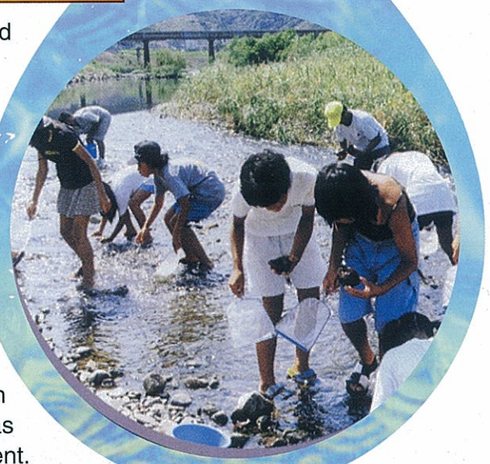
Education and Awareness Raising

Nationwide Survey of Aquatic Life

This survey is designed to study the biota of rivers, which are home to a variety of aquatic life (river crabs, water moths, etc.), thereby monitoring the water quality of sampling areas. Being a simple survey that can be done by everyone from children to adults, it has become an annual event.



Cooperation of local communities and their voluntary action are both essential to promoting water environmental conservation. Support measures are thus in place to motivate local communities.

Kid Hota-rangers "Kodomo-Hotarenja"

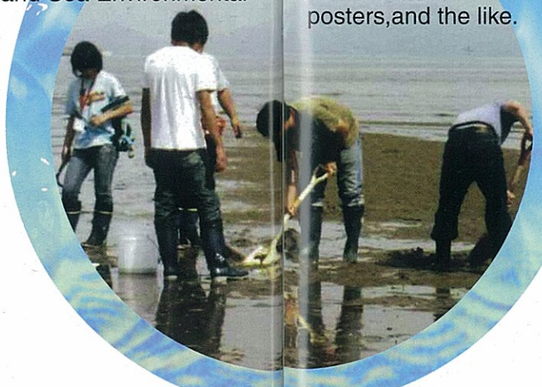
"Kodomo-Hotarenja" are a group of kids who are engaged in the conservation of rivers and lakes where the larvae of fireflies can grow. Their activity reports have been recruited since fiscal 2004, and a typical activities or unique activities in that have been being commended by the Minister of the Environment, it aims at a further spread of the water environmental conservation activities.

Best Beach 100

A total of 100 precious beaches where people can commune with water are designated as the "Best Beach 100", based on the criteria; water quality, accessibility, environmental education activity, etc.

Seto Inland Sea Environmental Conservation Month

The month of June is "Seto Inland Sea Environmental Conservation Month", which is designed to promote and raise the awareness of the Seto Inland Sea Environmental Conservation. the 13 prefectures with the Seto Inland Sea hold programs such as seminars, lecture meetings, beach cleanup and distribution of posters,and the like.



Selected 100 Exquisite and Well-conserved Waters

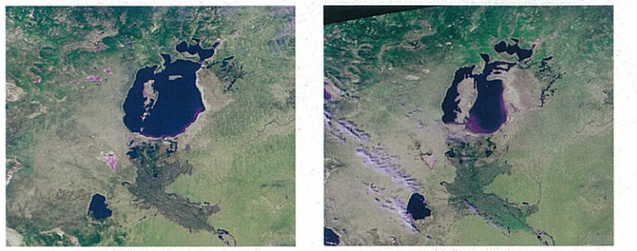
The top 100 springs and rivers nationwide were selected, and named the Selected 100 Exquisite and Well-conserved Waters. The purpose is to rediscover accessible, clean water that has long been part of community life and conserved by local communities, and to make it known to the public.
Every year, The National Liaison Council for the Conservation of Water Quality that is organized municipalities of locating "Exquisite and Well-conserved Waters" holds a symposium for promoting the preservation of water environment.

Global Water Problems and Japan's Approaches to Them

There are countries facing environmental problems such as water pollution due to growing population, urbanization, etc., each of which should be addressed immediately. Japan, as a responsible member of the international community, has been playing a part in solving such water problems, which are widely recognized as one of the most pressing issues, taking advantage of its expertise and experience in addressing a variety of water environmental problems.

The present state of the world's water problems

The Aral Sea



April 26, 1989

April 26, 2001

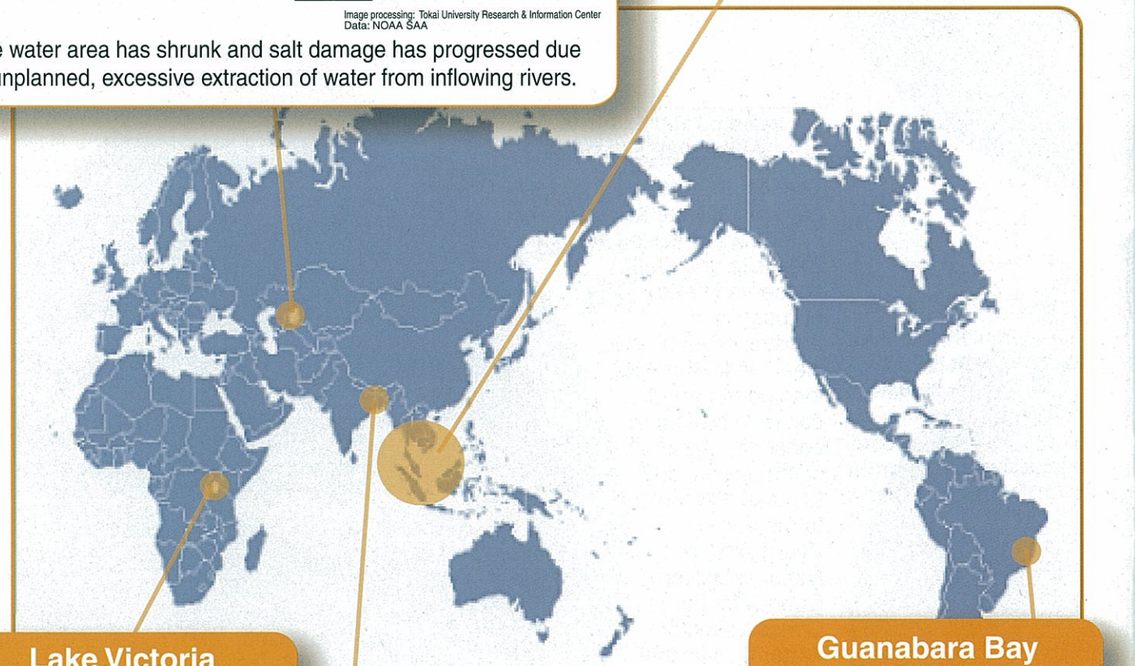
0 200(km)

Image processing: Tokai University Research & Information Center
Data: NOAA SAA

The water area has shrunk and salt damage has progressed due to unplanned, excessive extraction of water from inflowing rivers.

Southeast Asia

Industrial wastewater from plants and domestic wastewater from hotels, restaurants and households flow directly into rivers, causing serious water pollution.



Lake Victoria

The growing local population and expanding farmland are causing eutrophication of the lake, having adverse impacts on the ecosystem and fisheries.

Bangladesh and India (West Bengal)

The groundwater is polluted with arsenic.

Guanabara Bay

Water pollution is becoming a serious problem as the sewage from ghettos flows directly into the enclosed coastal sea, with inadequate treatment of waste.

Trends in international conferences on water problems

◆ Commission on Sustainable Development, the United Nations

With focus on "water", "sanitation" and "human habitation", the 13th meeting held in April 2005 came up with policy options to "halve, by 2015, the proportion of people without access to safe drinking water and sanitation", which is part of the "Millennium Development Goals". The 16th meeting scheduled for 2008, moreover, will follow up developments in water and sanitation policies.

◆ Advisory Board on Water and Sanitation, the United Nations

The Advisory Board on Water and Sanitation was set up in March 2004 as an advisory board to the then United Nations Secretary-General Kofi Annan, with ex-Prime Minister Ryutaro Hashimoto as the chairman. The Hashimoto Action Plan (Your Action, Our Action) was developed and announced in time for the 4th World Water Forum, which was held in March 2006.

◆ World Water Forum

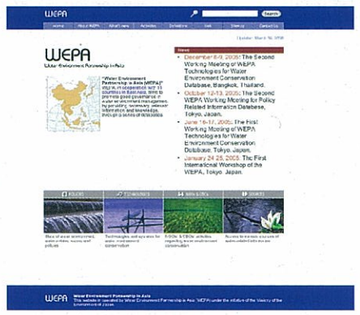
The World Water Forum is a triennial international conference, where a variety of organizations engaged in water problem-related activities (national governments, international agencies, private businesses, NGOs, research institutions, etc.) get together to discuss solutions. The 3rd forum was held in March 2003 in Kyoto, Shiga and Osaka, and the 4th forum in March 2006 in Mexico City, with the 5th forum scheduled for March 2009 in Istanbul.

The environmental subcommittee at the 4th World Water Forum (Mexico City)

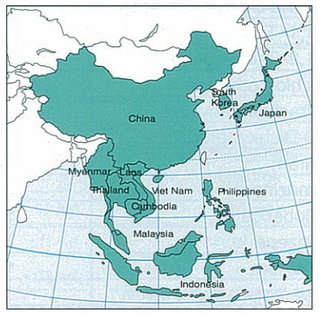
Actions taken by the Ministry of Environment

◆ Water Environment Partnership in Asia (WEPA)

Water Environment Partnership in Asia (WEPA) aims to solve water pollution problems in the Asian monsoon region. To this end, concerted efforts are underway to create a water environmental database and develop human resources, thereby strengthening regional water environmental governance. The database, meanwhile, was released in March 2006.
(WEPA database:
http://www.wepa-db.net)



WEPA Website



WEPA member countries

◆ Dissemination of information about water environmental conservation programs

◆ Surveys and research to conserve the world water environment

◆ Support for surveys to solve water pollution problems

<Reference> Environmental Quality Standards - 1

■ Environmental quality standards for water pollution

The basic Environment Low establishes two kinds of Environmental Quality Standard (EQS) relating to water pollution: environmental water quality standards for protecting human health, and environmental water quality standards for protecting the living environment. Each type of standard establishes levels desirable for achieving and maintaining public-water and other water-quality policy objectives.

Currently, EQSs have been established for 26 substances relating to human health, including cadmium and total cyanide. Environmental standards were established for groundwater quality in March 1997. Additionally, 27 other substances have been designated as "monitoring substances." These substances have not been made directly into EQSs as of the present time, but they have been identified as needing further observation.

EQSs have also been established relating to the living environment, including standards for biochemical oxygen demand (BOD), Chemical oxygen demand(COD), and dissolved oxgen(DO). Further, EQS have been established for nitrogen and phosphorus levels in lakes/reservoirs and sea/coastal areas, in order to prevent eutrophication.

Additional environmental quality standards were established in 2003 for total zinc to conserve aquatic life. Moreover, 3 other substances have been designated as "monitoring substances."

■ Environmental quality standards for human health

Standards

Item	Standard values
Cadmium	≤ 0.01 mg/L
Total cyanide	Not detectable
Lead	≤ 0.01 mg/L
Hexavalent chromium	≤ 0.05 mg/L
Arsenic	≤ 0.01 mg/L
Total mercury	≤ 0.0005 mg/L
Alkyl mercury	Not detectable
PCBs	Not detectable
Dichloromethane	≤ 0.02 mg/L
Carbon tetrachloride	≤ 0.002 mg/L
1,2- Dichloroethane	≤ 0.004 mg/L
1,1-Dichloroethylene	≤ 0.02 mg/L
Cis 1.2-Dichloroethylene	≤ 0.04 mg/L
1,1,1- Trichloroethane	≤ 1 mg/L
1,1,2- Trichloroethane	≤ 0.006 mg/L
Trichloroethylene	≤ 0.03 mg/L
Tetrachloroethylene	≤ 0.01 mg/L
1,3-Dichloropropene	≤ 0.002 mg/L
Thiram	≤ 0.006 mg/L
Simazine	≤ 0.003 mg/L
Thiobencarb	≤ 0.02 mg/L
Benzene	≤ 0.01 mg/L
Selenium	≤ 0.01 mg/L
Nitrate nitrogen and nitrite nitrogen	≤ 10 mg/L
Fluoride	≤ 0.8 mg/L
Boron	≤ 1 mg/L

Monitored substances and guideline values

Categories	Guideline values
Chloroform	≤ 0.06 mg/L
trans1,2-Dichloroethylene	≤ 0.04 mg/L
1,2- Dichlor propane	≤ 0.06mg/L
p- Dichlor benzene	≤ 0.2 mg/L
Isoxathion	≤ 0.008 mg/L
Diazinon	≤ 0.005 mg/L
Fenitrothion (MEP)	≤ 0.003 mg/L
Isoprothiolane	≤ 0.04 mg/L
Oxine copper (organocopper)	≤ 0.04 mg/L
Chlorothalonil (TPN)	≤ 0.05 mg/L
Propyzamide	≤ 0.008 mg/L
EPN	≤ 0.006 mg/L
Dichlorvos (DDVP)	≤ 0.008 mg/L
Fenobucarb (BPMC)	≤ 0.03 mg/L
Iprobenfos (IBP)	≤ 0.008 mg/L
Chlornitrofen (CNP)	–
Toluene	≤ 0.6 mg/L
Xylene	≤ 0.4 mg/L
Diethylhexyl phthalate	≤ 0.06 mg/L
Nickel	–
Molybdenum	≤ 0.07 mg/L
Antimony	≤ 0.02 mg/L
Vinyl chloride monomer	≤ 0.002 mg/L
Epichlorohydrin	≤ 0.0004 mg/L
1,4-Dioxane	≤ 0.05 mg/L
Total manganese	≤ 0.2 mg/L
Uranium	≤ 0.002 mg/L

Remarks 1. Standard values are for annual average values. However, the value for total cyanide is the maximum value.
2. "Not detectable" means that when the substance is measured by the specified method, the amount is less than the quantitative limit defined by that method.
3. The standard values for boron and fluoride are not applied to coastal waters.

■ Environmental quality standards for conservation of the living environment

1. Rivers (excluding lakes)

A

Item class	Water use	Standard value: Hydrogen-ion concentration (pH)	Biochemical oxygen demand (BOD)	Suspended solids (SS)	Dissolved oxygen (DO)	Total coliform
AA	Water supply class 1, conservation of natural environment, and uses listed in A-E	6.5 ≤ pH ≤ 8.5	≤ 1 mg/L	≤ 25 mg/L	≥ 7.5 mg/L	≤ 50 MPN/100mL
A	Water supply class 2, fishery class 1, bathing and uses listed in B-E	6.5 ≤ pH ≤ 8.5	≤ 2 mg/L	≤ 25 mg/L	≥ 7.5 mg/L	≤ 1,000 MPN/100mL
B	Water supply class 3, fishery class 2, and uses listed in C-E	6.5 ≤ pH ≤ 8.5	≤ 3 mg/L	≤ 25 mg/L	≥ 5 mg/L	≤ 5,000 MPN/100mL
C	Fishery class 3, industrial water class 1, and uses listed in D-E	6.5 ≤ pH ≤ 8.5	≤ 5 mg/L	≤ 50 mg/L	≥ 5 mg/L	—
D	Industrial water class 2, agricultural water, and uses listed in E	6.0 ≤ pH ≤ 8.5	≤ 8 mg/L	≤ 100 mg/L	≥ 2 mg/L	—
E	Industry water class 3 and conservation of environment	6.0 ≤ pH ≤ 8.5	≤ 10 mg/L	Floating matter such as garbage should not be observed.	≥ 2 mg/L	—

Remarks: 1. Standard values are based on daily average values. The same applies to the standard values of lakes and coastal waters.
2. At intake for agriculture, pH shall be between 6.0 and 7.5 and DO shall be more than 5mg/l. The same applies to the standard values of lakes.

Notes:
1. Nature conservation: Conservation of sightseeing and other environments
2. Water supply class 1: Purify water using filters and other simple means
   Water supply class 2: Purify water using sedimentation filters and other ordinary means
   Water supply class 3: Purify water using pre-treatment and other advanced methods
3. Fishery class 1: For such oligosaprobic members of the Salmonidae (salmon/trout) species as Salmo masou and Salvelinus leuconmaenisu, and marine products for fishery class 2 and 3
   Fishery class 2: For such alpha-oligosaprobic marine products as the Salmonidae (salmon/trout) species, sweetfish, and marine products for fishery class 3
   Fishery class 3: For such beta-oligosaprobic marine products as carp and crucian
4. Industrial water class 1: Water purified using sedimentation and other ordinary means
   Industrial water class 2: Purify water using chemical additives and other advanced means
   Industrial water class 3: Purify water using special means
5. Environmental conservation: Limit of not disrupting the day-to-day lives of the population

B

Item class	Adaptability to aquatic life habitat conditions	Standard value: Total zinc
Aquatic life A	Water bodies inhabited by aquatic organisms such as char, salmon, and trout, and also their prey, which favour relatively low-temperature ranges.	≤ 0.03 mg/L
Special aquatic life A	Water bodies categorized in "Aquatic life A" need to be conserved in particular as breeding or nursery grounds for the aquatic life categorized in "Aquatic life A".	≤ 0.03 mg/L
Aquatic life B	Water bodies inhabited by aquatic organisms such as carp and crucian, and also their prey, which favor relatively high-temperature ranges.	≤ 0.03 mg/L
Special aquatic life B	Water bodies categorized in "Aquatic life B" need to be conserved in particular as breeding or nursery grounds for the aquatic life categorized in "Aquatic life B".	≤ 0.03 mg/L

Remarks: Standard values are based on annual average values (including those for lakes and seas)

2. Lakes (natural lakes and reservoirs that have 10 million cubic meters of water or more)

A

Item class	Water use	Standard value: Hydrogen-ion concentration (pH)	Chemical oxygen demand (COD)	Suspended solids (SS)	Dissolved oxygen (DO)	Total coliform
AA	Water supply class 1, fishery class 1, conservation of natural environment, and uses listed in A-C	6.5 ≤ pH ≤ 8.5	≤ 1 mg/L	≤ 1 mg/L	≥ 7.5 mg/L	≤ 50 MPN/100mL
A	Water supply classes 2 and 3, fishery class 2, bathing, and uses listed in B-C	6.5 ≤ pH ≤ 8.5	≤ 3 mg/L	≤ 5 mg/L	≥ 7.5 mg/L	≤ 1,000 MPN/100mL
B	Fishery class 3, industrial water class 1, agricultural water, and uses listed in C	6.5 ≤ pH ≤ 8.5	≤ 5 mg/L	≤ 15 mg/L	≥ 5 mg/L	—
C	Industrial water class 2 and conservation of the environment	6.0 ≤ pH ≤ 8.5	≤ 8 mg/L	Floating matter such as garbage should not be observed.	≥ 2 mg/L	—

Notes:
1. Conservation of the natural environment: conservation of sightseeing and other environments
2. Water supply class 1: Purify water using filters and other simple means
   Water supply class 2/3: Purify water using sedimentation filters and other ordinary means, and pre-treatment and other advanced methods
3. Fishery class 1: For such marine products inhabiting oligotrophic lakes as sockeye salmon, and marine products for fishery class 2 and 3
   Fishery class 2: For such marine products inhabiting oligotrophic lakes as the Salmonidae (salmon/trout) species, sweetfish, and marine products for fishery class3
   Fishery class 3: For such marine products inhabiting oligotrophic lakes as koi and crucian carp
4. Industrial water class 1: Water purified using sedimentation and other ordinary means
   Industrial water class 2: Purify water using such advanced means as chemical additives and special purification means
5. Conservation of the environment: Limit of not disrupting the day-to-day lives of the population (including things likes walks along the beach)

B

Item class	Water use	Standard value: Total nitrogen	Total phosphorus
I	Conservation of natural environment and uses listed in II-V	≤ 0.1 mg/L	≤ 0.005 mg/L
II	Water supply classes 1, 2, and 3 (except special types), fishery class 1, bathing, and uses listed in III-V	≤ 0.2 mg/L	≤ 0.01 mg/L
III	Water supply class 3 (special types) and uses listed in IV-V	≤ 0.4 mg/L	≤ 0.03 mg/L
IV	Fishery class 2 and uses listed in V	≤ 0.6 mg/L	≤ 0.05 mg/L
V	Fishery class 3, industrial water, agricultural water, and conservation of the environment	≤ 1 mg/L	≤ 0.1 mg/L

Remarks: 1. Standard values are set in terms of annual averages.
2. Standard values are applicable only to the lakes and reservoirs where phytoplankton bloom may occur, and standard values for total nitrogen are applicable to lakes and reservoirs where nitrogen limits phytoplankton growth.
3. Standard values for total phosphorus are not applicable to agricultural water uses.

Notes:
1. Conservation of the natural environment: Conservation of sightseeing and other environments
2. Water supply class 1: Purify water using filters and other simple means
   Water supply class 2: Purify water using sedimentation filters and other ordinary means
   Water supply class 3: Purify water using pre-treatment and other advanced methods (a "special item" is a special purification means capable of removing odor-producing substances)
3. Fishery class 1: For such marine products as the Salmonidae (salmon/trout) species, sweetfish, and marine products for fishery class 2 and 3
   Fishery class 2: For such marine products as smelt and marine products for fishery class 3
   Fishery class 3: Such marine products as koi and crunian carp
4. Conservation of the environment: Limit of not disrupting the day-to-day lives of the population (including things likes walks along the beach)