

# ***Brief introduction of Japan Water Agency (JWA)***



**January 23, 2006**

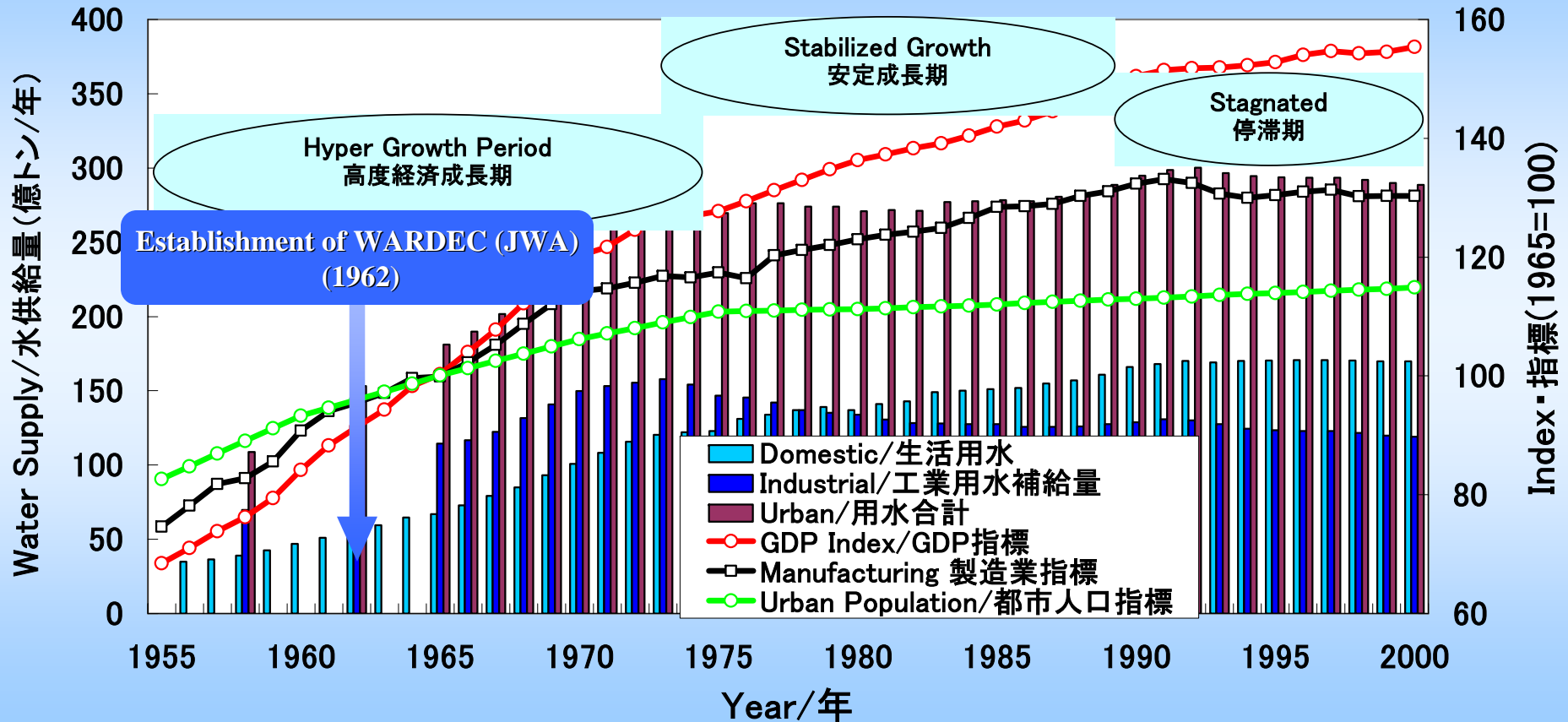
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# Establishment of JWA to Meet the Water Demand in the Hyper Growth Period

## Development Phase and Water Supply 戦後日本の発展局面と水供給

(100mil. M3/Yea)



# Activities of JWA

## 1. Water Resources Development Promotion Law

Water Resources Development Basic Plan (“Full Plan”) for each river system

## 2. Japan Water Agency Law

### JWA’s activities

**New construction and reconstruction of *Water Resources Development Facilities* and operation of those completed structures**

#### **Water utilization**

- Domestic Water
- Industrial Water
- Irrigation Water

#### **Flood control**

**Ministers  
supervising  
JWA’s  
activities**

## **Ministers concerning to JWA projects**

**- Minister of Land, Infrastructure and Transport**

**Flood control**

**- Minister of Health, Labor and Welfare**

**Domestic Water**

**- Minister of Agriculture, Forestry and Fisheries**

**Irrigation Water**

**- Minister of Economic, Trade and Industry**

**Industrial water**

# **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.**

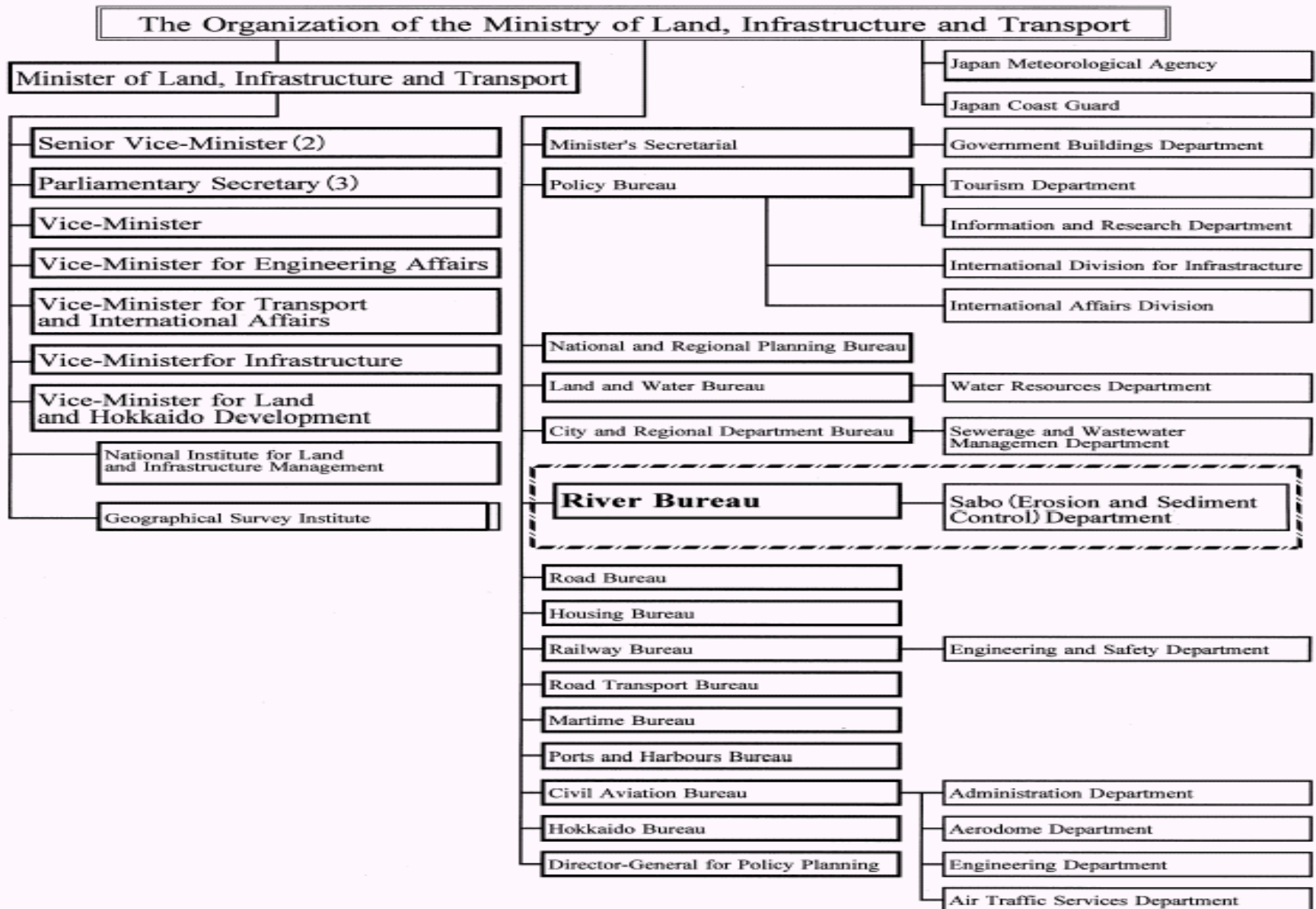
## **Ministry of the Environment**

**Water Quality, Environmental Preservation, etc.**

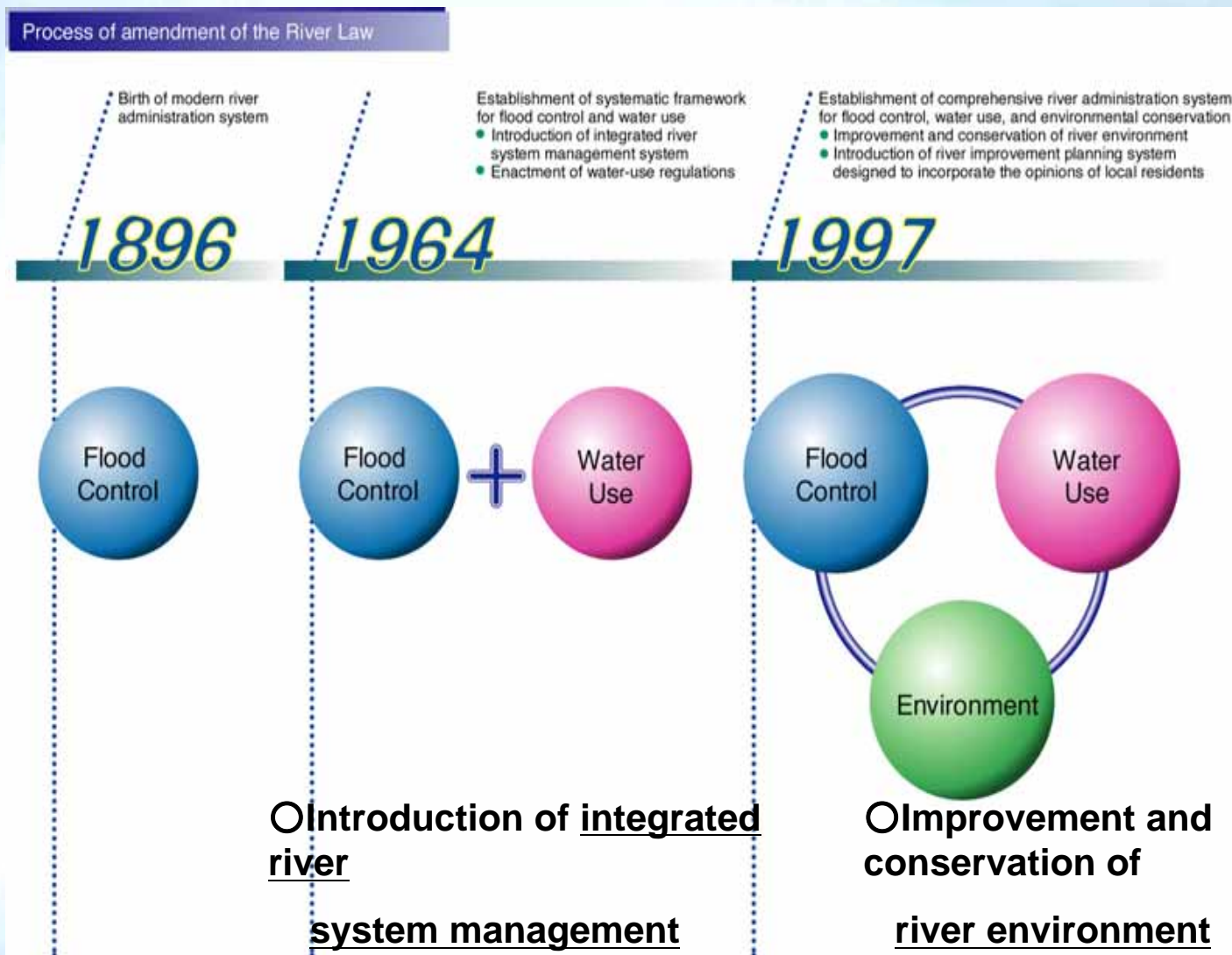
## **Ministry of Land, Infrastructure and Transport**

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

# Location of River Bureau at MLIT



# Outline of River Law during 100 years



○ Enhancement of water-use

○ Introduction of plans reflected by

# Rivers in Japan (As of the end of 2000)

**Class A River Systems :** The Ministry of MLIT designates, 109 systems  
 about 13,900 Class A rivers

**Class B River Systems :** Prefectural Governors designate, 2,713 systems  
 about 7,000 Class B rivres

**Independent River Systems:**

Class A Rivers

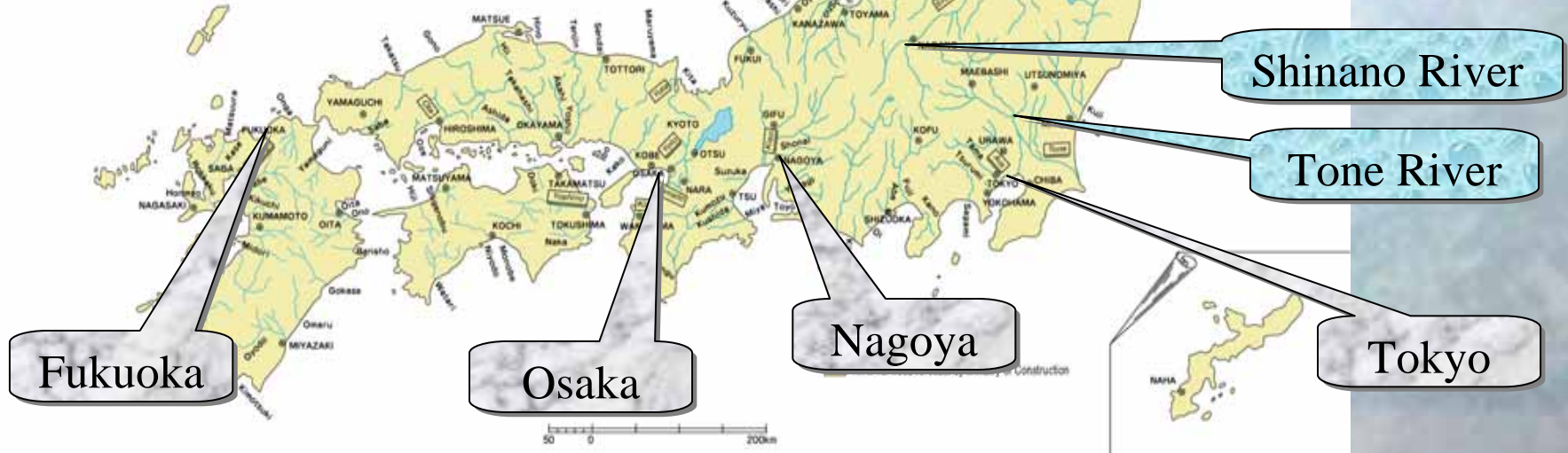
Class B Rivers

Locally designated Rivers

None-designated Rivers

Head of municipalities

**“New River Law”**  
 (Enacted 1964)





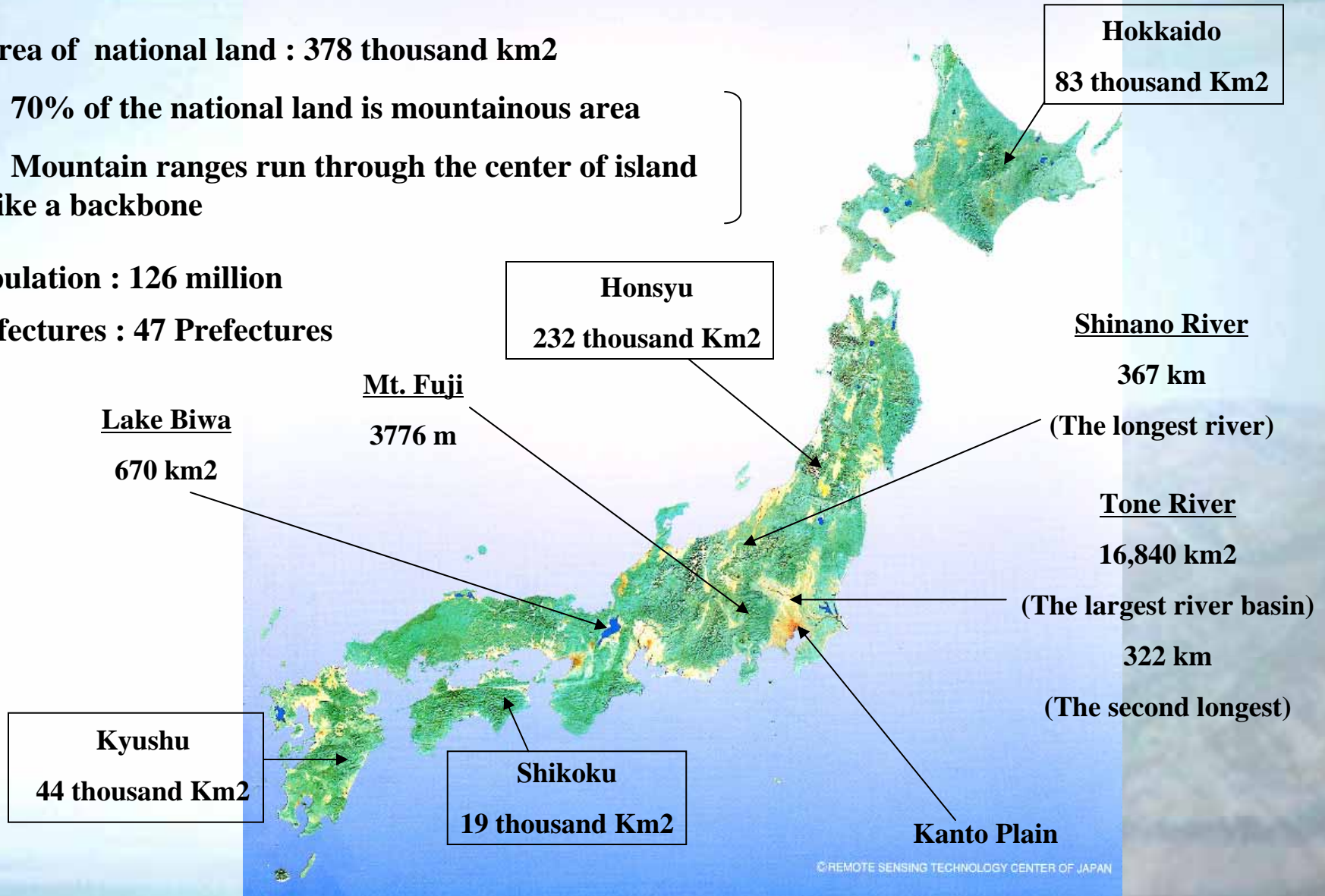
# Topographical features of Japan

Area of national land : 378 thousand km<sup>2</sup>

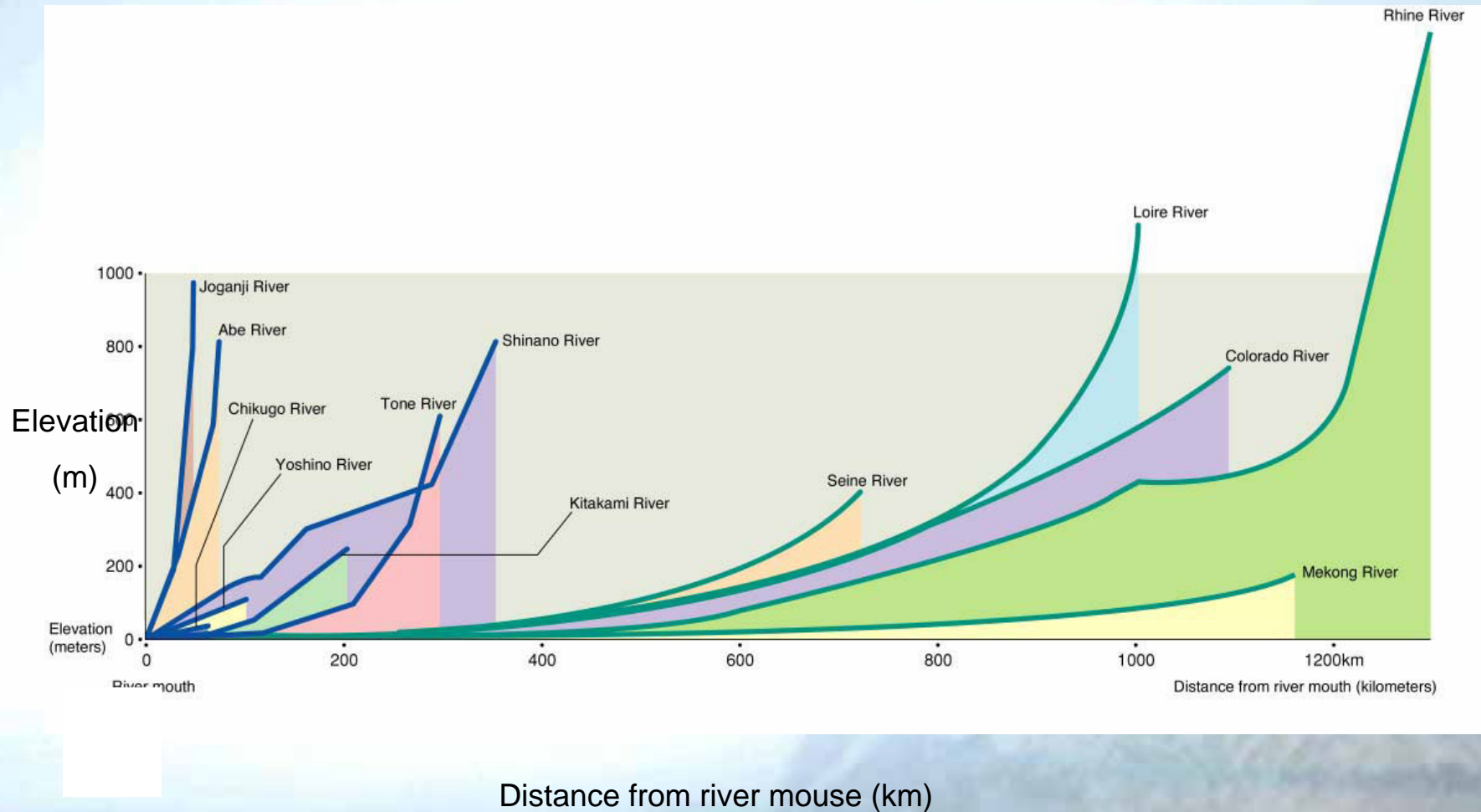
- 70% of the national land is mountainous area
- Mountain ranges run through the center of island like a backbone

Population : 126 million

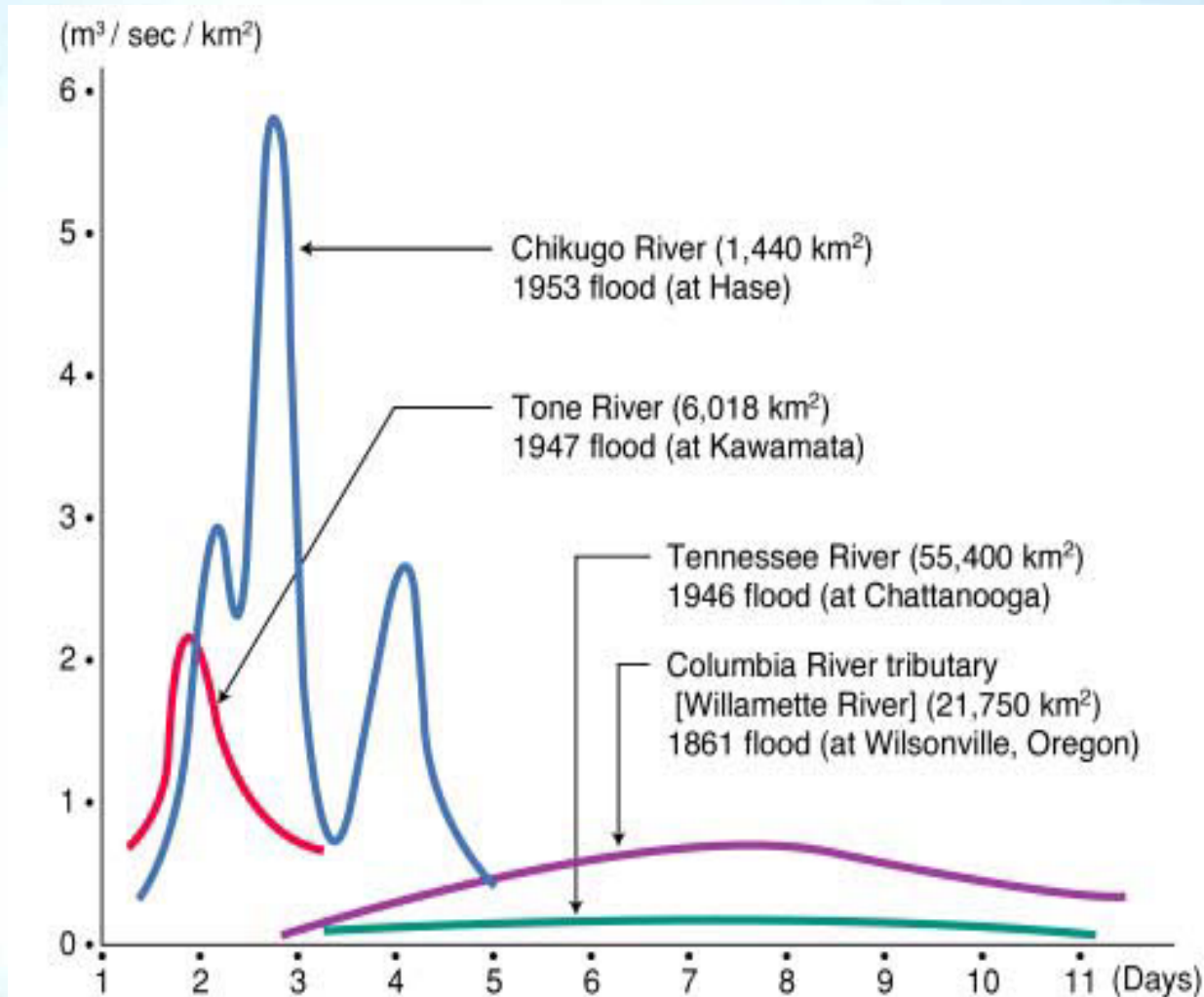
Prefectures : 47 Prefectures



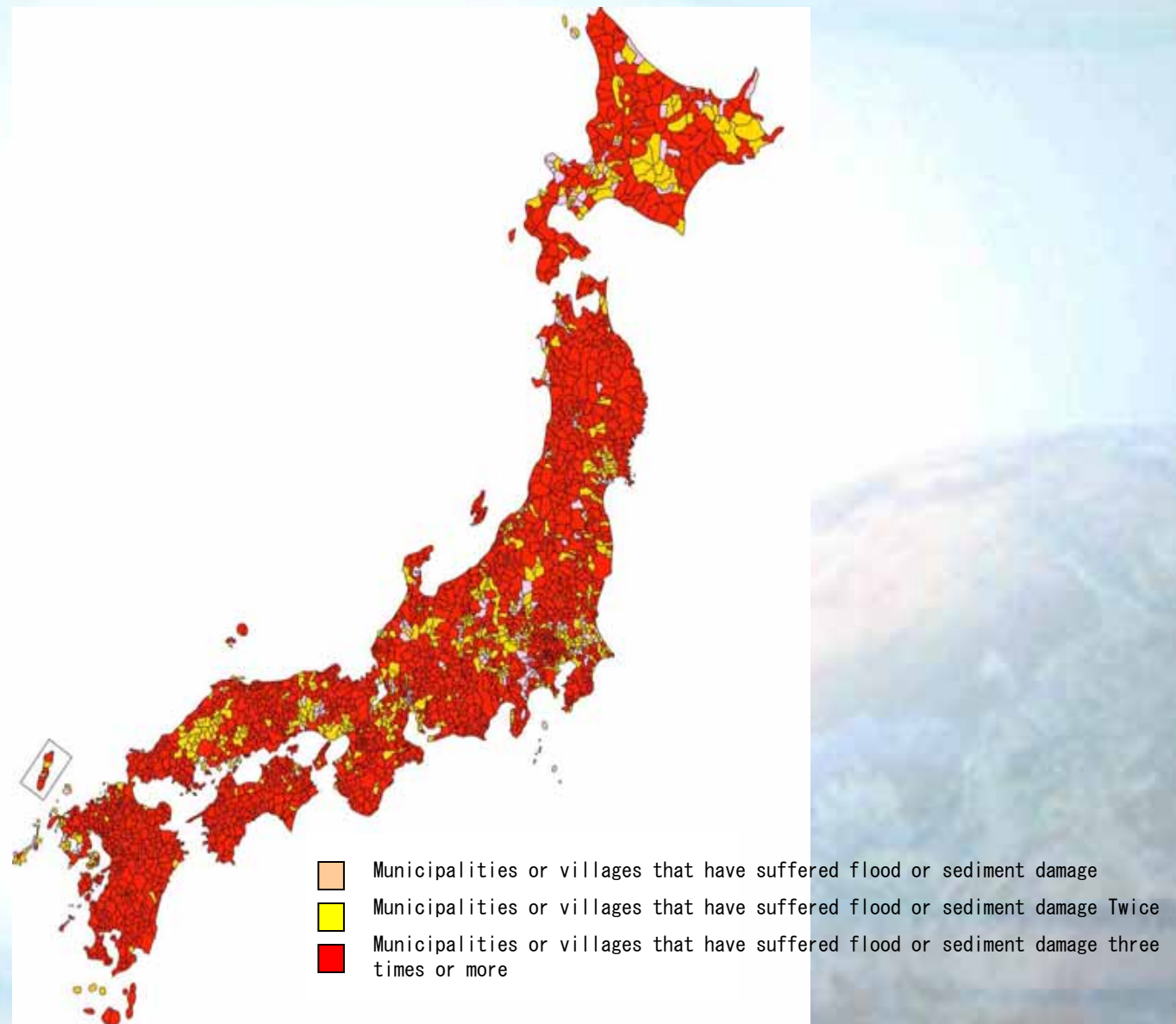
# Comparison of Riverbed Gradients



# Floods come short and quick

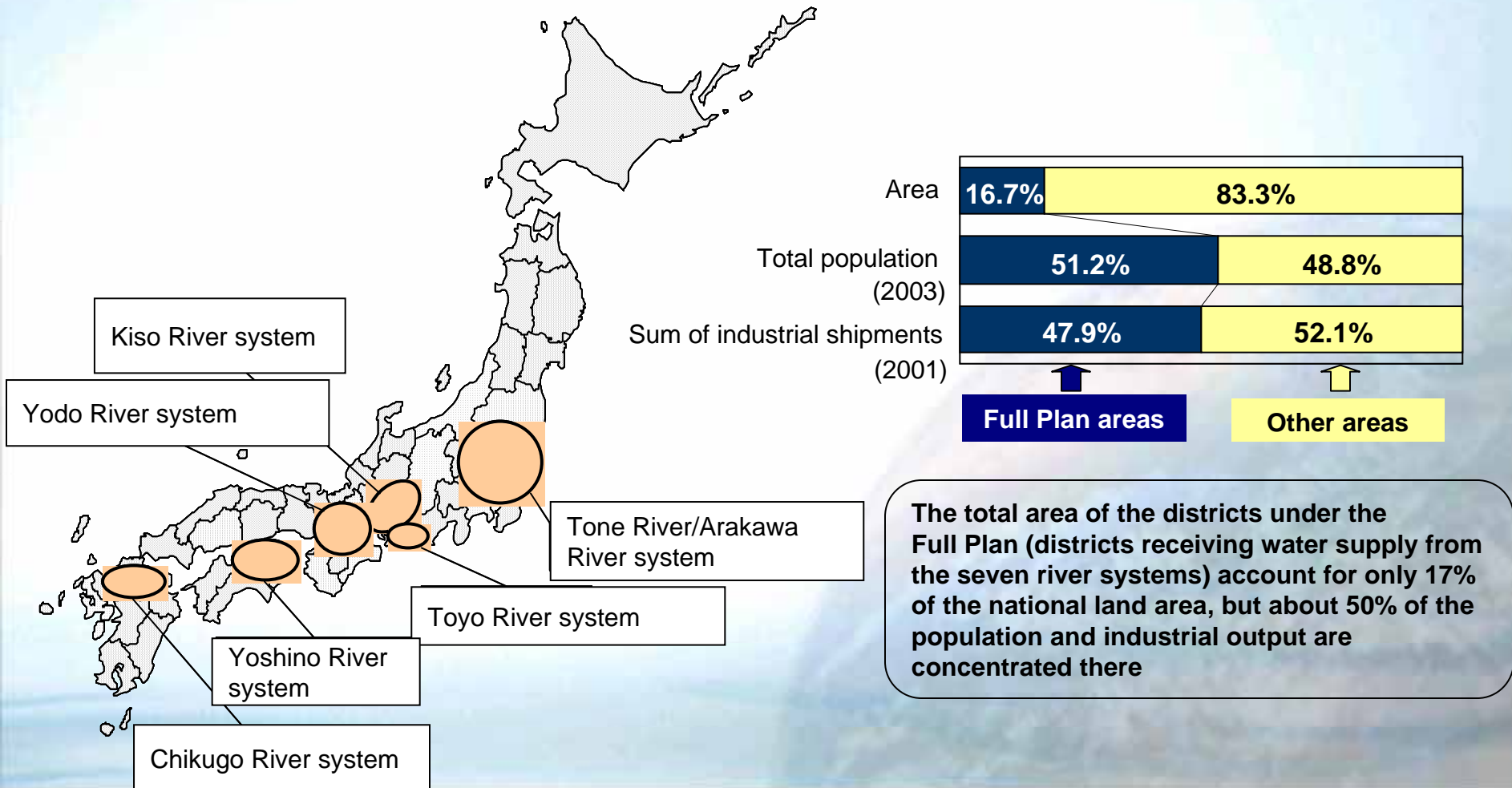


# Flood and Sediment Damage during the 10- years



# Water Resources Development Basic Plan (Full Plan)

The Water Resources Development Basic Plan (referred to as the Full Plan) stipulates purpose-specific demand forecasts and supply targets for seven designated river systems on the basis of the Water Resources Development Promotion Act, following a Cabinet decision.



# Outline of Water Resources Development Basic Plan

(As of February 2006)

	Tone River System, Ara River System	Toyo River System	Kiso River System (*)	Yodo River System	Yoshino River System (*)	Chikugo River System
Designation of River System	April 1962 (Tone River system) December 1974 (Arakawa River System)	February 1990	June 1965	April 1962	November 1966	October 1964
Decision on plan	February 1988 (4th Plan)	February 2006 (2nd Plan)	June 2004 (4th Plan)	August 1992 (4th Plan)	February 2002 (3rd Plan)	April 2005 (4th Plan)
Target Fiscal Year	FY2000	FY2015	FY2015	FY2000	FY2010	FY2015
Volume of developed water (**)	Approx. 117m <sup>3</sup> /s	Approx. 0.5m <sup>3</sup> /s	6.6m <sup>3</sup> /s	Approx. 49m <sup>3</sup> /s	-	Approx. 2.6m <sup>3</sup> /s
Facilities Improvement (***)	34 Projects <b>Takizawa Dam, others</b>	2 Projects Shidara Dam, others	2 Projects <b>Tokuyama Dam, others</b>	15 Projects <b>Kawakami Dam, others</b>	1 Project <b>Kagawa water supply facility</b>	6 Projects <b>Oyama Dam, others</b>

\* All changes made following "Report by Research/Planning Subcommittee under Water Resources Development Council" (December 2000).

\*\* Newly developed water supply under current Water Resources Development Basic Plan.

\*\*\* All projects incorporated in Water Resources Development Basic Plan.

\*\*\*\* Red-lettered facilities are JWA's project

## Chikugo River System

8 projects

### Chikugo River System

- 1 Ryochiku-heiya Canal
- 2 Tetsuchi Dam
- 3 Chikugo Barrage
- 4 Fukuoka Canal
- 5 Chikugogawa-Karyu Canal
- 6 Oyama Dam
- 7 Kotshwaragawa Dam

## Kiso River Systems

11 projects

### Yodo River System

- 1 Takayama Dam
- 2 Shorenji Dam
- 3 Yodogawa Barrage
- 4 Shorenjigawa Development
- 5 Murou Dam
- 6 Hatsuse Channel
- 7 Hiokura Dam
- 8 Lake Biwa Development
- 9 Hozshi Dam
- 10 Hirashi Dam
- 11 Nunobiki Dam
- 12 Kawakami Dam
- 13 Niu Dam

### Yoshino River System

- 1 Sameura Dam
- 2 Ikeda Dam
- 3 Kagawa Canal
- 4 Shingu Dam
- 5 Kyuyoshinogawa Estuary Barrage
- 6 Kochi Canal
- 7 Tomisato Dam
- 8 Emergency Reconstruction of Kagawa Canal facilities

### Kiso River System

- 1 Aichi Canal
- 2 Waya Dam
- 3 Kisogawa Canal
- 4 Nagaragawa Estuary Barrage
- 5 Mie Canal
- 6 Tokuyama Dam
- 7 Agigawa Dam
- 8 Misogawa Dam
- 9 Aichi Canal Stage II
- 10 Nagara Canal
- 11 Emergency Reconstruction of Kisogawa Canal Facilities

## Tone and Ara River Systems

25 projects

### Tone River/Ara River System

- 1 Yagisawa Dam
- 2 Shimokubo Dam
- 3 Tone Canal
- 4 Inbanuma Development
- 5 Gunma Canal
- 6 Tonegawa Estuary Barrage
- 7 Kusaki Dam
- 8 Hokusotoku Canal
- 9 Narita Canal
- 10 Boso Canal
- 11 Kasumigaura Lake Development
- 12 Tojo Canal
- 13 Omigawa Development
- 14 Naramata Dam
- 15 Saitama Goguchi Stage II
- 16 Kasumigaura Canal
- 17 Takizawa Dam
- 18 Urayama Dam
- 19 Reconstruction of Asaka Canal
- 20 Tokura Dam
- 21 Emergency Reconstruction of Tone Large Barrage facilities
- 22 Musashi Canal Reconstruction
- 23 Tone-chuo Canal
- 24 Emergency Reconstruction of Inbanuma development facilities
- 25 Emergency Reconstruction of Gunma Canal facilities

### Toyo River System

- 1 Toyogawa Canal
- 2 Emergency Reconstruction of Toyogawa Canal facilities
- 3 Toyogawa-Comprehensive Canal
- 4 Toyogawa Canal Stage II

## Toyo River System

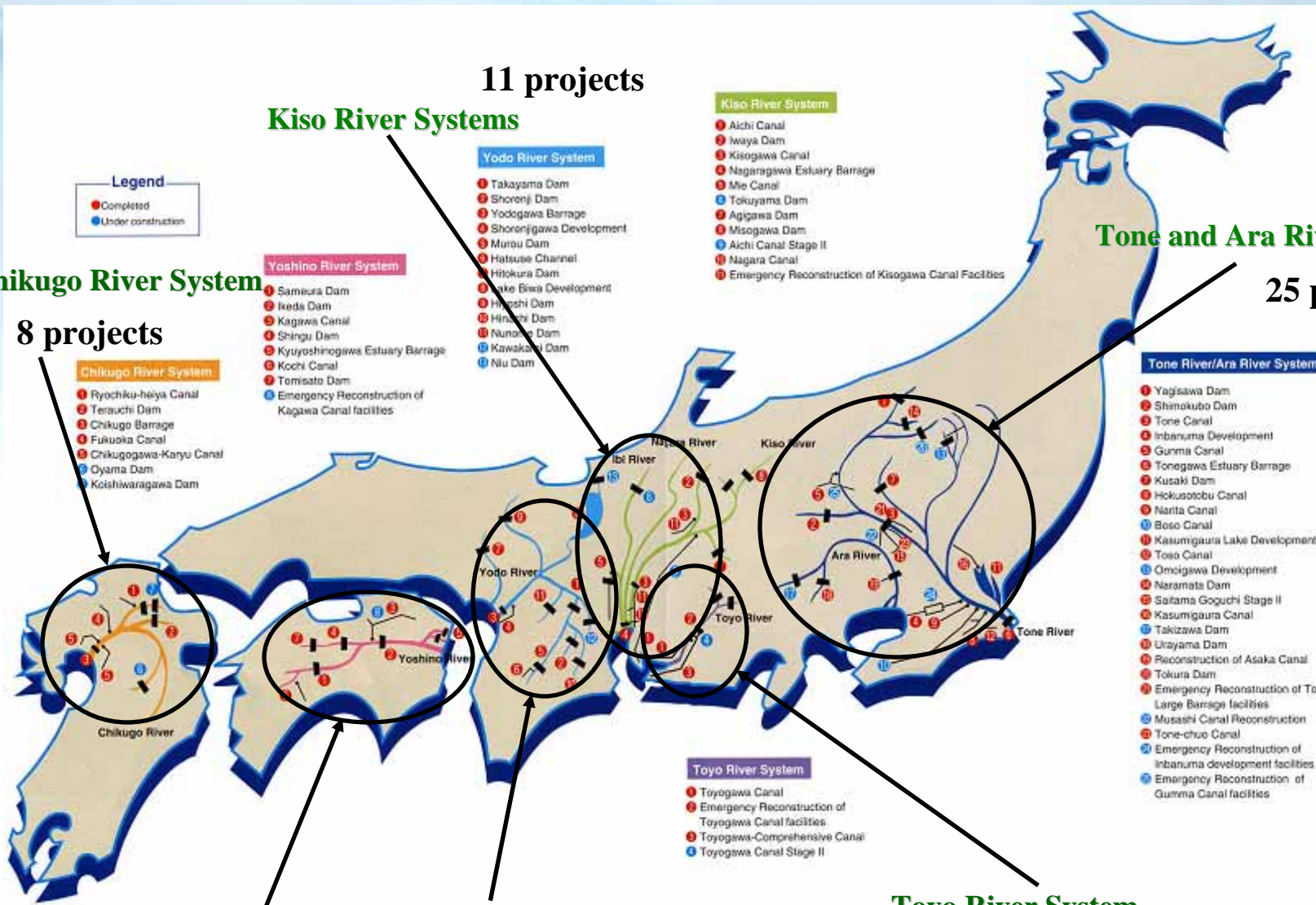
4 projects

## Yodo River System

13 projects

## Yoshino River System

8 projects



## What is Japan Water Agency (JWA) (1)

- **Water Resources Development Public Corporation (WARDEC) was transformed into JWA in October 2003 by administrative reform**
- **JWA is a semi-governmental river basin organization** as WARDEC was
- **JWA has been developing water resources for domestic, industrial and agricultural purpose by construction of dams, canals, barrages and developing lakes and doing flood control at the same time**
- **JWA is prohibited taking on the new projects whose purpose are increase of water supply excepting the projects that JWA takes over from WARDEC**
- **JWA has been operating, maintaining completed facilities and refurbished them to fulfill their functions**

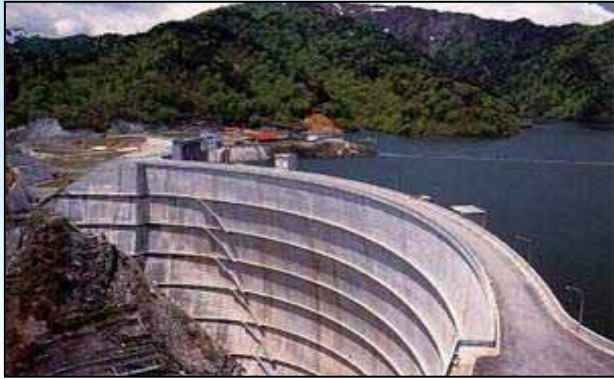


## **What is Japan Water Agency (JWA) (2)**

- JWA has been operating and maintaining 53 facilities and still implementing 15 projects in 6 major river systems**
- JWA has 4 Regional Bureaus in Chubu, Kansai, Shikoku and Kyushu and 36 site offices except the headquarters in Saitama**
- The number of staff is about 1,660 including the President, Vice President, 5 Executive Directors and 2 Auditors**
- The budget scale is around 270 billion yen including paying back loan with interests in installments.**

**(As of April 2006)**

# Construction and Management of Water Resources Development Facilities (JWA)



**Yagisawa Dam (Arch Concrete Dam)**



**Tone Barrage**



**Terauci Dam (Rock Fill Dam)**

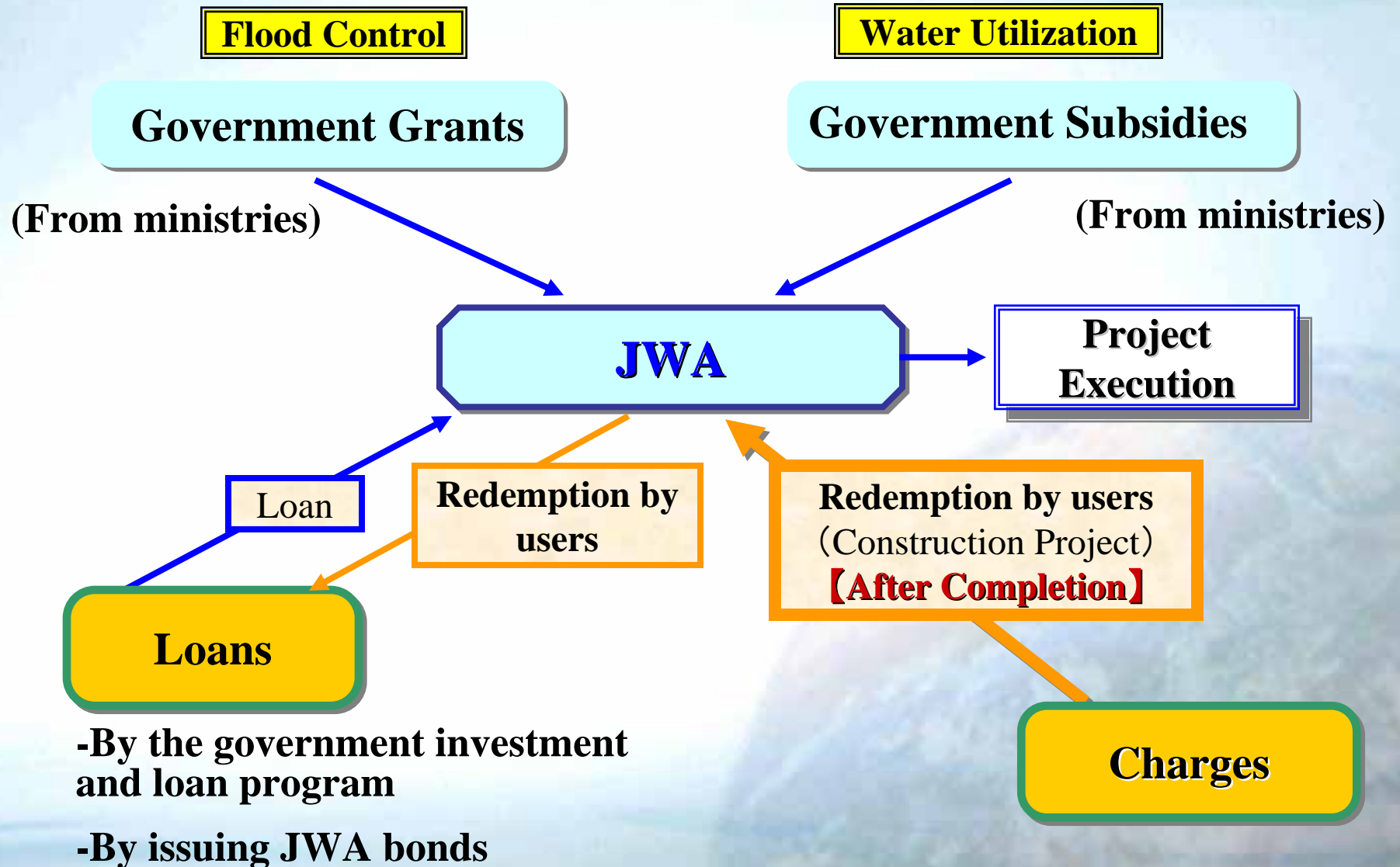


**Lake Biwa Development**



**Tone Chuo Canal (Saitama Canal)**

# Finance system of JWA



# Project implementation procedure

Basic investigations



Designation of river system for water resources development



Basic Plan for water resources development



Project implementation plan



Commencement of construction




Project completion



Facilities management regulation



Commencement of management



**Thank you...**