

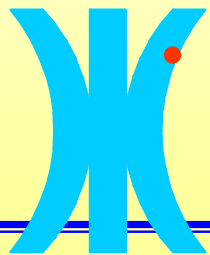
***Water Resources Management by  
JWA in Japan***

***Katsunori TAKAGI***

***Management and Planning Department  
Japan Water Agency***



- E. G. “River Law in Japan”
- Article 1 “Purpose of River Law”: The purpose of this Law is to contribute to land conservation and the development of the country, and thereby maintain public security and promote public welfare, by administering rivers comprehensively to prevent occurrence of damage due to floods, high tides, etc., utilize rivers properly, maintain the normal functions of the river water by maintaining and conserving the fluvial(river) environment
- Article 2 “Principles of River Administration”
- A river is public property and its conservation, utilization, and other forms of administration shall be properly performed so as to attain the purposes stated in the preceding article.
- The water of river cannot be made the subject of private rights.



# Roles of each Ministries on Water Administration

- Each conducts policies and projects in collaboration with others

**国土交通省** Ministry of Land, Infrastructure and Transport  
(Water Resource Development & compensation, Sewerage, River, Sabo, Basin planning)

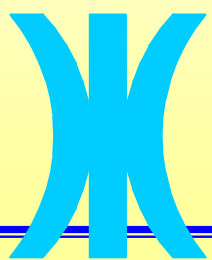
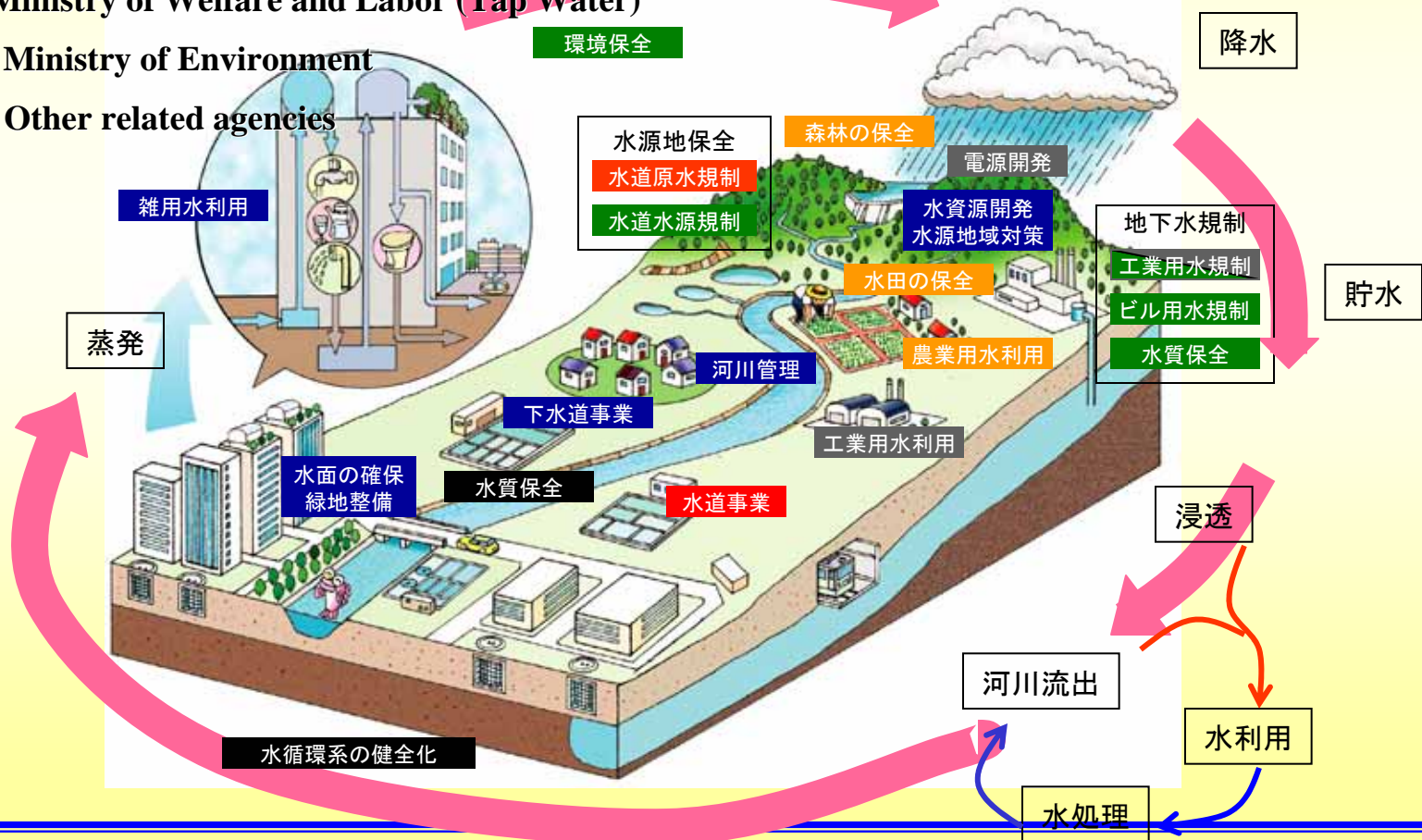
**農林水産省** Ministry of Agriculture, Forestry and Fishery (Irrigation and Drainage)

**経済産業省** Ministry of Industry and economy (Industrial Water)

**厚生労働省** Ministry of Welfare and Labor (Tap Water)

**環境省** Ministry of Environment

**各省連携** Other related agencies



# An Institutional Evolution for Water Resources Development

## An Evolution of Water Related Laws

1890 ~ 1945

1945 ~ 1995

1995 ~

Component of High  
Integrated laws

Special Measures Act on Concerning Upstream Area  
Development 1973~

*Water Resources Development Promotion Law*  
1961~

*Water Resources Development Public Corporation Law*  
1961~

Industrial Water Supply Business Law  
1958~ **Industrial Water**

Law on Specially Designated Multipurpose Dam  
1957~

Electric Power Development Promotion Law  
1952~ **Power Generation**

Readjustment of Arable Land Act  
1899~ **Agricultural Water**

Land Improvement Law  
1949~

Former River Law  
1896~ **Flood control**

New River Law  
1964~  
**+Water utilization**

Revisions of New River Law  
1997~  
**+Environment**

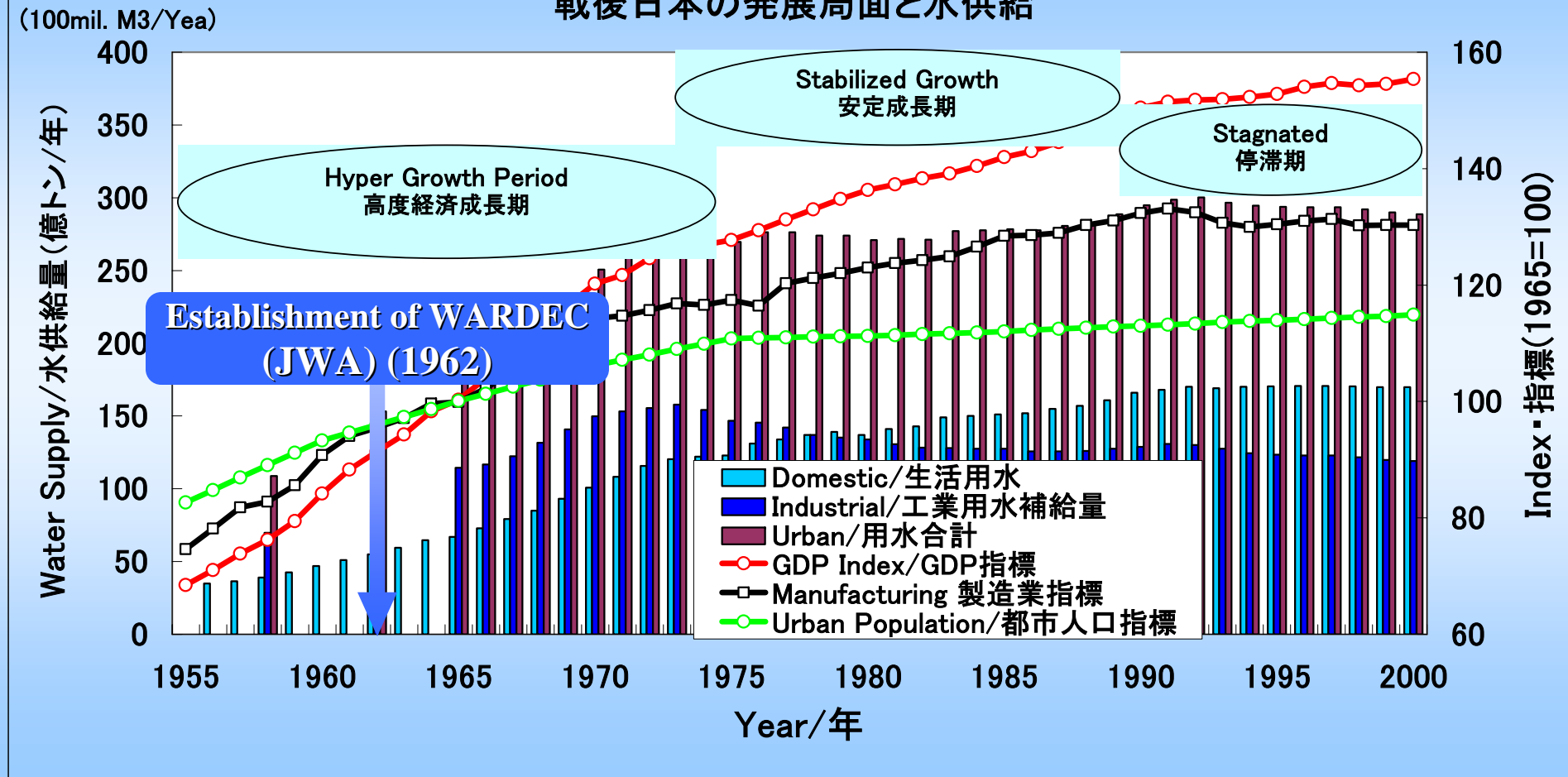
Waterworks Ordinance  
1890~ **Domestic Water**

Waterworks Law  
1957~



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

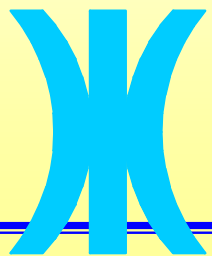
## Development Phase and Water Supply 戦後日本の発展局面と水供給





## “Tokyo Desert” at the Tokyo Olympic Game 1964

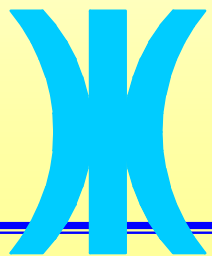
Incorporated Administrative Agency Japan Water Agency 「水とともに 水資源開発公団40年の足跡と新世紀への飛躍」 水資源開発公団より1

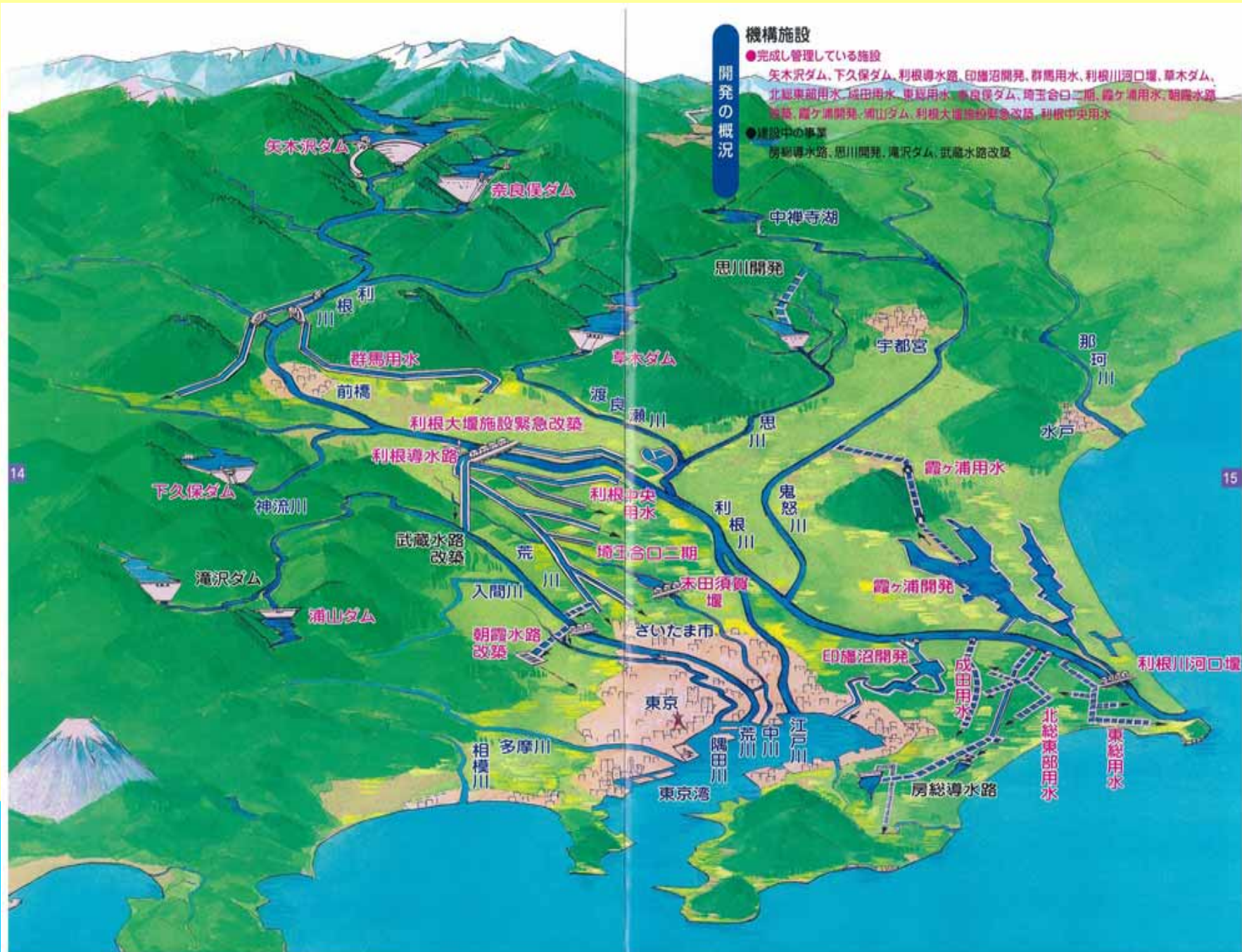


# Tone intake Weir



Max. 140m<sup>3</sup>/s water is taken to convey to the Tokyo metropolitan and suburb area as domestic, industrial and irrigation water







ダムからの補給の有無による流況の違い



位置図

①ダムからの補給を受けていない河川 (中川)



(H13.4.25撮影)

②ダムからの補給を受けている河川 (宮川)



(H13.4.25撮影)

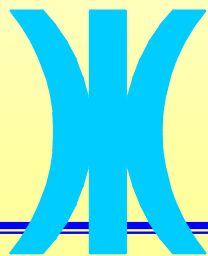
③水田の状況



## *Water resources coordination committee in drought*

When the drought happens or will be forecasted, the river administrator gathers water related stakeholders for the coordination of water usage distribution.

“Unstable situation of water supply”



# The WARDEC (JWA)'s Missions and Organization

## Activities of WARDEC (JWA)

### 1. Water Resources Development Promotion Law

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

### 2. Water Resources Development Public Corporation Law

#### WARDEC(JWA)'s activities

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

#### Water utilization

- Domestic Water
- Industrial Water
- Irrigation Water

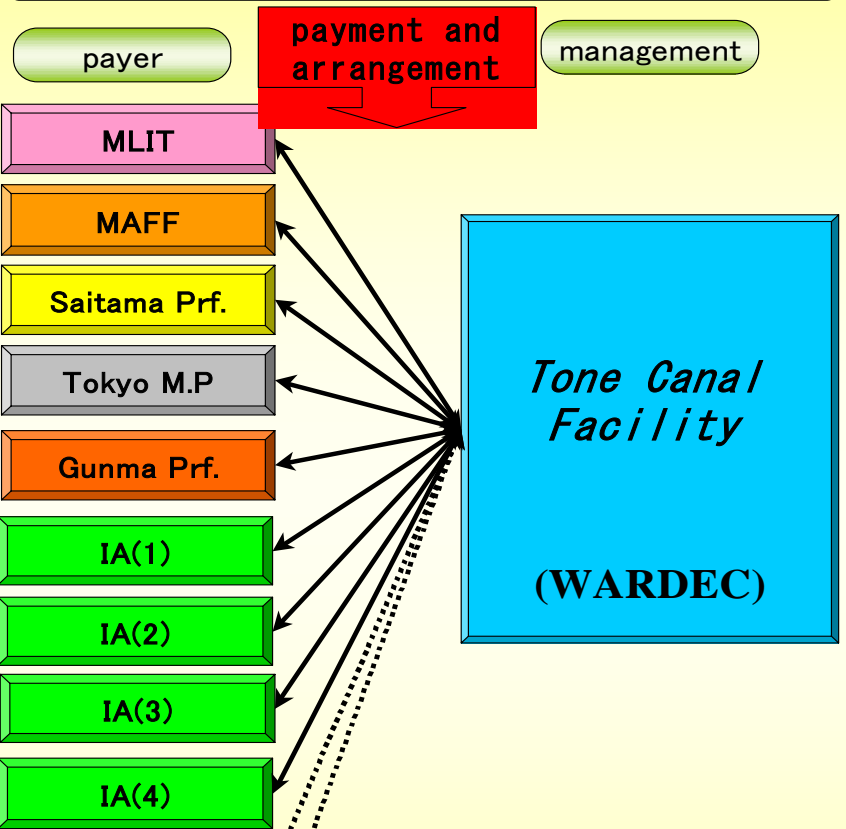
#### Flood control

Ministers  
supervising  
WARDEC(JWA)'s  
activities

### 3. The WARDEC (JWA)'s Missions and Organization

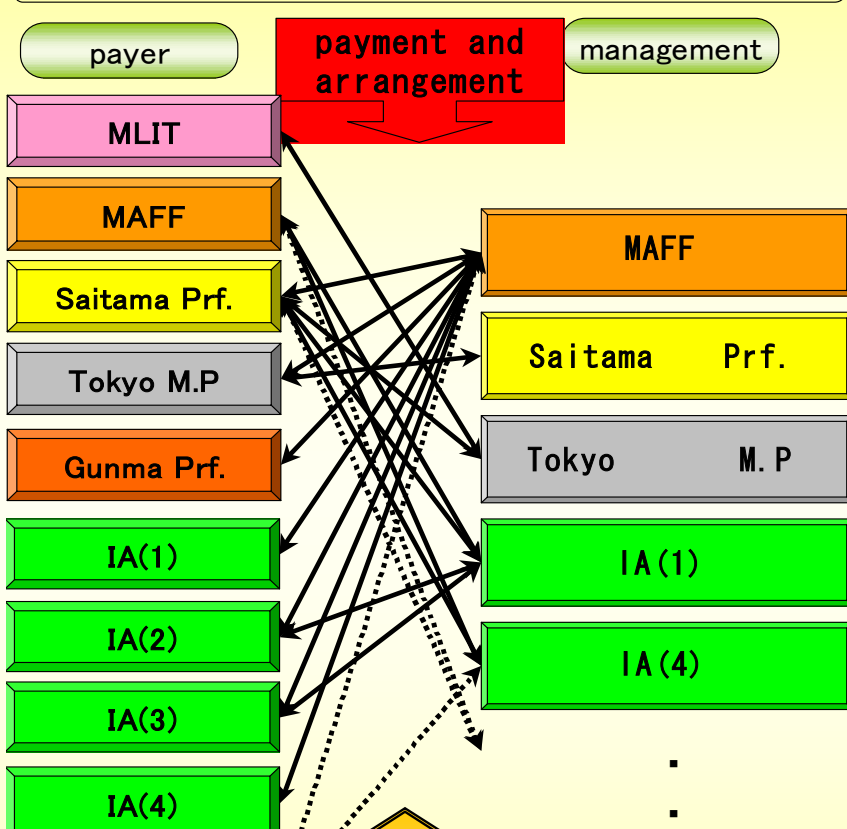
#### Effective Network and Management System by WARDEC for Users (ex. Tone Canal Project)

By WARDEC (current system)



Number of Route for arrangement:  
**13**

Not by WARDEC (imaginary system)



Number of Route for arrangement:  
**25**



MLIT: Ministry of Land, Infrastructure and Transport    MAFF: Ministry of Agriculture, Forestry and Fisheries.

Incorporated Administrative Agency    Japan Water Agency

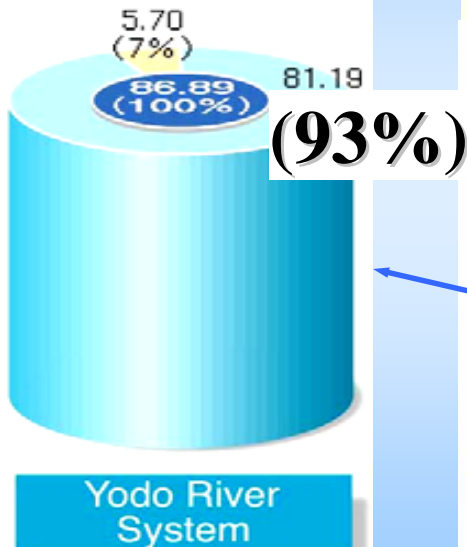
### 3. The WARDEC (JWA)'s Missions and Organization

**JWA is **sole** organization in Japan for unified execution of water resources development and management**

— Supply water resources to core areas in Japan and Execute flood control measures —

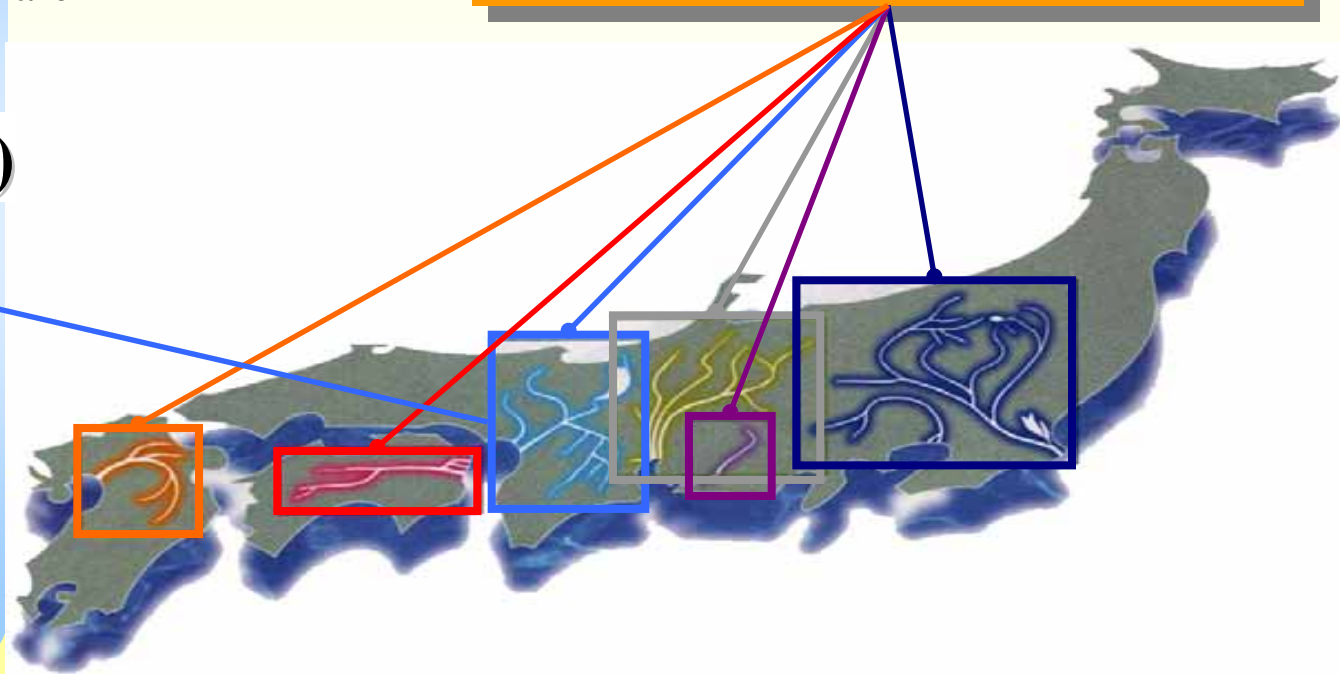
(EXAMPLE)

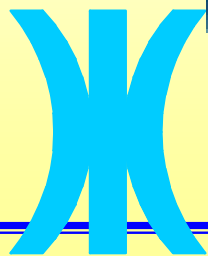
Water Resources Development Volume and WARDEC(JWA)' Share



Jurisdiction over

- 49% of total population
- 47% of gross industrial production





## Naturally shaped Fishway

The naturally shaped fishway was designed to help a wide range of fish and other aquatic life to ascend the river. The water course has a gentle slope and is filled with cobblestones and other natural stones. Much thought has gone into its making. Providing many rest areas and shelters, it has an alternating series of pools and rapids that provide diversity to the depth and velocity, and its course was made to meander.

This fishway helps a variety of fish and other aquatic life to migrate upstream, including benthic fish, who are not good swimmers, species such as *Eriocbeir japonicus* and *Macrobracium nipponense*, and good swimmers such as *Plecoglossus altivelis altivelis* (Ayu).

At the upstream of the fishway, four rubber-roofed weirs have been installed to deal with changes in the upstream water level.





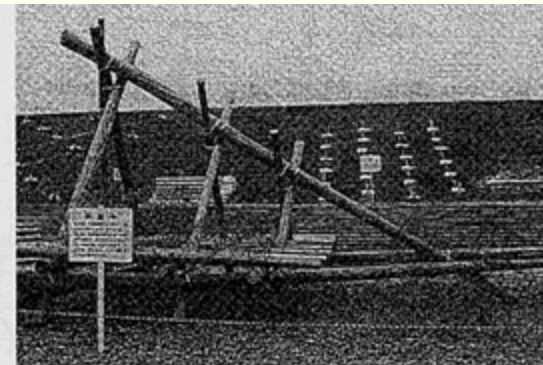
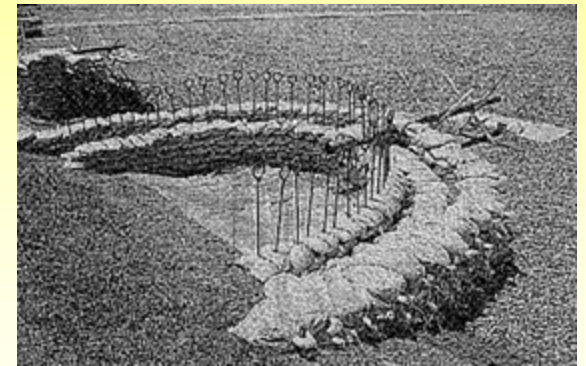


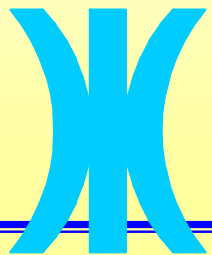


# 水防団、水防法



撮影 河合 孝 氏





*OUR ASIAN PEOPLE KNOW THAT/HOW WE SHOULD DO.  
FOR THE SUSTAINABLE CAPACITY BUILDING,  
WHAT IS THE MOST IMPORTANT?*

Practical approach for Asia

All problems and keys are in site.

Long strategy

Steady and Hard work for coordination  
and to get understanding from people and  
decision makers.

Transparency and Accountability

