

International City Network and Public-Private Cooperation for Urban Water-Environment Management

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Introduction



- ❑ Severe urban environmental problems, especially with water environment in Asia
 - Urbanization with rapid economic development in the region's megacities
 - These cities must develop the infrastructure to provide clean water and process sewage

Introduction



- Since the mid-1980s, **numerous water supply reforms, allowing for more privatized services**, initiating the globalization process (Bakker 2003; 2007; Swyngedouw et al 2002).
- The territorial expansion of municipally owned water companies observed as **urban entrepreneurialism** (Furlong 2015).

Introduction



- ❑ **Municipally owned companies** motivated by external factors such as customer requests and opportunities to contribute to environmental sustainability. Their export experiences are **influenced by their municipal ownership, technology, and the institutional contexts** within which they operate (Kanda et al 2016).

Introduction



□ Japan's Public Water Services

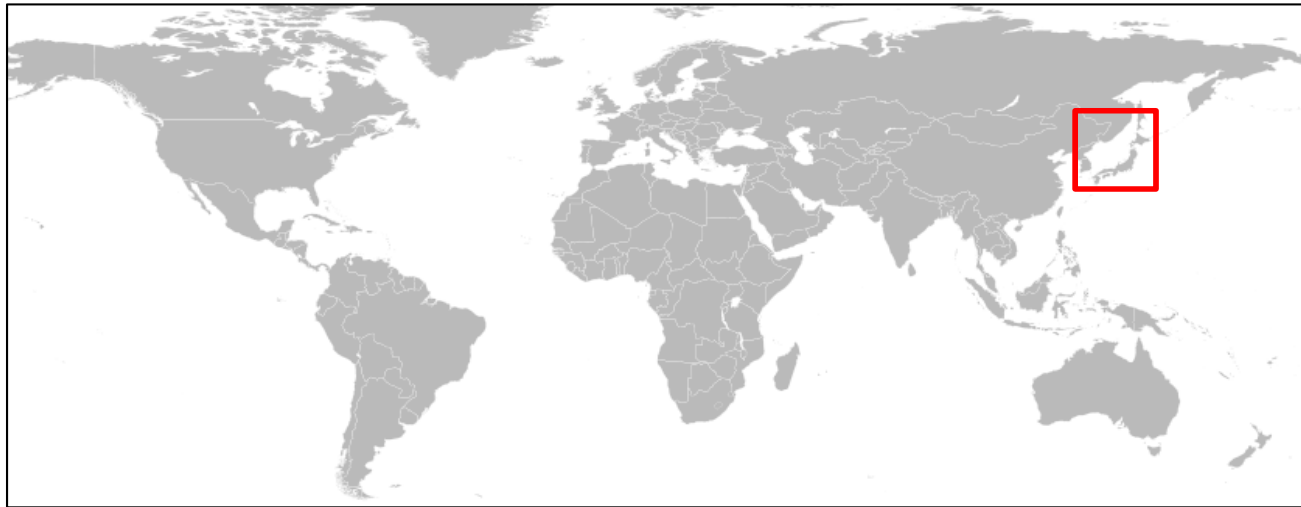
- Revenues shrinking in a decreasing birthrate, an aging population, and the water-conservation movement

□ Expanding water services abroad

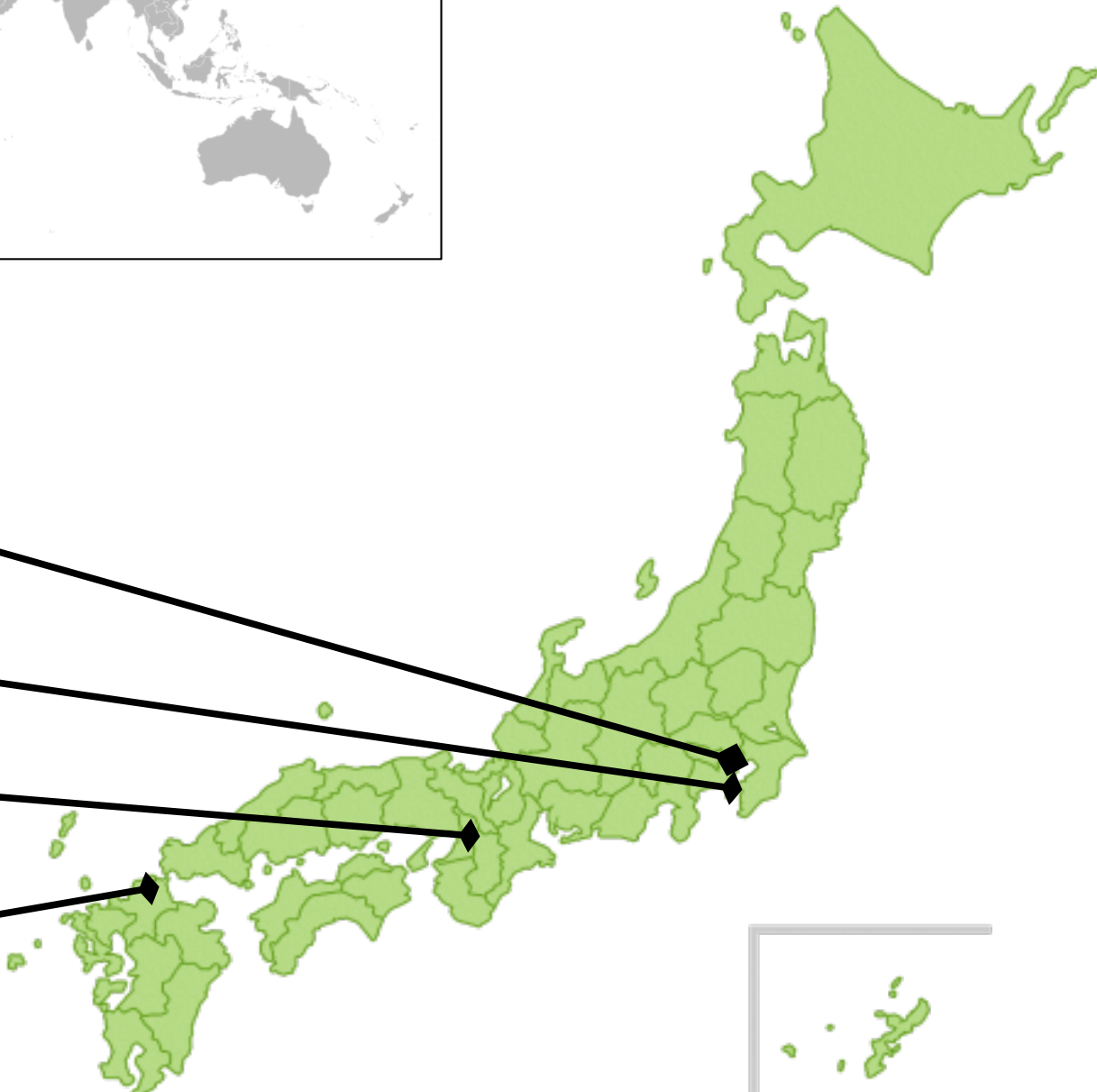
- ✓ Contributes to solving Asian cities' urban environmental problems
- ✓ Sustainable management of public water services.

Methods

1. Scrutinizing preliminary research
2. Case studies in four cities:
Tokyo, Yokohama, Osaka, and Kitakyushu
 - A) Text analysis of materials issued by national and local governments
 - B) Conducting interviews with municipalities



City	Water Service Population 2017 (x 1000)
Tokyo	13,401
Yokohama	3,731
Osaka	2,716
Kitakyushu	994



Case Studies Summary

	Tokyo	Yokohama	Osaka	Kitakyushu
Municipal Company (Equity Ratio)	Tokyo Suido Service Co., Ltd. (51%)	Yokohama Water Co., Ltd. (100%)	Clearwater OSAKA Co., Ltd. (100%)	Asia Low Carbonization Center (100%)
Public Private Cooperative Platform	Private Enterprise Support Program	Yokohama Water Business Council	Osaka Water & Environmental Solutions Association	Kitakyushu Overseas Water Business Association
Main Partner Cities	Bangkok, Thailand Delhi, India Hanoi, Vietnam Penang, Malaysia Yangon, Myanmar	Brida, Saudi Arabia Cebu, Philippines Hue, Vietnam	Ho Chi Minh, Vietnam Saint Petersburg, Russia Yangon, Myanmar	Dalian, China Hai Phone, Vietnam Mandalay, Myanmar Siem Reap, Cambodia Surabaya, Indonesia

Case 1: Tokyo



- **Tokyo Suido Service Co., Ltd.(TSS)**, in which the Tokyo Metropolitan Bureau of Waterworks **invests 51%**, made international contributions.
- In 2011, TSS, a Japanese company, and Hanoi City Waterworks Public Corporation **established a joint venture company** responsible for the construction and maintenance of a water purification plant.

Case 1: Tokyo



- TSS established its wholly owned subsidiary, **Tokyo Waterworks International Taiwan Co., Ltd.** in December 2012, thus strengthening the foundations for overseas project promotions.
- Published the “**Tokyo Waterworks International Cooperation Program**”
 - Technical cooperation projects in **Hanoi, Vietnam and Malaysia, Delhi, India.**
 - Infrastructure development, operational projects, in **Bangkok, Thailand and Yangon, Myanmar.**

Case 2: Yokohama



- **Yokohama Partnership of Resources and Technologies (Y-Port) project : international technical cooperation through PPP.**
- **Yokohama Water Co., Ltd.** established in 2010 with a 100% the Yokohama City Waterworks Bureau stake.
 - Accepted trainees from Central Asia and Southeast Asia.
 - Conducted consulting business related to projects in Vietnam and the Philippines.

Case 2: Yokohama



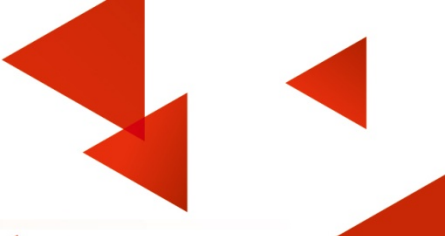
- ❑ In 2011, **the Yokohama Water Business Council** was established by **133** companies and organizations chaired by the mayor of Yokohama.
 - Utilized the technology expertise to support overseas water business of city enterprises.
 - Published a member introduction booklet.
 - **PPP in trade fairs and business missions** to Bangalore, India, and Jakarta, Indonesia.

Case 2: Yokohama



- In 2015, the **International Water Association Strategic Asset Management Conference** was held in Yokohama City.
 - Executives involved in Asian water utilities and water administration were invited to the Forum
 - To verify efforts to improve water utilities in each country, and to **share knowledge, technology, experiences, and know-how** for solving future problems.

Case 3: Osaka



- In 2011, the **Osaka Water & Environmental Solutions Association (OWESA)** established with 2 economic associations.
- OWESA 2 main activities:
 1. **Conducted overseas promotion** for collecting and sharing information.
 2. **Supported formulating overseas projects** through municipal international network, including business partner cities and **project implementation** through PPP.

Osaka Water & Environmental Solutions Association

Municipalities

Osaka City
Government

Osaka Prefectural
Government

Business Communities

Kansai Economic
Federation

Osaka Chamber of
Commerce

Collaboration

Collaboration

Requests, Needs

Consultations,
Solutions

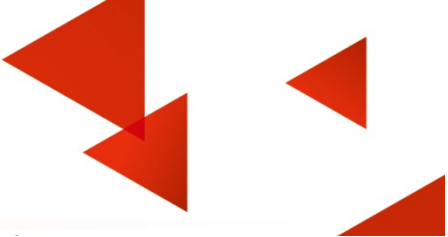
International
Organizations,
National
Governments,
Other Actors

Member
Companies

Partner
Cities,
Countries

- Water Service Utility
- Sewerage Service Utility
- Regulation Body

Case 3: Osaka



- ❑ Concluded Memorandum of Understanding of cooperation with **Ho Chi Minh, Vietnam** in 2011, **Yangon, Myanmar** in 2014.
- ❑ In 2016, **Saint Petersburg, Russia** adopted the sewer system technology of company in Osaka.
 - Resulted from a technical exchange at the Osaka Promotion Seminar, held in 2014 to celebrate the 35th anniversary of **the sister-city affiliation between cities.**

Case 4: Kitakyushu



- ❑ In 2010, **the Asia Low Carbonization Center** was established.
 - Concentrated environmental technologies in the region.
 - Targeting Asian region.
 - Created technology innovation.
 - Promoted overseas expansion of **packaged infrastructure service** according to the needs of partner cities.

Case 4: Kitakyushu

- ❑ Organized **the Kitakyushu Overseas Water Business Association** in 2010.
 - **A platform of PPP water services.**
 - Conducted the investigation of seeds and needs of enterprises.
 - Surveyed local needs overseas.
 - **Implemented overseas expansion and project-making through PPP.**

Case 4: Kitakyushu



- ❑ In 2013, **Hai Phong, Vietnam** decided to order water purification facility introducing Kitakyushu City technology.
- ❑ **Kitakyushu Overseas Water Business Association companies** received orders from the project in Phnom Penh, Kampong Cham, and Battambang, Cambodia.
- ❑ **City government was commissioned** the planning advisory work from **Siem Reap, Cambodia.**

Discussion 1



- ❑ **Major municipal water services in Japan expanding abroad**
 - With national governmental support
 - Relying on the international city network's solidarity and trust
 - Reducing the transaction cost of international water-related project development.

Discussion 2



- **The public-private cooperative platforms as intermediaries**
 - Enhancing the accountability and transparency
 - Developing implementation capacities
- of the overseas public water services expansion projects**

Municipal
Government

International
Inter-governmental
Partnership (Trust)

Partner
Municipal
Government

Investment / Supervise

Service Delivery /
Dividend

**Public-Private
Cooperative
Platform**

International Collaboration
Sharing Technologies
and Experiences
Service Delivery

Appropriate Compensation
for Technology and Services

Affiliated
Water Service
Company

Water Related
Companies

Introduction and
maintenance of
appropriate water
infrastructure

Discussion 3



- The international city networks:
 - **one-to-one mutual** networks to **multilateral** networks for efficient project development
 - ✓ Pragmatic “city networks” or “transnational municipal networks” (Kern & Bulkeley 2009)
 - ✓ Urban entrepreneurialism (Furlong 2015)
 - ✓ Smart city regionalism (Herrscher 2013)

Conclusion



- ❑ **A new form of international urban **water service cooperative governance****
 - Based on solidarity and trust between the municipalities
- ❑ **Future research**
 - The management of PPP platforms
 - Municipal owned companies in the project development process

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