Transparent and Efficient Use of Government Subsidy for Sanitation:

The case of Japan: How Government Subsidies have been used for Sanitation

Promoting Innovation Wastewater Management (ADB)

Making Sanitation a Sustainable Business

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I. BACKGROUND

In 55 years, wastewater treatment facilities for almost 90% of the nation have been constructed and well maintained

One of the reasons for this successful project implementation

Rational (Transparent and Efficient) Use of Government Subsidies

For Rational Use of Government Subsidies

1) Role of the Government
2) Cost Sharing Ratio (Public Burden & Private Burden)
3) System for proper project implementation and management
   - Technology Options
   - Institutional and management arrangements
   - Financing Arrangement
     - Legal System Rules & Regulation
   - Human Resource Development

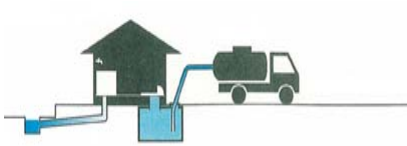
Outcomes

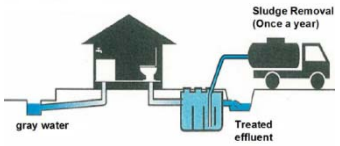
II. TECHNOLOGY OPTION

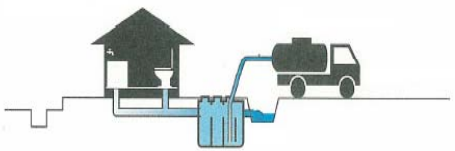
Table 1: Technology Options for Wastewater Treatment

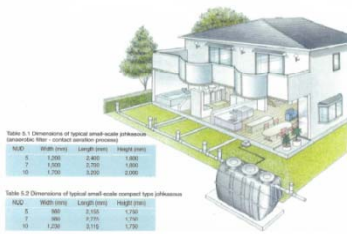
	Type of System	Population Rate (%) FY 2011	Project Program	Wastewater	
				Human Waste	Gray Water
Night Soil Treatment	Off-site	12.4	Night Soil Treatment Facility (MOE)	Vault Toilet	Discharge Without Treatment
				Collection (Vacuum Truck)	
				Night Soil Treatment Facility (Off-site)	
	On-site		(Tandoku-shori Johkasou*)	Flush Toilet On-site Treatment	Discharge Without Treatment
Wastewater Treatment	On-site	8.8	(Gappei-shori) Johkasou (MOE)	Flush Toilet	Gray Water
				On-site Treatment	
Wastewater Treated Population Rate = 87.6 (8.8+78.8)	Off-site	78.8	Sewerage System	Flush Toilet	Gray Water
		75.8	Public Sewerage System (MLIT)	Collection (Sewer Network)	
		2.8	Rural Sewerage System (MAFF)	Wastewater Treatment Plant (Off-site)	
		0.2	Community Plant (MOE)		

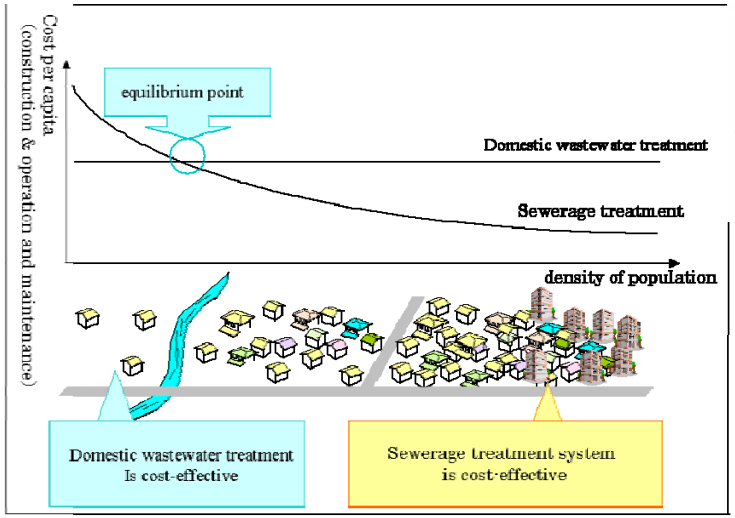
Note: MLIT: Ministry Land Infrastructure and Transfer, MAFF: Ministry of Agriculture, Forestry and Fisheries
MOE: Ministry of Environment *new installations are legally prohibited

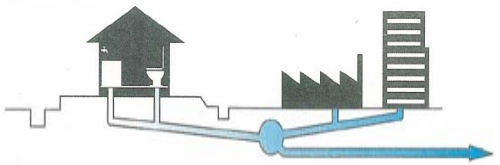












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III. INSTITUTIONAL AND MANAGEMENT ARRANGEMENTS

Table : Project Implementation Organizations

Type of System	Project Program	Project Implementation Organization
Off-site	Night Soil Treatment Facility (MOE)	Municipality
On-site	Johkasou (MOE)	Individuals or Municipality
Off-site	Sewerage System Public Sewerage System (MLIT) Rural Sewerage System (MAFF) Community Plant (MOE)	Municipality [JS: Japan Sewage Works Agency]

Note; Project Implementation (construction, O&M, and renewal)

The responsible Ministry in each program

Key and fundamental organization for nationwide budget, establishment of technical standards, project evaluation, enactment of laws and regulations basic frameworks, and long and middle-term plans

Management of Sewerage Systems

The sewerage systems constructed with national subsidies should be managed in a stable and sustainable way.

In Japan, under the **Local Government Finance Act**, public sewerage systems are managed by **public enterprises** which adopt the principle of **self-support accounting system** to cover costs from the income provided by the business and maintain it on a self-sustaining basis.

Necessary Aspects for Rational Management of Sewerage Systems

- **Appropriate cost sharing** between public and private finance resources
- **Long-term basis forecast of income and expenditures** considering the lifespan of the facilities and the increased percentage of users
- **Appropriate economic management** based on tangible business objectives, precise business analysis and future business prospects
- **Disclosure of Management information to the citizens** as tax payers and users who bear user charge

Currently, **Kyoto City, Yokosuka City, and other cities disclose management information** including Medium-range managerial planning,
Balance of payment of sewage works, and
PI (Performance Indicator) proposed by the Japan Sewage Works Association.

IV. FINANCING ARRANGEMENTS

Sewerage Finance Research Committee

- established to study **government's role and responsibilities** and **a rational cost sharing** for sewage works

- made an intensive research by **academics, researchers, local administration experts and sewerage engineers and officials on finances for sewerage Works**

- made **a major recommendation in its first report in 1961** and **other fundamental recommendations until the 5th Report in 1985**

- formulated **the current fundamental concept for sewage works on the principle** of

"Stormwater at public burden and Wastewater at private burden"

- the necessary expenses that should bear the central government based on the public role of sewerage systems
- the basic policy for the construction and maintenance financial sources

IV. FINANCING ARRANGEMENTS

Sewerage Systems

Table : National Subsidy Ratio

Classification		Ratio of National Subsidy	Cost Sharing Ratio of Local Governments
Sewer Pipes	Granted Project	1/2	1/2
	Unsubsidized Project		10/10
Wastewater Treatment Plants	Granted Project	5.5/10	4.5/10
	Unsubsidized Project		10/10

Note : All of the costs shared by local governments are covered by local bonds

Table: Financial Sources of Sewage Works

- **Construction Cost**
  - **National Grant**
  - **Local Government**
    - **Genera Account Budget**
    - **Local Bond Issue**
    - **(Prefecture Subsidy)**
    - **Beneficially Payment**
- **Maintenance Cost For Wastewater**
  - **User Charges**
  - **(General Account Budget)**
- **Maintenance Cost For Stormwater**
  - **General Account Budget**

"Stormwater at public burden and Wastewater at private burden"

V. PROJECT OUTCOME

3rd Infrastructure Intensive Development Plan

1) Reduction of Large scale and Broad base Disaster Risk

(1) Accomplish rate of Countermeasures for sewerage facilities for Earthquake 34%(2011) ⇨70%(2016)

(3) Accomplishment Rate of Countermeasures by Sewer Systems for Inundation 53%(2011) ⇨60%(2016)

2) Enhancement of reinforcement of industry foundation and global competitiveness

3) Accomplishment of Sustainable and vital country and communities

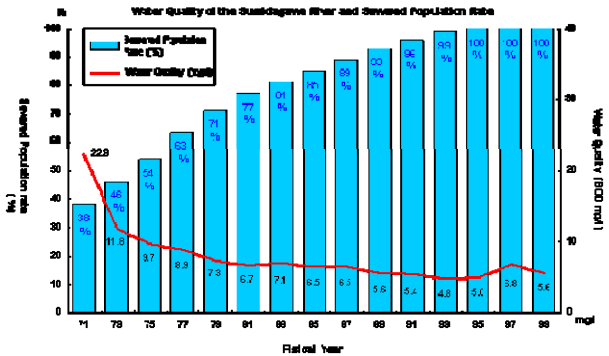
(6) Utilization rate of sewerage sludge for energy source 13%(2011) ⇨29%(2016)

(8) Wastewater Treated Population Rate 87%(2011) ⇨ 95%(2016)

(9) Percent of Population Served by Advanced Wastewater Treatment 33%(2011) ⇨ 43%(2016)

4) Enforcement of Appropriate Maintenance and Renovation for social infrastructure

(10) Accomplishment rate of formulating of the plan for longer life span 51%(2011) ⇨ 100%(2016)



CONCLUSION

I. **In order to use the central government or local government subsidies rationally to solve sanitation issues,**

Government's role and responsibility in sanitation should be clarified, **Rules for the cost shared by the government** based on the responsibility, **Measures for subsidy provision**, **Project inspection**, **Audit account**, **Disclosure of information**, **Mechanism for accountability**, **etc., are needed**

II. In Japan, several studies and discussions about a **rational cost sharing** for sewage works have been conducted by the **Sewerage Finance Research Committee.**

The Committee recommended **the current fundamental concept for sewage works** on the principle of

"stormwater at public burden and wastewater at private burden"

the necessary expenses that should bear the central government based on the public role of sewerage systems, and

the basic policy for the construction and maintenance financial sources.

CONCLUSION

III. Sewerage Law

Basic purpose of sewage works,
Role of the central government and municipalities,
Planning, design, management, user charges, and other important aspects relating sewage works were stipulated by the Sewerage Law.

Related Laws and Ordinances

Scope of national subsidies,
Procedures for the provision of subsidies,
Complete examination of the constructed sewerage facilities, etc., are also regulated by related Laws and Ordinances

IV. Several Construction Programs of Wastewater Treatment Facilities beside Sewerage Systems

National subsidies are also provided to these programs because of **their public role,** for example in preserving water quality in public water bodies.

The procedures for providing subsidies, the scope of subsidies, the project implementation measures, etc., are also formulated similarly to sewage works.

CONCLUSION

V. Necessary Aspects for **Rational and Sustainable Maintenance and Management of Wastewater Treatment Facilities** constructed with national subsidies

Appropriate cost sharing between **public fund** and **private expense** for maintenance cost,

Establishment of long term and/or middle term basis planning for the balance of revenues and expenses

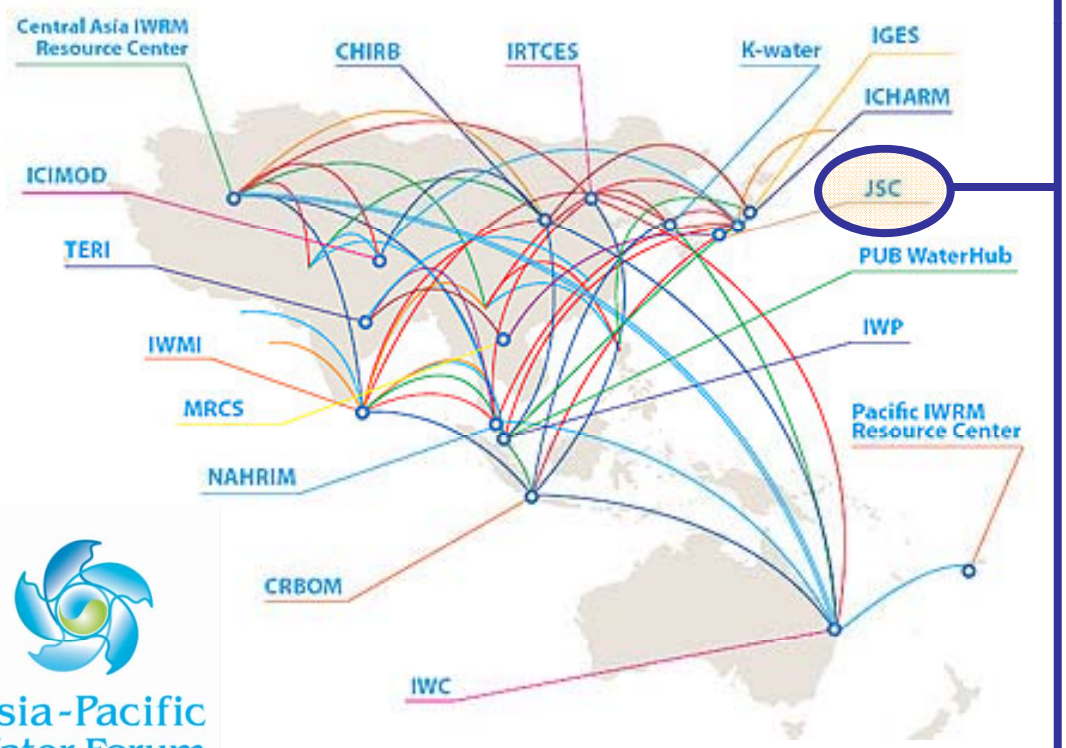
Efforts for sewerage system management as a self-supported public enterprise

Appropriate economic management based on precise business objectives

Disclosure of management information to the citizens to obtain consensus and support

- The Japan Sanitation Consortium (JSC) was launched on 16 October 2009
- JSC consists of the 5 main national agencies managing on-site and off-site sanitation in Japan

Thank you for your attention



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JSC MEMBER ORGANIZATIONS

OFF-SITE SANITATION

1. Sewerage Business Mar Centre
2. Japan Sewage Works Association
3. Japan Sewage Works Agency

ON-SITE SANITATION

4. Japan Environmental Sanitation Center
5. Japan Education Center of Environmental Sanitation

Asia-Pacific Water Forum
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