

Measures for Household Wastewater

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Effluent from such domestic activities as cooking, laundry, and bathing are a major cause of pollution of public waters. Therefore, the Water Pollution Control Law provides the stipulations for the comprehensive promotion of measures for household wastewater.



Responsibility of each entity for countermeasures against household wastewater

Administration	Municipalities	<ul style="list-style-type: none"> ◆ Build and maintain household wastewater treatment facilities ◆ Train leaders to provide education ◆ Enforce other measures against household wastewater
	Prefectural Governments	<ul style="list-style-type: none"> ◆ Wide-ranging measures ◆ General coordination of action of municipalities
	National Government	<ul style="list-style-type: none"> ◆ Diffusion of information ◆ Provide technical and fiscal assistance to local governments
General Public		<ul style="list-style-type: none"> ◆ Dispose of kitchen waste, used cooking oil, and the like, and use detergents and the like appropriately. ◆ Cooperate with the policies of the national and local government.



Key Areas for Measures against Household Wastewater and Plans for Promoting Measures

Prefectural governors shall designate areas in particular need of measures against household wastewater, such as areas without Environment Quality Standards for Water Pollution, as "Key Areas for Measures against Household Wastewater". Meanwhile, under these provisions the majors of municipalities within the specified regions shall create plans for promoting measures against household wastewater, based on building and maintaining household wastewater treatment facilities, etc. A total of 209 areas in 42 prefectures were designated as "Key Areas for Measures against Household Wastewater" at the end of March 2006.

What we casually discharge pollutes irreplaceable rivers and seas to the following extent

If we discharge this	The water is polluted to this extent (BOD (g))	How many bathtubs of water (300 l) are needed to make the water habitable for fish (BOD ≤ 5 mg/l)?
Used tempura oil (20 ml)	30	20
A glass of milk (200 ml)	16	11
A bowl of miso soup (with potatoes) (180 ml)	7	4.7
Rice-rinsing water (initial rinsing) (500 ml)	6	4
A spoonful of concentrated sauce (15 ml)	2	1.3
Shampoo (per bathing) (4.5 ml)	1	0.67

We can do it from now on! Measures to take in our everyday life (examples)

Kitchen

Prepare only the amount required for meals and drinks

Trap fine garbage such as vegetable chips using draining nets and sink-corner baskets

Use rice-rinsing water to water plants as it contains nutrients

Bathroom

Use an appropriate amount of shampoo and rinse

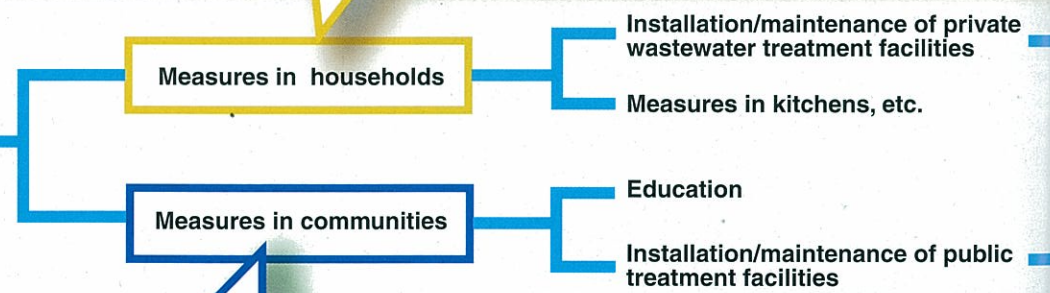
Toilet

Clean the toilet bowl briefly after using it to reduce the frequency of a cleanup using detergents

Laundry

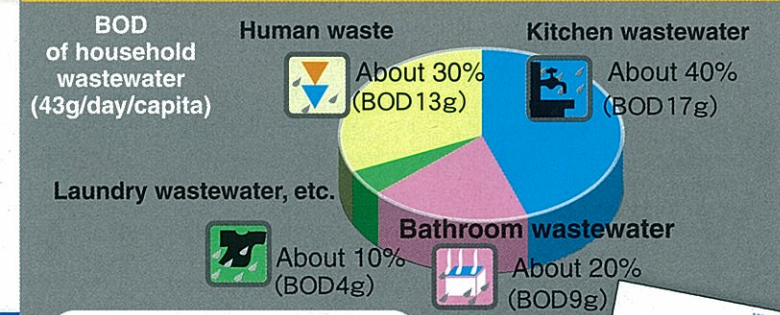
Measure the detergent carefully using a measuring spoon (too much detergent pollutes the water unnecessarily). It is not that the more detergent we use, the cleaner the laundry will be.

Measures for Household Wastewater



- Installation/maintenance of Jhokasou Systems
- Installation of special treatment facilities for household wastewater
- Installation/maintenance of sewerage systems
- Installation/maintenance of Jhokasou Systems
- Installation/maintenance of rural community wastewater treatment facilities
- Installation/maintenance of rural community sewerage

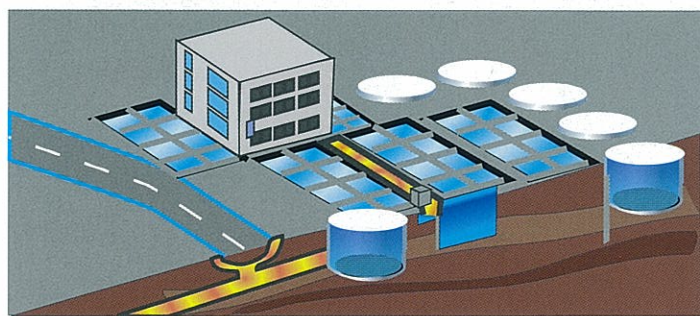
Types of Household Wastewater and the Environmental Load Imposed Per Day Per Capita



For more information, refer to the website of the Ministry of the Environment
<http://www.env.go.jp/water/seikatsu/>

Building and maintaining sewerage systems

To date, the Ministry of Land, Infrastructure and Transport has placed a focus on building sewerage systems systematically, in accordance with its 8 Five(Seven) Year Sewage Works Plans and a social infrastructure improvement plan launched in fiscal 2003. As of December 2005, comprehensive sewerage system development programs by watershed have been created in approximately 130 locations, providing effective sewerage construction in each water basin.



Building and maintaining Jhokasou Systems

As part of household wastewater program, the Ministry of Environment is promoting the construction and maintenance of Gappei-shori Jhokasou Systems that can treat both human waste and household wastewater. As of the end of fiscal 2004, these facilities have been built in 2,522 municipalities, as an effective measurement for household wastewater in areas dotted with houses.

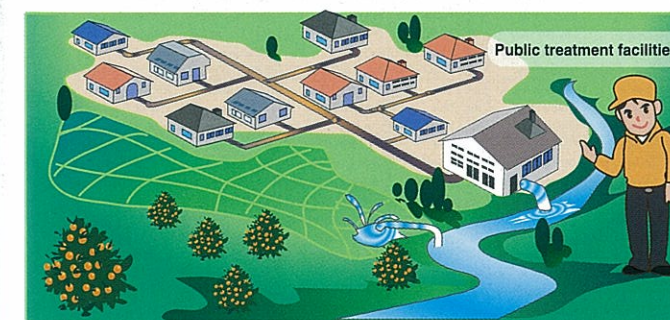


The Jhokasou Law was revised!
 The Jhokasou Law was revised on May 20, 2005 in accordance with the following:

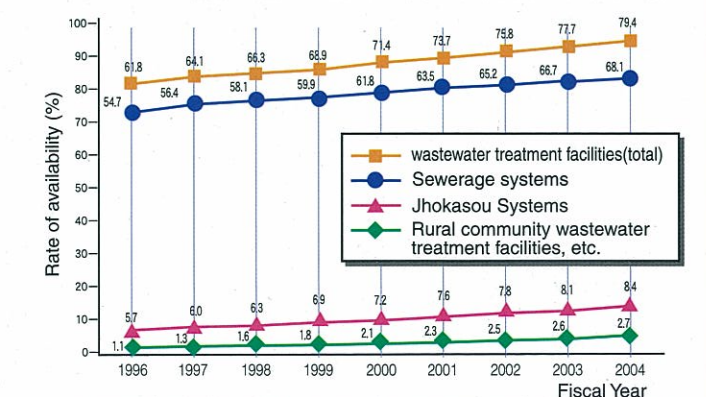
- ◆ Clarification of the objective of the law
- ◆ Establishment of the water quality standards for effluent from Jhokasou Systems
- ◆ Making properly of the water quality inspection time after the installation of Jhokasou Systems
- ◆ Tightening of prefectural supervisor regulations to ensure proper Operation and Maintenance of Jhokasou Systems

Building and maintaining rural community wastewater treatment facilities

The Ministry of Agriculture, Forestry and Fisheries would have created agricultural community effluent treatment programs in approximately 4,500 areas, by the end of fiscal 2005. These programs promote the treatment of human waste and household wastewater from rural villages, recycling of treated water as water for irrigation and active sludge as organic manure and the like, the conservation of irrigation wastewater and the water quality of public waters, etc.



Trends in Access to Wastewater Treatment Facilities

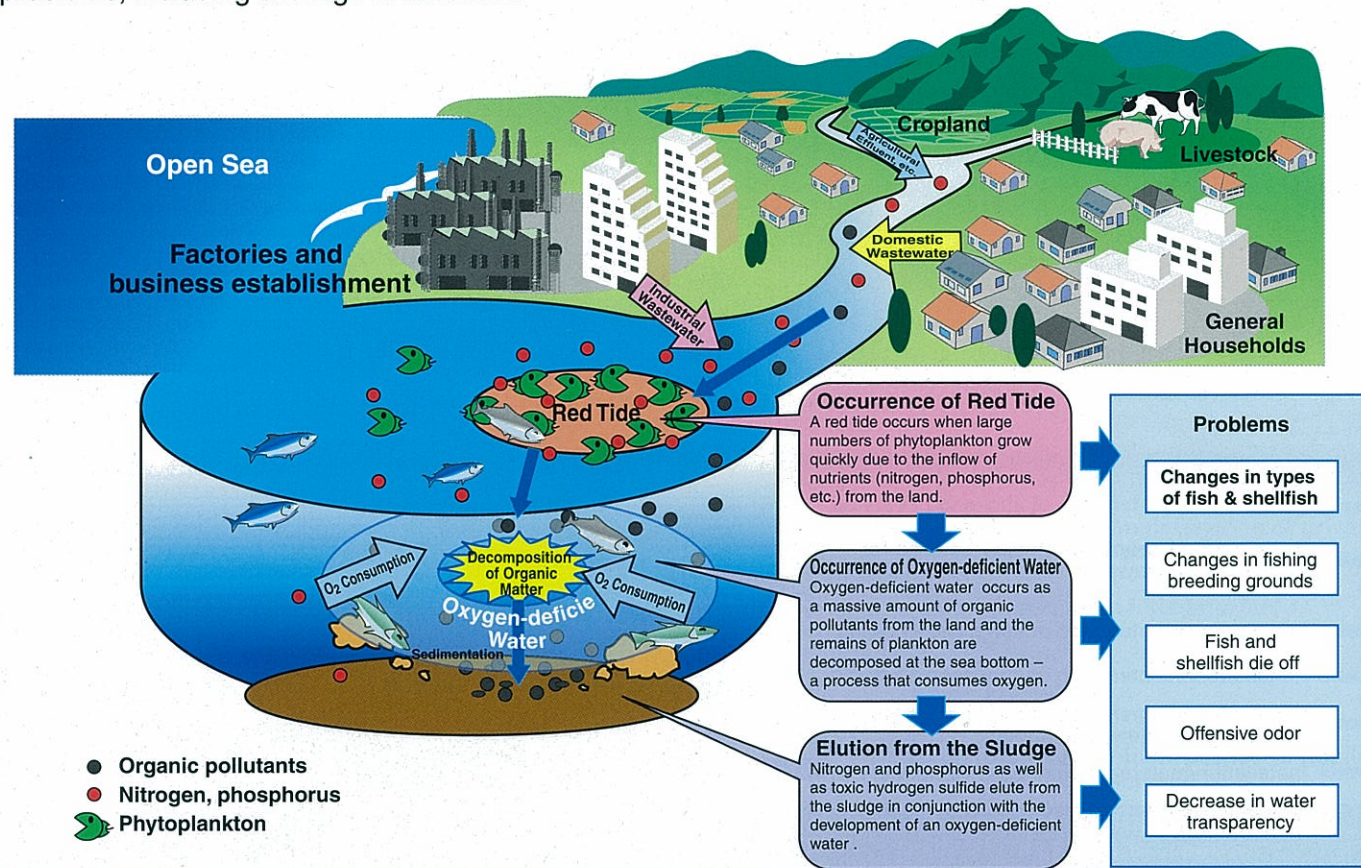


* "Rate of availability" refers to the rate of the number of people that have access to one of the above-mentioned wastewater treatment facilities expressed as a percentage of the total population.

Water Environmental Conservation in Enclosed Coastal Seas

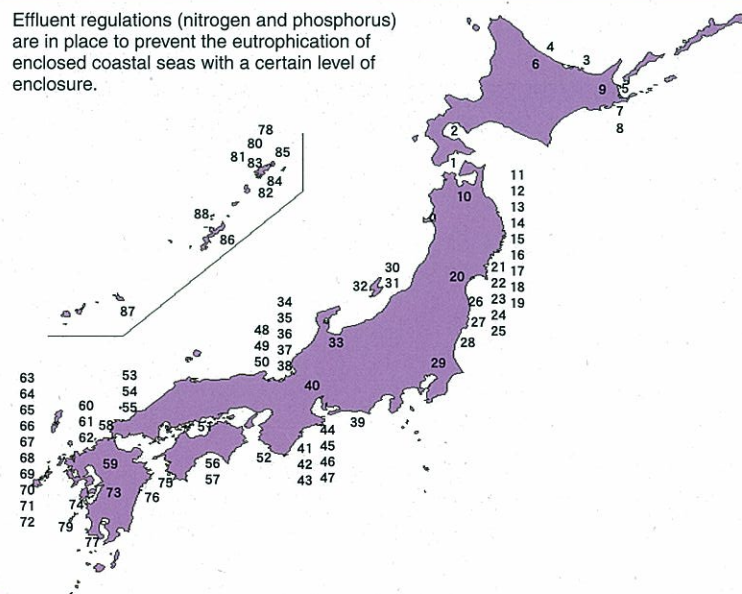
Water Environmental Problems in Enclosed Coastal Seas

The inflow of nutrient salts (ammonia, nitrate, nitrite, phosphate, etc.) originating from human socioeconomic activities leads to eutrophication of enclosed coastal seas such as basins and inland seas through the massive growth of phyto- and zoo-plankton, thereby causing red tides. In addition, the remains of phyto- and zoo-plankton, coupled with organic pollutants (which consume dissolved oxygen during the decomposition process), produce an oxygen-deficient water mass, which causes a variety of problems, including damage to fisheries.



Measures to Prevent Eutrophication of Enclosed Coastal Seas

Effluent regulations (nitrogen and phosphorus) are in place to prevent the eutrophication of enclosed coastal seas with a certain level of enclosure.

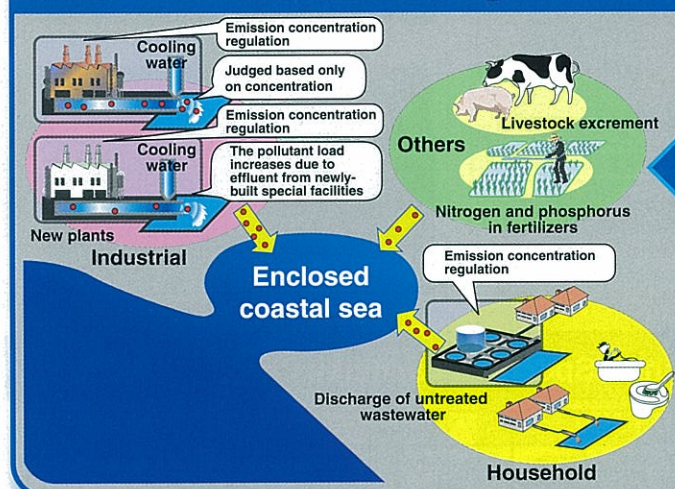


Effluent Standards for Nitrogen/Phosphorus in Sea and coastal sea					
No.	Prefecture	sea/coastal area name	No.	Prefecture	sea/coastal area name
1	Hokkaido	Hakodate Bay	31	Niigata	Kamo Lake
2	Hokkaido	Hunka Bay	32	Niigata	Mano Bay
3	Hokkaido	Notoro Lake	33	Ishikawa	Nanao Bay
4	Hokkaido	Komuke Lake	34	Fukui	Turuga Bay
5	Hokkaido	Huren Lake	35	Fukui	Yashiro Bay
6	Hokkaido	Saroma Lake	36	Fukui	Sekumi Bay
7	Hokkaido	Akkesi Bay	37	Fukui	Obama Bay
8	Hokkaido	Akkesi Lake	38	Fukui	Utira Bay
9	Hokkaido	Notsuke Bay	39	Sizuoka	Hamana Lake
10	Aomori	Mitsu Bay	40	Aichi, etc.	Ise Bay
11	Iwate	Miyako Bay	41	Mie	Owase Bay
12	Iwate	Ohunato Bay	42	Mie	Kata Bay
13	Iwate and Miyagi	Hirota Bay	43	Mie	Atashika Bay
14	Iwate	Kamaishi Bay	44	Mie	Gokasyo Bay
15	Iwate	Otsuli Bay	45	Mie	Kamizaki Bay
16	Iwate	Okkirai Bay	46	Mie	Nie Bay
17	Iwate	Hunakoshi Bay	47	Mie	Ago Bay
18	Iwate	Yamada Bay	48	Kyoto	Maizuru Bay
19	Miyagi	Mangoku-ura	49	Kyoto	Aso Sea and Miyazu Bay
20	Miyagi	Matsushima Bay	50	Kyoto	Kumihama Bay
21	Miyagi	Kesennuma Bay	51	Osaka, etc.	the Seto Inland Sea
22	Miyagi	Ogatsu Bay	52	Wakayama	Tanabe Bay
23	Miyagi	Onagawa Bay	53	Yamaguchi	Senzaki Bay
24	Miyagi	Samenoura Bay	54	Yamaguchi	Hukawa Bay
25	Miyagi	Shizugawa Bay	55	Yamaguchi	Yuya Bay
26	Fukushima	Matsukawaura	56	Kochi	Urato Bay
27	Fukushima	Onahama Bay	57	Kochi	Uranouti Bay
28	Ibaraki	Kashima Port	58	Fukuoka	Hakata Bay
29	Chiba, etc.	Tokyo Bay	59	Fukuoka, etc.	the Ariake Sea and Shimabara Bay
30	Niigata	Ryuto Port	60	Saga and Fukuoka	Karatsu Bay
61	Saga and Nagasaki	Imari Bay	62	Saga	Kariya Bay
63	Nagasaki	Nagasaki Bay	64	Nagasaki	Omura Bay
65	Nagasaki	Sasebo Bay	66	Nagasaki	Tatibana Bay
67	Nagasaki	Shiziki Bay	68	Nagasaki	Gonoura
69	Nagasaki	Hansei Bay	70	Nagasaki	Utiumi
71	Nagasaki	Miura Bay	72	Nagasaki	Aso Bay
73	Kumamoto and Kagoshima	the Yatsushiro Sea	74	Kumamoto and Kagoshima	Yokaku Bay
75	Oita	Nyuzu	76	Miyazaki	Ozue Bay
77	Kagoshima	Kagoshima Bay	78	Kagoshima	Naze Port
79	Kagoshima	Naka-Koshikiura	79	Kagoshima	Yakuli Bay
80	Kagoshima	Kuzi Bay and Shinokawa Bay	81	Kagoshima	Satsukawa Bay
82	Kagoshima	Syodon Bay	83	Kagoshima	Miura Bay
84	Kagoshima	Kasari Bay	85	Okinawa	Kin Bay
86	Okinawa	Yonaha Bay	87	Okinawa	Hanezainakai
88	Okinawa		88	Okinawa	

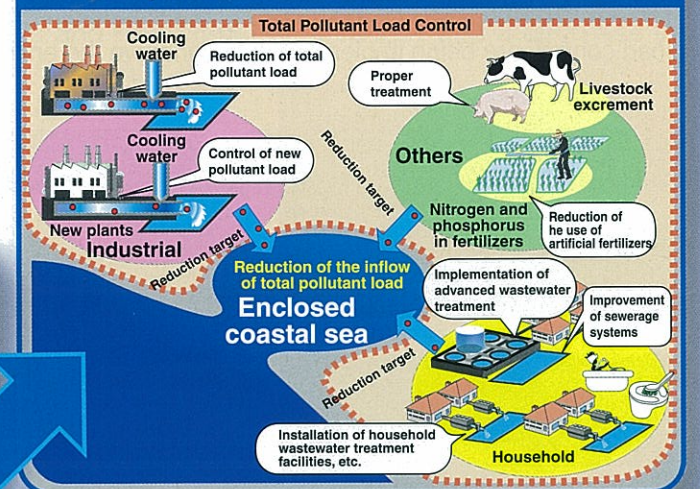
Total Pollutant Load Control and its System

In addition to concentration control, total pollutant load control should be in place to reduce the pollutant load in enclosed coastal seas, as the inflow of pollutants from densely populated or industrial areas into enclosed coastal seas causes serious water pollution.

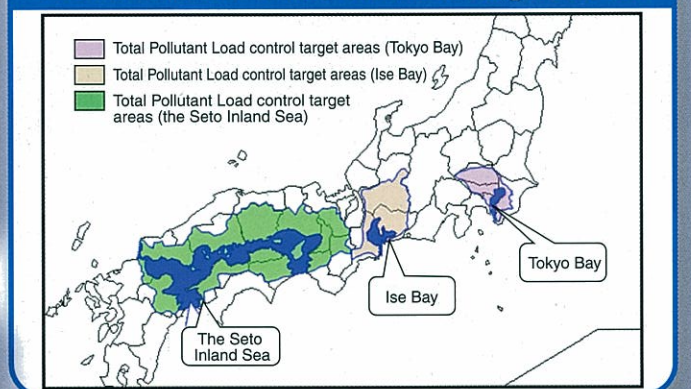
Emission concentration regulation



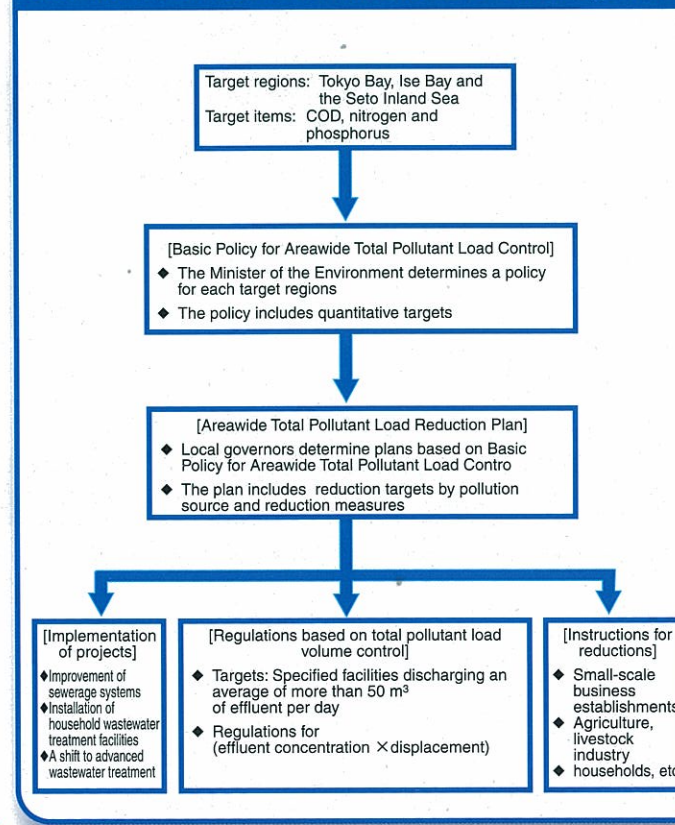
Concept of Total Pollutant Load Control



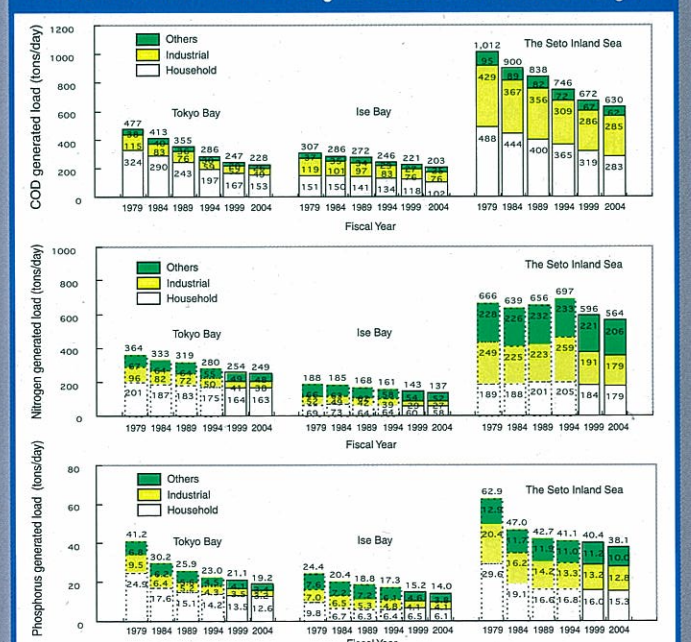
Total Pollutant Load Control Target Areas



Outline of the Total Pollutant Load Control System

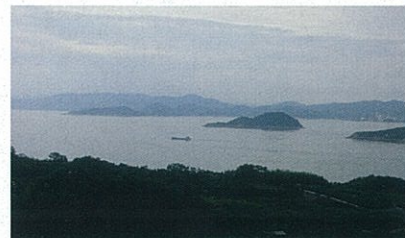


Trends in Pollutant Load in Designated Areas and Reduction Targets



■ Environmental Conservation of the Seto Inland Sea

The Seto Inland Sea is a scenic area unrivalled not only in Japan but also in the world; it is a storehouse of valuable fishery resources that should be passed on to future generations. Based on the Law Concerning Special Measures for the Environmental Conservation of the Seto Inland Sea, therefore, a variety of measures, including total pollutant load control, are being implemented to conserve the environment of the Seto Inland Sea.

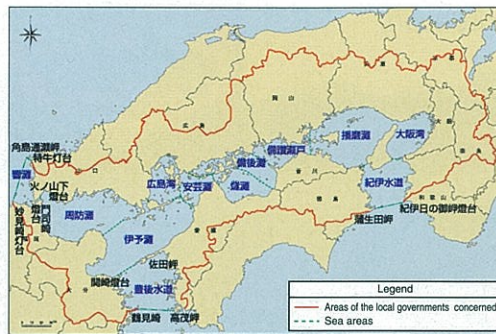


Scenic islands in the Seto Inland Sea



Photo credit: Toba Aquarium

Finless porpoise parent and child



Target areas regions of the Law Concerning Special Measures for Conservation of the Environment of the Seto Inland Sea



Photo credit: IDEA Consultants, Inc

Horseshoe crab



Fishing of spotted sardines

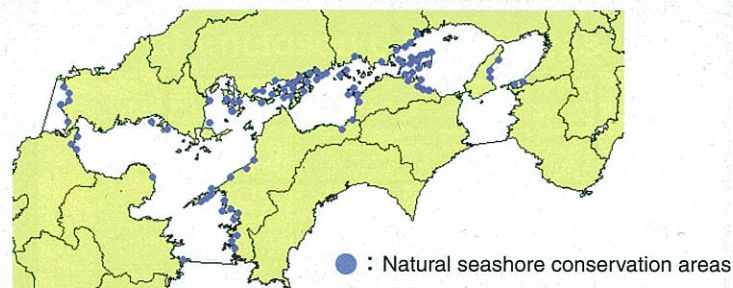
Regulations for the Installation of Specified Facilities

Because of the peculiarity of the Seto Inland Sea, environmental impact assessments are required before making an application for the installation of special facilities in the area.

Seas		Enclosed coastal seas			Other seas	
		Seto Inland Sea	Tokyo Bay, Ise Bay	Other enclosed coastal seas		
Effluent standards	Health items	○	○	○	○	
	Items related to living environment	COD, etc	○	○	○	○
		N · P	○	○	○	-
Total pollutant load control system (COD, N · P)		○	○	-	-	
Procedures for installation of specified facilities, etc.		Admission	Notification required	Notification required	Notification required	

Natural seashore Conservation

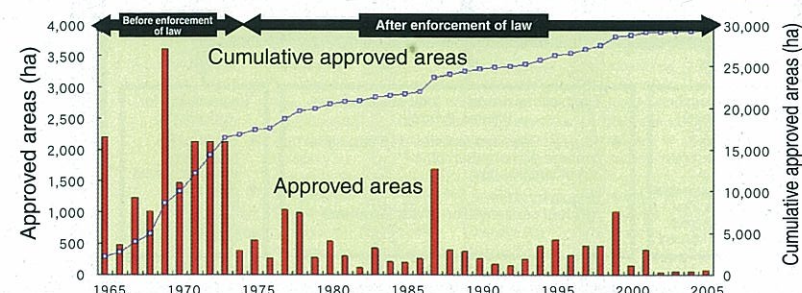
Based on the Law Concerning Special Measures for Conservation of the Environment of the Seto Inland Sea, the competent local governments designate the natural seashore of the Seto Inland Sea and the sea facing it as a conservation area to protect the valuable natural seashore accessible to the public.



● : Natural seashore conservation areas

Special Consideration to Reclamation, etc.

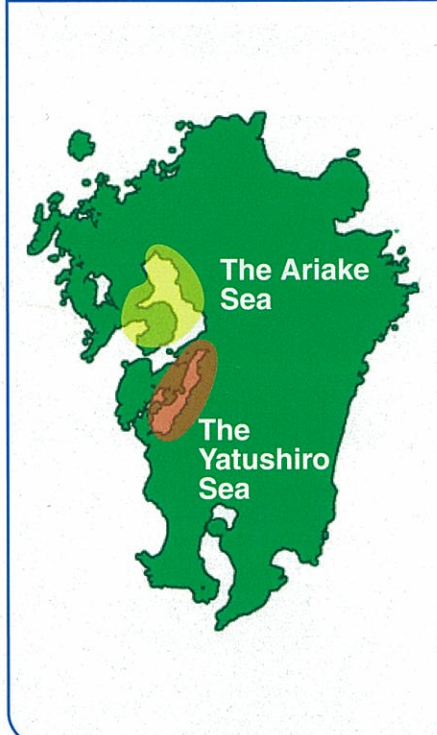
Reclamation should be strictly controlled to prevent environmental deterioration. When issuing licenses for public water body reclamation, therefore, special consideration must be given to the special characteristics of the Seto Inland Sea.



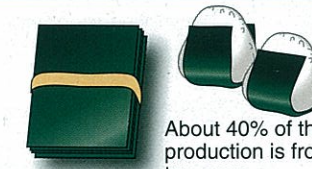
■ Regeneration of the Ariake Sea and the Yatushiro Sea

The Ariake Sea and the Yatushiro Sea, which together constitute a unique environment, are also a storehouse of valuable fishery resources. These seas, however, are faced with a number of critical challenges, such as the frequent occurrence of red tides and oxygen-deficient water, and a decrease in fishery production. Thus, a series of remediation measures are underway, based on Law on Special Measures to Restore the Ariake and the Yatushiro Seas.

Geographical location of the Ariake Sea and the Yatushiro Sea



Laver



About 40% of the total production is from these two seas

Japanese Littleneck



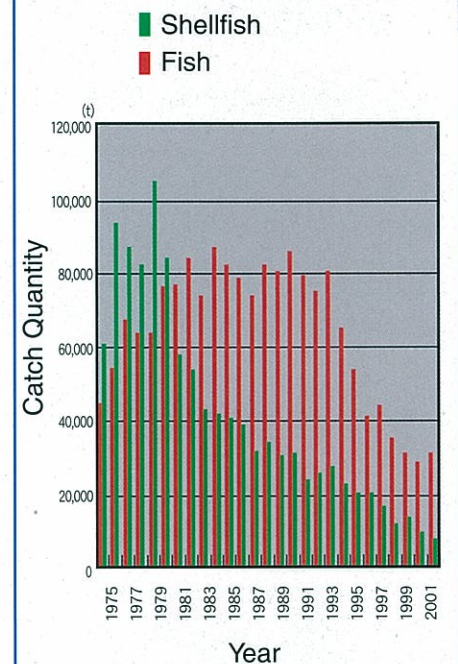
The production decreased from 65,000 tons in 1977 to some 2,000 tons; it is on the rise thanks to the introduction of catch quotas

Tairagi (Fan Shell)



Tairagi is a large fan-shaped bivalve; it stays in an upright position with the pointed tip stuck in the sand. The ligaments are eaten raw and the intestines, with ponzu sauce. Tairagi is now an expensive luxury as the catch is decreasing.

Decrease in Catch Quantity



Outline of the Law on Special Measures to Restore the Ariake and the Yatushiro Seas

◆ Designation of Areas (Article 3)

◆ Basic Policy for the remediation of the Ariake Sea and the Yatushiro Sea (Article 4)

◆ Prefectural plans for the restoration of the Ariake Sea and the Yatushiro Sea (Article 5)

◆ Government subsidies (Article 8-10)
◆ Exceptions to subsidy rates
◆ Consideration for local bonds (Article 11)
◆ Financing, etc. (Article 12)

◆ Implementation of projects by the national and local governments (Article 6)
◆ Restoration measures (Article 13-17, 19)
Water conservation, removal of drifting debris, adjustment of the river flow statuses, Conservation and improvement forests, Stocking of marine plants and animals, Appropriate use of acid agents, etc.
◆ Implementation of surveys and research, improvement of the system (Article 18)
◆ Bailouts for fishery operators (Article 22)
◆ Dissemination of information and knowledge (Article 23)

◆ Ariake and Yatushiro Sea Study Council (Article 24-25)
The progress of restoring the Ariake Sea and the Yatushiro Sea shall be reviewed by the council, based on the results of surveys conducted by the national and local governments, to revise the law.

◆ The law shall be reviewed within five years of enforcement, based on the status of the enforcement and the results of the surveys (Supplementary Provision 3)
Note 1: The competent ministers are those of the following ministries: the Ministry of Internal Affairs and Communications; the Ministry of Education, Culture, Sports, Science and Technology; the Ministry of Agriculture, Forestry and Fisheries; the Ministry of Economy, Trade and Industry; the Ministry of Land, Infrastructure and Transport; the Ministry of the Environment.

Note 2: The prefectures concerned are Fukuoka, Saga, Nagasaki, Kumamoto, Oita and Kagoshima.
Promulgation and enforcement: November 29, 2002