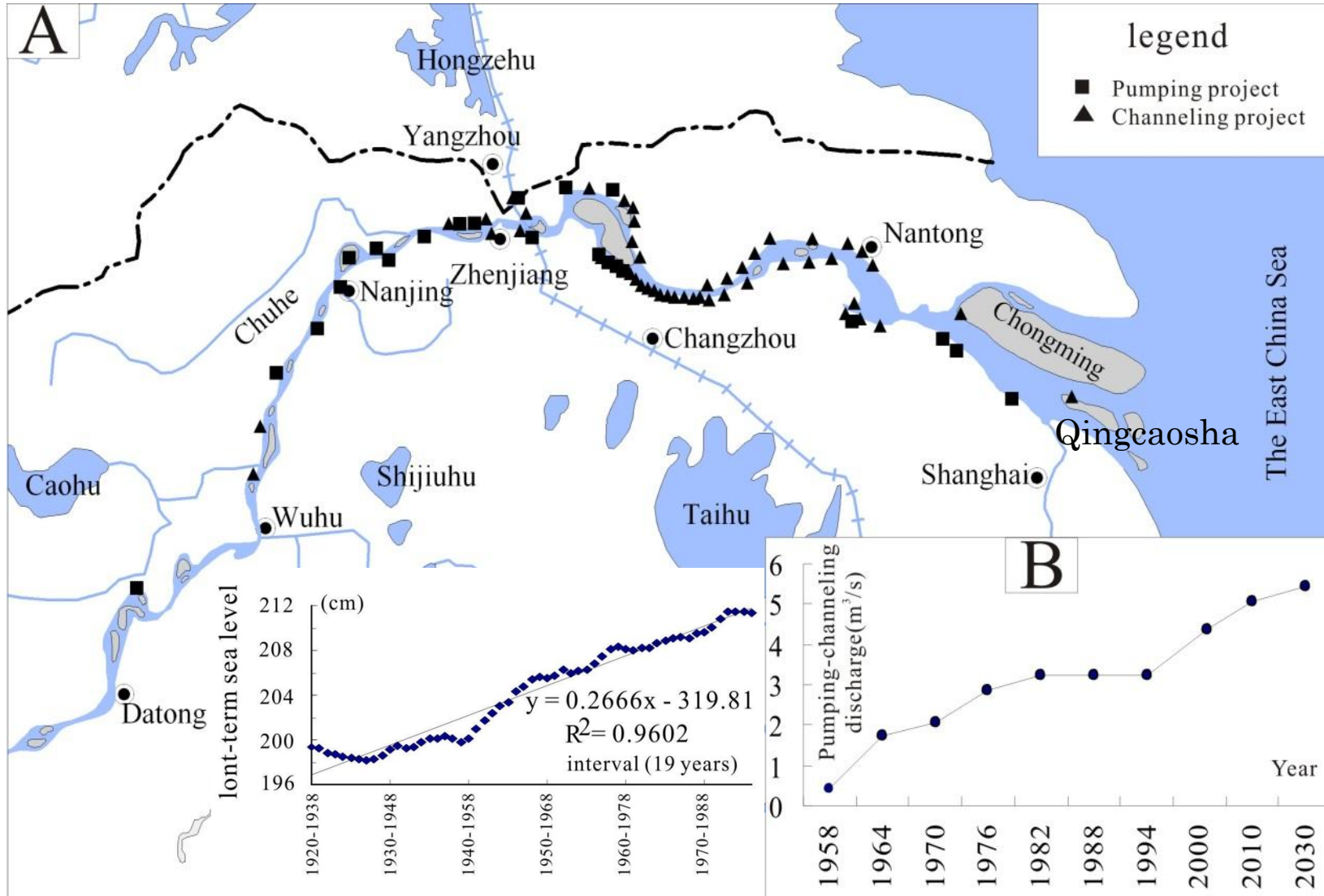


Salinity intrusion due to sea level rise and decrease in flow rate in the Yangtze River; Vulnerability and Adaptation Solution Options

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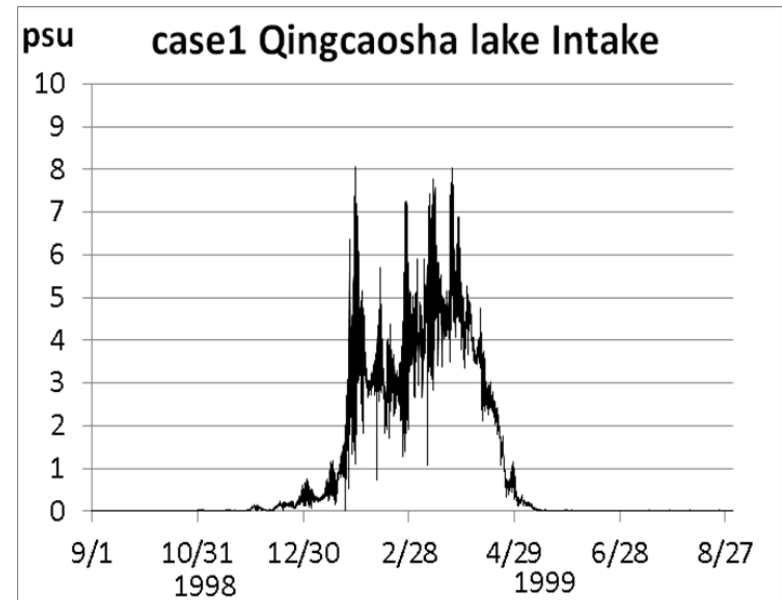
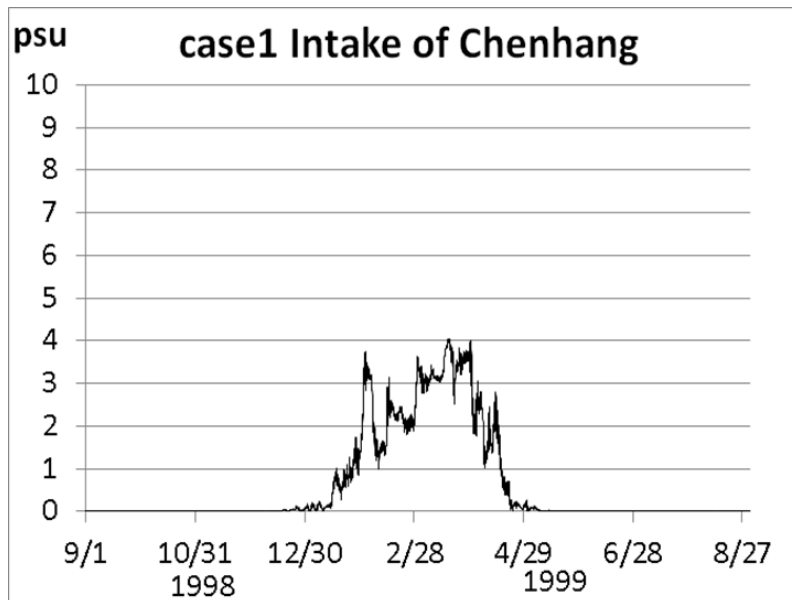
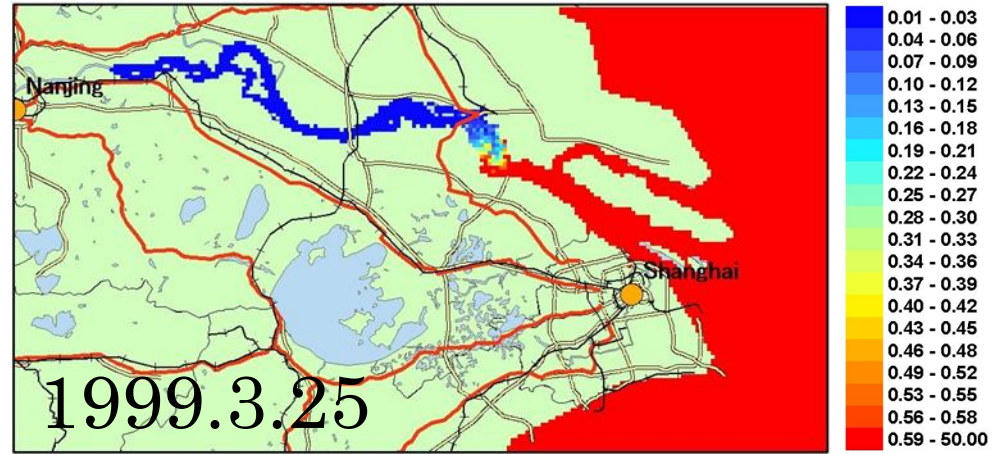
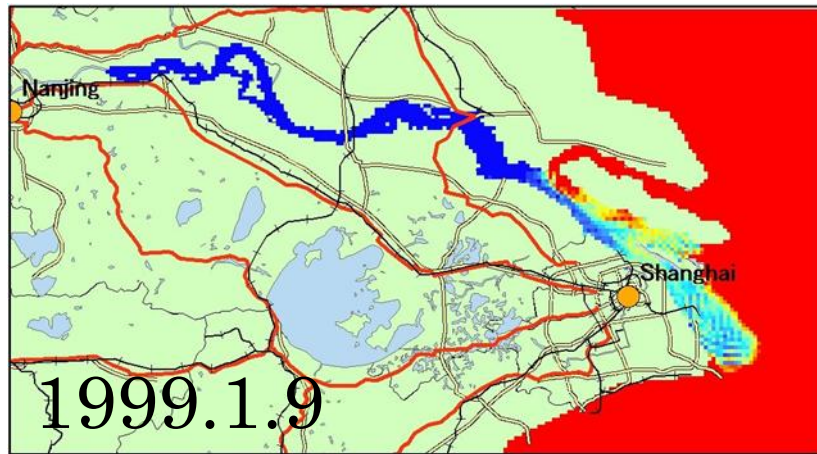
Decrease in flow rate in the lower Yangtze river

Increase in water-intake in Shanghai city



Sea level rise

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.