



Sato-umi Policy in Japan

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Environmental Policies of Enclosed Coastal Seas in JAPAN

1950-70's

- Development by high economic growth and expansion of industrial activity
- Water pollution by plant effluent and living drainage
- Loss of Shallow zone by reclamation
- Frequent occurrence of large-scale red tide
- Frequent occurrence of oil spill



Environmental administration

Restrict laws were enacted

1967 Basic Law for Environmental Pollution Control

1970 Water Pollution Control Law

1971 Environment Agency was established

1972 Nature Conservation Law

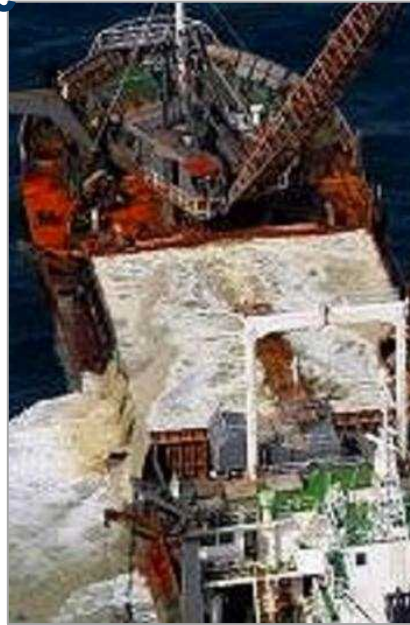
1973 Interim Law for Conservation of the Environment of the Seto Inland Sea

1978 Total pollutant load control (TPLC) was adopted for COD

Environmental Policies of Enclosed Coastal Seas in JAPAN

1980-90's

- Continuous occurrence of red tide
- Generation of anoxic water
- Occurrence of large-scale oil spill
- Collection of sea gravel



1990's-

- Creation of environments to pass on to future
- International contributions



Environmental administration

1993 Basic Environmental Law

1993 Nitrogen and Phosphorus were added to the effluent standard

1994 NOWPAP was established

2000 EMECS was established

2000 Basic Plan for Conservation of the Environment of the Seto Inland Sea

2001 Reorganized as Environment Ministry

2001 Nitrogen and Phosphorus were added to TPLC

2004 WEPA was established

Current problems of enclosed coastal sea

Increases of effluent pollution load

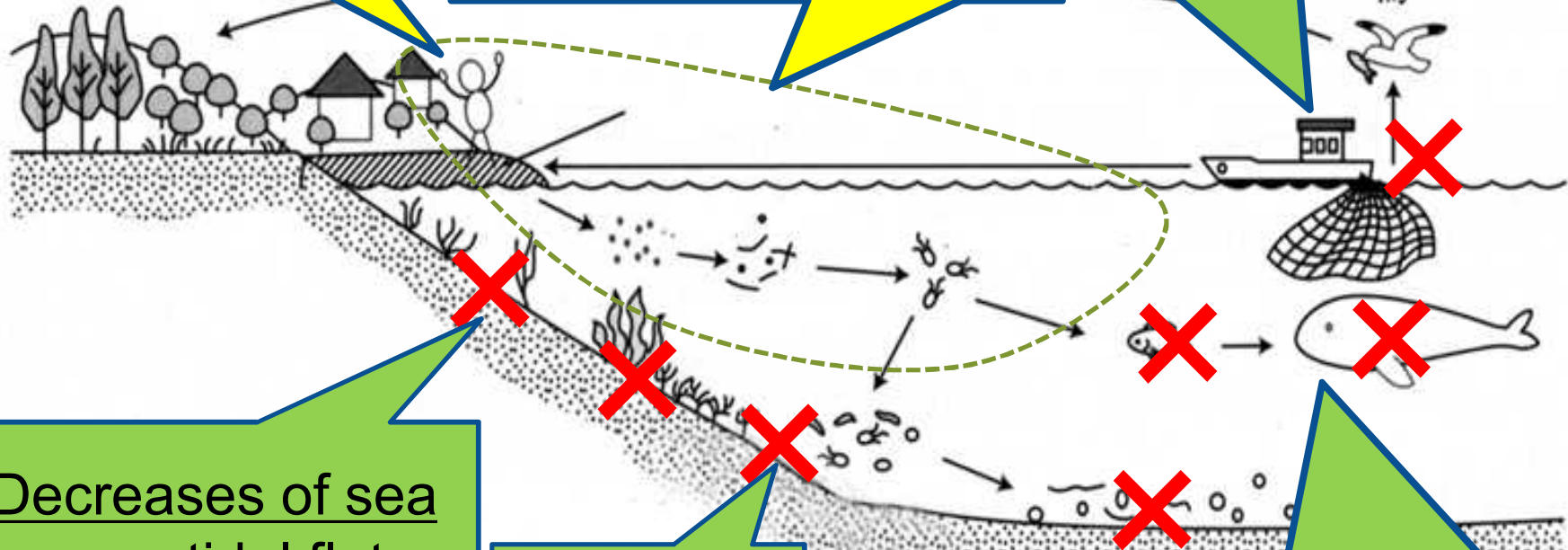
Coastal environment deteriorate due to eutrophication
• Red tide, anoxic water etc.

Reduce material circulation function
• Decline fishing village
• Decline in fishery

Decreases of sea grass, tidal flats
• Landfill, extraction of gravel and sand etc.

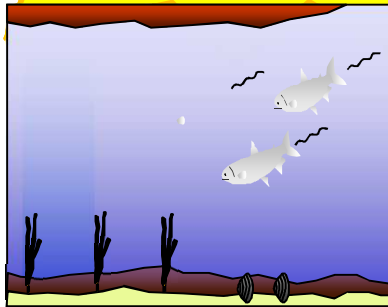
Decreases of benthos

Degradation of biodiversity, number of living thing
• Degradation of bio- habitat



Introduction of New Concept 'Creation of SATO-UMI'

Enclosed coastal seas
face devastation



Policy on
New Concept

Becoming a Leading Environmental Nation Strategy in the 21st Century (2007)

➤ Creation of Sato-umi rich in natural bounties listed

Basic Act on Ocean Policy (2008)

➤ Materialized of Sato-umi concept and describing of importance

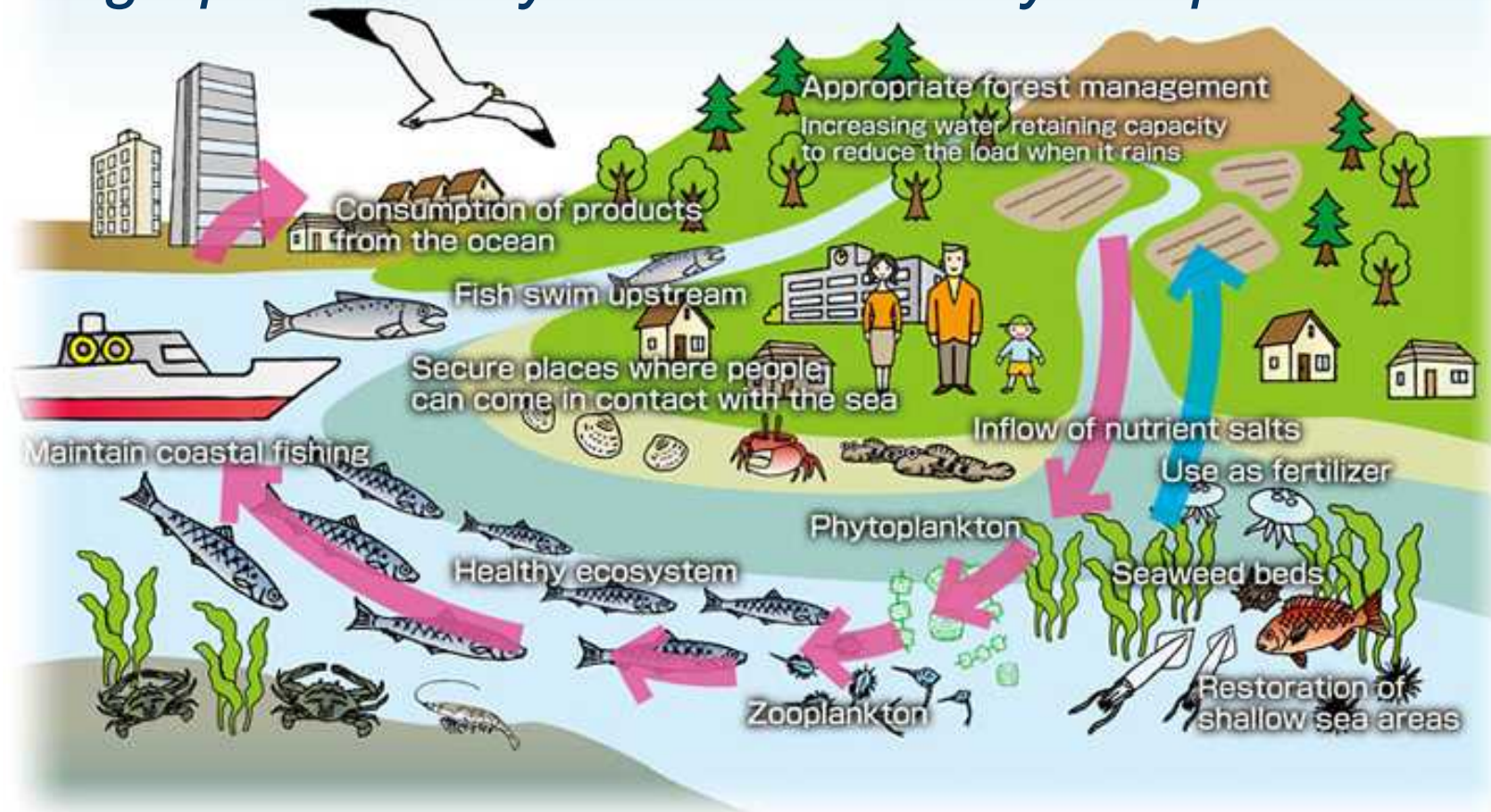
The Fourth National Biodiversity Strategy (2010)

➤ preservation and revitalization of Sato-umi was ranked as an important objective

The activities begin under 'Creation of SATO-UMI'

Concept & Image of Sato-umi

Coastal zone where land and coastal zone are managed in an integrated and comprehensive manner by human hands, with the result that material circulation functions are appropriately maintained and both high productivity and biodiversity are preserved.



Viewpoint of Sato-umi Creation

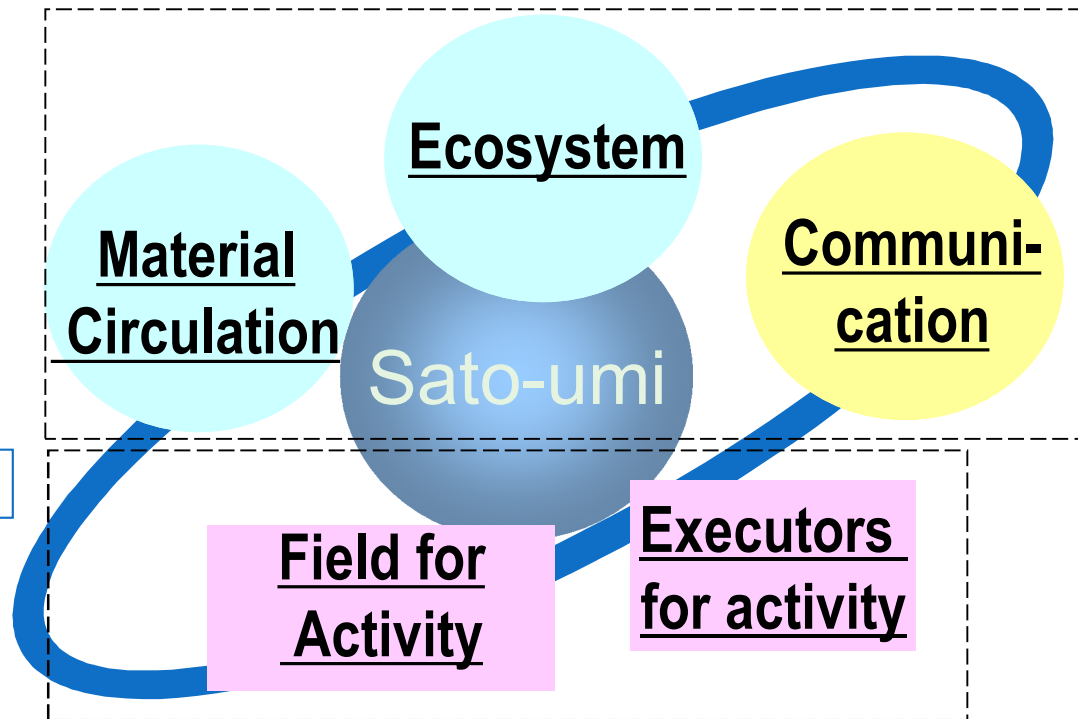
Viewpoint of Sato-umi Creation = Component of Sato-umi Creation

Diversity

*Three elements
that support
conservation
and restoration*

Sustainability

*Two elements
that support
implementation*



- Sato-umi is not only a spatial concept but also a concept generated among the human activities.
- Sato-umi is able to possess sustainability by being combined with lifestyle habits etc.
- Activity for creation of Sato-umi is a participation-and-cooperation type tool which is applicable to the comprehensive management of coastal area.

MOEJ Sato-umi Creation Support Project

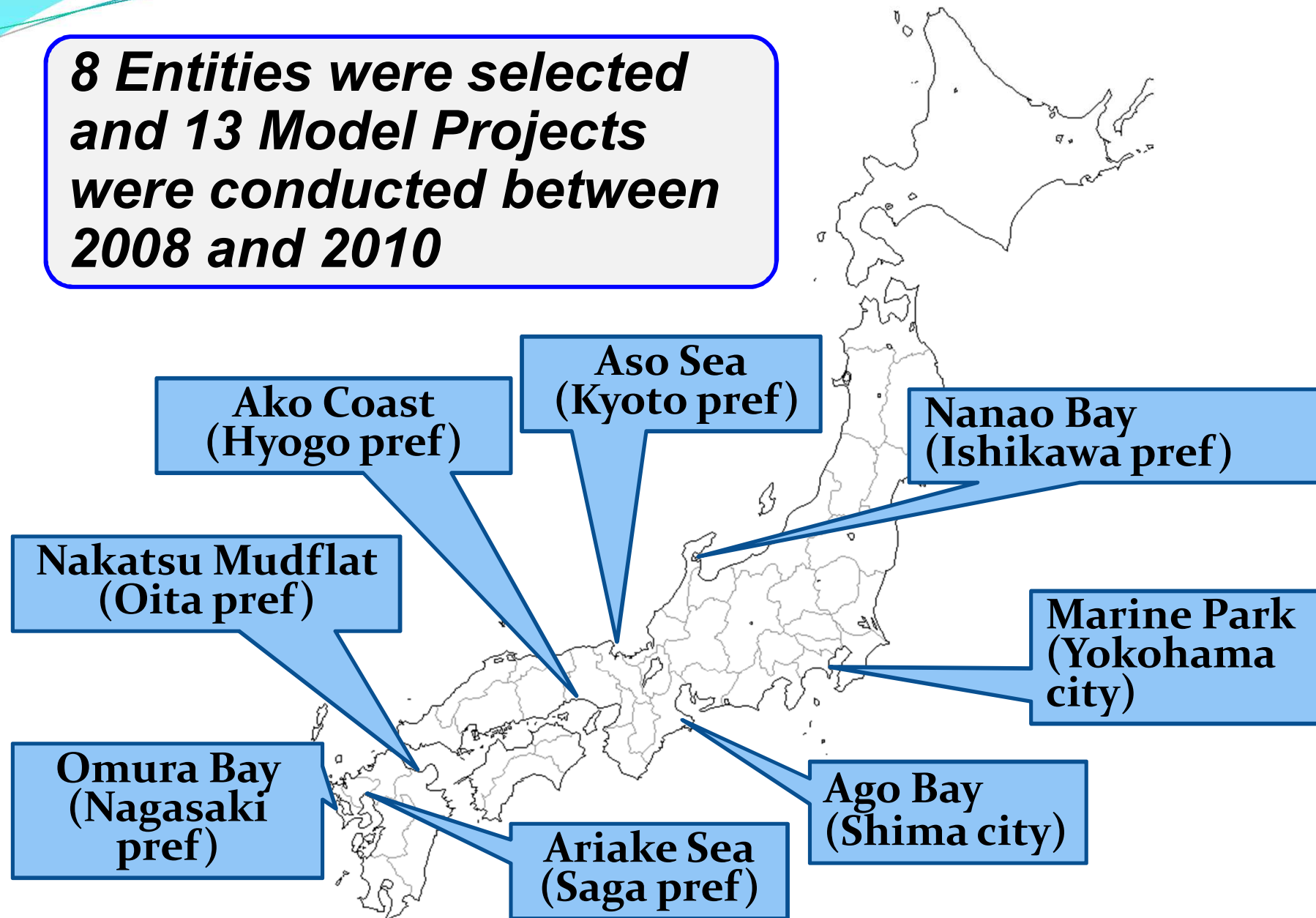
- (1) Support of Activities for Sato-umi Creation
(Model Project)**
- (2) Preparation of Standard Sato-umi Creation Plans for
Each Type of Activities**
- (3) Establishment of Sato-umi Creation Manual**
- (4) Selection of Examples of Advanced Sato-umi
Creation Activities**
- (5) Construction of a Sato-umi Website**
- (6) Publicity Activities (Pamphlet, Leaflet, Symposium)**
- (7) Provision of Information Overseas**

(1) Support of Activities for Sato-umi Creation (Model Project)

MOEJ support model activities addressing environmental conservation and human coexistence within coastal sea areas in partnership with local governments.

Model Projects to Support Sato-umi Creation

***8 Entities were selected
and 13 Model Projects
were conducted between
2008 and 2010***



Model Projects to Support Sato-umi Creation

Omura Bay (Nagasaki pref)

- Environmental education (Indian porpoise watching)
- Holding of a seminar on the approach to local partnerships



Ako Coast (Hyogo pref)

- Establishment and operation of specialist committee
- Holding of discussions with relevant local entities
- Study of water quality at the site and marine life habitation status



Nanao Bay (Ishikawa pref)

- Establishment of a steering committee
- Survey of local resident opinion
- Start of Sato-umi monitoring
- Holding of Hands-on activities, workshops and seminars



Nakatsu Mudflat (Oita pref)

- Survey of bottom sediment around *sasahibi*.
- Holding of monitoring sessions to commune with the ocean
- Pamphlet prepared



(2) Preparation of Standard Sato-umi Creation Plans for Each Type of Activities

The purpose is to enable Sato-umi creation activities to be initiated easily by selecting the category to which the target activities belong.

Standard Sato-umi Creation Plan for Each Type of Activities

■ *Integrated River Basin Activities*

Activities that consider the entire area from forest to ocean as an integrated whole



Tree planting (Iwate Prefecture)

■ *Mitigation Activities*

Activities to restore lost environments due to urban development, etc.



Mildly sloping revetment
at Kansai International Airport

Standard Sato-umi Creation Plan for Each Type of Activities

■ *Urban Activities*

Activities to preserve and restore seaweed beds and other shallow ocean near urban areas



Yokohama City in Tokyo Bay

■ *Environmentally “Sacred” Ocean Activities*

Activities to create environmentally "sacred" precincts by establishing “no-fishing” zones and seasons



Himeshima, Oita Prefecture

Standard Sato-umi Creation Plan for Each Type of Activities

■ *Experience-based Activities*

"Hands-on" activities conducted in urban neighborhoods by city residents



Ako Coast, Hyogo Prefecture

■ *Fishing Village Activities*

Activities conducted as part of fishing activities, with fishing villages playing a leading role



Ago Bay, Mie Prefecture

(3) Establishment of Sato-umi Creation Manual

The Manual includes,

- matters that should be considered in advance
- efforts that should be implemented
- desirable results and other information

This information is helpful when conducting new Sato-umi creation activities in the future.

Framework for Sato-umi Creation Manual

Chapter 1 : Introduction

Background, role, overview of content etc.

Chapter 2 : What is a Sato-umi?

Need for conservation and restoration of ocean environments,
Sato-Umi and Satochi Satoyama etc.

Chapter 3 : Sato-umi Creation Activities

Describes the type of activities that constitute Sato-umi creation

Chapter 4 : Advance preparations Before Initiating Sato-umi Creation

Study the range for Sato-umi creation activities,
Implementation of preliminary survey and organizing of issues

Chapter 5 : Approach to Sato-umi Creation: Establishment of Sato-umi Creation Plan

Establish objectives, Select activities, Study promotion organization,
Establish Sato-Umi Creation Plan

Chapter 6 : Evaluation and Review of Sato-umi Creation Activities

Evaluation of nature(monitoring) and social valuation,
Review of activities

(4) Selection of Examples of Advanced Sato-umi Creation Activities

MOEJ selected advanced Sato-umi activities that are of help to other groups conducting activities in other regions .

Activity at a Fishing Village in Iyo-Nada

The creation of forests is being promoted, together with coastal clean-ups performed by local fishermen and NPOs with the participation of the general public.

It is expected to promote wide ranging awareness and education relating to the sea environment.



Explaining how to create marine forests



Thriving eelgrass

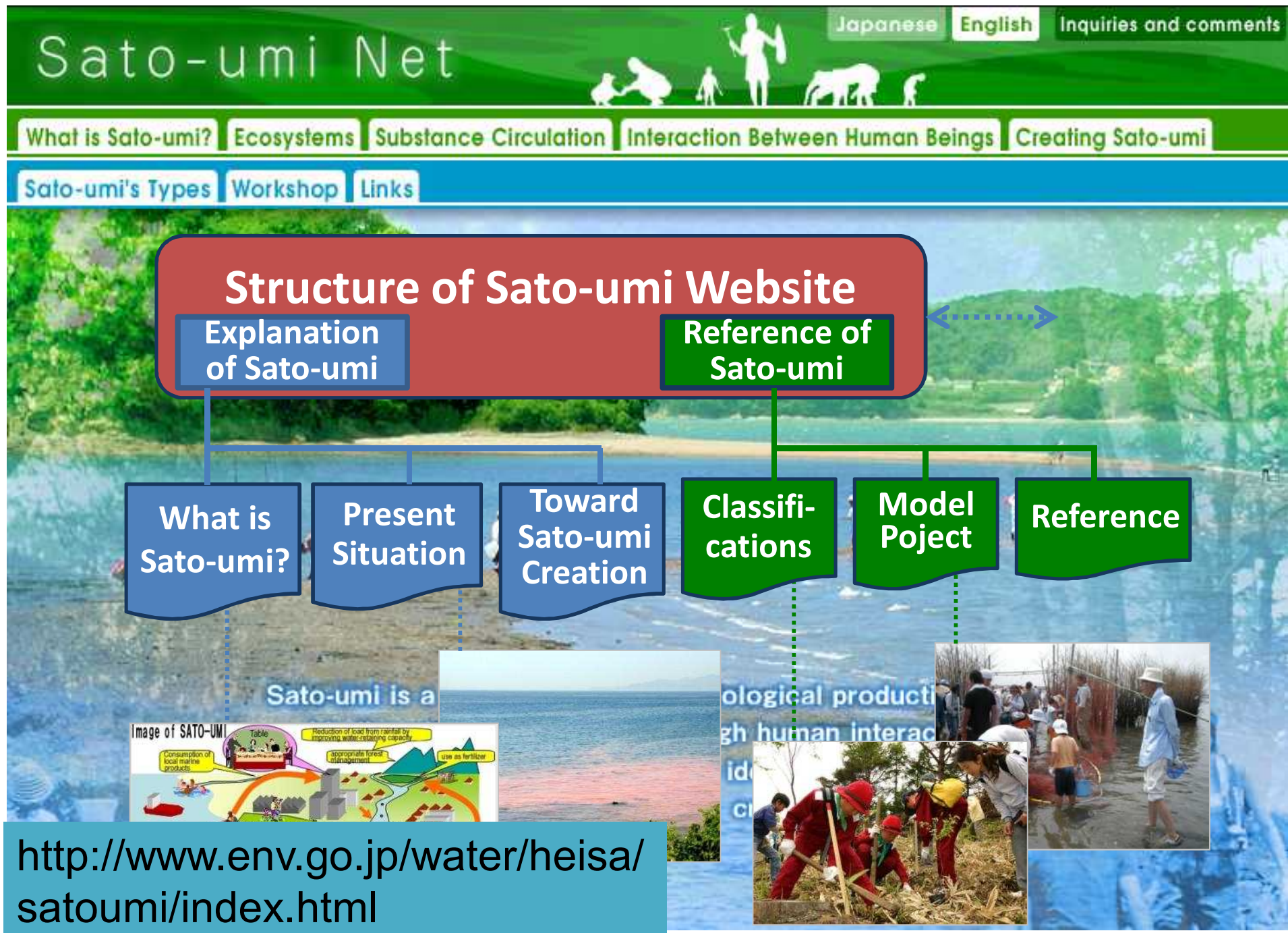


Participation by elementary school children



(5) Construction of a Sato-umi Website “ *Sato - umi Net* ”

In order to make information on Sato-umi widely available to Internet users in Japan and other countries, a Sato-umi website was created.



(6) Publicity Activities (Pamphlet, Symposium)

Pamphlet and symposiums relating to Sato-umi creation

Those efforts will be made to:

- publicize the Sato-umi concept,
- educate the general public regarding Sato-umi creation,
- provide information both at home and abroad.

Sato-umi Pamphlet ,Symposium

Sato-umi Symposium in each area

Sato-umi pamphlet

Definition of Sato-umi

A coastal zone where the livelihoods of human-beings and the blessings of nature harmoniously coexist with coastal area eco-systems

In Japanese, "SATO" means the area where people live, and "UMI" means the sea. Sato-umi is an important sea-land which has been supporting culture and cultural exchanges through such things as fisheries and the distribution of products. It is an area which includes both nature and human-beings, as well as an area in which both high biological productivity and biodiversity are associated. Healthy Sato-umi provides numerous blessings when the material circulation function is appropriately maintained, when integrated and comprehensive management of the land and coastal area is performed, and when the rich and diversified ecosystem and natural environment are conserved. This "preferable coastal area environment" must be maintained with the cooperation of more people in order to secure this precious environment to future generations.



The five elements that build and constitute Sato-umi

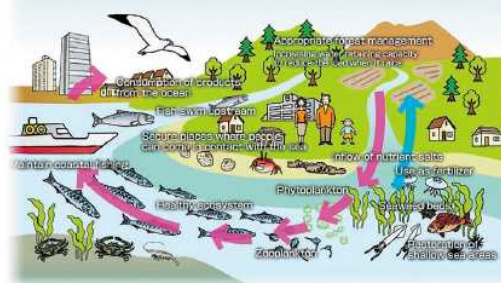
The first step for citizens, whose work is not sea-related, is to get familiar with the sea. This makes you understand the importance of the sea and realize what you have to do to conserve it. Sato-umi creation consists of five elements. Three of these elements (substance circulation, ecosystems, contact with nature) support the preservation and regeneration of ocean regions. The other two (activity spheres, entities that perform activities) support practical activities to create Sato-umi. Sato-umi are both made up of and nurtured by these five elements. Moreover, diverse Sato-umi creation activities that are tailored to each ocean region are formed by the balance of these five elements.



Toward the ideal coastal environment

Steady, seamless and endless material circulation function is fundamental to conserve affluent and stable Sato-umi

Consumption and discharges, which accompany our activities for living, agriculture, forestry, fisheries, commerce and industry, considerably influence the water environment that is seamlessly connected from the forest to the sea. Two important measures to achieve the ideal coastal environment are not to damage healthy natural ecosystems, and to offer opportunities for more people to understand the important role of Sato-umi through increased involvement and awareness.

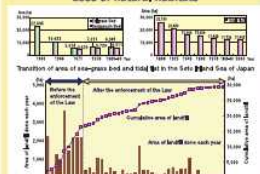


The threatened natural environment



Coastal and surrounding areas have been seriously damaged since the high economic growth era. Although the condition of the coastal environment is improving through environmental conservation and increased environmental consciousness, further efforts are necessary.

Loss of natural habitats



Decreases of sea grass beds and tidal flats, important habitats for aquatic life, caused by land reclamation affect the ecosystem balance.



Sato-umi Symposium in Nanao Bay (Panel Discussion)



Sato-umi Symposium in Ako (Musical by pupil)





(7) Provision of Information Overseas

An International Sato-umi Workshop were held at the 10th Conference of the Parties to the Convention on Biological Diversity (COP 10).

More information on efforts to create Sato-mi in Japan should also be provided to other countries.

Provision of Information Overseas

'International Sato-umi workshop' as a side-event on COP10, which was held at Nagoya in 2010



Conclusions

- Sato-umi constitutes a useful approach from the standpoints of marine biodiversity preservation and fishery resource management as well
- There are limits to what the government alone can do to restore ocean environments, so joint efforts with local residents and organizations of various types are needed



Future Unfolding

JAPAN

Output of the Project to Support Sato-umi Creation

Sato-umi Creation Manual

Standard Sato-umi Creation Plan

Example of advanced Sato-umi Creation

Pamphlet & Leaflet

Sato-umi Website & Sato-umi Data Network

International Workshop

Countries in the World

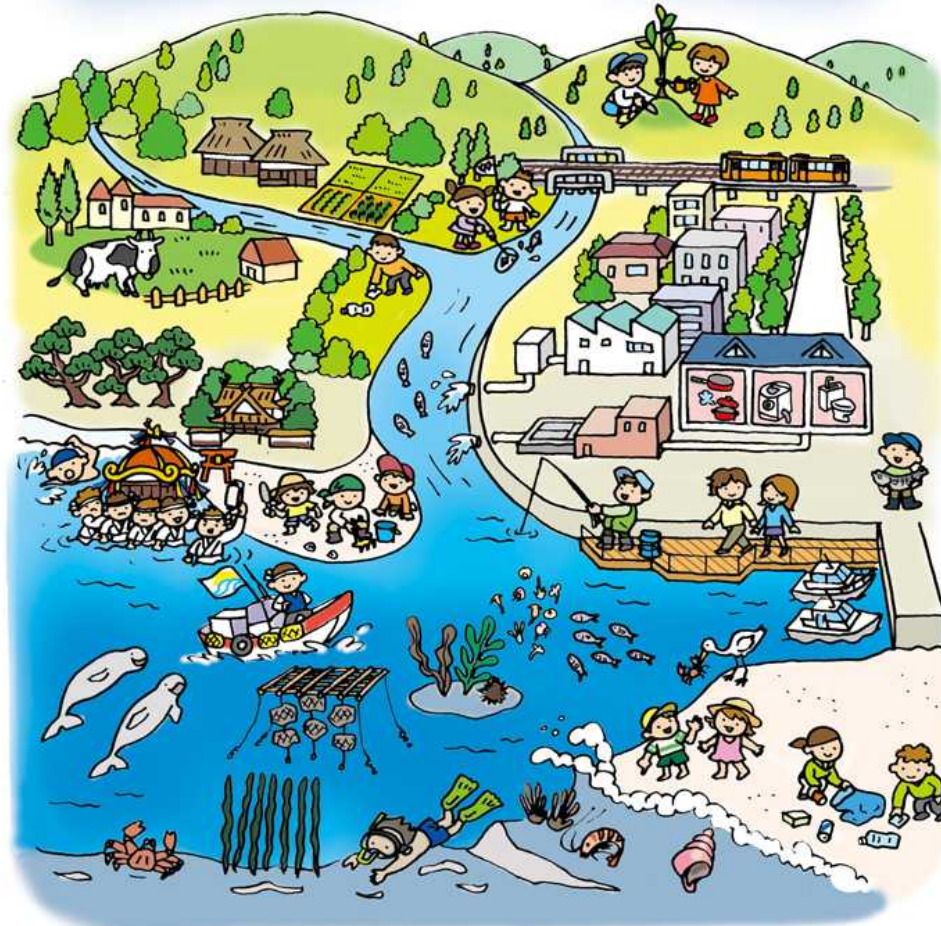
Needs & Problems of Creation of SATO-UMI



Sato-umi Information
Sharing

**Preservation & restoration of environment
of seas all over the world**

Thank you for your listening.



*MOEJ is waiting for your comments to;
mizu-hesasei@env.go.jp*

Selection of Advanced Examples of Sato-umi Creation Activities

Activities at Fishing Village in Ise Bay

To achieve a balance between environmental preservation and pearl production by creating tidal flats and marine forests.

To improve natural purifying functions and establish a system of cultivation based on forecasts of water quality.

Effect of these activities

- Shima City plans to set up an 'Ago Bay Nature Restoration Council' to enable effective utilization of the achievements of this project.
- Based on the achievements of the project, Mie Prefecture initiated an Enclosed Coastal Sea restoration Program in 2007.



Survey of marine forest growth

Selection of Advanced Examples of Sato-umi Creation Activities

Integrated River Basin Activities in Suo-Nada

In the Fushino River, activities are being promoted in which, based on a plan, the whole river basin is to be integrated by various participants.



History of implementation

- 2003: Plan established.
- 2004: Nature Restoration Council established.
- 2005: Overall plan for the restoration of nature in the tidal flats of the Fushino River estuary established.

Effect of these activities

- Increased biodiversity and population of bivalves in the tidal flats etc. of the Fushino River
- Expanded Zosteraceae beds



Selection of Advanced Examples of Sato-umi Creation Activities

Urban Activities in Tokyo Bay

Experiment to purify water by cultivating oysters, conducted with the participation of the general public.

It is expected that the number of organisms that ingest the nutrients discharged will increase and purification functions will be regenerated.



Experimental facility



Children participate by placing oysters

Placing cartons for oysters



Efforts by the Japanese Government aimed at Sato-umi Creation

- **May 2006: 7th International Conference on the Environmental Management of Enclosed Coastal Seas (EMECS 7, Caen, France)**

“Sato-umi” proposed as a new concept for coastal zone management in enclosed coastal seas

- **June 2007: Becoming a Leading Environmental Nation Strategy in the 21st Century (approved by the Cabinet)**

“Creation of Fertile Sato-umi” outlined as an environmental policy, whose launch in the next 1 - 2 years is a top priority

- **November 2007: The Third National Biodiversity Strategy (approved by the Cabinet)**

Restoration of ocean regions such as Sato-umi ranked as an important objective.

- **March 2008: Basic Plan on Ocean Policy (approved by the Cabinet)**

Sato-umi approach clearly stated to be of importance from the standpoint of preserving ocean environments

- **October 2008: 8th International Conference on the Environmental Management of Enclosed Coastal Seas (EMECS 8) (Shanghai, China)**

Featured a special session devoted to Sato-umi. Summing up the conference, the Shanghai Declaration stated that introducing the Sato-umi concept would *"help us keep our course on today's troubled waters"*

- **November 2009 : The East Asian Seas Congress 2009 (Manila, Philippines)**

Promoted "Sato-umi" activities implemented to help achieve a balance between nature and human beings, one that is sustainable and appropriate for the actual situation and needs of the local community.

- **March 2010: The Fourth National Biodiversity Strategy (approved by the Cabinet)**

As in the Third National Biodiversity Strategy, the preservation and revitalization of Sato-umi was ranked as an important objective.