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**Report of the NAFO Joint Commission-Scientific Council Working Group on  
Risk-Based Management Strategies (WG-RBMS) Meeting**

16–18 July 2025  
Tallinn, Estonia

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**Report of the NAFO Joint Commission-Scientific Council Working Group on  
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**1. Opening by co-Chairs, Fernando González-Costas (European Union) and Ray Walsh (Canada)**

The Chairs, Fernando González-Costas (European Union) and Ray Walsh (Canada) opened the meeting at 14:10 hours (UTC +3 hours) on Wednesday, 16 July 2025, and welcomed representatives from Canada, Denmark (in respect of Faroe Islands and Greenland), European Union, Iceland, Japan, Norway, Russian Federation, United Kingdom, the United States of America and the Chair of the Scientific Council (Annex 1).

**2. Appointment of Rapporteur**

The NAFO Secretariat was appointed as rapporteur of this meeting.

**3. Adoption of Agenda**

The working group agreed to include the following items under agenda item 7 – Other Business:

- a. Scientific Council updates
- b. Establishment of an ad hoc Virtual Working Group to discuss a potential third NAFO Performance Review
- c. Marine Stewardship Council requirements under its Standard 3.0
- d. NPFC PA workshop

The agenda was revised and adopted, as outlined in Annex 2.

**4. Application of the 2+3KLMNO Greenland Halibut Management Strategy (COM Request 2)**

The Chair of the Scientific Council, Diana González-Troncoso (European Union) presented the Scientific Council response ([SCS Doc. 25/13](#)) to Commission request 2 (from [COM Doc. 24-18](#)). The Scientific Council Chair noted that exceptional circumstances are occurring due to gaps in the EU-Spain 3L survey series. Sensitivity analysis indicated that the application of the management Procedure (MP) adopted in 2024 was still appropriate. The WG-RBMS thanked the Scientific Council Chair for the presentation, and the Scientific Council for their work. Consistent with the Scientific Council advice, WG-RBMS agreed to recommend to the Commission that the Management Procedure be applied to set the TAC for 2026.

The working group discussed the timing of the review of the MSE, noting that the agreement at the 2024 meeting ([COM-SC Doc. 24-03](#)) was to complete an “update” assessment every three years, and a more in-depth MSE review after six years. It was noted that the three year “update” assessment would involve rerunning the previously agreed base case models unchanged, except for the addition of any available data in subsequent years. There was some confusion as to whether the three-year review would take place in 2026 or 2027, and the WG-RBMS, taking note of the considerable workload of the Scientific Council in 2026, clarified that three-year review will occur in 2027 and six-year in-depth review would take place in 2030.

**5. Progress on the MSE Process for 3LN Redfish (COM Request 3)**

Mariano Koen-Alonso (Canada) provided an update on the Scientific Council response to Commission request 3 relating to the MSE process for 3LN redfish. It was noted that during the January 2025 intersessional Scientific Council meeting, it was agreed that moving forward with an MSE at that stage may not be worth the time and

capacity required given the results shown. At the June 2025 meeting, the Scientific Council examined the results of the most recent modelling effort carried out by Japan to develop a simple production model for use as an operating model for the 3LN redfish MSE. While the additional work presented at the meeting was useful to inform potential paths forward, further work is required before operating models suitable for the MSE of this stock can be established. It was noted that the Scientific Council at its June 2025 meeting agreed to continue to explore the development of operating models taking into account the previously highlighted challenges. Progress on this work will be reviewed and discussed at the June 2026 Scientific Council meeting. In addition, there will be a parallel process to assess and estimate the reference points to provide the advice to 2027, as the 3LN redfish is scheduled to undergo a full assessment in 2026. The WG-RBMS thanked the Scientific Council for the update and the efforts made to date. It was noted that the Scientific Council has many full assessments to be completed at their June 2026 meeting, and that the Commission should be very aware of this workload when formulating the requests to the Scientific Council for 2026

## **6. Precautionary Approach Framework (PAF) Reference Points (COM Request 7)**

The Chair of the Precautionary Approach working group (PA-WG), Fernando González-Costas (European Union), provided an update on the progress towards the development of reference points for the stocks that had a full assessment at the June 2025 Scientific Council meeting ([SCS Doc. 24/21](#); [SCS Doc. 25/10](#); [SCS Doc. 25/13](#)). It was noted that due to the lack of a designated expert, the reference points for white hake in Divisions 3NOPs were not developed, and the same issue will occur with squid in Subareas 3+4 in September 2025. The PA-WG Chair also noted a series of general and stock specific choices that the Scientific Council took to implement the new PAF, such as  $B_{msy}$  proxies for stocks assessed with survey indices and how to set F levels for projections in the new PAF. The WG-RBMS took note of these choices and thanked the PA-WG Chair and the Scientific Council for the presentation and the work that went into applying the revised PAF. It was remarked that, when applying the PAF in future for other stocks, further assumptions may need to be made and reviewed by the WG-RBMS and the Commission.

As part of the discussions, it was observed that the Scientific Council advice from the draft June 2025 meeting report for redfish in Division 3O included very prescriptive language in the advice text (grey box). The revised PAF (Annex 4 of [COM-SC Doc. 24-03](#)) notes that the Scientific Council should not be prescriptive when providing the options in its advice. As such, the WG-RBMS agreed to recommend that the Scientific Council reconsider the prescriptive language in the latest advice on redfish in Division 3O and provide the Commission with additional information at the September 2025 Annual Meeting for consideration of a range of management options aligned with the PAF. It was also discussed the need or not to include in the summary sheets the grey box under the new PAF and the WG-RBMS conclusion was that it is convenient to keep the grey box in order to highlight the main considerations of the advice.

The Scientific Council Chair, Diana González-Troncoso (European Union), highlighted that the previous PAF was contained within a stand-alone Fisheries Commission Document ([FC Doc. 04-18](#)), and that the revised PAF is currently contained within Annex 4 of the 2024 WG-RBMS report. It would be beneficial for it to be contained within a stand-alone document for easy reference and consultation. It was flagged that there were some changes to the risk table that was included in the Commission requests to the Scientific Council ([COM Doc. 24-18](#)) that would need to be included. As such, the WG-RBMS agreed to recommend that the Commission adopt a standalone Commission document containing the revised Precautionary Approach Framework, including the modifications to the risk table that were incorporated in the 2024 Commission requests, as outlined in COM-SC RBMS-WP 25-01 (Annex 3).

## **7. Other Business**

### **a. Scientific Council Updates**

#### *Scientific Council Workload*

The Chair of the Scientific Council, Diana González-Troncoso (European Union), presented an update on the current state of the Scientific Council workload and the discussions that took place at the June 2025 Scientific

Council meeting ([SCS Doc. 25/13](#)). The Scientific Council identified an increase in requests as well as an increase in the number of Scientific Council and working group meetings in recent years in parallel to a decrease in Scientific Council members actively participating at the June meeting. It was stressed that the workplan has shown a limited capacity to solve repeated concerns about the Scientific Council workload. It was also highlighted that an additional day was added to the June 2025 meeting to have dedicated discussions about the structure and function of Scientific Council. After these discussions, Scientific Council concluded that the structure of SC works well when properly resourced, however decreased capacity has prevented the Scientific Council from functioning as intended. The Scientific Council Chair presented some options that were discussed when considering the workload, such as prioritizing benchmark assessments over MSEs and extending some of the scheduling of the full assessments. The WG-RBMS thanked the Scientific Council Chair for the presentation but noted that managing the stocks in NAFO is the core of the work of the organization, and that reducing the stock assessment frequency would not be the area to start looking at for ways to reduce workload. It was noted that discussions on this would continue at the 2025 NAFO Annual Meeting.

The Scientific Council Chair also highlighted the dire situation in relation to the number of vacant positions for Scientific Council Chairs and Designated Experts. Starting in September 2025 there will be three Scientific Council committees without chairs (STACFEN, STACFIS and STACREC), four working groups without Scientific Council co-Chairs (WG-RBMS, WG-CESAG, PA-WG and the Climate Change subgroup) and four Designated Expert positions vacant (3NOPs white hake, 3LNOPs thorny skate, squid in Subareas 3+4, and 3LNO EPU). Scientific Council noted that individuals are already facing heavy workloads, leaving little motivation to take on leadership roles. It was noted that this concern was also discussed during the WG-EAFFM meeting, and the WG-RBMS agreed to reiterate the recommendation that was made in relation to this issue during the WG-EAFFM meeting.

#### *Advice for redfish in Divisions 3LN*

The Scientific Council Chair provided an update on the advice for redfish in Divisions 3LN, noting that in 2024 the Scientific Council provided advice for two years (2025 and 2026), and the Commission decision at the 2024 Annual Meeting was to set the TAC for 2025 only. This stock is not included in the Commission request with the list of full assessments for the year 2025. The SC provided in June 2025 an update of the advice for 2026 based on the results of the Interim Monitoring Report. The advice for 2026 provided in 2024 was reiterated at the June 2025 Scientific Council meeting ([SCS Doc. 25/13](#)) based on the previous PAF. The main reasons for applying the previous PAF to produce the 2026 advice at the June 2025 meeting were that this stock was not fully assessed and did not have a Designated Expert until June 2025 and therefore the reference points for applying the new PAF could not be developed. The WG-RBMS thanked the Scientific Council Chair for the update and noted that there may be additional questions from Contracting Parties on this stock at the 2025 Annual Meeting.

#### *Advice for white hake in Divisions 3NOPs*

In addition to the update provided by the PA-WG Chair, the Scientific Council Chair noted that, where the Designated Expert position for white hake in Divisions 3NOPs was vacant at the June 2025 Scientific Council meeting, a full assessment could not be performed for this stock. As such, an Interim Monitoring Report was completed, and it was noted that there was no significant change in the status of this stock ([SCS Doc. 25/13](#)).

### **b. Establishment of an ad hoc Virtual Working Group to Discuss a Potential Third NAFO Performance Review**

The Chair of STACFAD, Robert Fagan (Canada), provided an update on the virtual working group that will be established to discuss the scope and timelines for the next NAFO Performance Review ([COM Doc. 24-20](#)). The virtual working group will work intersessionally to develop draft Terms of Reference and criteria for the review. The working group will present the results of its work to the Commission at the 2026 Annual Meeting with a recommendation on whether to launch the next Performance Review of NAFO, if deemed appropriate. In preparation of the establishment of this working group, Contracting Parties will be invited to submit

representatives to participate in the working group as well as any matters that should be included in the scope. The WG-RBMS thanked the STACFAD Chair for the update.

Reflecting on the discussions around the Scientific Council workload, it was noted that there may be benefit in having an external review of the issue, that could be included as part of the Performance Review. It was highlighted that the current timeline for the Performance Review would not be able to address the short-term needs of the Scientific Council. With that in mind, it was agreed that in addition to the process outlined by the STACFAD Chair, the WG-RBMS recommends that the Commission also consider, as a first step, to expeditiously launch an external Performance Review with a focused assessment of the scientific process within NAFO. It was remarked that the scientific process would include the work of the Scientific Council, as well as how the Commission interacts with the Scientific Council when formulating its requests for advice.

### **c. Marine Stewardship Council Requirements Under its Standard 3.0**

The WG-RBMS co-Chair, Ray Walsh (Canada), provided an updated in relation to recommendation 5 from the August 2024 WG-RBMS meeting ([COM-SC Doc. 24-03](#)). The recommendation was for the Commission to *send correspondence to the Marine Stewardship Council (MSC), and other certifying bodies as appropriate, highlighting the adoption of the Revised Precautionary Approach Framework and noting the concerns and challenges of requiring a Management Strategy Evaluation (MSE) for RFMO managed fisheries to receive certification.* Following the adoption of the recommendation by the Commission at the 2024 Annual Meeting, correspondence was sent to the MSC from the Chair of the Commission (NAFO/25-049) in February 2025. A response was received from the MSC and circulated to Contracting Parties on 17 April 2025 (NAFO/25-105, Annex 4) and the WG-RBMS noted that it would be beneficial for NAFO to be made aware of any ongoing progress on the review process focused on the MSC Fisheries Standard Toolbox, and agreed to send a follow-up correspondence to the MSC.

### **d. NPFC PA Workshop**

The WG-RBMS co-Chair, Fernando González-Costas (European Union), informed the WG-RBMS that NAFO has received an invitation to participate in a special session on the application of the precautionary approach that the Common Oceans Deep-sea Fisheries (DSF) Project are organizing for the North Pacific Fisheries Commission (NPFC) in December 2025.

## **8. Recommendations**

The WG-RBMS agreed to forward the following conclusions and recommendations to the Commission:

- 1. In relation to the application of the 2+3KLMNO Greenland halibut Management Strategy (agenda item 4),**
  - a. WG-RBMS acknowledges that exceptional circumstances were occurring due to recent gaps in the EU-Spain 3L survey series. Nevertheless, sensitivity analysis indicated that the application of the Management Procedure adopted in 2024 was still appropriate.**
  - b. WG-RBMS recommends, consistent with the Scientific Council advice, the continued application of the harvest control rule (excluding the EU-Spain 3L survey series) to set the TAC for 2026.**
- 2. In relation to the Precautionary Approach Framework:**
  - a. WG-RBMS recommends that, when providing stock management advice to the Commission, Scientific Council follow the Precautionary Approach Framework and provide the Commission with the range of scenarios specified in ANNEX A (Guidance for providing advice on Stocks Assessed) of [COM Doc. 24-18](#).**

- b. **WG-RBMS recommends that the Scientific Council reconsider the prescriptive language in the latest Scientific Council advice (grey box) on 3O redfish and provide the Commission with additional information at the September 2025 Annual Scientific Council and Commission meeting to allow the Commission to consider a range of management options aligned with the Precautionary Approach Framework.**
  - c. **WG-RBMS recommends that the Commission adopt a standalone Commission document containing the revised Precautionary Approach Framework document outlined in COM-SC RBMS-WP 25-01 (Annex 3) including the modifications to the risk table that were incorporated in the 2024 Commission requests ([COM Doc. 24-18](#)).**
- 3. **In relation to the Scientific Council's workload, WG-RBMS notes the dire situation with the lack of Chairs and Designated Experts, expresses the WG's strong concern, and recommends the Commission encourage Contracting Parties to find ways to ensure the positions are filled by the close of the September 2025 Annual Meeting.**
- 4. **In relation to the Marine Stewardship Council requirements under its Standard 3.0, WG-RBMS recommends that the Commission send a follow-up correspondence to the Marine Stewardship Council response dated 15 April 2025, requesting to keep NAFO aware of any ongoing progress on the review process focussed on the MSC Fisheries Standard Toolbox.**
- 5. **In relation to the discussions on the potential third NAFO Performance Review, it was agreed the process outlined in [COM Doc. 24-20](#) should continue. In addition, the WG-RBMS recommends that the Commission consider expeditiously launching in 2025, as a first step, an external performance review with a focused assessment of the scientific process within NAFO.**

## 9. Adoption of the Report

The report was adopted via correspondence following the end of the meeting.

## 10. Adjournment

The meeting was adjourned at 14:35 hours (UTC +3 hours) on Thursday, 17 July 2025.

It was noted that this would be the last meeting of the co-Chair Fernando González-Costas (European Union), and that his contributions as co-Chair to this working group since 2019 have been invaluable in progressing the work of the working group including the completion of two MSEs and the implementation of the revised PAF. To say he will be greatly missed in an understatement.

**Annex 1. List of Participants**

<b>CO-CHAIRS</b>	González-Costas, Fernando (European Union) Walsh, Ray (Canada)
<b>SC CHAIR</b>	González Troncoso, Diana (European Union)
<b>CANADA</b>	<b>In-person</b> Burns, Adam Byrne, Vanessa Fagan, Robert Koen-Alonso, Mariano Marsden, Dale Rayner, Gemma Simpson, Mark  <b>Virtual</b> Burridge, Angela Krohn, Martha Zegarmistrz, Justyna
<b>DENMARK (IN RESPECT OF FAROE ISLANDS AND GREENLAND)</b>	<b>Virtual</b> Wang, Ulla S.
<b>EUROPEAN UNION</b>	<b>In-person</b> Alpoim, Ricardo Blazkiewicz, Bernard Demblon, Jessica Garrido Fernández, Irene Gonçalves Patricia Märting, Kaire Teixeira, Isabel Tuvi, Aare Vielmini, Ilaria  <b>Virtual</b> Belmonte, Luis Mancebo, C. Margarita
<b>ICELAND</b>	<b>In-person</b> Bragi Bragason, Agnar
<b>JAPAN</b>	<b>Virtual</b> Butterworth, Doug Taki, Kenji
<b>NORWAY</b>	<b>Virtual</b> Bakke, Gunnstein Hallfreðsson, Elvar H. Sandberg, Per
<b>RUSSIAN FEDERATION</b>	<b>Virtual</b> Fomin, Konstantin
<b>UNITED KINGDOM</b>	<b>Virtual</b> Fischer, Simon Gawlyk, Joe

<b>UNITED STATES OF AMERICA</b>	<p><b>In-person</b> Kelly, Moira Mencher, Elizabethann Warner-Kramer, Deirdre</p> <p><b>Virtual</b> Jaburek, Shannah</p>
<b>NAFO SECRETARIAT</b>	<p><b>In-person</b> Benediktsdóttir, Brynhildur Aker, Jana LeFort, Lisa Perreault, Andrea</p> <p><b>Virtual</b> Bell MacCallum, Dayna</p>



**Annex 2. Agenda**

1. Opening by co-Chairs, Fernando González-Costas (European Union) and Ray Walsh (Canada)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Application of the 2+3KLMNO Greenland halibut Management Strategy (COM Request 2)
5. Progress on the MSE process for 3LN redfish (COM Request 3)
6. Precautionary Approach Framework (PAF) reference points (COM Request 7)
7. Other Business
  - a. SC update (3LN Redfish, PA document, SC workload)
  - b. Establishment of an ad hoc Virtual Working Group to discuss a potential third NAFO Performance Review
  - c. Marine Stewardship Council requirements under its Standard 3.0
  - d. NPFC PA workshop
8. Recommendations
9. Adoption of report
10. Adjournment

### Annex 3. Revised NAFO Precautionary Approach Framework (COM-SC RBMS-WP 25-01)

The Revised NAFO Precautionary Approach Framework is set out below. When implementing this Framework, the Commission should consider a gradual approach, for example if substantial TAC changes are indicated by the Revised Framework or if the required reference points have not yet been established. Further, the Commission and the Scientific Council, through WG-RBMS, should also consider potential refinements of the Framework that may become apparent over time, for example upon application across the NAFO stocks.

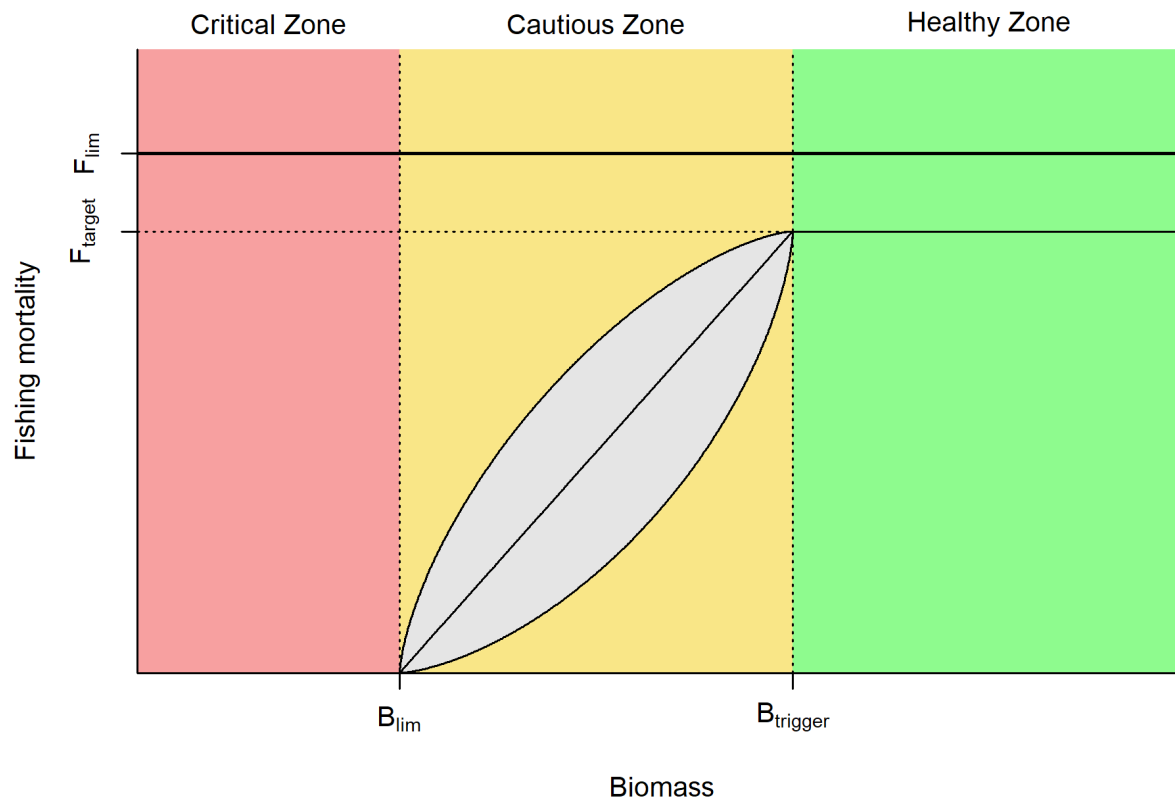
NAFO should apply this Precautionary Approach Framework in its fisheries management decision making. This framework defines three Zones (Healthy, Cautious, and Critical) to characterize the status of the stock. These zones are defined by two biomass reference points ( $B_{lim}$  and  $B_{trigger}$ ). Within this framework, the limit fishing mortality is defined as  $F_{lim}=F_{msy}$ , and  $F_{target}$  as a fraction of  $F_{msy}$  (Fig. 1).

Reference Points could be set as a function of the type of stock being managed. As a first step in the initial implementation of the PAF, the reference points or their best proxies, in the context of Figure 1 are set as follows:

$$F_{target}=0.85 \cdot F_{msy}.$$

$$B_{lim} = 0.30 \cdot B_{msy}$$

$$B_{trigger} = 0.75 \cdot B_{msy}$$



**Figure 1.** Schematic representation of the NAFO Precautionary Approach, including the leaf space to define fishing levels within the Cautious Zone.

## Commission

Management decisions by the Commission within these zones will be informed as follows:

### Healthy Zone:

In establishing an  $F$  for a stock in the Healthy Zone, the Commission should be informed by a range of options at, above, and below  $F_{\text{target}}$ , and associated risks, provided by the Scientific Council (Table 2) aimed at keeping the stock in the healthy zone.

### Cautious Zone:

$F$  should be generally managed within the boundaries of the leaf space defined by the structure of the PAF (Figure 1, Appendix 1).

Generally, the Commission should adopt an  $F$  that achieves the following policy objectives depending on stock trajectory and relative position in the cautious zone (Table 1).

**Table 1.**

Focus of management action within Cautious Zone		Stock status in the Cautious Zone	
		Low level	High level
Stock trajectory in the Cautious Zone	Decreasing Trend	Reduce risk of further stock decline	Mitigate stock decline
	Increasing Trend	Promote stock growth with high certainty	Promote stock growth

These focal elements for management actions are intended to articulate an increasing risk avoidance in management actions as the stock gets closer to  $B_{\text{lim}}$ . Overall, the intent is to avoid falling below  $B_{\text{lim}}$ .

### Critical Zone:

$F$  should be set as low as possible. In establishing  $F$ , the Commission should be informed by the range of options and associated risks provided by the Scientific Council (Table 2). The primary focus of management should be to rebuild the stock out of the Critical Zone.

## Scientific Council

The role of Scientific Council is to inform Commission's decision of where  $F$  should be set by characterizing the consequences of alternative management actions. These consequences would be typically described in terms of the status of the stock and  $F$  levels as:

- Probability of  $B > B_{\text{trigger}}$  within e.g. 1,2,3 years (depending on the stock)
- Probability of  $B < B_{\text{lim}}$  within e.g. 1,2,3 years (depending on the stock)
- Probability of  $B_{\text{future}} > B_{\text{current}}$  ( $B_{\text{future}} = 1,2,3$  years depending on stock) including indication of magnitude of this growth.

- Probability of  $F > F_{lim}$
- Probability of  $F > F_{target}$

To inform the Commission's decision, SC would also provide:

- Current stock status and confidence intervals
- Recent trajectory of the stock

Whenever deemed necessary by the Scientific Council, interpretations of the consequences of fishing options and/or any additional considerations and advice that may be relevant for the management decision should also be provided. SC should not be prescriptive among the options in its advice.

SC should provide the Commission with a risk-based table that would indicate the risks/probabilities associated with the items indicated above, based on available information. The  $F$  levels to consider would depend on the Zone where the stock status falls, and generally would follow the template table indicated below.

**Table 2. [The Revised NAFO Precautionary Approach Framework risk table.](#)**[y current year \(year in which the assessment is made, data until year y-1\)](#)

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

\*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.](#)

## Appendix 1. Implementation of the leaf HCR

The Leaf HCR represents a space within the Cautious Zone of the NAFO Precautionary Approach Framework (PAF) that bounds the F levels to be considered by Scientific Council in its advice to the Commission.

The Leaf HCR space is defined by a generalized formulation for the edges of the leaf, where the upper or lower edges of the leaf HCR can be obtained by defining  $F_t = f(B_t)$  as:

$$F_t = \frac{a^*(B_t - B_{lim})}{(B_x^* - B_{lim}) + (B_t - B_{lim})} \quad \text{Eq. 1}$$

where  $B_x^*$  is defined for the upper ( $B_x^{up}$ ) and lower leaf ( $B_x^{low}$ ) functions as:

$$B_x^* = B_{lim} + \left[ \frac{(B_{50}^* - B_{lim})(B_{trigger} - B_{lim})}{(B_{trigger} - B_{lim}) - 2(B_{50}^* - B_{lim})} \right] \quad \text{Eq. 2}$$

where  $B_{50}^*$ , defined for the upper ( $B_{50}^{upper}$ ) and lower ( $B_{50}^{lower}$ ) leaf edge functions, controls the width of the leaf. In order to maintain a symmetric leaf shape  $B_{50}^*$  needs to be set in a “complementary” way in the upper and lower edge functions.

To facilitate the setup of the leaf width,  $B_{50}^*$  has been implemented as determined by  $X_{50}^*$ , i.e.  $B_{50}^* = X_{50}^*(B_{trigger} - B_{lim}) + B_{lim}$ , where  $X_{50}^*$  represents the fraction within the  $B_{lim} - B_{trigger}$  range where the  $B_{50}^*$  is located. For the upper leaf edge function,  $X_{50}^{upper}$  must fall between 0 and 0.5, while for the lower leaf edge function  $X_{50}^{lower}$  must fall between 0.5 and 1. As mentioned above, to maintain the symmetry of the NAFO Leaf HCR the two  $X_{50}^*$  must be “complementary” in the sense that  $X_{50}^{lower} = 1 - X_{50}^{upper}$ .

Using  $B_x^*$  from Eq. 2,  $a^*$  can then be calculated for both the upper ( $a^{up}$ ) and lower ( $a^{low}$ ) leaf edge functions as:

$$a^* = \frac{F_{target} [(B_x^* - B_{lim}) + (B_{trigger} - B_{lim})]}{(B_{trigger} - B_{lim})}. \quad \text{Eq. 3}$$

The Revised NAFO PAF has adopted a middle width leaf for its initial implementation, corresponding to:

$$X_{50}^{lower} = 0.75$$

$$X_{50}^{upper} = 0.25$$

**Annex 4. MSC letter**  
(from NAFO/25-105)

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In all correspondence,  
please refer to:

NAFO/25-105

17 April 2025

TO: All Contracting Parties – Heads of Delegation

Dear Colleagues,

**Subject:** Communication regarding the Marine Stewardship Council requirements under its Standard 3.0

At the *NAFO Annual Meeting* in September 2024, the following recommendation was adopted:

- In relation to the Scientific Council workload (agenda item 8), WG-RBMS recommends that the Commission send correspondence to the Marine Stewardship Council (MSC), and other certifying bodies as appropriate, highlighting the adoption of the Revised Precautionary Approach Framework and noting the concerns and challenges of requiring a Management Strategy Evaluation (MSE) for RFMO managed fisheries to receive certification.

In consultation with NAFO President, Deirdre Warner-Kramer, please find enclosed the following documentation regarding the above-mentioned subject for onward transmission to NAFO Heads of Delegation:

- The response received from the Marine Stewardship Council
- The original submission transmitted to the Marine Stewardship Council (NAFO/25-049 of 19 February 2025)

Yours sincerely,

Brynhildur Benediktsdóttir  
Executive Secretary

BB:ll

Enclosed: The response received from the Marine Stewardship Council (01 pgs.)  
NAFO/25-049 of 19 February 2025 (07 pgs.)

cc: Ray Walsh, WG-RBMS co-Chair (Email: [ray.walsh@dfo-mpo.gc.ca](mailto:ray.walsh@dfo-mpo.gc.ca))  
Fernando Gonzalez-Costas, WG-RBMS co-Chair (Email: [fernando.gonzalez@ieo.csic.es](mailto:fernando.gonzalez@ieo.csic.es))



Marine Stewardship Council

April 15, 2025

Northwest Atlantic Fisheries Organization  
1601 Lower Water Street, Suite 401  
Halifax, Nova Scotia  
B3J 3P6

NAFO/25-049

Dear Deirdre,

**Re: Communication regarding the Marine Stewardship Council requirements under its Standard 3.0**

Thank you for your letter dated 19<sup>th</sup> February 2025 (NAFO/25-049) and for your patience whilst we drafted a response.

We want to acknowledge the issue with NAFO managed fisheries' ability to meet the MSC Fisheries Standard v3.1 with respect to harvest strategies tested using Management Strategy Evaluation. We have also heard of similar challenges in other settings, particularly in respect to non-tuna Regional Fisheries Management Organisations. We are taking this matter very seriously.

The MSC wants to ensure that our Standard works effectively for delivering on the promise of oceans teeming with life, and seafood supplies safeguarded for this and future generations. We wish to avoid placing unnecessary burden on management agencies as we reflect global best practice in setting our standard and processes. The MSC is currently undertaking a review process focussed on the MSC Fisheries Standard Toolbox. In addition to that, the issue you have raised with Fisheries Standard v3.1 Section SE for non-tuna RFMOs has also been prioritised internally for policy consideration. We will develop the details for that process over the next couple of months. We will keep partners informed on the next steps for that proposed policy process as details become available. [Kurtis Hayne](#), Programme Director for Canada will be your point of contact.

We recognize the challenges with the latest version of the Standard and are fully committed to learning from your ongoing feedback and making meaningful improvements. Please let us know if you would like to set up a meeting to discuss this further; we would be happy to.

Yours sincerely,

A handwritten signature in dark ink, appearing to read "Polly Burns".

Polly Burns, Head of Standard Implementation

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