March 29, 2023

OCEANA CANADA'S RECOMMENDATIONS FOR 2J3KL CAPELIN

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Oceana Canada
Halifax Office
1701 Hollis St, Suite 800
Halifax, NS Canada B3J 3M8

+1.844.362.3262
OCEANA.CA

Erin Dunne
Senior Resource Manager, Pelagic Fisheries/Fisheries Management
Fisheries and Oceans Canada/Government of Canada
Email: Erin.Dunne@dfo-mpo.gc.ca
Tel: 709-772-5845/ Fax: 709-772-3628

29 March 2023

Dear Erin,

As a recent observer at the Capelin Advisory Committee meeting, we are writing today regarding upcoming management decisions pertaining to the northeast Newfoundland and Labrador capelin stock (NAFO area 2J3KL). Oceana Canada appreciates the opportunity to observe the process, and recommends the following management actions:

1. **Close the 2J3KL capelin fishery.**
2. **Invest in capelin research programs and begin the development of a rebuilding plan as soon as possible.**
3. **Develop and implement interim measures that account for capelin's role in the ecosystem, with adequate monitoring, prior to resuming the capelin fishery.**[1]

Interim management measures should adhere to the Precautionary Approach Framework and contain both:

a. A minimum stock biomass below which commercial harvesting is prohibited, and;
b. A maximum harvest cap to reduce the probability of overfishing in years when environmental conditions are poor.[2]

We provide more detail on these recommendations below.

1. **Close the 2J3KL capelin fishery:** The 2023 capelin assessment showed that the 2J3KL capelin stock has been in the critical zone for all but two of the last 32 years. With the 2J3KL capelin stock now proposed to the Fish Stock Provisions (FSP) of the *Fisheries Act*, there will soon be a statutory requirement to rebuild and keep the stock above the

[1] DFO. 2009. A Fishery decision-making framework incorporating the precautionary approach.https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/precaution-eng.html
[2] Laughren J. 2023, March 8. Oceana Canada's Recommendations for Forage Fish Management. Letter-to-Minister_Forage-Fish-Management_Oceana-Canada-20230308.pdf

Limit Reference Point (LRP) as outlined by Section 70 (5).[3] We ask the department to follow the science and the law at this crucial juncture to protect capelin and give the population a chance to rebuild to abundance.

This year's assessment has shown some positive signs for the stock including a higher larval index and indications of a higher fall condition. Unfortunately, the overall trend of stock health remains largely unchanged in the past decade. Capelin continue to spawn later, with delayed spawning predicted to produce a weak year-class.[4] The effects of capelin's depressed state reverberate throughout the Newfoundland marine ecosystem, since capelin are a dominant forage fish in the northwest Atlantic and a key driver of cod biomass dynamics.

We are very supportive of the government's comprehensive review and selection of the "capcod" model to identify the LRP for capelin, based on the history of the stock trajectory and biology, and its importance to the ecosystem as a whole. This approach establishes key relationships between forage fish and predators in model results and aligns rebuilding measures with restoring essential ecosystem productivity. Further, this approach to setting an LRP has shown to be effective in other regions with similar parameters such as in the Barents Sea.[5]

As stated in the department's research document on this LRP approach, the "minimal level of capelin required to allow cod to reach its LRP, and by proxy to allow the ecosystem to return to minimal pre-collapse functionality and productivity, becomes a reasonable and natural level of setting capelin's LRP".[6] All models considered by the department placed capelin in the critical zone, but we believe this model is by far the best fit. With the LRP set, this year's assessment showed the stock at only 41 per cent of the LRP of 640 kilotonnes, and just 7 per cent of pre-collapse high-productive levels.

Not only does the best available science provide evidence for instituting a closure of the commercial fishery, but the government's own guidance from 1991 states that management should err on the side of under-exploitation due to capelin's extremely important role in the marine ecosystem along the northeast coast of Newfoundland.[7] Now is the time for the department to take bold action and follow the legislation and policy guidance to ensure that capelin are protected.

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[3] Public Works and Government Services Canada. 2022. Regulations Amending the Fishery (General) Regulations: SOR/2022-73. Canada Gazette, Part 2, Volume 156, Number 8. Government of Canada, Public Works and Government Services Canada, Integrated Services Branch. https://www.canadagazette.gc.ca/rppr/p2/2022/2022-04-13/html/sor-dors73- eng.html

[4] Murphy HM, Adamack AT, Cyr F. 2021. Identifying possible drivers of the abrupt and persistent delay in capelin spawning timing following the 1991 stock collapse in Newfoundland, Canada. ICES J Mar Sci 78:2709–2723.

[5] Koen-Alonso M, Lindstrøm U, and Cuff A. 2021. "Comparative modeling of cod-capelin dynamics in the [NL] shelves and Barents Sea ecosystems." Frnt in Mar Sci 8: 579946.

[6] Lewis KP, Regular PM, Barrett TJ, Koen-Alonso M, Mowbray F, Murphy H, Adamack AT, Bourne C. 2023, unpublished. A Review and Evaluation of potential LRPs for 2J3KL capelin. (Working paper).

[7] Fisheries and Oceans Canada Newfoundland Region. 1991. The Science of Capelin, A Variable Resource.

2. **Invest in capelin research programs and begin the development of a rebuilding plan as soon as possible:** This year's assessment and LRP setting process confirmed that capelin are deep in the critical zone as predicted by Oceana Canada for the past two years.[8] Fortunately, the department's own rebuilding framework presents a positive opportunity to rebuild quickly. We are encouraged and supportive of the department's interest in beginning the rebuilding plan process early and we look forward to your insights from the Atlantic mackerel and 3Ps cod rebuilding plan processes.

   Given the short-lived nature of capelin and its ability to undergo dramatic year-to-year changes in abundance, this will be a unique rebuilding plan and we have confidence that that the working group will be able to identify measures to rebuild capelin to abundance in a short time period. We also want to emphasize the department's own commitment to undertake a fully comprehensive and transparent socioeconomic analysis in its implementation of the rebuilding plan.

   We urge the department to address uncertainties raised by the Capelin Advisory Committee regarding the changes in capelin's spawning behavior, and the need for investing in capelin science to the levels seen in the data-rich 1980s and 1990s. Immediate investments should be made to increase monitoring of spawning beaches (both onshore and at demersal sites) and to expand the spatial extent of at-sea acoustic surveys.

3. **Develop and implement interim measures that account for capelin's role in the ecosystem, with adequate monitoring, prior to resuming the capelin fishery:** We understand that the department requires adequate time to initiate and complete a rebuilding plan for capelin. While the department undertakes this process, we urge you to follow the amended *Fisheries Act* (6.1(1)) which states that measures implemented to promote the sustainability of fish stocks shall "[take] into account the biology of the fish and the environmental conditions affecting the stock". Therefore, we recommend that an interim fishery management plan for 2J3KL capelin explicitly account for their role facilitating energy transfer through the marine ecosystem, and for their unique fluctuations in abundance and recruitment based on environmental conditions. This includes both a minimum stock biomass and a maximum harvest cap.

   The minimum biomass threshold should be set at a level that preserves recruitment capacity during years with poor environmental conditions and ensures the ecological needs of predators that depend on capelin are provided. The Precautionary Approach Framework already dictates a maximum acceptable removal reference for stocks "at or below FMSY or some other described metric of fishing pressure". Forage fish management would see a harvest cap being set below the maximum sustainable removal reference. The difference between the target harvest rate and a maximum sustainable removal reference would serve as the 'buffer' to reduce the probability of fishing mortality exceeding that maximum rate in a year where stock biomass and recruitment is impaired by external conditions.

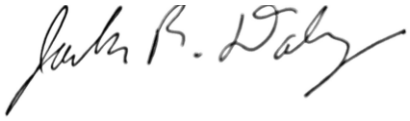
[8] Jubinville I, Schijns R, Rangeley R. 2022. Capelin in Crisis: Urgent Action Needed to Rebuild Abundance. Capelin in Crisis: Urgent Action Needed to Rebuild Abundance - Oceana Canada.

In summary, following the best available science for 2J3KL capelin and guidance from the Precautionary Approach Framework on harvest levels for critical zone stocks, serious interventions are necessary to promote the long-term recovery of the critically depleted, yet crucially important, capelin population.

We understand that the decision to stop fishing 2J3KL capelin is not an easy one and will impact the fishing industry. However, closing the 2J3KL capelin fishery until the population recovers and modern fisheries management tools are in place will provide the best chance for this severely depleted stock to rebuild. This decision is unfortunate but necessary to support healthy oceans and provide opportunities for coastal communities in Newfoundland and Labrador to steward a prosperous future fishery.

We appreciate the opportunity to provide input and we will continue to be engaged in the process. We look forward to working with you to rebuild capelin to abundance.

Yours Sincerely,



Jack Daly, M.A.
Marine Scientist, Oceana Canada
Tel: (508) 961-7059
jdaly@oceana.ca

Robert Rangeley, Ph.D.
Science Director, Oceana Canada
Tel: (902) 401-2961
rrangeley@oceana.ca