Salinity intrusion due to sea level rise and decrease in flow rate in the Yangtze River; Vulnerability and Adaptation Solution Options

Masataka Watanabe1), Maotian Li2) and Kaiqin Xu3)
Keio University, Japan
Chair, the Steering Committee of APAN
East China Normal University,
National Institute for Environmental Studies
Decrease in flow rate in the lower Yangtze river
Increase in water-intake in Shanghai city
Salinity intrusion during dry season in 1999

Changes in salinity at the intake of drinking water
Adaptation Solution Options

(a) **Construction of estuary weir** in the northern branch at the upstream entrance (width = 2km),
(b) **Increase the Yangtze river flow rate** during dry season with the integrated Yangtze river watershed management and Three Gorges Dam,
(c) **Regional and city planning** including the location of water intake in upstream of the Yangtze river,
(d) **Operation of high efficient desalination plant** during dry season,
(e) **Introduction of water saving system** in order to reduce water demand.
(f) **Real-time control of water supply-demand** in the Yangtze river watershed and Shanghai.

Evaluated from view points of environmental impacts, vulnerability and costs.