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In all correspondence, please refer to:

NAFO/25-154

30 June 2025

TO: All Contracting Parties; Scientific Council Chairs; Scientific Council Representatives; and Designated Experts for Stock Assessments

Dear Colleagues;

Subject: Scientific Council and STACFIS Shrimp Assessment Meeting Provisional Agendas, 09–11 September 2025

We wish to confirm that the *NAFO Scientific Council and STACFIS Shrimp Assessment Meeting* will be held 09–11 September 2025 at the NAFO Secretariat, in Halifax, Canada. For those delegates that are unable to attend the meeting in-person, Webex capabilities will be provided.

Pursuant to Rule 4.1 of the *NAFO Rules of Procedure: Scientific Council*, the Provisional Agenda for the NAFO Scientific Council and STACFIS Shrimp Assessment Meeting is hereby dispatched to Contracting Parties.

Yours sincerely,

Brynhildur Benediktsdóttir Executive Secretary

BB:db

cc: Diana González-Troncoso (Scientific Council Chair) and Martha Krohn (STACFIS Chair)

NAFO SCIENTIFIC COUNCIL AND STACFIS SHRIMP ASSESSMENT MEETING

NAFO Secretariat Halifax, Canada

09–11 September 2025

PROVISIONAL AGENDA

1. Provisional Agenda

The Scientific Council Shrimp Assessment Meeting Provisional Agenda (Appendix I), the STACFIS Agenda (Appendix II), Recommendations pertaining to NAFO stocks (Appendix III), and Designated Experts for NAFO stocks (Appendix IV), are also attached.

2. Venue of the Meeting

The NAFO Scientific Council and STACFIS Shrimp Assessment Meeting will take place, 9-11 September 2025, at:

NAFO Secretariat 1601 Lower Water Street, Suite 401 Halifax, Canada

For those delegates who will be participating virtually, a Webex invitation will be circulated closer to the meeting date.

The registration will start at 0900 hrs on 9 September 2025 followed by the Opening Session at 0930 hrs. The Executive Committee, including Designated Experts, will meet at 0900 hrs.

3. Scientific Papers

Scientists submitting Research Documents (SCR Docs) and Summary Documents (SCS Docs) for consideration at the meeting are requested to submit their papers to the Secretariat Inbox on the NAFO SharePoint site prior to the meeting. The Scientific Council prescribed <u>guidelines</u> for the preparation of scientific papers (and assessment papers) are provided on the NAFO website. Please note that Scientific Council recommends that SCR Docs shall have an abstract of approximately 250 words.

4. Data Requirements

Designated Experts are reminded of the 2010 NIPAG **recommendation** that, for shrimp in Division 3M and Divisions 3LNO, *biological and CPUE data from all fleets fishing for shrimp in the area should be provided, by 01 September.*

5. Representatives, Alternates, Experts and Advisers

In accordance with Rule 1 of the *NAFO Rules of Procedure: Scientific Council*, each Contracting Party shall notify the Executive Secretary of the <u>names of its representatives</u>, <u>alternates</u>, <u>experts and advisers</u> who will attend the Scientific Council Meeting, before commencement of the meeting. Please also indicate whether attendance will be in-person or virtually.

NAFO SCIENTIFIC COUNCIL AND STACFIS SHRIMP ASSESSMENT MEETING

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NAFO Secretariat Halifax, Canada

9-11 September 2025

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APPENDIX I. PROVISIONAL AGENDA - SCIENTIFIC COUNCIL SHRIMP ASSESSMENT MEETING

NAFO Secretariat

Halifax, Canada

09-11 September 2025

- I. Opening (Chair: Diana González-Troncoso)
 - 1. Appointment of Rapporteur
 - 2. Adoption of Agenda
 - 3. Attendance of Observers
 - 4. Plan of Work
- II. Review of Recommendations in 2024
- III. Fisheries Science (STACFIS Chair: Martha Krohn)
- IV. Reference Points for stocks with full assessment in 2025
- V. Formulation of Advice (see Annexes 1–3)
 - 1. Request for Advice on TACs and Other Management Measures (Item 1, Annex I)
 - a) Northern shrimp in Div. 3M
 - b) Northern shrimp in Divs. 3LNO
 - 2. Requests from Coastal States (Items 5 and 6 of Annex II, item 2 of Annex III)
 - a) Northern shrimp off West Greenland (Subareas 0 and 1)
 - b) Northern shrimp in Denmark Strait and off East Greenland (ICES Divisions XIVb and Va)

VI. Other Matters

- 1. Scheduling of Future Meetings
- 2. Topics for Future Special Sessions
- 3. Other Business
- VI. Adoption of Scientific Council and STACFIS Reports
- VII. Adjournment

ANNEX 1. COMMISSION'S REQUEST FOR SCIENTIFIC ADVICE ON MANAGEMENT IN 2025 AND BEYOND OF CERTAIN STOCKS IN SUBAREAS 2, 3 AND 4 AND OTHER MATTERS

(From <u>NAFO SCS Doc. 25/01</u>)

Following a request from the Scientific Council, the Commission agreed that items 1, 2, and 3 should be the priority for the June 2025 Scientific Council meeting subject to resources.

1. The Commission requests that the Scientific Council provide advice for the management of the fish stocks below according to the assessment frequency presented below. In line with the Revised NAFO Precautionary Approach Framework (Annex 4 of COM-SC Doc. 24-03) the Commission should be informed by the range of options and associated risks provided by the Scientific Council. The Commission will decide upon the acceptable risk level in the context of the entirety of the Scientific Council advice for each stock guided and as foreseen by the NAFO Precautionary Approach.

Yearly basis	Two-year basis	Three-year basis	Interim Monitoring Only
Cod in	Redfish in Division 3M	American plaice in	Subarea 6 Alfonsino
Division 3M	Thorny skate in Divisions	Division 3M	Subareas 2-3 Roughhead
	3LNO	Northern shortfin squid in	Grenadier
	Witch flounder in Divisions	Subareas 3+4	Capelin in Divisions 3NO
	3N0	Redfish in Division 30	
	Redfish in Divisions 3LN	Cod in Divisions 3NO	
	Yellowtail flounder in	American plaice in	
	Divisions 3LNO	Divisions 3LNO	
	Northern shrimp in		
	Divisions 3LNO		
	Northern shrimp in Division		
	3M		
	White hake in Divisions 3NO		

Advice should be provided using the guidance provided in **Annex A**, or using the predetermined Management Procedure in the cases where they exist (currently Greenland halibut 2+3KLMNO). For Division 3M shrimp supplementary advice in terms of fishing-days could also be considered as appropriate.

To implement this schedule of assessments, the Scientific Council is requested to conduct a full assessment of these stocks as follows:

- In 2025, advice should be provided for 2026 for: Cod in Division 3M
- In 2025, advice should be provided for 2026 and 2027 for: Yellowtail flounder in Divisions 3LNO, White hake in Divisions 3NO, Northern shrimp in Divisions 3LNO
 - With respect to Northern shrimp in Divisions 3LNO, Scientific Council is requested to provide its advice to the Commission prior to the 2025 Annual Meeting based on the survey data up to and including 2025.
- In 2025, advice should be provided for 2026, 2027 and 2028 for: Redfish in Division 30, Northern shortfin squid in Subareas 3+4.

The Commission also requests the Scientific Council to continue to monitor the status of all other stocks annually and, should a significant change be observed in stock status (e.g. from surveys) or in bycatch in other fisheries, provide updated advice as appropriate.

2. The Commission requests the Scientific Council to monitor the status of Greenland halibut in Subarea 2 + Divisions 3KLMNO annually to compute the TAC using the agreed Management Procedure and

determine whether exceptional circumstances are occurring. If exceptional circumstances are occurring, the exceptional circumstances protocol will provide guidance on what steps should be taken.

- 3. The Commission requests that Scientific Council continue to advance work on the 3LN redfish MSE processes during 2024-2025.
- 4. As practicable and taking into account Scientific Council capacity constraints, develop stock summary sheets for NAFO managed stocks that are evaluated using MSE processes.
- 5. In relation to the Ecosystem Roadmap as a whole, the Commission requests that the Scientific Council develop a reference document detailing the ecosystem roadmap, for completion in the next 1-3 years.
- 6. In relation to the habitat impact assessment component of the Roadmap (VME and SAI analyses), the Commission requests that Scientific Council:
 - a. Continue the development of a centralized data repository using ArcGIS online to host the data and data-products for scientific advice, in conjunction with the NAFO Secretariat
 - b. Work towards the reassessment of VMEs and impact of bottom fisheries on VMEs for 2027; including potential management options in the reassessment of bottom fisheries.
 - c. Develop materials on the potential of submitting NAFO coral bottom fishing closed areas as OECMs for discussion at the 2025 WG-EAFFM meeting.
- 7. The Commission requests the Scientific Council to develop reference points to facilitate the implementation of the Revised NAFO Precautionary Approach Framework, for stocks that currently do not have them.
- 8. In relation to its workload, the Commission requests the Scientific Council to:
 - a. Continue to update the 3-5 year work plan, which reflects requests arising from the 2024 Annual Meeting, other multi-year stock assessments and other scientific inquiries already planned for the near future. The work plan should identify what resources are necessary to successfully address these issues, gaps in current resources to meet those needs and proposed prioritization by the Scientific Council of upcoming work based on those gaps.
 - b. Consider undertaking internal, or support external, assessments to inform the ongoing effort to address the Scientific Council workload. Such assessments could include how to optimize:
 - i. the organization / structure and function of the Scientific Council, its standing committees and working groups,
 - ii. further development and implementation of the Scientific Council's workplan.
- 9. The Commission requests Scientific Council to conduct ongoing analysis of the Division 3M cod fishery data by 2025 in order to:
 - a. monitor the consequences of the management decisions (including the analysis of the redistribution of the fishing effort along the year and its potential effects on ecosystems, the variation of the cod catch composition in lengths/ages, and the bycatch levels of other fish species, benthos in general, and VME taxa in particular); and
 - b. carry out any additional monitoring that would be required, including Division 3M cod caught as bycatch in other fisheries during the closed period.
- 10. Noting the voluntary contribution of the United States to support a consultant to provide feedback on NAFO's processes to address climate change impacts, requests the SC to conduct an analysis of progress and/or outcomes of that work.

ANNEX A: Guidance for providing advice on Stocks Assessed

The Commission requests the Scientific Council to consider the following in assessing and projecting future stock levels for those stocks listed above. These evaluations should provide the information necessary for the Commission to consider the balance between risks and yield levels, in determining its management of these stocks:

Stochastic short-term projections (3 years) should be performed with the F levels that are included in the risk table from the Revised PA Framework (Table 1 below), based on the point estimate of biomass. The first year of the projection should assume a catch equal to the agreed TAC for that year. In instances where Scientific Council expects catches to be significantly different from the agreed TAC, an additional projection could be provided based on the best available catch estimation.

In relation to Tier 1 of the Roadmap Scientific Council should provide annually catch information in relation to 2TCI, including recent cumulative catch levels and a scoping of expected cumulative catch levels.

For stocks assessed with a production model, the advice should include updated time series or plots of:

- Catch and TAC of recent years
- Catch to relative biomass
- Relative Biomass
- Relative Fishing mortality
- Stock trajectory against precautionary approach reference points

For stock assessed with an age-structured model, information should be provided on stock size, spawning stock sizes, recruitment prospects, historical fishing mortality. Graphs and/or tables should be provided for all of the following for the longest time-period possible:

- historical yield and fishing mortality;
- spawning stock biomass and recruitment levels;
- Stock trajectory against precautionary approach reference points

For stocks for which only general biological and/or catch data are available, few standard criteria exist on which to base advice. The stock status should be evaluated in the context of management requirements for long-term sustainability and the advice provided should be consistent with the precautionary approach.

The following graphs should be presented for the longest time-period possible:

- catch and TAC of recent years
- length distributions
- time trends of survey abundance estimates
- an age or size range chosen to represent the spawning population
- an age or size-range chosen to represent the exploited population
- recruitment proxy or index for an age or size-range chosen to represent the recruiting population.
- fishing mortality proxy, such as the ratio of reported commercial catches to a measure of the exploited population.
- stock trajectory against precautionary approach reference points

In all cases any additional information the Scientific Council deems appropriate should be provided.

		Yield		P(F>F _{lim}) P(B <b<sub>lim)</b<sub>			P(F>F _{target})			P(B <b<sub>trigger)</b<sub>				P(By+3 > By)	(By+3-By)/By				
	Yield	Yield	Yield																
F in y+1 and	У	y+1	y+2																
following years	(50%)	(50%)	(50%)	у	y+1	y+2	у	y+1	y+2	y+3	у	y+1	y+2	у	y+1	y+2	y+3		
Critical Zone																			
F=0	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
F=X% current*	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
F current	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Cautious Zone																			
F lower edge leaf	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
F midrib leaf	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
F upper edge leaf	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Healthy Zone																			
F=0.75F _{msy}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
F_{target} =0.85 F_{msy}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
F _{lim} =F _{msy}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%

y current year (year in which the assessment is made, data until year y-1)

*X% may vary stock by stock. In the future, this framework may be modified to include F bycatch. The number of years in the risk projections table will be the same as the years of advice.

ANNEX 2. DENMARK (ON BEHALF OF GREENLAND) REQUESTS FOR SCIENTIFIC ADVICE ON MANAGEMENT IN 2025 AND BEYOND OF CERTAIN STOCKS IN SUBAREA 0 AND 1

(from <u>SCS Doc. 25/03</u>)

Denmark (on behalf of Greenland) Coastal State Request for Scientific Advice - 2026

Denmark (on behalf of Greenland) hereby request scientific advice on management in 2026 of certain stocks in NAFO Subareas 0 and 1. Denmark (on behalf of Greenland) requests the Scientific Council for advice on the following species:

1. Golden Redfish and Demersal Deep-Sea Redfish

Advice on Golden redfish (*Sebastes marinus*) and demersal deep-sea redfish (*Sebastes mentella*) in Subarea 1 was in June 2023 given for 2024-2026. The Scientific Council is requested to continue its monitoring of the above stocks and provide updated advice as appropriate in the event of significant changes in stock levels.

2. Atlantic Wolffish and Spotted Wolffish

Advice on Atlantic Wolffish (*Anarhichas lupus*) and Spotted Wolffish (*Anarhichas minor*) in Subarea 1 was in June 2023 given for 2024-2026. The Scientific Council is requested to continue its monitoring of the above stocks and provide updated advice as appropriate in the event of significant changes in stock levels.

3. Greenland Halibut, Offshore

Advice on Greenland Halibut, Offshore in Subareas 0 and 1 was given in 2024 for 2025 and 2026. Denmark (on behalf of Greenland) request the Scientific Council to provide catch advice according to the NAFO Precautionary Approach Framework (PAF). The advice should also include a range of risk-based catch options for 2026-2027. Specifically, Denmark (on behalf of Greenland) recommends that for each option a clear technical basis is provided and that a table with defined reference points is provided in the advice. Catch options that are in accordance with the NAFO PAF should be highlighted.

The advice shall remain a two-year advice, but Denmark (on behalf of Greenland) recommends the advice cycle to start at even years (starting with the 2026-2027 advice) to follow a request by the Scientific Council with the purpose of better distributing the workload of the Scientific Council.

4. Greenland Halibut, Inshore, West Greenland

Advice on the inshore stocks of Greenland Halibut in Subarea 1 was given in 2024 for 2025-2026. Denmark (on Behalf of Greenland) requests the Scientific Council to continue its monitoring of the above stocks and provide updated advice in the event of significant changes in stock levels.

5. Northern Shrimp, West Greenland

Subject to the concurrence of Canada as regards to Subareas 0 and 1, Denmark (on behalf of Greenland) requests the Scientific Council before December 2025 to provide advice on the scientific basis for management of Northern Shrimp (*Pandalus borealis*) in Subareas 0 and 1 in 2026 in line with Greenland's stated management objective of maintaining a mortality risk of no more than 35% in the first year prediction and to provide a catch option table ranging with 5,000 t increments. Future catch options should be provided for as many years as data allows for.

6. Northern Shrimp, East Greenland

Furthermore, the Scientific Council is in cooperation with ICES requested to provide advice on the scientific basis for management of Northern Shrimp (*Pandalus borealis*) in Denmark Strait and adjacent waters east of southern Greenland in 2026 and for as many years ahead as data allows for.

ANNEX 3. CANADA'S REQUEST FOR COASTAL STATE ADVICE IN 2026

(from <u>SCS Doc. 25/04</u>)

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

1. <u>Greenland halibut (Subarea 0 + 1 (offshore))</u>

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 provide risk-based advice on a range of TAC options for 2026 and 2027. 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 Revised (2024) Precautionary Approach Framework (PAF).

Specifically, Canada requests that, in addition to the risk table inputs provided in Table 2 of NAFO Revised PAF, the following options also be included:

- F_{status quo}
- Current TAC
- the 2019-2022 TAC level (36,370 t)

For each of the projections, please include the probabilities that biomass will increase or remain the same $(P(B2027 \ge B2025))$; and the probability that biomass will decrease (P(B2027 < B2025)).

Canada also requests that the NAFO Scientific Council define, in a table within the assessment document, stock reference points/indicators such as maximum sustainable yield (MSY), biomass at MSY (B_{MSY}), limit reference point (B_{lim}), and $B_{trigger}$.

Canada encourages the Scientific Council to continue to advance a model-based approach to bridge survey time series (i.e. data from the RV Paamiut and RV Tarajoq).

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 2026 to 2028 (inclusive). These options should be evaluated in relation to Canada's Harvest Strategy (2022 revised version attached) and NAFO's Revised 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 2026 to 2028. 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).

APPENDIX II. PROVISIONAL AGENDA - STACFIS

09-11 September 2025

- I. Opening (Martha Krohn)
 - 1. Appointment of Rapporteur
 - 2. Adoption of Agenda
 - 3. Plan of Work

II. General Review

- 1. Review of Recommendations in 2024
- 2. Review of Catches

III. Stock Assessments

- 1. Northern shrimp (Pandalus borealis) on the Flemish Cap (NAFO Division 3M) (Monitoring)
- 2. Northern shrimp (Pandalus borealis) on the Grand Bank (NAFO Divisions 3LNO) (Full assessment)
- 3. Northern shrimp (*Pandalus borealis*) off West Greenland (NAFO Subarea 0 and Subarea 1) (Full assessment)
- 4. Northern shrimp (*Pandalus borealis*) in the Denmark Strait and off East Greenland (ICES Divisions XIVb and Va) (Full assessment)
- IV. Other Business
 - 1. FIRMS Classification for NAFO Shrimp Stocks
- V. Ajournement

APPENDIX III. RELEVANT RECOMMENDATIONS

1. Northern Shrimp in Division 3M

NIPAG **recommended** in 2016 that further exploration of the relationship between shrimp, cod and the environment be continued in WGESA and NIPAG encourages the shrimp experts to be involved in this work.

Status: No progress from last year. This recommendation is reiterated.

STACFIS **recommends** *a* workshop be scheduled to advance the work being done on aging.

STACFIS **recommends** that an estimation of potential reference points be explored.

STACFIS **recommends** *exploration of a quantitative model for this stock.*

2. Northern Shrimp in Divisions 3LNO

NIPAG **recommended** in 2015 that ecosystem information related to the role of shrimp as prey in the Grand Bank (i.e. Divisions 3LNO) Ecosystem be presented to NIPAG.

Status: Available information was presented and will be presented annually.

NIPAG **recommends in 2018** that further work on the development of a recruitment index for Div. 3LNO be completed.

Status: Work is in progress to develop a shrimp population model.

STACFIS **recommends** that an estimation of potential reference points be explored.

3. Northern shrimp in SA 0 and SA 1

STACFIS **recommends** increasing commercial sampling of catch composition to cover both Canadian and Greenlandic fleets.

Status: In progress. Sampling has occurred since 2022 in the Greenlandic fleets. Whenever catches in Canadian SFA 1 are realized, sampling for size determination is advised.

STACFIS **recommends** developing a joint Canadian and Greenlandic sampling program to determine predation pressure from various fish species.

Status: In progress.

STACFIS **recommends** exploring the effects of the borrowing and banking system on the sustainability of the stock.

STACFIS **recommends** that a benchmark be undertaken for this stock in the next few years.

4. Northern shrimp in the Denmark Strait and off East Greenland (ICES Div. 14b and 5a)

STACFIS **recommends** *commercial sampling of catch composition.*

Status: This recommendation is reiterated and the work should be continued to improve coverage of the fleet.

STACFIS recommends exploration of the use of SPiCT for two and three year projections.

Status: Work is in progress. This recommendation is reiterated.

STACFIS **recommends** *exploration of available historical data from the east Greenland stock.*

Status: This recommendation is reiterated.

STACFIS **recommends** development of possible harvest control rules for this fishery.

Status: This recommendation is reiterated.

APPENDIX IV. DESIGNATED EXPERTS FOR ASSESSMENTS OF CERTAIN NAFO STOCKS

The following is the list of Designated Experts for 2025 assessments:

From the Science Branch, Northwest Atlantic Fisheries Centre, Department of Fisheries and Oceans, P. O. Box 5667, St. John's, NL, Canada A1C 5X1, Canada

Northern shrimp in Divisions 3LNO	Nicolas Le Corre	Nicolas.LeCorre@dfo-mpo.gc.ca						
From the Instituto Español de Oceanografia, Aptdo 1552, E-36200 Vigo (Pontevedra), Spain								
Northern shrimp in Division 3M	Jose Miguel Casas Sanchez	mikel.casas@ieo.csic.es						
From the Greenland Institute of Natural Resources, P. O. Box 570, DK-3900 Nuuk, Greenland								
Northern shrimp in Subarea 0+1	AnnDorte Burmeister	anndorte@natur.gl						
Northern shrimp in Denmark Strait	Tanja B. Buch	TaBb@natur.gl						