Conservation of Lake Water Quality

Law Concerning Special Measures for Conservation of Lake Water Quality (Revised in Fiscal 2005, Enforced on April 1, 2006): Effluent Control and Lake Environmental Conservation Systems Added

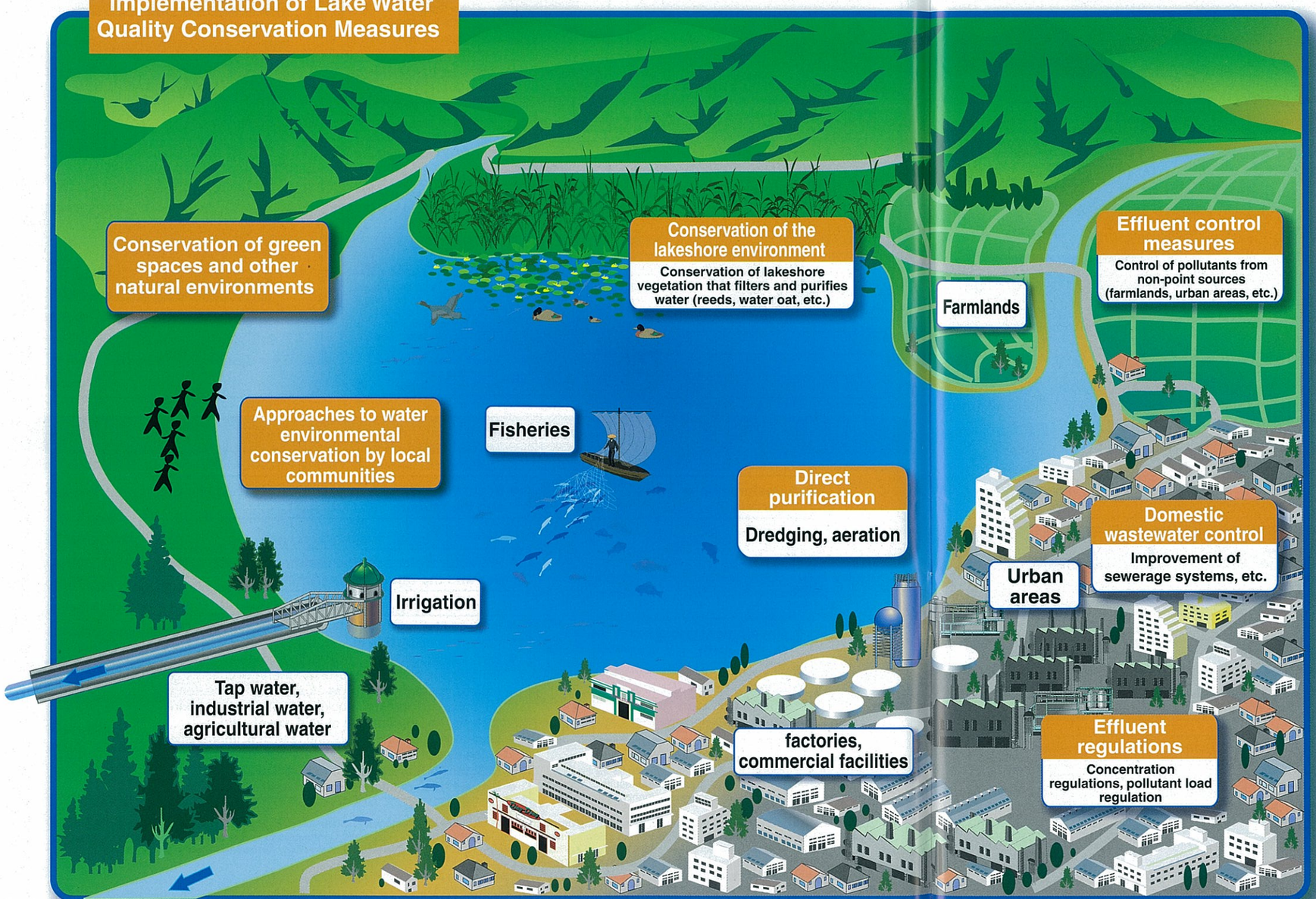
Basic Principles for the conservation of Lake Water Quality
The government establishes the basic principles for conservation of lake water quality (decided by the Cabinet).

→ **Designation of Lakes to be Conserved (Central Government)**
The Minister of the Environment designates lakes to be conserved, based on recommendations by the prefectural governments concerned (decided by the Cabinet).

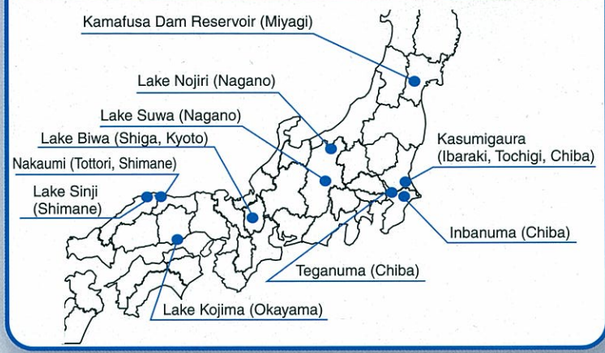
→ **Lake Water Quality Conservation Plan (Prefectural Governments)**
The Minster of the Environment approves the plans through the Conference on Environmental Pollution Control.

→ **Systematic Implementation of Comprehensive Measures**

Implementation of Lake Water Quality Conservation Measures



■ Locations of Designated Lakes



Effluent Control Measures

Effluent control measures are designed to control the inflow of pollutants from non-designated pollution sources (plane sources such as farmlands and urban areas) into lakes; effluent control target areas are designated and plans for effluent control measures are developed and implemented. Specific measures include optimization of the use of fertilizers, improvement of water management, cleanup of urban roads, promotion of the permeation and retention of rainwater permeation systems, and purification of water through vegetation.

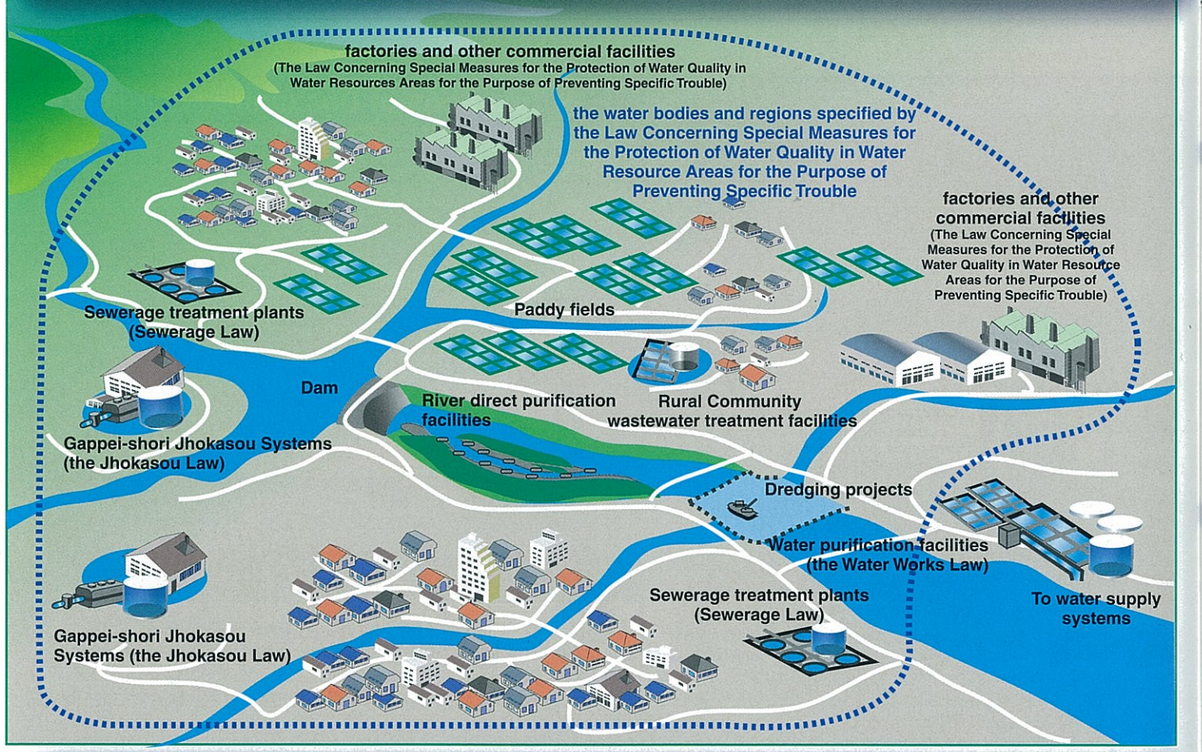
Conservation of the Lakeshore Environment

Notification is required before extracting vegetation growing in the lakeshore environmental conservation areas designated by the competent prefectural governments to conserve vegetation that filters and purifies water; the governors may request or order the restoration of vegetation if needed. The conservation areas are those where designated vegetation that filters and purifies water (hygrophytes, emergent vegetation, floating-leaved plants, submerged plants and free-floating plants) grows.

Protection of Drinking Water Sources

■ Measures to protect the Quality of Drinking Water

The Law Concerning Special Measures for the Protection of Water Quality in Water Resource Areas for the Purpose of Preventing Specific Trouble was enacted in March 1994 to prevent harm from trihalomethanes generated from the water purification process in waterworks.
This law stipulates provisions to prevent damage to the water supply, such as trihalomethanes entering drinking-water mains during the purification process. This law stipulates that the national government must define Basic Policy of Preservation of Water Quality in the Sources of City Water to Prevention of Water Quality in the Source of City Water to Prevent Problems in Specified City Water and Irrigation Systems; that the prefectural governors must formulate water-quality conservation plans based on the water bodies and regions specified by the Ministry of the Environment, based on the reports of the prefectural governors; and that regulations and the other measures to prevent water pollution must be implemented in a comprehensive and planned-out manner.
Note that water utilities conserve the quality of water sources by adopting sophisticated purification facilities, including ozone treatment facilities and activated carbon treatment facilities.



■ The Law Concerning Special Measures for the Protection of Water Quality in Water Resouce Areas for the Purpose of Preventing Specific Trouble

Basic Policy	◆ Basic Policy for protecting water bodies for water sources ◆ Basic measures for protecting water quality of specified water bodies	Minister of the Environment	Cabinet Decision
Reports by prefectural governors (specification of water bodies)		Request by water utility Interview with water utility	
Specification of water bodies and regions		Minister of the Environment	Cabinet Decision
Water Quality Conservation Plans	◆ Policies on conserving the water quality of specifies water bodies ◆ Promotion of conservation of water quality ◆ Regulations and other control measures	Interview with prefectural governors Interview with project implementers, municipalities and water utilities concerned Consultation with river administrators Consultation with the Minister of the Environment → Conference on Environmental Pollution Control Formulated by prefectural governors	

An Action for the Water Environment Soundness Index

The index that is found now?

With the advent of the 21st century, often termed 'the century of water,' the public are becoming increasingly of the importance of the aquatic environment. While water quality is indeed improving, the current situation appears to be that a healthy water environment has yet to be established.
The water environment, in the first place, is made up of a variety of constituents, including water quality, water flow, aquatic life, various water uses and the relation between humans and water, with amenity, regionality, history and culture as a backdrop. These constituents need to be appropriately protected according to the characteristics of each regional water environment if people are to enjoy and experience a healthy water environment.

What is the water environmental heath index

The water environment health index is designed to serve as a "viewpoint" for deliberations on the water environment and a "scale" to monitor its status and conservation activities. Specifically, the focus is on the following:

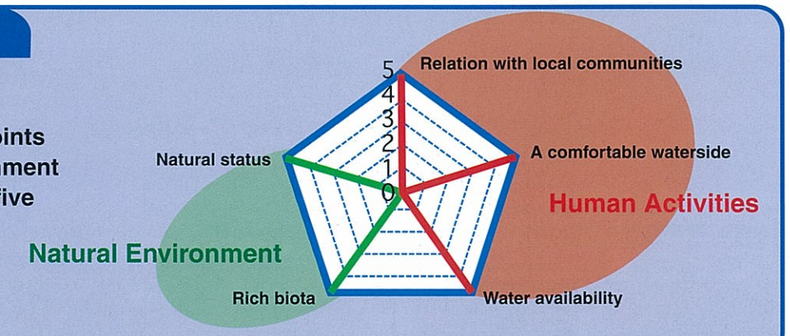
- ☞ Monitor the status of the water environment from various viewpoints, including water quality, taking people's sense of satisfaction into account
- ☞ Be user-friendly so that the index can be used continuously
- ☞ Incorporate the achievements of local communities, NPOs, etc. to assist the development of administrative measures

How is the water environment evaluated?

When asked "How is the water environment evaluated?" or "What is considered good for the water environment?" one might come up with various answers, some of which could be related to others. The water environment health index consists of the following five points of view (evaluation axes):

Basis of Water Environment Evaluation

The water environment is evaluated, based on two points of view (the natural environment and human activities) and five axes.

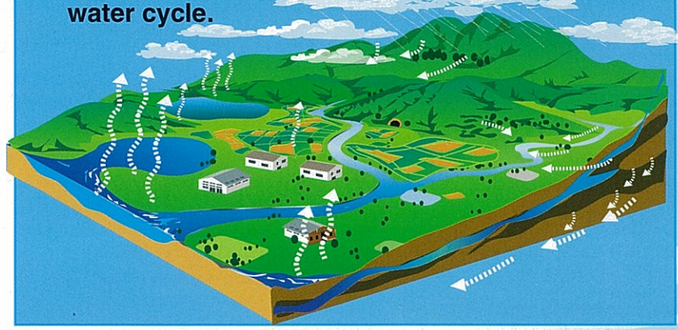


[Evaluation Axes]	[Interpretation]
Natural status	- How pristine is the environment?
Rich biota	- Is it habitable or are there living things?
Water availability	- Is this water clean? How can it be used?
A comfortable waterside	- What sort of waterside do people find comfort?
Relation with local communities	- How important is the waterfront to the local community?

Efforts to Secure an Environmentally Sound Water Cycles

A variety of problems are emerging due to rapid changes in the water environment, which emphasizes the need to take early effort to secure sound water cycles.

The rain water that falls on the ground is first retained in the soil and then becomes groundwater or else remains as surface water that flows into rivers, lakes and seas – a process during which it evaporates to form clouds, which in turn produces rain. This is the never-ending water cycle.



Background

- Climate change
- Rapid population growth in urban areas, concentration of industrial activities, expansion of urban areas
- Changes in land-use
- Changes in the industrial structure
- Changes in lifestyles (shift to a mass consumption society)
- Advancement of the economy, emphasis on efficiency

Factors

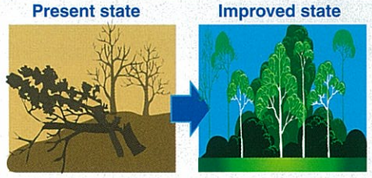
- Scarce precipitation, the widening gap between insufficient and heavy precipitation
- Deterioration of catchment basins (loss of permeating function, water-retaining capacity, water detention and natural purification capacity)
- Growth in demand for service water
- Increase in pollution load, diversification of pollutants
- Increase in demand for safe, pleasant tasting water
- Decrease in water surface area, waterfront spaces and green spaces
- Excessive pumping of groundwater

Problems with water cycle systems

- Decrease in river flow
- Water shortages, frequent occurrence of drought
- Frequent occurrence of urban floods
- Increase in the potential for flood and drought damage
- Deterioration of water quality and the occurrence of new water quality problems
- Decrease in groundwater levels, drying of springs, Ground subsidence
- Adverse impact on ecosystems
- Decrease in water activities, loss of water cultures

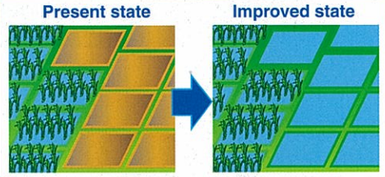
Forest conservation

Present state → Improved state



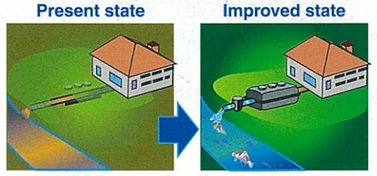
Promotion of groundwater recharge

Present state → Improved state



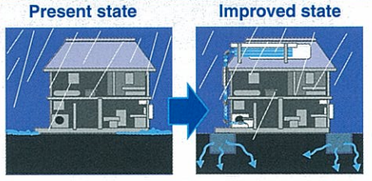
Installation of municipal wastewater treatment facility such as Johkasoh and sewage systems

Present state → Improved state



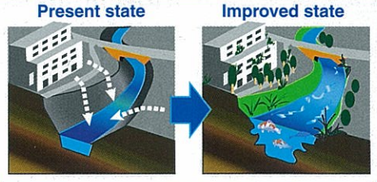
Installation of rainwater infiltrating facilities

Present state → Improved state



multiple nature-type river creation

Present state → Improved state



Development of green spaces

Present state → Improved state