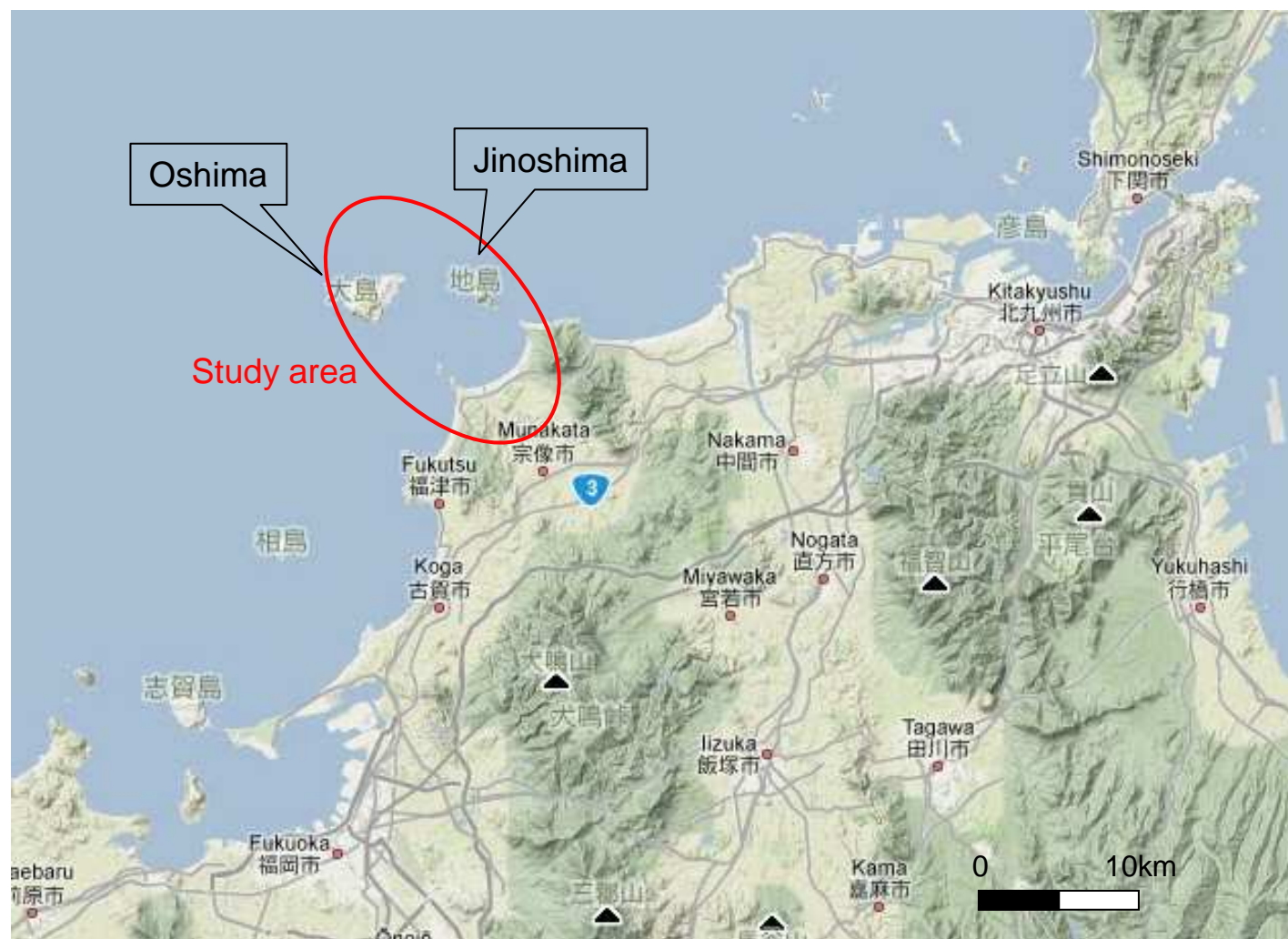
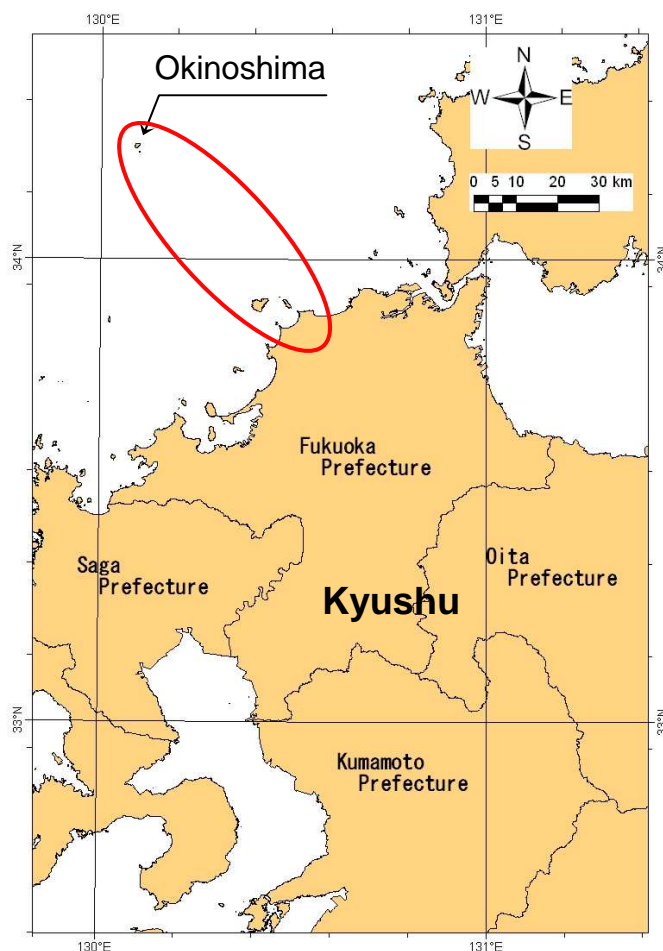
Review “Guidelines for Comprehensive  
Management of Coastal Zones” on

- identification of issues and framework
- institutional arrangement
- comprehensive evaluation processes
- components to consider

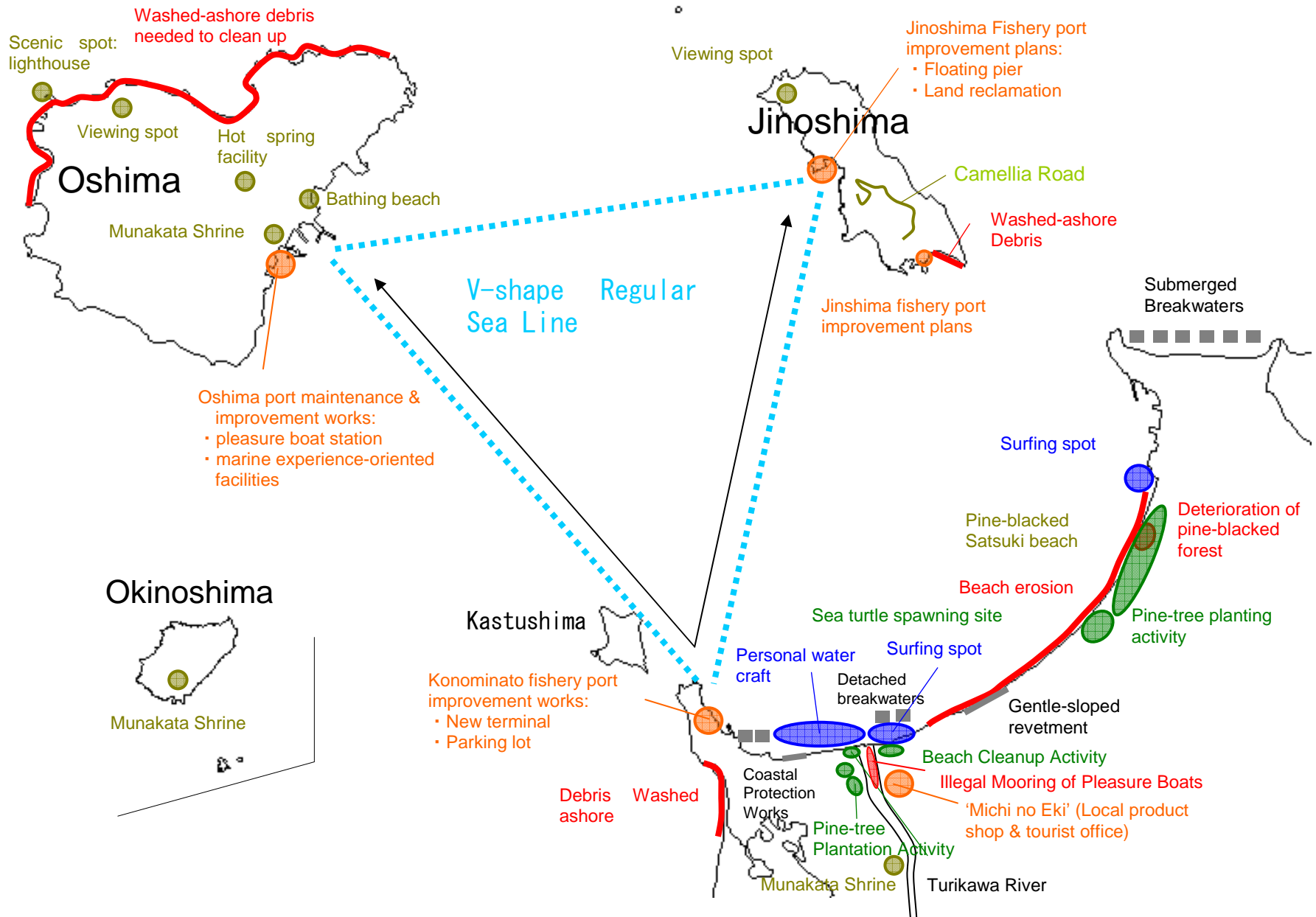
# Relationship between relevant items listed in the Guidelines and contents of the case study

Items in "Guidelines for Comprehensive Management of Coastal Zones"	Contents of study
Goals & objectives of ICM program	◦Goals & objectives of ICM program
understanding local characters	◦State of understanding local properties
limits of coastal interest	◦State of establishing limits of coastal interest
items to be considered in ICM program	◦duration
	◦basic policy
	◦projects, schemes
	◦implimenting strategies
	◦other items
framework for formulating and implementing ICM program	◦institutional structure for program development ◦relationship between lead agencies and existing organazations ◦information dissemination and stakeholders involvement
approved organazation of ICM program	◦Existance and necessity of approved organazation
organazation of council	◦Existance and activities of relevant council
concerns on formulating and implementing ICM program	◦measures to secure program development & implemen. ◦measures of coordination among relevant plans & policies ◦measures of coordination toward ambient coastal areas ◦allocation of funds for program development & implemen.

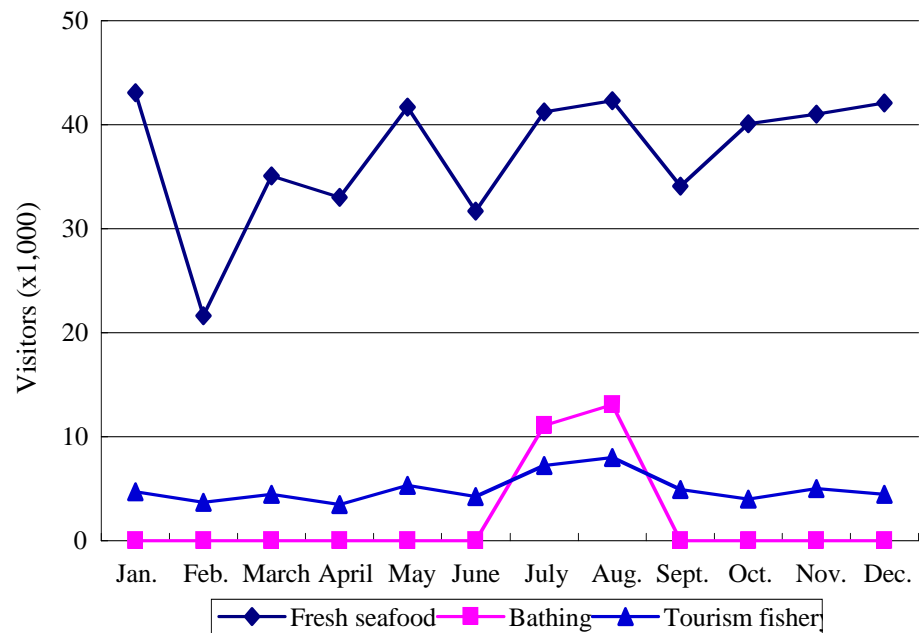
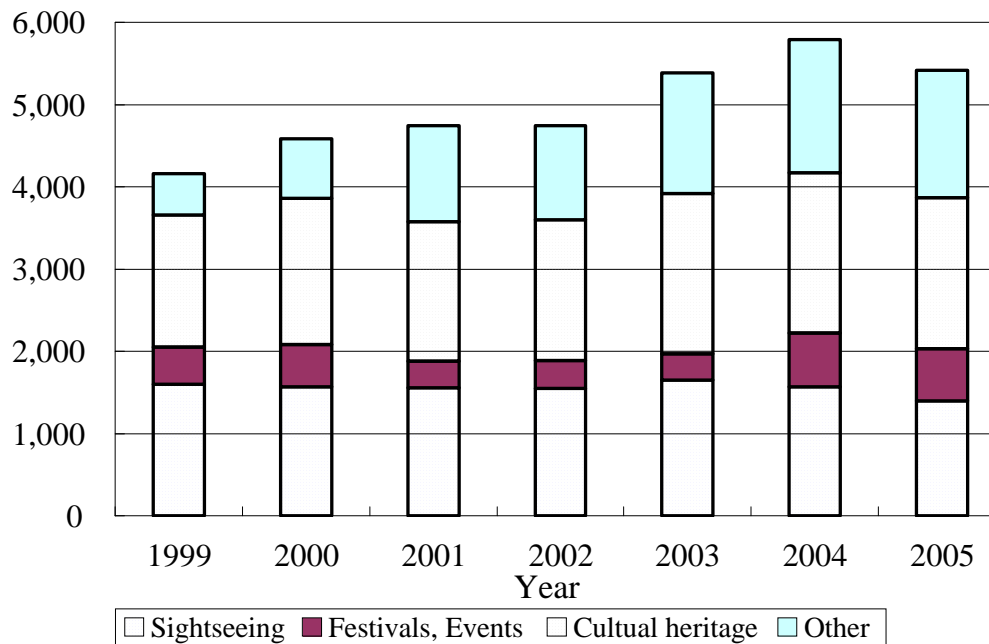
# Location of the case study area: Munakata coastal zone



# Locations of coastal- and marine-related resources and issues

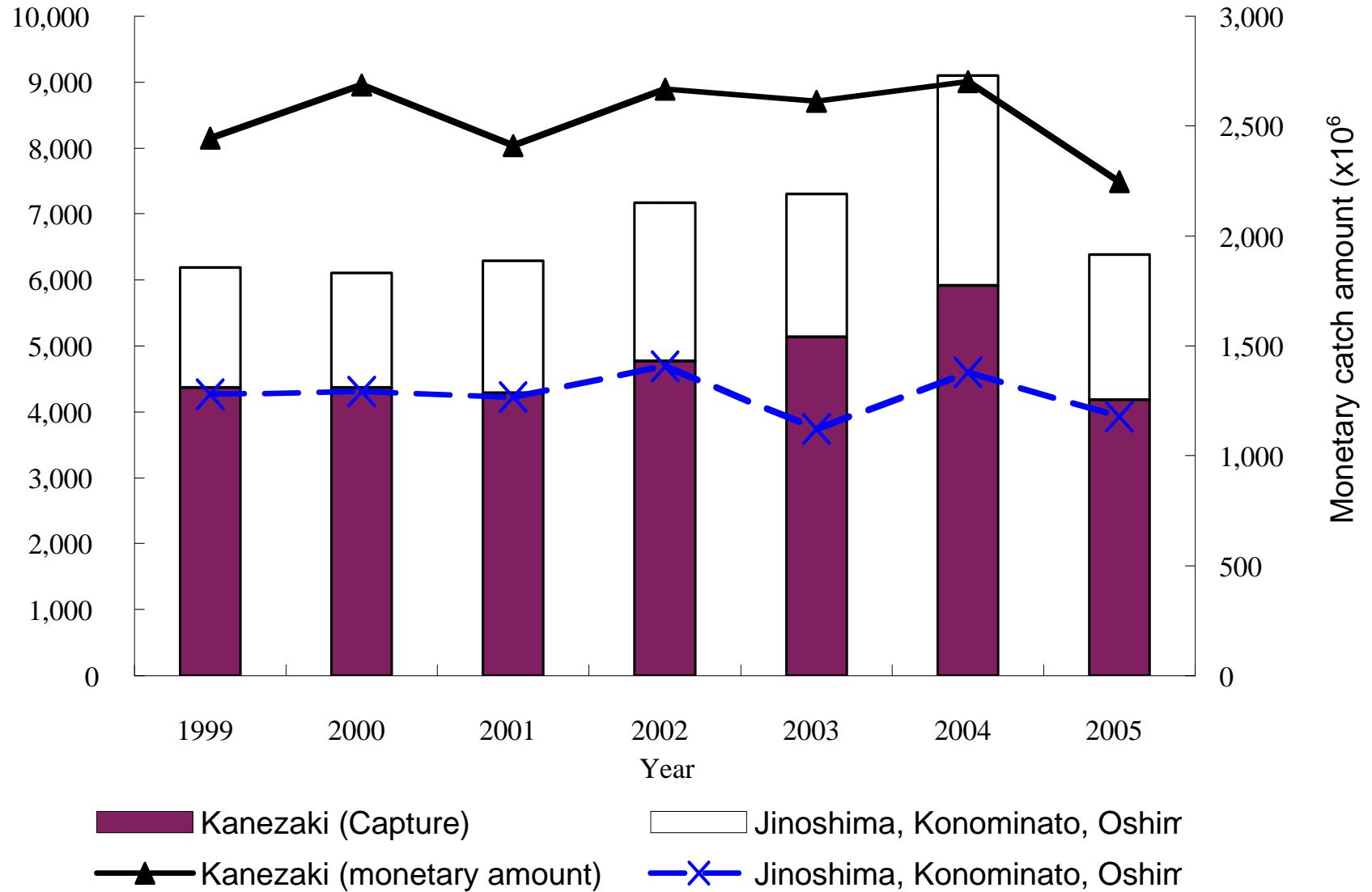


# Tourism Resources and Industry



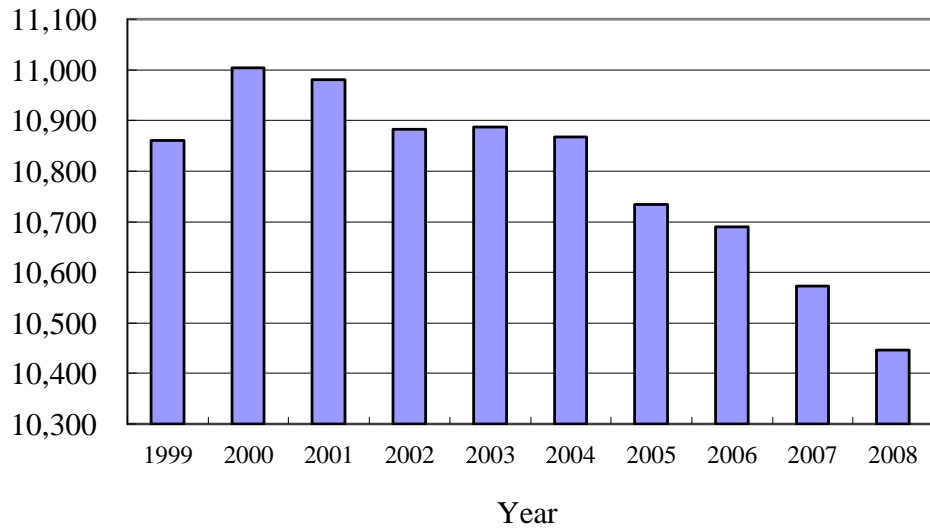
	Visitors (x1,000)	Bathing	Fishery tourism
<b>Total number of visitors</b>	<b>24.2</b>	<b>59.5</b>	
<b>One-day visitor</b>	<b>19.7</b>		<b>47.6</b>
<b>Overnight visitor</b>	<b>4.5</b>		<b>11.9</b>
<b>Visitors inside prefecture</b>	<b>23.0</b>		<b>56.6</b>
<b>Visitors outside prefecture</b>	<b>1.2</b>		<b>2.9</b>
<b>Total expenditure (x1,000Yen)</b>	<b>60,750</b>		<b>122,400</b>
<b>Accommodation cost</b>	<b>45,000</b>		<b>100,000</b>
<b>Other</b>	<b>15,750</b>		<b>22,400</b>
<b>Expenditure per capita (Yen)</b>	<b>2,510</b>		<b>2,057</b>

# Fishery Industry

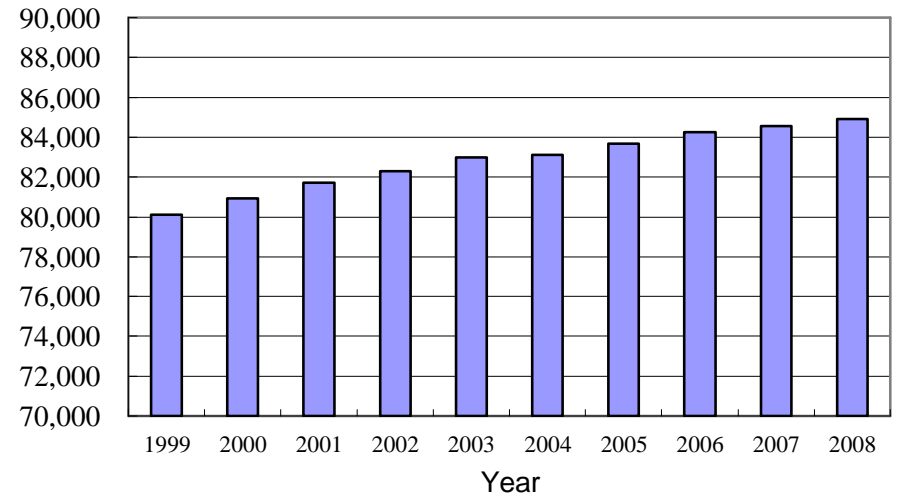


# Population decrease and aging in coastal communities

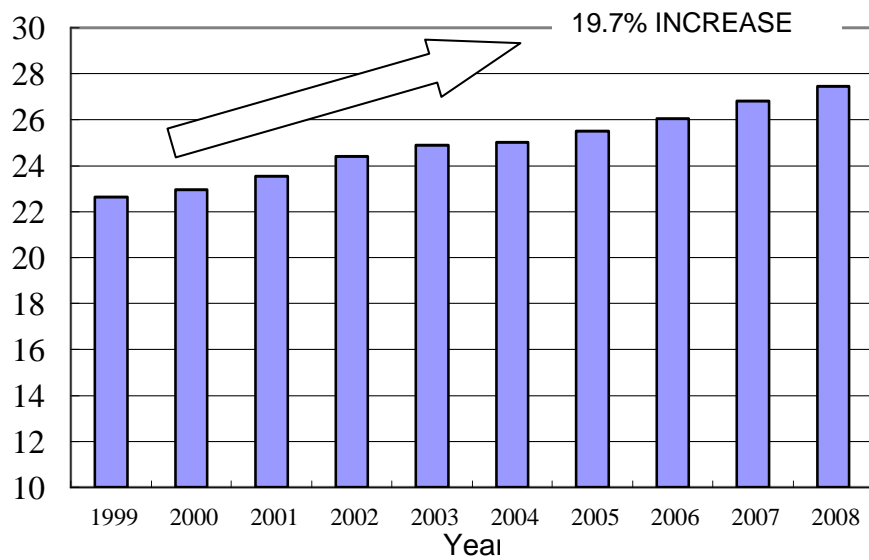
Population in the coastal communities



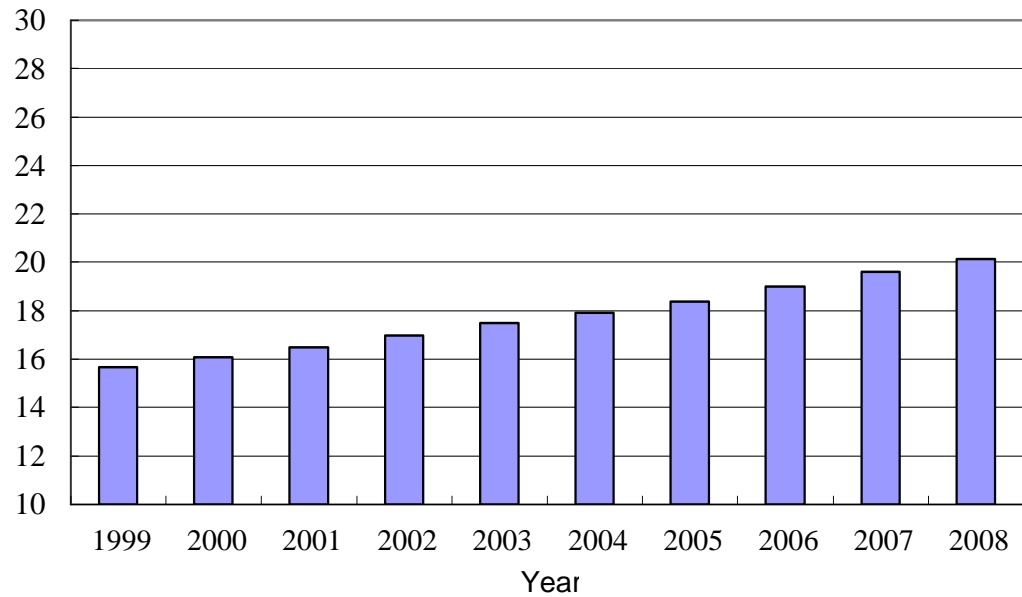
Population in the rest of Munakata City



Population Aging in the coastal commu



Population Aging in the rest of Munakata



# Coastal-related issues and their responses to be considered in the case study

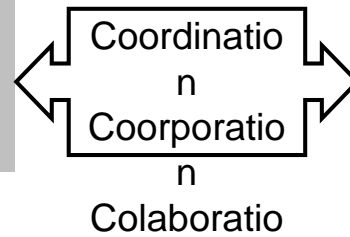
Issues		Contents to be considered
<b>Local revitalization</b>	<b>1. Creation of overnight stay type-tour routes</b>	<p>◦ To consider and compile model tour courses based on existing tourism resources regarding seacoasts.</p> <p>◦ To enhance the attractiveness and lure of each resource and role of stakeholders toward mutual cooperation</p>
	<b>2. Introduction of ecotourism</b>	◦ To examine local resources in the coastal zones including the nearby islands and study the possibility of introducing eco-tourism as a new type of tourism.
<b>Preservation and restoration of Coastal Environments</b>	<b>3. Response to beach erosion</b>	◦ To examine responsive measures for the beach erosion problem at the Satsuki beach and to plan necessary steps to solve it.
	<b>4. Enhancement of efforts to preserve coastal environments</b>	<p>◦ To collect and compile systematically various preservation activities performed by government and private sectors in the coastal zone</p> <p>◦ To study measures for promoting such activities.</p>
	<b>5. Response to drifted wastes, debris</b>	<p>◦ To grasp existing problems concerning drift debris in the coastal zone including the nearby islands.</p> <p>◦ To study proper measures for collecting, transporting and disposing of the debris.</p>
<b>Coordination of spatial functions</b>	<b>6. Coordination of sea surface utilization</b>	<p>◦ To collect and compile problems presently happening on sea surface utilization.</p> <p>◦ To examine countermeasures (like voluntary rules, city regulation) for their resolution</p>

# Integrated Management Plan of the Munakata Coastal Zone

Munakata ICM Working Committee

Establishment of local organizational structure

Munakata Coastal Tourism (MCT) Working Group



Munakata Coastal Use Coordination (MCUC) Working Group

[members]

- Munakata ICM Working Committee
- Local Fishery Cooperatives
- Fukuoka PWC Safety Association
- Small Boat Safety Association
- Japan Sportfishing Association
- Munakata Tourist Association
- **Local Residents**
- Fukuoka Coastguard Office
- Munakata Police Station

- ❑ Reevaluation of tourism resources, based on the theme of “experience, play, learn.”
- ❑ Creation of new tourism routes including coastal and marine-related activity experiences.
- ❑ Promotion of establishing a local system to accept visitors.

- ❑ Formulating the provisional rules and consider effective ways for implementing the rules.
- ❑ **Implementing the provisional rules and questionnaire survey**
- ❑ **Establishing the formal rules for use and preservation**

## 《Munakata Coastal Strategy》

**Vision:** Development of attractive playing and learning environments through the coastal & marine resources

**Goals:** Revitalization and coordination of coastal resources including Oshima & Jinoshima islands

### **Missions:**

i. Creation of experience-oriented, overnight-stay tourism business in the Munakata coastal zone

Based on local resources regarding with beach and coast that exist presently or are newly created, establish several model routes of experience-oriented, long stay sightseeing business, enhance charm of each resource, and clarify the roles of relevant stakeholders for mutual coordination.

ii. Coordination of conflict uses in coastal zone

Collect and compile problems on sea surface utilization conflicts, and examine countermeasures (like voluntary rules, city regulation) for resolution.

iii. Preservation of Satsuki Matsubara Beach from beach erosion

Investigate countermeasures to the beach erosion problems and present conditions of preservation and management of the pine -tree forest, and examine adverse effects of the beach erosion on coastal tourism and recreational use of the beach.

iv. Stability of fishery business by creating fishery-related activities and the brand of local fishery produce

Develop sustainable alternative livelihoods for fishers though creation of experience-oriented, overnight-stay tourism business, based on “Munakata local Fishery Promotion Plan.”

v. Response to problems of debris washed ashore

Countermeasures against wastes washed ashore should be considered from view of reducing disposed wastes through moral enhancement and working with volunteer on collecting wastes.

## Concrete items to be considered

- Identifying local resources and target tourists
- Basic tour course and related coastal resources
- Model tour course
- Example of active program
- Further issues

- Basic structure of rule
- Abstract of rule
- Zoning
- Further issues

- Consideration of erosion countermeasures
- Grasping status of preservation and management of pine forest
- Relationship between eroded beach and tourism

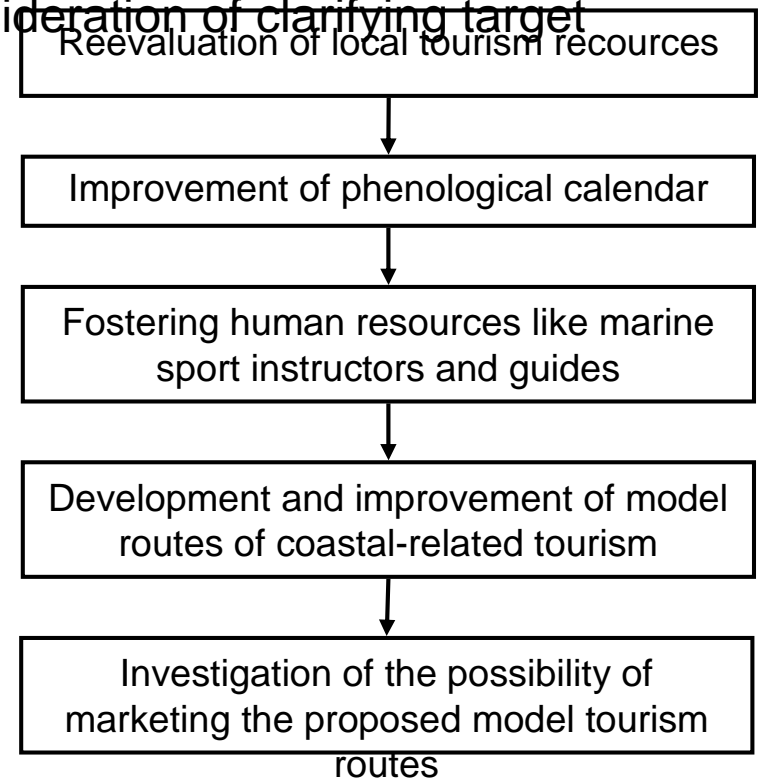
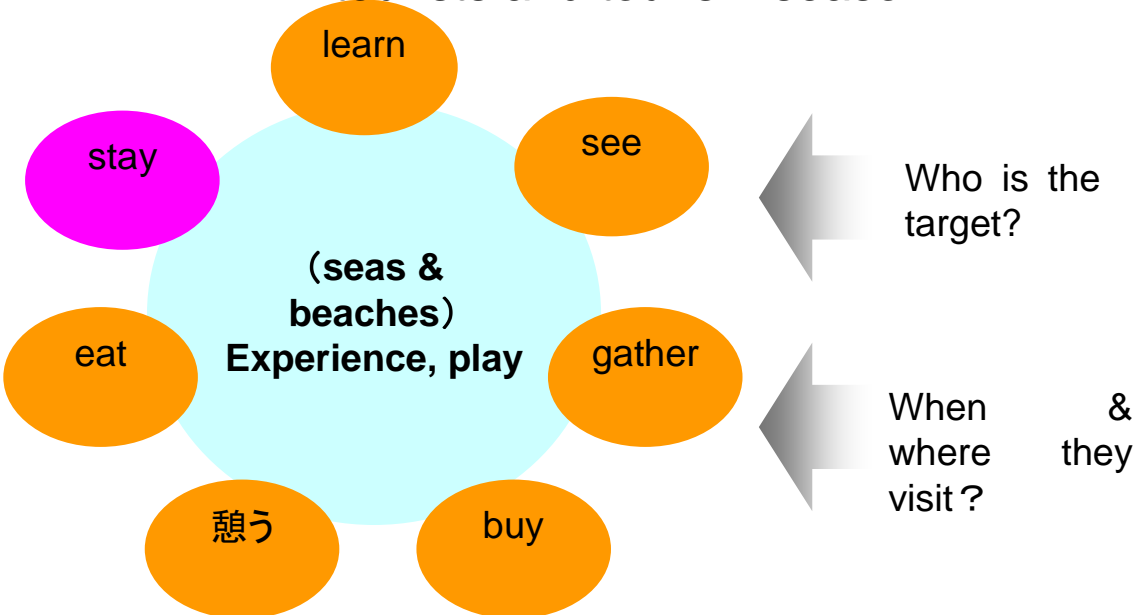
- Morning fishery market
- Experience-oriented fishery activities
- Further issues

- Possibility of ecotourism to clean up debris washed ashore
- Rules to enhance morals
- Further issues

# Creation of experience-oriented, overnight-stay coastal tourism

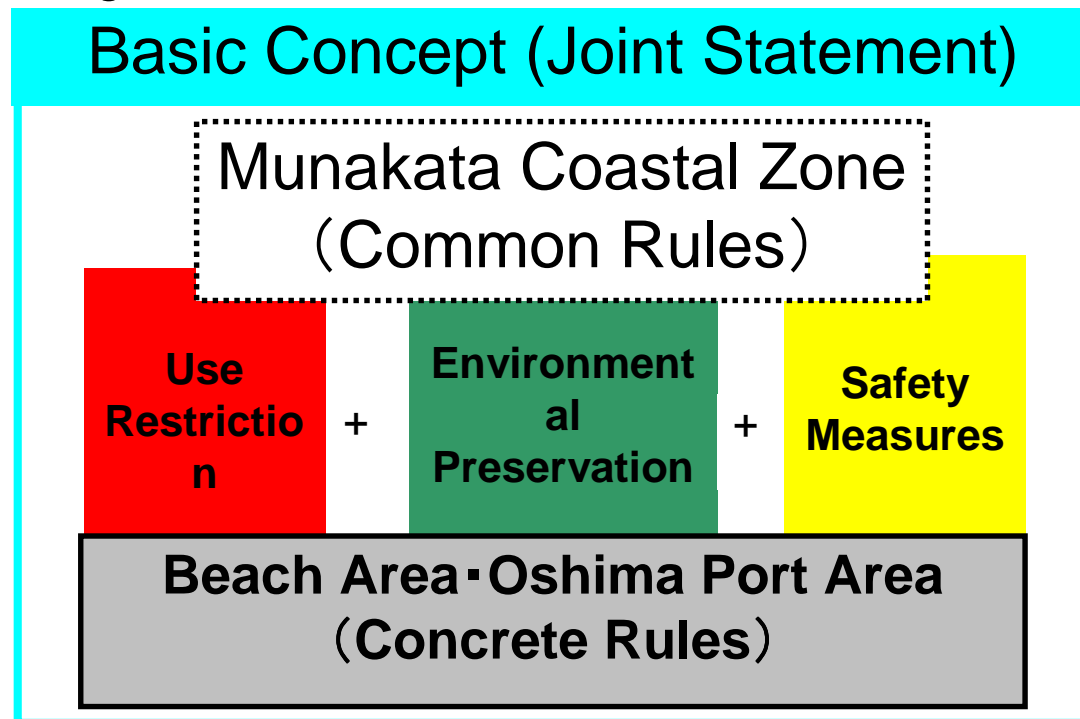
Basic concepts of experience-oriented, long-stay coastal tourism are as follows:

- Reevaluation of tourism resources located in the Munakata coastal zone, based on the theme of “experience, play, learn” at the sea and beaches.
- Creation of new tourism routes that combines lodging and coastal and marine-related activity experiences on the main land and the islands, taking into consideration the connection of each of the local tourism resources.
- Promotion of establishing a system that makes it possible to accept visitors into the whole local community, with consideration of clarifying target tourists and tourism season.



# Coordination of recreational use related conflicts on the sea surface in the Munakata coastal zone

- ❑ Conflicts exist in the study area among recreational users including sea bathers, surfers, PWC riders and other marine-sport players as well as between fisherman and recreational users
- ❑ The use of the sea and coastal areas may possibly cause safety problems, have adverse effects on fishery activities, and lead to the devastation of valuable natural environments.
- ❑ A precautionary approach of managing coastal utilization conflicts was carried out through establishment of sea surface utilization coordination rules.





# Munakata coast Rule for use of coastal water



## [ Power-driven Vessels for Leisure like PWCs ]

### use zone

- Use of the area limited from the detached breakwater and its extended line to the coastal line, toward offshore.
- Do not enter the Tsurikawa River, go into sea channels and approach the area where fixed fishing nets are set.



**DANGER**

Detached Breakwater

**DANGER**

Detached Breakwater

### [ surfing ] use zone



### [ surfing ] use zone



Ban on driving a car or buggy on the beaches

## [ swimming, kayaking, etc ] use zone

- A square area limited from the detach breakwater inshore
- On surfing and sea kayaking near the coast, pay attention to swimmers.
- Do not swim near the detached breakwater

**swimming DANGER**

Gaurd Station

## [ Power-driven Vessels for Leisure like PWCs ]

### Entrance & Exit Route

- Use the specified entrance and exit routes as indicated
- Drive slowly
- Pay attention on other users

## [ surfing & swimming ] use zone

- Bring back garbage of barbecue, etc
- Refrain from making noise such as setting off fireworks after 22:00

Tsurikawa River

# Questionnaire survey on implementation of the provisional rules

## 1. Objectives

- To collect the ideas and opinions of users about the "provisional rules" in the coastal area near Tsuru river.
- To announce the "provisional rules".
- To obtain any comments that may be reflected in their revision into the "formal rules".

## 2. Dates

First survey : August. 3 (Sun.) Weather: Fine

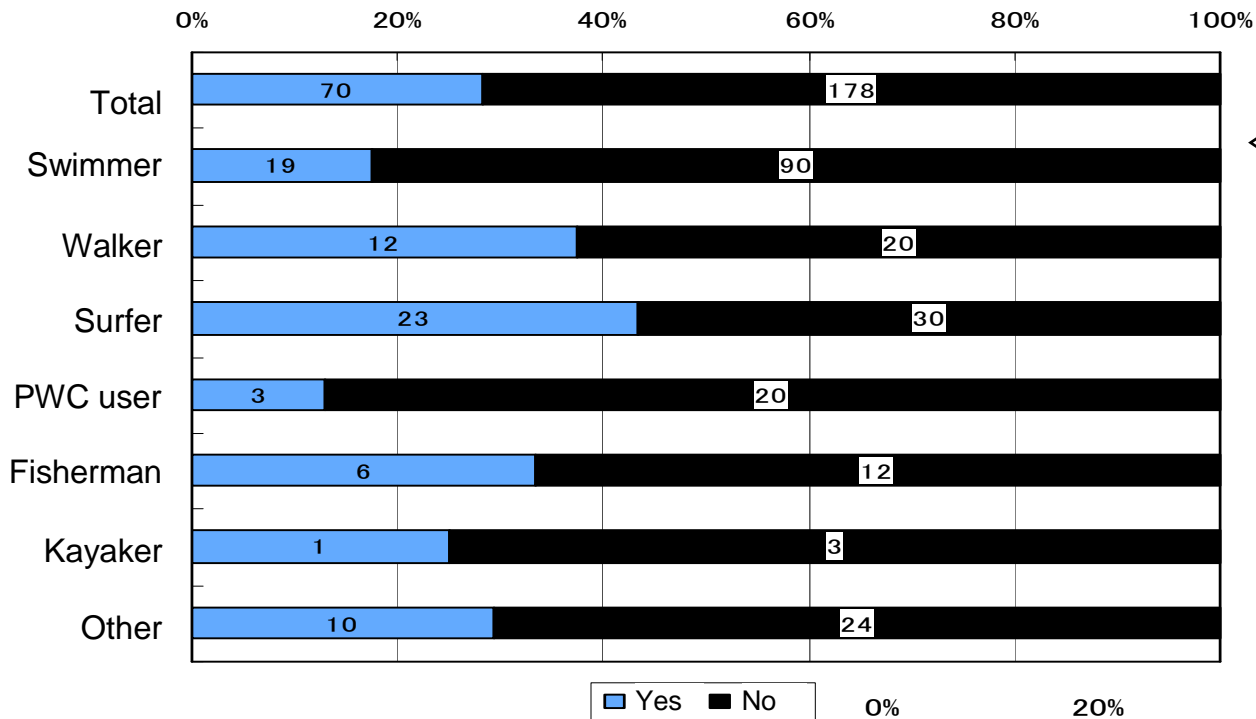
Second survey : August. 9 (Sat.) Weather: Fine

## Profile of respondents

<b>Domicile</b>	<b>Inside city</b>	<b>Outside city</b>	<b>Outside prefecture</b>	<b>Other</b>		
<b>Nos. (percent)</b>	<b>70 (29.8)</b>	<b>158 (66.4)</b>	<b>6 (2.5)</b>	<b>4 (1.7)</b>		
<b>Age</b>	<b>&lt;20</b>	<b>20s</b>	<b>30s</b>	<b>40s</b>	<b>50&lt;</b>	
<b>Nos. (percent)</b>	<b>21 (7.9)</b>	<b>57 (21.4)</b>	<b>105 (39.5)</b>	<b>34 (12.8)</b>	<b>49 (18.4)</b>	
<b>Purpose of visit</b>	<b>Surfing</b>	<b>Sea bathing</b>	<b>Walking</b>	<b>PWC riding</b>	<b>Fishing</b>	<b>Other</b>
<b>Nos. (percent)</b>	<b>53 (19.2)</b>	<b>111 (40.2)</b>	<b>33 (12.0)</b>	<b>23 (8.3)</b>	<b>18 (6.5)</b>	<b>38 (13.8)</b>

# Contents of the questionnaire

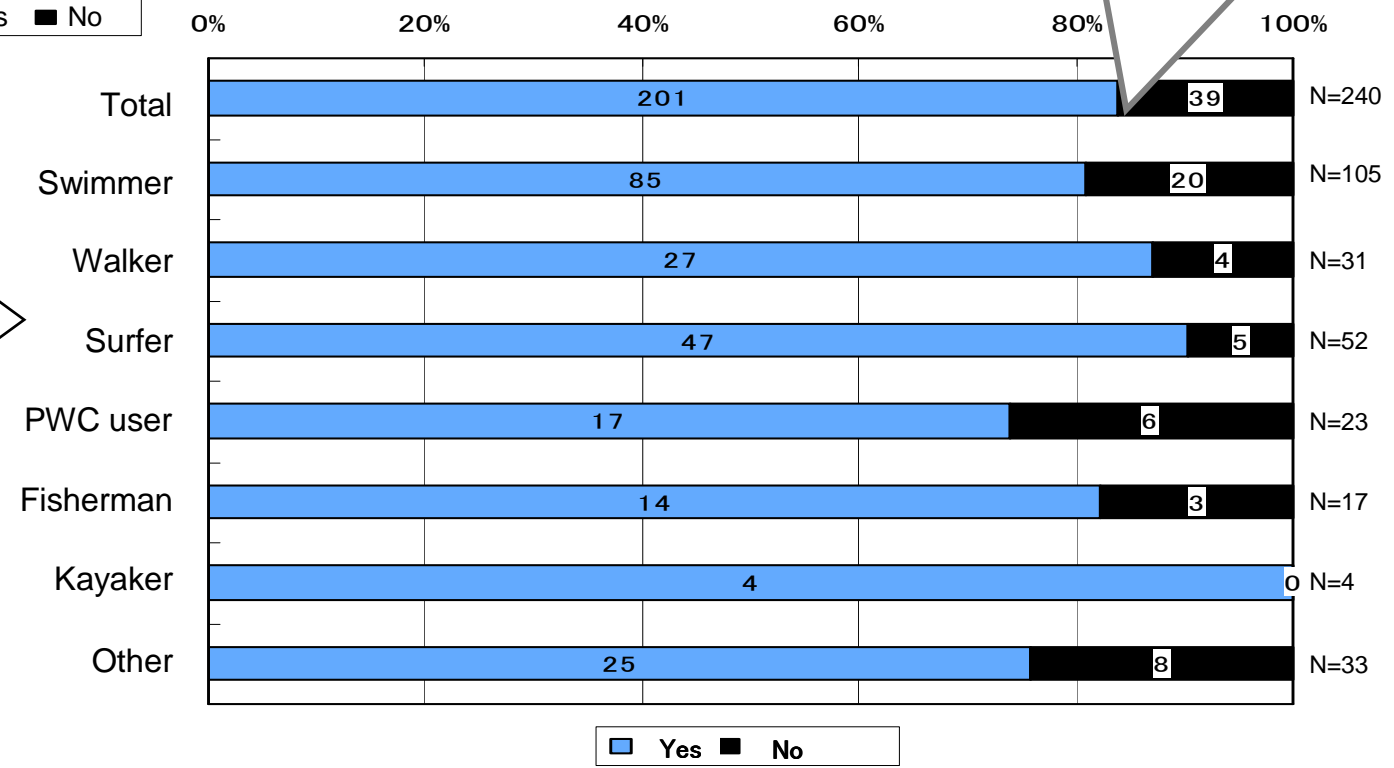
<b>Number</b>	<b>Questions</b>
Question1	How frequent do you visit this area?
Question2	What is an usual purpose of your visit?
Question3	Have you ever had any troubles or unpleasant experiences?
Question4	Do you think we need the rules like this? And why?
Question5	In this provisional rules, the sea surface is zoned for PWC riding, swimming and surfing. Do you have any problems?
Question6:	What kind of use do you think cause you any troubles?
Question7	We set the approach (exit) area for personal watercraft user in the "provisional rules". Are there any problems (hard to use), when you use it?
Question8	Have you looked at the signs that were placed in and around this area to disseminate the "provisional rules".
Question9	Were you able to understand the content of the rules? If you have any opinions on the rules, please write them down.
Question10	How could we make people understand and obey the rules?
Question11	Do you want to join marine legi experience programs?
Question12	Which programs interest you?
Question13	Do you have any concerns on the beaches around the mouth of Tsurikawa River?



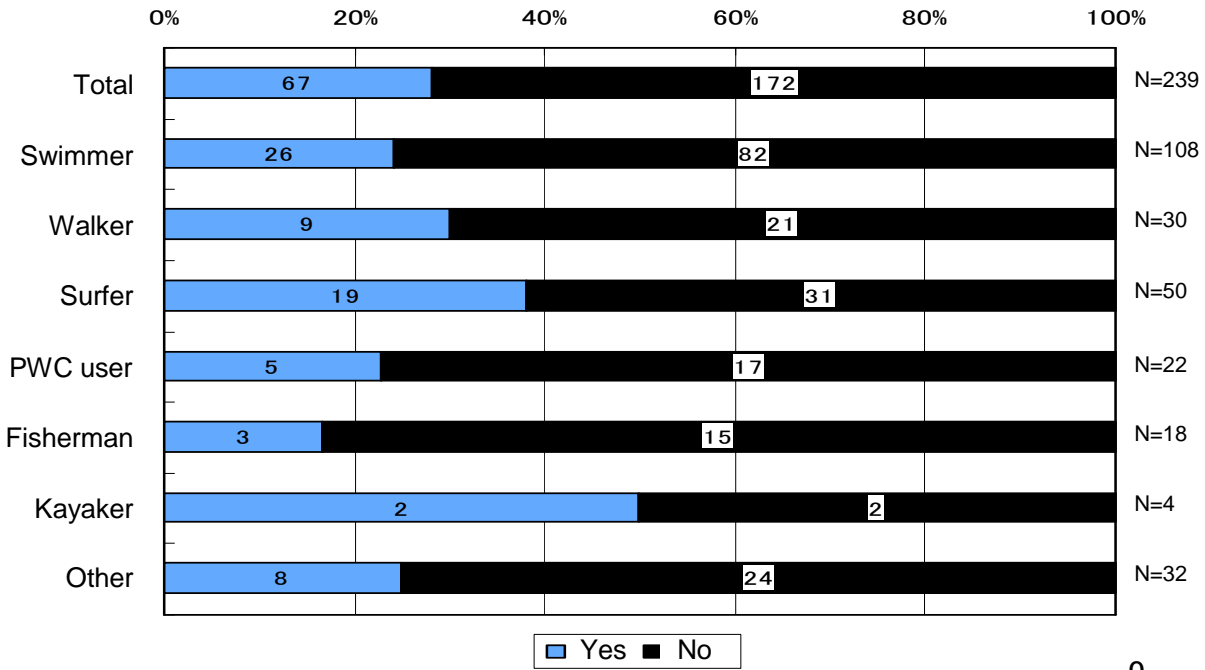
Q3: Have you ever had any troubles or unpleasant experiences?

**Respondents who answered "Need" are over 80%. People who enjoy surfing are high percentage, but personal watercraft user are low percentage.**

Q4: Do you think we need the rules like this? Why?

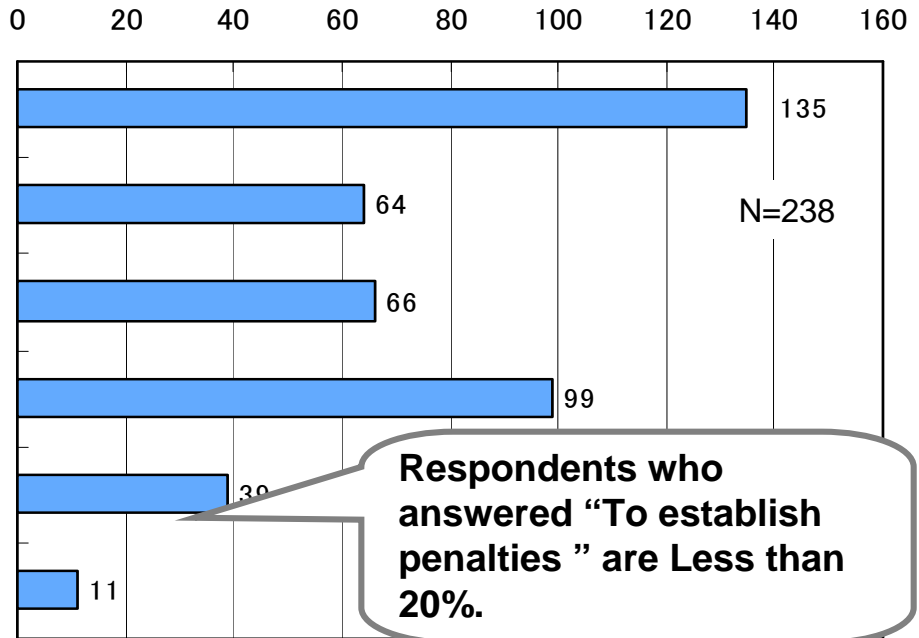


**Q5: In this “provisional rules,” the sea surface is zoned for PWC riding, swimming and surfing. Do you have any problems?**



**Respondents who answered “no problem” are over 70%. Personal watercraft user and swimmer are high satisfaction. On the other hand, surfers who answered “there is a problem” are nearly 40%.**

**Q10: How could we make people learn, understand and obey the rules?**



**Many people answered “To set up many sign” or “To strengthen the guard system”**

**Respondents who answered “To establish penalties” are Less than 20%.**

# Closing Remark

After the Guidelines for Comprehensive Management of Coastal Zones was issued in 2000 and the Basic Act on Ocean Policy was enacted in April 2007, MLIT has launched a case study program to help local governments in developing a local framework for ICM. Another intention is to achieve one of the priority targets of the Haikou Partnership Agreement, which is the implementation of integrated coastal management (ICM) programs in at least 20 percent of the Region's coasts by 2015.

The Munakata ICM program is one of these case study programs. The study started in 2007 and established the MICMW Committee to coordinate and cooperate with various stakeholders related to coastal activities. The Committee formulated the Munakata Coastal Strategy, which embodies the vision, goal and missions of the people of the Munakata coastal zone to chart the courses of action for the sustainable development and the preservation of cultural and natural resources in the Munakata coastal zone.

Two high priority missions, which are creation of experience-oriented, overnight-stay coastal tourism and coordination of recreational-use related conflicts on the sea surface, have been implemented in the local coastal communities and toward the creation of utilization rules.

It is expected that although this local issue-resolution-based management approach is a small step, it will lead to sustainable recreational use of the