

Killer whale depredation in the demersal longline and nets fisheries in the Okhotsk Sea

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Russian Greenland turbot (*Reinhardtius hippoglossoides*) fishery by bottom nets and longlines began to develop in the middle of the 1990s. Fishermen had not seen killer whale (*Orcinus orca*) aggressive behavior. Turbot depredation by killer whales on longline gear was first reported in autumn of 2000 and since the spring 2001 reports of losses of catch due to whales were from both longline and bottom nets vessels. Estimates of depredation rates varied from 10% for longliners up to 35% for bottom nets vessels. Fishermen used various guns including sound rockets and self-made explosives to attempt to save their catch. Some special acoustic devices were also tested. These devices generated not only acoustic signals with different frequency and power but also cetacean's calls of danger. All of these attempts had no positive effect. In spring 2005 the longliner "Yuliya Star" tested "Orca sphere" device specially designed for keeping killer whales away from fishing vessels. Preliminary results showed that this device had a positive effect. In 3 of 5 trials when the "Orca sphere" was submerged, killer whales left the vessel. Most parts of the catch turbot in these 3 trials was saved.

And excerpted from an e-mail Aug 18, 2006

The latest information about experience with "Orca Shere" has not good results. In August 5 2006 in central position 54°00N 152°10E longliner "Yuliya Star" were placed three longline sets. "Orca Spere" was immersed when vessel began hauling operation. Group about 12 killer whales were in visibility on distance 800-1500 meters. Some individuals diving to depredate turbot on distance 100-200 m from vessel. Catch of turbot on three longline sets were depredate on 75-84%. This summer such devices used some other longline vessels but there are no information about its effects.

Excuse my English.

Sincerely yours

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