

## カントリーレポート発表会 参加報告書

### 水のいのちとものづくり中部フォーラム会員報告書

水のいのちとものづくり中部フォーラム（以下「中部フォーラム」）会員である名古屋市では、タイ王国首都圏水道公社より研修員を受け入れており、その研修でタイ王国及びバンコク市の水道事情等についてカントリーレポートの発表会がありました。この度、名古屋市のお声掛けにより中部フォーラムから多数の会員も参加し、海外における水事情・水環境の実態をヒアリングしました。

#### 1. カントリーレポート発表会の概要

- (1) 名称：カントリーレポート発表会  
(タイ王国有償資金協力「第8次バンコク上水道整備事業」 附帯技術支援コース本邦研修)
- (2) 日程：2011年1月21日(金)13:30～17:15
- (3) 場所：JICA中部国際センター
- (4) 発表内容：タイ王国及びバンコク市の水道事情など
- (5) 発表者：タイ王国 首都圏水道公社（MWA）からの研修員8名
- (6) 参加人数：77名（内 中部フォーラム会員参加人数 19名）

#### 2. カントリーレポート発表会の状況写真





**THAILAND**

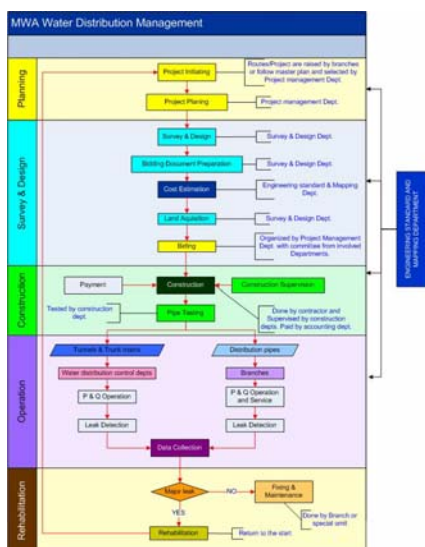
# Country Report

Water Distribution Management Course

2011 / 1 / 19 – 2011 / 2 / 11

## Participants

1. Mr. PONGPOTHAKUL Chana
2. Ms. SUDTO Warangkana
3. Mr. PIRACHAI Phakphoom
4. Mr. SAWADCHAI Anekpong
5. Mr. KUAKULTHAM Sorawat
6. Mr. NOOTBOOTSABA Pongtape
7. Mr. KAUSANGUNSILP Thanapong
8. Mr. MONGCONBAVON Tawat



## MWA Water Distribution Management

## General Information of Thailand

### Geography

- Land Area : approximately 513,115 sq. km (198,000 sq. miles)
- Terrain : Densely populated central plain ; northeastern plateau ; mountain range in the west ; southern isthmus joins the land mass with Malaysia.
- 5 regions, 76 provinces
- Capital city : Bangkok
- Climate : Tropical monsoon
- Temperature : avg. 28 -38 °C



## General Information of Thailand

### People

- Nationality : Thai
- The official language : Thai
- The 2009 estimated population is 67 million (Data based on the Thailand National Statistic Office and the National Economic and Social Development Board) of which approximately 9.3 million live in Bangkok and its vicinities
- Annual population growth rate (2009 est.) : 0.5%.
- Religions : Buddhist 93%-94%, Muslim 5%-6%, Christian 1%, Hindu, Brahmin, other
- 98% of the population are Thai-speaking Buddhists



## General Information of Thailand

### Economy (1)

- Middle-income country
- GDP (2009 prelim.): \$264 billion. (Data based on the National Economic and Social Development Board)
- Annual GDP growth rate (2009 prelim.): -2.2%.
- Per capita income (2009 prelim.): \$3,940.
- Unemployment rate (2009 prelim.): 1.5% of total labor force.
- Natural resources: Tin, rubber, natural gas, tungsten, tantalum, timber, lead, fish, gypsum, lignite, fluorite.



## General Information of Thailand

### Economy (2)

- Agriculture (8.9% of GDP): Products--rice, tapioca, rubber, corn, sugarcane, coconuts, soybeans.
- Industry: Types--tourism, textiles, garments, agricultural processing, cement, integrated circuits, jewelry, electronics, petrochemical, and auto assembly.
- Export Dependent (exports of goods and services equivalent to over 60% of GDP in 2009)



## General Information of Thailand

### Economy (3)

(% YOY)	Economic Forecast Year 2010			
	2009	Q1	Q2	Projection
GDP (at 1988 price)	-2.2	12.0	9.1	7.0-7.5
Total Investment (at 1988 price)	-9.0	12.9	12.2	9.2
Private	-12.8	15.8	18.5	12.1
Public	2.7	3.8	-3.4	1.7
Total Consumption (at 1988 price)	-0.1	4.5	6.5	4.0
Private	-1.1	4.0	6.5	4.1
Public	5.8	7.3	6.3	3.9
Export of Goods,	-13.9	32.0	41.8	25.7
Volume	-14.0	16.5	28.3	17.2
Import of Goods,	-24.9	63.6	44.8	32.9
Volume	-22.7	47.4	30.2	24.9
Current Account to GDP (%)	7.8	6.7	6.0	4.9
Inflation	-0.8	3.8	3.3	3.0-3.5
Unemployment rate	1.5	1.1	1.3	1.3



## General Information of Thailand

### Economy (4)

Kasikorn Bank Research :

- Flooding Oct-Nov 2010 -> over 40 provinces
- Economical Loss 32,400-54,200 Million Baht
- Can affect GDP -> 6.8-6.9% (decreased from 7.0-7.5%) (Forecast)
- Inflation 3.3-3.4% (Increase from No-flood 3.26%)



**Metropolitan Waterworks Authority**

- ESTABLISHED IN 1967, UNDER MWA'S ACT
- A STATE ENTERPRISE UNDER THE MINISTRY OF INTERIOR
- RESPONSIBLE FOR PROCURING, PRODUCING AND SUPPLYING TREATED WATER IN THE METROPOLITAN AREA, COVERING 3 PROVINCES : BANGKOK, NONTABURI AND SAMUTPRAKARN



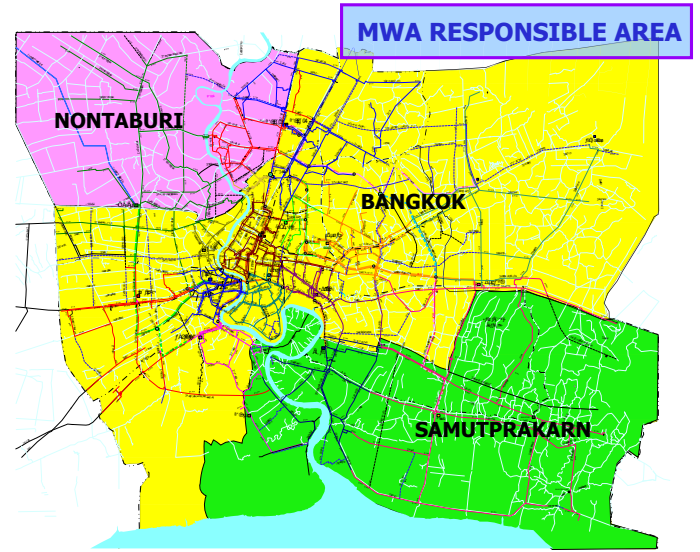
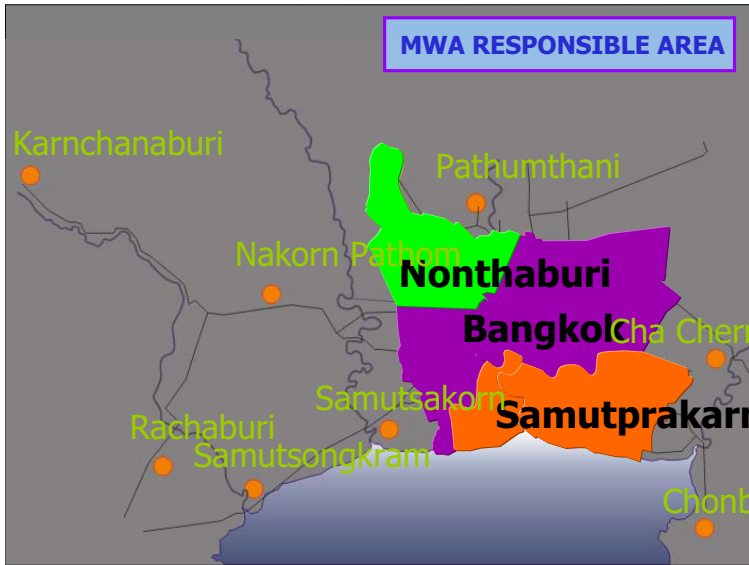
**Metropolitan Waterworks Authority**


### MISSION

To be a leading organization in good corporate management with social responsibilities in the forefront of ASEAN's utilities providing water supply services

### VISION

To provide cost-effective water supply services with high standards, modern technology, and competent professionals to ensure customers' satisfaction




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METROPOLITAN WATERWORKS AUTHORITY

## ESSENTIAL INFORMATION

- RESPONSIBLE AREA (sq. km) : 3,195
- SERVICE AREA (sq. km) : 2,329.3 (73%)
- NUMBER OF CUSTOMERS : 1,920,155
- NUMBER OF POPULATION : 7,958,163

Ref : MWA's 2009 Annual Report

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METROPOLITAN WATERWORKS AUTHORITY

## ESSENTIAL INFORMATION

- OPERATING INCOME (Million Baht) : 5,251.4
- COST PER UNIT SOLD (Baht/m<sup>3</sup>) : 9.50
- EFFECTIVE RATE (Baht/m<sup>3</sup>) : 11.94
  - RESIDENCE : 9.95
  - BUSINESS, STATE ENTERPRISE : 13.81
  - GOVERNMENT AGENCY & OTHERS

Ref : MWA's 2009 Annual Report

## ESSENTIAL INFORMATION

❑ TOTAL WATER PRODUCTION	1,736.4	Million m <sup>3</sup> /year
❑ TOTAL WATER SALES	1,250.3	Million m <sup>3</sup> /year
❑ PERCENTAGE OF WATER SALES	72	%
❑ PERCENTAGE OF WATER LOSSES	28	%

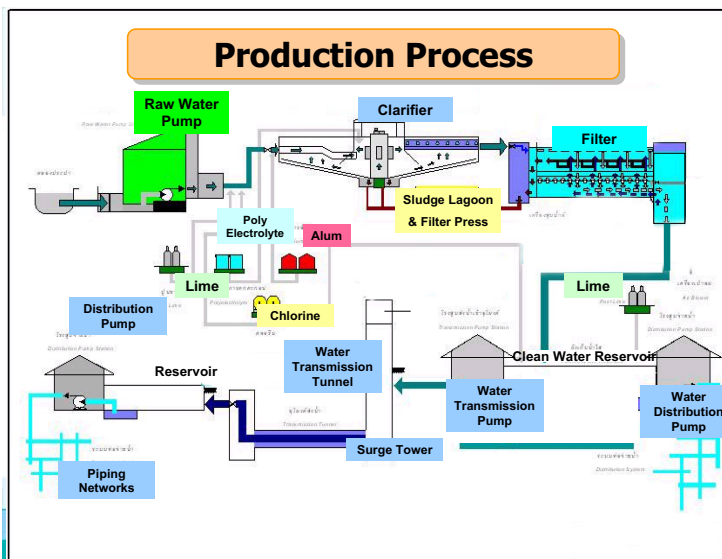
Ref : MWA's 2009 Annual Report

## RAW WATER SOURCES

100% Surface Water from 2 sources :



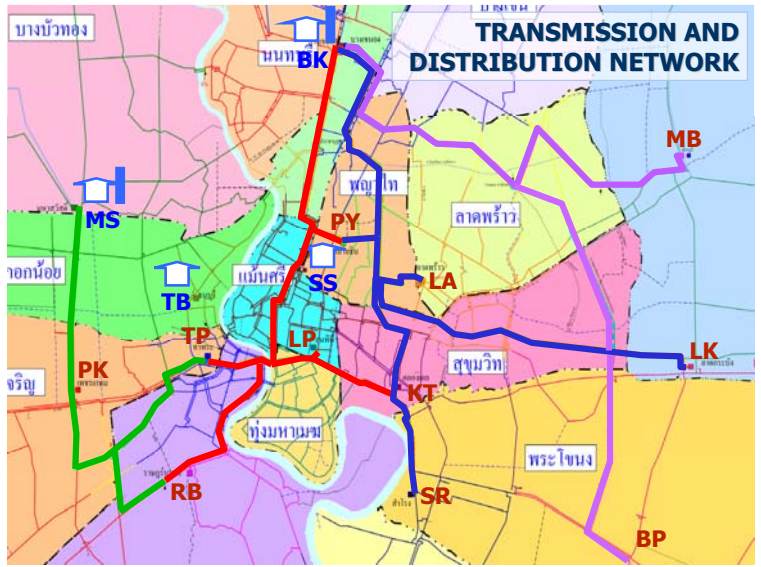
Chaopraya river and Maeklong river



## PRODUCTION CAPACITY

• BANGKHEN WTP.	3,600,000	CMD
• MAHASAWAT WTP.	1,200,000	CMD
• SAMSEN WTP.	550,000	CMD
• THONBURI WTP.	170,000	CMD

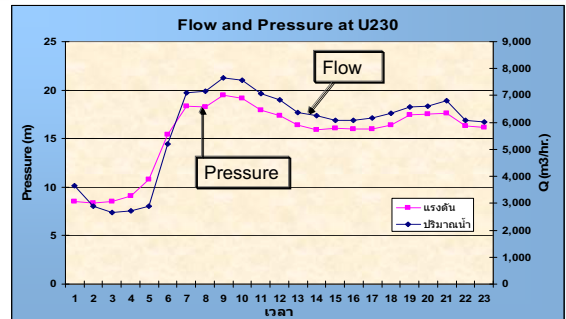
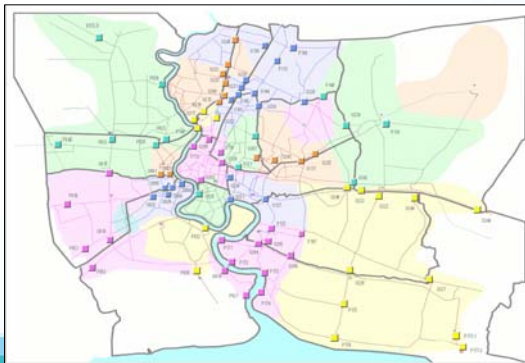
**TOTAL CAPACITY 5,520,000 CMD**



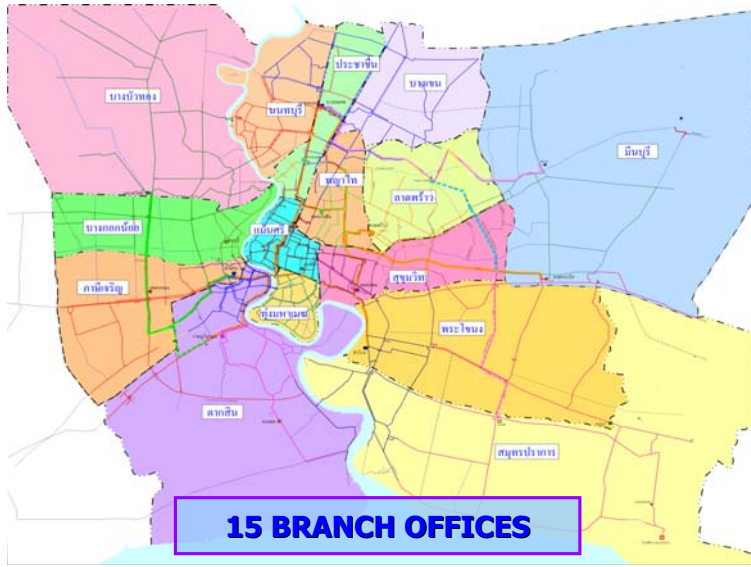
## Distribution Control

## Pressure Trend Curve

### Pressure Trend Curve



- Set the target pressure trend curve at effective points to control distribution pressure
- Pressure varies upon time and water demand in different areas to ensure satisfied water pressure for customers and also minimize water loss



**DRINKABLE WATER**

<http://www.mwa.co.th>  
**Call Center : 1125**

Certified by Mahidol University

**Waterworks for People**



**Thank you  
 for your attentions**

