

# Water Quality Conservation Measures for River Water in Japan

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環境省水・大気環境局水環境課  
Water Environment Division,  
Environmental Management Bureau,  
Ministry of the Environment, Japan (MOEJ)

岩崎 宏和  
IWASAKI Hirokazu

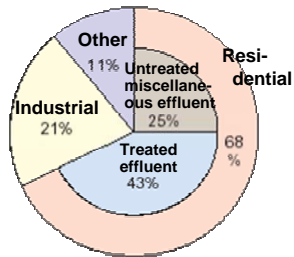
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## 1.Measures for Domestic Effluent

To prevent the water pollution of public waters, measures for domestic effluent are being promoted.

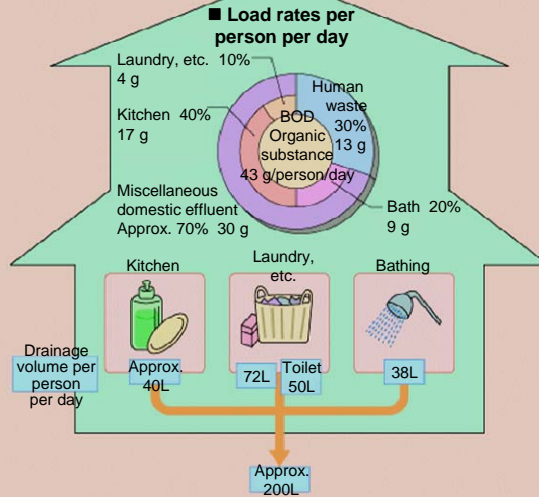
Rates of pollutant load according to source categories



Tokyo Bay FY1999

For example, **about 70 percent** of pollutant load of the Tokyo Bay comes from **residential wastewater**.

Rates of domestic effluent and biochemical oxygen demand (BOD)



## 1.Measures for Domestic Effluent

### Water Pollution Control Law

#### [Responsibilities and Obligations of Concerned Parties]

National government:	dissemination of knowledge, and technical and financial support for local public bodies
Prefectural governments:	implementation of policies for a large area and comprehensive coordination of policies administered by municipalities
Municipalities:	improvement of domestic effluent treatment facilities such as sewage systems, raising of awareness, etc.
Citizens:	proper disposal of cookery refuse, waste cooking oil, etc., proper use of detergents, and cooperation with administrative policies

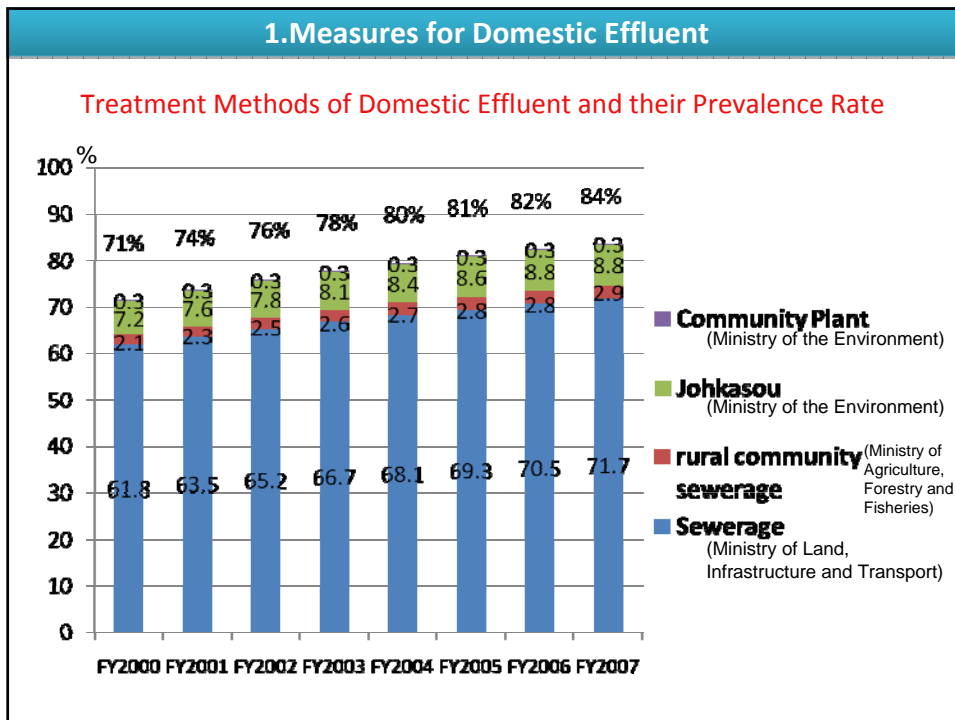
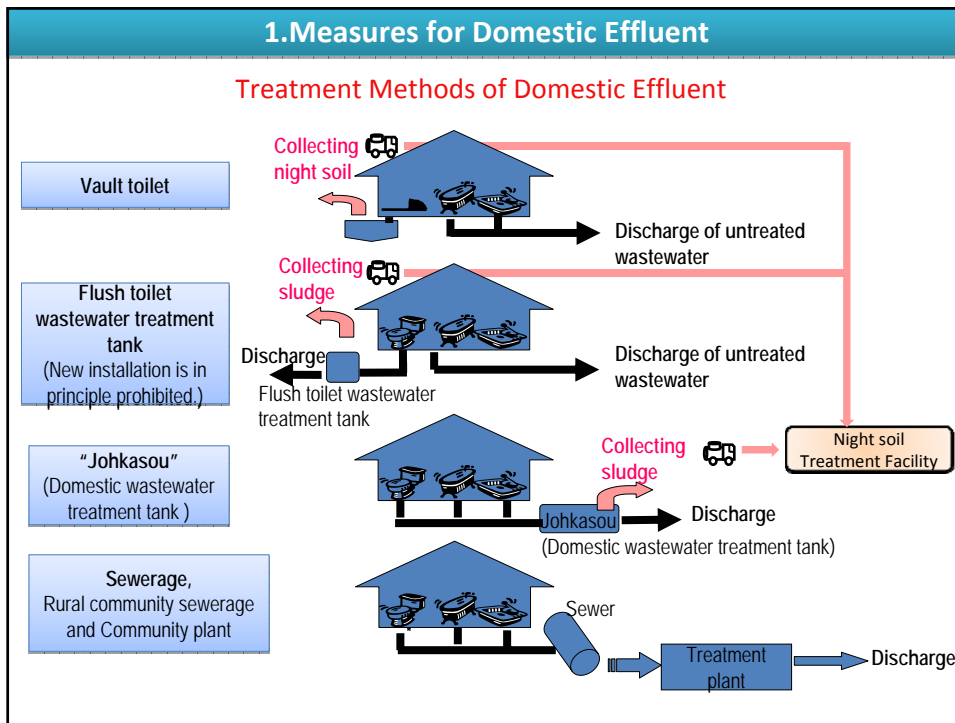
- Execution of projects  
Improvement of sewage systems, rural community sewerage, private sewage treatment tanks, etc.
- Measures at home  
Measures at kitchens such as disposal of cookery refuse and oil

#### [Important Areas for Domestic Effluent Measures]

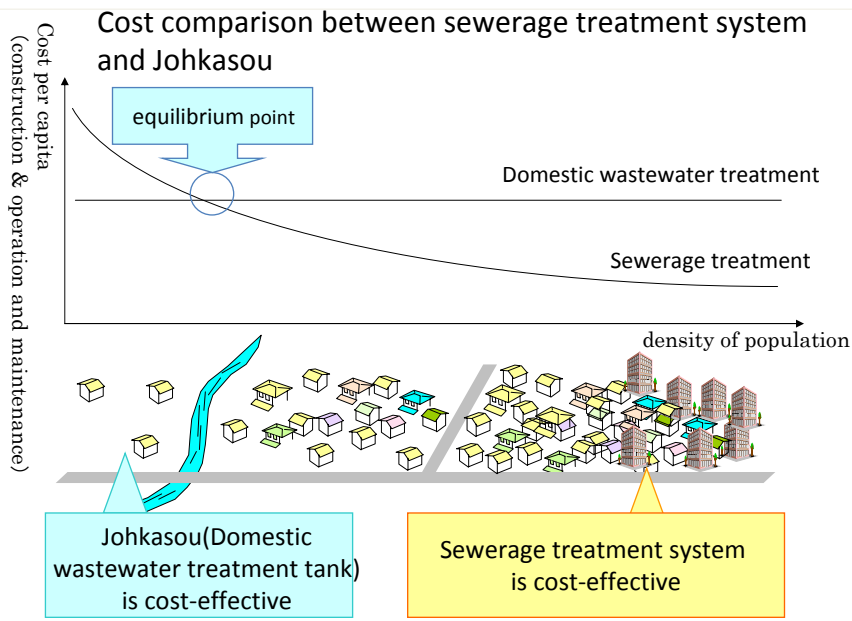
- Designation of important areas for domestic effluent measures by prefectural governors
- Drawing up of a promotion plan for domestic effluent measures by municipalities
- Execution of policies such as improvement of facilities and promotion of domestic effluent measures

Sewage Water Law (the Ministry of Land, Infrastructure and Transport): approval system for project plans, etc.

Private Sewerage System Law (Waste Management and Recycling Department of the Ministry of the Environment, and the Ministry of Land, Infrastructure and Transport): notification system for installation, prohibition of new installation of flush toilet wastewater treatment tank, standards for operation and maintenance, etc.



## 1.Measures for Domestic Effluent



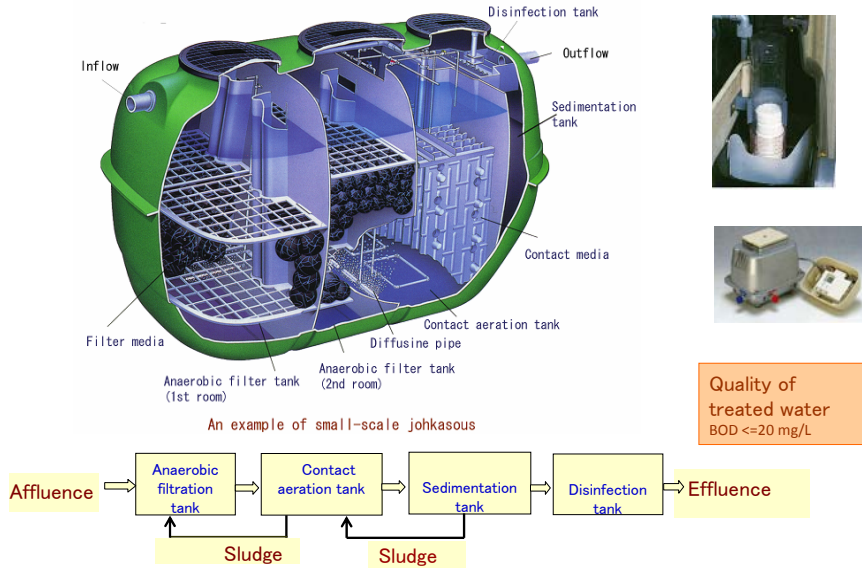
## 1.Measures for Domestic Effluent

### Comparison between sewerage treatment system and Johkasou

		Sewerage treatment system	Johkasou (Domestic wastewater treatment)
Function		Wastewater treatment and Prevention of inundation	Wastewater treatment
Object		Treating wastewater collectively	Treating wastewater individually
Suitable area		Urban area	Area of scattered population
Administrator		Municipality	Individual or Municipality
Useful life of facility	legal	Treatment plant : 23 years Piping system : 50 years	7 years
	past results	Treatment plant : 15-70 years Piping system : 50-120 years	main body : over 30 years equipment : 7-15 years

## 1.Measures for Domestic Effluent

### Johkasou System for Domestic Waste Water Treatment



## 1.Measures for Domestic Effluent

### Johkasou Law

#### Circumstances of the Establishment of the Johkasou Law

At one time in Japan, human waste was utilized as fertilizer, and so its treatment never became an issue in particular. However, as chemical fertilizers spread and at the same time urbanization progressed with the population concentrating in urban centers, the sanitary treatment and disposal of human waste became an issue. With improvement of people's living standards, the request for flush toilets increased rapidly. In such a situation, the construction of the sewerage system was not able to fill this request sufficiently in terms of finance and time. As a result, a large part of building the flushing system depended on Flush toilet wastewater treatment tanks (Tandoku-Shori Johkasou). However, there arose the problem of tanks without notification and the problem of the pollution of public waters due to their improper operation and maintenance. Hence, the law was enacted for the purpose of the proper management of the tanks (Johkasou).

## 1.Measures for Domestic Effluent

### Johkasou Law

#### [Purpose]

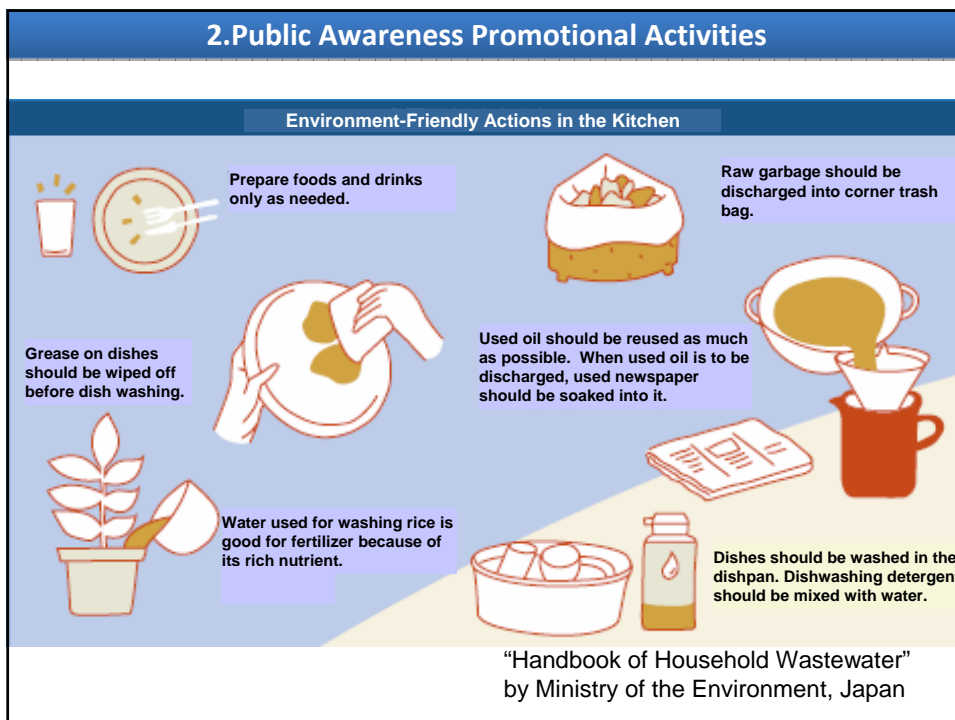
This Law aims at the proper treatment of human waste and miscellaneous effluent by means of Johkasou from the viewpoint of the conservation of water quality of public waters, thereby contributing to the conservation of the living environment and enhancement of public health.

#### [Treatment of Human Waste by Means of Septic Tanks]

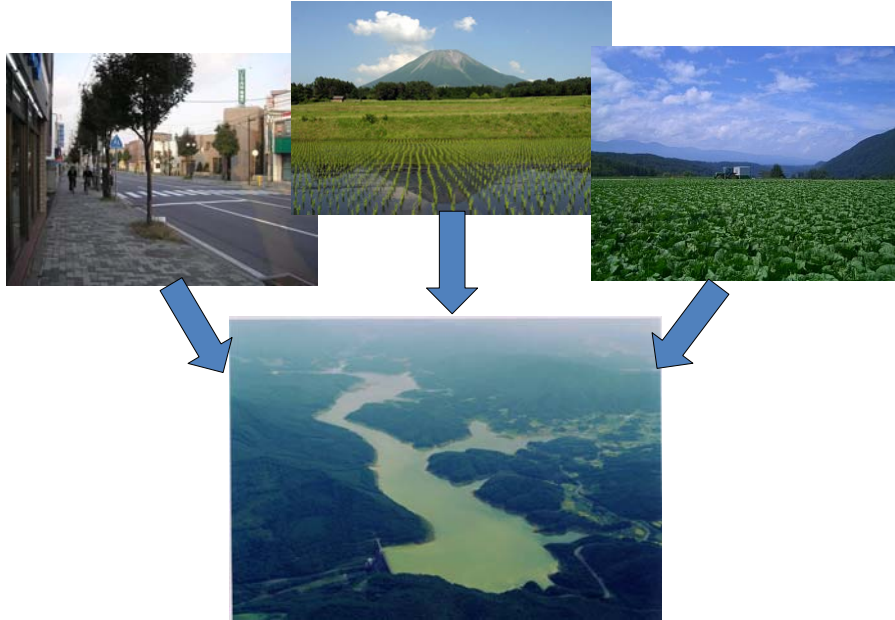
- No person shall discharge human waste into public waters before it is treated by a Johkasou, except for the case in which it is treated by final treatment sewerage or a night soil treatment facility based on Article 8 of the Waste Management and Public Cleansing Law.
- No person shall discharge into public waters miscellaneous effluent that the person who uses a Johkasou for the treatment of human waste discharges, before it is treated by a septic tank.
- The person who uses a Johkasou shall observe the general standards stipulated by the Ordinance of the Ministry of Environment concerning the utilization of the Johkasou for maintenance of the normal function of the Johkasou.

## 2.Public Awareness Promotional Activities

- Creation and distribution of pamphlets, flyers, etc.
- Poster displays, signs, etc.
- Symposiums, forums, workshops, study groups and other events
- Distribution of sink-corner strainers, filter paper and other materials
- Public awareness campaigns by instructors of domestic wastewater measures
- Forming of community councils led by residents and other such organizations



### 3.Measures for Unspecified Sources of Pollution



### 3.Measures for Unspecified Sources of Pollution

#### **Example of Agricultural Pollution Control Measures**

**(1) Promotion of Environmentally Friendly Agriculture**

**(2) Prevention of Turbid Water Outflow**

**(3) Recycling and Reuse of Agricultural Water**

**(4) Utilization of Biological Organic Resource**

**(Source:5<sup>th</sup> Conservation Plan of Water Quality in Lake Biwa)**





### 3.Measures for Unspecified Sources of Pollution

#### (3) Recycling and Reuse of Agricultural Water



Drainage Canal and Facility for Reuse of Agricultural Water



Drainage in Paddy Field

### 3.Measures for Unspecified Sources of Pollution

#### Measures for Environmental Pesticide Contamination Control

Pesticide should be properly managed in view of safety not to affect negative impacts on human body and environment, because the use of pesticide leads to discharge of physiologically active substance to the environment.

### 3.Measures for Unspecified Sources of Pollution

#### Outline of Japanese Regulatory System of Pesticides (Agricultural Chemicals Regulation Law)

Stage of control	Ministry of Agriculture, Forestry and Fisheries	Ministry of the Environment
<p>【Pre-marketing】</p> <p>Registration</p>	<p>Application for registration</p> <p>↓</p> <p>Inspection for registration (inspection of documents and samples)</p> <p>1)false description in application 2)damage to crops 3)damage to humans and livestock 4)-7) ←</p> <p>8)-10)omitted</p>	<p>Establishment of the <b>Registration Withholding Standards</b> on</p> <p>4)Residue in crops 5)Residue in soil 6)Damage to aquatic animals and plants 7)Water pollution</p>
<p>【Post-marketing】</p>	<ul style="list-style-type: none"> <li>•cancellation of registration</li> <li>•prohibition of sale</li> </ul>	<ul style="list-style-type: none"> <li>• restriction on the use of pesticide causing water pollution</li> </ul>

### 3.Measures for Unspecified Sources of Pollution

#### Outline of Registration Withholding Standards

The Minister of the Environment sets 4 Registration Withholding Standards for the environment

##### 4)residue in crops

Standards are in place to prevent damage to humans and livestock due to pesticide residues in crops.

##### 5)residue in soil

Standards are in place to prevent damage to humans and livestock due to crops contaminated by pesticide residues in soil.

##### 6)damage to aquatic animals and plants

Standards are in place to prevent severe damage to aquatic animals and plants due to agricultural chemicals.

##### 7)water pollution

Standards are in place to prevent damage to humans and livestock due to water pollution.

#### 4. Wide-Area Network for Water Pollution Prevention

### Liaison Conference of Water Pollution Measures

Liaison conference consisting of officers of national and local government, and water suppliers are established in each main river basin for emergency response against accidental water contamination, water pollution prevention, and water quality conservation as river management.

- Oil Overflow to River due to Traffic Accident
- Discharge of Hazardous Chemicals
- Oil Overflow from Boiler of Factory
- Wastewater Discharge due to Accident
- Fishkill, etc



Report to the Conference



- Prompt Response to the Accident by using the Network
- Emergency Response to Limit the Extent of Damage
- Contact with Water Suppliers
- Investigation of the Causes, etc

#### 5. Policies for Increasing Public Awareness of Water Environment Conservation

- Survey on Aquatic Life
- Kid ranger to protect Japanese fireflies
- Selected 100 Exquisite and Well-conserved Waters

5. Policies for Increasing Public Awareness  
of Water Environment Conservation

### Survey on Aquatic Life

- From 1984
- Intended for raising public awareness of water environment issues through water quality assessment by a survey on familiar aquatic life in rivers
- About 90,000 participants annually, mainly elementary and junior high school students



5. Policies for Increasing Public Awareness  
of Water Environment Conservation

### Kodomo Hotaranger (Kid ranger to protect Japanese fireflies)

- From FY 2004

Kid ranger



Ministry of the Environment



Friend of fireflies, cleaning dirty water and protecting rivers and lakes to ensure our baby fireflies have a happy life - that's the Hotaranger.

## 5. Policies for Increasing Public Awareness of Water Environment Conservation

### Selected 100 Exquisite and Well- conserved Waters

- Selected in 1985
  - Intended for increasing public awareness of water quality conservation and actively protecting excellent water environments through rediscovery of clean and clear waters that exist in many forms around Japan and introduction and promotion of these waters to people all over the country.
- Selection Criteria
  - Water quality and volume, surrounding environment (landscape), and good conservation status from the viewpoint of hydrophilicity
  - Presence of conservation activities by local residents, etc.
  - Consideration of scale, origin and history, scarcity, uniqueness, eminence, etc.
  - **Not limited to drinkable water!**

