

Rivers

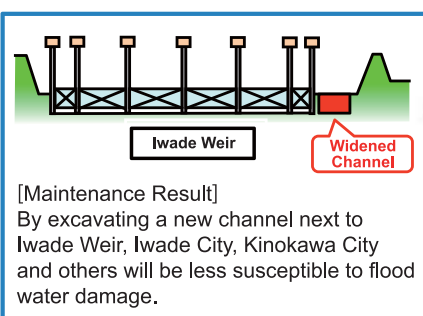
River Projects (10 River Systems: Shingugawa River, Kinokawa River, Yamatogawa River, Yodo River, Kakogawa River, Ibogawa River, Maruyamagawa River, Yuragawa River, Kitagawa River, Kuzuryu-gawa River)
 Dam Projects (3 locations: Daidogawa Dam, Amagase Dam, Asuwagawa Dam)
 Landslide Prevention Projects (1 location: Kamenose district)
 Erosion Control Projects (4 locations: Kidzugawa River System, Rokko Mountain Range, Kuzuryu-gawa River System, Kii Mountain Range)
 Coastal Area Projects (1 location: Toban Coast)

Safety of the People, Guarantee of Security

Promotion of flood prevention to stimulate regional growth

The betterment of flood prevention safety measures, made possible by better river maintenance, has allowed for the stimulation of regional areas.

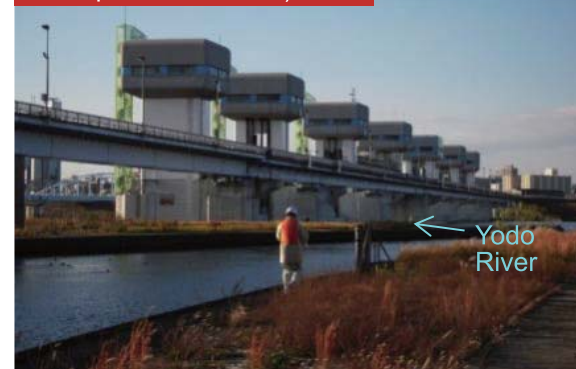
Countermeasures for Narrow Areas of Iwade (Kinokawa River System, Kinokawa)



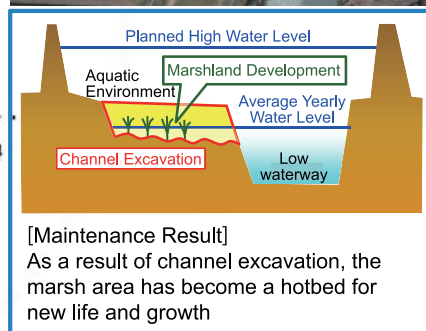
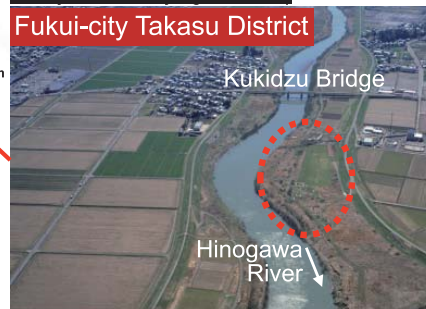
Nankai Trough Megathrust Earthquake Prevention Measure Promotion

Measures to prevent and lessen damage from earthquake and tsunami by strengthening sluiceways, embankments and waterways.

Osaka City (Yodo River Levy Earthquake Measures)



Hinogawa River Flood Prevention, Marshland Business Creation (Kuzuryu-gawa River System Kuzuryu-gawa River)



Yodo River High Standard Embankment Maintenance Industry (Yodo River System Yodo River)

[Maintenance Result]
 Yodo River High Standard Embankment allows for the creation of a new town.

Osaka-city Torishima District
 Torishima District (Stage 1) High Standard Embankment Maintenance Completed
 Torishima District (Stage 2) Planned Maintenance Locations

Mizbering Project

The people and industry, as well as the government, that have interest in the waterside, will join together as one to restore the lost bustle of the Japanese waterside and make a new, active area with endless possibilities.



Water Pollution and Landslide Disaster Countermeasures

Based on frequent flood disasters and sediment related disasters in recent years, emergency flood control measures have been implemented to prevent and mitigate damage in advance.

Yuragawa River Specific Floor Flooding Prevention Emergency Project

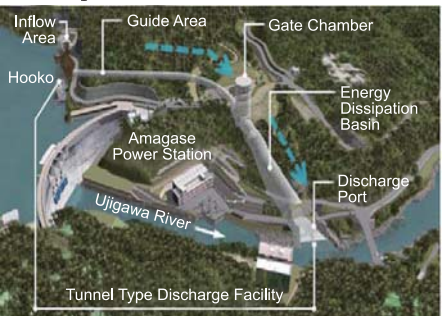


Kii Mountain Range Specific Emergency Erosion Project

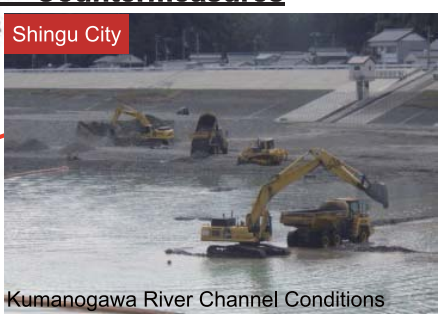


Industry aimed at protecting the livelihood of watershed residents from flood damage

Amagase Dam Restart Project



Kumanogawa River Severe Disaster Specific Emergency Countermeasures



Measures taken to rebuild a "Water Damage Prevention Conscious Society"

Based on heavy rains in the Kanto and Tohoku areas, a new "Water Damage Prevention Conscious Society Vision" will be promoted within the next 5 years for directly controlled river systems and their corresponding residential areas.

<Non-Structural Measures>
 • To make it easier for residents to recognize risk, evaluate and self-evacuate, we will switch to a more effective "Resident Perspective Countermeasure" and base our estimates on flood levels until 2016.

<Structural Measures>
 • Adding to the "Safe Floodwater Discharge Measure," a countermeasure aimed at reducing the damage of floods, "Crisis Management Measure" for roughly 150km area will be enacted.

<Crisis Management Measure>
 ○ New embankments aimed at lengthening the time between overtopping and breach will be promoted and embankments with tenacious structures will be maintained.

<Safe Floodwater Discharge Measures>
 ○ Measures to raise the height of embankments, prevent infiltration etc., will be preferentially enacted in necessary districts

<Resident Perspective Countermeasure>
 ○ Proliferation of Risk information for Residents
 ○ Preemptive response planning, Drill promotion
 ○ Provide real-time information to trigger evacuation procedures

<Embankment Construction for Reduction of Damages (Countermeasure Example)>
 Disasters Affected by Law
 Protecting embankments from erosion by overflowing water through the use of asphalt on the walkways of the embankments
 Narugasegawa River System Yoshidagawa River, Heavy rains of September 2015, Kanto and Tohoku
 Cross section
 H=3m
 Protection due to asphalt

House Collapse Danger Area *
 Areas where wooden houses face danger of collapse due to breach of embankments and floodwaters

