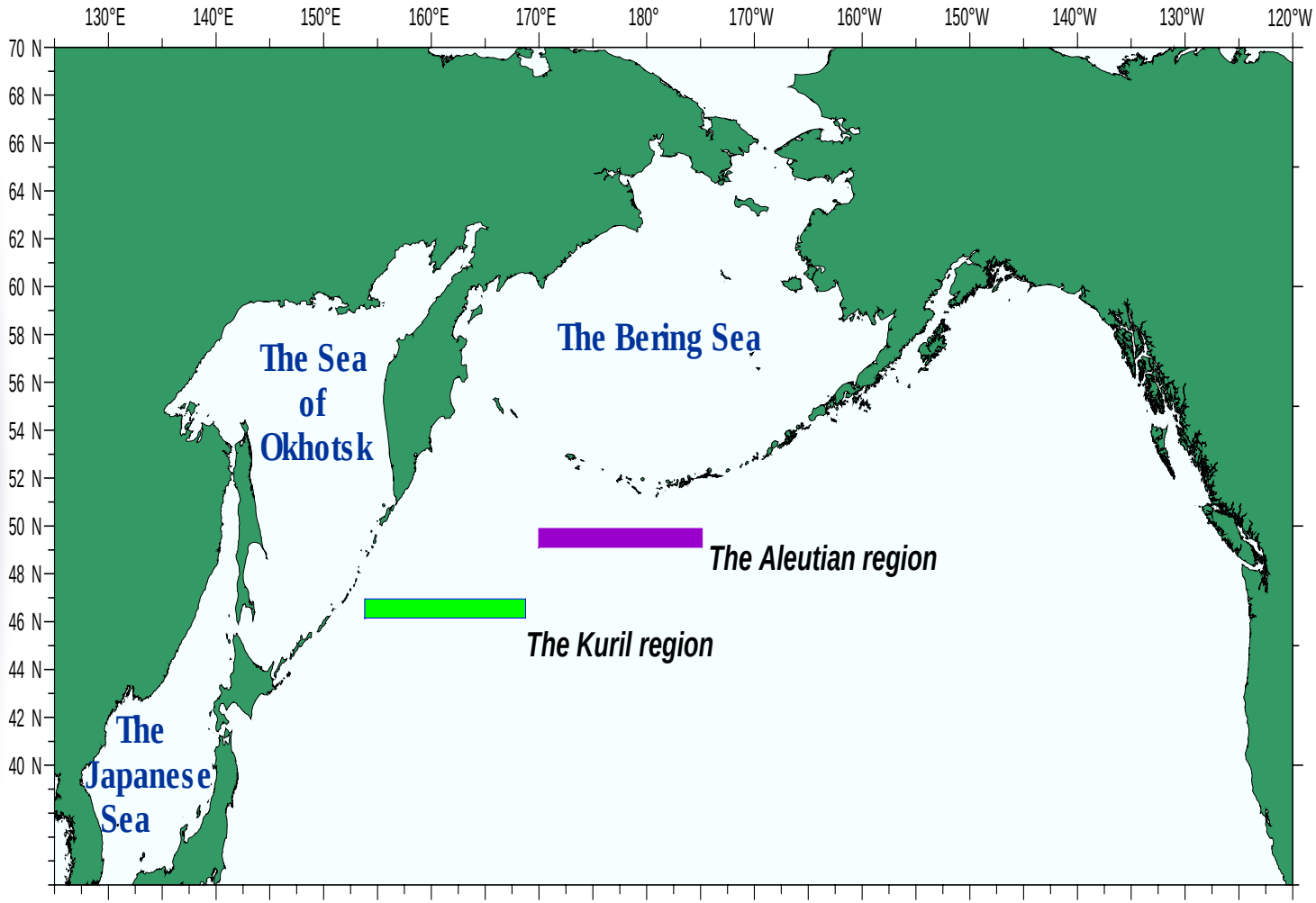
Changes of the Far East salmon's winter dwelling conditions in connection to the climate variability

Yulia Moseikina, Natalia Clovach, Marat Bogdanov, Andrey Krovnin and Olga Ivanova

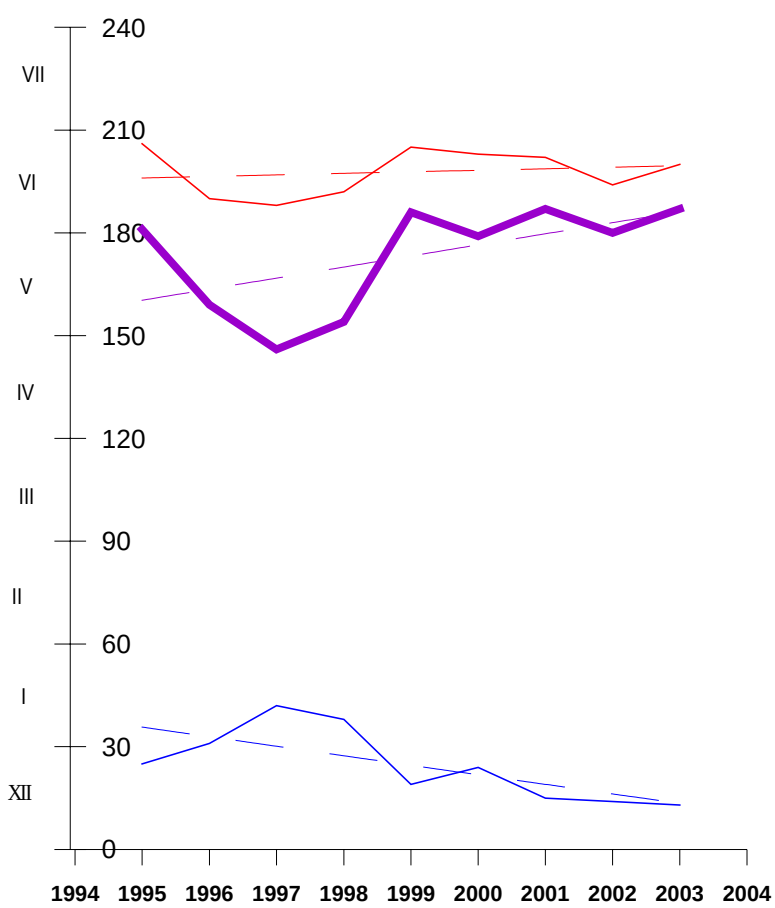
Russian Federal Research Institute of Fisheries & Oceanography (VNIRO)

Areas, chosen for calculating of duration the period, when the sea surface temperature less then 5°C

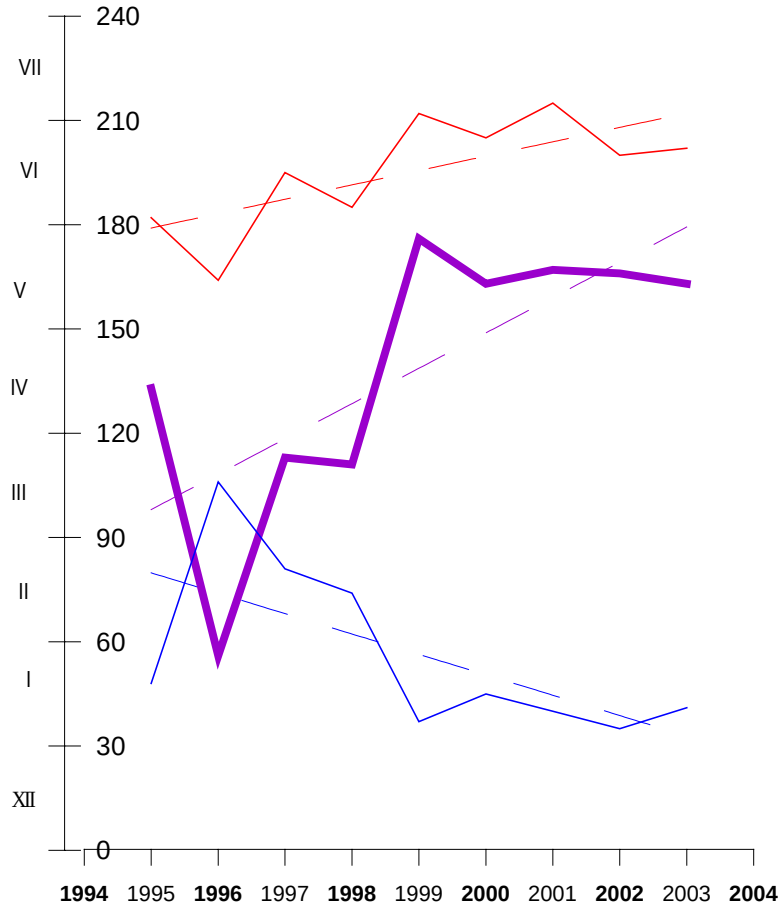


Duration of the period, when the sea surface temperature less then 5°C

The Kuril region
(46 - 47°N, 153 - 168°E)

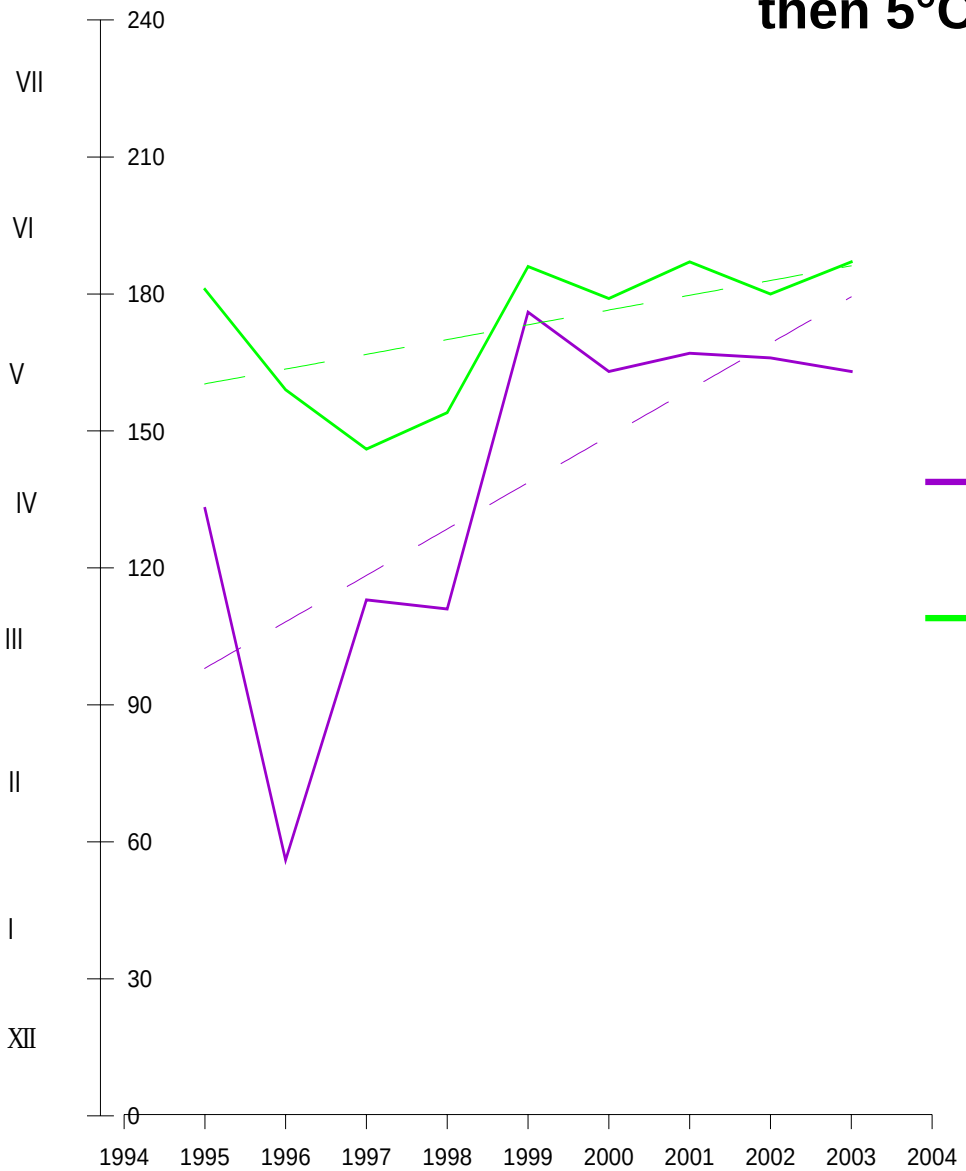


The Aleutian region
(49 - 50°N, 170°E - 175°W)

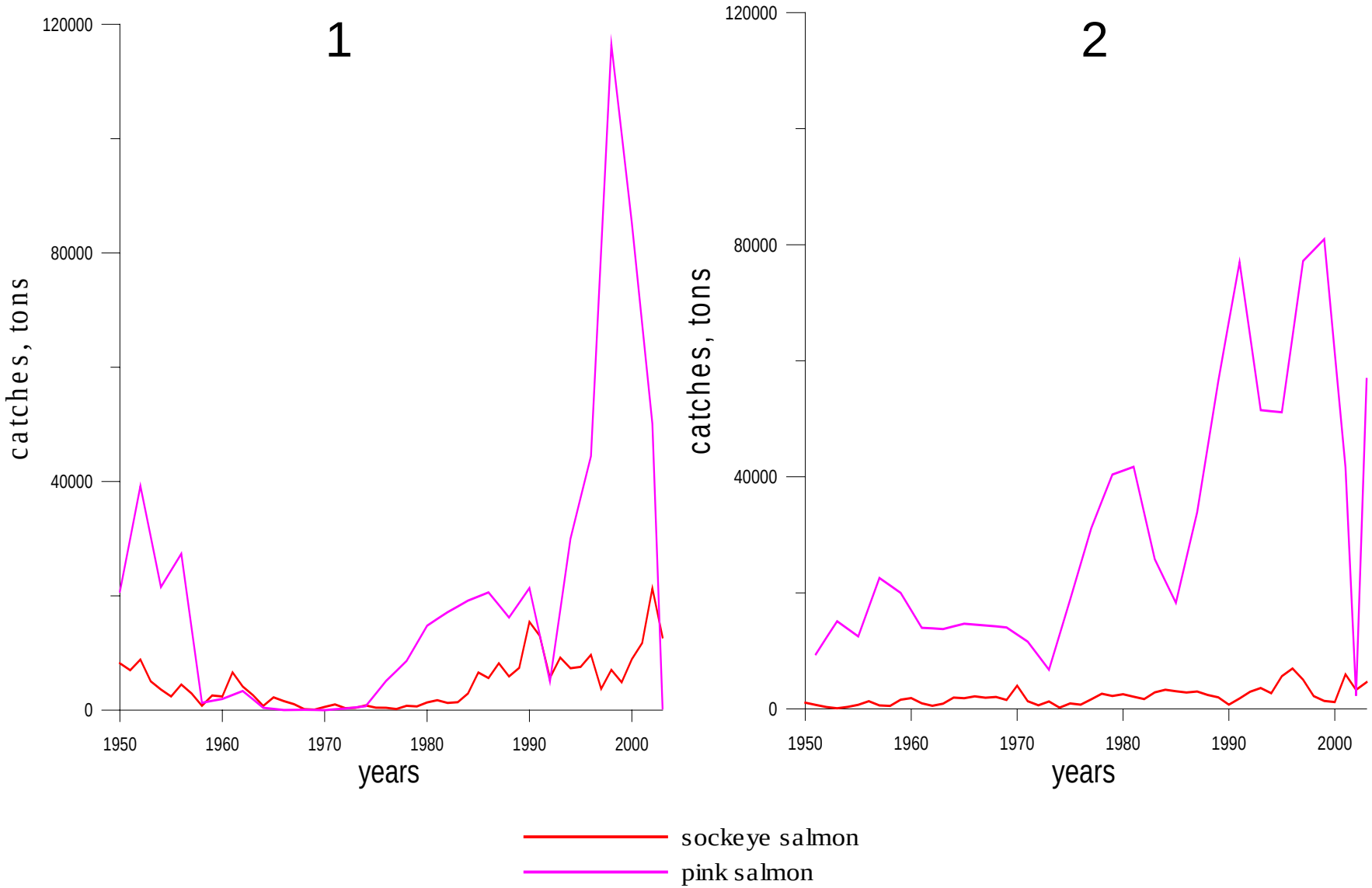


Duration of the period, when the sea surface temperature less then 5°C
Begining of the period, when the sea surface temperature became less then 5°C
Begining of the period, when the sea surface temperature became higher then 5°C

Duration of the period, when the sea surface temperature less then 5°C

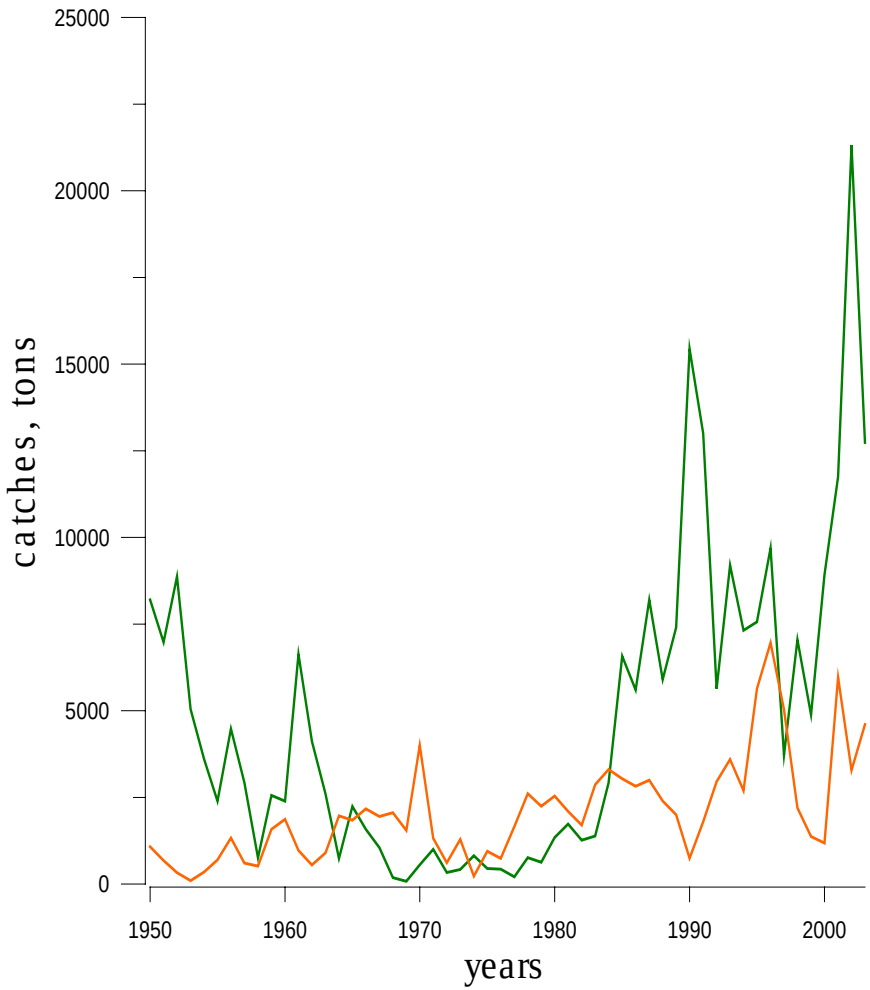


The salmon harvest of the West (1) and East (2) Kamchatka



Pink

Sockeye



West Kamchatka

East Kamchatka

Conclusions:

- **There is a clear inverse dependence between time of cold period beginning, and its duration both in the Aleutian and the Kuril regions.**
- **The duration of a cold period in both sectors increases in the latest ten years, moreover in the Aleutian area more quickly. We can notice an increase of negative impact of hydrological conditions on salmon in the period of their wintry.**
- **Moving of wintry area may led to increasing the length and duration of salmon migrations toward these area and to reducing of time of graziery. Abundance of salmons may reduce in such case.**
- **We have not opportunities to prevent the unfavorable effects of climatic fluctuation on salmon stock, but if we can assess of forecast the tendencies of changes in these factors, then we can estimate the possible changes in the state of salmon stocks under consideration.**