



NORTHWEST ATLANTIC
FISHERIES ORGANIZATION

Meeting Proceedings of the Commission

01 September 2021–31 August 2022

Printed and distributed by:
Northwest Atlantic Fisheries Organization
Summit Place • 1601 Lower Water Street • Suite 401
Halifax • Nova Scotia • B3J 3P6 • Canada

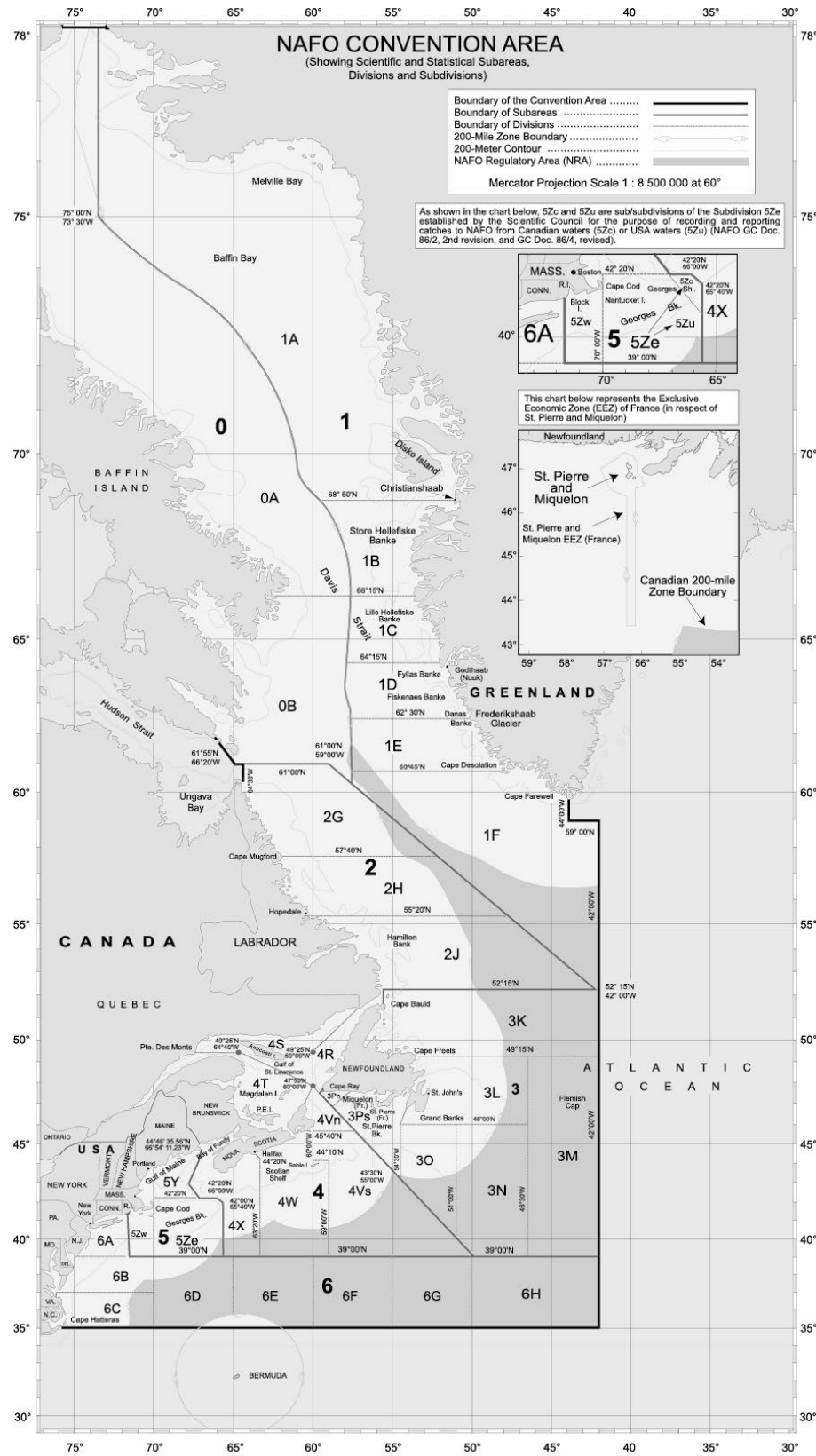
September 2022

Foreword

This issue of the *Meeting Proceedings of the Commission* contains the meeting reports of the Commission (COM) and the joint Commission-Scientific Council (COM-SC), including their subsidiary bodies and working groups held between 01 September 2021 to 31 August 2022. This follows a NAFO cycle of meetings starting with an Annual Meeting rather than by calendar year.

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June 2015



Structure of the Northwest Atlantic Fisheries Organization (NAFO)

(01 September 2021 to 31 August 2022)

CONTRACTING PARTIES

Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), European Union (EU), France (in respect of St. Pierre et Miquelon), Iceland, Japan, Norway, Republic of Korea, Russian Federation, Ukraine, United Kingdom, and United States of America (USA).

PRESIDENT

Temur Tairov (Russian Federation)

ACTING PRESIDENT – as of February 2022

Deirdre Warner-Kramer (United States of America)

CONSTITUENT BODIES

Commission *Chair* – Temur Tairov (Russian Federation)
vice-Chair – Deirdre Warner-Kramer* (United States of America) – Appointed Acting Chair Feb. 2022

Scientific Council *Chair* – Karen Dwyer (Canada)
vice-Chair – Diana González-Troncoso (European Union)

STANDING COMMITTEES

Commission	Standing Committee on Finance and Administration (STACFAD)	<i>Chair</i> – Robert Fagan (Canada)
	Standing Committee on International Control (STACTIC)	<i>vice-Chair</i> – Jake Round (United Kingdom)
		<i>Chair</i> – Kaire Märtin (European Union)
		<i>vice-Chair</i> – Patrick Moran (USA)
Scientific Council	Standing Committee on Fishery Science (STACFIS)	<i>Chair</i> – Mark Simpson (Canada)
	Standing Committee on Research and Coordination (STACREC)	<i>Chair</i> – Diana González-Troncoso (European Union)
	Standing Committee on Publications (STACPUB)	<i>Chair</i> – Rick Rideout (Canada)
	Standing Committee on Fisheries Environment (STACFEN)	<i>Chair</i> – Miguel Caetano (European Union)

SECRETARIAT

Executive Secretary	Fred Kingston
Deputy Executive Secretary / Senior Finance and Staff Administrator	Stan Goodick
Senior Fisheries Information Administrator	Jana Aker (until 30 September 2021)
Scientific Information Administrator	Dayna Bell MacCallum
Scientific Council Coordinator	Tom Blasdale
Senior Fisheries Commission Coordinator	Ricardo Federizon
Office Administrator	Sarah Guile
IT Manager	Matthew Kendall
Database Development/Programmer Analyst	DJ Laycock
Senior Executive Assistant to the Executive Secretary	Lisa LeFort
Science Information Administrator (Interim)	Fiona McAllister (Spring 2021 – February 2022)
Fisheries Information Administrator (Interim)	Fiona McAllister (October 2021 – February 2022)
Senior Publications/Web Manager	Alexis Pacey
Fisheries Information Administrator	Mikaela Soroka (began February 2022)

Headquarters Location

401-1601 Lower Water St., Halifax, Nova Scotia, B3J 3P6, Canada



Northwest Atlantic Fisheries Organization



**Report of the NAFO Commission and its Subsidiary Bodies
(STACTIC and STACFAD)**

43rd Annual Meeting of NAFO
20-24 September 2021
via WebEx

NAFO
Halifax, Nova Scotia, Canada
2021

**Report of the NAFO Commission and its Subsidiary Bodies
(STACTIC and STACFAD)**

43rd Annual Meeting of NAFO, 20-24 September 2021
via WebEx

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PART I. Report of the NAFO Commission

43rd Annual Meeting of NAFO, 20-24 September 2021
via WebEx

I. Opening Procedure

1. Opening by the Chair, Stéphane Artano (France, in respect of St. Pierre et Miquelon)

The 43rd Annual Meeting of NAFO was opened on Monday, 20 September 2021 at 08:05 hrs. Due to the global pandemic, the meeting was held by videoconference. A total of 212 Delegates was present from the 13 NAFO Contracting Parties (Annex 3). The NAFO President and Chair of the Commission, Stéphane Artano (France, in respect of St. Pierre et Miquelon) welcomed delegates to the meeting in his opening remarks (Annex 4).

Opening statements from Canada, Denmark (in respect of the Faroe Islands and Greenland), European Union, Japan and the United States of America (USA) are attached (Annexes 5-9).

2. Appointment of Rapporteur

The NAFO Secretariat (Fred Kingston, Executive Secretary, and Ricardo Federizon, Senior Fisheries Management Coordinator) was appointed as Rapporteur.

3. Adoption of Agenda

The provisional agenda was adopted as previously circulated to all Contracting Parties in NAFO/21-165 (Rev. 2) on 23 July 2021 (Annex 2).

The summary of decisions and actions taken by the NAFO Commission is presented in Annex 1.

4. Admission of Observers

Upon the invitation of the Executive Secretary, in accordance with the NAFO Rules for Observers, the following intergovernmental organizations (IGOs) attended this meeting: ABNJ Deep-Sea Fisheries Project, Convention on Biological Diversity Secretariat, Food and Agriculture Organization (FAO) of the United Nations, North-East Atlantic Fisheries Commission (NEAFC), North Pacific Anadromous Fish Commission (NPAFC) and the Western Central Atlantic Fishery Commission (WECAFC).

The NPAFC provided an Opening Statement (Annex 12).

The non-governmental organizations (NGOs) accredited with NAFO Observer Status that attended the 43rd Annual Meeting were: Dalhousie – Environment Information: Use and Influence, Dalhousie University – Marine & Environmental Law Institute, Deep Sea Conservation Coalition, Ecology Action Centre (EAC) and the Shark Trust.

The Deep Sea Conservation Coalition and Ecology Action Centre (EAC) provided Opening Statements for inclusion in the report (Annexes 10 and 11).

5. Publicity

In accordance with established practice, the President reminded Contracting Parties that they have agreed that no public statements would be made until after the conclusion of the meeting when a press release would be prepared by the Executive Secretary in consultation with the Chairs of the Commission and Scientific Council.

II. Supervision and Coordination of the Organizational, Administrative and Other Internal Affairs

6. Review of Membership of the Commission

The membership of the Commission has not changed since the 2020 Annual Meeting and is currently comprised of thirteen (13) Contracting Parties: Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), European Union (EU), France (in respect of St. Pierre et Miquelon), Iceland, Japan, Norway, Republic of Korea, Russian Federation, Ukraine, United Kingdom and United States of America (USA).

7. Administrative and Activity Report by NAFO Secretariat

The Administrative Report and Financial Statements (COM Doc. 21-05 Rev.) was referred to STACFAD for its review.

8. Recruitment of NAFO Executive Secretary for the 2023-2026 term

The recruitment process for the NAFO Executive Secretary was referred to STACFAD.

9. NAFO Headquarters Agreement

Canada provided a Working Paper indicating that it expects to ratify the Headquarters Agreement by the spring of 2022 (COM WP 21-33). The President noted that the signed Headquarters Agreement was circulated to Contracting Parties in 2019 in NAFO/19-162.

10. Review of the list of experts to serve as panelists under the NAFO Dispute Settlement provisions

The President referred to COM Working Paper 21-06 that listed, as of 31 August 2021, the experts nominated by Contracting Parties to serve as possible panelists in an ad hoc panel established under the dispute settlement provisions of the NAFO Convention (Article XV).

11. Guidance to STACFAD

The Administrative Report and Financial Statements (agenda item 7) and the Recruitment of NAFO Executive Secretary for the 2023-2026 term (agenda item 8) were already referred to STACFAD for its review. The Chair of STACFAD, Robert Fagan (Canada), was invited to prepare a report before the closing session. The STACFAD report and recommendations were presented under agenda item 31.

12. Guidance to STACTIC

The President noted that a number of recommendations of Joint Commission–Scientific Council Working Groups that are up for adoption at this meeting would be referred to STACTIC. The Chair of STACTIC, Kaire Märtin (European Union), was invited to prepare a report before the closing session. The STACTIC report and recommendations, including the recommendations from the STACTIC Intersessional Meeting in May 2021, were presented under agenda item 28.

III. Coordination of External Affairs

13. Report of Executive Secretary on External Meetings

The President referred to COM Working Paper 21-29 in which the Executive Secretary reports on NAFO's participation in external activities since the 2020 Annual Meeting.

14. International Relations

a. Relations with other International Organizations

The President referred to Working Papers in which the Executive Secretary reports on developments over the past year concerning the Biological Diversity Beyond Areas of National Jurisdiction (BBNJ) negotiations in the United Nations (COM WP 21-14) and concerning NAFO's international relations with other international organizations (COM WP 21-13).

b. NAFO Members as Observers to External Meetings

At the last Annual Meeting, it was agreed that the following NAFO Contracting Parties would observe at meetings of the following organizations during 2020/2021:

- Canada would represent NAFO at the North Atlantic Salmon Conservation Organization (NASCO) and the North Pacific Fisheries Commission (NPFC).
- Denmark (in respect of the Faroe Islands and Greenland) would represent NAFO at the North East Atlantic Fisheries Commission (NEAFC).
- European Union would represent NAFO at the International Commission for the Conservation of Atlantic Tunas (ICCAT) and South Indian Ocean Fisheries Agreement (SIOFA).
- Norway would represent NAFO at the South East Atlantic Fishery Organisation (SEAFO) and the North Atlantic Marine Mammal Commission (NAMMCO).
- United States of America would represent NAFO at the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), the North Pacific Anadromous Fish Commission (NPAFC) and the South Pacific Regional Fisheries Management Organization (SPRFMO).

The reports by these Observers were presented in the following Working Papers: NASCO (COM WP 21-30), NPFC (COM WP 21-31), NEAFC (COM WP 21-36), ICCAT (COM WP 21-24), SIOFA (COM WP 21-25), SEAFO (COM WP 21-26), NAMMCO (COM WP 21-27), CCAMLR (COM WP 21-34), NPAFC (COM WP 21-46) and SPRFMO (COM WP 21-35).

The same Contracting Parties agreed to represent NAFO at the same meetings for 2021/2022 with the exception of SEAFO. As Norway is withdrawing from SEAFO, it cannot be a NAFO observer to its meetings. Japan agreed to represent NAFO at future meetings of SEAFO and report to the Commission.

c. Areas Beyond National Jurisdiction (ABNJ) Deep-Sea Fisheries Project

The Executive Secretary referred to COM Working Paper 21-32 concerning the NAFO Secretariat's proposal that the Organization becomes a partner to the GEF project "*Deep-sea Fisheries under the Ecosystem Approach*" that is managed by the FAO ("*ABNJ Deep Sea Fisheries Project*"). This proposal was discussed at the July 2021 meeting of the Joint Commission–Scientific Council Working Group on the Ecosystem Approach Framework to Fisheries Management (WG-EAFFM), which recommended that the Commission support the ABNJ Deep Sea Fisheries Project, including offering in-kind support from NAFO as a partner to this Project.

Following this recommendation, the Secretariat estimated that NAFO could commit only in-kind support in the amount of approximately USD 3.03 million over the 5-year term (2022–2027). Much of the in-kind support would focus on the component of the Project concerning "*strengthening effective management of deep-sea fisheries*" and would involve the work of almost all NAFO bodies, including those focused on the revision of the NAFO Precautionary Approach Framework (PAF) and the implementation of an Ecosystem Approach Framework (EAF) to fisheries management.

The Commission agreed that:

- **NAFO becomes a partner to the “Deep-sea Fisheries Project” and commit only in-kind support in the amount of approximately USD 3.03 million over the Project’s 5-year term (2022–2027).**

Following this agreement, the Executive Secretary will prepare NAFO’s letter of commitment to the Project.

d. Possible Memorandum of Understanding (MOU) between the NAFO Secretariat and the Secretariat of the Sargasso Sea Commission

The President referred to COM Working Paper 21-21 concerning the possibility of signing a Memorandum of Understanding (MOU) between the NAFO Secretariat and the Secretariat of the Sargasso Sea Commission (SSSC). A draft text of a possible MOU has already been discussed by the Scientific Council and the July 2021 meeting of the Joint Commission–Scientific Council Working Group on the Ecosystem Approach Framework to Fisheries Management (WG-EAFFM). The WG-EAFFM recommendation that the Commission support the development of an MOU between the SSSC and the NAFO Secretariat was presented under agenda item 18.c.

15. Oil and Gas Activities in the NAFO Regulatory Area

The President referred to COM Working Paper 21-16 prepared by the Executive Secretary outlining the NAFO Secretariat’s actions over the last year under the information exchange arrangement between NAFO and Canada related to oil and gas activities in the NAFO Regulatory Area (NRA). The Secretariat has also relayed to Contracting Parties notifications of the Impact Assessment Agency of Canada (IAAC) concerning its assessments of proposed drilling sites in the NRA, as well as industry Notices to Mariners when a drillship is expected to transit through the NRA.

IV. Joint Session of Commission and Scientific Council

16. Implementation of 2018 Performance Review Panel recommendations

The President referred to the COM Working Paper 21-17 that outlined the status of the implementation of the recommendations of the 2018 Performance Review Panel.

As agreed at the 2019 Annual Meeting, the NAFO Secretariat will provide an annual update on progress the Organization has made in addressing the recommendations of the 2018 Performance Review Panel on the basis of the “*Action Plan for the Implementation of the Recommendations from the 2018 Report of the NAFO Performance Review Panel*” (COM Doc. 19-32).

17. Presentation of scientific advice by the Chair of the Scientific Council

a. Response of the Scientific Council to the Commission’s request for scientific advice

The Chair of the Scientific Council (SC), Carmen Fernandez (European Union), presented this year’s scientific advice. The advice represents the response of SC to the request from the Commission (COM Doc. 20-16). The scientific advice on fish stocks and on other topics were formulated mainly during the SC meeting in June 2021 (SCS Doc. 21/14 Rev.), except for the shrimp stocks in 3M and in 3LNO, which were formulated on 08 September 2021 during the NAFO/ICES *Pandalus* Assessment Group (NIPAG) meeting (SCS Doc 21-17).

The advice relating to risk-based management strategies, ecosystem approach to fisheries management, and bycatch and discards was taken on by Working Groups at their subsequent meetings (see agenda items 18.b, 17.c, and 27). A summary of the SC advice on fish stocks in which the Commission took management actions at this meeting (see agenda items 21 and 22) is presented in the table below. The detailed advice and responses to the Commission requests are contained in the above-mentioned documents.

Fish Stock	SC Advice
Cod in Div. 3M	Yield of less than or equal to 5 000 tonnes in 2022 results in a very low probability ($\leq 10\%$) of SSB being below B_{lim} in 2023 and a very low probability of exceeding F_{lim} . However, given the present low level of the SSB and projected decline of total biomass under any fishing scenario, in order to promote growth in SSB, SC advises catches of no more than 3 000 tonnes in 2022.
Redfish in Div. 3M	SC advises that catches do not exceed $F_{0.1}$ level, given the life history of the stock. This corresponds to a TAC of 10 933 t in 2022 and 11 171 t in 2023.
Shrimp in Div. 3M	To be consistent with the precautionary approach, SC advises that no directed fishery should occur in 2022.
Cod in Divs. 3NO	No directed fishing in 2022 to 2024 to allow for stock rebuilding.
American plaice in Divs. 3LNO	In accordance with the rebuilding plan, there should be no directed fishing on American plaice in Div. 3LNO in 2022, 2023 and 2024. Bycatch of American plaice should be kept to the lowest possible level and restricted to unavoidable bycatch in fisheries directing for other species.
Yellowtail flounder in Divs. 3LNO	Fishing mortality up to 85% F_{msy} , corresponding to catches of 22 100 t, 20 800 t, and 19 900 t in 2022 to 2024 respectively, have risk of no more than 30% of exceeding F_{lim} .
White hake in Divs. 3NOPs	For 2022-2023, catches of white hake in 3NO should not increase. Average annual total catches of the most recent five years were around 400 tonnes.
Capelin in Divs. 3NO	For 2022-2024, no directed fishery.
Greenland halibut in Divs. 2+3KLMNO	The TAC for 2022 derived from the HCR is 15 864 t. This is 4% lower than the 2021 TAC (16 498 t). Exceptional Circumstances are not occurring. The disruption of the 2021 Canadian Spring 3LNO survey, in addition to the years 2020 and 2017, will trigger Exceptional Circumstances next year.
Shrimp in Divs. 3LNO	No directed fishery in 2022 and 2023 as the stock is below B_{lim} with no indication of short-term recovery.

b. Feedback to the Scientific Council regarding the advice and its work during this meeting

A feedback question pertaining to 3M cod was forwarded to SC. Specifically, it asked about the impact of the June 2021 Faroese 3M cod survey catches on the advice provided for 2022. A total of 630.6 tonnes, equating to an additional 42% of the agreed TAC for 2021, was caught during the survey. The SC response to the question was drafted at this meeting (Annex 13 – COM WP 21-42).

c. Other issues as determined by the Chairs of the Commission and the Scientific Council

The SC Chair brought forward two issues:

- SC noted that with the information currently available, SC considers the Faroe Islands 3M cod survey initiative conducted in June 2021 did not fulfil the requirements of a valid scientific survey and more closely resembles a commercial fishery. SC further noted that protocols from Article 4 in the Conservation and Enforcement Measures (NAFO COM Doc. 21/01) do not require review of proposed survey research plans and confirmation of their scientific validity by SC. In this regard, SC recommends that the Commission amend this procedure to include a scientific review of proposed research surveys in the NAFO Regulatory Area (NRA) to ensure scientific best practices are followed (Annex 14 – COM-SC WP 21-15).

In reaction to this recommendation, Denmark (in respect to Faroe Islands and Greenland) issued a statement (Annex 15 – COM-SC WP 21-16).

The deliberations in addressing the issue of the Faroese survey continued at the Commission. They are reflected in the agenda items 21.a, and 28 in this report.

- In presenting the SC response to the Commission request pertaining to the development of a 3–5-year work plan and recalling the discussions at the Joint Commission-Scientific Council Working Group on Risk-based Management Strategies (WG-RBMS) meeting in August 2021, the SC Chair raised concern with regards the prioritization of SC tasks. SC presented a detailed schedule and timeline outlining resource requirements in the performance of all its tasks, among which three major tasks are the PA framework review, a review and evaluation of the Greenland halibut management strategy, and the development and evaluation of a management strategy for 3LN redfish. SC noted that the PA framework review is already underway, and that it expects the Greenland halibut process to take two years and the 3LN redfish process to take three years. Given the current workload and resources available, SC indicated that it cannot perform these three major tasks simultaneously and proposed that one of the two Management Strategy Evaluations (Greenland halibut or 3LN redfish) be postponed.

Further discussions on this issue are reflected in agenda items 18.b and 20.

18. Meeting Reports and Recommendations of the Joint Commission-Scientific Council Working Groups

a. Joint Commission-Scientific Council Working Group on Improving Efficiency of NAFO Working Group Process (E-WG), 2021

The Executive Secretary referred to COM-SC Working Paper 21-06, which is the recommendation from the Joint Commission-Scientific Council Efficiency Working Group. The Working Group recommended three (3) two-week periods where intersessional meetings by STACTIC and other Working Groups may be held, namely:

- 21 February to 04 March 2022,
- 25 April to 06 May 2022, and
- 08 to 19 August 2022.

Contracting Parties are not obliged to schedule meetings during these periods, but these dates may help in future planning of intersessional meetings.

The recommendations of the Working Group were **adopted** (Annex 16 – COM-SC WP 21-06). The Commission also agreed that this Working Group continue in 2022 under the same terms of reference.

b. Joint Commission–Scientific Council Working Group on Risk-based Management Strategies (WG-RBMS), August 2021

The co-Chairs, Fernando Gonzalez (European Union) and Ray Walsh (Canada), presented the August 2021 meeting report (COM-SC Doc. 21-04) and the recommendations (COM-SC WP 21-07):

Key items discussed at the Working Group include, among others:

- PAF Review,
- Greenland halibut Management Strategy Evaluation (MSE),
- 3LN Redfish MSE,
- Prioritization of the three tasks above.

The recommendations of WG-RBMS were **adopted** (Annex 17 – COM-SC WP 21-07).

The co-Chairs also highlighted the issue of the prioritization among the two MSEs and the PAF review. No consensus was reached at the WG-RBMS meeting. While SC expressed that it would be extremely difficult to perform the tasks simultaneously, Canada, on the other hand, indicated that it had allocated funding for a position dedicated to the 3LN redfish MSE review, and considers that this will ease the workload on SC allowing both MSEs to proceed simultaneously.

At this session, the detailed schedule and timeline presented by SC outlining resource requirements in the performance of its tasks, including the PAF review and the simultaneously performance of the two MSEs, was further discussed. Canada informed about its planned deliverables for the coming year in advancing the review of 3LN MSE (Annex 18 – COM-SC WP 21-12). Further discussions on this issue continued again at the separate sessions of the Commission and SC (see agenda item 20).

c. Joint Commission–Scientific Council Working Group on Ecosystems Approach Framework to Fisheries Management (WG-EAFFM), July 2021

The co-Chairs, Andrew Kenny (United Kingdom) and Elizabethann Mencher (United States of America), presented the July 2021 meeting report (COM-SC Doc. 21-03) and the recommendations (COM-SC WP 21-08 Rev.).

Key items discussed at the Working Group include, among others:

- Significant Adverse Impact (SAI)
- Vulnerable Marine Ecosystem (VME) closures
- EAF Roadmap and the 2022 Workshop
- Review of Chapter II – NAFO CEM measures.

The recommendations of WG-EAFFM were **adopted** (Annex 19 – COM-SC WP 21-08 Rev.).

In addition, the proposal revising the boundaries of Fogo, Corner Rise and Newfoundland Seamount closures was **adopted** (Annex 20 – COM-SC WP 21-13).

d. Joint Commission–Scientific Council Catch Estimation Strategy Advisory Group (CESAG), April 2021

The President referred to the report of the April 2021 meeting of CESAG (COM-SC Doc. 21-02) and its recommendations (COM-SC WP 21-09).

Report of the NAFO Commission, 20-24 September 2021

Key items discussed at the Working Group include, among others:

- 2020 catch estimates conducted by the Secretariat and forwarded to SC,
- Observer program best practices.

The recommendations of CESAG were **adopted** (Annex 21 – COM-SC 21-09).

19. Formulation of Request to the Scientific Council for Scientific Advice on the Management in 2023 and Beyond of Certain Stocks in Subareas 2, 3, 4, 6 and Other Matters

In accordance with the procedure outlined in FC Doc. 12-26, a steering committee was formed to assist in the drafting of the Commission Request. The committee consisted of the SC Coordinator and representatives from Canada and European Union.

The Request, developed with the assistance of the committee, was **adopted** (Annex 22 – COM WP 21-43 Rev. 3). Request items pertaining to fish stock assessments, 2+3KLMNO Greenland halibut and 3LN redfish MSE processes, Precautionary Approach Framework (PAF) are considered the priority items for the June 2022 SC meeting subject to resources and COVID-related restrictions.

V. Conservation of Fish Stocks in the Regulatory Area

20. Recommendations of the Joint Commission-Scientific Council Working Group on Risk-based Management Strategies (WG-RBMS), August 2021 (if more discussion is required)

In reference to the prioritization issue described in agenda item 17c and 18b and pertaining to the Greenland halibut Harvest Control Rule, SC expressed that short-term extension of the management regime beyond 2023 does not pose any problem from a scientific perspective (Annex 23 – COM WP 21-44).

With the SC explanation and conclusion outlined in Annex 23 (COM WP 21-44), and the Canadian input commitment to the 3LN Redfish MSE (see agenda item 17.b and Annex 18 – COM-SC WP 21-12), the Commission considered that it is possible to perform the two MSEs simultaneously under revised timelines.

21. Management and Technical Measures for Fish Stocks in the Regulatory Area, 2022

The Quota Table and the Effort Allocation Scheme for Shrimp Fishery in NAFO Division 3M for 2022, presented in Annex 24, incorporates the Total Allowable Catches (TACs) and effort allocation scheme decisions, as well as the update of the footnotes.

a. Cod in Division 3M

To reach consensus, the Commission **agreed** on the TAC of 4 000 tonnes for 2022.

The TAC represents a compromise among the TAC proposals which ranged from 3 000 to 5 000 tonnes. The flanking measures, such as time-area fishing limitations, port landing inspections and use of sorting grids designed to protect the spawning stock and juvenile cod were extended to 31 December 2022 (see agenda item 28).

Japan reiterated its understanding that SC would continue to review the effectiveness of the flanking measures, as agreed at the 42nd Commission meeting.

Referring to the 3M Cod survey conducted in the Flemish Cap in June 2021 (see item 17.c), Canada issued a statement:

“Canada would like to express its profound concern over the excessive catch of 630 tonnes of cod in division 3M taken in 2021 by Denmark, in respect of the Faroe Islands, under the auspices of scientific research. This unilateral action seriously contradicts NAFO’s foundational commitments “to ensure the long-term conservation and sustainable use of the fishery resources in the Convention Area and, in so doing, to safeguard the marine ecosystems in which these resources are found.”

The Scientific Council has stated that “the Faroe Islands 3M cod survey initiative does not fulfil the requirements of a valid scientific survey and more closely resembles a commercial fishery”. This harvest outside of an allocated quota puts at risk the conservation of this stock, which NAFO is charged to manage sustainably.

Canada is very disappointed by the erosion of trust that these actions have triggered, a shared trust that had been hard-fought within NAFO and had served the Commission well in recent years. Furthermore, the international credibility of NAFO and its Scientific Council as a leader among regional fisheries management organizations is something all Contracting Parties have worked for many years to achieve, is a source of pride for Contracting Parties, and should be strongly protected.

The first step to protect this trust and credibility is to ensure that this is never again permitted to occur. NAFO must take concrete steps to ensure that its conservation and enforcement measures are robust, and Canada remains committed to working with other Contracting Parties to achieve this objective.”

Norway supported the statement made by Canada.

In regard to the quota allocation and adjustments to the percentage shares of 3M Cod, the European Union and the United Kingdom issued a joint statement. It is presented in Annex 25 (COM WP 21-23).

b. Redfish in Division 3M

It was **agreed** on the TAC corresponding to the $F_{0.1}$ scenario, *i.e.*, 10 933 tonnes in 2022 and 11 171 tonnes in 2023.

c. Pelagic *Sebastes mentella* (oceanic redfish) in Sub-area 2 + Divisions 1F and 3K

The Commission **agreed** to rollover the TAC, which is set at zero, noting that the TAC might be adjusted in accordance with footnote 3 of the Quota Table.

d. Shrimp in Division 3M

It was **agreed** to impose a moratorium on the fishing of this stock for 2022.

The Commission will endeavour to have an in-person meeting before the next Annual Meeting to consider the transition from a fishing effort-based management scheme to a TAC-based scheme. Should the COVID-19 situation prevent an in-person meeting, a virtual one will be held.

e. Splendid alfonsino in Sub-Area 6

It was **agreed** to ban fishing of this stock indefinitely until SC could conduct full assessment of this stock and provide advice.

Report of the NAFO Commission, 20-24 September 2021

22. Management and Technical Measures for Fish Stocks Straddling National Jurisdictions, 2022

a. Cod in Divisions 3NO

It was **agreed** to maintain the moratorium applicable to 2022, 2023, and 2024.

b. American plaice in Divisions 3LNO

It was **agreed** to maintain the moratorium applicable to 2022, 2023, and 2024.

c. Yellowtail flounder in Divisions 3LNO

The Commission **agreed** on a TAC of 20 000 tonnes, applicable to 2022 and 2023.

d. Witch flounder in Divisions 3NO

It was **agreed** to rollover the TAC of 1 175 tonnes for 2022.

e. White hake in Divisions 3NO

It was **agreed** to rollover the TAC of 1 000 tonnes applicable to 2022 and 2023.

f. Capelin in Divisions 3NO

It was **agreed** to maintain the moratorium applicable to 2022, 2023, and 2024.

Consequently, Article 7.10 of the NAFO Conservation and Enforcement Measures (CEM) was revised to read:

“Considering the importance of capelin as a food source, the moratorium on 3NO capelin will continue until at least 31 December ~~2021~~2024.”

g. Greenland halibut in Sub-area 2 and Divisions 3KLMNO

As calculated by SC and consistent with the MSE and HCR, it was **agreed** to set the TAC at 15 864 tonnes in 2+3KLMNO, 11 755 tonnes of which is allocated to the fishery in 3LMNO.

h. Shrimp in Divisions 3LNO

It was **agreed** to maintain the moratorium applicable to 2022 and 2023.

23. Other matters pertaining to Conservation of Fish Stocks

There was no further matter discussed under this agenda item.

VI. Ecosystem Considerations

24. Recommendations of the Joint Commission–Scientific Council Working Group on Ecosystems Approach Framework to Fisheries Management (WG-EAFFM), July 2021 (if more discussion is required)

In addition to the WG-EAFFM recommendation to extend the existing closed areas for an additional five years, which was **adopted** by the Commission under agenda item 18.c, the proposal to expand the boundaries of five (5) existing closed areas and to establish four (4) additional closures, on an interim period of two years, was **adopted** (Annex 26 – COM WP 21-41 Rev.).

Regarding the review of the EAF Roadmap, Canada expressed:

“Canada supports the independent review of the Ecosystem Roadmap under the condition that SC leads the process throughout, in selecting the reviewers and developing the Terms of Reference. The SC should select reviewers who have appropriate expertise in ecosystem and stock assessment science, and these reviewers should not work for any Contracting Party government.

As effectively the client, WG-EAFFM should have an opportunity to review the Terms of Reference developed by SC to ensure that the review will align with its expectations for this exercise.”

25. Other matters pertaining to Ecosystem Considerations

There was no further matter discussed under this agenda item.

VII. Conservation and Enforcement Measures

26. Recommendations of the Joint Commission–Scientific Council Catch Estimation Strategy Advisory Group (CESAG), April 2021 (if more discussion is required)

There was no further matter discussed under this agenda item.

27. Meeting Report and Recommendations of the Ad hoc Working Group on Bycatches, Discards, and Selectivity (WG-BDS) in the NAFO Regulatory Area, July 2021

The Chair of WG-BDS, Temur Tairov (Russian Federation), presented the meeting report (COM Doc. 21-04) and the recommendations (COM WP 21-18).

Key items discussed at the Working Group include, among others:

- Results of the re-analysis conducted by the Secretariat of the Haul by Haul data 2016-2019 (spatio-analysis) in further support of Tasks 2.1 and 2.2 of the Action Plan,
- SC response to Commission requests (in support to Tasks 2.2 and 3.1)
 - Survivability rates of discarded species,
 - Bycatch of moratoria stocks as impediment to recovery,
 - Greenland shark (*Somniosus microcephalus*) bycatch and discards
- Development of potential fishery- and time-specific management options in support of Task 4 for further discussion.

The recommendations were **adopted** (Annex 27 – COM WP 21-18).

Concerning Greenland shark, a proposal was tabled to amend NAFO CEM Article 12 (COM WP-21-40). The proposal did not gain consensus. The proponent, United States of America, indicated that it would continue working with other Contracting Parties in order to address this issue at the next Annual Meeting.

In concluding this agenda item, the Chair indicated that he is stepping down from the position. The Commission thanked Temur Tairov for his services and leadership.

28. Report of STACTIC from this Annual Meeting and Recommendations

The STACTIC Chair, Kaire Märtin (European Union), presented the STACTIC Meeting Report (see Part II), and brought the following proposed amendments to the NAFO CEM to the Commission for consideration and adoption:

Report of the NAFO Commission, 20-24 September 2021

- STACTIC EDG-WP 20-05 “*Change to Article 5.15.f of the NAFO CEM*” (Annex 28)
- STACTIC WP 21-07 “*Insertion of reference to Annex II.I Part B in NAFO CEM Annex IV.A*” (Annex 29)
- STACTIC WP 21-13 Rev. “*Measures Concerning Vessels Demonstrating Repeat Non-compliance of Serious Infringements in the NAFO Regulatory Area*” (Annex 30)
- STACTIC WP 21-17 Rev. 2 “*Legend for Annex I.A of the NAFO CEM*” (Annex 31)
- STACTIC WP 21-20 Rev. “*List of serious infringements: use of sorting grids – NAFO CEM Article 38.1.g*” (Annex 32)
- STACTIC WP 21-22 Rev. “*Observer data collection*” (Annex 33)
- STACTIC WP 21-28 Rev. 2 “*NAFO CEM Article 7 and Article 7 bis realignment and Extension of Port State control measures*” (Annex 34)
- STACTIC WP 21-37 Rev. “*NAFO CEM Article 10 – Greenland Halibut*” (Annex 35)
- STACTIC WP 21-41 Rev. 4 “*Bycatch limits for the “Others” quota – NAFO CEM Article 6.3.e*” Annex 36
- STACTIC WP 21-50 Rev. 2 “*Bycatch limits during Quarter 1 closure – NAFO CEM Article 5.5.j*” (Annex 37)

The Commission **adopted** all the recommendations.

In addition, the Commission accepted STACTIC Working Paper 21-42 (Rev. 4) *DRAFT Annual Fisheries and Compliance Review 2021 (Compliance Report for Fishing Year 2021)* (Annex 38).

The STACTIC Chair highlighted the proposal STACTIC Working Paper 21-40 (Rev.) concerning regulating the use of commercial vessels in research activities by amending NAFO CEM Article 4. The proposal did not attain consensus because of the debate within STACTIC whether this is a control or policy issue. STACTIC sought advice from the Commission if the discussions relating to the research activities as outlined in the proposal are within the mandate of STACTIC. The Commission expressed that STACTIC should continue working on this issue, including discussions at the Intersessional Meeting. Norway further expressed: “... and where necessary consult with Scientific Council, on which requirements should apply for Contracting Parties authorizing vessels to undertake research activities in the NAFO Regulatory Area and other questions that naturally follows from this”.

The STACTIC Chair highlighted another issue and sought advice from the Commission. This pertains to the implementation of the 2018 Performance Review Panel recommendation on self-assessments of flag State performance in accordance with the criteria set out in the FAO Voluntary Guidelines for Flag State Performance. The original tasking to STACTIC was to provide a review of the criteria of the FAO Voluntary Guidelines for Flag State Performance, but it was unclear to STACTIC whether the tasking was also for Contracting Parties to move forward with completing the self assessment. The Commission had no time to elaborate its advice to STACTIC.

29. Other matters pertaining to Conservation and Enforcement Measures

The joint proposal from Canada, United States of America, United Kingdom, Norway and Iceland limiting scientific catches of Div. 3M Cod and Div. 3M Shrimp in 2022 was **adopted** (Annex 39 – COM WP 21-45 Rev.).

VIII. Finance and Administration

30. Report of STACFAD from this Annual Meeting

The Chair of STACFAD, Robert Fagan (Canada), presented the Committee report and recommendations (see Part III). The report included recommendations for the adoption of the budget for 2022, the Auditor’s Report for 2020, the recruitment process for the next Executive Secretary and the implementation of certain 2018 Performance Review Panel recommendations related to the Standing Committee. In addition, the Chair noted the election of Jake Round (United Kingdom) as the new vice-Chair.

31. Adoption of the 2022 Budget and STACFAD recommendations

The recommendations from STACFAD were the following:

STACFAD recommends that:

- The 2020 Financial Statements be adopted.
- Baker Tilly Nova Scotia be appointed to audit NAFO's records for the 2021–2025 fiscal periods.
- The amount maintained in the accumulated surplus account be set at \$285,000 of which \$200,000 would be sufficient to finance operations during the first three months of 2022, and of which \$85,000 would be a contingency fund available to be used for unforeseen and extraordinary expenses.
- The recruitment and relocation fund be increased by \$28,000 to the maximum amount allowed of \$100,000 for future recruitment and relocation costs of internationally recruited staff.
- The performance review fund be increased by \$15,000 to \$45,000 for future costs associated with having an external performance review.
- The estimated balance remaining of \$437,000 shall be maintained in the Operating Fund and applied to reduce annual contributions due from each Contracting Party for the following year.
- The Executive Secretary recruitment procedures and timelines for the 2023-2026 term be adopted as outlined in STACFAD WP 21-11 (Rev. 2).
- The internship period be maintained for six (6) months during 2022.
- The internship stipend be increased to CDN \$2,250 per month.
- The budget for 2022 of \$2,587,000 be adopted.
- The Commission appoint the three Staff Committee nominees for September 2021–September 2022: Brian Healey (Canada), Ignacio Granell (European Union) and Deirdre Warner-Kramer (United States of America).
- The 2024 Annual Meeting be held 23–27 September 2024 in Halifax, Nova Scotia, Canada, unless an invitation to host is extended by a Contracting Party and accepted by the Organization.

The recommendations of STACFAD were **adopted**.

IX. Closing Procedure

32. Other Business

There was no further matter discussed under this agenda item.

33. Election of Chair and vice-Chair

With the completion of the President's term, the current vice-Chair Temur Tairov (Russian Federation) was elected as the incoming Chair and NAFO President for a two-year term.

Deirdre Warner-Kramer (United States of America) was elected as the incoming vice-Chair for a two-year term.

34. Time and Place of Next Annual Meeting

An invitation to host the next Annual Meeting was extended by the European Union and accepted by the Organization. The 44th Annual Meeting will be held in Portugal during 19-23 September 2022.

35. Press Release

The Press Release of the meeting was developed by the Executive Secretary, through consultations with the Chairs of the Commission and Scientific Council. The agreed Press Release (Annex 40) was circulated and posted to the NAFO website at the conclusion of the meeting on Friday, 25 September.

36. Adjournment

The meeting adjourned 11:45 hrs on Friday, 24 September 2021.

The summary of decisions and actions taken by the NAFO Commission is presented in Annex 1.

**Annex 1. Summary of Decisions and Actions of the Commission
from the 43rd Annual Meeting of NAFO**

ANNEX #	NAFO WORKING PAPER #	DOCUMENT TITLE	NAFO DOCUMENT #
16	COM-SC WP 21-06	Recommendations from the Joint Commission-Scientific Council Working Group on Improving Efficiency of NAFO Working Group Process (E-WG)	COM-SC Doc. 21-06
17	COM-SC WP 21-07	Recommendations from the Joint Fisheries Commission-Scientific Council Working Group on Risk-Based Management Strategies (WG-RBMS)	COM-SC Doc. 21-07
19	COM-SC WP 21-08 Rev.	Recommendations from the Joint Fisheries Commission-Scientific Council Working Group on Ecosystem Approach Framework to Fisheries Management (WG-EAFFM)	COM-SC Doc. 21-08
20	COM-SC WP 21-13	Revision of Seamounts Closures	COM-SC Doc. 21-05
21	COM-SC WP 21-09	Recommendations from the Joint Commission-Scientific Council Catch Estimation Strategy Advisory Group (CESAG)	COM-SC Doc. 21-09
22	COM WP 21-43 Rev. 3	The Commission's Request for Scientific Advice on Management in 2023 and Beyond of Certain Stocks in Subareas 2, 3 and 4 and Other Matters	COM Doc. 21-20
24		2022 Quota Table and the Effort Allocation Scheme for the Shrimp Fishery in NAFO Division 3M, 2022	
26	COM WP 21-41 Rev.	Measure to Protect Vulnerable Marine Ecosystems	COM Doc. 21-16
27	COM WP 21-18	Recommendations from the Commission Ad Hoc Working Group on Bycatches, Discards and Selectivity (WG-BDS) in the NAFO Regulatory Area	COM Doc. 21-18
28	STACTIC EDG-WP 20-05	Change to Article 5.15.f of the NAFO CEM	COM Doc. 21-06
29	STACTIC WP 21-07	Insertion of reference to Annex II.I Part B in NAFO CEM Annex IV.A	COM Doc. 21-07
30	STACTIC WP 21-13 Rev.	Measures Concerning Vessels Demonstrating Repeat Non-compliance of Serious Infringements in the NAFO Regulatory Area	COM Doc. 21-08
31	STACTIC WP 21-17 Rev. 2	Legend for Annex I.A of the NAFO CEM	COM Doc. 21-09
32	STACTIC WP 21-20 Rev.	List of serious infringements: use of sorting grids – NAFO CEM Article 38.1.g	COM Doc. 21-10
33	STACTIC WP 21-22 Rev.	Observer data collection	COM Doc. 21-11
34	STACTIC WP 21-28 Rev. 2	NAFO CEM Article 7 and Article 7 bis realignment and Extension of Port State control measures	COM Doc. 21-12
35	STACTIC WP 21-37 Rev.	NAFO CEM Article 10 – Greenland Halibut	COM Doc. 21-13
36	STACTIC WP 21-41 Rev. 4	Bycatch limits for the “Others” quota – NAFO CEM Article 6.3.e	COM Doc. 21-14
37	STACTIC WP 21-50 Rev. 2	Bycatch limits during Quarter 1 closure – NAFO CEM Article 5.5.j.	COM Doc. 21-15
39	COM WP 21-45 Rev.	Measure to Revise NAFO CEM Article 4 to Limit Scientific Catches of 3M Cod and 3M Shrimp in 2022	COM Doc. 21-17
	STACFAD WP 21-01 to STACFAD WP 21-11 (Rev. 2)	STACFAD Recommendations including the 2022 Budget	see agenda item 31 (above)

Annex 2. Provisional Agenda

I. Opening Procedure	
1.	Opening by the Chair, Stéphane Artano (France, in respect of St. Pierre et Miquelon)
2.	Appointment of Rapporteur
3.	Adoption of Agenda
4.	Admission of Observers
5.	Publicity
II. Supervision and Coordination of the Organizational, Administrative and Other Internal Affairs	
6.	Review of Membership of the Commission
7.	Administrative and Activity Report by NAFO Secretariat
8.	Recruitment of NAFO Executive Secretary for the 2023-2026 term
9.	NAFO Headquarters Agreement
10.	Review of the list of experts to serve as panelists under the NAFO Dispute Settlement provisions
11.	Guidance to STACFAD
12.	Guidance to STACTIC
III. Coordination of External Affairs	
13.	Report of Executive Secretary on External Meetings
14.	International Relations
	a. Relations with other International Organizations
	b. NAFO Members as Observers to External Meetings
	c. Areas Beyond National Jurisdiction (ABNJ) Deep-Sea Fisheries Project
	d. Possible Memorandum of Understanding (MOU) between the NAFO Secretariat and the Secretariat of the Sargasso Sea Commission
15.	Oil and Gas Activities in the NAFO Regulatory Area
IV. Joint Session of Commission and Scientific Council	
16.	Implementation of 2018 Performance Review Panel recommendations
17.	Presentation of scientific advice by the Chair of the Scientific Council
	a. Response of the Scientific Council to the Commission's request for scientific advice
	b. Feedback to the Scientific Council regarding the advice and its work during this meeting
	c. Other issues as determined by the Chairs of the Commission and the Scientific Council
18.	Meeting Reports and Recommendations of the Joint Commission–Scientific Council Working Groups
	a. Working Group on Improving Efficiency of NAFO Working Group Process (E-WG), 2021
	b. Joint Commission–Scientific Council Working Group on Risk-based Management Strategies (WG-RBMS), August 2021
	c. Joint Commission–Scientific Council Working Group on Ecosystems Approach Framework to Fisheries Management (WG-EAFFM), July 2021
	d. Joint Commission–Scientific Council Catch Estimation Strategy Advisory Group (CESAG), April 2021
19.	Formulation of Request to the Scientific Council for Scientific Advice on Management in 2023 and Beyond of Certain Stocks in Subareas 2, 3, 4, 6 and Other Matters

V. Conservation of Fish Stocks in the Regulatory Area	
20.	Recommendations of the Joint Commission–Scientific Council Working Group on Risk-based Management Strategies (WG-RBMS), August 2021 (if more discussion is required)
21.	Management and Technical Measures for Fish Stocks in the Regulatory Area, 2022
	a. Cod in Division 3M
	b. Redfish in Division 3M
	c. Pelagic <i>Sebastes mentella</i> (oceanic redfish) in Sub-area 2 + Divisions 1F and 3K
	d. Shrimp in Division 3M
	e. Splendid alfonsino in Sub-Area 6
22.	Management and Technical Measures for Fish Stocks Straddling National Jurisdictions, 2022
	a. Cod in Divisions 3NO
	b. American plaice in Divisions 3LNO
	c. Yellowtail flounder in Divisions 3LNO
	d. Witch flounder in Divisions 3NO
	e. White hake in Divisions 3NO
	f. Capelin in Divisions 3NO
	g. Greenland halibut in Sub-area 2 and Divisions 3KLMNO
	h. Shrimp in Divisions 3LNO
23.	Other matters pertaining to Conservation of Fish Stocks
24.	Ecosystem Considerations
25.	Recommendations of the Joint Commission–Scientific Council Working Group on Ecosystems Approach Framework to Fisheries Management (WG-EAFFM), July 2021 (if more discussion is required)
26.	Other matters pertaining to Ecosystem Considerations
VI. Conservation and Enforcement Measures	
27.	Recommendations of the Joint Commission–Scientific Council Catch Estimation Strategy Advisory Group (CESAG), April 2021 (if more discussion is required)
28.	Meeting Report and Recommendations of the Ad hoc Working Group on Bycatches, Discards, and Selectivity (WG-BDS) in the NAFO Regulatory Area, July 2021
29.	Report of STACTIC from this Annual Meeting and Recommendations
30.	Other matters pertaining to Conservation and Enforcement Measures
VII. Finance and Administration	
31.	Report of STACFAD from this Annual Meeting
32.	Adoption of the 2022 Budget and STACFAD recommendations
VIII. Closing Procedure	
33.	Other Business
34.	Election of Chair and vice-Chair
35.	Time and Place of Next Annual Meeting
36.	Press Release
37.	Adjournment

Annex 3. Participant List

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Annex 4. Opening Statement by the NAFO President

Dear distinguished colleagues and friends,

I am very pleased to welcome you to the 43rd Annual Meeting of the Northwest Atlantic Fisheries Organization. Unfortunately, the continuing challenges of the current pandemic has forced us to meet virtually for the second year in a row and I regret very much that I am not able to meet with all of you in person.

Nevertheless, the Organization is becoming used to working in a virtual format. Since last year's Annual Meeting, Contracting Parties have participated in over 30 intersessional meetings and have given a lot of work for us to do this week. In particular, I want to commend the work of our Scientific Council, and its Chair, for again being able to provide the necessary scientific advice to base the decisions we will have to make this week in less-than-ideal conditions.

We have again focused the agenda for this week's meeting. Hopefully this will not only allow us to address the essential business for the 2022 fishing year, but also to make progress on matters that ensure that NAFO continues to be one of the leading regional fisheries management organizations with regard to its commitment to the long-term conservation and sustainable use of its fishery resources. In this context I would note the progress in our efforts to revise our precautionary approach framework, the work to integrate an ecosystem approach framework into fisheries management, including the upcoming review of our measures to protect Vulnerable Marine Ecosystems (VMEs) from bottom fishing activities, and the upcoming reviews of our Management Strategy Evaluations for Greenland halibut and redfish.

I also would like to acknowledge the contribution of Dean Swanson to NAFO. As many of you are aware, we lost a member of the NAFO family with Dean's passing earlier this year. He had been a member of the US delegation for almost 20 years since the USA acceded to NAFO in 1995 until his retirement in 2014. During that time, he chaired the NAFO Fisheries Commission (from 2002 to 2005) and was head of the US delegation for almost a decade, from 2006 to 2014. On behalf of NAFO, I want to express our condolences to his family and former colleagues for their loss.

I again want to thank our colleagues from Japan and Korea for sacrificing their evenings so that we can meet, not only this week, but throughout the year. I would also like to thank the Secretariat for all their work throughout the year and the preparations in the run-up to this meeting.

This is the last NAFO Annual Meeting that I will Chair. It has been an honour and privilege to be your President over the last 6 years. I am extremely grateful for the cooperation and goodwill you have given me during this time. Despite the challenges of the pandemic, I am confident this will continue throughout this week.

I now declare the 43rd Annual Meeting of NAFO officially open!

Annex 5. Opening Statement by the Delegation of Canada

Canada is pleased to be a part of the 43rd Annual Meeting of the Northwest Atlantic Fisheries Organization (NAFO), being held for the second time in a virtual setting.

The commitment of Contracting Parties to continue to make progress within each of NAFO's Standing Committees, Working Groups, and the Scientific Council is a source of pride for all of us and something we must continue to strive for at this annual meeting. While we look forward to a time when we can again meet in person, it is rewarding to see both the adaptability of the organization and the innovative approaches we have adopted to conduct our work in the most efficient way possible.

Much of the intersessional work undertaken by the Standing Committees and Working Groups is highly technical and particularly challenging in a virtual format. Again, it is the Scientific Council that continues to lead by example in completing its work. The SC's comprehensive analysis and advice is critical to inform management decisions in support of continued sustainable management of NAFO stocks. We, along with other Contracting Parties, again emphasize our concern about the continued heavy workload of the Council and urge all Contracting Parties to consider how they may be able to expand their participation and make meaningful change to the overall capacity of the Scientific Council.

Even with the commitment shown by each individual NAFO body, none of this success could be achieved without the unwavering professionalism and extraordinary hard work of the NAFO Secretariat. Their continued careful attention to meeting logistics and ongoing support of the Commission, the Scientific Council and other NAFO bodies is deeply appreciated by all Contracting Parties.

We are optimistic that our discussions this week will be productive as we continue to make progress on a number of key issues now before us.

With respect to the ongoing review of the NAFO Precautionary Approach Framework, the consideration of how to implement the General Objectives of the NAFO Convention was an important step and we look forward to continuing this review which will inform our decision making for years to come.

For the planned review of the management strategies for Greenland halibut and 3LN redfish, we are looking forward to discussions that will find a way to advance both of these critically important reviews, and we will inform Contracting Parties of Canada's intention to further support this work with additional resources.

We were pleased to see continued positive discussion on the Ecosystem Roadmap since the last annual meeting and remain supportive of planned efforts to bring together scientists and fisheries managers alike with the goal of discussing ecosystem objectives at both the open dialogue session and the planned workshop. Through these discussions, we can carefully examine the challenges and opportunities of working to implement the Roadmap into the Commission's decision-making processes.

NAFO has been a leader among regional fisheries management organizations in the protection of vulnerable marine ecosystems (VME). Collectively, we share a responsibility to protect the biodiversity under NAFO's jurisdiction, and to minimize adverse impacts of bottom fishing on VMEs. It is critically important that we maintain the protections we have established and carefully consider necessary additional protections for both VME areas and seamounts.

With the recent advice of the Scientific Council on 3M shrimp, Canada encourages all Contracting Parties to maintain our commitment to implement a new, sustainable management regime for this stock that aligns with the advice of the Scientific Council and places primary importance on conservation.

Each of these elements contributes significantly to achieving NAFO's overall objectives and serves to promote and protect our ocean resources. We need to ensure that they remain healthy for future generations, while providing important economic opportunities to Canada, its coastal communities and to all Contracting Parties.

In recent years, the co-operation of Contracting Parties has resulted in significant accomplishments. While engaging in a compressed and virtual meeting presents many challenges, Canada is committed to continuing to advance the work of the Commission as much as possible this week and intersessionally over the coming year.

Finally, Canada would like to express its heartfelt appreciation for the leadership that our Commission Chair, M. Stéphane Artano, has provided during the last four years. M. Artano's steady guidance to this Commission was instrumental in enabling NAFO's progress on important issues in these unprecedented times.

**Annex 6. Opening Statement
by the Delegation of Denmark (in respect of the Faroe Islands and Greenland)**

The Faroe Islands and Greenland (DFG) would like to begin by conveying our appreciation and warm thanks to the Secretariat for their outstanding efforts to keep us all well informed and up to date on meetings and activities during yet another year with many challenges.

While we are learning to adapt, again this year has brought numerous challenges due to the continued Covid-19 pandemic. It has influenced our collaborative work in NAFO and caused challenges for Contracting Parties to follow the normal procedures with respect to control and enforcement measures. The Faroe Islands and Greenland have both been affected to some degree by this situation, but not as seriously as many other countries around the world and their fisheries administrations and industries, with whom we greatly sympathize.

Once again, this year, one of the key issues for our delegation is the conservation and management measures with respect to the cod stock in 3M. This Delegation remains committed to taking appropriate conservation and management measures that are based on the applicable general principles, which includes promoting the optimum utilization and long-term sustainability of fisheries resources and applying the precautionary approach in accordance with the 1995 Agreement. This summer, a longliner flying the flag of the Faroe Islands was temporarily employed in a scientific survey in 3M. The survey was conducted under the auspices of the Faroe Marine Research Institute. The results are interesting and can guide us to broaden the perimeters to properly understanding the stock with a view to optimizing the information underlying the determination of relevant conservation and management measures.

Denmark in respect of the Faroe Islands and Greenland also welcomes the progress made in the Working group of Bycatch, Discard and Selectivity and STACTIC participation and looks forward to see the outcome of this work.

This Delegation takes note of the latest advice of the Scientific Council with respect to shrimp in 3M. In this light the continuing discussions on moving from a system of fishing days to quotas is less urgent and could be postponed preferably until face-to-face meeting could be held.

The Faroe Islands and Greenland are still looking forward to seeing the new NAFO Headquarters in Halifax and, not least, to enjoying the informal conversations with delegates that are so important for ensuring understanding and smooth collaboration. Under your able guidance Mr. Chair, this Delegation will nevertheless do its best to contribute to a constructive and successful outcome of this 43rd Annual Meeting, under these exceptional circumstances.

Annex 7. Opening Statement by the Delegation of the European Union

Mister Chair, Distinguished Delegates, Observers, Ladies and Gentlemen,

First of all, we would like to express our appreciation for the efforts made by the Chair, the NAFO Secretariat and the rest of NAFO Parties in order to organize the 43rd Annual Meeting of NAFO, which for the second time in a row takes place virtually via webex. Taking into account the difficult circumstances caused by the continued COVID-19 pandemic, we have all again been required to think about alternative ways for conducting the necessary business of this important organisation, so we can still discharge our mandate to ensure the long term conservation and sustainable use of the fishery resources in the Convention Area but in a format that is safe, cost efficient and which in this case also happens to be greener.

Secondly, I would like to recognise the excellent preparatory work carried out ahead of this meeting, which should allow us to reach decisions that will contribute to the effective management of international fisheries that this organisation has been entrusted to manage. This year fishable biomass shows decline in several areas and the situation for a number of important stocks remains difficult. The Commission will again have to set TACs for fish stocks under the purview of NAFO that ensure their sustainable management for the years to come while taking into account environmental, economic and social considerations. The EU will continue to seek and support solutions based on the best available scientific advice, aiming to ensure long-term sustainability for the stocks and predictability for the industry and areas that depend on their exploitation.

The EU has carefully studied the advice emanating from the Scientific Council and will continue to support sustainable approaches for the long-term management of key stocks, such as cod, Greenland halibut and redfish, which are of particular importance to the EU. In this regard, special consideration must also be given to technical and control measures that can help us better achieve conservation objectives of NAFO.

We are aware of the difficult situation of Northern shrimp in division 3M and have taken note of the most recent recommendation from the Scientific Council. The result of the scientific assessment of the status of this stock does once again highlight the need for a new management regime based on a TAC and quota allocation, possibly together with other management measures, which was not possible to adopt last year due to the pandemic situation. While the EU remains committed to devising a new and better fisheries management plan for Shrimp 3M, it would appear unlikely that Contracting Parties would be able at this year's Annual Meeting to reach agreement on all the elements to allow for a transition to TAC and quota allocation for 3M shrimp, notably given that fact that the meeting will again take place in a virtual format. The EU however believes that NAFO at this meeting could and should make some progress in this process by agreeing on some of the key elements upon which a future conversion mechanism could be based.

In addition, I would like to underline the importance of the Ecosystem Approach in NAFO while at the same time recognising the challenges inherent in implementing such an approach. In this regard, I would like to recall the relevance of pursuing a global assessment of the ecosystem and its dynamics in order to allow for the best management decisions.

In the context of the 2021 re-assessment of VME closures, I reiterate the EU continuous support for a coherent and clear policy aimed at protecting VMEs, including through its support for the NEREIDA project, and welcomes the latest scientific advice that provides important information that will help in the identification of VMEs.

Regarding control and enforcement, the EU will continue to promote compliance of the EU fleet with the NAFO rules in force, both at sea and in port, and measures that increase the efficiency of NAFO's control and inspection systems. The EU will continue to support a mandate to STACTIC to assess what elements of control would be necessary if NAFO were to adopt a landing obligation policy in order to inform ongoing discussions in various NAFO bodies dealing with measures on discards.

The EU delegation looks forward to working with all Contracting Parties in order to achieve the best possible result for NAFO stocks and ecosystems and to make this WebEx Annual Meeting a joint success.

Annex 8. Opening Statement by the Delegation of Japan

First of all, Japan would like to express its deepest gratitude to the NAFO Chairs and Secretariat staff for the excellent preparation and arrangements to hold the 43rd Annual Meeting in this challenging situation.

As Japan expressed in the past meetings, NAFO has played an important role for fisheries management through development of conservation and management measures for sustainable use of fishery resources based on scientific evidence. Other RFMOs are giving close attention to NAFO in order to learn how to address challenges and issues which are common between them and NAFO.

On this occasion, Japan would like to draw the attention of Contracting Parties (CPs) on two specific issues and explain its view for this year's NAFO Annual Meeting, namely management measures for Cod (3M) and re-assessment of VME closures.

Regarding 3M Cod, Japan is pleased with the relatively optimistic advice from the Scientific Council (SC) than last year although NAFO should be cautious given the high uncertainty in the stock assessment. Japan supports increased total allowable catch for 2022 based on the advice by SC. Concerning flanking measures which have been introduced from 2021, Japan reiterates the importance of assessment by the SC on their effectiveness in order to ensure 3M Cod fishery is managed through effective and efficient measures.

Regarding re-assessment of VME closures, Japan appreciates the extensive work conducted by SC. Re-assessment of VME closures should be based on the best scientific evidence available and carried out in an objective manner. Japan is of the view that the set of the criteria established by the FAO, as reflected in CEM Article 22. 4 (c), should be duly considered in the re-assessment. Japan will collaborate with all CPs for a constructive discussion on this issue.

Once again, Japan would like to repeat that, as the historic RFMO, NAFO has been serving a leading role among RFMOs. Last year, NAFO demonstrated that RFMO can make important decision making on conservation and management of fisheries resources even without convening in-person meetings. Other RFMOs followed NAFO's success to overcome the challenges caused by the COVID-19 pandemic. NAFO is expected to make similar achievements this year too, and the Japanese delegation is ready to work closely and cooperatively with other delegations to find good and reasonable solutions on every issue to be discussed.

Annex 9. Opening Statement by the Delegation of the United States of America (USA)

Mr. Chair, Delegates, Ladies, and Gentlemen, the United States is pleased to participate in this 43rd NAFO Annual Meeting. Although we are once again disappointed that we will not be able to see our NAFO colleagues in person, we trust that our shared experiences with virtual meetings over the past 18 months and our strong relationships will help to ensure a successful meeting this week. While we are on the subject of meetings, we would like to take this opportunity to recognize and thank the NAFO Secretariat for their continuing dedication and hard work. Although the COVID pandemic has made in-person meetings such as this impossible, it has not slowed the pace or number of meetings or reduced the volume of work undertaken by the Organization – quite the opposite in fact. In these challenging times, the Secretariat has continued to demonstrate professionalism and commitment to NAFO and its members, and for this we sincerely thank them.

Although the circumstances continue to be difficult and are affecting each Contracting Party differently, the United States remains committed to maintaining the standards we have set for ourselves relative to conservation and management of NAFO and associated species. Along these lines, we will continue to strongly advocate for consistency between the management decisions of the Commission and the advice of the Scientific Council. It is here that the commitment of the Organization to the sustainability of the resources under its purview are most impactful and most visible. It is our hope that NAFO will act accordingly – even when the decisions are difficult or unwelcome.

As we have stated in previous years, we cannot achieve good management without good science, and the United States remains concerned that the increasing demands on the Scientific Council are outstripping currently available scientific expertise and resources amongst participating CPs. We must recognize the potential negative impacts of this growing imbalance and continue to closely collaborate and coordinate with the SC relative to priority-setting moving forward to ensure that the SC can function effectively now and in the future.

The United States will also continue to advocate for the general guiding principle of transparency – as the default for deliberations by all NAFO bodies and in the decisions that result from those deliberations. Although the United States recognizes that there may be rare circumstances where participation in certain discussions on sensitive topics must be limited, we must ensure that fair, clear, and predictable procedures are in place to identify which topics and NAFO participants are appropriate for such special consideration. In doing so, we must ensure that we do not infringe upon the sovereignty of each Contracting Party to determine the representatives, experts, and advisers that make up their own delegations. We look forward to further discussion and progress on this issue during this meeting.

Relative to NAFO stocks, we were disappointed to learn of the developments reported by the Scientific Council regarding the Division 3M shrimp stock and look forward to a productive discussion on how NAFO will implement the SC advice for the stock with a focus on long-term sustainability. We remain committed to a transparent and open dialogue regarding the future management regime for 3M shrimp.

We yet again thank the Scientific Council for their groundbreaking work on both the protection of Vulnerable Marine Ecosystems and implementation of an ecosystem approach to fisheries management. NAFO has been at the forefront of this work globally, but we find ourselves again at a critical juncture this year. The United States looks forward to working with our partners in advancing the advice from the Scientific Council and ensuring we continue the necessary progress on these two key initiatives.

The United States also looks forward to further discussion during this meeting relative to the application of the CEM to fishing operations in the NRA, particularly regarding bycatch and related measures.

On a sad note, earlier this year Dean Swanson, the long-time U.S. NAFO Commissioner, passed away. Dean was passionate in his support for NAFO's mandate for science-based, sustainable fisheries management. He was also a good friend to many in this room and will be fondly remembered as a man of integrity and strong leadership. His incredible encyclopedia-like knowledge of all things NAFO was always a treasured resource. Dean left an indelible mark on this organization, strengthening its mission and its mandate in ways we are still benefiting from today. He will be missed.

Thank you very much and we look forward to a productive week.

Annex 10. Opening Statement by the Deep Sea Conservation Coalition (DSCC)

Chair, Heads of Delegation, Delegates and fellow Observers, we are pleased to be making this opening statement on behalf of Oceans North and the Deep Sea Conservation Coalition during this second meeting held virtually. We greatly miss in person meetings and being able to interact with all of you.

The Deep Sea Conservation Coalition and its 90+ member organizations continue to work towards the protection of vulnerable marine ecosystems (VME) and the sustainable management of deep sea fisheries across RFMOs responsible for the management of deep-sea fisheries. We have followed the progress at NAFO closely and look forward to this year's meeting as there are significant decisions to be taken to fulfill commitments to protect deep sea biodiversity based on the commitments of all Contracting Parties to implement United Nations General Assembly Resolution 61/105 and subsequent resolutions. It is not lost on us that this week, as NAFO convenes online, countries are also convening at the UN in New York City to focus on the protection of nature. We also recognize many of the commitments Contracting Parties are working towards in other fora, including the Convention on Biological Diversity and the ongoing negotiations of a new high seas treaty. Real tangible measures to protect biodiversity can be taken this week at NAFO.

To achieve meaningful action on protecting deep sea ecosystems, VME areas identified by the Scientific Council should be closed to bottom trawl fishing to prevent further damage to these ecosystems. However, we urge Contracting Parties to NAFO to, at a minimum, follow science advice and close those areas recommended by the Scientific Council. We have placed a priority on the following measures:

On VMEs:

- Agree to the Scientific Council advice on protecting seamounts and related features in the NAFO Regulatory Area, which will result in a significant increase in protection for these vulnerable marine ecosystem elements.
- Agree to the Scientific Council Advice on additions to the current set of VME closures, which have resulted from the full assessment of significant adverse impacts on VMEs. Together with maintaining all existing VME closures, these new measures will significantly increase the protection of known VME biomass. Some VME indicator species – notably black corals, tunicates and bryozoans – remain either completely or largely unprotected.

On the Ecosystem Approach to Fisheries Management:

- Commit to moving forward on the NAFO Ecosystem Roadmap, including agreeing to Scientific Council advice, which has now been tabled for the second year in a row, including being notified when NAFO catches have exceeded twice the total catch index.

On Deep Sea Fisheries:

- Follow Science Advice for all NAFO regulated species and take additional measures to protect Greenland shark caught in the NAFO Convention Area, including no retention of catch.

We have provided a “*checklist*” of measures that is available in the Observer folder in the NAFO SharePoint and we encourage you consider this list as you deliberate and take your decisions.

Thank you, Matt Gianni and Sandrine Polti, Deep Sea Conservation Coalition.

Annex 11. Opening Statement by the Ecology Action Centre (EAC)

The Ecology Action Centre (EAC) thanks the Chair and NAFO Secretariat for their efforts to organize this virtual 43rd Annual Meeting of NAFO. We appreciate the opportunity to participate as observers in the deliberations and share our perspectives and we note the continuing difficult circumstances all participants are working under.

NAFO's Scientific Council (SC) continues to undertake ground breaking work on the development of ecosystem approaches to fisheries management. We are pleased the Commission has agreed to move forward with the upcoming Open Dialogue and subsequent WG-EAFFM Workshop to undertake discussion on how to further integrate ecosystem information into management decisions.

- **We urge all Parties to participate fully in the upcoming Dialogue and Workshop with an eye to identify ecosystem level objectives for management and to ensure observer access to participate**
- **We also look to the Commission to support an external independent review of the Roadmap that is timely so as not to hinder progress towards implementation of the ecosystem approach to management**

The SC has also done extensive work to advise on the best available options to improve VME protection and fulfill NAFO's commitment to UNGA Resolution 61/105 while limiting potential losses to fishing fleets. If their recommendations on closures are adopted, no VME's would be classified as having 'Poor' protection with most moving to 'Good' and only one remaining 'Limited' while less than 1% of fishing activity would be impacted.

- **We urge adoption of recommended VME new closures, additions, and modifications and would commend NAFO on fulfilling UNGA Res 61/105**

We are concerned that planned work to consider additional conservation measures for Greenland sharks was slowed, not only due to restricted workloads in virtual settings over the last two years, but because NAFO Parties have largely failed to report thorough and timely bycatch data as well as their mortality reduction efforts as required by the current NCEM. The SC has highlighted the extreme longevity and low fecundity of this intriguing species and has noted the need to protect it across its large geographic range and reiterated the recommendation that no retention be allowed.

- **We encourage the adoption of no retention for Greenland shark and continued work to standardize and improve data collection from across the NCA as well as the identification of bycatch hotspots**
- **We also ask Parties to fulfill their requirement to report on mortality reduction efforts and to consider the SC advice that management of Greenland shark be consistent across its range**

We note with concern the assessment of 3M Northern Shrimp that indicates the stock is again below B_{lim} . The stock was opened with only slim indications of improvement and under an effort-regulation scheme, yet at this point with only 16% of effort expended the SC advised catch level has already been exceeded.

- **We look to the Commission to act swiftly to close the fishery on 3M Northern Shrimp for 2022 and focus on work towards a TAC and quota allocation scheme before considering any reopening**

Finally, we note the workload and complexity of the analyses requested of the Scientific Council continue to outstrip their resources and time available. This undermines the ability of NAFO to ensure comprehensive and credible management in the Convention Area.

- **We look to Parties to carefully consider all requests to SC and provide the necessary funding, resources, and expertise to support their work**

We thank you for your consideration of our positions and look forward to this week's discussions and deliberations.

Annex 12. Opening Statement by the North Pacific Anadromous Fish Commission (NPAFC)

Dear Mr. Chair, distinguished delegates, observers, ladies and gentlemen:

I am Vladimir Radchenko, Executive Director of the North Pacific Anadromous Fish Commission (NPAFC).

I am honoured to attend the NAFO 43rd Annual Meeting on behalf of the NPAFC in an observer capacity. I would like to extend the Commission's appreciation to the Honorable President Stéphane Artano, Vice-Chair Temur Tairov, members of the NAFO, including delegates from the NPAFC member countries, and Executive Secretary Fred Kingston for the invitation.

The 29th NPAFC Annual Meeting was held from May 10–20, 2021, also in a videoconferencing format. Since NAFO did not observe this meeting, I would like to brief you on major issues under consideration and meetings outcome. NPAFC members discussed coordinated enforcement efforts in 2020, which covered the Convention Area with 390 hours of aircraft patrols and 136 ship-days to deter and interrupt IUU fishing activity. Combined multilateral efforts identified multiple violations of Conservation and Management Measures established by RFMOs in the North Pacific; however, none involved high-seas driftnet activity or illegal retention of salmon.

Salmon researchers reviewed commercial catch statistics compiled from information provided by member countries. The total preliminary salmon catch in 2020 was 606.7 thousand metric tonnes (322.3 million fish) that is the lowest recorded since 1982. Many Pacific salmon stock conditions are of particular concern after 2020 fishery season. Therefore, NPAFC member countries highly support a large-scale survey throughout salmon wintering area in the framework of the 2022 Pan-Pacific Winter High Seas Expedition.

The International Year of the Salmon (IYS) has maintained a robust presence as it continues to strengthen its partnerships throughout the Northern Hemisphere. The 2021 Conference on the Winter Ecology of Pacific Salmon took place in April 2021 with presenters who had participated in the International Gulf of Alaska Expeditions in 2019-2020, as well as a panel of experts who discussed the upcoming 2022 Pan-Pacific High Seas Expedition. As the IYS approaches its final year in 2022, the Symposium Steering Committee, which includes members from the North Atlantic Salmon Conservation Organization (NASCO), starts planning the IYS Synthesis Symposium, which will take place in the Westin Bayshore Hotel in Vancouver, Canada from October 4–6, 2022. To continue the IYS legacy, the joint NPAFC/PICES proposal – Basin Events to Coastal Impacts: An Ocean Intelligence System for Fish and People (BECI) – was submitted for the UN Decade of Ocean Science.

NPAFC welcomed the incoming officers for two-year terms: President Doug Mecum (USA), Vice-President Vladimir Belyaev (Russia), and three committee chairpersons, Takumi Fukuda (Japan), Ju Kyoung Kim (Korea), and John Holmes (Canada). 2021 NPAFC Annual Meeting closed with an invitation from Japan to the Parties to hold the 2022 Annual Meeting in Hakodate, Japan. Because the NAFO Commission will consider an appointment of NAFO members as observers to external meetings, I would like to take this opportunity to confirm that NPAFC looks forward to seeing the NAFO representative at the NPAFC 30th Annual Meeting in Japan in May 2022.

Wishing the best of success and spirit of good cooperation to the NAFO Annual Meeting.

**Annex 13. SC Response to Feedback Questions Regarding its Scientific Advice –
United Kingdom
(COM WP 21-42)**

From United Kingdom regarding 3M cod [from COM WP 21-37]:

Scientific surveys normally harvest relatively small quantities of fish to derive information about stock status. In the case of the 2021 Faroese longline survey on Flemish Cap, the survey catches amount to 630.6t, equating to an additional 42% of the agreed TAC for 2021 of 1,500t. In order to take account of the impact of this catch on the advice provided for 2022, the UK proposes the following request to the SC:

Feedback Request

The Commission requests that the SC run additional projections assuming a total catch level of 2,130.6t in 2021, to be made available to CPs as soon as possible during the Annual Meeting.

Scientific Council responded [SC WP 21/013]:

In June 2021, projections with a catch in 2021 equal to the approved TAC = 1500t were run, given the results in Tables 1a and 2a as in the advisory sheet of the 3M cod. New projections incorporating the catches in the Faroese survey during June 2021 (630.6t), so with a catch in 2021 = 2130.6t, were performed with the same scenarios as in June 2021, given the results shown in Tables 1b and 2b.

Increasing the catches in 2021, the Yield in 2022 onwards declines slightly in all the scenarios with projecting F_s , the risk of SSB being below B_{lim} is slightly higher and the probability of the SSB in 2024 being above SSB in 2021 is lower.

While risks of the stock declining below B_{lim} in the next 2 years remain similar with the two levels of catch, the additional catches increase the probability that the stock will decline.

Report of the NAFO Commission, 20-24 September 2021

Table 1a. Results with a catch in 2021 of 1500t.

		B	SSB		Yield
Median and 80% CI					
F _{bar} = F _{sq} (median = 0.131)					
2021	45787	(40635 - 51559)	27058	(23458 - 31446)	1500
2022	42969	(37884 - 48389)	24420	(21335 - 27970)	6525
2023	34733	(29703 - 40345)	18598	(15605 - 21773)	5291
2024	29999	(24718 - 36318)	19822	(16344 - 23723)	
F _{bar} = 0					
2021	45787	(40635 - 51559)	27058	(23458 - 31446)	1500
2022	42969	(37884 - 48389)	24420	(21335 - 27970)	0
2023	41143	(36076 - 46765)	24071	(21037 - 27322)	0
2024	42102	(36620 - 48376)	30514	(27027 - 34628)	
F _{bar} = 3/4F _{lim} (median = 0.147)					
2021	45787	(40635 - 51559)	27058	(23458 - 31446)	1500
2022	42969	(37884 - 48389)	24420	(21335 - 27970)	7160
2023	34111	(29091 - 39726)	18092	(15086 - 21246)	5694
2024	28966	(23642 - 35277)	18923	(15516 - 22770)	
F _{bar} = 1/2F _{lim} (median = 0.098)					
2021	45787	(40635 - 51559)	27058	(23458 - 31446)	1500
2022	42969	(37884 - 48389)	24420	(21335 - 27970)	5000
2023	36238	(31192 - 41834)	19854	(16887 - 23067)	4254
2024	32578	(27213 - 38900)	22092	(18612 - 25996)	
Catch = 1500 tons					
2021	45787	(40635 - 51559)	27058	(23458 - 31446)	1500
2022	42969	(37884 - 48389)	24420	(21335 - 27970)	1500
2023	39661	(34603 - 45288)	22807	(19826 - 26087)	1500
2024	38994	(33591 - 45246)	27691	(24211 - 31752)	
Catch = 1875 tons					
2021	45787	(40635 - 51559)	27058	(23458 - 31446)	1500
2022	42969	(37884 - 48389)	24420	(21335 - 27970)	1875
2023	39291	(34238 - 44913)	22482	(19454 - 25735)	1875
2024	38216	(32795 - 44488)	27028	(23511 - 31085)	
Catch = 2250 tons					
2021	45787	(40635 - 51559)	27058	(23458 - 31446)	1500
2022	42969	(37884 - 48389)	24420	(21335 - 27970)	2250
2023	38923	(33871 - 44544)	22151	(19150 - 25412)	2250
2024	37438	(32028 - 43736)	26354	(22862 - 30373)	
Catch = 3000 tons					
2021	45787	(40635 - 51559)	27058	(23458 - 31446)	1500
2022	42969	(37884 - 48389)	24420	(21335 - 27970)	3000
2023	38196	(33139 - 43808)	21520	(18528 - 24739)	3000
2024	35865	(30453 - 42155)	24986	(21477 - 28888)	

Table 1b. Results with a catch in 2021 of 2130.6t (=1500 + 630.6).

	B		SSB		Yield
	Median and 80% CI				
F _{bar} = Fsq (median = 0.131)					
2021	45786	(40483 - 51538)	27071	(23429 - 31417)	2131
2022	42271	(37161 - 47408)	23874	(20789 - 27401)	6390
2023	34327	(29418 - 39829)	18272	(15306 - 21461)	5218
2024	29732	(24494 - 35909)	19570	(16108 - 23461)	
F _{bar} = 0					
2021	45786	(40483 - 51538)	27071	(23429 - 31417)	2131
2022	42271	(37161 - 47408)	23874	(20789 - 27401)	0
2023	40614	(35672 - 46166)	23620	(20612 - 26889)	0
2024	41588	(36298 - 47813)	30092	(26522 - 34166)	
F _{bar} = 3/4F _{lim} (median = 0.147)					
2021	45786	(40483 - 51538)	27071	(23429 - 31417)	2131
2022	42271	(37161 - 47408)	23874	(20789 - 27401)	7015
2023	33716	(28813 - 39207)	17754	(14808 - 20916)	5630
2024	28653	(23481 - 34842)	18644	(15219 - 22524)	
F _{bar} = 1/2F _{lim} (median = 0.098)					
2021	45786	(40483 - 51538)	27071	(23429 - 31417)	2131
2022	42271	(37161 - 47408)	23874	(20789 - 27401)	4901
2023	35791	(30868 - 41296)	19511	(16496 - 22691)	4205
2024	32279	(26951 - 38463)	21792	(18255 - 25694)	
Catch = 1500 tons					
2021	45786	(40483 - 51538)	27071	(23429 - 31417)	2131
2022	42271	(37161 - 47408)	23874	(20789 - 27401)	1500
2023	39131	(34196 - 44679)	22355	(19318 - 25569)	1500
2024	38516	(33179 - 44695)	27308	(23764 - 31342)	
Catch = 1875 tons					
2021	45786	(40483 - 51538)	27071	(23429 - 31417)	2131
2022	42271	(37161 - 47408)	23874	(20789 - 27401)	1875
2023	38764	(33827 - 44305)	22065	(18991 - 25288)	1875
2024	37749	(32396 - 43904)	26607	(23104 - 30608)	
Catch = 2250 tons					
2021	45786	(40483 - 51538)	27071	(23429 - 31417)	2131
2022	42271	(37161 - 47408)	23874	(20789 - 27401)	2250
2023	38399	(33459 - 43930)	21723	(18688 - 24960)	2250
2024	36966	(31635 - 43121)	25919	(22429 - 29956)	
Catch = 3000 tons					
2021	45786	(40483 - 51538)	27071	(23429 - 31417)	2131
2022	42271	(37161 - 47408)	23874	(20789 - 27401)	3000
2023	37665	(32721 - 43186)	21095	(18085 - 24336)	3000
2024	35411	(30063 - 41567)	24536	(21050 - 28527)	

Table 2a. Risk with a catch in 2021 of 1500t.

	Yield			P(SSB < B _{lim})				P(F _{bar} > F _{lim})			P(SSB ₂₄ > SSB ₂₁)
	2021	2022	2023	2021	2022	2023	2024	2021	2022	2023	
F _{bar} = F _{sq} = 0.131	1500	6525	5291	<1%	<1%	13%	8%	<1%	<1%	<1%	1%
F _{bar} = 0	1500	0	0	<1%	<1%	<1%	<1%	<1%	<1%	<1%	90%
F _{bar} = 3/4F _{lim} = 0.147	1500	7160	5694	<1%	<1%	17%	13%	<1%	1%	2%	<1%
F _{bar} = 1/2F _{lim} = 0.098	1500	5000	4254	<1%	<1%	5%	1%	<1%	<1%	<1%	4%
Catch = 1500 tons	1500	1500	1500	<1%	<1%	1%	<1%	<1%	<1%	<1%	58%
Catch = 1875 tons	1500	1875	1875	<1%	<1%	1%	<1%	<1%	<1%	<1%	48%
Catch = 2250 tons	1500	2250	2250	<1%	<1%	1%	<1%	<1%	<1%	<1%	36%
Catch = 3000 tons	1500	3000	3000	<1%	<1%	2%	<1%	<1%	<1%	<1%	20%

Table 2b. Risk with a catch in 2021 of 2130.6t (=1500t + 630.6t).

	Yield			P(SSB < B _{lim})				P(F _{bar} > F _{lim})			P(SSB ₂₄ > SSB ₂₁)
	2021	2022	2023	2021	2022	2023	2024	2021	2022	2023	
F _{bar} = F _{sq} = 0.131	2131	6390	5218	<1%	<1%	15%	9%	<1%	<1%	<1%	<1%
F _{bar} = 0	2131	0	0	<1%	<1%	<1%	<1%	<1%	<1%	<1%	87%
F _{bar} = 3/4F _{lim} = 0.147	2131	7015	5630	<1%	<1%	20%	15%	<1%	1%	2%	<1%
F _{bar} = 1/2F _{lim} = 0.098	2131	4901	4205	<1%	<1%	6%	2%	<1%	<1%	<1%	3%
Catch = 1500 tons	2131	1500	1500	<1%	<1%	1%	<1%	<1%	<1%	<1%	52%
Catch = 1875 tons	2131	1875	1875	<1%	<1%	1%	<1%	<1%	<1%	<1%	41%
C=2250	2131	2250	2250	<1%	<1%	1%	<1%	<1%	<1%	<1%	32%
Catch = 3000 tons	2131	3000	3000	<1%	<1%	2%	<1%	<1%	<1%	<1%	16%

Annex 14. Scientific Council Recommendation on Research Surveys in the NRA (COM-SC WP 21-15)

Scientific Council recommendation on research surveys in the NRA

With the information currently available, SC considers that the Faroe Islands 3M cod survey initiative does not fulfil the requirements of a valid scientific survey and more closely resembles a commercial fishery

SC notes that protocols from Article 4 in the Conservation and Enforcement Measures (NAFO COM Doc. 21/01) do not require review of proposed survey research plans and confirmation of their scientific validity by SC. **SC recommends** that the Commission amend this procedure to include a scientific review of proposed research surveys in the NRA to ensure scientific best practices are followed.

During the June 2021 SC meeting, a letter from the Faroe Marine Research Institute was forwarded by the NAFO secretariat to CPs and NAFO officials, indicating that this institute would be conducting a scientific survey in NAFO division 3M during June/July 2021. This prompted SC to request, via STACREC, a presentation about this planned survey. A presentation was given to STACREC describing this longline survey. This survey was presented by the Faeroe Islands as a complement to the EU Div. 3M bottom trawl research survey. It is a longline survey in waters less than 600 m, with approximately 100 sets with 6000 hooks each. The survey is conducted by a commercial fishing vessel without scientific personnel on board, and where catch will be recorded, identified, and sampled (length, weight and otoliths) by the fishing crew. This is primarily a cod survey, however Atlantic Halibut and other bycatch (including VME species) would be expected to be caught.

In principle, a longline survey may provide additional information on the ecosystem in 3M. However, STACREC noted that the proposed survey design was insufficient (e.g., lack of proper consideration of number of hooks, stratification, catchability) to consider this as a valid scientific survey; an appropriate survey design, together with objectives and detailed survey protocols, is required to properly assess the potential scientific value of the data collected.

Moreover, in September 2021, SC was made aware that the catch from this survey totaled 630 t, accounting for removals equal to roughly 42% of the TAC of 1500 t. For context, the EU bottom trawl survey of Div. 3M which constitutes the most important fishery independent data for the assessment, takes about 7 t in total of cod. This indicates that the Faroe Islands longline survey is not optimized for the collection of information with minimum impact, as would be the case for a typical scientific survey.

With the information currently available, SC considers that this initiative does not fulfil the requirements of a valid scientific survey and more closely resembles a commercial fishery

SC notes that protocols from Article 4 in the Conservation and Enforcement Measures (NAFO COM Doc 21/01) do not require review of proposed survey research plans and confirmation of their scientific validity by SC. **SC recommends** that the Commission amend this procedure to include a scientific review of proposed research surveys in the NRA to ensure scientific best practices are followed.

Annex 15. Statement of DFG with respect to COM-SC WP 21-15 "*Scientific Council recommendation on research surveys in the NRA*"
(COM-SC WP 21-16)

On 1 June 2021 the Faroese Marine Research Institute notified (hereafter "Notification") the Executive Secretary of the North Atlantic Fisheries Organization (hereafter "NAFO") that a Faroese Scientific Longline Survey (hereafter "Survey") would be conducted in 3M in Flemish Cap with tentative dates for 9 June to 9 July 2021. Consistent with Article 4(7) of the NAFO Conservation and Enforcement Measures, the Notification was made public on the NAFO Member's page on the day of its receipt.

The legal basis for the Survey is Article 4 of NAFO CEM. The Notification conforms with the legal requirements in that provision. A preliminary analysis from the Survey was submitted to NAFO on 14 September 2021. Consistent with the Notification, a complete analysis will in due course be submitted to NAFO.

The Scientific Council observes in the Scientific Council Working Paper 21 – 15 (hereafter "Working Paper"), issued on 23 September 2021, that Article 4 of the NAFO CEM does not require review of proposed survey research plans, nor any confirmation by the Scientific Council. Yet, it appears notwithstanding from the Working Paper that the Standing Committee on Research Coordination (hereafter "STACREC") did not consider that the standards in the Faroese Survey was in conformity with its perceptions of valid scientific surveys. Further, from this background the Scientific Council considers the survey to resemble a commercial fishery. Such conclusions go beyond the mandate entrusted to the Scientific Council and also the STACREC.

This Delegation deems it important to stress that the Notification was compiled and prepared in identical terms to similar surveys conducted in waters under the jurisdiction of the Faroe Islands. While there is no requirement to seek approval from STACREC, this Delegation would without any doubt have sought to adjust the Survey in order to take into account views on best practice that may have been expressed by STACREC - had these been received in due course. It is noted that this Delegation has not been informed of the reservations expressed by STACREC until the production of the Working Paper. The report from the June meeting of the Scientific Council, issued on 13 July 2021, does not contain any information on these discussions. Further, while the Working Paper refers to the discussions in the STACREC meeting, convened during the May/June meeting of the Scientific Council, the report from the STACREC meeting was, according to Appendix III to the Scientific Council report meeting, deferred until September and is still not made available (24 September 2021).

This Delegation expresses reservations to the above-mentioned observations in the Working Paper, which appear biased and one-sided. Further, it is the view of this Delegation that the observations in question go beyond the terms of reference of the Scientific Council, and also STACREC, from which it follows, are to be attributed no legal effect.

This Delegation notes the recommendation of the Scientific Council to provide for a scientific review of proposed research surveys and welcomes this opportunity to agree on appropriate procedures.

**Annex 16. Recommendations of the Joint Commission-Scientific Council
Working Group on Improving Efficiency of NAFO Working Group Process (E-WG)**
(COM-SC WP 21-06 now COM-SC Doc. 21-06)

The Working Group on Improving Efficiency of NAFO Working Group Process (E-WG) met via WebEx on 18 March 2021 (COM-SC Doc. 21-01) and agreed on the following recommendation.

The Working Group on Improving Efficiency of NAFO Working Group Process recommends that:

- **For the 2022 NAFO year, the following two-week periods, be considered for NAFO intersessional meetings:**
 - **21 February – 04 March 2022;**
 - **25 April – 06 May 2022; and**
 - **08 – 19 August 2022.**

As always, these two-week periods would not require meetings of NAFO subsidiary bodies to meet during those dates nor would they preclude the scheduling of meetings of NAFO subsidiary bodies outside those dates.

**Annex 17. Recommendations of the Joint Commission-Scientific Council
Working Group on Risk-Based Management Strategies (WG-RBMS)**
(COM-SC WP 21-07 now COM-SC Doc. 21-07)

The NAFO Joint Fisheries Commission-Scientific Council Working Group on Risk-Based Management Strategies (WG-RBMS) met via WebEx on 20-21 August (COM-SC Doc. 21-04) and agreed on the following recommendations:

In regard to Greenland halibut Management Strategy Evaluation,

1. **WG-RBMS endorses the continued application of the HCR to derive the TAC for 2022.**
2. **Regarding the Exceptional Circumstances for Greenland halibut in 2022 (COM-SC RBMS-WP 21-02) and conditional on the absence of other reasons for Exceptional Circumstances arising; WG-RBMS recommends that the Commission request the SC to calculate in 2022 the HCR adjusting the TAC advised for 2022 using four survey indices (Canadian fall 2J3K, Canadian fall 3LNO, EU 3M 0-1400m, and EU-Spain 3NO surveys) to provide TAC advice for 2023.**

In regard to 3LN Redfish,

3. **Noting that a review and update of the existing Management Strategy is required; WG-RBMS recommends that the Commission request SC, at its meeting in June 2022, to provide a full assessment and advice (based on an approach to be determined by the Commission in September 2021) on a TAC for 3LN Redfish for the years 2023 and 2024.**

In regard to Precautionary Approach Framework (PAF),

4. **WG-RBMS shares the interpretation that the SC/PA-WG has made of how to implement the General Objectives of the NAFO Convention within the PAF and its preliminary conclusions and recommends the work to continue according to the schedule approved last year.**

**Annex 18. Canadian Deliverables to Advance Review of 3LN Redfish Management Strategy
(Information Paper Presented by Canada)
(COM-SC WP 21-12)**

At the August 2021 meeting of the Working Group on Risk-Based Management Strategies (WG-RBMS), Canada agreed to identify tasks and/or deliverables to advance the planned review of the 3LN Redfish Management Strategy that could be made available for Scientific Council (SC) and WG-RBMS review/consideration in 2022. Canada recognizes the significant amount of work that is continually being requested of the SC, which implicates many of the same SC members.

The Canadian domestic 3LN Redfish Working Group (Canadian WG), comprised of fishery managers, scientists and industry representatives, continued to meet in 2021, with its discussions centered on new objectives that consider the episodic recruitment of redfish. Further to the recent advice of the SC, work will continue on potential new objectives that consider these sporadic recruitment events and the declining trend in the stock with a potentially long period of low recruitment, as well as on potential Harvest Control Rules (performance metrics).

Canada has dedicated science funding to support a new staff position that will be focused on the 3LN Redfish Management Strategy Evaluation (MSE) review, particularly the required modelling work. This will support the work of the SC in this respect and is expected to reduce the associated workload for this key component of the review.

The work of the Canadian WG will continue to be guided by the direction of the SC and WG-RBMS, and Canada will continue to provide updates to both groups.

A full assessment of 3LN redfish is scheduled for June 2022. As part of the assessment, a review of the data and existing models will occur, which will contribute to the work currently being done by the Canadian WG.

The SC conducted a scoping exercise to provide guidance to the WG-RBMS on the process of conducting a full review/evaluation of the management strategy of Div. 3LN redfish (NAFO SCS Doc. 21/14 – pages 102-103). The review of the 3LN redfish management strategy will follow the steps provided in the scoping exercise undertaken by SC, with focus on the first three steps as the deliverables to June 2022.

Canada will undertake the following tasks in advance of the June 2022 meeting of SC and will prepare working papers on the data review and the review of previous models for potential review by the SC at that time.

1. A data review – to ensure that the best data available are being used.

Review of the available biological, commercial and survey data and its possible use in the MSE process.

2. Decision on the models to apply to the data.

Revision and discussion of the problems with the current Operating Models (OM), as well as the development of new models that are required to cover any uncertainties that are identified (for example: sporadic recruitment events, stock mixing, modelling a mixed stock, etc.)

3. Initiate discussion on the OMs to be used.

The original MSE had six different operating models. SC Canadian delegation have recently updated the OMs from the original MSE. The results of these updates may provide information for the development of a new MSE. It will also assist in the review of the different models and discussions regarding any new models. Final selection on operating models will likely be made later, after further developments as may be appropriate.

**Annex 19. Recommendations of the Joint Commission-Scientific Council
Working Group on Ecosystem Approach Framework to Fisheries Management (WG-EAFFM)**
(COM WP 21-08 Rev. now COM Doc. 21-08)

The NAFO Joint Fisheries Commission-Scientific Council Working Group on Ecosystem Approach Framework to Fisheries Management (WG-EAFFM) met via WebEx on 14–16 July 2021 and 20-21 July 2021 (COM-SC Doc. 21-03) and agreed on the following recommendations:

The WG-EAFFM:

In regards to SAI work,

1. Recommends that the Commission direct the Secretariat to share its work on bottom fishing impacts along with any potential up-date of the SAI outcome with the UNGA VME review in 2022.

In regards to Seamounts,

2. Welcomes the recommendation from the SC on the proposal on revision boundaries of seamount closures and recommend the proposal be forwarded to the Commission for consideration, noting that some Contracting Parties need additional time for consultation on the revision with scientists and stakeholders.

In regards to Taxa Changes,

3. Recommends that the Commission adopt the Scientific Council recommended changes to Annex I.E.6 “*VME Indicator Species*” of the NAFO CEM (Annex 6).

In regards to Roadmap/Workshop

4. Recommends, given the long-term importance and ground-breaking nature of this work, that the Commission request Scientific Council, in consultation with WG-EAFFM, engage an external independent panel to conduct a scientific review of the NAFO Roadmap as it applies to estimating fisheries production and total catches (Tier 1) whilst considering a full range of species interactions (Tier 2). The outcomes of this would be available in advance of the planned workshop in 2022.
5. Recommends that the Commission strongly encourage participation by Contracting Parties and observers at both the open dialogue meeting and the subsequent WG-EAFFM Workshop.
6. Recommends that the Commission request the participation of WG-RBMS representatives and co-Chairs at both the open dialogue meeting and the subsequent WG-EAFFM Workshop, including potentially co-chairing the meetings, as many of these issues could overlap with its work, particularly the review of the PA Framework.

In regards to the review of NAFO CEM Chapter 2,

7. Re-iterates its prior recommendation that the Commission request the Scientific Council to review the effectiveness of NAFO CEM, Chapter 2 from a scientific and technical perspective and to report back at 2022 WG-EAFFM meeting.
8. Recommends that the Commission request STACTIC and the Secretariat to work with NAFO fishery observers to determine if, and how, the current VME identification guides can be improved to assist in VME species identification.
9. Recommends that the Commission request STACTIC, for WG-EAFFM’s 2022 meeting, to develop NAFO CEM text requiring the Secretariat to inform those Contracting Parties with an inspection presence when vessels are operating in closed areas at speeds indicating fishing may be occurring.

In regards to VMEs,

10. Recommends that the Commission extend the current closures in Chapter 2 of the NAFO CEM for five (5) years. Consequently,
 - a. Article 17.1 of the NAFO CEM should read: Until 31 December ~~2024~~ 2026, no vessel shall engage in bottom fishing activities in any of the areas illustrated in Figure 3 and defined by connecting the following coordinates specified in Table 5 in numerical order and back to coordinate 1.
 - b. Article 17.2 of the NAFO CEM should read: Until 31 December ~~2024~~ 2026, no vessel shall engage in bottom fishing activities in the area of Division 3O illustrated in Figure 4 and defined by connecting the coordinates specified in Table 6 in numerical order and back to coordinate 1.
 - c. Article 17.3 of the NAFO CEM should read: Until 31 December ~~2024~~ 2026, no vessel shall engage in bottom fishing activities in the areas 1-13 illustrated in Figure 5 and defined by connecting the coordinates specified in Table 7 in numerical order and back to coordinate 1.
11. Additional VME protections are needed, therefore, recommends that the Commission consider the SC's advice regarding additional area-based management measures to protect VMEs from SAI, and consider adopting additional measures if proposed at the 2021 Annual Meeting.

In regards to ABNJ Deep Sea Fisheries Project,

12. Recommends the Commission support the ABNJ Deep Sea Fisheries Project, including offering in-kind support from NAFO.

In regards to Sargasso Sea Commission,

13. Recommends the Commission support the development of an MOU between the Sargasso Sea Commission Secretariat and NAFO Secretariat.

Annex 6. Updated List of VME Indicator Species for inclusion in Part. VI, Annex I.E of the NAFO CEM

List of VME Indicator Species

Common Name and FAO ASFIS 3- ALPHA CODE	Taxon	Family	FAO ASFIS 3-ALPHA CODE
Large-Sized Sponges (PFR - Porifera)	<i>Asconema foliatum</i>	Rossellidae	ZBA
	<i>Aphrocallistes beatrix</i>	Aphrocallistidae	
	<i>Asbestopluma (Asbestopluma) ruetzleri</i>	Cladorhizidae	ZAB (Asbestopluma)
	<i>Axinella</i> sp.	Axinellidae	
	<i>Chondrocladia grandis</i>	Cladorhizidae	ZHD (Chondrocladia)
	<i>Cladorhiza abyssicola</i>	Cladorhizidae	ZCH (Cladorhiza)
	<i>Cladorhiza kenchingtonae</i>	Cladorhizidae	ZCH (Cladorhiza)
	<i>Craniella</i> spp.	Tetillidae	ZCS (Craniella spp.)
	<i>Dictyaulus romani</i>	Euplectellidae	ZDY (Dictyaulus)
	<i>Esperiopsis villosa</i>	Esperiopsidae	ZEW
	<i>Forcepia</i> spp.	Coelosphaeridae	ZFR
	<i>Geodia barretti</i>	Geodiidae	
	<i>Geodia macandrewii</i>	Geodiidae	
	<i>Geodia parva</i>	Geodiidae	
	<i>Geodia phlegraei</i>	Geodiidae	
	<i>Haliclona</i> sp.	Chalinidae	ZHL
	<i>Iophon piceum</i>	Acarnidae	WJP
	<i>Isodictya palmata</i>	Isodictyidae	
	<i>Lissodendoryx (Lissodendoryx) complicata</i>	Coelosphaeridae	ZDD
	<i>Mycale (Mycale) lingua</i>	Mycalidae	YHL (Mycale lingua)
	<i>Mycale (Mycale) loveni</i>	Mycalidae	
	<i>Phakellia</i> sp.	Axinellidae	
	<i>Polymastia</i> spp.	Polymastiidae	ZPY
	<i>Stelletta normani</i>	Ancorinidae	WSX (Stelletta)
	<i>Stelletta tuberosa</i>	Ancorinidae	WSX (Stelletta)
	<i>Stryphnus fortis</i>	Ancorinidae	WPH
	<i>Thenea muricata</i>	Pachastrellidae	ZTH (Thenea)
	<i>Thenea valdiviae</i>	Pachastrellidae	ZTH (Thenea)
	<i>Weberella bursa</i>	Polymastiidae	ZWB (Weberella spp.)

Common Name and FAO ASFIS 3- ALPHA CODE	Taxon	Family	FAO ASFIS 3-ALPHA CODE
Stony Corals (CSS - Scleractinia)	<i>Enallopsammia rostrata</i>	Dendrophylliidae	FEY
	<i>Lophelia pertusa</i>	Caryophylliidae	LWS
	<i>Madrepora oculata</i>	Oculinidae	MVI
	<i>Solenosmilia variabilis</i>	Caryophylliidae	RZT
Black corals (AQZ- Antipatharia)	<i>Stichopathes</i> sp.	Antipathidae	QYX
	<i>Leiopathes</i> cf. <i>expansa</i>	Leiopathidae	
	<i>Leiopathes</i> sp.	Leiopathidae	
	<i>Plumapathes</i> sp.	Myriopathidae	
	<i>Bathypathes</i> cf. <i>patula</i>	Schizopathidae	
	<i>Parantipathes</i> sp.	Schizopathidae	
	<i>Stauropathes arctica</i>	Schizopathidae	SQW
	<i>Stauropathes</i> cf. <i>punctata</i>	Schizopathidae	
	<i>Telopathes magnus</i>	Schizopathidae	
Small Gorgonians (GGW)	<i>Acanella arbuscula</i>	Isididae	KQL (Acanella)
	<i>Anthothela grandiflora</i>	Anthothelidae	WAG
	<i>Chrysogorgia</i> sp.	Chrysogorgiidae	FHX
	<i>Metallogorgia melanotrichos</i>	Chrysogorgiidae	QFY (Chrysogorgiidae)
	<i>Narella laxa</i>	Primnoidae	QON (Primnoidae)
	<i>Radicipes gracilis</i>	Chrysogorgiidae	CZN
	<i>Swiftia</i> sp.	Plexauridae	
Large Gorgonians (GGW)	<i>Acanthogorgia armata</i>	Acanthogorgiidae	AZC
	<i>Calyptraphora</i> sp.	Primnoidae	QON (Primnoidae)
	<i>Hemicorallium bathyrubrum</i>	Coralliidae	COR (Corallium)
	<i>Hemicorallium bayer</i>	Coralliidae	COR (Corallium)
	<i>Iridogorgia</i> sp.	Chrysogorgiidae	QFY (Chrysogorgiidae)
	<i>Keratoisis</i> cf. <i>siemensii</i>	Isididae	IQO (Isididae)
	<i>Keratoisis grayi</i>	Isididae	IQO (Isididae)
	<i>Lepidisis</i> sp.	Isididae	QFX (Lepidisis)
	<i>Paragorgia arborea</i>	Paragorgiidae	BFU
	<i>Paragorgia johnsoni</i>	Paragorgiidae	BFV

Common Name and FAO ASFIS 3- ALPHA CODE	Taxon	Family	FAO ASFIS 3-ALPHA CODE
Sea Pens (NTW – Pennatulacea)	<i>Paramuricea grandis</i>	Plexauridae	PZL (Paramuricea)
	<i>Paramuricea placomus</i>	Plexauridae	PZL (Paramuricea)
	<i>Paramuricea</i> spp.	Plexauridae	PZL (Paramuricea)
	<i>Parastenella atlantica</i>	Primnoidae	QON (Primnoidae)
	<i>Placogorgia</i> sp.	Plexauridae	
	<i>Placogorgia terceira</i>	Plexauridae	
	<i>Primnoa resedaeformis</i>	Primnoidae	QOE
	<i>Thouarella (Euthouarella) grasshoffi</i>	Primnoidae	QON (Primnoidae)
	<i>Anthoptilum grandiflorum</i>	Anthoptilidae	AJG (Anthoptilum)
	<i>Distichoptilum gracile</i>	Protoptilidae	WDG
	<i>Funiculina quadrangularis</i>	Funiculinidae	FQJ
	<i>Halipterus</i> cf. <i>christii</i>	Halipteridae	ZHX (Halipterus)
	<i>Halipterus finmarchica</i>	Halipteridae	HFM
	<i>Halipterus</i> sp.	Halipteridae	ZHX (Halipterus)
	<i>Kophobelemnnon stelliferum</i>	Kophobelemnidae	KVF
	<i>Pennatula aculeata</i>	Pennatulidae	QAC
	<i>Ptilella</i> spp.	Pennatulidae	
	<i>Pennatula</i> sp.	Pennatulidae	
	<i>Protoptilum carpenteri</i>	Protoptilidae	
	<i>Umbellula lindahli</i>	Umbellulidae	OJZ (Umbellula spp)
	<i>Virgularia mirabilis</i>	Virgulariidae	
Tube-Dwelling Anemones	<i>Pachycerianthus borealis</i>	Cerianthidae	WQB
Erect Bryozoans (BZN – Bryozoa)	<i>Eucratea loricata</i>	Eucrateidae	WEL
Sea Lilies (CWD – Crinoidea)	<i>Conocrinus lofotensis</i>	Bourgueticrinidae	WCF
	<i>Gephyrocrinus grimaldii</i>	Hyocrinidae	
	<i>Trichometra cubensis</i>	Antedonidae	
	<i>Boltenia ovifera</i>	Pyuridae	WBO

Common Name and FAO ASFIS 3- ALPHA CODE	Taxon	Family	FAO ASFIS 3-ALPHA CODE
Sea Squirts (SSX – Asciadiacea)	<i>Halocynthia aurantium</i>	Pyuridae	

Unlikely to be observed in trawls; *in situ* observations only:

Large xenophyophores	<i>Syringamina</i> sp.	Syringamminidae
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Annex 20. Revision of Seamounts Closures

(COM-SC WP 21-13 now COM-SC Doc. 21-05)

Explanatory Memorandum

The 2017 amendments to the NAFO Convention were designed to modernize NAFO, including incorporating an ecosystem approach to fisheries management. NAFO Contracting Parties have committed to conserving the marine biodiversity within the NAFO Regulatory Area, which has been reflected in NAFO's ongoing efforts to protect vulnerable marine ecosystem elements, such as seamounts.

In 2020, the Scientific Council recommended that the Commission revise the Newfoundland and Corner Rise Seamount protection zones to better protect seamount chains in the NAFO Regulatory Area (SCS Doc. 20/19). Due to the limited nature of the virtual NAFO meetings that year, a decision on this matter was deferred.

In 2021, the Scientific Council made additional recommendations with the aim of applying a consistent approach to NAFO's protection of seamounts. Recommendations include completing the protection of seamounts on the Fogo Seamount Chain and the Newfoundland Seamount Chain through revised boundaries; and, the implementation of seven seamount closures in the NAFO Convention Area in areas beyond national jurisdiction north of Orphan Knoll. These additional seven closures are targeted in scope. All proposed closures fall outside of NAFO's fishing footprint and will therefore have no impact on existing fishing activities (SCS 21/14).

On this basis, Canada and the United States of America propose adopting the SC's recommended revisions to the boundaries of the Fogo, Corner Rise and Newfoundland Seamount closures, as well as the implementation of seven additional closed areas north of Orphan Knoll.

Proposal

Reaffirming NAFO's commitment to incorporating an ecosystem approach to fisheries management, and to protecting biodiversity within the Northwest Atlantic;

Recalling the Scientific Council advice from 2021 which "recommends changes to the existing boundaries for the Fogo, Newfoundland and Corner Rise Seamount closures, as well as the implementation of seven new individual seamount closures in the NAFO Regulatory Area north of Orphan Knoll";

Thereby recommends that Article 17 of the CEM is amended, inclusive of revisions to Table 5 (referenced in para 17.1), in order to refine the closures for the Newfoundland, Corner Rise and Fogo Seamount chains, including the expansion to previously unprotected seamounts, as well as implement seven new closed areas to protect seamounts north of Orphan Knoll, as described by the geographical coordinates below:

Description	Coordinate No.	Latitude	Longitude
Fogo Seamount <u>Chains-1</u> Fogo Seamounts <u>2</u>	<u>11</u>	<u>42° 31' 33" N</u> <u>42°31'33"N</u>	<u>53° 23' 17" W</u> <u>53°23'17"W</u>
	<u>22</u>	<u>42° 31' 33" N</u> <u>42°31'33"N</u>	<u>52° 33' 37" W</u> <u>52°33'37"W</u>
	<u>33</u>	<u>41° 51' 00" N</u> <u>41°55'48"N</u>	<u>52° 07' 00" W</u> <u>53°23'17"W</u>
	<u>44</u>	<u>41° 51' 00" N</u> <u>41°55'48"N</u>	<u>51° 26' 00" W</u> <u>52°33'37"W</u>
	<u>51</u>	<u>42° 18' 00" N</u> <u>41°07'22"N</u>	<u>51° 26' 00" W</u> <u>52°27'49"W</u>
	<u>62</u>	<u>42° 18' 00" N</u> <u>41°07'22"N</u>	<u>51° 00' 00" W</u> <u>51°38'10"W</u>

Description	Coordinate No.	Latitude	Longitude
	73	41° 33' 00" N 40° 31' 37" N	51° 00' 00" W 52° 27' 49" W
	84	41° 33' 00" N 40° 31' 37" N	49° 42' 00" W 51° 38' 10" W
	9	42° 32' 00" N	49° 42' 00" W
	10	42° 32' 00" N	48° 45' 00" W
	11	41° 24' 00" N	48° 45' 00" W
	12	41° 24' 00" N	47° 55' 00" W
	13	40° 30' 00" N	47° 55' 00" W
	14	40° 30' 00" N	50° 15' 00" W
	15	40° 05' 00" N	50° 55' 00" W
	16	40° 05' 00" N	52° 00' 00" W
	17	40° 31' 37" N	52° 00' 00" W
	18	40° 31' 37" N	52° 27' 49" W
	19	41° 55' 48" N	53° 23' 17" W
Orphan Knoll	1	50°00'30"N	45°00'30"W
	2	51°00'30"N	45°00'30"W
	3	51°00'30"N	47°00'30"W
	4	50°00'30"N	47°00'30"W
Corner Rise Seamounts	1	36° 33' 00" N 35°00'00"N	52° 27' 00" W 48°00'00"W
	2	36° 33' 00" N 36°00'00"N	51° 00' 00" W 48°00'00"W
	3	36° 00' 00" N 36°00'00"N	50° 30' 00" W 52°00'00"W
	4	35° 33' 00" N 35°00'00"N	50° 30' 00" W 52°00'00"W
	5	35° 33' 00" N	48° 00' 00" W
	6	36° 00' 00" N	48° 00' 00" W
	7	36° 00' 00" N	47° 06' 00" W
	8	35° 33' 00" N	47° 06' 00" W
	9	35° 33' 00" N	42° 30' 00" W
	10	35° 00' 00" N	42° 30' 00" W
	11	35° 00' 00" N	52° 27' 00" W
Newfoundland Seamounts	11	44° 06' 00" N 43°29'00"N	46° 45' 00" W 43°20'00"W
	22	44° 06' 00" N 44°00'00"N	46° 18' 00" W 43°20'00"W
	33	43° 57' 00" N 44°00'00"N	46° 18' 00" W 46°40'00"W
	44	43° 57' 00" N 43°29'00"N	43° 24' 00" W 46°40'00"W
	5	43° 36' 00" N	43° 24' 00" W
	6	43° 36' 00" N	44° 42' 00" W
	7	43° 18' 00" N	44° 42' 00" W
	8	43° 18' 00" N	45° 00' 00" W
	9	42° 45' 00" N	45° 00' 00" W
	10	42° 45' 00" N	45° 15' 00" W
	11	43° 18' 00" N	45° 15' 00" W
	12	43° 18' 00" N	45° 25' 00" W
	13	43° 29' 00" N	45° 25' 00" W

Description	Coordinate No.	Latitude	Longitude
	<u>14</u>	<u>43° 29' 00" N</u>	<u>46° 00' 00" W</u>
	<u>15</u>	<u>43° 36' 00" N</u>	<u>46° 00' 00" W</u>
	<u>16</u>	<u>43° 36' 00" N</u>	<u>46° 40' 00" W</u>
	<u>17</u>	<u>43° 52' 00" N</u>	<u>46° 40' 00" W</u>
	<u>18</u>	<u>43° 52' 00" N</u>	<u>46° 45' 00" W</u>
New England Seamounts*	1	38°51'54.000" N	66°55'51.600" W
	2	37° 12' 0.000" N	60° 48' 0.000" W
	3	35° 0' 0.000" N	59°00'0.000" W
	4	35° 0' 0.000" N	56°30'0.000" W
	5	36° 48' 0.000" N	57° 48' 0.000" W
	6	39° 0' 0.000" N	60° 0' 0.000" W
	7	39° 18' 0.000" N	61° 30' 0.000" W
	8	39°56'20.400" N	65°56'34.800" W
<u>2H East</u>	<u>1</u>	<u>56° 00' 00" N</u>	<u>49° 00' 00" W</u>
	<u>2</u>	<u>56° 00' 00" N</u>	<u>48° 35' 00" W</u>
	<u>3</u>	<u>55° 44' 00" N</u>	<u>48° 35' 00" W</u>
	<u>4</u>	<u>55° 44' 00" N</u>	<u>49° 00' 00" W</u>
<u>2J East 1</u>	<u>1</u>	<u>55° 00' 00" N</u>	<u>47° 42' 00" W</u>
	<u>2</u>	<u>55° 00' 00" N</u>	<u>47° 29' 00" W</u>
	<u>3</u>	<u>54° 50' 00" N</u>	<u>47° 29' 00" W</u>
	<u>4</u>	<u>54° 50' 00" N</u>	<u>47° 42' 00" W</u>
<u>2J East 2</u>	<u>1</u>	<u>54° 14' 00" N</u>	<u>47° 54' 00" W</u>
	<u>2</u>	<u>54° 14' 00" N</u>	<u>47° 45' 00" W</u>
	<u>3</u>	<u>54° 06' 00" N</u>	<u>47° 45' 00" W</u>
	<u>4</u>	<u>54° 06' 00" N</u>	<u>47° 54' 00" W</u>
<u>1F West</u>	<u>1</u>	<u>55° 12' 00" N</u>	<u>46° 45' 00" W</u>
	<u>2</u>	<u>55° 12' 00" N</u>	<u>46° 35' 00" W</u>
	<u>3</u>	<u>55° 02' 00" N</u>	<u>46° 35' 00" W</u>
	<u>4</u>	<u>55° 02' 00" N</u>	<u>46° 45' 00" W</u>
<u>3K North</u>	<u>1</u>	<u>52° 07' 00" N</u>	<u>45° 46' 00" W</u>
	<u>2</u>	<u>52° 07' 00" N</u>	<u>45° 33' 00" W</u>
	<u>3</u>	<u>51° 58' 00" N</u>	<u>45° 33' 00" W</u>
	<u>4</u>	<u>51° 58' 00" N</u>	<u>45° 46' 00" W</u>
<u>1F East 1</u>	<u>1</u>	<u>56° 04' 00" N</u>	<u>42° 42' 00" W</u>
	<u>2</u>	<u>56° 04' 00" N</u>	<u>42° 30' 00" W</u>
	<u>3</u>	<u>55° 57' 00" N</u>	<u>42° 30' 00" W</u>
	<u>4</u>	<u>55° 57' 00" N</u>	<u>42° 42' 00" W</u>
<u>1F East 2</u>	<u>1</u>	<u>56° 23' 00" N</u>	<u>42° 08' 00" W</u>
	<u>2</u>	<u>56° 23' 00" N</u>	<u>42° 00' 00" W</u>
	<u>3</u>	<u>56° 10' 00" N</u>	<u>42° 00' 00" W</u>
	<u>4</u>	<u>56° 10' 00" N</u>	<u>42° 08' 00" W</u>

*From point 8 back to point 1, following the outer boundary of the US EEZ.

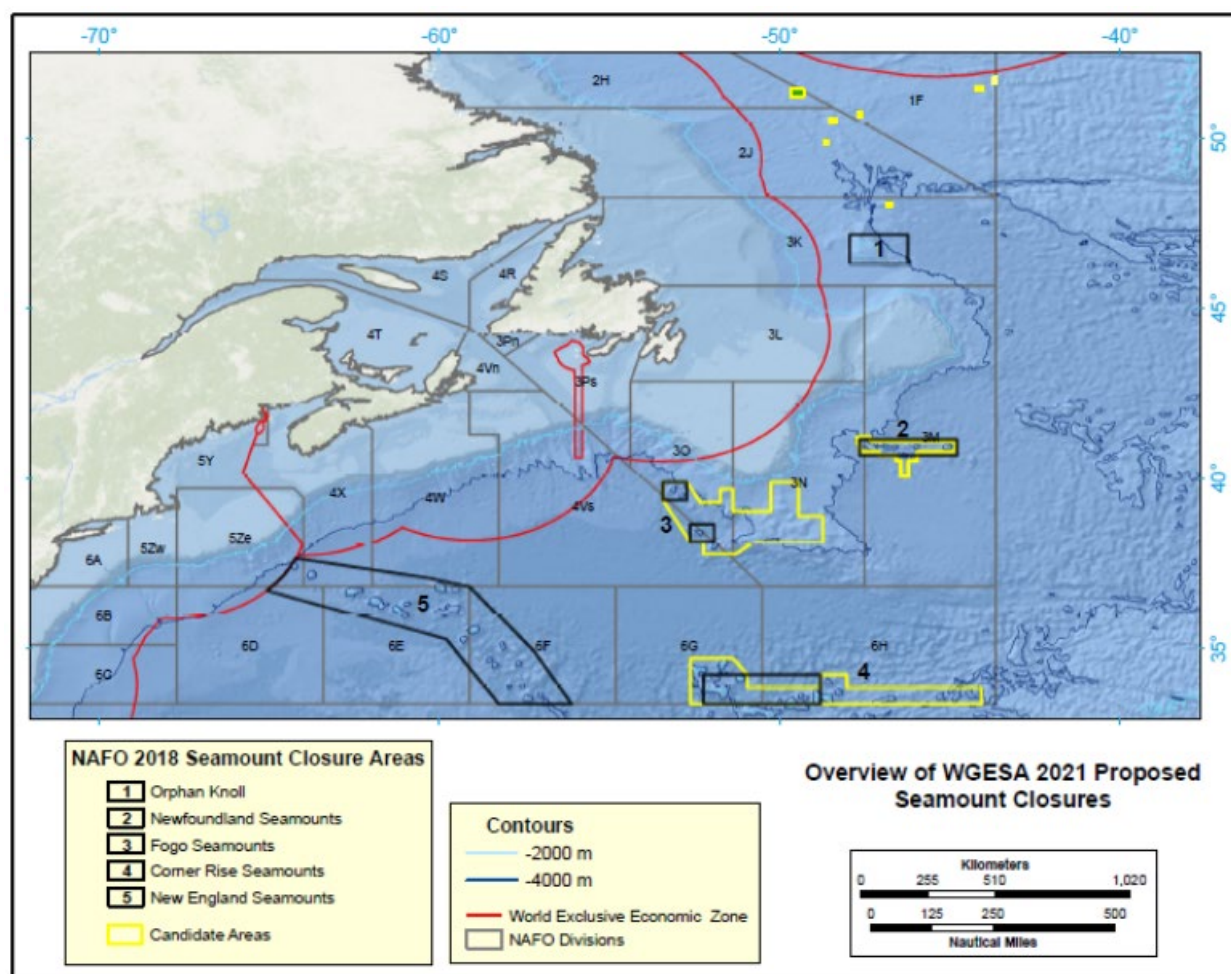


Figure 1. Location of the seamount areas in the NAFO Regulatory Area with current closures indicated in black outline and proposed changes and new closures indicated by yellow line.

**Annex 21. Recommendations of the Joint Commission-Scientific Council
Catch Estimation Strategy Advisory Group (CESAG)**
(COM-SC 21-09 now COM-SC Doc. 21-09)

The NAFO Joint Commission-Scientific Council Catch Estimation Strategy Advisory Group (CESAG) met via WebEx on 13 April 2021 (COM-SC Doc. 21-02) and agreed on the following recommendations:

The CESAG recommends that:

- 1. The Secretariat revise the 2020 catch estimates contained in COM-SC CESAG-WP 20-05 to include the remaining data and forward it (COM-SC CESAG-WP 20-05 Revised) to the Scientific Council by the 01 May deadline.**
- 2. The Commission request STACTIC review best practices outlined in COM-SC CESAG-WP 21-01 Revised to identify the possible application of these best practices to improve tow catch estimates in the NAFO Regulatory Area and consider the specific guidance on the International Observer Program as part of its planned review of the NAFO Observer Program scheduled for 2022.**

Annex 22. The Commission's Request for Scientific Advice on Management in 2023 and Beyond of Certain Stocks in Subareas 2, 3 and 4 and Other Matters

(COM WP 21-43 Rev. 3 **now** COM Doc. 21-20)

Following a request from the Scientific Council, the Commission agreed that items 1, 2, 4, 7, and 9 should be the priority for the June 2022 Scientific Council meeting subject to resources and COVID-related restrictions.

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 keeping with the NAFO Precautionary Approach Framework (FC Doc. 04/18), the advice should be provided as a range of management options and a risk analysis for each option without a single TAC recommendation. The Commission will decide upon the acceptable risk level in the context of the entirety of the SC advice for each stock guided and as foreseen by the Precautionary Approach.

Yearly basis	Two-year basis	Three-year basis
Cod in Div. 3M Northern shrimp in Div. 3M	Redfish in Div. 3M Thorny skate in Div. 3LNO Witch flounder in Div. 3NO Redfish in Div. 3LN White hake in Div. 3NO Yellowtail flounder in Div. 3LNO Northern shrimp 3LNO	American Plaice in Div. 3LNO American Plaice in Div. 3M Northern shortfin squid in SA 3+4 Redfish in Div. 3O Cod in Div. 3NO

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

- In 2022, advice should be provided for 2023 for Cod in Div. 3M and Northern shrimp in Div. 3M. With respect to Northern shrimp in Div. 3M, Scientific Council is requested to provide its advice to the Commission prior to the 2023 Annual Meeting based on the survey data up to and including 2023.
- In 2022, advice should be provided for 2023 and 2024 for: Thorny skate in Div. 3LNO, Redfish in Div. 3LN, Witch flounder in Div. 3NO.
- In 2022, advice should be provided for 2023, 2024 and 2025 for: SA 3+4 Northern shortfin squid, Redfish in Div. 3O.

Advice should be provided using the guidance provided in **Annexes A or B as appropriate**, or using the predetermined Harvest Control Rules in the cases where they exist (currently Greenland halibut 2+3KLMNO).

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. Conditional on the absence of other reasons for Exceptional Circumstances arising (other than the missing Canadian spring 3LNO survey), to calculate in 2022 the HCR adjusting the TAC advised for 2022 using four survey indices (Canadian fall 2J3K, Canadian fall 3LNO, EU 3M 0-1400m, and EU-Spain 3NO surveys) to provide TAC advice for 2023. If other reasons for exceptional circumstances are occurring, the EC protocol will provide guidance on what steps should be taken.

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3. The Commission requests that Scientific Council continue its evaluation of the impact of scientific trawl surveys on VME in closed areas and the effect of excluding surveys from these areas on stock assessments.
4. Scientific Council initiate the first steps in both the 2+3KLMNO Greenland halibut and 3LN redfish MSE processes during 2021-2022, namely:
 - a. Compile catch and survey data and any additional sources of information used in the current models;
 - b. Review and finalize the data inputs for review at the June 2022 Scientific Council meeting when conducting both the 3LN redfish assessment and the assessment of Greenland Halibut Exceptional Circumstances/ Provision of TAC advice
 - c. Time permitting, further work on the respective MSE work plans by the SC-GHL and SC-Redfish subgroups for presentation to WG-RBMS or SC.
5. The Commission requests that Scientific Council continue work on the sustainability of catches aspect of the Ecosystem Roadmap, including:
 - a. In consultation with WG-EAFFM via co-Chairs, convene independent experts to do a scientific review of; a) the estimation of fisheries production potential and total catch indices, and b) the adequacy of this analysis for their proposed use within the NAFO roadmap (Tier 1), while considering how species interactions are expected to be addressed in the future (Tier 2) within the overall Roadmap structure. The outcomes of this review would need to be tabled in June at Scientific Council to be available in advance of the planned workshop in 2022.
 - b. Work to support the WG-EAFFM workshop in 2022, which will explore ecosystem objectives and further develop how the Roadmap may apply to management decision making.
 - c. Continue its work to develop models that support implementation of Tier 2 of the EAFM Roadmap.
6. The Commission requests that Scientific Council, in relation to VME analyses:
 - a. Conduct a re-assessment of its previously recommended closures of 7a, 11a, 14a and 14b, incorporating catch and effort data for fisheries of shrimp from 2020 and 2021 into the fishing impact assessments. This work is to be completed by the 2023 Scientific Council meeting.
 - b. Review the effectiveness of NAFO CEM, Chapter 2 from a scientific and technical perspective and report back to the WG-EAFFM. WG-EAFFM would subsequently in 2022 consider whether any modifications to this Chapter should be recommended.
7. The Commission requests Scientific Council to continue progression on the review of the NAFO PA Framework in accordance to the PAF review work plan approved in 2020 (NAFO COM-SC Doc. 20-04).
8. The Commission requests Scientific Council to continue to develop a 3-5 year work plan, which reflects requests arising from the 2021 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.
9. The Commission requests that Scientific Council do a full assessment for Div. 3LN redfish and provide advice based on the projection for various harvest levels for two-years (2023 and 2024) to evaluate the impacts according to the performance statistics from NAFO CEM Annex I.H.

10. The Commission requests that any new results from stock assessments and the scientific advice of Cod 2J3KL (Canada), Witch 2J3KL (Canada) and Pelagic *Sebastes mentella* (ICES Divisions V, XII and XIV; NAFO 1) to be presented to the Scientific Council and request the Scientific Council to prepare a summary of these assessments to be included in its annual report.
11. The Commission requests Scientific Council, jointly with the Secretariat, to conduct ongoing analysis of the Flemish Cap cod fishery data by 2022 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 Div. 3M cod caught as bycatch in other fisheries during the closed period.
12. The Commission requests Secretariat and the Scientific Council with other international organizations, such as the FAO and ICES to inform the Scientific Council's work related to the potential impact of activities other than fishing in the Convention Area. This would be conditional on CPs providing appropriate additional expertise to Scientific Council.
13. The Commission request that Scientific Council proceed with developing the ecosystem summary sheets for 3M and 3LNO move toward undertaking a joint Workshop with ICES (International Council for the Exploration of the Sea) as part of a peer review of North Atlantic ecosystems.

The Commission request 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 Fisheries 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 following constant fishing mortality levels as appropriate:

- The first year of the projection should assume a catch equal to the agreed TAC for that year.

- The 10%, 50% and 90% percentiles of the yield, total biomass, spawning stock biomass and exploitable biomass for each year of the projections
- The risks of stock population parameters increasing above or falling below available biomass and fishing mortality reference points. The table indicated below should guide the Scientific Council in presenting the short-term projections.

				Limit reference points																			
				P(F>F _{lim})			P(B<B _{lim})									P(F>F _{mssy})			P(B<B _{mssy})			P(B2024 > B2021)	
F in 2022 and following years*	Yield 2022 (50%)	Yield 2023 (50%)	Yield 2024 (50%)	2022	2023	2024	2022	2023	2024							2022	2023	2024	2022	2023	2024		
2/3 Fmsy	t	t	t	%	%	%	%	%	%							%	%	%	%	%	%	%	
3/4 Fmsy	t	t	t	%	%	%	%	%	%							%	%	%	%	%	%	%	
85% Fmsy	t	t	t	%	%	%	%	%	%							%	%	%	%	%	%	%	
90% Fmsy																							
95% Fmsy																							
Fmsy	t	t	t	%	%	%	%	%	%							%	%	%	%	%	%	%	
0.75 X Fstatus quo	t	t	t	%	%	%	%	%	%							%	%	%	%	%	%	%	
Fstatus quo	t	t	t	%	%	%	%	%	%							%	%	%	%	%	%	%	
1.25 X Status quo	t	t	t	%	%	%	%	%	%							%	%	%	%	%	%	%	
F=0	t	t	t	%	%	%	%	%	%							%	%	%	%	%	%	%	
TAC Status quo																							
85% TAC Status quo																							
90% TAC Status quo																							
95% TAC Status quo																							

2. 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 reference points
 - And any information the Scientific Council deems appropriate

Stochastic short-term projections (3 years) should be performed with the following constant fishing mortality levels as appropriate:

- For stocks opened to direct fishing: $F_{0.1}$, F_{max} , $2/3 F_{max}$, $3/4 F_{max}$, $85\% F_{max}$, $75\% F_{status\ quo}$, $F_{status\ quo}$, $125\% F_{status\ quo}$,
 - For stocks under a moratorium to direct fishing: $F_{status\ quo}$, $F = 0$.

The first year of the projection should assume a catch equal to the agreed TAC for that year.

Results from stochastic short-term projection should include:

- The 10%, 50% and 90% percentiles of the yield, total biomass, spawning stock biomass and exploitable biomass for each year of the projections
- The risks of stock population parameters increasing above or falling below available biomass and fishing mortality reference points. The table indicated below should guide the Scientific Council in presenting the short-term projections.

				Limit reference points															P(B2024 > B2021)
				P(F.>F _{lim})			P(B<B _{lim})									P(F>F _{max})			
F in 2022 and following years*	Yield 2022	Yield 2023	Yield 2024	2022	2023	2024	2022	2023	2024	2022 2023 2024			2022 2023 2024						
F _{0.1}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
F _{max}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
66% F _{max}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
75% F _{max}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
85% F _{max}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
0.75 X F ₂₀₁₈	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
F ₂₀₁₈	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
1.25 X F ₂₀₁₈	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	

ANNEX B. Guidance for providing advice on Stocks Assessed without a Population Model

For those resources 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 one or several surveys, for the longest time-period possible:

- a. time trends of survey abundance estimates
- b. an age or size range chosen to represent the spawning population
- c. an age or size-range chosen to represent the exploited population
- d. recruitment proxy or index for an age or size-range chosen to represent the recruiting population.
- e. fishing mortality proxy, such as the ratio of reported commercial catches to a measure of the exploited population.
- f. Stock trajectory against reference points

And any information the Scientific Council deems appropriate.

Annex 23. SC Chair Update regarding the Greenland Halibut Harvest Control Rule
(COM WP 21-44)

- 1) The Greenland halibut Harvest Control Rule in the current NAFO CEM (COM. Doc. 21-01) was scientifically tested through an MSE process extending beyond 2023 (until 2037).
- 2) The management regime includes the HCR plus a protocol to deal with exceptional circumstances which is applied annually. In addition, update assessments based on the base-case SCAA and SSM models are done every 3 years. These update assessments were last conducted in 2020 and therefore would be repeated in 2023.

Therefore, the SC concludes a short-term extension of this management regime beyond 2023 does not pose any problem from a scientific perspective, and can be reliably applied, but is not recommended to extend for more than 3 years before a full review of the MSE is conducted.

Annex 24. 2022 Quota Table and Effort Allocation Scheme for the Shrimp Fishery in NAFO Division 3M, 2022

CATCH LIMITATIONS 2022—Article 5. Total allowable catches (TACs) and quotas (metric tons in live weight) for 2022 of particular stocks in Subareas 1–4 of the NAFO Convention Area.

Species	Cod				Redfish					American plaice		Yellowtail
Stock Specification	COD 3L	COD 3M		COD 3NO	RED 3LN		RED 3M	RED 3O	REB 1F_2_3K (i.e. Sub-Area 2 and Divs. 1F+3K)	PLA 3LNO	PLA 3M	YEL 3LNO
% of TAC			% of 3M Cod TAC			% of 3LN Redfish TAC						
Contracting Party												
Canada		32	0.80	0	7 710	42.60	500	6 000	0 ¹	0	0	19 500
Cuba		148	3.70	-	1 774	9.80	1 750	-	0 ¹	-	-	-
Denmark (Faroe Islands & Greenland)		894	22.35	-	-		69 ¹⁰	-	0	-	-	-
European Union		1 908 ⁵	47.71	0 ⁴	3 300 ⁴	18.23	7 813 ⁴	7 000	0 ⁷	0	0 ⁴	-
France (St. Pierre et Miquelon)		-		-	-		69 ¹⁰	-	0 ¹	-	-	400
Iceland		-		-	-		-	-	0	-	-	-
Japan		-		-	-		400	150	0 ¹	-	-	-
Korea		-		-	-		69 ¹⁰	100	0 ¹	-	-	-
Norway		370	9.25	-	-		-	-	0	-	-	-
Russian Federation		259	6.47	0	5 207	28.77	9 137	6 500	0	-	0	-
Ukraine		-		-	-		-	150	0 ¹	-	-	-
United Kingdom		373	9.32	-	-		-	-	-	-	-	-
United States of America		-		-	-		69 ¹⁰	-	0 ¹	-	-	-
Others		16	0.40	0	109	0.60	124	100	-	0	0	100
TOTAL ALLOWABLE CATCH	*	4 000	100.0 ¹³	*	18 100	100.0 ¹⁴	10 933	20 000	0 ^{3,9}	* ¹¹	* ⁸	20 000 ⁸

Annex I.A (2022)

Species	Witch			White hake	Capelin	Skates	Greenland halibut	Squid (<i>Illex</i>)	Shrimp		Alfonsino
Stock Specification	WIT 3L	WIT 3NO		HKW 3NO	CAP 3NO	SKA 3LNO	GHL 3LMNO	SQI 3_4 (i.e. Sub-areas 3+4)	PRA 3L	PRA 3NO	ALF 6 (i.e. Sub-area 6)
% of TAC			% of 3NO Witch TAC								
Contracting Party											
Canada		705	60.00	294	0	1 167	1 763	N.S. ²	0		
Cuba		-		-	0	-	-	510	0		
Denmark (Faroe Islands & Greenland)		-		-	-	-	202	-	0		
European Union		156 ⁴	13.27	588	0 ⁵	4 408	6 892 ⁶	<u>N.S.²</u> 611 ⁵	0 ⁶		
France (St. Pierre et Miquelon)		-		-	-	-	193	453	0		
Iceland		-		-	-	-	-	-	0		
Japan		-		-	0	-	1 205	510	0		
Korea		-		-	-	-	-	453	0		
Norway		-		-	0	-	-	-	0		
Russian Federation		302	25.73	59	0	1 167	1 500	749	0		
Ukraine		-		-	-	-	-	-	0		
United Kingdom		-		-	-	-	-	-	-		
United States of America		-		-	-	-	-	453	0		
Others		12	1.00	59	-	258		794	0		
TOTAL ALLOWABLE CATCH	*	1 175	100.00 ¹⁵	1 000 ⁸	* ¹¹	7 000 ¹²	11 755	34 000	0 ⁸	*	*



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Annex I.A (2022)

Symbol	Definition
-	Contracting Party does not have a quota allocation
*	Ban on fishing in force
0	Contracting Party has quota, but the TAC is zero
Blank	No quota allocation defined

- ¹ Quota to be shared by vessels from Canada, Cuba, France (St. Pierre et Miquelon), Japan, Korea, Ukraine and USA.
- ² The allocations to these Contracting Parties are as yet undetermined, although their sum shall not exceed the difference between the total of allocations to other Contracting Parties and the TAC (= 29.467 tonnes).
- ³ Should NEAFC modify its level of TAC, these figures shall be adjusted accordingly by NAFO through a mail vote.
- ⁴ Including allocations to Estonia, Latvia and Lithuania in accordance with the sharing arrangement of the former USSR quota adopted by the Fisheries Commission in 2003 (FC WP 03-7), as applied by NAFO since 2005 following their accession to the European Union.
- ⁵ Including allocations to Estonia, Latvia and Lithuania in accordance with the sharing arrangement of the former USSR quota adopted by the Fisheries Commission in 2003 (FC WP 03-7), and to Poland, as applied by NAFO since 2005 following their accession to the European Union.
- ⁶ Including allocations to Estonia, Latvia, Lithuania and Poland, as applied by NAFO since 2005 following their accession to the EU.
- ⁷ Allocation of 17.85% to Lithuania and 2.15% to Latvia following their accession to the European Union.
- ⁸ Applicable to 2022 and 2023.
- ⁹ If an increase in the overall TAC as defined in footnote 3 leads to an increase in these shares, the first 500 tonnes of that increase shall be added to the quota share referred to in footnote 1.
- ¹⁰ Notwithstanding the provision of Article 5.3(b) and without prejudice to future agreements on allocations, these quotas may be fished in their entirety by these Contracting Parties.
- ¹¹ Applicable to 2022, 2023, and 2024.
- ¹² Should catches exceed 5 000 tonnes, additional measures would be adopted to further restrain catches in 2022.

Historical statements

- ¹³ The allocation key of this stock is based on the 1998 Quota Table. In 1999, a moratorium on cod in Division 3M was declared.
- ¹⁴ The allocation key of this stock is based on the 1997 Quota Table. In 1998, a moratorium on redfish in Division 3LN was declared.
- ¹⁵ The allocation key of this stock is based on the 1994 Quota Table. In 1995, a moratorium on witch flounder in Division 3NO was declared.

**Effort Allocation Scheme for Shrimp Fishery in the
NAFO Regulatory Area Division 3M, 2022**

CONTRACTING PARTY	NUMBER OF FISHING DAYS ¹
Canada	0
Cuba	0
Denmark	
– Faroe Islands	0
– Greenland	0
European Union	0
France (in respect of St. Pierre et Miquelon)	0
Iceland	N/A
Japan	0
Korea	0
Norway	0
Russia	0
Ukraine	0
United Kingdom	0
USA	0
TOTAL	0

¹ When the scientific advice estimates that the stock shows signs of recovery, the fishery shall be re-opened in accordance with the effort allocation key in place for this fishery at the time of the closure.

**Annex 25. Joint Statement to notify NAFO of the TCA agreement regarding 3M cod
(European Union and the United Kingdom)
(COM WP 21-23)**

The Trade and Cooperation Agreement between the UK and the EU¹ (“the TCA”) was provisionally applied from 1 January 2021 and entered into force on 1 May 2021.

The TCA sets out at Annexes 35 and 36 agreed splits, between the UK and EU, of what were previously EU shares in various fisheries. This includes shares in the cod fishery in NAFO Division 3M (see Table D in Annex 36), for which it was agreed that the EU would retain 83.66% of its previous quota allocation for the stock and the UK would be allocated 16.34% of the same. This results in a UK share of the Total Allowable Catch of 9.32% and an EU share of 47.71%.

These shares were reflected in the provisional arrangement for splitting the EU quota for 2021 that was communicated to the NAFO Annual Meeting in September 2020 via a joint statement made by the UK and the EU, and subsequently reflected in the 2021 Annual Quota Table (see Annex I.A of the Conservation and Enforcement Measures 2021). No concerns were raised by Contracting Parties.

This further joint statement by the UK and the EU notifies NAFO Contracting Parties that this arrangement has now been confirmed, and as such will remain in place for 2022 onwards. This arrangement between the UK and the EU has no effect on the quota shares of this stock for other Contracting Parties.

The UK and EU respectfully request that the NAFO Secretariat duly notes and records this arrangement in the Annual Quota Tables for 2022 onwards.

[¹] Trade and Cooperation Agreement between the European Union and the European Atomic Energy Community, of the one part, and the United Kingdom of Great Britain and Northern Ireland, of the other part.

Annex 26. Measure to Protect Vulnerable Marine Ecosystems (COM WP 21-41 (Rev.) now COM Doc. 21-16)

Explanatory Memorandum

In 2021, the Scientific Council completed its five-year re-assessment of the risk of Significant Adverse Impacts (SAIs) from bottom fishing activities on VMEs in the NRA, taking into account all 6 FAO criteria and with greater spatial resolution than previous reviews (from 5km to 1km). The SC noted that this greater spatial resolution from this assessment resulted in more precise and generally larger estimates of the area and biomass protected by the current VME closures, relative to the 2020 review of VME closures. The SC concluded that small gorgonian, black coral, erect bryozoan, and sea squirt VMEs have a high overall risk of SAI, whereas the large-sized sponges and large gorgonian coral VMEs have a low overall risk of SAI with the current VME closures. The sea pen VME was assessed as having an intermediate risk of SAI. To note, at last year's Annual Meeting, NAFO contracting parties agreed by consensus to add black coral to the list of VMEs in need of protection. The SC subsequently recommended improving the protection of VMEs, including extension of existing closed areas and closure of new areas.

This proposal reflects the WG-EAFFM recommendation (NAFO/COM-SC Doc. 21-04) to maintain the existing closed areas for an additional five years, through 2026. The proposal further recommends closure of five new areas (1a, 2a, 8a, 9a, and 10a), and that these areas be reviewed in 5 years' time, as part of the 2026 VME/SAI assessment. Additionally, this proposal recommends the closure of four new areas (7a, 11a, 14a, and 14b) for an interim period of 2 years; during that time, the SC is requested to re-examine the boundaries of these areas, taking into account any bottom fishing activity from the 2020 and 2021 3M shrimp fisheries.

The proposal also recommends amended the sub-chapter heading, "*High Sponge and Coral Concentration Area Closures*" to "*Vulnerable Marine Ecosystem Area Closures*" to better reflect the range of VMEs NAFO is managing.

The co- proposers take note of the important work that NAFO has done since 2008 to protect vulnerable habitats from threats from bottom fishing. These efforts have been acknowledged by the United Nations' General Assembly thru its bottom fishing review process, which is scheduled to meet again in August 2022. In closing these proposed areas, NAFO is greatly increasing protection for black corals and sea pens while maintaining protections for large gorgonians and sponges, thereby supporting NAFO's commitment to conserving marine biodiversity and minimizing the risk of long term or irreversible adverse effects of fishing activities.

Proposal

Re-affirming NAFO's commitment to the precautionary approach and to implementing an ecosystem approach to fisheries management as well as adaptive approach to management, and

Noting the work of the Scientific Council to address the FAO International Guidelines for the Management of Deep-Sea Fisheries in the High Seas.

Thereby recommends that Chapter II, Article 17 "*Area Restrictions for Bottom Fishing for Activities*", paragraph 3 "*High Sponge and Coral Concentration Area Closures*", be amended as follows:

~~"High Sponge and Coral Concentration Area Closures"~~ **"Vulnerable Marine Ecosystem Area Closures"**

3. *"Until 31 December ~~2024~~ 2026, no vessel shall engage in bottom fishing activities in areas 1-13 illustrated in Figure 5 and defined by connecting the coordinates specified in Table 7 in numerical order and back to coordinate 1"*


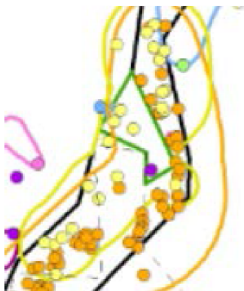

(Secretariat to update Table 7 and Figure 5 with coordinates from closed area 1a, 2a, 8a, 9a, and 10a. Existing area 1 should be amended to include the new coordinates from Area 1a, Area 2 with the new coordinates from 2a, etc. Coordinates for these new additional areas are listed in Annex 1)

"3.bis. Until 31 December 2023, no vessel shall engage in bottom fishing activities in the areas illustrated in Figure xx and defined by connecting the coordinates specified in Table XX in numerical order and back to coordinate 1.


(Secretariat to develop new table and figure to reflect closures for areas 7a, 11a, 14a, and 14b. Coordinates for these areas are listed in Annex 2)


The Scientific Council will be requested to conduct a re-assessment of its previously recommended closures of 7a, 11a, 14a and 14b, incorporating catch and effort data for fisheries of shrimp from 2020 and 2021 into the fishing impact assessments. This work is to be completed by the 2023 Scientific Council meeting. Additionally, the Scientific Council will take into consideration proposed areas 2b, 4a, 15a, 16, 17, and 18 as part of its next five-year VME/SAI reassessment, scheduled for 2026. CPs will provide any relevant information to that process.

Annex 1. Maps and coordinates to be included in revised Chapter II, Article 17, paragraph 3 (1a, 2a, 8a, 9a, and 10a)

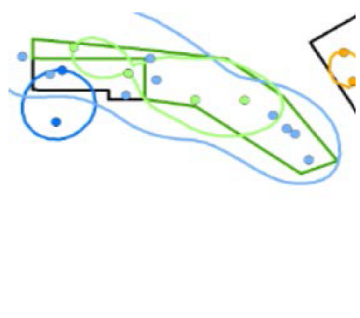
<p style="text-align: center;">Area 1a</p> 	<table> <tr> <th>Latitude</th><th>Longitude</th></tr> <tr> <td>44.04850 N</td><td>48.88119 W</td></tr> <tr> <td>44.04828 N</td><td>48.81930 W</td></tr> <tr> <td>43.99931 N</td><td>48.82402 W</td></tr> <tr> <td>44.00031 N</td><td>48.89132 W</td></tr> <tr> <td>44.04850 N</td><td>48.88119 W</td></tr> </table>	Latitude	Longitude	44.04850 N	48.88119 W	44.04828 N	48.81930 W	43.99931 N	48.82402 W	44.00031 N	48.89132 W	44.04850 N	48.88119 W		
Latitude	Longitude														
44.04850 N	48.88119 W														
44.04828 N	48.81930 W														
43.99931 N	48.82402 W														
44.00031 N	48.89132 W														
44.04850 N	48.88119 W														
<p style="text-align: center;">Area 2a</p> 	<table> <tr> <th>Latitude</th><th>Longitude</th></tr> <tr> <td>46.50617 N</td><td>47.18415 W</td></tr> <tr> <td>46.67800 N</td><td>47.05130 W</td></tr> <tr> <td>46.40669 N</td><td>46.85639 W</td></tr> <tr> <td>46.35133 N</td><td>46.98139 W</td></tr> <tr> <td>46.44222 N</td><td>46.98139 W</td></tr> <tr> <td>46.50617 N</td><td>47.18415 W</td></tr> </table>	Latitude	Longitude	46.50617 N	47.18415 W	46.67800 N	47.05130 W	46.40669 N	46.85639 W	46.35133 N	46.98139 W	46.44222 N	46.98139 W	46.50617 N	47.18415 W
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46.50617 N	47.18415 W														
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46.35133 N	46.98139 W														
46.44222 N	46.98139 W														
46.50617 N	47.18415 W														
<p style="text-align: center;">Area 8a</p> 	<table> <tr> <th>Latitude</th><th>Longitude</th></tr> <tr> <td>48.61528 N</td><td>45.52108 W</td></tr> <tr> <td>48.63553 N</td><td>45.32553 W</td></tr> <tr> <td>48.59900 N</td><td>45.32553 W</td></tr> <tr> <td>48.57319 N</td><td>45.43858 W</td></tr> <tr> <td>48.61528 N</td><td>45.52108 W</td></tr> </table>	Latitude	Longitude	48.61528 N	45.52108 W	48.63553 N	45.32553 W	48.59900 N	45.32553 W	48.57319 N	45.43858 W	48.61528 N	45.52108 W		
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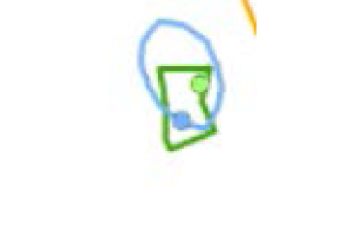
Area 9a	
	<div>Latitude</div> <div>Longitude</div>
	48.45850 N 45.57789 W
	48.26863 N 45.76336 W
	48.28661 N 45.79036 W
	48.20183 N 45.90358 W
	48.50508 N 45.66178 W
	48.45850 N 45.57789 W


Area 10a	
	<div>Latitude</div> <div>Longitude</div>
	47.82819 N 46.38003 W
	47.85837 N 46.43767 W
	48.15374 N 46.15862 W
	48.13325 N 46.09395 W
	47.82819 N 46.38003 W

Annex 2. Maps and coordinates to be included in new Chapter II, Article 17 paragraph 3.bis (7a, 11a, 14a, and 14b)

Area 7a		Latitude	Longitude
		48.16916 N	44.26527 W
		48.13845 N	44.38627 W
		48.30190 N	44.73967 W
		48.31908 N	44.91058 W
		48.41728 N	44.91058 W
		48.41728 N	45.28789 W
		48.46450 N	45.28868 W
		48.43927 N	44.90961 W
		48.41587 N	44.63289 W
		48.32513 N	44.44400 W
		48.16916 N	44.26527 W

Area 11a		Latitude	Longitude
		47.50040 N	46.45919 W
		47.62746 N	46.27531 W
		47.57767 N	46.20109 W
		47.54136 N	46.27405 W
		47.53611 N	46.24163 W
		47.47439 N	46.26826 W
		47.46008 N	46.35658 W
		47.50040 N	46.35658 W
		47.50040 N	46.45919 W

Area 14a		Latitude	Longitude
		47.75679 N	44.05179 W
		47.79843 N	44.05179 W
		47.83648 N	44.05958 W
		47.83635 N	43.97472 W
		47.79843 N	43.98983 W
		47.76533 N	43.96915 W
		47.74572 N	44.04486 W
		47.75679 N	44.05179 W

Area 14b		Latitude	Longitude
		47.58938 N	43.94725 W
		47.62598 N	43.88236 W
		47.50133 N	43.80515 W
		47.45969 N	43.80515 W
		47.45969 N	43.86676 W
		47.58938 N	43.94725 W

Annex 27. Recommendations from the Ad hoc Working Group to Reflect on the Rules Governing Bycatches, Discards and Selectivity (WG-BDS)

(COM WP 21-18 now COM Doc. 21-18)

The NAFO Commission Ad hoc Working Group to Reflect on the Rules Governing Bycatches, Discards and Selectivity (WG-BDS) in the NAFO Regulatory Area met via WebEx from 12–13 July 2021 (COM Doc. 21-04) and agreed on the following recommendations:

In relation to the development of management options in support of Tasks 4 of the Action Plan, the WG-BDS recommends that:

1. The Working Group creates a smaller group which will coordinate with STACTIC and SC in furthering Task 4 of the Action Plan and may consider a pilot case to examine bycatch of 3LNO American plaice and others in the development of potential fisheries-specific management options for further discussion by the full Working Group.

In relation to bycatch and discard information, the WG-BDS recommends that:

2. The Commission request STACTIC to provide a single interpretation of the application of the term bycatch for the purpose of the spatial temporal analysis undertaken by the Secretariat according to the agreed methodology.
3. The Secretariat monitor the discard data in the Haul by Haul reports and in observers reports, continue working with Contracting Parties to ensure that the discard information are reported in the Haul by Haul reports in accordance with Annex II.N and in the observer reports in accordance with Annex II.M, and report to this WG on the progress in resolving this discard data issue.

In relation to discards in NAFO, the WG-BDS recommends that:

4. The Secretariat gather the updated domestic policies of Contracting Parties on discards and share them to STACTIC in support of STACTIC's mandate in discussing landing obligations of a discard ban policy.

Annex 28. Change to Article 5.15.f of the NAFO CEM
(STACTIC EDG-WP 20-05 now COM Doc. 21-06)

At the 2020 Annual Meeting, the EDG presented a proposed change to Article 5.15.f, and STACTIC requested the EDG further review this change. The EDG has reviewed and discussed the following potential change to clarify Article 5.15.f. However, EDG questions whether the 15 days in (ii) should also apply to (i), and requests that STACTIC provide advice.

15. The Executive Secretary:

reports without delay to the Commission when the Contracting Party referred to under paragraph 5(d) of this Article failed to either:

(i) _____ cease fishing on that stock or

(ii) _____ demonstrate that the quota has not been taken within 15 days in accordance with Article 5.6;

Annex 29. Insertion of reference to Annex II.I Part B in NAFO CEM Annex IV.A(STACTIC WP 21-07 **now** COM Doc. 21-07)

At the 2020 NAFO Annual Meeting, STACTIC requested that the EDG review the NAFO CEM for the possible insertion of a reference to Annex II.I Part B in Article 33 or as a footnote to the Surveillance Report in Annex IV.A. Following the review, the EDG proposes the following footnote insertion in Annex IV.A.

3. VESSEL SIGHTED

Flag State	
Vessel Name, International Radio Call Sign (IRCS), Side Number, IMO Number	
Other Identification Features (Type of vessel, Color of hull, Superstructure, etc.)	
Vessel Activity¹	
Fishing Gear used	
Course and Speed	

¹ [Reported as free text or using the codes outlined in Annex II.I Part B.](#)

Annex 30. Measures Concerning Vessels Demonstrating Repeat Non-compliance of Serious Infringements in the NAFO Regulatory Area (STACTIC WP 21-13 Rev. now COM Doc. 21-08)

Background

At the 2016 Annual Meeting, STACTIC launched discussions to find a mechanism to address the issue of vessels repeatedly being issued citations for serious breaches of the NAFO CEM.

At the following Annual Meeting, STACTIC WPs 17-37 and 17-43 were tabled, with WP 17-37 outlining the domestic legislation which could be applied to address the issue of repeat non-compliance as submitted by various Contracting Parties. STACTIC WP 17-43 proposed that vessels infringing the CEMs as per the infringements identified under then-Article 38.8 (as of 2019, Article 38.3.c.i) be listed in the compliance review in a “*Contracting Party IUU list*”. Upon discussion, 17-43 was withdrawn.

At the 2018 Intersessional Meeting, Canada provided an update to WP 17-37, incorporating submissions from other Contracting Parties. It was agreed that Canada would continue its review with the aim of developing a proposal for the 2018 Annual Meeting. Discussion was deferred from the 2018 Annual Meeting to the 2019 Intersessional, beyond Canada providing an update that there is no common mechanism across all Contracting Parties’ domestic legislation to address repeat non-compliance of serious infringements. At the 2019 Intersessional, Canada agreed to continue work on a proposal for addressing repeat non-compliance of serious infringements in the NAFO Regulatory Area and present it at the 2019 Annual Meeting. Canada presented STACTIC WP 19-59, a discussion paper, at the 2019 Annual Meeting and accepted comments from Contracting Parties.

At the 2020 Intersessional Meeting, Canada presented discussion paper STACTIC WP 20-04, proposing a definition of repeated non-compliance to be added to the vessel. Some Contracting Parties raised concerns regarding the definition being linked to issuance rather than confirmation of infringements, and regarding repeated non-compliance being linked to repetition of any serious infringement.

At the 2020 Annual Meeting, Canada presented STACTIC WP 20-29 for discussion. It was subsequently agreed that further revisions were needed to address Contracting Parties concerns, and that a revision would be brought to this meeting after reflection upon any comments provided.

In addition to the ongoing discussion within STACTIC, the NAFO Performance Review Panel 2018 included the recommendation that “*NAFO [evaluate and adopt] appropriate measures to deter repeat serious non-compliance.*”

Discussion

In light of Contracting Parties differing legislative mechanisms, and the expressed desire to link measures concerning repeated non-compliance with confirmation of infringements, and a more limited list of infringements, Canada presents for discussion the following concepts:

Article 39 – Follow-up to Infringements

Duties of the Flag State Contracting Party

1. In the case of an infringement by a vessel flying its flag, the flag State Contracting Party shall:
 - (a) investigate fully, including as appropriate, by physically inspecting the fishing vessel at the earliest opportunity;

(b) cooperate with the inspecting Contracting Party to preserve the evidence and the chain of custody in a form that will facilitate proceedings in accordance with its laws;

(c) take immediate judicial or administrative action in conformity with its national legislation against the persons responsible for the vessel; ~~and~~

(d) ensure that sanctions applicable in respect of infringements are adequate in severity to be effective in securing compliance, deterring further infringements or their repetition and depriving the offenders of the benefits accruing from the infringement; ~~and~~

(e) to the extent possible within domestic legislation, ensure that sanctions applicable in respect of repeated serious infringements, particularly those identified under Article 38.3.c.i.31-4, are adequate in severity to be effective in securing compliance, deterring further infringements or their repetition and depriving the offenders of the benefits accruing from the infringement.

2. The judicial or administrative action and sanctions referred to in paragraph 1(c), ~~and~~ (d) and (e) may include, but ~~is-are~~ not limited to, the following, depending on the gravity of the offence and in accordance with domestic law:

(a) fines;

(b) seizure of the vessel, illegal fishing gear and catches;

(c) suspension or withdrawal of authorization to conduct fishing activities; ~~and~~

(d) reduction or cancellation of any fishing allocations;

(e) increased or additional reporting requirements; inter alia, enhanced reporting frequency or additional data to be reported; and

(f) increased or additional monitoring requirements inter alia, deployment of an observer or an inspector on board or remote electronic monitoring.

Annex 31. Legend for Annex I.A of the NAFO CEM
(STACTIC WP 21-17 Rev. 2 **now** COM Doc. 21-09)

At the November meeting of the Editorial Drafting Group (EDG), the Secretariat highlighted the use of the dashes, blanks, and zeros in the quota table (Annex I.A), noting there was no consistency. The EDG agreed that the use of the dashes / blanks should be consistent but also defined with a legend. The EDG agreed that:

STACTIC review the use of dashes, blanks, and zeros in Annex I.A of the quota table and create a legend that defines the meaning of each.

To facilitate this review, the Secretariat drafted a potential legend for review by STACTIC.

At the 2021 STACTIC Intersessional Meeting, it was agreed that:

STACTIC continue discussions on the draft legend for Annex I.A of the NAFO CEM outlined in STACTIC WP 21-17 at the 2021 Annual Meeting.

Following the 2021 STACTIC Intersessional meeting, comments were received from the European Union to include dashes under RED 30, HKW 3NO, and SKA 3LNO, and they have been added in the table below in track changes.

Symbol	Definition
-	Contracting Party does not have a quota allocation
*	Ban on fishing in force
0	Contracting Party has quota, but the TAC is zero
Blank	No quota allocation defined

Please find below the illustration of the application of the legends:

ANNEX I – FISHERIES MANAGEMENT

Annex I.A – Annual Quota Table

CATCH LIMITATIONS – Article 5. Total allowable catches (TACs) and quotas (metric tons in live weight) for 2021 of particular stocks in Subareas 1-4 of the NAFO Convention Area.

Species	Cod				Redfish					American plaice		Yellowtail
Stock Specification	COD 3L	COD 3M		COD 3NO	RED 3LN		RED 3M	RED 3O	REB 1F_2_3K (i.e. Sub-Area 2 and Divs. 1F+3K)	PLA 3LNO	PLA 3M	YEL 3LNO
% of TAC			% of 3M Cod TAC			% of 3LN Redfish TAC						
Contracting Party												
Canada		12	0.80	0	7 710	42.60	500	6 000	0 ¹	0	0	16 575
Cuba		56	3.70	-	1 774	9.80	1 750	-	0 ¹	-	-	-
Denmark (Faroe Islands and Greenland)		335	22.35	-	-		69 ¹⁰	-	0	-	-	-
European Union		716 ⁵	47.71	0 ⁴	3 300 ⁴	18.23	7 813 ⁴	7 000	0 ⁰⁷	0	0 ⁴	-
France (St. Pierre et Miquelon)		-		-	-		69 ¹⁰	-	0 ¹	-	-	340
Iceland		-		-	-		-	-	0	-	-	-
Japan		-		-	-		400	150	0 ¹	-	-	-
Korea		-		-	-		69 ¹⁰	100	0 ¹	-	-	-
Norway		139	9.25	-	-		-	-	0	-	-	-
Russian Federation		97	6.47	0	5 207	28.77	9 137	6 500	0	-	0	-
Ukraine		-		-	-		-	150	0 ¹	-	-	-
United Kingdom		140	9.32	-	-		-	-	-	-	-	-
United States of America		-		-	-		69 ¹⁰	-	0 ¹	-	-	-
Others		6	0.40	0	109	0.60	124	100	-	0	0	85
TOTAL ALLOWABLE CATCH	*	1 500	100.0 ¹³	*	18 100 ⁸	100.0 ¹⁴	8 448	20 000 ⁸	0 ^{3,9}	*	* ¹¹	17 000

Species	Witch			White hake	Capelin	Skates	Greenland halibut	Squid (<i>Illex</i>)	Shrimp		Alfonsino
Stock Specification	WIT 3L	WIT 3NO		HKW 3NO	CAP 3NO	SKA 3LNO	GHL 3LMNO	SQI 3_4 (i.e. Sub-areas 3+4)	PRA 3L	PRA 3NO	ALF 6 (i.e. Sub-area 6)
% of TAC			% of 3NO Witch TAC								
Contracting Party											
Canada		705	60.00	294	0	1 167	1 834	N.S. ²	0		
Cuba		-		-	0	-	-	510	0		
Denmark (Faroe Islands and Greenland)		-		-	-	-	210	-	0		
European Union		156 ⁴	13.27	588	0 ⁵	4 408	7 168 ⁶	<u>N.S.²</u> 611 ⁵	0 ⁶		
France (St. Pierre et Miquelon)		-		-	-	-	200	453	0		
Iceland		-		-	-	-	-	-	0		
Japan		-		-	0	-	1 253	510	0		
Korea		-		-	-	-	-	453	0		
Norway		-		-	0	-	-	-	0		
Russian Federation		302	25.73	59	0	1 167	1 560	749	0		
Ukraine		-		-	-	-	-	-	0		
United Kingdom		-		-	-	-	-	-	-		
United States of America		-		-	-	-	-	453	0		
Others		12	1.00	59	-	258		794	0		
TOTAL ALLOWABLE CATCH	* ⁸	1 175	100.00 ¹⁵	1 000	*	7 000 ^{8, 12}	12 225	34 000 ⁸	0	*	*

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<u>Symbol</u>	<u>Definition</u>
<u>-</u>	<u>Contracting Party does not have a quota allocation</u>
<u>*</u>	<u>Ban on fishing in force</u>
<u>0</u>	<u>Contracting Party has quota, but the TAC is zero</u>
<u>Blank</u>	<u>No quota allocation defined</u>

- ¹ Quota to be shared by vessels from Canada, Cuba, France (St. Pierre et Miquelon), Japan, Korea, Ukraine and USA.
- ² The allocations to these Contracting Parties are as yet undetermined, although their sum shall not exceed the difference between the total of allocations to other Contracting Parties and the TAC (= 29.467 tonnes).
- ³ Should NEAFC modify its level of TAC, these figures shall be adjusted accordingly by NAFO through a mail vote.
- ⁴ Including allocations to Estonia, Latvia and Lithuania in accordance with the sharing arrangement of the former USSR quota adopted by the Fisheries Commission in 2003 (FC WP 03/7), as applied by NAFO since 2005 following their accession to the European Union.
- ⁵ Including allocations to Estonia, Latvia and Lithuania in accordance with the sharing arrangement of the former USSR quota adopted by the Fisheries Commission in 2003 (FC WP 03/7), and to Poland, as applied by NAFO since 2005 following their accession to the European Union.
- ⁶ Including allocations to Estonia, Latvia, Lithuania and Poland, as applied by NAFO since 2005 following their accession to the EU.
- ⁷ Allocation of 17.85% to Lithuania and 2.15% to Latvia following their accession to the European Union.
- ⁸ Applicable to 2021 and 2022.
- ⁹ If an increase in the overall TAC as defined in footnote 3 leads to an increase in these shares, the first 500 tonnes of that increase shall be added to the quota share referred to in footnote 1.
- ¹⁰ Notwithstanding the provision of Article 5.3(b) and without prejudice to future agreements on allocations, these quotas may be fished in their entirety by these Contracting Parties.
- ¹¹ Applicable to 2021, 2022, and 2023.
- ¹² Should catches exceed 5 000 tonnes, additional measures would be adopted to further restrain catches in 2021.

Historical statements

- ¹³ The allocation key of this stock is based on the 1998 Quota Table. In 1999, a moratorium on cod in Division 3M was declared.
- ¹⁴ The allocation key of this stock is based on the 1997 Quota Table. In 1998, a moratorium on redfish in Division 3LN was declared.
- ¹⁵ The allocation key of this stock is based on the 1994 Quota Table. In 1995, a moratorium on witch flounder in Division 3NO was declared.

Annex 32. List of serious infringements: use of sorting grids – NAFO CEM Article 38.1.g
(STACTIC WP 21-20 Rev. now COM Doc. 21-10)

Background

Article 13.9 of the NAFO Control and Enforcement Measures (CEM) requires vessels conducting a direct fishery for COD 3M with trawl gear to use a sorting grid placed on the top-side panel of the trawl and with a minimum bar spacing of 55mm.

Article 38.1(g) of the NAFO CEM includes within the list of serious infringements using an unauthorized grid size. However, the grid size is not a parameter currently regulated. At the same time, the list does not include the lack of use of the grid where is mandatory or the use of a grid with a bar spacing contrary to Article 13. In order to address these issues, it is proposed to amend the wording in Article 38.1 (g).

Proposal

In CEM Article 38.1 (g), to amend the text as follows:

List of Serious Infringements

1. *Each of the following violations constitutes a serious infringement:*

[...]

*(g) **fishing with an** unauthorized mesh ~~or grid~~ size, **grid or grate bar spacing, or without the of use of grid or grate**, contrary Article 13;*

Annex 33. Observer data collection
(STACTIC WP 21-22 Rev. now COM Doc. 21-11)

Article 30.14(j) requires NAFO observers to “*record the number, estimated weight, length (estimated if measured length is not possible) sex, and catch disposition (alive, dead, unknown) for each individual Greenland shark per haul or set.*” Modifications to Annex II.M, Standardized Observer Report Template, were made at the 2019 NAFO Annual Meeting to accurately collect this required information on Greenland shark. Com. Doc. 19-19.

Currently, extensive auditing is required to allow Scientific Council members to use the Greenland shark catch data collected by NAFO observers due to incorrect reporting, including not reporting the data in English. To improve the quality of these data and to expedite the use of such data by the NAFO Scientific Council, we propose the following modifications to Article 30 and Annex II.M. An example of correct data reporting of individual Greenland shark catches is shown below for three hauls/sets.

Article 30 – Observer Program

Duties of the Observer

14. Each Contracting Party shall ensure that observers assigned to their vessels shall, at a minimum, perform the duties listed below:

(a) record for each haul/set, in the format indicated in Annex II.M, hereafter referred to as the observer trip report:

Annex II.M Standardized Observer Report Template**Part 5. ~~Catch of Greenland Shark Information by Haul~~ Data for Each Greenland Shark Caught per Haul**

Tow/Set Number	Total Number of Greenland Sharks <i>in Haul</i> <u>Tow/Set</u>	Shark Number	Estimated Weight (kg live weight)	<i>Total Length (cm, from tip of snout to tip of tail fin)</i>	Length Measured (M) or Estimated (E)?	Sex (M if male, F if female, U if unknown)	Catch Disposition (A if alive, D if dead, U if unknown)	Comments (in English to the extent possible)
1	3	1	200	152	M	M	D	calcified claspers
1	3	2	400	170	E	U	U	not brought onboard vessel
1	3	3	600	286	M	F	D	
2	1	1	1,000	317	M	F	D	
3	1	2	600	291	M	M	A	
3	2	2	700	299	M	M	D	badly entangled in net

**Annex 34. NAFO CEM Article 7 and Article 7 bis realignment and
Extension of Port State control measures**
(STACTIC WP 21-28 Rev. 2 **now** COM Doc. 21-12)

Background

The Editorial Drafting Group (EDG), at its November 2020 meeting, reviewed the placement of Article 7 bis under Article 7-Cod Recovery Plans following the request from STACTIC at the 2020 Annual Meeting. The EDG noted that consideration may need to be given to the title of Article 7, as 3M Cod is not currently under a recovery plan, and that having the text placed under Article 7 bis for 3M Cod may cause some confusion. The EDG agreed that STACTIC should further review the text and placement of Article 7 bis at the 2021 STACTIC Intersessional meeting.

Based on discussion at the 2021 STACTIC Intersessional meeting, Canada volunteered to draft a proposal to realign to Article 7 and Article 7.bis. The revised text of Article 7 and Article 7 bis can be found below to facilitate the review by STACTIC.

Following conversation at the 2021 STACTIC Annual meeting, Contracting Parties agreed that Canada's proposal should be merged with the EU proposal on Port State control measures (Article 7.bis) of STACTIC WP 21-47. This revision incorporates the changes proposed by the EU in that paper.

Proposal

Article 7 – Cod **Recovery Plans**

~~Cod in~~ Divisions 2J3KL

1. The Commission shall obtain annually the decision of Canada on the limit it has established for catches by Canadian fishers. This limit shall be 95% of the TAC for this stock.
2. The Commission shall establish a catch limit in the Regulatory Area that shall apply to the other Contracting Parties. This limit shall be 5% of the TAC for this stock.
3. The total of the catch limits set in accordance with paragraphs 1 and 2 shall constitute the TAC for 2J3KL cod.
4. The distribution key that shall apply for the 5% figure when the fishery in the Regulatory Area is resumed shall be 65.4% for the EU and 34.6% for the other Contracting Parties.
5. The measures in this Article shall apply when a decision is taken to allow the resumption of fishing for cod in the Regulatory Area, and shall not serve as a precedent in future years for establishing catch limits of criteria for quota allocations of other stocks.

~~Article 7 bis – 3M Cod~~⁶

Division 3M Control Measures¹

¹ STACTIC shall review these Division 3M Control Measures ~~this Article~~ and propose amendments as appropriate to the Commission at its Annual Meeting in 2024. These Division 3M Control Measures are ~~This Article is~~ only applicable when the TAC for cod in Division 3M in Annex I.A is under 36000 tonnes.

6. Each Contracting Party shall apply the following control measures for vessels with more than 1,250 kg of 3M cod catches on board²:
 - (a) prohibit its vessels from landing or transshipping 3M cod catches in ports other than those designated in accordance with Article 43.
 - (b) require that at least 48 hours before its estimated time of arrival in port, a vessel or its representative on its behalf, advises the competent port authority of its estimated time of arrival, the estimated quantity of 3M cod retained on board, and information on the division or divisions where any other cod catches retained on board were taken.
 - (c) inspect ~~each~~ at least 50% of the landings or transshipments of 3M cod in its ports and prepare an inspection report in the format prescribed in Annex IV.C, which it submits to the Executive Secretary within 14 working days from the date on which the inspection was completed. The PSC3 report shall identify and provide details of any infringement to the CEM detected during the port inspection. It shall include all relevant information available in reference to infringements detected at sea during the current trip of the inspected fishing vessel.

Duties of the Executive Secretary

7. The Executive Secretary posts without delay the port inspection report submitted in accordance with paragraph ~~46~~(c) to the NAFO MCS Website and ensures that it is made available to all Contracting Parties.

Division ~~Interim~~ 3NO - Interim Cod Conservation Plan and Rebuilding Strategy

8. Objective(s):

- (a) **Long-term Objective:** The long-term objective of this Conservation Plan and Rebuilding Strategy is to achieve and to maintain the 3NO Cod Spawning Stock Biomass (SSB) in the 'safe zone', as defined by the NAFO Precautionary Approach framework, and at or near B_{msy} .
- (b) **Interim Milestone:** As an interim milestone, increase the 3NO Cod Spawning Stock Biomass (SSB) to a level above the Limit Reference Point (B_{lim}). It may reasonably be expected that B_{lim} will not be reached until after 2015.

9. Reference Points:

- (a) Limit reference point for spawning stock biomass (B_{lim}) – 60 000 tonnes³
- (b) An intermediate stock reference point or security margin B_{isr} ⁴ – [120 000 tonnes]
- (c) Limit reference point for fishing mortality ($F_{lim} = F_{msy}$) – 0.30

² Each Contracting Party shall inspect vessels with less than 1250 kg of 3M cod onboard on a risk-based approach.

³ The Commission shall request the Scientific Council to review in detail the limit reference point when the Spawning Stock Biomass has reached 30 000 tonnes.

⁴ A 'buffer zone' (B_{buf}) is not required under the NAFO PA given the availability of risk analysis related to current and projected biomass values; however, SC has advised that an additional zone(s) between B_{lim} and B_{msy} could be considered. An intermediate stock reference point (B_{isr}) is proposed to delineate this zone. The proposed value is set at a level equivalent to twice B_{lim} . Should the SC review of the limit reference point (B_{lim}) result in a change to that value then the intermediate stock reference point (B_{isr}) should also be re-evaluated.

- (d) Interim B_{target} – 185 000 tonnes and interim F_{target} of $F_{0.1}$ – $0.192F^5$

10. Re-opening to Directed Fishing:

- (a) A re-opening of a directed fishery should only occur when the estimated SSB, in the year projected for opening the fishery, has a very low⁶ probability of actually being below B_{lim} .
- (b) An annual TAC should be established at a level which is projected to result in:
- (i) continued growth in SSB
 - (ii) low⁴ F^7 probability of SSB declining below B_{lim} throughout the subsequent 3-year period, and
 - (iii) fishing mortality $< F_{0.1}$

11. Harvest Control Rules:

Noting the desire for relative TAC stability, the projections referred to in items (a) through (d) below should consider the effect of maintaining the proposed annual TAC over 3 years. Further, in its application of the Harvest Control Rules, Commission may, based on Scientific Council analysis, consider scenarios which either mitigate decline in SSB or limit increases in TACs as a means to balance stability and growth objectives.

- (a) When SSB is below B_{lim} :

- (i) no directed fishing, and
- (ii) bycatch should be restricted to unavoidable bycatch in fisheries directing for other species

Before SSB increases above B_{lim} , additional or alternative harvest control rules should be developed, following the Precautionary Approach, to ensure the long-term objective is met, such as:

- (b) When SSB is between B_{lim} and B_{isr} :

- (i) TACs should be set at a level(s) to allow for continued growth in SSB consistent with established rebuilding objective(s)
- (ii) TACs should result in a low probability of SSB declining below B_{lim} throughout the subsequent 3-year period, and
- (iii) Biomass projections should apply a low risk tolerance

- (c) When SSB is above B_{isr} :

⁵ B_{target} is a proxy of B_{msy} . The level of F has very low probability of being higher than F_{lim} . The B_{target} is the equilibrium SSB that results from F_{target} . These are interim targets until more stock recruitment and productivity regime information is available to better estimate MSY-based reference points.

⁶ 'very low' means 10% or less

⁷ 'low' means 20% or less

- (i) TACs should be set at a level(s) to allow for growth in SSB consistent with the long term objective, and
 - (ii) Biomass projections should apply a risk neutral approach (i.e. mean probabilities)
- (d) When SSB is above B_{target} :
- (i) TACs should be set at a level of F that has a low probability of exceeding F_{msy} , and
 - (ii) Biomass projections should apply a risk neutral approach (i.e. mean probabilities)

12. **Ecosystem Considerations:**

Considering the importance of capelin as a food source, consistent with the ecosystem approach, the moratorium on 3NO capelin will continue until at least 31 December ~~2021~~2024.

13. **Bycatch Provisions:**

The bycatch provisions in the CEM for 3NO cod should be reviewed periodically, to coincide with scheduled assessments of the stock by Scientific Council, and adjusted to reflect the overall trend in spawning stock biomass.

Annex 35. NAFO CEM Article 10 – Greenland Halibut
(STACTIC WP 21-37 Rev. now COM Doc. 21-13)

Background

Article 10 Paragraph 4 (e) have a wording “*shall inspect each landing of Greenland halibut*” there have been different view of the understanding of the word “*each*” did it mean each single or the main quantity

Therefore DFG (Denmark in respect of Faroe Islands and Greenland) want to use the same principal as used in Article 7 bis - 3M Cod. and proposed a change language

Proposal: Article 10 – Greenland Halibut**Control Measures 4 (e)**

- (e) Each Contracting Party shall inspect each landing of Greenland halibut, ~~if the quantity onboard, is more than 5% of the total catch, or more than 5.000 kilo,~~ if the quantity of this stock on board represents either more than 5% of the total catch or more than 2,500 kg, in its ports and prepare an inspection report in the format prescribed in Annex IV.C, which it submits to the Executive Secretary within 14 working days from the date on which the inspection was completed. The PSC3 report shall identify and provide details of any infringement to the CEM detected during the port inspection. It shall include all relevant information available in reference to infringements detected at sea during the current trip of the inspected fishing vessel.

Annex 36. Bycatch limits for the “Others” quota – NAFO CEM Article 6.3.e

(STACTIC WP 21-41 Rev. 4 **now** COM Doc. 21-14)

Background

Article 6.2(c) of the NAFO Control and Enforcement Measures (CEM) includes within the definition of bycatch the species listed in Annex I.A where the “Others” quota for a particular stock has been fully utilized.

Article 6.3(c) requires each Contracting Party to ensure that its vessels limit the bycatch for stocks listed in Annex I.A where not specific quota has been allocated to the flag Contracting Party, to a maxima of 2500 kg or 10%, whichever the greater.

In accordance with Article 6.3(e) the bycatch limit of the “Others” quota is 1250 kg or 5%, whichever the greater, when the “Others” quota opened for that stock has been fully utilized.

The application of Article 6.3(e) has been that only the vessels of the Contracting Party notifying the use of the “Others” quota for directed fishery need to reduce the bycatch limit to 1250 kg or 5% once the “Others” quota has been fully utilized; while the vessels of other Contracting Parties without a quota for that stock remain subject to the limit of 2500 kg or 10% under Article 6.2(c).

In order to clarify this application, it is proposed to amend the wording in Article 6.3(e).

Proposal

In CEM Article 6.3(e), to amend the text as follows:

Limits for Species Listed in Annex I.A Retained on Board as Bycatch

3. *Each Contracting Party shall ensure that its vessels, including vessels chartered in accordance with Article 26, shall limit the retention of on board species classified as bycatch to the maxima specified below:*

[...]

*(e) when the “Others” quota opened for that stock has been fully utilized: 1250 kg or 5%, whichever is the greater, ~~for all the vessels of each~~ **those** Contracting Parties ~~that notified the use of the “Others” quota in accordance with Article 5;~~*

Annex 37. Bycatch limits during Quarter 1 closure – NAFO CEM Article 5.5.j.
(STACTIC WP 21-50 Rev. 2 **now** COM Doc. 21-15)

Background

The Total Allowable Catch for cod in Division 3M established for 2021 by the NAFO Scientific Council represented a sharp decline compared to 2020. In view of the status of the stock, measures in addition to the TAC were put in place, including a Quarter 1 closure, the use of size-selective sorting grid in directed fishery to reduce the fishing mortality of juveniles and a 100% port inspection benchmarks for vessels with more than 1,250 kg of 3M cod catches on board.

The Q1 closure under Article 5(5)(j) of the NAFO Control and Enforcement Measures (CEM) was a temporal measure for 2021. In view of the status of the stock this measure should apply during Q1 2022 and it should ensure a homogeneous application of the permitted level of bycatches.

Proposal

It is proposed to amend Article 5(5)(j) to change the wording of the closure for Q1 2022 so that it is clear that all Contracting Parties shall limit their bycatches in line with Article 6(3)(a) and observe the move-on provisions in Article 6.6(b):

- (j) close its directed fishery for cod in Division 3M between ~~2400:00 UTC 31 December~~ 2400:00 UTC 31 January 2022 and 24:00 UTC 31 March 2022~~1~~. During this period, all Contracting Parties shall ensure that its vessels limit the catches retained on board and in any one haul of this stock in line with Article 6.3(a) and observe the move-on provisions in Article 6.6(b).*

Annex 38. Annual Fisheries and Compliance Review 2021
(Compliance Report for Fishing Year 2020)
 (STACTIC WP 21-42 Rev. 4 **now** COM Doc. 21-19)

1.0 Introduction

The scope of this review covers the fishing activities of NAFO-registered vessels which operated in the NAFO Regulatory Area in 2020¹ (see Figure 1.0).

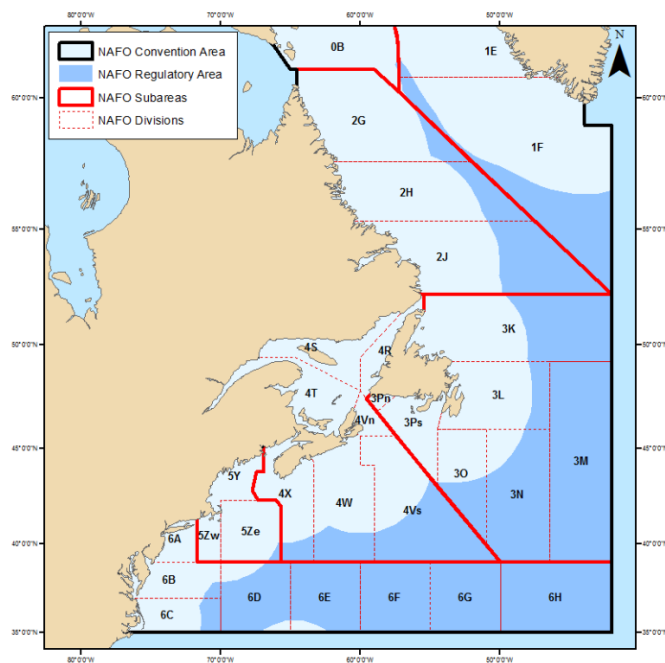


Figure 1.0. Divisions of the NAFO Convention Area and the Regulatory Area (dark blue).

This review is being undertaken in accordance with NAFO Rules of Procedure 5.1 and 5.2. As part of the review process, the Secretariat compiled 2020² information from the following sources: vessel monitoring system (VMS) and hail messages delivered by the vessels (Vessel Transmitted Information – VTI), electronic logbook (haul by haul) reports, Port Inspection Reports, At-sea Inspection Reports and Reports on Dispositions of Infringements provided by the Contracting Parties, and Trip Observer Reports sent to the Secretariat.

¹ According to Article 1.7 of the 2020 NAFO Conservation and Enforcement Measures (CEM), a fishing trip includes “the time from its entry into until its departure from the Regulatory Area and continues until all catch on board from the Regulatory Area is unloaded or transhipped”. All article and annex numbers mentioned in this report have reference to the 2020 NAFO CEM. Quantitative information presented in this report are summarized according to 2020 calendar year, unless otherwise indicated.

² In March 2020 the World Health Organization declared Covid-19 a pandemic. The assessment of Covid-19 impact on the compliance of Contracting Parties (CPs) is presented as an Annex to this report..

2.0 Fisheries in the NAFO Regulatory Area

2.1 Fishing effort by gear type

NAFO traditionally identifies three main fisheries in its Regulatory Area: the groundfish (GRO - primarily in Div. 3LMNO), shrimp (PRA - primarily in Div. 3L and Div. M) and pelagic redfish fisheries (REB - primarily in Div. 1F and Div. 2J).

In 2020, the shrimp fishery in Div. 3M was re-opened after nine years of moratorium. This stock has been managed through an effort (in terms of fishing days) allocation scheme. In the first year of the re-opened fishery, only 21 fishing days were utilized out of the total 2 640 days.

The pelagic redfish (*Sebastes mentella*) fishery in NAFO (REB in Subarea 2 and Divs. 1F+3K) has been under moratoria since 2012. Four (4) fishing vessels collectively spent 127 days fishing for this stock under the quota unilaterally declared by the Russian Federation.

Most of the effort comes from bottom trawlers (> 500 MT), accounting for 92% of fishing effort in terms of fishing days. The major species caught by the bottom trawlers are cod, Greenland halibut, yellowtail flounder, redfish, and thorny skate in Divisions 3LMNO (see Table 2.3.1).

Table 2.1.1. *Main fishing gears and fishing effort in the NAFO Regulatory Area in 2020.*

Fishing Gear	# Fishing vessels	# Fishing trips	Fishing days in NAFO RA	Main Species	Fishing Area
Longline	11	16	250	COD, HAL	Flemish Cap (for cod); Tail of the Grand Banks (for Atlantic halibut). Divs. 3LMNO
Bottom trawl	33	106	4224	COD, GHL, RED, SKA, YEL	Flemish Cap; Tail and Nose of the Grand Banks. Divs 3LMNO
Shrimp trawl	1	1	21	PRA	Flemish Cap. Div. 3M
Midwater trawl	4	5	127	REB	Div. 1F
Total	49	128	4622		

2.2 Effort Distribution by depth of groundfish vessel

Hourly positions of fishing vessels are required to be transmitted through the Vessel Monitoring System (VMS). However, activities whether steaming or fishing, are not indicated in the position reports. In this analysis, speeds between 0.5 and 5 knots were assumed to be fishing speeds. Figure 2.2.1 shows the distribution of fishing effort in hours of groundfish vessels is presented. About half of all groundfish effort is at depths 400 meters and shallower (longliners and trawlers catching skates, redfish and cod). Figure 2.2.1 also shows a concentration of fishing effort around 1000 meters and this can be attributed to the Greenland halibut fishery.

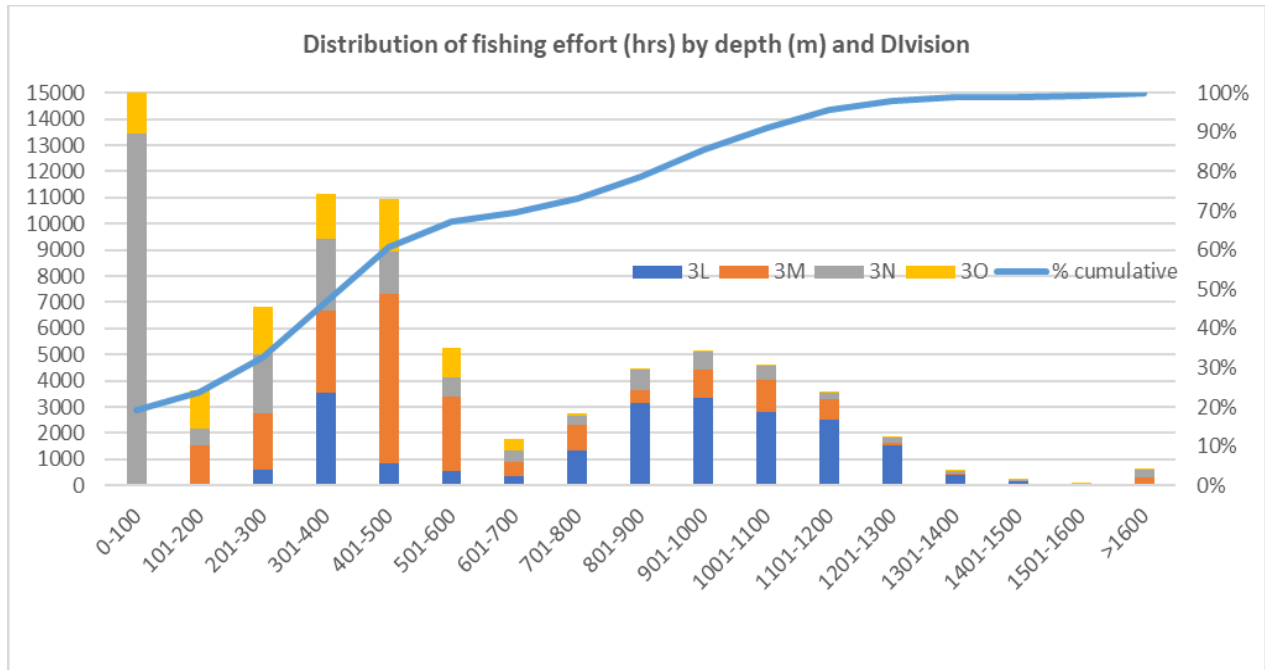


Figure 2.2.1. *Distribution of fishing effort (in hours) by depth (m) in the NRA in 2020. Vessels are assumed to be fishing at speed in the range of 0.5-5.0 knots.*

2.3 Catches in the NAFO Regulatory Area

A grand total of 73 473 t of fish (72 476.6 t retained + 996.2 t rejected) were caught by vessels authorized to fish in the Regulatory Area in 2020 (Tables 2.3.1 and 2.3.2). In terms of quantities caught, the stocks 3M Cod, 3LMNO Greenland halibut, 3M Redfish, 3LN Redfish, 3O Redfish, 3LNO Yellowtail flounder and 3NO Skates constitute the major groundfish fishery in the NRA.

Table 2.3.1 *Total reported retained catches (in tonnes) of species (in FAO 3-alpha code) by Division in calendar 2020 (Source: CA field of CAT Reports).*

Division	1F	3L	3M	3N	3O	Total
<i>Species subject to catch limitations (as listed in the Quota Table)</i>						
CAP						
COD		110.5	8720.9	348.0	218.8	9398.2
GHL		7887.3	1886.8	979.2	2.5	10755.8
HKW				85.0	164.1	249.1
PLA		78.7	187.1	775.8	225.9	1267.4
PRA			79.1			79.1
REB	3609.1					3609.1
RED		3978.6	8778.9	6830.6	6759.9	26348.0
SKA		23.7	26.2	2967.3	1130.5	4147.7
SQI				77.6	693.9	771.5
WIT		35.3	225.4	106.7	140.2	507.6
YEL		0.3	0.0	12264.5	192.3	12457.1
Subtotal	3609.1	12114.3	19904.4	24434.7	9528.2	69590.7
<i>Selected species not listed in the Quota Table</i>						
ANG				0.6	3.7	4.3
CAT		2.0	55.6	0.3	0.2	58.0
GDE		1.7	0.0			1.7
GPE		3.2	0.2			3.4
HAD				2.8	9.6	12.3
HAL		84.3	101.1	373.7	200.5	759.5
HKS				205.4	1580.9	1786.3
RHG		42.6	33.0	36.1	0.2	111.8
RNG		20.9	115.0	0.4		136.3
Subtotal		154.7	304.8	619.2	1795.0	2873.7
<i>Sharks</i>						
BSH			0.0	0.1		0.1
DGX				0.1		0.1
Subtotal			0.0	0.2		0.2
MZZ		0.4	10.5	1.0	0.0	12.0
Grand Total	3609.1	12269.4	20219.7	25055.1	11323.3	72476.6

Table 2.3.2 *Total reported rejected catches (in tonnes) of species (in FAO 3-alpha code) by Division in calendar year 2020 (Source: RJ field of CAT Reports).*

Division	3L	3M	3N	3O	Total
<i>Species subject to catch limitations (as listed in the Quota Table)</i>					
CAP			1.4	0.2	1.6
COD	2.9	0.8	4.5		8.2
GHL	0.1		0.0		0.1
HKW			0.2	0.6	0.8
PLA	1.6	5.5	14.1	0.6	21.8
PRA		0.1			0.1
REB	0.1	1.3			1.4
RED	0.3	2.5	0.3	1.3	4.3
SKA	2.4	1.5	233.5	0.6	238.0
SQI			0.0	0.5	0.5
WIT	0.5	0.4	1.9	1.1	3.9
YEL			12.7	0.1	12.8
Subtotal	7.8	12.2	268.5	5.0	293.5
<i>Selected species not listed in the Quota Table</i>					
ANG			0.0		0.0
CAT	27.9	10.7	8.0	1.3	48.0
GDE	14.0	8.9	1.8		24.7
HAL	0.0	0.2	0.1		0.3
HKR	0.6	0.4	0.4		1.4
HKS			1.9	29.9	31.8
RHG	152.6	65.7	17.9		236.3
RNG	49.1	27.3	6.5	0.1	82.9
Subtotal	244.3	113.2	36.6	31.3	425.4
<i>Sharks</i>					
BSH					
CAR		0.1			0.1
CFB			0.3		0.3
DGS			0.0		0.0
DGX	5.4	0.7	0.3		6.4
DUS	0.2		0.6		0.7
GSK	56.0	45.7	37.7	17.4	156.8
POR	0.7		6.4	3.1	10.2
SHX				0.5	0.5
SMA	0.5		2.4	1.0	3.9
Subtotal	62.7	46.5	47.6	22.1	178.9
MZZ	17.9	10.4	66.9	3.1	98.3
Grand Tot	332.7	182.3	419.6	61.5	996.2

3.0 Inspection and Surveillance

Chapter VI of the NAFO CEM outlines the general provisions and protocol of the at-sea inspection and surveillance in the NRA. The CPs with inspection presence, Canada and the EU deploy their inspectors onboard of patrol vessels. The inspectors are tasked to carry out NAFO inspection duties at sea (see Section 3.2).

3.1 Patrol Activity

Four (4) patrol vessels were deployed by the CPs with inspection presence. In all, 327 patrol-days were spent in the NRA. The length of time the patrol vessels exercised their duties in 2020 ranged between 27 days and 151 days. However, there were 121 days with no patrol vessel, 171 days when there was one patrol vessel, and 74 days when there was more than one patrol vessel present in the NRA. Figure 3.1 shows the time of the year the patrol vessels were present in the NRA.

During the 1st quarter leading to mid-April of 2020, there was only one (1) or no patrol vessel in the NRA.

In addition, in 2020, Canada deployed surveillance aircraft, collectively flying 367 hours with 1378 vessel sightings in the NRA. No non-Contracting Party vessel suspected of conducting IUU fishing activities was spotted.

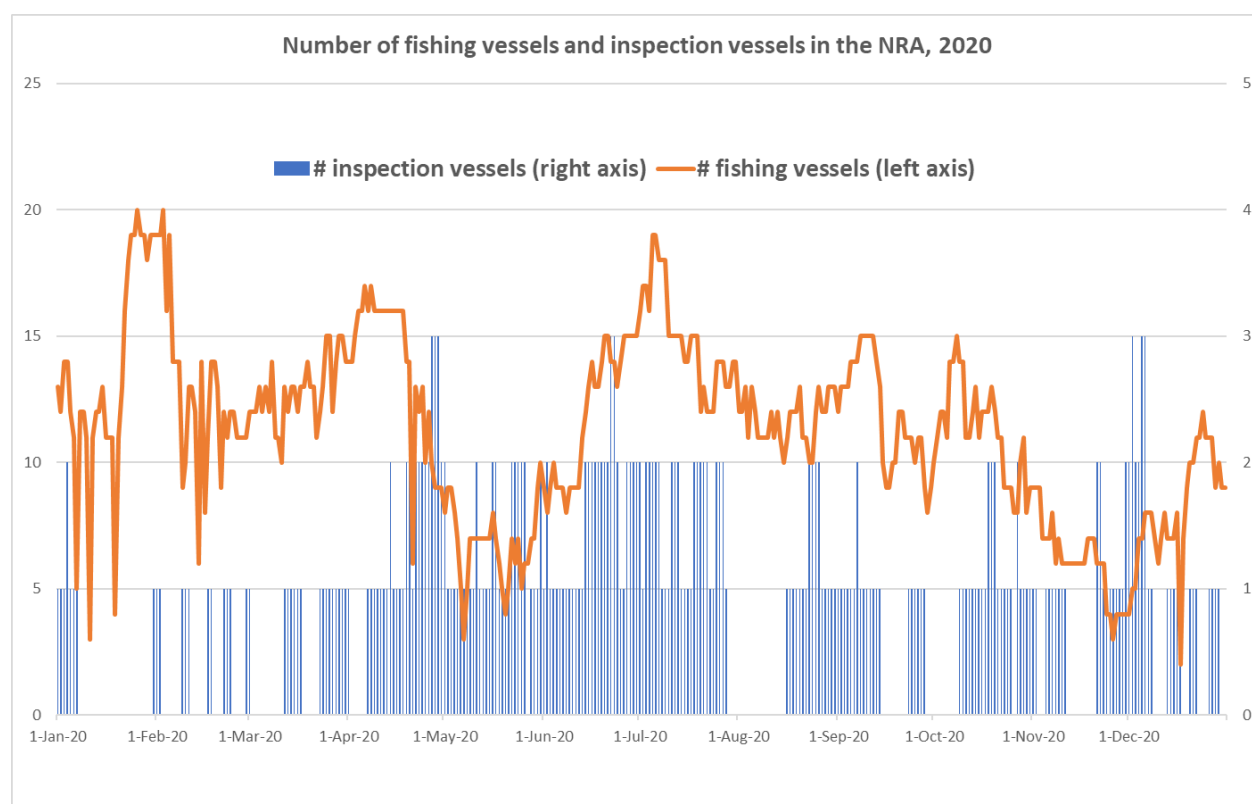


Figure 3.1 *Fishing vessel and Inspection Vessel Presence in the NRA in 2020.*

3.2 At-sea inspections

A total of 43 at-sea inspections were conducted. In four of these inspections at sea, five (5) Apparent Infringements (AI) were detected – three (3) serious as per Article 38 definition and two (2) non-serious AI. Details of the apparent infringements and their disposition can be found in Section 4.2.

3.3 Port Inspections

According to Article 43.10, the port State Contracting Party shall carry out inspections of at least 15% of all such landings or transshipments during each reporting year, unless otherwise required in a recovery plan in which case 100% coverage is required. Greenland halibut (GHL) is the only species where presence in the landing would require a port inspection (see Article 10). Port inspection reports are accomplished by port States using a PSC3 form (Annex IV.C).

In evaluating the compliance of port State authorities to Article 10, only trips with GHL onboard were considered. Table 3.3.1 shows the coverage levels (based on the number of trips) of port inspections for vessels that had GHL (caught either as directed fishery or bycatch) onboard.

Table 3.3.1 *Fishing trips with Greenland halibut (GHL) catches (based on Daily Catch Reports for the trip) and percent coverage of port inspections for the identified trips, by port State*

Port State CP	Number of identified trips by vessels larger than 24 m: trip with GHL catch > 0	Total amount of GHL from trips identified (t)	Number of identified trips with Port Inspection (PSC3)	Port Inspection Coverage (% based on identified trips with GHL catch)
CAN	8	1219.71	8	100%
DFG*	7	985.458	3	43%
EU**	56	8409.174	56	100%
FRA (St. Pierre et Miquelon)	1	0.378	1	100%
NOR*	1	488.584	0	0%
RUS	1	.378	0	0%
Overall	73	11103.3	68	69%

*Inspection not completed due to COVID-19

** One inspection did not include physical verification due to COVID-19

In evaluating compliance with Port State Control measures outlined in Chapter VII of the NAFO CEM, a review of the submission of Port State Control Prior Request (PSC1) and Port Inspection reports (PSC3) is presented in Table 3.3.2. The minimum coverage is 15% (Article 43.10).

Table 3.3.2 *The number of PSC1s and corresponding PSC3s received by the NAFO Secretariat.*

Port State	PSC1 (prior request made by flag State)	Number of PSC1's with intention to land/tranship catch	PSC3 (port inspection report from port State authority)	% Coverage (#PSC3 received / #PSC1 with intention to land/tranship catch received)
Canada	15	7	7	100%
DFG (Faroe Islands)	6	4	1	25%
EU	5	5	5	100%
FRA (St. Pierre et Miquelon)	1	1	1	100%
Iceland	5	5	0	0%*
Norway	1	1	0	0%*

*Inspection not completed due to COVID-19

4.0 Compliance

In this section, reporting obligations, including follow-up actions to apparent infringements (AIs) are examined.

4.1 Reporting Obligations

The NAFO CEM requires fishing vessels and flag State Contracting Parties (through the Fisheries Monitoring Centre) and port State Contracting Parties to provide reports on the fisheries activity within a determined time frame. Compliance of port State Contracting Parties to reporting requirements is discussed in Section 3.3.

4.1.1 Vessel Activity Reporting

4.1.1.1 Vessel Transmitted Information (VTI) – Catch-on-Entry (COE), Daily Catch Reports (CAT), and Catch-on-Exit (COX)

The Fisheries Monitoring Centres (FMCs) of flag States are responsible for transmitting the VTI reports to the Secretariat. The COE and COX are transmitted identifying the catches on board when entering and leaving the NRA. COE-COX information is used to estimate the fishing-days effort in a fishing trip. The CATs are daily catch quantities reported by species and by Division while on a fishing trip. CATs are used to monitor the quota uptakes by the fleet of the Contracting Parties.

In Table 4.1.1.1, the number of COE, COX, and CAT, as well as of fishing trips and fishing effort-days in the NRA, is presented. All identified 2020 fishing trips had corresponding COE and COX.

Table 4.1.1.1 *Fishing effort and VTI statistics in the NRA, 2020.*

Number of fishing trips identified	128
Fishing Days	4622
Number of Daily Catch Reports (CATs)	4385
Number of Trips with Catch on Entry Reports (COEs)	128
Number of Trips with Catch on Exit Reports (COXs)	128

No major technical issue was encountered in transmission and receipt of the VTI reports. All expected reports, including the Daily Catch reports (CAT), were received by the Secretariat.

The timely receipt of the CATs allowed an effective monitoring of the quota uptakes, including the attribution of catches to the right Parties of quota transfer and charter arrangement transactions.

4.1.1.2. Catch reporting on sharks

Article 28.6.g requires that all shark catches be reported at the species level, to the extent possible. When species specific reporting is not possible shark species shall be recorded as either large sharks (SHX) or dogfishes (DGX).

Greenland shark constitutes the bulk of the total shark catches by weight (see table 4.1.1.2). Most shark catches are discarded.

Table 4.1.1.2. *Amount of shark catches (t) as reported in CATs in 2020.*

3-Alpha Code	Scientific name	Common Name	Retained (t)	Rejected (t)	Total (t)
BSH	<i>Prionace glauca</i>	Great blue shark	0.1		0.1
CAR	<i>Chondrichthyes</i>	Cartilaginous fishes		0.1	0.1
CFB	<i>Centroscyllium fabricii</i>	Black dogfish		0.3	0.3
DGS	<i>Squalus acanthias</i>	Spiny dogfish		0.0	0.0
DGX	<i>Squalidae</i>	Dogfishes	0.1	6.4	6.5
DUS	<i>Carcharhinus obscurus</i>	Dusky shark		0.7	0.7
GSK	<i>Somniosus microcephalus</i>	Boreal (Greenland) shark		156.8	156.8
POR	<i>Lamna nasus</i>	Porbeagle		10.2	10.2
SHX	<i>Squaliformes</i>	Large sharks (NS)		0.5	0.5
SMA	<i>Isurus oxyrinchus</i>	Shortfin mako shark		3.9	3.9
Total			0.2	178.9	179.1

4.1.1.3 Electronic Fishing logbook (haul by haul) Reports

The submission of logbook data on a haul by haul basis became mandatory in 2015 (Article 28.8.b). The electronic fishing logbook information (haul by haul data) must be submitted to the Secretariat in the format prescribed in Annex II.N. for all hauls of the fishing trip (Article 28.8.c). The Secretariat has received haul by haul reports for all but four of the 128 trips that were completed in 2020. The Secretariat is coordinating with the CP concerned in locating the 4 missing reports.

4.1.1.4 Position reporting – Vessel Monitoring System (VMS)

According to Article 29, every fishing vessel operating in the NRA shall be equipped with a satellite monitoring device capable of continuous automatic transmission of position to its land-based Fisheries Monitoring Centre (FMC) of the flag States, which in turn is transmitted to the Secretariat in real time. The transmission of position reports (POS) shall be no less frequently than once an hour.

The Secretariat can confirm that the requirement is fully complied with. In 2020, a total of 140 690 POS reports were received. Occasionally, technical problems were encountered by the fishing vessels or FMCs. During these occasions, the POS's were transmitted manually. Technical issues were usually resolved within a few days through the coordination between the Secretariat and the FMC.

4.1.1.5 Closed Areas and Exploratory Fisheries

As of 2020, in total 20 areas in NAFO have been closed to bottom fishing including six seamounts and 14 areas with significant concentration of coral, sponges and sea pens, one coral protection zone, and six seamounts. The measures concerning the protection of Vulnerable Marine Ecosystems (VMEs) from bottom fishing are stipulated in Chapter II of the NAFO CEM.

Based on the VMS positions, no bottom fishing was detected within the closed areas. The Secretariat did not receive a notification from a Contracting Party concerning its intention to conduct exploratory fisheries (as defined in Article 18) in 2020.

4.1.1.6 Chartering arrangement

Article 26 allows chartering arrangements between two CPs – the chartering CP (with quota or fishing days allocation in the case of 3M PRA) and the flag State CP (with fishing vessel). Catches by the vessel are counted against the quota of the chartering CP. In 2020, three (3) chartering arrangements were made --- two arrangements with the fishing possibility for shrimp (3M PRA), and one arrangement with a fishing possibility of yellowtail founder (3LNO YEL).

Monitoring of the implementation of the chartering arrangements are made possible through the notifications of commencement, suspension, resumption, and termination of chartered fishing and the daily catch reports of the vessel (CAT's) where chartering catches are identified. The two charter arrangements for shrimp were not implemented. With regards to the 3LNO YEL arrangement, reported catches of this stock were within the fishing possibility stipulated in the charter arrangement.

The submission of the required documentations (Article 26.7 and 26.8) and reporting of implementation dates (Article 26.9) were complied with by both parties of the fishing charter arrangements.

4.1.2 Observer Reports

Flag State Contracting Parties are required to have 100% observer coverage under Article 30.5. However, they may allow their vessels to carry an observer for less than 100%, but not less than 25% of the fishing trips conducted by its fleet (Article 30.6) upon of observer withdrawal.

In evaluating the compliance to observer trip report submission (see Article 30.14.a), trips were grouped according to the implementation of Article 30.5 or 30.6 which requires 100% or >25% coverage, respectively.

In 2020, there were 84 fishing trips identified under Article 30.5, all of which have corresponding observer reports.

Three CPs invoked Article 30.6 which allows their vessels to carry an observer for less than 100% but not less than 25% of the fishing trips. All but one CP exceeded the minimum coverage requirement (see table below).

CP under Art. 30.6	# of identified trips	# of trips with Observer Trip Reports	%-coverage
CAN	33	28	85%
DFG	9	2	22%
NOR	2	2	100%*

** The Secretariat was advised that during the two trips, the vessels were carrying an observer for 66% and 70% of the days present in the NRA.*

4.2 Apparent Infringements detected at-sea and at-port

In 2020, a total of nine (9) vessels were cited with AI by inspectors at sea and port authorities. Details on the nature of the AIs and their disposition are provided in Table 4.2.

Table 4.2 *Details of Apparent Infringements (AI) detected by inspectors at-sea and by port authorities in 2020 and their disposition. AIs presented in bold were considered “serious” by the inspectors as per Article 38 definition.*

CP	Vessel code	Start Date of Inspection	AI's detected at-sea (Art. 37). Serious AIs in bold (Art.38)	AI's detected in port (PSC3: Section E.1.B. c). Serious AIs in bold (Art. 38)	Follow-up to AI, as reported by CP (Art 40)
EU	11	15-Jan-20		-Art 28.2.a,b, Art 28.3.a - Fishing and Production logbook Art 38.1.i - Mis-recording of catches Art. 38.1.n - Concealing, tampering evidence Art. 38.1.j - Interfering with inspectors and observers	Case pending Case under criminal investigation
EU	24	04-Mar-20		-Art. 27 - Product labelling	Case pending Precautionary order (seizure of relevant catches)
EU	11	04-Jun-20		- Art. 27.1.b - Product labelling '- Art 28.3.a.(i), (iv) - Production logbook	Case pending Precautionary order (seizure of relevant catches)
EU	49	11-Jul-20	Boxes of catches not labelled according to Division (Art. 27.1.d)	NAFO CEM Art. 38.1.n -- Area sealed by inspector had been entered.	Case pending Mis-labelling sanctioned with 520€. Prosecution is ongoing with regard to the infringement on gaining access to a sealed area
EU	164	24-Jun-20	Failure to maintain an accurate fishing logbook consistent with Annex II.A (Art. 28.2.a and Art. 38.1.i)	Fishing logbook (Art. 28.2 and 38.1.i) Production logbook (Art. 28.3) Interference with inspectors (Art. 38.1.I)	Case pending Precautionary order (rerouting to port + seizure of relevant catches)
EU	1	26-Aug-20		- Art.6.3.b - 3NO Cod bycatch threshold	Case Pending Precautionary order (seizure of relevant catches)
EU	41	04-Sep-20		-Art. 27 - Product labelling	Case Pending Precautionary order (seizure of relevant catches)
DFG	81	05-Sep-20	1) Directed fishing for Cod in 3N which is under moratorium (Art. 6.6.a and Art. 38.1.c) 2) Failure to carry out observer (Art. 30.5 and Art. 38.1.r)		Case closed. Vessel given warning.
EU	159	18-Oct-20	Use of inappropriate product code as listed in Annex II.K (art.27.1 (e))		Case closed Case dropped. Labelling considered correct.
EU	43	24-Nov-20		-Art. 10.4.d.- Greenland halibut control measure -Art. 28.2, Annex II.A - Fishing logbook, recording of catch - Art. 13.2.d - Gear requirements mesh size for ground fish.	Case pending

4.3 Follow-up to apparent infringements

NAFO CEM Article 39 spells out obligations of a flag State Contracting Party that has been notified of an apparent infringement. It includes taking immediate judicial or administrative action in conformity with the national legislation of the flag State Contracting Party and ensuring that sanctions applicable in respect of infringements are adequate in severity.

Article 40 requires Contracting Parties to report on the disposition of the AIs. The legal resolution of AIs may take more than a year. Contracting Parties shall continue to list such infringements on each subsequent report until it reports the final disposition of the infringement. In Table 4.3, a summary of status of AI cases in the last five years (2016-2020) and their resolution are presented.

Table 4.3 *Resolution of citations (by at-sea inspectors and port authorities) against vessels fishing in the NAFO Regulatory Area by year in which the citations were issued (as of May 2021). A citation is an inspection report that lists one or more apparent infringement. Inspections carried out for confirming a previous citation are not included.*

Year	Number of Inspection Reports with AI citation/s	Number of Resolved Cases	Number of Pending Cases*	% Resolved
2016	11	8	3	73%
2017	7	7	0	100%
2018	6	5	1	83%
2019	5	3	2	60%
2020	10	2	8	20%

*still under investigation, litigation, or appeal.

5.0 Trends and Analysis

Five-year trends (2016-2020) on effort and catch, reporting obligations of CPs and observers, compliance by fishing vessels, and at-sea inspections and AIs are presented in this section.

5.1 Effort and Catch

Table 5.1. *Fishing days, as defined by Article 1.6, by fishing gear.*

	Longline	Midwater-trawl	Bottom-Trawl	TOTAL
2016	260	181	3873	4314
2017	314	0	3558	3872
2018	304	82	3719	4105
2019	321	56	4297	4674
2020	250	127	4245*	4622

*21 days TBS + 4224 days OTB

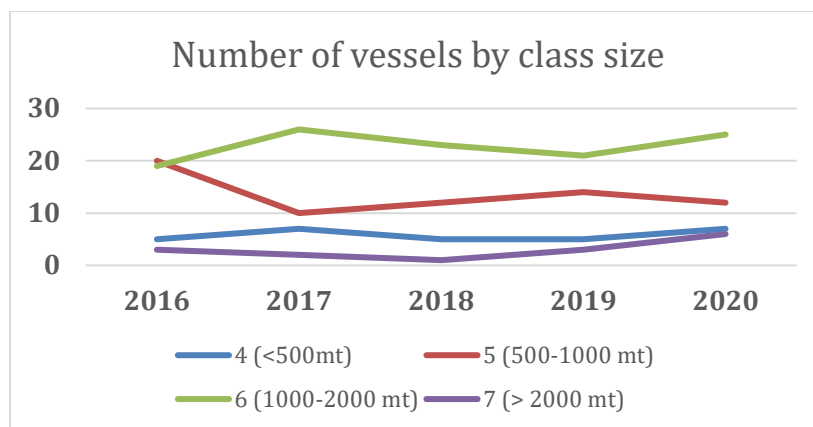


Figure 5.1.1 Number of fishing vessels in Divisions 3LMNO by class size, 2016-2020. The class sizes are based on the STATLANT classification.

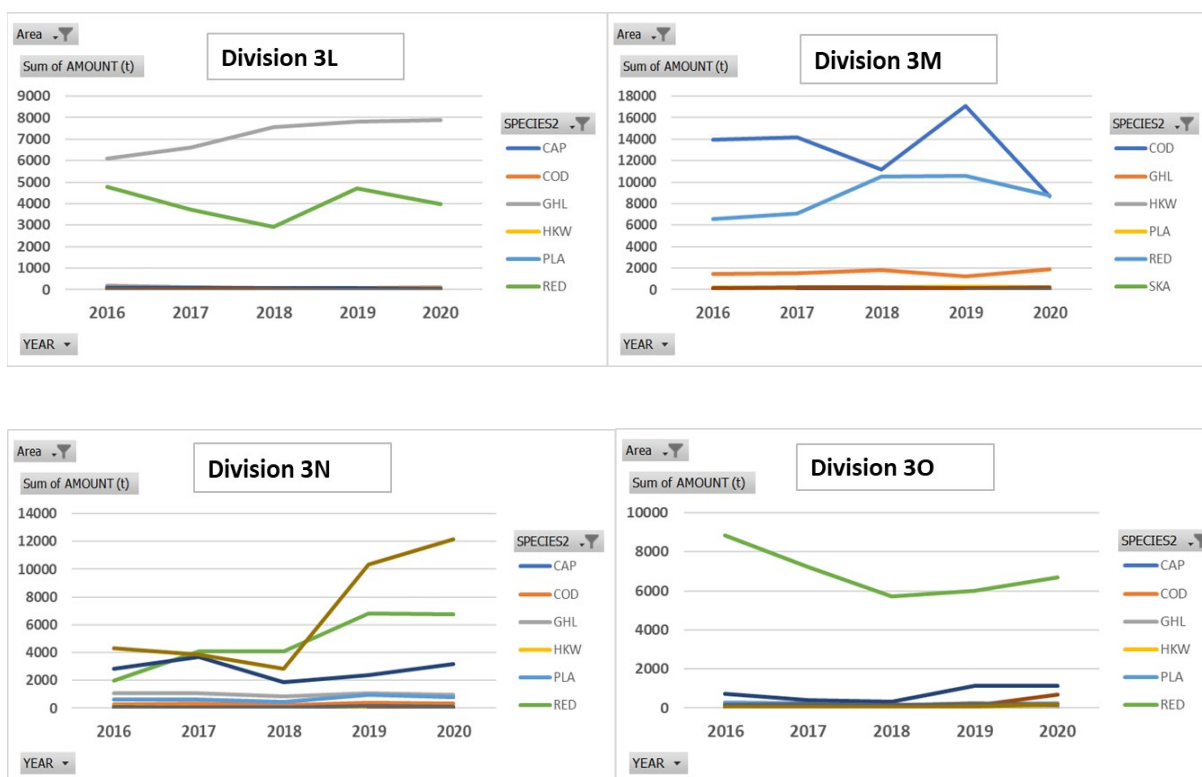


Figure 5.1.2 Catches (in tonnes) by Division of selected species managed by TAC, 2015-2020 (Source: CATs).

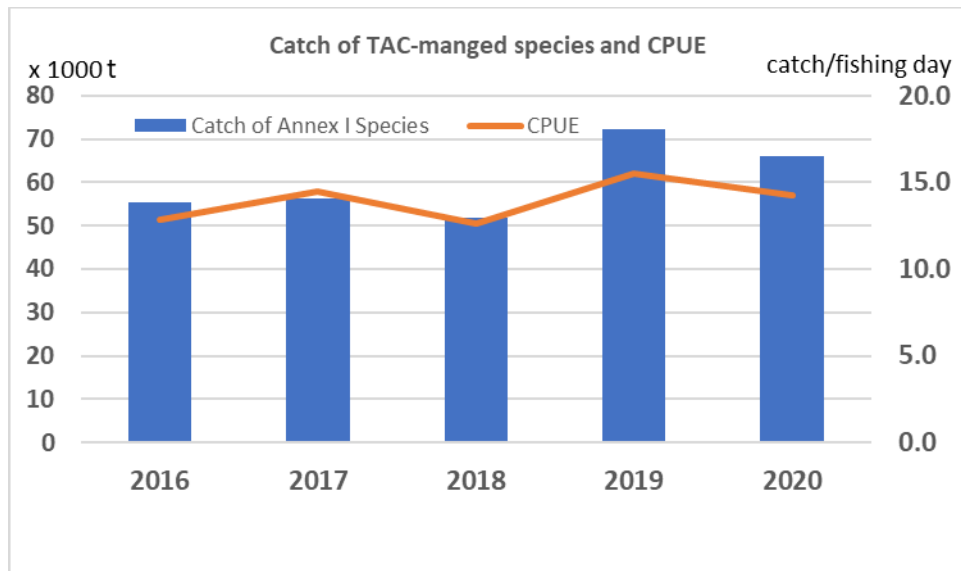


Figure 5.1.3 *Catch of TAC-managed species and CPUE in 2016 -2020, expressed in total catch of TAC-managed species per fishing day. Data Source: CATs and VMS reports.*

5.2 Reporting Obligations by Contracting Parties

Compliance to reporting obligations is quantified as a percentage coverage – the ratio of the fishing trips accounted for by the reports and of the total number of relevant fishing trips. A 100% coverage would mean that all expected reports were transmitted to the Secretariat. Figure 5.2 presents the percentage coverage of port inspections reports on vessels with Greenland halibut landings (in accordance with Article 10.4), observer reports from vessels operating under Article 30.5, and electronic fishing logbook (Haul by Haul) reports in accordance with Article 28.8.b.

Figure 5.2 shows the submission rates in the period of 2016-2020. In 2020, the submission rates of electronic logbook reports (Article 28.8.b), trip observer reports (Article 30.5), and port inspections reports (Article 10.4) are 96.9%, 100%, and 93.2%, respectively.

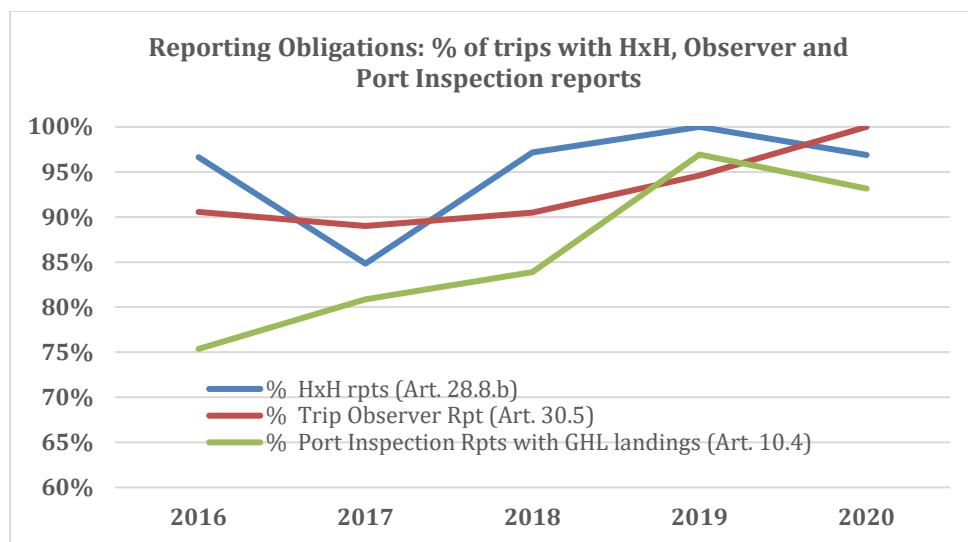


Figure 5.2 *Percentage coverage of Port Inspections reports with Greenland halibut landings reports (Arts. 10.4 and 42.10), Observer Trips Reports on fishing vessels operating under Article 30.5 (flag State CPs did not apply Article 30.6), and Haul by Haul reports (Article 28.8.b and Annex II.N), 2016-2020.*

5.3 Compliance by Fishing vessels

In the 5-year review period of 2016-2020, VMS and VTI requirements (Article 28 and 29) have been fully complied with.

Hourly position reports (POS), as well as the Daily Catch Reports by Division (CATs), were transmitted to the Secretariat while the vessels were in the NRA. The Catch-on-Entry (COE) and Catch-on-Exit (COX) reports for each fishing trip were also transmitted.

5.4 Inspections and Apparent Infringements

At-sea inspection rates, computed as a ratio of the number of at-sea inspections and the total fishing effort (fishing days), in the period 2016-2020 are presented in Figure 5.4.1. In 2020, inspection rate dipped to its lowest level (at 0.9% compared to 2.27% in 2019). Inspection rates of the 4 previous years had remained steady with less than 1% inter-annual difference. Frequency of AI cases in the same period is presented in Figure 5.4.2.

With regards to AIs detected at sea and at port, mis-reporting of catches remains the most common AI (Figure 5.4.2). There is no other discernable trend with regards to the nature and frequency of the AIs.

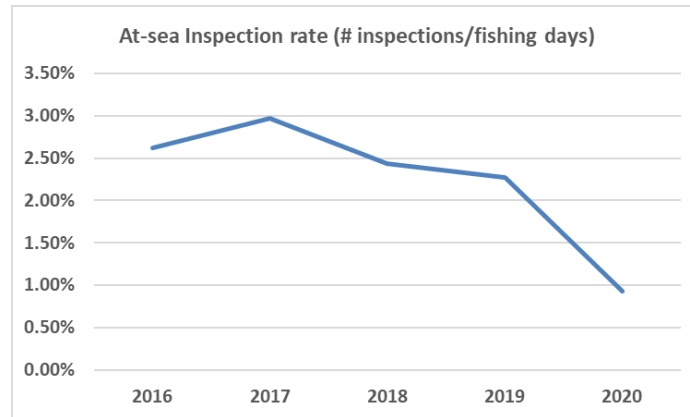


Figure 5.4.1 *Inspection rates (number of at-sea inspections/fishing days) in the NAFO Regulatory Area, 2016-2020.*

	2016	2017	2018	2019	2020
By-catch requirements	••••	••			•
Catch communication violations	•				
Directed fishing of moratorium stock	•	•			•
Directed fishing of stock without quota allocation			•		
Evidence tampering	•				••
Fishing after date of closure	•				
Gear requirements - mesh size, illegal attachments		•			•
Greenland halibut control measures (Art. 10.4.d)					•
Inspection protocol	•				••
Observer requirements					•
Mis-recording of catches - inaccurate recording	••••••••	••••	••••	••	•••
Mis-recording of catches -stowage	•	••	•	•••••	
Product labelling		•	••	••	••••
Quota requirements	••				
Vessel requirements - capacity plans	•		••	•	
Production logbook requirements					••
Other non-serious infringement					•

Figure 5.4.2 *Frequency of apparent infringement cases detected by at-sea inspectors and port authorities in 2016-2020. Black and blue dots represent apparent infringement issued at sea and at port, respectively.*

6.0 Conclusions

In NAFO, there are three main fisheries conducted mainly with trawl gear and a limited presence of longline gear. The total catches increased slightly from around 72,000 tonnes in 2019 to approximately 73,000 tonnes in 2020, including 3,609 tonnes of pelagic redfish under moratorium.

The at-sea inspection rate is lower in 2020 due to COVID-19. (Fig 5.4.1).

COVID-related impacts on control activities required the adoption of protective protocols both at-sea and in port and to some extent changes in inspection practices.

Contracting Parties have reported a certain impact on their ability to carry out control elements which are mandatory under the NAFO CEM, in particular for port inspection benchmarks.

Three CPs invoked Article 30.6 NAFO CEM which allows their vessels to carry an observer for less than 100% but not less than 25% of the fishing trips. All but one CP exceeded the minimum coverage requirement.

The 2020 CPUE is consistent with trends remaining steady (Fig 5.1.3)

2020 saw the reopening of the 3M PRA fishery with a limited activity consisting only on 79 tonnes of catches in 21 fishing days.

The timely receipt of the CATs allowed an effective monitoring of the quota uptakes, including the attribution of catches to the right Parties of quota transfer and charter arrangement transactions.

7.0 Recommendations

STACTIC recommends that all Contracting Parties continue to strive for coordination and collaboration.

STACTIC recommends that all Contracting Parties maintain and continue efforts to protect stocks that are subject to moratorium.

STACTIC recommends Contracting Parties to continue to urge masters to improve recording of sharks at species level (Section 4.1.1.2).

STACTIC recommends Contracting Parties continue to strive towards 100% submission of Observer Trip reports, the electronic logbook data reports (haul by haul) and Port Inspection reports, as the catch information contained in these reports are utilized by the Scientific Council and other working groups (*e.g.* CESAG, WG-BDS) in their fish stock assessment work (Section 5.2 and Figure 5.2).

STACTIC recommends Contracting Parties continue to strive towards 100% submission of reports on the partial withdrawal of observers and continue efforts to standardize the information in those reports.

STACTIC encourages Contracting Parties to continue to maintain inspection presence in the NRA (Section 3.1) and to continue to cooperate among them for at-sea deployments.

STACTIC recommends Contracting Parties to continue cooperation and discussions on best practices for both at sea and port inspections.

STACTIC recommends Contracting Parties ensure the application of the follow-up procedures in cases of serious infringements.

STACTIC recommends Contracting Parties ensure that research activities are conducted in a manner consistent with research plans and notification requirements.

STACTIC recommends Contracting Parties continue to ensure the protection of Vulnerable Marine Ecosystems.

STACTIC recommends Contracting Parties continue to ensure safe working procedures related to COVID-19 and to report the on the difficulties to comply with obligation on control directly linked to the COVID pandemic.

STACTIC recommends Contracting Parties continue to support at-sea observers during deployments in the NRA.

Annex. Impact of Covid-19 on Contracting Parties Compliance to NAFO Conservation and Management Measures

The global pandemic caused by COVID-19 has brought significant focus on essential industries, such as fisheries, to confirm that no effort is being spared to contain the spread of the virus. As all aspects of fisheries are being scrutinized, many Contracting Parties have determined that certain activities associated with fishing can continue with modified procedures and protocols in place to ensure the health and safety of all persons involved. However, a number of countries have also determined that certain obligations could not be met in accordance with acceptable hygiene and distancing protocols, given that persons can sometimes frequent numerous vessels and ports over relatively short periods.

Since the declaration of the global pandemic on 11 March 2020, correspondence from many Contracting Parties has been circulated regarding potential means of addressing difficulties complying with the NAFO CEMs due to COVID-19.

At the 2020 Annual meeting (COM Doc. 20-14), *“the Commission agreed that STACTIC should compile, make a first review of, including appropriate recommendations, and report for decision-making to the Commission on the measures undertaken by Contracting Parties via the compliance review. The Annual Compliance Report for 2020 (to be produced in 2021), when indicating non-compliances by a CP with a given obligation on control, should identify as well any difficulties directly linked to the COVID pandemic to be differentiated from any other non-compliances. This first assessment role for STACTIC does not aim at revising the decision of CP to suspend a control measure, but to differentiate the reasons for the non-compliance of a measure between COVID and non-COVID-related ones.”*

At the May 2021 Intersessional Meeting (COM Doc. 11-02), STACTIC developed a questionnaire-survey for the purpose of evaluating COVID-19's impact on compliance (STACTIC WP 21-12 Rev.). As of September 2021, four Contracting Parties (CPs) responded to the survey. The control measures impacted were the requirements pertaining to deployment of on-board observers (Article 30.5 and 30.6), Greenland halibut port inspection (Article 10.4 (e)), and port state measures (Article 43.10).

One Contracting Party did not report the details of the difficulties directly linked to the COVID-19 pandemic relating to the non-compliances with obligations on control in the agreed format and no preliminary STACTIC assessment is provided for this Contracting Party on whether the reasons for the non-compliance with control obligations relates to COVID-19.

All other Contracting Parties reported no instances of non-compliance with the obligations on control.

These are the summaries of the four reporting Contracting Parties:

One Contracting Party reported that due to safety concerns related to COVID-19, it suspended its national observer program, also applicable to the NRA, between 3 April and 5 August 2020. This relates to the obligation to deploy observers under Article 30 NAFO CEM. Subsequently, the CP used the derogation on the observer coverage in NAFO. The FMC and the NAFO inspectors of the CP concerned closely monitored the activity of its derogated fishing vessels to ensure adherence to the CEM. By the end of 2020, vessels from the one CP concerned had completed sufficient observed trips that the year's derogated trips were in compliance with the percentage outlined in Article 30.6 NAFO CEM.

One Contracting Party reported difficulties on complying with the 100% port inspection benchmarks for landings/transhipments of Greenland halibut set out in Article 10.4.(e) NAFO CEM and with the obligation to inspect at least 15% of third-country landings under Article 43.10 NAFO CEM. Based on risk and vulnerability assessments, the Contracting Party implemented strict disease control measures, including the non-inspection of foreign vessels between 12 March and June 2020. Port inspections were gradually resumed from June, although between June and September 2020, port inspectors were not allowed to go on board foreign vessels and only landed quantities were inspected during that period. Electronic and on-site surveillance presence as

well as document controls of PSC1 including flag State confirmation were used as alternative actions mitigate the impact of those measures.

Another Contracting Party reported similar difficulties relating to the port inspection benchmarks for landings/transhipments of Greenland halibut set out in Article 10.4.(e) NAFO CEM and the obligation to inspect at least 15% of third-country landings under Article 43.10 NAFO CEM, between 12 March and February 2021. This was also due to the strict disease control measures, including the non-inspection of foreign vessels between. Electronic and on-site surveillance presence as well as document controls of PSC1 including flag State confirmation were used as alternative actions to mitigate the impact of those measures.

One Contracting Party reported that one mandatory port inspection under Article 10.4.(e) NAFO CEM was carried without physical verification between 24 and 30 March 2020. This took place during the lockdown and under a temporal prohibition of physical inspections due to the risk of spreading the infection in the absence of protective equipment for inspectors and protective protocols allowing physical verification of the cargo. Alternative actions to mitigate the impact of this restriction included a thoughtful documental verification and cross-check of available fisheries data, but without physical verification. Protective protocols for port (and at-sea) inspections and protective equipment were soon adopted afterwards, including procedures for the verification of landing operations. In addition, remote monitoring based on cross-check and automatic validation systems of fisheries data have been improved.

The first assessment by STACTIC on the difficulties reported by these four Contracting Parties to comply with control obligations under the NAFO CEM is that the reported non-compliances are directly linked to the measures adopted in relation to the COVID-19 pandemic.

Annex 39. Measure to Revise NAFO CEM Article 4 to Limit Scientific Catches of 3M Cod and 3M Shrimp in 2022

(COM WP 21-45 (Rev.) now COM Doc. 21-17)

Explanatory memorandum

In order to pursue NAFO's primary objective of conservation and sustainable use, a fundamental requirement is that removals by all Contracting Parties remain within agreed limits. This obligation is especially critical in the context of stocks that are on a declining trajectory and are at risk of falling below B_{lim} . In 2020, the Commission agreed to a TAC of 1500t for 3M cod for 2021, a sharp reduction from the previous year in the face of biomass declines.

In 2021, Denmark (in respect of the Faroe Islands and Greenland, or DFG) initiated a longline survey using a commercial vessel in division 3M to provide information on cod and other species. At the 2021 NAFO Annual Meeting, DFG reported in NAFO SCR Doc. 21/039 that this survey had caught 630.6t of 3M cod, which is almost double, and in addition to, its quota for 2021 of 335t.

This significant overharvest is deeply troubling in its implications for the sustainability of the stock. However, it also points more broadly to a gap in Article 4 of NAFO's Conservation and Enforcement Measures (CEM), which does not provide adequate mechanisms to ensure that harvests taken in the context of scientific surveys are in fact taken for scientific purposes, that they are no larger than generally required for those purposes, and that they do not undermine other management measures aimed at ensuring sustainable harvests.

Developing mechanisms to manage scientific catches will require care to ensure they provide ample space for legitimate scientific work to be conducted, while at the same time ensuring that science needs cannot be confused with large harvests that may have a more commercial motivation. While work to develop such mechanisms is undertaken over the coming year, an interim measure is required to ensure that any 3M cod survey undertaken in 2022 is aligned with the agreed TAC for the stock and with sound fisheries management principles more generally.

Since the Commission agreed in 2021 to a moratorium for 3M Shrimp in 2022 given the stock's decline to a level below B_{lim} , similar caution is required for scientific work relating to the 3M Shrimp stock. This interim measure therefore covers both 3M cod and 3M shrimp.

Proposal

Recognizing that the NAFO Convention's objective includes "to ensure the long-term conservation and sustainable use of the fishery resources in the Convention Area;"

Concerned that a scientific survey conducted in NAFO Division 3M took an amount of cod disproportionate to what would be reasonably required or expected for purely scientific purposes;

Noting the Commission's wish to prevent excessive scientific catches while a permanent mechanism to manage these catches is developed;

Thereby recommend that Article 4 be amended to include new subparagraphs c and d in Paragraph 2:

2. A research vessel shall not:

[...]

c. in 2022 take 3M cod in excess of 15 metric tonnes. Should a research vessel's catch exceed this amount, the excess shall be counted against the allocation to the vessel's flag State Contracting Party. Furthermore, if the allocation to the Contracting Party for 3M cod is exhausted, it shall not authorize its vessels to undertake further research activities. Any research activities underway must be stopped as soon as 15t have been caught.

d. in 2022 take 3M shrimp in excess of 10 metric tonnes. Given no directed fishery is authorized on 3M shrimp in 2022, a Contracting Party must stop research activities on 3M shrimp once 10t have been caught.



NAFO Northwest Atlantic
Fisheries Organization

PRESS RELEASE

Committed to **Conservation** and **Management** of **Fisheries** and **Ecosystems** in the Northwest Atlantic

Annex 40. 2021 Press Release

NAFO AGREES TO FURTHER MEASURES TO PROTECT VULNERABLE MARINE ECOSYSTEMS (VMEs) AT ITS 43RD ANNUAL MEETING

FOR IMMEDIATE RELEASE

Halifax, Canada, 25 September 2021 – The Northwest Atlantic Fisheries Organization (NAFO) achieved significant progress with key decisions on the sustainable management of NAFO-managed fish stocks, the protection of vulnerable marine ecosystems (VME) and its review of its Precautionary Approach Framework.

Notably, a number of measures were adopted to enhance its protection for Vulnerable Marine Ecosystems (VMEs), in particular to safeguard black coral and sea pens. These measures include:

3. Through the addition of seven (7) new closed areas, as well as revisions to the boundaries of existing closures, all seamounts at fishable depths within the NAFO Regulatory Area now protected,
4. In addition to a five (5) year rollover of the current closures to protect VMEs in the NAFO Regulatory Area, five (5) further areas will be closed for this same duration,
5. As a precautionary measure, an additional four (4) VMEs closed areas were adopted for two (2) years to allow the Scientific Council to conduct additional analysis incorporating the most recent fishery data.

This demonstrates NAFO's commitment to the ecosystem approach to fisheries management and, specifically, to the protection of VMEs, which has been an obligation for regional fisheries management organizations (RFMOs) since 2008, following United Nations General Assembly (UNGA) Resolutions.

In addition, significant decisions were made regarding the following:

6. Progress achieved to review NAFO's Precautionary Approach Framework.
7. Continued additional conservation measures for cod in Div. 3M, including maintaining a port inspection effort and limiting bycatches during the first quarter closure of 2022.

NAFO elected Temur Tairov (Russian Federation) as NAFO's new President and Chair of the Commission and Deirdre Warner Kramer (USA) as Vice Chair of the Commission. Karen Dwyer (Canada) was elected Chair of the Scientific Council and Diana González Troncoso (EU) was elected as Vice Chair of the Scientific Council.

NAFO agreed on the closure of the shrimp fishery in Div. 3M for 2022, and will continue to work intersessionally to review the current management approach this stock.

The 44th Annual Meeting will take place 19–23 September 2022, in Portugal.

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PART II.
Report of the Standing Committee on International Control (STACTIC)

43rd Annual Meeting of NAFO, 20-24 September 2021

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Report of the Standing Committee on International Control (STACTIC)

43rd Annual Meeting of NAFO, 20-24 September 2021

1. Opening by the Chair, Kaire Märtin (European Union)

The Chair opened the meeting at 08:30ADT on Monday, 20 September 2021 via WebEx. The Chair welcomed representatives from the following Contracting Parties (CPs) – Canada, Denmark (in respect of Faroe Islands and Greenland), the European Union, France (in respect of St. Pierre et Miquelon), Iceland, Japan, Norway, the Russian Federation, Ukraine, the United Kingdom, and the United States of America (Annex 1).

2. Appointment of Rapporteur

Jana Aker (NAFO Secretariat) was appointed as rapporteur.

3. Adoption of Agenda

The following additions were made to the agenda under agenda Item 19 – Other Business:

a. VISMA Contract Renewal

The agenda was adopted, as amended (Annex 2).

The Chair noted that the work of the NAFO ad hoc Working Group on STACTIC Participation (WG-SP) is still ongoing. Contracting Parties agreed to follow the procedure established at the 2019 Annual Meeting as an interim solution for this meeting, which was that Contracting Parties identify agenda items and/or working papers to determine which items were deemed to be of a sensitive nature and were agreed to be discussed in an in-camera (closed) session. The in-camera (closed) sessions would be restricted to government officials and NAFO Commissioners from each delegation. Following the in-camera (closed) discussions, the Chair would report out the results or recommendations in open session. For this meeting, Contracting Parties agreed to discuss agenda items 4, 5, 12, and 18 in an in-camera (closed) session.

4. Compliance review 2021 including review of apparent infringement reports and of chartering arrangements

a. Compliance Review

The Chair highlighted the Draft 2020 Compilation of Fisheries Reports table in STACTIC WP 21-01 (Rev. 6) and noted that comments received following the STACTIC Intersessional meeting had been incorporated. Contracting Parties did note a few additional issues and flagged those to the Secretariat, and they were included in STACTIC WP 21-01 (Rev. 7). The European Union encouraged Contracting Parties to review their figures where discrepancies between the different sources of data are present.

The Chair highlighted STACTIC WP 21-02 (Rev. 3), the summary of inspections for 2020, and noted that the comments received following the intersessional meeting had been incorporated. The European Union requested further information on the availability of Canadian inspection reports for Canadian vessels on the MCS Website, and Canada noted that they are working internally to get these reports uploaded to the MCS Website going forward. The European Union noted the importance of having consistent sanctions and follow-up procedures for all Contracting Parties for infringements.

The Chair highlighted the overview of chartering arrangements and compliance document outlined in STACTIC WP 21-29 (Revised) for information.

The Chair highlighted the draft Annual Fisheries and Compliance Review for 2020 in STACTIC WP 21-42 (Revised). Contracting Parties offered some clarifications throughout the draft Compliance Review and representatives from Canada, the European Union, and the United States of America volunteered to continue

work on the conclusions and recommendations sections and summarize the submissions for the annex on compliance issues related to the impact of COVID-19. The final version of the draft Compliance Review is outlined in STACTIC WP 21-42 (Rev. 4).

It was agreed that:

- **The draft Annual Compliance Review outlined in STACTIC WP 21-42 (Rev. 4) be forwarded to the Commission for adoption.**

b. Analysis of at-Sea inspection rates

The NAFO Secretariat presented the at-sea inspection information outlined in STACTIC WP 21-52 in response to the recommendation from the 2021 STACTIC Intersessional meeting for the Secretariat to conduct an analysis on inspection rates in the NAFO Regulatory Area. Contracting Parties thanked the Secretariat for the work and noted that the information provided a general overview of the inspection activity, but more information would be required before any conclusions could be drawn, such as the risk assessment procedure, availability of inspection platforms, etc. Contracting Parties agreed that the information was useful and requested the Secretariat repeat the analysis for the 2023 Annual Meeting.

It was agreed that:

- **The NAFO Secretariat will provide an updated version of the information presented in STACTIC WP 21-52 for the 2023 STACTIC Annual Meeting.**

5. Review of Article 30 of the NAFO CEM

The Chair highlighted the summary of observer information for 2020 in STACTIC WP 21-03 (Rev. 3) and noted that almost all of the required information has been submitted, with the exception of the report on the partial withdrawal of observers from one Contracting Party. Contracting Parties provided the relevant updates and the final version is outlined in STACTIC WP 21-03 (Rev. 4). Contracting Parties agreed on the need for a standardized reporting template for the information required to be submitted to the NAFO Secretariat in accordance with Article 30.6.e of the NAFO CEM.

It was agreed that:

- **STACTIC will develop a reporting template for the data submission requirements under Article 30.6.e at the 2022 STACTIC Intersessional Meeting.**

6. STACTIC Participation

The Chair presented the meeting report from the NAFO ad hoc Working Group on STACTIC Participation (WG-SP) in STACTIC WP 21-45 and highlighted the recommendation that a small group consisting of Canada, the European Union, Japan, and the United States of America agreed to work on drafting a Rules of Procedure for presentation at this meeting, using the current procedure established at the 2019 Annual Meeting as a basis for agreement. The small group noted that they did not have enough time to reach consensus on the draft document and that more discussions will be required to complete this work. Particularly, the United States expressed concern that Contracting Parties were not operating from the same starting point, and requested that the Secretariat provide all Contracting Parties with the relevant documents that form the basis of understanding for the current ad-hoc procedure to ensure there is a common starting place for these discussions. It was agreed that Canada, the European Union, Japan, and the United States of America and any other interested Contracting Parties will continue work with the aim to present a proposal to STACTIC at the 2022 STACTIC Intersessional Meeting.

It was agreed that:

- **Canada, the European Union, Japan, and the United States of America and any other interested Contracting Parties will continue working on the draft proposal for a Rules of Procedure for STACTIC Participation for presentation at the 2022 STACTIC Intersessional Meeting.**
- **The Secretariat will compile and circulate, as soon as practicable, all relevant NAFO texts that form the basis of the current, ad-hoc procedure regarding STACTIC participation.**

7. New and Pending Proposals on Enforcement Measures: Possible revisions of the NAFO CEM

The Chair highlighted STACTIC WP 21-17 (Rev. 2) outlining the draft legend for Annex I.A of the NAFO CEM, noting that the proposal was discussed at the 2021 Intersessional meeting, and comments were received and incorporated since that meeting. Contracting Parties agreed to forward the proposed legend for Annex I.A to the Commission for adoption.

The NAFO Secretariat presented STACTIC WP 21-36 highlighting a possible clarification that may be required in the description of the RA field in the COX message. The Secretariat noted that there are some issues with vessels including CA and RJ amounts in the COX message but exiting from a different NAFO division than the catch was taken, resulting in the catch (in the CA and RJ fields) being associated with the division of exit. The European Union requested that before the proposal is adopted, the issue be flagged to JAGDM to ensure there are no technical issues with the proposed change and to also request JAGDM review the consistency of the COX messages between NEAFC and NAFO.

Denmark (in respect of the Faroe Islands and Greenland) presented a proposal relating to the port inspection of Greenland halibut outlined in STACTIC WP 21-37 and noted the purpose of the proposal was to clarify the intention of Article 10.4.e of the NAFO CEM. Contracting Parties thanked Denmark (in respect of the Faroe Islands and Greenland) for their proposal and offered some comments to clarify the proposal, outlined in STACTIC WP 21-37 (Revised). Contracting Parties agreed to forward the proposal to the Commission for adoption.

The European Union presented a proposal in STACTIC WP 21-40 amending Article 4 of the NAFO CEM to better regulate the use of commercial vessels for research activities. Contracting Parties thanked the European Union for the proposal and provided comments on the inclusion of a 2% threshold and suggested the inclusion of a definition of “*marketed*” to allow for further clarity in the provisions. During the discussion, Norway also suggested that STACTIC have discussions on the utility of having the Scientific Council review and approve research activities in the NAFO Regulatory Area. The European Union thanked Contracting Parties for the feedback, and the comments were incorporated into STACTIC WP 21-40 (Revised) by removing the 2% threshold and introducing the possibility for the NAFO Scientific Council to approve exceptions to the reporting requirements and quota limitations for research activities by commercial vessels. Some Contracting Parties expressed concerns with the discussions of the Research Vessel requirements being held in STACTIC and felt it may be more appropriate for the Commission, while indicating support to the underlying principles. A Contracting Party indicated a lack of mandate to endorse this proposal in STACTIC and that it should be sent to the NAFO Commission for decision. The European Union noted that the issue of reporting and notification requirements for research vessels is a matter of control. The European Union referred the importance of the subject and explained that in 2021 the survey by a commercial fishing vessel from a NAFO Contracting Party resulted in overall catches overshooting the Contracting Party’s quota and that this information had only been available in the second day of the STACTIC Annual Meeting because the vessel had not reported catches to NAFO. The European Union noted that it was not possible to board the vessel at the time of the activity due to bad weather and recalled that in accordance with Article 31(6) of the NAFO CEM, where the activities are not carried out in accordance with a research plan, the NAFO CEM apply in full. Contracting Parties agreed to request advice from the Commission if STACTIC can continue the discussions, and if so, that the discussion of the proposal will continue at the 2022 STACTIC Intersessional Meeting.

The European Union presented a proposal amending Article 6.3.e of the NAFO CEM to clarify the application of the bycatch provisions for Contracting Parties utilizing the “*Others*” quota outlined in STACTIC WP 21-41 (Revised). Contracting Parties thanked the European Union for the proposal and offered comments to the text to further clarify the proposal, which was presented in STACTIC WP 21-41 (Rev. 4). Contracting Parties agreed to forward the proposal to the Commission for adoption.

The European Union presented a proposal in STACTIC WP 21-47 relating to the port inspection of 3M Cod in Article 7 bis of the NAFO CEM and noted that the TAC for 3M cod was yet to be determined by the Commission, but that the provisions of Article 7 bis were only relevant when the TAC was below 3000 metric tonnes. The European Union proposed that the Article should be relevant when the TAC is below 6000 metric tonnes, and that the port inspection requirements would be 50% of the landings. Denmark (in respect of the Faroe Islands and Greenland) noted that they were not able to guarantee 50% inspection if all cod quota was caught on one fishing trip, and STACTIC agreed that the 50% provision would be relevant if there was more than one landing with 3M cod onboard. Japan expressed a reservation on the proposal, noting they could support the proposal at the STACTIC level, but there may be further discussions on the proposal when presented to the Commission.

Canada highlighted their proposal for editorial changes to the text of Article 7 bis of the NAFO CEM outlined in STACTIC WP 21-28 (Revised). Contracting Parties thanked Canada for the proposal and agreed that the proposals in this working paper can be combined with the text in STACTIC WP 21-47. The proposals from STACTIC WP 21-28 (Revised) and STACTIC WP 21-47 were combined into STACTIC WP 21-28 (Rev. 2), and it was agreed to forward the proposal to the Commission for adoption.

The European Union presented a proposal on the bycatch limits for 3M cod in quarter 1 (Article 5.5.j of the NAFO CEM) in STACTIC WP 21-50 and noted that this proposal was on the wording of the provision pending an agreement from the Commission to continue the quarter 1 closure in 2022. Contracting Parties thanked the European Union for the proposal but raised some concerns, including the use of the phrase “*ban the fishing*” and suggested alternate language. The European Union thanked Contracting Parties for the feedback and presented a revised proposal in STACTIC WP 21-50 (Rev. 2). Denmark (in respect of the Faroe Islands and Greenland) noted that they expect that moving forward, NAFO will endeavor to remove the discard obligations in the NAFO CEM. Norway expressed that they remain concerned with the number of discard obligations in the NAFO CEM, and would prefer not to add new measures requiring discards. Nevertheless, taking into account the problems described by EU, and in the spirit of compromise, they could go along with the proposal for now. However, Norway highlighted that in their opinion there was a need for a derogation from the discard obligations in the NAFO CEM for Contracting Parties with a landing obligation.

The United States of America presented a proposal to improve data collection of the bycatch of sea turtles, sea birds, and marine mammals in STACTIC WP 21-51 (Revised). Highlighting the commitment to apply an ecosystem-based approach to fisheries management in the 2017 NAFO Convention, the United States called for increased data collection by NAFO Observers of the bycatch of sea turtles, sea birds, and marine mammals. Contracting Parties thanked the United States of America for their proposal and noted their support for the principle of the proposal but offered some comments and clarifications on the proposed text, specifically in relation to the use of the phrase “*landings and discards*” as well as a reference to “*records in logbooks*”. The United States of America thanked Contracting Parties for their comments and presented a revised proposal in STACTIC WP 21-51 (Rev. 3). Contracting Parties supported the revised proposal and agreed on the importance of the data collection for sea turtles, sea birds, and marine mammals by NAFO Observers. One Contracting Party requested more time to deliberate on the proposal and that it be deferred to the 2022 STACTIC Intersessional Meeting.

The United States of America presented a proposal for additional trial tow opportunities outlined in STACTIC WP 21-54 and noted that the proposal was based on the discussions at the 2021 STACTIC intersessional meeting and the meeting of the STACTIC Working Group on Bycatch Discussions. Contracting Parties thanked the United States of America for the proposal and offered suggestions to strengthen and clarify the proposal. The United States of America thanked Contracting Parties for their feedback and presented the revision in STACTIC WP 21-54 (Rev. 2). Contracting Parties supported the revised proposal. One Contracting Party requested more time to understand the practical implications for this new measure, despite another

Contracting Party's intervention requesting that there be a compliance review and assessment of the proposed article at the 2022 Intersessional Meeting. Discussions on this proposal will be continued at the 2022 STACTIC Intersessional Meeting.

Japan presented a proposal for a trial tow in the squid fishery outlined in STACTIC WP 21-56 for discussion and noted that the approach is similar to the approach from the United States of America to address the gear requirements for the squid fishery. Japan noted that the working paper served as a starting point for the discussions, and that discussions can continue at the 2022 STACTIC Intersessional Meeting.

It was agreed that:

- The proposal for a legend for Annex I.A of the NAFO CEM outlined in STACTIC WP 21-17 (Rev. 2) be forwarded to the Commission for adoption.
- The clarification of the RA field in the COX message outlined in STACTIC WP 21-36 be forwarded to JAGDM to ensure there are not technical issues with the proposal.
- The consistency of the COX messages between NEAFC and NAFO be reviewed by JAGDM.
- The proposal clarifying the text in Article 10.4.e of the NAFO CEM outlined in STACTIC WP 21-37 (Revised) be forwarded to the Commission for adoption.
- STACTIC request advice from the Commission if the discussions relating to the regulation of the research activities as outlined in STACTIC WP 21-40 (Revised) are within the mandate of STACTIC and can continue at the 2022 STACTIC Intersessional Meeting.
- The proposal amending Article 6.3.e of the NAFO CEM to clarify the application of the bycatch provisions for Contracting Parties utilizing the “*Others*” quota outlined in STACTIC WP 21-41 (Rev. 4) be forwarded to the Commission for adoption.
- The proposal for revisions to Article 7 bis of the NAFO CEM outlined in STACTIC WP 21-28 (Rev. 2) be forwarded to the Commission for adoption.
- The proposal to clarify the text of Article 5.5.j of the NAFO CEM outlined in STACTIC WP 21-50 (Rev. 2) be forwarded to the Commission for adoption, pending the Commission decision to maintain the quarter 1 closure for 3M cod.
- The discussions on the proposal to improve data collection of the bycatch of sea turtles, sea birds, and marine mammals in STACTIC WP 21-51 (Rev. 3) continue at the 2022 STACTIC Intersessional Meeting.
- The discussions on the proposal for additional trial tow opportunities outlined in STACTIC WP 21-54 (Revised) continue at the 2022 STACTIC Intersessional Meeting.
- The discussions on the proposal for trial tow and the squid fishery outlined in STACTIC WP 21-56 continue at the 2022 STACTIC Intersessional Meeting.

8. Practical application of Port State Measures in NAFO

The Chair opened this agenda item and reflected on the discussions at the 2019 Annual Meeting requesting that these discussions on the practical application of port State measures in NAFO be held, noting the discussions have been deferred because of the COVID-19 pandemic. Contracting Parties agreed that there was limited time at this meeting to have full discussions on this topic and suggested that STACTIC continue the discussions at the 2022 STACTIC Intersessional Meeting, including an update from the NAFO Secretariat on the progress made for the electronic PSC process in NAFO. The European Union also highlighted the relevance of these discussions for the NAFO Inspectors Workshop.

It was agreed that:

- **The discussions on the practical application of the port state measures be continued at the 2022 STACTIC Intersessional Meeting.**
- **The NAFO Secretariat provide an update on the electronic PSC process in NAFO at the 2022 STACTIC Intersessional Meeting.**

9. Marking of gears

The Chair opened this agenda item and reflected on the discussion at the 2019 Annual Meeting relating to the insertion of a reference to the *FAO Guidelines on the Marking of Gears* under Article 13.10 of the NAFO CEM as outlined in STACTIC WP 19-11. The Chair noted that these discussions have been deferred because of the COVID-19 pandemic. Contracting Parties agreed that there was limited time at this meeting to have these discussions, and that Contracting Parties will submit information relating to their domestic use of the *FAO Guidelines on the Marking of Gears* in advance of the 2022 STACTIC Intersessional Meeting to facilitate discussions.

It was agreed that:

- **Discussions on the marking of gears continue at the 2022 STACTIC Intersessional Meeting.**
- **Contracting Parties will provide information on their domestic implementation of the *FAO Guidelines on the Marking of Gears* to the NAFO Secretariat in advance of the 2022 STACTIC Intersessional Meeting.**

10. Review of Current IUU list Pursuant to NAFO CEM, Article 53

The Chair highlighted the current NAFO IUU list outlined in STACTIC WP 21-30 and noted that there have been no changes to the list since it was last reviewed. The European Union noted that the vessel *Eros Dos* is under the process of being de-listed in NEAFC as the vessel has been scrapped, but the final decision will be made at the upcoming NEAFC Annual Meeting.

The Chair also highlighted the discussion paper in STACTIC WP 21-31 outlining the NEAFC IUU B-list that includes IUU vessels from other RFMOs and reflected on the current NAFO procedure to include NEAFC IUU listed vessels on the NAFO IUU list as prescribed in Article 49.1.c of the NAFO CEM. One Contracting Party expressed concern around the lack of procedures surrounding the listing and de-listing processes, they felt it was premature to do a wholesale inclusion of all RFMOs from NEAFC's IUU list and objected to the inclusion of the NEAFC IUU-B list onto the NAFO IUU list under the procedure outlined in Article 52.2 of the NAFO CEM. As a result, STACTIC agreed that the NEAFC IUU-B list outlined in STACTIC 21-31 will be included in the NAFO Provisional IUU Vessel List.

The European Union, Norway, and the United States of America presented an information paper in STACTIC WP 21-55 on the progress of the work on the proposal for the inclusion of other RFMO IUU vessel lists on the NAFO IUU list. Contracting Parties agreed to provide comments on the draft of the proposal in advance of the 2022 STACTIC Intersessional Meeting.

It was agreed that:

- **The vessels on the NEAFC IUU B-list outlined in STACTIC WP 21-31 be included in the NAFO Provisional IUU Vessel List.**
- **Contracting Parties will provide comments on the draft proposal for the inclusion of other RFMO IUU vessel lists on the NAFO IUU list outlined in STACTIC WP 21-55 in advance of the 2022 STACTIC Intersessional Meeting.**

11. Bycatches and Discards

The Chair of the STACTIC Working Group on Bycatch Discussions, Patrick Moran (United States of America), presented the report from the working group meeting held 08-09 September 2021 in STACTIC WP 21-34. The Chair of the working group highlighted the recommendations from the working group under agenda item 8.

STACTIC reflected on the first recommendation from the WG-BDS that STACTIC provide a single interpretation of the application of the term bycatch for the purpose of the spatial temporal analysis. STACTIC noted that the definition of bycatch is outlined in Article 6.2 of the NAFO CEM, and that the specific provisions outline the various scenarios that make up bycatch. The scenarios where a given stock is defined as bycatch are dependent on the quota allocation of a particular flag State Contracting Party (Article 6.2.a), whether a stock is under moratorium (Article 6.2.b), or if the others quota has been utilized (Article 6.3.c). STACTIC noted the possibility of different definitions of bycatch for the purposes of data analysis, while from a control point of view, the legal definition in Article 6.2 of the NAFO CEM is the relevant one.

The Chair highlighted the second and third recommendations from the working group in STACTIC WP 21-34 and noted that the discussions of the proposals are continuing under the fourth recommendation, and that the Secretariat has made the relevant documentation available on the SharePoint.

In relation to the fourth recommendation, the European Union presented the [Draft] Reply to the request from the NAFO Commission on what control elements would be necessary for NAFO to adopt a landing obligation policy in order to encompass ongoing discussions in various NAFO bodies dealing with measures on discards that was commented by the European Union, Canada, Norway, and Denmark (in respect of the Faroe Islands and Greenland). The European Union highlighted that the draft document was prepared with the intention to respond to the Commission request from the 2020 Annual Meeting. Contracting Parties expressed their gratitude for the work that has been completed to date but noted that there was not enough time to complete the document at this meeting for presentation to the Commission. STACTIC agreed that Contracting Parties will continue work on STACTIC WP 21-53 in advance of the 2022 STACTIC Intersessional Meeting.

During the discussions, Japan sought advice on the specific sorting grids that would be practical for use in the squid fishery, and the Chair encouraged Contracting Parties to share any relevant information with Japan in advance of the 2022 STACTIC Intersessional Meeting.

It was agreed that:

- **Contracting Parties will continue to work on the draft response to the Commission outlined in STACTIC WP 21-53 in advance of the 2022 STACTIC Intersessional Meeting.**

12. Discussion of data classification and access rights

The NAFO Secretariat presented a map of lost fishing gears in STACTIC WP 21-39 and noted the relevant information for the map is submitted in accordance with Articles 13.11-13.14 of the NAFO CEM and is still available on the NAFO Members Pages. Contracting Parties thanked the Secretariat for the map and agreed that it can be made available on the NAFO public website.

The Chair highlighted STACTIC WP 21-43 relating to the location of the practices and procedures website information. The Secretariat noted that the NAFO ad hoc Virtual NAFO Website Re-design Working Group requested STACTIC to review the information to see which items could be posted to the NAFO public website, and that in 2019, STACTIC noted that some of the information may be more appropriate to include on the MCS Website. Contracting Parties agreed to provide feedback to the NAFO Secretariat in advance of the 2022 STACTIC Intersessional Meeting to facilitate the discussions.

The Chair highlighted STACTIC WP 21-46 relating to the location of the research vessel information on the NAFO Websites. The NAFO Secretariat noted that the information is currently posted to the NAFO Members Pages and the MCS Website, and that the ad hoc Virtual NAFO Website Re-design Working Group requested STACTIC to review whether this information can be made available on the NAFO public website. STACTIC requested that the NAFO Secretariat follow up with the Scientific Council to determine if they had any concerns with making the information publicly available, but they were not able to provide a response in time for discussion at this meeting, so the discussions on STACTIC WP 21-46 will continue at the 2022 STACTIC Intersessional Meeting.

It was agreed that:

- **The lost gear map in STACTIC WP 21-39 be made available on the NAFO Public Website.**
- **Contracting Parties will provide feedback on their Practices and Procedures documents in advance of the 2022 STACTIC Intersessional Meeting to determine which documents are relevant for the NAFO Public Website and which should remain on the Members Pages and/or the NAFO MCS Website.**
- **The discussions on STACTIC WP 21-46 relating to the location of the research vessel information on the NAFO Websites continue at the 2022 STACTIC Intersessional Meeting.**

13. Report and recommendations of the Joint Advisory Group on Data Management (JAGDM)

The vice-Chair of JAGDM (Natasha Barbour, Canada) presented an update from the JAGDM meeting that was held on 26 May 2021 (COM Doc. 21-03) and noted no specific issues were forwarded from STACTIC at this meeting. The vice-Chair also flagged to STACTIC that JAGDM is still in search of a Chair. STACTIC thanked the vice-Chair of JAGDM for the report and updates.

14. Recommendations from NAFO working groups

The Chair highlighted a recommendation from the Joint Commission-Scientific Council Working Group on the Ecosystem Approach Framework to Fisheries Management (WG-EAFFM) in STACTIC WP 21-25 (Revised) relating to the proposed addition of a footnote into Annex II.N. The Chair also reflected on the discussions at the intersessional meeting that Contracting Parties would provide information on their start and end of haul times. Contracting Parties noted the divergent operations definitions of start and end of tow and reflected on the importance of having a consistent definition of these terms. It was agreed that Contracting Parties will provide their definitions for start and end of tow to the NAFO Secretariat to facilitate further discussion on the issue at the 2022 STACTIC Intersessional Meeting.

The Chair highlighted the recommendation from the Catch Estimation Strategy Advisory Group (CESAG) in STACTIC WP 21-27 relating to the inclusion of codend (minimum) mesh size and hook size in the Annex II.N template. Contracting Parties noted that this information is available in the Observer Reports submitted in accordance with Annex II.M, and CESAG could use the observer reports as a source of data for that information. Contracting Parties also recognized the value of this information and agreed to continue the discussions at the 2022 STACTIC Intersessional Meeting.

The Chair also highlighted that there were additional recommendations forwarded to STACTIC from the various working groups at this Annual Meeting, but they will be discussed at the 2022 STACTIC Intersessional Meeting.

It was agreed that:

- **Contracting Parties will provide their definitions of the start and end of a haul for trawlers in advance of the 2022 STACTIC Intersessional Meeting to facilitate further discussion on the proposal from the WG-EAFFM outlined in STACTIC WP 21-25 (Revised).**
- **The discussions on the CESAG request in STACTIC WP 21-27 relating to the inclusion of codend (minimum) mesh size and hook size in the Annex II.N continue at the 2022 STACTIC Intersessional meeting.**

15. Discussion on garbage disposal onboard vessels

The United States of America and Norway presented a proposal on marine pollution in STACTIC WP 21-48 and highlighted that the proposal is the result of ongoing discussions on the issue of marine pollution. Contracting Parties supported the principle of the proposal, highlighting the importance of the issues of marine pollution. The European Union reiterated their comments from previous discussions noting their preference for concrete provisions within the NAFO CEM rather than the inclusion of a reference to MARPOL Annex V, which is already mandatory for all NAFO Contracting Parties, and offered to work on a merged proposal including substantive measures on marine pollution by fishing vessels previously tabled by the European Union. The United States reminded Contracting Parties of their commitment under the 2017 NAFO Convention to minimize marine pollution in the NRA and saw this proposal as an opportunity to create a mandate for this important work. The European Union, Norway, and the United States of America agreed to continue work on the proposal in advance of the 2022 STACTIC Intersessional Meeting.

It was agreed that:

- **The European Union, Norway, and the United States of America agreed to continue work on a proposal relating to marine pollution provisions in the NAFO CEM in advance of the 2022 STACTIC Intersessional Meeting.**

16. Discussion of the reporting of shark catches in the NAFO Regulatory Area

Canada presented the review of Greenland shark data collection and methodologies outlined in STACTIC WP 21-49 (Rev. 3) that was completed by a small working group consisting of Denmark (in respect of the Faroe Islands and Greenland), the United States of America, Canada and the European Union. The working paper was compiled in response to the recommendations from the 2019 STACTIC Annual Meeting to exchange information with the goal of identifying a single methodology, where possible, for observers to collect information as required by Article 30.14(j) and Annex II.M of the NAFO Control and Enforcement Measures (CEM) for Greenland sharks. The working group invited STACTIC to consider the reporting elements and methodologies flagged in the document and their potential inclusion in the NAFO CEM and if some of the elements could be further consulted with other NAFO bodies; the possibility of circulating the safe release and handling methods to operators and observers that is included in the species guide in Annex III; the further development of the proposed guide in Annex III and the desired scope of its contents; and whether or not the group has completed the original mandate, or if there was further work required. Contracting Parties thanked the group for the excellent work in compiling the document and requested to continue the detailed discussions of this document at the 2022 STACTIC Intersessional Meeting.

It was agreed that:

- **The discussions on the review of Greenland shark data collection and methodologies outlined in STACTIC WP 21-49 (Rev. 3) continue at the 2022 STACTIC Intersessional Meeting.**

17. Implementation of the Performance Review Recommendations

The NAFO Secretariat highlighted STACTIC WP 21-35 outlining the Contracting Party reporting deadlines in the NAFO CEM in response to recommendation 19 of the 2018 Performance Review. Discussions on this working paper were deferred to the 2022 STACTIC Intersessional Meeting.

The Chair highlighted the Contracting Party comments on the FAO Voluntary Guidelines for Flag State Performance outlined in STACTIC WP 21-38 and noted that two responses were received in relation to recommendation 20 of the 2018 Performance Review. Contracting Parties were supportive of the exercise but noted confusions with the original tasking from the Commission on this item outlined in STACTIC WP 21-10 (Revised). The original tasking to STACTIC was to provide a review of the criteria of the FAO Voluntary Guidelines for Flag State Performance, but STACTIC was unclear if the tasking was also for Contracting Parties to move forward with completing the self assessment. Contracting Parties agreed to seek clear guidance from the Commission on how to move forward with Recommendation 20 of the 2018 Performance review, specifically if the Commission is tasking Contracting Parties to complete the self-assessments, and if so, to provide clear deadlines for when this work should be completed, and to also to provide clarity on if the Commission expects Contracting Parties to complete the self-assessments for NAFO specifically, or if the self-assessment completed for other RFMOs (*e.g.*, NEAFC) would be sufficient.

The Secretariat presented the preliminary VME data analysis in response to Recommendation 16 of the 2018 Performance Review in STACTIC WP 21-44. Contracting Parties thanked the Secretariat for the analysis and agreed to continue discussions at the 2022 STACTIC Intersessional Meeting.

It was agreed that:

- **The discussions on the Contracting Party reporting deadlines in the NAFO CEM in response to Recommendation 19 of the 2018 Performance Review outlined in STACTIC WP 21-35 continue at the 2022 STACTIC Intersessional Meeting.**
- **STACTIC request the following guidance from the Commission relative to Recommendation 20 of the 2018 Performance Review: 1) is the Commission tasking Contracting Parties to complete the self-assessments based on the FAO guidelines; 2) what is the deadline for completion of such CP self assessments; 3) Should Contracting Parties complete self-assessments for NAFO specifically, or are self-assessments completed for other RFMOs (*e.g.*, NEAFC) sufficient.**
- **The discussions on the VME data analysis in response to Recommendation 16 of the 2018 Performance Review in STACTIC WP 21-44 continue at the 2022 STACTIC Intersessional Meeting.**

18. Issues relating to the impacts of COVID-19

Contracting Parties shared their current experiences with the impacts related to the COVID-19 pandemic under this agenda item. The Chair thanked Contracting Parties for sharing the information and noted that there are still some issues complying with the NAFO CEM, but overall things are improving compared to this time last year.

19. Other business

a. VISMA Contract Renewal

The Secretariat presented STACTIC WP 21-32 noting that the current contract with the VMS service provider (Visma) is set to expire on 31 December 2022 and sought guidance from STACTIC on whether the Secretariat can seek a renewal of the contract or to seek another service provider. The European Union requested that more information be made available, including the details of the service, and options on other possible service providers before making a final decision. Contracting Parties agreed that the Secretariat will compile information on the existing contract and other possible service providers and provide this information to STACTIC in order for them to make a decision on this point via correspondence, with a 30-day period to provide feedback.

It was agreed that:

- **The NAFO Secretariat will provide further information on the details of the existing service provided by Visma as well as information on other possible service providers in order for STACTIC to make an informed decision on the contract renewal outlined in STACTIC WP 21-32.**
- **STACTIC will review the information provided by the Secretariat on the VMS service providers and make a decision via correspondence on the contract renewal with a 30-day deadline.**

20. Election of Chair and vice-Chair

At the 2019 Annual Meeting, Kaire Märtin (European Union) was elected as Chair and Patrick Moran (United States of America) was elected as vice-Chair. The Chair noted that the two-year period has ended and offered to extend the terms for a 1-year period. Contracting Parties thanked the Chair and vice-Chair for their service and agreed that Kaire Märtin (European Union) and Patrick Moran (United States of America) remain as Chair and vice-Chair respectively for one year.

It was agreed that:

- **Kaire Märtin (European Union) would remain as STACTIC Chair and Patrick Moran (United States of America) remain as vice-Chair for one year.**

21. Time and Place of next meeting

The next STACTIC Intersessional meeting will be scheduled during the beginning of the week of 09 May 2022. If the meeting can be held in person, it will be a 3-day meeting, and if the meeting will be held virtually, it will be a 4-day meeting. If the meeting can be held in person, it will take place at the NAFO Secretariat in Halifax, Canada, unless another Contracting Party offers to host.

22. Adoption of Report

The report was adopted on 24 September 2021, prior to the adjournment of the meeting.

23. Adjournment

The meeting was adjourned at 09:30 ADT on 24 September 2021.

Annex 1. List of Participants

Kaire Märtin (EU)	STACTIC Chair
Heather McCready Dion Browne Genevieve Warren Jenelle Hickey Mike Hurley Natasha Barbour	Canada
Michael D. Pedersen Meinhard Gaardlykke Petur Jacobsen	Denmark (in respect of the Faroe Islands and Greenland)
Xosé Tubio Miguel Quintans Cora Villar Arribi Carlos Silva Jørgen Eliassen Carlos Chamizo Eglė Radaitytė Küllli Aas Miguel Serrao Ralph Neidigk Genadijus Babcionis Meit Grossmann	European Union
Serge Chiarovano	France (in Respect of St. Pierre et Miquelon)
Johann Asmundsson Snorre Greil	Iceland
Hiryoki MORITA Yuki KINOSHITA	Japan
Hilde Ognedal	Norway
Anna Shulaeva Elena Troshina Alexandr Lizogub Ilya Skryabin	Russian Federation
Artem Ohorodnik	Ukraine
James Windebank Sandie-Gene Muir Emily Atherton	United Kingdom
Katherine Pohl Charles Lynch Elizabethann Mencher Eric Provencher Margaret Raymond	United States of America

Patrick Moran Richard Usher Shannah Jaburek	
Jana Aker Matt Kendall DJ Laycock	NAFO Secretariat

Annex 2. Agenda

1. Opening by the Chair, Kaire Märtin (European Union)
2. Appointment of Rapporteur
3. Adoption of Agenda
 - a. Compliance review 2021 including review of apparent infringement reports and of chartering arrangements
 - b. Compliance Review
4. Analysis of at-Sea inspection rates
5. Review of Article 30 of the NAFO CEM
6. STACTIC Participation
7. New and Pending Proposals on Enforcement Measures: Possible revisions of the NAFO CEM
8. Practical application of Port State Measures in NAFO
9. Marking of gears
10. Review of Current IUU list Pursuant to NAFO CEM, Article 53
11. Bycatches and Discards
12. Discussion of data classification and access rights
13. Report and recommendations of the Joint Advisory Group on Data Management (JAGDM)
14. Recommendations from NAFO working groups
15. Discussion on garbage disposal onboard vessels
16. Discussion of the reporting of shark catches in the NAFO Regulatory Area
17. Implementation of the Performance Review Recommendations
18. Issues relating to the impacts of COVID-19
19. Other business
 - a. VISMA Contract Renewal
20. Election of Chair and vice-Chair
21. Time and Place of next meeting
22. Adoption of Report
23. Adjournment

PART III.
Report of the NAFO Standing Committee on Finance and Administration (STACFAD)
43rd Annual Meeting of NAFO, 20-24 September 2021

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Report of the NAFO Standing Committee on Finance and Administration (STACFAD) Meeting

43rd Annual Meeting of NAFO, 20–24 September 2021

1. Opening by the Chair, Robert Fagan, (Canada)

The meeting was opened by the Chair, Robert Fagan (Canada), on Tuesday, 21 September 2021. Representatives were welcomed from Canada, Denmark (in respect of the Faroe Islands and Greenland), European Union, France (in respect of St. Pierre et Miquelon), Japan, Russian Federation, Ukraine, United Kingdom, United States of America and the NAFO Secretariat (Annex 1).

For the second year in history, the Annual Meeting of NAFO was held virtually. To maximize the efficiency of STACFAD's work in the abbreviated virtual meeting format, many routine agenda items were agreed by correspondence. The Chair thanked delegates for their continued flexibility and cooperation in advance of the meeting to facilitate this process.

2. Appointment of Rapporteur

The NAFO Secretariat was appointed as Rapporteur.

3. Adoption of Agenda

The agenda was adopted as circulated in NAFO/21-165 (Rev. 2) of 23 July 2021. (Annex 2).

4. Audited Financial Statements for 2020

Grant Thornton LLP performed the audit for the 2020 fiscal year, in accordance with the NAFO Financial Regulations. The draft audited financial statements for the year ended 31 December 2020 were circulated to the Heads of Delegations and STACFAD delegates in advance of the meeting. As is practice, the financial statements are presented as draft until after they are reviewed by STACFAD and approved by the Organization.

The excess of revenues over expenditures for 2020 was \$79,414 (2019 - \$58,862)

Total expenditures incurred for the fiscal period ending 2020, as shown in the draft financial statements, amounted to \$2,250,443, which was \$118,557 under the approved budget of \$2,369,000. Overall savings for the year can be attributed to the reduction in travel and meeting costs with meetings being held virtually, although, some cost overages were incurred in computer and professional services as a result of the Secretariat's servers being compromised by a cyberattack.

The operating fund had a balance of \$392,418 at year end which was used to reduce 2021 Contributions from Contracting Parties. As approved at the September 2020 Annual Meeting, the contingency fund remained at \$285,000; the relocation fund was increased to \$72,000 and the performance review fund was set at \$30,000.

STACFAD recommends that:

- **The 2020 Financial Statements be adopted.**

Rule 9.10 of the NAFO Financial Regulations states that the Auditors shall serve for a maximum of five years. The audit of the 2020 financial records was the fifth year for Grant Thornton having served as auditors of the Organization.

The Secretariat solicited proposals from three auditing firms to complete the annual audit of NAFO's financial records for the 2021–2025 fiscal periods. Proposals were received from Baker Tilly Nova Scotia and MNP Halifax/Dartmouth. PWC Atlantic declined to submit an audit proposal. A summary of the proposals received, along with the detailed proposals, were distributed to the Committee in STACFAD WP 21-02. Both firms that

submitted proposals are considered highly qualified, and with the necessary resources and experience to provide audit services in accordance with Canadian generally accepted auditing standards on the financial statements of NAFO. These statements are prepared in accordance with Canadian generally accepted accounting standards for not-for-profit organizations, and in accordance with NAFO's Financial Regulations.

STACFAD recommends that:

- **Baker Tilly Nova Scotia be appointed to audit NAFO's records for the 2021–2025 fiscal periods.**

5. Administrative and Activity Report by NAFO Secretariat

Highlights of the Secretariat's activities for the period September 2020 to August 2021 have been summarized in the Administrative and Activity Report (COM Doc. 21-05 (Revised)).

6. Financial Statements for 2021

Financial Statements projected to 31 December 2021 have been provided by the Secretariat in COM Doc. 21-05 (Revised).

Operating Expenses for 2021

The operating budget for 2021 was approved at \$2,451,000 while expenditures for the year are projected to be at \$2,258,000, or \$193,000 under the approved budget. As the global COVID-19 pandemic continued into 2021, in-person meetings are not expected to resume until late in the year, or possibly not until early 2022. Overall savings for the year can be attributed to the reduction in travel and meeting costs with meetings being held virtually.

All remaining 2021 operating expenses are anticipated to be on or near budget for the year. The above noted cost savings of \$193,000 will be returned to the accumulated surplus and may be used to reduce Contracting Parties contributions in 2022.

Assessed Contributions

At the beginning of 2021, the accumulated surplus had \$392,418, which was deemed to be in excess of the needs of the Organization and was allocated towards the 2021 operating budget. Therefore, in order to meet the 2021 operations budget of \$2,451,000, Contracting Parties were assessed contributions in the amount of \$2,058,582.

Balance Sheet

The Organization's cash position on 31 December 2021 is estimated to be \$1,215,635. The cash balance will be sufficient to finance appropriations in early 2022 pending the receipt of annual payments by Contracting Parties. Assessed contributions for 2021 are currently outstanding from Ukraine.

7. Review of Accumulated Surplus and Funds

According to the NAFO Financial Regulations, STACFAD and the Commission shall review the amount available in the accumulated surplus account during each Annual Meeting. The accumulated surplus account shall be set at a level sufficient to temporarily finance operations during the first three months of the year, plus an amount up to a maximum of 10% of the annual budget for the current financial year to be used for unforeseen and extraordinary expenses. In addition, the Organization shall also maintain a recruitment and relocation fund, up to a maximum of \$100,000, for relocation costs of internationally recruited staff. In addition, the Organization shall also maintain a performance review fund to pay costs associated with having an external performance review. The performance review fund balance shall be kept at a maximum of \$100,000.

The accumulated surplus account on 31 December 2021 is estimated to be \$867,000.

Reduced travel and meeting costs during the pandemic resulted in a higher than usual surplus for 2021. The Committee discussed whether it would be prudent to maximize contributions to funds held in the accumulated surplus. It was agreed to increase the recruitment and relocation fund to its maximum level as it is anticipated that related expenses will be incurred in 2022/2023.

STACFAD recommends that:

- **The amount maintained in the accumulated surplus account be set at \$285,000 of which \$200,000 would be sufficient to finance operations during the first three months of 2022, and of which \$85,000 would be a contingency fund available to be used for unforeseen and extraordinary expenses.**
- **The recruitment and relocation fund be increased by \$28,000 to the maximum amount allowed of \$100,000 for future recruitment and relocation costs of internationally recruited staff.**
- **The performance review fund be increased by \$15,000 to \$45,000 for future costs associated with having an external performance review.**
- **The estimated balance remaining of \$437,000 shall be maintained in the Operating Fund and applied to reduce annual contributions due from each Contracting Party for the following year.**

8. Personnel Matters

No personnel matters were presented this year.

9. Review of the Recruitment Process for the NAFO Executive Secretary

The second and final term of the current Executive Secretary's (ES) contract concludes at the end of 2021. Due to the unprecedented circumstances of the COVID-19 pandemic, the ES accepted a one-year extension of the current contract following a decision taken by the Heads of Delegations at last years Annual Meeting.

The recruitment process of the next ES for the 2023–2026 term is anticipated to begin in early 2022, with the selection of the next ES being performed by the Heads of Delegations at the September 2022 Annual Meeting.

STACFAD was tasked to develop the ES recruitment procedures and timelines for approval by the Commission (Annex 3).

STACFAD recommends that:

- **The Executive Secretary recruitment procedures and timelines for the 2023-2026 term be adopted as outlined in STACFAD WP 21-11 (Rev. 2).**

10. Internship Program

Activities and tasks of the 2021 NAFO internship program were presented in STACFAD WP 21-03. Due to the COVID-19 pandemic, the NAFO internship was postponed for the second half of 2020 and for 2021.

The Committee recognized the considerable benefits of the internship program to the Organization and the intern themselves. It is hoped that the internship program may resume in 2022.

STACFAD recommends that:

- **The internship period be maintained for six (6) months during 2022.**

NAFO Interns are responsible for their travel costs to and from their place of residence and the NAFO Secretariat and for the cost of travel/medical insurance. The internship program established in 2012 provides a stipend of CDN \$1,750 per month to support living expenses (accommodations, food, transportation, etc.) while in Halifax. The cost of living in Halifax has increased significantly since the inception of the program and the accommodation vacancy rate in Halifax is at near record lows making it challenging to find reasonably priced short-term housing. The current stipend is also below minimum wage standards in Nova Scotia when compared to hourly rate.

STACFAD recommends that:

- **The internship stipend be increased to CDN \$2,250 per month.**

11. Report on the Annual Meeting of the International Fisheries Commissions Pension Society (IFCPS)

The annual meeting of the International Fisheries Commissions Pension Society (IFCPS) was scheduled to be hosted by the North Pacific Marine Science Organization (PICES) 13–15 April 2021 in Victoria, British Columbia, Canada. As a result of travel restrictions due to COVID-19, the meeting was held by video-conference. The meeting was attended by the Executive Directors and Finance Officers of the seven International Fisheries Commissions with headquarters located in Canada and the United States of America. NAFO was represented by Fred Kingston, Executive Secretary, and Stan Goodick, Deputy Executive Secretary/Senior Finance and Staff Administrator. Also attending the meeting were the IFCPS directors appointed by the Governments of Canada and the United States of America.

Background information on the pension plan, actuarial valuation, investment returns, electronic files, and amendments to the Society By-Laws, was presented within the information paper (STACFAD WP 21-04).

The next annual meeting of the IFCPS will be hosted by the North Pacific Marine Science Organization (PICES) during the week of 04 April 2022 in Victoria, British Columbia, Canada.

12. Implementation of 2018 Performance Review Panel recommendations

The Secretariat provided an update on the implementation of the recommendations tasked to STACFAD in the *“Action Plan for the Implementation of the Recommendations from the 2018 Report of the NAFO Performance Review Panel”* (COM Doc. 19-32) and any other recommendations as assigned by the Commission, specifically:

Recommendation 26, Chapter V.3.2 *“Recommends NAFO makes all working documents publicly available, unless otherwise requested by a Contracting Party or subject to confidentiality rules.”* [pg. 36]

Recommendation 35, Chapter VII.1 *“Recommends NAFO develops an annual operational plan for the NAFO Secretariat outlining key objectives and specifying resources required to meet these objectives.”* [pg. 48]

Recommendation 36, Chapter VII.2 *“Recommends NAFO initiates a process to design a new visual identity for NAFO that reflects the role and responsibilities of the Organization.”* [pg. 48].

a. Design a potential new visual identity for NAFO

An update was provided in STACFAD WP 21-05 on the work completed since the 2020 Annual Meeting to initiate a process to design a potential new visual identity for NAFO, in response to Recommendation #36.

While substantial work has been done, the NAFO Secretariat believes additional work is needed before appropriate options can be presented to STACFAD for consideration. Using the information received from the focus group, the NAFO Secretariat will continue to work intersessionally on the development of options for a potential new NAFO logo for presentation to STACFAD at the 2022 Annual Meeting. The NAFO Secretariat will also prepare potential budgetary implications for presentation in the event that a new NAFO logo is considered.

b. Data classification and access rights of the NAFO websites

At the last Annual Meeting, it was agreed that before a formal classification policy could be developed that feedback would be sought from NAFO Bodies, Standing Committees, and Working Groups during the upcoming meeting year.

The Secretariat presented STACFAD WP 21-06 containing an update on the work completed on the implementation of Recommendation #26, including the challenges during the ongoing global pandemic presented in collecting this feedback. For that reason, the NAFO Secretariat will continue to seek feedback during upcoming meetings in 2021/2022. Using the information gathered, the *ad Hoc virtual NAFO Website Re-Design Working Group: Data Classification* will continue to work intersessionally on the development of a formal policy regarding the posting and distribution of meeting documentation.

c. NAFO operational plan

A status report on the work completed on the development of an annual operational plan for the NAFO Secretariat, Recommendation #35, was presented in STACFAD WP 21-07.

The annual operational plan will be a key tool for the Secretariat to be regularly reviewed by team members and updated throughout the year. Operational reporting is also provided at weekly coordination and monthly staff meetings.

An updated plan will be presented to STACFAD at the 2022 Annual Meeting, incorporating feedback from Canada.

13. Budget Estimate for 2022

The 2022 budget estimate, as prepared by the Secretariat, was provided in COM WP 21-05 (Revised). Additional details and highlights on the 2022 budget estimate were provided in STACFAD WP 21-08.

Approved Budget 2021	Preliminary Budget Forecast 2022	Budget Estimate 2022
\$2,451,000	\$2,460,000	\$2,587,000

The 2022 budget estimate of \$2,587,000 represents an increase of \$136,000 or 5.6% over the prior years approved budget.

The personnel services budget accounts for an increase of \$61,000 or 2.5% of the total increase for 2022. NAFO follows the salary scales of similar positions held in the Public Service of Canada which provide for routine economic and salary step increases. The increase in salaries, medical and insurance plans for 2022 can be attributed to higher than budgeted increases included in the recently released salary tables for the Program and Administrative Services and Computer Services Group. The Scientific Information Administrator (SIA) began a one-year maternity/parental leave in April 2021 which continues until April 2022. In accordance with the NAFO Staff Rules, a maternity/parental leave will be paid during this time. During the maternity/parental leave, a term SIA has been hired.

Report of STACFAD, 20–24 September 2021

The computer services budget increased by \$2,000. This can be attributed to security enhancements implemented to NAFO's firewall, servers, and software.

The internship budget increased by \$3,000. This can be attributed to an increase to the monthly stipend.

The inter-sessional other meetings budget increased by \$20,000 as it includes a provision for travel costs associated with independent experts invited to attend the NAFO WG-EAFFM Workshop of fisheries managers and scientists to draft ecosystem objectives.

In addition, the Commission adopted the WG-EAFFM recommendation to engage an external independent panel to conduct a scientific review of the NAFO Roadmap resulting in an increase to the proposed 2022 budget. While the terms of the external panel will be finalized at an upcoming meeting, an additional \$25,000 was added to accommodate travel costs for up to four independent experts.

The recruitment process for the next NAFO ES is expected to be launched in 2022 with an appointment for the 2023–2026 term. The 2022 budget estimate includes a provision for recruitment costs of the incoming ES (travel costs for shortlisted candidates to NAFO Annual Meeting for interviews) as well as some initial relocation costs. An additional \$85,000 of relocation costs for both the incoming and outgoing ES's is projected to be incurred in 2023.

The relocation fund established in 2017 will have \$100,000 available in the fund at the end of 31 December 2021. This fund will be available to offset expenses incurred in 2022, as well as a significant portion of the recruitment and relocation expenses incurred in 2023.

STACFAD recommends that:

- **The budget for 2022 of \$2,587,000 (Annex 4) be adopted.**

A preliminary calculation of billing for the 2022 financial year is included in Annex 6.

14. Budget Forecast for 2023 and 2024

The preliminary budget forecast for 2023 (\$2,624,000) and 2024 (\$2,594,000) (Annex 5) was provided in COM WP 21-05 (Revised). The forecasts were approved in principle, and it was noted that the budget for 2023 will be reviewed in detail at the next Annual Meeting.

15. Adoption of 2021/2022 Staff Committee Appointees

The NAFO Secretariat has a mechanism in place known as the NAFO Staff Committee to help in the rare event that a conflict cannot be solved internally in which the Staff Committee may be asked to intervene and to assist in achieving a solution through mediation. The Staff Committee has not been called on since its inception in 2005.

The Secretariat members nominated the following people to serve as members of the Staff Committee for September 2021–September 2022: Brian Healey (Canada), Ignacio Granell (European Union) and Deirdre Warner-Kramer (United States of America).

STACFAD recommends that:

- **The Commission appoint the three Staff Committee nominees for September 2021–September 2022: Brian Healey (Canada), Ignacio Granell (European Union) and Deirdre Warner-Kramer (United States of America).**

16. Other Business

No other matters were discussed under this agenda item.

17. Election of vice-Chair

According to Rule 5.4 of the NAFO Rules of Procedure: Commission *"The Committee shall elect, to serve for two years, their own Chairperson and Vice-Chairperson, who shall be allowed a vote."*

The current Chair, Robert Fagan (Canada), was elected in September 2020.

The vice-Chair position is currently vacant as Fiona MacKichan (United Kingdom), elected in September 2020, stepped down intersessionally.

Jake Round (United Kingdom) was nominated and elected as vice-Chair for a two-year term.

18. Time and Place of 2022–2024 Annual Meetings

As previously agreed, the dates for the 2022 and 2023 Annual Meetings are as follows:

2022 - 19–23 September

2023 - 18–22 September

The meetings will be held in Halifax, Nova Scotia, Canada, unless an invitation to host is extended by a Contracting Party and accepted by the Organization.

STACFAD recommends that:

- **The 2024 Annual Meeting be held 23–27 September 2024 in Halifax, Nova Scotia, Canada, unless an invitation to host is extended by a Contracting Party and accepted by the Organization.**

The Committee strongly reiterated Contracting Parties strive, whenever possible, to provide more than 12 months notice of the intention to extend an invitation to host a NAFO Annual Meeting to avoid unnecessary fiscal implications of the Organization having to make a non-refundable deposit to secure conference space.

19. Adjournment

The final session of the STACFAD meeting adjourned at 11:45 hours on 20 September 2021. The report was adopted by correspondence.

Gratitude was expressed to the Committee members for their effective cooperation this week, and to the NAFO Secretariat for its excellent support.

Annex 1. List of Participants

Fagan, Robert (Chair) Her, Natalie Marsden, Dale	Canada
Ulloriaq Lønberg-Jensen, Ole	Denmark (in respect of the Faroe Islands and Greenland)
Blazkiewicz, Bernard	European Union
Monneau, Marianna Servetto, Camille	France (in respect of St. Pierre et Miquelon)
Nakasu, Maiko	Japan
Badina, Julia	Russian Federation
Ohorodnik, Artem	Ukraine
Round, Jake	United Kingdom
Warner-Kramer, Deirdre	United States of America
Goodick, Stan LeFort, Lisa	NAFO Secretariat

Annex 2. Agenda

1. Opening by the Chair, Robert Fagan (Canada)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Audited Financial Statements for 2020
5. Administrative and Activity Report by NAFO Secretariat
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11. Report of the Annual Meeting of the International Fisheries Commissions Pension Society (IFCPS)
12. Implementation of 2018 Performance Review Panel recommendations
 - a. Design a potential new visual identity for NAFO
 - b. Data classification and access rights of the NAFO websites
 - c. NAFO operational plan
13. Budget Estimate for 2022
14. Budget Forecast for 2023 and 2024
15. Adoption of 2021/2022 Staff Committee Appointees
16. Other Business
17. Election of vice-Chair
18. Time and Place of 2022–2024 Annual Meetings
19. Adjournment

Annex 3. Recruitment Process for the NAFO Executive Secretary for the 2023–2026 term
(STACFAD WP 21-11 Rev. 2)

**Procedure, timetable, and selection criteria for the recruitment
of a new NAFO Executive Secretary for the 2023-2026 term**

Budget

	2022 Budget Estimate	2023 Budget Estimate
Recruitment and relocation costs of incoming ES		
1. Travel and per diem for shortlisted applicants	14,000	
2. Airfares for relocation of incoming ES and family	6,000	
3. Subsistence allowance		\$9,000
4. Relocation costs		22,000
5. Installation allowance		34,000
Relocation costs of outgoing ES		
6. Airfares for relocation of outgoing ES and family	3,000	
7. Relocation costs		20,000
Total recruitment and relocation costs	\$23,000	\$85,000

Relocation costs of incoming and outgoing Executive Secretaries have been calculated on the applicable provisions of NAFO Staff Rules 8.6 and 9.6.

Advertisement

- Contracting Parties shall agree on the text of a Vacancy Announcement for the post of Executive Secretary. The Vacancy Announcement shall be placed on a recruitment page on the NAFO website together with relevant supplementary information.
- The Executive Secretary shall circulate the announcement via email to all NAFO Contracting Parties, NAFO's emailing list and to all relevant organizations. Contracting Parties may place the announcement in national publications and websites they consider appropriate.

Availability of applications

Following the verification of eligibility criteria by the NAFO Executive Secretary, approved by the Chair of STACFAD, each application shall be posted on a password protected section of the NAFO website to be assessed by the Heads of Delegation of the Commission. Passwords will only be provided to the Chair of the Commission, the Heads of Delegations and the Chair of STACFAD.

Ranking of Applicants

Each Head of Delegation shall notify the NAFO Secretariat its 10 preferred candidates in order of preference out of all the applications received. Each preference list is to be considered confidential and is not to be disclosed. Upon receipt of all preference lists, the Chair of STACFAD shall, together with the current Executive Secretary, aggregate individual applicants' rankings, applying the awarding of 10 points for the first preference, 9 points for the second preference, etc.

Short list

The candidates with the four highest aggregate scores will be shortlisted for interview. Should the application of one such candidate be withdrawn, the next ranking candidate shall then be shortlisted. This process shall be followed as appropriate with the goal of interviewing four candidates (*i.e.*, in the event that multiple candidates withdraw).

Interview process

The shortlisted candidates will be notified to the Heads of Delegation of all Contracting Parties by the Executive Secretary and will be invited to the Annual Meeting for interviews. Some degree of standardization should be built into the interview process to ensure fairness. The interviews and the selection of the new Executive Secretary shall take place during meetings of the Heads of Delegation of the Commission. Ample time should be allocated for the interview and decision process, and it should be performed as early as possible during the week of the Annual Meeting, as free time later in the week is non-existent.

(Note: In 2013, interviews were conducted on Sunday evening with the election taking place on Monday or Tuesday. This allowed additional time for consultation amongst CPs.)

Travel (economy class), hotel accommodation and per diem expenses of candidates invited for interviews shall be reimbursed. CPs are encouraged to assume costs for candidates who are members of their delegations.

Recruitment timetable

Advertisement of the position by NAFO	January or February 2022
Deadline for the receipt of applications	15 May 2022
Eligibility criteria verification	Within 5 working days from 15 May 2022
Applications to be posted on a password protected page of the NAFO homepage	Within 7 working days from 15 May 2022
Submission of 10 preferred candidates, in order of preference, by Heads of Delegation	Before 30 June 2022
STACFAD Chair and ES to aggregate individual applicants' rankings	Between 1-14 July 2022
Notification of shortlist by Executive Secretary to Heads of Delegation	By 15 July 2022
Notification and communication by Executive Secretary with shortlisted candidates	Between 16 July and 15 August 2022
Interviews and selection	2022 Annual Meeting

**Vacancy Announcement
for the position of Executive Secretary
in the Northwest Atlantic Fisheries Organization (NAFO)**

The Northwest Atlantic Fisheries Organization (NAFO) invites applications for the position of Executive Secretary. The appointment will be for a term of four years with the possibility of an additional four-year appointment.

NAFO is an international organization with Headquarters in Halifax, Nova Scotia, Canada. It is responsible for giving effect to the objectives and principles of the Convention on Co-operation in the Northwest Atlantic Fisheries (NAFO Convention), the main of which is *“to ensure the long term conservation and sustainable use of the fishery resources in the Convention Area and, in so doing, to safeguard the marine ecosystems in which these resources are found”*.

Summary description of the position

The Executive Secretary is NAFO's chief administrative officer and must be impartial and objective in promoting and coordinating the interests of all Contracting Parties. The Executive Secretary is appointed by and subject to the general supervision of the Commission and is responsible for the effective running of NAFO's Secretariat and administration of NAFO's appropriations and budget (currently at the level of CDN \$2.4 million). The salary classification for this position is equivalent to the Government of Canada Chief Executive Officers of Crown Corporations, Group 3. The Executive Secretary's functions include in particular the following:

- Supervise and coordinate all the Secretariat's activities; manage and administer the annual budget of the Secretariat; appoint and supervise the staff of the Secretariat;
- Manage communications with NAFO members regarding all official correspondence, voting procedures and assessments;
- Manage relations with the public;
- Manage NAFO meetings by way of preparing draft/provisional agendas and relevant working papers and documents; acting as official rapporteur at meetings as required, providing organizational arrangements and reviewing, correcting and disseminating all NAFO documents and reports of the Organization's constituent bodies; receive the credentials of the representatives and of observers at annual and special meetings;
- Fulfill duties regarding the NAFO Conservation and Enforcement Measures (CEM) including publication of the CEM, monitoring fishing activities of Contracting Party vessels in the Regulatory Area, presenting charter and quota arrangements between Contracting Parties and reviewing and reporting on fishery statistics and relevant information to Contracting Parties;
- Manage NAFO Publications by way of preparing Annual Meeting Proceedings, Annual Report and other publications and/or periodicals as requested;
- Liaise with governments and international organizations, manage official correspondence and preparation of relevant papers, receive international visitors to the NAFO Headquarters and represent NAFO at meetings of other international organizations, as required;
- Perform such other functions as may be assigned to him/her by the Commission, its Chairperson, or the Chairperson of any NAFO body.

Members of the Secretariat enjoy the privileges and immunities to which they are deemed to be entitled as a consequence of the NAFO Convention and pursuant to the Northwest Atlantic Fisheries Organization Privileges and Immunities Order (Order-in-Council P.C. 1980-132, 11 January 1980), or under any agreement signed between the Organization and the Contracting Party concerned.

The NAFO Staff Rules set the conditions and principles of employment and the responsibilities of the NAFO Secretariat Staff.

Eligibility Criteria

- University degree or equivalent, preferably in a field related to NAFO's activities;
- Experience in fisheries management and/or fisheries policy formulation, preferably including international relations;
- Professional experience planning, organizing, and coordinating work programmes relevant to the activities of the NAFO Commission, including management and provision of budgetary oversight for programme delivery;
- Excellent working knowledge of English language.

Selection Criteria

- Demonstrated expertise in the operations and activities of international, regional and/or intergovernmental organizations, preferably those focused on fisheries governance.
- Leadership experience managing people, resources, and processes with a high level of demonstrated competence in areas such as:
 - Management of administrative and technical staff;
 - Preparation of reports, financial budgets and management of expenditures;
 - Organization and the provision of secretariat support for international meetings;
 - Oversight and management of computer services and information technology;
 - Public Relations.
- Demonstrated expertise in issues related to international fisheries conservation and management, particularly in the Northwest Atlantic Ocean.
- Excellent communications skills including a spoken and written command of the English language, and other language skills an asset.
- Demonstrated ability to work effectively with people of different national and cultural backgrounds in an international setting.

Applicants must be citizens of a Contracting Party of NAFO.

Other information

NAFO offers a competitive salary and benefits package. For additional information please address your inquiries to Mr. Fred Kingston, Executive Secretary; Email: fkingsston@nafo.int; Phone: +1 902 468 5590; Fax: +1 902 468 5538.

NAFO is committed to promoting diversity and ensuring employment equity within the Secretariat.

Please consult the NAFO website at www.nafo.int for further information on NAFO.

Availability

It is expected that the short-listed candidates will be interviewed at the 44th Annual Meeting of NAFO to be held in Halifax, Nova Scotia, Canada during 19-23 September 2022.

The candidate chosen would be expected to assume the position on 3 January 2023.

Applications shall be in English, the official language of the Organization, and should include the following:

- Cover Letter;
- Curriculum Vitae;
- List of publications, if available;
- Copies of academic and other relevant professional certificates (please provide English translation if applicable); and

Report of STACFAD, 20–24 September 2021

- Three references from persons with a recent knowledge of the applicant's character, qualifications and experience.

The short-listed candidates will be required to submit a certificate of health.

Location: Northwest Atlantic Fisheries Organization
1601 Lower Water Street, Suite 401, Halifax, Nova Scotia, B3J 3P6, CANADA
Phone: +1 902 468 5590 Fax: +1 902 468 5538 Web: www.nafo.int

Please send your application to:

Mr. Fred Kingston, Executive Secretary
Email: recruit@nafo.int

We thank all respondents; however, only candidates under consideration will be contacted.

Deadline for Application: 15 May 2022



Annex 4. Budget Estimate for 2022**NORTHWEST ATLANTIC FISHERIES ORGANIZATION****Budget Estimate for 2022****(Canadian Dollars)**

	Approved Budget 2021	Projected Expenditures 2021	Preliminary Budget Forecast 2022	Budget Estimate 2022
1 Personnel Services				
a) Salaries	\$1,221,000	\$1,241,000	\$1,221,000	\$1,272,000
b) Superannuation and Annuities	489,000	489,000	490,000	495,000
c) Medical and Insurance Plans	102,000	104,000	108,000	107,000
d) Employee Benefits	80,000	80,000	75,000	79,000
Subtotal Personnel Services	1,892,000	1,914,000	1,894,000	1,953,000
2 Additional Help	2,000	2,000	2,000	2,000
3 Communications	27,000	27,000	27,000	27,000
4 Computer Services	61,000	61,000	62,000	63,000
5 Equipment	27,000	27,000	27,000	27,000
6 Fishery Monitoring	42,000	42,000	43,000	43,000
7 Hospitality Allowance	3,000	3,000	3,000	3,000
8 Internship	11,000	6,000	11,000	14,000
9 Materials and Supplies	31,000	31,000	32,000	31,000
10 NAFO Meetings				
a) Sessional	186,000	26,000	189,000	187,000
b) Inter-sessional Scientific	30,000	30,000	30,000	30,000
c) Inter-sessional Other	40,000	20,000	40,000	85,000
Subtotal NAFO Meetings	256,000	76,000	259,000	302,000
11 Other Meetings and Travel	40,000	10,000	40,000	40,000
12 Professional Services	45,000	45,000	46,000	45,000
13 Publications	14,000	14,000	14,000	14,000
14 Recruitment	-	-	-	23,000
	\$2,451,000	\$2,258,000	\$2,460,000	\$2,587,000

Notes on Budget Estimate 2022
(Canadian Dollars)

Item 1(a)	Salaries Salaries budget estimate for 2022.		\$1,272,000
Item 1(b)	Superannuation and Annuities Employer's pension plan which includes employer's contributions, administration costs, actuarial fees and the required annual payment towards previous pension plan deficits.		\$495,000
Item 1(c)	Group Medical and Insurance Plans Employer's portion of Canada Pension Plan, Employment Insurance, Group Life Insurance, Long Term Disability Insurance and Medical Coverage.		\$107,000
Item 1(d)	Employee Benefits Employee benefits as per the NAFO Staff Rules including overtime, repatriation grant, termination benefits, vacation pay, and home leave travel for internationally recruited members of the Secretariat.		\$79,000
Item 2	Additional Support Other assistance as required.		\$2,000
Item 3	Communications Phone and internet services Postage and Courier	\$20,000 7,000	\$27,000
Item 4	Computer Services Computer hardware, software, supplies, support and website hosting.		\$63,000
Item 5	Equipment Leases (print department printer, photocopier and postage meter) Purchases Maintenance	\$14,000 10,000 3,000	\$27,000
Item 6	Fishery Monitoring Vessel Monitoring System (VMS) annual maintenance fee including programming changes as required due to changes to CEM Oracle database annual maintenance	\$40,000 3,000	\$43,000

Item 10(a)	NAFO Sessional Meetings Annual Meeting, September 2022, Halifax, Canada SC Meeting, June 2022, Halifax, Canada SC Meeting, October 2022		\$187,000
Item 10(b)	NAFO Inter-sessional Scientific Meetings Provision for inter-sessional meetings, symposia and a general provision for unforeseen expenses necessarily incurred by SC required for the provision of answering requests for advice from the Commission.		\$30,000
Item 10(c)	NAFO Inter-sessional Other General provision for Commission inter-sessional meetings. NAFO WG-EAFFM Workshop of fisheries managers and scientists to draft ecosystem objectives. NAFO WG-EAFFM Review of the NAFO Roadmap	\$40,000 20,000 25,000	\$85,000
Item 11	Other Meetings and Travel International Meetings regularly attended by the NAFO Secretariat which may include the following: Aquatic Sciences and Fisheries Abstracts (ASFA), Committee on Fisheries (COFI), Co-ordinating Working Party on Fishery Statistics (CWP), Fisheries Resources Monitoring Systems (FIRMS), International Fisheries Commissions Pension Society (IFCPS), Inspector Workshops, Regional Fishery Body Secretariats' Network (RSN), United Nations, etc.		\$40,000
Item 12	Professional Services Professional Services (audit, consulting, legal fees, and insurance) Professional Development and Training Public Relations	\$29,000 11,000 5,000	\$45,000
Item 13	Publications Production costs of NAFO publications, booklets, brochures, posters, etc., which may include the following: Conservation and Enforcement Measures, Convention, Inspection Forms, Journal of Northwest Atlantic Fishery Science, Meeting Proceedings, Rules of Procedure, Scientific Council Reports, Staff Rules, Secretariat Structure, etc.		\$14,000
Item 14	Recruitment and Relocation Recruitment process for the next NAFO Executive Secretary to be launched in 2022 with an appointment for the 2023-2026 term.		\$23,000

Annex 5. Preliminary Budget Forecast for 2023 and 2024

NORTHWEST ATLANTIC FISHERIES ORGANIZATION

Preliminary Budget Forecast for 2023 and 2024

(Canadian Dollars)

	Preliminary Budget Forecast 2023	Preliminary Budget Forecast 2024
1 Personnel Services		
a) Salaries	\$1,273,000	\$1,318,000
b) Superannuation and Annuities	497,000	502,000
c) Medical and Insurance Plans	112,000	114,000
d) Employee Benefits	82,000	80,000
Subtotal Personnel Services	1,964,000	2,014,000
2 Additional Help	2,000	2,000
3 Communications	28,000	28,000
4 Computer Services	65,000	65,000
5 Equipment	27,000	27,000
6 Fishery Monitoring	44,000	45,000
7 Hospitality Allowance	3,000	3,000
8 Internship	14,000	14,000
9 Materials and Supplies	32,000	33,000
10 NAFO Meetings		
a) Sessional	190,000	192,000
b) Inter-sessional Scientific	30,000	30,000
c) Inter-sessional Other	40,000	40,000
Subtotal NAFO Meetings	260,000	262,000
11 Other Meetings and Travel	40,000	40,000
12 Professional Services	46,000	47,000
13 Publications	14,000	14,000
14 Recruitment and Relocation	85,000	-
	\$2,624,000	\$2,594,000

Annex 6. Preliminary Calculation of Billing for Contracting Parties for 2022



Preliminary calculation of billing for the 2022 financial year (Canadian Dollars)

Budget Estimate	\$2,587,000
Deduct: Amount Allocated from Accumulated Surplus	-\$437,000
Amount Allocated from Relocation Fund	-\$23,000
Funds required to meet 2022 Administrative Budget	\$2,127,000

Part A

Contracting Parties	2019 nominal catches (metric tons)	Catch %	NAFO Convention Article IX.2.a,b,c			
			10%	30%	60%	Subtotal
Canada	159,852	36.51%	\$91,239	\$49,085	\$465,940	\$606,264
Cuba	-	-	-	\$49,085	-	\$49,085
Denmark (in respect of Faroe Islands and Greenland) (Note 2)	166,809	38.10%	\$95,210	\$49,085	\$486,231	\$630,526
European Union	47,671	10.89%	-	\$49,085	\$138,977	\$188,062
France (in respect of St. Pierre et Miquelon)	673	0.15%	\$384	\$49,085	\$1,913	\$51,382
Iceland	-	-	-	\$49,085	-	\$49,085
Japan	2,748	0.63%	-	\$49,085	\$8,039	\$57,124
Norway	3,210	0.73%	-	\$49,085	\$9,317	\$58,402
Republic of Korea	-	-	-	\$49,085	-	\$49,085
Russian Federation	11,574	2.64%	-	\$49,085	\$33,691	\$82,776
Ukraine	-	-	-	\$49,085	-	\$49,085
United Kingdom	-	-	-	\$49,085	-	\$49,085
United States of America (Note 3)	45,318	10.35%	\$25,867	\$49,085	\$132,087	\$207,039
Total	437,855	100.00%	\$212,700	\$638,105	\$1,276,195	\$2,127,000

Part B

Contracting Parties	Subtotal from Part A	NAFO Convention Article IX.2.d (Note 1)						Total contribution
		% Contribution	Catch % minus DFG	10%	30%	60%	Subtotal	
Canada	\$606,264	28.49%	58.98%	\$29,144	\$9,382	\$132,807	\$171,333	\$777,597
Cuba	\$49,085	2.31%	-	-	\$9,382	-	\$9,382	\$58,467
Denmark (in respect of Faroe Islands and Greenland) (Note 2)	\$630,526	29.64%	-	-\$37,529	-\$112,584	-\$225,177	-\$375,290	\$255,236
European Union	\$188,062	8.84%	17.59%	-	\$9,382	\$39,609	\$48,991	\$237,053
France (in respect of St. Pierre et Miquelon)	\$51,382	2.42%	0.25%	\$123	\$9,382	\$564	\$10,069	\$61,451
Iceland	\$49,085	2.31%	-	-	\$9,382	-	\$9,382	\$58,467
Japan	\$57,124	2.69%	1.01%	-	\$9,382	\$2,275	\$11,657	\$68,781
Norway	\$58,402	2.75%	1.18%	-	\$9,382	\$2,658	\$12,040	\$70,442
Republic of Korea	\$49,085	2.31%	-	-	\$9,382	-	\$9,382	\$58,467
Russian Federation	\$82,776	3.89%	4.27%	-	\$9,382	\$9,615	\$18,997	\$101,773
Ukraine	\$49,085	2.31%	-	-	\$9,382	-	\$9,382	\$58,467
United Kingdom	\$49,085	2.31%	-	-	\$9,382	-	\$9,382	\$58,467
United States of America (Note 3)	\$207,039	9.73%	16.72%	\$8,262	\$9,382	\$37,649	\$55,293	\$262,332
Total	\$2,127,000	100.00%	100.00%	\$0	\$0	\$0	\$0	\$2,127,000

Note 1 The annual contribution of any Contracting Party which has a population of less than 300,000 inhabitants shall be limited to a maximum of 12% of the total budget. When this contribution is so limited, the remaining part of the budget shall be divided among the other Contracting Parties in accordance with Article IX.2.a,b and c of the NAFO Convention.

Note 2 Faroe Islands 4,692 metric tons
Greenland 162,117 metric tons

Note 3 2019 nominal catches are not currently available. 2018 catches have been used for preliminary billing calculation purposes.



Report of the Joint Advisory Group on Data Management (JAGDM) Meeting

26 October 2021
Virtual Meeting

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Report of the Joint Advisory Group on Data Management (JAGDM) Meeting

26 October 2021
Virtual Meeting

1. Opening of the meeting

- 1.1 The Vice-chair, Natasha Barbour (Canada), opened the meeting and welcomed participants to the virtual meeting of JAGDM.
- 1.2 The following Contracting Parties were present: Canada, Denmark (in respect of the Faroe Islands and Greenland), the European Union, Iceland, Norway, the Russian Federation and the United Kingdom. The NAFO and NEAFC Secretariats were also present.

2. Appointment of the rapporteur

- 1.3 The NAFO Secretariat was appointed as rapporteur with the support of the NEAFC Secretariat.

3. Discussion and adoption of the agenda

- 3.1 The agenda was adopted without changes.

4. NAFO issues

i. Issues Raised by STACTIC

[JAGDM-2021-02-03_stacticwp21-36_PossibleClarificationRAinCOX](#)

- 4.1 The NAFO Secretariat presented JAGDM-2021-02-03, containing STACTIC WP 21-36, clarifying the Relevant Area (RA) field in the Catch On Exit (COX) message to ensure there are no technical issues with the proposal. The European Union noted that more consultations are required with their member states to determine if there are any potential technical issues if an onboard report system automatically assigns the RA field. A participant raised a technical implication of fishing in multiple relevant areas since the RA field is suited for only one relevant area. However, Canada clarified that the NAFO CEM defines a means to submit Catch message(s) (CAT) in addition to the COX when there were catches in multiple relevant areas.
- 4.2 Currently, for NEAFC, only the last catch needs to be reported in the COX. In the new scheme, the prior notification of exit message will include all the catches in the fishing trip. Also, for NAFO the RA field is mandatory, but for NEAFC, the RA field is optional in the COX unless management measures require it.
- 4.3 **In conclusion, it was agreed to continue discussions at the next JAGDM meeting to allow the EU more time to research the technical implications of the proposal. The goal is to provide a response to STACTIC before their next meeting in May 2022.**
- 4.4 Based on agenda item 4.1, there was a preliminary, high-level discussion concerning the consistency of the COX messages between NEAFC and NAFO. The NEAFC Secretariat suggested the new FLUX system

should be taken into consideration in the analysis. The FLUX system's equivalent to the COX message is named Area Exit.

- 4.5 In conclusion, it was agreed that the JAGDM Vice-chair would confirm with the STACTIC Chair what specific information STACTIC wants to receive from JAGDM. Once verified, the NAFO Secretariat will conduct a complete analysis of the COX messages, including the FLUX Area Exit message. At the next JAGDM meeting, the NAFO Secretariat will present the research.**

5. NEAFC issues

i. NEAFC Information Security Management System (ISMS), upgrade to ISO 27001:2013 and managing the existing ISMS.

- 5.1 The NEAFC Secretariat introduced document (JAGDM 2021-02-04). The paper described the process of updating the NEAFC ISMS, based on the ISO27001:2013 standard. It was expected that a new structure for the ISMS based on the 2013 standard would be clearer in 2022. The Secretariat therefore invited JAGDM to note also that while day-to-day attention on information and systems security continued in the Secretariat, routine reviews and updates to the existing ISMS would be frozen until the new ISMS based on ISO 2013 was in place. JAGDM was also invited to agree to the update of the NEAFC IT inventory (a routine and necessary task under the ISMS) by correspondence by the end of 2021.
- 5.2 **JAGDM agreed that the current ISMS routine updates would be put on hold until a clearer structure for the ISMS was developed in 2022, based on ISO 27001:2013. It also agreed but on that the IT inventory update could be agreed by correspondence with JAGDM by the end of 2021.**

ii. JAGDM and other NEAFC structures to support information security

- 5.3 The NEAFC Secretariat introduced document (JAGDM 2021-02-05). This was linked to the previous discussion on the ISMS update. The ISMS set out clear roles for the Secretariat, Contracting Parties and the relevant NEAFC Committees and JAGDM, however over the last years some gaps were appearing in these roles and responsibilities. These were particularly highlighted in the lack of a Chair for JAGDM over two years and also that the Security System Administrators (SSA) group had not met since 2017. Given the important role these two groups played in the ISMS, the paper offered several options, including the re-creation of an SSA like group and/or for JAGDM to reformulate its structure or format to help address these issues.
- 5.4 In discussion, there was some support for re-instating a specialist group on information system issues, but also consideration of JAGDM including such expertise. Another Party noted that strategic concerns should drive the data security approach. The NEAFC Secretariat also noted that implementation of systems cost money, and the ERS and ISO standard were driving the need for more discussion and consideration of issues. It was also noted that the current informal experts' group advising the Secretariat on the development of ISO style information security policies could play a role in the future, or be formalized as a replacement SSA group (noting also the previous experience of the SSA group had to be taken into account to avoid a repeated failure).
- 5.5 **In conclusion, JAGDM noted that the SSA group was already mandated in the ISMS so its re-creation would not require any special authorisation or procedure. Nevertheless, it was agreed that a strategic discussion meeting would be useful for JAGDM to consider its own structure and functions including how these may relate to a reinstated SSA group. This meeting was pencilled in for a 2-hour slot at on 13th January 2022 from 12:30 UTC. In the meanwhile, Contracting Parties were asked to nominate suitable experts for an SSA like group/function which would be formalized as a group (or merged with JAGDM membership) as appropriate following the strategic discussion in January. Nominations of experts were requested by 26 November 2021.**

iii. Amendment to ISMS Article 7.2

- 5.6 The NEAFC Secretariat introduced document JAGDM 2021-02-06 explaining this was a minor amendment to the ISMS agreed last year but by error not put up as a Recommendation to the NEAFC 2020 Annual Meeting. JAGDM 1 2021 had agreed to forward this to NEAFC AM 2021, however in the interim another minor update was needed to reflect further small changes in the NEAFC Port State Control publicly accessible pages.
- 5.7 **JAGDM agreed that JAGDM 2021-02-06 should be forwarded to the NEAFC Annual Meeting as a proposal for a Recommendation to amend Article 7.2, Annex 1 of the ISMS.**

iv. The implications of also referencing ASFIS in the NEAFC Scheme or NAFO CEM – including update on PECMAC discussions on Annex V of the Scheme.

- 5.8 The NEAFC Secretariat updated JAGDM on the insertion of a reference to the FAO ASFIS list to Annex V of the Scheme, to be a recommendation at the AM 2021. The Secretariat enquired as to the experience of NAFO in inserting a similar reference in its Scheme of Control.
- 5.9 **JAGDM noted the update and invited Contracting Parties and the Secretariats to provide any information of relevance to this issue. The next meeting of JAGDM would then consider any such information.**

v. Comparison of NEAFC Scheme Annex IV & FLUX Fishing FA doc

- 5.10 The NEAFC Secretariat introduced document JAGDM 2021-02-08 and its annex. JAGDM was asked to examine the NEAFC Scheme Annex IV in light of the ERS FLUX Fishing Activities Implementation Documents that had been adopted by NEAFC over the last few years. The implementation documents potentially required some further changes to be introduced into the version of Annex IV that had preceded them. Furthermore, a question was raised as to whether the text needed to respond to a likely additional readership now that IT developers' information was set out there.
- 5.11 In discussion, it was explained that the document presented included a comparison of the relevant parts of the Scheme and the ERS FLUX Implementation Documents. The aim was a for Contracting Parties to double-check the Secretariat's understanding of how the Scheme text needed updating in respect of the Implementation Documents, with no expectation of new formal recommendations being needed.

Various elements of the text were clarified in response to questions. This included a reference to transmission date and time, the potential need for a footnote, whether the Master Data Register reflected the two versions of the Implementation Document, and the use of POR messages for information on transshipments.

- 5.12 **JAGDM agreed that Contracting Parties should send queries and suggestions to the NEAFC Secretariat by 26 November. These should be compiled and presented to the next meeting of ERS Implementation Group for further detailed consideration/finalization of the text. The text would not need further consideration by JAGDM.**

vi. Analysis of denied forms in NEAFC Port State Control (PSC).

- 5.13 The NEAFC Secretariat introduced document JAGDM 2021-02-07 which was an analysis of denied forms under the NEAFC PSC. JAGDM 1 2021 had requested this analysis in relation to the NEAFC PSC and the FAO PSMA. The document set out the numbers of PSC forms denied and their subsequent re-submission as new forms and authorisation of entry to port. The Secretariat explained the process by which it linked denied forms to those it considered subsequently authorised. Reasons for denials were set out in order to help JAGDM understand why such forms were renewed and re-authorised.

In discussion, a Contracting Party noted that the analysis could usefully consider a longer period for linking forms submitted by the same vessel. This was because many vessels could apply for entry close to an ETA deadline and then re-submit a new form for a later ETA. The Secretariat agreed that such analysis could be interesting as well as consideration of the subsequent re-submissions of forms for landing at another port.

- 5.14 JAGDM concluded by asking the Secretariat to extend the analysis to consider the possibility of the resubmission of a request for a port entry at a later date, taking into account the relevant deadlines, to see how this increased the identified numbers of subsequently authorised forms, also to break the report down to the Port State level. This would then be put to PECMAC 2022 for consideration.**

vii. Other code list issues

- 5.15 The NEAFC Secretariat updated JAGDM on its task of including the full ASFIS list of species in the electronic PSC system.

5.16 It was agreed that this did not need further consideration by JAGDM

- 5.17 On UN/LOCODE, the Secretariat indicated its preliminary analysis had been done but further clarification was needed on the scope of the analysis. It was also preparing a list of pros and cons on the proposed use of business rules to validate LOCATION. The Secretariat will be contacting Contracting Parties on user defined LOCOCODES for inclusion. The Secretariat will present all this in a paper to the next JAGDM.

5.18 JAGDM indicated it was happy with the approach set out by the NEAFC Secretariat.

- 5.19 The Secretariat explained there were two data lists that had been identified under ownership of other groups than JAGDM (as the owner of the Master Data Register-MDR). These were the Scheme Annex I - Regulated Resources, under PECMAC and the Recommendation 02/2011 Monthly Statistics Annexes, under WG Statistics. It would be useful to have a discussion between these two groups and JAGDM as to how to operationalize data ownership and management between them.

5.20 JAGDM agreed that correspondence should be initiated with PECMAC and WG Statistics Chairs on how best to manage the relevant data list ownership and the MDR. The vice-Chair of JAGDM agreed to kindly undertake this correspondence in the absence of a Chair.

6. Any other business

- 6.1 There was no other business.

7. Election of Chair

- 7.1 There were no volunteers or nominations for the Chair position. At the JAGDM strategic meeting, scheduled for mid-January, the absence of a Chair will be on the meeting agenda.
- 7.2 The NEAFC Secretary plans to again raise the absence of a JAGDM Chair with the Head of Delegations.

8. Report to the Annual Meeting

- 8.1 The Vice-chair will provide the update at the next NAFO STACTIC Meeting. Based on availability, the Vice-chair will report to the upcoming NEAFC Annual Meeting; otherwise, the NEAFC Secretary will provide the update on the Vice-chair's behalf.

9. Date and place of the next meeting

- 9.1 The next meeting will to hosted by the NEAFC Secretariat on **March 22-23, 2022**. It will be determined closer to the meeting date if the meeting will be conducted in-person or virtually.

10. Closure of the meeting

- 10.1 The Vice-chair closed the meeting and thanked everyone for their positive and effective participation in the virtual meeting.

Northwest Atlantic Fisheries Organization



**Report of the NAFO Working Group on Improving Efficiency of NAFO Working Group
Process (E-WG) Meeting**

22 February 2022
via WebEx

NAFO
Halifax, Nova Scotia, Canada
2022

Report of E-WG,
22 February 2022

Report of the NAFO Working Group on Improving Efficiency of NAFO Working Group Process (E-WG) Meeting

22 February 2022
via WebEx

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Report of the NAFO Working Group on Improving Efficiency of NAFO Working Group Process (E-WG) Meeting

22 February 2022
via WebEx

1. Opening by the Chair, Fred Kingston (NAFO Secretariat)

The Chair, Fred Kingston (NAFO Secretariat) opened the meeting on Tuesday, 22 February 2022 at 10:00 hours. The Chairs and co-Chairs of the NAFO Working Groups were welcomed to the virtual meeting (Annex 1).

2. Appointment of Rapporteur

The NAFO Secretariat was appointed rapporteur.

3. Adoption of Agenda

The agenda was adopted as circulated (Annex 2).

4. Finalize schedule for upcoming meetings scheduled for 2022 (COM-SC WP 22-01)

The 2022 NAFO Meeting Schedule to-date was presented in COM-SC WP 22-01. The group focused its discussions on the NAFO Meetings still to be scheduled for 2022. The format and location of most of these meetings are still to be determined as the Secretariat, in consultation with the relevant co-Chairs, continue to monitor the situation regarding the current pandemic, including travel and gathering restrictions.

- **NAFO Joint Commission-Scientific Council Catch Estimation Strategy Advisory Group (CESAG) Meeting**

The Working Group agreed that the CESAG meeting could be held via correspondence with its work to be completed prior to 30 April 2022. However, if needed, **a half-day virtual meeting could be scheduled sometime during the weeks of 11 and 18 April**. For that reason, a doodle poll will be created and circulated to CESAG members to help identify a suitable virtual meeting date if CESAG participants determine a meeting is required.

The Secretariat would prepare the typical Working Papers and circulate to Advisory Group members by Friday, March 25 with a two-week review and discussion period. A meeting summary would be compiled, via correspondence, archiving the outcomes and/or recommendations of the Advisory Group.

- **NAFO Commission *Ad Hoc* Working Group on Bycatches, Discards and Selectivity (WG-BDS) in NAFO Regulatory Area Meeting**

The Working Group agreed that a formal meeting may not be required. However, a meeting date should be selected in the event that a meeting is required. Progress in the work of the NAFO STACTIC *Ad Hoc* Working Group on the issue of bycatch, directed fisheries, discards, and consideration of the elements necessary to consider adopting a landing obligation policy in NAFO will be considered in determining if a formal meeting be held.

- **NAFO Scientific Council Precautionary Approach Framework (PA-WG) Workshop**

The PA-WG Workshop is anticipated to require between two and possibly up to four days and at this point it is not known when it will be possible, however it could meet during the summer session (week of 15 August).

A further update on the possible scheduling of this Workshop will be provided by the Scientific Council at a later date.

- **NAFO Joint Commission–Scientific Council Working Group on Risk-based Management Strategies (WG-RBMS) Meeting**

The Working Group agreed that this year's meeting is anticipated to require two- to three-days. **It recommended that the meeting could take place during the week of 15 August 2022** and in Halifax, Nova Scotia (if possible).

A further update will be provided following the NAFO Scientific Council and its Standing Committees Meeting taking place 03–16 Jun. 2022 in Halifax, Nova Scotia.

- **NAFO Joint Commission–Scientific Council Working Group on Ecosystem Approach Framework to Fisheries Management (WG-EAFFM) Meeting**

It was noted that traditionally this meeting is scheduled back-to-back with another meeting, when possible, to reduce travel requirements for delegates. For that reason, the Working Group **recommended that this meeting could take place during the week of 08 August 2022** back-to-back with the NAFO Joint Commission–Scientific Council WG-EAFFM Workshop of fisheries managers and scientists to draft ecosystem objectives.

The WG-EAFFM is anticipated to require one- to two-days for its deliberation and would meet in-person in Halifax, Nova Scotia (if possible).

- **NAFO Joint Commission–Scientific Council WG-EAFFM Workshop of fisheries managers and scientists to draft ecosystem objectives**

As noted above, the Working Group **recommended that this meeting could take place during the week of 08 August 2022** back-to-back with the NAFO Joint Commission–Scientific Council Working Group on Ecosystem Approach Framework to Fisheries Management (WG-EAFFM) Meeting.

The Workshop is anticipated to require two- to three-days and would meet in-person in Halifax, Nova Scotia (if possible).

The 2022 NAFO Meeting Schedule was revised in COM-SC WP 22-01 (Revised) to incorporate the discussions of the group below (Annex 3).

5. **Set the three two-week periods during the NAFO year for possible intersessional meetings 2023 (COM-SC WP 22-02)**

The proposed three two-week periods during 2023 to be recommended to the Commission and Scientific Council for possible NAFO meetings were presented in COM-SC WP 22-02 as follows:

The Working Group on Improving Efficiency of NAFO Working Group Process recommends that:

- **For the 2023 NAFO year, the following two-week periods, be considered for NAFO intersessional meetings:**
 - **21 February – 03 March 2023;**
 - **24 April – 05 May 2023; and**
 - **17 – 28 July 2023**

The participants were requested to consider these dates and contact the Secretariat if there are any concerns. The Chair will send a note to this Working Group in the future to finalize, by written procedure, this proposed recommendation to the Commission and Scientific Council.

6. Recommendations to forward to the Commission and Scientific Council

The recommendations of this Working Group to forward to the Commission and Scientific Council at the 2022 Annual Meeting of NAFO, will be agreed on via correspondence (see agenda item 5 above).

7. Other matters

No other matters were raised under this agenda item.

8. Adjournment

The meeting was adjourned.

Annex 1. List of Participants

Chair of Commission	Temur Tairov (Russian Federation)
vice-Chair of Commission	Deirdre Warner-Kramer (USA)
vice-Chair of Scientific Council	Diana González-Troncoso (European Union)
Chair of STACFAD	Robert Fagan (Canada)
Chair of STACTIC	Kaire Märtin (European Union)
co-Chairs of CESAG	Katherine Sosebee (USA) Deirdre Warner-Kramer (USA)
Chair of WG-BDS	Deirdre Warner-Kramer (USA)
co-Chair of WG-EAFFM	Elizabethann Mencher (USA) Jack Ryan participated for Andy Kenny (United Kingdom)
co-Chairs of WG-RBMS	Fernando González-Costas (European Union) Ray Walsh (Canada)
NAFO Secretariat	Fred Kingston (Executive Secretary) Tom Blasdale (Scientific Council Coordinator) Ricardo Federizon (Senior Fisheries Management Coordinator) Lisa LeFort (Senior Executive Assistant)



Annex 2. Agenda

1. Opening by the Chair, Fred Kingston (NAFO Secretariat)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Finalize schedule for upcoming meetings scheduled for 2022 (COM-SC WP 22-01)
5. Set the three two-week periods during the NAFO year for possible intersessional meetings 2023 (COM-SC WP 22-02)
6. Recommendations to forward to the Commission and Scientific Council
7. Other matters
8. Adjournment

Annex 3. 2022 NAFO Meeting Schedule

[COM-SC Working Paper 22-01 Rev.]

The following NAFO Meetings are scheduled for 2022:

Date	Title	Venue
13 Jan.	Joint Advisory Group on Data Management (JAGDM) Meeting - Strategic Planning	Virtual
31 Jan.	NAFO: Scientific Council Precautionary Approach Framework Working Group (PA-WG)	WebEx
	<i>*First period for the scheduling of Working Group meetings 21 Feb.–04 Mar.</i>	
22 Feb.	NAFO Working Group on Improving Efficiency of NAFO Working Group Process (E-WG)	WebEx
24 Feb.	Informal chat to discuss 2022 plans of WG-EAFFM	WebEx
22–23 Mar.	Joint Advisory Group on Data Management (JAGDM) Meeting	WebEx
	<i>*Second period for the scheduling of Working Group meetings 25 Apr.–06 May</i>	
27–28 Apr.	NAFO Fishing Regime for Shrimp in Division 3M Meeting	Halifax, Nova Scotia**
09–12 May	NAFO Standing Committee on International Control (STACTIC) Intersessional Meeting <u>The format of the meeting to be decided for circulation with the Provisional Agenda on or before 10 Mar. 2022</u>	Halifax, Nova Scotia**
03–16 Jun.	NAFO Scientific Council and its Standing Committees Meeting	Halifax, Nova Scotia**
	<i>*Third period for the scheduling of Working Group meetings 08–19 Aug.</i>	
12–17 Sep.	NAFO/ICES <i>Pandalus</i> Assessment Meeting	Copenhagen, Denmark
19–23 Sep.	NAFO 44 th Annual Meeting	Portugal**

* As always, these two-week periods would not require meetings of NAFO subsidiary bodies to meet during those dates nor would they preclude the scheduling of meetings of NAFO subsidiary bodies outside those dates.

** The above-mentioned meeting is scheduled to take place in-person however the format of the meeting will be discussed, in consultation with the relevant Chair, as we continue to monitor the pandemic and resulting travel restrictions.



The following NAFO Meetings are still **to be** scheduled for 2022:

Date	Title	Venue
TBD	NAFO: Scientific Council Precautionary Approach Framework Working Group (PA-WG)	WebEx
TBD	NAFO: Scientific Council Review of the Roadmap Tier I and Tier II	WebEx
<u>Work to be completed</u> prior to 30 Apr.	<p>NAFO Joint Commission–Scientific Council Catch Estimation Strategy Advisory Group (CESAG) Meeting</p> <ul style="list-style-type: none"> <u>A doodle poll to be created and circulated to select virtual meeting date, if required.</u> <u>The Secretariat to prepare the typical Working Papers and circulate to Advisory Group members by Friday, March 25 with a two-week comment/review/discussion period.</u> <u>A meeting summary to be compiled to archive the outcomes and/or recommendations of the Advisory Group.</u> 	<u>To meet via correspondence instead of WebEx.</u>
Aug. <u>(TBC)</u>	<p>NAFO Commission <i>Ad Hoc</i> Working Group on Bycatches, Discards and Selectivity (WG-BDS) in NAFO Regulatory Area Meeting</p> <p><u>A formal meeting may not be required however a meeting date should be selected in the event that a meeting is required. The work of the sub-Working Group to be considered in determining if a formal meeting be held.</u></p>	TBD
<u>TBC:</u> <u>Jul. or Sep.</u>	<u>NAFO Scientific Council Precautionary Approach Framework (PA-WG) Workshop (4 days anticipated)</u>	<u>TBD</u>
<u>Week of the</u> <u>08 Aug.</u>	NAFO Joint Commission–Scientific Council Working Group on Ecosystem Approach Framework to Fisheries Management (WG-EAFFM) Meeting <u>(1–2 days anticipated)</u>	<u>Halifax, Nova Scotia</u>
<u>Week of the</u> <u>15 Aug.</u>	NAFO Joint Commission–Scientific Council Working Group on Risk-based Management Strategies (WG-RBMS) Meeting <u>(2–3 days anticipated)</u>	<u>Halifax, Nova Scotia</u>
<u>Week of the</u> <u>08 Aug.</u>	NAFO Joint Commission–Scientific Council WG-EAFFM Workshop of fisheries managers and scientists to draft ecosystem objectives** <u>(2–3 days anticipated)</u>	<u>Halifax, Nova Scotia</u>
TBD	NAFO <i>Ad hoc</i> Working Group on STACTIC Participation (WG-SP) Meeting	TBD
Nov. TBC	NAFO/ICES <i>Pandalus</i> Assessment Meeting	WebEx
Nov.	NAFO Working Group on Ecosystem Science and Assessment (WG-ESA) Meeting	Halifax, Nova Scotia

Northwest Atlantic Fisheries Organization



**Report of the NAFO *Ad Hoc* Virtual NAFO Website Re-Design Working Group:
Data Classification (WG-Data) Meeting**

12 April 2022
via WebEx

NAFO
Halifax, Nova Scotia, Canada
2022

**Report of the NAFO *Ad Hoc* Virtual NAFO Website Re-Design Working Group:
Data Classification (WG-Data) Meeting**

12 April 2022
via WebEx

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Report of the NAFO *Ad Hoc* Virtual NAFO Website Re-Design Working Group: Data Classification (WG-Data) Meeting

12 April 2022
via WebEx

1. Opening by the Chair, Fred Kingston (NAFO Secretariat)

The meeting was opened at 10:00 hours (Atlantic Daylight Time) on 12 April 2022 via WebEx. The STACFAD Chair, Robert Fagan (Canada), and representatives from Canada, Denmark (in respect of the Faroe Islands and Greenland), United Kingdom and the United States of America were present (Annex 1).

The Chair was pleased to see the number of Contracting Parties in attendance and looked forward to a productive discussion.

2. Appointment of Rapporteur

The NAFO Secretariat (Lisa LeFort, Senior Executive Assistant) was appointed as Rapporteur.

3. Adoption of the Agenda

The agenda was adopted (Annex 2).

4. Presentation on Work Completed

The NAFO Secretariat presented STACFAD WP 22-02 (Revised), specifically:

- An overview of the project contained in page 1.
- The feedback gathered regarding posting and distribution of meeting documentation from those Working Groups that were able to discuss the topic contained in Annex 1.
- The current policies of each NAFO Body contained in Annex 2.
- The current task and outstanding work including consideration of a potential hybrid meeting documentation policy contained in page 2.

STACFAD WP 22-02 (Revised) is provided in Annex 3 of this meeting report.

The NAFO Secretariat provided an overview of the project as detailed on page 1 of STACFAD WP 22-02 (Revised).

The *Ad Hoc virtual NAFO Website Re-Design Working Group: Data Classification* is tasked to develop a meeting documentation policy regarding the posting and distribution of meeting documentation, and thereby enhance the transparency of the organization. The goal is to develop such a policy to be presented to STACFAD for consideration and adoption at the 2022 Annual Meeting of NAFO.

This work is being completed in response to Recommendation #26 of the 2018 NAFO Performance Review. The 2018 NAFO Performance Review Panel, Recommendation 26, Chapter V.3.2, reads: "*Recommends NAFO makes all working documents publicly available, unless otherwise requested by a Contracting Party or subject to confidentiality rules.*"

This work has been on-going since 2019, however progress has been impacted by the absence of in-person meetings due to the global pandemic as well as limited participation of Contracting Parties.

5. Current Task and Review Outstanding Work

The *Ad Hoc* Working Group reviewed the feedback gathered regarding posting and distribution of meeting documentation from those Working Groups that were able to discuss the topic (Annex 1 of STACFAD WP 22-02 Revised).

The *Ad Hoc* Working Group reviewed the current policies of each NAFO Body (Annex 2 of STACFAD WP 22-02 Revised).

The Working Group was further reminded that COM WP 20-03 (Revised) was presented previously. This discussion paper outlined the current documentation practices and procedures of other regional fisheries management organizations (RFMOs), which was revised to include submissions from Working Group members to better reflect their experiences when participating in other RFMO meetings.

Consideration of a Hybrid Meeting Documentation Policy

The *Ad hoc* Virtual Working Group considered a hybrid policy as a possible viable option which could ensure transparency without impeding efficiency.

A potential hybrid meeting documentation policy is detailed on page 2 of STACFAD WP 22-02 (Revised):

- **Prior to the start of a meeting** – NAFO meeting documentation, such as working papers, which is received and deemed open access be made available to the general public on the NAFO website.
- **During the meeting** – NAFO meeting documentation, such as working papers and subsequent revisions, be posted on the NAFO Meetings SharePoint only.
- **Following the Annual Meeting of NAFO in September** – The majority of meeting documentation, such as working papers which are adopted during the Annual Meeting, are converted into a NAFO document and made available to the general public on the NAFO website.

It was noted that the focus of the considerations of such a policy regarding posting and distribution of meeting documentation publicly is two-fold (see below). The Chair also noted that these considerations are more appropriately applied to meetings of the Commission and its subsidiary bodies.

1. Access to working documents

The current practice is that following the Annual Meeting of NAFO in September, meeting documentation that is adopted, such as a Working Paper, is converted into a NAFO document and made available to the general public on the NAFO website, with the exception of working papers deemed “*restricted*”.

A meeting documentation policy will focus on working documents that are prepared prior to the meeting, during the meeting and/or not adopted at the meeting.

2. Determination of Working Papers that are “*restricted*” and/or subject to confidentiality rules

It will need to be determined who will decide which meeting documentation is deemed “*open access*” and which meeting documentation is deemed “*restricted*”.

Two approaches were considered:

- require each NAFO Body or Working Group to determine whether a particular NAFO meeting document is deemed “*open access*” or “*restricted*”, or
- establish a criteria/procedure for this determination.

After a brief discussion, the *Ad hoc* Virtual Working Group agreed to recommend to STACFAD at the 2022 Annual Meeting that, as an interim measure, a Contracting Party submitting a Working Paper designate that Working Paper to be “*open access*” and made available to the general public on the NAFO website prior to the

meeting. If the Contracting Party does not make such a designation, then it will not be made available to the general public.

6. Next Steps and/or Recommendations

The NAFO *Ad Hoc* Virtual NAFO Website Re-Design Working Group: Data Classification (WG-Data) agreed that:

- In terms of development of a policy regarding posting and distribution of meeting documentation publicly, a hybrid meeting documentation policy (as detailed on page 2 of STACFAD WP 22-02 Revised) be adopted by NAFO as an interim measure. This hybrid meeting documentation policy would be reviewed by STACFAD after one year (i.e., at the 2023 Annual Meeting of NAFO).
- In terms of development of guidelines for classification of working documents, an interim measure be adopted that the Contracting Party submitting a Working Paper is responsible to designate that Working Paper as “open access” and made available to the general public on the NAFO website prior to the meeting. If the Contracting Party does not make such a designation, then it will not be made available to the general public on the NAFO website prior to the meeting. These guidelines for classification would be reviewed by STACFAD after one year (i.e., at the 2023 Annual Meeting of NAFO).
- This *Ad Hoc* Working Group should continue to meet following the 2022 Annual Meeting to explore further means to improve the transparency of meeting documentation in NAFO and establish an interim procedure for determining whether documents prepared by the Secretariat are “open access” or not.

7. Other Business

No other business was discussed under this agenda item.

8. Time and Place of Next Meeting

The next meeting of the *Ad hoc* Virtual Working Group to be determined, as required.

9. Adjournment

The meeting adjourned and the meeting report was adopted by correspondence.

Annex 1. List of Participants

STACFAD CHAIR	Fagan, Robert
CANADA	Her, Natalie Johnson, Kate
DENMARK (IN RESPECT OF THE FAROE ISLANDS AND GREENLAND)	Doj, Iben Funch
UNITED KINGDOM	Round, Jake (STACFAD vice-Chair)
UNITED STATES OF AMERICA	Jaburek, Shannah Mencher, Elizabethann
NAFO SECRETARIAT	Kingston, Fred LeFort, Lisa Pacey, Alexis

Annex 2. Agenda

1. Opening by the Chair, Fred Kingston (NAFO Secretariat)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Presentation on Work Completed (STACFAD WP 22-02 Revised, page 1).
5. Current Task and Review Outstanding Work (STACFAD WP 22-02 Revised, page 2).
6. Next Steps and/or Recommendations
7. Other Business
8. Time and Place of Next Meeting
9. Adjournment

**Annex 3. Performance Review Recommendation #26:
Data Classification – NAFO Meeting Documentation**
STACFAD Working Paper 22-02 (Revised)

Preamble

In response to Recommendation #26 of the 2018 NAFO Performance Review, the *Ad Hoc* virtual NAFO Website Re-Design Working Group: Data Classification has been working on the development of a formal policy regarding the posting and distribution of meeting documentation to further enhance the transparency of this Organization.

- The 2018 NAFO Performance Review Panel, Recommendation 26, Chapter V.3.2, reads:
***“Recommends** NAFO makes all working documents publicly available, unless otherwise requested by a Contracting Party or subject to confidentiality rules.”*

Current Work

The goal of the *Ad Hoc* virtual NAFO Website Re-Design Working Group: Data Classification for 2022 is to develop a meeting documentation policy regarding the posting and distribution of meeting documentation, and thereby enhance the transparency of the Organization, to be presented to STACFAD for consideration and adoption at the 2022 Annual Meeting of NAFO.

The NAFO Secretariat proposes that:

- **The *Ad Hoc* virtual NAFO Website Re-Design Working Group: Data Classification re-convene to review the feedback gathered regarding posting and distribution of meeting documentation (contained in Annex 1).**
- **The *Ad Hoc* virtual NAFO Website Re-Design Working Group: Data Classification re-convene to consider a hybrid meeting documentation policy regarding the posting and distribution of meeting documentation (detailed above) including resolve any outstanding issues with such a policy.**

Work Completed up to the 2021 Annual Meeting

In 2020 – The *Ad Hoc* virtual Working Group met twice:

- 02 March 2020 via WebEx. The meeting report is contained in COM Doc. 20-02.
- 23 June 2020 via WebEx. The meeting report is contained in COM Doc. 20-06.

In 2021 – The *Ad Hoc* virtual Working Group did not meet, however previously agreed that feedback would be sought from NAFO Bodies, Standing Committees and Working Groups during upcoming meetings in 2020/2021.

The coronavirus (COVID-19) pandemic presented challenges in collecting this feedback. Nevertheless, some NAFO bodies were able to discuss this matter at least briefly so that the NAFO Secretariat was able to provide an update to STACFAD at the 2021 Annual Meeting of NAFO in STACFAD WP 21-06.

This update included:

- The discussions of those Working Groups that were able to discuss this matter during its meetings are summarized in Annex 1.
- The current policies of each NAFO Body regarding the posting and distribution of meeting documentation are summarized in Annex 2.

STACFAD agreed that the *Ad Hoc* virtual NAFO Website Re-Design Working Group: Data Classification will continue to work intersessionally on the development of a formal policy regarding the posting and distribution of meeting documentation.

A Hybrid Meeting Documentation Policy

At its last meeting, the *Ad Hoc* virtual Working Group **agreed** that a hybrid meeting documentation policy could ensure transparency without impeding efficiency.

A hybrid meeting documentation policy may include:

- **Prior to the start of any NAFO meeting**, NAFO meeting documentation that is received and deemed “open access”, such as a working paper, is made available to the general public on the NAFO website and to the meeting participants on the NAFO Meetings SharePoint.
- **Prior to the start of any NAFO meeting**, NAFO meeting documentation that is received and deemed “restricted”, such as a working paper, is made available only to the meeting participants on the NAFO Meetings SharePoint.
- **During the meeting**, NAFO meeting documentation, such as working papers and subsequent revisions, is posted on the NAFO Meetings SharePoint, but not made publicly available on the NAFO website. (This is the current practice)
- **Following the Annual Meeting of NAFO in September**, meeting documentation that is adopted, such as a working paper, is converted into a NAFO document and made available to the general public on the NAFO website with the exception of Working Papers deemed “restricted”. (This is also the current practice)

While the above hybrid meeting documentation policy may be a viable option for NAFO, the *Ad Hoc* virtual Working Group will need to determine who will decide which documentation is deemed “open access” and which documentation is deemed “restricted”.

For example, would each NAFO Body or Working Group be required to determine whether a particular NAFO meeting document is deemed “open access” or “restricted”, or adopt a criteria/procedure to do so.

The feedback gathered from NAFO Bodies, Standing Committees, and Working Groups further supports such a hybrid meeting documentation policy.

Working Group Membership

Another issue to be addressed is the limited Contracting Party membership and participation in the *Ad Hoc* virtual Working Group.

To ensure that productive discussion may be had at its next meeting, the NAFO Secretariat invites STACFAD Representatives from the 2021 Annual Meeting to participate in the Working Group.

Annex 1. Feedback gathered regarding posting and distribution of meeting documentation

The NAFO Secretariat presented COM WP 21-04 “*Request for Feedback – Ad Hoc virtual NAFO Website Re-Design Working Group: Data Classification*” to those Working Groups that were able to discuss this matter during its meeting.

NAFO Bodies, Standing Committees, and Working Groups	Feedback regarding posting and distribution of meeting documentation
WG-BDS	<p>The NAFO Commission <i>ad hoc</i> Working Group to Reflect on the Rules Governing Bycatches, Discards and Selectivity (WG-BDS) in the NAFO Regulatory Area met via WebEx during 12–13 July 2021.</p> <p>The WG-BDS discussion regarding posting, and distribution of meeting documentation is provided below:</p> <ul style="list-style-type: none"> • In response to Recommendation #26 of the 2018 NAFO Performance Review, the <i>Ad Hoc</i> virtual NAFO Website Re-Design Working Group: Data Classification was tasked with development of a formal policy regarding the posting and distribution of meeting documentation. This <i>Ad Hoc</i> Working Group will give its report to STACFAD. <p>At the 2020 Annual Meeting, STACFAD agreed that before a formal policy could be developed, feedback would be sought from NAFO Bodies, Standing Committees, and Working Groups during upcoming meetings in 2020/2021.</p> <p>The Executive Secretary presented COM WP 21-04 and sought feedback of this WG on a policy of making working documents being made accessible to the public.</p> <p>Contracting Parties expressed general support for transparency. However, given the sensitivity of the data contained in some working papers, a blanket policy of making the working documents be made available to the public would run counter to the domestic policy of some Contracting Parties. Some participants indicated they would need further consultations with their respective delegations.</p>

NAFO Bodies, Standing Committees, and Working Groups	Feedback regarding posting and distribution of meeting documentation
WG-EAFFM	<p>The NAFO Joint Commission-Scientific Council Working Group on the Ecosystem Approach Framework to Fisheries Management (WG-EAFFM) met via WebEx during 14–16 July 2021 and 20–21 July 2021.</p> <p>The WG-EAFFM discussion regarding posting, and distribution of meeting documentation is provided below:</p> <ul style="list-style-type: none"> • In alignment with the 2018 Performance Review Panel Recommendations and their implementation, <i>the Ad Hoc virtual NAFO Website Re-design Working Group: Data Classification</i> at the 2020 Annual Meeting of NAFO was tasked with development of a formal policy regarding the posting and distribution of meeting documentations. In this regard, feedback from the WG-EAFFM was sought whether working papers and other meeting working documents be made available to the public by posting them in the NAFO public website. <p>The Working Group expressed that in principle, there need to be greater transparency. However, there are situations where some documents cannot be made public for confidentiality reasons, <i>e.g.</i>, survey data, memos, papers as a basis for discussion or negotiation.</p>
WG-RBMS	<p>The NAFO Joint Commission-Scientific Council Working Group on Risk-Based Management Strategies (WG-RBMS) met during 24–26 August 2021 via WebEx.</p> <p>The WG-RBMS discussion regarding posting, and distribution of meeting documentation is provided below:</p> <ul style="list-style-type: none"> • In alignment with the 2018 Performance Review Panel Recommendations and their implementation, <i>the Ad Hoc virtual NAFO Website Re-design Working Group: Data Classification</i> at the 2020 Annual Meeting of NAFO was tasked with development of a formal policy regarding the posting and distribution of meeting documentations. In this regard, feedback from WG-RBMS was sought whether working papers and other meeting working documents be made available to the public by posting them in the NAFO public website. <p>The WG expressed general support for ongoing efforts to enhance transparency. However, it was noted that there are situations where it may not be appropriate to share documents publicly, in particular for confidentiality reasons, <i>e.g.</i>, catch data.</p>

NAFO Bodies, Standing Committees, and Working Groups	Feedback regarding posting and distribution of meeting documentation
WG-SP	<p>The <i>NAFO ad hoc Working Group on STACTIC Participation (WG-SP)</i>. The group last met on 25 August 2021 via WebEx.</p> <p>The WG-SP discussion regarding posting, and distribution of meeting documentation is provided below:</p> <p>Canada, the European Union, Japan, and the United States of America agreed to draft a proposal for a Rules of Procedure for STACTIC Participation for presentation at the STACTIC 2021 Annual Meeting.</p> <p>The proposal will use the current procedure that was established at the 2019 Annual Meeting as a basis, with refinements that will allow for improvements and clarification. Some improvements for consideration will include clarity on who can attend the in-camera (closed) sessions, timelines for identifying which agenda items will be discussed in the in-camera (closed) sessions, a process for having the agenda items for in-camera (closed) sessions grouped on the agenda to allow for the least disruption to the meeting, etc. It was also agreed that this procedure would not be relevant for observers participating in NAFO meetings under the NAFO Rules of Procedure for Observers to NAFO Meetings, but for non-governmental delegates appointed as experts or advisers; and that the procedure should ensure that access to information or documents conforms to the confidentiality rules in the NAFO CEM.</p>

Annex 2. Current policy for posting and distribution of meeting documentation

The table below details the current policies of each NAFO body posting and distribution of meeting documentation.

NAFO Bodies, Standing Committees, and Working Groups	Current policy regarding posting and distribution of meeting documentation
NAFO Scientific Council	<p>The working papers of the Scientific Council are neither publicly available on the NAFO website nor available on the password protected NAFO Members' pages.</p> <p>All final SCS (Scientific Council Summary) and SCR (Scientific Council Research) documents are publicly available on the NAFO website.</p>
NAFO Commission	<p>The working papers of the Commission are not publicly available on the NAFO website however they are available on the password protected NAFO Members' pages.</p> <p>Any working papers that are adopted at the Annual Meeting in September, are converted into NAFO documents which are then made publicly available on the NAFO website.</p>
STACFAD	<p>At the 2019 Annual Meeting of NAFO, STACFAD agreed that:</p> <ul style="list-style-type: none"> • Following a meeting, STACFAD Working Papers will be made publicly available on the NAFO website (https://www.nafo.int/) with the exception of Working Papers deemed restricted (e.g., personnel matters). <p>It was further agreed that:</p> <ul style="list-style-type: none"> • An exclusive STACFAD Username and Password will no longer be required to access STACFAD documentation on the NAFO Members' pages. • STACFAD documentation will be available in the NAFO Meetings SharePoint (https://meetings.nafo.int/) with the exception of Working Papers deemed restricted (e.g., personnel matters). • Following a meeting, STACFAD Working Papers will be made publicly available on the NAFO website (https://www.nafo.int/) with the exception of Working Papers deemed restricted (e.g., personnel matters). • General Council (GC) and Commission Documents will be made publicly available on the NAFO website (https://www.nafo.int/) with the exception of documents deemed restricted (e.g., personnel matters).

NAFO Bodies, Standing Committees, and Working Groups	Current policy regarding posting and distribution of meeting documentation
STACTIC	<p>At the 2019 Annual Meeting of NAFO, STACTIC agreed that:</p> <ul style="list-style-type: none"> Any Contracting Party can request to have their own STACTIC working papers posted to the NAFO public website going forward. <p>It was further agreed that:</p> <ul style="list-style-type: none"> The NAFO vessel registry (vessel flag State, vessel name, radio call sign) be posted to the NAFO public website. The NAFO Secretariat consolidate the information on the Research Vessels page of the NAFO Members website for review at the 2020 STACTIC Intersessional Meeting, and STACTIC will determine if it is appropriate to be posted to the NAFO public website. The Provisional Catch Information page of the NAFO Members pages will remain on the NAFO Members pages website and not be posted to the NAFO public website. Contracting Parties review the material on the Practices and Procedures page to determine which information may be posted to the public website, and which information should be migrated to the NAFO MCS Website at the 2020 STACTIC Intersessional Meeting. The NAFO Secretariat consolidate the location and gear details information, and create a map showing the locations of the lost gear for review at the 2020 STACTIC Intersessional Meeting, and STACTIC will determine if it is appropriate to be posted to the NAFO public website. The 3M redfish fishery real time catch uptake (showing total catch amounts) be posted to the NAFO public website. Any Contracting Party can request to have their own STACTIC working papers posted to the NAFO public website going forward. <p>Any STACTIC working papers that are adopted by the Commission at the Annual Meeting in September, are converted into NAFO documents which are then made publicly available on the NAFO website.</p>

Northwest Atlantic Fisheries Organization



**Report of the NAFO Standing Committee on International Control (STACTIC)
Intersessional Meeting**

09-12 May 2022
Halifax, Nova Scotia, Canada

NAFO
Halifax, Nova Scotia, Canada
2022

Report of the NAFO Standing Committee on International Control (STACTIC) Intersessional Meeting

09-12 May 2022
Halifax, Nova Scotia, Canada

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Report of the NAFO Standing Committee on International Control (STACTIC) Intersessional Meeting

09-12 May 2022

1. Opening of the meeting

The Chair of STACTIC, Kaire Märtin (European Union) opened the meeting at 12:00 UTC on 09 May 2022. She welcomed the participants present in-person and virtually via WebEx (Annex 1). She acknowledged that this meeting would pose unique challenges as this is the first time NAFO has had an in-person meeting since COVID-19. She also expressed confidence that with the continued cooperation of the delegations, this meeting would be productive despite the ambitious agenda.

Fred Kingston (Executive Secretary) also welcomed the participants. He remarked that this occasion is the first NAFO in-person meeting at the new office located in downtown Halifax and thanked Canada, the NAFO host country, for providing the modernized space.

A minute of silence was held to respect the crew members who lost their lives in the tragic sinking of *Villa de Pitanxo* in the NAFO Regulatory Area in February 2022.

Opening statements of the delegations are presented in Annex 3. The Russian Federation disagrees with opening statements being annexed as the issues raised in the opening statements are not covered by the NAFO Convention and therefore not within the mandate of the NAFO Commission and its bodies. The Russian Federation called on Contracting Parties to work productively on the agenda as adopted and refrain from discussing and expressing opinions on issues not included in the mandate of STACTIC.

2. Appointment of Rapporteur

The NAFO Secretariat (Ricardo Federizon and Mikaela Soroka) was appointed as rapporteur.

3. Adoption of Agenda

The provisional agenda, as previously circulated, was adopted without changes (Annex 2).

In accordance with the interim procedure established in 2019, Contracting Parties were asked to identify agenda items they deemed to be of a sensitive nature and, in their opinion, were more appropriate to be discussed in an *in-camera* session.

Recognizing the need for a productive meeting, Contracting Parties agreed that all working papers and agenda items would be discussed in an open session, with the exception of agenda item 5 (2021 Annual Compliance Review), agenda item 6 (Review of Article 30, STACTIC WP 22-05 Rev. 2), agenda item 10 (NAFO MCS Website), and agenda item 23 (Impacts of COVID). Following the protocols adopted at the 2019 Annual Meeting, these agenda items would be discussed in an *in-camera* session restricted to government officials and NAFO Commissioners from each delegation.

To better facilitate and manage the schedule, the Chair proposed, and the Contracting Parties agreed, that the *in-camera* agenda items would be addressed together. The *in-camera* agenda items were addressed on the first day of the meeting.

4. STACTIC Participation

Pending the resolution of the issue of participation of the various stakeholders in STACTIC meetings, this meeting followed the interim procedure that was agreed in 2019:

Contracting Parties agreed to follow the procedure established at the 2019 Annual Meeting as an interim solution for this meeting without prejudice to any other future possible decisions about the issue of participation, which was that Contracting Parties identify agenda items and/or working papers which they deemed to be of a sensitive

nature and discussed in an in-camera (closed) session. The in-camera (closed) sessions would be restricted to government officials and NAFO Commissioners from each delegation. Following the in-camera (closed) discussions, the Chair would report out the results or recommendations in open session.

The Secretariat presented STACTIC WP 22-01 which chronicles the efforts in resolving the issue of STACTIC participation since 2018. At the 2021 Annual Meeting it was agreed that Canada, the European Union, Japan, and the United States of America as well as other interested Contracting Parties would continue working on the draft proposal for an updated Rules of Procedure for STACTIC Participation for presentation at this meeting.

The United States of America reported there have been no significant developments since the Annual Meeting. Given the need to advance this important issue and given its impact on other subgroups, the United States of America requested this matter be addressed at the Commission level, so that the Commission can interpret the NAFO Convention and provide guidance to resolve fundamental issues related to the composition of STACTIC delegations and the dissemination of confidential/sensitive information.

The United States of America maintains its position that under the NAFO Convention, Contracting Parties are free to select experts and advisors as members of their delegation, and, therefore, such advisors may attend STACTIC meetings. Each Contracting Party can then develop the necessary safeguards and confidentiality requirements to protect the dissemination of information, pursuant to NAFO CEM Annex II.B – *Rules on Confidentiality*. Any objectionable restriction on this right impinges on a Contracting Party's sovereignty.

According to the United States of America, this issue could easily be resolved if individual Contracting Parties managed their delegation in a manner that addressed their individual disclosure or sharing concerns. But, in order to ensure the spirit and intent of the Convention are upheld, and Contracting Parties' sovereignties are not encroached, the United States of America requested that this matter be raised to the Commission to outline Rules of Procedure for attendance within STACTIC and other relevant NAFO working groups.

The European Union explained that Canada, the United States of America, Japan and the European Union had been working before the 2021 Annual Meeting on draft Rules of Procedures for STACTIC participation and that the main discrepancy at stake is about the participation of commissioners (potentially including non-governmental officials) in closed sessions. The European Union considers that there are related issues such as access to confidential commercial and personal data (including information on criminal investigations) in working papers; namely information extracted from the MCS Website to which only members of the administrations of the Parties can get access. Discussions on participation of commissioners in closed sessions but with restricted access to confidential information are pending. If the participation in closed sessions is unrestricted, the European Union view is that there would be no difference between closed and open sessions. This might change STACTIC dynamics in terms of general participation of non-governmental officials within delegations of the Parties, richness of the discussions and the need to ensure data confidentiality through aggregation and anonymization. The European Union's view is that these topics remain to be discussed by STACTIC, but it will not block a request to the NAFO Commission if the request mentions these issues. The European Union informed STACTIC that it has asked the NAFO Executive Secretary to ensure that the European Union data extracted from the MCS Website remains undisclosed to non-governmental officials.

STACTIC agreed that:

- **STACTIC sends a written request to the Commission prior to the 2022 Annual Meeting requesting assistance of the Commission to come to a resolution regarding participants, other than government officials, in STACTIC Meetings.**

5. Annual Compliance Review, 2021

The Secretariat presented three working papers:

- STACTIC WP 22-02 (Rev.) – *DRAFT Compilation of Fisheries Reports 2021*

This working paper is the compilation of the data/information of the 2021 fishing activities in the NAFO Regulatory Area, by fishing trip, as defined in NAFO CEM Article 1.7. Information sources are the vessel monitoring system (VMS), hail messages delivered by the vessels (Vessel Transmitted Information – VTI), fishing logbook (haul by haul) data, Port Inspection Reports, At-sea Inspection Reports and Reports on Dispositions of Infringements provided by the Contracting Parties as per Article 40 of the NAFO CEM, and Trip Observer Reports sent to the Secretariat.

- STACTIC WP 22-04 (Rev.) – *Summary of Inspection Information for 2021*

This working paper summaries the inspection information for 2021. It consists of the summary of inspections at sea and infringements issued as reported by Contracting Parties with inspection presence, port inspections and infringements issued by port State authorities, disposition of infringements, and hours flown by surveillance aircraft.

- STACTIC WP 22-03 – *DRAFT Annual Fisheries and Compliance Review 2022 (Compliance Report for Fishing Year 2021)*

This working paper is the first draft of the Annual Fisheries and Compliance Review that must be finalized by STACTIC at the 2022 Annual Meeting. Compliance information contained in this working paper are derived from the two working papers mentioned above.

Discussions on these working papers centered on the process of the development of the Annual Fisheries and Compliance Review. The *NAFO Rules of Procedure: Commission* 5.1(a)–(e) was recalled. The general process is that the Secretariat makes a comprehensive provisional compilation of the relevant reports submitted by Contracting Parties. The *Annual Compliance Report* shall be based on this compilation.

Contracting Parties examined STACTIC WP 22-02 (Rev.) and STACTIC WP 22-04 (Rev.) for accuracy and completeness. Deficiencies in the submission of data/information by Contracting Parties were identified. Some Contracting Parties provided comments and observations on the two working papers. Contracting Parties were urged to review further the relevant portions of the compilation and forward the missing information to the Secretariat by 15 June 2022. The Secretariat reminded STACTIC that the compilation will be transmitted to all Contracting Parties (with vessels anonymized) in accordance with Commission Rules of Procedure 5.1(e), i.e., by 20 June 2022 which is 90 days prior to the 2022 Annual Meeting. Also, preliminary comments were given in STACTIC WP 22-03.

Contracting Parties also provided verbal reports on the impact of COVID-19 in their compliance to the NAFO CEM in 2021. It was decided that as in the previous year, the impacts will be included as an annex to the *2022 Annual Compliance Review of 2021 Fishing Activities in the NAFO Regulatory Area*.

STACTIC agreed that:

- Contracting Parties forward missing information and comments, if any, on STACTIC WP 22-02 (Rev.) to the Secretariat by 15 June 2022 for inclusion in the compilation of the 2021 fishing reports.
- Contracting Parties report on the impact of COVID-19 on their compliance to the NAFO CEM using the reporting template outlined in STACTIC WP 21-12 and forward them to the Secretariat by 15 August 2022 for inclusion in the *Annual Fisheries and Compliance Review 2022 (Compliance Report for Fishing Year 2021)*.

- **Contracting Parties forward comments on STACTIC WP 22-03 to the Secretariat by 15 August 2022 for incorporation to the *Annual Fisheries and Compliance Review 2022 (Compliance Report for Fishing Year 2021)*.**

6. Review of Article 30 of the NAFO CEM

The Secretariat presented two working papers: STACTIC WP 22-05 (Rev. 2) – *Summary of Observer Information for 2021* and STACTIC WP 22-26 – *NAFO CEM Article 30 Trend on Enforcement and Regulations*.

STACTIC WP 22-05 (Rev. 2) compiles the Contracting Party submissions on compliance to the observer scheme in accordance with Articles 30.10(d) and 30.6(e). It was noted that the submissions did not come in a standardized format. Some reports were in a tabulated format, some were free text format, and some included both. Seven Contracting Parties submitted their reports – Canada, Denmark (in respect of Faroe Islands and Greenland), the European Union, Japan, Norway and the United States of America. The submission of one Contracting Party is missing.

STACTIC WP 22-26 is a tabulation of the observer scheme compliance reports for Contracting Parties from 2019-2021. The tabulation was prepared by the Secretariat to facilitate the discussions on the review of the Observer Program (Article 30) that is required to be conducted in 2022 pursuant to Article 30.19 of the NAFO CEM. Given the impacts of COVID, limited progress had been made on the review, and there was some concern about the feasibility of completing the exercise in 2022.

STACTIC realized that the scope of the review must be agreed first and that the review cannot be accomplished at this meeting. STACTIC agreed to create a small working group whose mandate is to carry out the review. The Terms of Reference will be developed after the STACTIC meeting via correspondence. The working group agreed to have a meeting prior to the 2022 Annual Meeting as it is expected to report to STACTIC in September. Initial consideration was made to include, among others, the following elements in the review: standard reporting template to comply with Article 30.10(d) and 30.6(e), use of cameras by observers, potential use of the Observers Application, simplification of notifications, collection of (Greenland) shark data and Best Practices as recommended by the Joint Catch Estimation Strategy Advisory Group (CESAG). These elements should be considered in the development of the Terms of Reference for the dedicated working group and Canada offered to host this meeting either virtually or in person.

It was agreed that:

- **To create a dedicated working group whose mandate is to carry out the review of Article 30 of the NAFO CEM “Observer Program”. This working group will meet prior to the 2022 Annual Meeting.**
- **In consultation with other Contracting Parties, Canada draft a proposal of the Terms of Reference intersessionally for the dedicated working group to review Article 30 of the NAFO CEM “Observer Program”. The proposal of the Terms of Reference will be reviewed by correspondence and the dedicated working group will report at the 2022 Annual Meeting.**
- **The following elements should be considered in the proposal of the Terms of Reference for the dedicated working group to review Article 30 of the NAFO CEM “Observer Program” – standard reporting template to comply with Article 30.10(d) and 30.6(e), use of cameras by observers, potential use of the Observers Application, simplification of notifications, collection of (Greenland) shark data and Best Practices as recommended by the Joint Catch Estimation Strategy Advisory Group (CESAG).**

7. New and pending proposals on enforcement measures: Possible revisions of the NAFO CEM

Three (3) pending proposals, which were deferred from the 2021 Annual Meeting, were discussed:

1. STACTIC WP 21-51 (Rev. 3) – *Measures to Improve Data Collection of Bycatch of Sea Turtles, Sea Birds, and Marine Mammal (United States)*

To ensure data on bycatch of sea turtles, sea birds, and marine mammals are consistently being collected and reported in NAFO regulatory waters, the United States of America expressed that NAFO CEM Article 30.14 explicitly require observers to collect this data as part of their regular data collection procedures. Some Contracting Parties supported this proposal. One Contracting Party indicated its concerns about singling out these categories of species given that they are covered by the FAO 3-Alpha Species Codes (ASFIS) list and are already expected to be reported by masters and observers. The improvement on data collection would be more a matter of implementation of the observer programme (e.g., training).

STACTIC agreed that:

- **STACTIC WP 21-51 (Rev. 3) will be discussed further at the 2022 Annual Meeting.**

2. STACTIC WP 22-21 – *Proposal for Additional Trip Tow Opportunity*

The United States of America submitted a revised proposal STACTIC WP 22-21 that sought two one-hour trial tows upon a vessel's first entrance into the Division. The United States of America suggested that this approach would provide vessels with added flexibility to determine catch composition and that the limited fishing time would assist in mitigating bycatch. Contracting Parties thanked the United States of America for its proposal. Some Contracting Parties expressed concern that one-hour tow times would not be sufficient to gauge catch composition. Additionally, many Contracting Parties were concerned that it would create some internal inconsistency with the existing 3-hour trial tow in Article 6 of the NAFO CEM. The United States of America thanked the Contracting Parties for their feedback.

3. STACTIC WP 21-56 – *Proposal for Trial Tow and Squid Fishery*

Japan re-introduced STACTIC WP 21-56 stating that no real changes or updates were made to their proposal.

As both STACTIC WP 21-56 and STACTIC WP 22-21 are proposals for trial tows, it was suggested by a Contracting Party that the working papers be merged into one proposal. Japan and the United States of America merged STACTIC WP 22-21 and STACTIC WP 21-56 to table a joint proposal outlined in STACTIC WP 22-29 – *Proposal for additional trial tow opportunities*. Some Contracting Parties indicated that they need more time to reflect on this proposal.

STACTIC agreed that:

- **STACTIC WP 22-29 will be discussed further at the 2022 Annual Meeting.**

Three (3) new proposals were tabled and discussed:

1. STACTIC WP 22-23 – *Research vessels (NAFO CEM: Article 4)*

This proposal from the European Union pertains to control measures on research vessels. Canada wondered whether this proposal, in its current form, is outside the purview of STACTIC because of its reference to the Scientific Council. Canada and the United States of America indicated that minor modifications may be needed to the proposal, and it is willing to work intersessionally with the European Union to find a way forward. Norway indicated that the Scientific Council's opinion on the proposal should be sought. Denmark (in respect of Faroe Islands and Greenland) indicated that they have no mandate to undertake the proposal as it stands. The European Union agreed to revise the proposal based on the comments from other Contracting Parties so that this can advance at the 2022 Annual Meeting.

STACTIC agreed that:

- **STACTIC, through a letter from the Chair, will forward the draft proposal (STACTIC WP 22-23) to the Scientific Council for comments before the 2022 Annual Meeting, noting that it has not been endorsed by STACTIC yet.**
- **The European Union revise the draft proposal (STACTIC WP 22-23) based on the comments from other Contracting Parties so that this can advance at the 2022 Annual Meeting.**

2. STACTIC WP 22-24 – *Streamlining the Notification Process for Observer Deployments: (NAFO CEM Article 30 and Annex II.F2)*

This proposal from Canada intends to relieve the administrative burden of Contracting Parties. Norway and Denmark (in respect of Faroe Islands and Greenland) noted that the proposed addition of the field ON (name of observer) in the Catch on Entry report could pose some difficulties due to the scheduling of the deployment of observers. Norway remarked that the name of the observer is already indicated in the observer reports. Canada indicated that it would work intersessionally with other Contracting Parties to modify the proposal.

STACTIC agreed that:

- **Canada would work intersessionally with other Contracting Parties and bring forward a modified proposal of STACTIC WP 22-24 at the 2022 Annual Meeting.**

3. STACTIC WP 22-25 – *Addition of Date of Capture to Product Labelling Requirements (NAFO CEM Article 27.34)*

Canada noted that the requirement of “date of capture” already exists for shrimp, and it should be extended to other stocks. Denmark (in respect of the Faroe Islands and Greenland) noted that nearly all labelling is now done electronically and in real time, so this proposal is a challenge. The European Union indicated that it would need more time to look at the possible impacts on current practices on board and scenarios. Canada expressed its willingness to compromise, perhaps for it to be applied only to selected stocks. Canada indicated that it would work intersessionally with other Contracting Parties to modify the proposal.

STACTIC agreed that:

- **Canada would work intersessionally with other Contracting Parties and bring forward a modified proposal of STACTIC WP 22-25 at the 2022 Annual Meeting.**

8. Practical application of Port State Measures in NAFO

Canada reported that it has no major concern with the port State Measures but is concerned with the delays on the correspondence and the 3-day prior entry to allow the necessary movement of documents. Masters may need further education on the process regarding the movement of documents.

Denmark (in respect of Faroe Islands and Greenland) indicated that it noticed that control authorities have different ways of calculating percentages on PSC3s with respect to over and under reporting on the PSC3. It agreed to present a working paper at the 2022 Annual Meeting on this matter.

The European Union reported about the implementation of the Port State Measures Agreement (PSMA) and the FAO Global Information Exchange System (GIES) including its ongoing testing in cooperation with certain RFMOs. The European Union suggested that the Secretariat should engage with FAO on this matter. The European Union considers that the PSC platforms should be compatible and able to electronically exchange the PSC information in standardised formats.

Norway suggested that the Secretariat reach out to NEAFC as it has in place a well functioning and efficient electronic system for port State control, which has been effective for several years, and that the NAFO and NEAFC requirements are quite similar. Norway further noted that there is ongoing work on the possibility of linking the NEAFC port State control system to GIES to avoid double reporting, and that this could be useful for NAFO as well.

Denmark (in respect of Faroe Islands and Greenland) noted that the NEAFC PSC system is implemented as a web-based system, and is very easy to use, and urged NAFO to implement the same system as NEAFC.

The Secretariat indicated that it has conducted a preliminary evaluation of the NEAFC system in the past. It can not be easily implemented in NAFO unless there is a major restructuring, due to different hardware and software technologies being used. The Secretariat also noted that perhaps a small service contract could assist in moving this forward.

STACTIC agreed that:

- **The Secretariat would reach out to NEAFC on their PSC system and the FAO on its Global Information Exchange System (GIES) to streamline the PSC process in NAFO and provide an update at the 2022 Annual Meeting.**
- **Denmark (in respect of Faroe Islands and Greenland) to present a working paper at the 2022 Annual Meeting on calculating percentages in PSC3s with respect to over and under reporting in PSC3.**

9. Marking of gears

At the 2021 Annual Meeting, it was agreed to continue discussions on the marking of gears at this meeting, specifically on the possible insertion of a reference to the *FAO Guidelines on the Marking of Gears* under Article 13.10 of the NAFO CEM. The Secretariat will compile the information on the marking requirement in Article 13.10 using FAO Guidelines and Contracting Parties' feedback for presentation at the 2022 Annual Meeting. Canada suggested a template be used for this compilation.

Japan remarked that STACTIC should consider the amendment, taking into account the necessity and likelihood of risk that each fishing gear type may pose. Denmark (in respect of Faroe Islands and Greenland) noted that only Iceland marks longlines electronically and perhaps the marking can be extended. The European Union indicated that FAO Guidelines are a tool for policymakers to establish a marking system, but they do not contain marking rules like those in the *Convention on Conduct of Fishing Operations in the North Atlantic*, so they are not equivalent references, and one cannot replace the other.

The Chair noted that the following Contracting Parties have already submitted documents related to domestic practices of marking: Canada, Denmark (in respect of the Faroe Islands and Greenland), the European Union, Iceland, Russian Federation, United Kingdom and the United States of America.

As suggested by the Chair, it was agreed that the Secretariat conducts a comparative analysis of the two documents (*Convention on Conduct of Fishing Operations in the North Atlantic* and the *FAO Voluntary Guidelines on the Marking of Fishing Gear*) as well as marking practices of the Contracting Parties to be presented at the next meeting. Canada suggested a template of alignment be used to conduct the analysis.

STACTIC agreed that:

- **The Secretariat will develop a template to compile the information on the marking requirement in Article 13.10 using FAO Guidelines and Contracting Parties' feedback for presentation at the 2022 Annual Meeting.**
- **Contracting Parties will submit any outstanding domestic information on the marking of gears using the template provided by the Secretariat.**

- **The Secretariat conducts a comparative analysis of the two documents (Convention on Conduct of Fishing Operations in the North Atlantic and the FAO Voluntary Guidelines on the Marking of Fishing Gear) as well as the marking practices of the Contracting Parties to be presented at the 2022 Annual Meeting.**

10. NAFO MCS website and application development

The Secretariat presented an overview of some of the latest enhancements to the MCS Website requested by the European Union. A project status update was also provided for the Observer and electronic Port State Control applications. Contracting Parties thanked the Secretariat for the presentation. Canada mentioned their continued support for the Observer application. The European Union thanked the useful improvements done by the Secretariat and noted that other elements can be added with regard to the Others Quota uptake. Contracting Parties supported the Secretariat to continue work on the MCS Website enhancements and the Observer application.

STACTIC agreed that:

- **The Secretariat continues the work on the enhancements to the MCS Website and the Observer application.**

11. Report and recommendations of the Editorial Drafting Group (EDG)

The Chair of the EDG, Patrick Moran (United States) reported the outcomes from the last meeting that was held in November 2021 (STACTIC WP 21-57). The EDG made some minor editorial changes for clarity and consistency throughout the 2022 NAFO CEM.

In STACTIC WP 21-57, the EDG forwarded to STACTIC two editing items for further review and consideration:

1. Suggested edits in Article 13.10(a) and
2. Insertion of Subarea 6 in the caption of Annex I.A in consideration of the inclusion of alfonosinos in Subarea 6 in the quota table.

In regards to the first item, the STACTIC discussion is reflected in agenda item 9. In regards to the second item, STACTIC agreed that STACTIC WP 22-07, regarding the insertion of Subarea 6 in the caption of Annex I.A of the NAFO CEM, will be sent to the Commission for adoption at the 2022 Annual Meeting.

At the EDG meeting, the Secretariat was requested to provide a list of NAFO CEM articles where “fly its flag” occurs in the NAFO CEM. The list is presented in STACTIC EDG WP 21-04. The EDG will work on the list with the goal of bringing a proposal for article revisions at the 2022 Annual Meeting. This exercise is being undertaken in response to Recommendation 21 of the 2018 NAFO Performance Review.

Another issue that was brought to the attention of STACTIC is regarding the lost gear map. The EDG noted that the STACTIC decision to post the lost gear map to the NAFO public website contradicts the text in Article 13.15 of the NAFO CEM (STACTIC WP 22-08 Rev.).

Discussions on the lost gear map continued at this meeting. The United States of America expressed concern with sharing vessel or Contracting Party-specific data on the public map. An option is to prepare two versions, one for the public website and one for the secured website. Canada expressed also that longline gear types could be consolidated, and that lost gear positions should be limited to those in the NAFO Regulatory Area. STACTIC WP 22-08 (Rev.) attempts to address the issue. The United States of America agreed to draft a proposal to modify Article 13 for the 2022 Annual Meeting.

STACTIC agreed that:

- STACTIC WP 22-07, regarding the insertion of Subarea 6 in the caption of Annex I.A of the NAFO CEM, will be sent to the Commission for adoption at the 2022 Annual Meeting.
- The EDG will work intersessionally on the list of NAFO CEM articles where “fly its flag” occurs in the NAFO CEM (STACTIC EDG WP 21-04) with the goal of bringing a proposal for article revisions at the 2022 Annual Meeting.
- STACTIC continue discussions on the lost gear map (STACTIC WP 22-08 Rev.) and the United States of America will draft a proposal to modify Article 13 of the NAFO CEM for presentation at the 2022 Annual Meeting.

12. Half-year review of the implementation of new NAFO CEM measures

No substantive issue was discussed on this agenda item.

13. Review and evaluation of Practices and Procedures

This is a standing agenda item with the intention of providing Contracting Parties with the opportunity to share their practices and procedures. Contracting Parties can submit relevant documents to the Secretariat to augment the ones on the NAFO members pages.

Contracting Parties reviewed the list of shared documents that are available on the NAFO Members' pages. Some Contracting Parties submitted new documents to share and advised the Secretariat to remove obsolete ones. It was decided that some documents can be made public while others need to remain on the secure section of the website. In this regard, Contracting Parties identified these documents, and they are listed in STACTIC WP 22-09 (Rev. 4).

Any Contracting Party can request to have their own material on the Practices and Procedures page posted to the NAFO public website going forward.

STACTIC agreed that:

- The Secretariat would use STACTIC WP 22-09 (Rev. 4) to determine which information may be posted to the public website, and which information should be retained on the NAFO Members' pages for presentation at the 2022 Annual Meeting.
- The review and evaluation of practices and procedures remain a standing item on the agenda for future meetings.

14. Review of current IUU list pursuant to NAFO CEM, Article 53

The Secretariat presented STACTIC WP 22-10 highlighting both the current NAFO IUU and Provisional lists. It was pointed out that the vessel *Eros Dos* was removed from the NAFO IUU list, as it was removed by NEAFC from its list due to evidence that it was scrapped.

STACTIC WP 22-22 a proposal on the “*Inclusion of vessels from IUU lists of other RFMOs into the NAFO IUU list*” by Norway, the European Union and the United States of America was presented by Norway. Contracting Parties agreed in principle with the suggested edits to the NAFO CEM but wanted more time to reflect.

The Secretariat presented STACTIC WP 22-20 (Rev.) as an information paper on a project by the International MCS Network on advancing the utility of RFMO IUU Vessel lists. Contracting Parties thanked the Secretariat for the update and expressed support for this project. The Secretariat agreed to share the upcoming draft report as well as provide an update to STACTIC at the 2022 Annual Meeting.

STACTIC agreed that:

- **STACTIC WP 22-10 would remain open for further discussion at the 2022 Annual Meeting.**
- **Contracting Parties would review the text and send comments on STACTIC WP 22-22 to Norway, the European Union and the United States of America in advance of the 2022 Annual Meeting.**
- **The Secretariat would provide an update and draft report from the International MCS Network project on advancing the utility of RFMO IUU Vessel lists at the 2022 Annual Meeting.**

15. Bycatch and Discards

Discussions under this agenda item focused on landing obligations and, specifically, on the request from the Commission with regard to what control elements would be necessary for NAFO to consider a landing obligation policy.

The European Union reported that although considerable progress had been made up to the 2021 Annual Meeting, there has been limited developments since the creation of STACTIC WP 21-53. There are still some pending contributions concerning domestic practices on landing policy.

It was acknowledged that this topic is quite technical, and a second dedicated meeting is needed in order to make progress. The United States of America remarked that this document is a good starting point, as it highlights not only the enforcement considerations of a potential discard ban, but also the need to fully consider the associated management issues in tandem and encouraged that these issues be discussed in the Commission and Scientific Council.

To facilitate the ongoing dialogue of a discard policy, STACTIC agreed to the creation of a dedicated working group which may be held back-to-back with the working group on the Observer Program Review. The terms of reference would be developed after the STACTIC meeting by correspondence.

Canada commented that there remain divergent views among Contracting Parties on discards. Several Contracting Parties expressed support and willingness to participate in the dedicated working group meeting.

STACTIC agreed that:

- **In consultation with other Contracting Parties, the European Union draft a proposal of the Terms of Reference intersessionally for the dedicated working group to advance the discussions on the landing obligations policies as outlined in STACTIC WP 21-53. The proposal of the Terms of Reference will be reviewed by correspondence and the dedicated working group will report at the 2022 Annual Meeting.**
- **The dedicated working group meeting will be held in advance of the Annual Meeting and may be held back-to-back with the working group meeting on the Observer Program Review.**

16. Discussion of data classification and access rights

The Secretariat presented STACTIC WP 22-13 detailing an update on the work of the *Ad Hoc* virtual NAFO Website Re-Design Working Group: Data Classification.

The *Ad Hoc* virtual Working Group met 12 April 2022 via WebEx. The focus of its meeting was to develop a policy regarding the posting and distribution of meeting documentation, and thereby enhance the transparency of the Organization. In this regard, the *Ad hoc* Virtual Working Group will present a hybrid meeting documentation policy as a possible viable solution, which could ensure transparency without impeding efficiency, to STACFAD for consideration and adoption at the 2022 Annual Meeting of NAFO.

It was noted that the proposed *Ad hoc* Virtual Working Group recommendation will have limited potential impact to STACTIC. Its basis is similar to the recommendation of STACTIC adopted at the 2019 Annual Meeting of NAFO “*Any Contracting Party can request to have their own STACTIC working papers posted to the NAFO public website going forward.*”

The United States of America enquired whether the *Ad hoc* Virtual Working Group had discussed how the recommendation could be applied to working papers prepared by the Secretariat. The Secretariat replied that this issue had not been addressed by the working group but added that it will be raised at the next meeting of the *Ad hoc* working Group.

Regarding the posting of research vessel information to the public website (STACTIC WP 21-46), Contracting Parties were in favor of posting future research vessel information publicly, provided it would not apply retroactively. The EDG was requested to review the NAFO CEM to ensure that no amendments are required for adoption of STACTIC WP 21-46 to ensure and report back to STACTIC at the 2022 Annual Meeting.

STACTIC agreed that:

- **The Secretariat would use STACTIC WP 22-09 (Rev. 4) to determine, on the basis of the Contracting Party feedback, which information may be posted to the public website, and which information should be retained on the NAFO Members’ pages.**
- **Any Contracting Party can request to have their own material on the Practices and Procedures page posted to the NAFO public website going forward.**
- **The EDG to review the NAFO CEM to ensure that no amendments are required for adoption of STACTIC WP 21-46 and report back to STACTIC at the 2022 Annual Meeting.**
- **The Ad Hoc virtual NAFO Website Re-Design Working Group: Data Classification would discuss at its next meeting how the NAFO Meeting Documentation Policy would apply to working papers prepared by the Secretariat.**

17. Report and advice of the Joint Advisory Group on Data Management (JAGDM)

The vice-Chair of JAGDM (Natasha Barbour, Canada) presented an update from the JAGDM meeting held on 26 Oct 2021 (COM Doc. 21-22). Two items that STACTIC asked JAGDM to provide on the technical implications were discussed, specifically – any possible technical issues with a definition change for the RA field in the Catch On Exit (COX) message outlined in STACTIC WP 21-36, and the analysis on the consistency of the COX message for NEAFC and NAFO, including NEAFC’s FLUX Area Exit message. Both items required more research. Concerning the COX’s RA field definition, the European Union proposed to JAGDM also consider that a CAT message should be used for the vessel’s last catch if the RA field is different than the division of the vessel’s final catch of the trip. The in-person JAGDM meetings were postponed until the Fall of 2022. Before the 2022 NAFO Annual meeting, the two items will be discussed via email correspondence to reach a conclusion. If technical advice cannot be concluded via email, a web conference will be arranged to discuss these two items. The outcome of the JAGDM meeting will be reported to STACTIC at the 2022 Annual Meeting.

Concerning the COX’s RA field definition, the European Union proposed to ask JAGDM also about a potential alternative approach: the IT implications of restricting the possibility by NAFO masters to use the COX message to report the last CAT information (using a CAT message instead) if the catching and exit area differ.

Concerning the vacant Chair for JAGDM, it was agreed to be a rotating Chair on a strict 2-year cycle (defaulting to a 1-year rotation if no candidate could be found otherwise). The order of the Chair would be alphabetical; Iceland and Canada were considered recent Chairs; therefore, other Contracting Parties were asked to start the cycle of chairing.

STACTIC agreed that:

- **A modified request including a question on potential IT implications of restricting the possibility by NAFO masters to use the COX message to report the last CAT information (using a CAT message instead) if the catching and exit area differ be forwarded to JAGDM, and hopefully will be discussed in JAGDM prior to the 2022 Annual Meeting.**

18. Recommendations from NAFO Working Groups

Two working papers were discussed under this agenda item: STACTIC WP 22-14 and STACTIC WP 22-15.

In STACTIC WP 22-14, the Joint Working Group on Ecosystem Approach Framework to Fisheries Management (WG-EAFFM) recommends inserting a footnote in Annex II.N (Fishing logbook) of the NAFO CEM to clarify and match the definition of Start and End of fishing in Annex II.M. At the 2021 Annual Meeting, input from Contracting Parties was sought regarding their domestic definition of Start and End of fishing operations for towed gears. From the input and the subsequent discussion, it was realized that Contracting Parties apply varying understandings with regard to what the masters are expected to report, notably from the initial deployment until the full retrieval of the net versus from the moment the net reaches the fishing depth until the beginning of the retrieval. The European Union expressed concerns on the controllability of the activity within VMEs if operators were able to claim that there was not fishing activity because the gear was not fully deployed, or the retrieval had already started. Several Contracting Parties expressed the possibility to request observers to collect both reference periods. It will be difficult to implement and enforce a standard definition since it must be reported by the fishing masters.

The United States of America remarked that the concepts of tow time and fishing time are important, and information should be uniformly collected, as there are scientific implications. The United States of America volunteered to draft a proposal for review at the 2022 Annual Meeting.

The Chair requested the Secretariat to compile the domestic definitions of start and end times of fishing operations, particularly on trawl and longline gears, to forward to the WG-EAFFM.

In STACTIC WP 22-15, there are two CESAG recommendations: 1) on practicality of adding codend mesh size or hook size to Annex II.N template, and 2) on review of current measures relating to reporting catch by NAFO Division.

STACTIC considers it practical to add codend mesh size to the reporting requirements. However, there is no universal standard of measurement for hook size even if these data are to be collected by observers and it is relevant information for fisheries management. Several Contracting Parties indicated that they require masters to report hook sizes even if not covered by the NAFO CEM, while others would need more time to check this. It was suggested that the trade name of the hook can be indicated instead. In regards to the measures relating to reporting catch by NAFO Division, the newly created working group on the Review of Article 30 "*Observer Program*" might consider discussing this as part of the scope of the review.

STACTIC agreed to:

- **Transmit to CESAG the view that mesh size could be added to Annex II.N template and that it would be necessary, and of added value, to have a standard definition of hook size to be used by observers and so it can be considered to be included in Annex II.N template as a reporting requirement for masters. CESAG is invited to propose a definition of the hook size.**
- **The Secretariat compile the domestic definitions of start and end times of fishing operations, particularly on trawl and longline gears, to forward to the WG-EAFFM.**
- **The United States of America to draft a proposal on the collection of tow and fishing times for presentation at the 2022 Annual Meeting.**

19. Discussion on garbage disposal onboard vessels

At the 2021 Annual Meeting, the European Union, the United States of America and Norway agreed to continue work on a joint proposal relating to marine pollution provisions in NAFO in advance of this meeting.

The European Union reported that there is no progress since the 2021 Annual Meeting. In moving further, a possibility would be to map existing marine pollution from fishing vessels within STACTIC. In order to do so, STACTIC should enquire from other NAFO bodies whether they have information on this matter. Afterwards, STACTIC could consider concrete measures in the NAFO CEM, including a general reference to MARPOL Annex V, or other approaches. There were also discussions on the difficulties for fisheries inspectors to enforce MARPOL provisions, unless they are part of the NAFO CEM. The European Union offered to produce a first draft of the STACTIC request to the Commission, for the consideration of STACTIC members.

Norway asked for further clarification regarding challenges related to MARPOL Annex V and inspections at sea. Furthermore, Norway recalled that, on several occasions, it has expressed its view that NAFO should include text in the CEM that flag Contracting Parties shall prohibit their fishing vessels from discharging garbage into the sea, in accordance with MARPOL Annex V. It further expressed concern that a different text from MARPOL could weaken or create ambiguity regarding which requirements would apply.

Norway could go along with the proposal to ask other NAFO bodies for information in regard to problems relating to marine pollution in the NAFO Regulatory Area but emphasized that Norway has not changed its view.

There was some agreement in aligning NAFO measures related to ocean garbage/pollution with those recently adopted in NEAFC, but diverging views on whether other provisions, such as reporting requirements, could also be considered.

STACTIC agreed that:

- **A request be made to the Commission on the possibility that other NAFO specialized bodies, notably the Scientific Council, provide information on the impact of garbage disposal in the NAFO Regulatory Area. The text of the request will be drafted by the European Union and coordinated by STACTIC members by correspondence to support further discussion on possible NAFO CEM amendments, prior to the 2022 Annual Meeting.**
- **STACTIC continues discussion on garbage disposal at the 2022 Annual Meeting.**

20. Discussion on labour conditions onboard vessels

The Secretariat presented a working paper noting that not all Contracting Parties have provided their Single Point of Contact (SPOC) (STACTIC WP 22-16 Rev. 2). The Chair reminded Contracting Parties to send their SPOC to the Secretariat. Russia agreed to provide the information at a later time.

STACTIC agreed that:

- **Contracting Parties submit outstanding SPOC information to the Secretariat.**

21. Discussion of the reporting of shark catches in the NAFO Regulatory Area

Natasha Barbour (Canada) presented STACTIC WP 21-49 (Rev. 3) – *Review of Greenland shark Data Collection and Methodologies*. This document was produced by a small group with the goal of identifying a single methodology for observers to collect information as required by Article 30.14(j) and Annex II.M.

With the original mandate of the dedicated group now fulfilled, STACTIC should now consider new measures for the NAFO CEM in this regard. It was noted that STACTIC WP 21-49 (Rev. 3) contained information on guidelines in handling sharks. Contracting Parties were invited to include, in the Practices and Procedures page of the website, their best practices on handling and discards of sharks.

It was agreed that this topic be included in the Terms of Reference of the working group on the Review of Article 30 “Observer Program” and may be extended to other shark species. The requirement for future assistance from the dedicated shark working group will be determined following STACTIC’s review of the information in STACTIC WP 21.49 (Rev. 3).

STACTIC agreed that:

- **Shark data collection and methodologies be included in the Terms of Reference for the working group on the Review of Article 30 “Observer Program”, and maybe extended to other shark species.**

22. Implementation of the Performance Review Recommendations

The Secretariat presented an update on the implementation of the 2018 Performance Review Recommendations 5, 7, 15-22, and 24, which are relevant to STACTIC (STACTIC WP 22-17). There was no change in the draft update except for Recommendation 19 which should now have status “Complete” with the creation of STACTIC WP 21-35.

In addition, STACTIC provided comments and observations on the following recommendations:

- **Recommendation 16** – STACTIC WP 22-19 indicates that there is considerable improvement in recording encounters with VMEs. This coincides with the enhancement of the observer scheme made in 2019. The Secretariat was requested to conduct further analysis on the observers’ data and report to STACTIC at the 2022 Annual Meeting. The results of the analysis may be forwarded to the WG-EAFFM.
- **Recommendation 19** – STACTIC WP 21-35 – *Contracting Party Reporting Deadlines* can be uploaded to the Practices and Procedures Member’s page.
- **Recommendation 20** – STACTIC will re-iterate its request to the Commission at the 2022 Annual Meeting for further guidance in STACTIC discussions of the *FAO Voluntary Guidelines for Flag State Performance*.
- **Recommendation 21** – EDG is working on it (See agenda item 11).
- **Recommendation 24** – STACTIC will reflect further on this at the 2022 Annual Meeting.

With regard to Recommendation 20, Norway re-iterated that in their view, the recommendation from the Performance Review Panel that the NAFO Contracting Parties conduct a flag State evaluation and submit this to STACTIC, would be a very useful exercise, as flag State performance is key the successful implementation of the NAFO CEM. Norway also noted that the *FAO Voluntary Guidelines for Flag State Performance* were agreed through a technical consultation in which NAFO Contracting Parties played an active role, and which was founded by four NAFO Contracting Parties: Canada, the United States of America, the European Union and Norway, in addition to New Zealand.

The European Union expressed concerns about the flag State evaluation in view of lack of progress in other RFMOs, the need for a dedicated evaluation for the NAFO framework and the limited added value of self-evaluations which do not describe the details of the domestic legal framework applying the FAO Guidelines, but only general positive assessments. The European Union expressed the view that the recommendation consists in reviewing the Guidelines’ criteria at NAFO level and that any step further requires a clear commitment by Parties to do a meaningful exercise.

STACTIC agreed that:

- **In regard to the implementation of the 2018 Performance Review: Recommendation 16, the Secretariat would conduct further analysis on the observers’ data and report to STACTIC at the 2022 Annual Meeting.**

- In regard to the implementation of the 2018 Performance Review: Recommendation 19, STACTIC WP 21-35 can be uploaded to the Practices and Procedures Member's page.
- In regard to the implementation of the 2018 Performance Review: Recommendation 20, STACTIC will re-iterate its request to the Commission at the 2022 Annual Meeting for further guidance in STACTIC discussions of the *FAO Voluntary Guidelines for Flag State Performance*.
- In regard to the implementation of the 2018 Performance Review: Recommendation 24, STACTIC will reflect further on this at the 2022 Annual Meeting.

23. Issues relating to the impacts of COVID-19

Contracting Parties gave oral reports concerning COVID-19 impacts in the compliance of the NAFO CEM so far in 2022. The reports centered on the impacts on at-sea inspections, port inspections, and the implementation of the observer scheme. The general sentiment is that they are returning to "normalcy" as in the pre-COVID-19 times. Wearing masks and social distancing are practiced during inspections. Monitoring of the COVID-19 situation continues through vigilance and alertness.

STACTIC agreed that:

- Contracting Parties continue to report on the impact of COVID-19 for 2022. The Secretariat will compile the reports and the compilation will be included as an annex in the next cycle of the Annual Fisheries and Compliance Review.

24. Visma VMS contract renewal

The Secretariat presented STACTIC WP 22-18 (Rev. 2), an update to the VMS contract renewal including that a two-year bridge contract has been agreed with VISMA as well as an estimated timeline if a call for tender is put out. It was agreed that the two-year bridge contract with VISMA is necessary and can go ahead.

The European Union expressed the view that STACFAD is relevant body to advise the NAFO Commission on financial decisions, without prejudice to the input from STACTIC.

After further discussion, the Secretariat agreed to compile further information in advance of the 2022 Annual Meeting. The European Union suggested sending all relevant information to STACFAD in advance of the 2022 Annual Meeting so they can give their own advice to the NAFO Commission. This agenda item will also be continued at the 2022 Annual Meeting.

STACTIC agreed that:

- In advance of the 2022 Annual Meeting, the Secretariat will compile further information on historic contracts, NEAFC's current VMS details as well as what other software providers may have to offer.
- The Secretariat would forward all relevant information to STACFAD in advance of the 2022 Annual Meeting so they could consider in tandem with STACTIC whether to renew the contract with VISMA for 2025 forward or to put out a call for tender.
- This agenda item will be discussed further at the 2022 Annual Meeting.

25. Other business

a. UN FAO Survey of RFB Secretariats on Safety and Decent Working Conditions on Fishing Vessels, November 2021

The Secretariat presented STACTIC WP 22-11 for information. This is an FAO initiative which aims to: 1) increase and build capacity for implementation of safety at sea and working improvements in fishing operations managed by RFMO/As, and 2) to work towards increased global and regional cooperation on addressing safety at-sea and decent working conditions in fishing operations.

b. FAO Workshop - Use of cameras to record deepwater shark and VME indicator catches by scientific observers, August 2021

A demonstration of the Observer app which is currently in the testing phase was presented by the Secretariat at the workshop (STACTIC WP 22-12). It was noted that this activity was done as part of the GEF project “*Deep-sea Fisheries under the Ecosystem Approach*” of which NAFO is a partner. FAO manages this project.

c. The International MCS (IMCS) Network “7th Global Fisheries Enforcement Training Workshop”

This workshop initially scheduled to take place in August 2022 in Halifax, Nova Scotia was postponed to 2023.

26. Time and place of next meeting

The next STACTIC meeting will be held in Porto, Portugal from 19-23 September 2022.

27. Adoption of Report

The meeting report was adopted by correspondence.

28. Adjournment

The meeting adjourned at 11:55 UTC on 12 May 2022.

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Annex 2. Agenda

1. Opening by the Chair, Kaire Märtin (European Union)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. STACTIC Participation
5. Annual Compliance Review, 2021
6. Review of Article 30 of the NAFO CEM
7. New and pending proposals on enforcement measures: Possible revisions of the NAFO CEM
8. Practical application of Port State Measures in NAFO
9. Marking of gears
10. NAFO MCS website and application development
11. Report and Recommendations of the Editorial Drafting Group (EDG)
12. Half-year review of the implementation of new NAFO CEM measures
13. Review and evaluation of Practices and Procedures
14. Review of current IUU list pursuant to NAFO CEM, Article 53
15. Bycatch and discards
16. Discussion of data classification and access rights
17. Report and advice of the Joint Advisory Group on Data Management (JAGDM)
18. Recommendations from NAFO Working Groups
19. Discussion on garbage disposal onboard vessels
20. Discussion on labour conditions onboard vessels
21. Discussion of the reporting of shark catches in the NAFO Regulatory Area
22. Implementation of the Performance Review Recommendations
23. Issues relating to the impacts of COVID-19
24. Visma VMS contract renewal
25. Other business
 - a. UN FAO Survey of RFB Secretariats on Safety and Decent Working Conditions on Fishing Vessels, November 2021
 - b. FAO Workshop - Use of cameras to record deepwater shark and VME indicator catches by scientific observers, August 2021
 - c. The International MCS (IMCS) Network “7th Global Fisheries Enforcement Training Workshop”
26. Time and place of next meeting
27. Adoption of report
28. Adjournment

Annex 3. Opening Remarks

CANADA

The Russian Federation's attendance at our meeting this week serves as a reminder of President Putin's unjustifiable and unprovoked invasion of Ukraine.

In launching the largest military invasion of any European country since World War II, Russia seeks to undermine the principle of territorial integrity, to destroy the freedom of the Ukrainian people, to overthrow the democratically elected government of a sovereign nation and to undermine the rules-based international order. This assault has led to the senseless deaths of countless innocent people and ever-mounting humanitarian consequences. It is a clear violation of Russia's obligations under international law, including the United Nations Charter.

Canada condemns President Putin's unlawful invasion, because Russia's actions cannot and must not be normalized. We call on the Russian leadership to abandon this path of war, and return to good-faith diplomacy.

NAFO is based on a multilateral commitment to common goals, to be achieved through discussion, good-faith negotiation, and compromise. We look forward to working in that spirit over the next four days, and beyond, as members of STACTIC focus their efforts on the many important items we're tasked with this week. However, as we do so, we will continue to be mindful of the ongoing, blatant attack on these principles currently being waged by Russia on Ukraine and its people.

DENMARK (IN RESPECT OF FAROE ISLANDS AND GREENLAND)

The Government of the Faroe Islands and the Government of Greenland condemn by the firmest possible terms the Russian armed attack on Ukraine. Our participation at this meeting shall by no means be conceived as the situation being normal.

EUROPEAN UNION

Madam Chair, Mister Vice-Chair, colleagues from the Executive Secretary, delegates:

We look forward to having fruitful and constructive discussions one more time, so that we can make progress on the long agenda ahead of us. The European Union considers fisheries control an essential pillar to ensure the long-term conservation and sustainability of NAFO fisheries. We would like to thank the NAFO Secretariat, Chair and Vice-Chair for all the preparations to organise this meeting in these challenging conditions, in a hybrid mode and with some restriction deriving from the pandemic still in place.

On 12 February 2022, we were shocked by the news of the tragic sinking of the Spanish flagged vessel VILLA DE PITANXO. On behalf of the European Union, I wish to express our sincerest condolences and sympathy to the families and relatives of the crewmembers. I would also like to transmit our deepest appreciation for those involved in the rescue efforts.

Let me express also the European Union and its Member States' full solidarity with Ukraine and the Ukrainian people.

The EU condemns in the strongest possible terms Russia's unprovoked and unjustified act of aggression against Ukraine, which grossly violates international law and the United Nations Charter, and undermines international security and stability.

The EU demands that Russia immediately cease its military actions, withdraw all its troops from the entire territory of Ukraine and fully respect Ukraine's territorial integrity, sovereignty and independence within its

internationally recognised borders and abide by UN General Assembly resolution titled “Aggression against Ukraine” supported by 141 states at the 11th emergency special session.

The EU resolutely supports Ukraine’s inherent right of self-defence and the Ukrainian armed forces’ efforts to defend Ukraine’s territorial integrity and population in accordance with Article 51 of the UN Charter.

At all times Russia must respect its obligations under international law, including international humanitarian and human rights law, including with respect to the protection of civilians, women and children.

Russia also needs to stop its disinformation campaign and cyber-attacks.

JAPAN

We are pleased to participate in STACTIC intersessional meeting and would like to express our gratitude to NAFO Secretariat for preparing this meeting in the hybrid format. We are looking forward to continuing working together with colleagues from Contracting Parties for constructive discussion and progress in important issues which STACTIC has dealt with.

Japan takes this opportunity to make the statement in relation to the war in Ukraine as follows;

Japan is extremely concerned about the violations of sovereignty and territorial integrity of a NAFO member, as well as the violations of international law.

Russia’s aggression against Ukraine is absolutely unacceptable and Japan strongly condemns it.

Thank you very much.

NORWAY

Russia’s attack on Ukraine is an unprovoked and illegal attack on a peaceful neighbour. It is a clear and unacceptable violation of international law. It is a flagrant breach of the most fundamental rules of international relations and respect for the sovereignty and territorial integrity of UN member states. It shows complete disrespect for the UN Charter and international law, and poses a threat to the international order that was established after 1945.

Norway condemns Russia’s attack on Ukraine in the strongest possible terms. Russia’s aggressive actions are a clear violation of Ukraine’s independence, sovereignty, and territorial integrity.

UNITED KINGDOM

The United Kingdom would like to thank the NAFO secretariat for organising this meeting of STACTIC, noting the particular challenges of hosting a meeting where not all delegates, including the UK are able to attend in person due to the current circumstances. I am sure any technical issues will once again be overcome and we are looking forward to discussing with representatives of Contracting Parties in attendance the important subjects on what is another packed agenda and hope that the discussions will be both constructive and productive.

In respect of the Russian assault on Ukraine:

Russia’s assault on Ukraine is an unprovoked, premeditated attack against a sovereign democratic state. The UK and our international partners stand united in condemning the Russian government’s reprehensible actions, which are an egregious violation of international law and the UN Charter.

As a Permanent Member of the UN Security Council, Russia has a particular responsibility to uphold international peace and security. Instead, it is violating the borders of another country and its actions are causing widespread suffering.

The Russian Government has shown that it was never serious about engaging in diplomacy – it has deliberately worked to mislead the world, in order to mask its carefully planned aggression.

As the UN Secretary-General has said, such unilateral measures conflict directly with the United Nations Charter - the use of force by one country against another is the repudiation of the principles that every country has committed to uphold.

Russia must urgently de-escalate and withdraw its troops. It must be held accountable and stop undermining democracy, global stability, and international law.

Thank you

UNITED STATES OF AMERICA

What an honor it is to be here today. The United States would like to express its deep appreciation to the Secretariat for hosting and facilitating our first hybrid meeting of STACTIC. We recognize and appreciate all of your hard work in organizing this important meeting. We are very much looking forward to reconnecting with our NAFO partners who are here in Halifax and abroad this week.

As we begin our meeting today, Chair, we note the Russian Federation's (remote) participation in this meeting. The U.S. Delegation is compelled, therefore, to make the following statement reflecting the current U.S. position regarding Russian aggression in Ukraine:

- Russia's initial invasion and ongoing war against Ukraine is unprovoked and unjustified. President Putin has waged a brutal war that has rendered catastrophic loss of life and human suffering in Ukraine, as well as extensive environmental damage and destruction that will extend far beyond Ukraine's borders. Russia alone is responsible for the death and destruction that this invasion continues to bring, and the world must hold Russia accountable.
- Russia's actions constitute a clear violation of Article 2(4) of the United Nations Charter, which states that all member States shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any State.
- The U.S. Delegation stands in solidarity with its like-minded allies and partners in NAFO and the international community more generally to condemn Russia's actions in the strongest possible terms.
- We also join our partners in urgently calling on Russia to immediately cease its use of force against Ukraine, refrain from any further unlawful threat or use of force against any UN member State, and immediately withdraw all of its military forces from the territory of Ukraine within its internationally recognized borders.

While Russia's actions in Ukraine are reprehensible, we cannot and should not allow this heinous situation to impede the important work of this body. We have a full agenda ahead of us, including important discussions on STACTIC participation, landing obligations, IUU vessel listings, and many more. We are optimistic that the opportunity to meet both in person and virtually will facilitate communication and help us find solutions to these significant topics. We look forward to cooperative and productive discussions over the course of this week.

Thank you.

Northwest Atlantic Fisheries Organization



Report of the STACTIC Observer Program Review Working Group (WG-OPR) Meeting

26-28 July 2022
Montréal, Québec

NAFO
Halifax, Nova Scotia, Canada
2022

Report of the STACTIC Observer Program Review Working Group (WG-OPR) Meeting

26-28 July 2022
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Report of the STACTIC Observer Program Review Working Group (WG-OPR) Meeting26-28 July 2022
Montréal, Québec**1. Opening of the Meeting**

The host (Canada) opened the meeting at 09:00 (UTC/GMT -4 hours) on Tuesday, 26 July 2022 at the Courtyard by Marriott in Montreal, Quebec, Canada and via WebEx, and welcomed representatives from Canada, Denmark (in respect of the Faroe Islands and Greenland), the European Union, Iceland, Japan, and the United States of America (Annex 1).

2. Appointment of Rapporteur

The NAFO Secretariat (Mikaela Soroka) was appointed as rapporteur.

3. Election of Chair and Co-Chair

Brent Napier (Canada) was elected Chair. The group agreed that a Co-Chair would be unnecessary for the meeting.

4. Adoption of Agenda

The agenda was adopted as previously circulated (Annex 2).

5. Draft Terms of Reference

The Working Group noted that following the circulation to STACTIC members, there were no comments to the draft Terms of Reference (STACTIC WP 22-30) (Annex 3), which are therefore considered endorsed.

6. Timeline for Review

Pursuant to Article 30.19, the Observer Program Working Group conducted the Observer Program review 26-28 July 2022, agreeing to continue work in support of its recommendations intersessionally. The Working Group further agreed to seek STACTIC's endorsement to advance longer-term betterments to the Observer Program, such as Observer Electronic Application and Remote Electronic Monitoring, in 2023. The Working Group recommends undertaking a number of tasks to carry out a full update of the Observer Program by 2023 without prejudice to the possibility to amend some elements of the program in 2022, which is identified as a priority.

It was **agreed** that:

- **The WG-OPR recommends a number of tasks to carry out a full update of the Observer Program by 2023 without prejudice to the possibility to amend some elements of the program in 2022, which is identified as a priority.**
- **The WG-OPR will seek STACTIC's endorsement to advance longer-term betterments to the Observer Program.**

7. Article 30 Implementation

The Chair advised that the discussions and recommendations under this agenda item would constitute the core of the Observer Program review made pursuant to 30.19 of the NAFO CEM. The Secretariat presented STACTIC WP 22-26 (Rev.), explaining the elements of the working paper that provided a provision by provision Contracting Party compliance assessment over a three-year period (2019-2021). The Working Group discussed each section of Article 30, with the view to evaluate implementation progress, identify challenges and develop recommendations to STACTIC to improve the Program. The summary of discussions and recommendations related to the review are presented in STACTIC OPR-WP 22-03, which forms Annex 4 of this report.

The Working Group noted an improvement on the level of implementation of the Observer Program over the years, with the exception of reporting obligations by some Contracting Parties, notably concerning the justification on the use of the derogations to the 100% observers' coverage. Furthermore, the Working Group highlighted that some instances of partial compliance and non-compliance had been a direct consequence of measures adopted by Contracting Parties relating to the COVID-19 pandemic.

The Working Group recommends that Contracting Parties ensure the full implementation of the current framework under Article 30, with a recognition that the Observer Program may change with time as a result of this group's efforts. Furthermore, the Working Group noted a need for a requirement in the program that flag State Contracting Parties should exploit the data originating from the observer program for control purposes.

It was **agreed** that:

- **The WG-OPR recommends establishing a clear mandate for the flag State Contracting Parties to adopt appropriate measures necessary to effectively comply with their responsibilities under the observer program.**
- **The WG-OPR recommends assessing the need to update Article 38 on serious infringements when undertaking changes to the Observer Program.**
- **The WG-OPR recommends considering derogations based only on exceptional and appropriately justified circumstances or the use of remote electronic monitoring.**
- **The WG-OPR recommends compiling “international standards or guidelines” (Art 30.8(f)) with a view to consider the adoption of NAFO ones.**
- **The WG-OPR recommends to revise the use of the expression “trip” and “entry into port” in the wording of Art 30, in light of the definition of fishing trip in the NAFO CEM and with a view to clarify the reporting requirements.**
- **The WG-OPR recommends that STACTIC review the wording of Article 30.14.g**
- **The WG-OPR recommends clarifying the wording of Article 30.16, linking the cost to the deployment of the observer.**
- **The WG-OPR recommends to undertake an editorial revision of the program, including grouping general provisions and flag State Contracting Parties' obligations; and to consider moving to Annex II.M the data elements to be reported by observers.**
- **The WG-OPR recommends that the Duties of the Executive Secretary (30.19) are revised in light of the changes adopted in the Observer Program and that an assessment on the need to allocate appropriate resources to the Secretariat is carried out.**

8. Data Collection on Sharks

The European Union presented STACTIC WP 21-49 (Rev. 3), highlighting the four (4) relevant recommendations related to the capture of information on maturity, disposition, pictures and fork length. While acknowledging the growing data collection requirements placed on observers, the Working Group noted the scientific value of collecting additional information highlighted in WP 21-49 (Rev. 3). The Working Group discussed the challenges of collecting the additional data elements in the context of reducing shark damage/mortality, while mitigating the risk to crew and observers. The benefit of a handling guide, specific to Greenland shark, was discussed, and the Group found that this could be a complimentary product that should be discussed by STACTIC. The Working Group also noted the added value of seeking the Scientific Council's input of STACTIC WP 21-49 (Rev. 3) on relevant information, including shark length-to-weight correlation charts and formulas and shark identification and handling guide. The utility of capturing the location of shark occurrences directly in Part 5 of the observer's template report as well as pictures/video was discussed, noting the imagery may support more efficient data capture, as well as provide ancillary benefits to science. It was also noted that STACTIC WP 21-49 (Rev. 3) indicates that there would be some value in considering a tagging scheme. This would require input from other NAFO bodies if it was to be considered. Denmark (in respect of the Faroe Islands and Greenland) noted the disposition of shark varied based on fishing method, and the

Working Group reflected on the need to include some language guiding observers on evaluating whether collection of some or all data was appropriate based on the sharks' disposition.

It was **agreed** that:

- **The WG-OPR recommends to include as part of the revision of the observers' reporting template (Annex II.M) information on maturity, disposition, pictures and fork length of Greenland sharks, and to the extent necessary, location; as well as an indication that data collection is done minimizing damage to the sampled individuals.**
- **The United States of America and the European Union will collaborate on preparing a draft working paper relating to this recommendation.**
- **The WG-OPR recommends to seek the Scientific Council's input on STACTIC WP 21-49 Rev. 3 as well as any resulting proposal.**

9. Best Practices identified by CESAG

The Chair presented COM-SC CESAG-WP 21-01 (Rev.), highlighting the eight (8) recommendations, and associated proposed timelines, made with the Guidance on Best Practices for Tow Catch Estimates in NAFO Fisheries. A member of CESAG provided additional explanations with regard to the best practices identified by CESAG concerning the International Observer Program. A summary of the deliberations and recommendations to update the NAFO Observer Program for each topic is provided below. The Working Group notes that the scope of some of CESAG's recommendations was not fully clear and the recommendations below would benefit from further discussions.

<p>1. Observers deployed from a different flag state to the vessel, either through a central provider or through a bilateral agreement or MoU between designating and receiving Contracting Parties.</p>	<p>The Working Group considers a regional observer program a long-term option. Contracting Parties appreciated the concept of a central, NAFO observer program, managed by the organization. Contracting Parties noted the value one system could provide, including streamlining deployment, training, and ensuring consistent practices across the organization. The Working Group noted that some elements such as the possibility to have observers on board from a different Contracting Party are already part of the program; and that some other elements of a regional program such as the use of the observers' app provided by the NAFO Secretariat should be explored in the short or medium term.</p>
<p>2. Common Standards and program accreditation</p>	<p>The Working Group recommends developing common standards (e.g. training, equipment, working conditions, safety, etc.) to be made part of the Observer Program. This task can be linked to the research and identification of international standards and guidelines referred to in Article 30.8(f) of the NAFO CEM.</p>
<p>3. Regular verification of average box weights</p>	<p>The Working Group recommends including within the observers' tasks the verification of average box weights. In adding this task, the frequency or scenarios for that verification must give due regard to the already many tasks of observers.</p>

4. Regular verification conversion factors	The Working Group considered the assessment of conversion factors was outside the tasks of the observer. However, the Working Group recommends including within the observers' tasks the verification of the presentation/product form code. In adding this task, the frequency or scenarios for that verification must give due regard to the already many tasks of the observers.
5. Regular verification of volume to mass ratio	The Working Group considers that the assessment of the density factors on the vessels' holds would not be a task for observers insofar as these factors are determined by inspectors. The Working Group considers that there could be some merit in the verification of the volume to mass ratio of catches in the codend, but the nature of CESAG's recommendation remained unclear.
<p>6. Observers provided with independent means of communication</p> <p>Comments:</p> <p>a) NAFO CEM Article 30.8 Duties of the flag state Contracting Party</p> <p><i>(e), ensure that observers are equipped with an independent two-way communication device at sea.</i></p> <p>b) Still pending full implementation by several Contracting Parties.</p>	The Working Group concluded that this recommendation is already part of the Observer Program. However, the Working Group recommends establishing a common understanding on the meaning of the requirement to "ensure that observers are equipped with an independent two-way communication device at sea", in particular, whether it entails an independent data connection or only an independent device; as well as, for the latter case, to consider the introduction of an obligation for the Master to provide a connection for the observer.
7. Photos and Video	The Working Group considered that these elements are already part of the observer program (Art 30.14(i)(ii)). The Working Group does not advise to include within the program electronic data exchanges of these large files in daily reporting due to the difficulties to transmit them via satellite connection.
<p>8. Catch data verification</p> <p><i>(Recommendation from STACTIC OPR-WP 18-11)</i></p>	The Working Group recommends that the requirements to verify production logbook data and labelling be made more explicit in the NAFO CEMs.

It was **agreed** that:

- The WG-OPR recommends developing common standards (e.g. training, equipment, working conditions, safety, etc) to be made part of the Observer Program. This task can be linked to the research and identification of international standards and guidelines referred to in Art 30.8(f) of the NAFO CEM.
- The WG-OPR recommends including within the observers' tasks the verification of average box weights and presentations. In adding these tasks, the frequency or scenarios for that verification must give due regard to the already many tasks of the observers.
- The WG-OPR recommends to establish a common understanding on the meaning of the requirement to ensure that observers are equipped with an independent two-way communication device at sea", in particular whether it entails an independent data connection or only an independent device; as well as, for the latter case, to consider the introduction of an obligation of the Master to provide a data connection for the observer.
- The WG-OPR recommends that the requirements to verify production logbook data and labelling be made more explicit in the NAFO CEMs

10. Observer Electronic Application

The Chair noted the Working Group's views, expressed throughout the meeting, that an OEA would contribute to the effectiveness of the Observer Program and address some of the data capture and reporting challenges flagged by the review. The Working Group further discussed the utility and potential benefits of this tool and expressed interest in supporting the ongoing work of the NAFO Secretariat, on a priority basis, in this regard. It was agreed that the Working Group would meet intersessionally with the NAFO Secretariat to receive an update on the OEA initiative and contribute to forward planning for future operational testing and potential implementation, as the Secretariat was unable to provide a formal update at this meeting.

It was **agreed** that:

- The WG-OPR recommends establishing the observer application as a main tool for the observers to carry out their reporting obligations and exploring the necessary steps to be undertaken including by the NAFO Secretariat to produce and maintain the observer application.

11. Remote Electronic Monitoring

The Chair introduced the agenda item and encouraged Contracting Parties to share domestic experiences and best practices related to the use of Remote Electronic Monitoring (REM). Canada, The United States of America, the European Union, and Japan provided brief summaries of their collective experiences. The use of REM in other RFMO's was discussed, noting in particular ICCAT's preliminary work in this regard. The Chair suggested that the Working Group could recommend to STACTIC, as a starting point, that Contracting Parties provide relevant information related to their use of REM to support advancement of these technologies in NAFO.

A discussion occurred regarding the various types of sensors that could be used aboard a variety of different vessels. The Working Group also discussed how having Remote Electronic Monitoring (REM) aboard vessels could impact the Observer Program: if 100% coverage will still be relevant and how this will impact the Scientific Council's need for scientific data. The European Union shared a document on their internal guidelines which found that REM was as useful as an inspection, and therefore is a cost-effective tool useful for control. The Working Group was of the view that derogations from 100% observer coverage should only happen in exceptional circumstances or where alternative means of observation are used. It was the consensus of the Working Group that, depending on various parameters regarding REM, a human observer may not be required. It was agreed that using REM as an alternative means to human observation would require establishing minimum standards for the electronic systems. The European Union volunteered to draft a proposal regarding guidelines for the use of REM which could be considered for the introduction of derogations to a 100% coverage

of the NAFO Observer Program. The Working Group noted that the use of REM as an alternative means of observation should also consider the need to collect specific scientific data where necessary and that other NAFO bodies should be included in the discussion to the extent necessary. The Working Group concluded that further discussions are needed particularly with respect to the development of corresponding and appropriate infringements, clear guidelines on data storage and retention, data access, REM reporting and review standards, gaps, or vulnerabilities in data collection. The United States of America also noted that the use of REM in the NRA represents a significant shift in policy and practice and should be vetted by the Commission. The Chair proposed for the Working Group to put forward a recommendation to STACTIC that encompasses the Contracting Parties' own REM experiences, the language that is foreseen to require adjustment in the NAFO CEM and to endorse the development of minimum standards.

It was **agreed** that:

- **The WG-OPR recommends to consider the use of REM as justification to derogate from a 100% observers' coverage. In connection with this option, the Working Group recommends to develop minimum standards for the system and to identify scientific data that the system could not provide, as well as appropriate alternatives to collect this data (e.g. by the operator).**
- **The European Union volunteered to draft a proposal regarding the guidelines for the use of REM which could be considered for the introduction of possible derogations to a 100% coverage of the NAFO Observer Program.**
- **The WG-OPR recommend to STACTIC that Contracting Parties share information on their REM experiences including successes and any challenges faced.**

12. Simplification of Notifications

The Working Group noted that a notification benefiting from simplification was the 24h observer deployment notification, in light of the fact that the observers' name is part of the OBR report. The Chair noted that Canada had previously submitted a proposal on this item to STACTIC and would be presenting a revised proposal at the 2022 STACTIC Annual Meeting.

It was **agreed** that:

- **The WG-OPR recommends to simplify the 24h observer deployment notification under Article 30.10(a) of the NAFO CEM.**
- **Canada will revise STACTIC WP 22-24 - Streamlining the Notification Process for Observer Deployments - for presentation at the 2022 STACTIC Annual Meeting.**

13. Standardizing Reporting Templates

There are numerous reporting obligations for both Contracting Parties and observers under Article 30. To ensure complete and uniform data collection that can easily be reviewed and analysed, the Working Group recognized the need to develop reporting templates for these requirements.

a. Contracting Party reporting requirements

The Working Group reviewed Contracting Parties' reporting obligations under Article 30, highlighting requirements in Article 30.6(e), 30.9(c), and 30.10(d). The United States of America and Canada volunteered to draft proposal(s) on how to refine the different Contracting Party and Observer reporting requirements.

b. Observer reporting requirements

The Working Group looked at the reporting requirements of observers under Article 30 and agreed on the importance of ensuring standardized reporting. The United States of America and Canada volunteered to revise

Annex II. M. to improve data quality and collection. It was noted that work to amend the observer reporting template would likely need to continue beyond the 2022 STACTIC Annual Meeting.

The United States of America and Canada volunteered to draft proposal(s) on how to refine the different Contracting Party and Observer reporting requirements. It was noted that work to amend the observer reporting template would likely need to continue beyond the 2022 STACTIC Annual Meeting.

It was **agreed** that:

- **The WG-OPR recommends to undertake a revision of Annex II.M to incorporate additional elements (e.g. Greenland sharks' data) and to update the associated templates.**
- **The WG-OPR recommends to draft templates for Contracting Parties' reporting obligations, including Articles 30.6(e), 30.9(c), and 30.10(d).**
- **The United States of America and Canada volunteered to draft proposal(s) on how to refine the different reporting requirements and report back to the Working Group.**

14. Other Business

The United States of America presented STACTIC OPR-WP 22-01, which seeks to enlarge the observer reporting requirements to include both fishing and hauling start and end times. The purpose of providing all data sets is to ensure that this information can clearly be understood and cross referenced with other data sets, namely the master's logbooks. There was some concern from the Working Group regarding the language used in the proposal from the United States of America regarding the four points of reference that describe the start and end times of fishing activity. The United States of America thanked Contracting Parties for their comments and would work intersessionally to address the concerns with a revised paper to be put forward at the 2022 STACTIC Annual Meeting. The Working Group additionally noted that the United States of America should seek input from the Scientific Council on the relevancy of this data set for fixed gear in the NRA.

It was **agreed** that:

- **The United States of America will work with interested Contracting Parties to revise STACTIC OPR-WP 22-01 for presentation at the 2022 STACTIC Annual Meeting.**

15. Adoption of the Report

The report was adopted via correspondence.

16. Adjournment

The meeting adjourned at 14:10 (UTC/GMT -4 hours) on 28 July 2022.

Annex 1. List of Participants

Napier, Brent (in-person)	Chair
Barbour, Natasha Browne, Dion (in-person) Hickey, Janelle	Canada
Gaardlykke, Meinhard Nedergaard, Mads Trolle Radoor, Sanne	Denmark (in respect of Greenland and Faroe Islands)
Arrhenius, Fredrik Babcionis, Genadijus Dybiec, Leszek Ferreira, Carlos Granell, Ignacio Grossmann, Meit Head, Francois Luengo, Gabriel Arevalillo Mattsson, Ylva Näks, Liivika Ogertschnig, Larissa Okas, Reemet Quintans, Miguel Robledo, C. Margarita Mancebo Statkus, Romas Szumlicz-Dobiesz, Justyna Trübner, Björn Tubio, Xose	European Union
Ásmundsson, Jóhann	Iceland
Akiyama, Masahiro Matsunaga, Satoshi Yoshida, Mako	Japan
Jaburek, Shannah Mencher, Elizabethann Pohl, Katie (in-person) Provencher, Eric	United States of America
Kendall, Matt (in-person) Soroka, Mikaela (in-person)	NAFO Secretariat

Annex 2. Agenda

1. Opening of the Meeting
2. Appointment of Rapporteur
3. Election of Chair and Co-Chair
4. Adoption of Agenda
5. Draft Terms of Reference
6. Timeline for Review
7. Article 30 Implementation
8. Data Collection on Sharks
9. Best Practices identified by CESAG
10. Observer Electronic Application
11. Remote Electronic Monitoring
12. Simplification of Notifications
13. Standardizing Reporting Templates
 - a. Contracting Party reporting requirements
 - b. Observer reporting requirements
14. Other Business
15. Adoption of the Report
16. Adjournment

Annex 3. Terms of Reference for NAFO STACTIC 2022 Observer Program Review Working Group (WG-OPR) (STACTIC WP 22-30)

Background

At the 2018 Annual Meeting, an updated Article 30 was adopted by the NAFO Commission, which came into effect on 1 January 2019, except for those Contracting Parties which elected to delay the application of Article 30 of the NAFO Conservation and Enforcement Measures (CEM) until 1 January 2020. Since coming into effect, significant progress has been made by Contracting Parties to implement the observer program according to the revised Article 30. However, some challenges have arisen during the implementation process, and the annual reports under Article 30.10(d) have identified some areas for improvement. COVID-19 has also impacted the implementation of the program.

Article 30.19 of the NAFO CEM mandates that STACTIC complete a review of the observer program in 2022. At the 2022 STACTIC Intersessional Meeting, Contracting Parties determined that a dedicated working group would be required to carry out the review, as it could not be completed within the confines of the meeting. It was agreed that the working group would meet in advance of the 2022 Annual Meeting, to present a report to STACTIC at that time.

This document proposes the Terms of Reference for the **Observer Program Review Working Group (WG-OPR)**.

Membership

All Contracting Parties are welcome and encouraged to participate in the Working Group (WG). The WG should be comprised of representatives from Contracting Parties with a working knowledge of NAFO observer practices and procedures, Article 30 requirements and understanding of the changes made to the program.

Scientific Council will be asked to nominate an expert to participate as a liaison between the WG and the Council. This liaison shall attend all meetings of the WG.

The WG should elect its chair and co-chair.

Objective

Pursuant to Article 30.19 NAFO CEM, conduct the mandatory 2022 review of Article 30 NAFO CEM as adopted in 2019. The WG should identify implementation challenges of the Observer Scheme and provide recommendations to STACTIC to address those issues, to enhance the quality and types of data captured and to improve the overall consistency and efficiency of the observer program.

Tasks

The Working Group should focus its efforts on:

1. Reviewing the implementation of the provisions of Article 30 since its last revision, identifying the challenges experienced by Contracting Parties; and
2. Making recommendations to STACTIC to revise the provisions in Article 30 NAFO CEM with a view to improve the program, including:
 - a. Standardized reporting templates
 - i. Contracting Party reporting requirements

1. Article 30.6(e) - Observer Derogation Comparison
2. Article 30.10(d) - Observer Compliance Report
- ii. Observer reporting requirements
 1. Annex II.M Part 2, review the definition of the duration of a haul
- b. Potential improvements on Data Collection on Sharks
 - i. Review findings presented in STACTIC WP 21-49 Rev3 "Review of Greenland shark Data Collection and Methodologies"
 1. Standardize and incorporate new data fields in Annex II.M, Part 5
 2. Evaluate need for standardized methodologies for data collection/estimation, handling and release
 3. Evaluate need for a species identification guide/observer handbook for Sharks
 - c. Incorporation of best practices outlined in COM-SC CESAG-WP 21-01 Rev.
 - d. Potential for simplification of notifications
 - e. Potential use of the observer electronic application
 - f. Potential use of remote electronic monitoring (REM)
 - i. in lieu of observers
 - ii. in addition to observers

The WG should take into account documents compiled by the Secretariat and any additional information provided by Contracting Parties and NAFO bodies (i.e., STACTIC, Scientific Council) for identification of areas requiring improvement.

Meetings

The WG will identify an appropriate timeline in which to complete the review.

The WG should meet as required to perform the duties prescribed and will communicate regularly through teleconferences and electronically.

A face-to-face meeting with hybrid capacity will be hosted by Canada, the dates to be determined in consultation with participating Contracting Parties.

Reporting

The WG should prepare a report of the proceedings of each of its meetings to be presented to STACTIC.

The WG should report to STACTIC at the 2022 NAFO Annual Meeting with its findings and recommendations.

Annex 4. Review of Article 30 discussion summary from STACTIC OPR-WP 22-03 (Rev.)

Article number	Article content	Discussion	Recommendation/Action
General Discussion		<ul style="list-style-type: none"> • A framework is required for linkage between Flag State / Contracting Party with the Observer Program. (EU to draft wording) • Article 30.14 is lengthy, possible streamlining, usage of annexes and EDG review. 	<ul style="list-style-type: none"> • The WG-OPR recommends a number of tasks to carry out a full update of the Observer Program by 2023 without prejudice to the possibility to amend some elements of the program in 2022, which is identified as a priority. • The WG-OPR recommends establishing a clear mandate for the flag State Contracting Parties to adopt appropriate measures necessary to effectively comply with their responsibilities under the observer program. • The WG-OPR recommends assessing the need to update Article 38 on serious infringements when undertaking changes to the observer program. • The WG-OPR recommends to revise the use of the expression “trip” and “entry into port” in the wording of Art 30, in light of the definition of fishing trip in the NCEM and with a view to clarify the reporting requirements. • The WG-OPR recommends to undertake an editorial revision of the program, including grouping general provisions and flag State Contracting Parties’ obligation; and to consider to move to Annex II.M the data elements to be reported by observers.

30.2	Observers shall execute their duties and functions in an unbiased manner regardless of nationality and of which flag the vessel is flying, and shall be free from undue influence or benefit linked to the fishing activity of the vessel.	No comment	
30.4	Observers shall be independent and impartial, and have the training, knowledge, skills and abilities to perform all of the duties, functions, and requirements as specified in Article 30.	No comment	
30.5	Subject to the exception in paragraph 5, each flag State Contracting Party shall ensure that every fishing vessel flying its flag, while conducting fishing activities in the Regulatory Area, carries at all times at least one observer in accordance with the provisions of this Program. A vessel shall not commence fishing until the observer is deployed on the vessel.	No comment	
30.6	Guidelines for Partial withdrawal of observers	<ul style="list-style-type: none"> • Restriction should be outlined for derogation (list of reasons) • To be reviewed to include conclusion from REM effect on observer coverage • CAN offered to draft a template for the derogation (which would include reason for derogation) • Inclusion of a timeline 	<ul style="list-style-type: none"> • The WG-OPR recommends considering derogations based only on exceptional and appropriately justified circumstances or the use of remote electronic monitoring.
30.6.a	ensures that the vessels concerned target species in areas where negligible by-catch of other species is expected to occur;	<ul style="list-style-type: none"> • Should trip plan be included in derogation notification 	

30.6.b	ensures that the vessel complies with all real-time reporting requirements;	No comment	
30.6.c	physically inspect or otherwise evaluate as appropriate, following risk assessment, each landing in its ports by the vessel concerned according to domestic monitoring control and surveillance procedures. If any infringement to the CEM is detected and confirmed, it shall prepare a report in the format prescribed in Annex IV. C (PSC 3). The PSC 3 shall be submitted to the Executive Secretary as soon as possible after the infringement has been confirmed.	<ul style="list-style-type: none"> No need for reference of PSC 3 as it is covered in Article 47 – change language to state an inspection will occur (EU to suggest textual change) 	
30.6.d	as soon as possible in advance of the fishing trip, notify the Executive Secretary: (i) the name, IMO number, and International Radio Call sign of the vessel, (ii) the factors that support the decision to grant the derogation to the 100% coverage;	<ul style="list-style-type: none"> No template for this notification currently exists Addition of REM reference Addition of language regarding timeline Suggestion that rationale for derogation be included in 30.6(e) template 	<ul style="list-style-type: none"> The WG-OPR recommends to consider the use of REM as justification to derogate from a 100% observers' coverage. In connection with this option, the Working Group recommends to develop minimum standards for the system and to identify scientific data that the system could not provide, as well as appropriate alternatives to collect this data (e.g. by the operator). The WG-OPR recommend to STACTIC that Contracting Parties share information on their REM experiences including successes and any challenges faced.

30.6.e	submit to the Executive Secretary by 1 March each year, for the previous calendar year, a report containing a comparison of all relevant catch and fishing activities showing the difference between the trips where the vessel had an observer on board and those where the observer was withdraw	<ul style="list-style-type: none"> No template for how to conduct comparison – US and CAN offered to draft template 	<ul style="list-style-type: none"> The WG-OPR recommends the drafting of templates for Contracting Parties' reporting obligations including 30.6.e, 30.9.c, and 30.10.d.
30.7	Where an inspector issues a notice of an infringement to a fishing vessel that is not carrying an observer, in accordance with this derogation, at the time of the notice, the infringement shall be deemed a serious infringement for the purpose of Article 38.1 and, where the flag State Contracting Party does not require the fishing vessel to proceed immediately to port in accordance with Article 38.3, it shall deploy an observer to the fishing vessel without delay.	<ul style="list-style-type: none"> Issues with "immediate deployment" timeline This provision should be added to STACTIC WP 22-26REV. 	
30.8.a	each year, before its vessels start fishing in the NAFO Regulatory Area, post to the MCS Website an ongoing list of observers (name and ID if applicable) that it intends to deploy to vessels entitled to fly its flag operating in the Regulatory Area;	<ul style="list-style-type: none"> Addition of a timeline 	
30.8.b	require its vessels to carry an observer from the list it has posted to the NAFO MCS website, in accordance with this Program	<ul style="list-style-type: none"> Addition of timeline for updated list throughout the year 	

30.8.c	to the extent practicable, ensure that individual observers are not deployed on consecutive trips on the same vessel	<ul style="list-style-type: none"> • Discussion on the varied length of trips and the challenges of both short and long trips being completed consecutively. • Definition of “trip” must be clarified – potential modification of timeline 	
30.8.d	ensure that vessel Masters, operators, or owners cannot refuse to accept an observer deployment	<ul style="list-style-type: none"> • Discussion on connection between this section and Article 30.12 	
30.8.e	Ensure that observers are equipped with an independent two-way communication device at sea	<ul style="list-style-type: none"> • Definition of “independent” is needed for clarification • Discussion on safety of observer – inclusion of Master’s requirement of ensuring communication lines are not broken 	<ul style="list-style-type: none"> • The WG-OPR recommends to establish a common understanding on the meaning of the requirement to ensure that observers are equipped with an independent two-way communication device at sea”, in particular whether it entails an independent data connection or only an independent device; as well as, for the latter case, to consider the introduction of an obligation of the Master to provide a data connection for the observer.
30.8.f	take appropriate action with respect to their vessels to ensure safe working conditions, the protection, security and welfare of observers in the performance of their duties, consistent with international standards or guidelines	<ul style="list-style-type: none"> • Addition of mentioning safety of transferring at sea • Potential creation of group to focus on working conditions 	<ul style="list-style-type: none"> • The WG-OPR recommends compiling “international standards or guidelines” with a view to consider the adoption of NAFO ones. • The WG-OPR recommends developing common standards (e.g. training, equipment, working conditions, safety, etc) to be made part of the Observer Program. This task can be linked to the research and identification of international standards and guidelines referred to in Art 30.8(f) of the NAFO CEM.
30.8.g	ensure that the observers treat all data and information related to the fishing operations collected during their deployment, including images and videos taken, in accordance with applicable confidentiality requirements	<ul style="list-style-type: none"> • Potentially linking to duties of observer section 	

30.9	Upon the receipt of an OBR from an observer reporting discrepancies with the CEM or an incident, including any instances of obstruction, intimidation, interference with, or otherwise prevention of the observer from performing their duties, concerning a vessel entitled to fly its flag, a Contracting Party shall:	<ul style="list-style-type: none"> To be reviewed (EU) 	
30.9.a	treat the report with upmost sensitivity and discretion, in accordance with applicable confidentiality requirements	No comment	
30.9.b	assess discrepancies identified in the OBR and conduct any follow-up action deemed appropriate	<ul style="list-style-type: none"> Addition of non-discrepancies Discuss with larger STACTIC group the sharing of weights between the observer and the vessel master <ul style="list-style-type: none"> Addition of template and timeline 	
30.9.c	create a report on follow-up actions and post it in a computer readable format to the NAFO MCS website	<ul style="list-style-type: none"> Addition of template and timeline 	<ul style="list-style-type: none"> The WG-OPR recommends adoption of templates for Contracting Parties' reporting obligations including 30.6.e, 30.9.c, and 30.10.d.
30.10.a	no later than 24 hours in advance of an observer's deployment onboard a fishing vessel, by posting to the MCS Website the name of the fishing vessel and International Radio Call Sign, together with the name and ID (if applicable) of the observer concerned	<ul style="list-style-type: none"> Discussed difficulties in meeting this requirement in addition to possible changes 	<ul style="list-style-type: none"> The WG-OPR recommends to simplify the 24h observer deployment notification under Article 30.10(a) of the NAFO CEM.
30.10.b	electronically and without delay following its receipt, the daily OBR report referred to in paragraph 13 (e)	<ul style="list-style-type: none"> Addition of mentioning that derogated vessels do not need to submit OBRs 	

30.10.c	within 30 days following the arrival of the vessel in port, the observer trip report referred to in paragraph 13	<ul style="list-style-type: none"> • Definition of “trip” • Discussion regarding timeline • To be revisited after the development of the observer application 	
30.10.d	By March 1 each year for the previous calendar year, a report on its compliance with the obligations outlined in this Article.	<ul style="list-style-type: none"> • See discussion under 30.18(d) 	<ul style="list-style-type: none"> • The WG-OPR recommends adoption of templates for Contracting Parties' reporting obligations including 30.6.e, 30.9.c, and 30.10.d.
30.11	If a vessel is carrying an observer from another Contracting Party, that Contracting Party shall ensure that its observer reports [are sent to] the vessel's flag State Contracting Party.	<ul style="list-style-type: none"> • To be revisited after the development of the observer application 	
30.12	If a vessel required to carry an observer is not carrying one, the flag State Contracting Party may allow any other Contracting Party to deploy an observer to the vessel	No comment	
30.13	If, during deployment, it is determined that a serious risk to the observer exists, the flag State Contracting Party of the vessel concerned shall take steps to ensure that the observer is removed from the vessel unless and until the risk is addressed.	<ul style="list-style-type: none"> • Potential relocation to the obligations of the Contracting Party section 	

30.14.a	record for each haul/set, in the format indicated in Annex II.M, hereafter referred to as the observer trip report:	<ul style="list-style-type: none"> • Potential for clarification and simplification of reporting. • Agreed for editorial revision (inclusion of EDG) • Canada and US to work on revision of Annex II.M <p>See also discussion of Agenda item 9.</p>	<ul style="list-style-type: none"> • The WG-OPR recommends to undertake a revision of Annex II.M to incorporate additional elements (e.g. Greenland sharks' data) and to update the associated templates. • The WG-OPR recommends including within the observers' tasks the verification of average box weights and presentations. In adding these tasks, the frequency or scenarios for that verification must give due regard to the already many tasks of the observers. • The WG-OPR recommends that the requirements to verify production logbook data and labelling be made more explicit in the NAFO CEMs. • The WG-OPR recommends to establish the observer application as a main tool for the observers to carry out their reporting obligations and to explore the necessary steps to be undertaken including by the NAFO Secretariat to produce and maintain the observer application.
30.14.b	monitor the vessel's stowage plan referred to in Article 28, and record in the observer report any discrepancies identified;	No comment	
30.14.c	record any observed interruption or interference with the Vessel Monitoring System (VMS);	<ul style="list-style-type: none"> • Discussion if this should be monitored by the FMC instead of the observer 	
30.14.d	only set vessel's instruments with the Master's agreement;	<ul style="list-style-type: none"> • Potential change in language regarding "set" 	

30.14.e	transmit daily, whether the vessel is fishing or not, before 12:00 UTC to the Fisheries Monitoring Centre (FMC) of the flag State Contracting Party, in accordance with Annex II.G, the OBR report, by division;	<ul style="list-style-type: none"> Removal of redundancies 	
30.14.f	perform such work, including for scientific purposes, as the Commission may request;	<ul style="list-style-type: none"> Potential change in wording regarding the “Commission” 	
30.14.g.i	submit the observer report... as soon as possible after leaving the Regulatory Area and at the latest at arrival of the vessel in port, to the flag State Contracting Party	<ul style="list-style-type: none"> Timeline challenges noted with the submission deadline of report for coastal states due to limited time for observers to complete electronic files by the arrival of vessel in port. Canada to draft proposal (s). Review of language regarding “arrival...in port” – “offload” 	<ul style="list-style-type: none"> The WG-OPR recommends that STACTIC review the wording of 30.14.g.
30.14.g.ii	submit the observer report... immediately upon arrival in port, to the local port inspection authority if an inspection in port occurs;	<ul style="list-style-type: none"> Review of language regarding “arrival in port” – “offload” 	
30.14.h	make themselves available to inspectors at sea, or in port upon arrival of the vessel, for the purposes of inspecting the fishing activities of the vessel;	<ul style="list-style-type: none"> Discussion regarding the inclusion in inspections the level of cooperation of the observer 	

30.14.i	referring to any incidents of discrepancies with the CEM: (i) report without delay to the competent authority of the flag State Contracting Party of the vessel, any discrepancy with the CEM, including any instances of obstruction, intimidation, interference with or otherwise prevention of the observer from performing their duties, using the independent two-way communication device, and (ii) maintain detailed records, including relevant images and video footage, of any circumstances and information related to any instances of discrepancies with the CEM, for transmission to the Fisheries Monitoring Centre (FMC) of the flag State Contracting Party at the earliest opportunity, and at the latest upon arrival of the vessel in port	No comment	
30.14.j	for all observed hauls that contain Greenland shark, record the number, estimated weight and measured length (estimated length if measured length is not possible) per haul or set, the sex, and catch disposition (alive, dead, unknown) of each individual Greenland shark.	See discussion of Agenda item 8	<ul style="list-style-type: none"> • The WG-OPR recommends to include as part of the revision of the observers' reporting template (Annex II.M) information on maturity, disposition, pictures and fork length of Greenland sharks, and to the extent necessary, location; as well as an indication that data collection is done minimizing damage to the sampled individuals. • The WG-OPR recommends to seek the Scientific Council's input on STACTIC WP 21-49 Rev. 3 as well as any resulting proposal.

30.15.a	extend such co-operation and assistance as may be required to enable the observer to carry out his or her duties. This cooperation shall include providing the observer with such access as may be required to the catch, including such catch as the vessel may intend to discard	No comment	
30.15.b	provide food and accommodations to the observer of a standard no less than that provided to the vessel's officers. If officers' accommodations are not available, the observer shall be provided accommodations of a standard as close to an officer's as practicable but no less than that provided to the crew	<ul style="list-style-type: none"> To be included in group discussion on working conditions 	
30.15.c	provide access to all operational areas of the vessel necessary to complete their duties, including the vessel's hold(s), production area(s), bridge, garbage processing equipment and navigation and communication equipment	No comment	
30.15.d	do not obstruct, intimidate, interfere with, influence, bribe or attempt to bribe an observer in the performance of his/her duties	<ul style="list-style-type: none"> Comment that provisions worked well in single case to date. 	
30.15.e	include the observer in all emergency drills conducted on-board	No comment	

30.15.f	notify the observer when an inspection party has signaled their intent to board the vessel	No comment	
30.16	Subject to any arrangement with another Contracting Party, each Contracting Party shall bear the costs of remunerating every observer it has deployed.	<ul style="list-style-type: none"> • Potential relocation to beginning of Article • Potential language change (CAN) • Link to Article 30.12 and 30.17 	<ul style="list-style-type: none"> • The WG-OPR recommends clarifying the wording of 30.16, linking the cost to the deployment of the observer.
30.17	Contracting Parties shall ensure that their observers have no financial or beneficial interest in, and are paid in a manner that demonstrates financial independence from, the vessel(s) being monitored.	<ul style="list-style-type: none"> • Potential relocation to beginning of Article in general provisions 	
30.18.a	posts without delay the information received in accordance with subparagraphs 6, 8, 9, and 10 to the NAFO MCS Website and ensures it is made available without delay to all Contracting Parties, for enforcement purposes only.	<ul style="list-style-type: none"> • Simplification of language (EU) 	<ul style="list-style-type: none"> • The WG-OPR recommends that the Duties of the Executive Secretary (30.18) are revised in light of the changes adopted in the observer program and that an assessment on the need to allocate appropriate resources to the Secretariat is carried out.
30.18.b	makes available upon request the observer data, including the daily OBR report, to the other NAFO bodies;	No comment	
30.18.c	where a daily OBR report has not been received for 2 consecutive days, notifies the flag State Contracting Party and any Contracting Party participating in the at-sea Inspection and Surveillance Scheme that an OBR has not been received;	<ul style="list-style-type: none"> • Potential change in language regarding “consecutive days” to “working days” • Need for Secretariat vs FMC responsibility • Revisit needed for this requirement. 	

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30.18.d	submits to STACTIC, at its Intersessional meeting, a synthesis of the Contracting Parties performance reports referred to in paragraph 10(d).	<ul style="list-style-type: none"> • Simplification of language (EU) • Develop a contracting party Article 30 reporting template. • Formalize role of NAFO Secretariat with clear instructions and role in following up with Contracting Parties when information hasn't been submitted for the Article 30 report. 	
30.19	This Observer Program will be reviewed by STACTIC in 2022.	<ul style="list-style-type: none"> • For further discussion • Potential to set a regular review cycle. 	

Northwest Atlantic Fisheries Organization



**Report of the NAFO Joint Commission-Scientific Council Working Group on Ecosystem
Approach Framework to Fisheries Management (WG-EAFFM) Meeting**

11-12 August 2022
Halifax, Nova Scotia

NAFO
Halifax, Nova Scotia, Canada
2022

Report of WG-EAFFM,
11–12 August 2022

Report of the NAFO Joint Commission–Scientific Council Working Group on Ecosystem Approach Framework to Fisheries Management (WG-EAFFM) Meeting

11–12 August 2022
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11–12 August 2022
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1. Opening by the co-Chairs, Andrew Kenny (United Kingdom) and Elizabethann Mencher (USA)

The meeting was opened by the co-chairs, Andrew Kenny (United Kingdom) and Elizabethann Mencher (USA), at 09:00 hours (UTC/GMT -3 hours in Halifax, Nova Scotia) on Thursday, 11 August 2022.

The co-Chairs welcomed the scientists and fisheries managers, either participating in-person or virtually via WebEx, from Canada, European Union, Iceland, Japan, Norway, Russian Federation, Ukraine, United Kingdom, and the United States of America. The Chair of the Scientific Council (SC) was present. Observers from Ecology Action Centre, Food and Agriculture Organization of the United Nations (FAO), and Oceans North were also welcomed (Annex 1).

2. Appointment of Rapporteur

The NAFO Secretariat (Ricardo Federizon, Senior Fisheries Management Coordinator and Tom Blasdale, Scientific Council Coordinator) were appointed co-Rapporteurs of this meeting.

3. Adoption of Agenda

The provisional agenda as previously circulated was adopted with the following amendments (see Annex 2):

- Insertion of new agenda item 8 “*Review of NAFO CEM Chapter 2*”
- Renaming of agenda item 9.a “*Update on the FAO ABNJ Deep-Seas Fisheries Project*”
- Insertion of new agenda item 9.c “*Terms of Reference for the WG-EAFFM*”
- Insertion of new agenda item 9.d “*SC Workload*”

4. Review of the July 2021 Recommendations (COM-SC Doc. 21-08)

WG-EAFFM reviewed the recommendations and the status of their implementation. The summary pertaining to the major recommendations is presented in the table below.

Recommendations	Status
Secretariat to share NAFO’s work on SAI on bottom fishing with the UNGA VME review in 2022	See agenda item 9. b
Revision boundaries of seamount closures	The Commission adopted the proposed revision of the boundaries of Fogo, Corner Rise, and Newfoundland Seamounts closures (COM-SC Doc. 21-05). The revision of the boundaries is now reflected in the NAFO CEM.
Changes to Annex I.E.6 <i>VME Indicator Species</i> of the NAFO CEM	The Commission adopted the proposed changes. They are now reflected in the NAFO CEM.

Independent experts review of the NAFO Roadmap Tier 1 and Tier 2	See agenda item 5.b.i
SC input to the review of the effectiveness of Chapter 2 of the NAFO CEM.	See agenda item 5.c.ii
STACTIC and Secretariat to work with NAFO fishery observers to the improvement of the VME species identification guide.	No progress due to Covid. The Secretariat, however, noted the ongoing work on the development of the Observer App for mobile phone in the reporting of fish and VME species by observers. It was also noted that the VME Species Identification Guide was updated to include bryozoans
Secretariat to inform CPs with inspection presence when vessels are operating in closed areas at speeds indicating fishing may be occurring,	No progress due to Covid. The Secretariat, however, noted that the secured MCS Website, one of the tools employed by STACTIC in monitoring compliance, features a fishing trip mapping that allows the detection in real time of fishing vessels steaming or operating in closed areas. The fishing trip mapping is accessible only to the NAFO inspectors.
Extension of the current closures for five years	The Commission adopted the proposal to extend the closures until 31 December 2026. The extension is now reflected in Article 17 of the NAFO CEM.
Commission considers the SC advice regarding additional area-based management measures to protect VMEs from SAI.	The Commission adopted the proposal to expand the boundaries of five (5) existing closed areas and to establish four (4) additional closures, on an interim period of two years (COM Doc. 21-16).
Commission supports the ABNJ Deep-Sea Fisheries Project	The Commission agreed to become a partner to the Project and commit only in-kind support in the amount of USD 3.03 million over the Project's 5-year term (2022-2027) (COM Doc. 21-21 Revised)
Commission supports the development of an MOU between the Sargasso Sea Commission Secretariat and NAFO Secretariat	The Commission adopted the recommendation (COM Doc. 21-21 Revised)

5. Presentation and discussion of Scientific Council responses to Commission requests for advice (COM Doc. 21-20 and SCS Doc. 22-01) relevant to WG-EAFFM

Andrew Kenny (co-Chair of this WG and co-Chair of the SC Working Group on Ecosystem Science and Assessment (WG-ESA), on behalf of the Scientific Council (SC) presented the SC response to the Commission requests relevant to this WG. The SC response, contained in SCS Doc. 22-18) was based on work undertaken by WG-ESA in November 2021 (SCS Doc. 21-21).

The presentation comprised five (5) parts, organized according to the Commission requests relevant to EAFFM (COM Doc. 21-20): a) Impact of scientific trawl surveys on VME in closed areas, b) Ecosystem Roadmap, c) VME analysis, including closures and Chapter 2 review, d) impacts of non-fishing activities in the NAFO Convention Area, and e) 3M and 3LNO Ecosystem Summary Sheets (ESS). The SC response to the Commission request presented below represents the headline advice formulated by the SC at its June 2022 meeting.

The WG took note of the advice. In its recommendations, the positive consideration of the scientific advice is reflected (see agenda item 10).

a. Commission Request # 3 – Evaluation of the impact of scientific trawl surveys on VME in closed areas and the effect of excluding surveys from these areas on stock assessments

Commission Request 3.- *The Commission requests that Scientific Council continue its evaluation of the impact of scientific trawl surveys on VME in closed areas and the effect of excluding surveys from these areas on stock assessments.*

Scientific Council responded:

Recent studies on the exclusion of surveys from closed areas indicate that survey indices for a number of species show measurable changes in estimates when sets from closed areas are omitted.

These studies also indicated that recurrence times in scientific surveys in the NRA may not result in significant adverse impacts in some cases. SC/WGESA will further review these studies at its 2022 November meeting before making a final recommendation.

Among the main conclusions of the analysis are the following:

- The revision of the closed areas that is carried out every 4 years makes it difficult to analyze the impact of the scientific surveys in the closed areas since these areas can change over time.
- Recurrence time for the surveys carried out in the NRA show that the benthic impact of the surveys activity is likely to have time to recover to the levels that existed prior to the benthic impact of the sampling activity at least for the closed areas delimited for sea pens (Closed areas 7, 8, 9, 10, 11, 12, and 14).
- For the closed areas based on large gorgonians and sponges (Closed Areas 1, 2, 3, 4, 5, 6 and 13) the conclusions are less clear due to the available information about the longevity of some of the coral and sponges species and the recurrence times of surveys.
- Reducing the trawling time in European surveys from 30 to 20 minutes in the sets made within the closed areas would considerably reduce the benthic impact extending the recurrence time to more than 1500 years.
- For most of the stocks indices, the estimation of biomass, abundance, age/length structure and bias over time is very similar with and without the data of the sets carried out in the closed areas.
- Only the EU survey indices for two stocks, Greenland halibut Subarea 2 and Division 3LMNO and roughhead grenadier Subarea 2 and 3, show a measurable change in estimates when information on sets made within closed areas is omitted. There are other species in which their total biomass indices do not change considerably, but bias occurs in the estimation of their biomass index and/or their age or length indices change appreciably when hauls from closed areas are removed from the calculations (e.g., redfish and witch flounder indices). The impact of these factors on the assessment would be case-dependent, and the assessment models would have to be run with and without the hauls in the closed areas to evaluate the differences in the results.

It was noted that analysis done so far was NRA only, and the reduction in tow duration only covers EU vessels as Canadian vessels already use 15 min tows. The measure for survey impacts is that the time between impacts should be >10 times the lifespan of the indicator spp. The life of sponges is estimated at 300 years so recovery time could be 3000 years. WG-ESA will carry out further analysis during their meeting in November 2022.

WG-EAFFM **expressed support** the advice of SC and awaits with interest the results of further analysis.

b. Commission Request # 5 – Ecosystem Road Map

Commission Request #5: *The Commission requests that Scientific Council continue work on the sustainability of catches aspect of the Ecosystem Roadmap, including:*

- a. *In consultation with WG-EAFFM via co-Chairs, convene independent experts to do a scientific review of; a) the estimation of fisheries production potential and total catch indices, and b) the adequacy of this analysis for their proposed use within the NAFO roadmap (Tier 1), while considering how species interactions are expected to be addressed in the future (Tier 2) within the overall Roadmap structure. The outcomes of this review would need to be tabled in June at Scientific Council to be available in advance of the planned workshop in 2022.*

Scientific Council responded:

Scientific Council, in consultation with COM-SC WGEAFFM, convened a three person independent expert panel to address this request. Based on the results of the external review, and the follow-up discussions, **SC concludes** that the EPP/TCI work is scientifically sound, and more than adequate for supporting implementation of the Tier 1 of the Roadmap. Also in line with the review results, SC considers that while the recommendations on presentation of the material, and additional sensitivity analyses indicated by the reviewers should be carried out, completing these should not delay implementation of Tier 1.

SC Main conclusions

- *All reviewers agreed that the science presented in support of the total catch indices was sound and reasonable. Advice using the TCI approach would be sensible, reasonable, and even advisable in the NAFO EAFM Tier 1 context.*
- *The consensus recommendation (by the reviewers) is that the overall approach should proceed with suitable and minor validation points to be executed.*

SC next steps (short term)

- *Publication of the full suite of reviews (i.e. initial independent written comments, and follow-up consolidated review) as an SCS document.*
- *Production of a new SCR summarizing the EPP/TCI work and addressing the feedback and recommendations emerging from the independent expert review.*

Several WG-EAFFM members **reiterated their continued support** for the scientific work underpinning Tier 1 and 2 of the roadmap and their appreciation for the work of the reviewers.

- b. *Work to support the WG-EAFFM workshop in 2022, which will explore ecosystem objectives and further develop how the Roadmap may apply to management decision making.*

This request was discussed under agenda item 6: Outcomes of the WG-EAFFM Workshop (08–10 August 2022).

- c. *Continue its work to develop models that support implementation of Tier 2 of the EAFM Roadmap.*

Scientific Council responded:

In order to advance the development of models in support of Tier 2 assessments, SC made progress by a) defining the features required for Tier 2 models and identifying potential advice applications, b) making explicit the formal steps and operational requirements needed for Tier 2 model development, and c) examining ongoing modelling work that could support Tier 2 assessments.

Building upon this progress, the next steps towards a strategy for a broader implementation of Tier 2 would include a) developing a triage procedure for identifying priorities for model development, and b) developing mechanisms to promote the engagement of the broader research community in Tier 2 model development.

In terms of specific applications, the exploration of the existing multispecies Flemish Cap model for the implementation of Tier 2 for the Flemish Cap is an obvious operational next step.

Finally, it is critical to highlight that any progress on Tier 2 development and implementation is conditional on the support provided by CPs. Current capacity does not exist within WG-ESA and SC to engage fully on Tier 2 development.

SC Conclusions:

- *Tier 2 assessments represent a bridge between the large-scale strategic ecosystem advice and the tactical advice at the stock level.*
- *They provide the platform for testing targeted hypotheses about ecosystem/multispecies functioning and dynamics (including the assessment of trade-offs).*
- *The basic characteristics of Tier 2 models (without being overly prescriptive) are:*
 - 1) *being time-dynamic, and including fishing as a driver;*
 - 2) *incorporating only key interactions and drivers (e.g. Minimum-Realistic Models –MRM, Models of Intermediate Complexity for Ecosystem assessments –MICE); and*
 - 3) *Being amenable to statistical model fitting evaluation, and/or robust simulation testing (depending on the purpose of application).*

SC next steps:

- *Develop a triage process to help identify the cases where the need for Tier 2 modelling is more pressing.*
- *Stand out example is the Flemish Cap multispecies model.*

WG-EAFFM thanked SC for their continuing progress and discussed how the Roadmap as a whole could be useful to managers. WG-EAFFM noted concerns over the SC's current workload, and in that light the SC's capacity to address this type of analysis, especially when taking into consideration wider resource issues facing SC in general. These issues were addressed by recommendation #10.

FAO suggested that NAFO and FAO should consider holding a joint symposium focussing on the NAFO roadmap as part of the FAO ABNJ Deep-seas Fisheries project. This was further discussed under agenda item 9a: Update on the ABNJ Deep-seas Fisheries Project.

c. Commission Request # 6 – VME analysis

Commission Request # 6: The Commission requests that Scientific Council, in relation to VME analyses:

- a. *Conduct a re-assessment of its previously recommended closures of 7a, 11a, 14a and 14b, incorporating catch and effort data for fisheries of shrimp from 2020 and 2021 into the fishing impact assessments. This work is to be completed by the 2023 Scientific Council meeting.*

Scientific Council responded:

The work to address this request is ongoing. Data preparations are underway, and analyses will be undertaken by SC in 2022 and 2023. Results are anticipated in 2023.

Given the ongoing and expected future demand of analyses like the one involved in this request, and to ensure SC can maintain effective quality control, transparency, ease of access and reproducibility of ecosystem-related assessment data sets and data products, **SC recommends:**

1. *Creating standardized data layers and products with supporting documentation (including metadata) for periodic reassessment purposes required to support the implementation of the NAFO Roadmap towards an Ecosystem Approach and to respond to requests from the Commission; and*
2. *Requesting the NAFO Secretariat to explore the feasibility of using GIS to manage, visualize and share those core data layers and derived products. This web-based application is intended for internal SC use only to preserve confidentiality and respect data ownership regulations from different Contracting Parties.*

Capacity currently exists for initial development of these standardized data layers but ongoing maintenance and support will require additional resources and capacity within the Secretariat.

WG-EAFFM generally supported the idea of creating standardized data layers and other products and having the Secretariat support those efforts. The working group suggested that the Secretariat explore what is being done in other RFMOs in relation to sharing of data including through GIS. It was further suggested that the Secretariat should consider additional resources that may be required to do this work, possibly including IT resources and additional staff and/ or further training for existing staff. These discussions are reflected in WG recommendations 1 and 2.

- b. *Review the effectiveness of NAFO CEM, Chapter 2 from a scientific and technical perspective and report back to the WG-EAFFM. WG-EAFFM would subsequently in 2022 consider whether any modifications to this Chapter should be recommended*

Scientific Council responded:

Scientific Council discussed the effectiveness of NAFO CEM, Chapter 2 from a scientific and technical Perspective.

The primary issue related to the content of Articles 21 and 22 concerning potential effect any change in the fishing footprint would have on the provisions in case of VME encounters, specifically a need to re-evaluate the encounter thresholds. Furthermore, under Article 23 (re-assessment of bottom fishing activities) the text does not fully reflect the current process to assess the risk of SAI.

SC conclusions:

- *With respect to Articles 21 and 22, the main issue discussed was potential changes to the fishing footprint and the consequences for the encounter thresholds – specifically the need to re-evaluate the threshold values.*
- *With respect to Article 23 (re-assessment of bottom fishing activities) the text does not fully reflect the current assessment framework (e.g. the roadmap) and the requirement to assess the risk of SAI*
- *Specific edits and suggested changes to Chapter 2 text are given in the WG-ESA report SCS 21-21.*

WG-EAFFM thanked SC for their work noting that, while the primary intention of the request was for SC to provide a broad review of the overall effectiveness of the measures from a scientific perspective, WG-ESA's specific editing suggestions were also welcome.

The SC's review complements a review of the chapter undertaken by STACTIC in 2021.

This review was discussed further under agenda item 9 and WG-EAFFM recommendations on suggested amendments to Articles 17, 23, and 24 are given in recommendation 12.

d. Commission Request # 12 – potential impact of activities other than fishing in the Convention Area.

The Commission requests Secretariat and the Scientific Council with other international organizations, such as the FAO and ICES to inform the Scientific Council's work related to the potential impact of activities other than fishing in the Convention Area. This would be conditional on CPs providing appropriate additional expertise to Scientific Council.

SC reiterates its prior advice that there are a number of activities occurring in the NRA (especially oil and gas) which appear to have significant spatial overlap with NAFO bottom fisheries, NAFO closures and VMEs, and have the potential to impact fisheries resources and the ecosystem. These activities have increased in recent years.

Information on “activities other than fishing” (e.g. trends, spatial location, overlapping with fisheries, VMEs and closed areas, and potential impacts) will continue to be included in the Ecosystem Summary Sheets.

Geographical location of oil and gas activities in the NRA is publicly available from several sources. Conversely, information on the assessment of potential impacts of such activities, as well as mitigation measures, is scarce or difficult to obtain.

SC also notes that current expertise, within SC WG-ESA in particular, and SC in general, is insufficient to allow SC to fully assess the long-term impacts of these activities on fisheries resources, VMEs and the wider marine ecosystem.

SC requests access to the data and analysis from monitoring programs of oil and gas activities from Contracting Parties.

SC also reiterates that CPs provide expertise in evaluation of marine environmental impacts of activities other than fishing (eg. oil and gas).

Canada highlighted that NAFO has no regulatory role for oil and gas activities, but noted it will continue to share information.

Oceans North recalled recently developed Canadian guidance on assessment and mitigation of potential impacts from oil and gas development in sensitive benthic area closures which may be of use to SC.

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WG-EAFFM further noted the need for more SC resources to address requests of this nature, should they continue to be requested by the Commission.

e. Commission Request # 13 – 3M and 3LNO Ecosystem Summary Sheets

Commission Request # 13: The Commission requests that Scientific Council proceed with developing the ecosystem summary sheets for 3M and 3LNO move toward undertaking a joint Workshop with ICES (International Council for the Exploration of the Sea) as part of a peer review of North Atlantic ecosystems.

Scientific Council responded:

SC noted that the request is a carryover from 2020.

SC has developed an action plan to move this work forward, but progress is effectively conditional on CPs providing the necessary support. This working plan includes:

Grand Bank (3LNO) EPU. The existing Ecosystem Summary Sheet (ESS) will be updated to the extent possible during the 2022 WGESA meeting, with a final review and formal approval by SC in June 2023.

Flemish Cap (3M) EPU. A draft ESS will be produced during the 2022 WGESA meeting, with an initial review and evaluation of progress by SC in June 2023. The extent of this progress will determine if a final ESS could be produced or if additional work is required.

Additional Data by CPs. ESSs may contain grey out items due to lack of data. In those cases where data may exist within CPs, **SC requests the Secretariat** to work with WG-ESA co-chairs to formalize the request of information to fill these gaps to extent possible.

Joint NAFO-ICES Workshop on Ecosystem Summaries. WGESA Co-chairs will re-establish contact with ICES about the possibility and potential scope for this workshop. Given current workload and capacity within SC, this workshop is not expected to take place until 2023 at the earliest. The renewed contact with ICES would be intended to keep the dialogue open on this matter, but without making concrete commitments.

SC considered that consolidating the creation and updating of ESSs would benefit from the creation of the Ecosystem-level Designated Expert (EDE) role, and created EDE positions for the Grand Bank (3LNO) and Flemish Cap (3M) EPU. However, no experts were designated in these positions, which remain vacant as all members of SC stated they could not take on further workload. Experts to serve in these positions would need to be identified/nominated by SC and/or Contracting Parties (CPs), and formally designated by SC. CP support in the form of new positions and/or additional capacity would be required for making the new EDE roles operational.

SC notes:

- *A near final (up-to-date) version of the 3LNO ESS was made available in June 2020 (SCS 20-14 Rev.) which is pending formal approval by SC.*
- *Successfully up-dating and completing ESS remains conditional on CPs providing the support required to carry out the work.*

WG-EAFFM thanked the SC for their work and supported these ongoing activities.

General WG-EAFFM discussion of the Scientific Council advice:

WG-EAFFM noted that the lack of resources available to SC was mentioned several times throughout the WG meeting. The Working Group discussed that both the amount of scientific requests and the breadth of those requests increases annually. It was acknowledged that while the SC is an independent body from the Commission and has the autonomy to prioritize its own workload, it would be beneficial if the Commission could consider a prioritization process for its new SC requests, while acknowledging such a process could be challenging.

This needs to be taken into consideration by the Commission in their discussions around prioritization. These issues were addressed by recommendation 10.

6. Update on the WG-EAFFM Workshop (2022), including the Open Dialogue Meeting (September 2021)

In opening this agenda item, the co-Chair (AK) recalled the SC response to 2021 Commission Request 5.b – *work to support the WG-EAFFM workshop in 2022, which will explore ecosystem objectives and further develop how the Roadmap may apply to management decision making*. The SC response, formulated in June 2022 to this request:

Scientific Council responded:

Building upon its advice in 2020 and the results from the independent scientific review of EPP-TCI, Scientific Council **recommends** that, *as an interim measure in the implementation of Tier 1 of the NAFO Roadmap, a TCI-based assessment of ecosystem overfishing be adopted by the Commission to inform their fishery management decisions.*

This recommended initial implementation of TCIs effectively constitutes a traffic light approach as follows:

Red light (total catches >2TCI; High risk of impacts due to ecosystem overfishing): *this is a catch scenario to be avoided and if reached, management measures should be taken to reduce total catches below 2TCI;*

Yellow light (1TCI<total catches<2TCI; Intermediate risk of impacts due to ecosystem overfishing): *management measures should explicitly account for preventing the zone of high risk of ecosystem overfishing to be reached;*

Green light (total catches <1TCI; Low risk of impacts due to ecosystem overfishing): *no additional management measures are required to reduce the risk of ecosystem overfishing.*

The Commission may also wish to consider a hard form of the TCI approach with operational decision rules.

There is a need to define appropriate ecosystem level objectives against which the different technical elements of the Roadmap can be applied.

In 08–09 August, the *NAFO WG-EAFFM Workshop for fisheries managers and scientists to draft ecosystem objectives* was conducted. The workshop focused on the implementation of Tier 1 of the Roadmap, specifically the application of TCI concept in the TAC decision process. The workshop was attended by forty-five (45) participants representing NAFO scientists and fishery managers, representatives from the fishing industry, international organization (FAO), and non-government organizations (Ecology Action Center and Oceans North). The participants of the workshop acted on their own personal capacity. Conclusions of the workshop are presented in Annex 3.

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WG-EAFFM noted their appreciation to the WG-EAFFM Co-Chairs, the SC Chair, and Mariano Koen-Alonso (Canada), as well as the Secretariat for all of their work in preparing for and facilitating the workshop. The workshop had been under development for several years, and postponed due to COVID, and the working group was pleased to see it move forward. Moreover, it was noted that the workshop model provided a useful format for having more in-depth and frank discussions than a typical WG meeting would normally allow.

Recommendations 3-9 (see agenda item 10) incorporate the SC advice and the conclusions of the workshop.

7. Update on proposed sub-group considering NAFO OECMs (Other Effective area-based Conservation Measures)

The plan to have an intersessional, small group exercise to explore the link between NAFO area-based management measures and the CBD's process was postponed due to the preparations of the WG-EAFFM workshop. Instead, Joe Appiott, Coordinator for Marine, Coastal and Island Biodiversity, Convention on Biological Diversity (CBD) was invited to give a talk (virtually) on the OECM criteria and the CBD process (COM-SC EAFFM-WP 22-12). WG-EAFFM noted that there is no selection or review of OECM submissions by competent management authorities, candidate OECMs are effectively accepted by the CBD as submitted.

WG-EAFFM will undertake intersessional work, taking into account the presentation from CBD and Andy Kenny, and will inform the next meeting of the working group on possible ways forward.

8. Review of the NAFO CEM, Chapter II

As required in Article 24 of the NAFO CEM, a review was conducted, taking in consideration input of SC (at its June 2022 meeting) and WG-ESA (SCS Doc. 21-21) as well as the previous input from STACTIC (see COM-SC 21-02). The review resulted to a recommendation of some revisions to the Articles of Chapter II, including the insertion of Significant Adverse Impact assessment in Article 23 and the timing of future reviews of Chapter II (See recommendation 12 in agenda item 10).

9. Other Matters

a. Update on the ABNJ Deep-Seas Fisheries Project

In 2021, the Commission agreed that NAFO becomes a partner to this project and commit in-kind support in the amount of USD 3.03 million over the Project's 5-year term (2022-2027).

Tony Thompson (FAO) provided an update on this project. A key element was the FAO suggestion to hold a joint symposium on ecosystem productivity models. As NAFO is undertaking ground-breaking work on ecosystem status in the NW Atlantic and linking ecosystem productivity with total fish production leading to more sustainable management under EAFM, and this work builds on existing stock assessment and has implications for the scientific advice, management, monitoring and compliance work of RFMO's, FAO believes this would be a suitable topic for a NAFO symposium in partnership with the Project and its global partners.

FAO requests that this WG consider this, and if appropriate, suggest forming an organising committee consisting of NAFO representatives from the science, management and compliance committees and FAO who would be able to assist in the planning of the symposium.

To this effect, the WG made a recommendation to further explore the possibility of such a symposium, as resources allow (See Recommendation 13 in agenda item 10).

b. Other International Relations

- **Biological Diversity Beyond Areas of National Jurisdiction (BBNJ) Process.** The WG noted the update on this process as contained in COM-SC EAFFM-WP 22-11 and presented by the Secretariat. The Secretariat

suggested that the main issues of these negotiations of particular interest for NAFO are area-based management tools (including the place of NAFO's VME closures, fish stock boundaries, etc. within any final international legally binding instrument (ILBI)), environmental impact assessments (including how this will relate to the work of NAFO's Scientific Council in fish stock and ecosystem assessment), and the governance structure of any ILBI and how it will interact with NAFO.

- **UN Bottom Fisheries VME workshop, August 2022.** In 2021, the Commission upon the recommendation of this WG directed the Secretariat to share its work on bottom fishing impacts along with any potential update of the SAI outcome with the UNGA VME review in 2022.

This workshop provided the opportunity for NAFO to share its work with the United Nations. Tom Blasdale, the Scientific Coordinator represented the NAFO Secretariat and reported on the work of NAFO regarding VMEs, including the management measures to protect VMEs and the SAI impact assessment of bottom fishing. He also served as a panellist (https://www.un.org/depts/los/bottom_fishing_workshop.htm).

The participants of this meeting who were also participants at UN workshop commended Mr. Blasdale on his productive participation and his effective presentation of NAFO's work on VMEs. The participants also commented that among the RFMOs at the workshop, NAFO leads in the implementation of the *FAO International Guidelines for the Management of Deep-Sea Fisheries in the High Seas*.

- **Sargasso Sea Commission** In 2021, the Commission upon the recommendation of the WG expressed its support for the development of an MOU between the Sargasso Sea Commission Secretariat and the NAFO Secretariat.

The Executive Secretary provided an update. The draft MOU is nearing the finalization stages as there are still some edits on the draft that needs to be agreed by the two Secretariats. The WG made a recommendation supporting the finalization of the MOU (see recommendation 14 in agenda item 10).

c. Terms of Reference for the WG-EAFFM

The co-Chairs indicated that the terms of reference of this working group as stipulated in FC Doc. 13/19 are due for review. The participants were requested to reflect on this as this item will be included in the agenda of the next meeting.

d. SC Workload

The SC Chair highlighted the issue of heavy workload among its members, which is not sustainable. Document SCS 22-05 *Scientific Council 5-year Plan 2022* was recalled to highlight the work, including among others, the work on PA, EAF, VME, SAI and MSE, and the resource gaps in completing the work. SC appealed to the WG to be cognizant of this predicament when formulating recommendations to the Commission.

10. Recommendations

In regard to the VME Assessments,

1. In regards to the VME and SAI assessments, WG-EAFFM recommends that the Commission direct the Secretariat to develop and electronically host the relevant data sets to support the SC's work and consider providing dedicated staff for data archiving, maintenance, and management, taking into consideration available resources and any confidentiality concerns.
2. Additionally, WG-EAFFM recommends that the Commission request the Secretariat to begin consideration of how these data sets or suitable derived data products might be made public in the future, while taking into consideration any confidentiality concerns about the data.

In regard to the Ecosystem Roadmap,

3. **WG-EAFFM recommends that the Commission adopt the use of TCI as a scientifically sound approach, as confirmed by the independent review, and that 2TCI can act as an ecosystem reference point to help inform managers.**
4. **Further, that the Commission request SC to include TCI information in its regular reporting on stock and ecosystem assessments.**
5. **WG-EAFFM recommends that the Commission request that WG-EAFFM explore effective methods to communicate TCI-related information to the Commission, in particular when 2TCI is, or is expected to be exceeded.**
6. **WG-EAFFM recommends that the Commission request SC and WG-EAFFM to explore possible underlying scientific causes and management considerations in the rare event when 2TCI is or is expected to be exceeded, similar to those when exceptional circumstances are triggered within MSE.**
7. **WG-EAFFM recommends that the Commission request SC to continue its efforts on the Roadmap, cognizant of capacity constraints and the need for prioritization.**
8. **WG-EAFFM further recommends that Commission direct WG-EAFFM to explore how NAFO might consider these management options, including the potential roles of WG-EAFFM and RBMS working groups.**
9. **WG-EAFFM recommends that the Commission request the SC and WG-EAFFM inform a Commission discussion on operational objectives for the protection of VMEs and biodiversity in the NRA.**

In regard to the Scientific Support for the Roadmap,

10. **WG-EAFFM reaffirms its recommendation to the Commission to seek scientific resources through CPs to support SC's activities, including those on the roadmap.**
11. **WG-EAFFM recommends that the Commission to better communicate the scientific work of the SC, to encourage greater interest in participation in SC activities.**

In regard to Chapter II, NAFO CEM,

12. **In relation to the review of Chapter 2, WG-EAFFM recommends that the Commission adopt the following edits to Articles 17, 23, and 24:**

Article 17 - Area Restrictions for Bottom Fishing Activities

Contracting Parties are encouraged to the extent possible to record all ~~coral and sponge~~ VME indicator species catch in their annual government and/or industry research programs and to consider non-destructive means for the long-term monitoring of VME ~~coral and sponges~~ in the closed areas.

Article 23:

(1) The Commission will request the Scientific Council to

(a) identify VMEs, on the basis of best available scientific information and with the co-operation of Contracting Parties;

(b) map sites where these VMEs are known to occur or likely to occur; and

(c) provide such data and information to the Executive Secretary for circulation to all Contracting Parties;

(d) an assessment of Significant Adverse Impacts (SAI) as defined by the FAO guidelines for deep-sea fisheries; and

(e) conduct a risk assessment based on the outcome of these assessments.

Article 24:

The provisions of this Chapter shall be periodically reviewed by the Commission at its Annual Meeting ~~no later than 2022~~ in the year following the reassessments set out in Article 23, paragraph 2(a).

In regard to the GEF ABNJ Deep Seas Fisheries Project,

13. WG-EAFFM recommends that the Commission request the Secretariat to work with the FAO to explore the idea of a joint NAFO-FAO symposium on ecosystem production models in relation to fisheries management, as part of the ABNJ deep sea fisheries project.

In regard to the Sargasso Sea Commission,

14. WG-EAFFM recommends that the Commission support the finalization of an MOU between the NAFO and Sargasso Sea Commission Secretariats.

11. Adoption of the report

The report was adopted via correspondence.

12. Adjournment

Andrew Kenny (United Kingdom) announced that he is stepping down as co-Chair of this WG after the meeting. WG-EAFFM members expressed profound appreciation and thanks for his leadership and long-standing service.

The meeting was adjourned at 15:30 (UTC/GMT -3 hours in Halifax, Nova Scotia) on 12 August 2022.

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Annex 2. Agenda

1. Opening by the co-Chairs, Andrew Kenny (United Kingdom) and Elizabethann Mencher (USA)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Review of the August 2021 Recommendations (COM-SC Doc. 21-08)
5. Presentation and discussion of Scientific Council responses to Commission requests for advice (COM Doc. 21-20 and SCS Doc. 22-01) relevant to WG-EAFFM
 - a. Commission Request # 3 – Evaluation of the impact of scientific trawl surveys on VME in closed areas and the effect of excluding surveys from these areas on stock assessments.
 - b. Commission Request # 5 – Ecosystem Road Map
 - i. Independent experts review of the NAFO Roadmap Tier 1 and Tier 2.
 - ii. Update on development of models that support implementation of Tier 2
 - c. Commission Request # 6 – VME analysis
 - i. Bottom closures 7a, 11a, 14a, 14b
 - ii. Scientific Council review of the effectiveness of NAFO CEM, Chapter 2
 - d. Commission Request # 12 – potential impact of activities other than fishing in the Convention Area.
 - e. Commission Request # 13 – 3M and 3LNO Ecosystem Summary Sheets
6. Outcomes of the WG-EAFFM Workshop (08–10 August 2022)
7. Update on proposed sub-group considering NAFO OECMs (Other Effective area-based Conservation Measures)
8. Review of the NAFO CEM, Chapter II (input of STACTIC)
9. Other Matters
 - a. Update on the ABNJ Deep-Seas Fisheries Project
 - b. Other International Relations (Update on the BBNJ, United Nations and Sargasso Sea Commission)
 - c. Terms of Reference for the WG-EAFFM
 - d. SC Workload
10. Recommendations
11. Adoption of the Report
12. Adjournment

**Annex 3. Conclusions of the NAFO Joint Commission-Scientific Council WG-EAFFM Workshop
of fisheries managers and scientists to draft ecosystem objectives, 08–10 August 2022**
(COM-SC EAFFM-WP 22-09)

The discussions during the workshop identified:

Ecosystem Objectives

1. The workshop discussed the ways NAFO has reflected ecosystem objectives in its decision-making processes, such as VME protection.
2. If NAFO would want to develop further ecosystem objectives, it could consider a process that is informed by scientific, policy, and socio-economic needs including climate change, multispecies/foodweb considerations, and ecosystem functions.
3. Developing ecosystem objectives which can be clearly linked to (and supported by) robust targets and indicators was highlighted as particularly important with respect to their effective implementation.
4. The 2TCI ecosystem reference point provides an opportunity for developing management objectives to maintain fishing pressure at levels generally consistent with ecosystem sustainability.

Implementation of Tier 1 of the Roadmap

1. There is an acceptance that the TCI concept and related scientific advice, as also confirmed by the independent external scientific review, is scientifically sound.
2. The 2TCI is an ecosystem reference point which historically has been associated with guild decline and an increased risk of reduced guild recovery, often due to fishing pressure (i.e., ecosystem overfishing – catches consistently exceeding fishable production given current ecosystem conditions).
3. The TCI-based assessment and the 2TCI ecosystem reference point are complementary to current practices and provides a check for evaluation of ecosystem sustainability.
4. Current single stock management practices (e.g., PA) have been generally effective in keeping catch levels below 2TCI, but there are a few examples where this has not been the case.
5. 2TCI is calculated over a pre-agreed reference period and revised periodically, or in response to concerns about changes in ecosystem productivity.
6. Practical applications of the 2TCI ecosystem reference point can be conceptualized as the triggering of an exceptional circumstances protocol, as in MSE. Regular monitoring and reporting is required, and action could be considered when the 2TCI ecosystem reference point is exceeded, or it is expected to be exceeded.
7. The exercises performed during the workshop showed the importance of flexibility in defining the management actions to avoid exceeding the 2TCI ecosystem reference point. Reasons for exceeding the 2TCI ecosystem reference point can be diverse (e.g., a pulse of large recruitment, changes in ecosystem productivity or ecosystem overfishing), and they need to be understood in each case while considering possible action.
8. At this time, a non-prescriptive approach to management actions in relation to exceeding the 2TCI ecosystem reference point is indicated to be more effective for management decisions than a prescriptive rule-based application of the 2TCI information. A more prescriptive MSE-type approach could eventually be considered in the future but would need to be developed and tested in the context of MSE-type exercises.

Report of WG-EAFFM,
11–12 August 2022

9. Reporting on TCI levels should be incorporated into the standard COM request for scientific advice, and Information on the 2TCI ecosystem reference point should be communicated to the Commission, for example, via incorporation into stock and ecosystem summary sheets.
10. Science information and advice from single species assessments should be conveyed in relation to the corresponding 2TCI ecosystem reference point, in a format that combines across species within guilds, to help inform management decisions.
11. The discussion of the implementation of TCI-based advice highlighted the complexities of the trade-offs that are embedded in the TAC negotiations.



Northwest Atlantic Fisheries Organization



**Report of the NAFO Joint Commission–Scientific Council
Precautionary Approach Framework Workshop**

15–16 August 2022
Halifax, Nova Scotia

NAFO
Halifax, Nova Scotia, Canada
2022

Report of PA Framework Workshop,
15–16 August 2022

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Report of the NAFO Joint Commission–Scientific Council Precautionary Approach Framework Workshop

15–16 August 2022
Halifax, Nova Scotia

1. Opening by co-Chairs, Fernando González-Costas (European Union), Ray Walsh (Canada) and Steve Cadrin (NAFO Precautionary Approach Framework Working Group co-Chair)

The workshop was opened by the co-Chairs Fernando González-Costas (European Union), Ray Walsh (Canada) and Steve Cadrin (co-Chair of the NAFO Precautionary Approach Framework Working Group, PA-WG) at 09:00 hours (UTC/GMT -3 hours in Halifax, Nova Scotia) on Monday, 15 August 2022.

The co-Chairs welcomed participants attending in person and virtually. This included representatives from Canada, European Union, Iceland, Japan, Norway, Ukraine, United Kingdom, United States of America, as well as the NAFO Scientific Council (SC) Chair and invited experts on Precautionary Approach Framework on Fisheries Management (Annex 1).

2. Appointment of Rapporteurs

The NAFO Secretariat (Ricardo Federizon, Senior Fisheries Management Coordinator and Tom Blasdale, Scientific Council Coordinator) were appointed co-Rapporteurs of this meeting.

3. Adoption of the Agenda

The provisional agenda as previously circulated in NAFO 22-184 was adopted (Annex 2).

4. Summary of Precautionary Approach Framework Working Group Recommendations

The PA-WG Co-Chair, Steve Cadrin, presented a summary of the work of the NAFO Precautionary Approach Framework Working Group (PA-WG) to date. Complete account of this work can be found in the following SCRs: Achieving NAFO Convention Objectives with a Precautionary Approach Framework (SCR Doc. 22/02) Report of the NAFO Precautionary Approach Framework Working Group (SCS Doc. 22/15).

5. Discussion Session on PA structure

The following is a summary of discussions occurring in the workshop based around a discussion document that was circulated prior to the meeting, which posed a series of questions to facilitate discussion by participants.

Limit Reference Points:

Do we agree with the proposed definitions of the F_{lim} , options for B_{lim} , and risk tolerance for exceeding limits?

PA limit references are for conservation purposes. They mark the extreme boundaries or exploitation and stock size. The main objective is to avoid recruitment overfishing and high risk of recruitment failure. and usually indicate that drastic measures may need to be taken.

One of the problems with the current NAFO PA framework definition of $F_{lim} = F_{msy}$ is that F_{lim} it is not directly associated with B_{lim} . F_{lim} should mark an extreme boundary that should not be exceeded, and this boundary does not correlate to F_{msy} . F_{msy} should be considered as the limit for optimal exploitation and not that the limit that should definitively should not be exceeded. There may be situations where fishing levels may be set above

F_{msy} (e.g. in situations where B is much higher than B_{msy} or where fishing level may be over F_{msy} for short period but would be below F_{msy} on average.

Other options used for F_{lim} are more related to B_{lim} , for example within ICES where F_{lim} is set at F_{msy} or F_{p05} , whichever is the smaller. F_{p05} is defined as the equilibrium F value that offers 5% probability of being below B_{lim} . In ICES, F_{msy} is currently used as a target but there is movement towards changing to a lower level for F_{target} .

On the other hand, many of the frameworks analyzed by the PA WG use $F_{lim} = F_{msy}$ and some countries may have a legal obligation to use F_{msy} as a limit. The majority of the workshop participants agree with the current use of F_{msy} as F_{lim} . This definition of F_{lim} is more in line with the majority of the PA frameworks analyzed.

If F_{msy} is defined as a limit, the probability of exceeding this limit should be <50%, values of 30-40% were based on a review of risk tolerance for $F > F_{msy}$ in other PA frameworks.

Most workshop participants agreed with the current definition of B_{lim} as the level which avoids recruitment overfishing. The following method of estimating B_{lim} was suggested: Reference point derived from the stock recruitment relationship would be the default. Where there is insufficient basis to use the stock recruit relationship, the lowest level from which the stock has recovered can be considered, and if that isn't possible a proxy, e.g., a percentage of B_0 or a percentage of B_{msy} can be considered. The latter options (B_0 and B_{msy}) seem more complicated as they require deciding what percentage to use.

Another alternative that was discussed was a definition of B_{lim} which described recruitment overfishing and $B_{limsoft}$ that is more like a buffer to avoid B_{lim} . If $B_{limsoft}$ is implemented, the allowable risk of being below $B_{limsoft}$ should be higher than the allowable risk of being below B_{lim} , establishing a region in which management actions can be taken before the stock goes below B_{lim} .

When there is a probability distribution, there is no need for a B_{buf} , but instead $B_{limsoft}$ can be used with a higher acceptable risk level. $B_{limsoft}$ could also be used to incorporate ecosystem information when this becomes available. The difference between $B_{limsoft}$ and B_{buf} is related to stocks where there is error distribution and so if the $B_{limsoft}$ were implemented there would be no need for using the B_{buf} . Participants concluded that it is important that the new framework be as simple and easy to communicate as possible and that other simpler tools (harvest control rule (HCR), buffers, etc.) can be used to avoid approaching B_{lim} than $B_{limsoft}$.

The allowable risk of being below B_{lim} should be very low. The current NAFO PA framework notes that 'very low' might be defined as 5-10% but the actual value is not prescribed but should be specified by managers. The same or similar level of risk is used in most of the analysed frameworks.

The need to not only specify a risk level but also to take into account other factors such as biomass trends was discussed in the workshop. One of the problems with using trends is that trends can be unpredictable at low stock levels and may not be the same next year and when used again in the context of MSE, it becomes too complex.

The possibility of establishing a risk range was also discussed. If this were established, it would complicate the work of the SC to produce the advice as different advice would have to be formulated for each level of risk.

Buffer Reference Points:

If we believe they are necessary, it would be convenient to look at possible estimation methods to establish their values.

One of the main problems with the current NAFO PA framework is that reference point buffers were never implemented. The reason they weren't implemented is because they are only necessary in stocks where it is not possible to estimate risk unlike the majority of the NAFO stocks where this is possible. Another reason B_{buf} isn't used is because many stocks do not have any limit reference point established.

One of the advantages of having the buffer would be that it is possible to manage stocks to a level above B_{lim} , rather than just above B_{lim} . There is value in having a “middle zone” where action may be taken (not necessarily a recovery plan). Buffers also could be very useful for defining and implementing HCRs.

Uncertainty can be accounted for either buffers or by using probability distribution. Where we don't have estimates of uncertainty there are useful proxies that can be used to establish a buffer to account for uncertainty.

F_{buf} is often a way to set F_{target} , so the implementation of both would not be required; one or the other can be implemented.

F_{target} Reference Point:

A possible F_{target} in the healthy zone is the level F_{buf} or the F that has a certain risk of being greater than $F_{lim} = F_{msy}$.

Regarding the question if the F_{target} should be defined as a fraction of F_{msy} or in terms of risk of going beyond F_{lim} , it was suggested that if defined as a % of F_{msy} it should be 80-85%. In ICES, the fraction of F_{msy} is a level that gives a fraction of the yield at F_{msy} .

One other possibility is to use a value somewhat lower than F_{msy} , e.g. $F_{0.1}$ because in many cases, yield per recruit (YPR) with a flat-top curve makes very difficult to estimate F_{msy} . $F_{0.1}$ value proved to be much more stable to noise in the data than the F_{msy} estimate.

Both may be required; a fraction of F_{msy} or a definition based on risk of going beyond F_{lim} , depending on whether there are deterministic or stochastic estimates. Also, there is no guarantee that 80-85% of F_{msy} will give the risk of being $> F_{msy}$ below 30-40% so both may be required. A pragmatic way to do it may be to use the risk where we have an assessment that allows it, but where this is not possible use the fraction.

The key principles of the ICES F_{eco} (a reference point based on ecosystem state) are the desire to transfer ecosystem information into the F_{target} . To do this, there is a need to evaluate a “safe range” in which to change the F_{target} , and rather than transferring absolute F_{target} values from another applied model a multiplier to the target F . F_{eco} is not as good as including factors directly in the assessment model, it is a fallback for factors that cannot be included directly. F_{eco} would meet the Convention requirement to consider the ecosystem objectives.

If the absence of ecosystem information, a default set at a sensible level would be used that could be further improved and additional information can be added later.

Potential problems for F_{eco} implementation were discussed, among which it was commented that when a quantitative assessment is available, productivity is already factored into this through the data (growth, recruitment, mortality, etc.) used in the model. Given that we also have the 2TCI concept in terms of ecosystem productivity, there are doubts whether the implementation of the F_{eco} at the single stock assessment level would overwhelm the ecosystem information in the final results. Beyond that, the F_{eco} and ecosystem consideration concepts and their implications should be more clearly understood before implementation by managers.

Biomass Target Reference Point:

The framework needs a target reference point for biomass? The SC PA WG does not have a clear opinion on whether it is necessary to establish an explicit B_{target} . If needed the B_{target} value should be related with F_{target} .

It was commented that B_{target} would probably not need to be implemented in the new PA framework and that there is no clear need for management measures associated with this reference point, but on the other hand

there should be a target associated with F_{target} . The 1995 United Nations Fish Stocks Agreement also recognizes the need of B_{target} . In general, B_{target} is most relevant for rebuilding plans and status determination. The UN Stock Agreement has a requirement to rebuild stocks to a level that could be equivalent to B_{target} .

If the NAFO objective is to have $B > B_{\text{msy}}$ more often than not, it makes sense to have it as a target against which it can be monitored. B_{msy} will be most useful as a performance statistic to monitor whether Convention objectives are being met and could also be useful in a Management Strategy Evaluation (MSE) but should not necessarily be part of the framework. B_{msy} and F_{msy} could be seen as guideposts in the framework for reference rather than as management points that trigger actions. This serves the function of communicating.

One possible way to define the B_{target} is to set it as a function of the biomass given by the F_{target} , e.g. if 80% F_{msy} is our F_{target} , the associated target biomass will be somewhat $> B_{\text{msy}}$. Alternatively, F_{target} could be defined as a function of B_{target} but F is a ratio and B is an absolute number and models are much better at estimating ratios than numbers.

Biomass Trigger Reference Point:

It is desirable to have a biomass operational control point (B_{trigger}) between B_{lim} and the target below which fishing pressure is reduced.

The participants are of the opinion that it is necessary to establish biomass reference points in the new framework that delimit the recovery zone from the danger zones and the safety zone. WKLife has found in simulations that if there is no "biomass safeguard" there is a loss of yield. There are two possibilities for setting these benchmarks: setting them based on degree of proximity to B_{lim} or based on whether it is too far from our "target" reference point; to stay away from B_{lim} or to stay close to B_{target} .

Having a trigger is necessary for a harvest control rule unless fishing is at a very low F level. The trigger is a protection against a run of bad recruitment. A trigger with a sharp cut off can lead to highly fluctuating catches.

$B_{\text{buf}}/B_{\text{limsoft}}$ is a trigger on the lower end. Having B_{trigger} as a point closer to B_{msy} is a tool to communicate to managers. A second inflection point allows fishing pressure to be slowly reduced before we reach $B_{\text{buf}}/B_{\text{limsoft}}$.

Having a fixed fraction of B_{msy} may not necessarily protect us from going below B_{lim} .

Biomass B_{limsoft} Reference Point:

There are several reasons for implementing this soft limit reference point. It has the advantage that the risk of falling below it could be higher and more stable.

As previously commented, there are two possibilities for setting these intermediate biomass reference points: setting them based on whether we are too close to B_{lim} or based on whether we are too far from our "target" reference point ---to stay away from B_{lim} or to stay close to B_{target} . During the workshop, different options on this point were discussed, one is to have two intermediate reference points; $B_{\text{limsoft}}/B_{\text{buf}}$ that provides a safeguard against going below B_{lim} , and B_{trigger} closer to B_{msy} . The other view is to have only one biomass reference point for simplicity, and a possible candidate for this biomass reference point that serves both purposes could be B_{isr} established in the 3LNO American plaice recovery plan. The proposed value for B_{isr} is equivalent to twice B_{lim} .

If the option is to have a buffer to avoid going below B_{lim} , it will need to be set at a level that will give us some time to take action before we hit B_{lim} . i.e., not too close to B_{lim} . The reference point (B_{isr}) was proposed to delineate this zone in the American plaice 3LNO recovery plan.

From the point of view of industry-related participants, B_{buf} is important for two reasons: to avoid reaching B_{lim} levels and to get more performance. If there is a choice between the two, the preferred option would be stability,

as they prefer the B_{buf} level not to be just above B_{lim} , where management measures would be much more restrictive. They would prefer the B_{buf} level to be halfway between B_{lim} and B_{msy} .

Different reasons have been mentioned why it might be convenient to have two reference points (soft and buffer). If we only have one inflection point, experience shows that this can result in going below B_{lim} . The point of the $B_{limsoft}$ is to have a softer lower point which we want to stay away from but is less disastrous.

Management of fishing mortality based on a Harvest Control Rule:

Any PA must define the appropriate reduction in fishing pressure to correct the biomass decline. Many of the HCRs analyzed have a segmented shape, with the inflection point at the $B_{trigger}$.

From a management perspective it would be preferable for the HCR to be conceptual rather than prescriptive. There could be other factors and information, e.g., the trajectory of the stock or a coming good year class that could make support a decision outside the HCR. It's impossible to have a framework that can cover all possibilities so important to have the HCR as a default with the expectation the managers can deviate from it where appropriate.

Prescribed management actions can be either formulaic or descriptive, as the present PA. The current framework does have prescriptive management actions, but they are not formulaic. It will be very difficult to simulation test and monitor the performance of a non-prescriptive formulaic rule. The generic testing simulations should take account of environmental variation by having this reflected in realistic OMs. If there is a recovery zone and a danger zone established, there is a need to have different management actions in the two zones in order to test them. The assumption is that reductions be faster in the danger zone.

Management of fishing mortality (Recovery Plans):

Are rebuilding plans needed in the framework?

If a recovery plan is needed, it does not mean that the framework is not working well. The other option is that some aspect of the recovery can be built into the HCR and the framework so that it does not reach the point of having to discuss and implement a recovery plan, which would take time and effort. Having management measures built into the recovery zone that perform the role of a recovery plan removes the need for the development and implementation of a recovery plan.

From a manager's perspective, if the purpose of the recovery zone is to rebuild the stock, then we would have management measures in place to address low biomass. Implementation of a rebuilding plan takes time and effort for which we have limited resources and other stocks consider.

Because the behavior of stocks at low levels is unpredictable, it is unwise to set timelines as they are never met given the dependence on variable productivity and we should therefore not have prescribed timelines.

Some of the possible HCRs seen in the workshop are in themselves recovery plans and could be tested as other HCRs. In practice the behavior of collapsed stocks is very hard to predict or simulate. The ability to complete realistic simulation testing for recovery plans is always a question.

Escapement strategy for highly variable stocks:

The choices to make are; what risk to accept, and what the limit we wish to remain above. Typically this will be B_{lim} , since the aim often is to avoid recruitment overfishing, but other considerations can also be used.

This strategy could be used for stocks with episodic recruitment or short-lived stocks. Trying to keep these stocks at stable, equilibrium levels is clearly unrealistic. In stocks like these, the best approach is to make the

best use of the biomass or recruitment that is there, but then restrict fishing to make sure there is enough biomass left to produce future recruitments.

Redfish are important stocks in NAFO. As well as having highly variable recruitments, they also have very variable survey results due to variable catchability. One approach suggested was “inventory management”.

There are clear differences between the management of the small pelagics and redfish. In the small pelagics an escapement strategy makes sense but means managing in a risky area when the stock nears B_{lim} . There will be an ICES workshop on small pelagics later this year which will do some simulations on these types of stocks. For long lived species like redfish, the strategy is in principle an escapement strategy but because the fish are long lived, the effect of variable recruitment gets smoothed over the years.

NAFO is now in the process of MSE for 3LN redfish and this could be a good point to test management strategies for this stock. The results would be expected to apply to the other redfish stocks.

6. PA Framework Conclusions

Based on the above discussion, the workshop agreed the following main conclusions (numbering does not imply priority):

1. B_{lim} should represent seriously impaired productivity (e.g., the point of impaired recruitment), derived from stock-recruitment information if possible or proxies (e.g., 30-40% B_{msy} , $B_{recover}$; depending on available information).
 - a. Management should be based on very low risk of $B < B_{lim}$ (e.g., 5-10% risk, defined by managers).
 - b. Recent and projected stock trajectory (and other information like age structure, environmental conditions, etc.) should be considered for determining appropriate management actions to achieve low risk of $B < B_{lim}$.
2. Many PA systems have implemented the UN 1995 Straddling Stocks Agreement by defining $F_{lim} = F_{msy}$, recognizing that $F_{lim} = F_{msy}$ is not directly associated with B_{lim} or impaired productivity.
3. Uncertainty and risk need to be addressed in the PA framework, and the framework needs to be implemented with the information available (e.g., buffers require defined limit reference points and estimates of uncertainties or proxies; risk evaluation requires limit reference points and projected uncertainty).
4. F_{target} can be defined using several alternatives: a fraction of F_{msy} (~80-85% F_{msy}), risk of $F > F_{lim}$, a F lower than F_{msy} that produces nearly MSY (e.g., 90-95% MSY), $F_{40\%MSP}$, or $F_{0.1}$.
 - a. Feco as a target needs more development and communication with managers.
5. B_{target} is not needed in the framework, but B_{msy} is necessary as a performance statistic to meet principle b of the NAFO Convention (“to ensure that fishery resources are maintained at or restored to levels capable of producing maximum sustainable yield”)
6. The PA framework could benefit from an intermediate biomass reference point or multiple biomass reference points that are between B_{lim} and B_{msy} so that management actions can be implemented earlier as the stock approaches B_{lim} .
 - a. Intermediate biomass reference points can be derived from uncertainty in the assessment (e.g., B_{buf}), a multiple of B_{lim} (e.g., $B_{isr}=2, B_{lim}$ proposed for 3NO cod), a fraction of B_{msy} , or impairment of ecological role.

- b. Management action would be based on a probability of falling below the intermediate reference points, and the risk tolerance would be greater for higher biomass reference points.
- 7. The PA framework requires pre-agreed management actions that are conditional on stock status and fishing status.
 - a. As examples, the current NAFO PA framework has pre-agreed management actions:
 - i. in the Safe Zone, “select and set fishing mortality from a range of F values that have a low probability of exceeding F_{lim} ...”;
 - ii. in the Overfishing Zone, “reduce F to below F_{buf} ”;
 - iii. in the Cautionary Zone, “The closer stock biomass is to B_{lim} , the lower F should be below F_{buf} to ensure that there is a very low probability that biomass will decline below B_{lim} within the foreseeable future”;
 - iv. in the Danger Zone, “Reduce F to below F_{buf} . The closer stock biomass is to B_{lim} , the lower F should be below F_{buf} to ensure that there is a very low probability that biomass will decline below B_{lim} within the foreseeable future”; and
 - v. in the Collapse Zone, “ F should be set as close to zero as possible”.
 - b. Prescribed management actions can be qualitative (e.g., reduce F when B approaches B_{lim}) or applying a functional harvest control rule (target F a function of B)
 - c. Performance testing of the PA framework requires formulaic management actions (e.g., a function of stock biomass)
 - d. Flexibility will be needed for implementation, because a single HCR is not expected to be appropriate for all NAFO stocks.
- 8. PA framework should promote rebuilding of depleted stocks.
 - a. Stock recovery plans may be needed when the general PA framework is not effective, but they should not be an explicit component of the framework.
- 9. Flexibility will be needed to implement the PA framework for short-lived stocks or stocks with sporadic recruitment.
 - a. An escapement strategy could be based on B_{lim} but might require flexibility in risk tolerance.
 - b. Effective management of long-lived stocks with sporadic recruitment needs further development.
- 10. Participants highlighted the need for a follow-up meeting of manager and scientists to further discuss the concepts considered at the initial workshop. The objective of the meeting would present some additional information that could help inform the development of a proposed revision of the NAFO PA Framework.

7. Adjournment

The meeting was adjourned at 17:00 hours (UTC/GMT -3 hours Time in Halifax, Nova Scotia) on 16 August 2022.

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Annex 2. Provisional Agenda and Timetable**Day 1 – Morning Session (09:00 – 12:00 hours)**

- Opening, introductions, and approval of the agenda
- Summary of recommendations
- Key decisions and alternative PA structures to make to update the NAFO PA

Day 1 – Afternoon session (13:00 – 17:00 hours)

- Discussion Session on PA structure and key decision
- Time to Delegations to study the proposals

Day 2 – Morning Session (09:00 – 12:00 hours)

- Revision of decisions and consensus PA structure

Day 2 – Afternoon session (13:00 – 17:00 hours)

- Drafting of summary PA framework conclusions
- Next steps
- Other matters
- Drafting Workshop conclusions and Closing of the workshop

Northwest Atlantic Fisheries Organization



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

17-18 August 2022
Halifax, Nova Scotia

NAFO
Halifax, Nova Scotia, Canada
2022

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

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

17-18 August 2022
Halifax, Nova Scotia

1. Opening by co-Chairs, Fernando González-Costas (European Union) and Ray Walsh (Canada)

The meeting was opened by the co-Chairs Fernando González-Costas (European Union) and Ray Walsh (Canada) at 09:30 hours (UTC/GMT -3 hours in Halifax, Nova Scotia) on Wednesday, 17 August 2022.

The co-Chairs welcomed participants attending in person and virtually. This included representatives from Canada, European Union, Japan, Norway, Ukraine, United Kingdom, United States of America, as well as the NAFO Scientific Council (SC) Chair and invited experts on Precautionary Approach Framework on Fisheries Management (Annex 1).

2. Appointment of Rapporteurs

The NAFO Secretariat (Ricardo Federizon, Senior Fisheries Management Coordinator and Tom Blasdale, Scientific Council Coordinator) were appointed co-Rapporteurs of this meeting.

3. Adoption of Agenda

The provisional agenda as previously circulated (NAFO 22-164) was revised prior to the start of the meeting (Annex 2).

4. Greenland halibut in NAFO Divisions 2+3KLMNO

WG-RBMS noted that, with respect to the Exceptional Circumstances (EC) arising from missing the survey data, during the 2021 Annual Meeting the Commission provided direction to the Scientific Council on the application of the Harvest Control Rule (HCR) in 2022 to provide advice for 2023.

Subsequently, in response to Commission request #2 (see COM Doc. 21-20, also SCS Doc. 22-01), SC advises that EC are not occurring. Total Allowable Catch (TAC) for 2023 derived from the HCR is 15 156 tonnes which is 5% lower than the 2022 TAC (see SCS Doc. 22-18).

As no additional ECs were identified, and in accordance with the EC protocol (NAFO Conversation and Enforcement Measures [CEM] Annex I.G), WG-RBMS noted that no further action was required at this meeting.

5. Redfish in NAFO Divisions 3LN

In response to Commission request # 9 (see COM Doc. 21-20, also SCS Doc. 22-01), SC advises that catches for 2023 should not exceed their current level of 11 500 tonnes (see SCS Doc. 22-18).

Noting that the application of the Risk-based Management Strategy and the HCR as outlined in Annex I.H of the NAFO CEM expires in 2022, and that a new Management Strategy Evaluation (MSE) process for 3LN redfish is ongoing (see below), the WG **recommends** the deletion of Article 10.bis and its associated Annex I.H of the NAFO CEM (see agenda item 10).

6. MSE processes for 2+3KLMNO Greenland halibut and 3LN redfish

In September 2021, the Commission requested SC to initiate the first steps in both the 2+3KLMNO Greenland halibut and 3LN redfish MSE processes during 2021-2022 (see COM Doc. 21-20, also SCS Doc. 22-01). In June 2022, SC reported on this progress in these processes (see SCS Doc. 22-18).

6.1 Update on Progress (Commission Request #4)

Available survey data were compiled and reviewed for 2+3KLMNO Greenland halibut. SC noted that *“within-survey coverage has been an issue for many of the surveys and conflicting patterns in disparate survey indices were highlighted.”*

For 3LN redfish, catch data were reviewed in addition to the survey data. *“There was some evidence of difference in the length composition in 3L versus 3N, both in the commercial and survey redfish catches”. Also, “the ASPIC-based MSE adopted in 2014 was updated with most recent data and exploration of production model formulations continues. Work has been initiated on the development of length-based models that will include both survey and commercial length frequencies.”*

SC considered that it was premature to finalize data inputs for both processes before further investigations could be considered.

6.2 Discussion on next steps/workplan

Given the update above and in consideration of the SC resource and capability gaps and prioritization issues (see SCS Doc. 22-20 – *Scientific Council 5-year Work Plan 2022*), a MSE workplan for 2023 outlining the timeline and target deliverables for the two MSE process was developed (COM-SC RBMS WP 22-07). The WG **recommends** that the Commission approve the workplan (see agenda item 10 and Annex 3).

7. Review of the NAFO PA Framework

In 2021, the Commission requested SC to continue progression on the review of the NAFO Precautionary Approach (PA) Framework in accordance with the PA Framework review work plan approved in 2020 contained in NAFO COM-SC Doc. 20-04 (see COM Doc. 21-20). In June 2022, SC reported on its progress (see SCS Doc. 22-18).

7.1 Update on Progress (Commission Request #7)

In responding to this request, SC at its meeting in June 2022 came up with these conclusions and recommendations based on the progress of its continuing work:

- The Precautionary Approach to have three zone (e.g. collapsed, cautious, and healthy zones) with associated reference points: B_{lim} based on unacceptable or irreversible outcomes, and B_{target} based on optimal yield objectives.
- The selection of an adaptable F_{target} based in approaches similar to F_{eco} (e.g. adjusting target F based on ecosystem conditions), as well as a “soft limit” for B_{lim} which would help to account for both ecosystem considerations and a more stable estimation of uncertainties.
- The updated PA Framework to have clearly identified default probability levels to be used for advice unless otherwise specified.
- The stocks managed with MSE may not require the estimation of all reference points, but performance metrics and objectives used in MSE development need to be consistent with the PA.

In addition, SC meet in July 2022 to finalize and summarize the main conclusions and recommendations made by the SC Precautionary Approach Working group (PA-WG) which are detailed in SCS Doc. 22-02 and SCS Doc. 22-15. The meeting clarified some elements of the PA Framework: B_{lim} , acceptable risk of falling below B_{lim} , F_{msy} and F_{target} , B_{msy} , response to falling stock size, highly variable stocks/escapement strategy, ecosystem considerations, and recovery plans. Also discussed were alternative PA Frameworks that reflect the main recommendations and conclusions of the PA-WG. The meeting results are documented SCS Doc. 22-19 and were presented in the WG-RBMS PA Framework Workshop which was held in 15-16 August 2022 (see below).

7.2 Discussion of the Results of the PA Framework Workshop and Next Steps

The WG-RBMS PA Framework Workshop which was held in 15-16 August 2022. There were 45 workshop participants including NAFO scientists, external experts, managers, and the representatives from the fishing industry. They participated in their personal capacity. The purpose of the workshop was to gather input from fisheries managers, policy advisors and stakeholders on potential revisions or additions to NAFO's PA Framework, in view of informing the Commission's consideration of a revised PA Framework. The results and conclusions of the workshop is contained in COM-SC RBMS-WP 22-05 (see Annex 4).

The WG summarized these conclusions as follows:

- The analysis of the current NAFO PA Framework indicated that, if fully implemented, the current framework can deliver on many NAFO objectives. However, there may be ways to improve the current framework's effectiveness and better align it with the revised NAFO Convention.
- The conclusions of the PA Framework Revision workshop support the basic ideas of the current NAFO PA Framework, in particular the definition of the boundary reference points (B_{lim} and F_{lim}) as well as the pre-agreed management actions that are conditional on stock status and fishing status.
- The workshop also discussed possible revisions, clarifications, and additions to the current Framework such as: The establishment of a F_{target} as well as the possible implementation of an intermediate biomass reference point or multiple biomass reference points that are between B_{lim} and B_{msy} .
- The conclusions also recognise that stock recovery plans may be needed in some special cases, however, they should not be an explicit component of the framework.
- It was noted that different (or at least more flexible) approaches will be needed with respect to application of the PA Framework for stocks with sporadic/episodic recruitments, both short-lived (e.g. capelin) and longer-lived (e.g. redfish) stocks.

The WG-RBMS PA Framework Workshop arrived at a series of general conclusions toward updating the NAFO PA Framework, but further work is required in order to formalize proposals on what a revised NAFO PA Framework could look like. This follow-up work, building upon the results from the 1st PA Framework workshop, would;

1. Develop a small set of revised PA Frameworks based on the conclusions of the workshop. These revised PA Frameworks would consider plausible choices for zones, reference/operational points, proxies, and probability levels based on the discussion and conclusions from the 1st PA Framework workshop.
2. Apply in an illustrative way the revised PA Framework to selected NAFO stocks, and as much as possible examine how the SC advice may have differed under the revised PA Frameworks.

Report of WG-RBMS,
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3. Select the revised PA Frameworks and/or the key features within those frameworks that will need to be considered for the development of simulation testing (e.g. reference points, proxies, risk levels, HCRs, etc), as well as the generalized life histories that would be considered in the simulation testing exercise.

Given the update above and in consideration of the SC resource and capability gaps and prioritization issues (see SCS Doc. 22-20 – *Scientific Council 5-year Work Plan 2022*), a revised workplan outlining the timeline was developed (COM-SC RBMS WP 22-05). The WG **recommends** that the Commission approve the workplan (see agenda item 10 and Annex 5).

The PA work is expected to be undertaken during the regular July 2023 WG-RBMS meeting, and it is expected to be informed by any progress on this matter emerging from the intersessional WG-RBMS meeting in the spring of 2023, as well as the work done by SC and its PA-WG.

8. Implementation of 2018 Performance Review Panel recommendations

The co-Chairs recalled Recommendations 2, 3 and 27 of the 2018 Performance Review Panel (see COM WP 21-17) and updated the status of implementation to “*Completed*”.

The Working Group also noted Recommendation 26 which states “*NAFO makes all working documents publicly available, unless otherwise requested by a Contracting Party or subject to confidentiality rules*”. The Working Group reiterated its general support for ongoing efforts to enhance transparency while mindful of confidentiality constraints, *e.g.*, catch data.

9. Other Matters

SC Workload. The SC Chair re-iterated the issue of heavy workload among its members, which is not sustainable. The document SCS 22-05 *Scientific Council 5-year Plan 2022* was recalled highlighting the workload, including among others, the work on PA Framework, EAF, MSE and the resource gaps in completing the tasks. SC appealed to the WG to be cognizant of this predicament when formulating recommendations to the Commission.

10. Recommendations

The working group agreed to the following conclusions and recommendations:

In regard to the review of the Precautionary Approach (PA) Framework:

1. **WG-RBMS supports the conclusions reached at the PA Framework Workshop (COM-SC RBMS-WP 22-05)**
2. **WG-RBMS recommends that the Commission approve the updated workplan for the revision of the NAFO Precautionary Approach Framework (COM-SC RBMS-WP 22-06)**

In regard to ongoing MSE processes for 3LN Redfish and 2+3KLMNO Greenland halibut:

3. **WG-RBMS recognizes the Scientific Council workload and the progress that has been made to date. It recommends that both processes continue to advance in parallel, to the extent possible, including approving the 2023 workplan (COM-SC RBMS-WP 22-07).**

In regard to 3LN Redfish:

4. **WG-RBMS recommends deleting the text of NAFO CEM Article 10 bis, Redfish Conservation Plan and Harvest Control Rule, and the associated Annex I.H., noting that a new Management Strategy for this stock is currently under development.**

11. Adoption of the Report

The report was adopted via correspondence.

12. Adjournment

The meeting was adjourned at 11:30 hours (UTC/GMT -3 hours Time in Halifax, Nova Scotia) on 18 August 2022.

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Report of WG-RBMS,
17 -18 August 2022

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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. Greenland Halibut in NAFO Divisions 2+3KLMNO
Scientific Council advice on the 2023 TAC, Harvest Control Rule and Exceptional Circumstances Protocol (Commission Request #2)
5. Redfish in NAFO Divisions 3LN.
Scientific Council advice including evaluation of impacts according to the performance statistics (Commission Request #9)
6. MSE processes for 2+3KLMNO Greenland halibut and 3LN redfish
 - 6.1 Update on Progress (*Commission Request #4*)
 - 6.2 Discussion of Next Steps/ Workplan
7. Review of the NAFO PA Framework
 - 7.1 Update on Progress (*Commission Request #7*).
 - 7.2 Discussion of the Results of the PA Framework Workshop and Next Steps
8. Implementation of 2018 Performance Review Panel Recommendations
9. Other Matters
10. Recommendations
11. Adoption of the Report
12. Adjournment

Annex 3. 2023 Management Strategy Evaluation Workplan
(COM-SC RBMS-WP 22-07)

DATE	NAFO BODY	GHL MSE	3LN REDFISH
Early 2023	SC	Finalize data series to be used for the MSE	Finalize data series to be used for the MSE
April 2023	WG-RBMS (1)	Schedule finalized and proposed to the Commission; propose conceptual initial Candidate Management Procedures (CMPs); identify management objectives/ performance statistics	Schedule finalized and proposed to the Commission; initiate discussion on management objectives, conceptual initial CMPs, potential OMs, and performance statistics.
June 2023	Scientific Council	Proposal and review and finalization of Operating Models (OMs) to be used; consensus required at this time; preliminary application of initial CMPs.	Proposal and review of OMs to be used
July 2023	WG-RBMS (2)	Finalize CMPs; refinement of performance statistics including risk tolerances and constraints	Continued progress on OMs, development of performance statistics; development of CMPs.,
1) Timelines are notional and subject to revision based on workload, capacity and unanticipated problems.			
2) Contracting Parties are encouraged to submit proposed initial CMPs, management objectives and performance statistics for consideration in advance of the April WG-RBMS meeting.			

Annex 4. PA Framework Workshop Conclusions (COM-SC RBMS-WP 22-05)

PA Framework Conclusions (numbering does not imply priority)

1. Blim should represent seriously impaired productivity (e.g., the point of impaired recruitment), derived from stock-recruitment information if possible or proxies (e.g., 30-40% Bmsy, Brecover; depending on available information).
 - a. Management should be based on very low risk of $B < B_{lim}$ (e.g., 5-10% risk, defined by managers).
 - b. Recent and projected stock trajectory (and other information like age structure, environmental conditions, etc.) should be considered for determining appropriate management actions to achieve low risk of $B < B_{lim}$.
2. Many PA systems have implemented the UN 1995 Straddling Stocks Agreement by defining $F_{lim} = F_{msy}$, recognizing that $F_{lim} = F_{msy}$ is not directly associated with Blim or impaired productivity.
3. Uncertainty and risk need to be addressed in the PA Framework, and the framework needs to be implemented with the information available (e.g., buffers require defined limit reference points and estimates of uncertainties or proxies; risk evaluation requires limit reference points and projected uncertainty).
4. F_{target} can be defined using several alternatives: a fraction of F_{msy} (~80-85% F_{msy}), risk of $F > F_{lim}$, a F lower than F_{msy} that produces nearly MSY (e.g., 90-95%MSY), $F_{40\%MSP}$, or $F_{0.1}$.
 - a. F_{eco} as a target needs more development and communication with managers.
5. B_{target} is not needed in the framework, but B_{msy} is necessary as a performance statistic to meet principle b of the NAFO Convention (*"to ensure that fishery resources are maintained at or restored to levels capable of producing maximum sustainable yield"*)
6. The PA Framework could benefit from an intermediate biomass reference point or multiple biomass reference points that are between Blim and Bmsy so that management actions can be implemented earlier as the stock approaches Blim.
 - a. Intermediate biomass reference points can be derived from uncertainty in the assessment (e.g., B_{buf}), a multiple of Blim (e.g., $B_{isr} = 2B_{lim}$ proposed for 3NO cod), a fraction of Bmsy, or impairment of ecological role.
 - b. Management action would be based on a probability of falling below the intermediate reference points, and the risk tolerance would be greater for higher biomass reference points.
7. The PA Framework requires pre-agreed management actions that are conditional on stock status and fishing status.
 - a. As examples, the current NAFO PA Framework has pre-agreed management actions:
 - i. in the Safe Zone, *"select and set fishing mortality from a range of F values that have a low probability of exceeding F_{lim} ..."*;
 - ii. in the Overfishing Zone, *"reduce F to below F_{buf} "*;

- iii. in the Cautionary Zone, *“The closer stock biomass is to Blim, the lower F should be below Fbuf to ensure that there is a very low probability that biomass will decline below Blim within the foreseeable future”*;
 - iv. in the Danger Zone, *“Reduce F to below Fbuf. The closer stock biomass is to Blim, the lower F should be below Fbuf to ensure that there is a very low probability that biomass will decline below Blim within the foreseeable future”*; and
 - v. in the Collapse Zone, *“F should be set as close to zero as possible”*.
- b. Prescribed management actions can be qualitative (e.g., reduce F when B approaches Blim) or applying a functional harvest control rule (target F a function of B)
 - c. Performance testing of the PA Framework requires formulaic management actions (e.g., a function of stock biomass)
 - d. Flexibility will be needed for implementation, because a single HCR is not expected to be appropriate for all NAFO stocks.
8. PA Framework should promote rebuilding of depleted stocks.
- a. Stock recovery plans may be needed when the general PA Framework is not effective, but they should not be an explicit component of the framework.
9. Flexibility will be needed to implement the PA Framework for short-lived stocks or stocks with sporadic recruitment.
- a. An escapement strategy could be based on Blim but might require flexibility in risk tolerance.
 - b. Effective management of long-lived stocks with sporadic recruitment needs further development.
10. Participants highlighted the need for a follow-up meeting of manager and scientists to further discuss the concepts considered at the initial workshop. The objective of the meeting would to present some additional information that could help inform the development of a proposed revision of the NAFO PA Framework.

Annex 5. NAFO Precautionary Approach Framework Revision - Revised Workplan
(COM-SC RBMS-WP 22-06)

- Review of and proposal for ToRs related to mapping objectives: ToRs 1a, 1c and 1g.
Deadline for results to SC: June 2021
- Present results to WG-RBMS after the June SC
- Review of and proposal for ToRs related to structural aspects and quantification of uncertainty and risk. Deadline for results to SC: ToRs 1b, 1d, 1e and 1f.
Deadline for results November 2021
- The work in the previous bullet points would need to cover the data continuum, so that the framework could be applied to all NAFO stocks (data rich and data poor).
- Consider broad associated implications for stocks managed using a Management Procedure (HCR) based on a MSE.
- Workshop - (including the group of scientists and managers and stakeholders), around March 2022, to address the entire ToR and make a proposal of revision of the NAFO PA Framework (to be later reviewed by the WG-RBMS).
Note: Delayed until August 2022.
- WG-RBMS 2022, reviewed the latest SC progress report (June 2022) on the PAF, as well as, the conclusions from the 1st PAF workshop (August 2022); and, prepared a revised workplan.
- SC to prepare additional information to inform discussion at WG-RBMS in 2023.
- Time for Contracting Parties internal discussions and further work if required
- WG-RBMS July 2023, review additional information from SC and propose draft revised framework
- Provisional draft framework to be considered by the NAFO Commission in September 2023, for endorsement in advance of simulation testing.
- SC June 2024, complete simulation testing
- WG-RBMS 2024, review the results of SC simulation testing and recommend revised PA Framework to Commission
- Sept 2024, Commission decision on adoption of revised PA Framework

Northwest Atlantic Fisheries Organization



**Report of the STACTIC Working Group on Control of Landing Obligation (WG-LO)
Meeting**

29-30 August 2022
via Webex

NAFO
Halifax, Nova Scotia, Canada
2022

Report of the STACTIC Working Group on Control of Landing Obligation (WG-LO) Meeting

29–30 August 2022
via Webex

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Report of the STACTIC Working Group on Control of Landing Obligation (WG-LO) Meeting

29–30 August 2022
via Webex

1. Opening of the Meeting

The Chair (Patrick Moran) opened the meeting at 09:00 (UTC/GMT -3 hours) on Monday, 29 August 2022 via Webex and welcomed representatives from Canada, Denmark (in respect of the Faroe Islands and Greenland), the European Union, Japan, Norway and the United States of America (Annex 1).

2. Appointment of Rapporteur

The NAFO Secretariat (Mikaela Soroka) was appointed as rapporteur.

3. Adoption of Agenda

The agenda was adopted as previously circulated (Annex 2).

4. Draft Terms of Reference

The Working Group noted that following the circulation to STACTIC members, there were no comments to the draft Terms of Reference (STACTIC WP 22-31) (Annex 3), which were considered endorsed. However, it was noted that the language of point 1 of the Terms of Reference could be clarified in this report. The expected role of the Working Group is to provide a draft response for STACTIC's consideration. STACTIC's role is to finalise that response.

5. Discussion on control elements

The Working Group initiated the conversation by presenting STACTIC WP 21-53 and relevant background information of the document. The Working Group performed an extensive review of the document and created the revised document STACTIC WP 22-34 for presentation at the STACTIC 2022 Annual Meeting. During the discussion, Contracting Parties were encouraged to revise and, as appropriate, update the summary of their domestic landing obligations included in the annex of the document, prior to 09 September 2022.

It was **agreed** that:

- **Contracting Parties are encouraged to revise and, as appropriate, update the summary of their domestic landing obligations included in the Annex of STACTIC WP 22-34 prior to 09 September 2022.**
- **The Working Group will forward STACTIC WP 22-34 to STACTIC for consideration at the STACTIC 2022 Annual Meeting.**

6. Recommendations to STACTIC

It was **agreed** that:

- **The Working Group recommends that STACTIC endorse STACTIC WP 22-34.**

Report of WG-LO,
29-30 August 2022

7. Other Business

No other business was discussed.

8. Adoption of the Report

The report was adopted during the meeting.

9. Adjournment

The meeting adjourned at 11:15 (UTC/GMT -3 hours) on 30 August 2022.

Annex 1. List of Participants

Moran, Patrick (USA)	Chair
Browne, Dion Hickey, Janelle	Canada
Nedergaard, Mads Trolle Radoor, Sanne Rømer	Denmark (in respect of Greenland and Faroe Islands)
Arrhenius, Fredrik Babcionis, Genadijus Dybiec, Leszek Escudeiro, João Ferreira, Carlos Granell, Ignacio Grossmann, Meit Head, Francois Llopis López, Marta Luengo, Gabriel Arevalillo Mattsson, Ylva Näks, Liivika Ogertschnig, Larissa Okas, Reemet Quintans, Miguel Robledo, C. Margarita Mancebo Romaite, Kristina Szumlicz-Dobiesz, Justyna Tubio, Xose Trübner, Björn	European Union
Akiyama, Masahiro Matsunaga, Satoshi Yoshida, Mako	Japan
Myrvang, Runa Ognedal, Hilde	Norway
Jaburek, Shannah Pohl, Katie Provencher, Eric	United States of America
Federizon, Ricardo Kendall, Matt Soroka, Mikaela	NAFO Secretariat

Annex 2. Agenda

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