



May 5, 2023

Daniel Shewchuk, Chairperson
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Iola Metuq, Chairperson
Nunavik Marine Region Wildlife Board
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Dear Messrs. Shewchuk and Metuq:

Re: NWMB-NMRWB Joint Written Public Hearing to Consider the 2023–24 Total Allowable Catch levels for Northern and Striped shrimp.

We are pleased to submit the following as the joint submission from the quota holders for Northern and Striped shrimp from Nunavut and Nunavik.

This submission provides the following recommendations from industry for the Boards' consideration for quotas in the Western and Eastern Assessment Zones (WAZ and EAZ respectively) for overall total allowable catch (TACs) for both Northern (*Pandalus borealis*) and Striped (*Pandalus montagui*) shrimp. This includes harvest levels for both species in Nunavut and Nunavik-West (NU-W and NK-W) and Nunavut and Nunavik-East (NU-E and NK-E), as well as the distribution of TAC within the Davis Strait management units of Davis Strait West and East (DSW and DWE), including the allocation of the TAC among fleet interests.

Our submission also addresses recommended Management Measures. We recommend the continuation of the practice whereby both northern and striped shrimp allocations in NU-W and NK-W may be harvested in either management unit, regardless of land claim boundaries. We also recommend the continuation of the practice whereby both northern and striped shrimp allocations in NU-E and NK-E may be harvested in either management unit, regardless of land claim boundaries.

The above measures represent a past practice acceptable to the industry and both boards, as well as DFO, and serve as a laudable example of industry and Board cooperation, together with DFO. This recommendation accords with a standing decision of both boards of July 13, 2022 and previous years in support of harvesting of these species in either management unit.

Industry remains extremely concerned that the largest aggregation of montagui in Ungava Bay lies in the dividing line between NKE and NKW. This aggregation is assigned quota in both East and West, but a slight shift in the shrimp aggregation in the wrong direction during fishing season could shut down the fishery. We appreciate that this is a complex issue and ask the Boards if they might request that DFO form a small DFO Science - industry working group to review this issue in more detail with a view to identifying a less risky approach.

Makivik also wishes to inform its Board that it was denied access to DFO/Industry science peer review sessions for EAZ/WAZ this year, and respectfully requests that the NMRWB ask the Minister to ensure that Makivik is invited to participate in all industry sessions that involve land claims areas.

We thank you for the opportunity to make this submission, and thank you in advance for your consideration of this submission. Please do not hesitate to contact us if you have any questions.

Respectfully submitted,



Derek Butler, Executive Director
Nunavut Fisheries Association



Andy Moorhouse, Vice-President, Economic Development
Société Makivik Corporation

cc:

Joyce Murray, Minister of Fisheries, Oceans and Canadian Coast Guard
Gabriel Nirlungayuk, Regional Director General, Arctic Region, Fisheries and Oceans Canada
Nirlungayuk, Regional Director General, Arctic Region, Fisheries and Oceans Canada
David Akeegok Minister of Economic Development and Transportation
Aluki Kotierk, President, Nunavut Tunngavik Incorporated
Olayuk Akesuk, President, Qikiqtani Inuit Association
Julai Alikatuktuk, CSPF, NFA Director
Jerry Ward, QC, NFA Director
Sandy Kautuq, BFC, NFA Director
Joeli Qamanirq, AFA, NFA Director
Tony Wright, Makivik

2023/24 Submission of the Nunavut Fisheries Association and Makivik Corporation

Re: Nunavut Wildlife Management Board and Nunavik Marine Region Wildlife Board Written Public Hearing to Consider the 2023–24 Total Allowable Catch Levels for Northern and Striped Shrimp

Introduction

The following is the submission of the Nunavut Fisheries Association (NFA) and Makivik Corporation (MC), representing the respective allocation holders for Northern and Striped shrimp under consideration by the Nunavut Wildlife Management Board (NWMB) and Nunavik Marine Region Wildlife Board (NMRWB). The submission is in response to the invitation dated April 14, 2023 for submissions for the joint public hearing of the Boards.

Background

For the 2023/24 Northern (*Pandalus borealis*) and Striped (*P. montagui*) Shrimp fisheries¹ in the WAZ and EAZ, Fisheries and Oceans Canada (DFO) has provided the Boards with the requisite materials including the Proposal, science summaries and a Summary of Stakeholder Views from the 2023 North Shrimp Advisory Committee Meeting of April 4th and 5th, 2023.

The details on stock status for the four stocks under consideration in this written response are provided in the above noted materials submitted by DFO and available to the parties. In short, changes in the fishable biomass of the stocks' status under consideration year over year are as follows:

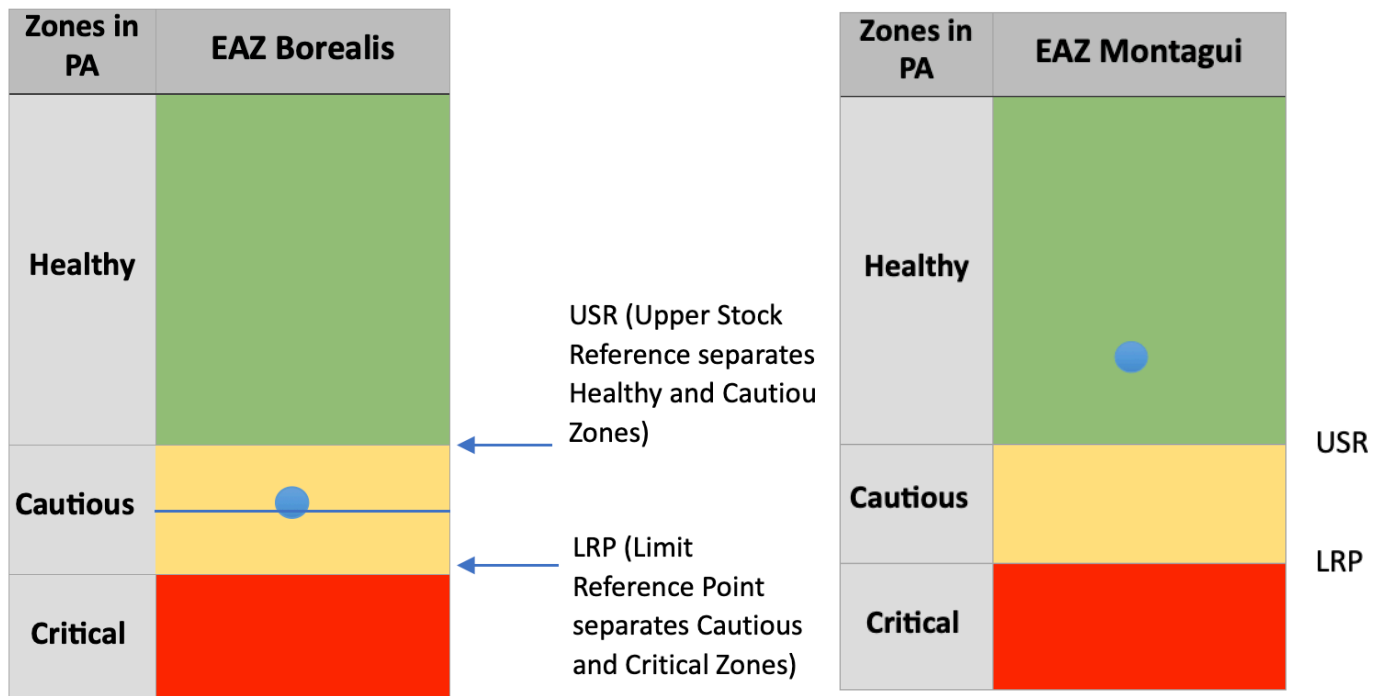
- **EAZ borealis** - Fishable biomass index decreased by 29.8% and is at 36,911 t. The index is above the midpoint in the cautious zone;
- **EAZ montagui** - Fishable biomass index decreased by 5.9% and is at 14,325 t. It remains in the healthy zone, at 171% of the proposed USR (Upper Stock Reference, which delineates healthy from cautious zone);
- **WAZ borealis** - Fishable biomass index increased by 19.9%, to 23,939 t. It is in the healthy zone, at 194% of the proposed USR; and
- **WAZ montagui** - Fishable biomass index increased 61.1% to 104,737 t. It is also in the healthy zone at 248% of the proposed USR.

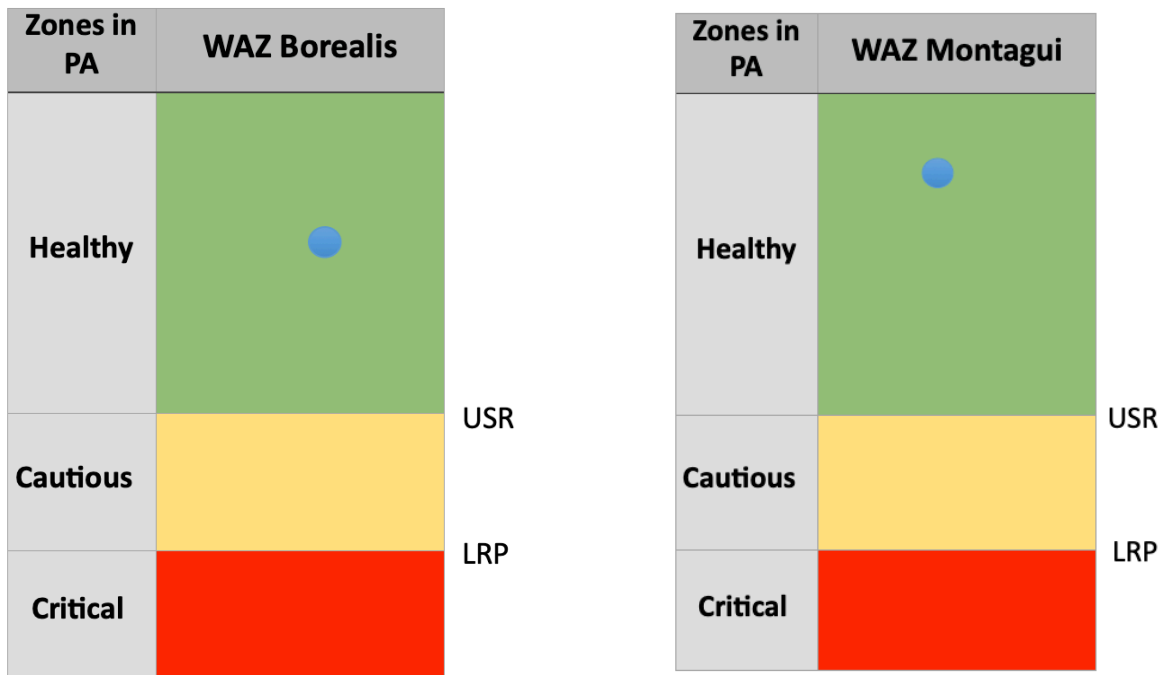
¹ We will use the standard nomenclature in DFO documents of borealis and montagui in the balance of our submission.

Three of four stocks remain well into their respective healthy zones, and the other (EAZ borealis) is above the midpoint of the cautious zone, where exploitation rates well above 15% are permitted. Target Exploitation Rates under the Precautionary Approach (PA) Framework for stocks in the healthy zone are around 20%, but can be higher. Maximum 15% ERs are only proscribed in the 4th or bottom quadrant of the cautious zone, while EAZ borealis is in the 2nd quadrant, slightly above the midpoint in that zone.

The below figures (and the two on the next page) illustrate the status of Spawning Stock Biomass (SSB) for each stock (EAZ borealis and montagui, and WAZ borealis and montagui) in their respective PA frameworks, as shown on pages 6, 7, 9 and 11 in the CSAS Science Advisory Report 2023/013 submitted to the respective Boards by DFO. For ease of viewing, the DFO figures are re-illustrated below into the green, yellow and red, representing the healthy, cautious and critical zones in each figure. The most recent stock status marked by the blue dots.

It is of note that we are dealing with three stocks that are “well into,” as DFO says, their respective healthy zones. Just one stock - EAZ borealis - is in the middle of the cautious zone but as we discuss later, has cycled up and down repeatedly.





The TACs and corresponding Exploitation Rates (ERs) contained in this submission take into account the recommended ERs provided for in the Integrated Fisheries Management Plan for these species. The general and long-standing practice for shrimp stocks under the PA Frameworks in the south has been to set TACs at 20% ERs in the healthy zone.

Even in the cautious zone, a 15% ER is only proscribed in the lower quadrant (the lowest 25% of the cautious zone) with rates well above 15% permitted in the upper areas of the zone, which is where EAZ Borealis is found.

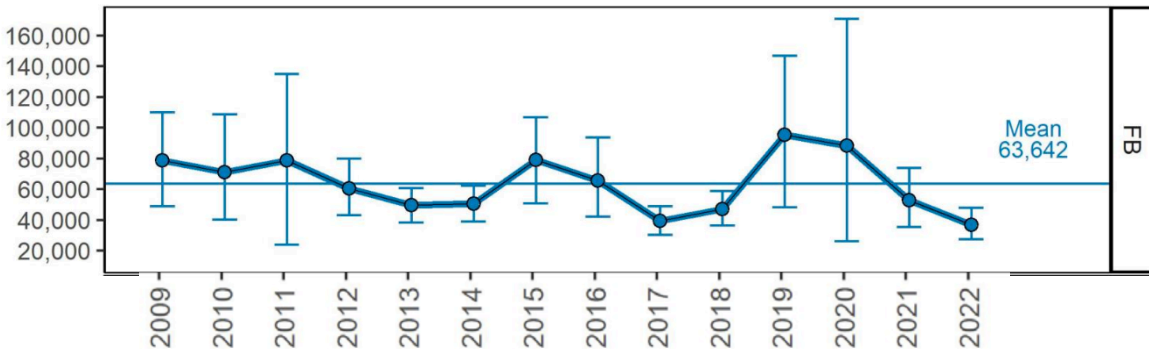
In the North, until recently the absence of a PA Framework and USR and LRP levels has largely been stated by DFO as a rationale for maintaining ERs at lower levels. With this now addressed, we can now benefit from having the necessary elements in place that permit higher ERs when stocks warrant such consideration.

We turn now to specific industry recommendations and rationale, for EAZ and WAZ, for both borealis and montaguui respectively. The submission closes with recommendations on distribution or sharing within the management units.

Eastern Assessment Zone (EAZ) - borealis and montaguui

For **P. borealis**, it should be noted that the fishable biomass index has been highly variable, and cycles between peak to trough every 2 or 3 years in the time series (years of available data on biomass index, 2009-2022). As shown in the figure below, the stock index has typically moved in a cycle up and down in this period. The peaks of 2011, 2015 and 2019 are in turn followed by lows of 2013, 2017 and 2022. The variability in the index suggests a

level of stock stability over time. The spawning stocks biomass index (SSB) follows a similar pattern, with less variability.



In light of this, our proposal for the 2023/24 TAC would have the effect of moderating the increases and decreases, in a stock index that is highly variable, as shown above. It would provide greater stability to the industry, and avoid the extremes of chasing signals up or down.

In keeping with the observed decline in the fishable biomass index, we propose a TAC reduction, but that it be moderated in the light of the history of the stock cycling up and down.

Industry recommends a TAC for 2023/24 of 9,057 t for 223/24, or a reduction of 1,675 t. This correlates to an Exploitation Rate of 24.5%.

Industry would underscore that its recommendation of a nominal 24.5% ER is effectively equivalent to a real ER of 18.5%, given a large portion of the EAZ allocation falls into Davis Strait East (DSE), which industry considers nonviable and hence ‘paper fish,’ given that it will not be caught. As such, the recommended real ER being proposed by industry of 18.5% falls well within the parameters of the PA for a stock in the upper level of the cautious zone.

For **P. montagui**, the stock is deemed to be well into the healthy zone. An Exploitation Rate (ER) of 15% would provide a TAC of 2,149 t, a very conservative ER for a healthy stock (ERs of 20% would provide for a TAC of 2,865 t, consistent with ERs in other healthy stocks). Industry nonetheless recommends a TAC of 2,149 t for P. montagui in the EAZ, as it should provide an adequate increase for 2023/24.

Western Assessment Zone (WAZ) - borealis and montagui

For **P. borealis**, given that the TAC in 2022/23 was 3,958 t, at a 20.0% Exploitation Rate (ER), and the fishable biomass index has increased 19.9% (well into the healthy zone), industry supports maintaining the ER of 20.0%, which results in a TAC of 4,788 t. To underscore, this is the same ER as in 2022/23, on an increasing stock. Only a portion of this is expected to be harvested, so the actual ER is expected to be lower.

For **P. montagui** in the WAZ, the 2022/23 TAC was 12,096 t with an Exploitation Rate (ER) of 18.6%. The fishable biomass index has increased 61.1% (again, well into the healthy zone). Industry therefore supports an increase in TAC over 2022/23; our recommendation is for a TAC of 17,282t, which equates to a conservative ER of 16.5%. As noted earlier on borealis in the EAZ, industry is supportive of moderating both increases and decreases in the interests of sustainability and industry stability. The number of survey sets completed, confidence intervals and other factors form the backdrop to our recommendation.

We next turn to joint recommendations of the NU/NK industry on how the above recommended TAC levels should be distributed.

Distribution/Sharing of Recommended NU/NK Industry TACs

Western Assessment Zone Sharing

We first turn our considerations to the Western Assessment Zone. The WAZ is located fully within the Nunavut (NU) and Nunavik (NK) settlement areas where access is limited to the industry players in these Territories. Since the WAZ fishery started the agreement has been to share WAZ TACs between NU and NK on a 50/50 basis. Industry supports a continuation of this practice, for both borealis and montagui. Based on the above recommended 4,788 t borealis TAC and 17,282 t montagui recommendations for 2023/24, this would resort in the following sharing recommendations:

- WAZ Borealis - **2,394 t each** for NU and NUK
- WAZ Montagui - **8,641 t each** for NU and NUK.

Eastern Assessment Zone Sharing

In the Eastern Assessment Zone (EAZ) stocks are subdivided into three areas, being Davis Strait West and East (DSW and DSE respectively) and Nunavut and Nunavik East (NU-E and NK-E respectively).

EAZ Borealis

Our submission makes the following sharing recommendation for the TAC of 9,057 t referenced earlier in this submission. These recommendations are in the same proportions as those accepted and implemented in 2022/23.

It is recommended for 2023/24 that the 9,057 TAC recommendation be apportioned as follows:

- NU – 1,819 t in DSW, 1,364 t in DSE, and 560 t in NU/NKE, for a total of 3,743 t;
- NK – 202 t in DSW, 140 t in NU/NKE, for a total of 342; and
- Offshore – 4,122 t in DSW, 851 t in DSE, for a total of 4,972 t.

EAZ Montagu

As previously noted, in the EAZ stocks are subdivided into three areas, NU/NK E, DSW, and DSE. Given the anticipated decline in borealis in the EAZ, we propose an allowance of 574 t to the offshore, with the remainder to be distributed to NU/NK as a directed fishery based on the existing 70/30 split. Our sharing recommendation based on the 2,149 t TAC recommendation earlier in this submission is as follows:

- NU/NK E (Inuit land claim beneficiaries) – 1094.5 t NU, 480.5 t NK, as per the long-standing sharing agreement in place between NU and NK; and
- DSW/DSE (offshore) – 574 t, as a bycatch allowance.

Summary

This submission has outlined the joint recommendations of the Nunavut and Nunavik shrimp industries with respect to the TACs, sharing in the EAZ and WAZ, and the continuation of current management measures previously endorsed and accepted by industry, the Boards and DFO.

We remain available to respond to any questions of clarification or regarding content, and again thank the respective Boards for the opportunity to make this submission.

Respectfully submitted,

Nunavut Fisheries Association and Makivvik Corporation

SUMMARY TABLE OF 2023/24 Recommendations		
Shrimp Stock	TAC Recommendation	Sharing Recommendation
WAZ montagu	17,282 t	NU – 50% of TAC – 8,641 t; NK – 50% of TAC – 8,641 t.
WAZ borealis	4,788 t	NU – 50% of TAC – 2,394 t; NK – 50% of TAC – 2,394 t.
EAZ montagu	2,149 t	NU/NK – NU/NK E – 1,575 t directed fishery: <ul style="list-style-type: none"> • NU – 1,094.5 t • NK – 480.5 t Offshore – DSW/DSE – 574 t, as an allowance bycatch target.
EAZ borealis	9,057 t	NU – 1,819 t in DSW, 1,364 t in DSE, 560 t in NU/NK E, 3,743 t total; NK – 202 t in DSW, 140 t in NU/NK E, 342 t total; Offshore – 4,122 t in DSW, 851 t in DSE, 4,972 t