

SUBMISSION TO THE
NUNAVUT WILDLIFE MANAGEMENT BOARD AND NUNAVIK MARINE
REGION WILDLIFE BOARD
FOR

Information: X

Decision:

Recommendation:

Issue: Implementation of Arctic Cod Bycatch Management Measures in the 2019/20 Northern and Striped Shrimp fishery in the Western Assessment Zone

Resource Management Information

In 2018-19 (October), industry reported to Fisheries and Oceans Canada (DFO) that elevated bycatch levels of Arctic cod were being caught consistently in the Western Assessment Zone (WAZ) (see map at Appendix 1). These catches triggered move-away provisions as required by Conditions of Licence (COL) for shrimp harvesters in this area. In order to continue to successfully prosecute the fishery, industry requested that DFO amend COL to allow higher bycatches. Based on the Science and catch information available for Arctic cod (see Appendix 2), Resource Management (RM) assessed that permitting higher bycatches would not represent a significant conservation concern for this species. RM implemented industry's proposed amendment for Arctic cod (Appendix 3) for the remainder of the season, following conversations with staff from both the Nunavut and Nunavik Boards (the Boards) and DFO Science.

Further, the Department committed to seeking science advice on a sustainable overall bycatch limit of Arctic cod in the WAZ, Eastern Assessment Zone (EAZ) and Shrimp Fishing Area (SFA) 1. A Canadian Science Advisory Secretariat (CSAS) peer review process was conducted July 2019.

In 2019-20 (September), increased Arctic cod bycatches were being recorded in the WAZ. DFO accepted industry's request to re-instate the 2018-19 COL for Arctic cod bycatch for the WAZ, following discussion with the Boards and DFO Science. The condition is in effect for the remainder of the season (i.e. on an interim basis).

Decisions to amend COL in 2018-19 and 2019-20 were consistent with the relevant clauses of the Nunavut and Nunavik Inuit Land Claims Agreements, whereby the need to modify COL to address higher incidences of Arctic cod bycatches was considered to be based on 'urgent and unusual circumstances'. Following the 2018-19 COL amendment and recognizing the need to ensure the sustainability of Arctic cod, the ecological importance of the species and to avoid urgent COL amendments in the future, the Department committed to undertaking consultations on a longer-term management approach with the offshore fleet, Nunavut and Nunavik industry and the Boards' staff for EAZ, WAZ as well as SFA 1. At the time of this submission, consultations with the relevant stakeholders are anticipated to begin in November.

Science Information

Arctic cod (*Boreogadus saida*) is a ubiquitous species occurring in a wide range of habitats in the Arctic. They are considered seasonal migrants that are known to use

different habitats throughout the year (e.g., summer aggregations, under-ice habitat use). Large aggregations of Arctic cod have been reported in both nearshore and offshore areas. Young cod live and move around at various depths in the water until reaching age 1+, after which they move down and stay closer to the bottom of the ocean for the rest of their life. Being large enough, they become regular bycatch in Shrimp trawl fisheries, which suggests that Shrimp and Arctic cod share the same habitat. Arctic cod plays a pivotal role in the marine ecosystem, providing food for numerous species of seabirds, marine mammals, and fishes.

Data for Arctic cod is collected through at-sea observers and fishery logbooks, however its population status is not formally assessed by Science, and thus is unknown. The Department conducted a CSAS peer review process in July 2019 to provide advice on Arctic cod bycatch limits in Northern Shrimp fisheries in the WAZ, EAZ and SFA 1. Participants included representatives from DFO Science and RM, and the Boards.

Estimates of the potential Arctic cod biomass in the ecosystem were derived based on the requirements to meet the energetic needs of higher trophic level predators (whales, seals, birds, fishes), which translated to 500,000 to 1,000,000 t of Arctic cod annually. The estimates are highly uncertain due to the absence of a survey dedicated to Arctic cod, limited availability of life history data, and patchy spatial and temporal distribution of Arctic cod. This uncertainty leads to low confidence in determining the impacts of removal. If the estimates are taken at face-value then the percentage of Arctic cod removed from the total biomass through the shrimp fishery is likely very low, however given the considerable uncertainty, precaution is advised.

Next Steps

Once the consultation process is complete, the Department will return to the Boards to seek decisions and advice (as appropriate) on Arctic cod bycatch COL at their March 2020 meeting for implementation beginning in the 2020-21 season.

Outcomes of the Arctic cod bycatch discussions will be presented to members of the Northern Shrimp Advisory Committee at the next annual meeting (March 2020).

Prepared by: Fisheries and Resource Management, Fisheries and Oceans Canada

Date: November 1, 2019

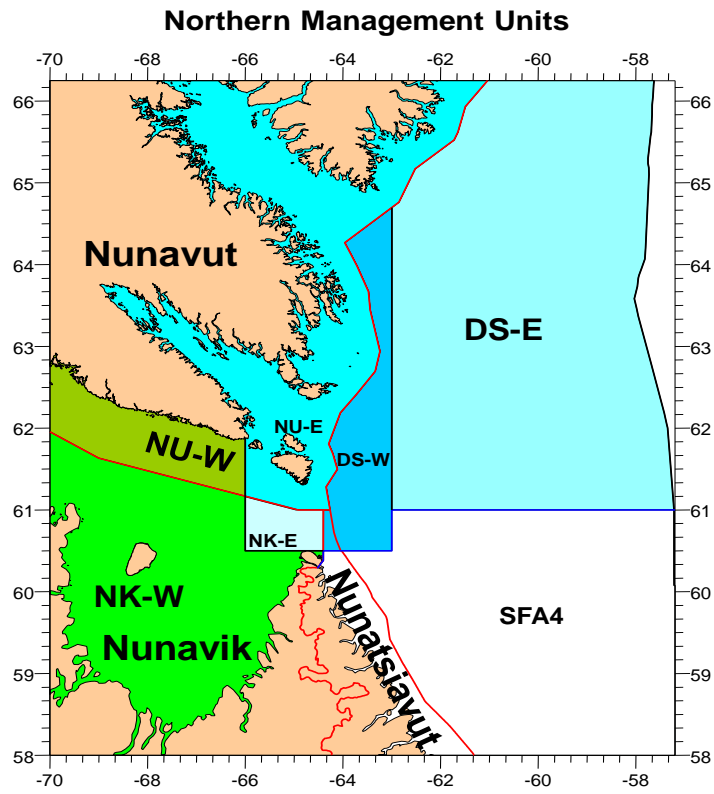
Appendices

Appendix 1 – Map

Appendix 2 – Historical Bycatches, Arctic cod

Appendix 3 –2018-19 and 2019-20 Amendment to Northern Shrimp Licence

Blue areas – Eastern Assessment Zone
Green areas – Western Assessment Zone



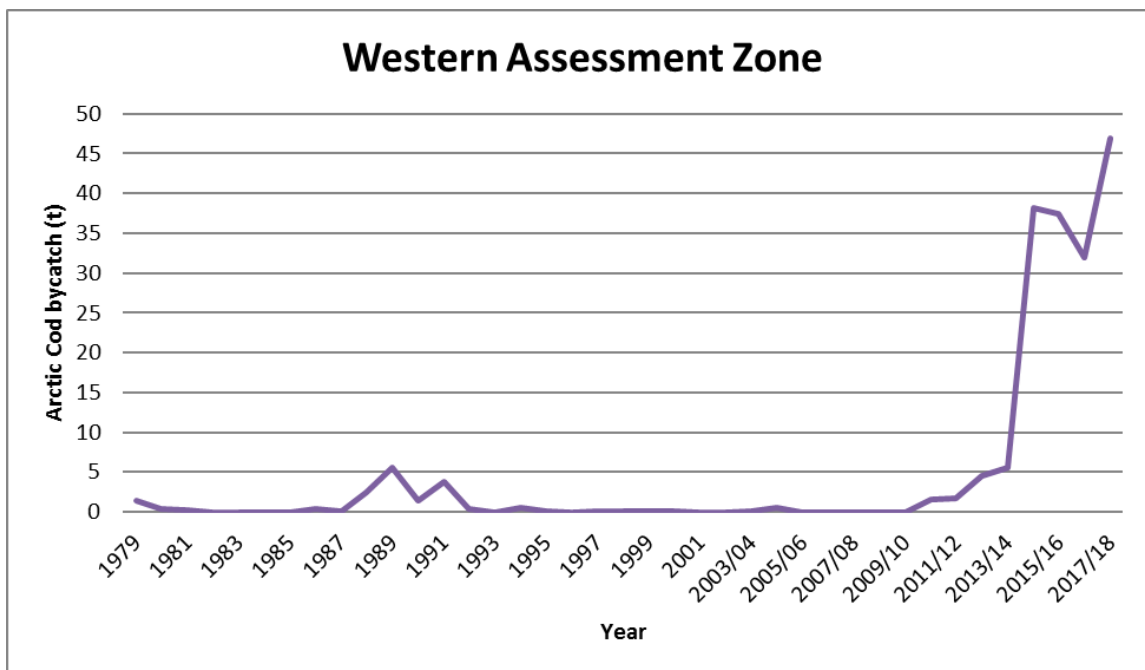


Figure 1. Arctic cod bycatch in SFA 3 (Western Assessment Zone) for 1979–2018¹.

¹ . Shrimp fishery management cycle changed from calendar year to fiscal year starting in 2003.

9/26/2019

Please note that the licence for Northern Shrimp is amended as follows:

5.2.2 Notwithstanding section 5.2 above, while fishing in the waters of Management Units Nunavut West and/or Nunavik West, if total bycatches of Arctic Cod exceed the greater of 5 percent by weight of the catch of shrimp or 200kg, averaged over the previous six tows, the licence holder or vessel operator must immediately change fishing area by a minimum of ten (10) nautical miles from any position of the previous six tows in an effort to avoid further bycatches of Arctic Cod. If after moving, the total bycatches of Arctic Cod exceed the greater of 5 percent by weight of the catch of shrimp, or 200kg, averaged over the previous six tows, the vessel must continue to move 10 nautical miles from any position of the six previous tows to avoid by-catch. The licence holder or vessel operator must record in the logbook the active avoidance measures taken in response to excessive Arctic Cod bycatch. The licence holder or vessel operator must also record in the logbook the position (latitude and longitude) at the time of Arctic Cod bycatch, as well as the quantity caught by weight in kilogram.

This amendment is valid from the date of issuance to March 31, 2020.