Importance of wild and hatchery-reared salmon in forming commercial pink and chum salmon stocks in Sakhalin-Kuril Region

by

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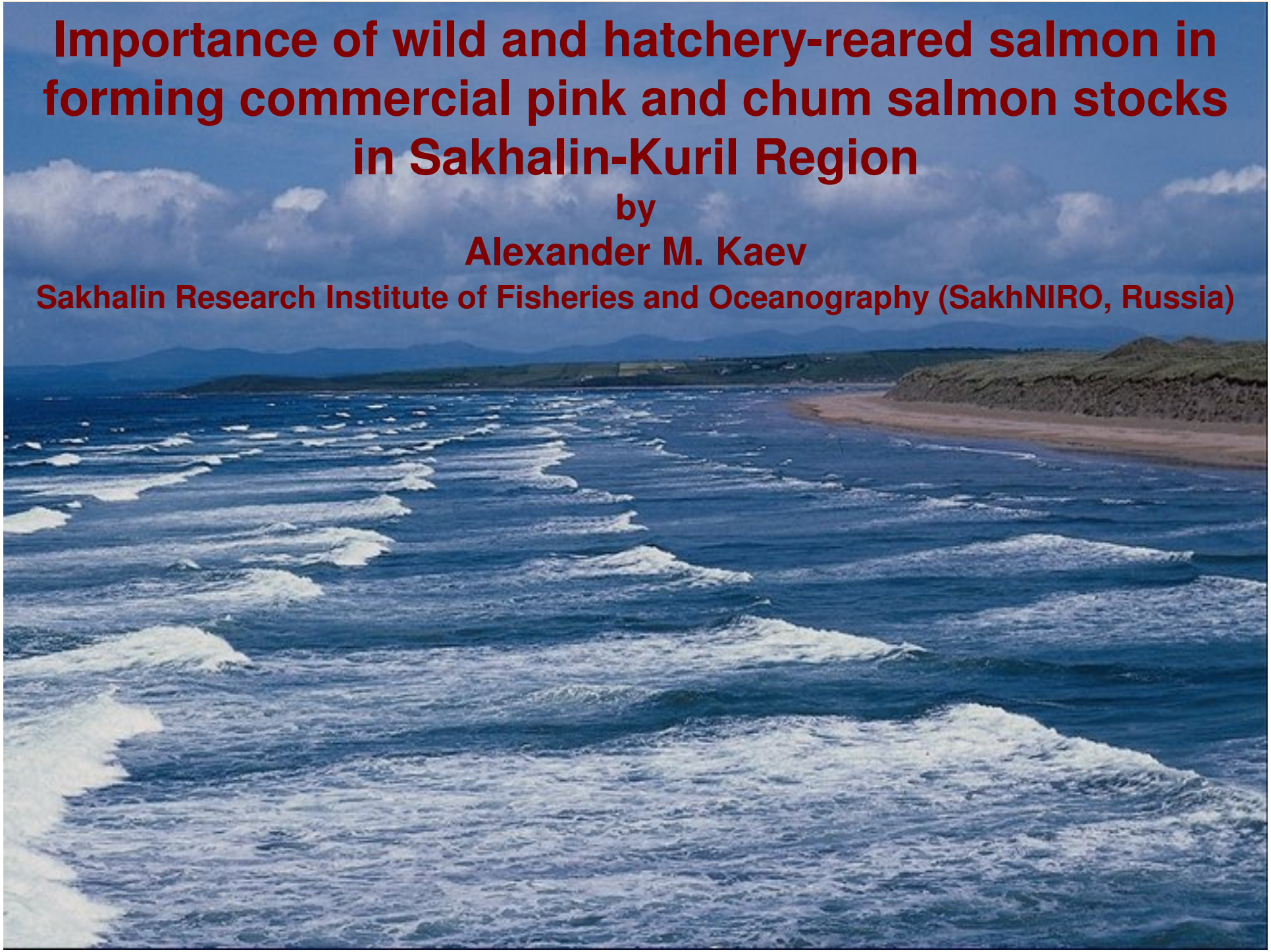
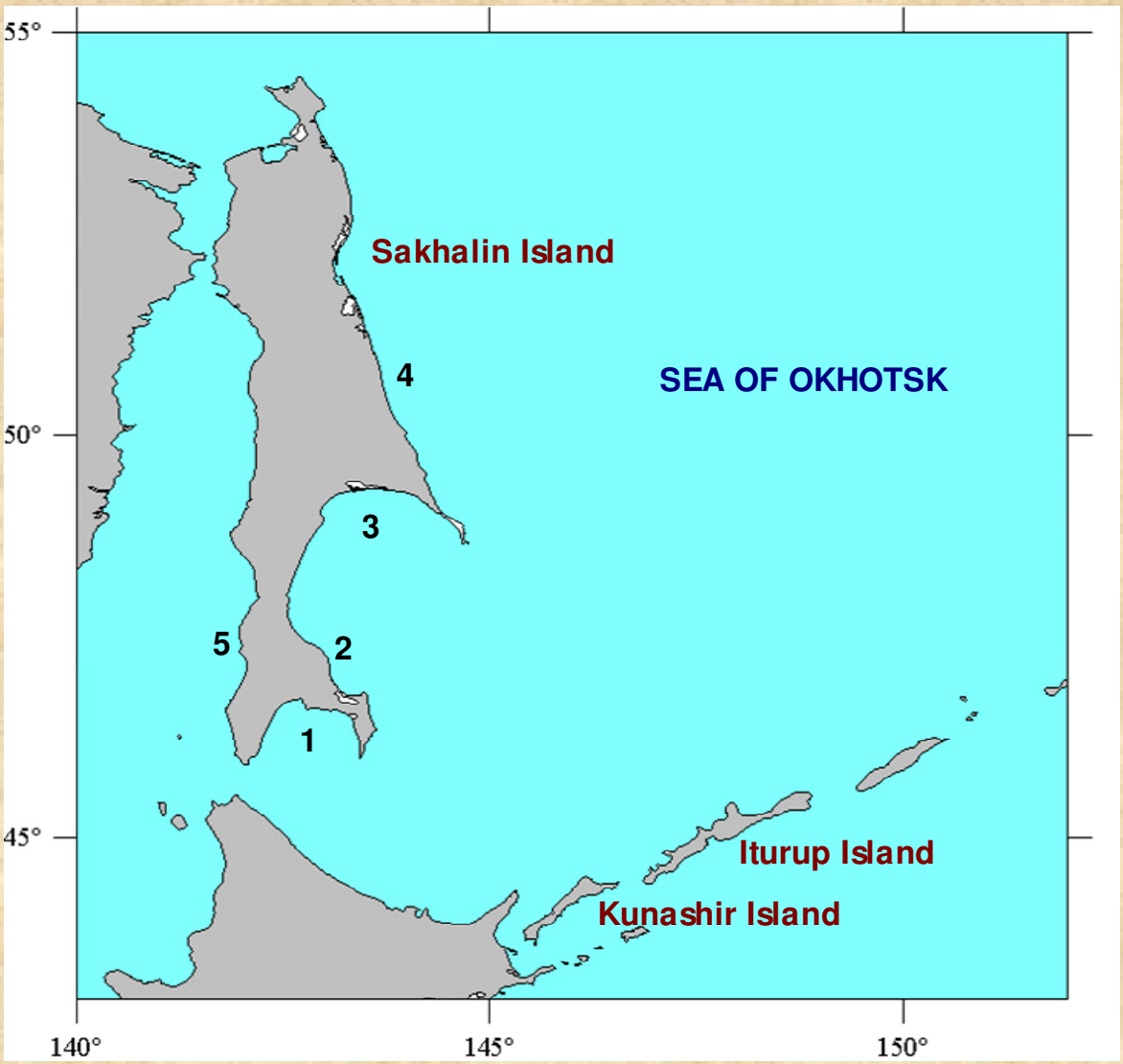
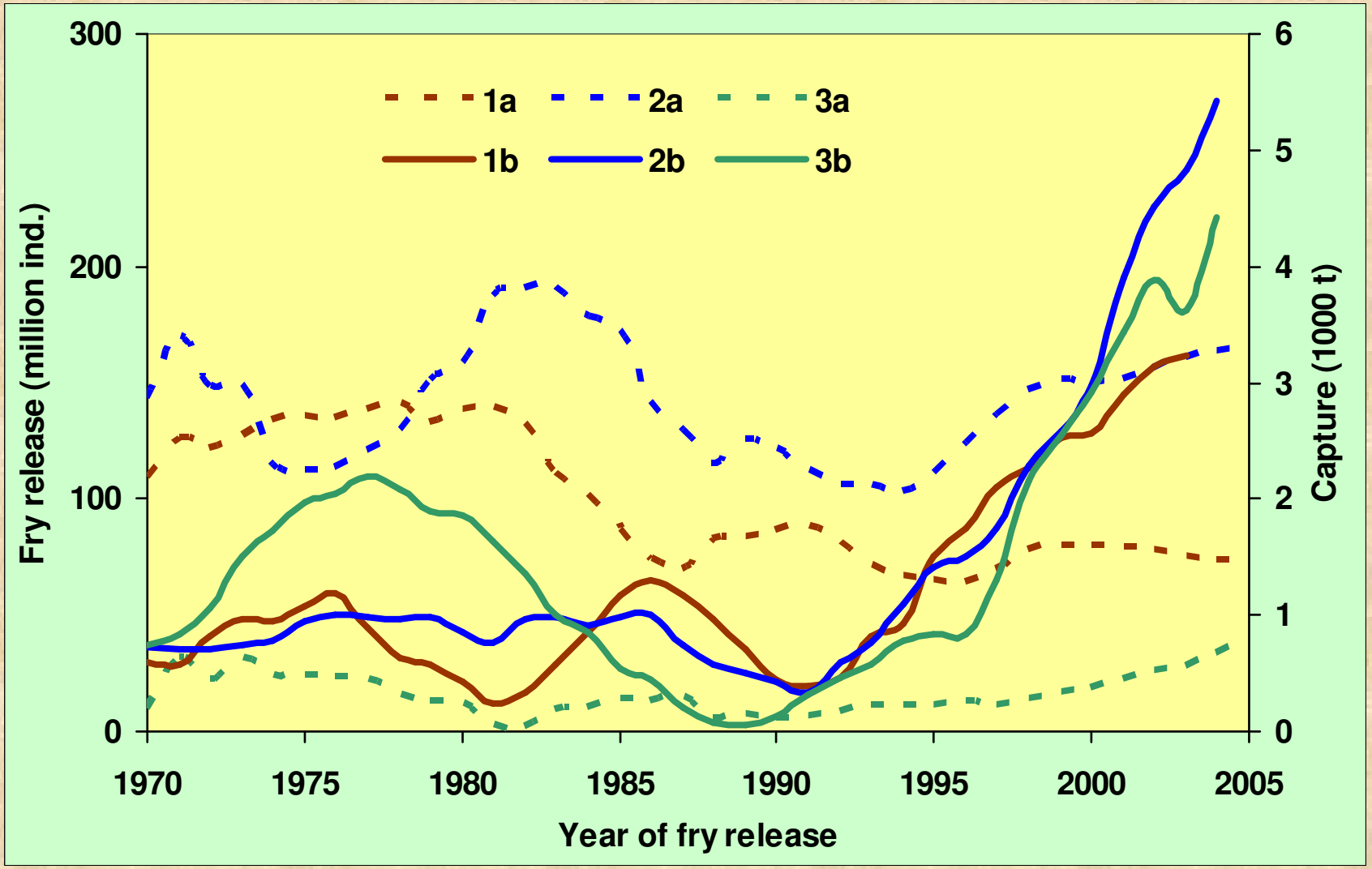


Study regions for pink and chum salmon:

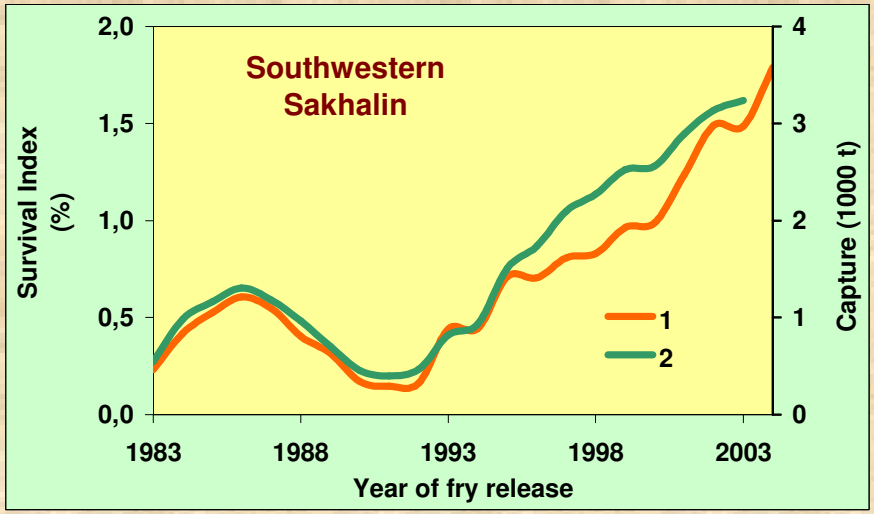
Sakhalin Island (1– Aniva Bay, 2– southeastern coast, 3– Terpeniya Bay, 4– northeastern coast, 2– southwestern coast), Iturup Island and Kunashir Island.

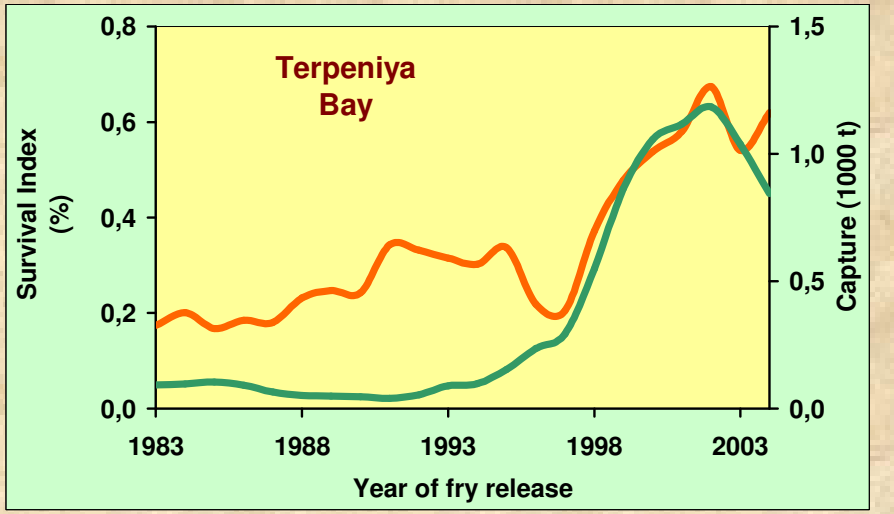


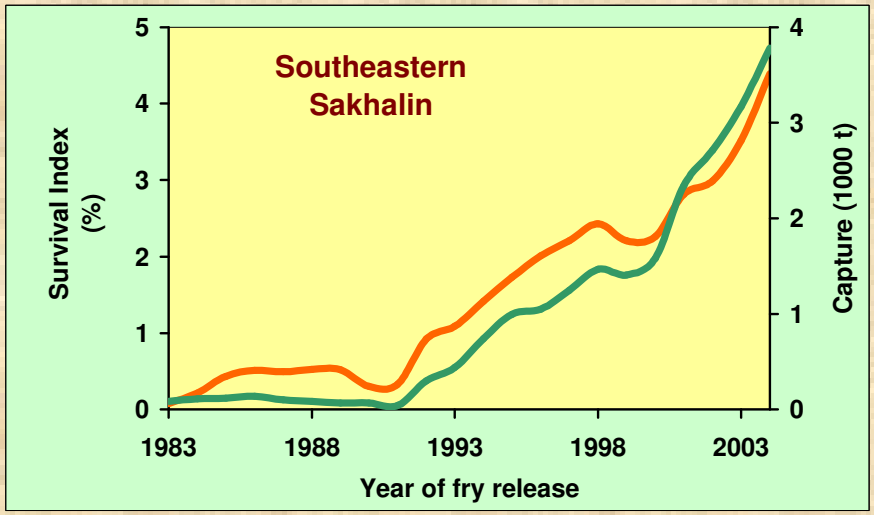
Dynamics of fry release (a) and posterior catches (b) of chum salmon: 1 – southwestern Sakhalin (R = –0.53), 2 – eastern Sakhalin (0.27), 3 – Iturup Island (0.64).

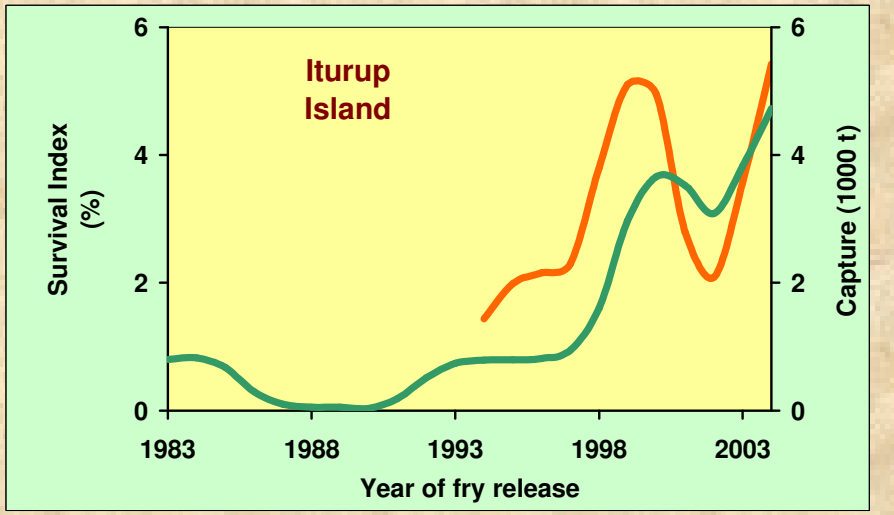


Dynamics of chum salmon survival index (SI) at salmon hatcheries (1) and catches of this species (2) in different areas of Sakhalin-Kuril Region









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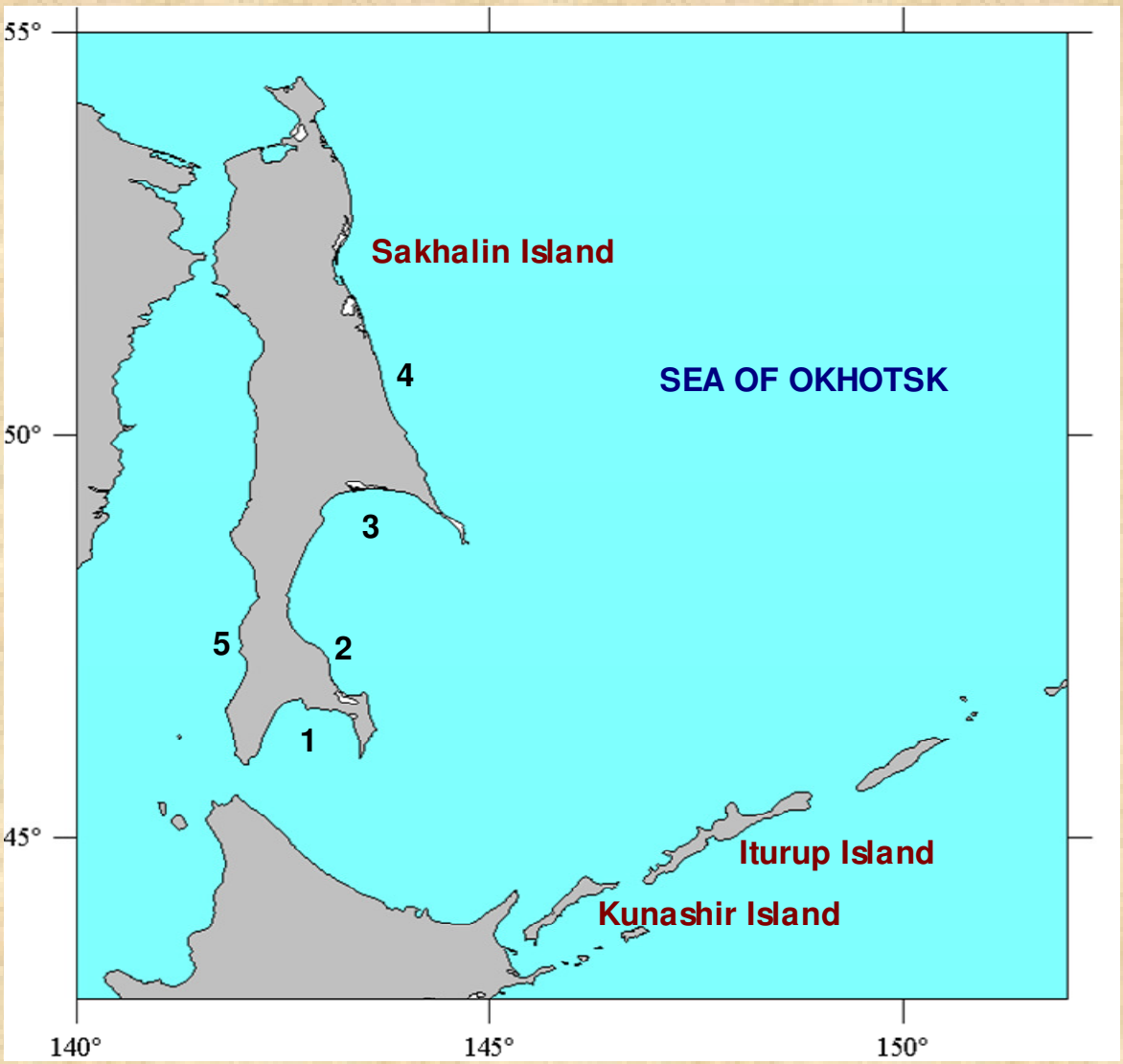
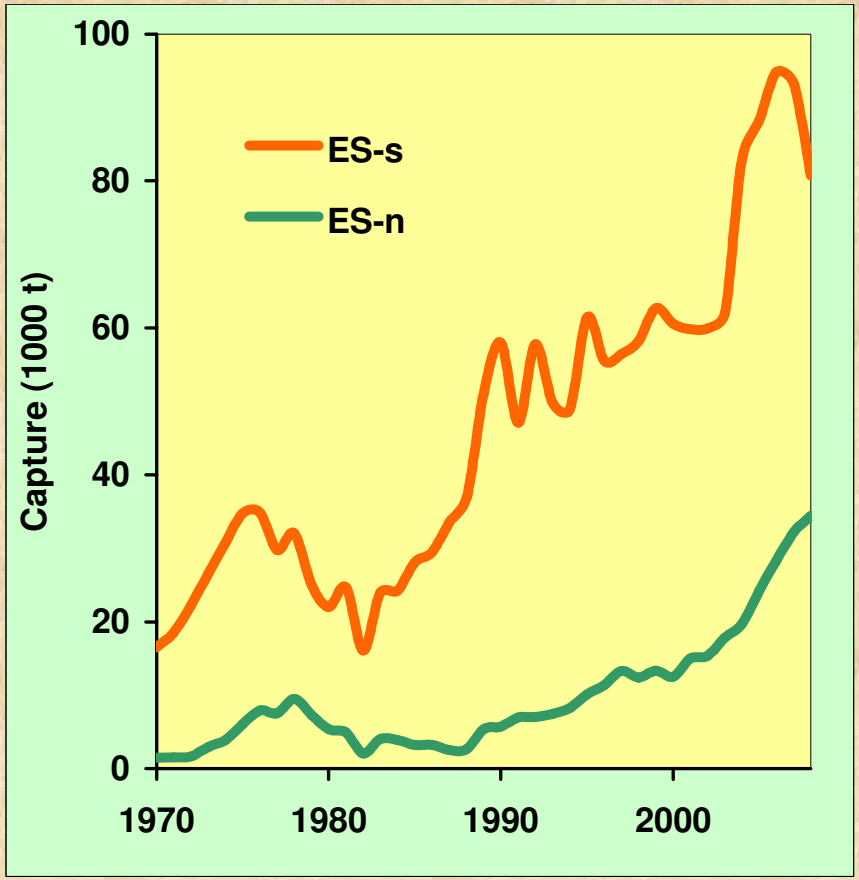
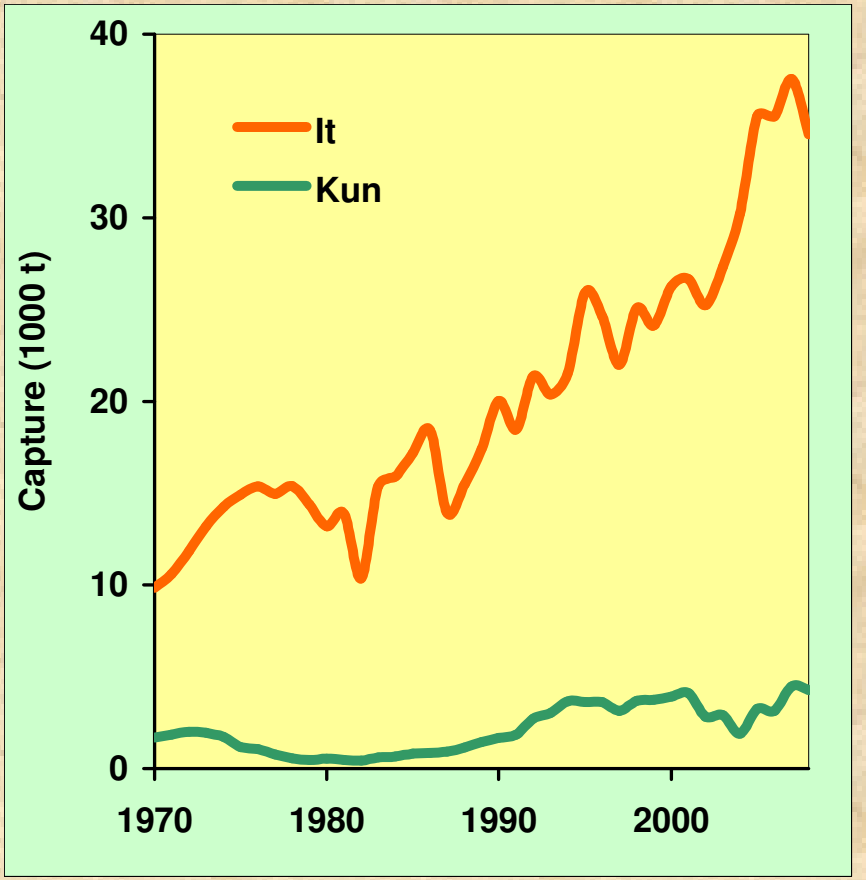


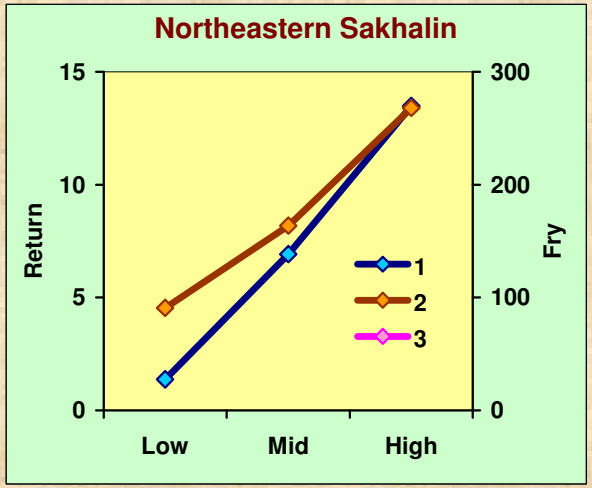
Dynamics of pink salmon catches (sliding average by 4 points) in principal fishery areas of Sakhalin-Kuril Region in 1970–2008:

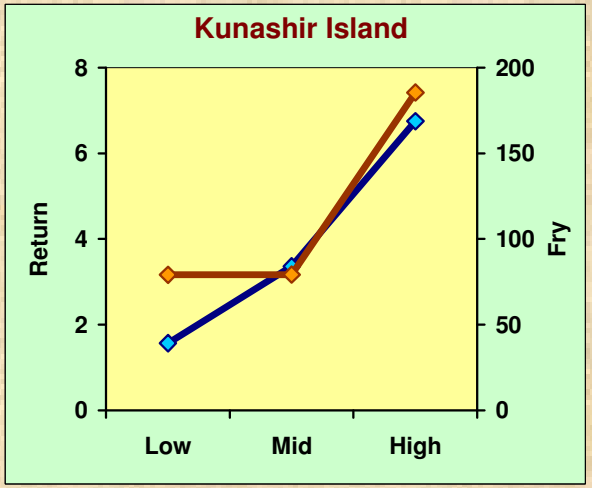
ES – east coast of Sakhalin Island («s» and «n» denote its southern and northern parts), It – Iturup Island, Kun – Kunashir Island

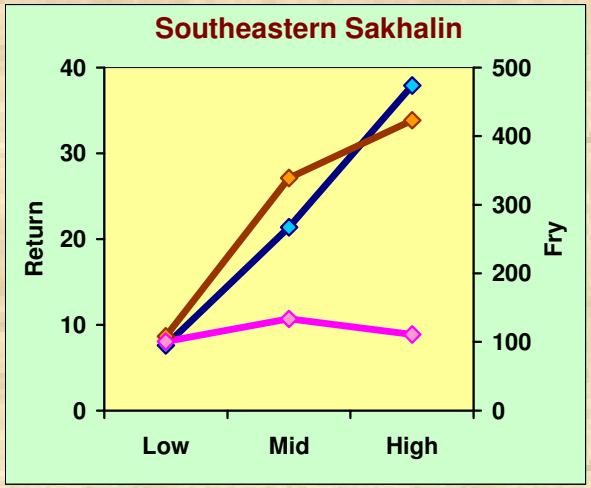


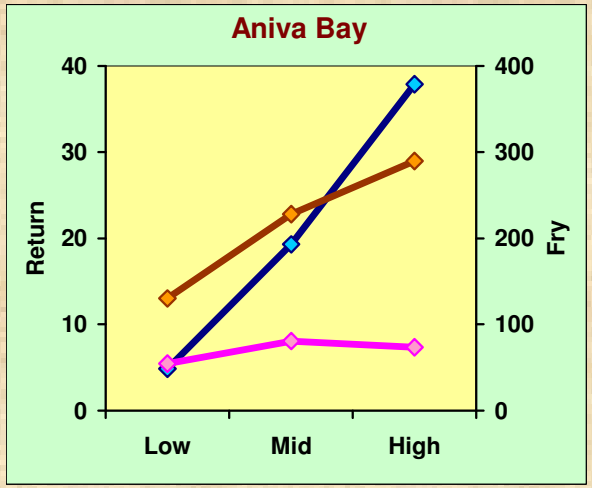


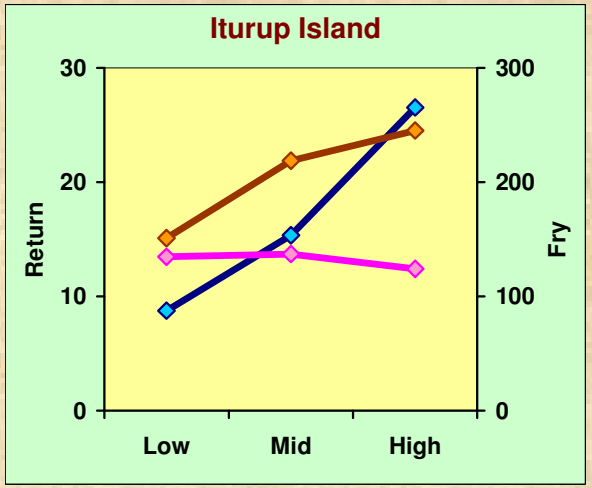
Ratio between fish returns (1), wild (2), and hatchery (3) fry at different levels of return (low — mid — high) in principal pink salmon reproduction areas of Sakhalin-Kuril Region (million individuals).











Resume:

Taking into account an expected deterioration of salmon marine habitat, measures on maintaining fishery need to be developed.

Chum salmon fishery could be maintained based on further development of hatchery rearing.

To support pink salmon fishery, the improvement of spawning conditions is a very important factor.