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## Whaling in Chukotka from 2013 till 2017

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### ABSTRACT

During 2013-2017, whaling in Chukotka was conducted by sea-hunters from 9 communities (14 whaling settlements), but whaling only by people from 4 villages (Lorino, Inchoun, Lavrentiya, Uelen), which makes over 70% of the whaling limit. For the last 5 years the average catch per year is 123 gray and 1-2 bowhead whales. The average size of the gray whales from 2013 to 2017 varies from 9.4 up to 10.9 meters for females and from 9.4 up to 10.6 meters for males. Mostly young females are currently whaled – annually females make up 52% to 69% of the slaughtered animals. Whales caught on Chukotka's Arctic coast are statistically larger (by more than 1 meter) and fatter (by 30%) than the whales harvested on the eastern coast. The natives population of Chukotka has risen by 11% (in 2010 - 17,900; in 2015 - 19,140 people) since 2010 and also considering the biomass of the harvested whales being currently almost 2 times less than it was in the 1980s-1990s, so the needs of local people are not met.

*KEY WORDS: gray whale, bowhead whale, whaling, Chukotka, traditional use, harvest*

### INTRODUCTION

At all times and under all circumstances, harvesting of marine mammals guaranteed survival and cultural continuity for Chukotka's indigenous people. Whale harvest in Chukotka has, at least, two thousand years of history. Thanks to traditional fishing and the use of whales and other marine mammals, Chukotka's natives were able to survive the economic collapse caused by Russia's transition to a market economy. However, this transition adversely affected the structure of the whaling industry.

In the 1980s and early 1990s (during the Soviet period), whaling was an integral part of the unified Soviet economy and was organized through state farms. Whaling itself was done from whaling ships (for example, vessel «Zvezdny»). The average weight of a whale in that period was nearly 18 tons. From 1991 to 1995, the government support was reduced to a minimum, state farms ceased to exist, people organized whaling brigades and communities, and turned to traditional methods of whaling using small boats (whaleboats and canoes; fig.1). All this accounted for the decrease in the average weight of the harvested whales by half (up to 8-9 tons), which continued until the early 2000s (Litovka, 2008). And the total biomass of the harvested whales before the decline in whaling in the 1990s was 2.7 times bigger than the biomass of the currently harvested whales (fig.2).

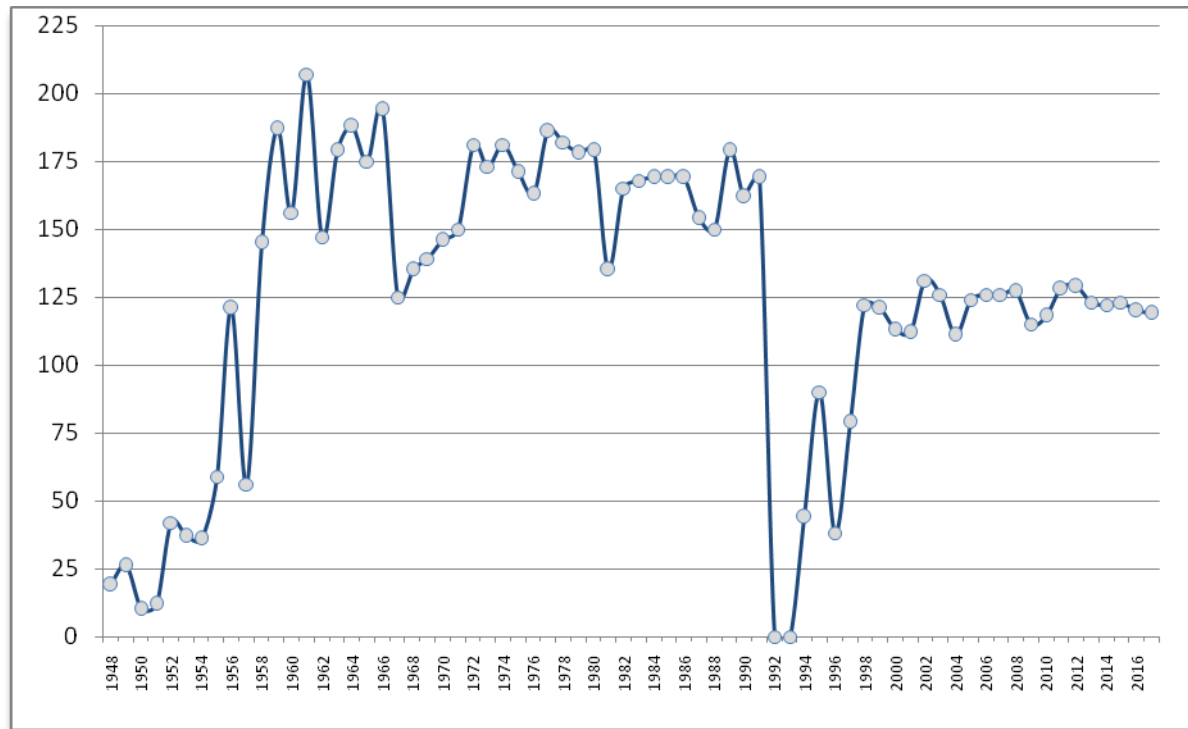


Figure 1. Total number of the harvested GW from 1949 till 2017

It is believed that the eastern (Californian-Chukchi) population of gray whales, inhabiting the Bering and Chukchi seas, has reached the optimum level. Despite this, the population size for as yet unexplained circumstances fell from 26,6 to 21 thousand individuals (Buckland et al., 1993; Gerber et al., 1999; Rugh et al., 2005; Blochin et al., 2011). According to the published data, the West-Arctic (Bering-Chukchi-Beaufort) population of bowhead whales is slightly more than 16,7 thousand individuals (Givens et al., 2013).

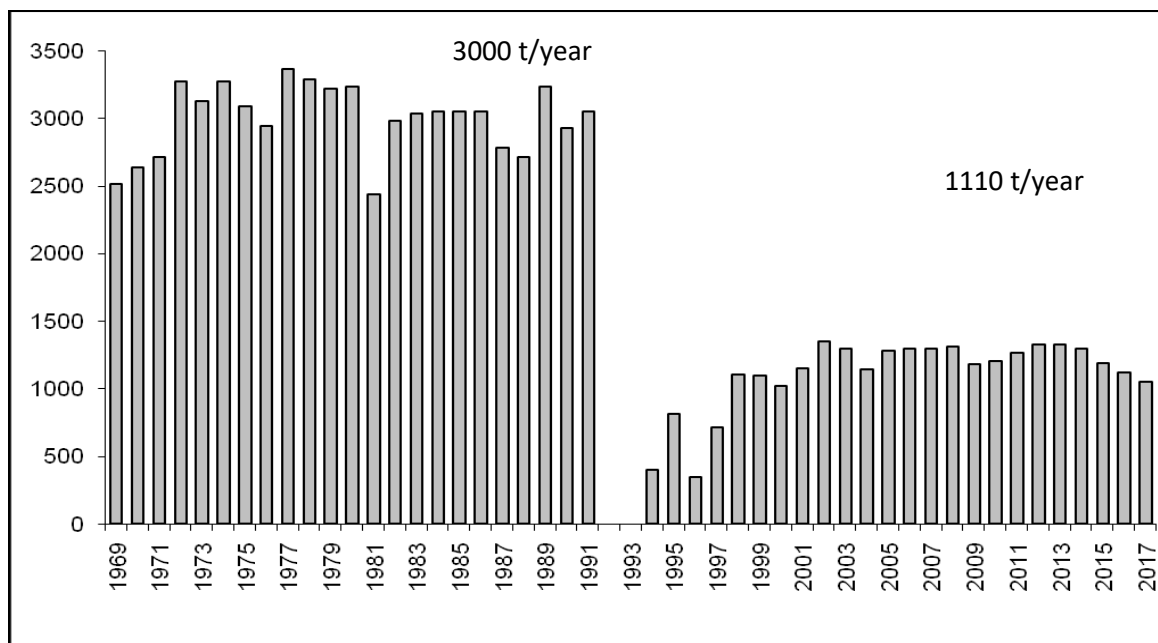


Figure 2. The total weight of the harvested gray whales

This is a total reserve of gray and bowhead whales shared by the Russian Federation and the United States. It serves as the basis for calculating the whaling ratio primarily to satisfy needs of Chukotka and Alaska's natives.

In accordance with the decisions of the 65th Int. Whaling Commission's session, the indigenous people of northern Russia (Chukotka Region) were given 6-year whaling quotas for the period of 2013-2018. The Russian share in the gray whales block quota is 135 heads per year (96.4%), 5 heads are given annually to the Maca tribe (Washington, USA). The Russian share of the bowhead whales is 5 heads per year (7.7%), and the US share is 60 bowhead whales. In total, Russia can harvest 720 gray and 30 bowhead whales within 6 years. As agreed by the Russian and American sites, it is possible to redistribute the quotas on gray and bowhead whales between them.

## RESULTS

During 2013-2017, whaling in Chukotka region was conducted by sea-hunters from 9 communities (14 whaling settlements) in the traditional way: from canoes, whaleboats, and motor boats using rifles, American large-caliber darting guns, and rotary harpoons. Whaling was mainly done by people from 4 villages - Lorino (282 whales were caught during 5 years), Inchoun (60 whales), Lavrentiya (58 whales), Uelen (50 whales), which makes over 70% of the whaling limit. The other 10 settlements hunt from 1 to 7 animals per year each (fig.3).

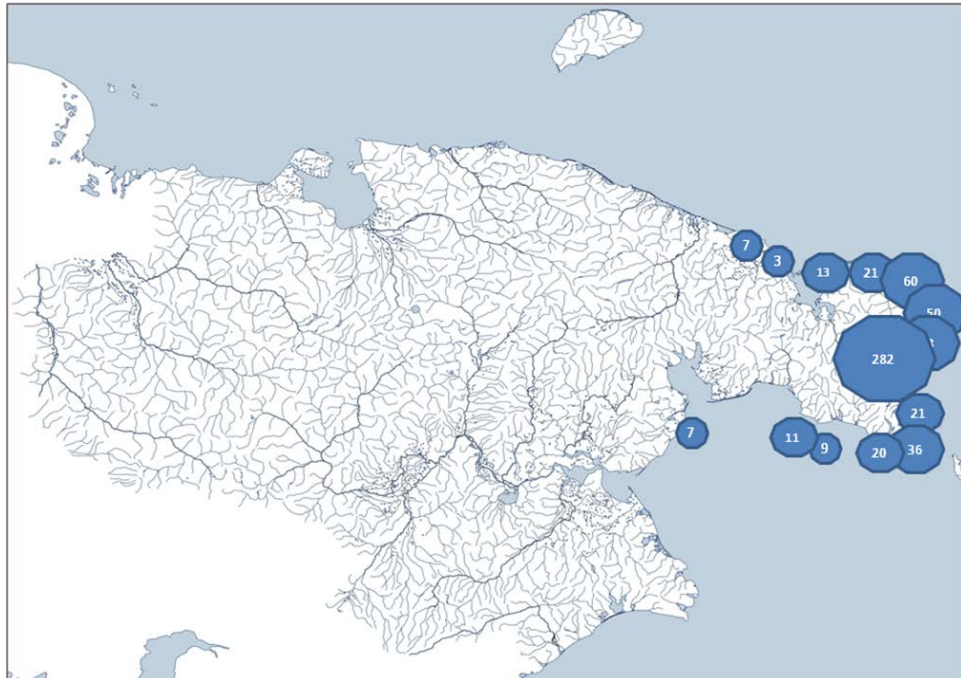


Figure 3. Gray whale harvest level

Until the early 1990s, more than 175 gray whales were harvested annually. For the last 5 years, it has been allowed to catch no more than 135 gray whales every year. Nevertheless, the average catch per year is 123 gray and 1-2 bowhead whales (not every year).

The annually harvested animals are mostly from 8 up to 10 meters long (fig.4, 5). The average size of the gray whales from 2013 to 2017 varies from 9.4 up to 10.9 meters for females and from 9.4 up to 10.6 meters for males.

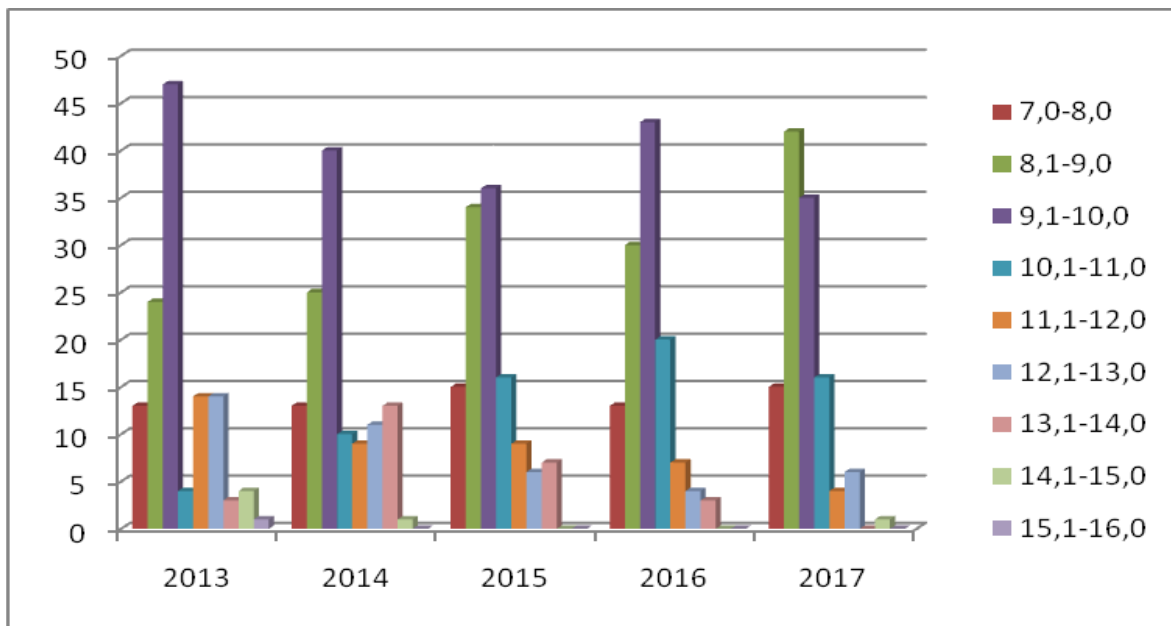


Figure 4. Length of harvested Gray whales

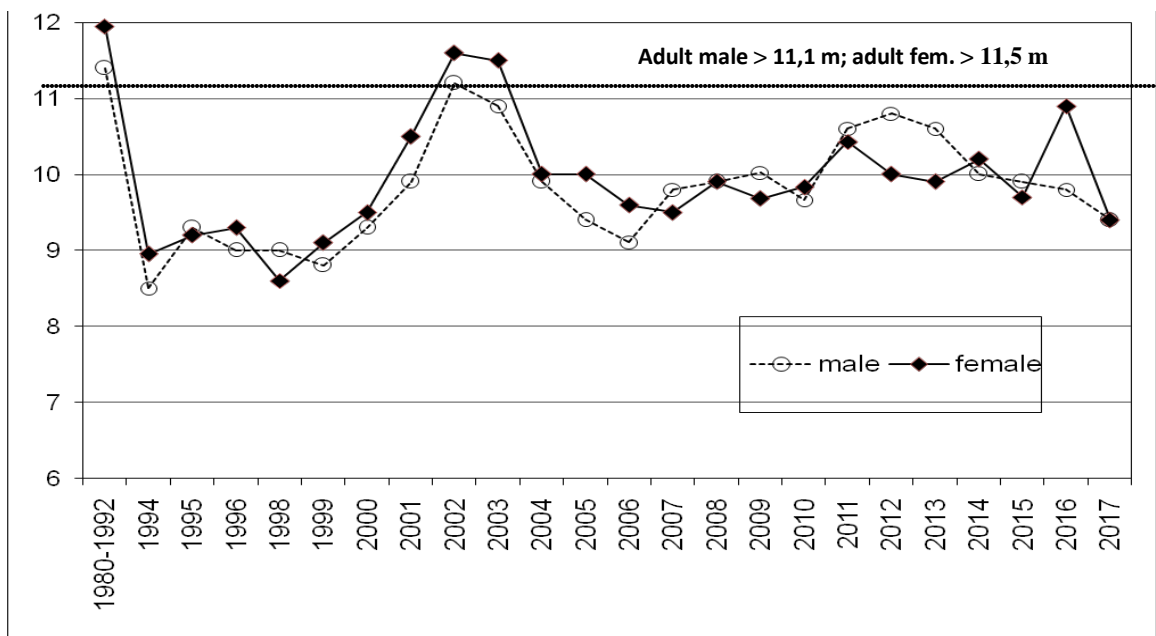


Figure 5. Average length of harvested gray whales

According to the data mentioned above, mostly young females are currently whaled – annually females make up 52% to 69% of the slaughtered animals. Adult animals (larger than 11 meters) constitute only a small part of the catch (fig. 6), and animals larger than 13-14 meters are rare (due to difficulty in whaling and transporting such large whales).

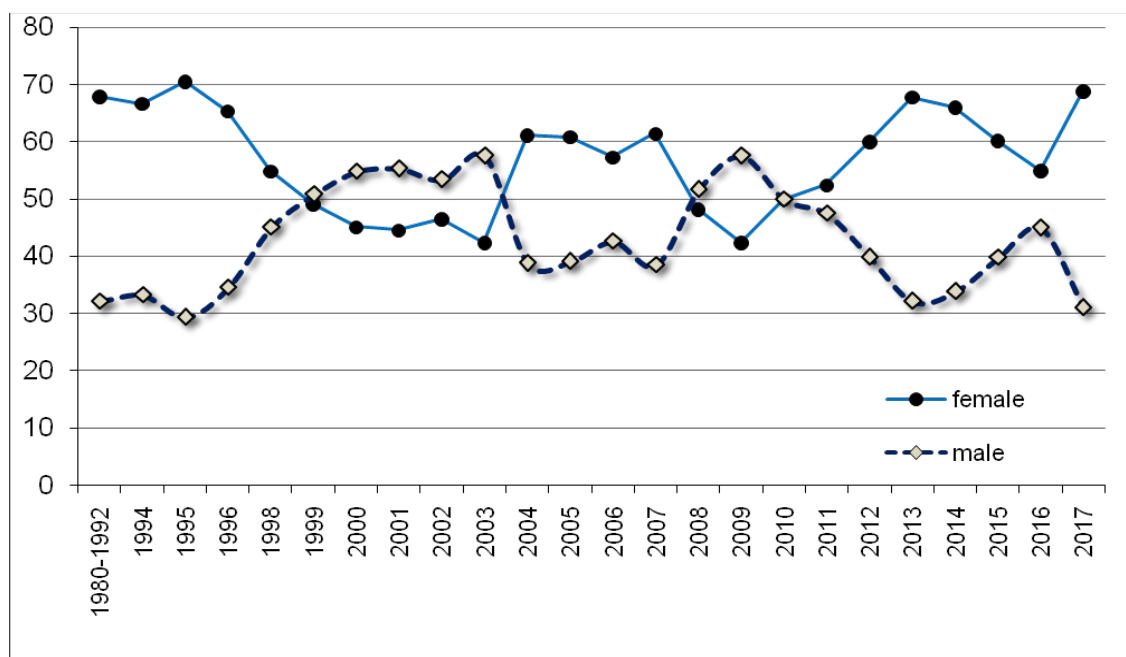


Figure 6. Sex ratio of harvested gray whales

Whales caught on Chukotka's Arctic coast are statistically larger (by more than 1 meter) and fatter (by 30%) than the whales harvested on the eastern coast (fig. 7). Probably, adult animals pass through the Bering Strait into the Arctic, and youngsters stay to feed near the eastern coast of Anadyr Bay.

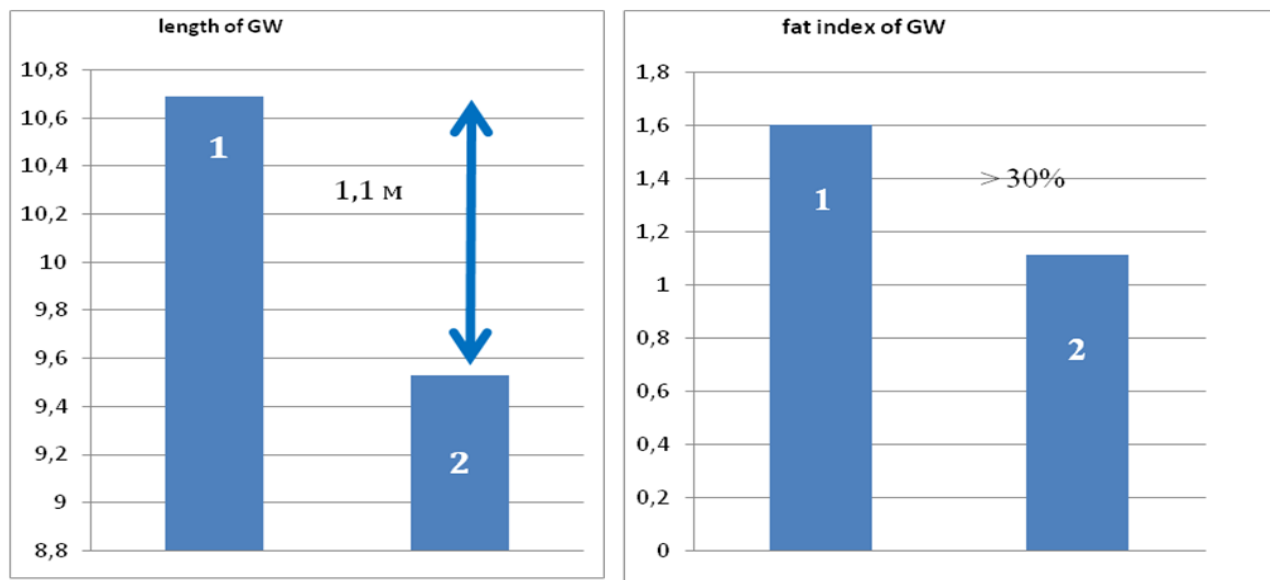


Figure 7. Average length and Fat Index of gray whales harvested in Arctic (1) and eastern shores (2) of Chukotka

Almost every year there are animals in the total catch of whales which are not taken into account in the quota (or subsequently excluded from the catch). These are animals lost due to aggressiveness or a sharp change in the weather during transportation of a whale ashore or because of their specific odor. In both cases, a relevant document is drawn (about the loss or disposal of the whale). From 2013 to 2017, five whales were lost and 4 harvested whales had specific odor.

From 2013 to 2017, four bowhead whales (2 females and 2 males) were harvested near Chukotka, mainly in Anadyr Bay. The average size of the whales was 14.5 meters (minimum 13.0, maximum 17.0 meters).

## **SUMMARY**

- Despite planned whaling being over approximately 25 years ago, hunters continue to catch small, immature grey whales;
- basically immature female whales are harvested which suggests sex and age-based segregation of the grey whales group during the summer-fall period in the western Arctic;
- the size characteristics of the whales harvested on the Arctic coast of Chukotka are higher than of those caught on the eastern coast of the same region. It is quite possible that more mature whales migrate to the Arctic via the Bering Strait compared to those remaining in Anadyr Bay although we do not exclude the possibility of our mistake;
- the current grey and bowhead whales harvesting in Chukotka is below a maximum of the sustainable level recommended by the IWC Scientific Committee for both whale species. The natives population of Chukotka has risen by 11% (in 2010 - 17,900; in 2015 - 19,140 people) since 2010 and also considering the biomass of the harvested whales being currently almost 2 times less than it was in the 1980s-1990s. That is why subsistence needs of aboriginal population are not satisfied.

## **ACKNOWLEDGEMENTS**

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