(1) Brief report on results of investment for flood damage

# (2) Experiences on effective dam operation for flood in Japan



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# Effect of flood prevention project

Certainly the number of casualties have been reduced by the construction of flood prevention dam and river improvement work etc. Roughly, the number of casualties have become 1/10 of ratio of reduction in every 20 years.



Note) Casualties are the amount of water, sediment and volcanic induced disaster Japan is superpower country on disaster. Reference: documen

Reference: document by the River Bureau, MLIT **10** 

# **Damage and Investment**



### USA vs. Japan (Dead/Missing)





Except damage cost, damages have been improved as trend.

Processed by Toshikatsu Omachi, APHW, Yachiyo Eng.



Around end of 1980s, the trend of damage cost turned into "decrease".



Smoothly decrease under the rapid increase of GDP

Processed by Toshikatsu Omachi, APHW, Yachiyo Eng.



"Dead & Missing" trend in proportion with others. If more property concentrates to floodplain, the trend will be predicted to change.

# **Sharing experience on dam operation**

The year 2004 saw the <u>largest number of typhoons hitting Japan</u> since observations began (four times the average for a year), and typhoons caused flood damage in all parts of the country.



#### **Example of the Effects of Flood Control: Typhoon No.23 (Yoshino River)**

•Typhoon No.23 brought a torrential downpour with 500 mm of rainfall per around 2-3 days over the Yoshino River basin.



## **Flood Control Chart (Sameura Dam)**



#### [Sameura Dam Flood Control Operation Against Typhoon No.23]



**Pre-consensus building among parties concerned and permission to carry out the special operation are needed.** 

•This dam operation reduced 20% of river flow at the downstream (Ikeda point).

•One (1) meter of water level could be cut off at the downstream

(Reduction of damage by inundation)



For transparency and accountability, a lot of information are released!

## Graph of the Effective Storage Capacity of the Sameura Dam

#### Overview of year 2004 and 2005



#### **Year in 2005**





September 7 Percentage stored 100%

## **Sameura Dam**



# Conclusion

- "Continuous investment" is the key to reduce damage and to protect our prosperity".
- Integrated approach is important.
- Efforts for flood through infrastructure development are useful. (Need long term policy and accountability)

ANNOUNCEMENT

## SETTING UP in 2006 Thematic workshop on "FACILITY MANAGEMENT"

In this workshop, various & wide area on facility management will be discussed continuously.

JWA leads this workshop as practitioner.

Further improvement of facility management for people

