

Coordination of water use in drought terms



October 8, 2008

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Contents

1. Coordination of water use in drought term in Japan
2. Example: Countermeasures against heavy droughts
3. Strengthening / fulfilling of information offer

1. Coordination of water use in drought term in Japan

- River (Dam) Administrator and Water consumers cooperate each other at the time of drought.
- **Drought Conciliation Councils** consisted of River (Dam) Administrator and Water consumers are held to keep drought damage to a minimum before the river flow and water stored in the Dams are going to be little and can not maintain river flow functions.

1. Coordination of water use in drought term in Japan (continued)

- Executive Office of Drought Conciliation Councils is Regional Bureau of **MLIT** (Ministry of Land, Infrastructure, Transport and Tourism) in general.
- MLIT plays a role in coordination of water uses between water consumers.
- Dam Administrator estimates increasing and decreasing of dam water volume on the condition that dam continues prescribed water supply and gives information for water consumers.

1. Coordination of water use in drought term in Japan (continued)

- **JWA** (Japan Water Agency) operates water supply facilities under the decision by Drought Conciliation Councils.
- Usually this water supply operation becomes very delicate not to make the water supply from the reservoir less than the decided amount.

1. Coordination of water use in drought term in Japan (continued)

- Relevant organizations and bodies struggle in drought terms so that they can reduce or avoid drought influence such as cutting of the water supply to the citizen's life, agriculture, industry.



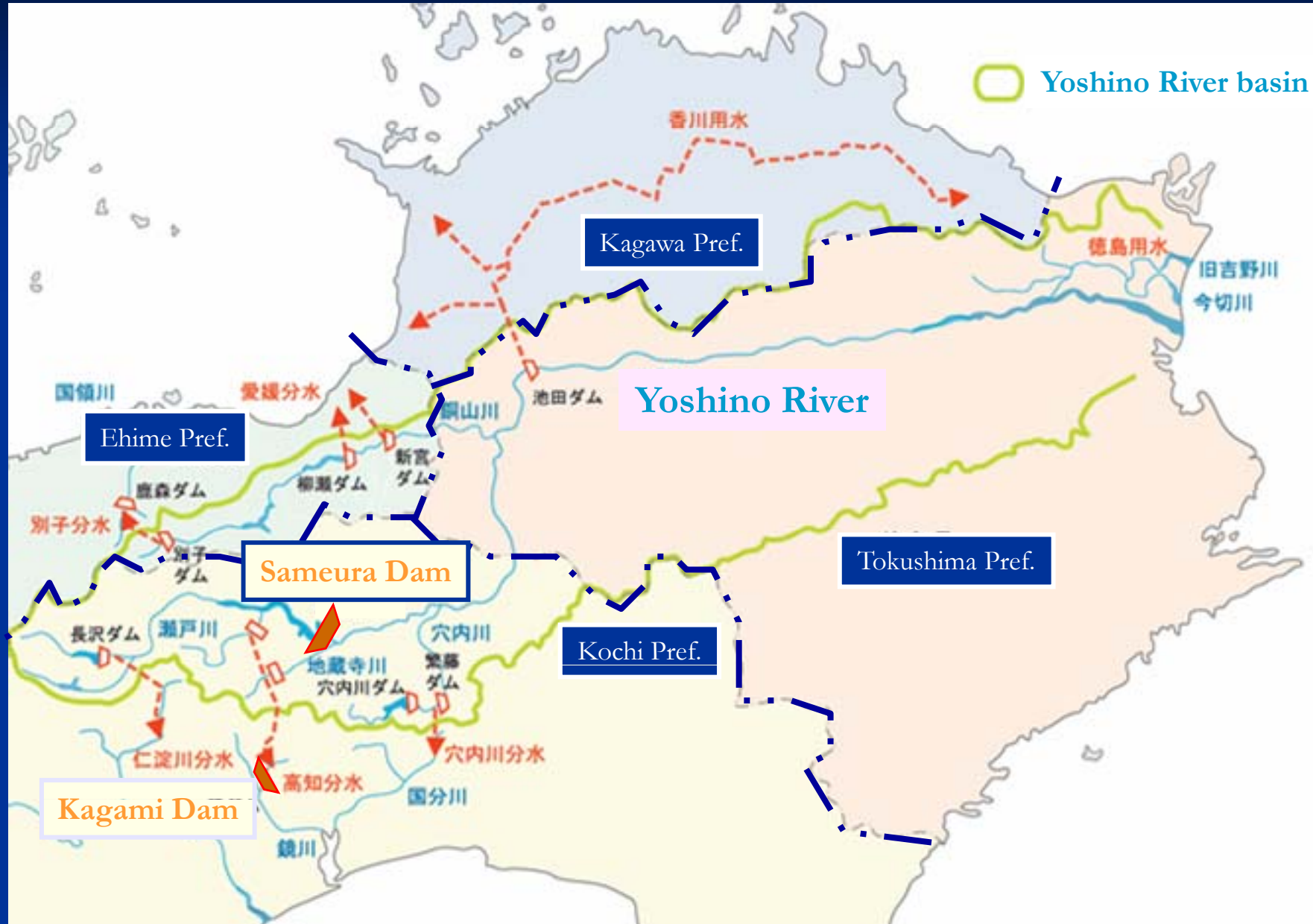
This is a kind of **Risk Management** in Japan.

2. Example:

Countermeasures against heavy droughts

- Drought management -2005 in Shikoku-
- Accommodating power generation water with domestic water

2.1 Drought management -2005 in Shikoku-



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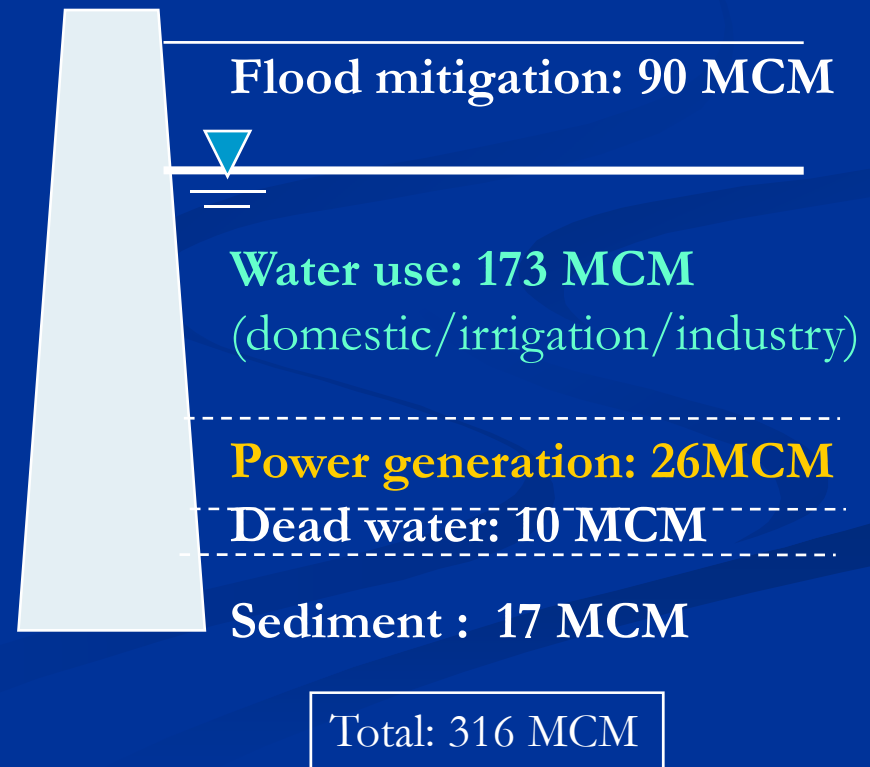
- In 2005 heavy drought attacked Shikoku Area. The reservoir of Sameura Dam, which is a main dam in Yoshino River basin, became empty (capacity for water use) and water intake was restricted 75% at last.
- Many countermeasures were implemented to mitigate drought damage, especially for the **domestic water use**.



2.1 Drought management -2005 in Shikoku-

- (1) Exclusive water to power generation was supplied as emergency discharge.
- (2) Irrigation / Industry sector accommodated water to domestic sector to reduce the restricting rate.
- (3) Water accommodation among municipalities (domestic sectors) were implemented to equalize domestic water supply situation.
- (4) Water accommodation from Fuchu dam of Kagawa prefecture's own reservoir was implemented after all.

Allocation of
Storage Capacity
July 1 – Oct 10
(flood season)

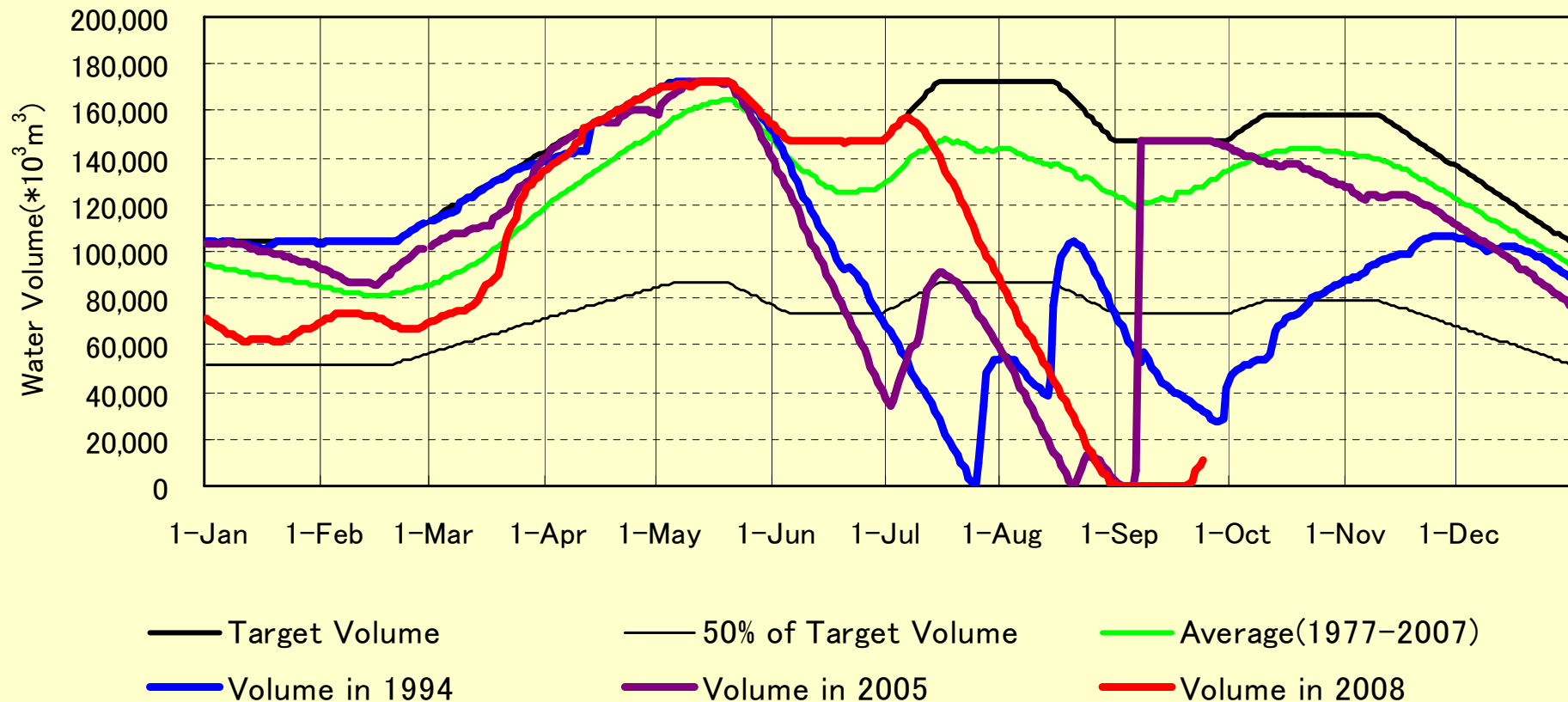


2.2 Accommodating power generation water with domestic water

- When a severe drought attacked Shikoku Area, water accommodation by power generation sector has been implemented (in 1994, 2005, 2008 since its completion in 1978).
 - (1) To secure Sameura dam storage, power generation company stopped using power generation capacity.
 - (2) They also stopped diversion for power generation from upstream point of Sameura dam to Kagami dam in different basin.
 - (3) After water use storage became empty, power generation capacity was used for domestic water supply.

2.2 Accommodating power generation water with domestic water (continued)

Reservoir Operation Graph of Sameura Dam



3. Strengthening / fulfilling of information offer

- Information offer about water saving during the heavy drought term in Shikoku 2005
- Information offering methods about water use safety for the public

3.1 Information offer about water saving during the heavy drought term in Shikoku 2005

During that term, information about drought countermeasure and water resources situation were offered on real time by

- ordinary method like public campaign car
- internet



City life went on without confusion.



Public campaign flag



Public campaign car



Public campaign internet

3.2 Information offering methods about water use safety for the public

- Generally speaking, it is difficult for the public to understand water use safety.
- Actually the severe drought in Shikoku 2005 put an end by heavy rain.
- Therefore tentative estimation was implemented supposing no heavy rain existed. It found that severe drought was lasting 8 months further in that case.
- This is one of the methods to show the public visibly that water use safety is very critical matter.

Thank you!

