

### 3. Policy

(2008. 3. 31 Notification)

【The working of the river is utilized keeping the width of river bed enough】

**The width of river bed enough is important, when a section keep the capacity of flood management**

▪ When there is limitation on a site, slope gradient of revetments is 1:0.5 to keep the width of river bed

※consideration of discharge capacity, recovery of the variety by the action of the river, keeping of riverfront, The stability of the riverbed



- This river was repaired at slope gradient of 1:1.5, but the riverbed width has only 4m
- A river channel was made a straight line, and it was repaired in a prismatic channel

Under keeping the width of a river widely, the work of the river is promoted and the depth of the water and velocity change, and gut is formed, then Various river environment is formed

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### Case of channel improvement of Kitagawa River (Miyazaki Pref.)

## Limiting place to protect from affiliation

Improving river environment in view to make use of dynamics, even though it is anti-disaster measures.





### 3. Policy

## Case of channel improvement of Kitagawa River (Miyazaki Pref.)

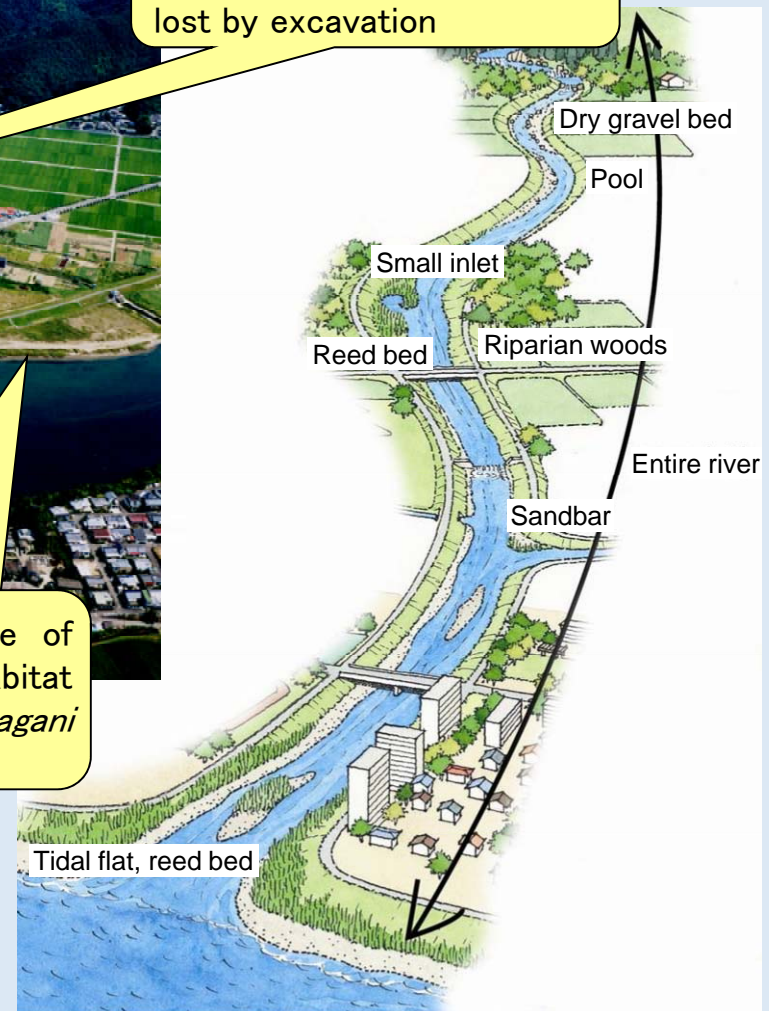
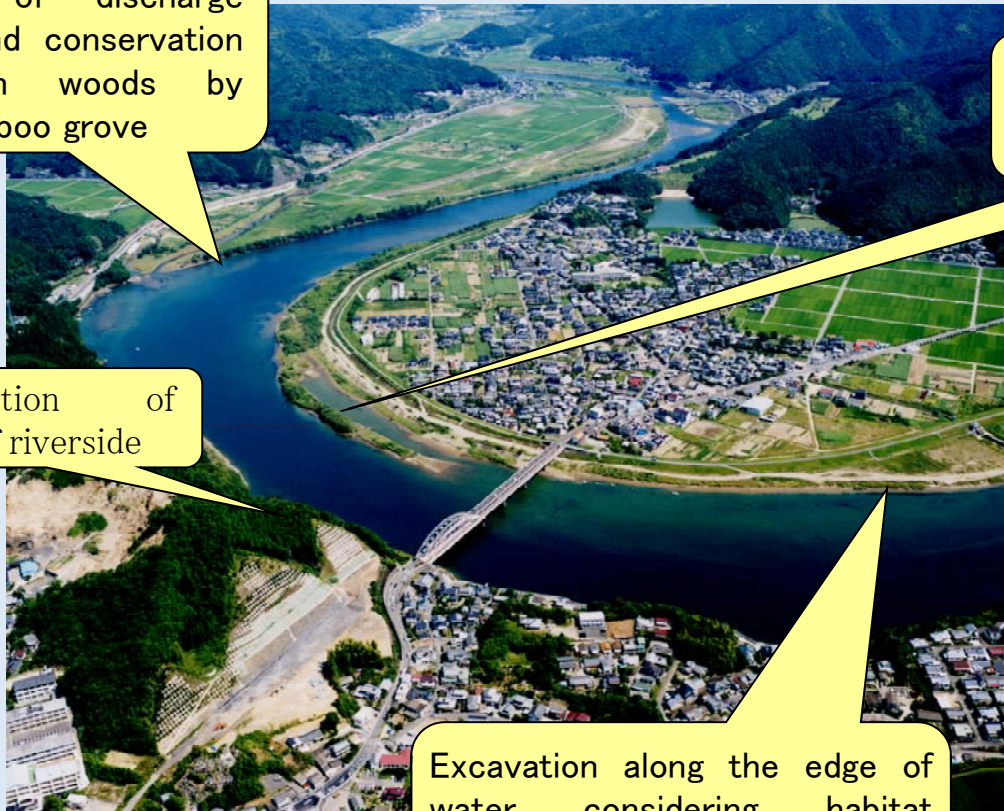
### Limiting place to protect from affiliation

Retention of discharge capacity and conservation of riparian woods by cutting bamboo grove

Conservation of forests of riverside

Small inlet to compensate for a brackish water area lost by excavation

Excavation along the edge of water considering habitat requirements for *kawasunagani* (*Deiratonotus japonicus*)



### 3. Policy

### National Census of River Environment

#### inhabitation research

#### Definition

The basics investigation that is done periodical, continuous and unified to catch a river from the viewpoint of environment

#### Designated rivers and Dams

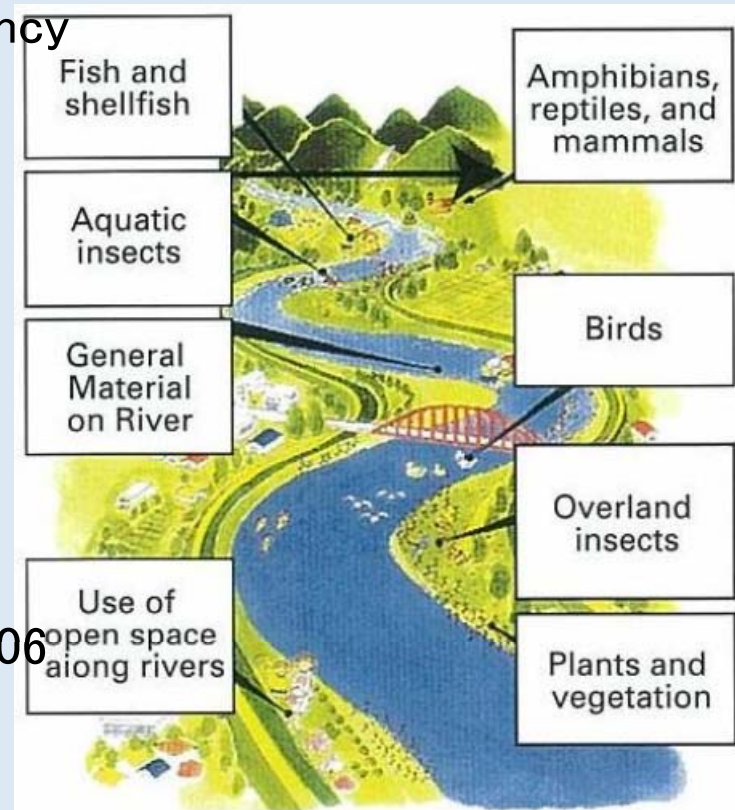
- 109 rivers administrated by MLIT
- dams administrated by MLIT and Japan Water Agency

#### Biotic investigation Contents

Fishes and shellfishes, Benthos, Plants, Birds, Amphibians, Reptiles and Mammals, Land insects, etc.

#### Result

- every 5-year from 1990
- The third investigation was completed in 2005
- The fourth investigation has been started since 2006

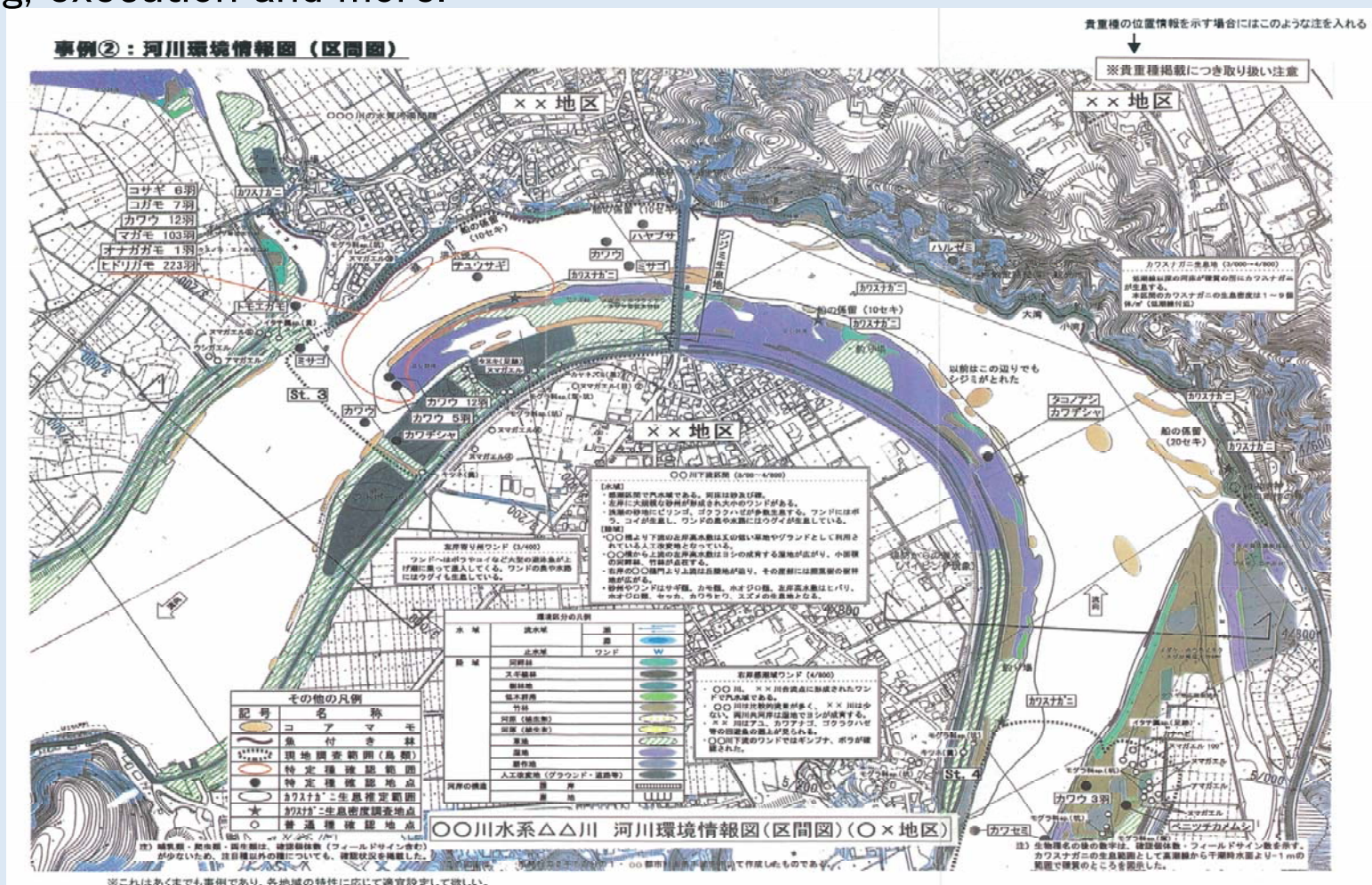




# National Census of River Environment Analysis

# Inflection of Investigation

“Environmental Information map”, based on the result of National Census of River Environment, utilized for each stage of the river management, such for planning, execution and more.

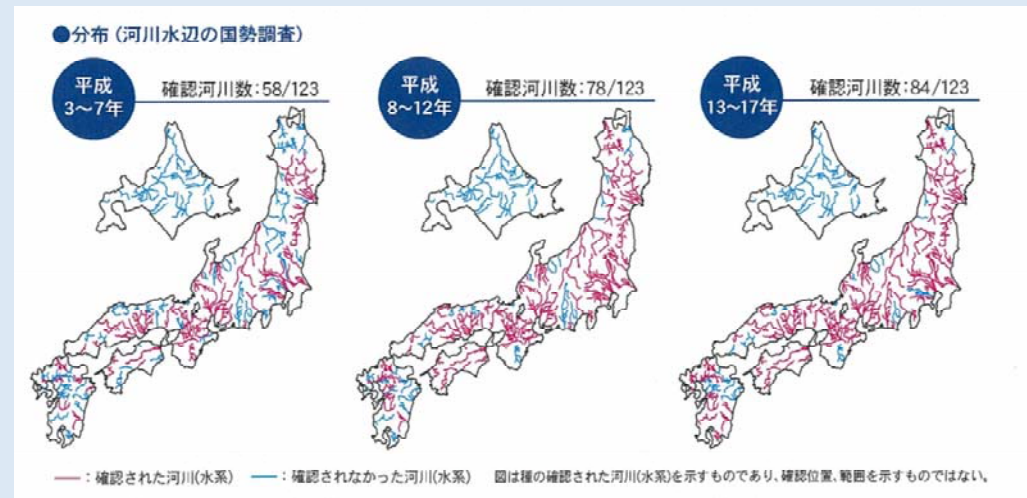




# Alien species

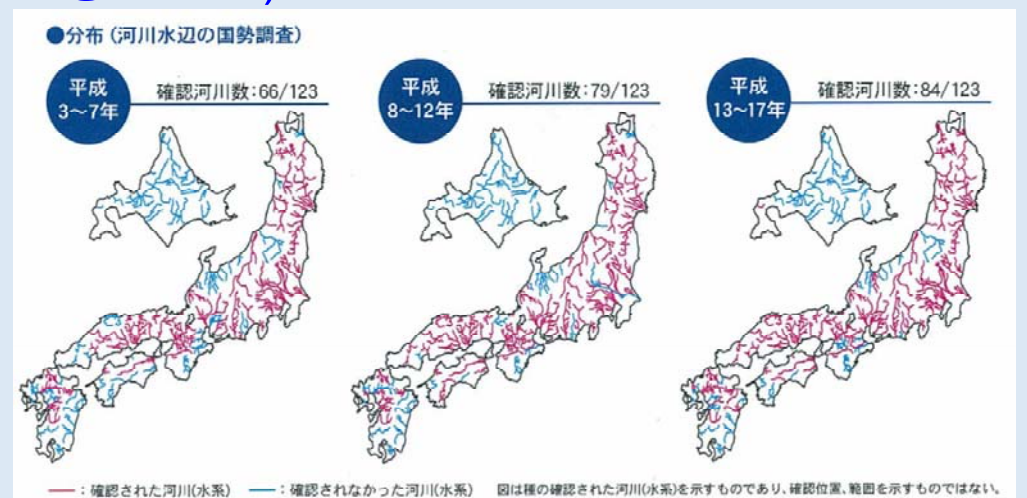
Magnification of alien specie's habitation level, affecting native ecosystem.

Black bass (Sunfish, Scientific name: *Micropterus salmoides*)



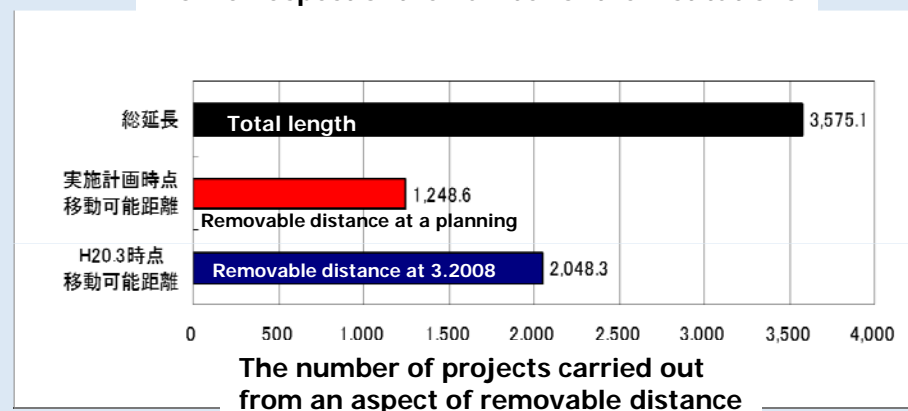
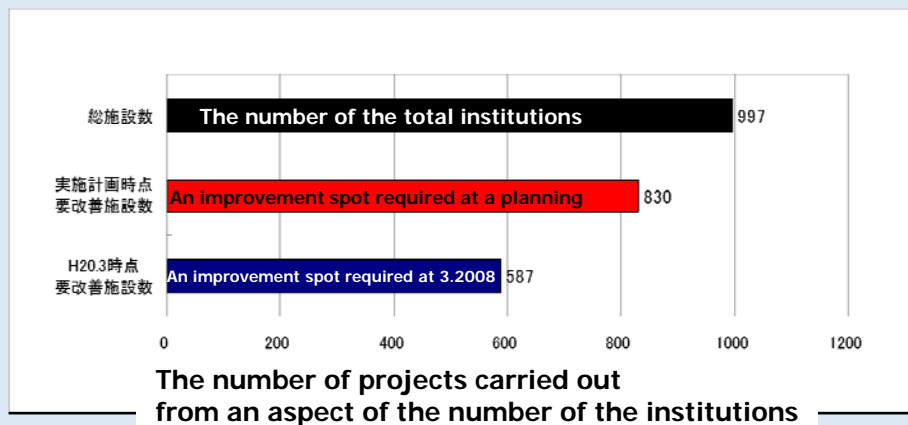
*Sicyos angulatus* burr cucumber

(Cucurbitaceae, Scientific name: *Sicyos angulatus*)



# Creating Rivers That Fish Can Easily Ascend

To promote creation of rich area of the river environment more positively, in a river becoming the local symbol, improvement of the structure such as weir or ground sill or dam or debris control dam and setting and the improvement of the fishway and the keeping of the fishway discharge are performed premeditatedly. And these improvements are performed so that fish can easily ascend positively as a model projects. (From 1991)

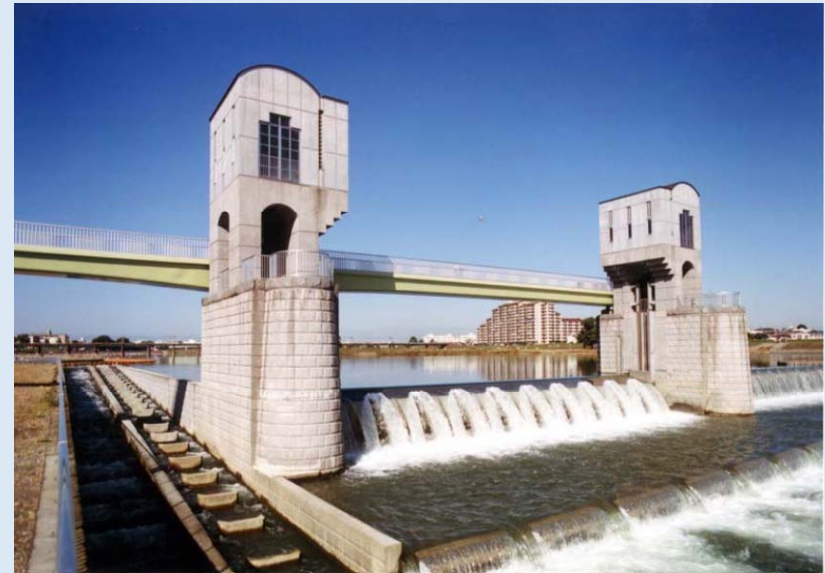
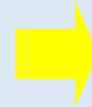
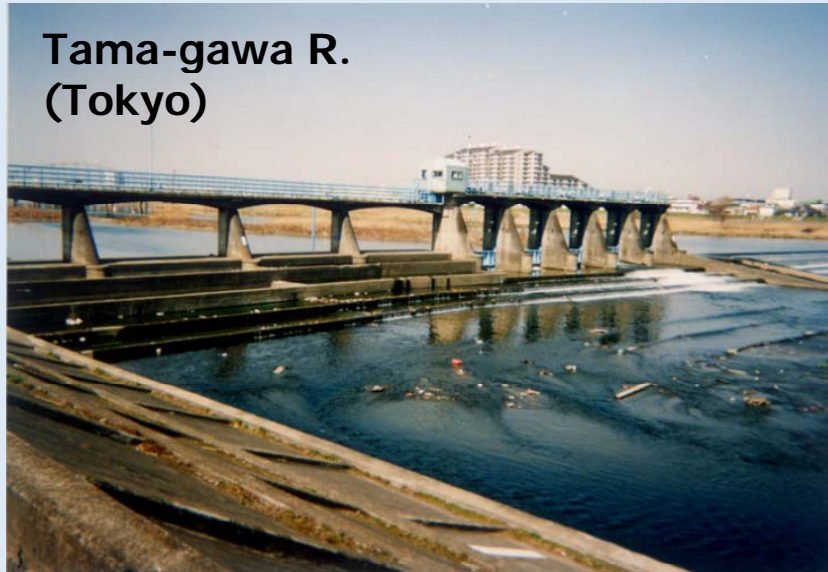


Designated river for "Model Project for Creating Rivers That Fish Can Easily Ascend"



# Creating Rivers That Fish Can Easily Ascend

**Tama-gawa R.  
(Tokyo)**



**Onga-gawa R.  
(Fukuoka Pref.)**



In around Shin-machi groundsill, at the same time with improvement of ascent condition, diverse habitats creating suitable circumstance for fishes.

**Arakawa R.  
(Saitama Pref.)**



The gentle fish way creates a flow such as a natural brook