

Status Review of Chum Salmon from Korea



Sukyung Kang, Suam Kim¹, and Ju Kyung Kim

National Fisheries Research and Development Institute

¹Pukyong National University

Distribution of Chum (*Oncorhynchus keta*)

© 2005 State of the Salmon, a joint program of Wild Salmon Center and Ecotrust



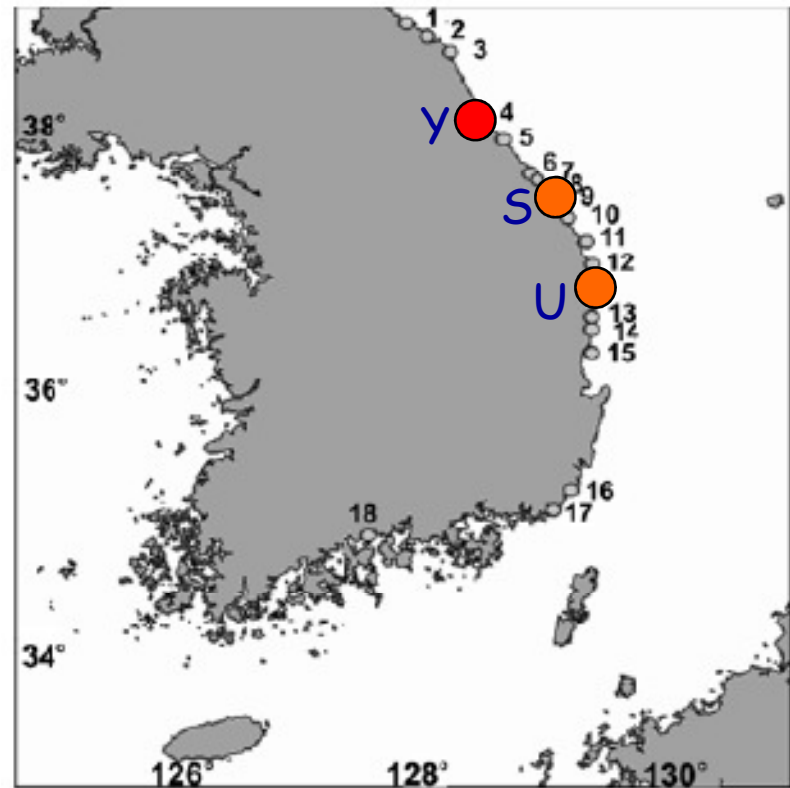
Chum Salmon Distribution in the North Pacific
(From the book [Atlas of Pacific Salmon](#))

Outline

- History of Chum Salmon Enhancement Program in Korea
- Status of Korean Salmon
 - Catch and escapement
 - Return rate
- Environmental changes
 - SST
- Salmon with Environmental changes
- Summary

History

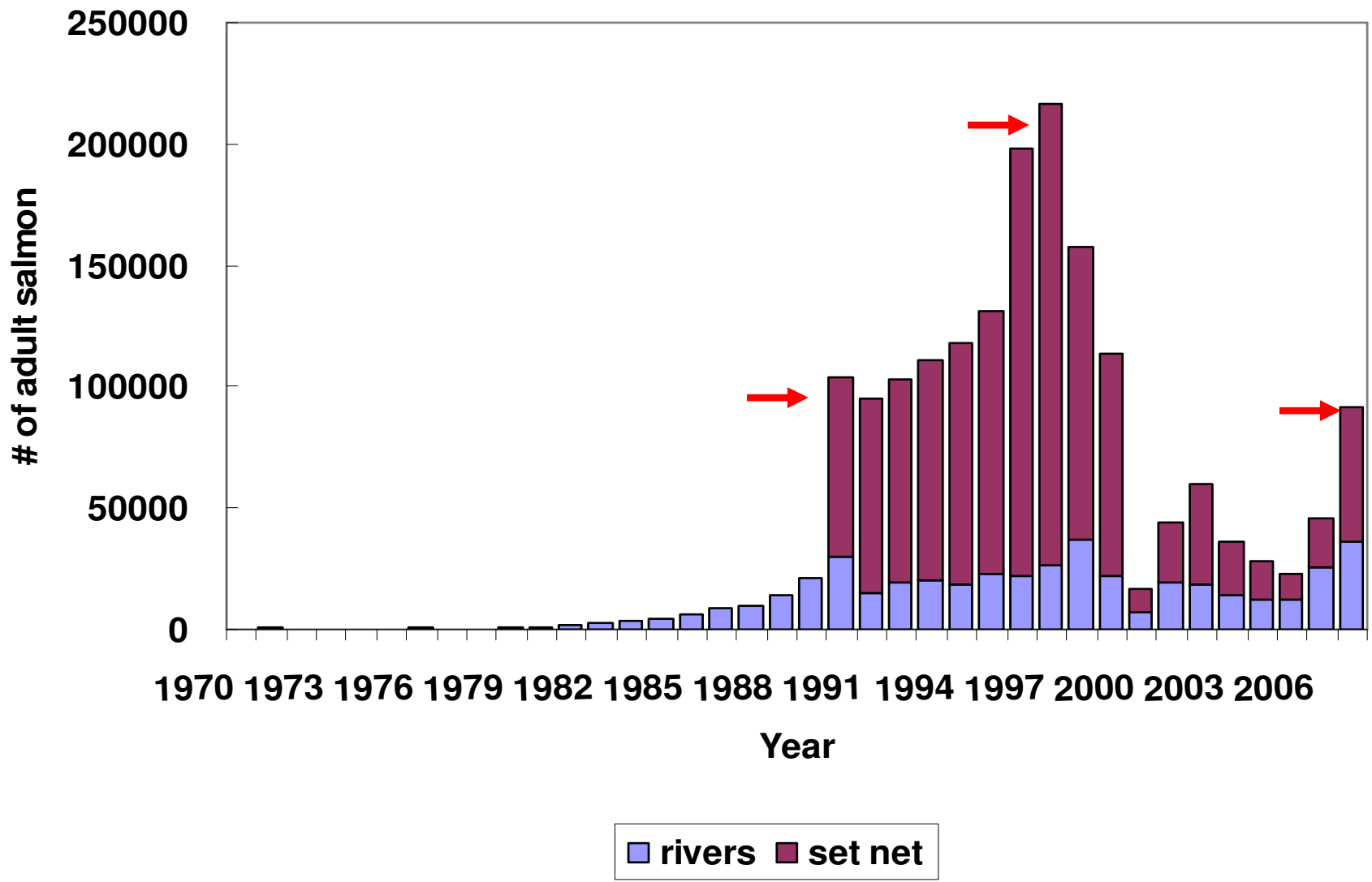
- Chum salmon enhancement program was started in 1967.
- Yeongdong Inland Fisheries Research Institute was established at Yangyang in 1984.
- My institute covers about 60-70% of total Korean chum fingerling releases and adult salmon catches.



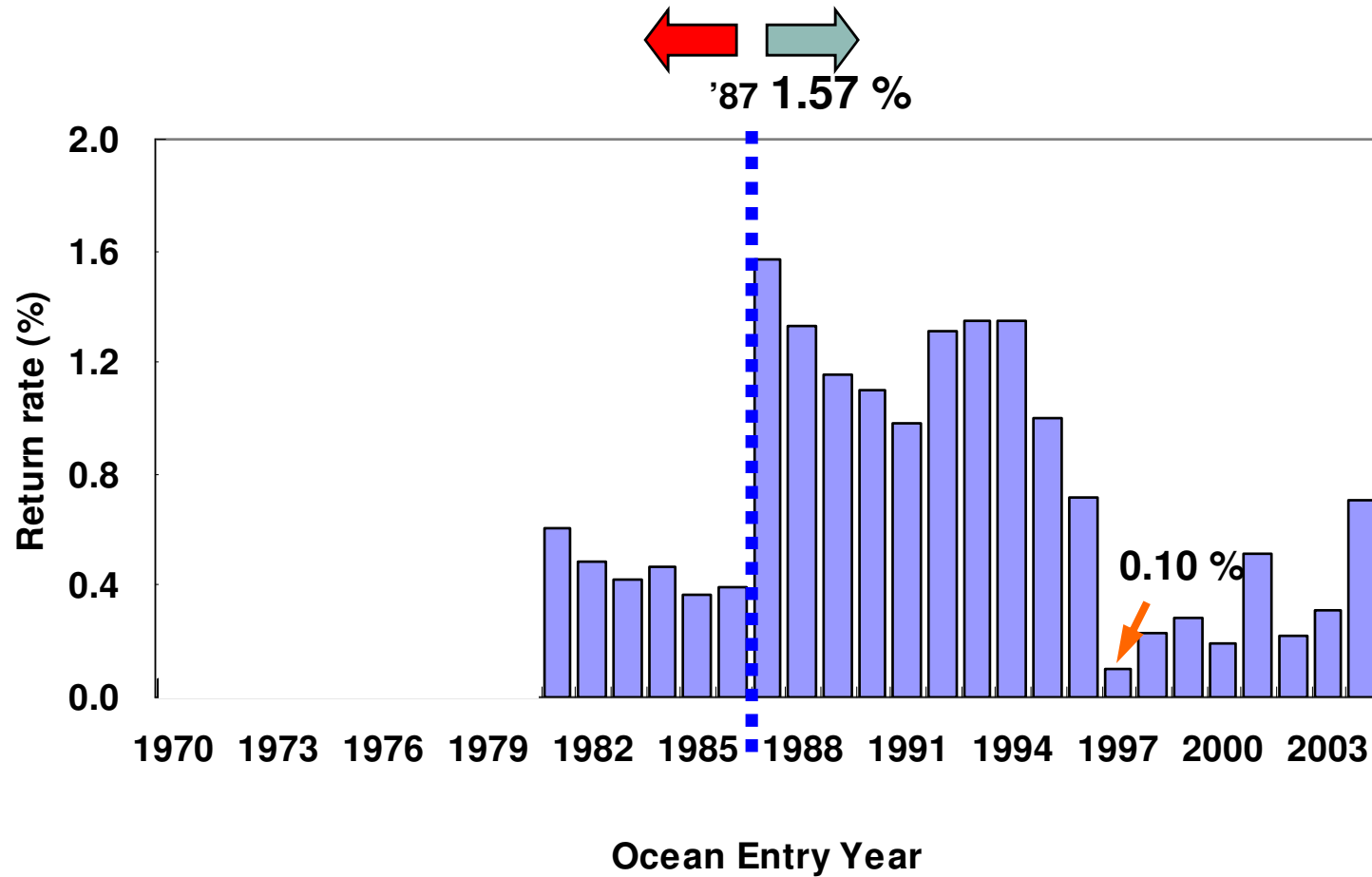
The locations of stream/river in the east coast of Korean Peninsula where fry salmon are released

Status of Korean Salmon

Number of adult chum salmon returned since 1970

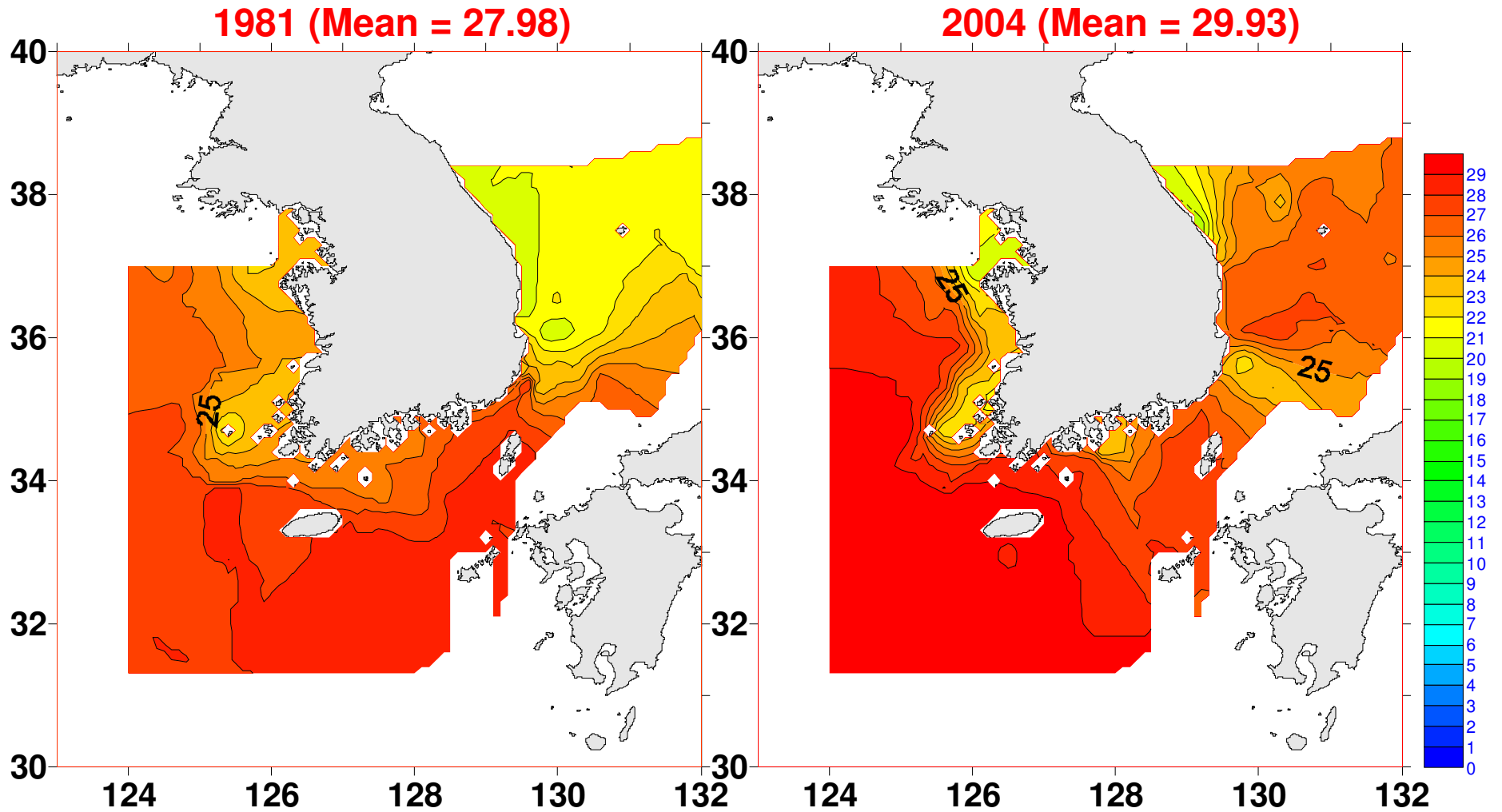


Variation of the return rate

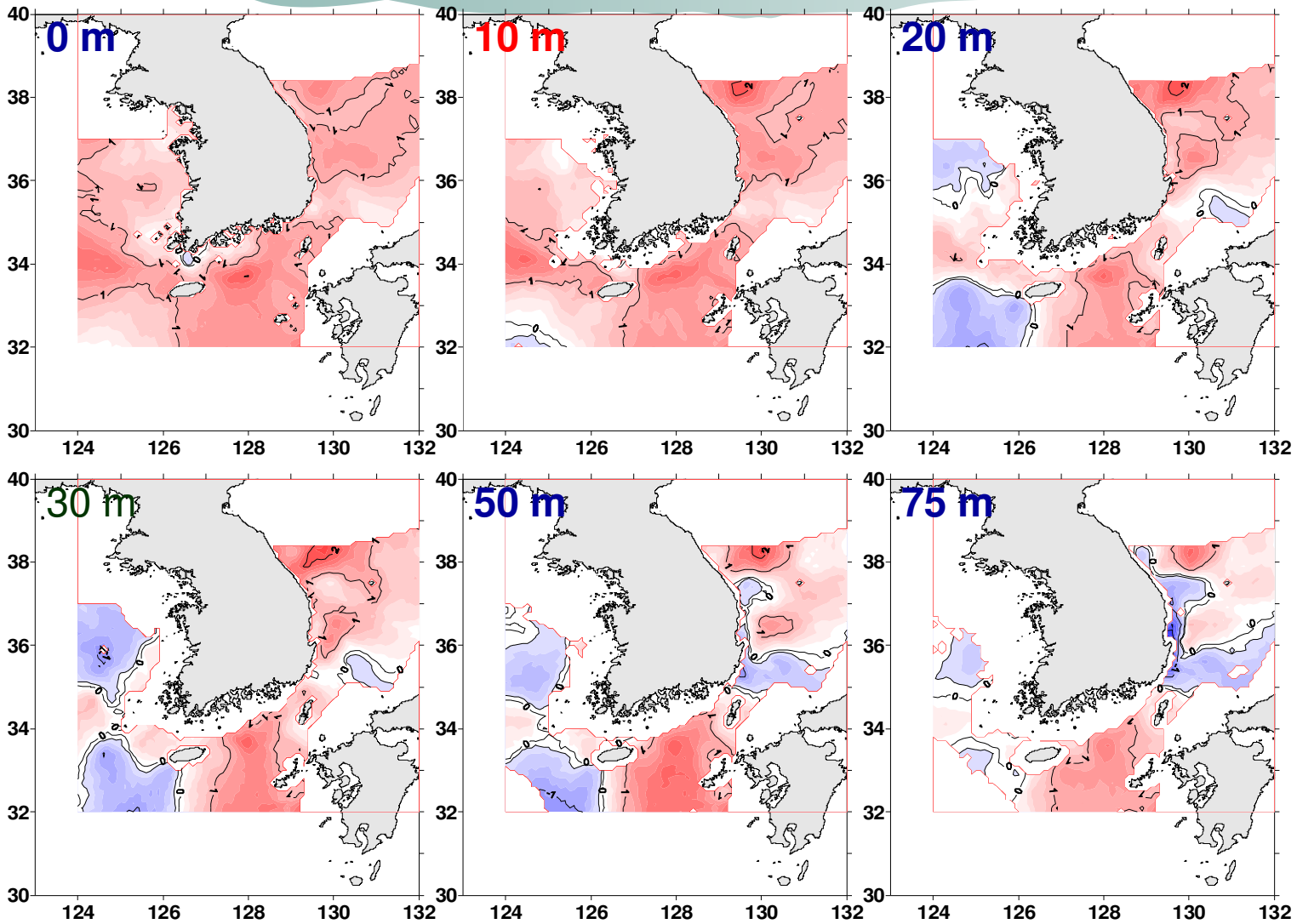


Environmental Changes


Mean Sea Surface Temperature in August



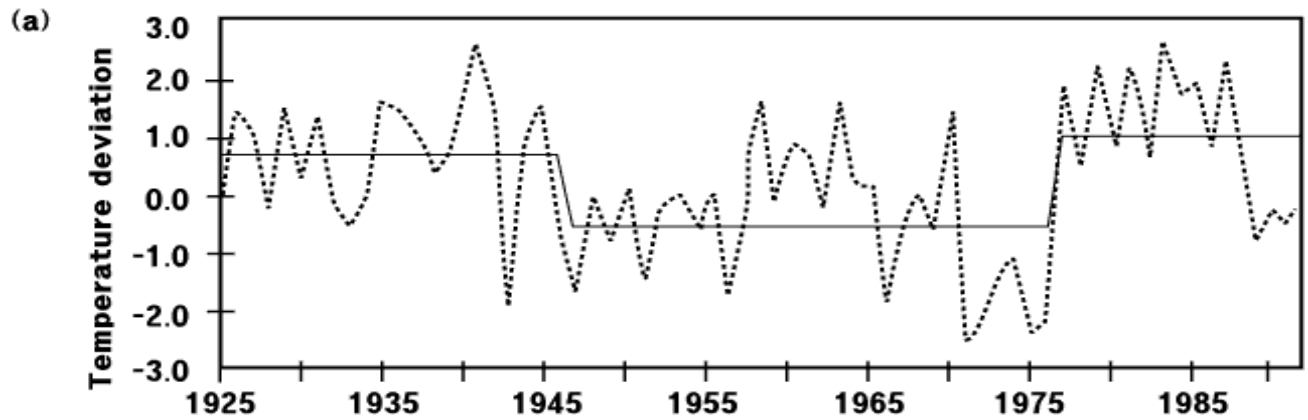
Water Temperature Change (1968-2005)



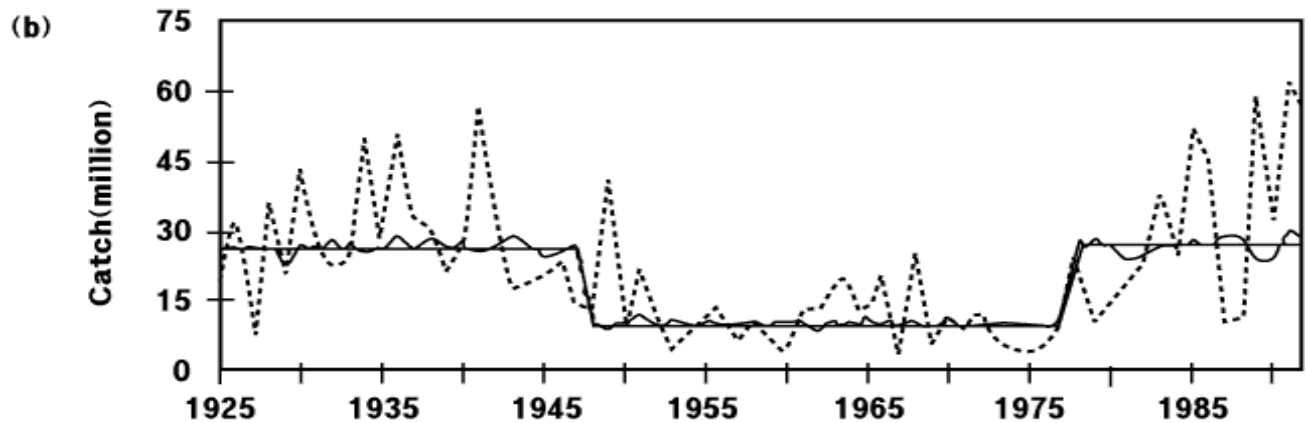
(Jung, 2008)

A horizontal, irregular brushstroke in a teal color, serving as a background for the title text.

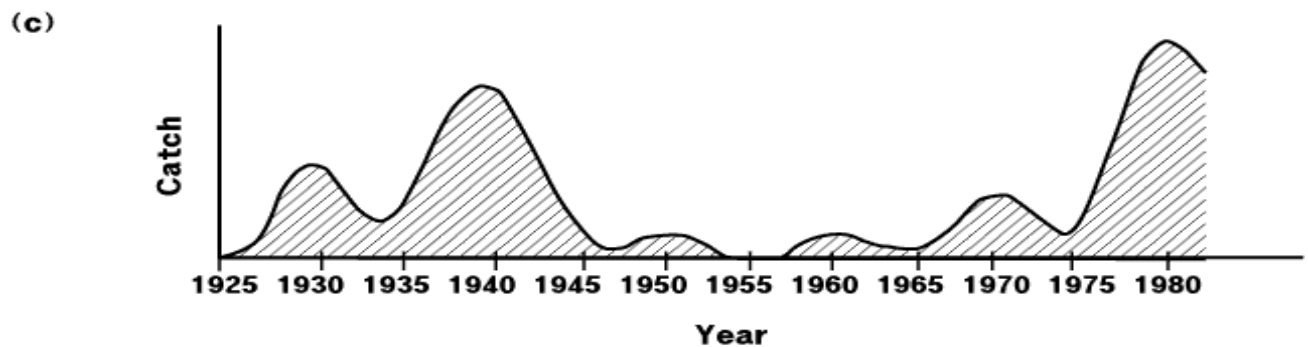
Salmon with Environmental Changes



Air
temperature at
Kodiak

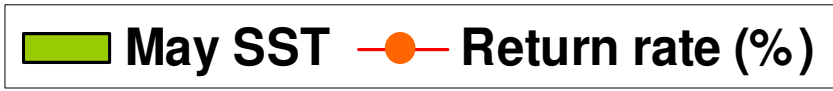
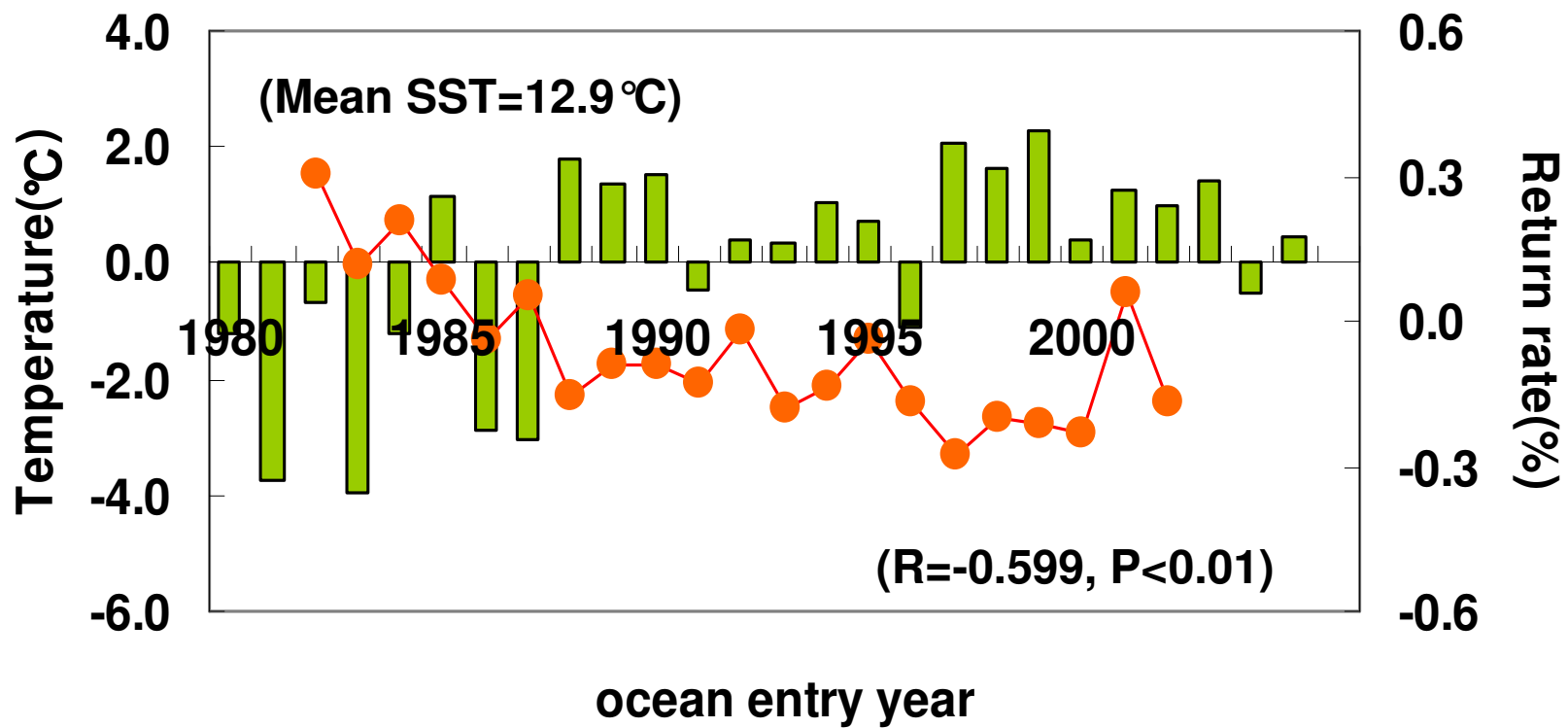


Pink salmon
catch in Alaska

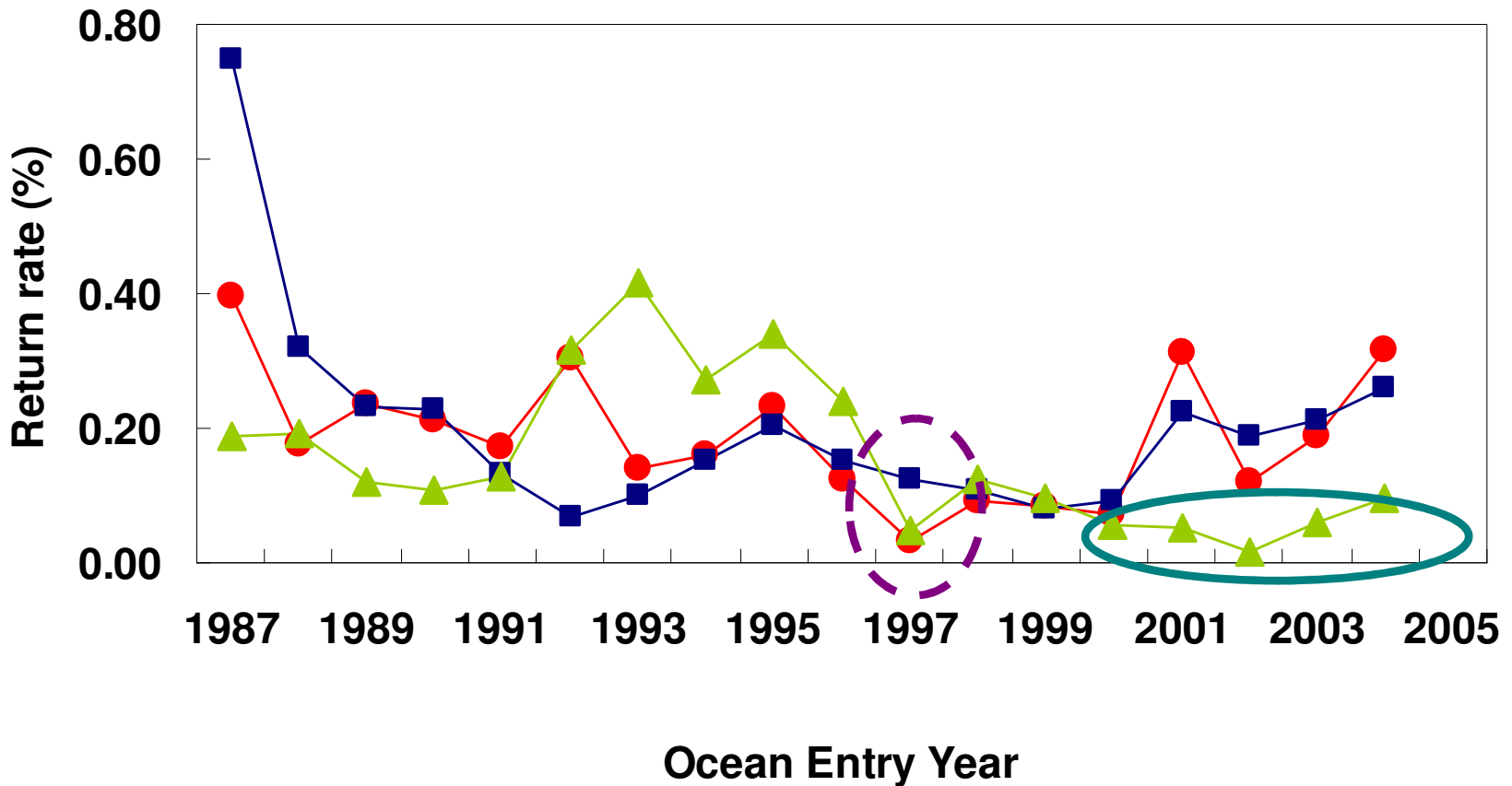
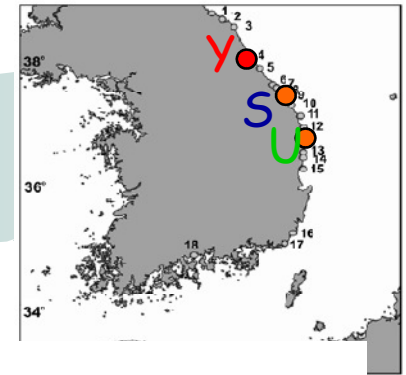


Pink salmon
catch in
North Korea

Return rate & SST



Return rate by hatchery



Summary

- For the last four decades, Korea's chum salmon program has focused on improving the conditions of salmon stocks by artificially fertilizing eggs, raising fingerlings, and releasing them.
- The return rates of chum salmon to Korean waters were seriously reduced from 1.5% in 1990s to around 0.5% in 2000s.
- Future climate change (ex. Warm surface waters) would be expected to reduce the production of chum salmon in Korea.