

# Status Assessment 2020 - Bowhead Whale

The Spitsbergen population of Bowhead whales does not yet show any clear signs of recovery. Main threats include low numbers of animals combined with extreme longevity and a slow reproductive cycle, complicated in the extreme by climate change, including its direct impact on reducing suitable habitat and indirect consequences such as increased human activities in the species range. Direct threats include loss of sea-ice habitats, loss of key Arctic prey species, underwater noise (military SONAR, seismic exploration), and increased risk of entanglement and ship strikes.



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Bowhead whale Status		Distribution		Population size (historic)		Demographics		Status	
Region	I	↔	1,2	↓	1,2	?			
	II								
	III								
	IV								
	V								

Bowhead whale Threats/Impacts		Climate change		Underwater noise		Shipping		Evidence of threat or impact	
Region	I	1-5		5		5			
	II								
	III								
	IV								
	V								

⊕ Table Legend

⊕ Method of Assessment

## Background Information

- Year added to OSPAR List: 2008 (OSPAR 2009)
- Case report: <https://www.ospar.org/documents?v=7099> (<https://www.ospar.org/documents?v=7099>)
- Key criteria: severe decline due to commercial whaling until the first half of the 20th century; the species only occurs in Arctic and sub-Arctic waters, and within the OSPAR Area only in OSPAR Region I (Greenland, Iceland, Norway). IUCN lists the stock as Endangered.
- Sensitivity: long-lived, small stock, sensitive to climate change and its direct and indirect consequences.
- Key anthropogenic pressures: climate change, including its indirect consequences such as changes in feeding conditions, increased risk of predation and increased levels of human activities in its area of distribution; as well as increased fishing, tourism and oil and gas exploration and shipping, including the opening of new shipping routes crossing the Arctic and potential impacts of pollution and oil spills. Direct threats are habitat loss due to sea ice reductions, underwater noise, including from military SONAR and from seismic surveys, entanglement in fishing gear and ship strikes.
- Last status assessment and brief outcome: OSPAR (2008; 2010). This population was driven to commercial extinction by overharvesting; based on historical back-calculations this population was likely reduced by 95-99%.

## Geographical Range and Distribution

The Bowhead whales occurring in OSPAR Region I are part of the Spitsbergen stock (**Figure 1**). It is possible that more migration will occur between stocks with melting sea-ice. Given the close association with sea-ice of the Spitsbergen stock, it is possible that the range of the species will be

reduced; northward shifts are likely in the coming decades, but once the ice is over the deep Arctic basin, waters are unlikely to sustain bowhead recovery. The area of distribution includes waters off Greenland, Norway and Franz Josef Land in Russia.

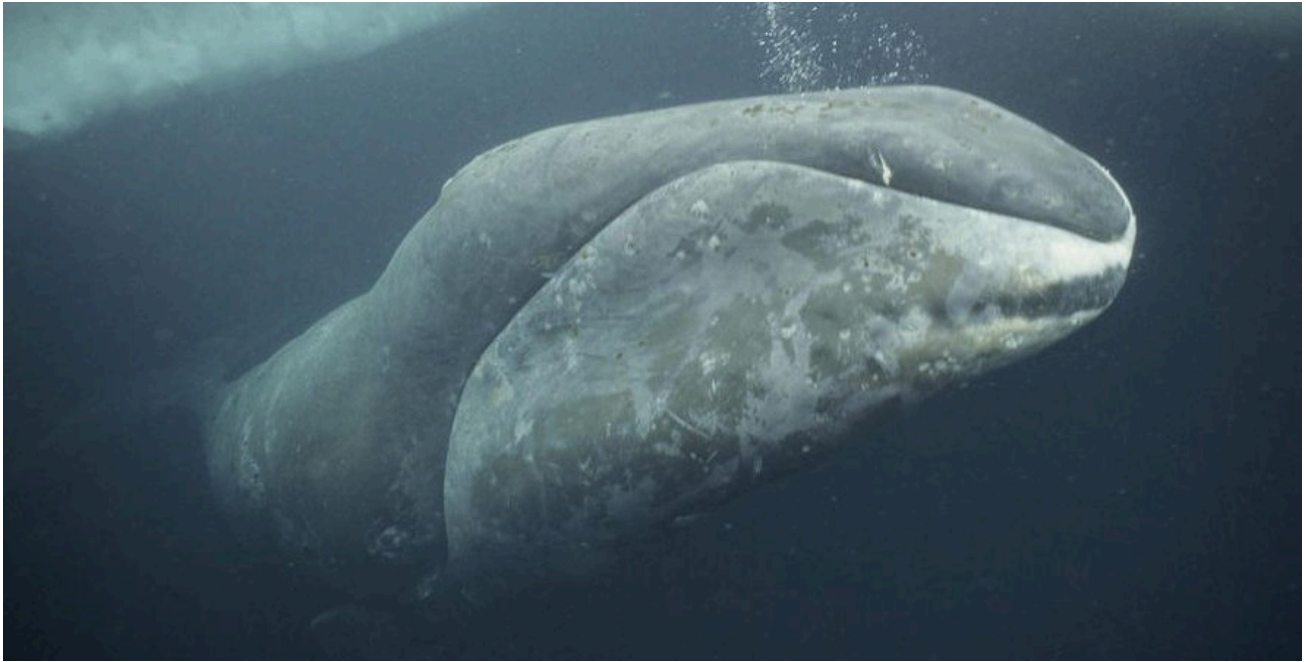


Figure 1 Stocks of Bowhead whale according to NAMMCO (<https://nammco.no/wp-content/uploads/2016/12/bowhead-dist-web-1024x936.png>)

## Population/Abundance

More sightings have occurred since the OSPAR listing. For instance, 80 to 100 bowheads were observed at the edge of the sea ice between Northeast Greenland and Spitsbergen (de Boer et al. 2019), the highest number ever recorded on one day in the Atlantic Arctic since the 17th Century. A

survey of the MIZ, covering a significant part of the range for the Spitsbergen's stock was surveyed in 2015, producing an estimate of a few hundred animals (Vacquie-Garcia et al. 2017). (<https://iwc.int/status#overview> (<https://iwc.int/status#overview>)). No trend data are available, and there are no signs of significant recovery. Estimates for the Spitsbergen stock: 102 (32–329) (NAMMCO; Boertmann et al., 2015) to 340 (100–900) animals (<https://iwc.int/estimate> (<https://iwc.int/estimate>)) 343 (136–862; Vacquie-Garcia et al. 2017).

Method of assessment: 1 and 2

## Condition

The species has a very long life span. Calves have only rarely been observed in the Spitsbergen stock.

There is ample information about the decline in the quantity and quality of the species habitat (see a.o. the most recent IPCC reports): dwindling sea-ice in the Arctic is likely to have severe impacts on bowhead prey species, on the occurrence of predators (killer whales), on the extent of human activities such as fishing, oil and gas exploration, tourism, shipping (e.g. emerging new shipping routes), etc. (Kovacs et al. 2011, Reeves et al. 2014) The species is vulnerable to ship strikes and to entanglement in fishing gear. Given its longevity and blubber thickness, it is vulnerable to pollutants and increasing temperatures and an increased human presence as well as the northern shift of boreal cetacean species lead to the emergence of new diseases.

Method of assessment: 1 to 5

## Threats and Impacts

In the past, whaling was the main threat to the species, the main threats now are direct and indirect effects of climate change. The species depends heavily on areas with sea-ice. Indirect consequences of dwindling sea-ice are changes in feeding conditions, appearance/occurrence of predators and increasing human activities in its area of distribution such as fishing, tourism, oil and gas exploration, pollution and the opening of new shipping routes crossing the Arctic. Direct threats are underwater noise, including from military SONAR and from seismic surveys, entanglement in fishing gear and ship strikes.

Measures that address key pressures from human activities or conserve the species/habitat

Other relevant competent authorities are IWC, NAMMCO, Arctic Council (CAFF in particular) and IMO.

Actions of OSPAR related to climate change and pollution might benefit the species.

The overview assessment of implementation reporting was not available at the time of publishing this status assessment. Future updates of the status assessment will take implementation reporting against OSPAR actions into account.

## Conclusion (including management considerations)

The Spitsbergen stock of Bowhead whale does not show significant signs of recovery, and numbers remain very low compared to pre-whaling numbers. Therefore, it is justified that this species remains on the OSPAR List.

IWC is the main international organization in charge of protecting large whales in the world and assessing their status. Therefore, OSPAR could contact the IWC to notify its concern about the status and conservation of the Spitsbergen stock of the Bowhead whale and request that issues relative to the status of this stock and threats be treated as priority issues within the IWC. NAMMCO is a regional body for cooperation on conservation, management and study of cetaceans and pinnipeds in the North Atlantic. The Arctic Council is the leading intergovernmental forum promoting cooperation, coordination and interaction among the Arctic States, Arctic indigenous communities and other Arctic inhabitants on common Arctic issues, in particular on issues of sustainable development and environmental protection in the Arctic.

Given recent developments in Arctic sea ice condition and the opening of new shipping routes, OSPAR could address IMO to notify its concern about the effects of shipping in distribution range of the Bowhead whale. Finally, OSPAR's general activities related to climate and to pollutants are relevant.

## Knowledge Gaps

There is a general lack of information about the stock and its relationship to other stocks. Consequences of melting sea ice and increased human activities remain partly speculative. Studies on climate change and its consequences, including consequences of an increased human presence in the Arctic, are important, as well as large-scale surveys to assess the condition of, and threats to Arctic fauna, such as Bowhead whales.

## Context & Guidelines

Guidance on the Development of Status Assessments for the OSPAR List of Threatened and/or Declining Species and Habitats

OSPAR Agreement 2019-05e (<https://www.ospar.org/documents?v=40966>)

## References

Sheet reference:

BDC2020/Bowhead whale



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