

Input & Outcome the Corporation

Phnom Penh Water Supply Authority with Water and Sewer Bureau City of Kitakyushu

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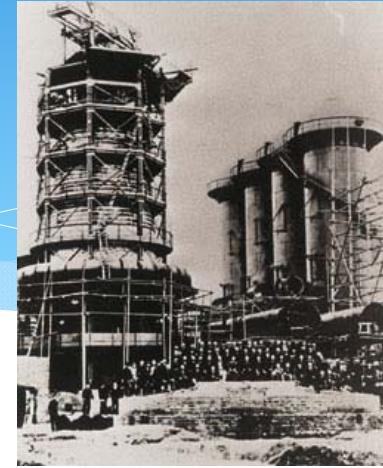
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History of Kitakyushu

City of Kitakyushu

- 1901 the first government-managed steelworks in Japan
- Developed with progressing of heavy industry
- 1960s Seriously polluted city
- 1971 Tackle to control pollution
- *Gray City to Green City → the World Capital of Sustainable Development*
- One of Green Cities Program of OECD



Water and Sewer Bureau, City of Kitakyushu

Waterworks Bureau

- Established in 1911
- Production Capacity 769,000m³/D
- Fighting with polluted water resource
- Fighting with water leakage ← Huge difference of altitude
- Technical cooperation and Expansion of Water services to neighboring cities
- International Cooperation
 - ❖ Phnom Penh Water Supply Authority (PPWSA) + 8 cities of Cambodia/
Haiphong of Vietnam/ Dalian of China
 - ❖ Technical cooperation with MHLW, JICA/ *Consulting services*
 - ❖ O & M of facilities/ NRW reduction/ Human resource management

PPWSA Now and Then

1993	Performance Indicator	2010
20	Staff / 1,000 Connections	2.97
65,000	Production capacity, m ³ /D	300,000
Not drinkable	Water Quality	WHO Standard
20%	Coverage Area	92%
10 hr/Day	Supply Duration	24hr/Day
0.02 MPa	Supply Pressure	0.2 MPa
26,881	Number of Connections	210,000
72%	No Revenue Water	5.9%
48%	Collection Efficiency	99.9%
150%	Operation Ratio	37.1%

Cooperation



History

- ❖ 1993 First Expert from Kitakyushu
- ❖ 2001-2003 Transfer of Distribution monitoring system
- ❖ 2003-2006 Capacity Building Project phase 1 supporting by JICA
 - Kitakyushu → PPWSA
- ❖ 2007-2012 Capacity Building Project phase 2 supporting by JICA
 - PPWSA/Kitakyushu → Water Supply Utilities of Provincial towns
- ❖ 2012-2017 Capacity Building Project phase 3 supporting by JICA
 - PPWSA/Kitakyushu → Water Supply Utilities of Provincial towns

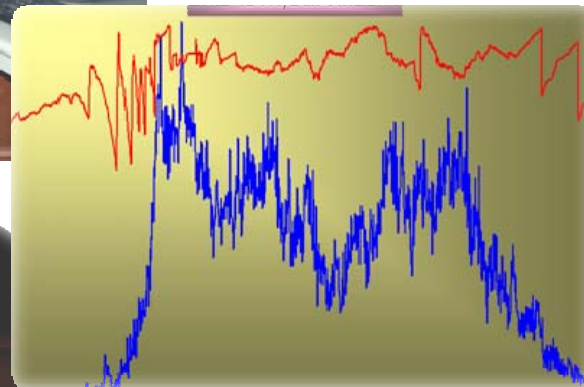
Contents

- ❖ Capacity Building
- ❖ Formulation of Standard Operation Procedures
- ❖ Reduction of Water Losses
- ❖ Carbon Emission Reduction Program



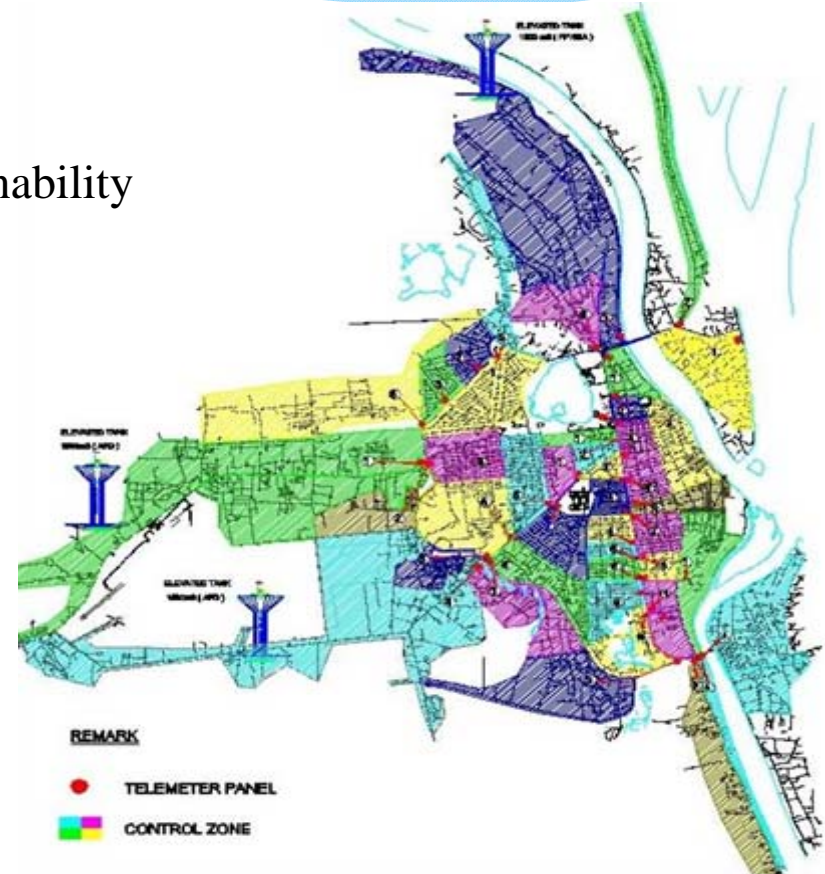
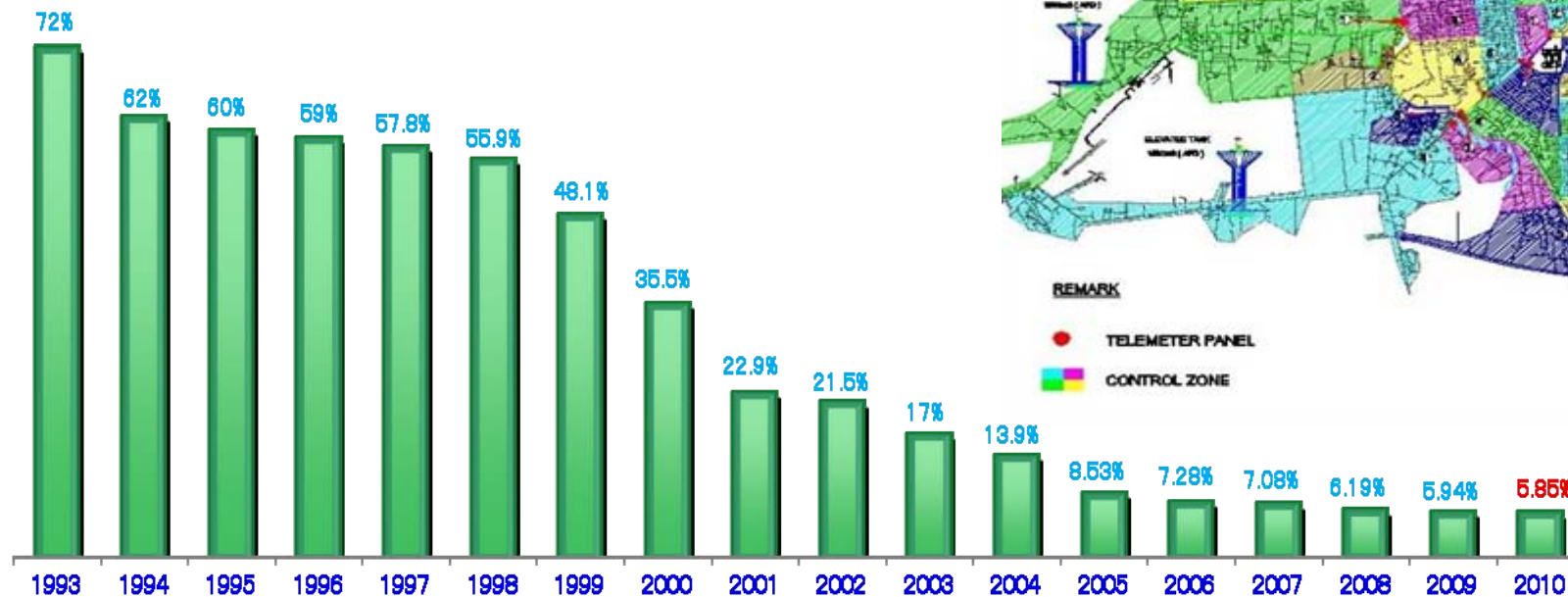
Reduction of Non Revenue Water

- PPWSA made big effort to set up 41 zones in the distribution network
- Kitakyushu supported to use equipment and expertise in setting up zone-monitoring system



Outcome from NRW Reduction

- Monitoring data of the distribution network
 - Effective information for leakage detection.
- Decreasing of NRW → Securing financial sustainability
(Water tariff unchanged since 2001 !!)
 - Helping to the most vulnerable people.



Input and Outcome Capacity Building Phase 1



- Duration : 2003 ~ 2006

- Input

- ❖ Total Numbers of Trainees :514 Trainees Ministry/ PPWSA/Provincial Waterworks
- ❖ Chief Advisor from JICA
- ❖ 15 Experts from Kitakyushu (69.5 Man/Months) → 21 PPWSA Counterparts
- ❖ 3 Experts from Yokohama (7.5 Man/Months) →6 PPWSA Counterparts
- ❖ Training course in Japan on 3 PPWSA Counterparts
- ❖ Financial Supporting by JICA

- Outcome

- ❖ Capacity of O&M of counterparts was improved.
- ❖ Standard Operation Procedure on operation and maintenance of water treatment plant and water distribution network, securing the sustainability of supply of water for the city.
 - Securing **drinkable water from Tap** to million of people.
 - Effective and efficient operation, keeping the **cost of water low**.

Input and Outcome Capacity Building Phase 2

- Duration : 2007 ~ 2012
- Input
 - ❖ 26 Kitakyushu experts (166 M/M) and 15 PPWSA experts
 - 102 Counterparts from 8 provincial waterworks/
9 Counterparts from Ministry
 - ❖ Financial Support from JICA
- Outcome
 - ❖ Capacity of the operation and maintenance of 102 staffs from 8 provincial waterworks have been improved.
 - 8 provincial waterworks can supply clean water which almost follows the Cambodian Water Quality Standard in 24hours a day.
 - Helping the sustainable growth in financial aspects for enabling the future investment to expanding supply network.



ありがとうございました！



Thank you!