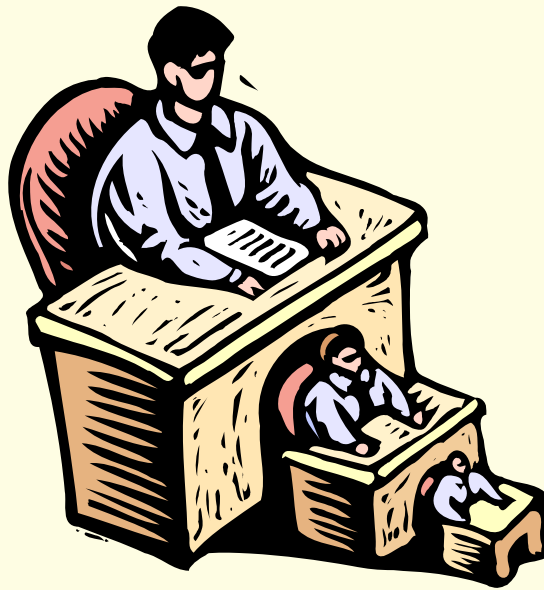


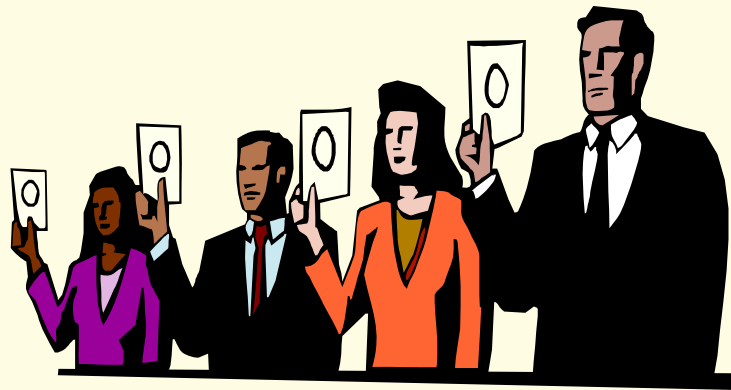


Public Debt Management Office

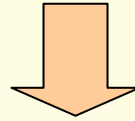
# Thailand Monitoring and Evaluation System



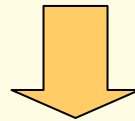
# Who monitor and evaluate?



**Ministry of Finance**



**Public Debt Management  
Office (PDMO)**



**Project Loan Operation Bureau**

# PDMO's main functions

- To formulate public borrowing policies and plans and to manage public debt for maximum economic benefit
- To supervise, monitor and evaluate public borrowing and public debt management programs, as well as, the performance of project loan implementation.

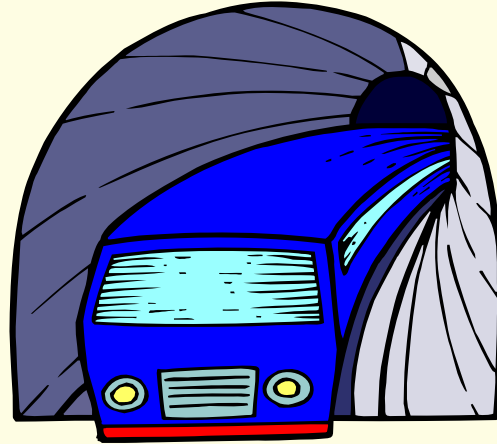
# PDMO's main functions

- To borrow for government agencies for development projects and to guarantee for state own enterprises in order to meet government policies , national development plans such as
  - Upgrade national competitiveness
  - Natural resources and environmental management
  - Poverty reduction

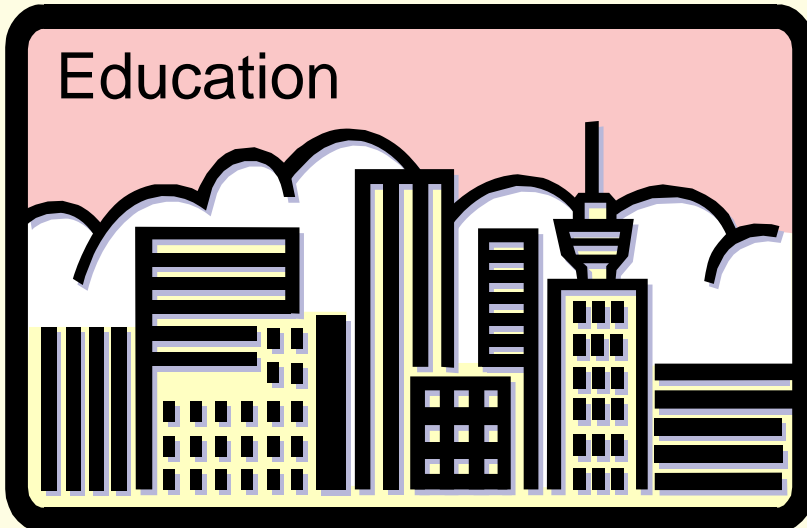
# Type of Loan Projects



Transportation



Environment



Social  
Development

# Database for on-going projects

- **Project basic information :**  
loan amount, currency, closing date, signing date, interest rate, loan source, expenditure category etc.
- **Project progress status**
- **Problems (if any)**

# How to Monitor?



# How?

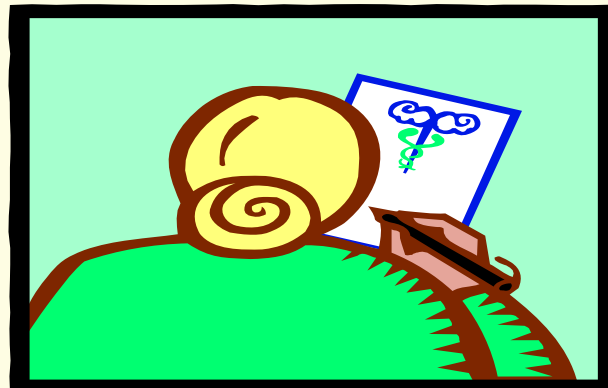
To monitor on- going projects

- Disbursement Progress
- Project Progress status

by using Loan Portfolio Management Information System (LPMIS)

# How?

- Executing Agencies (EAs) load disbursement and project progress status forms on PDMO website board ([www.pdmo.go.th](http://www.pdmo.go.th))
- EAs fill up forms and send to PDMO monthly
- PDMO collects and analyzes data



# Disbursement Progress Index (DPI)

- Measures the loan disbursement progress against implementation period
- DPI compares the actual disbursement to the benchmark average disbursement

## Disbursement Progress Index (DPI)

$$\text{DPI} = \frac{\% \text{ of Accumulated Disbursement}}{\% \text{ of Project Implementation Period}} \times 100$$

# Disbursement Progress Index (DPI)

## Classification

- Good 100% and up
- Average 70-100%
- To be improved below 70%
- No movement 0%

# Usefulness of results

- Loan Management
- Extension closing date
- Amend loan agreement
- Accelerate loan disbursement and project implementation
- Cancel unused loan amount
- Cancel loan agreement
- Solve problem in project implementation such as counterpart fund, procurement

# How to evaluate?



(For completed projects)

# Evaluation for completed projects

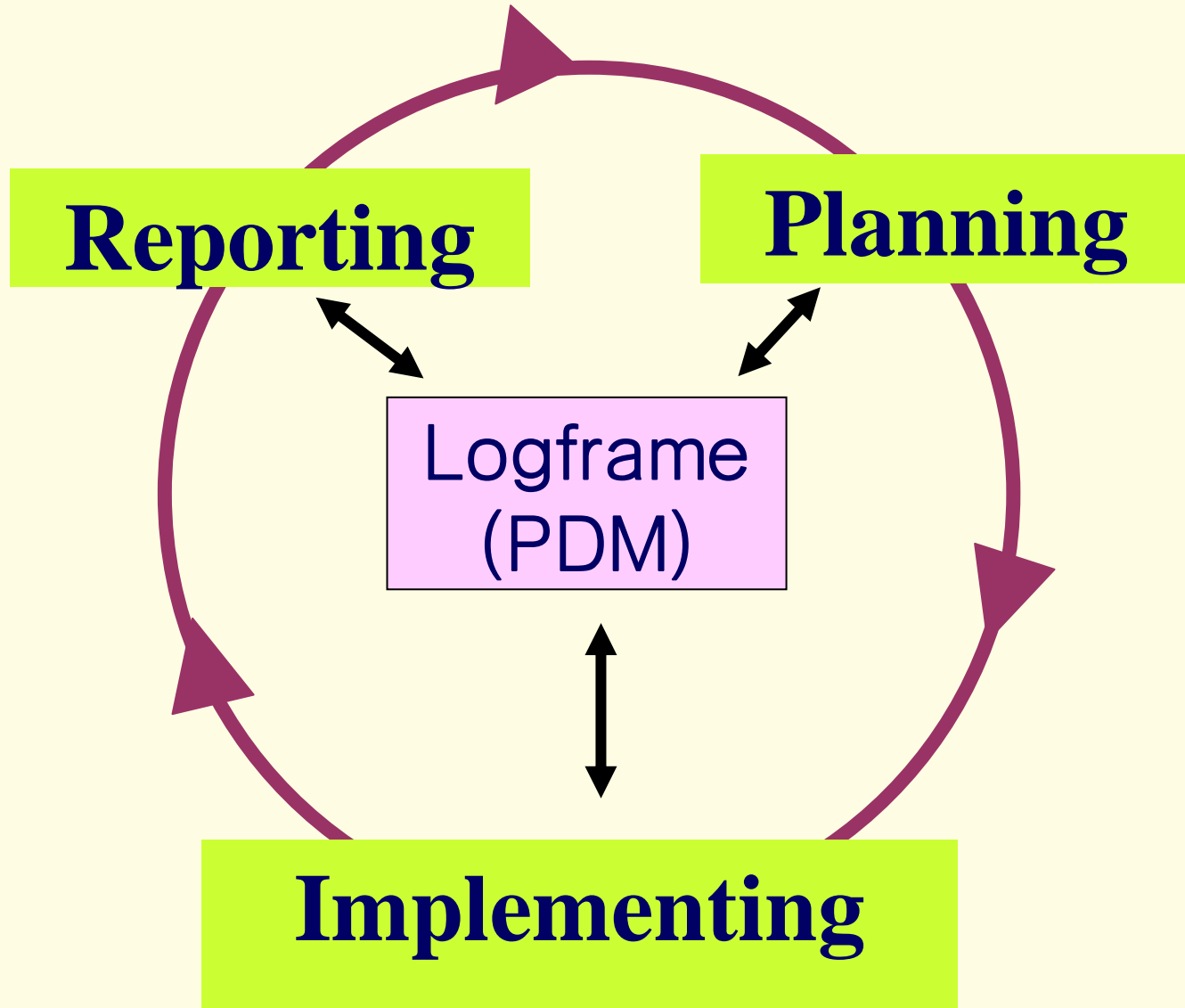
- After 1-2 years of completion  
(Project Completion Report)
- After 5-7 years of completion

# 3 Steps in evaluation

- Planning
- Implementing
- Reporting



# Evaluation



# Planning

- Determine Project/Plan
  - Schedule
  - Budget
  - Resources Availability (e.g.personnel)
- Collect basic information
- Design and prepare questionnaires

# Items in questionnaire

## Executing Agency

- Relevant to project objective
- Comparison of project scope between the original plan and outcome
- Achievement of objective by considering project indicators
- Operation and maintenance program
- Organization chart /officer in charge

# Items in questionnaire

## Beneficiaries

- General information (age, occupation etc.)
- Satisfaction Level of beneficiaries
- Benefit/impact from project implementation
- Recommendations/opinions for the project

# Implementing

- Field Survey (Executing agency Office and Project Site)
- Interview officer in charge (at project implementation stage and completion stage)
- Interview beneficiaries of the projects
- Gather questionnaire /collect data
- Analyze and interpret data
- Summary sheet

# Evaluation Criteria

- 1) relevance
- 2) efficiency
- 3) effectiveness
- 4) impact
- 5) sustainability



# Relevance

- Consistency with development policy
- Matching beneficiary needs
- Appropriateness of the project scope
- Relevance of objectives at the evaluation stage

# Efficiency

- Achievement of output
- Implementation schedule efficiency
- Construction cost efficiency
- Comparison of planned and actual output, project cost, project period

# Effectiveness

- Use and operation of outputs
- Achievement of project purpose
- Achievement of EIRR and FIRR targets

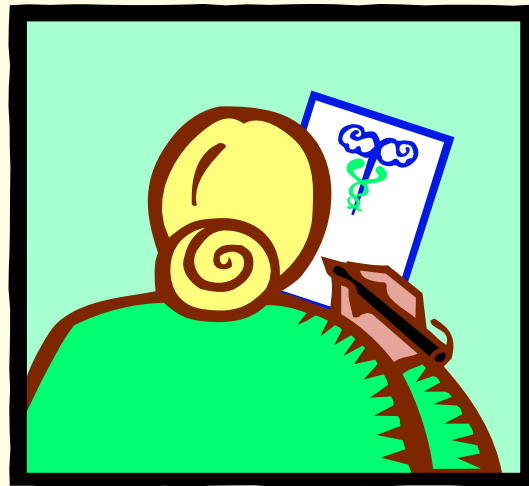
# Impact

- Contribution to achievement to the overall goal
- Impact on the natural environment, living environment, resident relocation and land acquisition
- Impact on technology

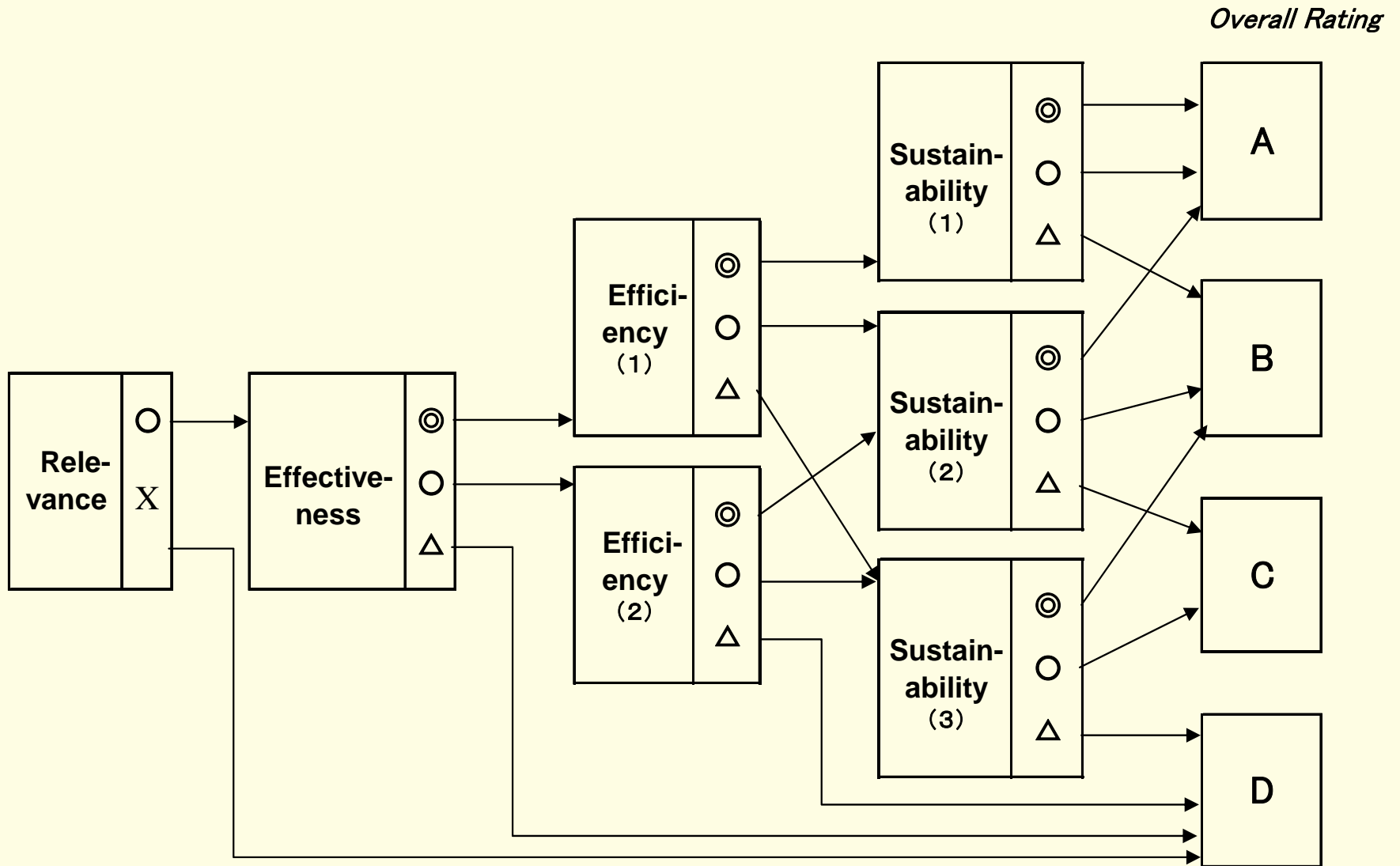
# Sustainability

- Operation and maintenance system: O&M status, office and staff in charge
- Financial resources or budget for operation and maintenance /financial status
- The environment surrounding the project

# Rating the projects



# Flow Chart of Rating Mechanism



# Rating Category

A	⊙	Highly satisfactory
B	○	satisfactory
C	△	partly satisfactory
D	X	unsatisfactory

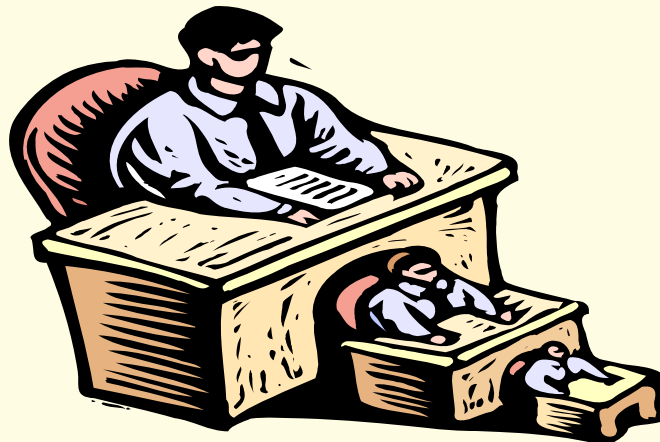
# Reporting

- Background of Project
- Objective of Project
- Results and evaluation
- Operation and Maintenance System
- Recommendation which might be beneficial for better realization of the project effectiveness and impact and sustainability
- Lesson learned from the project which might be valuable for a similar type of projects

# Report

(Monthly, Quarterly)

- PDMO to report to Parliament: Details of financing, Progress and Outcome
- PDMO Executives
- Debt Policy and Management Committee



# **Evaluation Results**

***TXVII-7: Fourth Bangkok Water  
Supply Project (II) and Fifth Project  
TXVIII-7: Networks System  
Improvement Project***

Atsushi Fujino, Team Leader, External Evaluator  
Team

Public Debt Management Office, Ministry of Finance

April 29, 2005  
Bangkok, Thailand

# Project Objectives

To cope with an increase in **water demand** and reduce **water leakage** as well as to improve **water quality** by constructing water treatment plants and improving distribution network systems in the Bangkok Metropolitan Area, thereby improving **public health**, enhancing **industrial and commercial activities**, and reducing **use of groundwater**.

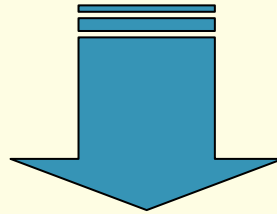
# Criteria & Rating

Relevance A [◎]

Efficiency B [○]

Effectiveness A [◎]

Sustainability A [◎]



**Overall Rating A [◎]**

# Relevance [A(©)]

## Appraisal (Plan)

### □ Policy Level

- 7th NESDP (1992-1996):  
Expansion of water supply facilities

### □ Program Level

- Serious water shortage
- MWA Master Plan (1990):  
Expansion of the water supply facilities

### □ Project Level

- Aimed at expanding water production and distribution facilities

## Ex-post Evaluation (Actual)

### □ Policy Level

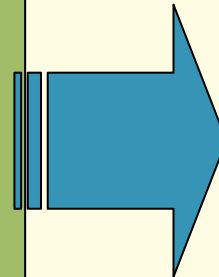
- 9th NESDP (2002-2006):  
Improvement of water supply facilities

### □ Program Level

- High demand for stable water supply (volume, pressure, and quality)

### □ Project Level

- Addresses the above issues



# Efficiency [B(O)]: Output [A(©)]

Appraisal (Plan)

Ex-post Evaluation (Actual)

## □ 4th Project (II)

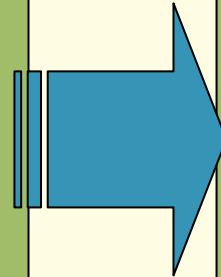
- (1) Improvement of the existing raw water canal from Sam Lae raw water PS to Bang Khen WTP
  - Pumping unit at Bang Khen raw water PS
  - **Lad Krabang Distribution PS**
  - Transmission conduits
  - Trunk mains / Distribution pipelines
  - Consulting services

## □ 5th Project

- (1) **Maha Sawat WTP**
  - Trunk mains / Distribution pipelines
  - Consulting services

## □ Network Systems Improvement Project

- Pumping building with at Bang Khen WTP
- **Distribution pumping units (7)**
- Trunk mains / Distribution pipelines
- Consulting services



## □ 4th Project (II)

- **Cancelled**
- As planned
- (3) As planned
- (4) As planned
  - 18.1 km / 19 km
  - As planned

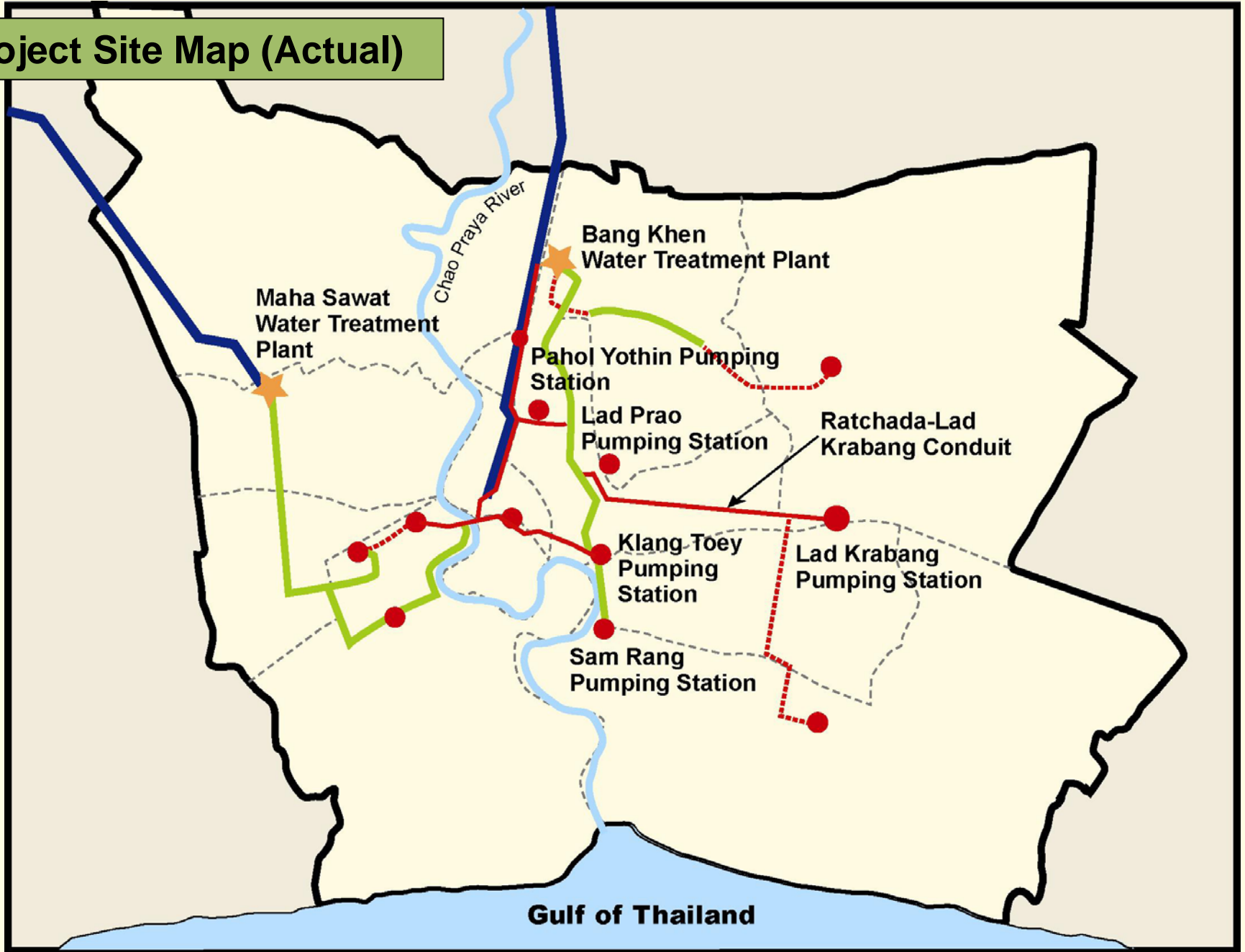
## □ 5th Project

- (1) As planned
  - 219.5 km / 669.3 km
  - As planned

## □ Network Systems Improvement Project

- As planned
- **5 controlling systems added**
- 216.4 km / 296 km
- As planned

# Project Site Map (Actual)



# Efficiency [B(O)]: Schedule [C( $\Delta$ )]

## Appraisal (Plan)

### □ 4th Project (II)

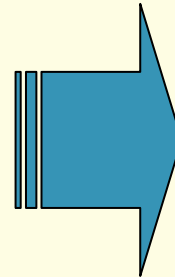
Jan. 1993 – Jun. 1996  
(42 months)

### □ 5th Project

Sept. 1992 – Apr. 1996  
(44 months)

### □ Networks System Improvement Project

Sept. 1993 – Feb. 1998  
(54 months)



## Ex-post Evaluation (Actual)

### □ 4th Project (II)

Jan. 1993 – Jun. 2000  
(90 months)

### □ 5th Project

Jan. 1993 – Jan. 2002  
(109 months)

### □ Networks System Improvement Project

Sept. 1993 – Jan. 2004  
(125 months)

# Efficiency [B(O)]: Cost [A(©)]

## Appraisal (Plan)

### □ 4th Project (II)

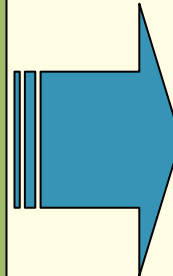
\ 22,955 m

### □ 5th Project

\ 39,084 m

### □ Networks System Improvement Project

\ 20,522 m



## Ex-post Evaluation

(Actual)

### □ 4th Project (II)

\ 13,388 m

### □ 5th Project

\ 20,335 m

### □ Networks System Improvement Project

\ 12,206 m

# Effectiveness [A(©)]

- Increase in Water Production Volume

## Maha Sawat WTP

<2000 target: 2 years after the project completion>

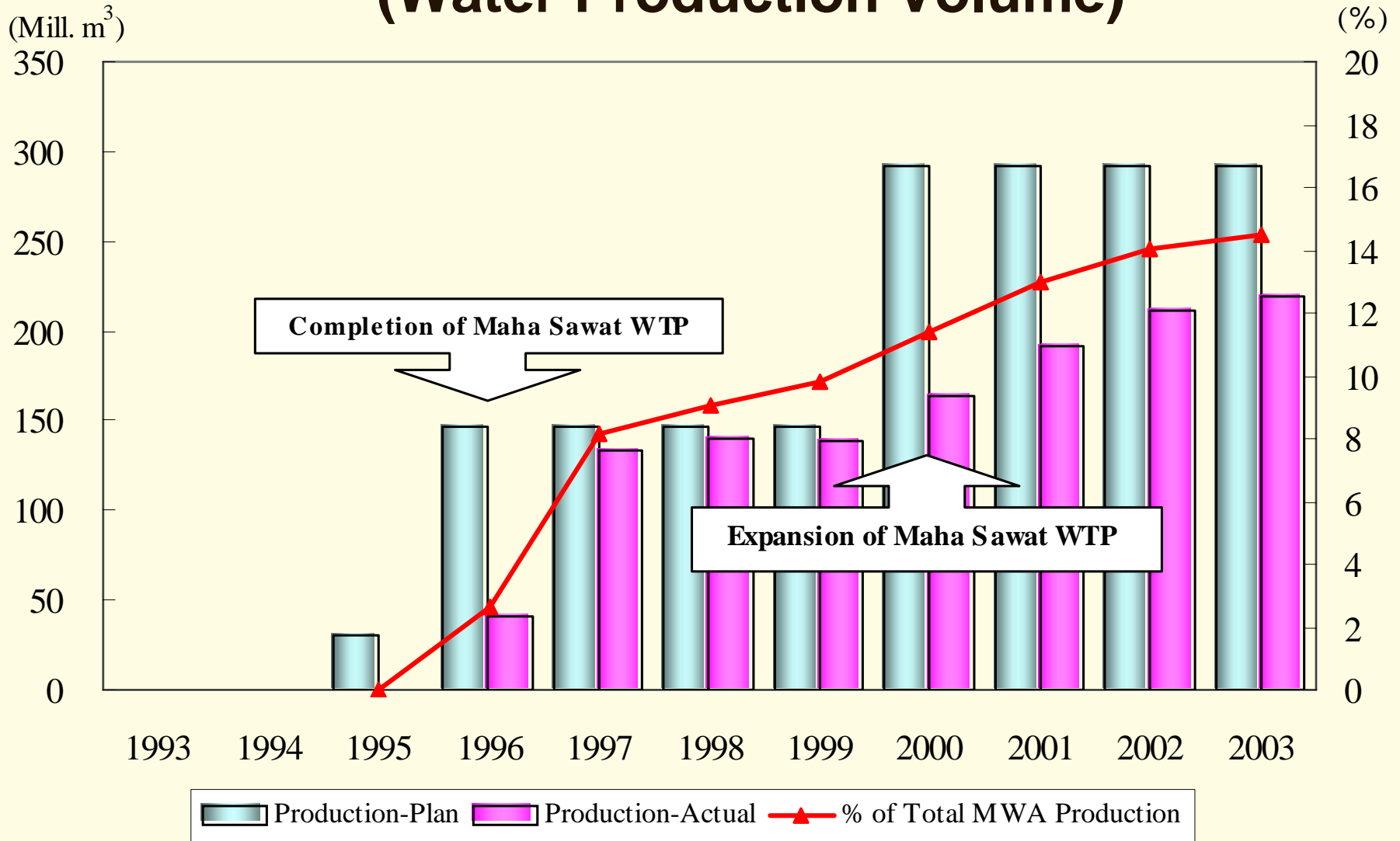
146 mil. m<sup>3</sup>/year

<2003 actual>

125.2 mil. m<sup>3</sup>/year (85.8% of target)



# Appraisal Plans & Actual Performance (Water Production Volume)



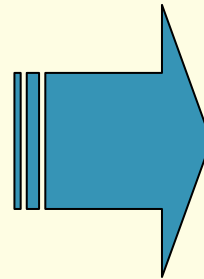
# Effectiveness [A(©)] (Cont'd)

## 2) Improvement in Water Supply Services

### Appraisal (Plan)

<2000 target: 2 years after the project completion>

- a) **Population Served**: 8.39 mil.
- b) **Percentage of Population Served**: 80.1%
- c) **Service Area**: 1,060 km<sup>2</sup>
- d) **Non-revenue Water Rate**: 25.0%

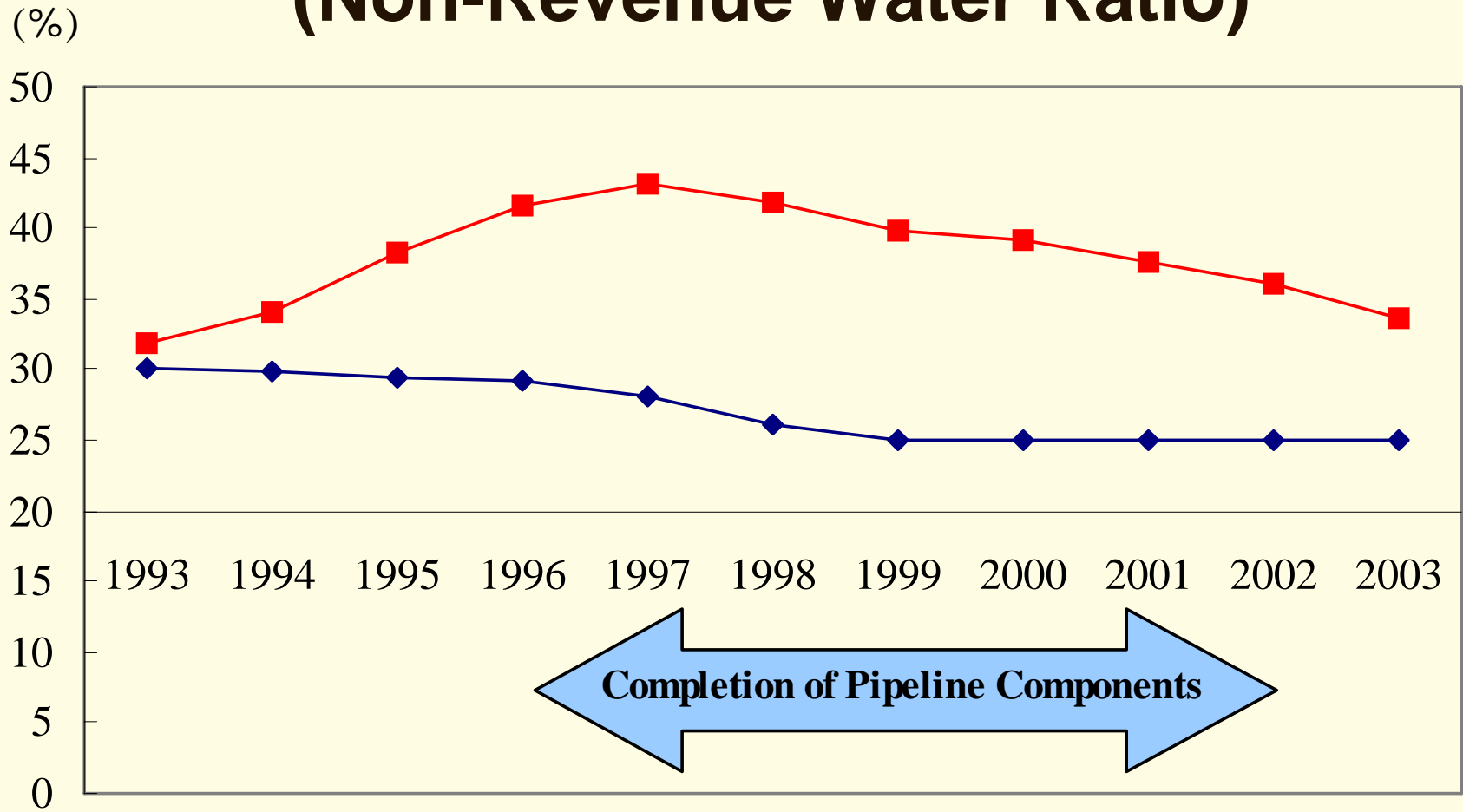


### Ex-post Evaluation

<2003 actual>

- a) **Population Served**: 6.93 mil.
- b) **Percentage of Population Served**: 87.5%
- c) **Service Area**: 1,515.5 km<sup>2</sup>
- d) **Non-revenue Water Rate**: 33.7%

# Appraisal Plans & Actual Performance (Non-Revenue Water Ratio)



◆ NRW -- Plan (%)    ■ NRW -- Actual (%)

# Effectiveness [A(©)] (Cont'd)

- **Improvement in Water Quality**
  - **Satisfaction of MWA water quality standards** (based on WHO recommendations)

## 4) **FIRR**

- Appraisal:  
**4.54% -- 5.35%**
- Ex-post Evaluation:  
**5.03% -- 12.77%**



# Impacts

- **Improvement of sanitation**

**Decrease in acute diarrhea cases:** 877.58 (1998) to 676.98 (2002) (per 100,000)

- **Enhancement of industrial and commercial activities**

Contribution in the eastern part of the Bangkok Metropolitan Area

- **Decrease in groundwater use**

**MWA groundwater use:** 130 mil m<sup>3</sup> (1993) to none (2004); Areas with **land subsidence** more than 3cm p.a. largely decreased

# Sustainability [A(©)]

## 1) Executing Agency

### □ Technical Capacity

- No problems

### □ Operation and Maintenance System

- O&M: Office of Bang Khen WTP  
Office of Maha Sawat WTP  
Office of the Water Transmission and  
Distributing System
- Managerial issues (e.g. water tariff):  
MWA Board in consultation with  
Minister of Interior

# Sustainability [A(©)] (Cont'd)

- Financial Conditions

- No problems

- **Operation and Maintenance Status**

- No problems

# Lessons Learned

## For MWA

MWA should have established **solid and effective communication channels** with other concerned governmental agencies, such as BMA and DOH, to **share information and facilitate coordination among all agencies concerned** to avoid delays in project completion.

**Thank you**