NARBO 4th Training Programme

9th November 2006

Effective and Sustainable Management on Existing Water Infrastructure

- The Case Study on Mie Canal Operation and Maintenance Office -

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Mie Canal Operation and Maintenance Office

Japan Water Agency


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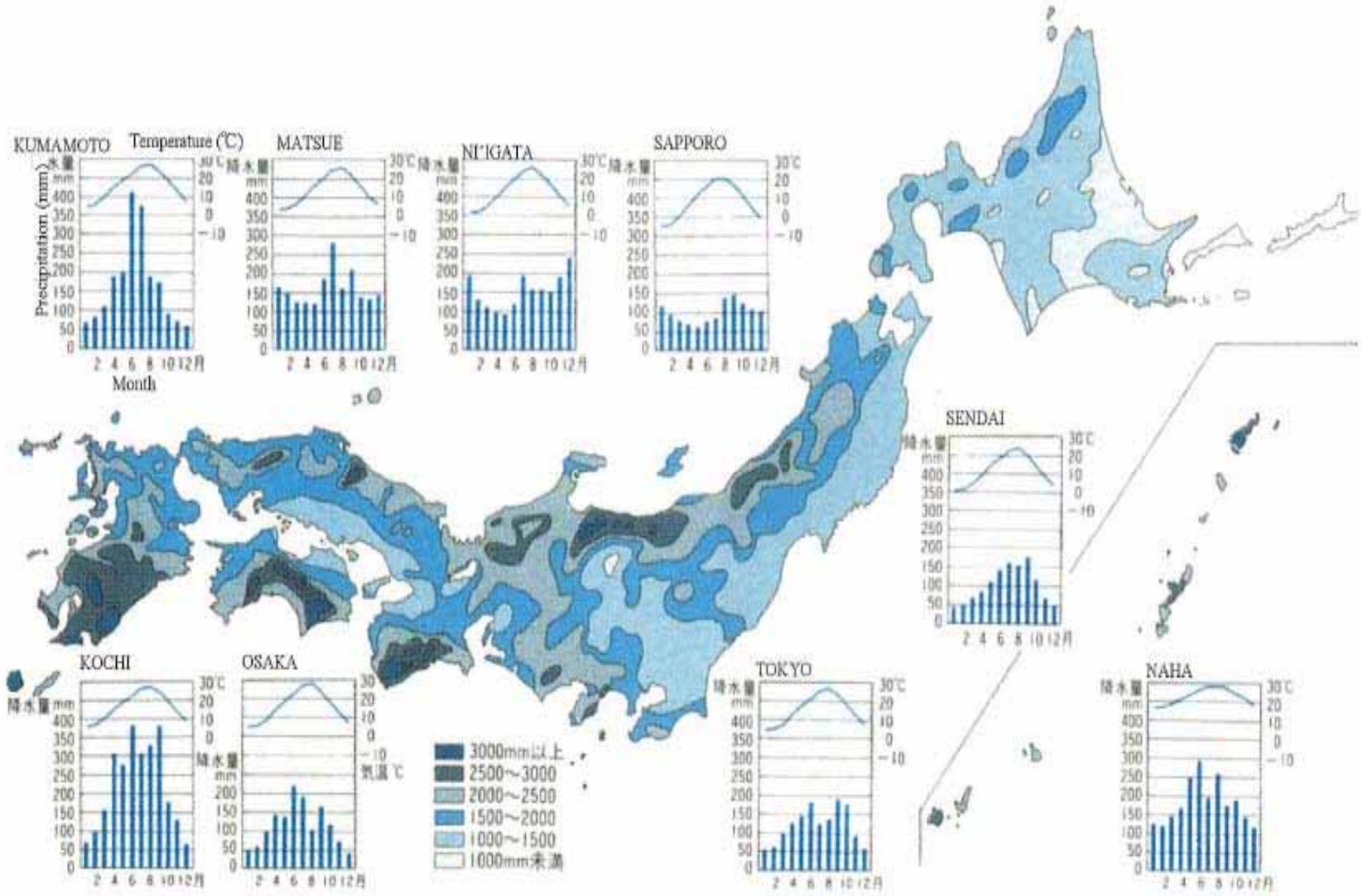
Distribution of precipitation and annual average temperature and monthly precipitation



Governments Related to Water in Japan

Ministry of Health, Labour and Welfare

Water Supply for Domestic Use, Quality Preservation of Water Source, etc.

Ministry of Agriculture, Forestry and Fisheries

Water Supply for Agricultural Use, Forest Development for Headwaters Conservations, etc.

Ministry of Economy, Trade and Industry

Water Supply for Industrial Use, Hydropower, etc.

Ministry of the Environment

Water Quality, Environmental Preservation, etc.

Ministry of Land, Infrastructure and Transport

Sewerage, River Improvement for Flood Control and Environment, Reservoir Area Development, Water Supply and Demand Planning, etc.

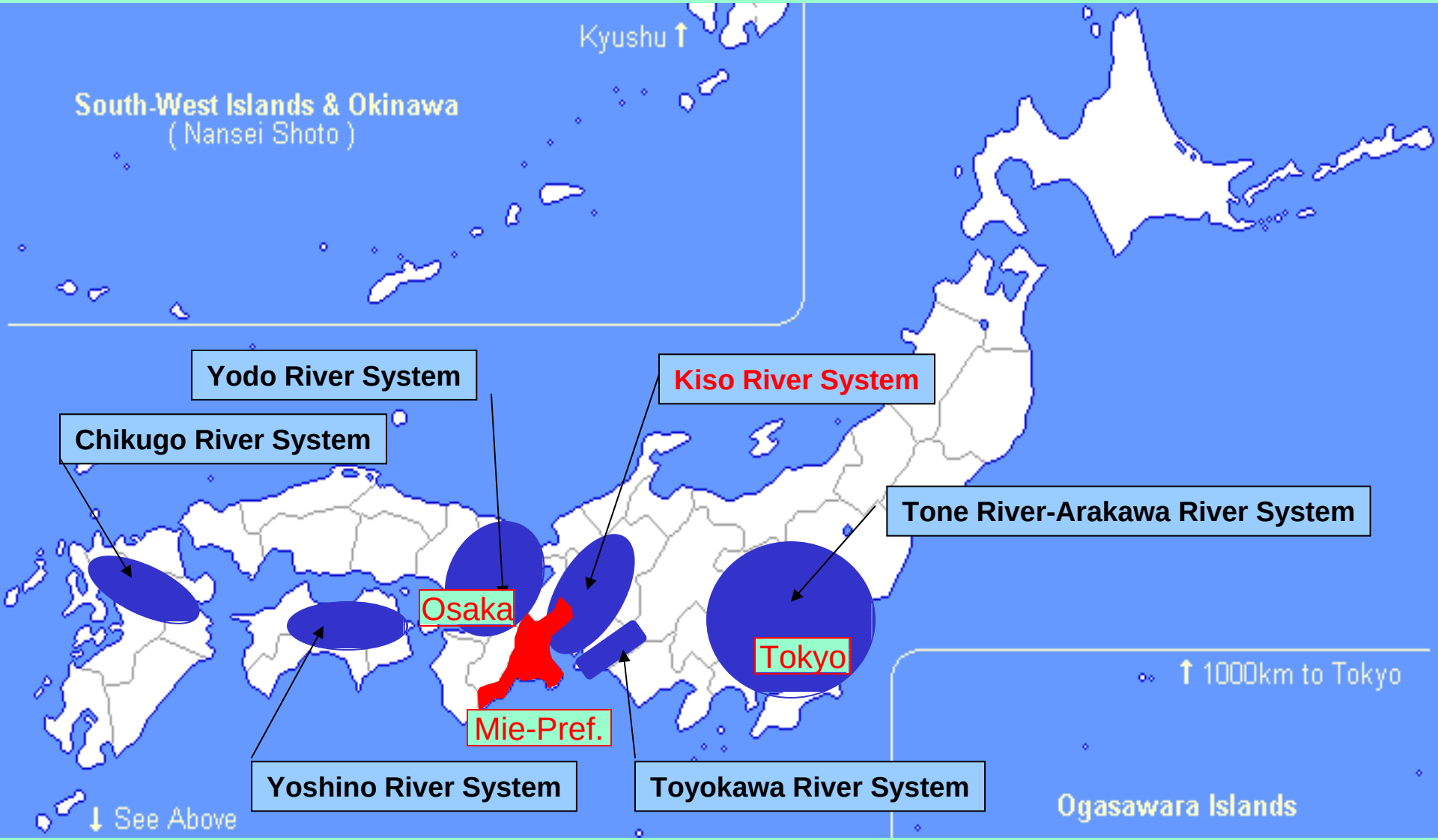
> Principle of farmer's applications

> Compulsory participation under the high rate of farmer's agreement

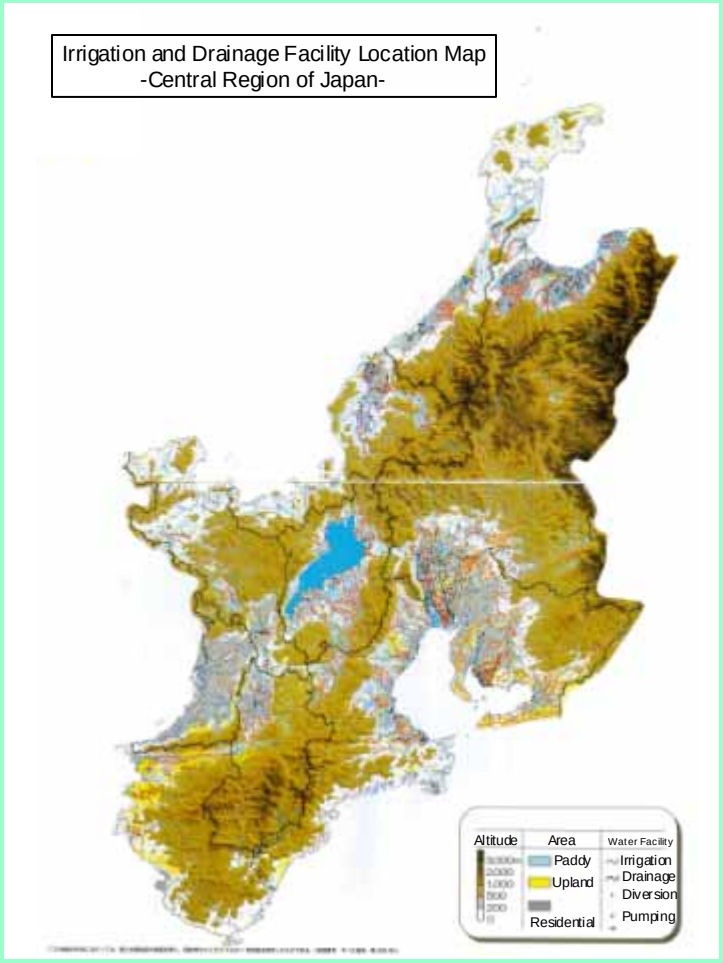
> Financial support and sharing duties among farmers

> Implementation of On-farm project with full agreement of farmers and land offering for shared facilities

Location of Mie Canal Project

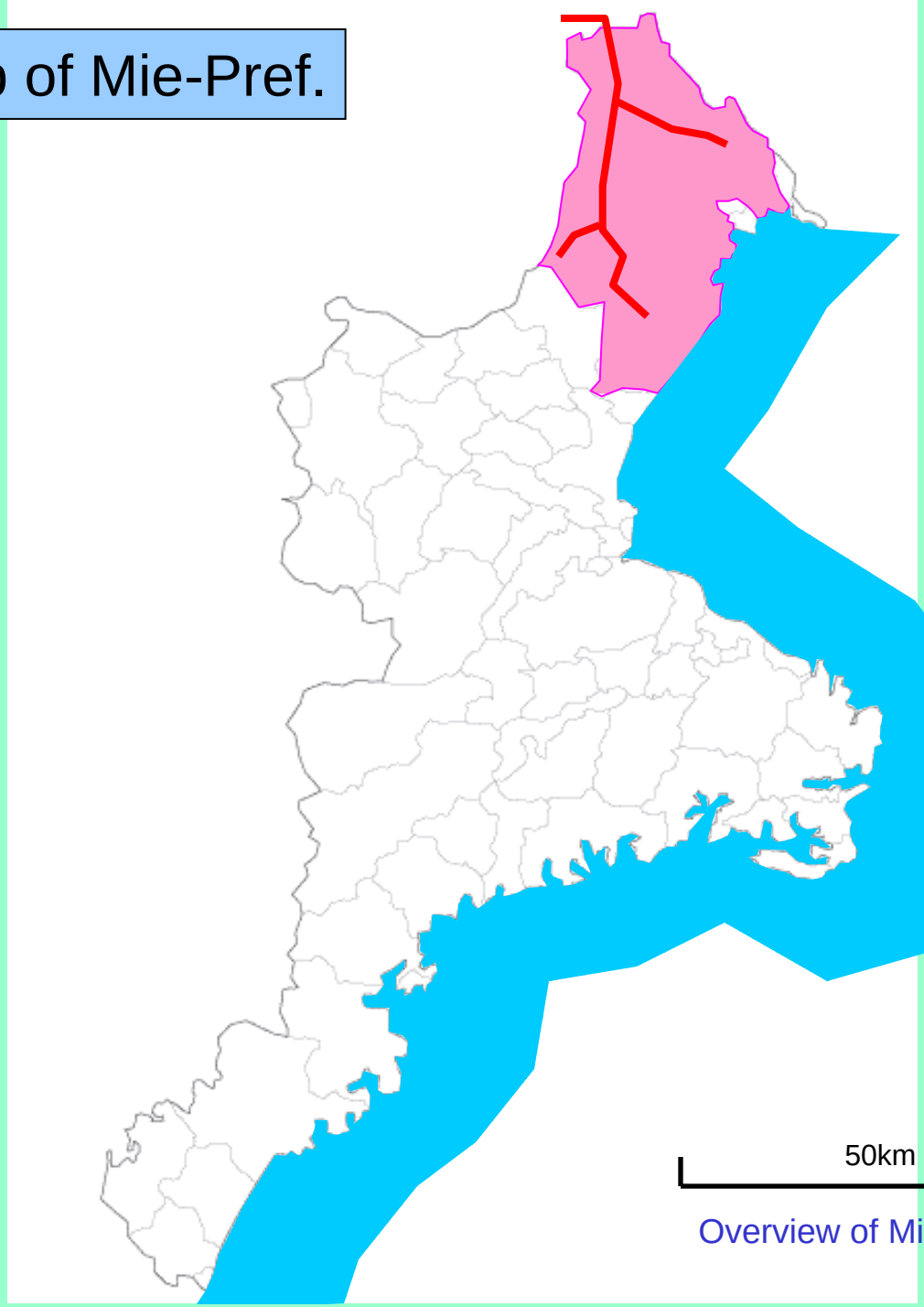


Overview of Mie Canal Construction Project



Overview of Mie Canal Construction Project

Map of Mie-Pref.



Overview of Mie Canal Construction Project

Agricultural Water Use

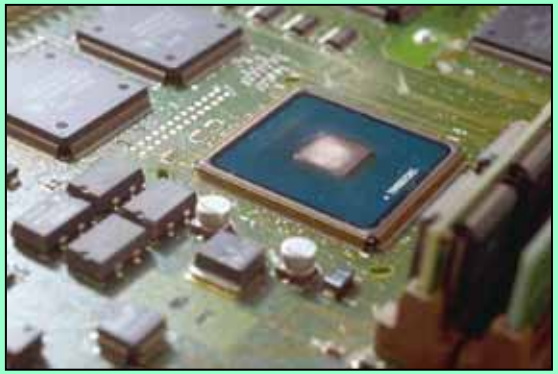
Paddy Field Irrigation

Upland Irrigation

Overview of Mie Canal Construction Project

Industrial and Domestic Water Use

FUJITSU Mie Plant

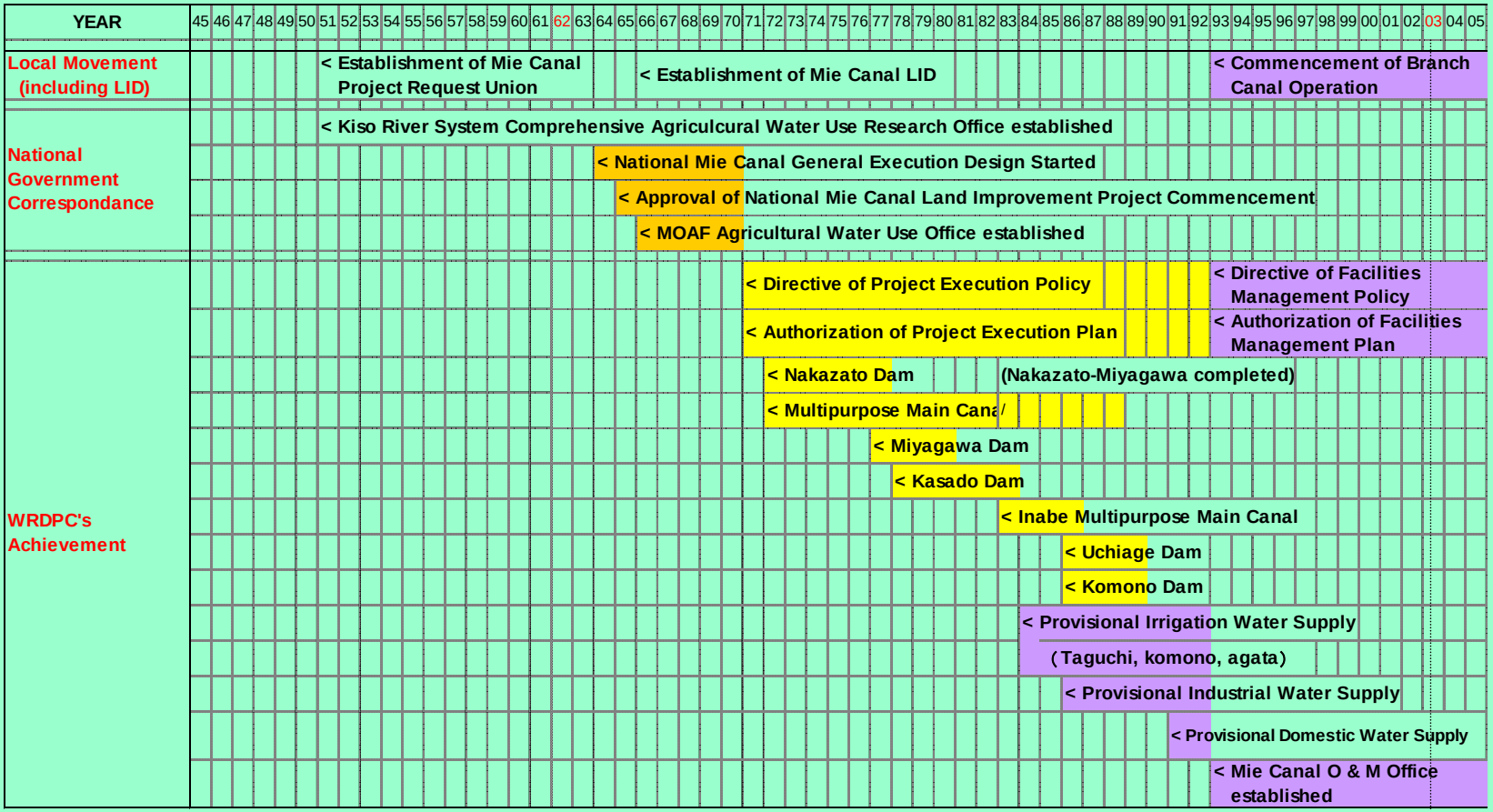


Memory LSI

SUIZAWA Water Purification Plant

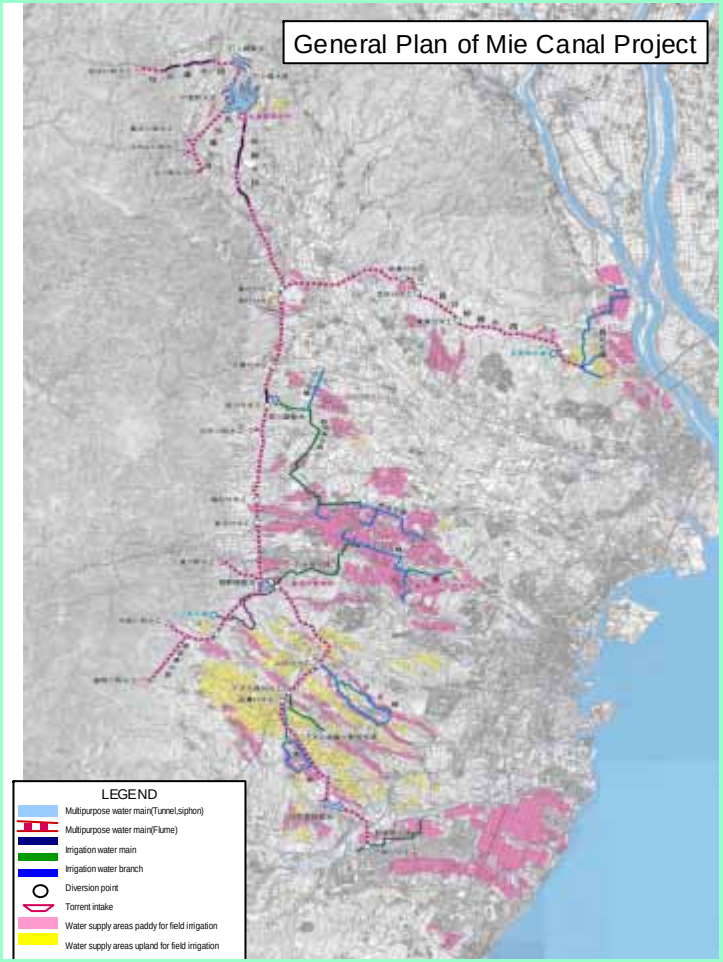
Overview of Mie Canal Construction Project

Project history



Overview of Mie Canal Construction Project

Project General Plan

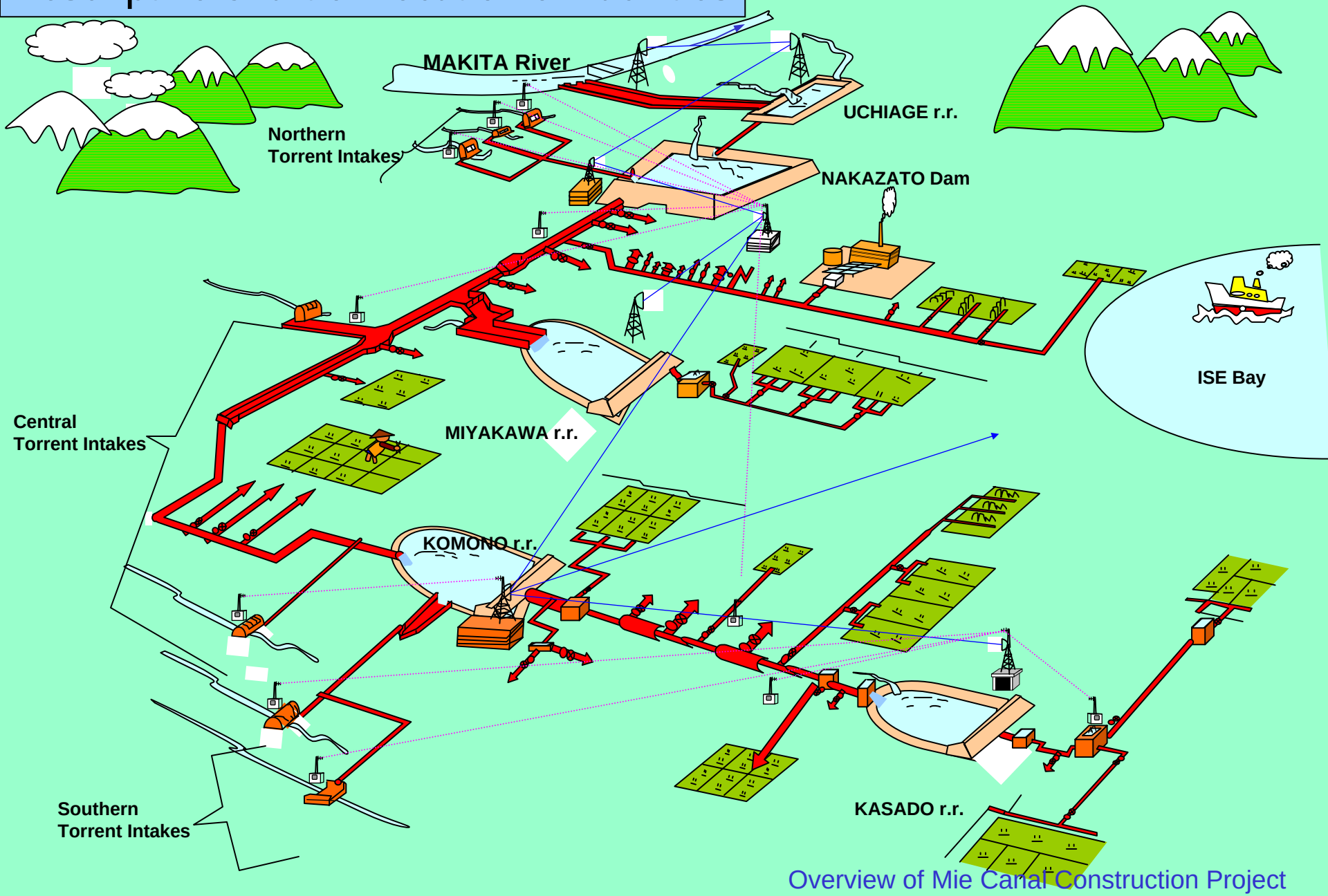


Features of Main Facilities

(Intake works)	Name of intake	Catchment area	Irrigation area	Maxmam intake	Restraint flow		Droughty discharge
					Summer season	Winter season	
		km2	ha	m3/s	m3/s	m3/s	m3/s
Makita River Intake	Makita river	26.0	7,310	5.0	1.20	0.32	0.28
Northern torrent intakes	Inabe river	5.9	7,310	1.2	0.29	0.11	0.03
	Koutidani river	6.6	7,310	2.6	0.43	0.23	0.06
	Hie river	2.8	7,310	0.5	0.13	0.05	0.01
Central torrent intakes	Tabika river	6.6	5,430	1.4	0.26	0.13	0.04
	Mitaki River	11.1	5,250	2.7	0.46	0.29	0.07
Southern torrent intakes	Utsube river	7.1	5,250	1.5	0.25	0.14	0.04
	Onbe river	9.5	5,250	1.7	0.54	0.18	0.04

(Reservoirs)	Catchment area		Irrigation area	Effective storage	Design Usage Volume	Nos of Usage per Year	Maximum Intake Volume
	Direct	Indirect					
	km2	km2	km2	1,000m3	1,000m3		m3/s
UCHIAGE	(1.40)	–	–	2,200	–	–	5.0
NAKAZATO	4.00	42.68	7,310	16,000	24,300	1.5	7.3
MIYAKAWA	1.80	–	910	800	5,800	7.3	1.4
KOMONO	0.80	34.30	5,250	1,600	31,300	19.6	2.5
KASADO	6.90	–	1,690	3,000	6,100	2.0	4.2

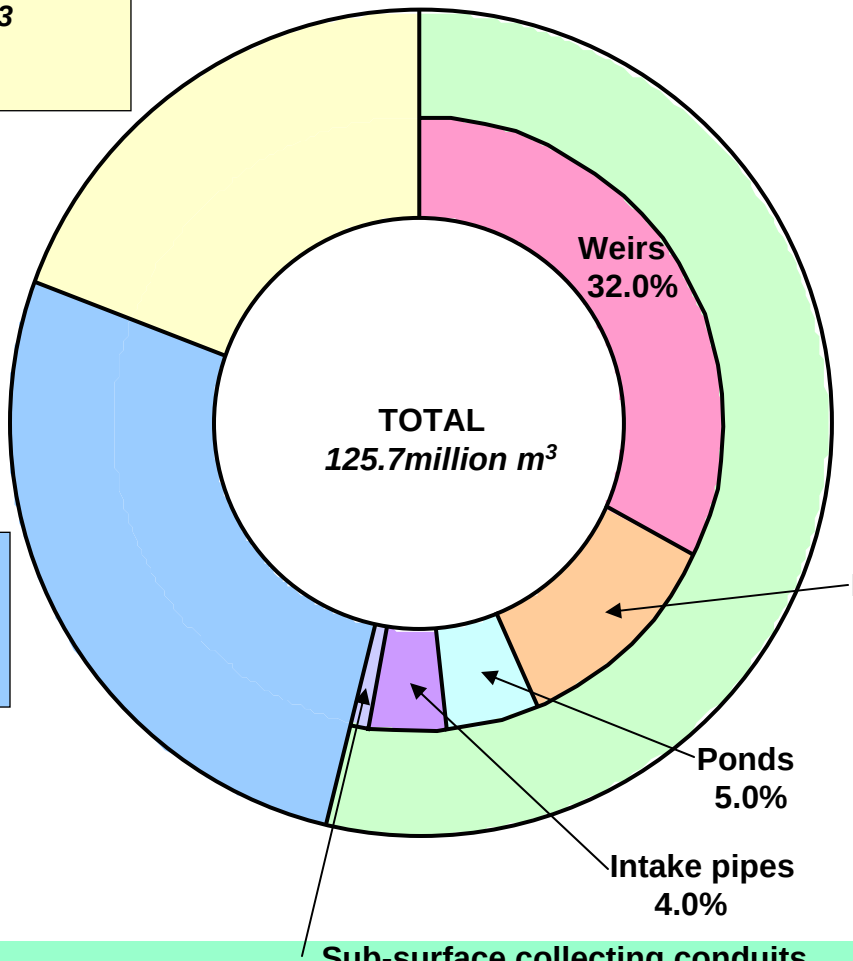
Descriptive Chart of Location of Facilities



Overview of Mie Canal Construction Project

Annual Agricultural Water Source Plan

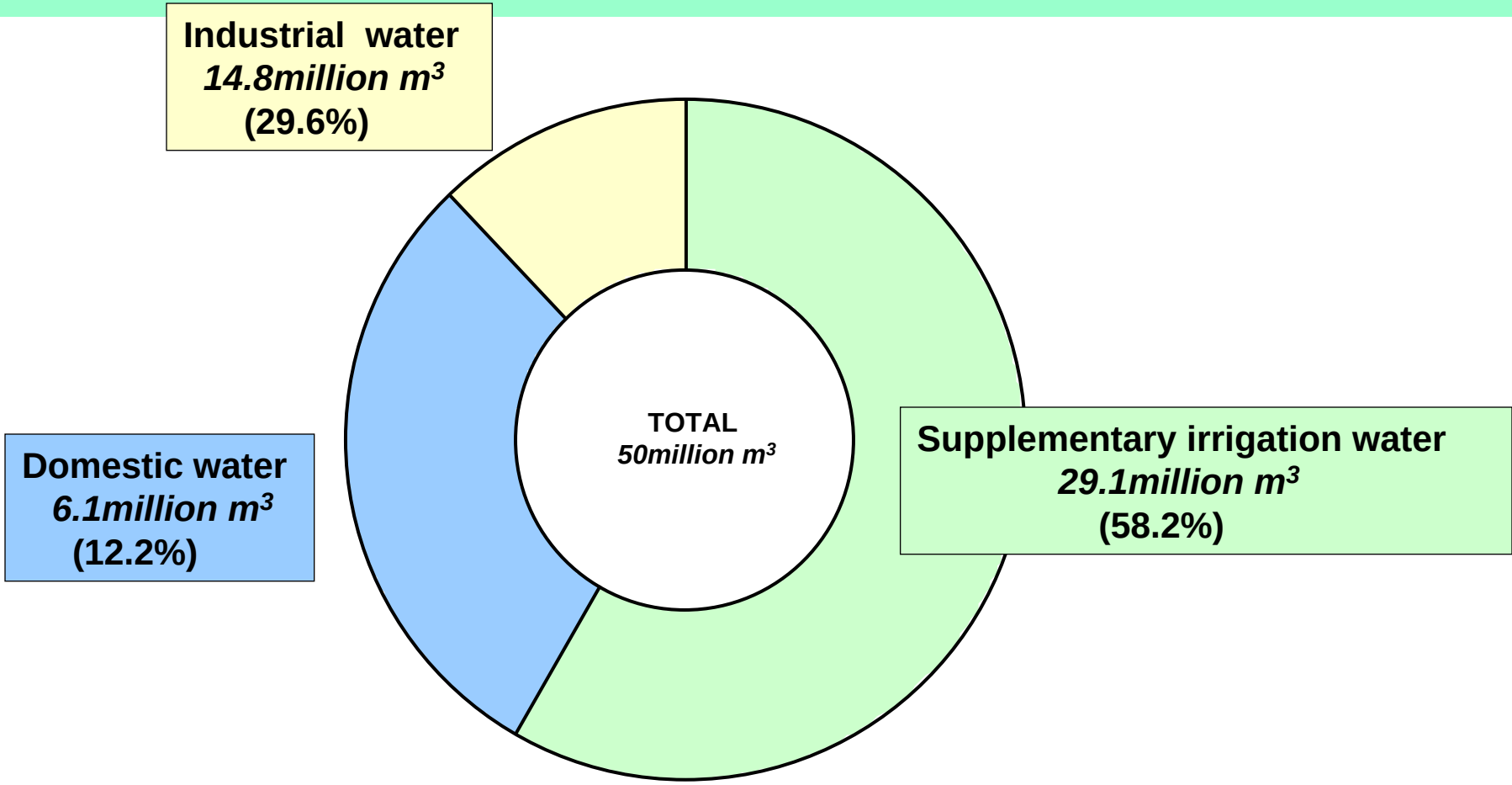
Net deficit water volume
24.4million m³
(19.4%)



Existing water sources
67.4million m³
(53.6%)

Rainfall
33.9million m³
(27.0%)

Annual Water Supply Plan of Mie Canal Project

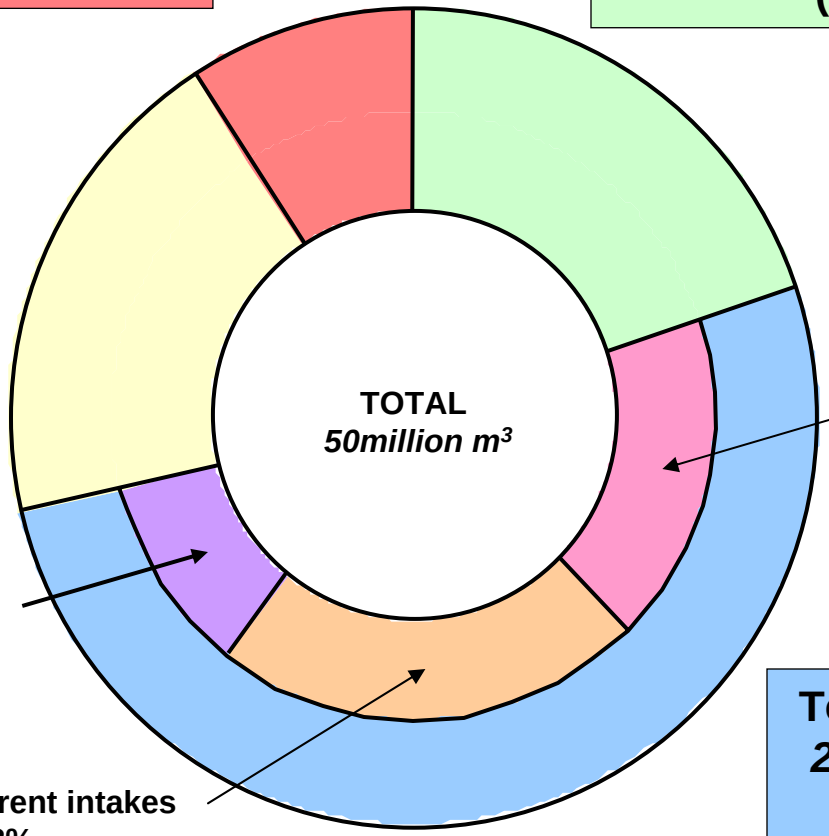


Annual water source plan of Mie Canal Project

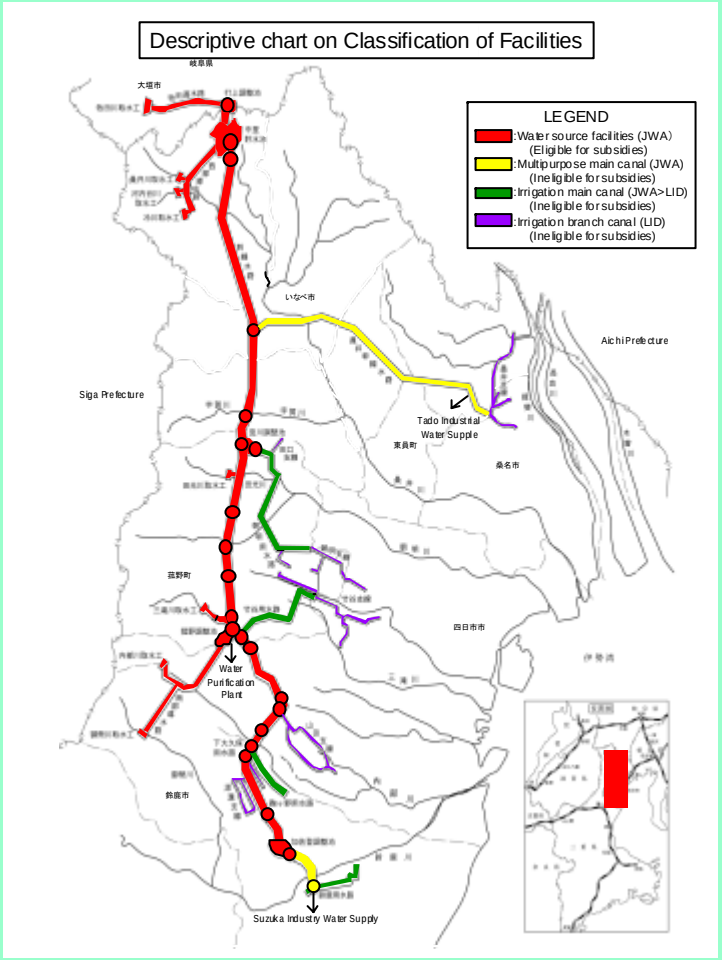
Original inflow of dams
4.6million m³
(9.2%)

Interbasin transfer from R.Makita
10.0million m³
(20.0%)

Storage of dams
9.8million m³
(19.6%)

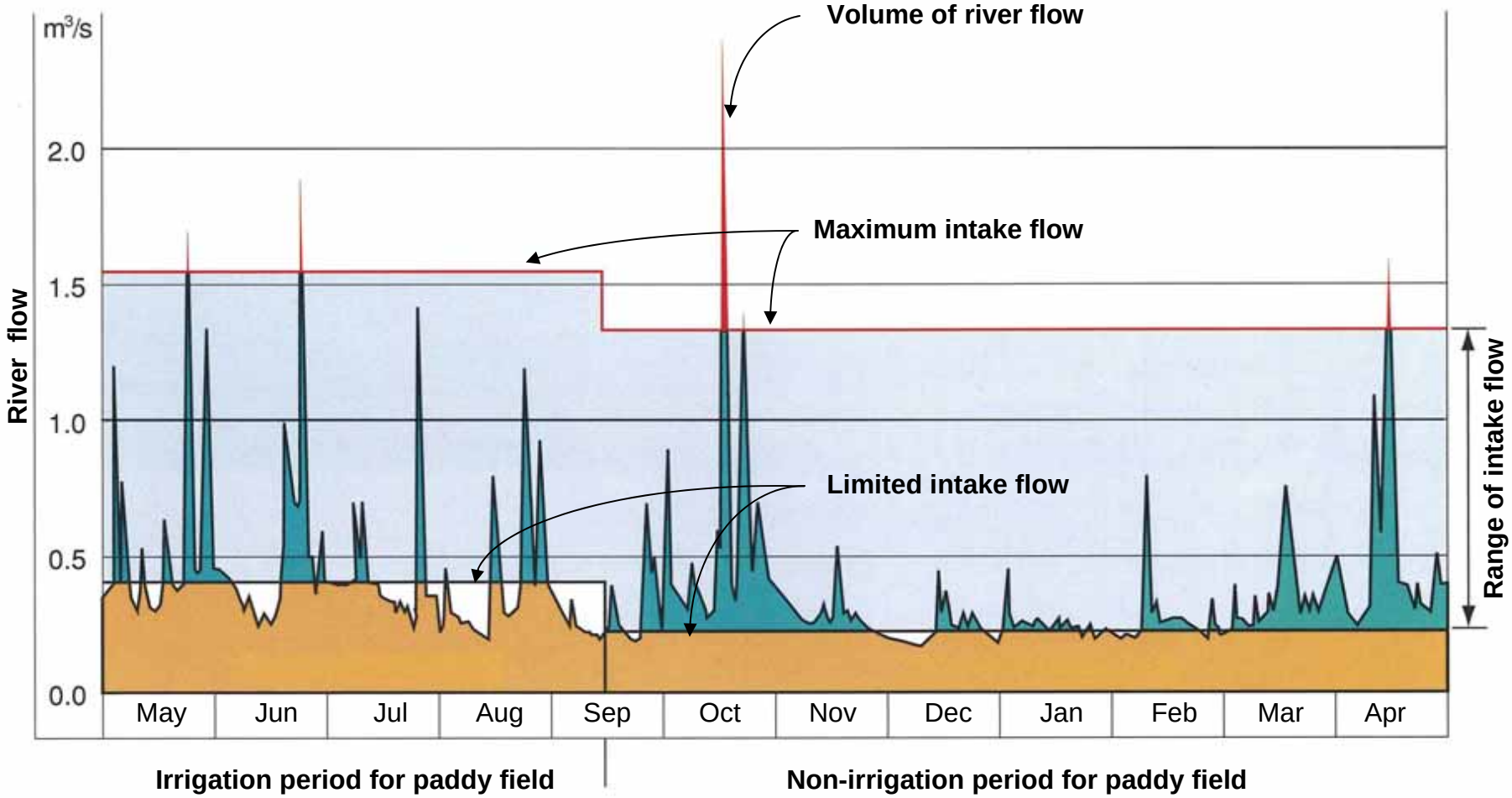


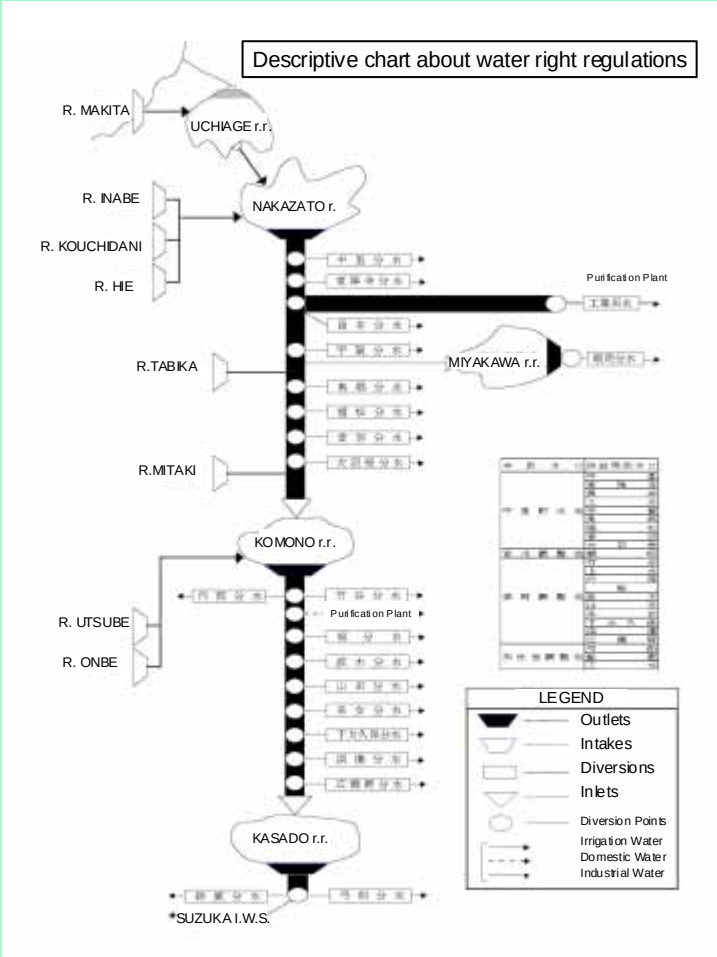
Torrent intakes
25.6million m³
(51.2%)



Overview of Mie Canal Construction Project

How do we take water from torrent intake?

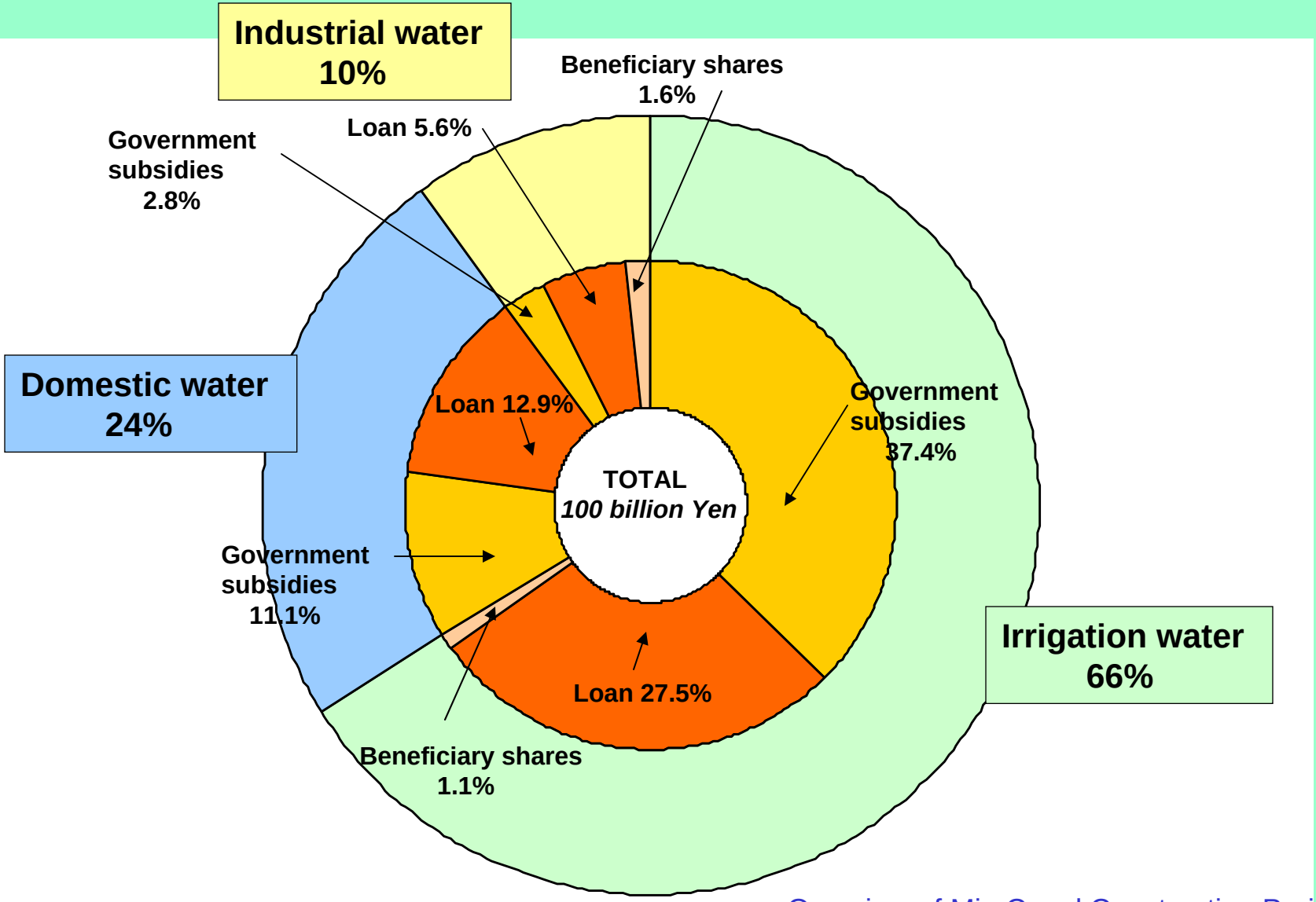


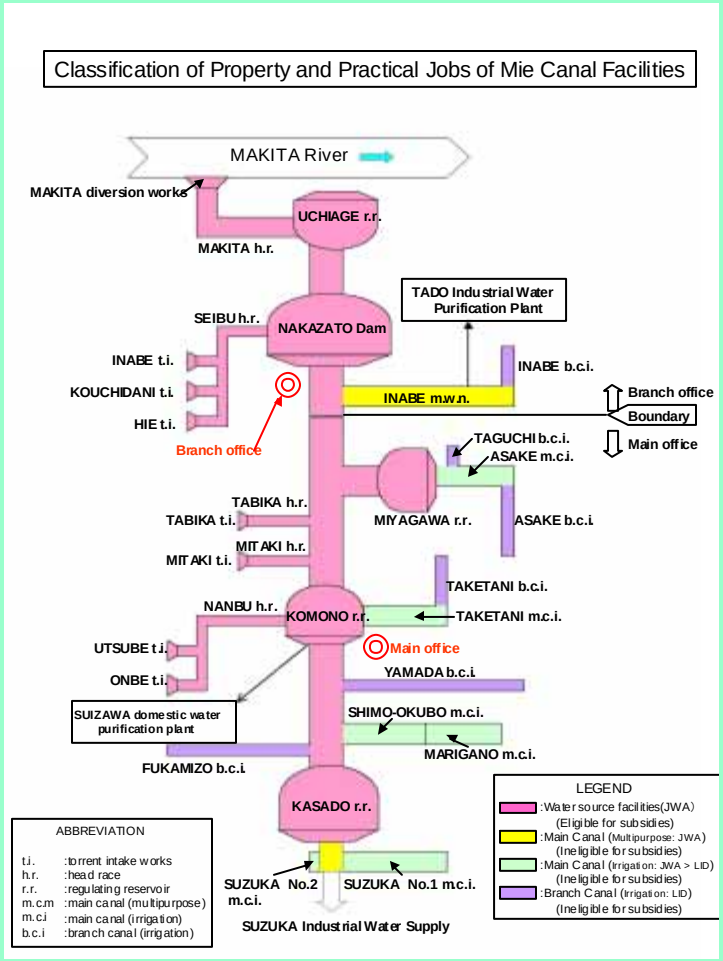


Overview of Mie Canal Construction Project

Construction cost sharing

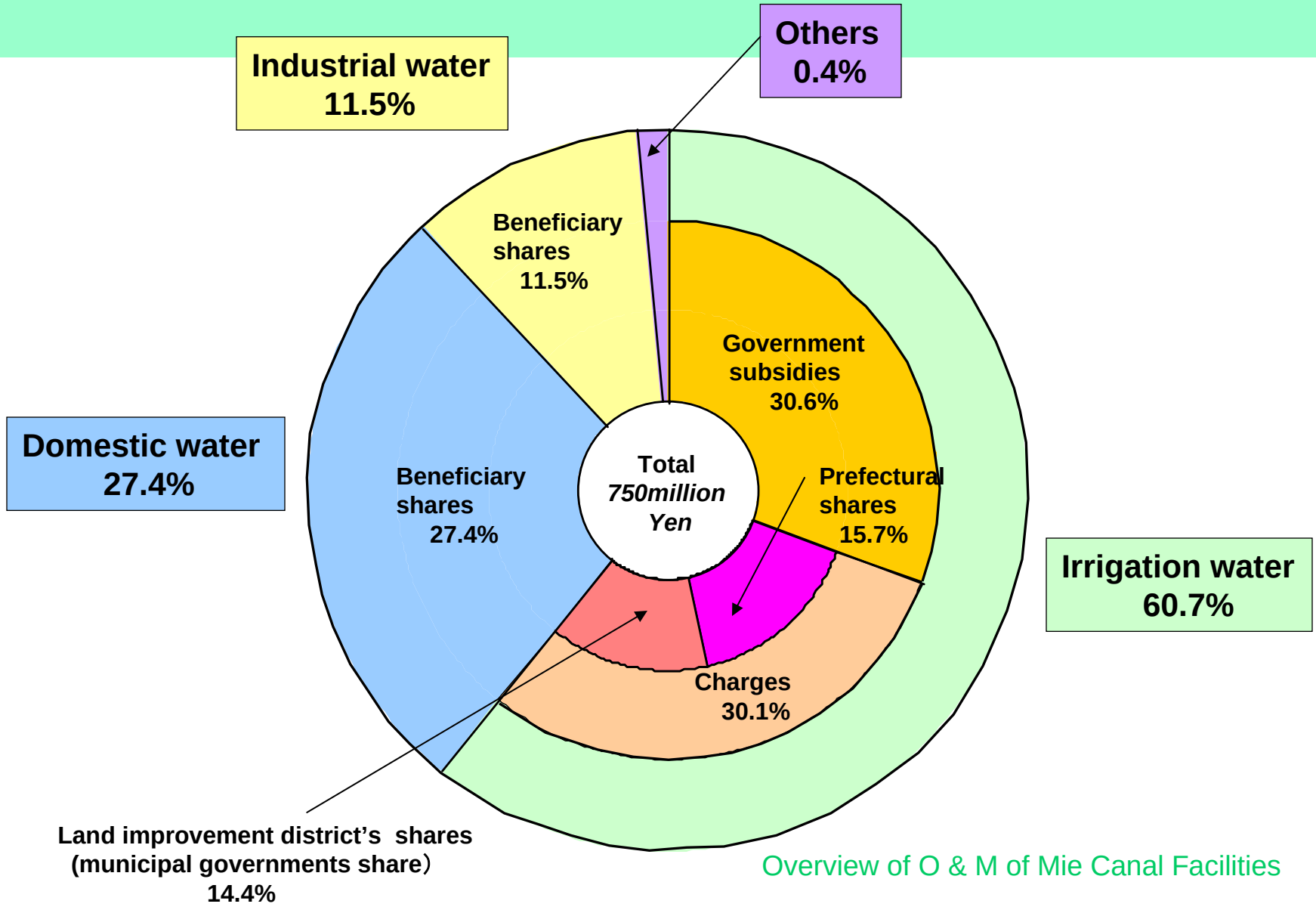
(construction period:1971-1993)





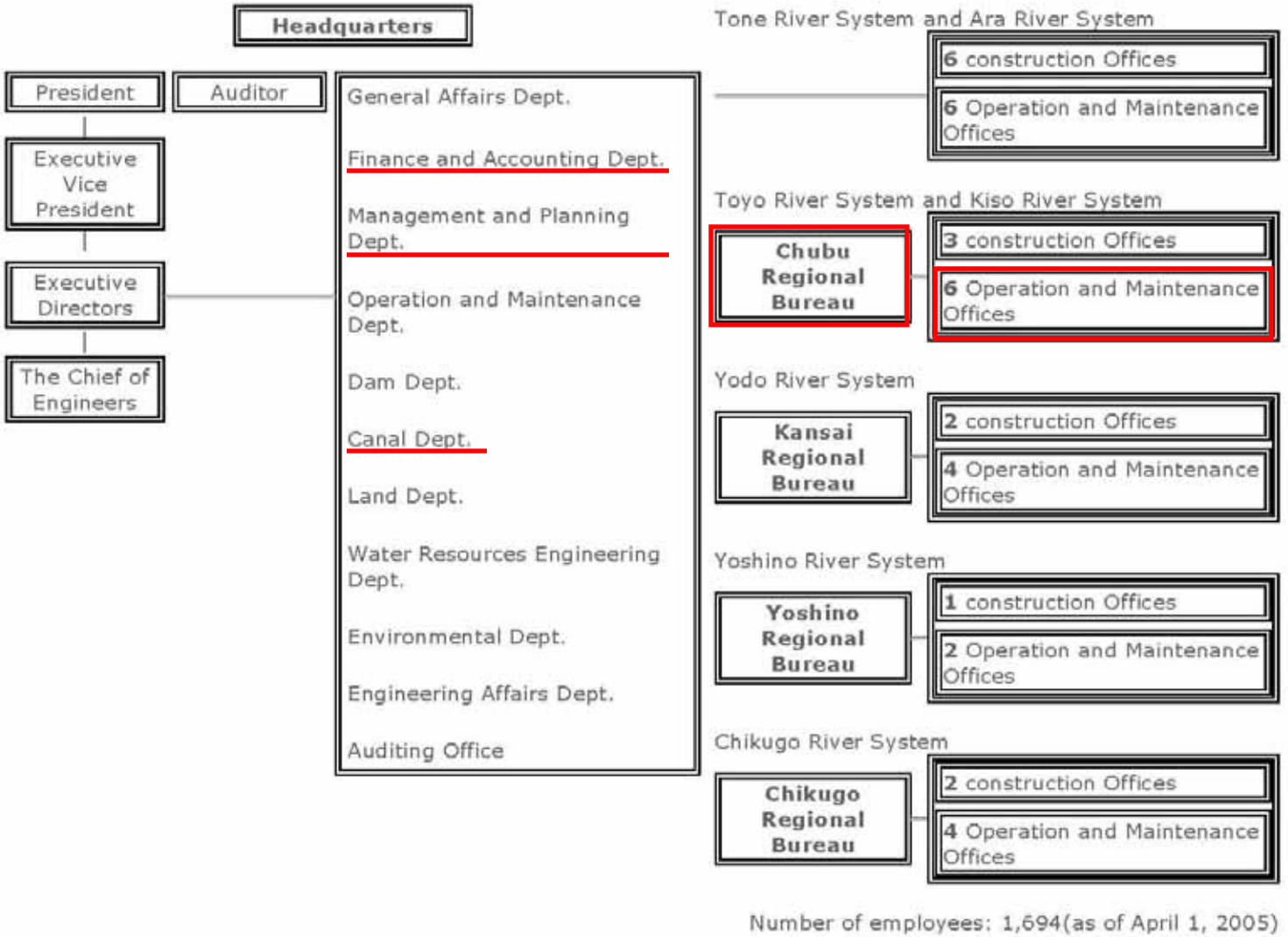
Overview of O & M of Mie Canal Facilities

Management cost sharing (JWA Mie Office :2005)



Oraganization

(As of April 1, 2005)



Number of employees: 1,694(as of April 1, 2005)

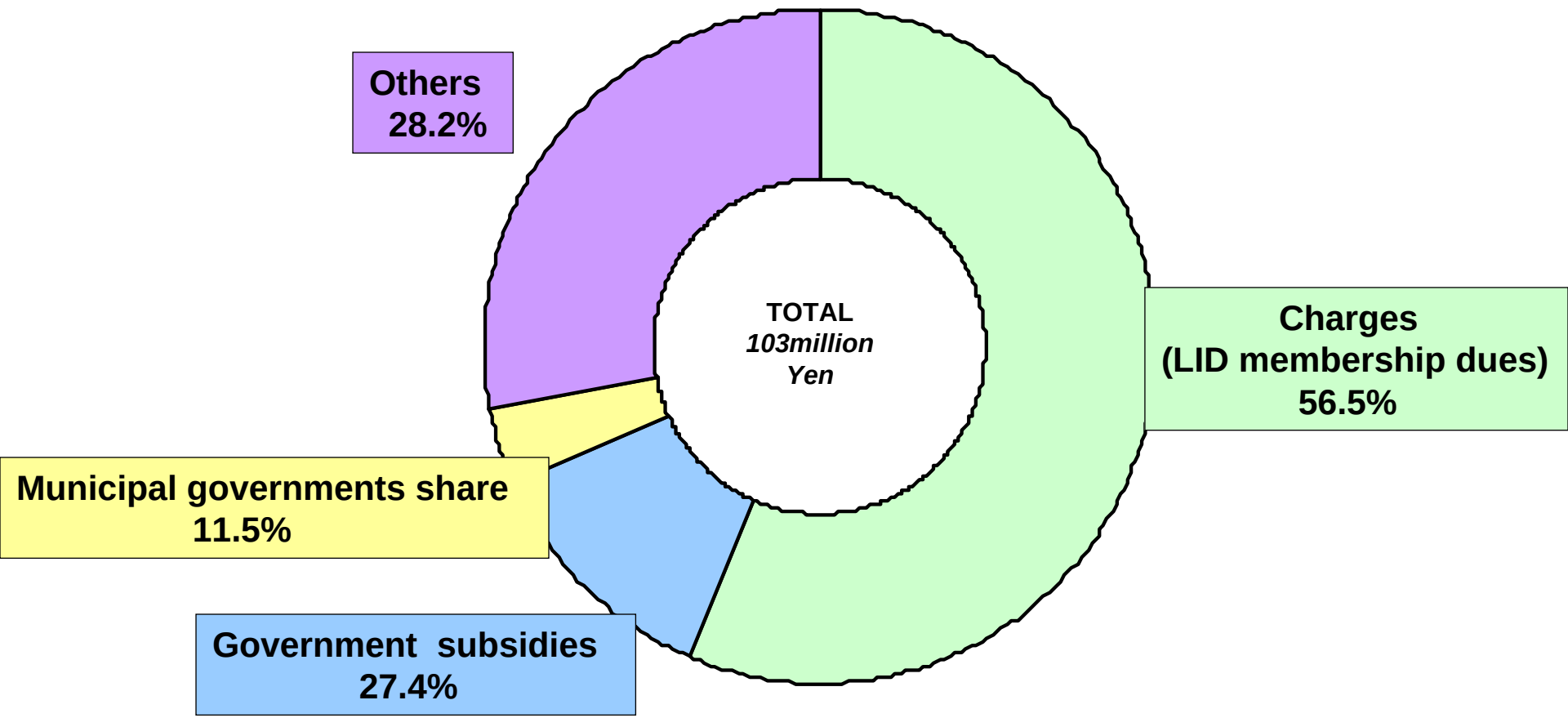
Notes

1)It is stipulated that the Japan Water Agency should be staffed with one president, one executive vice president, five executive directors (at most) and two auditors.

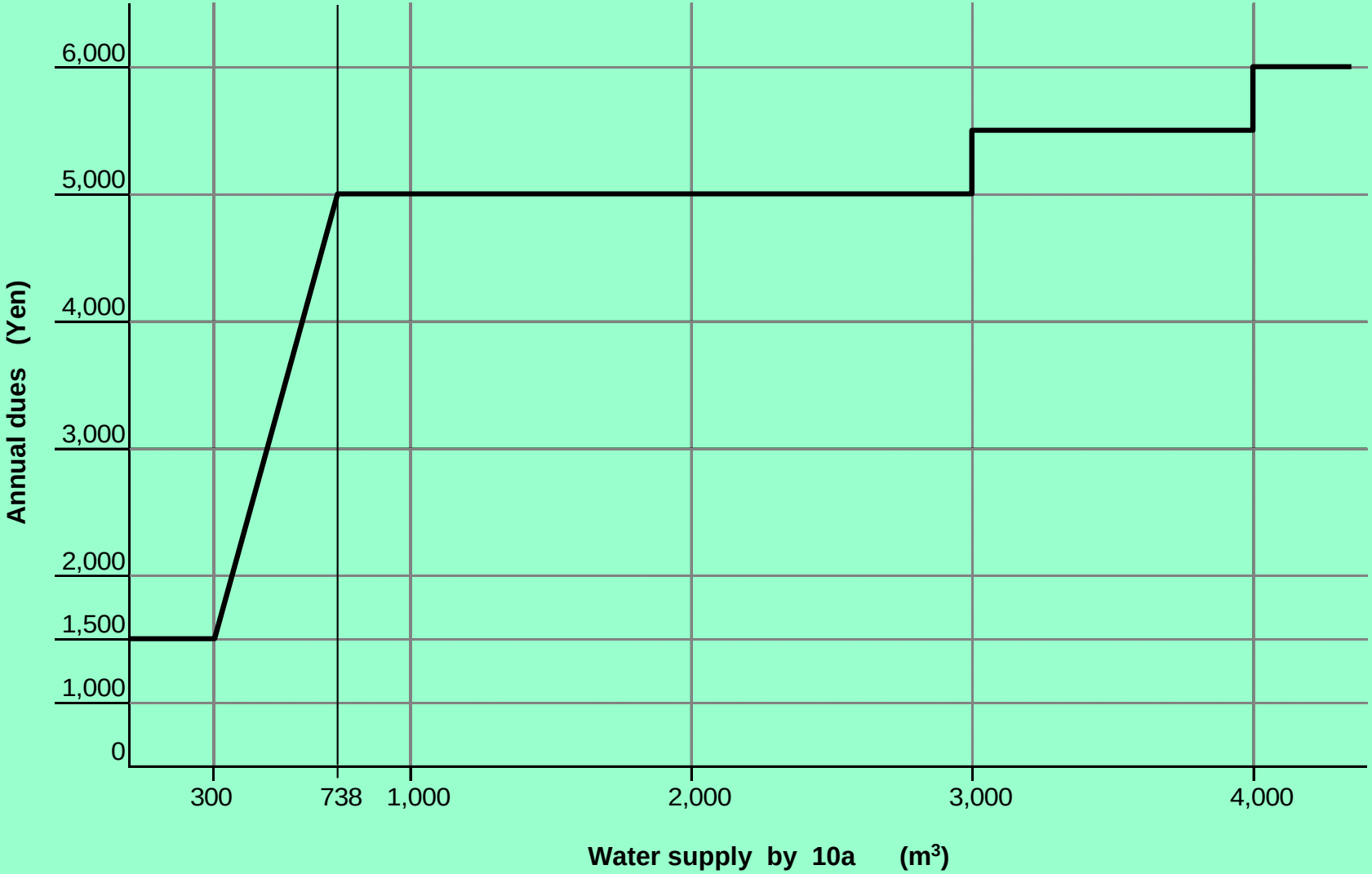
2)Construction offices include Management and Construction Offices.

Organization Chart of Mie Canal LID

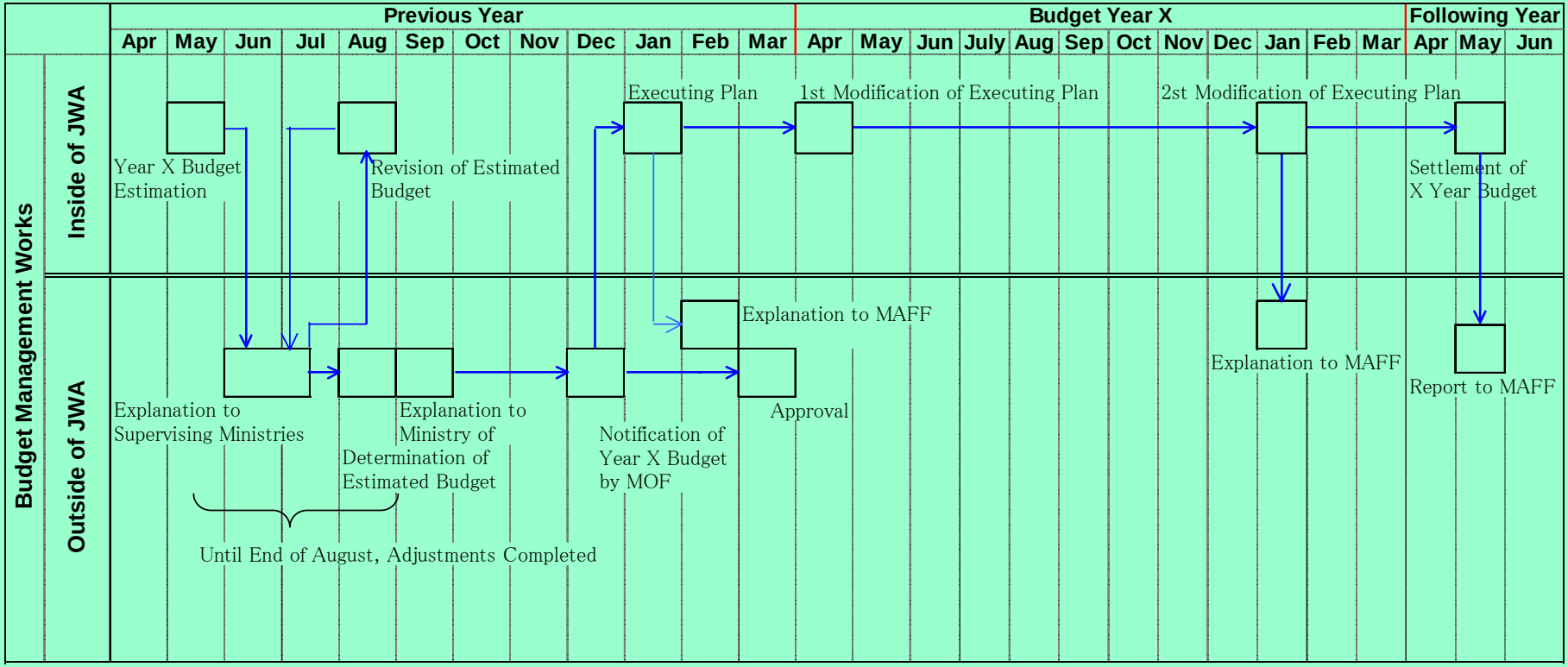
Management cost sharing (Mie Canal LID:2005)



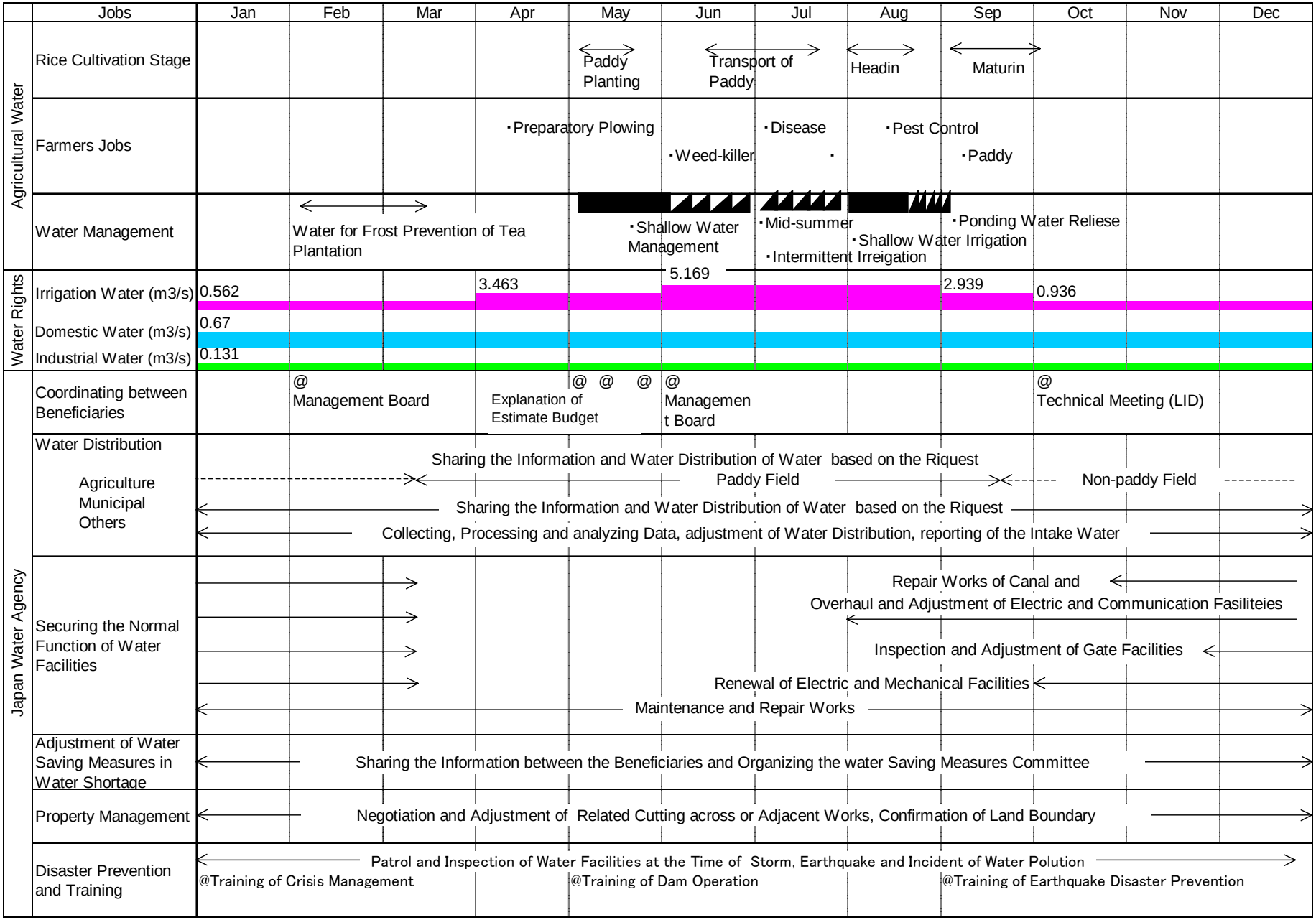
Mie Canal LID's membership dues



Annual Work Flow of Budget Management



Annual Work Flow of Mie Canal Operation & Maintenance



Water delivery operation (1)

Water delivery operation (2)

Mie Canal Management Board

Technical meeting with Mie Canal LID

Ordinary works (1) Inspection of Facilities

MAKITA Intake Works

Inside the Main Canal

Communication Facilities

Ordinary works (2) Inspection & Maintenance

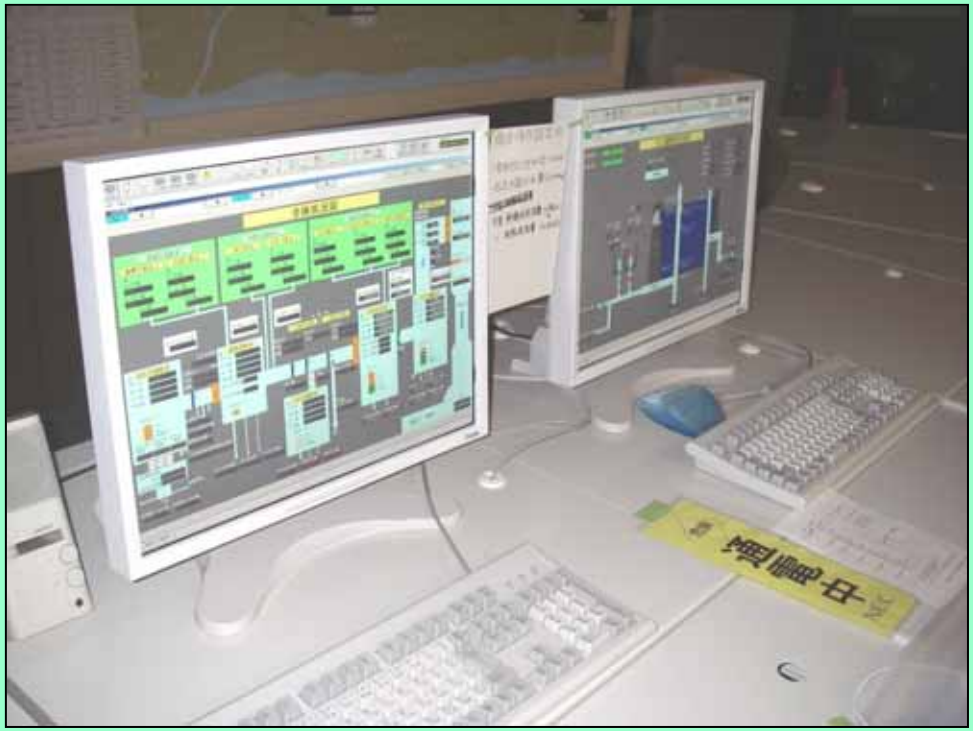
Electric Facilities

Removal of Rock and Sand

Works occurred with certain intervals (1)

Renewal of Water delivery control and data processing system

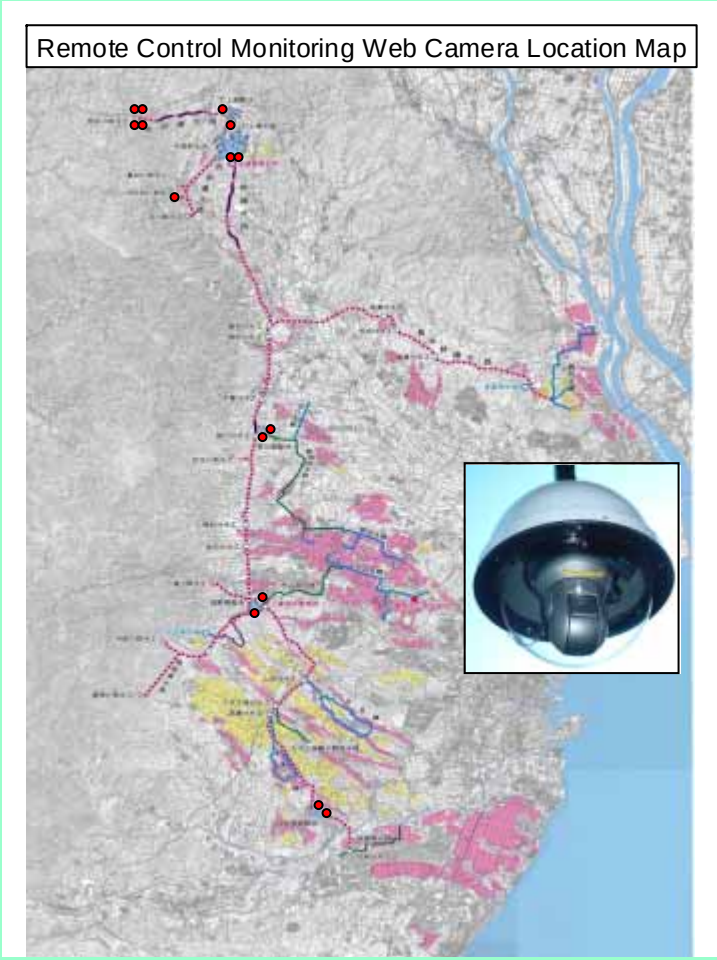
Existing graphic panel



Graphic displays of new system

Works occurred with certain intervals (2)

Introduction of Information and communication Technologies




http://10.105.130.9 - 三重用水ITVシステム - Microsoft Internet Explorer
ファイル(F) 編集(E) 表示(V) お気に入り(A) ツール(T) ヘルプ(H)
三重用水
Mie Yousui
ユーザ名: master
全画面表示
画面自動切替
検知画像
ライブ画像
録画画像
2006 年 03
29 日 11 時
グループ
マルチ画面
牧田川取水工
閉じる
ライブ画像・全画面表示(マルチ画面)
牧田川 上流
牧田川 下流
牧田川 沈砂池
牧田川 河川
打上 鉄塔
打上 中里注水工
中里 鉄塔
中里 取水塔
宮川 鉄塔
宮川 注水工
蔵野 別棟
蔵野 取水工
加佐登 鉄塔(湖面)
加佐登 鉄塔(放流工)
河内谷 取水工
三重用水...
状態
接続状態: 正常
異常状態:
正常
音声制御
状態:
地点選択
牧田川取水工
打上取水塔
中里注水工
中里取水塔
蔵野調整池
宮川取水塔
宮川注水工
加佐登取水塔
操作選択
放送プレビュー
放送開始
アナウンスメッセージ選択
1 2 3 4 5
6 7 8 9 10
アナウンス起動
照明制御
地点選択
牧田川取水工
打上取水塔
中里注水工
中里取水塔
蔵野調整池
宮川取水塔
宮川注水工
加佐登取水塔
照明選択
地点未選択
地点未選択
地点未選択
地点未選択
地点未選択
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インターネット
スタート
三重用水監視 Ver.1....
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CAPS
KANA
11:53

Provision for large scale earthquakes and water pollution

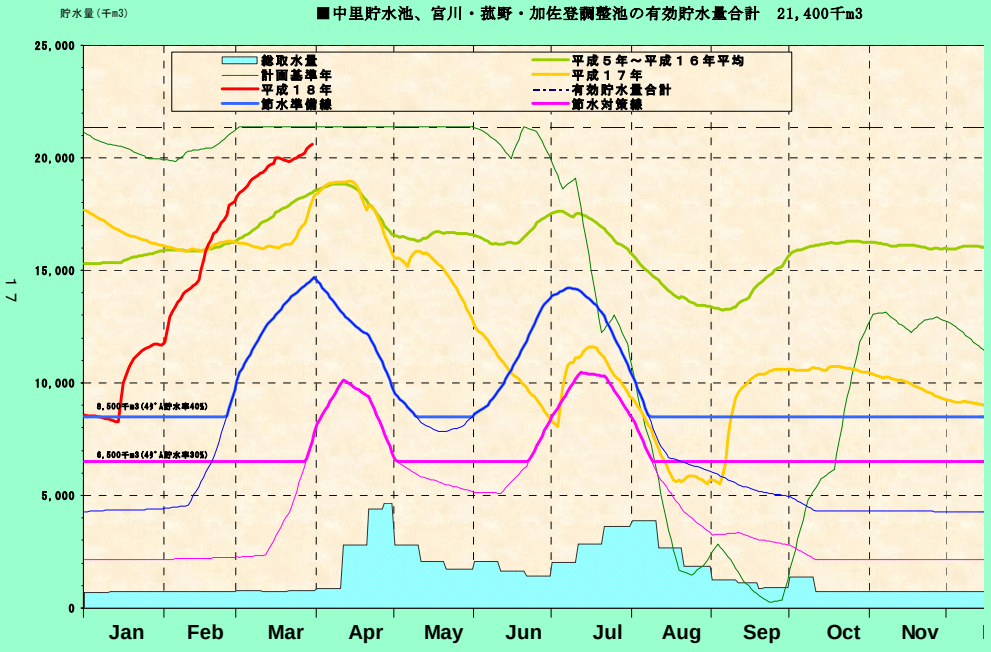
Measures for large scale earthquakes

Measures for water pollution

Measures in the time of Drought

Managing Mie Canal Water Saving Measures Committee

Mie Canal Water Saving Measure Line



Overview of O & M of Mie Canal Facilities

NAKAZATO Dam showed its bottom. (2005)

27/08/2005
27%

21/09/2005
46%

One of problems which has to be tackled

- Public relations to kids (the next generation) -

INABE Intake Works

NAKAZATO Dam

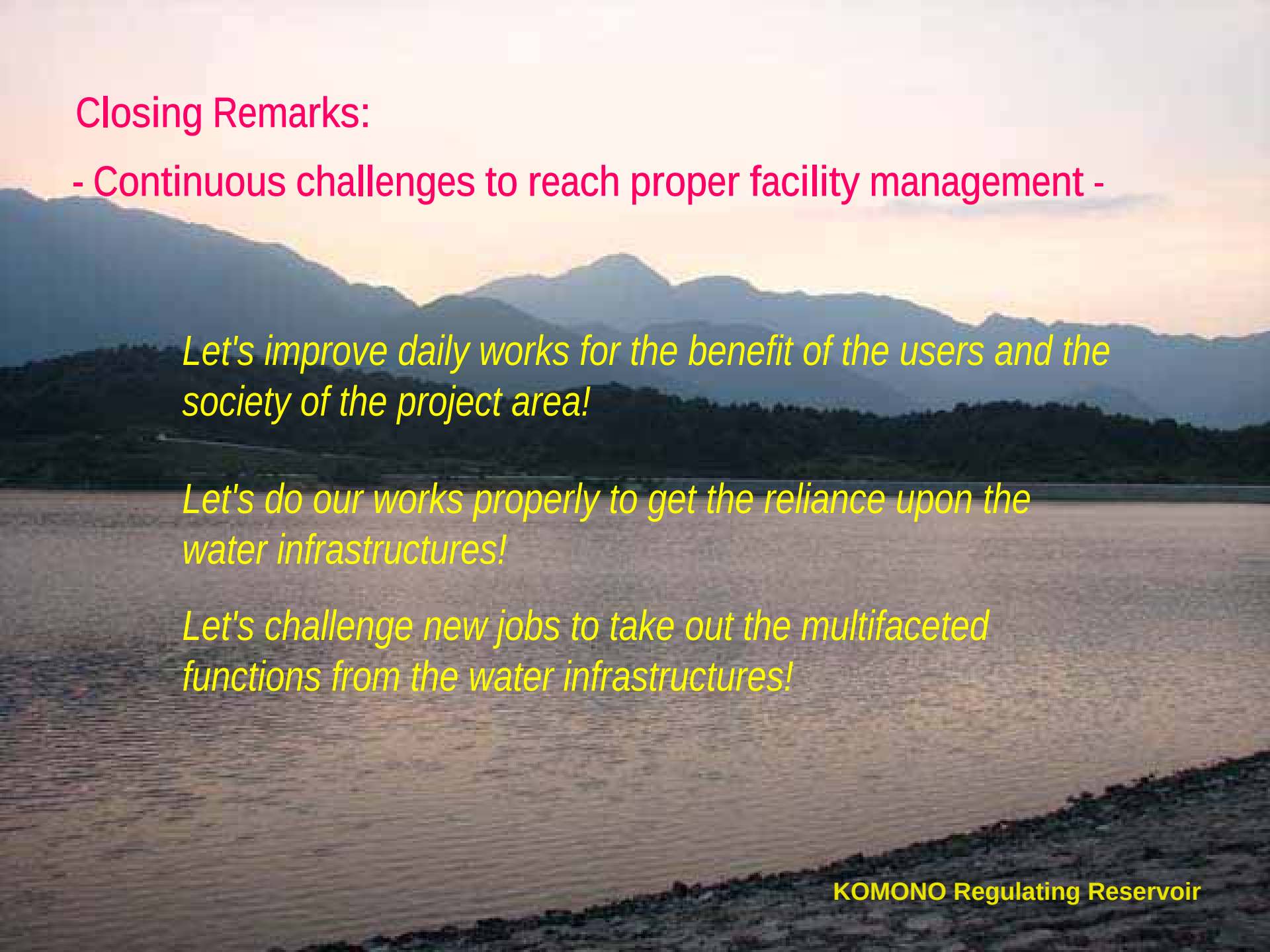
Closing Remarks:

- Continuous challenges to reach proper facility management -

Let's improve daily works for the benefit of the users and the society of the project area!

Let's do our works properly to get the reliance upon the water infrastructures!

Let's challenge new jobs to take out the multifaceted functions from the water infrastructures!



KOMONO Regulating Reservoir