Efforts and international projects
for Bureau of Waterworks
Tokyo Metropolitan Government

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Bureau of Waterworks
Tokyo Metropolitan Government
Outline

1 Business overview

2 International cooperation and status of enterprise partnership

3 Contents overview of exhibition stand in the Japan Pavilion
Business Overview

Scale

- Served population: 13.4 mil.
- Four large-scale purification plants adapting advanced water treatment (Daily supply= over 1 million m$^3$/day)

<table>
<thead>
<tr>
<th>Index</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service area</td>
<td>1,239.27km$^2$</td>
</tr>
<tr>
<td>Population served</td>
<td>13,401,324</td>
</tr>
<tr>
<td>Pervasion</td>
<td>100%</td>
</tr>
<tr>
<td>Total length of distribution pipes</td>
<td>27,126km</td>
</tr>
<tr>
<td>Total capacity of facilities</td>
<td>6,859,500m$^3$/day</td>
</tr>
</tbody>
</table>
Business Overview

System

• Total waterworks management from managing water resource conservation forests to water supply

• Achieve 100% advanced treatment at all purification plants along the Tone River system
Skill

• Know-how on waterworks through our 120-year history (Leakage prevention, proper management of water conservation forest)
• Know-how on wide area supply

<Water Conservation Forest in Western Tokyo>
Business Overview

Population (in Mill)

- Population Served
- Supply Capacity

Rapid Economical Growth
Transition of the Leakage Rate

Leakage Rate (%)

End of WW Ⅱ

80.0


3.1
Our Efforts

• Pursue safety and security:
  For direct tap water consumption

• Stable everyday water supply:
  24 hour-per-day control system

• Complete back-up functionality:
  To maintain water supplies in disaster situations

• Top-tier leakage rate in the world
  Strong technical capabilities based on experience

• Management based on long-term perspectives
  Financial base that supports stable management

Utilize these strengths in implementing our system throughout the world
Tokyo Bureau of Waterworks: International implementation initiatives

In 2010, we began international implementation utilizing the Tokyo Waterworks Service (TSS), supervisory body.

<Scheme diagram>

- Appeal to the national government
- to establish a new scheme for risk avoidance

- Contractor recruitment
- Facility management etc.
- Research (Advice/Coordination)
- Overseas water utilities (National/municipal)
- TMWB
- Partnership
- Private sectors, etc.
- Bidding
## Roles of TMWB, TSS, and private sectors

**Collaboration that draws on the strengths of each**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>TMWB</strong></td>
<td>• Appeals to the public sector and strengthening of relationships</td>
</tr>
<tr>
<td><strong>TSS</strong></td>
<td>• Local on-site activities that utilize know-how for waterworks services management.</td>
</tr>
<tr>
<td></td>
<td>• Facility maintenance, etc.</td>
</tr>
<tr>
<td><strong>Private Sector</strong></td>
<td>• Project planning that draws on company know-how</td>
</tr>
<tr>
<td></td>
<td>• Project expansion that draws on the know-how of overseas waterworks services (International situation, contracting, etc.)</td>
</tr>
<tr>
<td></td>
<td>• Collection of information on local situations (At local Offices)</td>
</tr>
</tbody>
</table>

Collaboration enables cooperative activities that would be difficult for the Tokyo Bureau of Waterworks alone.
Where we cooperate

- Delhi, India (Technical Cooperation Project)
  * TEC International Co., Ltd.

- Yangon, Myanmar (NRW Reduction Project)
  * Toyo Engineering Corporation
  * Mitsui & Co., Ltd.

- Yangon, Myanmar (Technical Cooperation Project)
  * TEC International Co., Ltd.

- Hanoi, Vietnam (JICA Partnership Program)

- Labuan, Malaysia (JICA Partnership Program)
  * Yokogawa Solution Service Corporation
Technical Cooperation Project

Project overview

**Objective**
To improve the city of Yangon’s waterworks management and maintenance

**Period**
June 2015 to June 2020

**Costs**
1st term: 280 million JPY(≒2.5 million USD)
2nd term: 300 million JPY(≒2.7 million USD)
Scheme Diagram

JICA

Request

TMWB
Fukuoka

TSS Co., Ltd

PUC Co., Ltd.

TEC International Co., Ltd.

JV

Carry out a project

Advice

Yangon City
## Roles

| TMWB Fukuoka        | • Provide advice based on experiences and knowledge as domestic supporting members  
|                     | • Dispatch personnel to local on-site seminars, and etc. |
| TSS PUC             | • Non-revenue water control, GIS, financial affairs / administration |
| TEC International   | • Overall management, operational coordination, water quality management, and etc. |
**NRW Reduction Project (Free financial aid for projects)**

Overview of the infrastructure development project

**Project description**
Leak detection
replacement/repair of pipes,
replacement/installation of meters

**Period**
2016 to 2022 (scheduled)

**Costs**
Approx. 1.8 billion JPY
(≒16.2 million USD)

*Maintenance projects planned utilizing Yangon municipal funds, beginning with areas which completed infrastructure construction.*
Invest Japan International Cooperation System
(By-proxy bidding and contracting procedures)

MOFA*
Government of Myanmar
Yangon City

*Ministry of Foreign Affairs

Project contract
October 7, 2016

Japan International Cooperation System

Japan Consortium LLC (SPC)

TSS Co., Ltd
Toyo Engineering Corporation
Mitsui & Co., Ltd
TMWB

Yangon Waterworks Development and Improvement Cooperation Team
## Roles

<table>
<thead>
<tr>
<th>Organization</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMWB</td>
<td>Builds cooperative G-to-G relationships as well as proposing projects and appealing for aid to the national government (Ministry of Foreign Affairs, etc.)</td>
</tr>
<tr>
<td>TSS</td>
<td>Implements countermeasures to non-revenue water by transferring technology and know-how</td>
</tr>
<tr>
<td>Toyo Engineering Corporation</td>
<td>Overall project management, etc.</td>
</tr>
<tr>
<td>Mitsui &amp; Co., Ltd</td>
<td>Collects local on-site information, etc.</td>
</tr>
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Conclusion

- Implement project and improve local waterworks in the country
- Enhance the presence of Japan and Tokyo
- Support private companies moving in on international business
# Exhibition Stand

## Panels / Models

<table>
<thead>
<tr>
<th>Disaster risk</th>
<th>Social change-related risk</th>
</tr>
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<tbody>
<tr>
<td>Disaster countermeasures (1)</td>
<td>Leak prevention and stoppage</td>
</tr>
<tr>
<td>Earthquake resilience and power independence</td>
<td>Administrative body Group management</td>
</tr>
<tr>
<td>Networks and lid coverage</td>
<td>Demonstration of robots for investigating pipe interiors</td>
</tr>
</tbody>
</table>

### Disaster risk
- Earthquake-resistant pipe joint model

### Social change-related risk
- Demonstration of robots for investigating pipe interiors

## Novelty

- Hand towel

## Panels / Models

<table>
<thead>
<tr>
<th>Climate change risk</th>
<th>Water management</th>
<th>Lower environmental burden</th>
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<tbody>
<tr>
<td>Preservation of water conservation forests</td>
<td>Water quality management</td>
<td>Lower environmental burden</td>
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### Climate change risk
- Model of a complex power supply system
- Lumber from thinned forests

## Drinking Station

- [Image of Drinking Station]

## Videos

- PR video for water conservation forests
- Video showcasing Bureau activities, and etc.
Thank you for your attention