

# Integrated Basin-wide Development in Central Japan

Management of river basins was mainly river works, but nowadays has been added another aspect, producing good water environment, biodiversity, climate change and promotion of regional development which is needed for preservation of local communities having severe problems of aging and depopulations . \* River Basin is a unity area of nature, history, culture, climate, transportation

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Development

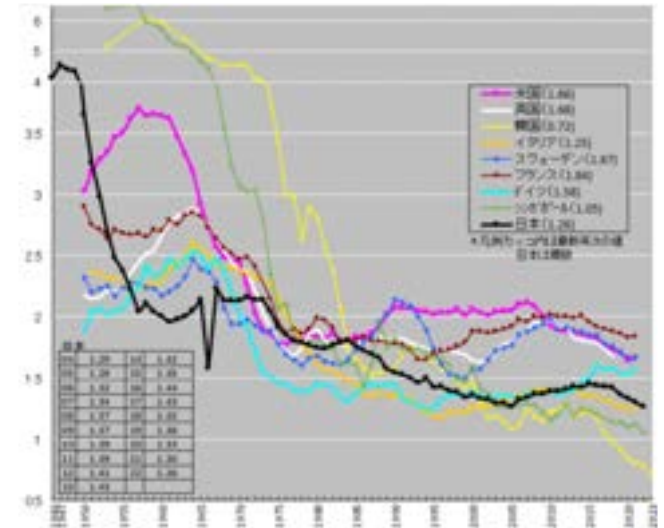
# Challenges in JAPAN.

Climate-change,  
Bio-diversity,  
Disaster (Earthquake, Flooding)  
Regional Promotion  
(←Declining Birth-rate, Depopulation)

These are nation-wide.



Lifted up by Earthquake



Birth-rate

# Municipal Governments Have Important Roles

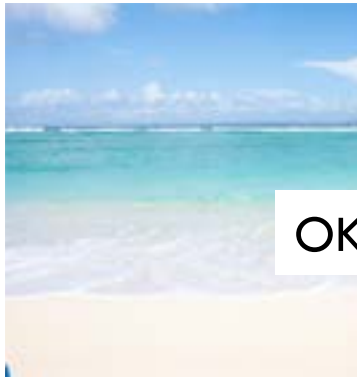
Not only national government,  
but also each municipal government have  
the responsibility of These Challenges.

Municipal governments have important roles  
because the countermeasures for these wide and various  
problems should be done by municipal governments according  
to national policies.



# Some Considerations

First Point is the countermeasures are various and different in regions or parts of JAPAN according to condition of nature, history, culture and so on. But countermeasures should be executed by the coalition of municipal government because of efficiency and effect of execution.



OKINAWA



Various  
Conditions



HOKKAIDO

# Governance

The coalition , well organized area, is a wide area or region of river basin in the Central JAPAN.

An organization is needed similar to one government of basins area. It is difficult to establish the government in JAPAN like "Water Agency" of France because of differences of laws and historical conditions.

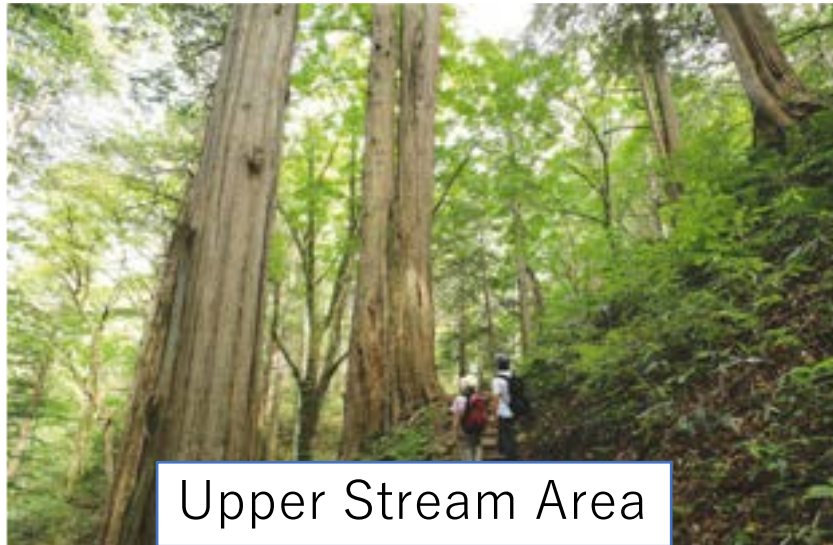


*France 6 basins and Water Agencies*

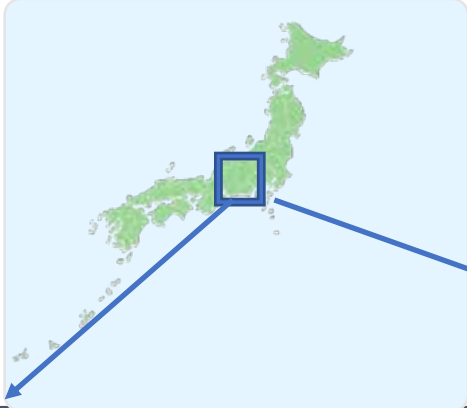
# Collaboration of Municipal government of River basin-wide

Next Point is the necessity of a collaboration of municipal government of river basin-wide.

Introducing **Integrated Basin-wide Development in Central Japan** , in Kiso 3 river basins + Water (includes irrigation, industry) receiving Area



# ABSTRACT of KISO 3 BASINS



**Area of River Basins :**  
 Kiso 5,275km<sup>2</sup>, Nagara 1985km<sup>2</sup>, Ibi 1840km<sup>2</sup>

**Length of Rivers :**  
 Kiso 229km, Nagara 166km, Ibi 121km

**Population in 3 River Basins** 2.8million

**Municipalities in 3 River Basins :**  
 Gifu-ken 39 Aichi-ken 7 Mie-ken 3  
 Nagano-ken 6

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# Kiso 3 river basins + Water receiving Area



# Municipal Cooperation In Kiso 3 Rivers Basins

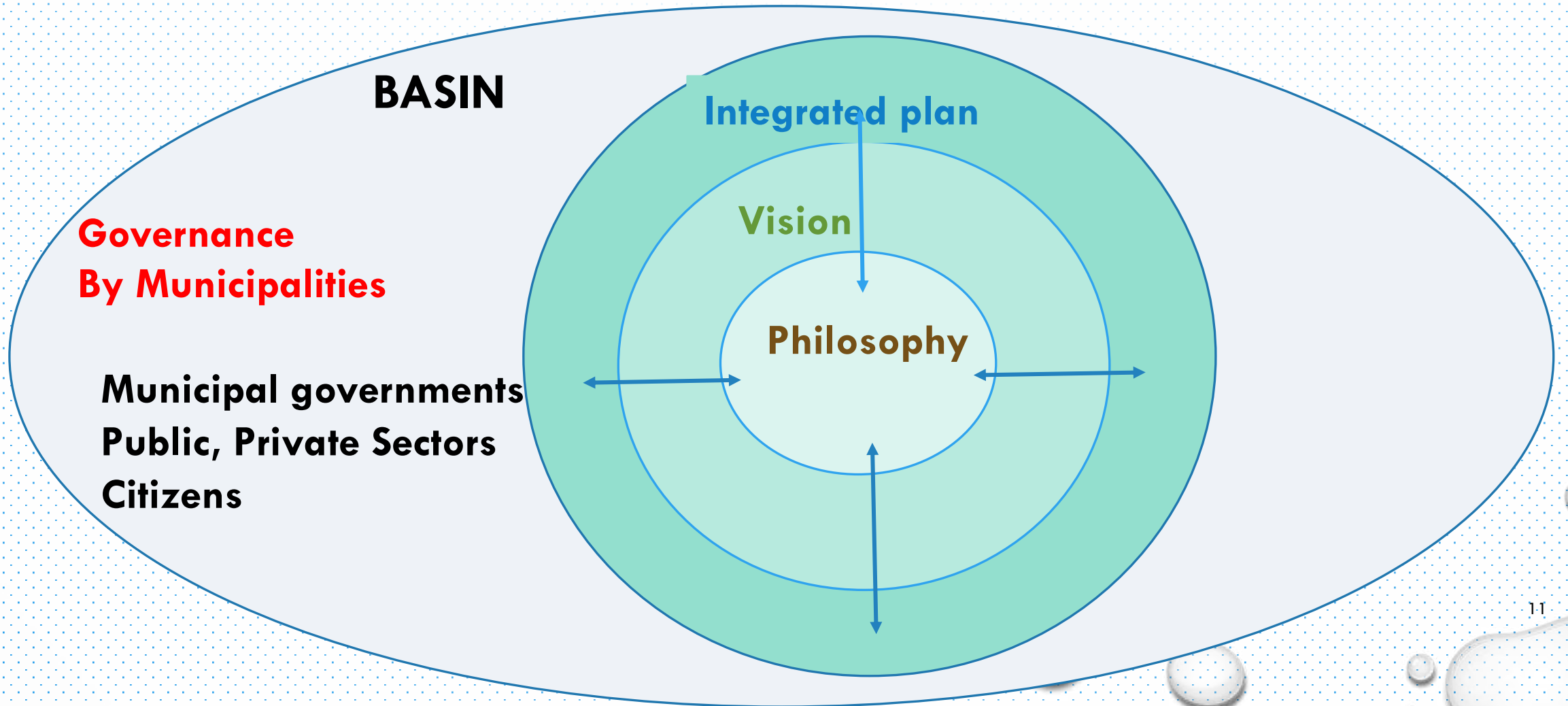
The City of Nagoya suggested that

Taking the opportunity of holding COP10(Biodiversity) in 2010.

The Municipal Cooperation in The Kiso 3 Rivers Basins was established by 28 Municipal Governments in the basins of Kiso 3 rivers in 2011.



# 4 Factors For Integrated Management Of Municipal Cooperation



## 4 Factors

# For Integrated Management Of KISO 3 River Basins

## Philosophy

Sound Water Cycle & Livings are Alive Lively and Sustainably

## Vision : Image Of Philosophy

Healthily Water Circulates (Vaporization, Falling, Flow, Infiltration) from mountains to sea areas  
for variety of Livings will be alive, lively and sustainably

## Integarated Plan : Plan For Implementation Of Vision

The plan of Water Use, Irrigation, Flood Control, Hydroelektric Power, Land Subsidence, Material Cycle,  
Water Environment, Biodiversity, Climate Chang, Regional Promotion

## Governance For Integrated Management Of Basins

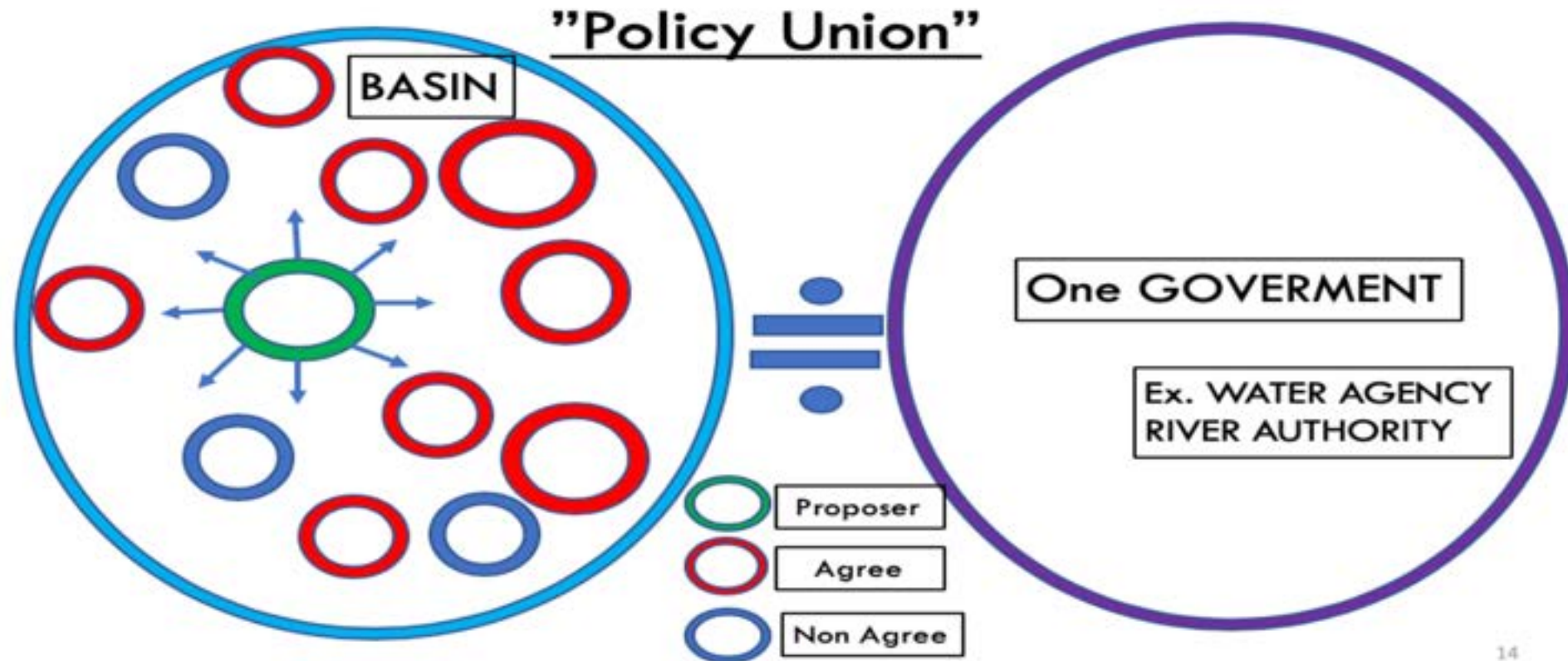
"Policy Union" Of Municipal Governments

MUNICIPAL COOPERATION, PUBLIC-PRIVATE COOPERATION, PUBLIC PARTICIPATION

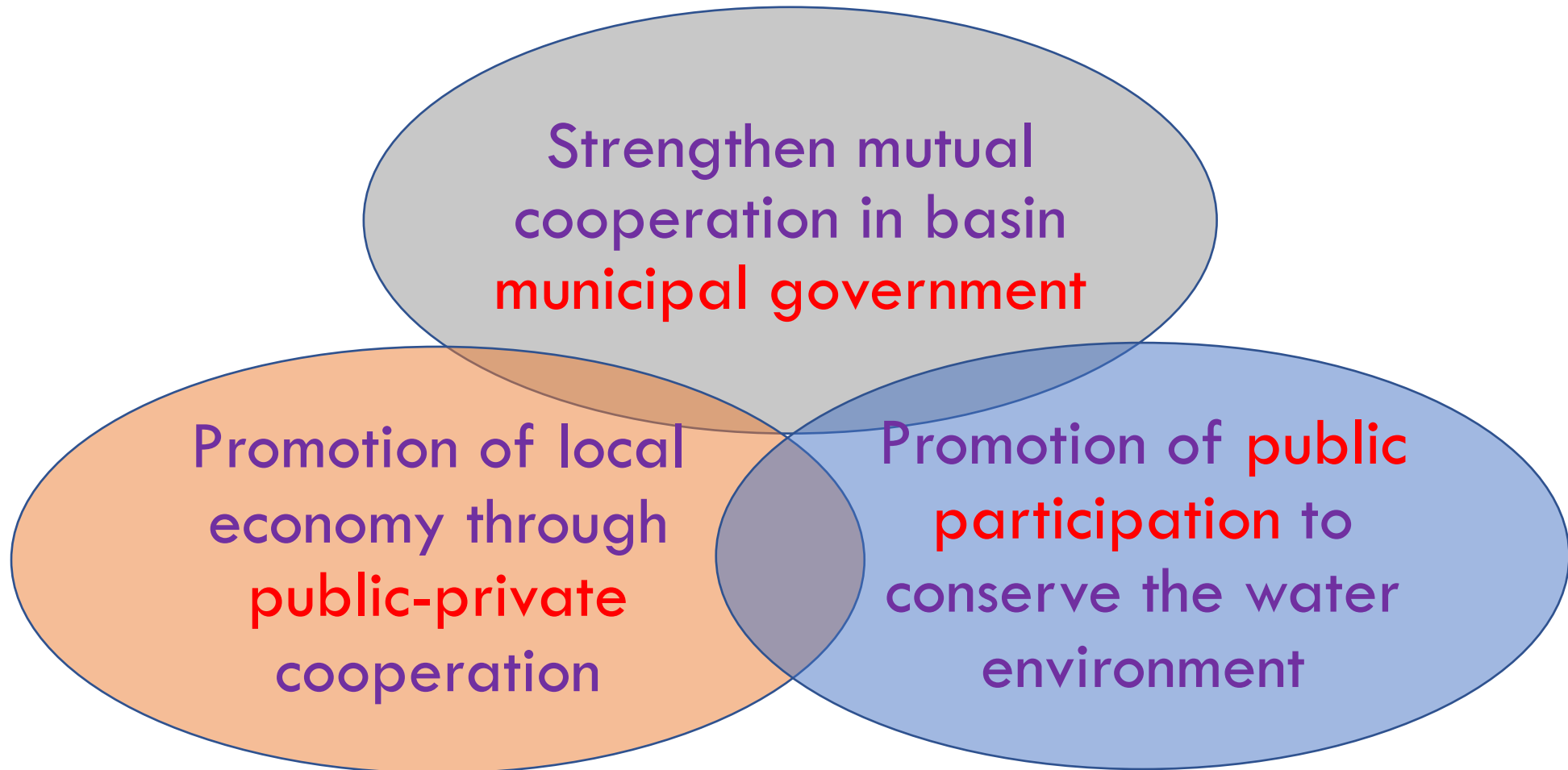
# "Policy Union"

Important concept of the collaboration is "Policy Union"

That is equivalent to the administrative activity of one government



# Municipal Cooperation, Public-Private Cooperation, Public Participation



# Mutual Understanding and Cooperation

Needs to find solutions with all the basin areas working together and sharing problems.

Important concept of the collaboration in KISO 3 River Basins is

Exchange and Mutual Understanding

of upstream or middle stream (non-urban) area and downstream (urban) area.



Exchange between Upper stream area and Down stream Area

# Common Challenge for the Entire Basin Area

## Regional Promotion

← Downstream **SUPPORTING** Upstream

### Challenges for the Upstream and Middle stream areas

\*Aging, depopulation

\*Lack of leaders

in agriculture and forestry

- Decrease of flow,
- Muddy stream

- Devastation of forests
- Depression of the soil  
percolation capability
- Runoff of sediment  
and fallen trees



# Activities of Municipal Cooperation In Kiso 3 Rivers Basins

Summit of Mayors



Trade Fair



Symposium



Marche



Photo Contest



# My activities going on after retirement

Urban area, supporting Non-Urban area



## Our Activities :

1. Small company's business support
2. Overseas water and sewage works
3. Basin-wide development
4. Research water cycle and slow-sand infiltration

# SUPPORT of Plan, Design, Construction & Operation Water Treatment Plant Reconstruction in KISO-VILLAGE



Water Treatment Plant



One of our member



Tube type Membrane Filter

# Promotion of Rural Water Supply in CAMBODIA Starting from SELF-SUSTAINING of WATER SUPPLY in SONGVEUY Commune

## Overall Goal

The rural water supply will be promoted by the proper operation and management of Rural Water Supply based on the Songveuy model.

## One of Outputs, 5years activities

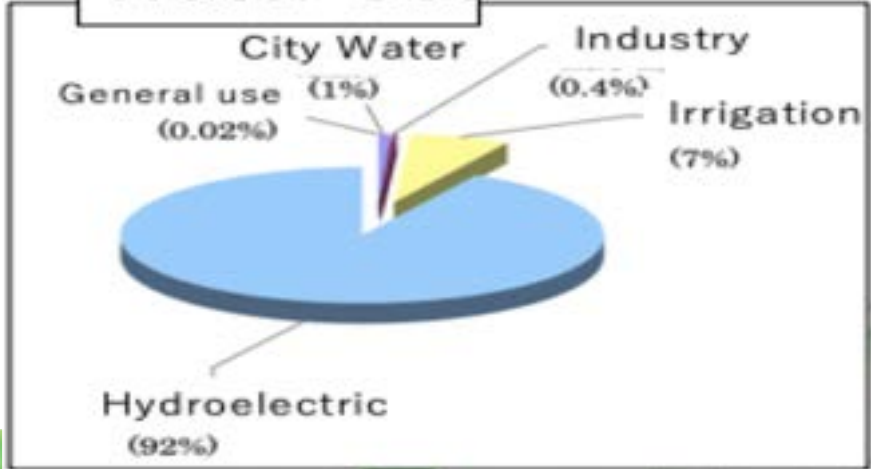
The Operation and management of Rural Water Supply will be improved according with the improvement of knowledge and technical ability of each commune and the Alliance.



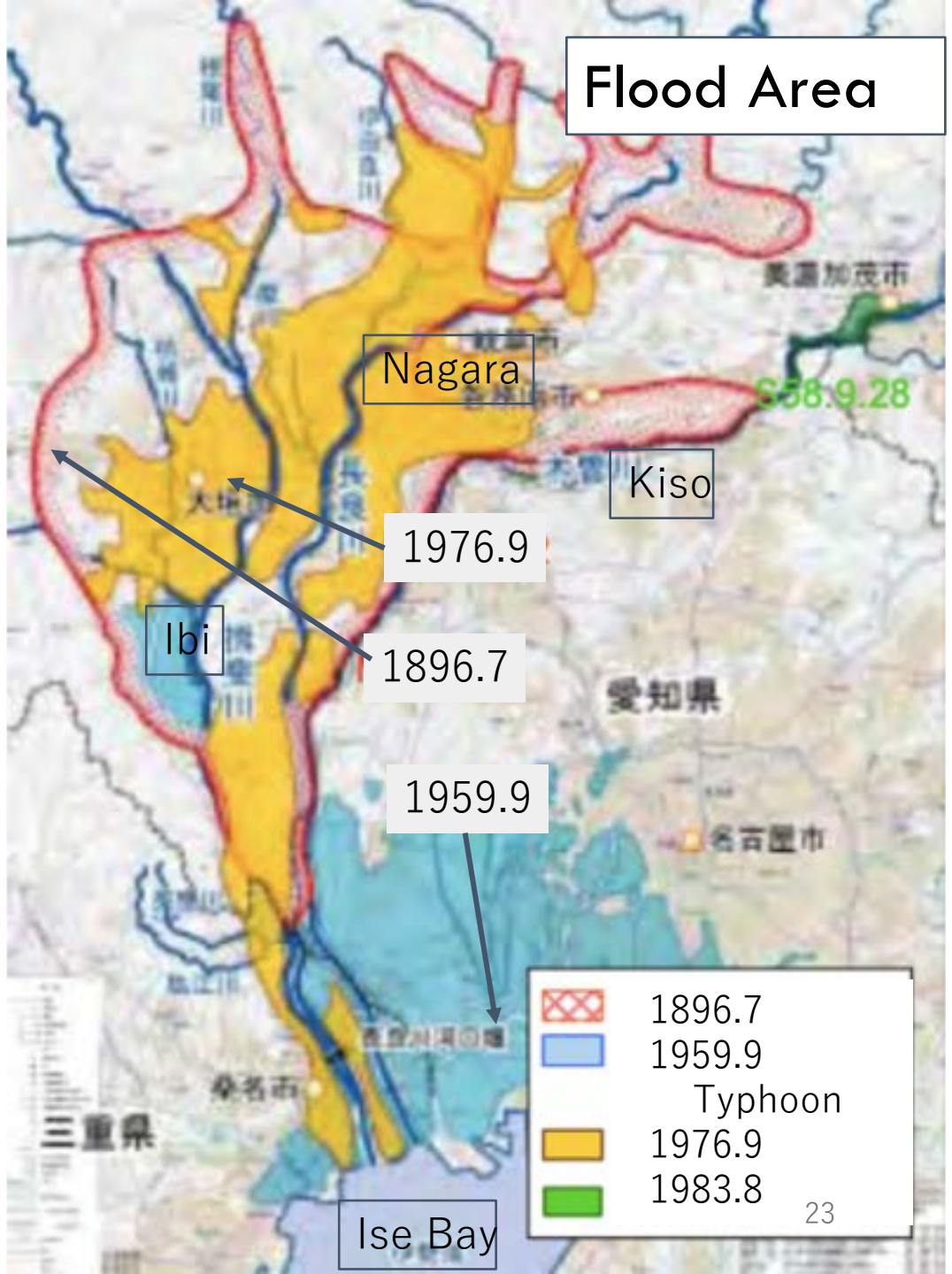
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# Water Use



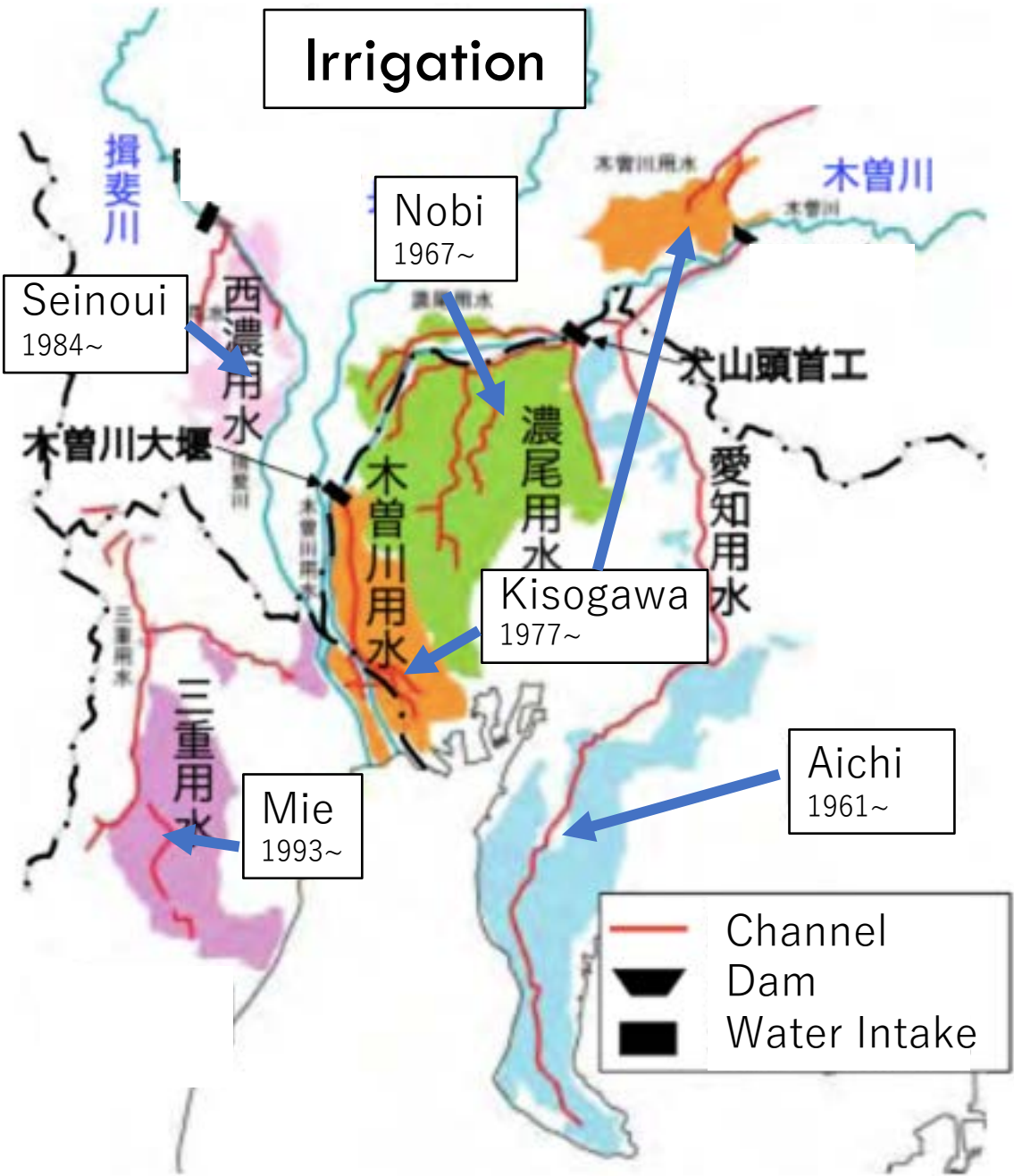
# Flood Area



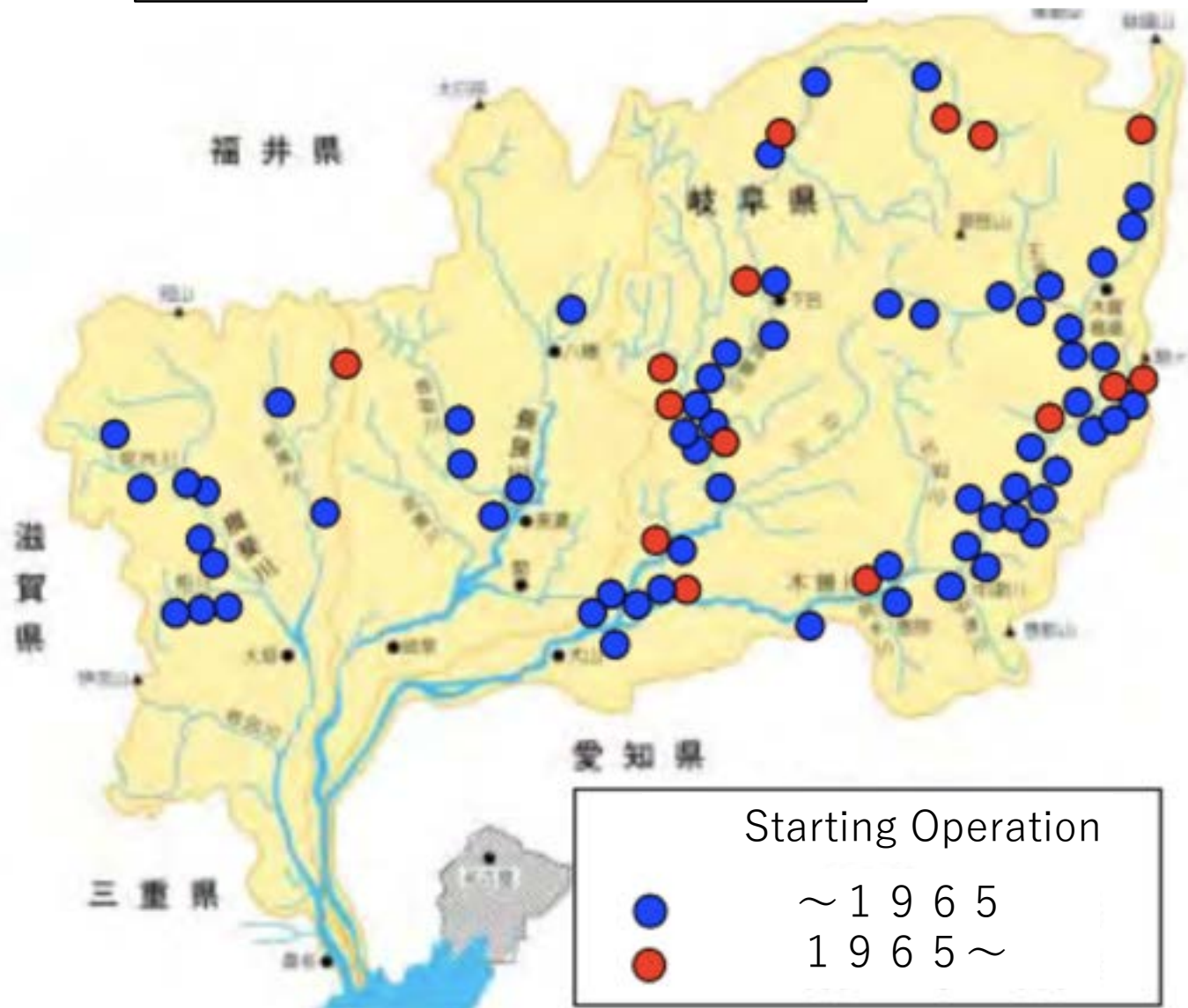
# Dams



# Irrigation



# Hydroelectric Power

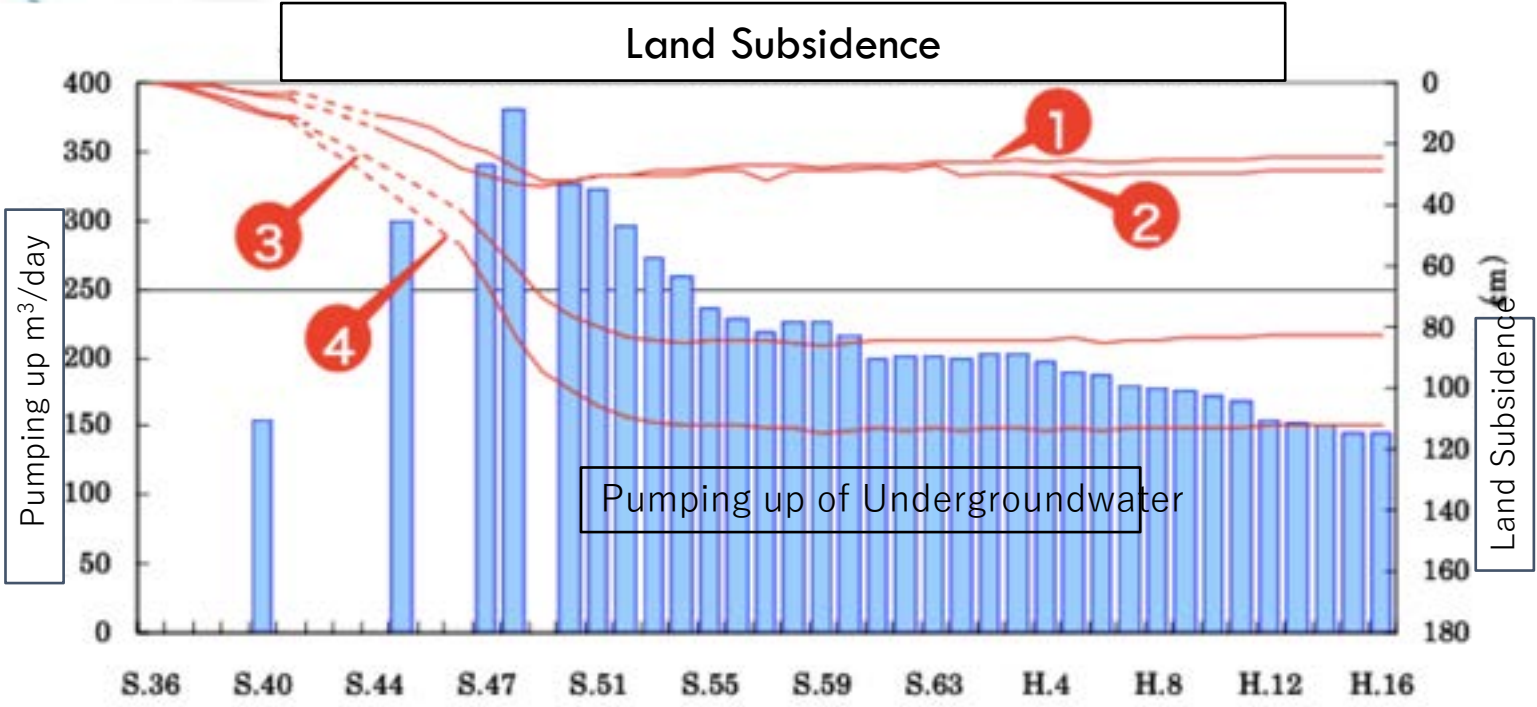
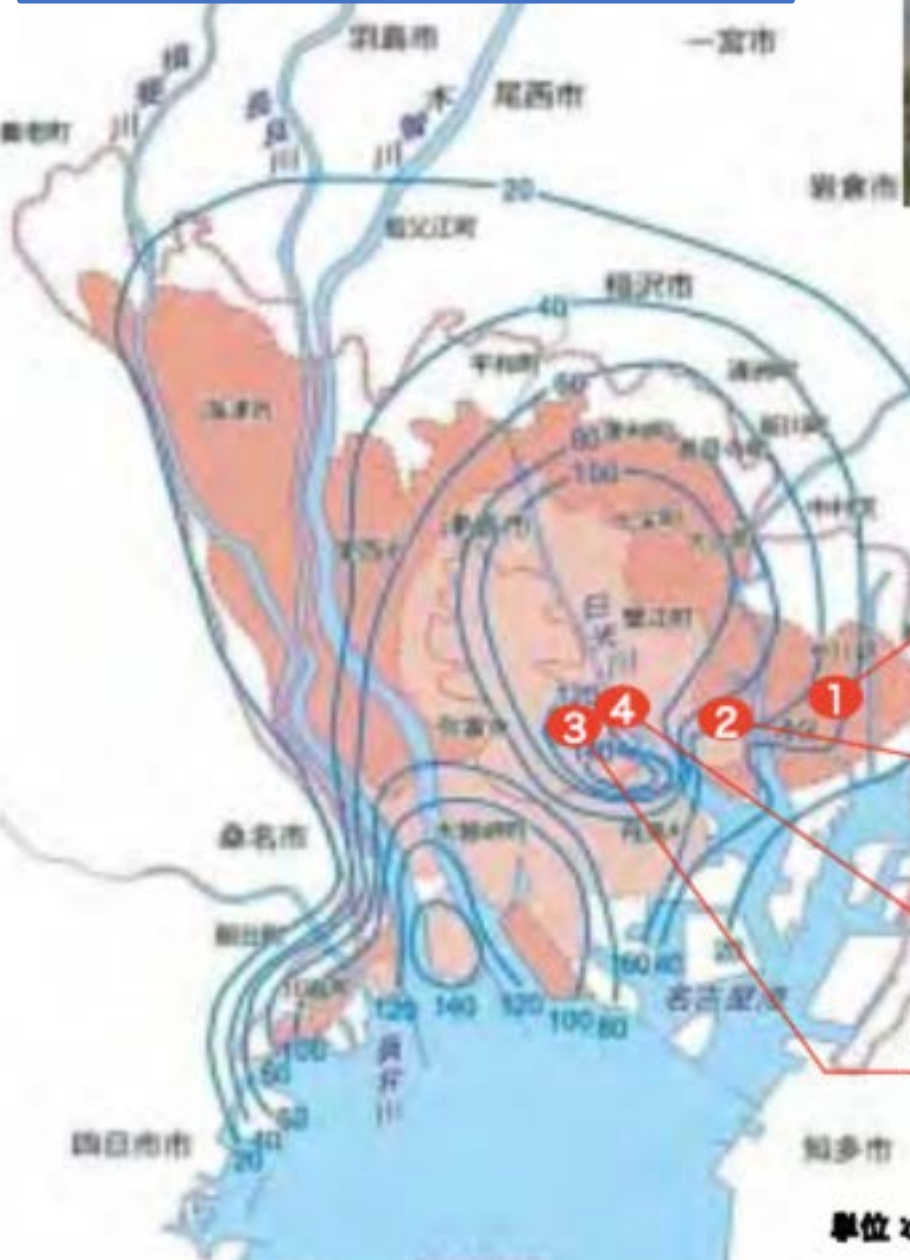
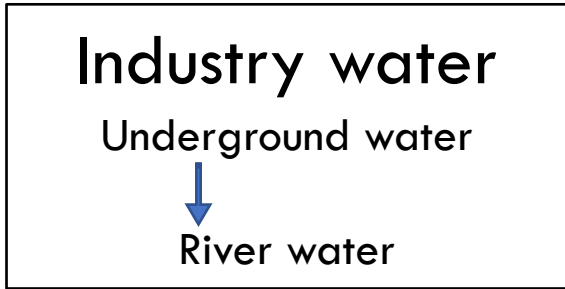




# Land Subsidence

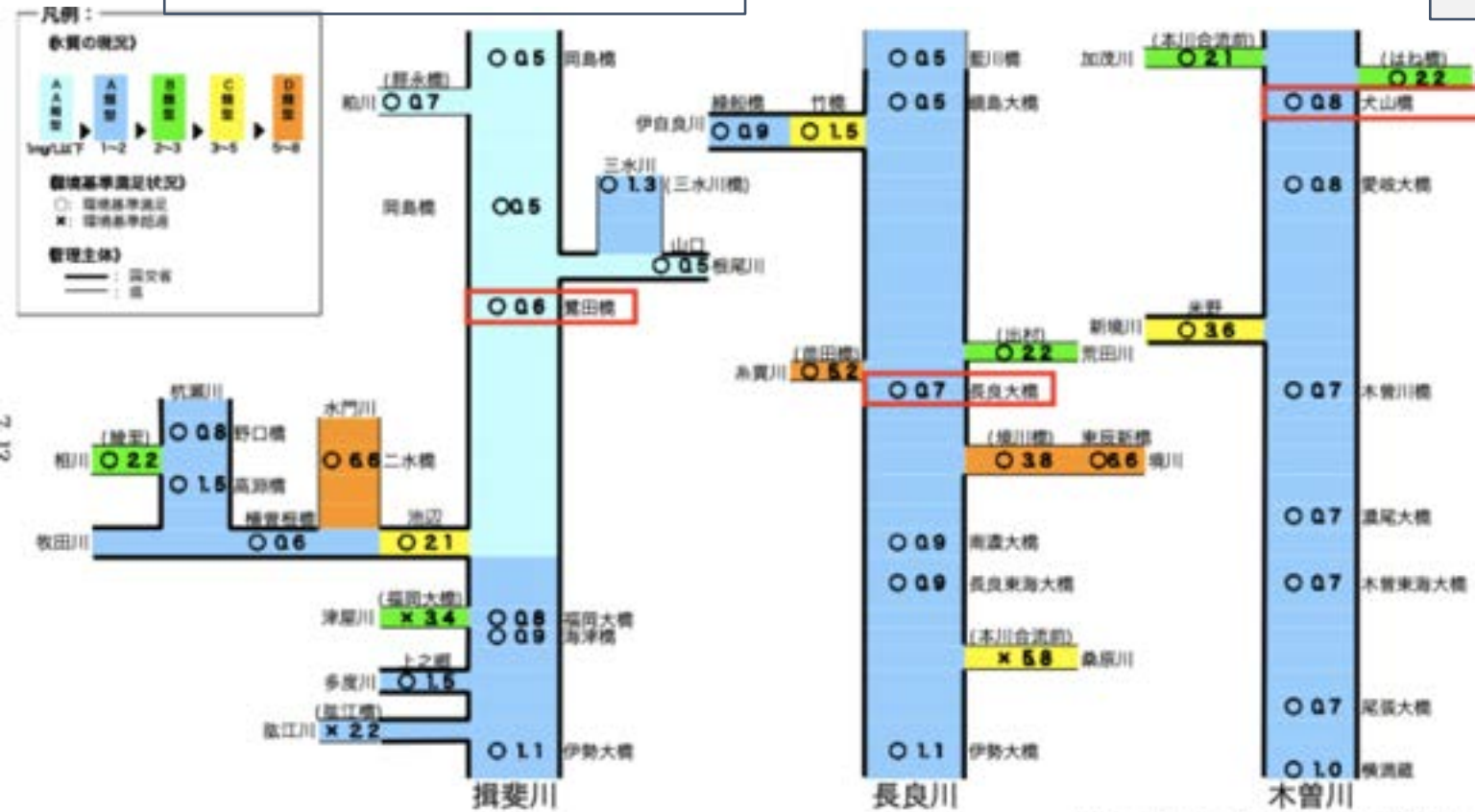


Land Subsidence



単位 x

# Water Quality



	COD	T-N	T-P
Kiso	53.0	53.0	53.0
Nagara	29.7	10.5	1.1
Ibi	21.5	8.3	0.8
total	104.2	31.2	2.8
Ise Bay	322.1	127.4	12.0
%	32.4	24.5	23.6

ton/day in 2004

# Sewage Works



Ise Bay