

2022 Annual Report



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

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NORTHWEST ATLANTIC
FISHERIES ORGANIZATION

Annual Report 2022

This Annual Report summarizes and highlights discussions, decisions and events of NAFO during 2022. It does not replace the detailed NAFO meeting reports, such as *Scientific Council Reports and Meeting Proceedings of the Commission*, which are accessible on the NAFO Website.

www.nafo.int



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May 2023

A YEAR IN REVIEW



Fred Kingston, Executive Secretary

It has been another interesting year for NAFO. As travel restrictions due to the global pandemic began to ease, NAFO was able to conduct many of its meetings in a “hybrid” format (i.e. “in person”, with the possibility for officials who could not attend to participate virtually), including the 2022 Annual Meeting. Overall NAFO again held around twenty-five meetings in 2022 in virtual or hybrid format.

This year’s Annual Meeting took place in the historic town of Porto, Portugal – the first time the Annual Meeting was held in person since the start of the global pandemic in 2020. It was extremely well organized, and the hospitality of our Portuguese hosts was wonderful, helping to ensure a very successful Annual Meeting.

At the 2022 Annual Meeting, NAFO made significant progress in further developing its ecosystem approach framework to fisheries management. In particular, the Commission adopted, in principle, ecosystem reference points (“total catch index” or “TCI”) to complement stock

assessments and to help inform management decisions regarding the potential risk of ecosystem overfishing. This decision followed extensive work from NAFO’s Scientific Council, including an independent peer review of the TCI concept in 2022, and a dedicated “Ecosystem Roadmap Workshop” for fisheries managers and scientists last August to discuss some of the potential practical implications of this concept. This decision can be considered “ground-breaking”, since, as far as I am aware, no other Regional Fisheries Management Organization (RFMO) has gone as far as NAFO in incorporating such ecosystem considerations into its fisheries management process.

Other major decisions adopted at the 2022 Annual Meeting included:

- Significant progress continues to be made on NAFO’s revision of its precautionary approach framework. This revision is expected to be finalized at the 2023 Annual Meeting;
- NAFO adopted a Management Strategy Evaluation Workplan for both Greenland halibut in Divisions 2+3KLMNO and redfish in Divisions 3LN;
- NAFO adopted measures to prohibit the landing and retention of Greenland sharks in the NAFO Regulatory Area; and
- Brynhildur Benediktsdóttir was selected the new Executive Secretary beginning in January 2023.

The Commission also discussed the issue of the workload on the Scientific Council, which has been very heavy over the last several years. The Commission agreed to form an informal group consisting of the Chairs of the Commission and Scientific Council and the Chairs of several Joint Commission-Scientific Council Working Groups to reflect on the problem and to explore possible short- and long-term

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solutions. This informal group is expected to meet intersessionally and will report and present proposals, including budgetary implications, to the Commission and Scientific Council at the 2023 Annual Meeting.

This year also marked the completion of the term of Kaire Märtin (EU – Estonia) as Chair of the NAFO Standing Committee on International Control (STACTIC). I wish to express my thanks to her for all her dedication in steering STACTIC

successfully through many difficult issues, particularly arising from the global pandemic. Patrick Moran (USA) will take over as interim Chair for the coming year. At the Secretariat, we welcomed Mikaela Soroka as the new Fisheries Information Administrator.

Finally, 2022 was my last year as Executive Secretary. I am pleased that the Secretariat will be in very good hands with my successor. It has been a great honour and privilege to serve this Organization over the last

nine years. It is gratifying that NAFO has become a model of what an RFMO can achieve and has earned respect from the international fisheries community. This is all due to the vision and spirit of cooperation of NAFO's Contracting Parties and the dedication and professionalism of the staff at the NAFO Secretariat.

Executive Secretary,
Fred Kingston

CONTRACTING PARTIES OF NAFO



Canada



European Union



Republic of Korea



Cuba



France (in respect of
St. Pierre and Miquelon)



Russian Federation



Denmark (in respect
of the Faroe Islands
and Greenland)



Iceland



Ukraine



Japan



United Kingdom



Norway



United States of America

ELECTED OFFICERS

Commission



Acting Chair of the Commission & vice-Chair of the Commission
Deirdre Warner-Kramer
(United States of America)
Mar. 2022-present & Sep. 2021–Sep. 2022 respectively



President of NAFO & Chair of the Commission
Temur Tairov
(Russian Federation)
Sep. 2021–Mar. 2022



Chair of STACFAD
Robert Fagan
(Canada)
Sep. 2020–Sep. 2024



vice-Chair of STACFAD
Jake Round
(United Kingdom)
Sep. 2021–Sep. 2023



Chair of STACTIC
Kaire Märtin
(European Union)
Sep. 2019–Sep. 2022



vice-Chair of STACTIC
Patrick Moran
(United States of America)
Sep. 2019–Sep. 2022

Scientific Council



Chair of the Scientific Council
Karen Dwyer
(Canada)
Sep. 2021–Sep. 2023



vice-Chair of Scientific Council & STACREC Chair
Diana González-Troncoso
(European Union)
Sep. 2021–Sep. 2023



Chair of STACFEN
Miguel Caetano
(European Union)
Jun. 2019–Sep. 2023



Chair of STACFIS
Mark Simpson
(Canada)
Sep. 2021–Sep. 2023



Chair of STACPUB
Rick Rideout
(Canada)
Sep. 2021–Sep. 2023

VILLA DE PITANXO

On 15 February 2022, one of European Union's fishing vessels, the Villa de Pitanzo, sank during its deployment in the NAFO Regulatory Area. We extend our deepest condolences to all of those involved in this devastating tragedy.

ANNUAL MEETING

Porto, Portugal



NAFO's 44th Annual Meeting was held at the Palácio da Bolsa, from the 19-23 September 2022, in Porto, Portugal. The meeting marked the first time NAFO has held an Annual Meeting, in-person, since the beginning of the global pandemic in 2020. The meeting

consisted of a hybrid format allowing participants to also attend virtually.

The meeting was opened, and delegates were welcomed to Portugal, by the acting Chair of the Commission, Deirdre Warner-Kramer, and Dr. Isabel Ventura, Deputy Director of the Directorate-General for

Natural Resources, Safety and Maritime Services of Portugal.

For further information on the outcomes and decisions made at the 44th Annual Meeting, please see the [NAFO website](https://www.nafo.int).

See page 19 for more pictures.

The next Annual Meeting will be held in Spain, 18-22 September 2023.



NAFO ANNUAL MEETING - SEPTEMBER 2022



Heads of Delegation

Back row, left to right: Fred Kingston, Executive Secretary; Will Francis (United Kingdom), Durita Lamhauge Jóansdóttir (DFG-Faroe Islands), Caroline Lunde Ellingsen (Norway), Ichiro Nomura (Japan); Bernard Briand (France-SPM).

Front row, left to right: Iben Funch Døj (DFG-Greenland); Anders Jessen (European Union); Deirdre Warner-Kramer (Acting Chair of the Commission); Adam Burns (Canada); Lázara Mercedes López Acea (Cuba).

MISSING
FROM PHOTOATTENDED VIRTUALLY
BY WEBEXJohann Sigurjonsson
(Iceland)Soobin Shim
(Republic of Korea)Temur Tairov
(Russian Federation)Oleh Klochak
(Ukraine)Michael Pentony
(United States of
America)

Financial Status Update

The Standing Committee on Finance and Administration (STACFAD) oversees the budget and administrative matters of the Organization. At the 2023 Annual Meeting, Robert Fagan (Canada) led the committee throughout its deliberations.

STACFAD was pleased to report that the overall financial affairs of the Organization continue to be in a stable position. Two membership contributions were outstanding at the end of 2022, totaling \$149,111.

The Relocation Fund which represents funds for the future recruitment and relocation costs of incoming and outgoing internationally recruited staff was maintained to its maximum level of \$100,000. Also, the Performance Review Fund established for future costs associated with having an external performance review was increased by another \$15,000 to \$60,000.

The NAFO budget for 2022 was set at \$2.587 million (Table. 1) with actual expenditures coming in approximately \$236,000 under budget. The majority of the savings can once again be attributed to the reduction in meeting and travel costs as in person meetings did not resume until mid-year, albeit at a reduced number.

Baker Tilly Nova Scotia Inc. audited the 2022 financial statements for the second time in accordance with their appointment to audit NAFO'S financial records for the 2021–2025 fiscal periods.

The Committee put forward a budget proposal for the 2023 fiscal year of \$2.650 million, representing an increase of 2.4% over the 2022 budget. The increase in the 2023 budget can be attributed to routine economic and salary step increases for personnel, changes in personnel, and an increase to the computer services budget.

The Commission selected its new Executive Secretary during the Annual Meeting for the 2023–2026 term. As a result, additional funds of \$85,000 were budgeted for relocation costs for both the incoming and outgoing Executive Secretaries.

Robert Fagan (Canada) was re-elected as Chair for a second term two-year term.

The next meeting of STACFAD will be held 18–22 September 2023, during the 45th Annual Meeting of NAFO in Spain.

Table 1. NAFO Budget 2022

	2022 Budget	2022 Actual Expenditures
Salaries and Benefits	\$1,953,000	\$1,931,892
Meeting and Travel	342,000	198,534
Computer Services	63,000	65,190
Professional Services	45,000	29,181
Fishery Monitoring	43,000	42,400
Other	141,000	84,034
Total	\$2,587,000	\$2,351,231

Contributions billed to NAFO Contracting Parties for 2022 are shown in Table 2. The NAFO Convention (Article IX.2) establishes a four-part cost sharing formula, including a proportion based on the nominal catches in the Convention Area.

Table 2. NAFO Contracting Parties' contributions for 2022

	2022 Member Contributions
Canada	\$735,195
Cuba	55,279
Denmark (in respect of Faroe Islands and Greenland)	241,322
European Union	224,126
France (in respect of St. Pierre et Miquelon)	58,099
Iceland	55,279
Japan	65,030
Norway	66,598
Republic of Korea	55,279
Russian Federation	96,224
Ukraine	55,279
United Kingdom	55,279
United States of America	248,027
Total	\$2,011,016

FISHERY

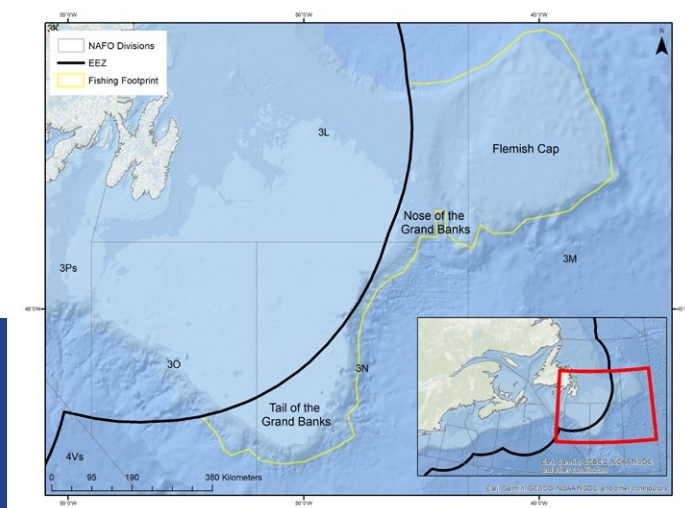
2022 FISHING EFFORT

The information below is a summary of the fishing activity that took place in the 2022 calendar year, in which there were 38 fishing vessels spending approximately 3 925 days in the NAFO Regulatory Area (NRA). Smaller vessels tend to fish for yellowtail flounder and Atlantic halibut in Tail of the Grand Banks, and cod in the Flemish Cap using longline gears. Larger vessels go on much longer fishing trips using bottom trawls in the Nose and Tail of the Grand Banks and in the Flemish Cap directing for cod, Greenland halibut, redfish, and skates.

TAC Table 2022 and 2023 (metric tons)

The annual TACs are agreed by the Commission and TAC decisions are based on advice from the Scientific Council, which conducts regular assessment of the fish stocks. A summary of the scientific advice and adopted management measures for 2022 is available in Appendix I. Existing moratoria (TAC = 0) were extended to allow rebuilding of depleted stocks.

Stock/Year	2022	2023
3L Cod	0	0
3M Cod	4 000	6 100
3NO Cod	0	0
3LN Redfish	18 100	18 100
3M Redfish	10 933	11 171
3O Redfish	20 000	20 000
Subarea 2 and Div. 1F+3K Redfish	0	0
3LNO American plaice	0	0
3M American plaice	0	0
3LNO Yellowtail flounder	20 000	20 000
3L Witch flounder	0	0
3NO Witch flounder	1 175	1 295
3NO White hake	1 000	1 000
3NO Capelin	0	0
3LNO Skates	7 000	7 000
3LMNO Greenland halibut	11 755	11 227
Subareas 3+4 Squid (<i>Illex</i>)	34 000	34 000
3L Shrimp	0	0
3NO Shrimp	0	0
3M Shrimp	0	0
SA6 Alfonsino	0	0



VULNERABLE MARINE ECOSYSTEMS (VMEs)

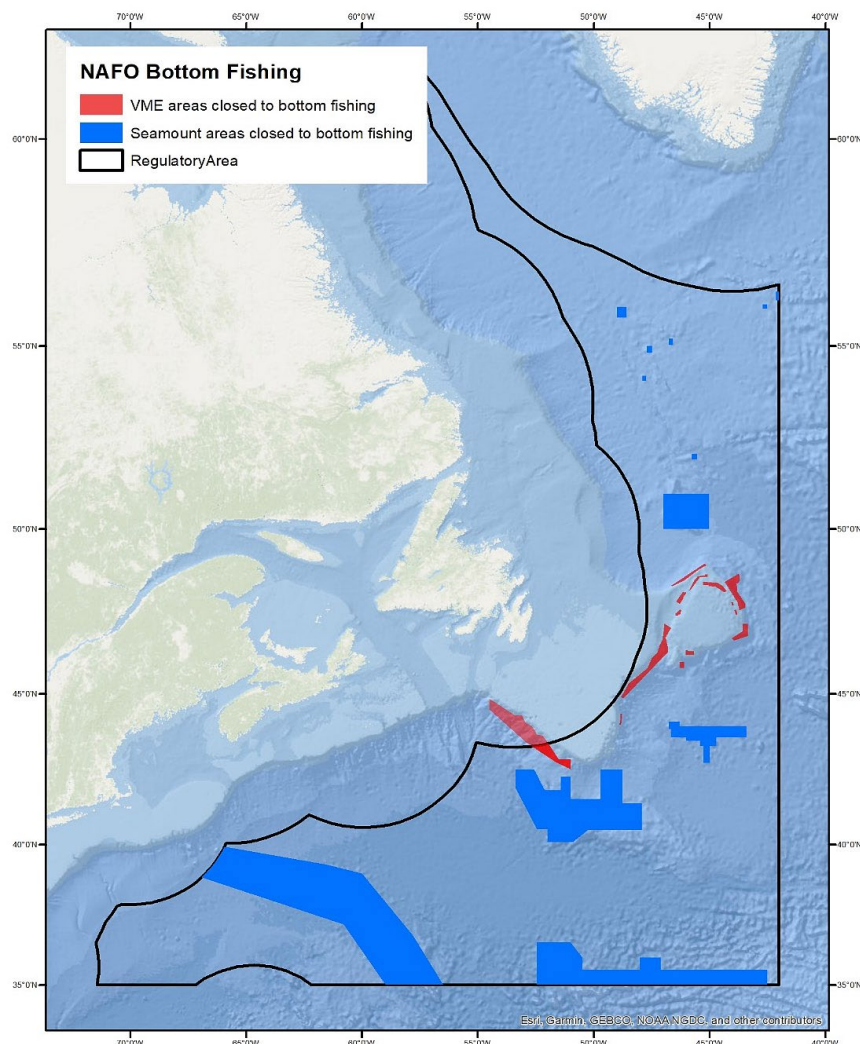


Figure 1. The current NAFO VME closures that were adopted at the 2021 Annual Meeting.

In order to protect Vulnerable Marine Ecosystems (VMEs), NAFO has restricted bottom fishing activities in 27 areas within the NRA, including:

15 areas
to protect
sponge, sea
pen and
corals

&

12
seamount
areas

The result is that approximately 14% of the NAFO Regulatory Area is closed to bottom fishing activities (Figure 1).

JOINT COMMISSION-SCIENTIFIC COUNCIL

Working Groups

In February, the NAFO Working Group on Improving Efficiency of NAFO Working Group Process (E-WG) met, and the NAFO Joint Commission–Scientific Council Working Group on Catch Estimation Strategy Advisory Group (CESAG) met by correspondence throughout the spring. In August, the Working Group on Risk-Based Management Strategies (WG-RBMS), and the Working Group on Ecosystem Approach Framework to

Fisheries Management (WG-EAFFM), met in-person in Halifax, Canada. Additionally, during the meeting period in August, the WG-EAFFM held a workshop to draft ecosystem objectives, and the WG-RBMS held a Precautionary Approach Framework workshop.

Meeting reports from the joint Working Groups can be found on the [NAFO website](http://www.nafo.int).

SCIENTIFIC COUNCIL

SCIENTIFIC COUNCIL - JUNE 2022



The 2022, Scientific Council (SC) June meeting returned to Saint Mary's University, Halifax, for its first in-person meeting in three years. Due to ongoing difficulties with international travel, the option to participate remotely was retained, but a total of 27 scientists were able to attend the meeting in person with a further 27 participating online.

During the June meeting, Scientific Council carried out full assessments for cod in Division 3M, redfish in Divisions 3LN and in Division 3O, witch flounder in Divisions 3NO, and thorny skate in Division 3LNO and Subdivision 3Ps. Interim monitoring updates were conducted for all other stocks for which multi-year advice was provided in 2020 or 2021. At the request of coastal States, Scientific Council also conducted full assessments of Greenland halibut in Division 1A (inshore) and in Subarea 0+1 (offshore). Full details of all these assessments can be found in the Scientific Council June report ([SCS Doc. 22/18](#)).

As required by the [Management Strategy \(MS\) for Greenland halibut](#) stock in Subarea 2 + Divisions 3KLMNO, adopted by NAFO in 2017, Scientific Council was requested to monitor the status of this stock to determine whether exceptional circumstances were occurring. Scientific Council advised that, with the exception of three missing values from the Canadian spring 3LNO survey, exceptional circumstances were not occurring in 2022, however further disruptions in surveys in 2022 will trigger exceptional circumstances in 2023. In accordance with the [Exceptional Circumstances Protocol](#), Scientific Council will work with WG-RBMS in 2023 to determine the severity of the exceptional circumstances identified and advise on options.

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Scientific Council

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In 2022, Scientific Council initiated the first steps in the scheduled review of the 2+3KLMNO Greenland halibut Management Strategy Evaluation (MSE), as well as developing a new MSE for 3LN redfish. Work on both MSEs will continue through 2023 and 2024 with the expectation that both will be adopted by the Commission in 2024. Scientific Council also continued its work on the review of the NAFO Precautionary Approach Framework.

At the request of the Commission, SC convened a panel of independent experts to do a scientific review of Ecosystem Production Potential (EPP) and Total Catch Indices (TCI) as components of the NAFO Roadmap for the implementation for the Ecosystem Approach to fisheries management. Based on the results of the review, SC concluded that the EPP/TCI work is scientifically sound, and more than adequate for supporting implementation of the Tier 1 of the Roadmap. Consequently, at the 2022 Annual Meeting, the Commission adopted, in principle, TCI as an ecosystem reference point to help inform management decisions regarding the potential risk of ecosystem overfishing.

Scientific Council held two meetings in September 2022: the shrimp assessment meeting, which was held in Vigo, Spain, and the Annual Meeting in Porto, Portugal. The shrimp assessment meeting conducted assessments of northern shrimp (*Pandalus*) in NAFO Division 3M, in the Denmark Strait and off East Greenland, and in Subarea 1 and Division 0A. During the Annual Meeting SC carried out a full assessment of northern shortfin squid in Subareas 3+4 as well as addressing a number of requests received from the Commission during the Annual Meeting.



Scientific Council in session



Margaret Treble (left), Chair of STACPUB (2010–2021) receives the Scientific Merit Award from Karen Dwyer (right), Chair of Scientific Council.

Scientific Council in 2022 was pleased to present a Scientific Merit Award to Margaret Treble (Canada) for her many science contributions to SC over the years as designated expert for the Greenland

Halibut Subarea 0 and 1 stock since 2018, but also for her dedicated work as Chair of STACPUB for 12 consecutive years (2010–2021).

MEETINGS

- 13 January 2022, Joint Advisory Group on Data Management (JAGDM) Meeting: Strategic Planning Meeting
- 31 January 2022, NAFO Scientific Council Precautionary Approach Framework Working Group (PA-WG)
- 22 February 2022, NAFO Working Group on Improving Efficiency of NAFO Working Group Process (E-WG)
- 12 April 2022, *Ad Hoc* virtual NAFO Website Re-Design Working Group: Data Classification Meeting
- April 2022, NAFO Joint Commission–Scientific Council Catch Estimation Strategy Advisory Group (CESAG) Meeting
- 04 May 2022, NAFO Scientific Council Standing Committee on Research Coordination (STACREC) Meeting
- 09–12 May 2022, NAFO Standing Committee on International Control (STACTIC) Intersessional Meeting
- 19 May 2022, NAFO Scientific Council Precautionary Approach Framework Working Group (PA-WG)
- 03–16 June 2022, NAFO Scientific Council and its Standing Committees Meeting
- 07 July 2022, NAFO Scientific Council Precautionary Approach Framework Working Group (PA-WG)
- 14 July 2022, NAFO STACTIC Editorial Drafting Group of the NAFO CEM (EDG) Meeting
- 26–28 July 2022, NAFO STACTIC Observer Program Review Working Group Meeting (WG-OPR)
- 27 July 2022, NAFO Scientific Council Meeting
- 08–10 August 2022, NAFO Joint Commission–Scientific Council WG-EAFFM Workshop of fisheries managers and scientists to draft ecosystem objectives
- 11–12 August 2022, NAFO Joint Commission–Scientific Council Working Group on Ecosystem Approach Framework to Fisheries Management (WG-EAFFM) Meeting
- 15–16 August 2022, NAFO Precautionary Approach Framework Workshop
- 17–18 August 2022, NAFO Joint Commission–Scientific Council Working Group on Risk-based Management Strategies (WG-RBMS) Meeting
- 29–30 August 2022, NAFO STACTIC Working Group on Control of Landing Obligation (WG-LO) Meeting
- 12–16 September 2022, NAFO Scientific Council and STACFIS Shrimp Meeting
- 18 September 2022, NAFO Commission Intersessional Fishing Regime for Shrimp in Division 3M Meeting
- 19–23 September 2022, NAFO 44th Annual Meeting
- 31 October 2022, NAFO STACTIC Editorial Drafting Group of the NAFO CEM (EDG) Meeting
- 15–24 November 2022, Scientific Council Working Group on Ecosystem Science and Assessment (WG-ESA)
- 01 December 2022, NAFO Scientific Council Precautionary Approach Working Group
- 14 December 2022, NAFO Working Group on Improving Efficiency of NAFO Working Group Process (E-WG) Meeting



Meeting reports of all NAFO meetings can be found on the NAFO website.

EXTERNAL MEETINGS



EFCA NAFO Observer's Workshop, Vigo, Spain

BBNJ Table-Top Exercise, organized by the United Kingdom and Canada, virtual. 06 and 10 January 2022

Executive Secretary, Fred Kingston, participated in this Workshop.

Informal workshop entitled "High Seas Marine Protected Areas: Vast, Remote and Costly?" organized by the Institute for Sustainable Development and International Relations (IDDRI), Virtual, 15–16 February 2022

Executive Secretary, Fred Kingston, participated in this Workshop.

European Commission workshop on "Improving environmental sustainability of deep-sea fisheries with emphasis on the conservation of Vulnerable Marine Ecosystems (VMEs)", Virtual, 28 February 2022

Executive Secretary, Fred Kingston, attended the meeting.

Fourth Session of the Intergovernmental Conference (IGC) on an international legally binding instrument under the UN Convention on the Law of the Sea (UNCLOS) on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ), New York City, USA, 07–18 March 2022

Executive Secretary, Fred Kingston, attended the meeting virtually.

EFCA Training for EU NAFO inspectors, Virtual, 30–31 March and 25–26 April 2022

Database Developer/Programmer Analyst, DJ Laycock and Fisheries Information Administrator, Mikaela Soroka, attended the meeting virtually.

International Fisheries Commissions Pension Society (IFCPS), Annual Meeting, Victoria BC, Canada, 05–07 April 2022

Executive Secretary, Fred Kingston, and Deputy Executive Secretary and

Senior Finance & Staff Administrator, Stan Goodick attended the meeting.

Fifteenth round of Informal Consultations of States Parties to the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, New York City, USA, 17–19 May 2022

The topic of these informal consultations was "Implementation of an ecosystem approach to fisheries management". Executive Secretary, Fred Kingston, attended the meeting and gave a presentation entitled, "The experience of NAFO in implementing the ecosystem approach to fisheries management".

The Ocean Frontier 2022 Conference hosted by Ocean Frontier Institute, Halifax, NS, 16–19 May 2022

Executive Secretary, Fred Kingston, attended the meeting.

FAO Technical Consultation on Voluntary Guidelines for Transshipment, Rome, 30 May–03 June 2022

Executive Secretary, Fred Kingston, Senior Fisheries Management Coordinator, Ricardo Federizon, and Fisheries Information Administrator, Mikaela Soroka, attended virtually.

Coordinating Working Party on Fishery Statistics – 27th Session, Virtual, 20–24 June 2022

Senior Fisheries Management Coordinator, Ricardo Federizon, attended the meeting.

United Nations Workshop to discuss the implementation of paragraphs 113, 117 and 119 to 124 of resolution 64/72, paragraphs 121, 126, 129, 130 and 132 to 134 of resolution 66.68 and paragraphs 156, 171, 175, 177 to 188 and 219 of resolution 71/123 of the Provisions of the United Nations Convention on the Law of the

Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, New York City, USA, 02–03 August 2022

Scientific Council Coordinator, Thomas Blasdale, attended the meeting, and gave two presentations.

Regional Fishery Body Secretariats' Network (RSN-9), FAO headquarters in Rome, Italy, 02, 03, and 09 September 2022

Executive Secretary, Fred Kingston, attended the meeting.

Thirty-fifth Session of the Committee on Fisheries (COFI-35), FAO headquarters in Rome, Italy, 05–09 September 2022

Executive Secretary, Fred Kingston, attended the meeting.

ASFA Advisory Board (Virtual) Meeting, 12–14 September and 23 November 2022

Senior Publications/Web Manager, Alexis Pacey, attended the meeting.

Convention on Biological Diversity - Third meeting of the Sustainable Ocean Initiative (SOI) Global Dialogue with Regional Seas Organizations and Regional Fishery Bodies, Busan, Republic of Korea, 25–28 October 2022

Executive Secretary, Fred Kingston, attended the meeting.

European Fisheries Control Agency (EFCA) NAFO Observer's Workshop, Vigo, Spain, 29–30 November 2022

Database Developer/Programmer Analyst, DJ Laycock, attended the meeting.

International Monitoring Control and Surveillance (IMCS) Network webinar "Moving From Words to Action: Operational MCS Implications of the FAO Voluntary Guidelines for Transshipment", Virtual, 07 December 2022

Senior Fisheries Management Coordinator, Ricardo Federizon, attended the meeting.

SECRETARIAT ACTIVITIES

Secretariat Staff Members 2022



Executive Secretary
Fred Kingston
2014–2022



Deputy Executive
Secretary &
Senior Finance & Staff
Administrator
Stan Goodick



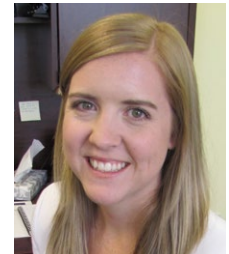
Senior Fisheries
Management
Coordinator
Ricardo Federizon



Scientific Council
Coordinator
Tom Blasdale



Scientific Information
Administrator
Dayna Bell-MacCallum



Office
Administrator
Sarah Guile



IT Manager
Matt Kendall



Database Developer/
Programmer Analyst
DJ Laycock



Senior Executive
Assistant to the
Executive Secretary
Lisa LeFort



Senior Publications/
Web Manager
Alexis Pacey



Fisheries Information
Administrator
Mikaela Soroka

INTERNSHIPS

The NAFO Intern Program is currently on hold due to the ongoing global pandemic.

Mikaela Soroka was

welcomed to the NAFO team as the Fisheries Information Administrator in Spring 2022.

Outreach

EXTERNAL RELATIONS

During the past year, the NAFO Secretariat has participated in meetings to discuss NAFO-related issues, including the following:

27 September 2022 – Executive Secretary, Fred Kingston, provided a presentation on NAFO to the University of Alicante, in Alicante, Spain.

30 September 2022 – Executive Secretary, Fred Kingston, gave a presentation to the Master's Program in Sustainable Fisheries Management class, about the NAFO Observer Program, at the University of Alicante, in Alicante, Spain.

03 November 2022 – Scientific Information Administrator, Dayna Bell MacCallum, gave a presentation on NAFO to Master of Marine Affairs Program class at Dalhousie University in Halifax, Canada.

07 December 2022 – Executive Secretary, Fred Kingston, gave a presentation about NAFO to the International Ocean Institute Workshop on Ocean Governance for Indigenous Peoples, in Halifax, Canada.

08 December 2022 – Executive Secretary, Fred Kingston, gave a virtual presentation about NAFO to the University of Hamburg.

INFORMATION REQUESTS

The NAFO Secretariat regularly responds to requests from various international sources. During the last year the Secretariat has responded specifically request for input on:

Contribution to the survey entitled, *'External Evaluation of EFCA covering the period 2017–2021'*.

Contribution to the questionnaire on monitoring the implementation of the 1995 FAO Code of Conduct for Responsible Fisheries, the International Plans of Action on Capacity, Sharks, Seabirds, Illegal, Unreported and Unregulated Fishing and

the Strategies for Improving Information on Status and Trends of Capture Fisheries and Aquaculture.

Contribution to the report of the UN Secretary-General's contribution to UNGA resolution 74/18 of 10 December 2019, pursuant to paragraph 67, regarding *"Implementation of an ecosystem approach to fisheries management"*.

Contribution to the report of the UN General Assembly 2022 review on the impacts of bottom fishing.

Contribution to the report of the Secretary-General on oceans and the law of the sea, as mandated by UNGA resolution 76/72

of 09 December 2021, entitled *"Oceans and the law of the sea"*

Contribution to the Regional Fishery Body Secretariats Network (RSN) Newsletters.

Throughout the year various informal requests are made to the Secretariat regarding specific information, procedures of NAFO, etc. by students, educational institutes, RFMOs, Contracting Parties representatives or other organizations. These are answered to the best of the ability and as time permits by various members of the NAFO Secretariat.

Networking & Information Management

INTERNET & SECURITY

In December 2022, staff members of the NAFO Secretariat took part in a Cybersecurity Awareness Training course held by Bulletproof Academy. The training session was part of the overall upgrade that the NAFO Secretariat is taking to enhance information technology security measures.

TOOLS AND APPLICATIONS

The NAFO Monitoring, Control, and Surveillance (MCS) website continues to be a valuable tool for retrieving current information for compliance and inspection activities. In March and April, DJ Laycock, NAFO Database Developer/Programmer Analyst, provided virtual MCS training for the EU Inspectors Workshop. Also, in 2022, based on feedback from the Standing Committee on International Control (STACTIC), the following two enhancements should be available 1) Daily Observer Messages, 2) Notification of Others quota uptake summary. At-sea trials of the Observer Application will resume in early 2023.

PUBLICATIONS

The NAFO Secretariat prepared, posted to the web and/or printed the following publications in 2022:

The *Journal of Northwest Atlantic Fishery Science*, Vol. 53, 2022 was published online. To submit articles, or view past publications, please visit the JNAFS website at <https://journal.nafo.int/>.

NAFO Conservation and Enforcement Measures 2023

NAFO Annual Report 2021

Meeting Proceedings of the Commission, 01 September 2021–31 August 2022

NAFO Scientific Council Reports 2021

All publications and documents are available on the NAFO website: www.nafo.int/Publications

ASFA (AQUATIC SCIENCES AND FISHERIES ABSTRACTS)

ASFA inputting and indexing took place during spring-autumn for 2022 documents and publications. ProQuest/Clarivate, ASFA's publishing partner new ingestion tool imports the OpenASFA records monthly to their platform (available by subscription through your institute or library). OpenASFA records can also be viewed on the [FAO open access site](https://www.fao.org/fishery/en/asfa):

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APPENDIX I

Comparison of Scientific Advice on NAFO Fish Stocks and the Management Measures decided by the Commission

	Most recent scientific advice and year of provision		Management measures applicable to 2023
Fish Stocks	Scientific Advice	Year of decision	Management measures
Cod in Division 3M	Yield corresponding to F less than or equal to $3/4 F_{lim}$ in 2023 results in a very low probability ($\leq 10\%$) of SSB being below B_{lim} in 2024 and a very low probability ($\leq 10\%$) of exceeding F_{lim} . However, given the present level of the SSB and projected decline of total biomass under any fishing scenario, in order to promote growth in SSB with more than 60% probability, SC advises scenarios with F no more than F_{sq} .	2022	To reach consensus, the Commission agreed on the TAC of 6 100 tonnes. The TAC represents a compromise among the TAC proposals which range between 5 050 and 6 364 tonnes, corresponding to the 75% and 50% probability that $SSB_{2025} > SSB_{2022}$, respectively.
Cod in Division 3NO	No directed fishing in 2022 to 2024 to allow for stock rebuilding.	2021	It was agreed to maintain the moratorium applicable to 2022, 2023, and 2024.
Redfish in Divisions 3LN	Scientific Council advises that catches should not exceed their current level of 11 500 t (the mean of the last 5 years).	2022	It was agreed to set the TAC at 18 100 tonnes, applicable to 2023 and 2024.
Redfish in Division 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.	2021	It was agreed on the TAC corresponding to the $F_{0.1}$ scenario, <i>i.e.</i> , 10 933 tonnes in 2022 and 11 171 tonnes in 2023.
Redfish in Division 3O	The stock is below an interim survey-based proxy for B_{MSY} but above the limit reference point ($B_{lim} = 0.3_{MSY}$ -proxy) with a probability $> 99\%$. There is insufficient information on which to base predictions of annual yield potential. Catches have averaged about 9 000 t over the period used for the MSY proxy calculation (1991–2021). Scientific Council is unable to advise on an appropriate TAC for 2023, 2024 and 2025.	2022	It was agreed to rollover the TAC of 20 000 tonnes applicable to 2023, 2024, and 2025.
Pelagic Sebastes mentella (oceanic redfish) in Subarea 2 + Divisions 1F and 3K	ICES advises that when the precautionary approach is applied, there should be zero catch in each of the years 2022, 2023, and 2024. Scientific Council endorsed the conclusions of both the ICES assessment results and its advice.	2022	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 Annex I.A of the NAFO CEM (Quota Table).
American plaice in Divisions 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.	2021	It was agreed to maintain the moratorium applicable to 2022, 2023, and 2024.

Appendix I. cont'd

	Most recent scientific advice and year of provision		Management measures applicable to 2023
Fish Stocks	Scientific Advice	Year of decision	Management measures
American Plaice in Division 3M	The stock has recovered to the levels of the mid 1990s, when the fishery was closed. Scientific Council considers that there is not sufficient evidence that the stock would be able to sustain a fishery at this time and recommends that there be no directed fishing in 2021, 2022 and 2023. Bycatch should be kept at the lowest possible level.	2020	It was agreed to maintain the moratorium applicable to 2021, 2022, and 2023.
Yellowtail flounder in Divisions 3LNO	SC advises that 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} and are projected to maintain the stock above B_{msy} .	2021	The Commission agreed on a TAC of 20 000 tonnes, applicable to 2022 and 2023.
Witch flounder in Divisions 3NO	In the projection period there is less than a 10% probability of being below B_{lim} , however the probability of exceeding F_{lim} is estimated to be above 30% in 2024 for F greater than $2/3 F_{MSY}$. Scientific Council therefore recommends that F should be no higher than $2/3 F_{MSY}$.	2022	The Commission agreed on a TAC of 1 295 applicable to 2023, and 1 367 tonnes applicable to 2024.
White hake in Divisions 3NO	For 2022 and 2023 and given the absence of strong recruitment, Scientific Council recommends catches of white hake in Divisions 3NO should not increase. Average annual catches over 2014 to 2018 were around 400 tonnes.	2021	It was agreed to rollover the TAC of 1 000 tonnes applicable to 2022 and 2023. Additional measures in Article 5.13-14 of the NAFO CEM.
Capelin in Divisions 3NO	For 2022–2024, no directed fishery.	2021	It was agreed to maintain the moratorium applicable to 2022, 2023, and 2024
Skates in Division 3LNO	The stock has been stable at recent catch levels in Div. 3LNO (approximately 3 710 t, 2017 - 2021) however, given the low resilience to fishing mortality and higher historic stock levels, Scientific Council advises no increase in catches.	2022	It was agreed to rollover the TAC of 7 000 tonnes applicable 2023 and 2024. Footnote 12 of the Quota Table revised to read: Should catches exceed 4 500 tonnes, additional measures would be adopted to further restrain catches in 2023 and in 2024.
Greenland halibut in Sub-area 2 and Divisions 3KLMNO	With the exception of the three missing values from the Canadian spring 3LNO survey, SC advises that exceptional circumstances are not occurring. Therefore, the TAC for 2023 derived from the HCR is 15 156 t.	2022	It was agreed to set the TAC at 15 156 tonnes in 2+3KLMNO, 11 227 tonnes of which are allocated to the fishery in 3LMNO.

Appendix I. cont'd

	Most recent scientific advice and year of provision		Management measures applicable to 2023
Fish Stocks	Scientific Advice	Year of decision	Management measures
Northern shortfin squid in Subareas 3+4	SC advises catches between 19 000 and 34 000 tonnes per year (two proxies for F_{lim} , the potential yield which the northern stock component may be able to sustain under a low productivity regime). Scientific Council advises catches between 19 000 and 34 000 tonnes per year (two proxies for F_{lim} , the potential yield which the northern stock component may be able to sustain under a low productivity regime).	2022	It was agreed to rollover the TAC of 34 000 tonnes applicable to 2023, 2024, and 2025
Northern Shrimp in Divisions 3LNO	No directed fishery in 2022 and 2023 as the stock is below B_{lim} with no indication of short-term recovery.	2021	It was agreed to maintain the moratorium applicable to 2022 and 2023
Splendid alfonso in Subarea 6	The substantial decline in CPUE and catches on the Kükenenthal peak in the past year indicates that the stock may be depleted. Scientific Council advises to close the fishery until biomass increases to exploitable levels	2019	Ban on fishing.
Shrimp in Division 3M	To be consistent with the precautionary approach, SC advises that no directed fishery should occur in 2023.	2022	Ban on fishing. It was agreed to continue the moratorium on the fishing of this stock for 2023.



Memories from Porto

