

ADMINISTRATIVE REFORM FOR SUSTAINABLE PUBLIC WATER SERVICES IN JAPAN

2019 EROPA Conference

The Future of Public Administration: Rethinking Resilience,
Equity, and Sustainability in the Region and Beyond

22–27 September 2019

Manila, Philippines

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Introduction 1



- Since the mid-1980s, **numerous water supply reforms, allowing for more privatized services**, initiating the globalization process (Bakker 2003b; 2007; Swyngedouw et al 2002).
- **Private-sector participation** in the management of water infrastructure has **increased significantly over the past decade** (Bakker, 2003a).

Introduction 2



- Municipalities compelled to make **tradeoffs** between **environmental and social sustainability and economic sustainability** (Furlong, 2012; Furlong & Bakker, 2010).
- Public–private partnerships are complex, requiring institutional capacity to design tenders, conduct monitoring, enforce contracts over the long term (Bloomfield, 2006; Iossa, 2018; Trebilcock & Rosenstock, 2015).

Research Question



- 1. How the water service in Japan has responded to social changes in the business environment**
- 2. How the local governments of Japan adapt to the system change as water service players**

Methods

1. Analyzing the text of **policy materials and plans** issued by the national and local governments
2. **Interviews with the newly established municipality-owned sewerage operation entity** in the Osaka City Government



Results

System reform in Japan (National level)

Year	Actions
2011	Revision of the Act on the Promotion of Maintenance of Public Facilities by Utilization of Private Companies <ul style="list-style-type: none"><li data-bbox="229 486 1473 534">• The operation rights system for public facilities was installed
2014	New Sewerage Vision <ul style="list-style-type: none"><li data-bbox="229 634 2032 793">• Indicates the direction for integrated management of administrative officers, facilities, and finance, and it is necessary to promote asset management and crisis management in the event of a large-scale disaster.
2014	Guidelines on the management of local public enterprises <ul style="list-style-type: none"><li data-bbox="229 895 1949 942">• Local governments are requested to formulate a “public enterprises business strategy”
2015	Revision of the Sewerage Law <ul style="list-style-type: none"><li data-bbox="229 1041 1736 1088">• Promoting the maintenance and refurbishing of sewerage facilities via PPP
2017	New Sewerage Vision Acceleration Strategy <ul style="list-style-type: none"><li data-bbox="229 1186 2007 1233">• Attracting attention in the sewerage sector, as well as PPP and PFI, including concessions
2018	“Study Group on the Sewage Finance” interim report <ul style="list-style-type: none"><li data-bbox="229 1332 1508 1379">• Indicates the promotion of regionalization and co-management

Osaka City Sewerage Service Index 2017

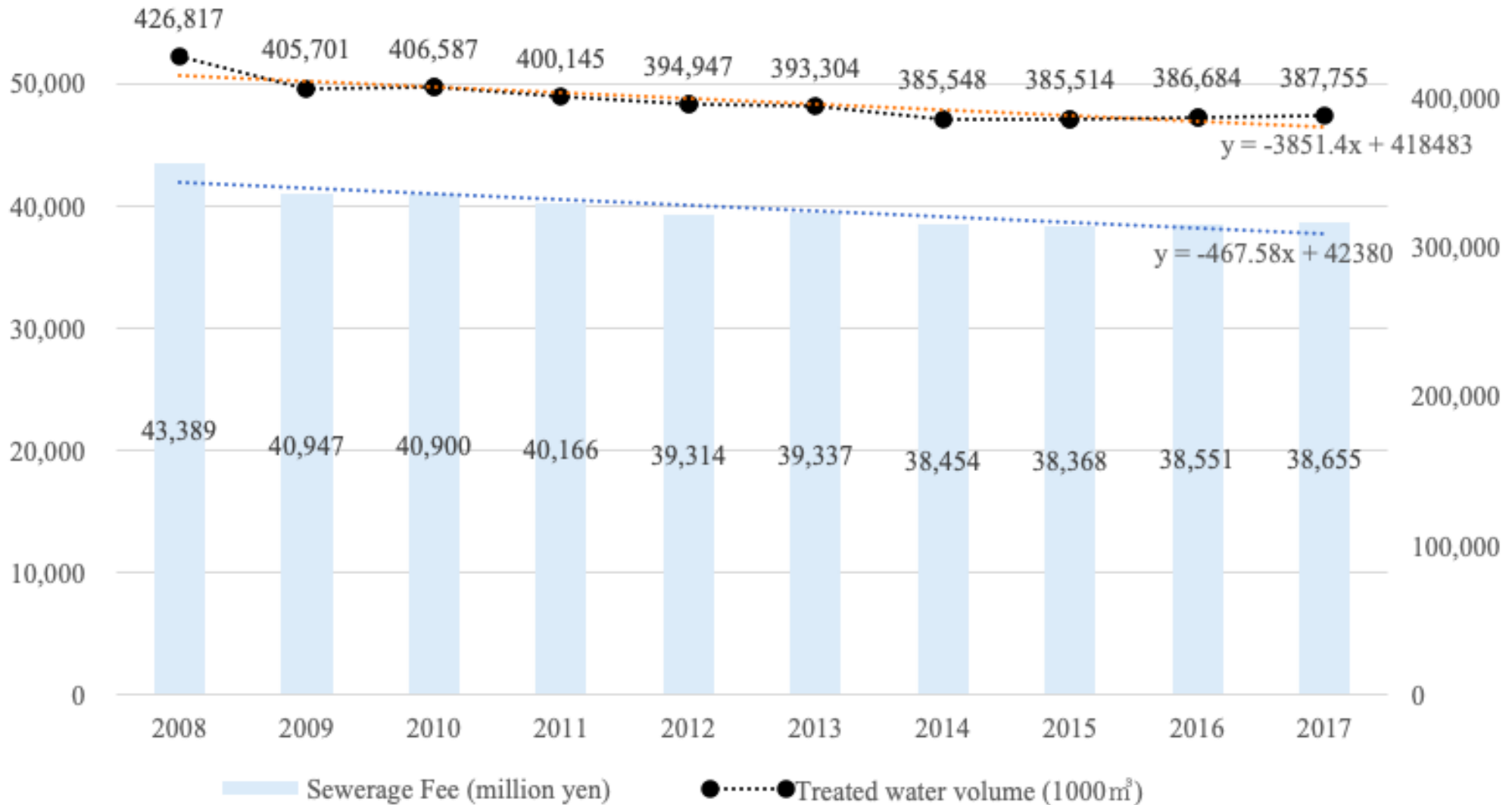
Population in the service area (person)	2,703,394
Sewerage covering ratio (%)	99.9
Sewerage covering area (km ²)	190.52
The length of sewerage pipe (km)	4,957
The volume of processing waste water (million m ³)	608.0
Main Expenses (billion yen)	
(1) Operation Cost	22.3
(2) Investment	36.8
(3) Depreciation	12.4
Main Revenues (billion yen)	
(1) Sewerage fee	38.7
(2) Assistance from public budget	26.3
(3) Issue of bonds	23.3
(4) National governmental subsidiary	10.4



Estimated Expenses for Future Facility Maintenance in Osaka Sewerage Business

Core business	Business progress target	Remaining expenses
Antiflood business	Protection from heavy rain (60 mm/hour) approximately once in about 10 years Rainwater drainage facility capacity (whole city average) of 84.3% to 90% (target in 2025), to achieve 100% in about 20 years	About 100 billion yen (until FY2025) To achieve 100% will require approximately 200 billion yen more
Improvement of the combined sewer system	Combined sewerage improvement rate of 51% to 100% (to FY2023)	Approximately 100 billion yen (until FY2023)
Renewal and refurbishment of aged facilities	Renovation and renewal of facilities requiring urgent care Focus on phased reconstruction and renewal Preventive maintenance	Annual investment of approximately 43.5 billion yen required in the future

Transition of sewerage fees and treated water volume of Osaka's sewerage business

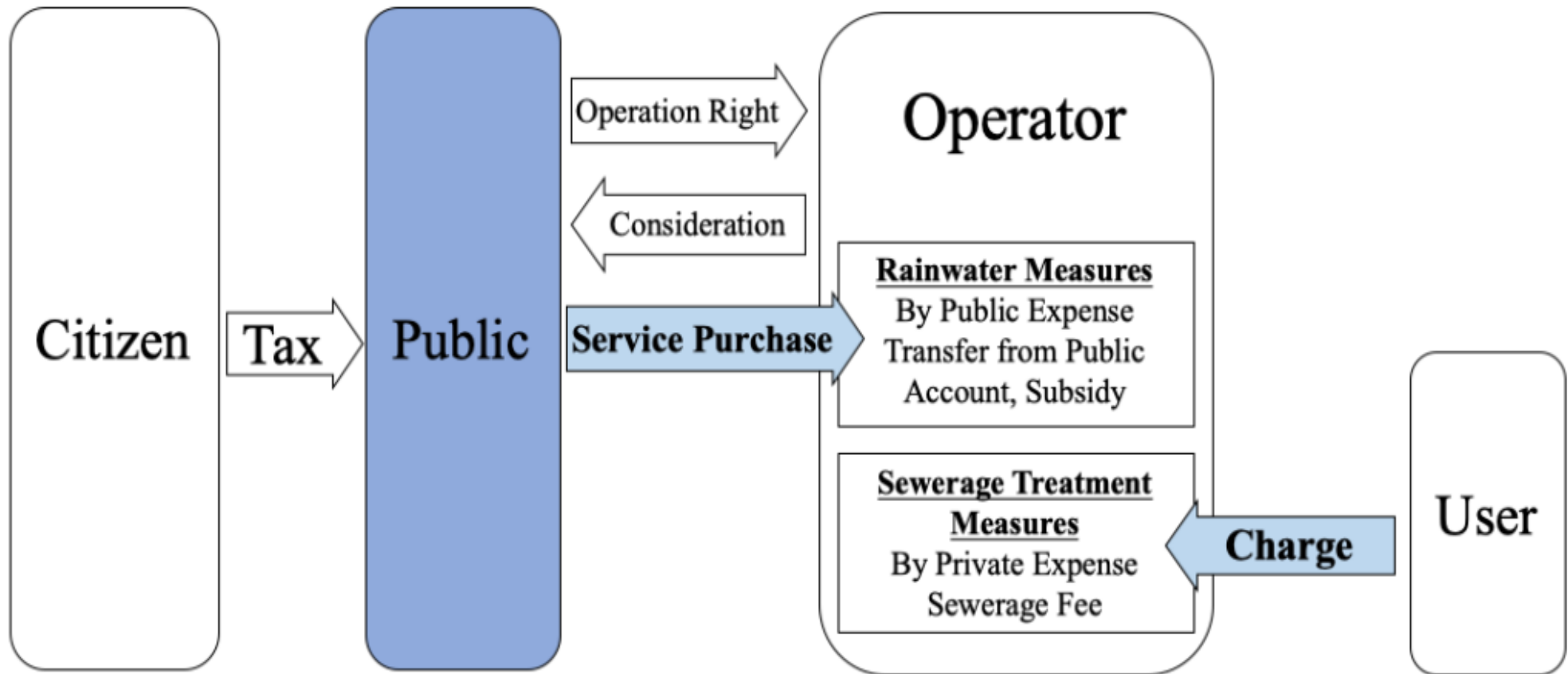


Source: Osaka City Sewerage Business Annual Reports (2017, p. 9), edited by author. 想像もしなかった自分史がはじまる 造手門学院大学

Steps for management reform of Osaka's public sewerage business

Business Area	Phase 1	Phase 2	Phase 3
Business Area A Public Administrative Specific Works	Public: Organized work related to Comprehensive business development Operations involving the exercise of public authority based on the Sewerage law		
Business Area B Construction	Public: New Construction for anti-flood, combined sewerage improvement Large-scale Update and Renovation works		
Business Area C Operation and Maintenance	Private: Comprehensive Outsourcing	Private: Comprehensive Outsourcing Small simple renewal works	Private: Mixed Operation Right System Contract term 20-30 years
Expected effects of Business operations	Reduction of maintenance costs		
	Revenue growth from domestic and overseas business development		
	Reduced construction costs		
Contracted Party	Affiliated general incorporated association	<ul style="list-style-type: none"> New entity (Stock Company) 100% owned by City government 	<ul style="list-style-type: none"> Stock company A part of the share is owned by private company

Mixed operation rights system





Conditions for the Reform by Osaka City Council

Maintain current service level	As for outsourcing the sewerage business operation to the newly established company, the city will sufficiently supervise the company not only to make the management more efficient but also inherit the knowledge and technology possessed by the present staff.
Securing a crisis management response system	The city will make sure the safety and security of the citizens are maintained, fully considering crisis management, including disasters.
Cost reduction by the private management method	With the establishment of a stock company, it is necessary to consider the introduction of a more effective performance procurement system and take measures to reduce the burden on citizens.
Accountability and information disclosure	It is necessary to report the business plan to the City Council immediately after the establishment of the corporation.
Thorough consideration and accountability on promoting reform	The operating power system must be carefully examined, giving polite and sufficient explanations to Parliament.

Discussion 1



- The momentum of the public water administrative reform increased in Japan after 2011

<p>Short-term factors</p>	<ul style="list-style-type: none">■ The economic deterioration and disasters<ul style="list-style-type: none">➤ After the world financial crisis of 2007–2008➤ the Great East Japan Earthquake and Tsunami of 2011.
<p>Long-term trends</p>	<ul style="list-style-type: none">■ The declining birthrate and aging population

Discussion 2



- Public water business reform in Japan
 - **Organizational reform of corporatization and private sector partnership** as asset management for more efficiency
 - **Not** the institutional and resource **governance reform** of roles between the national and local government and citizen participation

Resource Management Reforms

Category	Target of reform	Type of reform	Example drawn from the water sector
Resource management institutions	Property rights	Privatization	Sale of water supply infrastructure to private sector
	Regulatory frameworks	Deregulation	Cessation of direct state oversight of water quality mechanisms
Resource management organizations	Asset management	Private sector partnerships	Municipal outsourcing of water supply system management to private companies
	Organizational structure	Corporatization	From local government department to publicly owned corporation
Resource governance	Resource allocation	Marketization	Introduction of a water market
	Performance incentives/sanctions	Commercialization	Introduction of commercial principles (e.g., full cost recovery) in water management
	User participation	Devolution or decentralization	Devolving water quality monitoring to lower orders of government or individual water users

Source: Adapted from Bakker (2007, p. 435), Table 1.

Discussion 3



- In Japan's case, it is considered **more important to secure a crisis management response and security** in the event of a disaster than to ensure efficiency.
- The “**redundancy**” of management resources coping with earthquakes and heavy rains is emphasized.

Conclusion 1



- **The capacity building of Redundancy is a cost-up and uncertain factor** in long-term management risk,
 - Highlighted in the process of the public-to-private outsourcing contracts.
 - Large-scale machinery and equipment industry, as the level of deterioration varies.

Conclusion 2



- Ownership of facilities be vested in the municipality. But the **Publicly Owned Company** should be watched closely.
 - Integration of wide-area operations by taking orders from outer areas
 - Sharing management with the private sector
 - Actively introducing new technologies

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