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SCIENTIFIC COUNCIL - 2024**Canada's Request to NAFO Scientific Council for Coastal State Advice – 2025**

Canada would like to submit its request to the Scientific Council for advice on the following species:

1. Greenland halibut (Subarea 0 + 1 (offshore))

The Scientific Council is requested to provide an overall assessment of status and trends in the total stock area throughout its range and to specifically advise on TAC levels for 2025 and 2026. The stock status should be evaluated in the context of management requirements for long-term sustainability and the advice provided should be consistent with NAFO's Precautionary Approach Framework.

It is noted that at this time only general biological advice and/or catch data are available, and few standard criteria exist on which to base advice. Canada encourages the Scientific Council to continue to explore a model-based approach to bridge survey time series (i.e. data from the RV Paamiut and RV Tarajoq), and opportunities to develop risk-based advice in the future, noting that data conditions do not allow for such advice at this time.

2. Northern shrimp (Subarea 1 and Division 0A)

Canada requests that the Scientific Council consider the following options in assessing and projecting future stock levels for Northern shrimp (*Pandalus borealis*) in Subarea 1 and Division 0A:

The status of the stock should be determined and risk-based advice provided for catch options corresponding to Z_{msy} in 5,000t increments with forecasts for 2025 to 2027 (inclusive). These options should be evaluated in relation to Canada's Harvest Strategy (2022 revised version attached) and NAFO's Precautionary Approach Framework.

Presentation of the results should include graphs and/or tables related to the following:

- Historical and current yield, biomass relative to B_{msy} , total mortality relative to Z_{msy} , and recruitment (or proxy) levels for the longest time period possible;
- Total mortality (Z) and fishable biomass for a range of projected catch options (as noted above) for the years 2025 to 2027. Projections should include both catch options and a range of effective cod predation biomass levels considered appropriate by the Scientific Council. Results should include risk analyses of falling below: B_{msy} , 80% B_{msy} and B_{lim} (30% B_{msy}), and of being above Z_{msy} based on the 3-year projections, consistent with the Harvest Decision Rules in Canada's Harvest Strategy; and
- Total area fished for the longest time period possible.

Please provide the advice relative to Canada's Harvest Strategy as part of the formal advice (i.e., grey box in the advice summary sheet).



Harvest Strategy (HS) for SFA 1 Shrimp Updated 2022

Harvest Control Rules (HDRs)

Preamble

In the absence of a TAC-setting and quota-sharing agreement with Greenland on this trans-boundary stock, the approach outline below will be taken by Canada. Reference points and scientific advice are based on a quantitative assessment model and stock composition indices as articulated by the Scientific Council (SC) of the Northwest Atlantic Fisheries Organization (NAFO). Previous work by the SC has shown that a maintained mortality risk of 35% is low enough to keep stock levels safely at or above Bmsy.

The Harvest Strategy will remain in place until such time that Canada and Greenland may adopt common Harvest Decision Rules.

Objectives

- Achieve/maintain the stock in the Healthy Zone (>80% of Bmsy).
- Avoid serious harm to the reproductive capacity of the stock by maintaining biomass >30% of Bmsy.
- Avoid total removals in excess of maximum sustainable yield.
- Manage the TAC and quotas to facilitate a balance of opportunity and stability in the industry, subject to the need to respond to precipitous biomass declines.
- Maintain Canada's quota share of this trans-boundary stock.

Reference Points

- Healthy Zone = >80% of Bmsy
- Cautious Zone = >30%Bmsy and < 80%Bmsy
- Critical Zone is <30%Bmsy
- Limit Reference Point for biomass (Blim) = 30% of Bmsy

Limit Reference Point for total mortality = Zmsy

Harvest Decision Rules (HDRs)

The Canadian quota will be 17% of 5/6 of the TAC designated by Canada, or 14.2% of the entire designated TAC.

- When the biomass is above 80% of Bmsy, the risk of being above Zmsy should not exceed 35%, based on the 3-year projections.
- When the biomass is between 30-80% of Bmsy, the risk of being above Zmsy based on the 3-year projections should be within the range of 17-34%, with the risk tolerance being lower the closer the biomass is to Blim, with 17% at the lower end and 34% of the upper end of this range.
- If the biomass is below the Healthy Zone and approaching Blim (middle of the cautious zone) then a special meeting will be sought with Greenland to develop actions that endeavor to mitigate or reverse the decline (e.g., a rebuilding plan). In the absence of agreement on measures to be taken, special conservation measures may be taken unilaterally by Canada.

Notes:

- Biomass refers to fishable biomass as calculated by the assessment model. Biomass values are to be based on point estimates.
- Precipitous decline: When the biomass decreases by more than 25% in the cautious zone; a special NSAC discussion will be held to evaluate all available biomass signals and the recent stock trend to determine if special conservation measures are required and/or consultations with Greenland on appropriate measures will be triggered
- Canadian quotas that are uncaught in one year may be carried forward to the following year in accordance with criteria and levels to be agreed between DFO and quota holders as long as the harvest level is consistent with the HDRs above.

These HDRs are subject to change as Canada further develops guidance on the application of the PA framework on its domestic fisheries. This could include rules that provide stability in TAC (i.e., a maximum and minimum percentage cha