

Northwest Atlantic
Fisheries Organization
(NAFO)



**Meeting Proceedings
of the General Council and Fisheries Commission
for 2016/2017**

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FOREWORD

This issue of the Proceedings contains the meeting reports of the General Council (GC) and Fisheries Commission (FC) including their subsidiary bodies and working groups held in the twelve months preceding the Annual Meeting in September 2017 (between 1 September 2016 and 31 August 2017). This follows a NAFO cycle of meetings starting with an Annual Meeting rather than by calendar year.

After 18 May 2017, all meeting reports of the Commission (COM) and their subsidiary bodies and working groups will be published in a separate volume. The new title is *Meeting Proceedings of the Commission for 2016/2017*.

This present 2016/2017 issue is comprised of the following sections:

SECTION I (1–50) contains the Report of the General Council and its Subsidiary Body (STACFAD), 38th Annual Meeting, 19–23 September 2016, Varadero, Cuba.

SECTION II (51–192) contains the Report of the Fisheries Commission and its Subsidiary Body (STACTIC), 38th Annual Meeting, 19–23 September 2016, Varadero, Cuba.

SECTION III (193–201) contains the Report of the NAFO Editorial Drafting Group Meeting (EDG), 17–18 October 2016 Hafnarfjörður, Iceland.

SECTION IV (203–210) contains the Report of the NAFO STACTIC Observer Program Review Working Group (WG-OPR), 18–20 October 2016, Hafnarfjörður, Iceland

SECTION V (211–220) contains the NAFO Joint Fisheries Commission-Scientific Council Working Group on Catch Reporting (WG-CR), 06 February 2017, NEAFC Secretariat, London, UK

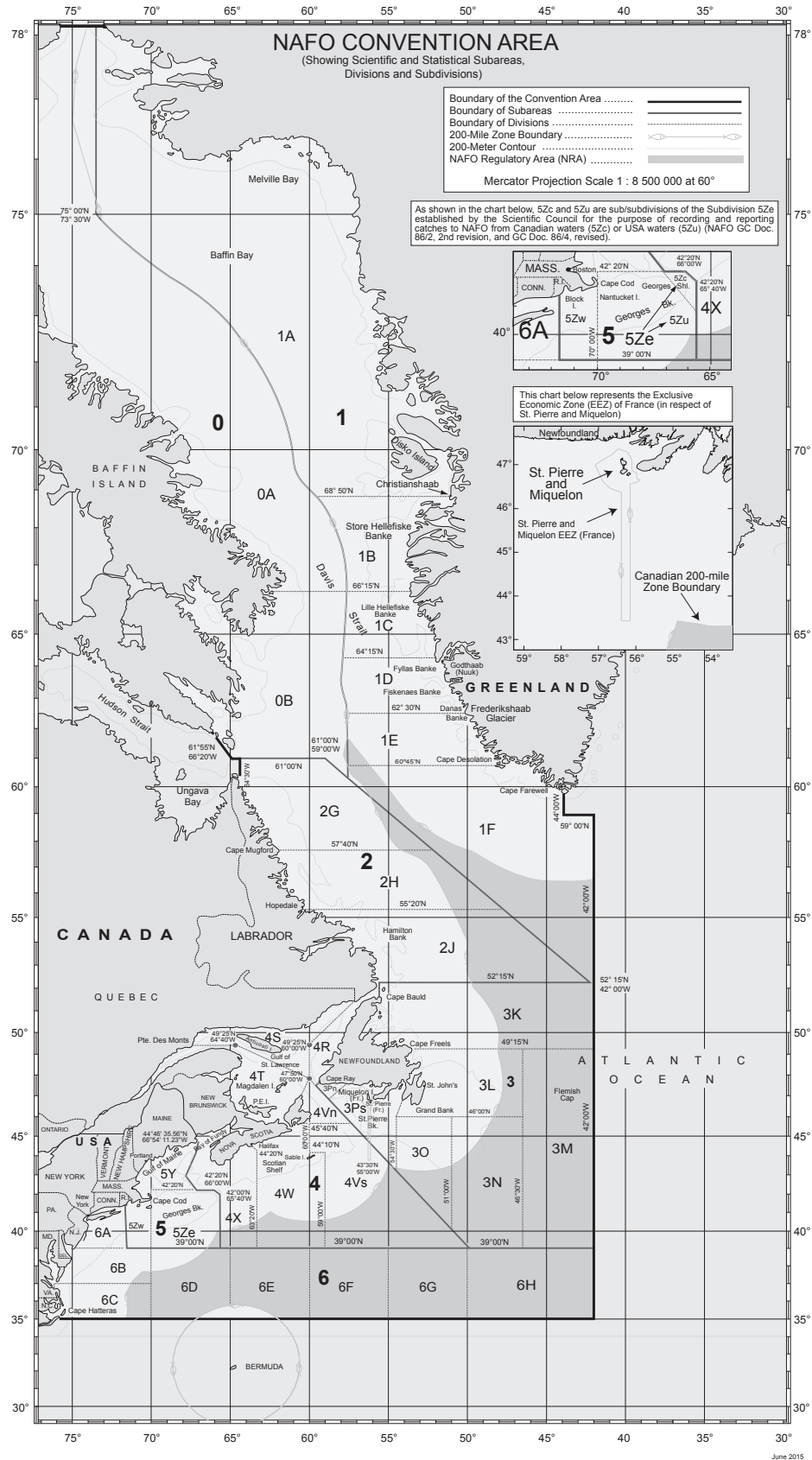
SECTION VI (221–232) contains the NAFO Joint Fisheries Commission-Scientific Council Working Group on Risk-Based Management Strategies (WG-RBMS), 7–9 February 2017, NEAFC Secretariat, London, UK

SECTION VII (pages 233–242) contains the Report of the Joint Advisory Group on Data Management (JAGDM) Meeting, 22–23 March 2017, London, UK

SECTION VIII (pages 243–256) contains the Report of the NAFO Joint Fisheries Commission-Scientific Council Working Group on Risk-Based Management Strategies (WG-RBMS), 25–27 April 2017, Falmouth, MA, US

SECTION IX (page 257–266) contains the Report of the NAFO STACTIC Observer Program Review Working Group (WG-OPR), 08 May 2017, Boston, MA, USA

SECTION X (pages 267–280) contains the Report of the NAFO Standing Committee on International Control (STACTIC) Intersessional Meeting, 09–11 May 2017, Boston, MA, USA



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STRUCTURE OF THE NORTHWEST ATLANTIC FISHERIES ORGANIZATION (NAFO)

(as of 31 August 2017)

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 and United States of America (USA).

PRESIDENT

Stéphane Artano (France in respect of St. Pierre et Miquelon)

CONSTITUENT BODIES

General Council *Chair* – Stéphane Artano (France in respect of St. Pierre et Miquelon)
Vice-Chair – Sylvie Lapointe (Canada)

Scientific Council *Chair* – Katherine Sosebee (USA)
Vice-Chair – Brian Healey (Canada)

Fisheries Commission *Chair* – Temur Tairov (Russian Federation)
Vice-Chair – Patrick Moran (USA)

from 18 May 2017

Commission *Chair* – Stéphane Artano (France in respect of St. Pierre et Miquelon)
Vice-Chair – Temur Tairov (Russian Federation)

STANDING COMMITTEES

General Council Standing Committee on Finance and Administration (STACFAD) *Chair* – Deirdre Warner-Kramer (USA)
Vice-Chair – Élise Lavigne (Canada)

Scientific Council Standing Committee on Fishery Science (STACFIS) *Chair* – Joël Vigneau (EU)
Standing Committee on Research and Coordination (STACREC) *Chair* – Brian Healey (Canada)
Standing Committee on Publications (STACPUB) *Chair* – Margaret Treble (Canada)
Standing Committee on Fisheries Environment (STACFEN) *Chair* – Andrew Cogswell (Canada)

Fisheries Commission Standing Committee on International Control (STACTIC) *Chair* – Judy Dwyer (Canada)
Vice-Chair – Aronne Spezzani (EU)



SECRETARIAT

Executive Secretary	Fred Kingston
Deputy Executive Secretary /	
Senior Finance and Staff Administrator	Stan Goodick
Senior Fisheries Commission Coordinator	Ricardo Federizon
Scientific Council Coordinator	Tom Blasdale
Executive Assistant to the Executive Secretary	Lisa LeFort
Fisheries Information Administrator	Jana Aker
Scientific Information Administrator	Dayna Bell
IT Manager	Matthew Kendall
Senior Publications Manager	Alexis Pacey
Database Manager	Mark Harley (to 15 August 2016)
Database Development/Programmer Analyst	DJ Laycock (from 13 September 2016)
Office Administrator	Sarah Guile
Office Administrator (term)	Whitney McEvoy (from July 2017)
NAFO Intern	Yumi Okochi (mid-May–mid-August 2016)
NAFO Intern	Martha Astrup (August–October 2016)

Headquarters Location

2 Morris Drive, Suite 100, Dartmouth, Nova Scotia, Canada, B3B 1K8



SECTION I

(1–50)

**Report of the General Council and its Subsidiary Body the Standing Committee on
Finance and Administration (STACFAD)
38th Annual Meeting of NAFO**

**19–23 September 2016
Varadero, Cuba**

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Heads of Delegation – left to right; back row: Fred Kingston (Executive Secretary), Sung Ho Kim (Korea), Kevin Stringer (Canada), John Bullard (USA), Kenro Iino (Japan), Konstantin Drevetnyak (Russia), Stéphane Artano (President of NAFO and GC Chair; France-SPM).

Front row: Sigrun Holst (Norway), Brynhildur Benediktsdóttir (Iceland), Nora Yong Mena (Cuba), Veronika Veits (EU), Yana Yemtseva (Ukraine), Ulla Svarrer Wang (Faroe Islands-DFG), Mads Trolle Nedergaard (Greenland-DFG).

PART I
Report of the General Council
38th Annual Meeting of NAFO
 (GC Doc. 16-03)

19–23 September 2016
Varadero, Cuba

I. Opening Procedure

1. Opening by the Chair, Stéphane Artano (France-SPM)

The 38th Annual Meeting of NAFO was convened on Monday, 19 September 2016 at 1000 hrs at the Convention Center Plaza America in Varadero, Cuba with 159 delegates present from 12 NAFO Contracting Parties (Annex 1). The NAFO President and General Council Chair, Stéphane Artano (France-SPM), welcomed all delegates to the Meeting (Annex 3).

The Cuban Minister of the Food Industry, Ms. Maria del Carmen Concepcion Gonzalez, also welcomed delegates to Varadero, Cuba (Annex 4).

Opening statements were deferred at the opening session, but were provided in writing for inclusion in the report by Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), European Union, Japan, Republic of Korea, Russian Federation, Ukraine and the United States of America (USA) (Annexes 5-10).

2. Appointment of Rapporteur

The Executive Secretary, Fred Kingston, was appointed the rapporteur.

3. Adoption of Agenda

The agenda was adopted as circulated (Annex 2).

4. Admission of Observers

In accordance with the NAFO Rules for Observers and in advance of the meeting, the Executive Secretary formally invited the following intergovernmental organizations to attend:

- Government of Bermuda
- Convention on Biological Diversity (CBD) Secretariat
- Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)
- Permanent Commission for the South Pacific (CPPS)
- Food and Agriculture Organization of the UN (FAO)
- General Fisheries Commission for the Mediterranean (GFCM)
- International Commission for the Conservation of Atlantic Tunas (ICCAT)
- International Council for the Exploration of the Seas (ICES)
- International Monitoring, Control and Surveillance (IMCS) Network
- North Atlantic Marine Mammal Commission (NAMMCO)
- North Atlantic Salmon Conservation Organization (NASCO)
- North East Atlantic Fisheries Commission (NEAFC)
- North Pacific Anadromous Fish Commission (NPAFC)

- North Pacific Fisheries Commission (NPFC)
- North Pacific Marine Science Organization (PICES)
- Sargasso Sea Commission,
- Southeast Atlantic Fisheries Organization (SEAFO)
- South Pacific Regional Fisheries Management Organisation (SPRFMO)
- South Indian Ocean Fisheries Agreement (SIOFA)
- United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), and
- Western Central Atlantic Fishery Commission (WECAFC)

During the 38th Annual Meeting, CCAMLR was represented by Norway and NPFC was represented by Canada.

The Ecology Action Centre (EAC), an NGO which had been granted accredited observer status, was also present and provided an opening statement in writing for inclusion in the report (Annex 11).

5. Publicity

The meeting 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 collaboration with the Chairs of the General Council, Fisheries Commission and Scientific Council.

6. Guidance to STACFAD necessary for them to complete their work (Monday)

It was noted that STACFAD may have to consider the possible costs of a next Performance Review and a management strategy evaluation (MSE) for Greenland halibut in its budget deliberations. No additional issues were raised. The Chair of STACFAD was invited to prepare a report for the closing session.

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

7. Review of Membership of the General Council and Fisheries Commission

The membership of the General Council and Fisheries Commission has not changed since the 2015 Annual Meeting and is currently comprised of twelve (12) 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 and United States of America (USA).

8. Status of ratification process resulting from the adoption of the amended Convention and presentation of progress reports

To-date, seven Contracting Parties have ratified the amended Convention, namely Canada, Cuba, Denmark (in respect of Faroe Islands and Greenland), European Union, Iceland, Norway and the Russian Federation.

Other Contracting Parties updated the status of their ratification process. France (in respect of St. Pierre et Miquelon) announced that it had ratified the amended Convention on 4 July 2016 and it was in the process of notifying Canada (the Depository of the NAFO Convention). Once this notification is received from France, only one remaining Contracting Party is required to ratify the amended Convention for it to come into force. For this reason, Contracting Parties were strongly encouraged to continue their efforts to ratify the amended Convention.

It was agreed, should the amended NAFO Convention come into force before the next Annual Meeting, that in the interim, the GC Chair would become the Chair of the new Commission with the FC Chair becoming the Vice-Chair. In this case, a general election will take place at the end of that Annual Meeting in accordance with the NAFO Rules of Procedure.

9. Administrative and Activity Report by NAFO Secretariat

The Administrative and Activity report was presented to STACFAD (GC Doc. 16-01).

NAFO Website Re-design

The Secretariat provided a demonstration of Phase I of the new NAFO website – the redesign of the public website (www.nafo.int) – which is expected to be launched later this year. In the past year, the NAFO Secretariat has created a new platform and structure for NAFO's website to enable users to navigate and find information quickly in a more user-friendly, modern format. The 'open source Content Management System' eliminates the framesets used on the previous site and addresses the concerns raised by a 2010 survey, recommendations of the Scientific Council Standing Committee on Publications (STACPUB) and the input of an ad hoc Working Group of interested Contracting Party representatives.

Key highlights include a modernized look; an interactive calendar of events; a search function and user friendly icons of the most frequently accessed pages (i.e. Journal of the Northwest Atlantic Fishery Science, Science Advice and the NAFO CEM). Comments from Contracting Parties would be welcomed.

Phase II of the new NAFO website – the redesign of the secure Members' area (members.nafo.int) – was discussed by STACFAD and its recommendations were presented in its report under agenda item 17.

10. Consideration of the Renewal of the Executive Secretary's contract

The contract of the Executive Secretary, Fred Kingston was extended to the 2018-2021 term.

11. Status of NAFO Headquarters Agreement

At the last Annual Meeting, Canada reported that it was prepared to proceed with the draft text of the Headquarters Agreement reviewed at the 31st Annual Meeting in 2009 (Annex 3 of GC Doc. 09-03: Part II) that focused on NAFO's privileges and immunities. However, there was a delay due to a legal proceeding that was still before the courts. An alternate instrument (Memorandum of Understanding) was prepared to address issues related to the provision of the premises and security by the host country at the last Annual Meeting (STACFAD WP 15-09).

Both the NAFO Headquarters Agreement and the Memorandum of Understanding were reviewed by STACFAD during this meeting and its recommendations were presented in its report under agenda item 17.

12. Performance Review

a) Status of implementation of recommendations of the NAFO Performance Review

As part of General Council's regular annual review on the status of the recommendations of the 2011 NAFO Performance Review, the Executive Secretary presented GC Working Paper 16-02. Since the 2015 Annual Meeting, there was nothing further to report regarding the Action Plan for the Implementation of the Performance Review.

b) Preparation of the next Performance Review

Since the UN General Assembly has called for regular performance reviews of Regional Fisheries Management Organizations (RFMOs) such as NAFO, Contracting Parties agreed that they should take the first steps to prepare NAFO's next Performance Review. The NAFO Performance Review virtual Working Group was established by the General Council at the 37th NAFO Annual Meeting in Halifax, Nova Scotia. As noted in the Terms of Reference (GC Doc. 15-03).

The Working Group met virtually three times – 16 March, 28 June and 29 August 2016. The meeting report from this Working Group (GC Doc. 16-02) was presented including its recommendations that:

- **NAFO's second Performance Review be launched following the 2016 NAFO Annual Meeting for completion at the 2017 NAFO Annual Meeting; and**
- **The Terms of Reference for NAFO's second Performance Review contained in GC PR-WP 16-05 Rev. (Annex 3) be forwarded to the General Council for consideration and adoption at the 2016 NAFO Annual Meeting.**

The General Council adopted both recommendations.

III. Coordination of External Affairs

13. Report of Executive Secretary on External Meetings

The Executive Secretary highlighted a few of the external meetings he participated in since the last Annual Meeting, including:

- FAO 20th Anniversary of the Code of Conduct for Responsible Fisheries (October 2015);
- Project Steering Committee for the Areas Beyond National Jurisdiction (ABNJ) Deep-Seas Project (December 2015) as Chairman;
- NEAFC Seminar on Allocation Criteria (February 2016);
- Review Conference on 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 (May 2016);
- Thirty-second Session of the FAO Committee on Fisheries (COFI) (July 2016); and
- Sixth Meeting of the Regional Fishery Body Secretariats' Network (RSN) (July 2016).

Other members of the Secretariat actively participated in:

- FAO Aquatic Science and Fisheries Abstracts (ASFA) Advisory Board Meeting co-hosted by NAFO and Dalhousie University (October 2015);
- ABNJ Deep-Seas Project: 2016 World Wide Review of Bottom Fisheries in the High Seas (May 2016); and
- UN Bottom Fisheries Workshop (August 2016).

An overview of all of the external meetings is available in the Administrative Report (GC Doc. 16-01).

14. International Relations

a) Appointment of NAFO Members as Observers to External Meetings

At the last Annual Meeting (September 2015), it was agreed that the following NAFO Contracting Parties would observe at meetings of the following organizations during 2015/2016:

- Denmark (in respect of the Faroe Islands and Greenland) would represent NAFO at the North East Atlantic Fisheries Commission (NEAFC).
- EU would represent NAFO at the International Commission for the Conservation of Atlantic Tunas (ICCAT).
- Norway would represent NAFO at the South East Atlantic Fishery Organisation (SEAFO) and the North Atlantic Marine Mammal Commission (NAMMCO).
- USA would represent NAFO at the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), the North Pacific Anadromous Fish Commission (NPAFC) and the North Atlantic Salmon Conservation Organization (NASCO).

The reports by these Observers were presented (GC WP 16-06 to 16-10).

It was agreed that it would also be useful to have NAFO representation at meetings of the North Pacific Fisheries Commission (NPFC) and South Indian Ocean Fisheries Agreement (SIOFA).

It was agreed that following Contracting Parties would represent NAFO at the meetings in 2016-2017 of the following organizations:

- Canada at NPFC;
- Denmark (in respect of the Faroe Islands and Greenland) at NEAFC;
- EU at ICCAT and SIOFA;
- Norway at SEAFO and NAAMCO;
- USA at CCAMLR, NPAFC and NASCO.

The importance of external relations was stressed as work of relevant organizations in other areas can impact the work of NAFO. For that reason, it was agreed that the NAFO Secretariat should try to attend meetings of the UN preparatory committee to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction (BBNJ), as its resources allow, and report back to General Council at the next Annual Meeting.

b) ABNJ Deep-Seas Project

In 2013, NAFO was invited to be a partner in the FAO-Global Environment Facility (GEF) Project “*Sustainable fisheries management and biodiversity conservation of deep-sea living marine resources and ecosystems in the Areas Beyond National Jurisdiction (ABNJ Deep Seas Project)*”. NAFO’s participation will be guided by the activities table which was jointly prepared by FAO and the NAFO Secretariat and which may be modified as the project progresses. The NAFO support to the project would be an estimated in-kind contribution over the period of 2014-2018. This in-kind contribution represents staff time for activities and meeting expenses for work on deep sea fisheries, as well as administrative expenses for NAFO’s current core activities and operations which are of direct relevance to deep sea fisheries. Almost all the costs that are being implemented or planned are part of the regular work of NAFO.

Under this agenda item, the Executive Secretary presented the annual update of the ABNJ Deep-Seas Project provided by the FAO’s Deep Seas Project Coordinator (GC WP 16-05).

c) Relations with other International Organizations

At the last Annual Meeting, Contracting Parties asked the Executive Secretary to identify international organizations with areas of mutual interest, such as the International Seabed Authority (ISA) and the International Maritime Organisation (IMO), and to explore the establishment of mechanisms for dialogue and engagement.

The Executive Secretary provided a progress report on his activities in this area during the past year (GC WP 16-03). In addition to the ISA and the IMO, the Secretariat identified the Convention on Biological Diversity (CBD) Secretariat and the International Cable Protection Committee (ICPC) as international organizations with areas of some mutual interest. NAFO has also been approached by the World Meteorological Organization (WMO) concerning its proposal to strengthen collaboration with RFMOs in the context of the climate and weather aspects of fisheries. NAFO already has established links with both the UN Food and Agricultural Organization (FAO) and the UN Division for Ocean Affairs and the Law of the Sea (UN-DOALOS).

Some parties stressed ISA and CBD as being of particular relevance for NAFO.

It was **agreed** to adopt the following recommendation of the 2016 meeting of Joint Fisheries Commission–Scientific Council Working Group on Ecosystem Approach Framework to Fisheries Management (WG-EAFFM):

- **That the NAFO Secretariat maintains dialogue with relevant organizations and explore mechanisms to improve the exchange of information. The FC and Contracting Parties may consider other means to facilitate active monitoring of assessments, planning processes and actions taken in other fora in order to identify and, if needed, respond on issues concerning NRA fisheries, fisheries resources, and biodiversity.**

15. Oil and Gas Activities in the NAFO Regulatory Area – Information Exchange Arrangement

At the 2014 Annual Meeting, the General Council gave the Executive Secretary the mandate to work with Canada to explore and implement means for the appropriate and timely exchange of information necessary to avoid overlapping activities and mitigate potential conflicts between fisheries and hydrocarbons activities in the NAFO Regulatory Area.

Following the 2014 Annual Meeting, an “interim process” was established through which Canada sent information to the NAFO Secretariat about petroleum-related activities for onward transmission to NAFO Contracting Parties (GC WP 15-04). Since the 2015 Annual Meeting, there have been four such notifications (GC WP 16-04).

At last year’s Annual Meeting, the General Council discussed Canada’s proposed approach for such an information exchange arrangement. The Canadian process was seen by Contracting Parties as a reasonable approach for such an information exchange arrangement. Canada undertook to continue to engage with the Executive Secretary to consider possible refinements to its text, taking into account specific suggestions from a Contracting Party. In this context, the Executive Secretary presented GC WP 16-04, which outlined the major developments on the issue since the last Annual Meeting.

On the basis of this proposed information exchange arrangement, in particular Article 3.2 of the proposal, the Secretariat was prepared to provide to Canada a ‘five-year monthly snapshot’ of fishing activity on the basis of anonymized, aggregate VMS data provided it had the authority to do so. (This authority was subsequently given by amendments adopted by the Fisheries Commission in FC Doc. 16-13 – Transmission of aggregated VMS data to Contracting Parties for non-inspection purposes).

IV. Finance

16. Report of STACFAD at the Annual Meeting

The report of STACFAD was presented by the Chair, Deirdre Warner-Kramer (USA). The report contained recommendations for the adoption of the budget for 2017, the Auditor’s Report for 2015, financial matters, personnel matters, and an update on the NAFO Secretariat classification scheme review.

17. Adoption of the Budget and STACFAD recommendations for 2016

STACFAD recommends that:

- **The 2015 Auditors’ Report be adopted.**
- **Grant Thornton be appointed to audit NAFO’s records for the 2016 - 2020 fiscal periods.**
- **In regards to the NAFO Website re-design project:**
 - **General meeting information, such as meeting location and provisional agendas, be also made available on the NAFO public pages.**
 - **The *Ad hoc virtual Working Group* is empowered to identify other documents or pages that are clearly administrative or not confidential that could be migrated immediately to the public pages**
 - **The NAFO Secretariat research the standards and guidelines of access to documentation of other RFMOs.**
 - **The *Ad hoc virtual Working Group* continue to work intersessionally to develop standards and guidelines of access to documentation contained in the NAFO Members’ area and**

- NAFO Meetings SharePoint for review by STACFAD, with the view to be as transparent as practicable.
- NAFO Contracting parties to strongly encourage additional participation of self-identified to the *Ad hoc virtual Working Group*, in particular those with STACTIC expertise.
 - Phase II of the NAFO website re-design project be completed prior to the 2017 NAFO Annual Meeting.
- 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 2016, and of which \$85,000 would be a contingency fund available to be used for unforeseen and extraordinary expenses.
 - STACFAD endorsed the proposed changes to the NAFO Staff Classification Scheme:
 - Reclassify the IT Manager position from Information Services (IS) to Computer Services (CS)
 - Reclassify the Finance and Staff Administrator position from Administrative Services (AS) to Financial Management (FI)
 - Combine the 01 and 02 pay levels for Administrative Services (AS) and Programme Administration (PM) levels to allow for a seven level pay band. This would impact the following positions: Fisheries Information Administrator, Office Administrator, Publications Manager and Scientific Information Administrator.
 - Combine the 02 and 03 pay levels for Administrative Services (AS) to allow for a six level pay band. This would impact the position of the Executive Assistant to the Executive Secretary.
 - Staff members currently occupying a position in which there are proposed changes to the salary structure would have the option to either stay with the current salary scheme or switch to the revised salary scheme. Staff members employed in the future would automatically switch to the revised salary scheme.
 - Updating of the Publications Manager's, Database Manager's and the Finance and Staff Administrator's job descriptions, as recommended.
 - Perform a review of the Staff Classification System every five years, or as appropriate
 - STACFAD recommends the following amendment to NAFO STAFF Rule 9.5:
 - *"For employees hired before 01 October 2016, in the event of separation from service with the Secretariat, members of the Secretariat shall be compensated an indemnity equivalent to the rate of two (2) weeks current salary for every year of service with the Secretariat, free of all deductions except statutory deductions, limited to a maximum of 40 weeks.*
 - *"For employees hired after 30 September 2016, in the event of separation from service with the Secretariat, members of the Secretariat shall be compensated an indemnity equivalent to the rate of one (1) weeks current salary for every year of service with the Secretariat, free of all deductions except statutory deductions, limited to a maximum of 40 weeks."*
 - The Committee agreed to maintain the internship period at six (6) months during 2017 year and the Committee also agreed to maintain the stipend amount at \$1,750 CAD per month.
 - The Secretariat was requested to continue their outreach efforts to ensure qualified participants from various contracting parties participate in the program.
 - The Government of Canada proceed with its domestic process to sign and ratify the Headquarters Agreement; as well that the Government of Canada and NAFO proceed with the signature of the Memorandum of Understanding.
 - STACFAD recommends that the budget for 2017 of \$2,126,000 be adopted.
 - STACFAD recommends that General Council appoint the three Staff Committee nominees,

Emilia Batista (EU), Joanne Morgan (Canada) and Deirdre Warner-Kramer (USA), for September 2016–September 2017.

- **The Committee encourages 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.**
- **STACFAD recommends that the dates of the 2019 Annual Meeting (to be held in Halifax, Nova Scotia, Canada, unless an invitation to host is extended by a Contracting Party and accepted by the Organization) to be 23-27 September 2019.**

All of STACFAD's recommendations were adopted by General Council and the work and report by STACFAD and the Secretariat were commended. The 6.5% increase in the budget was due mainly to the cost of the second performance review of NAFO. Denmark (in respect of Faroe Islands and Greenland) noted that, while it does not object to launching the second performance review this year, the additional costs significantly impact its billing.

V. Closing Procedure

18. Time and Place of Next Annual Meeting

The 39th Annual Meeting will be in Halifax, Nova Scotia, Canada during the dates of 18-22 September 2017, unless an invitation to host is extended by a Contracting Party and accepted by the Organization.

19. Other Business

No other business was discussed under this agenda item.

20. Press Release

The Press Release of the meeting was developed by the Executive Secretary through consultations with the Chairs of General Council, Fisheries Commission and Scientific Council. The agreed Press Release (Annex 12) was circulated and posted to the NAFO website at the conclusion of the meeting on Friday, 23 September 2016.

21. Adjournment

The Chair noted that NAFO has achieved much this year and should be proud of its achievements. He thanked Contracting Parties for their constructive work and the NAFO Secretariat and the Cuban government for the excellent preparation of the meeting and support throughout the week.

The meeting adjourned at 11:30 hrs on Friday, 23 September 2016.

Annex 1. Participant List

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Annex 2. Agenda

I. Opening Procedure

1. Opening by the Chair, Stéphane Artano (France-SPM)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Admission of Observers
5. Publicity
6. Guidance to STACFAD necessary for them to complete their work

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

7. Review of Membership of the General Council and Fisheries Commission
8. Status of ratification process resulting from the adoption of the amended Convention and presentation of progress reports
9. Administrative and Activity Report by NAFO Secretariat
10. Consideration of the Renewal of the Executive Secretary's contract
11. Status of NAFO Headquarters Agreement
 - a) Performance Review
 - b) Status of implementation of recommendations of the NAFO Performance Review
12. Preparation of the next Performance Review

III. Coordination of External Affairs

13. Report of Executive Secretary on External Meetings
14. International Relations
 - a) Appointment of NAFO Members as Observers to External Meeting
 - b) ABNJ Deep-Seas Project
 - c) Relations with other International Organizations
15. Oil and Gas Activities in the NAFO Regulatory Area – Information Exchange Arrangement

IV. Finance

16. Report of STACFAD at the Annual Meeting
17. Adoption of the Budget and STACFAD recommendations for 2016

V. Closing Procedure

18. Other Business
19. Time and Place of Next Annual Meeting
20. Press Release
21. Adjournment

Annex 3. NAFO Opening Speech by the NAFO President/GC Chair

I am happy to extend a warm welcome to all of you here in Varadero, Cuba and to open the 38th Annual Meeting of the Northwest Atlantic Fisheries Organization. I also want to thank very much our Cuban hosts for their warm welcome and the great preparations for this meeting.

Before I officially open this year's meeting, I would like to remind you of our agreement last year not to give oral opening statements to allow for more time for discussions on substance. The only exception will be myself, as NAFO President.

We have been very busy this past year. Since the last Annual Meeting in Halifax, we have met intersessionally 23 times, including virtual sessions. The recommendations from all these meetings come to us for decision over the next 5 days. We will have to address a range of issues from the traditional, including budgetary matters and management measures, such as TACs and quotas, to the less traditional, such as giving consideration as to how "fisheries production potential" limits could give guidance to the management of NAFO stocks. I expect we will be very busy.

Under the amended Convention, our objective is to *"ensure the long term and sustainable use of the fishery resources in the Convention area and, in doing so, to safeguard the marine ecosystems in which these resources are found"*. In this context I would like to highlight the following areas that we have to consider this week:

- We *will* have our first full reassessment of bottom fishing activities in the context of our protections for VMEs. As you are aware, NAFO's current VME protections are the culmination of over a decade of good hard work;
- We will be considering a work plan for launching a benchmark review of the assessment of 3M Cod, as well as a work plan for the MSE evaluation for 2+3KLMNO Greenland halibut; and
- We have to address how and when NAFO undertakes its second Performance Review. Such an independent Review of NAFO's performance will be important to ensure that the Organization is living up to the objectives of the NAFO Convention and the other relevant international instruments addressing the conservation and management of living marine resources.

In this context, let me note that this year is yet another important year for international fisheries governance. In May, there was the resumption of the Review of the UN Fish Stocks Agreement. Last month there was also the review of UN General Assembly's Bottom Fishing Resolution. For both these reviews NAFO was an active participant. Furthermore, the UN just wrapped up its second session of the Preparatory Committee on Marine Biodiversity Beyond Areas of National Jurisdiction (BBNJ), something which may have implications for NAFO down the road.

Given the international framework it seems that NAFO, as an RFMO, is doing very well. It continues to have in place a strong scientific basis for its management measures, based on the precautionary approach, and an effective control and enforcement system with a high level of compliance. It is also ahead of most, if not all, RFMOs in developing an ecosystem approach framework to fisheries management.

Having said all this, I should note that it is almost nine years and counting and we still have not ratified the amended NAFO Convention. As in previous years, those Contracting Parties that have not yet ratified the amended Convention will be called upon to present a progress report on the status of their respective ratification process. Hopefully we will see the entry into force of the amended Convention in the near future.

Finally, I would also like to take the opportunity to thank the Secretariat for all their work throughout the year and their preparations for this meeting.

To conclude, we will indeed be very busy this week. However, I am confident that, with your good will and cooperation, we can finish all our business in an efficient and timely manner.

Thank you very much for your attention. Now I will declare the 38th Annual Meeting of NAFO officially open!

**Annex 4. NAFO Opening Speech by the
Minister of the Food Industry of the Republic of Cuba,
Maria Del Carmen Concepcion Gonzalez**

Good morning.

Mr. President, distinguished delegates and observers, ladies and gentlemen.

It is a pleasure to welcome all of you to Cuba and host the 38th Annual Meeting of the Northwest Atlantic Fisheries Organization in this beautiful resort of Varadero and specifically in the well-known Convention Center “Plaza América”.

To protect the resources of the sea is not just a duty, but an obligation and the Regional Fisheries Management Organizations, play a unique role in facilitating international cooperation for the conservation and management of fish stocks, among them NAFO.

Thanks to the hard work carried out during the past years, NAFO has gained in authority in the international arena and is bringing a huge contribution to the development of the cooperation in the fisheries sector and the protection of fishing stocks and marine ecosystems.

Cuba, founding member of the Organization, support all the measures proposed for the conservation and sustainable use of marine resources in the Convention area, based on scientific evidence.

As an active member of the international community, Cuba signed and ratified the Law of the Sea of the United Nations, participates actively in the FAO Fisheries Committee and recently became part of the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing.

Our fishing regime is regulated by the Decree Law, that in the near future is going to be elevated to the rank of a Law, and several complementary norms, establishing that the aquatic resources are part of the national patrimony and that correspond to the Cuban State, to issue the conditions for their protection and sustainable use, in order to guarantee a better control of the exercise of the responsible fisheries.

In October 2015, Cuba presented to the international community and to FAO, the National Action Plan for the Conservation of sharks and rays, in accordance with the principles established by the International Action Plan and in conformity with the technical measures dictated by FAO for a responsible fisheries.

This year, NAFO will face again, the important task of discussing matters resulting from the sessions of the Working Groups and analyses the situation of stocks and their recovery plans in the Convention Area. All this requires the compromise of the member states present here.

Our delegation looks forward to work in an atmosphere of frank cooperation and understanding to achieve the common goal that is the conservation and sustainable use of marine resources for the sake of the future generations, in spite of the brutal economic, commercial and financial blockade that our country suffers and which could not break the spirit of our people.

I wish to thank all of you for the trust deposited on my country for the celebration of this 38th Meeting and I hope that in spite of the full working agenda, you will also find some spare time to enjoy the beauty of this marvelous beach.

Thank you.

Annex 5. Opening Statement by Canada

Ladies and Gentlemen, it is a great pleasure to be here with you in the beautiful city of Varadero, Cuba for the 38th Annual Meeting of the Northwest Atlantic Fisheries Organization (NAFO).

We would like to thank the Cuban Minister of Food Industry, Maria del Carmen Concepción González and the Government of Cuba for their warm welcome and their selection of this incredible venue.

I would also like to thank the NAFO Secretariat for all their work in setting up the meeting.

With its rich fishing history and relationship with the ocean, Cuba is a fitting location for the NAFO annual meeting. Canada's East coast communities also depend on fisheries and the marine environment. We need to continue to work together to ensure the continued sustainable management of these valuable resources.

We believe NAFO has demonstrated its ability to achieve this goal in recent years through cooperation and hard work. The organization has made significant improvements over the years, including: (1) Working jointly with science to promote sustainable fisheries; (2) Taking an ecosystem approach to fisheries management and protecting Vulnerable Marine Ecosystems (VMEs); and (3) Strengthening compliance through an effective enforcement regime.

The collaboration among Contracting Parties and between the Fisheries Commission and Scientific Council continues to support more transparent, consensus-based decision making. Our cooperation can be linked to recent success stories, including the recovery of some important groundfish stocks. The key to this success has been our effort to take management decisions that respect and adhere to science advice and the precautionary approach and support the rebuilding of groundfish stocks.

NAFO has the opportunity to continue to show leadership among regional fisheries management organizations by maintaining its commitment to an ecosystem approach to risk-based fisheries management. Key examples of NAFO's global leadership and commitment to its international obligations can be found in the efforts of Working Group on an Ecosystem Approach to Fisheries Management and the Working Group on Risk-Based Management Strategies. Through these working groups, NAFO has made important progress on the development and application of the Precautionary Approach framework and the reassessment of bottom fishing activity impacts on Vulnerable Marine Ecosystems (VMEs) in the NAFO Regulatory Area (NRA). NAFO has also taken measures to protect key concentrations of corals, sponges and other VMEs.

There remains important work ahead. We all have to commit to completing the required work on the review of the Greenland halibut Management Strategy Evaluation (MSE) for implementation in 2018, and to continue our work on 3M cod. We must continue to identify opportunities to strengthen our enforcement regime and improve compliance, including effective follow-up on infringements. The Catch Data Advisory Group has made important progress on identifying a process to improve catch data, which is the foundation for accurate stock assessments, science and effective fisheries management regime.

We must also remember the importance of the Amendments to the 1978 NAFO Convention. We would like to congratulate France on behalf of St. Pierre et Miquelon on their recent ratification of the amendments. Many others have ratified and Canada is eager to begin preparing for the renewed convention.

The 38th annual meeting of NAFO provides us with an opportunity to build on the progress outlined above. The framework that NAFO has developed, including the communication between managers and scientists, our ecosystem considerations and commitment to compliance with enforcement measures is instrumental to sustainable fisheries in the NRA now and in the future. I trust this meeting will contribute to advancing our achievements.

Thank you, Kevin Stringer

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

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

The Faroe Islands and Greenland (DFG) would first of all like to thank Cuba for their hospitality to host this Annual Meeting in Varadero. We appreciate all the hard work our host has put in the practical preparations of this meeting. Fifteen years ago we were all hit by a tragedy that led to the cancellation of the Annual Meeting, but this year we all succeeded arriving here and we are firmly committed to achieve some good results.

The Faroe Islands and Greenland (DFG) will continue to work constructively with our NAFO partners in order to continue the implementation of the Performance Review Report recommendations.

Further the Faroe Islands and Greenland (DFG) welcomes the review and evaluation of the classification system that has been undertaken within the NAFO organization. DFG finds it highly important that the salaries offered attracts people with the adequate qualifications, skills and competences. At the same time DFG supports a classification system that is fair, sound and transparent.

The Faroe Islands and Greenland (DFG) would like to express its hope at this annual meeting that NAFO are moving closer in finally being able to ratify the amended convention.

The biological advice on NAFO stocks for the next year and beyond is as usual a mixed advice of stocks to be maintained under moratoria, of stocks in decline and of stocks that are healthy and growing. As last year The Faroe Islands and Greenland still note with great concern that the shrimp stocks at Flemish Cap and the Grand Banks shows no sign of recovery. This year we hope that the revision of the Port State Control Alignment may reach a consensus.

Our delegation would like to take this opportunity to convey our sincere appreciation and warm thanks to the Secretariat for once again having prepared this annual meeting so well.

The Faroe Islands and Greenland (DFG) can assure you that we are looking forward to working constructively with all delegations in the week ahead of us to bring the many points on our agenda to successful conclusion.

Thank you

Annex 7. Opening Statement by European Union

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

First of all we would like to thank the Government of Cuba for hosting the 38th Annual Meeting of NAFO on this beautiful island and at a historical moment, 15 years after 9/11 when a NAFO meeting in Cuba had to be cancelled.

Since the last Annual Meeting, we all (fisheries managers, scientists, control and enforcement experts, the NAFO Secretariat) have been working very hard together throughout numerous inter-sessional meetings: if we count the many times we have met by videoconference, we have probably broken previous records. This shows the commitment of everyone around the table to move NAFO forward and to maintain its frontrunner role in the sustainable management of NAFO fisheries and protecting Vulnerable Marine Ecosystems (VME). It will also allow us at this Annual Meeting to take many decisions based on thorough preparatory work and to pave the way for further improvements.

The EU will be keen to see decisions in the following key areas:

- First of all, better science as a basis for sound management, notably through more and better data and the continuation of a strong dialogue between fisheries managers and scientists. Better science is crucial for sound management decisions and thus the performance of NAFO. Using our scientific resources more strategically in the light of NAFO's priorities, such as the development of risk based management strategies and the review of the precautionary framework will be high on our agenda this year.
- Second, this brings us to our wish to ensure progress and delivery on the review of existing plans, notably of the MSE for GLH where we should meet our deadline for review next year. It will require the mobilisation of all resources necessary to make this happen in time and we count on all Contracting Parties to contribute to it.
- Third, the EU is also keen to move NAFO's groundbreaking work on the Assessment of Significant Adverse Impacts forward and to ensure a full assessment based on all six FAO criteria by 2021. The NEREIDA seabed mapping project - which we have financed over the last three years with an amount of around 130 000€, an amount we hope to be able to double next year, if all goes well – is already providing important knowledge and evidence on deep-sea habitats and VME resilience that we expect to be considered in this assessment.
- Fourth, the EU is also pleased with the progress on by-catch, discards and selectivity and supports the continuation of this work which is particularly important to reduce food waste in the NRA.
- Finally, we will continue to support an even stronger and more efficient control and enforcement system in NAFO, in particular by adopting the alignment NAFO's port state control in line with the FAO Port State Measures Agreement which entered into force this year, and by continued efforts to reinforce NAFO's observer system.

In addition, the determination of Total Allowable Catches, the TACs, will take centre stage. In line with the EU's Common Fisheries Policy adopted in 2013 the EU is firmly committed to follow scientific advice and hopes that NAFO will promote responsible decisions that also allow to balance environmental, economic and social considerations

We will also promote again the introduction of a naturally-attached-fins policy for sharks in NAFO in line with the EU's internal policy and global efforts to end the wasteful practice of shark finning with the hope that NAFO will be able to follow its neighbour NEAFC this year.

Last but not least, the EU would like to express its hope that the Amended Convention enters into force as soon as possible. An entry into force in 2017 seems within reach, but we have been saying it for a while now. The EU calls on strengthened efforts from Contracting Parties concerned to accelerate their ratification process.

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

Annex 8. Opening Statement by Japan

Mr. Chairman, Distinguished Delegates, Observers, Ladies and Gentlemen,

On behalf of the Japanese Delegation, I would like to express my deepest gratitude to the Government of Cuba for hosting the 38th Annual meeting of NAFO in this beautiful city, Varadero. We also thank the NAFO Secretariat for the excellent preparation and arrangements and wish all the best to our new Chair, Mr. Artano.

As the Japanese delegation expressed in the past meetings, NAFO has played an important role for fisheries management. NAFO, as one of the leading RFMOs with a long history, should develop conservation and management measures for sustainable use of fisheries resources, and such measures should be based on scientific advice. We should also bear in mind that NAFO measures would be taken into account by other RFMOs.

Mr. Chairman, on this occasion, I would like to address two specific issues and explain our thought for this NAFO annual meeting, namely MSE and TAC for Greenland Halibut and risk assessment on sea pen.

The working group on Risk-Based Management Strategies held in April developed the MSE work plan for 2 + 3 KLMNO Greenland halibut, and recommended Fisheries Commission and Scientific Council to adopt the work plan. According to the draft work plan, the Scientific Council was supposed to conduct Greenland Halibut stock assessment in June. However, the Scientific Council did not conduct the assessment because of the lack of necessary information including catch estimate. From Japan's point of view, current MSE and harvest control rule do not fit the actual Greenland Halibut stock situation. In fact, as the Scientific Council pointed out, not only analysis of survey data but also model choice and formulation are needed to be examined during MSE review process. The Scientific Council also pointed out that most research vessel series providing information on the abundance of Greenland halibut are deficient in various ways and to varying degrees. The review process has been already delayed for several years, and Japan would like to urge NAFO to proceed to the review process as soon as possible. It is difficult to accept any more delay on this review process.

The Scientific Council calculated 2017 TAC for Greenland Halibut based on the current harvest control rule. One of three indices (CAN Spring 3LNO) was calculated using 4 years data (2011 – 2014) as 2015 survey was incomplete, even though other two indices were calculated using 5 years data (2011 – 2015). Taking into account the difference, the 4 years average must be handled differently from other two indices. Japan would like to request the Scientific Council recalculate the TAC in a more appropriate manner.

Mr. Chairman, the Scientific Council also conducted risk assessment for Significant Adverse Impact (SAI) on VME elements and species. The assessment result shows that Sea pen has high risk score of SAI. Japan would like to know the criteria for the classification of high, moderate, and low risk scores and scientific basis that underpins the criteria. The assessment results on three VME indicator species, Sponge, Sea pen and large gorgonian, were shown in quantitative and relative evaluation. However, the criteria for the relative evaluation are not clear and the biological factors (ex., growth and production rates, resilience) of each taxon may not be taken into consideration in the assessment. In addition, a number of issues which must be solved in the new assessment method were pointed out during the discussion of WG-EAFFM. So, it is clear that more investigation on the SAI methods and results is necessary before considering the SAI result as a basis of management measures introduction.

Mr. Chairman, the Japanese Delegation is ready to work closely and cooperatively with other delegations to find good solutions and sincerely hopes that this annual meeting will be successfully and fruitfully concluded.

Thank you, Mr. Chairman.

Annex 9. Opening Statement by the Russian Federation

Mister President, distinguished Delegates, Observers, Ladies and Gentlemen,

I am delighted to represent the Russian Federation at the 38th NAFO Annual Meeting.

On behalf of the Russian Delegation, I would like to express my gratitude to the Cuban authorities for hosting and arranging this Annual Meeting in such a beautiful and peaceful place of Varadero. I would also like to thank the NAFO Secretariat for the excellent work done in preparation for this meeting.

The work undertaken by the NAFO subsidiary bodies and by the Working Groups intersessionally should be highly commended. We would like to highlight the work by the NAFO Joint Fisheries Commission–Scientific Council Working Group on Risk-Based Management Strategies. We are looking forward to the outcome of the 3M Cod Benchmark as well as 3M cod and Greenland halibut MSE in 2017. We are pleased with the intermediate results of Risk-Based Management Strategy for 3LN Redfish.

In general, it is good to see that the fish stocks have been recovering over the recent years due to well-developed management strategies, rebuilding plans and management measures. We entertain high hopes that a similar approach will be applied to other commercial fish stocks that are of a potential interest to the fishing industry.

The Russian Federation would like to highlight the importance of the work by WGESA, particularly the first steps aimed at developing the fisheries production potential assessment model. If the model, which takes all the key interactions between all ecosystem components into consideration, is successfully implemented, we shall have a great supplementary instrument to manage fisheries in a safe and rational manner.

However, we are concerned about future implications for scientific surveys in the NAFO Regulatory Area resulting from the exclusion of closed areas from the established survey routes. There is a need for the Contracting Parties to maintain a reasonable balance between protection of VMEs and research activities bearing in mind that a lack of crucial scientific information may result in undermining the rational fishery in the long term.

We have a full agenda ahead of us. We are looking forward to the successful and productive work at this session.

Annex 10. Opening Statement by the United States of America

The United States is very pleased to finally make it to beautiful Varadero, and we would like to express our appreciation to the Government of Cuba for hosting the 38th NAFO Annual Meeting. We would also like to once again recognize the tireless efforts of the NAFO Secretariat in ensuring that our meetings are efficient and successful.

Now, we would like to take this opportunity to highlight some key issues for our delegation at this year's annual meeting.

First and foremost, the United States remains committed to transparent, ecosystem-based and precautionary decision making that is consistent with the advice of the NAFO Scientific Council. Additionally, decision making in NAFO must be inclusive (particularly when it relates to allocation of fishing opportunities). All NAFO Parties—and particularly coastal States—must be allowed to fully participate in deliberations leading to allocative decisions. The United States is deeply committed to these principles.

We have seen groundbreaking work arising from the Scientific Council over the past few years—from its work on ecosystem modeling, to the reassessment on VMEs. In order for this work to continue as a foundation for effective decision making, NAFO must ensure the SC has the necessary resources and guidance. We also need to continue to strive to ensure that scientists and managers have access to reliable and accurate data. The United States was pleased with the hard work done intersessionally in STACTIC and in relevant Working Groups to address and improve our data collection deficiencies and to continue enhancement of risk-based management and decision making in NAFO. However, much work remains to be done, and the United States will continue to support these important efforts.

The United States participated in the virtual working group meetings in preparation for a second NAFO performance review and we look forward to finalizing the schedule for this review during this meeting. Great progress has been made in implementing the recommendations of the first Performance Review Panel, and a second review will highlight areas of success and allow us to ensure that future efforts reflect up-to-date goals/objectives.

The United States remains committed to precautionary management measures for elasmobranchs. To that end, we congratulate Cuba on their 2015 National Plan of Action for Sharks, a first for a Caribbean Island nation. We see it as a road map to conserving shark populations for sustainable fishing and tourism, including through preventing finning, and look forward to working with Cuba and other NAFO Parties toward improved international shark management. In particular, at this meeting, we hope to discuss how we can strengthen NAFO measures relative to shark finning and for continued progress toward bringing the NAFO skate TAC in line with scientific advice.

We will continue to push for application and further development of the precautionary approach as applied to NAFO stocks, as well as continued progress to protect vulnerable marine ecosystems and implement an ecosystem approach to management of NAFO fisheries. The United States looks forward to discussing the results of 2016 SC reassessment of bottom fishing activities (and associated VME impacts). We believe that the Council meeting output on risk assessment for Significant Adverse Impacts on VME elements and species clearly highlights the need for additional work relative to sea pen populations.

I am pleased to announce that last week as part of the Our Ocean Conference, President Obama created the first marine national monument on the East Coast. The Northeast Canyons and Seamounts Marine National Monument encompasses pristine underwater mountains and canyons that will provide critical protections for important ecological resources and marine species, including deep-sea coral and endangered whales and sea turtles. This is part of the same seamount chain currently under the NAFO seamount protection measures. At this meeting we hope to explore how NAFO and the United States can improve linkages between these two areas to create strong connectivity across the New England Seamount chain.

When the White House announced the Monument, they emphasized the importance of New England fisheries in the monument area and all of the Northwest Atlantic, highlighting not only historical fishing efforts but the strong, vibrant U.S. fishing industry operating today. We remain frustrated to see that these vital and legitimate fisheries interests are still so poorly reflected in our access to NAFO fisheries. We will continue to insist that contracting parties, and particularly coastal States, should have appropriate access to relevant NAFO stocks that reflects the realities and interests of today, not just a static historical past.

Thank you very much.

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

Madam Chair, Distinguished Delegates, Fellow Observers, on behalf of the Ecology Action Centre (EAC), as an active member of the Deep Sea Conservation Coalition (DSCC), we appreciate the opportunity to once again attend NAFO as official observers. We also thank the government of Cuba for hosting this meeting.

As many of you know, this year is an important year for RFMOs, with the conclusion of the 3rd review of implementation of the UN Fish Stocks Agreement. The results of this review show that despite some efforts, many high seas stocks remain in decline. Further, the August 2016 United Nations General Assembly review workshop on the impacts of bottom trawling concluded that while there has been progress in VME protection the commitments made through the United Nations General Assembly (UNGA) Sustainable Fisheries Resolutions 61/105 /, 64/72 and 66/68 with regards to protecting VME's, full implementation has not yet occurred.

This year, NAFO through the agreement of its Contracting Parties, must:

With regards to VMEs:

- Adopt the impact assessment as completed by Scientific Council and take action to protect VME areas where SAIs continue to occur.
- At a minimum, agree to close proposed areas 13 & 14, following scientific advice as well as the 2016 impact assessment, which show that 81% of sea pens remain at risk of fisheries impact.
- Agree to use non-destructive sampling within existing closed areas, as a matter of urgency as this issue has been raised at least since 2008. Scientific research is the single greatest threat to VMEs within the closed areas.

With regards to sustainable fisheries management:

- Make progress on the protection of deep-sea fish species, particularly those which could be considered VMEs under the FAO Guidelines on Deep Sea Fisheries.
- Ensure that the management strategy evaluation for Greenland halibut is completed NAFO should not agree to any quota increase for Greenland halibut without completing the review of the management strategy evaluation.

With regards to the protection of elasmobranchs:

- NAFO must adopt a fin's naturally attached for all shark species caught as bycatch in NAFO managed fisheries.
- Agree to set the TAC for skates consistent with catch levels.

NAFO has been a leader in many areas of improved fisheries management of straddling stocks over the past decade.

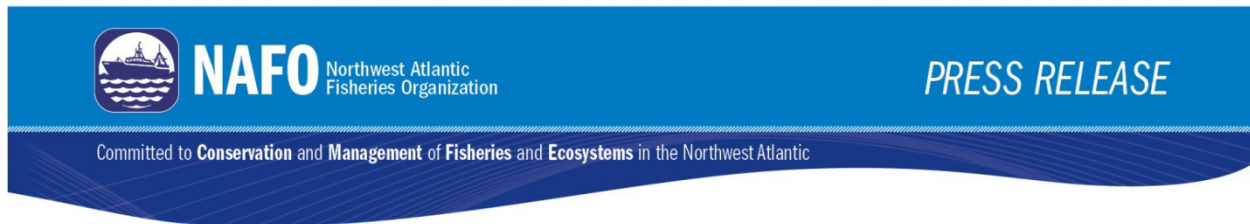
We encourage Contracting Parties to continue to support this leadership, particularly through making progress this year on:

- Integration of climate change and climate vulnerability into stock assessments
- Continuation of the ecosystem roadmap which if successful will show commitment to application of the ecosystem approach to fisheries management within an RFMO context.
- Consideration of the work of NAFO relevant to the protection of biodiversity beyond national jurisdiction. To this end, we also encourage continued data sharing between NAFO and other governance organizations, including but not limited to the IMO, ISA and CNLOPB.

NAFO has made considerable progress on transparency over the past decade. We hope that this progress will be extended to the current NAFO Performance Review process and that NGOs will be allowed to attend panel discussions and participate in the Performance Review, a minimum as observers.

Our detailed recommendations, as well as a report completed by the Deep Sea Conservation Coalition on the implementation of the UNGA resolutions, are available on the table for observer information. We look forward to this week's meeting and seeing further progress at NAFO.

Thank you. Respectfully, submitted by Susanna Fuller & Katie Schleit on behalf of the Ecology Action Centre



Annex 12. Press Release

NAFO STRENGTHENS ITS PROTECTION MEASURES FOR HABITATS AND SPECIES IN THE NORTHWEST ATLANTIC

FOR IMMEDIATE RELEASE

VARADERO, CUBA, 23 SEPTEMBER 2016- The 38th Annual Meeting of the Northwest Atlantic Fisheries Organization (NAFO) took place from the 19-23 September. The delegates were welcomed by the Cuban Minister of Food Industry, Ms. Maria del Carmen Concepción González. NAFO continued to make progress in further developing its implementation of the ecosystem approach to fisheries management. Along with the traditional total allowable catch (TAC) and quota decisions, significant decisions were made regarding the following:

- **NAFO agreed to undergo its second performance review.** This performance review will be completed by the next Annual Meeting in September 2017. It will address: conservation and management; compliance and enforcement; governance; science; international cooperation; financial and administrative issues. The previous NAFO performance review took place in 2011. All of those recommendations have been addressed. The Food and Agriculture Organization (FAO) has called on all Regional Fisheries Management Organizations (RFMOs) to undergo regular performance reviews to ensure that they are following best practices.
- **NAFO has agreed to align its port State control measures with the FAO Port State Measures Agreement** which recently came into force. The proposed changes will help to further prevent, deter and eliminate illegal, unreported and unregulated fishing (IUU). The FAO port State measures are internationally recognized in the fishing industry and NAFO's alignment will further increase consistency amongst port States.
- In continuation of its protection of vulnerable marine ecosystems (VMEs) **NAFO closed an additional 239 km² of its Regulatory Area to protect significant concentrations of sea pens.** Sea pens are considered a VME indicator species. This brings the total area of the NAFO Regulatory Area (NRA) protected from bottom fishing to about 380,511 km², representing around 15% of the NRA.
- NAFO will launch a management strategy evaluation (MSE) for Greenland halibut for completion at the next Annual Meeting in September 2017
- NAFO has put rules in place to prohibit the removal of shark fins on board vessels.
- NAFO's Executive Secretary, Mr. Fred Kingston, was renewed for a second four-year term ending at the end of 2021.

For further inquiries, please contact:
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E-mail: dbell@nafo.int

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PART II

Report of the Standing Committee on Finance and Administration (STACFAD) 38th Annual Meeting of NAFO

**19–23 September 2016
Varadero, Cuba**

1. Opening by the Chair

The first session of STACFAD was opened by the Chair, Deirdre Warner-Kramer (USA) on Monday, 19 September 2016. The Chair welcomed delegates and members of the NAFO Secretariat to the meeting.

Present were delegates from Canada, Denmark (in respect of the Faroe Islands and Greenland), European Union (EU), United States of America (USA) and members of the NAFO Secretariat (Annex 1).

2. Appointment of Rapporteur

The NAFO Secretariat was appointed as Rapporteur.

3. Adoption of Agenda

The provisional agenda (Annex 2) was adopted with the addition of the following item:

- An update on the NAFO Secretariat office relocation under other items.

4. Auditors' Report for 2015

The auditing firm of WBLI Chartered Accountants performed the audit of the financial statements of the Organization for the fiscal year ended December 31, 2015. The financial statements and report to the General Council were circulated to STACFAD delegates in advance of the Annual Meeting.

The Senior Finance and Staff Administrator for NAFO presented the Draft Independent Auditors' Report and Financial Statements of the Northwest Atlantic Fisheries Organization for the year ended December 31, 2015. As auditing standards do not permit Auditors to sign and date the Auditors' Report until after the statements are reviewed and approved, the financial statements will be shown as draft statements until they are reviewed by STACFAD and approved by the Organization at the Annual Meeting. It was noted that the total expenditures incurred for the fiscal period ending 2015 amounted to \$1,898,851, which was \$82,149 under the approved budget of \$1,981,000.

Consistent with prior years, the Independent Auditors' Report noted that the Organization:

- 1) has not recorded or met all disclosure requirements for employee future benefits, including the pension plan assets, liabilities and unfunded deficit;
- 2) has a policy not to capitalize its capital assets; and
- 3) also has a policy not to capitalize finance leases.

Furthermore, the audit determined the financial affairs of the Organization had been conducted in accordance with the Financial Regulations and budgetary provisions of NAFO and presented, in all material respects, a fair and accurate accounting of the financial affairs of the Organization.

- **STACFAD recommends that the 2015 Auditors' Report be adopted.**

The Organization's Financial Regulation, Rule 9.10, states that the length of time a firm carrying out the NAFO audit shall serve is limited to a maximum of five (5) years. The audit of the 2015 financial records was the fifth and final year for WBLI Chartered Accountants, to serve as auditors of the Organization.

The Secretariat had solicited proposals from four auditing firms to perform the auditing services of NAFO's financial records for the 2016 - 2020 fiscal periods. Two of the mid-size local firms that were approached stated they don't perform IFRS (International Financial Reporting Standards) engagements and therefore declined to submit a proposal. The Secretariat received proposals from Deloitte and Grant Thornton. A summary of the proposals received, along with the detailed proposals, (STACFAD WP 16-01) were distributed to the Committee. The Secretariat has previously worked with both companies to their full satisfaction.

- **STACFAD recommends that Grant Thornton be appointed to audit NAFO's records for the 2016 - 2020 fiscal periods.**

5. Administrative and Activity Report by Secretariat

a. Administrative and Activity Report

The Executive Secretary highlighted NAFO administrative matters and activities for the period September 2015 to August 2016 (GC Doc. 16-01).

Canada noted that it was pleased to see the installation of a new advanced firewall application at the NAFO Secretariat as recommended by the Information Security Management System (ISMS) recommendations.

An updated communication strategy was presented to STACFAD (STACFAD WP 16-10). The communication strategy is based upon NAFO's two previous communication documents, the NAFO Communication Strategy (GC Doc. 13-6) and the NAFO Media Policy (GC Doc. 04-4), and encompasses all of the communications and public relations of NAFO.

Updates to the strategy include goals for outreach at NAFO, a plan of action and timeline for all communication tasks, staff responsibilities, social media plan, and key messaging. The updated strategy is a living document that will be updated as needed.

The Secretariat invited Contracting Parties to provide comments and suggestions on improvement of the communication strategy as they see fit. Comments should be sent to Dayna Bell, dbell@nafo.int.

b. NAFO website

In the past year, the NAFO Secretariat has been working on a website re-design for the NAFO public site (www.nafo.int), as outlined in STACFAD WP 16-02. The re-designed website utilizes a new platform, an open source Content Management System (CMS), which enables users to navigate and find information quickly in a more user-friendly format. The Ad hoc virtual Working Group of self-identified interested participants was established and assisted in the process. Phase I of the NAFO website re-design is scheduled to be launched by the end of 2016. The Secretariat invited feedback on the new website once it is completed.

In the coming 12 months, the NAFO Secretariat will focus on Phase II of the project which concentrates on the re-design of the NAFO Members' pages (members.nafo.int). It was agreed that the redesign of the Members' pages should incorporate concerns raised regarding transparency in NAFO proceedings, specifically access to its meeting documentation, and take into account the different users of the NAFO website (STACFAD WP 16-11). For this reason, general meeting information such as meeting location and provisional agendas could be also made available on the public pages

In regards to the NAFO Website re-design project, STACFAD recommends that:

- **General meeting information, such as meeting location and provisional agendas, be also made available on the NAFO public pages.**
- **The Ad hoc virtual Working Group is empowered to identify other documents or pages that are clearly administrative or not confidential that could be migrated immediately to the public pages.**

- **The NAFO Secretariat research the standards and guidelines of access to documentation of other RFMOs.**
- **The *Ad hoc virtual Working Group* continue to work intersessionally to develop standards and guidelines of access to documentation contained in the NAFO Members' area and NAFO Meetings SharePoint for review by STACFAD, with the view to be as transparent as practicable.**
- **NAFO Contracting parties to strongly encourage additional participation of self-identified to the *Ad hoc virtual Working Group*, in particular those with STACTIC expertise.**
- **Phase II of the NAFO website re-design project be completed prior to the 2017 NAFO Annual Meeting.**

6. Financial Statements for 2016

The Secretariat presented the 2016 financial statements to the Committee: The operating budget for 2016 was approved at \$1,997,000 while expenditures for the year are projected to be at \$1,961,000, or \$36,000 under the approved budget. Savings for the year can be attributed to the following:

- 1) Two personnel changes resulting in short term vacancies;
- 2) Equipment lease renewals at lower operating costs;
- 3) Annual meeting travel costs lower than budgeted; and
- 4) Relocation costs for the SC Coordinator lower than anticipated.

It was also noted that legal fees required to defend the wrongful dismissal suit exceeded the budget provision.

All remaining 2016 operating expenses are anticipated to be on or near budget for the year. The above noted cost savings of \$36,000 will be returned to the accumulated surplus and will be available to reduce Contracting Parties contributions in 2016.

The Committee noted its appreciation to the Secretariat for its continued efforts to maintain costs within the approved operating budget. However, it was also noted that additional tasks are continually being asked of the Secretariat and it is important to ensure that adequate resources are available to ensure the needs of the Organization are being fulfilled.

Assessed Contributions

At the beginning of 2016, the accumulated surplus had \$320,050 which, was deemed to be in excess of the needs of the Organization and was allocated towards the 2016 operating budget. Therefore, in order to meet the 2016 operations budget of \$1,997,000, Contracting Parties were assessed contributions in the amount of \$1,676,950.

Balance Sheet

The Organization's cash position at December 31, 2016 is estimated to be \$503,685. The cash balance should be sufficient to finance appropriations in early 2017 pending the receipt of annual payments by Contracting Parties in the spring of 2017.

It was noted that Ukraine had outstanding contributions for 2015 and 2016 totalling \$73,804. The Committee noted that according to Article XVI.9 of the NAFO Convention, if 2 years' contributions are still outstanding at the end of the year 2016, Ukraine will lose their right to vote and cast objections in 2017, until it has fulfilled its obligations.

7. Review of Accumulated Surplus and Contingency Funds

According to the Financial Regulations of the Organization, STACFAD and General Council 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 to the good conduct of the business of the Organization.

The Secretariat noted the accumulated surplus account at December 31, 2016 is estimated to be \$600,000.

- **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 2016, and of which \$85,000 would be a contingency fund available to be used for unforeseen and extraordinary expenses.**

8. Personnel Matters

a. Personnel updates

This year, the Secretariat said goodbye to two employees: Scientific Council Coordinator, Dr. Neil Campbell, and Database Manager, Mr. Mark Harley. Tom Blasdale, Scientific Council Coordinator started in March 2016 and DJ Laycock, Database Developer/Programmer Analyst, began in September 2016.

The NAFO Secretariat presented those staff members who were eligible for promotion, and the Committee was in agreement with the proposed promotions.

b. NAFO Secretariat classification scheme review

At the 2014 NAFO Annual Meeting, the General Council tasked STACFAD to develop Terms of Reference to review the existing NAFO Secretariat staff classification scheme, including salary scales and relevant employment benefits' to improve efficiency and support the priorities of the Organization and its Contracting Parties. SJM Consulting was hired to perform the Staff Classification review and the report was presented to STACFAD in 2015. The Committee and staff members expressed concerns that the level of detail and analysis contained within did not fully meet the terms of reference. It was agreed that comments from Contracting Parties, the Secretariat and staff members would be compiled and forwarded to the consultant to be used for a revision of the review.

The revised report (STACFAD WP 16-03) was received from the consultant in August 2016 and distributed to STACFAD members just prior to the NAFO Annual Meeting. The Committee reviewed the results of the report and noted that although report contained additional detail from the prior year, there were still concerns that the level of detail and analysis did not meet expectations. One item in particular - the comparison with other RFMOs - was lacking.

At last year's Annual Meeting, STACFAD also requested that the Secretariat use the consultant's revised report as a basis to develop and present recommendations for STACFAD's consideration at the current Annual Meeting. The Secretariat presented its proposed changes to the NAFO Staff Classification System as contained in STACFAD WP 16-04 (Revised).

STACFAD endorsed the proposed changes to the NAFO Staff Classification Scheme:

- **Reclassify the IT Manager position from Information Services (IS) to Computer Services (CS)**
- **Reclassify the Finance and Staff Administrator position from Administrative Services (AS) to Financial Management (FI)**
- **Combine the 01 and 02 pay levels for Administrative Services (AS) and Programme Administration (PM) levels to allow for a seven level pay band. This would impact the following positions: Fisheries Information Administrator, Office Administrator, Publications Manager and Scientific Information Administrator.**
- **Combine the 02 and 03 pay levels for Administrative Services (AS) to allow for a six level pay band. This would impact the position of the Executive Assistant to the Executive Secretary.**

- **Staff members currently occupying a position in which there are proposed changes to the salary structure would have the option to either stay with the current salary scheme or switch to the revised salary scheme. Staff members employed in the future would automatically switch to the revised salary scheme.**
- **Updating of the Publications Manager's, Database Manager's and the Finance and Staff Administrator's job descriptions, as recommended.**
- **Perform a review of the Staff Classification System every five years, or as appropriate**

The NAFO Staff Association noted that it does not oppose the NAFO Secretariat's proposed changes to the NAFO Classification System as detailed in STACFAD WP 16-04. The staff members however wish to express concerns that the level of detail and analysis contained within did not reflect staff positions fully or meet the terms of reference.

The consideration of possible modifications to NAFO's separation indemnity benefits has been discussed since 2014 following the elimination of these benefits in the Public Service of Canada (PSC). This item was deferred until receipt of the revised Staff Classification Report as the report also included a review of NAFO's separation indemnity benefits, including the comparison of separation indemnity benefits received in the Public Service of Canada (PSC) and similar RFMOs. Following a proposal from Canada, STACFAD agreed that existing employees would remain under NAFO's current system, but that new hires would receive a separation benefit of one (1) week per year of service.

- **STACFAD recommends for adoption the following amendment to NAFO STAFF Rule 9.5:**

"For employees hired before 01 October 2016, in the event of separation from service with the Secretariat, members of the Secretariat shall be compensated an indemnity equivalent to the rate of two (2) weeks current salary for every year of service with the Secretariat, free of all deductions except statutory deductions, limited to a maximum of 40 weeks.

For employees hired after 30 September 2016, in the event of separation from service with the Secretariat, members of the Secretariat shall be compensated an indemnity equivalent to the rate of one (1) weeks current salary for every year of service with the Secretariat, free of all deductions except statutory deductions, limited to a maximum of 40 weeks."

9. Internship Program

The Secretariat presented a report (STACFAD WP 16-05) on the activities of the internship program which occurred during the year including the tasks performed by the interns, Yumi Okochi (Japan) and Martha Astrup (Norway), hosted at the Secretariat in 2016. The report also included a review on the current stipend provided to NAFO Interns, including an assessment on the estimated cost of living in Halifax, and a comparison of intern stipends offered by other RFMO's hosted in Canada. The Committee once again endorsed the continuation of the internship program recognizing the considerable benefits to the Secretariat and the organization.

- **The Committee agreed to maintain the internship period at six (6) months during 2017 year and the Committee also agreed to maintain the stipend amount at \$1,750 CAD per month.**
- **The Secretariat was requested to continue their outreach efforts to ensure qualified participants from various contracting parties participate in the program.**

10. Headquarters Agreement

At the last Annual Meeting, Canada reported that it was prepared to proceed with the draft text of the Headquarters Agreement reviewed at the 31st Annual Meeting in 2009 that focused on NAFO's privileges and immunities. However, this was delayed because an issue on NAFO's immunity was still before the Canadian courts. The court case has been concluded and therefore, the finalization of the Headquarters Agreement and related Memorandum of Understanding that outline the logistics for accommodation of Headquarters of NAFO in Canada can proceed.

STACFAD recommends that the Government of Canada proceed with its domestic process to sign and ratify the Headquarters Agreement. This process requires Cabinet approval, Orders in Council for signature and ratification, as well as tabling for 21 sitting days in Parliament. This process is likely to take several months.

STACFAD recommends that the Government of Canada and NAFO proceed with the signature of the Memorandum of Understanding.

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

The Annual Meeting of the International Fisheries Commissions Pension Society (IFCPS) was held 19-21 April 2016 in Seattle, Washington, USA, and the Secretariat provided the Committee with an update on the highlights of the meeting. Background information on the pension plan, investment performance, financial status, as well as future administrative support was included with the information paper (STACFAD WP 16-06).

12. Update on implementation of the NAFO Performance Review Panel (PRP) recommendations tasked to STACFAD

One PRP recommendation tasked to STACFAD remains outstanding. PRP Recommendation 7.2.3 suggests amending certain provisions of the NAFO Staff Rules pertaining to the rights and obligations of NAFO Secretariat Staff, particularly dismissal or termination of appointment. A review of this agenda item has been deferred in prior years until the conclusion of the current wrongful dismissal legal case against NAFO. The court case has been concluded; therefore the NAFO Secretariat can begin the review of these parts of the current Staff Rules over the next year with the assistance of its lawyers. The Secretariat will present any proposals for amendment to STACFAD at the 2017 Annual Meeting.

13. Budget Estimate for 2017

The Committee reviewed the 2017 budget estimate as detailed in GC WP 16-01(Revised).

<i>Approved Budget 2016</i>	<i>Preliminary Budget Forecast 2017</i>	<i>Budget Estimate 2017</i>
<i>\$1,997,000</i>	<i>\$1,995,000</i>	<i>\$2,126,000</i>

The 2017 budget estimate of \$2,126,000 represents an increase of \$129,000 or 6.5% over the prior years approved budget.

It was noted that there are two extraordinary items in the 2017 budget. First, \$93,000 has been earmarked to cover expenses associated with NAFO's second Performance Review (external review panel members' fees and travel, printing, etc.) scheduled to be launched in 2017. Second, an additional \$30,000 has been added to the inter-sessional scientific budget for costs associated with additional meetings to provide answers for requests for advice from the Fisheries Commission.

If not for the above two extraordinary items, the increase to the 2017 budget would only have been \$6,000 or 0.3%.

- **STACFAD recommends that the budget for 2017 of \$2,126,000 (Annex 3) be adopted.**

A preliminary calculation of billing for the 2017 financial year is provided in Annex 4. The preliminary calculation of billing is based on the budget estimate of \$2,126,000 and shall be reduced by any amount determined by the General Council to be in excess of the needs of the accumulated surplus account.

The accumulated surplus account at December 31, 2016 is estimated to be \$600,000 and the recommended minimum balance in the accumulated surplus account for operations and emergency use for the 2017 fiscal year is \$285,000. This allows for \$315,000 (\$600,000-\$285,000) to be applied towards the 2017 billing.

Funds required to meet the 2017 administrative budget and appropriated from Contracting Parties are estimated to be \$1,811,000 (\$2,126,000 - \$315,000).

14. Budget Forecast for 2018 and 2019

STACFAD reviewed the preliminary budget forecast for 2018 (\$2,051,000) and 2019 (\$2,090,000) (Annex 4) and approved the forecast in principle. It was noted that the budget for 2018 will be reviewed in detail at the next Annual Meeting.

15. Adoption of 2016/2017 Staff Committee Appointees

The Secretariat members nominated the following people to serve as members of the Staff Committee for September 2016–September 2017: Emilia Batista (EU); Joanne Morgan (Canada) and Deirdre Warner-Kramer (USA).

- **STACFAD recommends that General Council appoint the three Staff Committee nominees, Emilia Batista (EU); Joanne Morgan (Canada) and Deirdre Warner-Kramer (USA), for September 2016–September 2017.**

16. Election of Chair

According to Rule 5.2 of the GC Rules of Procedure: *“The Committee shall elect from among its members, to serve for two years, a chair and a vice-chair who shall be allowed to vote.”*

The present Chair, Deirdre Warner-Kramer (USA), was nominated and re-elected for a two-year term.

17. Other Matters

The following matter was put forward by the committee to discuss under other matters:

- **NAFO Secretariat office relocation.**

The current lease of the NAFO Secretariat headquarters will be up for renewal in March 2017. The Secretariat informed the committee that discussions with Canada have started about the possible relocation of the NAFO Secretariat.

The Committee noted the importance of ensuring the Secretariat is provided with appropriate space to meet the needs and interests of the Organization, including computer and data security, conference meeting space, security, etc. For transparency reasons and to ensure the needs of the Organizations are met, Canada was requested to provide a copy of the needs assessment and requested that it is sent to the NAFO Secretariat for circulation to Contracting Parties.

The Committee requests that the timing of the possible relocation and any potential costs to NAFO be provided when the information is made available.

18. Time and Place of 2017–2019 Annual Meetings

As previously agreed, the 2017 and 2018 Annual Meetings will be held 18–22 September and 17–21 September, respectively. 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.

It was once again noted by the NAFO Secretariat that there are limited conference venues in the Halifax area large enough to accommodate hosting a NAFO Annual Meeting. It continues to be extremely difficult to reserve and hold conference space on a short-term basis (i.e. one year basis). Hotels are seeking a long-term commitment

as they quite often will have other clients willing to book two years or more in advance. NAFO is limited from committing two years in advance as offers from CPs to host a NAFO Annual Meeting can be issued up to one year prior to an Annual Meeting.

- **STACFAD encourages 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.**
- **STACFAD recommends that the dates of the 2019 Annual Meeting (to be held in Halifax, Nova Scotia, Canada, unless an invitation to host is extended by a Contracting Party and accepted by the Organization) to be as follows:**

23-27 September 2019

19. Adjournment

The final session of the STACFAD meeting adjourned on 22 September 2016.

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

Élise Lavigne	Canada
Rasmus Bæk Pedersen	Denmark (in respect of the Faroe Islands and Greenland)
Karen Eva Abrahamsen	European Union
Elizabethann English Deirdre Warner-Kramer	United States of America
Fred Kingston Stan Goodick Sarah Guile Alexis Pacey Dayna Bell	NAFO Secretariat

Annex 2. Agenda

1. Opening by the Chair, Deirdre Warner-Kramer (USA)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Auditors' Report for 2015
5. Administrative and Activity Report by NAFO Secretariat
 - a) Administrative and Activity Report
 - b) NAFO website
6. Financial Statements for 2016
7. Review of Accumulated Surplus and Contingency Fund
8. Personnel Matters
 - a) Personnel updates
 - b) Secretariat Staff Classification Review
9. Internship Program
10. Headquarters Agreement
11. Report of the Annual Meeting of the International Fisheries Commissions Pension Society (IFCPS)
12. Update on implementation of the NAFO Performance Review Panel (PRP) recommendations tasked to STACFAD
13. Budget Estimate for 2017
14. Budget Forecast for 2018 and 2019
15. Adoption of 2016/2017 Staff Committee Appointees
16. Election of Chair
17. Other Matters
 - NAFO Secretariat office relocation
18. Time and Place of 2017-2019 Annual Meetings
19. Adjournment

Annex 3. Budget Estimate for 2017

NORTHWEST ATLANTIC FISHERIES ORGANIZATION

Budget Estimate for 2017

(Canadian Dollars)

	Approved Budget 2016	Projected Expenditures 2016	Preliminary Budget Forecast 2017	Budget Estimate 2017
1. Personal Services				
a) Salaries	\$992,000	\$984,000	\$1,023,000	\$1,026,000
b) Superannuation and Annuities	353,000	345,000	355,000	348,000
c) Medical and Insurance Plans	92,000	90,000	95,000	93,000
d) Employee Benefits	60,000	55,000	63,000	62,000
Subtotal Personal Services	1,497,000	1,474,000	1,536,000	1,529,000
2. Additional Help	2,000	2,000	2,000	2,000
3. Communications	22,000	22,000	23,000	23,000
4. Computer Services	42,000	42,000	42,000	42,000
5. Equipment	28,000	26,000	28,000	28,000
6. Fishery Monitoring	37,000	37,000	37,000	50,000
7. Hospitality Allowance	3,000	3,000	3,000	3,000
8. Internship	11,000	11,000	11,000	11,000
9. Materials and Supplies	28,000	28,000	28,000	28,000
10. NAFO Meetings				
a) Sessional	115,000	100,000	118,000	118,000
b) Inter-sessional Scientific	25,000	25,000	25,000	55,000
c) Inter-sessional Other	32,000	32,000	32,000	32,000
Subtotal NAFO Meetings	172,000	157,000	175,000	205,000
11. Other Meetings and Travel	35,000	35,000	35,000	35,000
12. Performance/External Reviews	0	0	0	93,000
13. Professional Services	51,000	66,000	51,000	51,000
14. Publications	12,000	12,000	12,000	14,000
15. Recruitment and Relocation	57,000	46,000	12,000	12,000
	\$1,997,000	\$1,961,000	\$1,995,000	\$2,126,000

**Notes on Budget Estimate 2017
(Canadian Dollars)**

Item 1(a)	Salaries Salaries budget estimate for 2017.		\$1,026,000
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.		\$348,000
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.		\$93,000
Item 1(d)	Employee Benefits Employee benefits as per the NAFO Staff Rules including overtime, repatriation grant, termination benefits, vacation pay, and travel to home country for internationally recruited members of the Secretariat.		\$62,000
Item 2	Additional Support Other assistance as required.		\$2,000
Item 3	Communications Phone, fax and internet services Postage Courier/Mail service	\$17,000 4,000 2,000	\$23,000
Item 4	Computer Services Computer hardware, software, supplies and support.		\$42,000
Item 5	Equipment Leases (print department printer, photocopier and postage meter) Purchases Maintenance	\$15,000 9,000 4,000	\$28,000
Item 6	Fishery Monitoring Vessel Monitoring System (VMS) annual maintenance fee including programming changes as required due to changes to CEM Oracle database license	\$37,000 13,000	\$50,000

Item 10(a)	NAFO Sessional Meetings		\$118,000
	Annual Meeting, September 2017, Halifax, Canada		
	SC Meeting, June 2017, Halifax, Canada		
	SC Meeting, September 2017, Halifax, Canada		
Item 10(b)	NAFO Inter-sessional Scientific Meetings		\$55,000
	Provision for inter-sessional meetings and a general provision for unforeseen expenses necessarily incurred by SC required for the provision of answering requests for advice from FC.	\$25,000	
	Special Meetings for PA Framework, 3M Cod Benchmark Review and Greenland Halibut MSE	30,000	
Item 10(c)	NAFO Inter-sessional Other		\$32,000
	General provision for GC and FC inter-sessional meetings.		
Item 11	Other Meetings and Travel		\$35,000
	International Meetings regularly attended by the NAFO Secretariat:		
	1. Aquatic Sciences and Fisheries Abstracts (ASFA)		
	2. Committee on Fisheries (COFI)		
	3. Co-ordinating Working Party on Fishery Statistics (CWP)		
	4. Fisheries Resources Monitoring Systems (FIRMS)		
	5. International Fisheries Commissions Pension Society (IFCPS)		
	6. Regional Fishery Body Secretariats' Network (RSN)		
	7. United Nations		
Item 12	Performance/External Reviews		\$93,000
	Costs associated with the performance review of the Organization.		
Item 13	Professional Services		\$51,000
	Professional Services (audit, consulting, legal fees, and insurance)	\$35,000	
	Professional Development and Training	11,000	
	Public Relations	5,000	
Item 14	Publications		\$14,000
	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.		

Annex 4. Preliminary Budget Forecast for 2018 and 2019

NORTHWEST ATLANTIC FISHERIES ORGANIZATION

Preliminary Budget Forecast for 2018 and 2019

(Canadian Dollars)

	Preliminary Budget Forecast 2018	Preliminary Budget Forecast 2019
1. Personal Services		
a) Salaries	\$1,069,000	\$1,101,000
b) Superannuation and Annuities	350,000	352,000
c) Medical and Insurance Plans	99,000	104,000
d) Employee Benefits	65,000	62,000
Subtotal Personal Services	1,583,000	1,619,000
2. Additional Help	2,000	2,000
3. Communications	23,000	23,000
4. Computer Services	42,000	42,000
5. Equipment	28,000	28,000
6. Fishery Monitoring	41,000	42,000
7. Hospitality Allowance	3,000	3,000
8. Internship	11,000	11,000
9. Materials and Supplies	28,000	28,000
10. NAFO Meetings		
a) Sessional	120,000	121,000
b) Inter-sessional Scientific	25,000	25,000
c) Inter-sessional Other	32,000	32,000
Subtotal NAFO Meetings	177,000	178,000
11. Other Meetings and Travel	35,000	35,000
12. Professional Services	52,000	53,000
13. Publications	14,000	14,000
14. Recruitment and Relocation	12,000	12,000
	\$2,051,000	\$2,090,000

Annex 5

**Preliminary calculation of billing for Contracting Parties
against the proposed estimate of \$2,126,000 for the 2017
financial year (based on 12 Contracting Parties to NAFO)**
[(Canadian Dollars)]

Budget Estimate	\$2,126,000
Deduct: Amount from Accumulated Surplus (pending approval from General Council)	315,000
Funds required to meet 2017 Administrative Budget	\$1,811,000

60% of funds required = \$1,086,600
 30% of funds required = \$543,300
 10% of funds required = \$181,100

2016 Billing for comparison purposes	
Approved Budget 2016	\$1,997,000
Deduct: Accumulated Surplus	320,050
Funds required 2016 Budget	\$1,676,950

Contracting Parties	Nominal Catches for 2014	% of Total Catch in the Convention Area		10%	30%	60%	2017 Preliminary Billing
		Nominal Catches for 2013	% of Total Catch in the Convention Area				
Canada	336,274	357,615	51.13%	\$95,612.33	\$45,275.00	\$534,281.22	\$675,168.55
Cuba	652	845	0.09%	-	45,275.00	977.94	46,252.94
Denmark (in respect of Faroe Islands and Greenland) (1)	145,533	144,541	21.28%	41,379.20	45,275.00	231,228.48	317,882.68
European Union	34,172	39,695	5.00%	-	45,275.00	54,330.00	99,605.00
France (in respect of St. Pierre et Miquelon)	3,595	316	0.53%	1,022.16	45,275.00	5,758.98	52,056.14
Iceland	-	92	-	-	45,275.00	-	45,275.00
Japan	-	-	-	-	45,275.00	-	45,275.00
Norway	2,813	2,846	0.41%	-	45,275.00	4,455.06	49,730.06
Republic of Korea	-	-	-	-	45,275.00	-	45,275.00
Russian Federation	9,278	11,399	1.36%	-	45,275.00	14,777.76	60,052.76
Ukraine	-	-	-	-	45,275.00	-	45,275.00
United States of America	151,537	142,092	22.16%	43,086.31	45,275.00	240,790.56	329,151.87
	683,854	699,441	100.00%	\$181,100.00	\$543,300.00	\$1,086,600.00	\$1,811,000.00
Funds required to meet 1 January - 31 December 2017 Administrative Budget							\$1,811,000.00

(1) Faroe Islands 3,958 metric tons
 Greenland 141,575 metric tons



SECTION II

(51–192)

**Report of the Fisheries Commission and its Subsidiary Body
the Standing Committee on International Control (STACTIC)
38th Annual Meeting of NAFO**

19–23 September 2016**Varadero, Cuba****Contents**

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STACTIC - 2016 Annual Meeting

Acronyms

CDAG	NAFO Joint Fisheries Commission-Scientific Council Catch Data Advisory Group
CP	Contracting Party
DFG	Denmark (on behalf of the Faroe Islands and Greenland)
EDG	Editorial Drafting Group
EU	European Union
FC	Fisheries Commission
FPP	Fisheries Production Potential
FRA-SPM	France (in respect of St. Pierre et Miquelon)
GC	General Council
HCR	Harvest Control Rule
ICES	International Council for the Exploration of the Sea
ISMS	Information Security and Management System
JAGDM	Joint Advisory Group on Data Management
MCS	Monitoring, Control and Surveillance
MSE	Management Strategy Evaluation
NCEM	NAFO Conservation and Enforcement Measures
NRA	NAFO Regulatory Area
PA	Precautionary Approach
SAI	Significant Adverse Impact
SC	Scientific Council
SSB	Spawning Stock Biomass
STACTIC	NAFO Standing Committee on International Control
TAC	Total Allowable Catch
TOR	Terms of Reference
USA	United States of America
VME	Vulnerable Marine Ecosystems
VTI	Vessel Transmitted Information
WG	Working Group
WG-CR	NAFO Joint Fisheries Commission-Scientific Council <i>Ad Hoc</i> Working Group on Catch Reporting
WG-BDS	NAFO Fisheries Commission <i>Ad Hoc</i> Working Group to Reflect on the Rules Governing Bycatches, Discards and Selectivity in the NAFO Regulatory Area
WG-EAFFM	NAFO Joint Fisheries Commission-Scientific Council Working Group on Ecosystem Approach Framework to Fisheries
WG-ESA	NAFO Scientific Council Working Group on Ecosystem Science Assessment
WG-RBMS	NAFO Joint Fisheries Commission-Scientific Council Working Group on Risk-Based Management Strategies
WP	Working Paper

PART I
Report of the Fisheries Commission
38th Annual Meeting of NAFO
(FC Doc. 16-20)

19–23 September 2016
Varadero, Cuba

I. Opening

1. Opening by the Chair

The meeting was opened by the Chair, Temur Tairov (Russian Federation), at 11:45 hrs on Monday, 19 September 2016. Delegations from the following Contracting Parties (CPs) were in attendance: Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland) (DFG), European Union (EU), France (in respect of St. Pierre et Miquelon) (FRA-SPM), Iceland, Japan, Republic of Korea, Norway, Russian Federation, the United States of America (USA) and Ukraine.

The attendance of observers representing the Ecology Action Centre was acknowledged (Annex 1).

2. Appointment of Rapporteur

Ricardo Federizon, Senior Fisheries Commission Coordinator (NAFO Secretariat) was appointed Rapporteur. The summary of decisions and actions taken by the Fisheries Commission (FC) is presented in Annex 2.

3. Adoption of Agenda

The provisional agenda as previously circulated was adopted (Annex 3).

4. Review of Commission Membership

It was noted that the membership of the FC is currently twelve (12) CPs and all have voting rights.

5. Guidance to STACTIC necessary for them to complete their work

The Chair of the Standing Committee on International Control (STACTIC), Judy Dwyer (Canada) presented the results of STACTIC May 2016 Intersessional Meeting which was held in London, United Kingdom (FC Doc. 16-03). She reported on the status of the proposals on changes in the NAFO Conservation and Enforcement Measures (NCEM). STACTIC advised that it would continue the discussions and deliberations on its work related to Port State Measures, Observers Scheme, Annual Compliance Review, *Monitoring, Control, and Surveillance (MCS)* website, Editorial Drafting Group (EDG), Information Security Management System (ISMS) and the Joint Advisory Group on Data Management (JAGDM), among others at this meeting.

FC commended STACTIC for its hard work and encouraged STACTIC to continue working on the pending issues.

FC **accepted** the report. The formal adoption of the recommendations contained therein was done under agenda item 16.

II. Scientific Advice

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

The Chair of Scientific Council (SC), Katherine Sosebee (USA), presented the comprehensive and detailed scientific advice. The Chair explained how the advice was developed in the context of the *SC Roadmap to Ecosystem Approach*. The scientific advice on fish stocks and on other topics were mainly formulated during

the June 2016 SC meeting (SCS Doc. 16-14 Rev.). The multi-year advice provided in the previous year was also reviewed or updated at that meeting. Advice on shrimps was formulated during its meeting in September 2016 (SCS Doc. 16-18). The scientific advice represents the response of SC to the request from FC which was formulated at the 37th Annual Meeting in September 2015 (FC Doc. 15-17 Rev.).

The following represents an overview of the scientific advice on the fish stocks which were fully assessed or monitored at the SC meetings, as well as on selected topics from special request items on fish stocks, Risk-based Management Strategies, and Ecosystem Approach Framework to Fisheries Management. The advice may contain special comments and caveats. The SC Chair urged FC to consult the details in the relevant SC meeting reports when considering conservation and management measures.

6.1 Scientific advice on fish stocks

- **Shrimp in Divs. 3LNO.** No directed fishery in 2017.
- **American plaice in Divs. 3LNO.** No directed fishery in 2017 and 2018.
- **Thorny skate in Divs. 3LNO.** The stock has shown little improvement at recent catch levels (approximately 4700 tonnes in 2011-2015). SC advises no increase in catches in 2017 and 2018.
- **Redfish in Div. 3O.** SC is unable to advise on an appropriate Total Allowable Catch (TAC) for 2017, 2018 and 2019.
- **Witch flounder in Divs. 2J +3KL.** No directed fishery in 2017, 2018 and 2019.
- **Squid (*Illex*) in Sub-areas 3+4.** For 2017-2019, TAC of no more than 34 000 tonnes/year.
- **An update on monitoring of stocks for which multiyear advice was provided in 2014 or 2015** was provided. SC reiterated the following:
 - **Cod in Div. 3M.** TAC should be less than the catch corresponding to F_{lim} (in 2016-2017).
 - **Redfish in Div. 3M.** Allows a marginal increase in TAC in 2016-2017 to 7 000t.
 - **American plaice in Div. 3M.** No directed fishery in 2015-2017.
 - **Yellowtail flounder in Divs. 3LNO.** Fishing mortality up to 85% F_{msy} corresponding to a catch of 26300 tonnes in 2016, 23 600 tonnes in 2017 and 22 000 tonnes in 2018 has low risk (5%) of exceeding F_{lim} , and is projected to maintain the stock well above B_{msy} .
 - **Witch flounder in Divs. 3NO.** Exploitation in 2016-2017 should not exceed $\frac{2}{3} F_{msy}$, corresponding to catches of 2172 tonnes and 2225 tonnes respectively.
 - **Capelin in Divs. 3NO.** No directed fishery in 2016-2018.
 - **White hake in Divs. 3NO.** Catches of white hake in Divs. 3NO should not exceed their current levels of 100-300 tonnes (in 2016-2017).
- **Greenland halibut in Divs. 2+3KLMNO.** TAC for 2017 derived from the Harvest Control Rule (HCR) is 14 059 tonnes. Exceptional circumstances are occurring; however the survey observation does not constitute a conservation concern.

6.2 Scientific advice on Risk-based Management Strategies (RBMS), Ecosystem Approach Framework to Fisheries Management (EAFFM) and other topics

- **Redfish in Divs. 3LN – full assessment to evaluate the effects of fisheries removals.** At the beginning of 2016, the stock was at or above B_{msy} and fishing mortality was well below F_{msy} during 2015. The probability of biomass being below B_{lim} or fishing mortality being above F_{msy} is < 1%.
- **Risk assessment for Significant Adverse Impact (SAI) on Vulnerable Marine Ecosystem (VME) elements and species.** SC completed the assessment of the risk of Significant Adverse Impacts (SAIs) from bottom fishing activities on VMEs in the NAFO Regulatory Area (NRA). The results indicated that both large gorgonians and sponges VME have a low overall risk of SAI, while sea pen VMEs were assessed as having a high overall risk of SAI.
- **Seamount VME Species Guide.** The NAFO VME coral and sponge identification guide was updated in 2015 to include other species defined as VME Indicator Species.

- **Risk assessments for impacts of trawl surveys on VME in closed areas.** A partial analysis was conducted to evaluate the impact of removing the closed areas on the indices of biomass derived from the EU survey in Div. 3M. The results show minimal impact on estimates of survey biomass and trends for all the assessed species with the exception of roughhead grenadier and Greenland halibut.
- **Bycatch analysis from haul-by-haul data.** The 2015 haul-by-haul data are incomplete, since the requirement was to report only the top three species from each haul. SC considers the data to be not useful for the examination of bycatch. The requirement changed in 2016 and all species are now required to be reported. Therefore, SC will review the analysis at the June 2017 SC meeting.
- **Review F_{lim} value for Division 3M Cod.** The review of the F_{lim} is highly dependent of the revision of biological data for the cod benchmark and the PA Framework revision which is currently under discussion. Scientific Council endorsed the FC-SC WG-RBMS proposal that the best forum to carry out the F_{lim} review is the benchmark process, and will undertake this task during that process (see agenda item 8).
- **Assessment of individual species components of 3M Redfish.** The next full assessment of the Beaked Redfish (*S. mentella* and *S. fasciatus*) in Div. 3M stock is scheduled for June 2017. SC will endeavor a full assessment of the 3M golden redfish (*Sebastes marinus*) at that time.
- **Appropriateness of survey coverage for Greenland halibut.** The surveys provide coverage of the majority of the spatial distribution of the stock and the area from which the majority of the catches are taken.
- **Full assessment of Greenland halibut in 2+3KLMNO and consideration of weighing each survey to inform the 2017 MSE review.** SC referred to the efforts made in 2016 to complete this complex and time-consuming task. SC will endeavour to have a full assessment complete in advance of the September 2017 annual meeting (see agenda items 8 and 9.7).
- **Work plan for assessment of impacts other than fishing in the NRA.** SC considers that developing the requested work plan is beyond its capacity and purview. It realizes the potential for negative impact of non-fisheries activities on VMEs within the NRA, and wants to highlight the complex science and governance issues that would need to be addressed to develop a comprehensive work plan. SC emphasizes that governance issues are the main impediment for comprehensive protection of VMEs in the NRA, not the scientific knowledge about them.
- **How many SSB points above 30000 tonnes are considered sufficient to conduct a review of B_{lim} of cod in 3NO?** SC notes that the number of SSB points required prior to re-evaluating B_{lim} will depend on the associated recruitment values and the overall pattern in the stock-recruit scatter and therefore a predetermined number of points cannot be specified at this time.
- **Survey biomass trends for Witch flounder in Division 3M.** The majority of the witch flounder biomass in Div. 3M is concentrated at depths less than 700 m. Since a minimum in 2002, the index has increased with large inter-annual variability. The maximum biomass was reached in 2012.
- **Review Results of 2015 Canadian photographic surveys for non-coral and sponge VME indicator species.** SC recommends that the location of the significant catches, rather than the full kernel density polygon areas, be used to identify significant concentrations of these VME indicator species.
- **Plan for work for the benchmark process for 3M Cod.** SC endorsed the timeline proposed by Working Group (WG)-RBMS for the 3M cod benchmark assessment with minor editorial changes. CPs must contribute scientific experts in relevant fields and must participate in the benchmark process as outlined in the calendar (see agenda item 8).

6.3 Other issues as determined by the Chair of the Scientific Council

The SC Chair emphasized the continued importance and priority of accurate catch estimates and reported that there has been significant progress in addressing the problem of catch estimation through the work of the Catch Data Advisory Group (see agenda item 14).

6.4 Feedback to the Scientific Council regarding the advice and its work during this Meeting

FC **noted** the SC Reports and the presentation. The SC Chair's presentation engendered questions and enquiries for further clarifications to which SC prepared responses during the meeting. These relate to 2J+3KLMNO Greenland halibut, SAI on VMEs, candidate areas 13 and 14, and gear selectivity. The FC questions and SC responses were compiled in FC WP 16-15 (Annex 4).

7. Formulation of Request to the Scientific Council for Scientific Advice on the Management of Fish Stocks in 2018 and on other matters

In 2012, a steering committee was created which was tasked to coordinate with FC and SC in drafting the FC Request document (FC Doc. 12-26). It constitutes of the SC Coordinator, and two CP representatives. One of the CP representatives, Katherine Sosebee (USA) became the SC Chair, and the other CP representative, Estelle Couture (Canada) no longer serves in this capacity. They were replaced on the steering committee by Sebastian Rodriguez-Alfaro (EU) and Sandra Courchesne (Canada) who compiled the request document at this meeting.

The **adopted** request items are compiled in FC WP 16-14 and presented in Annex 5.

III. Conservation of Fish Stocks in the Regulatory Area

8. Meeting Report and Recommendations of the Joint Fisheries Commission–Scientific Council Working Group on Risk-based Management Strategies, April 2016

The presentation of the report and the recommendations was done in a joint plenary session with SC. The joint session was in an open-discussion format.

Carsten Hvingel (Norway), co-Chair of the Joint WG, presented the meeting report (FC-SC Doc. 16-02) and forwarded the recommendations addressed to FC and SC for consideration and adoption in FC-SC WP 16-02 (Annex 6).

FC **accepted** the report and **adopted** the FC-specific recommendations 2, 6 and 7, with changes outlined below.

During the joint deliberation, it was recognized that the WG recommendations were formulated about six months ago prior to the SC June meeting. The timelines prescribed in the recommendations concerning the Precautionary Approach (PA) Framework, 3M cod benchmark assessment and Greenland halibut management strategy evaluation (MSE) were adjusted in consideration with the challenging workload and capacity limitations of SC. Due to the amount and diverse nature of the requests, CPs were strongly encouraged to provide increased participation in future SC meetings and workshops.

Regarding Recommendation 1, SC gave an update that it would give priority to reviewing those PA elements that are essential to advance the work of MSE initiatives.

Regarding Recommendation 2, FC revised the recommended timeline for Greenland halibut MSE in consultation with SC. The new **adopted** timeline is presented in Annex 7.

Regarding Recommendation 6, a supplementary guidance to the 3LN redfish conservation plan and the HCR was **adopted** and shall be **incorporated** into the NCEM, together with the original HCR (FC Doc. 14-29) (Annex 8).

Regarding Recommendation 7, the timeline for the 3M cod benchmark assessment and HCR/MSE process were postponed for a year (2018).

Norway stated that the proposal of giving priority to the Greenland halibut HCR/MSE process at the expense of 3M Cod by postponing the cod benchmark and HCR/MSE process would be to choose a high risk alternative. Without benchmark on cod, it is uncertain whether the SC will be able to do a full cod assessment in June 2017.

The alternative proposed by the SC, namely to conduct a two year process for both GHL and cod would result in full assessments in June and consequently TAC advice. Norway therefore preferred the SC alternative which would lower the risk of not having appropriate TAC advice next year. Norway further explained that they are concerned about the 3M cod stock development after several years of low recruitment, and that they would avoid contributing to a management by which 3M cod again falls under moratorium.

Canada indicated that Kevin Anderson would no longer serve as co-Chair of the WG and Jacqueline Perry (Canada) was identified to replace Mr. Anderson.

9. Management and Technical Measures for Fish Stocks Straddling National Jurisdictions, 2017

The Quota Table for 2017, presented in Annex 9, incorporates the TAC decisions and update of the relevant footnotes, as well as the footnote edits recommended by STACTIC (see item 16).

9.1 Redfish in Divisions 3LN

Consistent with the risk-based management strategy for this stock as outlined in FC Doc. 14-29 and adopted at the 2014 FC Meeting, it was **agreed** to set the TAC at 14 200 tonnes for 2017 and 2018.

9.2 Redfish in Division 3O

It was **agreed** to set the TAC at 20 000 tonnes for 2017, 2018, and 2019.

9.3 Pelagic *Sebastes mentella* (oceanic redfish) in the NAFO Convention Area

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

The Russian Federation issued a statement regarding its position on this stock: The Russian Federation adheres to its position that there is a single stock of pelagic *Sebastes mentella* in the Irminger Sea and adjacent waters, including the NAFO Convention Area. Russia reiterates its standpoint that studies into the redfish stock structure should be continued using all available scientific and fisheries data as a basis. Until new data on the stock structure are available, Russia will continue to regulate the pelagic fishery for *Sebastes mentella* based on the concept of the single stock structure of this stock.

9.4 American plaice in Divisions 3LNO

It was **agreed** the moratorium continues in 2017 and 2018.

9.5 Witch Flounder in Division 3L

It was **agreed** the moratorium continues in 2017, 2018 and 2019.

9.6 Skates in Divisions 3LNO

It was **agreed** to rollover the TAC of 7 000 tonnes for 2017 and 2018.

FC acknowledged the SC advice of no increase in catches (approximately 4 700 tonnes in 2011-2015). In this regard, footnote 17 (of the 2016 Quota Table, now footnote 13) was **updated** to read: *Should catches exceed 5 000 tonnes, additional measures would be adopted to further restrain catches in 2018.*

9.7 Greenland halibut in Subarea 2 and Divisions 3KLMNO

It was **agreed** to rollover the TAC at 14 799 tonnes, i.e. of this total, 10 966 tonnes is allocated to the fishery in Divs. 3LMNO.

It was acknowledged that the roll-over deviates from the HCR applied to this stock in the determination of the 2017 TAC. Some CPs noted the recent gaps in research vessel survey data used in the assessment; the MSE review is now behind schedule; new risk-based advice is anticipated for next year as a result

of the adopted MSE process and timeline (See Annex 7) and there is no clear difference with regards to conservation consequences between the current HCR and a one-year rollover.

Some CPs expressed concern but agreed to a rollover decision of the TAC for 2017.

Norway and USA requested that the record of the meeting specifically notes their concern.

Norway expressed its position: Norway emphasized that no science had been presented that would support a rollover. There was no new assessment of this stock available from the SC on which to justify a diversion from the agreed HCR. Hence, the only science available as guidance towards setting a TAC was that behind the existing HCR, i.e. the extensive MSE process that was completed by NAFO some years back. That HCR was derived through science, and subsequently reviewed and adopted by the FC. The fact that this HCR was in place had been used to justify the postponement of the GHL MSE review in 2014. Norway held the view that NAFO should base TAC decisions on the best science available and as there is still no new assessment or MSE-based HCR in place, Norway failed to see why the FC should deviate from the agreed HCR on how to derive the TAC.

USA recognized the balance that CPs worked to achieve and accepted the TAC decision. At the same time, it emphasized a note of concern that some other CPs had also raised -- NAFO worked hard to develop HCRs because they create predictability and a carefully balanced basis for management. Ignoring the hard-fought HCR when it points to reduced catches is disturbing. USA noted that it was hard to ask the SC to take on a significant amount of work to update the MSE for next year, if the FC will again set aside the results. USA urged that the FC should not be in a similar position a year from now when the new MSE is anticipated to be implemented.

9.8 Squid (*Illex*) in Sub-areas 3+4

It was **agreed** to rollover the TAC of 34 000 tonnes in 2017, 2018, and 2019.

9.9 Shrimp in Division 3LNO

It was **agreed** that the moratorium continues in 2017.

10. Other Matters pertaining to Conservation of Fish Stocks

Norway noted that two stocks, 3O Redfish and 3LNO Skates, illustrate the need to initiate a general discussion and examination of the quota allocation schemes being implemented by NAFO. TACs for these stocks were set significantly higher than the TACs recommended by SC. This was a pragmatic approach to accommodate fishing possibilities for CPs with low shares, whereas CPs with higher shares did not catch their quotas. While past realized catches have tended not to exceed the scientific advice, this approach could, however, lead to overfishing if all CPs entitled to fish on these stocks did catch their quotas.

FC **adopted** a joint proposal from Cuba, EU, Norway and the USA to strengthen the shark management measures embodied in Article 12 of the NCEM (Annex 10). The proposal calls for the prohibition of removal of fins on-board vessels and also of the retention on-board, transshipment and landing of sharks separate to the carcass. Previously, Article 12 applied 5% fin-to-carcass weight ratio, which according to the proponents has not proven effective as a conservation measure for sharks.

The decision to prohibit shark-finning was reached through a voting procedure in accordance with Article XIV of the Convention and with Rules 2.3 and 2.4 of the *Rules of Procedure for the Fisheries Commission*. Nine (9) CPs, namely, Canada, Cuba, DFG, EU, FRA-SPM, Iceland, Norway, Republic of Korea, and the USA voted in favor of the proposal. Japan voted against the proposal. The Russian Federation abstained. Ukraine was absent when the vote was held.

Japan issued a statement pertaining to the adoption of the new shark management measures: "Japan expressed its disappointment on the adoption of this proposal. Japan emphasized that NAFO Fisheries Commission

meeting reports clearly stated “Shark species taken in NAFO fisheries are not associated with shark fining practices, and there has never been an incident of shark fining observed in the NRA.” The meeting reports also identified that current catch data reporting still needs improvement. For instance, NCEM Article 28 paragraph 6 (g) allows to record shark either large sharks (NS) or dogfishes (DGX) when species reporting is not possible. The meeting reports pointed out that “it is not known how many species of shark were lumped into DGX.” In this regard, the urgent matter for shark conservation and management is not relating to shark fining practices, but species level catch data reporting. Japan also underlined that management measures should be considered based on the recommendation from NAFO Scientific Council. It would have serious consequences in [the] future that NAFO adopted a conservation measure without NAFO SC recommendation.”

Regarding alfonsino fishery which occurs in the closed seamounts, Norway pointed to the unresolved issue of management of the alfonsino fishery on seamounts in the NAFO Regulatory Area (NRA). They recalled that it is widely recognized, based on experience from seamounts worldwide, that alfonsino is an aggregating species susceptible to overfishing, potentially also serial depletion of aggregations associated with different seamount summits. They further recalled that the 2015 FC Annual Meeting Report expresses that the issue of the management of alfonsino fisheries in the NRA would be revisited in 2016 and that the SC Chair had confirmed that the scientific advice from 2015 recommending regulations still stands. Norway therefore maintained, as in 2013, 2014 and 2015, that the fishery with midwater trawls within seamount closures remains unregulated in the sense that the present measures relevant to that fishery do not limit catches nor fishing efforts targeted at alfonsino. They noted with some concern that the CPs that conduct alfonsino fisheries and which tabled proposals for management measures in 2015 had not thus far taken initiatives this year to respond to the SC advice recommending regulations. Norway also stated that they would appreciate information on the current fishery and the landings in 2015.

IV. Ecosystem Considerations

11. Meeting Report and Recommendations of the Joint Fisheries Commission–Scientific Council Working Group on Ecosystems Approach Framework to Fisheries Management, August 2016

The presentation of the report and the recommendations was done in a joint plenary session with SC. The joint session was in an open-discussion format.

Andrew Kenny (EU), co-Chair of the Working Group, presented the meeting report (FC-SC Doc. 16-03) and forwarded the recommendations addressed to FC and SC for consideration and adoption in FC-SC WP 16-03 (Annex 11).

The recommendations cover topics of, among others, reassessment of NAFO bottom fisheries and Significant Adverse Impact (SAI), candidate areas 13 and 14, potential impact of non-fishing activities, and the Fisheries Production Potential (FPP).

FC **accepted** the report and **adopted** all FC-specific recommendations.

Regarding recommendation 5, a joint proposal by Canada, USA, Iceland and Norway to establish an additional area closure to protect VMEs in the NAFO Regulatory Area was **adopted** (Annex 12). The new closed area covers two areas previously identified as candidate areas 13 and 14. The closure of this area, now identified as Area 14, shall remain in place until 31 December 2018, before which time it will be reviewed taking into account the latest SC advice, which should consider the NEREIDA research results on sea pen resilience.

DFG and the Russian Federation expressed reservations, contending that the currently available scientific information is insufficient to warrant a temporary closure. The EU called for a generic discussion on a decision-making framework for future closures, so that the decision-making is more transparent and efficient.

Regarding recommendation 6, it was noted that there is a need to understand better the FPP and its potential to inform the management of NAFO stocks.

Concerning the closed New England and Corner Rise Seamounts and as proposed by USA, FC would request the WG at its next meeting to consider the 2014 scientific advice and develop recommendations for additional management measures necessary for their protection (Annex 13).

12. Other Matters pertaining to Ecosystem Considerations

There was no other matter discussed.

V. Conservation and Enforcement Measures

13. Review of Chartering Arrangements

A report on chartering arrangements was presented by the Secretariat (FC WP 16-02). There were two (2) arrangements made in 2015. In the period of January – August 2016, there were also two (2) arrangements, one of which has been temporarily suspended and has not yet resumed. The Secretariat noted full compliance with all the chartering requirements, specifically with regards to documentation, notification of implementation date, and reporting of charter catches, as stipulated in Article 26 of the NCEM.

14. Meeting Report and Recommendations of the Joint Fisheries Commission–Scientific Council Catch Data Advisory Group, 2016

The presentation of the report was done in a joint plenary session with SC. The joint session was in an open-discussion format.

The SC Chair (presiding co-Chair of this advisory group) presented the meeting report covering the face-to-face inaugural meeting in November 2015 and six subsequent meetings via Web-Ex, the last one being held in July 2016 (FC-SC Doc. 16-02). FC **accepted** the report.

As mandated, CDAG developed a methodology for catch estimation using STACTIC data. The methodology will be utilized by the Secretariat and the estimates could be considered by SC in its fish stock assessment work. An important feature of the methodology is the use of nominal catch data from port inspections in evaluating the integrity of primary data sources used in the estimation, e.g. the Daily Catch Reports and the logbook haul-by-haul data.

In 2017, CDAG will evaluate the 2016 catch estimates of priority stocks: 2+3KLMNO Greenland halibut, 3LNO American plaice and 3M cod and may consider potential enhancements to the agreed upon methodology.

FC commended CDAG for its work, as it considers the development of the methodology a significant step and progress in addressing the issue and challenges of collecting reliable catch estimate data (see Section 6.3).

15. Meeting Report and Recommendations of the ad hoc Working Group on Bycatches, Discards, and Selectivity, August 2016

Don Power (presiding acting Chair of WG) presented the meeting report (FC Doc. 16-05) and forwarded the recommendations for consideration and adoption in FC WP 16-03 (Annex 14). FC **accepted** the report and **adopted** all the recommendations.

Regarding recommendation 1, the ad hoc Working Group will continue for another year in order to complete its work in the development of the Action Plan.

Regarding recommendation 2, a request was forwarded to SC to conduct an analysis of the 2016 haul-by-haul data (see item 7). Several CPs re-iterated the importance and availability of the haul-by-haul data.

Regarding recommendation 3, the Secretariat shall continue to analyze the Daily Catch Reports. The results will be incorporated in the STACTIC *Annual Compliance Review*.

The report also informed about the gear selectivity experiment conducted by EU with the use of sorting grids in fishing gears targeting cod in the Flemish Cap. The EU encouraged other CPs to carry out more selectivity tests and several CPs expressed support for the experiment. In this regard, SC provided guidance on the protocol for carrying out the selectivity trials (see agenda item 6.4).

16. Reports of STACTIC (from May 2016 Intersessional meeting and this Annual Meeting)

The STACTIC Chair presented the STACTIC Meeting Report and FC **accepted** it (the May 2015 intersessional meeting report (FC Doc. 16-03) was presented and accepted under agenda item 5). FC **adopted** all recommendations contained in both reports. The STACTIC Meeting Report is presented as Part II of this Report.

Specifically, the following NCEM recommendations coming from both meetings were forwarded to FC:

- a) *Proposed amendments to Chapter VII (Port State Control) and Chapter VIII (Non-Contracting Party Scheme) of the NCEM to align with the FAO Port State Measures Agreement (Annex 15),*
- b) *Proposal on the notification process for the closure of directed fishing in the Regulatory Area for a particular stock subject to an “Others” Quota (Annex 16),*
- c) *Development of the NAFO MCS website and updating of the CEM text to formalize report posting obligations (Annex 17),*
- d) *Electronic Notification and Authorization (Article 25) and Electronic Catch Reporting (Article 28) (Annex 18),*
- e) *Notification of vessels fishing on the “Others” quota to Contracting Parties with an inspection presence in the Regulatory Area (Annex 19),*
- f) *New text for EU footnotes associated to CEM Annex I.A (Annex 20).*

FC **adopted** recommendations a) – f). In addition, FC **accepted** the *Annual Compliance Review 2016 (Compliance Report for Fishing Year 2015)* (Annex 21).

17. Other Matters pertaining to Conservation and Enforcement Measures

FC **adopted** the proposal allowing the Secretariat to transmit, in particular circumstances, aggregated VMS data to CPs for non-inspection purposes (Annex 22).

VI. Closing

18. Other Business

At the 37th NAFO Annual Meeting in September 2015, the WG on Improving Efficiency of NAFO Working Group Process was created to identify mechanisms to improve efficiencies and identify possible overlaps of the Terms of Reference (TOR) of the various WGs (FC Doc. 15-18). As mandated, the Executive Secretary chaired a virtual meeting of this WG (via Web-Ex). Various Working Groups were also consulted during their meetings.

The Executive Secretary presented the report, highlighting the following considerations for improved efficiency (FC-SC WP 16-04):

- Use of technology, such as document sharing and video-teleconferencing,
- Back-to-back sessions of Working Groups or a Working Group with the STACTIC Intersessional,
- Possibly allocating several two-week time periods annually for the proposed Working Group meetings,
- Possible overlaps in the WG-BDS and WG-Catch Reporting.

It was **decided** that:

The WG on Improving Efficiency of NAFO Working Group Process continue its work for the 2016-2017 NAFO year under the same Terms of Reference with the addition that the participants include the current Chair of STACTIC.

A tentative list of NAFO October 2016 – September 2017 meetings was compiled and circulated, with the aim that it, together with the considerations above, will assist in the immediate determination of the meeting dates (Annex 23). The list of meetings was based on the decisions of the subsidiary bodies at this Meeting.

19. Time and Place of the Next Meeting

This matter was deferred to the General Council.

20. Adjournment

The Meeting was adjourned at 11:10 hrs on Friday 23 September 2016. The Chair expressed thanks to Cuba for its hospitality in hosting the meeting. The participants thanked the Chair for his leadership.

Annex 1. Participant List

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Annex 2. Summary of decisions and actions taken by the Fisheries Commission (Annual Meeting 2016)

Substantive Issues (agenda item):	Decision/Action:
6. Presentation of scientific advice by the Chair of the Scientific Council	Noted Scientific Council Chair's presentation of the scientific advice and the SC Meeting Reports that contained the scientific advice.
7. Formulation of Request to the Scientific Council for Scientific Advice on the Management of Fish Stocks in 2016 and on other matters	Adopted the FC Request to the SC for scientific advice (Annex 5).
8. Meeting Report and Recommendations of the Joint FC-SC WG on Risk-based Management Strategies, April 2016	<p>Accepted the meeting report.</p> <p>Adopted all FC-specific recommendations with amendment to the GHL timeline/workplan (Annex 6).</p> <p>Adopted the Greenland halibut MSE timeline (Annex 7).</p> <p>Adopted the supplementary guidance to the 3LN Redfish Conservation Plan and HCR and incorporated them into the NCEM (Annex 8).</p>
9. Management and Technical Measures for Fish Stocks Straddling National Jurisdictions, 2017	(see 2017 Quota Table (Annex 9))
9.1 Redfish in Division 3LN	Set the TAC at 14 200 tonnes, applicable for 2017 and 2018.
9.2 Redfish in Division 3O	Set the TAC at 20 000 tonnes, applicable for 2017, 2018, 2019.
9.3 Pelagic <i>Sebastes mentella</i> (oceanic redfish) in NAFO Convention Area	Agreed to continue the moratorium.
9.4 American plaice in Divisions 3LNO	Agreed to continue the moratorium for 2017 and 2018.
9.5 Witch flounder in Divisions 3L	Agreed to continue the moratorium for 2017, 2018 and 2019.
9.6 Skates in Divisions 3LNO	<p>Set the TAC at 7 000 tonnes, applicable for 2017 and 2018.</p> <p>Updated footnote 13 of the Quota Table.</p>
9.7 Greenland halibut in Sub-area 2 and Divisions 3KLMNO	Set the TAC at 14 799 tonnes (10 966 tonnes in Divisions 3LMNO).
9.8 Squid (<i>Illex</i>) in Sub-areas 3+4	Set the TAC at 34 000 tonnes, applicable for 2017, 2018, 2019.
9.9 Shrimp in Division 3LNO	Agreed to continue the moratorium in 2017.
10. Other Matters pertaining to Conservation of Fish Stocks	Adopted the proposal to amend Article 12 of the NCEM in order to ban shark-finning and also retention, transshipment and landing of sharks separate to the carcass (Annex 10).
11. Meeting Report and Recommendations of the Joint FC-SC WG on Ecosystems Approach Framework to Fisheries Management, August 2016	<p>Accepted the meeting report.</p> <p>Adopted all FC-specific recommendations (Annex 11).</p> <p>Adopted the proposal to close to bottom fishing the new Area 14 (Annex 12).</p>
14. Meeting Report and Recommendations of the Joint FC-SC Catch Data Advisory Group, 2016	Accepted the meeting report.

15. Meeting Report and Recommendations of the ad hoc WG on Bycatches, Discards, and Selectivity, August 2016	<p>Accepted the meeting report.</p> <p>Adopted all recommendations (Annex 14).</p> <p>Decided to continue the ad hoc WG for another year.</p>
16. Reports of STACTIC (from May 2016 intersessional meeting and this Annual Meeting)	<p>Accepted the STACTIC May 2016 Intersessional Meeting Report and the current meeting report (see Part II of this Report).</p> <p>Adopted <i>Proposed amendments to Chapter VII (Port State Control) and Chapter VII (Non-Contracting Party Scheme) of the NCEM to align with the FAO Port State Measures Agreement (Annex 15).</i></p> <p>Adopted <i>Proposal on the notification process for the closure of directed fishing in the Regulatory Area for a particular stock subject to an “Others” Quota (Annex 16).</i></p> <p>Adopted <i>Development of the NAFO MCS website and updating of the CEM text to formalize report posting obligations (Annex 17),</i></p> <p>Adopted <i>Electronic Notification and Authorization (Article 25) and Electronic Catch Reporting (Article 28) (Annex 18),</i></p> <p>Adopted <i>Notification of vessels fishing on the “Others” quota to Contracting Parties with an inspection presence in the Regulatory Area (Annex 19),</i></p> <p>Adopted <i>New text for EU footnotes associated to CEM Annex I.A (Annex 20),</i></p> <p>Accepted <i>Annual Compliance Review 2016, for fishing year 2015 (Annex 21).</i></p>
17. Other Matters pertaining to Conservation and Enforcement Measures	<p>Adopted <i>Transmission of aggregated VMS data to Contracting Parties for non-inspection purposes (Annex 22).</i></p>
18. Other Business	<p>Decided that WG on Improving Efficiency continue its work for the 2016-2017 NAFO year under the same TOR</p>

Annex 3. Agenda

I. Opening

1. Opening by the Chair
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Review of Commission Membership
5. Guidance to STACTIC necessary for them to complete their work

II. Scientific Advice

6. Presentation of scientific advice by the Chair of the Scientific Council
 - 6.1 Scientific advice on fish stocks
 - 6.2 Scientific advice on Risk-based Management Strategies (RBMS) and Ecosystem Approach Framework to Fisheries Management (EAFFM), and other topics
 - 6.3 Other issues as determined by the Chair of the Scientific Council
 - 6.4 Feedback to the Scientific Council regarding the advice and its work during this meeting
7. Formulation of Request to the Scientific Council for Scientific Advice on the Management of Fish Stocks in 2017 and on other matters

III. Conservation of Fish Stocks in the Regulatory Area

8. Meeting Report and Recommendations of the Joint Fisheries Commission–Scientific Council Working Group on Risk-based Management Strategies, April 2016
9. Management and Technical Measures for Fish Stocks Straddling National Jurisdictions, 2017
 - 9.1 Redfish in Div. 3LN
 - 9.2 Redfish in Div. 3O
 - 9.3 Pelagic *Sebastes mentella* (oceanic redfish) in the NAFO Convention Area
 - 9.4 American plaice in Div. 3LNO
 - 9.5 Witch flounder in Div. 3L
 - 9.6 Skates in Div. 3LNO
 - 9.7 Greenland halibut in Subarea 2 + Div. 3KLMNO
 - 9.8 Squid (*Illex*) in Sub-area 2 and Div. 3KLMNO
 - 9.9 Shrimp in Div. 3LNO
10. Other matters pertaining to Conservation of Fish Stocks

IV. Ecosystem Considerations

11. Meeting Report and Recommendations of the Joint Fisheries Commission–Scientific Council Working Group on Ecosystems Approach Framework to Fisheries Management, August 2016
12. Other matters pertaining to Ecosystem Considerations

V. Conservation and Enforcement Measures

13. Review of Chartering Arrangements
14. Meeting Report of the Joint Fisheries Commission–Scientific Council Catch Data Advisory Group, 2016
15. Meeting Report and Recommendations of the ad hoc Working Group on Bycatches, Discards, and Selectivity, August 2016
16. Reports of STACTIC (from May 2016 intersessional meeting and current Annual Meeting)
17. Other matters pertaining to Conservation and Enforcement Measures

VI. Closing Procedure

18. Time and Place of Next Meeting
19. Other Business
20. Adjournment

Annex 4. Scientific Council responses to requests received from the Fisheries Commission during the Annual Meeting

(FC Working Paper 16-15 Rev.)

I. On Greenland halibut 2J+3KLMNO (see FC WP 16-07 and SC WP 16-16)

1. During recent years the trend in most of the commercial species present in the 3NO division of the Grand Bank has been upwards. Cod spawning biomass in division 3NO has increased considerably over the past five years (NAFO SCS Doc. 15-12). The spawning stock biomass (SBB) of American plaice in 3LNO has been increasing since its lowest estimate levels in 1995 (NAFO SCS Doc. 16-14 Rev.). The stock size of yellowtail flounder 3LNO has steadily increased since 1994 and is now well above Bmsy (NAFO SCS Doc. 15-12). For the witch flounder 3NO, the stock size has steadily increased since 1999 and is now at 81% Bmsy (NAFO SCS Doc. 15-12). Thorny skate biomass in 3LNO has been increasing very slowly from low levels since the mid-1990s (NAFO SCS Doc. 16-14 Rev.). White hake 3NO shows an increase in the biomass index since 2014 to the average level observed from 1996-2014 (NAFO SCS Doc. 15-12).

Greenland halibut has shown an opposite trend in the biomass index values linked to shallow depths in the Canadian spring survey in Div. 3LNO and the EU Spanish Spring survey in Div. 3NO. These downwards trends for shallower areas in 3LNO have occurred simultaneously to opposite upwards tendencies for the other main commercial species at the same depths.

Could the Scientific Council:

- 1.1. Explain if it is possible that the biomass index for Greenland Halibut in shallower areas from the two surveys in Div. 3LNO has been influenced by the increase in abundance of other stocks, be it by substitution or displacement or other reasons?

Scientific Council responded:

SC is unable to answer the question at this time given the complexity of the ecosystem on the Grand Bank.

Determining the effects of species interactions, both in terms of trajectories over time and spatial distribution are difficult to disentangle. Typically, the final outcomes are the consequence of multiple interactions playing all at once. The available information on diet compositions, albeit limited for some of the stocks, indicates that there are some shared prey items between Greenland halibut and some of the other stocks. This would suggest that trophic interactions are a plausible mechanism for the patterns described.

However, the spatial distribution of these stocks indicates that Greenland halibut biomass mostly occurs in the northern Grand Bank (3L), while for the other species, most of their biomass on the Grand Bank tends to be on the southern areas (3NO), suggesting that interactions among these species may not necessarily have a strong impact on species distributions. In addition, environmental factor like temperature and the related thermal habitat are also potentially important drivers that can affect both, stock trajectories over time, and spatial distributions. The food web in the Grand Bank is complex, and definitive answers to these types of specific questions can only be addressed through direct analysis, and to the extent the available data and capacity allows.

Multispecies modelling work for the Grand Bank is ongoing, but this work is far from being completed. SC would need to know the level of priority of work on Greenland halibut in relation to other activities.

- 1.2. Confirm whether or not the biomass indexes mentioned in 2.1 above reflect the real variations in the total biomass for the whole Greenland halibut population in the NAFO regulatory area?

Scientific Council responded:

No single survey series covers the entire stock area. The Canadian spring survey index of abundance was considered an index of stock size for younger ages in the most recent assessment. Most research vessel survey series providing information on the abundance of Greenland halibut are deficient in various ways and to varying degrees. However, together these surveys provide coverage of the majority of the spatial distribution of the stock and the area from which the majority of the catches are taken. Moreover, the SC in June stressed that prior to any new assessment, data from all surveys need to be evaluated for internal consistency and compared for consistency across surveys. These analyses will determine if they provide appropriate input to a model of the dynamics of the population.

2. Could the Scientific Council estimate what would be the derived TAC if only the two remaining 2011-2015 survey slopes (Canadian Fall survey in 2J3K and EU-Spain Flemish Cap survey in 3M) are included in the calculation for 2017 for Greenland halibut in SA2 + Divs. 3KLMNO?

Scientific Council responded:

The computation result (15 539 t) is 5% larger than the 2016 TAC. However, this alternative HCR which considers results from only two surveys is a departure from the work done by WGMSE and it is impossible to comment on whether this strategy is sustainable.

When the HCR was adopted in 2010, a single survey point was missing from each of the Canadian surveys. In such cases, it was agreed that the remaining data points would be used to compute the survey slope. This approach has been applied in subsequent years.

3. (Verbal request). We note that SC in the STACFIS report says that recruitment has been below average for the most recent 4 years. Can you say what implications that would have for the future development of the stock.

Scientific Council responded:

Because the assessment has not yet been completed, SC is unable to project the impact of these recruits with respect to the short term development of the stock. It is expected that this issue will be addressed in the course of the work plan for the revision of the assessment.

II. On Assessment of Significant Adverse Impact (SAI) on VMEs (see FC WP 16-07 and SC WP 16-17)

On its 2016 report, the SC answers the request of the FC to assess the risk associated with bottom fishing activities on known and predicted VME species and elements in the NRA. Could the SC clarify the following:

1. **Page 29: from quantitative to qualitative.** The 2 tables on page 29 of the SC report constitute the core of the SAI advice. But it is unclear how the quantitative evaluation of SAI criteria made in the first table led to the qualitative attribution of risk scores (the colour codes) in the second table. The SC report talks about the risk scores being “determined by expert evaluation”. There is no clarity as to what specific percentage intervals determine a given risk score (a given colour). How did this “expert evaluation” take place? Is there any written methodology where it can be ascertained how the risk scores were attributed, on the basis of the quantitative evaluation?

Scientific Council responded:

SC notes and endorses the conclusion made by WGEAFFM (NAFO FC-SC Doc. 16-03), that is; “the use of colour coding to represent ‘low’, ‘moderate’ and ‘high’ risk categories was less informative than simply having a table with quantitative numbers (percentages), particularly as the thresholds used to determine which category of risk applied were not explicit as they were assigned using expert judgment”. SC further concludes that to avoid unnecessary uncertainty and ambiguity, that the assigned colours (red, yellow and green), against the SAI specific criteria for each of the VME types, be disregarded and removed from

the tables in the assessment of SAI along with the associated text; “high”, “Moderate” and “Low. The “low risk”, “high risk” and “impacted” categories referred to in table 1 refer to a quantitatively defined SAI criteria and should not be confused with the overall risk category (last row of the table). The overall “risk of SAI”, as presented in the assessment table (table 1) in the SC advice, and reiterated by WGEAFM (NAFO FC-SC Doc. 16-03), was evaluated using expert judgement and achieved by consensus during the plenary session of WGESA in November 2015. The overall risk category is qualitative rather than quantitative and as such, specific percentage intervals resulting in high, moderate or low risk cannot be assigned.

Table 1.

	Sponge		Sea pen		Large gorgonian	
SAI criteria	Area	Biomass	Area	Biomass	Area	Biomass
Low risk	65%	73%	16%	19%	56%	63%
High risk	21%	17%	46%	39%	12%	14%
Impacted	14%	10%	38%	42%	31%	23%
VMEs overlapping	11%		2%		74%	
Impact cut-off value	0.3		0.5		0.1	
Fragmentation	1%		26%		2%	
Fishing area stability	32%		14%		21%	
Overall Risk of SAI	Low		High		Low	

2. **Page 29: biomass and area.** It would seem that, among the criteria used for the SAI assessment, equal weight is given to biomass and area where the VME indicator species occurs. Shouldn't biomass be a predominant factor? Is the weight for all criteria listed the same for all three VME indicator species?

Scientific Council responded:

Biomass is considered to be of greater functional significance for VMEs, however the same overall assessment of SAI is reached irrespective of using either biomass or area based calculations.

The assessment of all the specific SAI criteria was done on equal terms without any weighting. Likewise, no comparative evaluation of the relative importance or significance of VME has been attempted in the current assessment, nor was a distinction made between the relative importance of the specific SAI criteria used in the assessment. For example, all VME were treated as being of equal importance and value (such that a 10% area of impact of sponge VME was evaluated to be lower risk than (say) a 40% area of impact of sea pen VME).

3. **Page 29: sensitivity to fishing.** In the quantitative table (percentages) there is a criterion called “sensitivity”, which is 0.5 for sea pen, 0.3 for sponges and 0.1 for large gorgonians. Can it be understood that the higher index for sea pen sensitivity means, in fact, that sea pens are less sensitive to fishing than sponges or gorgonians (i.e. more resilient)?

Scientific Council responded:

Yes. Higher values indicate that a VME may be more resilient, however, all VMEs by definition have low resilience, it is just that some are more resilient than others.

4. **Page 30:** in the three maps with impacted, high and low risk areas (see also a copy below), it would seem that certain portions of current closures are not in any of those cases (neither impacted in the past nor at high risk nor at low risk). In other words, they appear in grey colour in all three maps. Does this mean that those “grey” portions do not serve any VME protection purpose any longer? Examples are circled in red below:

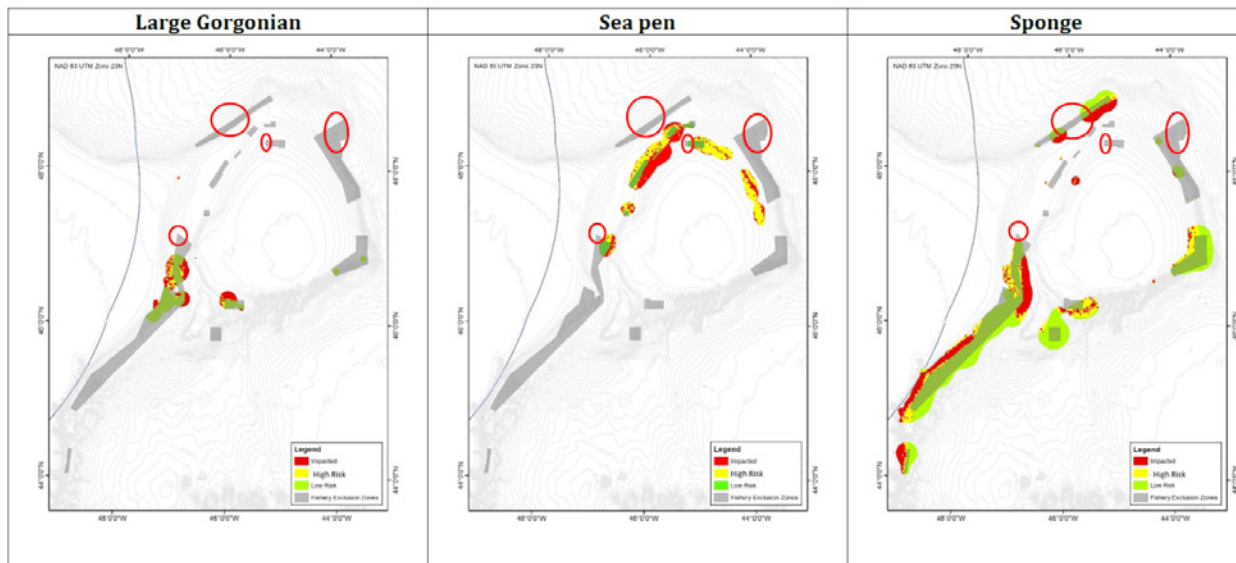


Fig.3. Impacted, high and low risk areas have been quantified for each VME using the corresponding cut-off values (see Annex VIII, section 4.2.5.)

Scientific Council responded:

No. There is VME habitat present in the fishery closures beyond the VME polygon boundaries as defined and used in the current assessment. The polygon boundaries as used in the assessment should not be interpreted as the definitive distribution of actual known VME. The polygon boundaries (defined by a combination of KDA and SDM modelling using environmental data) are simply used to ensure that a consistent assessment approach is applied across all VME types. For example, there are additional underwater camera data for some of the closure areas outside of VME polygons, which clearly show VME. However, since all closure areas outside of polygon boundaries have not been consistently sampled using the same techniques, it has not been possible to use the data in the current assessment.

III. On the closures of Candidate areas 13 and 14 (see FC WP 16-07 and SC WP 16-17)

In 2013 the Fisheries Commission Working Group of Fishery Managers and Scientists on Vulnerable Marine Ecosystems (WGFMS-VME) (NAFO/FC Doc. 13-03), proposed a measure concerning the creation of closed areas 13 and 14 in order to protect significant concentrations of large sea pens. The initial consideration of closure of the sea pen areas 13 and 14, i.e. around 43 Km², was based on two surveys tows (1.6 and 2.2 Kg) which showed a sea pen weight over the 1.6 Kg threshold identified for sea pens.

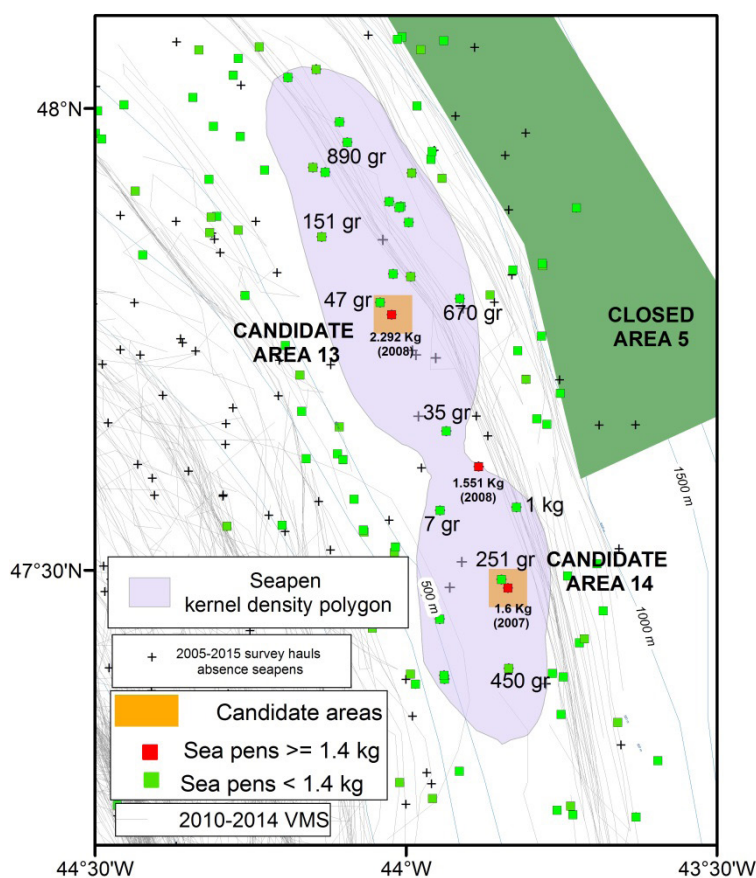
As a result of lowering the sea pens threshold to 1.4 Kg (NAFO SCS Doc. 13-024), a third survey tow (1.5 Kg) was added to those surveys over the threshold, having as a result a proposal for a larger polygonal area over 200 Km².

- 1.1.** Could the Scientific Council identify the total number of survey tows inside the sea pen Kernel density polygon and the number of those survey tows below the threshold? And more specifically, can the Scientific Council indicate how many of the new scientific surveys tows undertaken since 2014 are over the sea pen threshold?

Scientific Council responded:

The total number of survey tows inside the sea-pen Kernel density polygon around candidate areas 13 and 14, northeast of Flemish Cap for the 2005-2015 period is 37. 27 of these contained sea pens, of which 3 were above the threshold.

During 2014 and 2015 seven new EU Spain and Portugal scientific surveys tows were undertaken inside the sea-pen kernel density polygon around candidate areas 13 and 14, northeast of Flemish Cap. Six of these contained sea pens of which none were over the sea-pen threshold.



- 1.2.** Could the Scientific Council also recall the development on the thresholds for sea pens and why this threshold was lowered from one year to the other in 2013?

Scientific Council responded:

The threshold of 1.6 kg for seapen was estimated in 2008 on the basis of the data available at the time and using a cumulative distribution approach (NAFO SCS 08/24). This method estimated the threshold by considering the point where 97.5% of all seapen biomass was accumulated. This value of 97.5% was arbitrary and defined on the basis on very general statistical arguments and in association with other spatial buffering considerations; it does not reflect any characteristic of the spatial structure of seapen aggregations. The value of 1.4 kg was estimated through the application of the Kernel Density Estimation method that allows

detecting natural breaks in the spatial distribution of seapen biomass aggregations (NAFO SCS 13/14, Kenchington et al. 2014). This analysis included a larger dataset, and unlike the cumulative biomass method, it allows considering the actual spatial structure of the distribution of biomass to identify the VME habitat boundaries.

2. How would the closure of candidate areas 13 and 14 affect the percentages established for the risk criteria under SAI assessment for sea pens and consequently, the attribution of risk categories (colours)?

Scientific Council responded:

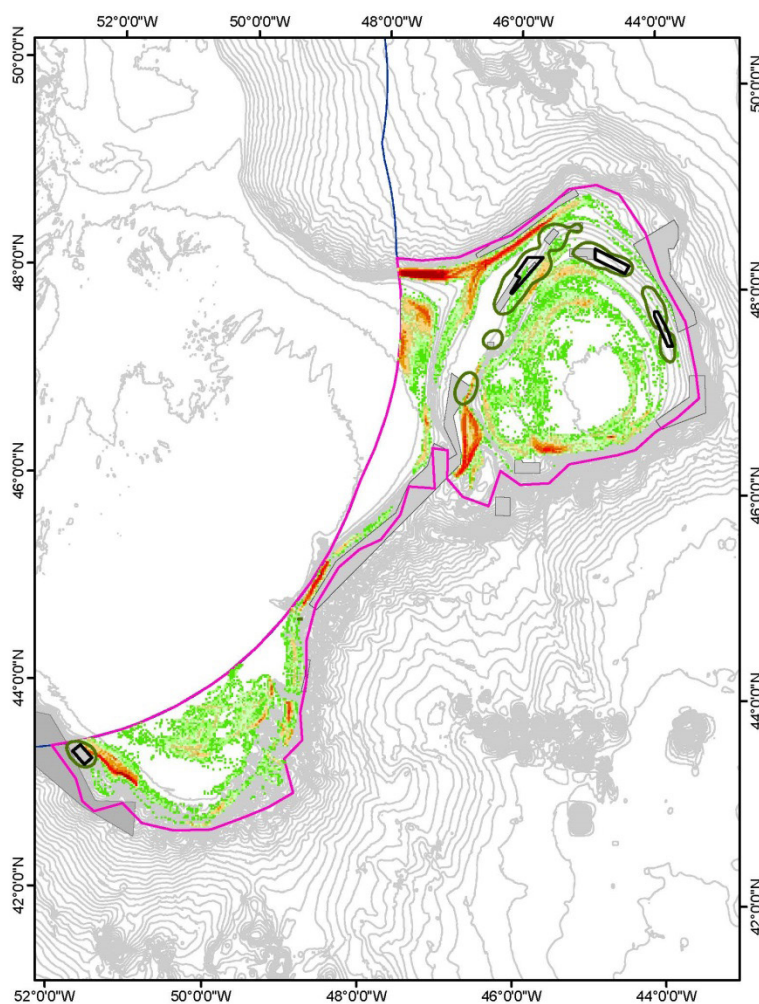
The closure of the original proposed areas 13 and 14 does not make any difference in terms of the overall seapen area and biomass protected and consequently would not be expected to result in any change to the overall risk evaluation. The closure of the polygon proposed in 2013 that joins the two original areas provides only marginal improvements on the overall seapen area and biomass protected.

	Current Seapen protection zones		Current Seapen protection zones plus original areas 13 and 14		Current Seapen protection zones plus the previously proposed polygon that joins the original areas 13 and 14	
SAI criteria	Area	Biomass	Area	Biomass	Area	Biomass
Low risk	16%	19%	16%	19%	19%	20%
High risk	46%	39%	46%	39%	43%	38%
Impacted	38%	42%	38%	42%	38%	42%

3. What size/biomass of the NRA would NAFO need to close so as to ensure that sea pen risk levels go from high to moderate or low.

Scientific Council responded:

In order to bring the protected area/biomass to levels closer to the ones of large gorgonians and sponges, several additional (or expansion) of seapen protection zones would be required. The following map illustrates one possible scenario that could lead to these results. This scenario has been designed to minimize overlap with fishing effort (measured as average VMS effort between 2008–2014). The effort depicted in this map corresponds to the top 90% of the total effort. Changes similar to this scenario would improve the risk status of sea-pens, however, without performing a full expert analysis, it is not possible to definitively say which risk category they would be in.



This illustrative scenario renders the following coverages for area and biomass. The current values for large gorgonians and sponges are also provided for comparative purposes.

SAI criteria	Current Seapen protection zones		Current Seapen protection zones plus illustrative polygons to improve coverage for protected seapen area and biomass		Current Sponge protection zones		Current Large gorgonian protection zones	
	Area	Biomass	Area	Biomass	Area	Biomass	Area	Biomass
Low risk	16%	19%	32%	39%	65%	73%	56%	63%
High risk	46%	39%	36%	28%	14%	10%	12%	14%
Impacted	38%	42%	32%	33%	21%	17%	31%	23%

Fisheries Commission requested (verbally):

4. Does the advice given in 2014 still stand?

Scientific Council responded:

Yes. There is no new analysis that would invalidate the previous advice.

Reference:

Kenchington, E., Murillo, F. J., Lirette, C., Sacau, M., Koen-Alonso, M., Kenny, A., Ollerhead, N., Wareham, V., and Beazley, L. 2014. Kernel density surface modelling as a means to identify significant concentrations of vulnerable marine ecosystem indicators. *PLoS ONE* 9.doi:10.1371/journal.pone.0109365.

IV. On the selectivity trials on cod 3M (see FC WP 16-07 and SC WP 16-19)

1. In the last NAFO Fisheries Commission Ad hoc Working Group Bycatches, Discards and Selectivity (WG-BDS) (NAFO/FC Doc. 16-05), the EU informed the Working Group of its experiment using sorting grids in fishing gears targeting cod in Division 3M and that, given the promising results (SC WP 16-09), STACREC encouraged further work in collaboration with SC.

The EU will continue the selectivity trials on 2017 thanks to the cooperation, as in 2016, of the Fish Producers' Organisation Ltd.

Could Scientific Council provide guidance on the protocol for carrying out the selectivity trials so the outcome of this trial can be fully used by SC 2017?

Scientific Council responded:

The lack of standardization in the 2016 experiment prevented a thorough evaluation of the results.

Further ad-hoc studies with improved design (e.g. increased sample size, randomized placement of the experimental gear, standardization of all other net parameters, adherence to a strict fish sampling protocol, etc.) may provide a sound basis for determining the effectiveness of the grid to alter the size composition of landings. This, however, does not constitute a selectivity experiment but may provide a means to demonstrate the effectiveness of the sorting grid. In addition, information on other major species in the catch such as redfish should be collected.

SC notes that a definitive selectivity experiment (e.g. Jorgensen, 2006) is a significant project that requires a sophisticated project design and dedicated resources. The analysis of the outcomes of this selectivity experiment could be applicable with respect to the cod fishery on the Flemish Cap.

Annex 5. Fisheries Commission's Request for Scientific Advice on Management in 2018 and Beyond of Certain Stocks in Subareas 2, 3 and 4 and Other Matters

(FC WP 16-14 Rev. **now** FC Doc. 16-16)

1. The Fisheries Commission requests that the Scientific Council provide advice for the management of the fish stocks below according to the assessment frequency presented below. The advice should be provided as a range of management options and a risk analysis for each option (rather than a single TAC recommendation).

<u>Yearly basis</u>	<u>Two year basis</u>	<u>Three year basis</u>
Northern shrimp in Div. 3LNO	American plaice in Div. 3LNO	American plaice in Div. 3M
Cod in Div. 3M	Redfish in Div. 3M	Capelin in Div. 3NO
	Northern shrimp in Div. 3M	Cod in Div. 3NO
	Thorny skate in Div. 3LNO	Northern shortfin squid in SA 3+4
	White hake in Div. 3NO	Redfish in Div. 3O
	Witch flounder in Div. 3NO	Witch flounder in Div. 2J+3KL
		Yellowtail flounder in Div. 3LNO

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

In 2017, advice should be provided for 2018 for Northern shrimp in NAFO Div. 3LNO and Cod in Div 3M*.

In 2017, advice should be provided for 2018 and 2019 for Redfish in 3M, Witch flounder in 3NO, Shrimp in 3M.

In 2017, advice should be provided for 2018, 2019 and 2020 for Cod in 3NO, American plaice in Div. 3M

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.

The Fisheries Commission also requests the Scientific Council to continue to monitor the status of all these 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 Fisheries Commission requests the Scientific Council to implement the steps of the work plan relevant to the SC for progression of the Greenland halibut Management Strategy Evaluation Review (FC Working Paper 16-11 Rev. 2 adopted at the NAFO 2016 Annual Meeting).
3. The Fisheries Commission requests that the Scientific Council continue its risk assessment of scientific trawl surveys impact on VME in closed areas, and the effect of excluding surveys from these areas on stock assessments.
4. The Fisheries Commission requests the Scientific Council, based on analysis of the 2016 haul by haul data and patterns of fishing activity, to examine relative levels of by-catch and discards of 3M cod/redfish, and stocks under moratoria in the different circumstances (e.g. fisheries areas, season, fleets, depths, timing).
5. The stock of redfish 3M covers catches of three *Sebastes* species and the scientific advice is based on data of only two species (*S. mentella* and *S. fasciatus*). Golden redfish, *Sebastes marinus* (a.k.a. *S. norvegicus*), represents part of the catch but has not yet been subject to a full assessment in NAFO. The Scientific Council is requested to conduct a full assessment on 3M golden redfish in June 2017. The Scientific Council is also requested to advice on the implications for the three species in terms of catch reporting and stock management.

6. In relation to the assessment of NAFO bottom fisheries, the Fisheries Commission endorsed the next re-assessment in 2021 and that the Scientific Council should:
 - Assess the overlap of NAFO fisheries with VME to evaluate fishery specific impacts in addition to the cumulative impacts;
 - Consider clearer objective ranking processes and options for objective weighting criteria for the overall assessment of risk;
 - Maintain efforts to assess all of the six FAO criteria (Article 18 of the FAO International Guidelines for the Management of Deep Sea Fisheries in the High Seas) including the three FAO functional SAI criteria which could not be evaluated in the current assessment (recovery potential, ecosystem function alteration, and impact relative to habitat use duration of VME indicator species).
 - Continue to work on non-sponge and coral VMEs (for example bryozoan and sea squirts) to prepare for the next assessment.
 - The SC further develops and compile identification guides for fishes (e.g. sharks and skates) that could be provided to observers.
 7. The Fisheries Commission requests the SC to continue progression on the review of the NAFO PA Framework.
 8. The Fisheries Commission requests the Scientific Council, by their 2018 annual meeting engage with relevant experts as needed, review the available information on the life history, population status, and current fishing mortality of Greenland sharks (*Somniosus microcephalus*), on longevity and records of Greenland shark bycatch in NAFO fisheries, and develop advice for management, in line with the precautionary approach, for consideration by the Fisheries Commission.
 9. The Fisheries Commission requests the Scientific Council start working on and finalizing by SC 2018 a strategic scientific plan based on a Strength, Weaknesses, Opportunities and Threats (SWOT) analysis defining the strategy and the mid and long term objectives and tasks in view of NAFO's amended convention objectives. The plan should define for each strategic objective goals, tasks and measurable targets.
- * *3M cod Benchmark process has been delayed at the request of the Fisheries Commission in favour of the Greenland halibut MSE work plan*

ANNEX A: Guidance for providing advice on Stocks Assessed with an Analytical Model

The Fisheries 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:

- For stocks assessed with a production model, the advice should include updated time series of:
 - Catch and TAC of recent years
 - Catch to relative biomass
 - Relative Biomass
 - Relative Fishing mortality
 - 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: $2/3 F_{msy}$, $3/4 F_{msy}$, $85\% F_{msy}$, $75\% F_{2016}$, F_{2016} , $125\% F_{2016}$
- For stocks under a moratorium to direct fishing: F_{2016} , $F = 0$.

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(F>F _{lim})			P(B<B _{lim})			P(F>F _{msy})			P(B<B _{msy})			P(B2019 > B2016)
F in 2017 and following years*	Yield 2018 (50%)	Yield 2019 (50%)	Yield 2020 (50%)	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019	
2/3 F _{msy}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%
3/4 F _{msy}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%
85% F _{msy}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%
F _{msy}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%
0.75 X F ₂₀₁₆	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%
F ₂₀₁₅	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%
1.25 X F ₂₀₁₆	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%
F=0	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%

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} , $2/3 F_{max}$, $3/4 F_{max}$, $85\% F_{max}$, $75\% F_{2016}$, F_{2016} , $125\% F_{2016}$
- For stocks under a moratorium to direct fishing: F_{2015} , $F = 0$.
- 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(F>F _{lim})			P(B<B _{lim})			P(F>F0.1)			P(F>F _{max})			P(B2019 > B2016)
F in 2017 and following years*	Yield 2018	Yield 2019	Yield 2020	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019	
F0.1	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 ₂₀₁₆	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%
F ₂₀₁₅	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%	%
1.25 X F ₂₀₁₆	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 6. Recommendations from the WG-RBMS to forward to FC and SC

(FC-SC WP 16-02)

The WG-RBMS met on 4-6 April 2016 in Tórshavn, Faroe Islands and agreed on the following recommendations (FC/SC Doc. 16-01):

The Working Group **recommends** that:

On the Precautionary Approach (PA) Framework:

1. Scientific Council, through its WG-PAF, adopt the timeline for the revision of the NAFO PA framework as outlined in Annex 1

On 2+3KMNO Greenland Halibut:

2. Fisheries Commission and Scientific Council adopt the MSE work plan as outlined in Annex 2.

The Working Group noted the following constraints and/or considerations to complete the MSE review within the established time frame: a) timely availability of catch data (total and catch-at-age); b) capacity/expertise to provide SCAA assessment models; and c) potential revision of the PAF.

For points a) and b):

3. Scientific Council use 2015 catch estimate developed by the Catch Data Advisory Group (CDAG) of the FC-SC WG on Catch Reporting in MSE review/formulation.
4. Scientific Council consider how to incorporate the uncertainty associated with the 2011-2014 catch into the MSE review/formulation.
5. Contracting Parties and/or Scientific Council seek out expertise to facilitate integration of an SCAA-type model into the MSE review/formulation. This should be done, if possible, before June 2016 to allow timely progress.

On 3LN Redfish:

6. Fisheries Commission adopt supplementary guidance to the 3LN Redfish conservation plan and Harvest Control Rule (HCR) as presented in Annex 3. It is further recommended that the HCR (Annex 3.1) be incorporated into the NAFO Conservation and Enforcement Measures.

On 3M Cod:

7. Fisheries Commission and Scientific Council adopt the timeline for the 3M Cod Benchmark Assessment and MSE, as outlined in Annex 4.

Annex 1. Timeline for the revision of the PA Framework
(FC-SC RBMS-WP 16-03 Rev. 3)

Noting that the RBMS Working Group determined that the current application of the PA is not aligned with the PA;

Noting that the FC developed the following terms of reference:

1. To clarify the following elements:
 - a. To confirm/review the NAFO PA reference points definition in page 3 of FC Doc. 04-18.
 - b. To confirm/review the NAFO Management strategies and courses of action, including risk levels, on page 3 of FC Doc. 04-18
 - c. Distinction between MSY and limit/target related reference points.
 - d. Analysis in support of the development of other reference points (e.g. targets, buffers).
 - e. To review the methods for the calculation and interpretation of risk and the quantification and qualification of uncertainties related to them.
 - f. For stocks where risk analyses are not possible, provide options on how to establish buffer reference points on a stock by stock basis.
 - g. Determine the conditions for when/if reference points should change and / or be re-evaluated.
2. Consider how a revised PA can fit within an Ecosystem Approach.
3. In reviewing the NAFO PAF the WG will also take into consideration other Precautionary Approach Frameworks with a focus in the North Atlantic.

Noting that the FC recommended that the SC convene a technical Working Group to address these ToRs

The WG suggests the following timeline to address each ToR:

Timeline for PA Revision		16/M	A	M	J	J	A	S	O	N	D	17/J	F	M	A	M	J
ToR 3.																	
Discuss NAFO PA Successes and failures (done in March 2016)																	
Members work on summarizing the PA framework as used in other RFMOs and national plans (April-May 2016)																	
Results to be reviewed at the June 2016 SC Meeting.																	
ToR 1a. and 1c. (These tasks are related and should be completed together).																	
Review existing PA framework. (started in March 2016)																	
June-September – Work on these ToRs.																	
Present work to the joint meeting (September 2016)																	
ToR 1f.																	
Discuss spreadsheets/tack status (March 2016 and April 2016)																	
Distribute to DEs to fill in completely (June 2016)																	
Classify stocks with regards to assessment level (June 2016).																	
ToR 1d. Can only be done after 1f																	
ToR 1e																	
March-May 2016 Members potentially work on ideas for analyses to help with identifying risk levels																	
Work on analyses for risk levels (June-September 2016)																	
ToR 1b. Can only be done after 1a, 1c and 1e is finished																	
ToR 2.																	
Discuss with Chairs of WG-ESA working together on fitting the PA into an Ecosystem Approach (June 2016)																	
Work to be done at the November 2016 WG-ESA meeting																	
Work to Reviewed by SC at the June 2017 meeting																	
This ToR may need more time after the June 2017 meeting																	
ToR 1g Along with ToR 2 will be finished after the other ToRs.																	

Annex 2. Draft Workplan for the GHL MSE Review (FC-SC RBMS-WP 16-05 Rev. 2)

At the 2015 NAFO Annual Meeting, the Fisheries Commission instructed the *Joint FC-SC Working Group of Risk Based Management Strategies* to undertake discussions on finalizing an approach and work plan to enable the comprehensive review of the 2+3KLMNO Greenland halibut MSE scheduled for 2017.

Below is an overview of the proposed key steps to be undertaken in completing this review. It should be noted that the steps are not considered prescriptive and there is possible flexibility in their sequencing (i.e. it is not necessary that Step I be completed before work can commence on the subsequent phases).

Where agreed upon, timelines have been identified, though adjustments may be necessary. Timelines for the remaining tasks (Step IV to VI) will require discussion of the FC-SC WG-RBMS to occur after the June 2016 SC meeting.

Step I – April 2016

FC-SC WG-RBMS

1. General discussion on MSE process with specific reference to NAFO GHL framework
2. Develop Draft Workplan for GHL MSE Review – i.e. scope, process & timelines
3. Seek an update from SC on specific timelines associated with the review (assessment and MSE)
4. Consideration of additional questions and/ or guidance to SC

Step II – June 2016

Scientific Council

1. Greenland halibut stock assessment (using both XSA and SCAA¹ – FC Doc 15-17 Revised).
2. Feedback on performance of existing management strategy, including identification of possible deficiencies / areas for improvement (i.e. lessons learned)
3. Consideration of operating models and input data to be applied in the MSE

Step III - FC-SC WG-RBMS during 2016

1. Review / Discussion of elements which were the basis of current MSE (e.g.. management objectives, performance statistics, HCR including constraints, etc.) [see Annexes 2.1 and 2.2]
2. Development of some candidate HCRs for initial testing

Step IV

Scientific Council

1. Testing of performance of candidate HCRs.

Step V

FC-SC WG-RBMS

1. Review results of initial MSE testing
2. Consider possible refinements to management objectives, performance statistics, and/ or HCR formulations

Steps IV and V – Repeated as necessary to refine HCR

Step VI

FC-SC WG-RBMS

1. Recommendation to FC on Adoption/ Updates to GHL HCR

¹ Possible issues with capacity and/or availability of expertise

Annex 2.1 – Overview of Key Inputs from Initial GHL MSE formulation

Management Objective – ‘An exploitable biomass of 5+ year classes of 140 000 tonnes on average ...’ [NCEMs Article 10.2]

Milestone - Average exploitable biomass for the period 1985-1999 with associated timeline of 2031

Performance Statistics

1. The probability of the decline of 25% or more in terms of exploitable biomass from 2011 to 2016 is kept at 10% or lower (with the caveat that should the risk tolerance level of 10% unduly constrain the tuning of the Harvest Control Rule such that a rule cannot be developed to satisfy this or other constraints, then flexibility is provided to consider a risk tolerance level of up to 25%);
2. a) The probability of annual TAC variation of greater than 15% be kept at 25% or lower and b) The probability of variation of TAC more than 25% over any period of 3 years should be kept at 25% or lower. If the conditions a) and b) are not met, then an alternate performance target should be considered as follows: c) The TAC should not be below 10 000 tonnes for the period 2011-2015 in any one year with a probability of 25% on a year by year basis;
3. The magnitude of the average TAC in the short, medium and long term should be maximized;
4. The probability of failure to meet or exceed a milestone within a prescribed period of time should be kept at 25% or lower.

Annex 2.2 – Adopted Harvest Control Rule (2010-17)

$$TAC_{y+1} = TAC_y (1 + \lambda \times \text{slope})$$

where:

slope = is based on the average trend in biomass from three survey indices (the Canadian Autumn Div. 2J3K index (“F2J3K”), the Canadian Spring Div. 3LNO index (“S3LNO”), and the EU Flemish Cap index covering depths from 0-1400m (“EU1400”)) over the previous five years.

λ = is an adjustment variable for the relative change in TAC to the perceived change in stock size. The value of λ is 2 if the average slope is negative, and 1 when the slope is positive.

**Annex 3. 3LN Redfish Conservation Plan and Harvest Control Rule –
Supplementary Guidance**
(FC-SC RBMS-WP 16-02 Rev. 2)

Noting that a Harvest Control Rule for 3LN Redfish was adopted by NAFO in 2014 that reflected the advice of the Scientific Council for this stock;

Recognizing at the time the Harvest Control Rule was developed the biomass was estimated to be greater than B_{msy} and evaluated against a range of conservation focused performance statistics;

Noting that a full review and evaluation of the HCR will occur on or before 2020 and that in the interim, NAFO will continue to monitor trends in the survey indices for this stock, as well as, conduct periodic assessments (beginning in 2016);

Recognizing that the long-term objective of this Conservation Plan is to maintain the biomass in the ‘safe zone’, as defined by the NAFO Precautionary Approach framework, and at or near B_{msy} ;

Recalling that at the 2015 Annual Meeting the Working Group on Risk-based Management Strategies was tasked with the development of supplementary guidance for Fisheries Commission to respond to any unforeseen performance in the stock (FC WP 15/16);

Consistent with the structure and key principles of the Framework on the General Framework on Risk-based Management Strategies, as adopted by NAFO in 2014;

Consistent with the parameters agreed upon by Fisheries Commission for development of the harvest strategy;

It is proposed that following supplementary guidance be adopted as an addendum to the existing Risk-Based Management Strategy for 3LN Redfish (Annex I):

The context, objectives and performance statistics for this Risk-Based Management Strategy remain as stated Annex 3 to the 2014 Annual Meeting Report of the Fisheries Commission (FC-SC RBMS WP 14/4 Rev 3).

1. Objectives:

The long-term objective of the Redfish 3LN Conservation Plan is to maintain the biomass in the ‘safe zone’, as defined by the NAFO Precautionary Approach framework.

2. Reference Points (as identified by NAFO Scientific Council - NAFO SCS Doc. 14-17 Rev.):

- a) Limit reference point for biomass (B_{lim}): 30% of B_{msy}
- b) Limit reference point for fishing mortality (F_{lim}): F_{msy}

3. Performance Statistics (levels of risks that apply to section 4):

- a) Very low (< 10%) probability of biomass declining below B_{lim} .
- b) Low (< 30%) probability of fishing mortality $> F_{msy}$
- c) Less than 50% probability of declining below 80% B_{msy} on or before 2021

4. Supplementary Guidance to the 3LN Redfish Harvest Control Rule (Annex 1):

- a) When biomass is below B_{lim} :
 - i. No directed fishing
 - ii. By-catch should be restricted to unavoidable by-catch in fisheries directing for other species

- b) When biomass is between B_{lim} and 80% of B_{msy}
 - i. TAC's should be set at a level(s) to allow for growth to above 80% of B_{msy} or to avoid or mitigate further decline in biomass consistent with explicit rebuilding objectives²
- c) When biomass is above 80% of B_{msy}
 - i. TAC's should be set at a level(s) to maintain biomass above 80% of B_{msy} or to avoid or mitigate decline below 80% of B_{msy}
- d) If fishing mortality is above F_{msy}
 - i. Fishing mortality should be reduced to a level below F_{msy} .

² Tolerance for short-term preventable decline is reduced as biomass approaches Blim

Annex 3.1
NAFO – Risk-Based Management Strategy for 3LN Redfish³

Management Strategy/Harvest Control Rule:

A stepwise biannual catch increase reaching 18 100t by 2019-2020. (18 100t is the equilibrium yield in the 2014 assessment under the assumption of an MSY of 21 000t).

2015 TAC:	10,400t
2016:	10,400t
2017:	14,200t
2018:	14,200t
2019:	18,100t
2020:	18,100t

Review/Monitoring:

1. Scientific Council will monitor the performance of the HCR by examining the trends in the survey indices and by conducting a full assessment every 2-3 years and for the first time in 2016.
2. Conduct a full review/ evaluation of the management strategy at the end of the 7 year implementation period.

³ Adopted by NAFO in September 2014 for implementation effective January 1, 2015

Annex 4. 3M Cod Work schedule 2016–2018 (FC-SC RBMS-WP 16-07 Rev. 3)

In order to provide a tentative timeline to the NAFO 3M Cod Benchmark and the NAFO 3M Cod MSE, the following work plan was agreed by the WG-RBMS in April 2016:

NAFO 3M Cod Benchmark calendar

1. The Scientific Council (SC), in **June 2016**, will approve the main assessment issues to be revised during the 3M Benchmark. Among those issues, there the FC request to the SC (request number 8, SC SCS Doc. 16-01) that the SC should, in 2016, *analyse whether the current Flim value for 3M cod is currently underestimated and to revise, if required, the relevant fishing mortality and biomass reference points appropriately*. The RBMS WG recognizes that the best forum to carry out the Flim review is the benchmark process, so it would be recommended to undertake this task during that process.
2. **Before the end of 2016** all data needed for the NAFO 3M Cod assessment will be reviewed and compiled.
3. **Between June 2016 and March 2017** different teams of SC scientists will be working on the issues identified in the 2016 June SC meeting.
4. **The benchmark will be carried out in April 2017**. This may involve SC and external scientists.
5. The **June 2017 SC** meeting will carry out a new assessment taking into account the Benchmark conclusions. This assessment would inform the TAC decision for 2018 because the MSE may not be finalised before September 2017 (see next section below - “NAFO 3M Cod MSE calendar”).

NAFO 3M Cod MSE calendar

Little progress is expected here before June 2017: this is because the results of the 3M cod benchmark and the NAFO PAF review will be required prior to the resumption of the MSE process. This would be the expected steps:

1. In **June 2017** a new 3M Cod assessment would be issued, according with the benchmark outputs as well as (ideally) the reference points arising from any revisions of the PAF, which at this stage would be tentative (not adopted by the FC).
2. **After September 2017**, if the FC adopts any relevant new elements of the PAF, the RBMS WG should revise the management objectives of the 3M cod MSE accordingly.
3. **Between September 2017 and March 2018 different HCRs** could be tested in order to see if they reach the established management objectives.
4. **By June 2018 the RBMS WG and SC** may revise the 3M Cod MSE to enable the proposal of a HCR. This HCR may be submitted for approval to FC in September, 2018.

If and as approved by the FC, this HCR will be applied to determine the TAC in 2019 and onward.

Annex 7. Revised Workplan for the Greenland halibut (GHL) Management Strategy Evaluation (MSE) Review

(FC WP 16-11 Rev. 2 ~~now~~ FC Doc. 16-17)

Noting that In accordance with the NCEMS, the current MSE-based plan for GHL will be in place until the end of 2017, i.e. the current Harvest Control Rule is to be applied in 2017;

Recognizing the critical importance of completing the review of the GHL MSE plan in time for the 2017 Annual Meeting to enable it to be implemented for the 2018 fishing season;

Highlighting the need for Contracting Parties to commit the necessary resources to undertake this high priority work;

Recalling that the April 2016 WG on RBMS established a workplan for the review of the MSE that identified a stock assessment to be completed during the June SC and the workplan noted that this timeline may require adjustment;

Noting that Scientific Council has advised that the completion of a stock assessment was not possible at its 2016 June meeting;

Further noting that due to amount of work required, Scientific Council is unable to complete stock assessments for both 3M Cod and 2+3KLMNO Greenland halibut in April, 2017;

Recognizing that in order to complete the GHL MSE Review within the timeline previously agreed to by Fisheries Commission in 2014 that the 3M Cod benchmark assessment will have to be delayed until 2018;

Recognizing that ongoing work to update the PA Framework may inform the development of a new Harvest Control Rule for Greenland halibut but does not preclude the work on the review from being completed;

To maintain the commitment to implement a new GHL MSE plan for 2018 fishing season, it is proposed that the MSE workplan be revised as follows:

Revised Workplan for the GHM MSE Review (September 2016)

At the 2015 NAFO Annual Meeting, the Fisheries Commission instructed the *Joint FC-SC Working Group of Risk Based Management Strategies* to undertake discussions on finalizing an approach and work plan to enable the comprehensive review of the 2+3KLMNO Greenland halibut MSE scheduled for 2017.

Below is an overview of the proposed key steps to be undertaken in completing this review. It should be noted that the steps are not considered prescriptive and there is possible flexibility in their sequencing, and/or some steps may take place concurrently.

Step I – NAFO Annual Meeting – September 2016

1. Contracting Parties identify MSE Expertise / Commit resources necessary to undertake the review
2. Adoption of a revised workplan

Step II –October/November 2016

1. Greenland halibut catch for period 2011-15 agreed upon by Scientific Council
2. Scientific Council / CPs to make fishery and survey data available for MSE review

Step III – FC-SC RBMS WG – [January – February 2017]

1. Review/Discussion of elements which were the basis of current MSE (e.g. management objectives, performance statistics, HCR including constraints, etc.) [see Annexes 5.I and 5.II]
2. Possible identification of candidate HCRs

Step IV – Scientific Council –April 2017

1. Greenland halibut stock assessment
2. Feedback on performance of existing management strategy, including identification of possible deficiencies / areas for improvement (i.e. lessons learned)
3. Agreement on final data set / input data to be applied in the MSE

Step V – Scientific Council –June 2017

1. SC review and confirmation of final set of operating models

Step VI FC-SC-RBMS WG – August 2017¹

1. Review MSE Results/ Performance of Candidate HCRs
2. Consider possible refinements to management objectives, performance statistics, and/ or HCR formulations

Step VII FC-SC WG-RBMS – Prior to Annual Meeting in 2017

1. Recommendation to FC on Adoption/ Updates to GHM HCR

Step VIII – NAFO Annual Meeting – September 2017

1. Adopt new/ updated Management Strategy / HCR
2. TAC decision for 2018

¹ RBMS to reconvene as necessary to refine HCR

Annex 5.I – Overview of Key Inputs from Initial GHL MSE formulation

Management Objective – ‘An exploitable biomass of 5+ year classes of 140 000 tonnes on average ...’ [NCEMs Article 10.2]

Milestone - Average exploitable biomass for the period 1985-1999 with associated timeline of 2031

Performance Statistics

1. The probability of the decline of 25% or more in terms of exploitable biomass from 2011 to 2016 is kept at 10% or lower (with the caveat that should the risk tolerance level of 10% unduly constrain the tuning of the Harvest Control Rule such that a rule cannot be developed to satisfy this or other constraints, then flexibility is provided to consider a risk tolerance level of up to 25%);
2. a) The probability of annual TAC variation of greater than 15% be kept at 25% or lower and b) The probability of variation of TAC more than 25% over any period of 3 years should be kept at 25% or lower. If the conditions a) and b) are not met, then an alternate performance target should be considered as follows: c) The TAC should not be below 10 000 tonnes for the period 2011-2015 in any one year with a probability of 25% on a year by year basis;
3. The magnitude of the average TAC in the short, medium and long term should be maximized;
4. The probability of failure to meet or exceed a milestone within a prescribed period of time should be kept at 25% or lower.

Annex 5.II – Adopted Harvest Control Rule (2010-17)

$$TAC_{y+1} = TAC_y (1 + \lambda \times \text{slope})$$

where:

slope = is based on the average trend in biomass from three survey indices (the Canadian Autumn Div. 2J3K index (“F2J3K”), the Canadian Spring Div. 3LNO index (“S3LNO”), and the EU Flemish Cap index covering depths from 0-1400m (“EU1400”)) over the previous five years.

λ = is an adjustment variable for the relative change in TAC to the perceived change in stock size. The value of λ is 2 if the average slope is negative, and 1 when the slope is positive.

Annex 8. Supplementary Guidance to the 3LN Redfish Conservation Plan and Harvest Control Rule (HCR)

(Recommendation 6 of FC-SC WP 16-02 **now** FC Doc. 16-15)

The WG-RBMS met on 4-6 April 2016 in Tórshavn, Faroe Islands and agreed on the following recommendation (FC/SC Doc. 16-01):

The Working Group **recommended** that:

Fisheries Commission adopt supplementary guidance to the 3LN Redfish conservation plan and Harvest Control Rule (HCR) as presented in Annex 1. It is further recommended that the HCR (Annex I) be incorporated into the NAFO Conservation and Enforcement Measures.

**Annex 1. 3LN Redfish Conservation Plan and Harvest Control Rule –
Supplementary Guidance**
(FC-SC RBMS-WP 16-02 Rev. 2)

Noting that a Harvest Control Rule for 3LN Redfish was adopted by NAFO in 2014 that reflected the advice of the Scientific Council for this stock;

Recognizing at the time the Harvest Control Rule was developed the biomass was estimated to be greater than B_{msy} , and evaluated against a range of conservation focused performance statistics;

Noting that a full review and evaluation of the HCR will occur on or before 2020 and that in the interim, NAFO will continue to monitor trends in the survey indices for this stock, as well as, conduct periodic assessments (beginning in 2016);

Recognizing that the long-term objective of this Conservation Plan is to maintain the biomass in the ‘safe zone’, as defined by the NAFO Precautionary Approach framework, and at or near B_{msy} ;

Recalling that at the 2015 Annual Meeting the Working Group on Risk-based Management Strategies was tasked with the development of supplementary guidance for Fisheries Commission to respond to any unforeseen performance in the stock (FC WP 15/16);

Consistent with the structure and key principles of the Framework on the General Framework on Risk-based Management Strategies, as adopted by NAFO in 2014;

Consistent with the parameters agreed upon by Fisheries Commission for development of the harvest strategy;

It is proposed that following supplementary guidance be adopted as an addendum to the existing Risk-Based Management Strategy for 3LN Redfish (Annex I):

The context, objectives and performance statistics for this Risk-Based Management Strategy remain as stated Annex 3 to the 2014 Annual Meeting Report of the Fisheries Commission (FC-SC RBMS WP 14/4 Rev. 3).

1. Objectives:

The long-term objective of the Redfish 3LN Conservation Plan is to maintain the biomass in the ‘safe zone’, as defined by the NAFO Precautionary Approach framework.

2. Reference Points (as identified by NAFO Scientific Council - NAFO SCS Doc. 14-17 Rev.):

- a) Limit reference point for biomass (B_{lim}): 30% of B_{msy}
- b) Limit reference point for fishing mortality (F_{lim}): F_{msy}

3. Performance Statistics (levels of risks that apply to section 4):

- a) Very low (< 10%) probability of biomass declining below B_{lim} .
- b) Low (< 30%) probability of fishing mortality $> F_{msy}$
- c) Less than 50% probability of declining below 80% B_{msy} on or before 2021

4. Supplementary Guidance to the 3LN Redfish Harvest Control Rule (Annex 1):

- a) When biomass is below B_{lim} :
 - i. No directed fishing
 - ii. By-catch should be restricted to unavoidable by-catch in fisheries directing for other species
- b) When biomass is between B_{lim} and 80% of B_{msy}
 - i. TAC's should be set at a level(s) to allow for growth to above 80% of B_{msy} or to avoid or mitigate further decline in biomass consistent with explicit rebuilding objectives¹
- c) When biomass is above 80% of B_{msy}
 - i. TAC's should be set at a level(s) to maintain biomass above 80% of B_{msy} or to avoid or mitigate decline below 80% of B_{msy}
- d) If fishing mortality is above F_{msy}
 - i. Fishing mortality should be reduced to a level below F_{msy} .

¹ Tolerance for short-term preventable decline is reduced as biomass approaches B_{lim}

Annex I.
NAFO – Risk-Based Management Strategy for 3LN Redfish²

Management Strategy/Harvest Control Rule:

A stepwise biannual catch increase reaching 18 100t by 2019-2020. (18 100t is the equilibrium yield in the 2014 assessment under the assumption of an MSY of 21 000t).

2015 TAC:	10,400t
2016:	10,400t
2017:	14,200t
2018:	14,200t
2019:	18,100t
2020:	18,100t

Review/Monitoring:

1. Scientific Council will monitor the performance of the HCR by examining the trends in the survey indices and by conducting a full assessment every 2-3 years and for the first time in 2016.
2. Conduct a full review/ evaluation of the management strategy at the end of the 7-year implementation period.

² Adopted by NAFO in September 2014 for implementation effective January 1, 2015

Annex 9. Quota Table 2017

CATCH LIMITATIONS - Article 5. Total allowable catches (TACs) and quotas (metric tons in live weight) for 2017 of particular stocks in Subareas 1-4 of the NAFO Convention Area.

Species	Cod			Redfish						American plaice		Yellowtail
	COD 3L	COD 3M	% of 3M Cod TAC	COD 3NO	RED 3LN	% of 3LN Redfish TAC	RED 3M	RED 3O	REB 1F_2_3K (i.e. Sub-Area 2 and Divs. 1F+3K)	PLA 3LNO	PLA 3M	
Stock Specification												YEL 3LNO
% of TAC						% of 3LN Redfish TAC						
Contracting Party												
Canada		111	0.80	0	6 049	42.60	500	6 000	0 ¹	0	0	16 575
Cuba		515	3.70	-	1 392	9.80	1 750		0 ¹	-	-	-
Denmark (Faroe Islands and Greenland)		3 114	22.35	-	-		69 ¹⁰		0	-	-	-
European Union		7 945 ⁵	57.03	0 ⁴	2 589 ⁴	18.23	7 813 ⁴	7 000	0 0 ⁷	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		1 289	9.25	-	-		-		0	-	-	-
Russian Federation		901	6.47	0	4 085	28.77	9 137	6 500	0	-	0	-
Ukraine								150	0 ¹			
United States of America		-		-	-		69 ¹⁰		0 ¹	-	-	-
Others		56	0.40	0	85	0.60	124	100	-	0	0	85
TOTAL ALLOWABLE CATCH	*	13 931 ¹⁴	100.0	*	14 200 ^{8,15}	100.0	7 000	20 000 ₁₁	0 ^{3,9}	* ⁸	*	17 000 ¹²

(2017)

Species	Witch		White hake	Capelin	Skates	Greenland halibut	Squid (<i>Illex</i>)	Shrimp	
	WIT 3L	WIT 3NO						PRA 3L	PRA 3NO
Stock Specification							SQI 3_4 (i.e. Sub-areas 3+4)		
% of TAC			% of 3NO Witch TAC						
Contracting Party									
Canada		1 335	60.00	0	1 167	1 644	N.S. ²	0	
Cuba		-		0		-	510	0	
Denmark (Faroe Islands and Greenland)		-		-		189	-	0	
European Union		295 ⁴	13.27	0 ⁵	4 408	6 430 ⁶	N.S. ² 611 ⁵	0 ⁶	
France (St. Pierre et Miquelon)		-		-		180	453	0	
Iceland		-		-		-	-	0	
Japan		-		0		1 124	510	0	
Korea		-		-		-	453	0	
Norway		-		0		-	-	0	
Russian Federation		573	25.73	0	1 167	1 399	749	0	
Ukraine						-		0	
United States of America		-		-		-	453	0	
Others		22	1.00	-	258	0	794	0	
TOTAL ALLOWABLE CATCH	^{*11}	2 225 ¹⁶	100.00	^{*8}	7 000 ^{8,13}	10 966	34 000 ¹¹	0	*

* Ban on fishing in force.

- 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 EU.
- 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 EU.
- 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 2017 and 2018.
- 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.
- 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 2017, 2018 and 2019.
- 12 Following the NAFO annual meeting and prior to 1 January of the succeeding year, at the request of the USA, Canada will transfer 1,000 tonnes of its 3LNO yellowtail quota to the USA.
- 13 Should catches exceed 5 000 tonnes, additional measures would be adopted to further restrain catches in 2018.

Historical statements

- 14 The allocation key of this stock is based on the 1998 Quota Table. In 1999, a moratorium on cod in Division 3M was declared.
- 15 The allocation key of this stock is based on the 1997 Quota Table. In 1998, a moratorium on redfish in Division 3LN was declared.
- 16 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 10. Amendment of Article 12 of the NCEM on Shark Management (FC WP 16-06 **now** FC Doc. 16-11)

Explanatory memorandum

Article 12 of the NCEM contains provisions on the conservation and management of sharks. The main objective of these provisions is to make sure that sharks are not killed for the sole purpose of keeping their fins on board. To this end the NAFO CEM prohibit vessel operators to have shark fins onboard that total more than 5% of the weight of sharks onboard.

However, the current limit of fin-to-carass weight ratio has not proven effective as a conservation measure for sharks. Current scientific evidence clearly indicates that the fins-to-carass weight ratio varies widely among species, as does the fin types used in calculations, the type of carass weight used (whole or dressed), and the method of processing used to remove the fins (fin cutting technique). Species and/or fleet-specific ratios are not a practical solution mainly due to difficulties associated with accurate species identification.

Recent studies have shown that the generalised 5% fin-to-carass weight ratio used in existing regulations provides an opportunity to harvest additional fins from sharks without retaining all of the corresponding shark carcasses. Based on the most recent scientific evidence, the most effective way of avoiding the wasteful practice of shark-finning is to require all sharks to be landed with their fins still naturally attached. This also makes data collection and monitoring more straightforward and accurate. On this basis, NEAFC adopted in 2015 Recommendation 10:2015 on Conservation of Sharks Caught in Association with Fisheries Managed by the North-East Atlantic Fisheries Commission (NEAFC).

Therefore it is suggested that NAFO Contracting Parties support this measure and adopt a fins- naturally-attached at first landing policy as outlined below.

The NAFO Contracting Parties:

Considering that the United Nations General Assembly adopted consensus Resolutions every year from 2007 (62/177, 63/112, 64/72, 65/38, 66/6, 67/79, 68/71, 69/109 and 70/75) calling upon States to take immediate and concerted action to improve the implementation of and compliance with existing regional fisheries management organization or arrangements measures that regulate shark fisheries and incidental catch of sharks, in particular those measures which prohibit or restrict fisheries conducted solely for the purpose of harvesting shark fins, and, where necessary, to consider taking other measures, as appropriate, such as requiring that all sharks be landed with each fin naturally attached;

Recalling that the United Nations Food and Agriculture Organization (FAO) International Plan of Action for Sharks calls on States to cooperate through Regional Fisheries Organizations to ensure the sustainability of shark stocks;

Also recalling that the FAO International Plan of Action for Sharks calls on States to encourage full use of dead sharks, facilitate improved species-specific catch and landings data and monitoring of shark catches and the identification and reporting of species-specific biological and trade data;

Considering that despite regional agreements on the prohibition of shark finning, sharks' fins continue to be removed on board and the rest of the shark carcass discarded into the sea;

Conscious that the fin-to-carass weight ratio as a means of ensuring that sharks are not finned has proven ineffective in terms of implementation, enforcement and monitoring, in particular due to the lack of reliable data and of appropriate species/fleet specific methodology;

Noting, the recent adoption of Recommendation 10:2015 on Conservation of Sharks Caught in Association with Fisheries Managed by the North-East Atlantic Fisheries Commission (NEAFC), which establishes the fins attached policy as exclusive option for ensuring the shark finning ban in the NEAFC Convention area;

Aware that identifying sharks by species is very difficult when the fins have been removed from the carcasses;

Proposed amendments

To modify Article 12 of the NAFO Conservation and Enforcement Measures as follows:

Article 12 - Conservation and Management of Sharks

- 1) Contracting Parties shall report all catches of sharks, including available historical data, in accordance with the data reporting procedures set out in Article 28.
- 2) ~~2- Up to the point of offloading, no fishing vessel shall discard any part of shark retained on board except the head, guts or skin.~~
- 2) Contracting Parties shall prohibit the removal of shark fins on-board vessels. Contracting Parties shall also prohibit the retention on-board, transshipment and landing of shark fins separate to the carcass.
- 3) ~~Contracting Parties shall require their vessels not to have onboard shark fins that total more than 5% of the weight of sharks onboard, up to the first point of landing. Contracting Parties that currently do not require fins and carcasses to be offloaded together at the point of first landing shall take the necessary measures to ensure compliance with the 5% fin to body weight ratio through certification, monitoring by an observer, or other appropriate measures.~~
- 3) Without prejudice to paragraph 2, in order to facilitate on-board storage, shark fins may be partially sliced through and folded against the carcass, but shall not be removed from the carcass before the first landing.
- 4) No fishing vessel shall retain on board, tranship or land any fins harvested in contravention of these provisions.
- 5) In fisheries that are not directed at sharks, each Contracting Party shall encourage every vessel entitled to fly its flag to release ~~live~~ sharks alive, and especially juveniles, that are not intended for use as food or subsistence.
- 6) Contracting Parties shall, where possible, undertake research to identify ways to make fishing gear more selective for the protection of sharks.
- 7) Contracting Parties shall where ~~ren~~ possible, conduct research on key biological and ecological parameters, life-history, behavioural traits and migration patterns, as well as on the identification of potential mapping, pupping and nursery grounds of key shark species. Contracting Parties shall provide the results of such research to the NAFO Secretariat, to identify shark nursery areas.

Annex 11. Recommendation from the WG-EAFFM to forward to FC and SC (FC-SC WP 16-03 Rev. now FC-SC Doc. 16-04 Rev.)

Recommendations from the WG-EAFFM to forward to FC and SC

The Joint FC-SC Working Group on Ecosystem Approach Framework to Fisheries Management met 10-12 August 2016 in Halifax, Nova Scotia and agreed on the following recommendations:

WG-EAFFM recommends:

In relation to the reassessment of NAFO bottom fisheries (EAFFM agenda item 4a)

- 1. To support the next re-assessment in 2020, that SC;**
 - a) assess the overlap of NAFO fisheries with VME to evaluate fishery specific impacts in addition to the cumulative impacts;**
 - b) consider clearer objective ranking processes and options for objective weighting criteria for the overall assessment of risk;**
 - c) maintain efforts to assess all of the six FAO criteria (Article 18 Article 18 of the FAO International Guidelines for the Management of Deep-Sea Fisheries in the High Seas) including the three FAO functional SAI criteria which could not be evaluated in the current assessment (recovery potential, ecosystem function alteration, and impact relative to habitat use duration of VME indicator species).**
 - d) continue work on non-sponge and coral VMEs (for example bryozoan and sea squirts) to prepare for the next assessment.**

In relation to widening the scope of the NAFO coral and sponge guide (EAFFM item 4b)

- 2. In addition to the VME guide, that SC further develop and compile identification guides for fishes (e.g. sharks and skates) that could be provided to observers.**

In relation to risk assessment of scientific trawl surveys impact on VMEs (EAFFM item 4c)

- 3. In consideration of other SC priorities, that SC maintain efforts to conclude the assessment of the impact of survey hauls on VMEs in closed areas and the effect of excluding surveys from these areas on stock assessments.**

In relation to potential impact of non-fishing activities (EAFFM item 4d)

- 4. That NAFO Secretariat maintains dialogue with relevant organizations and explore mechanisms to improve the exchange of information. The FC and Contracting Parties may consider other means to facilitate active monitoring of assessments, planning processes and actions taken in other fora in order to identify and, if needed, respond on issues concerning NRA fisheries, fisheries resources, and biodiversity.**

In relation to ongoing matters (EAFFM agenda item 5)

- 5. Taking note of the recent SAI assessment from the SC, that FC consider management response, if appropriate, including the possible closure of the areas previously identified as sea pen candidate areas 13 and 14 (Eastern Flemish Cap) if proposals are made at the annual meeting (see Annex 1).**

In relation to Ecosystem Approach to Fisheries (EAF) (EAFFM agenda item 6)

- 6. FC/SC give consideration (possibly through their informal dialogue) to how Fisheries Production Potential (FPP) limits could inform management of NAFO stocks and provide feedback and further direction.**

Annex 1. Maps of Candidate Areas 13 and 14 referred to in Recommendation 5

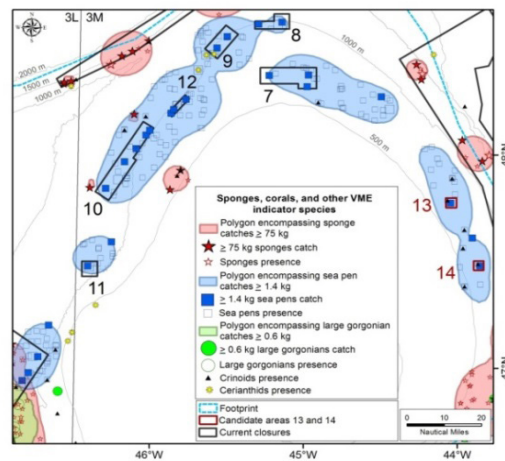


Figure 1. Closed Areas 7 – 12 and Candidate Areas 13 and 14.

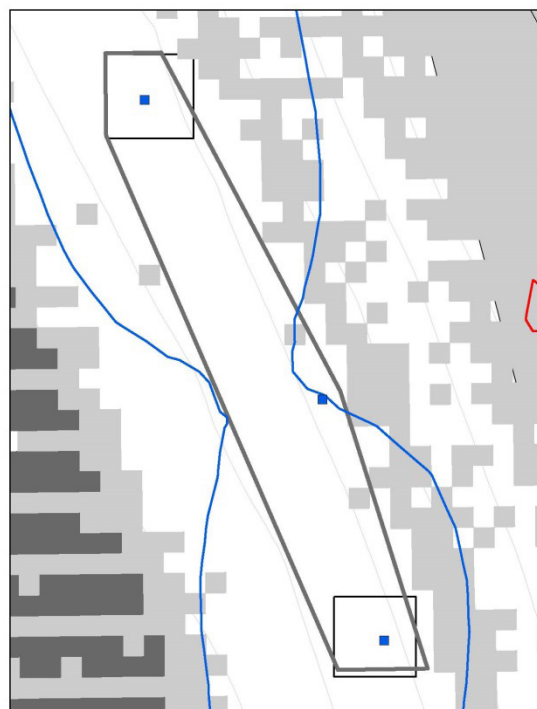


Figure 2. Candidate Areas 13 and 14.

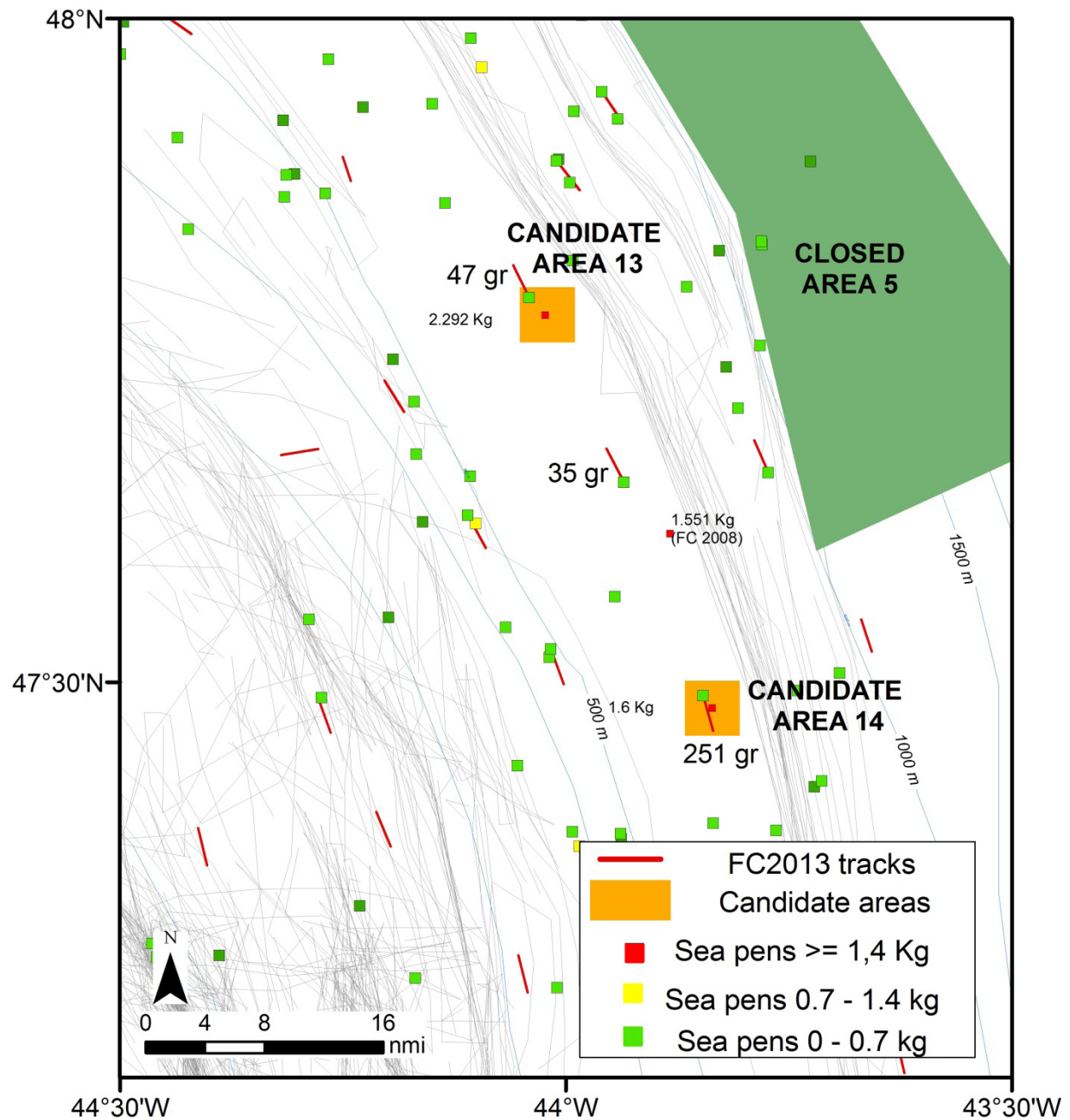


Figure 3. Candidate Areas 13 and 14.

**Annex 12. Establishment of an Additional Area Closure to
Protect VMEs in the NAFO Regulatory Area**
(FC WP 16-10 Rev. **now** FC Doc. 16-12)

Recalling commitments made under the United Nations General Assembly resolution 61/105 (and subsequent resolutions), to manage the impacts of bottom contact fishing on vulnerable marine ecosystems;

Acknowledging NAFO's commitment to an ecosystem approach to fisheries management;

Mindful of the advice of the Scientific Council Risk assessments for SAI on three VME indicator species in their June 2016 meeting (NAFO SCS Doc. 16-14 Rev.), which noted that both large gorgonians and sponges VME have a low overall risk of SAI, while sea pen VMEs were assessed as having a high overall risk of SAI;

Considering the priority areas noted identified in 2014 Scientific Council advice (NAFO SCS Doc. 14-17);

Noting recommendation 5 of the Report of the Working Group of Fisheries Managers and Scientists on an Ecosystem Approach Framework to Fisheries Management (WG-EAFFM)

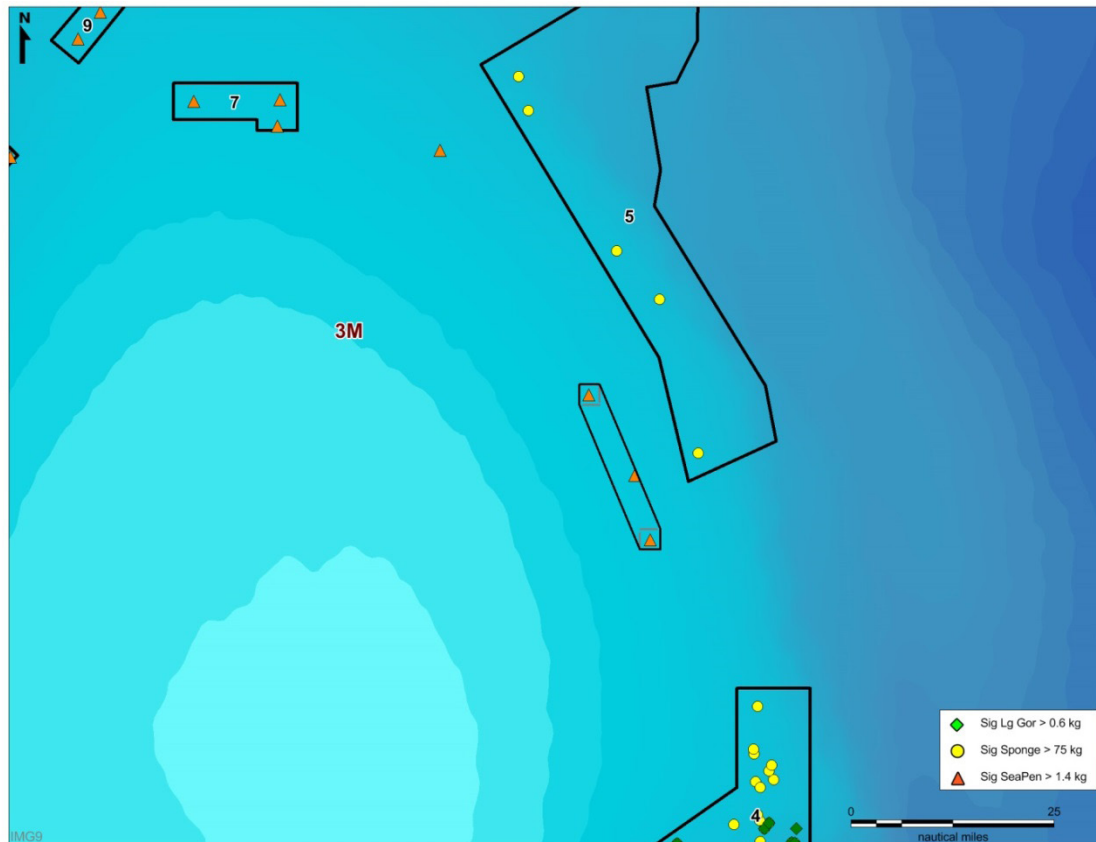
"Taking note of the recent SAI assessment from the SC, that FC consider management response, if appropriate, including the possible closure of the areas previously identified as sea pen candidate areas 13 and 14 (Eastern Flemish Cap) if proposals are made at the annual meeting...."

Taking into account the maps outlined in Annex 4 of the Report of the NAFO Joint Fisheries Commission–Scientific Council Working Group on Ecosystem Approach Framework to Fisheries Management (WG-EAFFM), which have been attached in Annex 1 of this document;

It is proposed that the Fisheries Commission:

Create a new area closure on the Eastern Flemish Cap encompassing the areas previously identified as areas 13 and 14, to capture significant concentrations of sea pens, as outlined in the map and the coordinates below. This closure, new area 14, will remain in place until December 31, 2018, before which time it will be reviewed taking into account the latest SC advice, which should consider the NEREIDA research results on sea pen resilience.

Area 14



ID	Lat (Y)	Long (X)
1	47.798425	-44.051794
2	47.756789	-44.051794
3	47.459692	-43.866764
4	47.459692	-43.80515
5	47.501333	-43.80515
6	47.798425	-43.989833

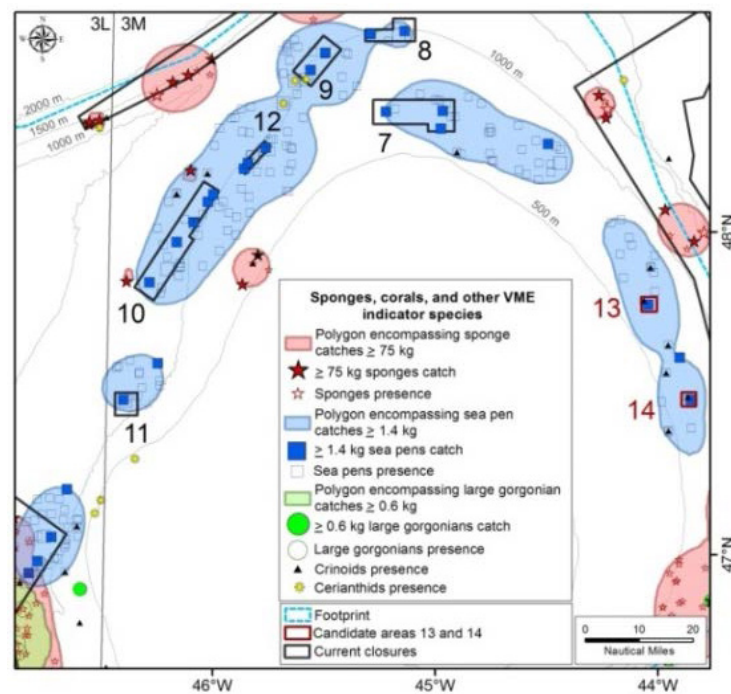
Annex 1. Maps of Candidate Areas 13 and 14 referred to in Recommendation 5

Figure 1. Closed Areas 7 – 12 and Candidate Areas 13 and 14.

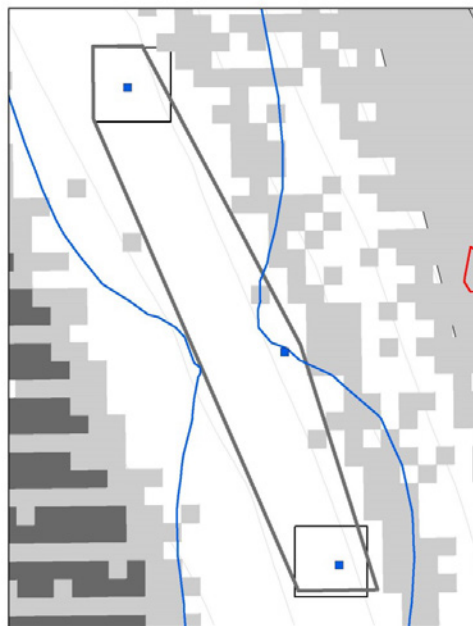


Figure 2. Candidate Areas 13 and 14 from 2003-2013 VMS data.

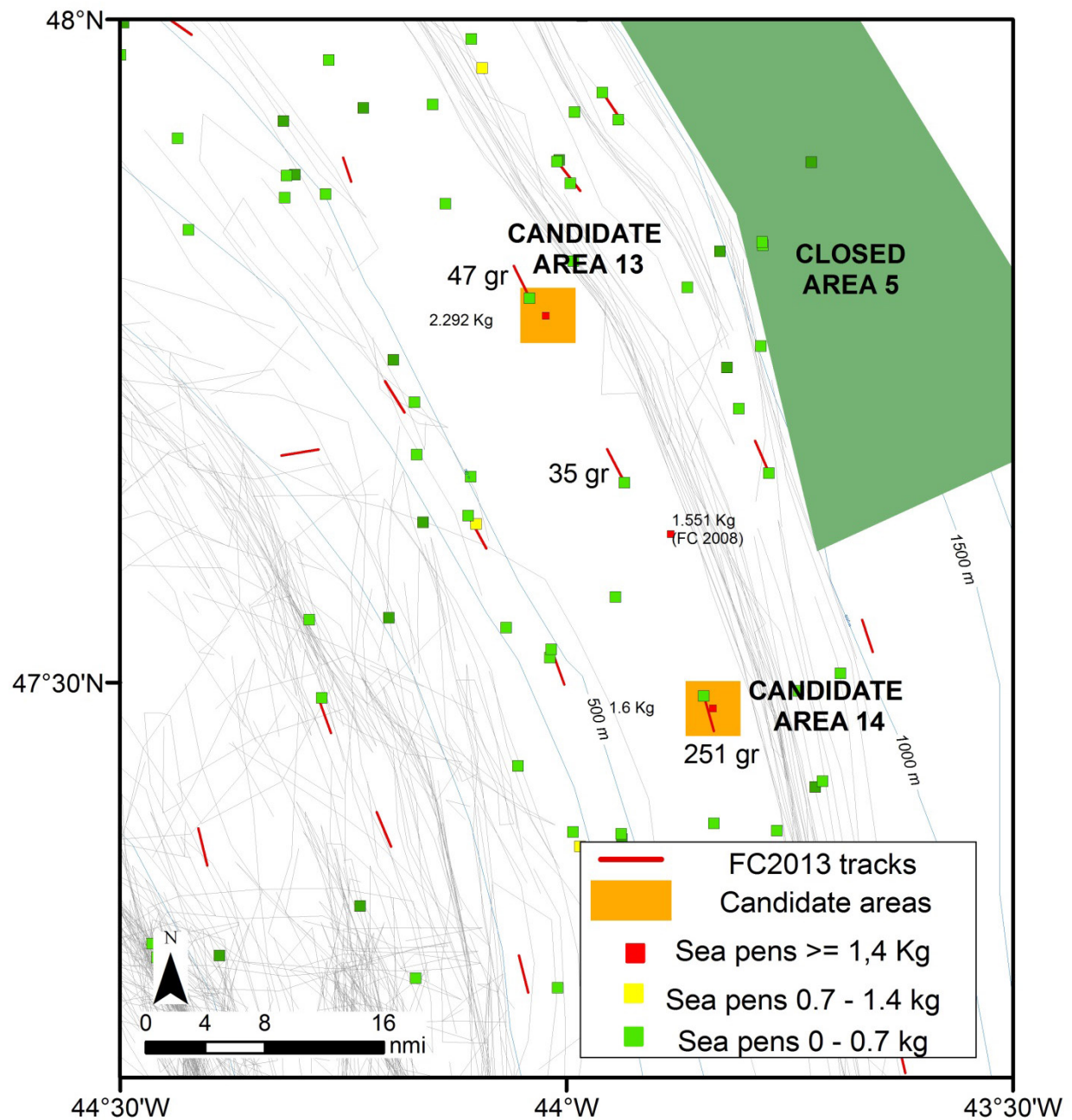


Figure 3. Candidate Areas 13 and 14.

Annex 13. Advice to the WG-EAFFM on the New England and Corner Rise Seamounts (FC WP 16-09)

(Presented by the delegation of the USA)

Explanatory memorandum

Seamounts are defined by NAFO as “VME elements” based on their ecology in terms of structure and function. The United States recently announced the first national monument in the Atlantic, the Northeast Canyons and Seamounts Marine National Monument, which includes the four seamounts along the New England seamount chain located within the US EEZ. With this closure, there is now a gap in protection across the New England seamount chain, which spans the US EEZ and the NAFO Convention Area, with several seamounts located in the NAFO waters not included in NAFO’s current seamount polygon.

In 2014, the Scientific Council recommended expansion of the seamount protection zones surrounding the New England and Corner Rise Seamount chains located within the NAFO Regulatory Area (SCS 14/17 Rev.). With regards to the New England and Corner Rise seamount chains, the SC recommended that the polygons be expanded to include all relevant seamounts. Therefore, the United States proposes that the WG-EAFFM evaluate that advice from SC and provide further guidance to the FC.

Proposal

Acknowledging the recent action by the United States to protect the four seamounts within the New England seamount chain located inside the U.S. EEZ;

Recalling the Scientific Council advice from 2014, “that the polygons of the closures for both the New England and Corner Rise seamounts be revised to the north, east and west in the NAFO Convention Area to include all the peaks that are shallower than 2000 meters”; and

Reaffirming NAFO’s commitment to ecosystem and science based management.

Thereby recommends that the FC requests the WG-EAFFM, at its next meeting, to:

- **consider the advice from the 2014 Scientific Report in regards to extent of the New England and Corner Rise Seamounts, and**
- **develop recommendations to the FC, as appropriate, on amendment to the current polygons for those seamounts, pursuant to that advice, as well as any additional management advice necessary for their protection, as appropriate.**

Annex 14. Recommendations from the WG-BDS to forward to FC

(FC WP 16-03 **now** FC Doc. 16-18)

The *Ad hoc* Working Group on Bycatches, Discards, and Selectivity (WG-BDS) met on 9 August 2016 in Halifax, Nova Scotia and agreed on the following recommendations (FC Doc. 16-05):

1. **The Fisheries Commission to endorse the continuation of the work by the FC *Ad hoc* WG-BDS to further develop and finalize the Action Plan in time of the 2017 NAFO Annual Meeting;**
2. **The Fisheries Commission to request the Scientific Council, based on analysis of the 2016 H x H data and patterns of fishing activity, to examine relative levels of bycatch and discards of 3M cod/redfish, and stocks under moratoria in the different circumstances (e.g. fisheries, area, season, fleets, depths, timing);**
3. **The Secretariat to continue to analyze data for trends, patterns, anomalies:**
 - **In cases where bycatch thresholds are exceeded or trends are apparent, the analysis should provide additional information on the associated catch weights for the specific stocks (3NO cod, 3M American plaice, 3LNO American plaice);**
 - **Analysis should consider both historical and current CATs (2012 to current); and**
 - **Trend in reported catch of non- Annex I.A species (3M witch flounder and 3M skate).**

**Annex 15. Amendments to Chapter VII (Port State Control) and Chapter VIII
(Non-Contracting Party Scheme) of the NCEM to align with the
FAO Port State Measures Agreement**
(STACTIC WP 16-13 Rev. 2 now FC Doc. 16-06)

**Northwest Atlantic Fisheries Organization
Conservation and Enforcement Measures**

Article 1 - Definitions

1. "Bottom fishing activities" means bottom fishing activities where the fishing gear is likely to contact the seafloor during the normal course of fishing operations;
2. "CEM" refers to these Conservation and Enforcement Measures;
3. "Convention" means the 1979 Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries, as amended from time to time;
4. "FMC" means a land-based fisheries monitoring centre of the flag State Contracting Party;
5. "Fishing activities" means harvesting or processing fishery resources, landing or transshipping of fishery resources or products derived from fishery resources, or any other activity in preparation for, in support of, or related to the harvesting of fisheries resources in the Regulatory Area, including:
 - (i) the actual or attempted searching for, catching or taking of fishery resources;
 - (ii) any activity that can reasonably be expected to result in locating, catching, taking, or harvesting of fishery resources for any purpose, and
 - (iii) any operation at sea in support of, or in preparation for, any activity described in this definition,
 but does not include any operations related to emergencies involving the health and safety of the crew members or the safety of a vessel.
6. "Fishing day" means any calendar day or any fraction of a calendar day in which a fishing vessel is present in any Division in the Regulatory Area;
7. "Fishing trip" for a fishing vessel 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 has been landed or transhipped;
8. "Fishing vessel" means any vessel equipped for, intended for, or engaged in fishing activities, including fish processing, transshipment or any other activity in preparation for or related to fishing activities, including experimental or exploratory fishing activities;
9. "Inspector", unless otherwise specified, means an inspector of the fishery control services of a Contracting Party assigned to the Joint Inspection and Surveillance Scheme;
10. "IUU fishing" means activities as defined in paragraph 3 of the FAO International Plan of Action to prevent, deter and eliminate illegal, unreported and unregulated fishing;
11. "IUU Vessel List" means the list, established in accordance with Articles 52 and 53;
12. "Non-Contracting Party vessel" means a vessel entitled to fly the flag of a State that is not a Contracting Party or a vessel suspected to be without nationality;
13. "Port" includes offshore terminals and other installations for landing, transshipping, packaging, processing, refueling or resupplying.
14. "Processed fish" means any marine organism that has been physically altered since capture, including fish that has been filleted, gutted, packaged, canned, frozen, smoked, salted, cooked, pickled, dried or prepared for market in any other manner;
15. "Research vessel" means a vessel permanently used for research or a vessel normally used for fishing activities or fisheries support activity that is for the time being used for fisheries research;
16. "Transshipment" means transfer, over the side, from one fishing vessel to another, of fisheries resources or products;

Article 2 - Scope

1. The CEM shall, unless otherwise provided, apply to all fishing vessels used or intended for use for the purposes of commercial fishing activities conducted on fisheries resources in the Regulatory Area.
2. Unless otherwise provided, research vessels shall not be restricted by conservation and management measures pertaining to the taking of fish, in particular, concerning mesh size, size limits, closed areas and seasons.

Article 3 - Duties of the Contracting Parties

1. Each Contracting Party shall ensure that every fishing vessel entitled to fly its flag operating in the Regulatory Area complies with the relevant provisions of the CEM; and
2. Each fishing vessel operating in the Regulatory Area shall perform the relevant duties set out in the CEM and comply with the relevant provisions of the CEM.

Article 38 - Additional Procedures for Serious Infringements

List of Serious Infringements

1. Each of the following violations constitutes a serious infringement:
 - (a) fishing an “Others” quota without prior notification to the Executive Secretary contrary to Article 5;
 - (b) fishing an “Others” quota more than seven working days following closure by the Executive Secretary contrary to Article 5;
 - (c) directed fishing for a stock which is subject to a moratorium, or for which fishing is otherwise prohibited, contrary to Article 6;
 - (d) directed fishing for stocks or species after the date of closure by the flag State Contracting Party notified to the Executive Secretary contrary to Article 5;
 - (e) fishing in a closed area, contrary to Article 9.6 and Article 11;
 - (f) fishing with a bottom fishing gear in an area closed to bottom fishing activities, contrary to Chapter II;
 - (g) using an unauthorized mesh size contrary to Article 13;
 - (h) fishing without a valid authorization issued by the flag State Contracting Party contrary to Article 25;
 - (i) mis-recording of catches contrary to Article 28;
 - (j) failing to carry or interfering with the operation of the satellite monitoring system contrary to Article 29;
 - (k) failure to communicate messages related to catch contrary to Article 10.6 or Article 28;
 - (l) obstructing, intimidating, interfering with or otherwise preventing inspectors or observers from performing their duties;
 - (m) committing an infringement where there is no observer on board;
 - (n) concealing, tampering with or disposing of evidence related to an investigation, including the breaking or tampering of seals or gaining access to sealed areas;
 - (o) presentation of falsified documents or providing false information to an inspector that would prevent a serious infringement from being detected;
 - (p) landing, transshipping or making use of other port services in a port not designated in accordance with the provisions of Article 43.1;
 - (q) failure to comply with the provisions of Article 45.1; and
 - (r) landing, transshipping or making use of other port services without authorization of the port State as referred to in Article 43.6.

Duties and Authority of the Inspectors

2. Where the inspectors cite a vessel for having committed a serious infringement, they shall:
 - (a) seek to notify the competent authority of the flag State Contracting Party;
 - (b) report the serious infringement to the Executive Secretary;
 - (c) take all measures necessary to ensure security and continuity of the evidence, including, as appropriate, sealing the vessel's hold for further inspection;
 - (d) request that the master cease all fishing activity that appears to constitute a serious infringement;
3. The inspectors may remain on board to provide information and assistance to the inspector designated by the flag State Contracting Party (designated inspector). During this time, the inspectors shall complete the original inspection provided that, following the arrival of the designated inspector, the competent authority of the flag State Contracting Party does not require the inspectors to leave the vessel.

Duties of the Flag State Contracting Party

4. Where notified of a serious infringement, the flag State Contracting Party shall:
 - (a) acknowledge receipt of the notification without delay;
 - (b) ensure the fishing vessel does not resume fishing until the inspectors have notified the master that they are satisfied that the infringement will not be repeated; and
 - (c) ensure that the vessel is inspected within 72 hours by an inspector designated by the flag State Contracting Party.
5. Where justified, the flag State Contracting Party shall, where authorized to do so, require the vessel to proceed immediately to a port for a thorough inspection under its authority in the presence of an inspector from any other Contracting Party that wishes to participate.
6. Where the flag State Contracting Party does not order the fishing vessel to port, it shall provide written justification to the Executive Secretary no later than 3 working days following the notice of infringement.
7. Where the flag State Contracting Party orders the fishing vessel to port, an inspector from another Contracting Party may board or remain onboard the vessel as it proceeds to port, provided that the competent authority of the flag State Contracting Party does not require the inspector to leave the vessel.
8. (a) Where, in accordance with the inspection referred to in paragraph 3, the designated inspector issues a notice of infringement for:
 - (i) directed fishing for a stock which is subject to a moratorium
 - (ii) directed fishing for a stock for which fishing is prohibited under Article 6
 - (iii) mis-recording of catch, contrary to Article 28 or
 - (iv) repetition of the same serious infringement during a 100 days period or a single fishing trip, whichever is shorter

the flag State Contracting Party shall order the vessel to cease all fishing activities and shall forthwith initiate a full investigation.
- (b) In this paragraph, "mis-recording of catches" means a difference of at least 10 tonnes or 20%, whichever is greater, between the inspectors' estimates of processed catch on board, by species or in total, and the figures recorded in the production logbook, calculated as a percentage of the production logbook figures. In order to calculate the estimate of the catch on board, the inspectors shall apply a stowage factor agreed between them and the designated inspector.
9. (a) Where the flag State Contracting Party is unable to conduct a full investigation in the Regulatory Area, or where the serious infringement is mis-recording of catches, it shall order the vessel to proceed immediately to a port where it shall conduct a full investigation ensuring that the physical inspection and enumeration of total catch on board takes place under its authority;
- (b) Subject to the consent of the flag State Contracting Party, inspectors of another Contracting Party may participate in the inspection and enumeration of the catch.

Duties of the Executive Secretary

10. The Executive Secretary:

- (a) informs without delay the Contracting Parties having an inspection presence in the Regulatory Area of the serious infringement referred by its inspectors;
- (b) informs without delay to the inspecting Contracting Party, the justification provided by the flag State Contracting Party, where it did not order its vessel to port in response to the finding of a serious infringement; and
- (c) makes available to any Contracting Party, on request, the justification provided by the flag State Contracting Party where it did not order its vessel to port in response to the finding of a serious infringement.

Article 39 – Follow-up to Infringements

1. A flag State Contracting Party that has been notified of an infringement committed by a fishing vessel entitled to fly its flag shall:
 - (a) investigate immediately and 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 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 entitled to fly its flag where the CEM have not been respected; and
 - (d) ensure that sanctions applicable in respect of infringements are adequate in severity to be effective in securing compliance, deterring further infringements and depriving the offenders of the benefits accruing from the infringement.
2. Each Contracting Party shall ensure that in proceedings it has instituted, it treats all notices of infringement issued in accordance with Article 38.1(l) as if the infringement was reported by its own inspector.
3. Each Contracting Party shall take enforcement measures with respect to a vessel entitled to fly its flag, where it has been established in accordance with domestic law, that the vessel committed a serious infringement listed in Article 38.8.
4. The measures referred to in paragraph 3 and the sanctions referred to in paragraph 1(d) may include 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.
5. The flag State Contracting Party shall immediately notify the Executive Secretary of the measures taken against its vessel in accordance with paragraphs 3 and 4.

CHAPTER VII PORT STATE CONTROL

Article 42 - Scope

Subject to the right of the port State Contracting Party to impose requirements of its own under domestic laws and regulations for entry or denial to its ports, the provisions in this Chapter apply to landings, transshipments, or use of ports by Contracting Parties by fishing vessels entitled to fly the flag of another Contracting Party, conducting fishing activities in the Regulatory Area. The provisions apply to fish caught in the Regulatory Area, or fish products originating from such fish, that have not been previously landed or transhipped at a port.

This Chapter also sets out the respective duties of the flag State Contracting Party and obligations of the master of fishing vessels requesting entry to a port of a Contracting Party.

This Chapter shall be:

- (a) interpreted in a manner consistent with international law, including the right of port access in case of force majeure; and
- (b) applied in a fair and transparent manner.

Article 43 - Duties of the Port State Contracting Party

1. The port State Contracting Party shall designate ports to which fishing vessels may be permitted entry for the purpose of landing, transshipment and/or provision of port services and shall to the greatest extent possible ensure that each designated port has sufficient capacity to conduct inspections pursuant to this Chapter. It shall transmit to the Executive Secretary a list of these ports. Any subsequent changes to the list shall be notified to the Executive Secretary no less than fifteen days before the change comes into effect.
2. The port State Contracting Party shall establish a minimum prior request period. The prior request period should be 3 working days before the estimated time of arrival. However the port State Contracting Party may make provisions for another prior request period, taking into account, inter alia, catch product type or the distance between fishing grounds and its ports. The port State Contracting Party shall advise the Executive Secretary of the prior request period.
3. The port State Contracting Party shall designate the competent authority which shall act as the contact point for the purposes of receiving requests in accordance with Article 45 (1, 2 and/or 3), receiving confirmations in accordance with Article 44.2 and issuing authorizations in accordance with paragraph 6. The port State Contracting Party shall advise the Executive Secretary about the competent authority name and its contact information.
4. The requirements contained in paragraphs 1, 2 and 3 do not apply to a Contracting Party that does not permit landings, transshipments, or use of ports by vessels entitled to fly the flag of another Contracting Party.
5. The port State Contracting Party shall forward a copy of the form as referred to in Article 45 (1 and 2) without delay to the flag State Contracting Party of the vessel and to the flag State Contracting Party of donor vessels where the vessel has engaged in transshipment operations.
6. Fishing vessels may not enter port without prior authorization by the competent authorities of the port State Contracting Party. Authorization to land or tranship shall only be given if the confirmation from the flag State Contracting Party as referred to in Article 44.2 has been received.
7. By way of derogation from paragraph 6 the port State Contracting Party may authorize all or part of a landing in the absence of the confirmation referred to in paragraph 6. In such cases the fish concerned shall be kept in storage under the control of the competent authorities. The fish shall only be released to be sold, taken over, produced or transported once the confirmation referred to in paragraph 6 has been received. If the confirmation has not been received within 14 days of the landing the port State Contracting Party may confiscate and dispose of the fish in accordance with national rules.
8. The port State Contracting Party shall without delay notify the master of the fishing vessel of its decision on whether to authorize or deny the port entry, or if the vessel is in port, the landing, transshipment and other use of port. If the vessel entry is authorized the port state returns to the master a copy of the form PSC 1 or 2 with Part C duly completed. This copy shall also be transmitted to the Executive Secretary without delay. In case of a denial the port state shall also notify the flag State Contracting Party.
9. In case of cancellation of the prior request referred to in Article 45, paragraph 2, the port State Contracting Party shall forward a copy of the cancelled PSC 1 or 2 to the flag State Contracting Party and the Executive Secretary.
10. Unless otherwise required in a recovery plan, the port State Contracting Party shall carry out inspections of at least 15 % of all such landings or transshipments during each reporting year.

In determining which vessels to inspect, port state Contracting Parties shall give priority to:

- (a) vessels that have been denied entry or use of a port in accordance with this Chapter or any other provision of the CEM; and
 - (b) requests from other Contracting Parties, States or RFMOs that a particular vessel be inspected.
11. Inspections shall be conducted by authorized Contracting Party inspectors who shall present credentials to the master of the vessel prior to the inspection.
 12. The port State Contracting Party may invite inspectors of other Contracting Parties to accompany their own inspectors and observe the inspection.
 13. An inspection of a vessel in port by a port State Contracting Party shall involve the monitoring of the entire landing or transshipment of fishery resources in that port, as applicable. During any such inspection, the port State Contracting Party shall, at a minimum:
 - (a) cross-check against the quantities of each species landed or transhipped,
 - (i) the quantities by species recorded in the logbook;
 - (ii) catch and activity reports; and
 - (iii) all information on catches provided in the prior notification (PSC 1 or 2);
 - (b) verify and record the quantities by species of catch remaining on board upon completion of landing or transshipment;
 - (c) verify any information from inspections carried out in accordance with Chapter VI;
 - (d) verify all nets on board and record mesh size measurements
 - (e) verify fish size for compliance with minimum size requirements;
 14. Each inspection shall be documented by completing form PSC 3 (port State Control inspection form) as set out in Annex IV.C. The inspectors may insert any comments they consider relevant. The master shall be given the opportunity to add any comments or objection to the report, and, as appropriate, to contact the relevant authorities of the flag State in particular where the master has serious difficulties in understanding the content of the report. The inspectors shall sign the report and request that the master sign the report. The master's signature on the report shall serve only as acknowledgment of the receipt of a copy of the report. The master of the vessel shall be provided with a copy of the report containing the result of the inspection, including possible measures that could be taken. A copy of the report shall be provided to the master.
 15. The port State Contracting Party shall without delay transmit a copy of each port State Control inspection report and, upon request, an original or a certified copy thereof, to the flag State Contracting Party and to the flag State of any vessel that transhipped catch to the inspected fishing vessel. A copy shall also be sent to the Executive Secretary without delay.
 16. The port State Contracting Party shall make all possible effort to communicate with the master or senior crew members of the vessel, including where possible and where needed, that the inspector is accompanied by an interpreter.
 17. The port State Contracting Party shall make all possible efforts to avoid unduly delaying the fishing vessel and ensure that the vessel suffers the minimum interference and inconvenience and that unnecessary degradation of the quality of the fish is avoided.

Article 44 - Duties of the Flag State Contracting Party

1. The flag State Contracting Party shall ensure that the master of any fishing vessel entitled to fly its flag complies with the obligations relating to masters set out in Article 45.
2. The flag State Contracting Party of a fishing vessel intending to land or tranship, or where the vessel has engaged in transshipment operations outside a port, the flag State Contracting Party or parties, shall confirm by returning a copy of the form, PSC 1 or 2, transmitted in accordance with Article 43.5 with part B duly completed, stating that:
 - (a) the fishing vessel declared to have caught the fish had sufficient quota for the species declared;
 - (b) the declared quantity of fish on board has been duly reported by species and taken into account for the calculation of any catch or effort limitations that may be applicable;
 - (c) the fishing vessel declared to have caught the fish had authorization to fish in the areas declared; and

- (d) the presence of the vessel in the area in which it has declared to have taken its catch has been verified by VMS data.
3. The flag State Contracting Party shall designate the competent authority, which shall act as the contact point for the purposes of receiving requests in accordance with Article 43.5 and providing confirmation in accordance with Article 43.6, and communicate this information to the NAFO Secretariat for dissemination to Contracting Parties.

Article 45 - Obligations of the Master of a Fishing Vessel

1. The master or the agent of any fishing vessel intending to enter port shall forward the request for entry to the competent authorities of the port State Contracting Party within the request period referred to in Article 43.2. Such request shall be accompanied by the form provided for in Annex II.L with Part A duly completed as follows:
 - (a) Form PSC 1, as referred to in Annex II.L.A shall be used where the vessel is carrying, landing or transshipping its own catch; and
 - (b) Form PSC 2, as referred to in Annex II.L.B, shall be used where the vessel has engaged in transshipment operations. A separate form shall be used for each donor vessel.
 - (c) Both forms PSC 1 and PSC 2 shall be completed in cases where a vessel carries, lands or transships its own catch and catch that was received through transshipment.
2. A master or the agent may cancel a prior request by notifying the competent authorities of the port they intended to use. The request shall be accompanied by a copy of the original PSC 1 or 2 with the word “cancelled” written across it.
3. The master of a fishing vessel shall:
 - (a) co-operate with and assist in the inspection of the fishing vessel conducted in accordance with these procedures and shall not obstruct, intimidate or interfere with the port State inspectors in the performance of their duties;
 - (b) provide access to any areas, decks, rooms, catch, nets or other gear or equipment, and provide any relevant information which the port State inspectors request including copies of any relevant documents.

Article 46 - Duties of the Executive Secretary

1. The Executive Secretary shall without delay post on the NAFO website:
 - (a) the list of designated ports and any changes thereto;
 - (b) the prior request periods established by each Contracting Party;
 - (c) the information about the designated competent authorities in each port State Contracting Party; and,
 - (d) the information about the designated competent authorities in each flag State Contracting Party.
2. The Executive Secretary shall without delay post on the secure part of the NAFO website:
 - (a) copies of all PSC 1 and 2 forms transmitted by port State Contracting Parties;
 - (b) copies of all inspection reports, as referred to in Annex IV.C (PSC 3 form), transmitted by port State Contracting Parties.
3. All forms related to a specific landing or transshipment shall be posted together.

Article 47 - Serious Infringements Detected During In-Port Inspections

1. The provisions in Articles 39 and 40 shall apply to any serious infringements listed in Article 38 detected during in-port inspections.
2. Serious infringements detected during in-port inspections shall be followed up in accordance with domestic law.

CHAPTER VIII NON-CONTRACTING PARTY SCHEME

Article 48 - General Provisions

1. The purpose of this Chapter is to promote compliance with non-Contracting Party vessels with recommendations established by NAFO and to prevent, deter and eliminate IUU fishing by non-Contracting Party vessels (hereinafter referred to as “NCP” vessels) that undermine the effectiveness of the Conservation and Enforcement Measures established by the Organization.
2. Nothing in this Chapter shall be construed to:
 - (a) affect the sovereign right of any Contracting Party to take additional measures to prevent, deter and eliminate IUU fishing by NCP vessels or, where evidence so warrants, take such action as may be appropriate, consistent with international law; or
 - (b) prevent a Contracting Party from allowing an NCP vessel entry into its ports for the purpose of conducting an inspection of, or taking appropriate enforcement action, which, if there is sufficient proof of IUU fishing, is at least as effective as denial of port entry in preventing, deterring and eliminating IUU fishing.
3. This Chapter shall be:
 - (a) interpreted in a manner consistent with international law, including the right of port access in case of force majeure or distress; and
 - (b) applied in a fair and transparent manner.
4. Each Contracting Party shall ensure that vessels entitled to fly its flag do not engage in joint fishing activities with NCP vessels referred to in Article 49, including receiving or delivering transshipments of fish to or from a NCP vessel.

Article 49 – Presumption of IUU fishing

1. An NCP vessel is presumed to have undermined the effectiveness of the CEM, and to have engaged in IUU fishing, if it has been:
 - (a) sighted or identified by other means as engaged in fishing activities in the Regulatory Area;
 - (b) involved in transshipment with another NCP vessel sighted or identified as engaged in fishing activities inside or outside the Regulatory Area; and/or
 - (c) included in the IUU list of the North East Atlantic Fisheries Commission (NEAFC);

Article 50 – Sighting and Inspection of NCP Vessels in the NRA

1. Each Contracting Party with an inspection and/or surveillance presence in the Regulatory Area authorized under the Joint Inspection and Surveillance Scheme that sights or identifies an NCP vessel engaged in fishing activities in the NRA shall:
 - (a) transmit immediately the information to the Executive Secretary using the format of the surveillance report set out in Annex IV.A;
 - (b) attempt to inform the Master that the vessel is presumed to be engaged in IUU fishing and that this information will be distributed to all Contracting Parties, relevant Regional Fisheries Management Organizations (RFMOs) and the flag State of the vessel;
 - (c) if appropriate, request permission from the Master to board the vessel for inspection; and
 - (d) where the Master agrees to inspection:
 - (i) transmit the inspector’s findings to the Executive Secretary without delay, using the inspection report form set out in Annex IV.B; and
 - (ii) provide a copy to the inspection report to the Master.

Duties of the Executive Secretary

2. The Executive Secretary, within one business day, posts the information received pursuant to this Article to the secure part of the NAFO website and distributes it to all Contracting Parties, other relevant RFMOs, and to the flag State of the vessel as soon as possible.

Article 51 – Port Entry and Inspection of NCP vessels

Duties of the Master of a NCP vessel

1. Each Master of a NCP vessel shall request permission to enter port from the competent authority of the port State Contracting Party in accordance with the provisions of Article 45.

Duties of the Port State Contracting Party

2. Each port State Contracting Party shall:
 - (a) forward without delay to the flag State of the vessel and to the Executive Secretary the information it has received pursuant to Article 45;
 - (b) refuse port entry to any NCP vessel where:
 - (i) the Master has not fulfilled the requirements set out in Article 45 paragraph 1; or
 - (ii) the flag State has not confirmed the vessel's fishing activities in accordance with Article 44 paragraph 2;
 - (c) inform the Master or agent, the flag State of that vessel, and the Executive Secretary of its decision to refuse port entry, landing, transshipment or other use of port of any NCP vessel;
 - (d) withdraw denial of port entry only if the port State has determined there is sufficient proof that the grounds on which entry was denied were inadequate or erroneous or that such grounds no longer apply.
 - (e) inform the Master or agent, the flag State of that vessel, and the Executive Secretary of its decision to withdraw denial of port entry, landing, transshipment or other use of port of any NCP vessel;
 - (f) where it permits entry, ensure the vessel is inspected by duly authorized officials knowledgeable in the CEM and that the inspection is carried out in accordance with Article 43 paragraphs 11 – 18 : and
 - (g) send a copy of the inspection report and details of any subsequent action it has taken to the Executive Secretary without delay.
3. Each port State Contracting Party shall ensure that no NCP vessel engages in landing, or transshipment operations or other use of its ports unless the vessel has been inspected by its duly authorized officials knowledgeable in the CEM and the Master establishes that the fish species on board subject to the NAFO Convention were harvested outside the Regulatory Area or in compliance with the CEM.

Duties of the Executive Secretary

4. The Executive Secretary shall without delay post the information received pursuant to this Article to the secure part of the NAFO website, and distributes it to all Contracting Parties, relevant RFMOs, the flag State of the vessel and the state of which the vessel's master is a national, if known.

Article 52 - Provisional IUU Vessel List

1. In addition to information submitted from Contracting Parties in accordance with Articles 49 and 51, each Contracting Party may, without delay, transmit to the Executive Secretary any information that may assist in identification of any NCP vessel that might be carrying out IUU fishing in the Regulatory Area.
2. If a Contracting Party objects to a NEAFC IUU-listed vessel being incorporated into or deleted from the NAFO IUU Vessel List in accordance with Article 53, such vessel shall be placed on the Provisional IUU Vessel List.

Duties of the Executive Secretary

3. The Executive Secretary:
 - (a) establishes and maintains a list of NCP vessels presumed to have engaged in IUU fishing in the Regulatory Area referred to as the Provisional IUU Vessel List;
 - (b) upon receipt, records the information received pursuant to paragraph 1, including, if available, the name of the vessel, its flag State, call sign and registration number, and any other identifying features, in the Provisional IUU Vessel List;
 - (c) posts the Provisional IUU Vessel List and all updates to the secure part of the NAFO website; and
 - (d) advises the flag State of the NCP vessel listing, including:

- (i) the reasons and supporting evidence;
 - (ii) a copy of the CEM and a link to its place on the NAFO website;
- (e) requests that the flag State of the NCP vessel:
 - (i) take all measures to ensure that the vessel immediately ceases all fishing activities that undermine the effectiveness of the CEM;
 - (ii) report within 30 days from the date of the request on the measures it has taken with respect to the vessel concerned; and
 - (iii) state any objections it may have to including the vessel in the IUU Vessel List;
- (f) transmits to the flag State of the NCP vessel any additional information received pursuant to Articles 49-51 in respect of vessels entitled to fly their flag that have already been included in the Provisional IUU Vessel List;
- (g) distributes any information received from the flag State to all Contracting Parties;
- (h) advises the flag State of the NCP vessel of the dates STACTIC and the General Council will consider listing the vessel in the IUU Vessel List, and invites the flag State to attend the meeting as an observer where it will be given the opportunity to respond to the report submitted in accordance with paragraph 3(e)(ii);
- (i) transfers the vessel from the Provisional IUU Vessel List to the IUU Vessel List in accordance with Article 53 if the flag State does not object; and
- (j) places all vessels included in the NEAFC IUU List on the IUU Vessel List unless a Contracting Party objects to such inclusion, in which case it places the vessel on the Provisional IUU Vessel List. Article 53 shall not apply to vessels placed on the Provisional IUU Vessel List in accordance with this paragraph.

Article 53 - IUU Vessel List

Listing a Vessel on the IUU Vessel List

1. STACTIC recommends to the Fisheries Commission whether each vessel listed in the Provisional IUU Vessel List should be:
 - (a) deleted from the Provisional IUU Vessel List;
 - (b) retained in the Provisional IUU Vessel List, pending receipt of further information from the flag State, or
 - (c) transferred to the IUU Vessel List only upon expiration of the period referred to in Article 52.3(e)(ii).

Deleting a Vessel from the IUU Vessel List

2. STACTIC may advise that the Fisheries Commission recommend that General Council delete a vessel from either the Provisional IUU Vessel List or the IUU Vessel List where it is satisfied that the flag State of a vessel concerned has provided sufficient evidence to establish that:
 - (a) it has taken effective action to address the IUU fishing of such vessel, including prosecution and imposition of sanctions of adequate severity;
 - (b) it has taken measures to prevent such vessel from engaging in further IUU fishing under its flag;
 - (c) such vessel has changed ownership, and
 - (i) the previous owner no longer has any legal, financial or real interest in such vessel, or exercises no control over it; or
 - (ii) the new owner has no legal, financial or real interest in, nor exercises control over, another vessel listed in the IUU Vessel List or any similar IUU list maintained by an RFMO, and has not otherwise been engaged in IUU activities;
 - (d) such vessel did not take part in IUU fishing; or,
 - (e) such vessel has sunk, been scrapped, or been permanently reassigned for purposes other than fishing activities.
3. The Fisheries Commission may recommend to the General Council any changes to listings in the IUU Vessel List. The General Council determines the final composition of the IUU Vessel List.

Duties of the Executive Secretary

4. The Executive Secretary:

- (a) posts the IUU Vessel List on the NAFO website, including the name and flag State and, if available, the call sign, hull number, IMO number, previous name(s) and flag(s) or any other identifying features for each vessel;
- (b) notifies the flag State of the name of each vessel entitled to fly its flag listed in the IUU Vessel List;
- (c) transmits the IUU Vessel List and any relevant information, including the reasons for listing or de-listing each vessel, to other RFMOs, including, in particular, the NEAFC, the South East Atlantic Fisheries Organisation (SEAFO), and the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR);
- (d) transmits the amendments to the NEAFC IUU list, upon receipt, to all Contracting Parties and amends the IUU Vessel List consistent with amendments to the NEAFC IUU List, within 30 days of such transmittal; unless within the 30 days the Executive Secretary receives from a Contracting Party a written submission establishing that:
 - (i) any of the requirements in paragraph 2(a)-(d) of this Article have been met with regard to a vessel placed on the NEAFC IUU List; or
 - (ii) none of the requirements in paragraph 2(a)-(d) of this Article have been met with regard to a vessel taken off the NEAFC IUU List; and
- (e) advises STACTIC of any action taken pursuant to this Article.

Article 54 - Action against vessels listed in the IUU Vessel List

Each Contracting Parties shall take all measures necessary to deter, prevent, and eliminate IUU fishing, in relation to any vessel listed in the IUU Vessel List, including:

- (a) prohibiting any vessel entitled to fly its flag, from, except in the case of force majeure, participating in fishing activities with such vessel, including but not limited to joint fishing operations;
- (b) prohibiting the supply of provisions, fuel or other services to such vessel;
- (c) prohibiting entry into its ports of such vessel, and if the vessel is in port, prohibiting use of port, except in the case of force majeure, distress, for the purposes of inspection, or for taking appropriate enforcement action;
- (d) prohibiting change of crew, except as required in relation to force majeure;
- (e) refusing to authorize such vessel to fish in waters under its national jurisdiction;
- (f) prohibiting chartering of such vessel;
- (g) refusing to entitle such vessels to fly its flag;
- (h) prohibiting landing and importation of fish from onboard or traceable to such vessel;
- (i) encouraging importers, transporters and other sectors concerned, to refrain from negotiating transshipment of fish with such vessels; and
- (j) collecting and exchanging any appropriate information regarding such vessel with the other Contracting Parties, non-Contracting Parties and RFMOs with the aim of detecting, deterring and preventing the use of false import or export certificates in relation to fish or fish product from such vessels.

Article 55 - Action Against Flag States

1. Contracting Parties shall jointly and/or individually request the cooperation of the flag State of each NCP vessel listed in the IUU Vessel List with a view to prevent, deter and eliminate future IUU activities by such vessel.
2. The Fisheries Commission shall review annually the actions taken by the flag States referred to in paragraph 1 with a view to identifying for follow-up action any that has not taken action sufficient to prevent deter and eliminate IUU activities by any vessel entitled to fly its flag listed in the IUU Vessel List.
3. Each Contracting Parties should, to the extent possible and consistent with its international obligations and in accordance with applicable legislation, restrict the export and transfer of any fishing vessel entitled to fly its flag to any State identified pursuant to paragraph 2.

Annex II.L
Port State Control Prior Request Forms
A-PSC-1

PORT STATE CONTROL FORM – PSC 1									
PART A: To be completed by the Master of the Vessel. Please use black ink									
Name of Vessel:		IMO Number: ¹		Radio Call Sign:		Flag State:			
Email Address:		Telephone Number:		Fax Number:		Inmarsat Number:			
Vessel master's name:		Vessel master's nationality:		Vessel owner:		Certificate of Registry ID:			
Vessel dimensions		Length (m):		Beam (m):		Draft (m):			
Port State:				Port of Landing or Transshipment:					
Last port of call:				Date:					
Estimated Date of Arrival:				Estimated Time (UTC) of Arrival:					
Frozen products only				Fresh products only					
Total catch on board – all areas							Catch to be landed ²		
Species ³	Product ⁴	Area of catch			Conversion factor	Product weight (kg)	Product weight (kg)		
		NEAFC CA (ICES subareas and divisions)	NAFO RA (Sub Division)	Other areas					
PART B: For official use only – to be completed by the Flag State									
The Flag State of the vessel must respond to the following questions by marking in the box "Yes" or "No"						NEAFC CA		NAFO RA	
						Yes	No	Yes	No
a) The fishing vessel declared to have caught the fish had sufficient quota for the species declared									
b) The quantities on board have been duly reported and taken into account for the calculation of any catch or effort limitations that may be applicable									
c) The fishing vessel declared to have caught the fish had authorisation to fish in the area declared									
d) The presence of the fishing vessel in the area of catch declared has been verified according to VMS data									
Flag State confirmation: <i>I confirm that the above information is complete, true and correct to the best of my knowledge and belief.</i>									



Name and Title:					Date:	
Signature:			Official Stamp:			
PART C: For official use only – to be completed by the Port State						
Name of Port State:						
Authorisation:	Yes:		No:		Date:	
Signature:			Official Stamp:			
¹ Fishing vessels not assigned an IMO number shall provide their external registration number ² If necessary an additional form or forms shall be used ³ FAO Species Codes – NEAFC Annex V - NAFO Annex I.C ⁴ Product presentations – NEAFC Appendix 1 to Annex IV – NAFO Annex II.K						

B-PSC-2

PORT STATE CONTROL FORM – PSC 2									
PART A: To be completed by the Master of the Vessel. A separate form shall be completed for each donor vessel. Please use black ink									
Name of Vessel:		IMO Number:¹		Radio Call Sign:		Flag State:			
Email Address:		Telephone Number:		Fax Number:		Inmarsat Number:			
Vessel master's name:		Vessel master's nationality:		Vessel owner:		Certificate of Registry ID:			
Vessel dimensions:		Length (m):		Beam (m):		Draft (m):			
Port State:				Port of Landing or Transhipment:					
Last port of call:				Date:					
Date and location of transhipment:				Transhipment authorisation if relevant:					
Estimated Date of Arrival:				Estimated Time (UTC) of Arrival:					
Frozen products only				Fresh products only					
Catch Information for Donor Vessels *A separate form shall be completed for each Donor Vessel*									
Name of Vessel			IMO Number¹		Radio Call Sign		Flag State		
Total catch on board – all areas						Catch to be landed²			
Species³	Product⁴	Area of catch			Conversion factor	Product weight (kg)	Product weight (kg)		
		NEAFC CA (ICES subareas and divisions)	NAFO RA (Sub Division)	Other areas					
PART B: For official use only - to be completed by the Flag State									
The Flag State of the vessel must respond to the following questions by marking in the box "Yes" or "No"						NEAFC CA		NAFO RA	
						Yes	No	Yes	No
a) The fishing vessel declared to have caught the fish had sufficient quota for the species declared									
b) The quantities on board have been duly reported and taken into account for the calculation of any catch or effort limitations that may be applicable									
c) The fishing vessel declared to have caught the fish had authorisation to fish in the area declared									
d) The presence of the fishing vessel in the area of catch declared has been verified according to VMS data									



Flag State confirmation: I confirm that the above information is complete, true and correct to the best of my knowledge and belief.					
Name and Title:				Date:	
Signature:			Official Stamp:		
PART C: For official use only - to be completed by the Port State					
Name of Port State:					
Authorisation:	Yes:		No:		Date:
Signature:			Official Stamp:		
¹ . Fishing vessels not assigned an IMO number shall provide their external registration number ² . If necessary an additional form or forms shall be used ³ . FAO Species Codes – NEAFC Annex V - NAFO Annex II ⁴ . Product presentations – NEAFC Appendix 1 to Annex IV – NAFO Annex II.K					

Annex IV C
Report on Port State Control inspection (PSC 3)
(Please use black ink)

A. INSPECTION REFERENCE.						Inspection report number:			
Landing	Yes	No	Transhipment	Yes	No	Other reason for port entry			
Port State						Port of landing or transhipment			
Vessel name			Flag State			IMO Number ¹		International Radio call sign	
Landing / transhipment Start Date						Landing / transhipment Start Time (UTC)			
Landing / transhipment End Date						Landing / transhipment End Time (UTC)			
Vessel master's name:			Vessel master's nationality:			Vessel's owner/operator:		Certificate of Registry ID:	
VMS:			Port of registry:			Fishing master's name:		Fishing master's nationality:	
Vessel's beneficial owner ² :			Vessel's agent:			Vessel Type:			
Last port of call:						Date:			
B. INSPECTION DETAILS									
Name of donor vessel ³			IMO Number ¹			Radio call sign		Flag State	
B1. CATCH RECORDED IN THE LOGBOOK									
Species ⁴			Area of catch			Declared live weight kg		Conversion factor used	

¹ Fishing vessels not assigned an IMO number shall provide their external registration number

² If known and if different from vessel's owner

³ In case where a vessel has engaged in transhipment operations, a separate form shall be used for each donor vessel.

⁴ FAO Species Codes – NEAFC Annex V - NAFO Annex I.C



B2. FISH LANDED OR TRANSHIPPED*

In case where a vessel has engaged in transshipment operations a separate form shall be used for each donor vessel.

Species ⁴	Product ⁵	Area of catch	Product weight landed in kg	Conversion factor	Equivalent live weight kg	Diff (kg) between live weight declared in the logbook and the live weight landed	Diff (%) between live weight declared in the logbook and the live weight landed	Diff (kg) between Product weight landed and PSC 1/2	Diff (%) between Product weight landed and PSC 1/2

RELEVANT TRANSHIPMENT AUTHORISATION:**B3. INFORMATION ABOUT LANDINGS AUTHORISED WITHOUT CONFIRMATION FROM THE FLAG STATE**

Ref. NEAFC art. 23.2 / NAFO art. 45.6

Name of Storage:	
Name of Competent Authorities:	
Deadline for receiving Confirmation:	

B4. FISH RETAINED ON BOARD

Species ⁴	Product ⁵	Area of catch	Product weight in kg	Conversion factor	Live weight kg	Diff. (kg) between product weight on board and PSC 1/2	Diff. (%) between product weight on board and PSC 1/2

C. RESULTS OF INSPECTION**C1. GENERAL**

Inspection Start Date:		Inspection Start Time (UTC):	
Inspection End Date:		Inspection End Time (UTC):	
Status in other RFMO areas where fishing activities have been undertaken, including any IUU vessel listing			
RFMO	Vessel identifier	Flag State status	Vessel on authorised vessel list

Observations:⁵ Product presentations – NEAFC Appendix 1 to Annex IV – NAFO Annex II.K

C2. GEAR INSPECTION IN PORT (In accordance with Article 43.13 (j))							
A. General data							
Number of gear inspected				Date gear inspection			
Has the vessel been cited?	Yes		No	If yes, complete the full "verification of inspection in port form. If no, complete the form with the exception of the NAFO seal details			
B. Otter Trawl details							
NAFO Seal number				Is seal undamaged?	Yes		No
Gear type							
Attachments							
Grate Bar Spacing (mm).							
Mesh type							
Average mesh sizes (mm)							
Trawl part							
Wings							
Body							
Lengthening Piece							
Codend							
D. Observations by the master:							
<p>I,the undersigned, Master of the vesselhereby confirm that a copy of this report have been delivered to me on this date. My signature does not constitute acceptance of any part of the contents of this report, except my own observations, if any.</p> <p>Signature: _____ Date : _____</p>							
E. INFRINGEMENTS AND FOLLOW-UP							
E.1 NAFO							
E.1 A At Sea Inspection							
Infringements resulting from Inspections inside NAFO R.A.							
Inspection Party	Date of inspection		Division		NAFO CEM infringement legal reference		
E.1 B Port Inspection Infringements results							
(a) - Confirmation of Infringements found at sea inspection							
NAFO CEM infringement legal reference				National Infringement legal reference			
(b) - Infringements found at sea inspection and not possible to be confirmed during the Port Inspection.							
Comments:							

(c) - Additional infringements found during the Port Inspection		
NAFO CEM infringement legal reference	National Infringement legal reference	
E2. NEAFC INFRINGEMENT NOTED		
Article	NEAFC provision(s) violated and summary of pertinent facts	
Inspector's observations:		
Action taken:		
Inspecting authority/agency:		
Inspectors Name	Inspectors signature	Date and place
F. DISTRIBUTION		
Copy to flag State	Copy to NEAFC Secretary	Copy to NAFO Executive Secretary

ANNEX

Inspectors shall:

- (a) verify, to the extent possible, that the vessel identification documentation on board and information relating to the owner of the vessel is true, complete and correct, including through appropriate contacts with the flag State or international records of vessels if necessary;
- (b) verify that the vessel's flag and markings (e.g. name, external registration number, International Maritime Organization (IMO) ship identification number, international radio call sign and other markings, main dimensions) are consistent with information contained in the documentation;
- (c) review all other relevant documentation and records held onboard, including, to the extent possible, those in electronic format and vessel monitoring system (VMS) data from the flag State or RFMOs. Relevant documentation may include logbooks, catch, transshipment and trade documents, crew lists, stowage plans and drawings, descriptions of fish holds, and documents required pursuant to the Convention on International Trade in Endangered Species of Wild Fauna and Flora;
- (d) verify, to the extent possible, that the authorizations for fishing activities are true, complete, correct and consistent with the information provided in accordance with the CEM provisions including, but not limited to, Articles 25, 44, 45 and 51;
- (e) determine, to the extent possible, whether any fishery resources on board were harvested in accordance with applicable authorizations for the vessel;
- (f) examine any fishery resources on board the vessel, including by sampling, to determine its quantity and composition. In doing so, inspectors may open containers where the fishery resources have been pre-packed and move the catch or containers to ascertain the integrity of fish holds. Such examination may include inspections of product type and determination of nominal weight;
- (g) examine, to the extent possible, all relevant fishing gear onboard, including any gear stowed out of sight as well as related devices, and to the extent possible, verify that they are in conformity with the conditions of the authorizations. The fishing gear shall, to the extent possible, also be checked to ensure that features such as the mesh and twine size, devices and attachments, dimensions and configuration of nets, pots, dredges, hook sizes and numbers are in conformity with applicable regulations and that the markings correspond to those authorized for the vessel;
- (h) evaluate whether there is clear evidence for believing that a non-Contracting Party vessel has engaged in IUU fishing activities; and
- (i) arrange, where necessary and possible, for translation of relevant documentation.

Additionally inspections shall be conducted in a fair, transparent and non-discriminatory manner and shall not constitute harassment of any vessel. Inspectors shall not interfere with the master's ability to communicate with the authorities of the flag State Contracting Party.

Annex 16. Notification process for the closure of directed fishing in the Regulatory Area for a particular stock under an “Others” Quota (STACTIC WP 16-15 now FC Doc. 16-07)

Explanatory memorandum

The closure of an “Others” quota within fisheries in Annex I A. relies heavily on timely notifications from the NAFO Executive Secretary.

At the May 2016 Intersession meeting in London, the NAFO Secretariat sought guidance from STACTIC WG on whether the Secretariat is required to Notify Contracting Parties after the 5-day prior notification, when 100 % of the “Others” quota uptake is projected to be reached. In considering the request it was agreed that clarification in the NCEM was required. Canada agreed to review Article 5.5 (g) **Closure of Fisheries for Stocks Listed in Annex I.A and I.B Subject to Quota or Fishing Effort - Duties of the Executive Secretary** and draft a proposal which will include revised text that further clarifies the article.

The amendments outlined below clarify that Contracting Parties shall ensure that no vessel continue a directed fishery in the Regulatory Area for a particular stock under an “Others” quota after 5 days of notification according to Article 5.15. Separately, the amendment clearly states that no Contracting Party should commence a directed fishery for a stock under an “Others” quota anytime following notification by the Executive Secretary that the “Others” quota is projected to be taken.

In addition to clarify these provisions apply only to “Others” quota, the term “subject to” has been changed to “under”.

New edit of Article 5.5 (g) – Closure of Fisheries for Stocks Listed in Annex I.A and I.B Subject to Quota or Fishing Effort

Duties of the Contracting Party

The current text in 5.5 (g) (below) is being replaced with the proposed amended text:

- (g) ~~ensure that no vessels entitled to fly its flag commence or continue a directed fishery in the Regulatory Area for a particular stock subject to an “Others” quota within 7 days of notification by the Executive Secretary that the quota is taken;~~

Proposed text:

- (g) ensure that no vessel entitled to fly its flag **continues a directed fishery in the Regulatory Area for a particular stock under an “Others” quota beyond 5 days of notification** by the Executive Secretary that that particular “Others” quota is projected to be taken, in accordance with paragraph 15 of this Article;

The following text is proposed to be inserted as 5.5 (h):

- (h) **ensure that no vessel entitled to fly its flag commences a directed fishery in the Regulatory Area for a particular stock under an “Others” quota following notification by the Executive Secretary that that particular Others quota is projected to be taken, in accordance with paragraph 15 of this Article; and**

The current text in 5.5 (h) (below) will now move to be referenced as 5.5 (i):

- (i) ensure that, after a closure of its fishery in accordance with this paragraph, no more fish of the stock concerned is retained on board the vessels entitled to fly its flag unless otherwise authorized by the CEM.

Duties of the Executive Secretary

The current text in 5.15 (d) ii (below) is being replaced with the proposed amended text:

- (d) notifies all Contracting Parties by electronic means 5 calendar days in advance of the date on which the available data indicates that total reported catch, including discards, is projected to:
 - (i) reach 50% of the TAC, for Redfish in Division 3M and in Sub Area 2 and Division 1F + 3K;
 - (ii) Equals 80 % and then 100% of the TAC for any particular stock subject to the others “Others” quota, when such quota exists in accordance with Annex I.A;
 - (iii) reach 100% of an “Others” quota, when such quota exists in accordance with Annex I.A;

Annex 17. Development of the NAFO MCS website and updating of the CEM text to formalize report posting obligations

(STACTIC WP 16-17 Rev. **now** FC Doc. 16-08)

At its 2016 Intersessional meeting, STACTIC adopted the Working Paper 16-07 Rev. 2, with the scope to enhance the use of the NAFO MCS Website to store reports related to fishing activities in NAFO waters in a single location within the Website, from where they will be disseminated to authorized recipients as provided by the CEM, and accessed for related MCS purposes.

For each report concerned, the transmission format and flow for storage on the NAFO MCS Website are detailed in Table 1 of the WP 16-07. It was agreed that the European Union would move forward with the proposal presented in STACTIC WP 16-07 Rev. 2 and would provide draft changes to the text of the NAFO CEM prior to the 2016 Annual Meeting.

Below are, for adoption, the draft changes to the NAFO CEM text proposed by the EU, implementing the new transmission flow adopted by STACTIC under the WP 16-07 Rev. 2, following the same sequence.

Section 0: Notification of vessels fishing on the “Others” quota

Article 5.3 (e)
Quotas and Effort
..... each Contracting Party shall:
(e) posts to the NAFO MCS Website the names of vessels that intend to fish the “Others” quota at least 48 hours in advance of each entry, and after a minimum of 48 hours of absence from the Regulatory Area. This notification shall, if possible, be accompanied with an estimate of the projected catch;
Article 5.15 – new (i)
Duties of the Executive Secretary
9. The Executive Secretary:
(i) ensures that the notification posted to the NAFO MCS Website in accordance with subparagraph 5.3 (e) is automatically transmitted to Contracting Parties with an inspection presence in the Regulatory Area.

Section 1: Catch Reporting by Vessels

COE; COX; CAT; COB; TRA; POR; CANCEL reports

Article 28.9.a and b
Duties of the Executive Secretary
9. The Executive Secretary:
(a) assigns sequential numbers to the reports of each Contracting Party listed in paragraph 6, including any cancellation reports, then posts them to the NAFO MCS Website and ensures that they are automatically transmitted to Contracting Parties with an inspection presence in the Regulatory Area as soon as possible;
(b) ensures that each port of landing report (POR) posted to the NAFO MCS Website is automatically transmitted to the flag State Contracting Party of the receiving vessel and, in conformity with Annex II.B, to all Contracting Parties;

Section 2: VMS
ENT; POS; EXI reports

Article 29.10.b

Duties of the Executive Secretary

10. The Executive Secretary:

- (b) posts as soon as possible the VMS position data listed in paragraph 2 (a) to the NAFO MCS Website and ensures that they are automatically made available to all Contracting Parties with an inspection presence in the Regulatory Area;

Section 3: Observer Scheme:
Notification of observers

Article 30.A.2

Duties of the Flag State Contracting Party

- 2. Every flag State Contracting Party shall post to the NAFO MCS Website, in PDF format, a list of the observers it intends to deploy to the vessels entitled to fly its flag operating in the Regulatory Area and shall ensure that the observers on board such vessels carry out only the following duties:

Observer reports

Article 30.A.2.h

Duties of the Flag State Contracting Party

- (h) as soon as possible after leaving the Regulatory Area, and at the latest at arrival of the vessel in port, submit the report, as set out in Annex II.M, in electronic format, to the flag State Contracting Party and, if an inspection in port occurs, to the local port inspection authority. The flag State Contracting Party forwards the report to the Executive Secretary, in Microsoft Excel File format, within 30 days following the arrival of the vessel in port.

Article 30.A.7.a and b

Duties of the Executive Secretary

7. The Executive Secretary:

- (a) posts to the NAFO MCS Website a copy the observer report in PDF format, and
- (b) ensures that any Contracting Party:
 - (i) with an inspection presence in the Regulatory Area, is automatically provided with a copy of the report referred to in paragraph 2(g h), including individual hauls and co-ordinates;
 - (ii) without an inspection presence in the Regulatory Area, upon request, is provided with a copy of the report referred to in paragraph 2(g h), providing daily catch totals by species and division.

Notification of electronic reporting

Article 30.B.2.a
Duties of the Flag State Contracting Party
<p>2. Each Contracting Party that intends to apply paragraph B.1 shall:</p> <p>(a) no later than 30 days prior to the start of its fishing season, post in PDF format to the NAFO MCS Website notification of its intention and, before it authorizes a vessel to operate in accordance with this Article, of the name of such vessel and the period of time during which it will not carry an observer.</p>
Article 30.B.9.a
Duties of the Executive Secretary
<p>9. The Executive Secretary:</p> <p>(a) ensures that the information posted to the NAFO MCS Website in accordance with subparagraph B.2(a) is automatically transmitted as soon as possible to all Contracting Parties</p>

OBR reports

Article 30.B.9.b
Duties of the Executive Secretary
<p>9. The Executive Secretary:</p> <p>(b) posts to the NAFO MCS Website the OBR reports received in accordance with paragraphs B.6. Where any such report has not been received for 2 consecutive days, notifies the flag State Contracting Party and any Contracting Party with an inspection presence in the Regulatory Area;</p>

Section 4: Sea Inspection Scheme:
Notification requirements

Article 32.1.a to c
<i>Notification Requirements</i>
<p>1. Each Contracting Party shall, no later than 1 December each year, posts to the NAFO MCS Website, in PDF format, notification of:</p> <p>(a) the names of inspectors and inspector trainees and the name, radio call sign and communication contact information of each inspection platform it has assigned to the Scheme. It shall notify changes to the particulars so notified, whenever possible, no less than 60 days in advance;</p> <p>(b) its provisional plan for assigning inspectors and platforms to this Scheme in the following calendar year;</p> <p>(c) the particulars for communicating to its competent authority immediate notification of infringements in the Regulatory Area, and</p> <p>(d) any subsequent changes to the information provided above under a, b or c in replacement of the previous one, no less than 15 days before the change comes into effect.</p>
Article 32.3.a
<i>Duties of the Executive Secretary</i>
<p>3. The Executive Secretary:</p> <p>(a) ensures that the information referred to in paragraph 1 (a to d) is automatically made available to all Contracting Parties; and</p>

Surveillance reports**Article 33.1.c and 33.2*****Surveillance procedures***

1. Where an inspector observes in the Regulatory Area a fishing vessel entitled to fly the flag of a Contracting Party for which the position and catch reports do not correspond with the current information available to that inspector, and where an immediate inspection is not practicable, the inspector shall:
 - (c) without delay electronically transmit the Surveillance Report and images to the inspecting Contracting Party, who without delay will post them to the NAFO MCS Website for automatic transmission to the flag State Contracting Party of the vessel.
2. Each Contracting Party shall:
 - (a) on receipt of a Surveillance Report concerning a vessel entitled to fly its flag, whenever possible, promptly board the vessel and conduct such investigation as may be necessary to determine appropriate follow-up action, and
 - (b) post the final report of such investigation in PDF format to the NAFO MCS Website.

Article 33.3***Duties of the Executive Secretary***

3. The Executive Secretary ensures that:
 - (a) the Surveillance Reports and images referred to in paragraph 1 (c) are automatically transmitted to the flag State Contracting Party of the vessel concerned, and
 - (b) the final reports referred to in paragraph 2 (b) are automatically transmitted to Contracting Parties with an inspection presence in the Regulatory Area.

Sea Inspection reports**Article 36.3 a to c*****Inspection reports and follow-up***

3. The inspecting Contracting Party shall:
 - (a) post a copy of the sea inspection report in PDF format to the NAFO MCS Website, if possible within 30 days of the inspection, for automatic transmission to the flag State Contracting Party of the inspected vessel;
 - (b) where the inspectors issues a notice of an infringement, within 10 days of the inspection vessel's return to port, post a copy of the sea inspection report to the NAFO MCS Website in PDF format with supporting documents, including copies of any images recorded, for automatic transmission to the flag State Contracting Party of the inspected vessel. The inspecting Contracting Party shall treat this information as confidential in accordance with Annex II.B;

New paragraph 6 to be inserted in Article 36***Duties of the Executive Secretary***

6. The Executive Secretary :
 - (a) ensures that the sea inspection reports referred to in paragraphs 3 (a) and 3 (b) are automatically transmitted
 - i. to the flag State Contracting Party of the inspected vessel;
 - ii. to the port State Contracting Party, on demand of that Contracting Party and in support of the port inspection of the inspected vessel concerned, should the flag State Contracting Party be different;
 - (b) treats the related information as confidential in accordance with Annex II.B.

Section 5: Port State Control***Designated ports*****Article 43.1*****Duties of the Port State Contracting Party***

1. The port State Contracting Party shall post to the NAFO MCS Website, in PDF format, a list of designated ports to which fishing vessels may be permitted access for the purpose of landing or transshipment. Any subsequent changes to the list shall be posted in replacement of the previous one no less than fifteen days before the change comes into effect.

Prior Notification Period**Article 43.2****2. *Duties of the Port State Contracting Party***

The port State Contracting Party shall establish a minimum prior notification period. The prior notification period should be 3 working days before the estimated time of arrival. However the port State Contracting Party may make provisions for another prior notification period, taking into account, inter alia, distance between fishing grounds and its ports. The port State Contracting Party shall post the prior notification period to the NAFO MCS Website, in PDF format.

Competent Authority**Article 43.3****3. *Duties of the Port State Contracting Party***

The port State Contracting Party shall designate the competent authority which shall act as the contact point for the purposes of receiving notifications in accordance with Article 45 (1, 2 and/or 3), receiving confirmations in accordance with Article 44.2 and issuing authorizations in accordance with paragraph 6. The port State Contracting Party shall post to the NAFO MCS Website, in PDF format, the competent authority name and its contact information.

PSC 1 and PSC 2 decision**Article 43.8****8. *Duties of the Port State Contracting Party***

The port State Contracting Party shall without delay notify the master of the fishing vessel of its decision on whether to authorize the landing or transshipment by returning a copy of the form PSC 1 or 2 with Part C duly completed. This copy shall also be posted to the NAFO MCS Website, in PDF format, without delay.

PSC 1 and PSC 2 cancellation**Article 43.9****9. *Duties of the Port State Contracting Party***

In case of cancellation of the prior notification referred to in Article 45, paragraph 2, the port State Contracting Party shall post a copy of the cancelled PSC 1 or 2 to the NAFO MCS Website, in PDF format, for automatic transmission to the flag State Contracting Party.

Port Inspection reports**Article 43.15****15. Duties of the Port State Contracting Party**

The port State Contracting Party shall without delay post a copy of each port State Control inspection report to the NAFO MCS Website, in PDF format, for automatic transmission to the flag State Contracting Party and to the flag State of any vessel that transhipped catch to the inspected fishing vessel. The port State Contracting party transmits an original or a certified copy of the inspection report to any such flag States, upon request.

Duties of the Executive Secretary**Article 46****Duties of the Executive Secretary**

1. The Executive Secretary ensures that the following information is automatically made available to all Contracting Parties:
 - (a) the list of designated ports;
 - (b) the prior notification periods established by each port State Contracting Party;
 - (c) the information about the designated competent authorities in each port State Contracting Party;
 - (d) the information about the designated competent authorities in each flag State Contracting Party, and
 - (e) copies of all PSC 1 and 2 forms transmitted by port State Contracting Parties;
2. The Executive Secretary ensures that copies of all inspection reports, as referred to in Annex IV.C (PSC 3 form), posted by port State Contracting Parties to the NAFO MCS Website are automatically transmitted to the flag State Contracting Party and to the flag State of any vessel that transhipped catch to the inspected fishing vessel
3. All forms related to a specific landing or transhipment shall be posted together.

GHL landings**Article 10.5. c and e****Control Measures**

- (c) Each Contracting Party shall post to the NAFO MCS Website, in PDF format, the name of every port it has so designated. Any subsequent changes to the list shall be posted in replacement of the previous one no less than fifteen days before the change comes into effect;
- (e) Each Contracting Party shall inspect each landing of Greenland halibut in its ports and prepare an inspection report in the format prescribed in Annex IV.C, which it post to the NAFO MCS Website, in PDF format, within 14 working days from the date on which the inspection was completed.

Article 10.8.b and c

8. The Executive Secretary ensures that:
 - (b) the list of designated ports posted by the Contracting Parties for the purpose of this Article as well as any subsequent changes is automatically transmitted to all Contracting Parties;
 - (c) any port inspection report posted to the NAFO MCS Website in accordance with subparagraph 5(e) is transmitted to any Contracting Party that requests it; and

Annex 18. Electronic Notification and Authorization (Article 25) and Electronic Catch Reporting (Article 28)

(STACTIC WP 16-29 Rev. **now** FC Doc. 16-09 Rev.)

The NAFO Conservation and Enforcement Measures prescribe electronic notification and authorization in Article 25 and electronic catch reporting in Article 28. Details regarding data elements and required information in various reports are indicated in the tables in Annexes II.C to II.G. It has become apparent that ambiguous definitions relating to certain data elements, coupled with the lack of some tangible examples, have contributed to inconsistencies in electronic reporting by Contracting Parties.

During the 2015 STACTIC Intersessional, this matter was referred to the JAGDM group for clarification and advice with a view to amending the pertinent tables in the Annexes with clear definitions and tangible examples of the correct reporting format.

JAGDM tasked representatives from Norway and Canada with reviewing the Annexes to identify data elements requiring improvement and to propose new definitions and examples of the required format. This proposal focuses on some minor but important changes to Annex II.D. Part C, Annexes II.E, and II.F. Concentration was placed on the data field codes SQ, DA, TI, RN, RD and RT, and wording to encapsulate the process when vessel reports are forwarded to the NAFO Secretariat via the flag State Fisheries Monitoring Centre (FMC). Additional references to other Annexes have been included as well to better understand the proposed changes.

Below are the edits recommended by JAGDM to help clarify the data elements.

Annex II.D
C. Format for electronic exchange of fisheries monitoring information
(The North Atlantic Format)

Category	Data Element	Field code	Type	Contents	Definitions
System	Start Record	SR			Indicates start of the record
Details	End Record	ER			Indicates end of the record
	Return Status	RS	Char*3	Codes	ACK / NAK = Acknowledged / Not Acknowledged
	Return Error Number	RE	Num*3	001 – 999	Codes indicating errors as received at operation centre, see Annex II.D.D(2)
Message	Address destination	AD	Char*3	ISO-3166 Address	Address of the party receiving the message, “XNW” for NAFO
Details	From	FR	Char*3	ISO-3166 Address	Address of the transmitting party, (Contracting Party)
	Type of Message	TM	Char*3	Code	Code for the message type
	Sequence Number	SQ	Num*6	NNNNNN	Serial number of messages sent from a vessel to the final destination (XNW). It is unique for each vessel for a calendar year. At the beginning of the current year this value will be reset to 1 for each vessel and will increment at the sending of each message. Message serial number
	Record Number	RN	Num*6	NNNNNN	Serial number of records sent from the FMC to XNW. It is unique for each FMC for a calendar year. At the beginning of the current year this value will be reset to 1 and will increment at the sending of each record. Serial number of the record in the relevant year
	Record Date	RD	Num*8	YYYYMMDD	Year, month and date day in UTC from the FMC
	Record Time	RT	Num*4	HHMM	Hours and minutes in UTC from the FMC
	Date	DA	Num*8	YYYYMMDD	Year, month and date day in UTC of first transmission. In cases of RET messages first transmission is from the FMC, in all other cases first transmission is from the vessel, mostly at the vessel (For RET at the FMC)
	Time	TI	Num*4	HHMM	Hours and minutes in UTC of first transmission. In cases of RET messages first transmission is from the FMC, in all other cases first transmission is from the vessel, mostly at the vessel (For RET at the FMC)
	Cancelled report	CR	Num*6	NNNNNN	Record Number of the record to be cancelled
	Year of the report cancelled	YR	Num*4	NNNN	Year in UTC of the report to be cancelled
Vessel	Radio Call Sign	RC	Char*7	IRCS Code	International Radio Call Sign of the vessel
Registration	Vessel name	NA	Char*30		Name of the vessel
Details	Ext. registration	XR	Char*14		Side Number of the vessel
	Flag State	FS	Char*3	ISO-3166	State of registration
	Contracting Party internal ref. number	IR	Char*3 Num*9	ISO-3166 +max. 9N	Unique vessel number attributed by the flag State in accordance with registration
	Port Name	PO	Char*20		Port of registration of the vessel/homeport
	Vessel Owner	VO	Char*60		Name and address of the vessel owner
	Vessel Charterer	VC	Char*60		Name and address of the vessel charterer
Vessel IMO Number	IMO Number	IM	Num*7	NNNNNNN	IMO ship identification number

Vessel Character. Details	Vessel Tonnage Unit	VT	Char*2 Num*4	“OC”/“LC” Tonnage	According to: “OC” OSLO 1947 Convention /“LC” LONDON ICTM-69
	Vessel Power Unit	VP	Char*2 Num*5	0-99999	Total main engine power in “KW”
	Vessel Length	VL	Char*2 Num*3	“OA” Length in meters	Unit “OA” length overall. Total length of the vessel in meters, rounded to the nearest whole meter
	Vessel Type	TP	Char*3	Code	As listed in Annex II.I
	Fishing Gear	GE	Char*3	FAO Code	International Standard Statistical Classification of the Fishing Gear as Annex II.J
Authorization details	Start Date	SD	Num*8	YYYYMMDD	Licence detail; date on which the authorization starts
	End Date	ED	Num*8	YYYYMMDD	Licence detail; date on which the authorization ends
	Targeted species and Area	TA	Char*3 Char*10	Stock specifications, FAO Species code and NAFO defined area code or “ANY”	Species and area allowed for directed fishery. Regulated species of Annex I.A or I.B must refer to the stock specification. For unregulated species use Sub Area or division or “ANY”. Allow for several pairs of fields. e.g. //TA/GHL 3LMNO COD 3M RED 3LN RED 3M HER ANY//
Activity Details	Latitude	LA	Char*5	NDDMM (WGS-84)	e.g. //LA/N6235 = 62°35' North
	Longitude	LO	Char*6	E/WDDMM (WGS-84)	e.g. //LO/W02134 = 21°34' West
	Latitude (decimal)	LT	Char*7	+/-DD.ddd	Value negative if latitude is in the southern hemisphere ¹ (WGS84)
	Longitude (decimal)	LG	Char*8	+/-DDD.ddd	Value negative if longitude is in the western hemisphere ¹ (WGS84)
	Trip Number	TN	Num*3	001-999	Number of the fishing trip in current year
	Catch Species Quantity	CA	Char*3 Num*7	FAO species code 0-9999999	Daily catch by species and by Division, retained on board, in kilograms live weight
	Quantity onboard Species Quantity	OB	Char*3 Num*7	FAO species code 0-9999999	Total quantity by species on board the vessel at the moment of sending the hail message concerned in kilograms live weight
	Discard Species Quantity	RJ	Char*3 Num*7	FAO species code 0 - 9999999	Catch discarded by species and by Division in kilograms live weight
	Undersize Species Quantity	US	Char*3 Num*7	FAO species code 0 - 9999999	Undersize catch by species and by Division in kilograms live weight
	Transferred species Species Quantity	KG	Char*3 Num*7	FAO species code 0-9999999	Information concerning the quantities transferred between vessels by species in kilograms live weight rounded to the nearest 100 Kg. whilst operating in the R.A.
	Relevant Area	RA	Char*6	ICES/NAFO Codes	Code for the relevant fishing area
	Directed Species	DS	Char*3	FAO species codes	Code for the species the vessel is targeting. Allow for several species, separated by a space. e.g. //DS/species species species//
	Observer on board	OO	Char*1	Y or N	Presence of a compliance observer on board
	Transhipped From	TF	Char*7	IRCS Code	International Radio Call Sign of the donor vessel
	Transhipped To	TT	Char*7	IRCS Code	International Radio Call Sign of the receiving vessel
	Master Name	MA	Char*30		Name of the vessels master
	Coastal State	CS	Char*3	ISO-3166 3 Alpha Code	Coastal State of Port of Landing
	Predicted Date	PD	Num*8	YYYYMMDD	Estimated date UTC when the master intends to be in port

Predicted Time	PT	Num*4	HHMM	Estimated time UTC when the master intends to be in port
Port Name	PO	Char*20		Name of the actual port of landing
Speed	SP	Num*3	Knots*10	e.g. //SP/105 = 10.5 knots
Course	CO	Num*3	360° degree scale	e.g. //CO/270 = 270
Chartering Flag Catches	CH	Char*3	ISO-3166	Flag of Chartering Contracting Party
Area of Entry	AE	Char*6	ICES/NAFO Codes	NAFO Division entering into
Days fished	DF	Num*3	1-365	Number of days the vessel spent in the fishing zone during the trip.
Apparent Infringement	AF	Char*1	Y or N	For onboard observer to report his observations
Mesh Size	ME	Num*3	0 – 999	Average mesh size in millimetres
Production	PR	Char*3	Code	Code for the production Annex II.K
LogBook	LB	Char*1	Y or N	For onboard observer to approve the entries in the vessels logbook
Hails	HA	Char*1	Y or N	For onboard observer to approve the hails sent from the vessel
Observer Name	ON	Char*30	Text	Name of the onboard observer
Free Text	MS	Char*255	Text	Activity detail; for further comments by observer

¹ The plus sign (+) does not need to be transmitted; leading zeros can be omitted.

Annex II.E

VMS Data Format

Format specifications when sending reports from FMC to NAFO (XNW) see also Annex II.D.A,II.D.B,II.D.C and II.D.D.1

Data Element	Field Code	Mandatory / Optional	Remarks
Start record	SR	M	System detail; indicates start of record
Address	AD	M	Message detail; destination; “XNW” for NAFO
From	FR	M	Message detail; Name of transmitting Party (ISO-3)
Sequence Number	SQ	M¹	Message detail; message serial number in current year
Record Number	RN	M	Message detail; Unique serial number starting at 1 each year for records sent from the FMC to (XNW) (See also Annex II.D.C)
Record Date	RD	M	Message detail; Year, month and day in UTC of the record transmission from the FMC
Record Time	RT	M	Message detail; Hours and minutes in UTC of the record transmission from the FMC
Type of Message	TM ⁴	M	Message detail; message type, “POS” as Position report/message to be communicated by VMS or other means by vessels with a defective satellite tracking device
Radio call sign	RC	M	Vessel registration detail; international radio call sign of the vessel
Sequence Number	SQ	M¹	Message detail; Unique serial number starting at 1 each year for messages sent from a vessel to final destination (XNW) (See also Annex II.D.C) message serial number in current year
Trip Number	TN	O	Activity detail; fishing trip serial number in current year
Vessel Name	NA	O	Vessel registration detail; name of the vessel
Contracting Party Internal Reference Number	IR	O	Vessel registration detail. Unique Contracting Party vessel number as ISO-3 flag State code followed by number
External Registration Number	XR	O	Vessel registration detail; the side number of the vessel
Latitude	LA	M ²	Activity detail; Latitude at the fixing of the position transmitted from the vessel position at time of transmission
Longitude	LO	M ²	Activity detail; Longitude at the fixing of the position transmitted from the vessel position at time of transmission
Latitude (decimal)	LT	M ³	Activity detail; Latitude at the fixing of the position transmitted from the vessel position at time of transmission
Longitude (decimal)	LG	M ³	Activity detail; Longitude at the fixing of the position transmitted from the vessel position at time of transmission
Speed	SP	M	Activity detail; Speed at the fixing of the position transmitted from the vessel time of transmission
Course	CO	M	Activity detail; Course at the fixing of the position transmitted from the vessel time of transmission
Date	DA	M	Message detail; UTC date of the fixing of the position transmitted from the vessel date of transmission
Time	TI	M	Message detail; UTC time of the fixing of the position transmitted from the vessel time of transmission
End of record	ER	M	System detail; indicates end of the record

¹ Optional in case of a VMS message.

² Mandatory for manual messages.

³ Mandatory for VMS messages.

⁴ Type of message shall be “ENT” for the first VMS message from the Regulatory Area as detected by the FMC of the Contracting Party.

Type of message shall be “EXI” for the first VMS message from outside the Regulatory Area as detected by the FMC of the Contracting Party, and the values for latitude and longitude are, in this type of message, optional.

Type of message shall be “MAN” for reports communicated by vessels with a defective satellite tracking device in accordance with Article 29.8.

Annex II.F

Format for the Communication of Catches and Reports by Fishing Vessels, [and when forwarded by Contracting Parties to the Secretary](#)

- 1) The sequence of messages that fishing vessels shall communicate electronically via the FMC to the Secretariat shall be as follows:

Report	Code	Requirements for the field
Catch on Entry	COE	6 hours in advance of the vessels entry into the RA.
Entry	ENT	The first position report from a vessel detected to be inside the RA.
Position	POS	Position report every hour
Catch	CAT	Reporting of catches; on a daily basis, for all species by Division.
Cross Boundary	COB	Reporting of catches; prior to crossing the boundary to 3L as appropriate.
Transshipment	TRA	Report on quantities to be on-loaded (receiving vessel) or off-loaded (donor vessel), for each transshipment.
Catch on Exit	COX	6 hours in advance of the vessels departure from the RA.
Exit	EXI	The first position report from a vessel detected to be outside the RA.
Port of Landing	POR	Report (receiving vessel) on catch onboard to be landed, for each landing after transshipment.

2) “Catch on ENTRY” report

Format specifications when sending reports from FMC to NAFO (XNW) see also Annex II.D.A,II.D.B,II.D.C and II.D.D.1

Data Element	Field Code	Mandatory/Optional	Requirements for the field
Start record	SR	M	System detail; indicates start of record
From	FR	M	Message detail: Address of the transmitting party (ISO- 3). Name of transmitting Party
Address	AD	M	Message detail; destination, “XNW” for NAFO
Sequence Number	SQ	M	Message detail; serial number in current year
Record Number	RN	M	Message detail: Unique serial number starting at 1 each year for records sent from the FMC to (XNW) (See also Annex II.D.C)
Record Date	RD	M	Message detail: Year, month and day in UTC of the record transmission from the FMC
Record Time	RT	M	Message detail: Hours and minutes in UTC of the record transmission from the FMC
Type of Message	TM	M	Message detail; message type, “COE” as Catch on Entry report
Sequence Number	SQ	M	Message detail: Unique serial number starting at 1 each year for messages sent from a vessel to final destination (XNW) (See also Annex II.D.C) serial number in current year
Radio call sign	RC	M	Vessel registration detail; international radio call sign of the vessel
Trip Number	TN	O	Activity detail; fishing trip serial number in current year
Vessel Name	NA	O	Vessel registration detail; name of the vessel
Master Name	MA	M	Name of the master of vessel
External Registration Number	XR	O	Vessel registration detail; the side number of the vessel
Latitude	LA	M	Activity detail; position Latitude at time of transmission
Longitude	LO	M	Activity detail; position Longitude at time of transmission
Relevant Area	RA	M	NAFO Division into which the vessel is about to enter
Date	DA	M	Message detail; UTC date of transmission from vessel
Time	TI	M	Message detail; UTC time of transmission from vessel
On Board	OB	M	Activity detail; Total quantity by species on board rounded to the nearest 100 kg, upon entry in the RA. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes) + live weight in kilograms (until 9 digits), with each field separated by a space, e.g. //OB/speciesspaceweightspacspecies spaceweightspacspeciespaceweight//
Observer on board	OO	M	Activity detail; “Yes” or “No”
End of record	ER	M	System detail; indicates end of the record

3) "Catch" report

Format specifications when sending reports from FMC to NAFO (XNW) see also Annex II..D.A,II.D.B,II.D.C and II.D.D.1

Data Element	Field Code	Mandatory/Optional	Requirements for the field
Start record	SR	M	System detail; indicates start of record
Address	AD	M	Message detail; destination, “XNW” for NAFO
From	FR	M	Message detail; Address of the transmitting party (ISO-3)
Sequence Number	SQ	M	Message detail; serial number in current year
Record Number	RN	M	Message detail; Unique serial number starting at 1 each year for records sent from the FMC to (XNW) (See also Annex II.D.C)
Record Date	RD	M	Message detail; Year, month and day in UTC of the record transmission from the FMC
Record Time	RT	M	Message detail; Hours and minutes in UTC of the record transmission from the FMC
Type of Message	TM	M	Message detail; message type, “CAT” as Daily Catch report
Radio call sign	RC	M	Vessel registration detail; international radio call sign of the vessel
Sequence Number	SQ	M	Message detail; Unique serial number starting at 1 each year for messages sent from a vessel to final destination (XNW) (See also Annex II.D.C) serial number in current year
Trip Number	TN	O	Activity detail; fishing trip serial number in current year
Vessel Name	NA	O	Vessel registration detail; name of the vessel
Contracting Party Internal Reference Number	IR	O	Vessel registration detail; unique Contracting Party vessel number as ISO-3 flag State code followed by number
External Registration Number	XR	O	Vessel registration detail; the side number of the vessel
Relevant Area	RA	M	Activity detail; NAFO Division
Latitude	LA	M ¹	Activity detail; position Latitude at time of transmission from the vessel
Longitude	LO	M ¹	Activity detail; position Longitude at time of transmission from the vessel
Catch species live weight	CA	M	Activity detail; Catch retained onboard by species and by Division since last CAT report in kilograms rounded to the nearest 100 kilograms. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes)+live weight in kilograms (until 9 digits), with each field separated by a space, e.g.//CA/speciesspaceweightspacespeciesspaceweightspacespeciesspaceweightspace//
Discarding species live weight	RJ	M	Activity detail; Catch discarded by species and by Division since last CAT report, in kg rounded to the nearest 100 kg. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes) + live weight in kilograms (until 9 digits), with each field separated by a space, e.g. //RJ/speciesspaceweightspacespecies spaceweightspacespecies spaceweight//
Chartering Flag	CH	M ²	Flag of Chartering Contracting Party to which the catch must be allocated
Days Fished	DF	M ³	Activity detail; number of fishing days in the Regulatory Area since last CAT report, as appropriate
Date	DA	M	Message detail; UTC date of transmission from the vessel
Time	TI	M	Message detail; UTC time of transmission from the vessel
End of record	ER	M	System detail; indicates end of the record

¹Optional if the vessel is subject to satellite tracking in accordance with Article 29.1.

² Mandatory if fishing activity under chartering agreement.

³ By default, the normal reporting period should be 1 day.

Annex II.F

5) “TRANSHIPMENT” report

Format specifications when sending reports from FMC to NAFO (XNW) see also Annex II.D.A,II.D.B,II.D.C and II.D.D.1

Data Element	Field Code	Mandatory/Optional	Requirements for the field
Start record	SR	M	System detail; indicates start of record
From	FR	M	Message detail: Address of the transmitting party (ISO-3) Name of transmitting Party
Address	AD	M	Message detail; destination, “XNW” for NAFO
Sequence Number	SQ	M	Message detail; serial number in current year
Record Number	RN	M	Message detail: Unique serial number starting at 1 each year for records sent from the FMC to (XNW) (See also Annex II.D.C)
Record Date	RD	M	Message detail: Year, month and day in UTC of the record transmission from the FMC
Record Time	RT	M	Message detail: Hours and minutes in UTC of the record transmission from the FMC
Type of Message	TM	M	Message detail; message type, “TRA” as Transhipment report
Sequence Number	SQ	M	Message detail: Unique serial number starting at 1 each year for messages sent from a vessel to final destination (XNW) (See also Annex II.D.C) serial number in current year
Radio call sign	RC	M	Vessel registration detail; international radio call sign of the vessel
Trip Number	TN	O	Activity detail; fishing trip serial number in current year
Vessel Name	NA	O	Vessel registration detail; name of the vessel
Name of Master	MA	O	Name of master of vessel
External Registration Number	XR	O	Vessel registration detail; the side number of the vessel
Quantity on-loaded or off-loaded species live weight	KG	M	Quantity by species in the Regulatory Area on-loaded or off-loaded in kilograms rounded to the nearest 100 kilograms. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes)+live weight in kilograms (until 9 digits), with each field separated by a space, e.g. //KG/speciesspaceweightspacespecies spaceweights pacespeciesspaceweightspace//
Transhipped To	TT	M ¹	Vessel registration detail; International radio call sign of the receiving vessel
Transhipped From	TF	M ¹	Vessel registration detail; International radio call sign of the donor vessel
Latitude	LA	M ²	Activity detail; estimated latitude where the master intends to do the transhipment
Longitude	LO	M ²	Activity detail; estimated longitude where the master intends to do the transhipment
Predicted Date	PD	M ²	Activity detail; estimated date UTC when the master intends to do the transhipment (YYYYMMDD)
Predicted Time	PT	M ²	Activity detail; estimated time UTC when the master intends to do the transhipment (HHMM)
Date	DA	M	Message detail; UTC date of transmission from the vessel
Time	TI	M	Message detail; UTC date of transmission from the vessel
End of record	ER	M	System detail; indicates end of the record

¹ Whichever one is appropriate

² Optional for reports sent by the receiving vessel after the transhipment.

Annex II.F

6) “Catch on EXIT” report

Format specifications when sending reports from FMC to NAFO (XNW) see also Annex II.D.A,II.D.B,II.D.C and II.D.D.1

Data Element	Field Code	Mandatory/Optional	Requirements for the field
Start record	SR	M	System detail; indicates start of record
Address	AD	M	Message detail; destination, “XNW” for NAFO
From	FR	M	Message detail; Address of the transmitting party (ISO-3) Name of transmitting party
Sequence Number	SQ	M	Message detail; serial number in current year
Record Number	RN	M	Message detail; Unique serial number starting at 1 each year for records sent from the FMC to (XNW) (See also Annex II.D.C)
Record Date	RD	M	Message detail; Year, month and day in UTC of the record transmission from the FMC
Record Time	RT	M	Message detail; Hours and minutes in UTC of the record transmission from the FMC
Type of Message	TM	M	Message detail; “COX” as Catch on Exit report
Sequence Number	SQ	M	Message detail; Unique serial number starting at 1 each year for messages sent from a vessel to final destination (XNW) (See also Annex II.D.C) message serial number in current year from
Radio call sign	RC	M	Vessel registration detail; international radio call sign of the vessel
Trip Number	TN	O	Activity detail; fishing trip serial number in current year
Vessel Name	NA	O	Vessel registration detail; name of the vessel
Master Name	MA	O	Name of master of vessel
External Registration Number	XR	O	Vessel registration detail; the side number of the vessel
Latitude	LA	O ¹	Activity detail; position Latitude at time of transmission from the vessel
Longitude	LO	O ¹	Activity detail; position Longitude at time of transmission from the vessel
Relevant Area	RA	M	NAFO area from which the vessel is about to exit
Catch	CA	M	Activity detail; Catch retained onboard by species and by Division since last CAT report in kilograms rounded to the nearest 100 kilograms. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes)+live weight in kilograms (until 9 digits), with each field separated by a space, e.g. //CA/speciesspaceweightspacspeciespaceweightspacspeciespaceweightspac//
Catch	OB	M	Activity detail; Total quantity by species on board rounded to the nearest 100 kg, upon exit from the RA. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes) + live weight in kilograms (until 9 digits), with each field separated by a space, e.g. //OB/speciesspaceweightspacspeciespaceweightspacspeciespaceweightspac//
Days Fished	DF	O	Activity detail; number of fishing days in the Regulatory Area
Date	DA	M	Message detail; UTC date of transmission from the vessel
Time	TI	M	Message detail; UTC date of transmission from the vessel
End of record	ER	M	System detail; indicates end of the record

¹ Optional if the vessel is subject to satellite tracking in accordance with Article 29.1.

Annex II.F

7) “PORT OF LANDING” report

Format specifications when sending reports from FMC to NAFO (XNW) see also Annex II.D.A,II.D.B,II.D.C and II.D.D.1

Data Element	Field Code	Mandatory/Optional	Requirements for the field
Start record	SR	M	System detail; indicates start of record
From	FR	M	Message detail; Address of the transmitting party (ISO-3). Name of transmitting party
Address	AD	M	Message detail; destination, “XNW” for NAFO
Sequence Number	SQ	M	Message detail; serial number of the report from the vessel in the relevant year
Record Number	RN	M	Message detail; Unique serial number starting at 1 each year for records sent from the FMC to (XNW) (See also Annex II.D.C)
Record Date	RD	M	Message detail; Year, month and day in UTC of the record transmission from the FMC
Record Time	RT	M	Message detail; Hours and minutes in UTC of the record transmission from the FMC
Type of Message	TM	M	Message detail; message type, “POR”
Sequence Number	SQ	M	Message detail; Unique serial number starting at 1 each year for messages sent from a vessel to final destination (XNW) (See also Annex II.D.C) serial number of the report from the vessel in the relevant year
Radio call sign	RC	M	Vessel registration detail; international radio call sign of the vessel
Trip Number	TN	O	Activity detail; fishing trip serial number in current year
Vessel Name	NA	O	Vessel registration detail; name of the vessel
Name of Master	MA	O	Name of master of vessel
External Registration Number	XR	O	Vessel registration detail; the side number of the vessel
Latitude	LA	M ¹	Activity detail; position Latitude at time of transmission
Longitude	LO	M ¹	Activity detail; position Longitude at time of transmission
Coastal State	CS	M	Activity detail; Coastal State of Port of Landing
Name of Port	PO	M	Activity detail; name of Port for landing
Predicted Date	PD	M	Activity detail; estimated date UTC when the master intends to be in port (YYYYMMDD)
Predicted Time	PT	M	Activity detail; estimated time UTC when the master intends to be in port (HHMM)
Quantity to be landed species live weight	KG	M	Activity detail; Quantity by species in kilograms rounded to the nearest 100 kilograms, to be landed in a port. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes)+live weight in kilograms (until 9 digits), with each field separated by a space, e.g.//KG/speciesspaceweightspace speciesspaceweightspace species spaceweightspace//
Quantity on board species live weight	OB	M	Activity detail; Total quantity by species on board rounded to the nearest 100 kg, in advance of landing of the transhipped quantities. Allow for several pairs of fields, consisting of species (FAO 3 alpha codes) + live weight in kilograms (until 9 digits), with each field separated by a space, e.g. //OB/speciesspaceweightspace speciesspaceweightspace speciesspaceweight//
Date	DA	M	Message detail; UTC date of transmission from the vessel
Time	TI	M	Message detail; UTC time of transmission from the vessel
End of record	ER	M	System detail; indicates end of the record

¹ Optional if a vessel is subject to satellite tracking.

8) “CANCEL” report

[Format specifications when sending reports from FMC to NAFO \(XNW\) see also Annex II.D.A,II.D.B,II.D.C and II.D.D.1](#)

Data Element	Field Code	Mandatory/ Optional	Requirements for the field
Start record	SR	M	System detail; indicates start of record
From	FR	M	Message detail: Address of the transmitting party (ISO-3) Name of transmitting Party
Address	AD	M	Message detail; destination, “XNW” for NAFO
Record Number	RN	M	Message detail: Unique serial number starting at 1 each year for records sent from the FMC to (XNW) (See also Annex II.D.C)
Record Date	RD	M	Message detail: Year, month and day in UTC of the record transmission from the FMC
Record Time	RT	M	Message detail: Hours and minutes in UTC of the record transmission from the FMC
Type of Message	TM	M	Message detail; message type, “CAN ¹ ” as Cancel report
Radio call sign	RC	M	Vessel registration detail; international radio call sign of the vessel
Cancelled report	CR	M	Message detail; the record number of the report to be cancelled
Year of the report cancelled	YR	M	Message detail; year of the report to be cancelled
Date	DA	M	Message detail; UTC date of transmission from the vessel ²
Time	TI	M	Message detail; UTC time of transmission from the vessel ²
End of record	ER	M	System detail; indicates end of the record

¹ Cancel report should not be used to cancel other Cancel report.

² [If the report is not sent from a vessel the time will be from the FMC and be the same as RD, RT.](#)

Annex 19. Notification of vessels fishing on the “Others” quota to Contracting Parties with an inspection presence in the Regulatory Area

(STACTIC WP 16-31 **now** FC Doc. 16-14)

Background

According to NAFO CEM Article 5 paragraph 3 (e), Contracting Parties who wish to utilize the “Others quota” must notify the Executive Secretary of the names of its vessels that intend to fish the “Others” quota, as well as the estimated projected catch. Under the existing CEM, Contracting Parties with inspection presence in the Regulatory Area are not provided with this information.

In support of inspection at sea, it is proposed that the Executive Secretary circulates the relevant data to Contracting Parties with inspection presence in the Regulatory Area. The Duties of the Executive Secretary under CEM Article 5.15 should be amended accordingly.

Proposed amendment

Insert the following text in Article 5 paragraph 15

- i) circulates without delay to Contracting Parties with an inspection presence in the Regulatory Area the information notified in accordance with Article 5 paragraph 3 (e).

Annex 20. New text for EU footnotes associated to CEM Annex I.A

(STACTIC WP 16-32 now FC Doc. 16-10)

Background information

NAFO has simplified in 2015 the footnotes associated to the CEM Annex I.A. It was however agreed, on request of the EU, to defer to 2016 the revision of the footnotes pertaining to the EU, to ensure that the new edit would preserve the individual allocation rights of the EU Baltic States (Estonia, Latvia, Lithuania and Poland) within the EU global allocation of TACs.

Thanks to the collaboration of the NAFO Secretariat, the legal basis and calculation procedures endorsed by the Fisheries Commission and used by the NAFO Secretariat since 2005 to establish the individual allocations rights for each of the EU Baltic Member States, in relation to the global EU allocation, have been clarified.

The new harmonized edit of the EU related footnotes to CEM Annex I.A proposed for adoption refers to these procedures.

New editorial text for the EU footnotes associated to CEM Annex I.A

CEM 2016 EU Footnote		Existing text	New text
N°	Stock		
4	COD 3NO PLA 3M WIT 3NO	Including fishing entitlements of Estonia, Latvia, and Lithuania following their accession to the European Union and in accordance with sharing arrangements of the former USSR quota adopted by the Fisheries Commission at its Annual Meeting in 2003 (FC Working Paper 03/7)	# 1 <i>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 EU</i>
	CAP 3NO		# 2 <i>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 EU</i>
5	RED 3M	Including allocations of 1571 tonnes each for Estonia, Latvia and Lithuania out of a sharing of 20,000 tonnes, following their accession to the European Union	item as # 1 above
6	SQI 3_4	Allocations of 128 tonnes each for Estonia, Latvia and Lithuania as well as 227 tonnes for Poland out of a TAC of 34,000 tonnes, following their accession to the European Union	item as #2 above

CEM 2016 EU Footnote		Existing text	New text
N°	Stock		
7	PRA 3L	Including allocations of 1.11 % each for Estonia, Latvia, Lithuania and Poland out of the TAC, following their accession to the European Union	#3 <i>Including allocations to Estonia, Latvia, Lithuania and Poland, as applied by NAFO since 2005 following their accession to the EU</i>
8	REB 1F_2_3K	Allocation of 17.85% to Lithuania and 2.15% to Latvia following their accession to the European Union	#4 No change to existing #8
11	GHL 3LMNO	Including an allocation of 360 tonnes for Estonia, Latvia, and Lithuania following their accession to the European Union	item as #3 above
15	COD 3M	Including fishing entitlements of 155 tons each for Estonia, Latvia, and Lithuania in accordance with sharing arrangements of the former USSR quota adopted by the Fisheries Commission at its Annual Meeting in 2003 (FC Working Paper 03/7) and allocation of 529 tons for Poland following their accession to the European Union	item as #2 above
16	RED 3LN	Including fishing entitlements of 514 tonnes each for Estonia, Latvia, and Lithuania in accordance with sharing arrangements of the former USSR quota adopted by the Fisheries Commission at its Annual Meeting in 2003 (FC Working Paper 03/7) following their accession to the European Union	item as #1 above

Annex 21. Annual Compliance Review 2016 (Compliance Report for Fishing Year 2015) (STACTIC WP 16-28 Rev. 3 now FC Doc. 16-19)

1. Introduction

This compliance review is being undertaken in accordance with Rules 5.1 and 5.2 of the Fisheries Commission Rules of Procedure. The scope of the review is to determine how international fisheries complied with the annually updated NAFO Conservation and Enforcement Measures (NCEM) when fishing in the NAFO Regulatory Area (NRA), and assess the performance of NAFO Contracting Parties (CPs) with regard to their reporting obligations.⁴

This review utilizes information for the years 2004 to 2015 from the following sources: vessel monitoring system (VMS) and hail messages delivered by the vessels (Vessel Transmitted Information – VTI), Port Inspection Reports, At-sea Inspection Reports and Reports on Dispositions of Apparent Infringements provided by the Contracting Parties, and Observer Reports sent to the Secretariat. It starts with the description of the fisheries in the NAFO Regulatory Area.

2. Fishing effort and fishing trends in the NAFO Regulatory Area

NAFO identifies three main fisheries in its Regulatory Area: the groundfish (GRO - primarily in Div. 3LMNO), shrimp (PRA - primarily in Div. 3LM) and pelagic redfish fisheries (REB - primarily in Div. 1F and 2J). The PRA and the REB fisheries have been under moratoria. Some effort was exerted on REB fisheries by one CP which formally objected to the moratorium. In 2015, there were 57 fishing vessels spending a total of 4209 days in the NRA (Table 1), and 138 trips were identified.

Table 1. 2014-2015 Comparison of Fishing Effort in the NAFO Regulatory Area.

Number of fishing vessels					Fishing effort (days present in the NRA)				
Year	Groundfish (GRO)	Shrimp (PRA)	Pelagic Redfish (REB)	TOTAL*	Year	Groundfish (GRO)	Shrimp (PRA)	Pelagic Redfish (REB)	TOTAL
2014	52	3	5	59	2014	4699	67	56	4822
2015	51	0	7	57	2015	4107	0	102	4209
% change	-1.9%	-100.0%	40.0%	-3.4 %	% change	-12.6%	-100.0%	82.1 %	-12.7%

*The total reflects the total number of vessels operating in the NAFO Regulatory Area in a year.

The groundfish fishery accounted for 97.6% of the total fishing effort (in terms of fishing days), shrimp for 0%, and the pelagic redfish fishery for around 2.4%. The groundfish fishing effort decreased by 12%, shrimp fishing effort decreased by 100% and pelagic redfish effort increased by 82%. The non-effort in the shrimp fishery is attributed to the moratorium in 2015. There was an increase in the number of vessels participating in the pelagic redfish fishery and as a result, and increase in the effort. In all, a decrease (12.7%) of the total fishing effort was observed (Table 1) compared to 2014.

For the period 2004–2015, the overall fishing activities in the NRA show a declining trend, from 134 active vessels in 2004 to 57 in 2015, representing a 57.5% decrease. The decline in terms of overall fishing days was a 74.5% decrease for the same period from 16 480 days in 2004 to 4 209 days in 2015. The average number of days each vessel operates in the NAFO Regulatory Area also declined from 123 days in 2004 to 74 days in 2015.

⁶ For the purpose of this compliance analysis, only fishing trips which ended in 2015 were considered. Fishing trip for a fishing vessel 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” (NCEM Art. 1.7).

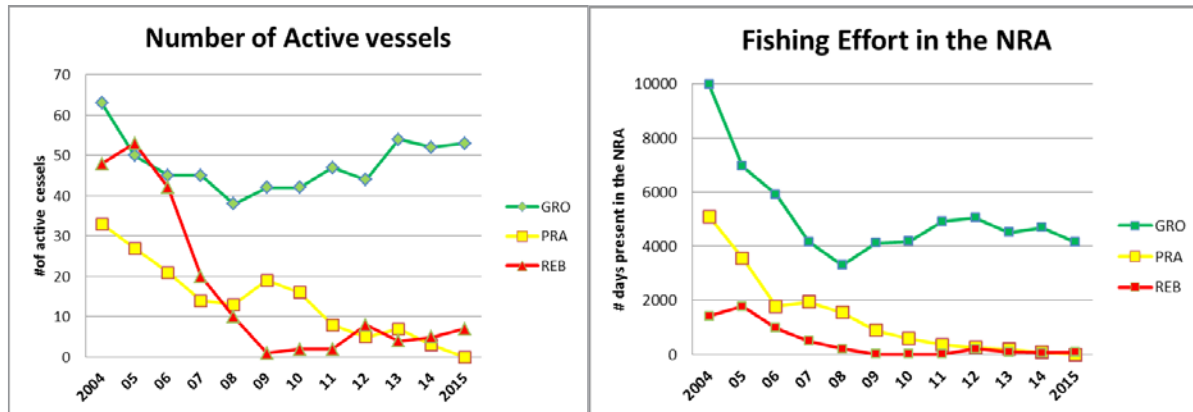


Figure 1. The trend of fishing effort in the NAFO Regulatory Area in the period 2004-2015.

Figure 1 illustrates the changes described above for each of the major fisheries. NAFO fisheries remain dominated by the groundfish category. After five years of steep decline, the groundfish effort has been stable since 2009. Figure 2 illustrates the current effort distribution compared to 2004 and the 2004-2015 average. By 2015, the fishing effort contribution of shrimp fisheries was reduced to 0% due to the shrimp TAC of zero.

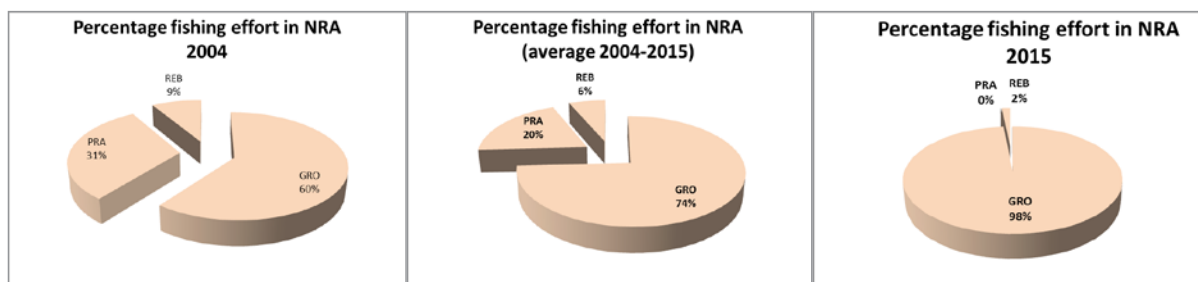


Figure 2. Fishing effort proportions of the three different fishery types (2004-2015) suggesting a shift in fisheries over the years).

Effort distribution by depth of groundfish vessels

The requirement of providing the speed and course information in the Vessel Monitoring System (VMS) reports facilitated the estimation of fishing effort in terms of fishing hours. Speeds between 0.5 and 5 knots were considered fishing speeds. In Figure 3, the distribution of fishing effort in hours of groundfish vessels is presented. Figure 3 shows that about half of all groundfish effort is at depths 400 meters and below (skates, redfish and cod). Figure 4 shows the comparison of the fishing depth distribution between 2014 and 2015. It suggests an increase of fishing effort at 300-700 m depth and a decrease at 700-2000 m.

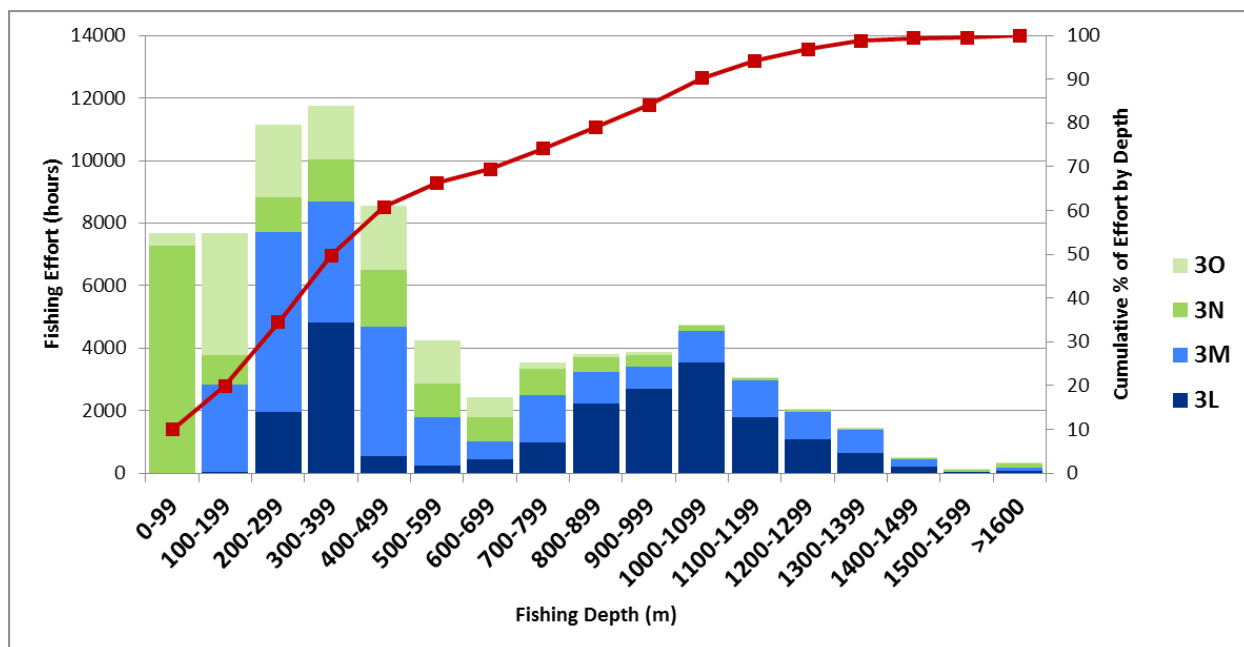


Figure 3. Distribution of groundfish fishing effort by depth in the NRA in 2015 (Divisions 3L, 3M, 3N, and 3O).

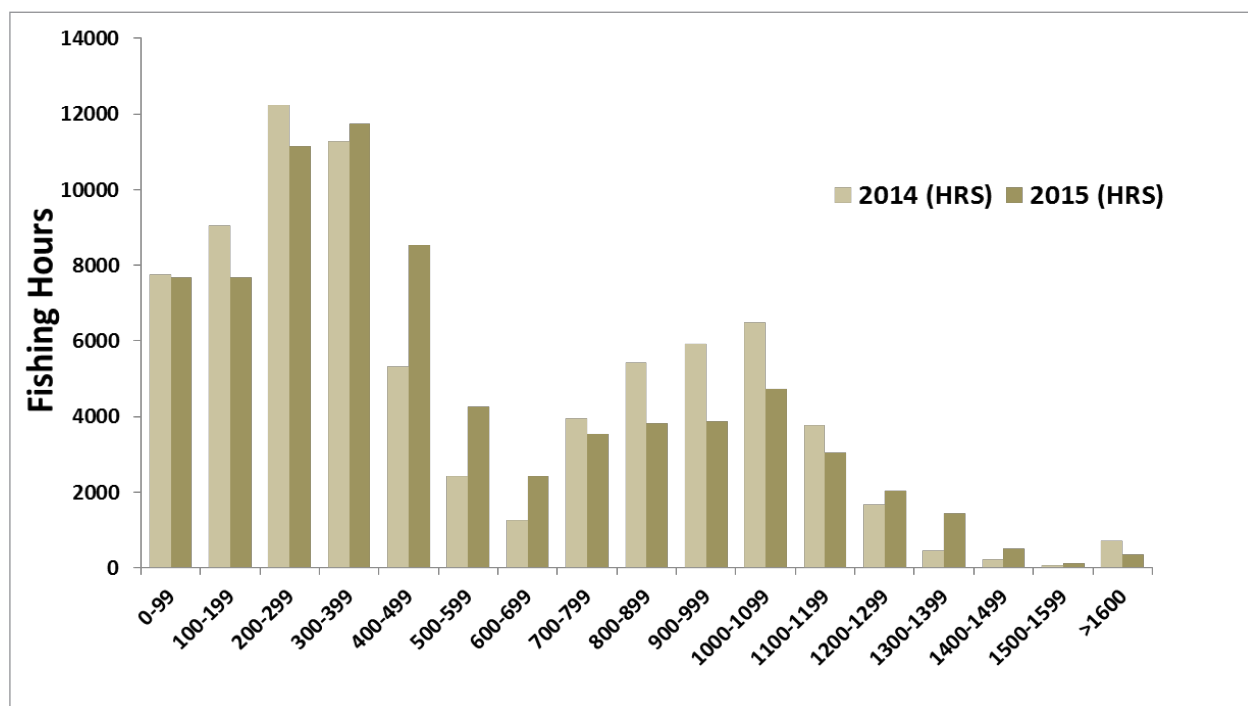


Figure 4. 2014-2015 Comparison of groundfish fishing effort distribution by depth in the NRA (Div. 3LMNO).

3. Compliance by Fishing Vessels

Monitoring, Control and Surveillance (MCS) measures are spelled out in Chapters III-VII of the NCEM. Through the at-sea and port inspections, NAFO monitors, controls and conducts surveillance of the fisheries in the NRA exposing infringements of the NAFO regulations and collecting evidence for the following prosecution within the legal system of each NAFO flag State Contracting Party.

Position reporting – Vessel Monitoring System (VMS)

Vessels in the NRA are required to transmit position reports at one hour intervals. In addition, the course and speed information must be included in the position reports. Examination of the position reports revealed that vessels were compliant to this requirement. The position reports were received by the Secretariat in practically real-time through the Fisheries Monitoring Centres (FMC) of individual flag States. When technical difficulties were encountered by the vessels in complying with the position reporting requirements, the position reports were reported by FMCs every 4 hours as per NCEM Art. 29.8. Generally, the technical issues were resolved at most within a few days through the coordination and communication between the Secretariat and the FMCs. The timeliness of submission of position reports was not an issue since VMS reports were being received by the Secretariat and CPs with inspection presence in real-time through satellite technology.

With an estimated total fishing effort of 4209 vessel-days, the expected number of VMS reports is 101 016. A total of 107 731 VMS position reports within the vessel-days were received in 2015 fishing trips. This amount suggests that some vessels transmitted their positions more frequently than the required hourly interval. Some vessels which were landing or calling on Canadian ports continued to transmit VMS reports. This also contributed to the higher-than-expected number of VMS reports received in the Secretariat. From compliance perspective, this is not an issue.

Activity and catch reporting – Vessel Transmitted Information (VTI): Catch-on-Entry, Catch-on-Exit, Daily Catches

Catch quantities on board upon entry to (COE) and exit from (COX) the NRA must be reported for each fishing trip. While fishing in the NRA, fishing vessels are required to transmit daily catch reports (CAT) detailing catch quantities by species and division. Catch reports are transmitted through the same technology and communication channel as the transmission of VMS (positions) reports. (See section *Vessel Transmitted Information (VTI) – Catch-on-Entry (COE), Catch-on Exit (COX), Daily catch reports (CAT)* below.)

Daily catch reports are not limited to species listed in Annex I.A of the NCEM (under TAC or moratorium). Vessels are required to report catches (and discards) at the species level to the extent possible. The catches of regulated and selected non-regulated species are presented in Table 2.

Table 2. Total reported catches (retained and rejected (t)) of regulated and selected non-regulated species in 2015 (Source: CAT reports).

Division	1F	3L	3M	3N	3O	6G	?	Grand Total
Species (3-alpha FAO code)								
CAP				1.2	0.9			2.1
COD		219.0	13250.1	181.1	262.9		0.1	13913.3
GHL		5078.0	2568.9	765.7	13.6	0.0		8426.1
HKW		0.0	45.5	104.6	261.2		0.2	411.5
PLA		126.1	267.5	333.6	303.2		0.1	1030.5
REB	2951.5	0.0						2951.5
RED		5262.3	6937.7	1212.0	8081.4		1.2	21494.4
SKA	0.0	63.8	72.4	2536.5	849.0	0.0	2.9	3524.5
WIT		28.9	197.9	26.6	148.3		0.2	401.8
YEL		8.1		1518.7	148.6		0.1	1675.5
ALF				0.0		66.4		66.5
ANG				23.7	98.5		0.3	122.5
CAT		15.4	27.2	9.4	3.6			55.6
HAD			87.8	34.7	123.8		0.4	246.7
HAL		119.6	114.5	294.0	170.6		0.2	698.9
RHG		116.0	77.7	36.9	0.2			230.9
RNG		48.8	73.7	4.8	0.3			127.6
Grand Total	2951.5	11085.9	23720.8	7083.8	10465.9	66.4	5.7	55380.0

Vessel activity after 3M redfish 100%-TAC-uptake notification

The stock 3M Redfish is the only regulated stock which Total Allowable Catch (TAC) is considerably less than the sum of the quotas. The Secretariat monitors the TAC uptake through the daily catch reports (CATs) it receives from the fishing vessels. When the TAC is reached, Contracting Parties are notified required to instruct their vessels to cease directed fishery on the stock.

According to Article 5.5 d) of the 2015 NCEM, not more than 50% of the TAC may be fished before 1st July. A total of 12 vessels were targeting 3M redfish in early 2015 and on 6th February 2015, a 50%-TAC uptake notification was circulated by the Secretariat, on which time the fishery would be suspended until 30th June. Figure 5 shows the total daily catches and the percentage cumulative catch derived from CAT reports. On 3th July 2015, the five day notification was sent. On 13th July 2015, a 100% TAC uptake notification (6700 t) was sent effective 13th July. By the closure date, the TAC was exceeded by 3.5%. There were a total of 19 vessels targeting 3M redfish in July 2015.

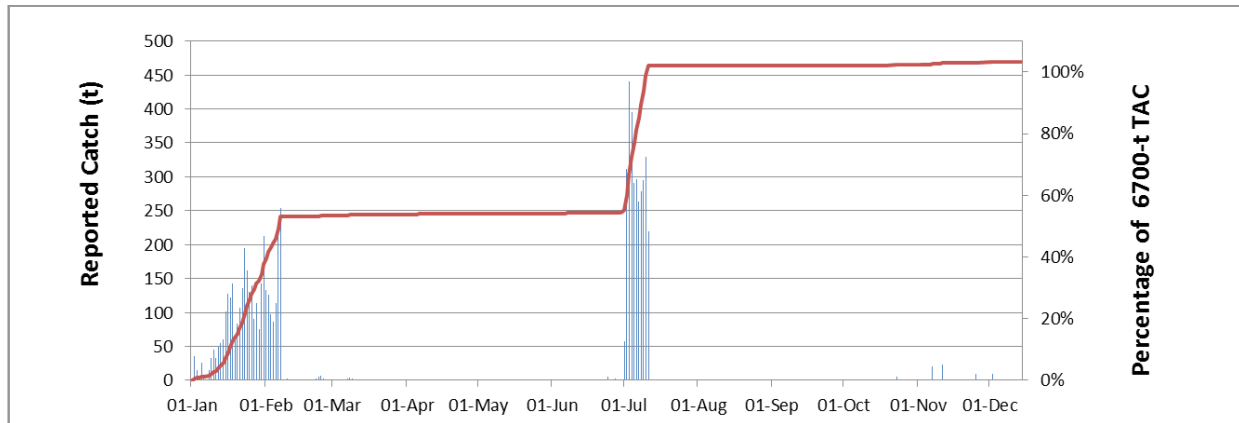


Figure 5. Daily 3M redfish catches of all vessels in 2015

Closed areas and Exploratory Fisheries

Since 2007, in total 20 areas in NAFO have been closed to bottom fishing including 13 significant coral and sponge areas, one coral protection zone and six seamounts. The conservation and enforcement measures concerning the protection of the VMEs from bottom fishing are stipulated in Chapter II of the NCEM.

An examination of the VMS position reports revealed that the closed areas were respected (Fig. 6). Fishing activities were confined within the footprint, except for two vessels which fished in Division 6G (in the environs of the closed Corner Seamounts) for 7 and 13 days in January (of which 4 days were in December 2014) and February 2015 respectively (Fig. 6.D). According to the observer report of the fishing trips in Division 6G, the fishing gear that was used was mid-water trawl (OTM). The main species caught was splendid alfonsinos. Possible management measures concerning fishing stocks associated with seamounts are under discussions in 2016 the provision for exploratory bottom fisheries within the seamount areas was removed from NCEM Art. 17.

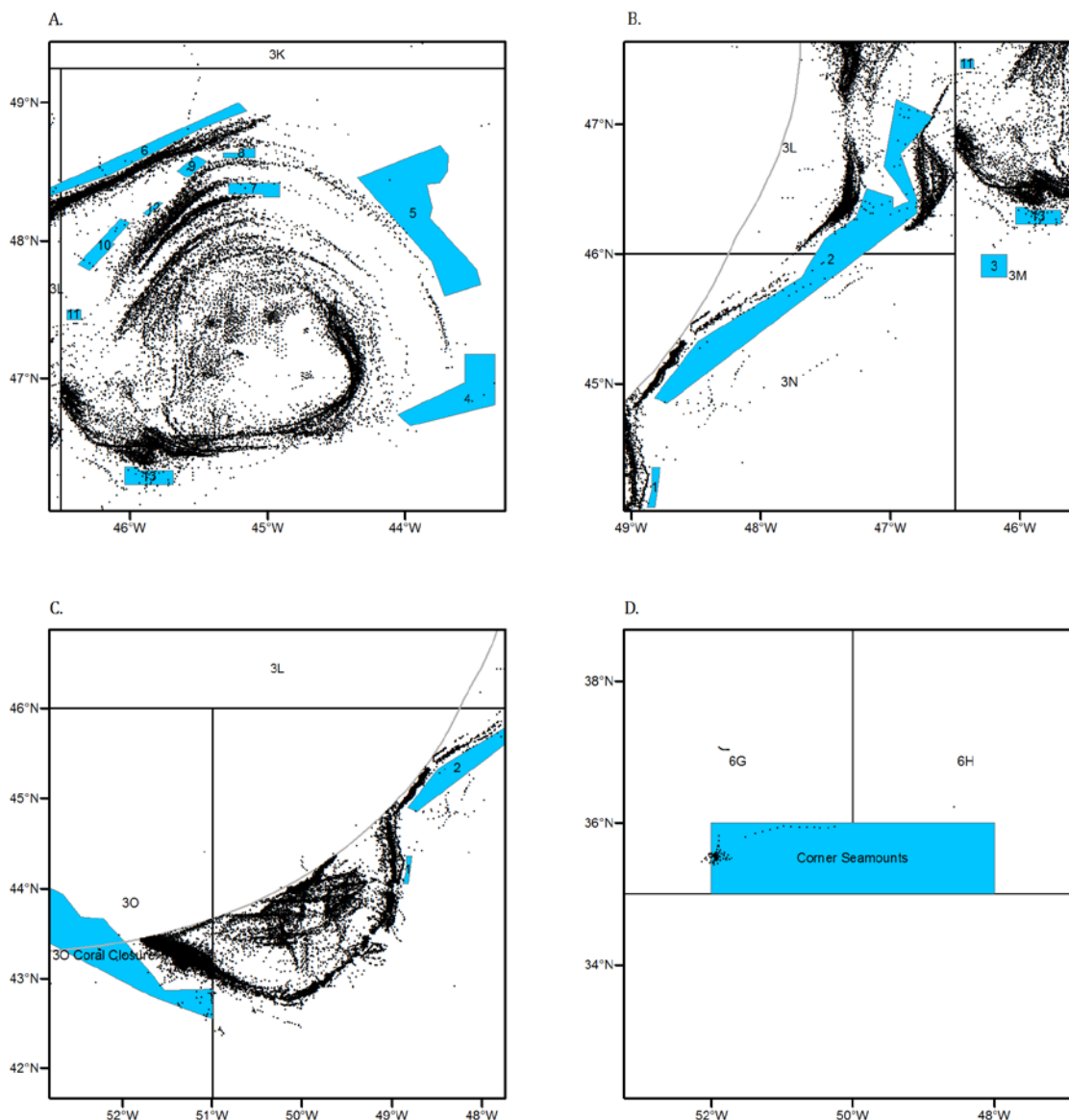


Figure 6. VMS position plots of all vessels at speed 0.5 -5.0 knots in the NRA in 2015 in relation to the VME closed areas and Corner Seamount. A: Flemish Cap, B: Flemish Pass, C: Division 30 Coral Zone, D: Corner Seamount.

Catch reporting on sharks

Fishing for the purpose of collecting shark fins is prohibited under NCEM Art. 12. Sharks species taken in NAFO fisheries are not associated with shark finning practices, and there has never been an incident of shark finning observed in the NRA. It has been noted that there has been a lack of species-specific reporting of shark catches in the NRA. In this regard, it became a requirement in 2012 to report, the extent possible, all shark catches at the species level (NCEM Art. 28.6.g).

The 2015 CAT reports were examined. Not all shark catches were reported to the species levels. A little more than half of all shark catches were reported as Greenland shark (Table 4). It is not known how many species of shark were lumped into DGX.

Table 4. Amount of shark catches (t) as reported in CATs in 2015.

FAO 3- Alpha Code	Common Name	Reported catches in 2015 (kg)		Percentage
		Retained (CA)	Rejected (RJ)	
BSH	Great blue shark	0	50	0.06%
CFB	Black dogfish	0	3 426	4.03%
DGS	Spiny dogfish	0	1	0.00%
DGX	Dogfishes (NS)	24 506	1 667	30.79%
GSK	Greenland shark	1 500	48 739	59.11%
POR	Porbeagle shark	0	5 000	5.88%
RHT	Atlantic sharpnose shark	0	105	0.12%

At-sea inspections

The NAFO Joint Inspection and Surveillance Scheme is implemented to ensure management and enforcement measures are complied with by fishing vessels fishing in the NRA. Inspectors are appointed by Contracting Parties and assigned to fishery patrol vessels tasked to carry out NAFO inspection duties at sea (Chapter VI of NCEM).

The total number of at-sea inspections dropped from 135 in 2014 to 110 in 2015. This decrease was partially attributed to mechanical problems with one of the Canadian inspection vessels in 2015. With the decrease of total fishing effort (down 12.5%, from 4822 days in 2014 to 4209 days in 2015), the inspection rate (number of inspections/fishing effort) decreased slightly, from 2.8% to 2.6% (Fig. 7).

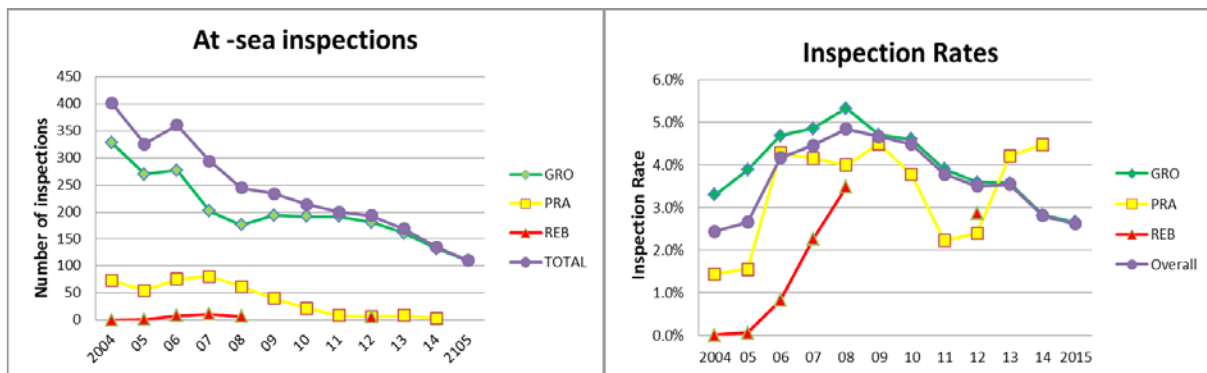


Figure 7. Number of At-Sea Inspections and Inspection rates (number of at-sea inspection/vessel-days) in the NAFO Regulatory Area by fishery type.

Apparent infringements detected at-sea

Each citation issued by at-sea inspectors can list one or more apparent infringements (AI). In 2015, one vessel was issued with an apparent infringement at sea. In comparison, there were ten AIs issued to four vessels in 2014. Table 5 gives details of the AI issued at-sea in 2015 (See Section 5 for follow-up actions and disposition of the AI cases).

In Figure 8, the composite list of AIs issued and the frequency of the cases since 2011 are shown. Product mislabelling, expired vessel capacity plans, and mis-recording of catches are the most frequent AIs.

Table 5. Details of Apparent Infringements (AI) detected in 2015 by inspectors at-sea.

AI	Vessel Code	Cp	FS	Directed Species (according to CAT)	Inspecting Cp	Division in NRA or Port Location	Date of inspection	Apparent Infringement	Serious AI? As considered by Inspectors	Article (2015 NCEM)	Disposition/Followup/ update as of March 2016	Reference of Disposition
1	1	EU	PRT	Cod	Canada	3M	9-Feb-2015	Where a ban on fishing applies (moratoria), did retain on board the greater of 1250 kg or 5% of American plaice in Div. 3N	No	Art. 6.3 (d)	Apparent Infringement confirmed at landing with additional infringement (Art. 38.1. I - misreporting of catch). Case pending	EU Annual Rpt on Inspection and Surveillance Activities (At sea). 17 Feb 2016.

	2011	2012	2013	2014	2015
Mis-recording of catches -stowage	••••			••	
Product labelling	•	•••		•	
Vessel requirements - capacity plans	•	•••		•	
Bycatch - move-away			•		
Bycatch - retaining 3m Redfish			••••••••		
By-catch requirements	•				•
Gear requirements - mesh size	•			•	
Mis-recording of catches - inaccurate recording		•		•••	
Observer requirements				•	
Quota requirements		••			
VMS requirements		•		•	

Figure 8. Frequency of AI cases detected by NAFO at-sea inspectors in 2011 - 2015.

4. Reporting obligations by NAFO Contracting Parties and Observers

The NCEM obliges vessels and Contracting Parties to provide reports on their activity within a determined time frame. The completeness and regular delivery of those reports in time are of key importance to evaluating overall compliance. In evaluating the completeness, reports were examined to determine which fishing trips were covered by the reports. Each fishing trip must have Vessel Transmitted Information and Observer reports; vessels landing Greenland halibut must have port inspection reports. The percentage coverage is computed as a ratio of fishing days accounted for by the reports and total fishing days effort in the NRA. Less than 100% coverage suggests that there were missing reports that should have been received by the Secretariat.

Vessel Transmitted Information (VTI) – Catch-on-Entry (COE), Catch-on Exit (COX), Daily catch reports (CAT)

The FMCs of flag States are responsible in transmitting the VTI reports to the Secretariat (see also section *Activity and Catch Reporting*). The COE and COX are transmitted signifying the start and end of a fishing trip. A 100% coverage would mean that all expected COEs are paired up with all expected COXs. For the purpose of evaluating the coverage, a trip with a missing COE or COX would not account for the number of days of a fishing trip in the NRA.

In Table 6, the number of COE, COX, and CAT, as well as of the fishing trips and fishing effort-day in the NRA, is presented. Ideally, the number of COE and COX should correspond to the number of fishing trips. The higher-than-expected numbers suggest that duplicates and erroneous reports are occasionally sent. The VMS-VTI system features a cancel report (CAN) which allow vessels and FMCs to withdraw or correct previously sent VTI report. Nonetheless, all identified fishing trips had the corresponding COE and COX report, representing 100% coverage (see also Fig. 10). In long fishing trips, some vessels which visited Canadian ports, not to land but to obtain provisions, transmitted COEs and COXs. This accounts for the higher number of COEs and COXs than the fishing trips.

Table 6. Fishing effort and VTI statistics in the NRA, 2015.

Number of fishing trips identified	138
Days Present in the Regulatory Area	4209
Number of Daily Catch Reports (CATs)	4349
Number of Catch on Entry Reports (COEs)	161
Number of Catch on Exit Reports (COXs)	163

In total 4943 CATs were received, more than the total effort of 4209 vessel days. This indicates that vessels which fished in two or more Divisions in a day transmitted multiple reports, consistent with the requirement that fishing vessels shall report daily their catches by species and by Divisions. The CAT reports have proven to be useful in monitoring quota uptakes of the Contracting Parties.

Port inspections

Prior to 2009, port State Contracting Parties were required to conduct port inspections on *all* vessels landing or transshipping fish species from the NRA, i.e. 100% coverage. Since the adoption of the Port State Control measures in 2009, the 100% coverage has been maintained for vessels landing NAFO species under recovery plans, in particular Greenland halibut. When landing catch species not under recovery plans, port inspections are not required if the vessel flag State Contracting Party and the port State Contracting Party are the same; if the flag State and the port State are different, the latter is required to conduct port inspections only 15 % of the total fish landing port of call in a year.

In 2015, 87 port inspection reports were received by the Secretariat all of which were associated with groundfish. Some port States submitted port inspection reports on their own vessels making the coverage considerably more than 15%.

In evaluating the compliance of port State authorities in conducting inspections, only trips with Greenland halibut onboard were considered. The identification of these trips was done by examining COX reports. Of the 138 fishing trips identified, COXs of 80 fishing trips indicated Greenland halibut on board. Of the 80 fishing trips (3468 days effort), 73 fishing trips (3331 days effort) have corresponding port inspection reports – an 96% coverage (see Fig. 10).

Observer reports

Under the “traditional” scheme, vessels are required to have an independent observer on board at all times (i.e. 100% coverage) in every fishing trip (NCEM Art. 30.A). Observers in this scheme are committed to deliver within 30 days after their assignment period their observer report, which contains information on date of fishing trip as well as catch and effort.

Since 2007, Contracting Parties have the option of the electronic reporting scheme. Under this electronic scheme, CPs may allow their vessels in a single year to have observers onboard at least 25% of the time the vessels are on a fishing trip (NCEM Art. 30.B). CPs must give prior notification to the Secretariat of which vessels participate in the electronic scheme. Observers under this scheme are required to report daily the catches and discards (OBR) while the fishing master transmits the daily catch reports (CAT) every trip. The CAT and OBR reports are transmitted through the same technology and communication channels as the VMS. In 2015, two vessels submitted OBR reports while fishing in the NAFO Regulatory Area.

In evaluating compliance of observer reports submission, only reports from vessels under the “traditional” scheme were considered. As in the port inspection reports, percentage coverage was computed as the ratio of the fishing days accounted for by the observers and the total fishing days (of the trips under this scheme) in the NRA. In 2015, the percentage was 84%, i.e. 3507 (106 trips) out of 4188 (136 trips) days were covered by observer reports (Fig. 9).

Catch information in observer reports may be crosschecked with other data sources (e.g. port inspection reports and CATs). According to NCEM Art. 30.A.2.(c), the observers shall record, among others, the catch, effort, and discard information for each haul. The Secretariat has noted a vast improvement in this regard. Whereas there were only 12 out of 79 reports contained haul by haul information in 2013; in 2014, 83 out of 87; in 2015 98 out of 99 observer reports received by the Secretariat contained haul by haul information in the observer reports.

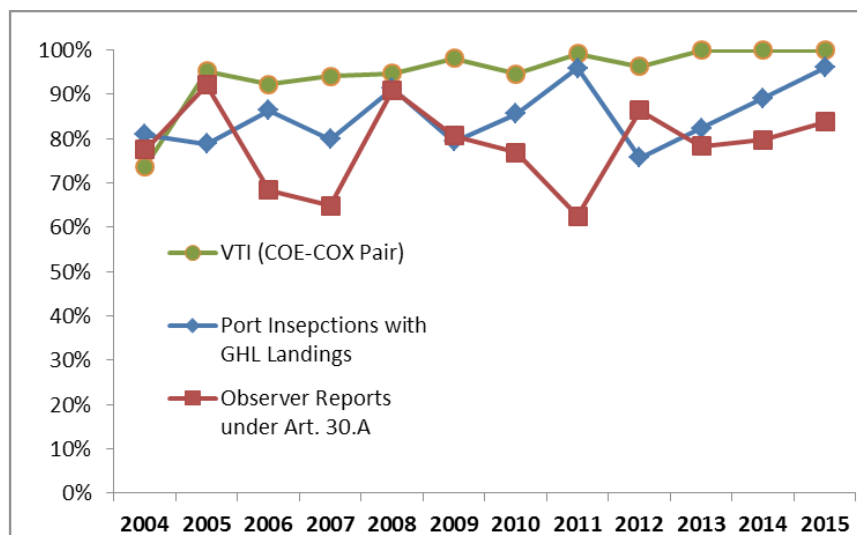


Figure 9. Percentage coverage of fishing effort by VTI (COE-COX Pairs), Port Inspection and Observer Reports as a measure of compliance to report submission requirements.

Catch data source comparisons for Greenland halibut in Div. 3LMNO (PSC3 declared, landed, and CATs)

A comparison of catch data found in the port state inspections forms (declared and landed) compared to the daily CAT message for the catch retained on board (discards not included) for trips that occurred in 2015. For the vast majority of these fishing trips, the difference between landed figures and catch retained on board are within the range of $\pm 5\%$.

Timeliness of submission of reports

VMS messages are required to be provided every hour; hail messages at each entry and exit from the NRA as well catch reports on a daily basis; observers and at-sea inspection reports are expected to be submitted within 30 days and port inspection reports (PSC3 forms) should be sent to the Executive Secretary “without delay.” For the purpose of timeliness analysis, PSC 3 forms, as well as at-sea inspection reports received more than 30 days after the date of inspection were considered late. VMS and VTI messages were not included in the timeliness analysis as they are received practically in real time through satellite technology.

Figure 10 shows the timeliness of submission of at sea inspection, observer and port inspection reports. Less than half of the number of observer reports was received on time (17%). Timeliness in the submission of at-sea and port inspection reports was 75% and 37%, respectively.

At-sea and port inspection reports containing citations of infringements were always transmitted to the Secretariat without delay.

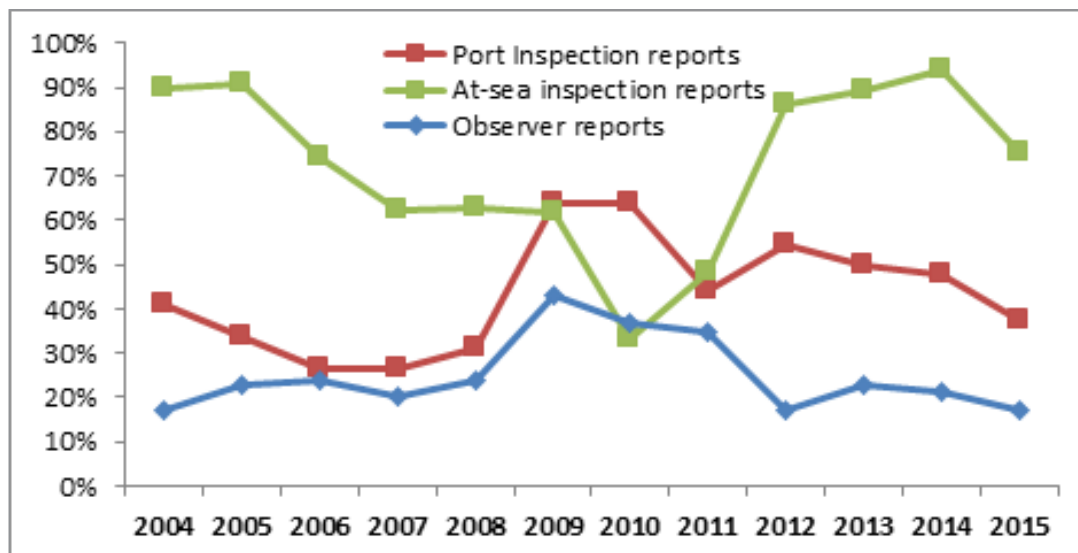


Figure 10. Timeliness of submission of reports. Reports received 30 days after assignment or inspection are considered late.

5. Follow-up to infringements

NCEM Art. 39 spells out obligations of a flag State Contracting Party that has been notified of an infringement. It includes taking immediate judicial or administrative action in conformity with their national legislations and ensuring that sanctions applicable in respect of infringements are adequate in severity. In 2015, a citation of one non-serious AI was issued by at-sea-inspectors (See Table 5 for details).

It must be noted that legal resolution of AIs may take more than a year. In Table 7, a summary of the status of AI cases detected at sea in the last five years (2011–2015) and their resolution are presented.

Table 7. Legal resolution of citations against vessels fishing in the NAFO Regulatory Area by year in which the citations were issued (as of August 2016). A citation is an inspection report (from at-sea) that lists one or more infringements. Inspections carried out for confirming a previous citation are not included.

Year	Number of At-sea Inspection Reports with AI Citation/s	Resolved cases		Pending cases
		Number	%	
2011	8	8	100%	0
2012	10	10	100%	0
2013	13	13	100%	0
2014	5	4	80%	1
2015	1	0	0%	1
Total	37	35	95%	

6. Trends, Conclusions and Recommendations

Three main fisheries are identified by NAFO, these are groundfish (primarily in Div. 3LMNO), shrimp (primarily 3LM) and pelagic redfish (primarily in Div. 1F & 2J). Data collected in relation to these fisheries was reviewed to develop the following trends, conclusions and recommendations.

General Trends

The number of vessels active in the NRA went from 134 in 2004 to 57 in 2015 (a 57.5% decrease). Although this represents a significant overall declining trend, there was increased activity in one of the three main fisheries. The groundfish fisheries have shown a steady upward trend since 2013, ranging from 39 vessels in 2008 to an average of over 50 vessels from 2013 to 2015.

From 2004 to 2008 there has been an observed decline in fishing effort (the number of days a vessel is present in the NRA), a trend that appeared to stabilize in 2009 with ~5000 days of effort. During the years since, fishing effort remained relatively stable with some fluctuation. Since 2013, the fishing effort went from 4779 days to 4822 days in 2014 (+0.9%) followed by a decline to 4209 days in 2015 (-12.7%). The total fishing effort in 2015, in terms of fishing days, is comprised of 97.6% groundfish (4107 days) and 2.4% pelagic redfish fisheries (102 days), virtually a 100% groundfish based industry.

In the shrimp fishery, with the exception of the 2007 and 2008 fishing years, the number of active vessels and the fishing effort has declined steadily since 2004, with zero activity or effort identified in 2015. Over the last three years, effort has gone from 7 (2013) to 3 vessels in 2014, in the 3L fishery. Subsequently, in 2013 and 2014, there were further declines in fishing effort, reduced from 64.7% from 190 days in 2013 to just 67 days in 2014. As a result of the fishery closures in 2015, there were no shrimp vessels active in the NRA.

The pelagic redfish fishery (REB) has increased by 25%, with 7 vessels fishing in 2015 compared to 5 in 2014. There was a resulting increase in fishing effort from 56 days in 2014 to 102 days in 2015.

Analysis of groundfish activity by water depth shows that about half of all groundfish effort in 2015 occurred at depths of <400m, comparable to the profile of 2014. Fishing effort in water depths greater than 700m continue to present a declining trend, with approximately 70% of all fishing occurring below 700m. There is a notable overall decrease in effort in depths greater than 700m while the distribution in shallower depths (0–99 m), remains relatively unchanged.

Compliance by fishing vessels

For 2015, indications are that the VMS reporting requirements are being met by Contracting Party vessels. However, further in depth analysis of the VMS and VTI data on a trip basis is required to make a more concrete conclusion on the compliance with this requirement.

Using GHL as a case study, it is demonstrated that the cumulative CAT reports for a trip as declared by the vessel master generally match the figures identified at landing in port inspections. This indicates that in general, accurate CAT reports are being declared and transmitted by vessel operators. This suggests that this data is a reliable reflection of vessel activity.

Out of 4209 fishing days spent in the NRA in 2015, as only 20 were spent beyond the footprint in Division 6G, and 102 days were spent in Division 1F and by vessels engaged in pelagic trawling (therefore not restricted to remain within the fishing footprint), it is demonstrated that there is significant compliance of vessels to area closures.

There has been no detected incidence of shark finning by NAFO inspectors in the NRA in 2015.

Inspections and Apparent Infringements

The total number of at-sea inspections dropped from 135 in 2014 to 100 in 2015—in part due to mechanical problems on an inspection vessel. However, given the decline in total fishing effort from 2014 to 2015, the inspection rate (number of inspections/fishing effort) only decreased slightly from 2.8% to 2.6%.

In 2015, 87 port inspection reports were received by the Secretariat, all of which were associated with groundfish.

In 2015, catch on exit reports identified 80 fishing trips landing Greenland halibut. Vessels landing Greenland halibut must be inspected in port, yet the Secretariat only received inspection reports from 73 of the trips that submitted catch on exit reports with Greenland halibut. CPs should investigate why the 100% inspection requirement is apparently not being satisfied. Nonetheless, it does appear that the in-port inspection rate of vessels landing Greenland halibut is improving from 2014, when 89% of trips were inspected, to 2015, when 96% of trips were inspected.

In 2015, only one (1) apparent infringement was detected at-sea. The apparent infringement is associated with a bycatch requirement. It is not considered serious and was the first apparent infringement associated with a bycatch requirement detected at-sea since 2011. Apparent infringements detected at-sea are down significantly from 2014, when 12 were detected.

Just considering the reports on at-sea inspections, it may be interpreted that compliance is improving in NAFO as in 2015 there were less AIs detected at-sea in comparison to all other years since 2011. However, the number of AIs detected at-sea cannot be used as a direct indication of compliance in the absence of further information on apparent infringements detected in port.

Reporting Obligations by CPs and Observers

In 2015, 84% of fishing days were covered by observer reports, which is similar coverage that was seen in 2014. Additionally, 98 out of 99 observer reports received by the secretariat contained haul by haul information. This is also a positive improvement on previous years; however, the timeliness of submission of reports will be examined by appropriate Contracting Parties.

No analysis is available to determine the observer coverage rate or compliance with the OBR reporting requirements for Contracting Parties employing the electronic reporting protocol under Article 30.B. Additional analysis is necessary to ensure that Contracting Parties are complying with minimum observer coverage levels and submitting the required reports. In 2015, only 2 vessels took part in this scheme.

Timely submission of Inspection Reports

The majority of at-sea and port inspection reports noting apparent infringements are being transmitted on a timely basis to the Secretariat by CPs. However, the timeliness of in-port inspection reports where there is no apparent infringement detected is generally poor over the last few years with no improvement noted in 2015.

Recommendations

It would significantly improve the ability to evaluate compliance in the NAFO Regulatory Area if port inspection data was available. Therefore a requirement for the CPs to provide less aggregated data to the NAFO Secretariat should be considered for inclusion in the CEM.

Haul by haul information should be incorporated for future analyses.

A further in depth analysis of the VMS and VTI data on a trip basis should be completed to make a concrete conclusion on the compliance with this requirement.

The Secretariat shall provide to individual Contracting Parties a monthly update on outstanding report submissions in order to facilitate the timely transmission of reports.

Annex 22. Transmission of aggregated VMS data to Contracting Parties for non-inspection purposes

(FC WP 16-12 Rev. **now** FC Doc. 16-13)

This proposal supports the mandate given by the NAFO General Council to the NAFO Executive Secretary in September, 2014 (GC Doc. 14-02) *“to work with Canada to explore and implement a means for the appropriate and timely exchange of information necessary to avoid overlapping activities and mitigate potential conflicts between fisheries and hydrocarbon activities”*.

The current NAFO CEM (Article 29.10 and Annex II.B) strictly restricts the use of VMS data to specific purposes, with due respect of confidentiality. Furthermore and for confidentiality reasons, point 3.2 of Annex II.B states that a Contracting Party “shall make available reports and messages *only to their means of inspection and their inspectors* assigned to the Scheme of Joint International Inspection and Surveillance”.

Noting the value in utilising aggregate and anonymous vessel positional data relating to fishing activity to avoid the potential conflict of overlapping spatial interests, such as from the hydrocarbon industry, transmission of VMS data to other parties, should be enabled in specific circumstances and the relevant provisions of the NAFO CEM should be amended.

Proposal

It is proposed to modify the sub-paragraph (g) of Article 29 paragraph 10 of the NAFO CEM:

(g) upon request, provides the NAFO VMS data:

- i. *for Search and Rescue and maritime safety purposes as required, and*
- ii. *to a Contracting Party, in a monthly aggregated and anonymized form limited to the most recent five-year period, for purposes identified in the request, in the absence of an objection from a Contracting Party within thirty days of the communication of the request by the Secretariat. Such requests shall be in writing and shall identify the purposes for which the VMS data will be used and the entities to which the data will be given. The request shall immediately be forwarded to all Contracting Parties. Any objection to the request shall be sent in writing to the Executive Secretary who shall immediately forward the objection to all Contracting Parties. The Contracting Party requesting the VMS data shall only provide the VMS data to the entities defined in the request on the condition that it is for their own use only and that the data is not the subject of further distribution.*

Annex 23. Tentative NAFO WG Schedule for 2016/2017 (FC-SC WP 16-05 Rev.)

The following **Working Groups** are scheduled for the remainder of 2016:

Date	Title	Venue
17-18 Oct.	NAFO STACTIC Editorial Drafting Group of the NAFO CEM (EDG)	Reykjavik, Iceland
18-20 Oct.	NAFO STACTIC Observer Program Review Working Group	Reykjavik, Iceland
8-17 Nov.	NAFO Working Group on Ecosystem Science Assessment (WG-ESA)	Lisbon, Portugal

The following **Working Groups** are scheduled for 2017:

Date	Title	Venue
TBD	Joint Advisory Group on Data Management <i>(in the past JAGDM meets twice annually – early in the year then again in May/June)</i>	NEAFC Secretariat London, England
Feb.	NAFO Joint Fisheries Commission-Scientific Council Catch Data Advisory Group (CDAG)	TBD
Jan.-Feb.	NAFO Joint Fisheries Commission-Scientific Council Working Group on Risk-Based Management Strategies (WG-RBMS)	TBD
<i>back-to-back with another WG, when possible</i>	NAFO Ad Hoc Working Group on Bycatches, Discards and Selectivity (WG-BDS)	TBD
Apr.	NAFO Scientific Council Greenland halibut stock assessment	TBD
Week of 08 May	NAFO Standing Committee on International Control (STACTIC) Intersessional Meeting	TBD
TBD	Joint Advisory Group on Data Management <i>(in the past JAGDM meets twice annually – early in the year then again in May/June)</i>	NAFO Secretariat Halifax, Nova Scotia
1-15 Jun.	NAFO Scientific Council and its Standing Committees	Halifax, Nova Scotia
<i>after June meeting and prior to the Ann. Mtg.</i>	NAFO Joint Fisheries Commission-Scientific Council Working Group on Ecosystem Approach Framework to Fisheries (WG-EAFFM)	TBD
Aug.	NAFO Joint Fisheries Commission-Scientific Council Working Group on Risk-Based Management Strategies (WG-RBMS)	TBD
6-13 Sep.	Joint NAFO/ICES <i>Pandalus</i> Assessment Meeting	TBD
18-22 Sep.	NAFO 39 th Annual Meeting	TBD

PART II

Report of the Standing Committee on International Control (STACTIC) 38th Annual Meeting of NAFO,

**19–23 September 2016
Varadero, Cuba**

1. Opening by the Chair

The Chair, Judy Dwyer (Canada) opened the meeting at 2:00pm on Monday, 19 September 2016 at the Convention Center Plaza America in Varadero, Cuba. The Chair welcomed representatives from the following Contracting Parties (CPs): Canada, Denmark (in respect of Faroe Islands and Greenland), the European Union, Iceland, Japan, Norway, Russian Federation, and the United States of America (Annex 1).

2. Appointment of Rapporteur

The NAFO Secretariat was appointed as Rapporteur.

3. Adoption of Agenda

It was requested that the agenda item on Report and Recommendations of the Working Group to Review the NAFO Observer Scheme, June 2016 be discussed prior to the discussions of the MCS website.

The Agenda was adopted, as outlined in Annex 2.
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4. Compliance review 2016 including review of reports of Apparent Infringements

The NAFO Secretariat presented STACTIC WP 16-16 - Provisional Compilation of Fisheries Reports 2015 by the NAFO Secretariat, which highlighted the compliance tables that were distributed to Contracting Parties in June 2016.

The NAFO Secretariat Presented STACTIC WP 16-28 - Draft Annual Compliance Review 2016 (Compliance Report for Fishing Year 2015). The Chair asked for comments on the draft and Contracting Parties clarified some issues and requested some additions be made, including the number of vessels targeting 3M redfish, as well as the number of trips that were covered by an observer report. The NAFO Secretariat presented STACTIC WP 16-18 - Apparent Infringements detected at-sea and their Disposition 2011-2015 submitted annually by the Contracting Parties, in response to a recommendation from the May 2016 STACTIC Intersessional for discussion among STACTIC participants and highlighting the importance of discussing the details of this report. It was agreed that this document remain internal within STACTIC and that it is not for broader distribution.

The NAFO Secretariat presented STACTIC WP 16-19 (Rev.) - Daily Catch Trends in response to a recommendation made at the STACTIC Intersessional meeting. The NAFO Secretariat also presented STACTIC WP 16-26 - Comparison of Greenland halibut reported catches in Division 3LMNO in response to a recommendation made at the STACTIC Intersessional meeting. Contracting Parties noted that the high level of detail in these working papers may not be necessary for inclusion in the compliance review document; however, CPs confirmed the need to continue these assessments in the context of their utility and scope in reviewing compliance and identified that these analyses should be presented at the next STACTIC Intersessional for discussion. Contracting Parties made the same comments relating to the existing Figure 5 and supporting text in STACTIC WP 16-28, and agreed to remove that section from the compliance review.

Representatives from Canada, the European Union, the United States, and the NAFO Secretariat volunteered to complete STACTIC WP 16-28 (Rev.) in terms of summarizing the compliance review in Part 6: Trends, Conclusions and Recommendations. The text was provided and reviewed by Contracting Parties during the

meeting and the final version of the draft compliance review is presented in STACTIC WP 16-28 (Rev. 3). Within section 6 of the compliance review, Contracting Parties agreed that the Secretariat shall provide to individual Contracting Parties a monthly update on outstanding report submissions in order to facilitate the timely transmission of reports.

It was **agreed** that:

That the draft Annual Compliance Review outlined in STACTIC WP 16-28 (Rev. 3) be forwarded to the Fisheries Commission for adoption.

The Secretariat would continue to conduct the analyses in STACTIC WP 16-26, STACTIC WP 16-19 (Rev.), and Figure 5 in STACTIC WP 16-28, for presentation at the next STACTIC Intersessional to facilitate discussions.

The Secretariat will provide to individual Contracting Parties a monthly update on outstanding report submissions in order to facilitate the timely transmission of reports.

Canada would draft a discussion paper describing a process for conducting the compliance review for presentation at the next STACTIC Intersessional.

The Secretariat would provide a list of the current information presented in the compliance review at the STACTIC Intersessional in order to facilitate a review of the scope and purpose of the current report format to help ensure that it presents useful and relevant compliance information.

5. Port State Control Alignment

At the Intersessional meeting in May 2016, STACTIC agreed to review STACTIC WP 16-13 (Rev.) - Proposed amendments to Chapter VII (Port State Control) and Chapter VIII (Non-Contracting Party Scheme) of the NCEM to align with the FAO Port State Measures Agreement, in preparation for discussion at the Annual Meeting and the Chair introduced the working paper for discussion. Japan proposed that within Article 42 and Article 54, they would agree with the original proposed text. Relating to Article 43.1, Japan proposed to retain the text “to the greatest extent possible”. Contracting Parties noted that this text is in alignment with the FAO agreement and that they would be willing to accept this proposal. The changes were reflected in STACTIC WP 16-13 (Rev. 2) and Contracting Parties thanked Japan for their efforts to come to an agreement on the alignment of the CEM with FAO Port State Measures Agreement.

It was **agreed** that:

The proposed changes to align the NAFO CEM to the FAO Port State Measures Agreement presented in STACTIC WP 16-13 (Rev. 2) be forwarded to the Fisheries Commission for adoption.

6. Review and evaluation of Practices and Procedures

The NAFO Secretariat presented STACTIC WP 16-20 - Practices and Procedures and noted that the presentation made by Greenland at the May 2016 STACTIC Intersessional Meeting has been added to the list, as per the agreement at that meeting. Contracting Parties requested that STACTIC participants be sent a notification any time there is an update to the Practices and Procedures webpage.

Denmark (in Respect of the Faroe Islands and Greenland) highlighted that an interesting addition to the Practices and Procedures of NAFO would be a presentation from Iceland on how they are using business intelligence software and databases to improve the effectiveness of their inspection regime. Iceland agreed that they would make that presentation at the next STACTIC Intersessional meeting.

It was **agreed** that:

The NAFO Secretariat would send a notification email to STACTIC participants any time there is new material uploaded to the Practices and Procedures webpage.

Iceland would present on how they are using business intelligence software and databases to improve the effectiveness of their inspection regime at the next STACTIC Intersessional meeting.

7. Review of current IUU list pursuant to NAFO CEM (NCEM) Article 53

The NAFO Secretariat presented STACTIC WP 16-21 - NAFO IUU List Update and stated that there have been no new updates since the last Annual Meeting other than a footnote relating to the flag status of the vessel Maine.

It was **agreed** that:

The footnote relating to the information received from the Republic of Guinea remain on the IUU website, and if updates are received, they would be discussed at the STACTIC Intersessional.

8. Review of the implementation of new NAFO CEM measures

The NAFO Secretariat presented STACTIC WP 16-22 - Update on the submission of Logbook Information (Art. 28.8.b), which provided an update on submissions of haul by haul data to the Secretariat. The Secretariat noted that they are receiving the data from the European Union but there is still some work to be done to get it into a format that fits with the submissions from other Contracting Parties. It was noted that there were a number of other outstanding submissions from various Contracting Parties and they requested that the Secretariat provide them with a detailed list of the fishing trips for which the Secretariat has not received the haul by haul information. The European Union noted that the submission of haul by haul reports in accordance with Article 28.8b should be added to the 2017 Compliance Review.

It was **agreed** that:

The NAFO Secretariat would provide individual Contracting Parties a list of trips for which there has been no haul by haul information received, and continue providing regular updates as noted in the recommendation under Agenda Item 4.

The Secretariat will, going forward, include the haul by haul reporting requirement in the Annual Compliance Review.

9. NAFO Monitoring Control and Surveillance (MCS) Website

The European Union presented STACTIC WP 16-17 - Development of the NAFO MCS website and updating of the CEM text to formalize report posting obligations, outlining the proposed changes in the NAFO CEM that were agreed to at the STACTIC Intersessional Meeting in STACTIC WP 16-07 (Rev. 2). The EU noted that this document was prepared in consultation with the NAFO Secretariat and that the purpose of the proposal was to facilitate the submission, storage, and dissemination of reports necessary for at-sea and in port inspection strategies and remove the need to have things posted on the NAFO Members Pages. The European Union updated the proposal, which was presented in STACTIC WP 16-17 (Rev.) and Contracting Parties agreed to forward this to the Fisheries Commission for adoption.

It was **agreed** that:

The proposal presented by the European Union in STACTIC WP 16-17 (Rev.) regarding the expansion of the MCS website would be forwarded to the Fisheries Commission for adoption.

10. Editorial Drafting Group (EDG) of the NAFO CEM

The European Union presented STACTIC WP 16-32 - New text for EU footnotes associated to CEM Annex I.A. The European Union highlighted the work of the EDG that was done last year to simplify and update the footnotes in Annex I.A of the NAFO CEM and noted that this was an extension of that work. The European Union required extra time to complete the revision of the footnotes related to the Baltic States share of EU allocations to preserve the individual allocation rights for those States. Contracting Parties thanked the European Union for their efforts on the paper and agreed to forward the working paper to the Fisheries Commission for adoption.

The United States, on the topic of the footnotes, noted that the text that was in footnote 21 of Annex I.A of the 2015 NAFO CEM was replaced by the text presented in Article 6.3.f of the 2016 NAFO CEM, and that the new text in Article 6.3.f does not accurately reflect the text that was previously in footnote 21, as mentioned above. Contracting Parties noted that this issue would be best discussed at the next meeting of the EDG.

The Chair also noted STACTIC WP 16-38, which was meant to address a recommendation from the intersessional meeting, but that the EDG did not have time to review prior to this meeting. Canada decided to withdraw the working paper and Contracting Parties agreed it would be discussed by the EDG at their next meeting.

Following discussions, it was noted that the next meeting of the Editorial Drafting Group would take place in conjunction with the Working Group to Review the NAFO Observer Scheme, on 17-18 October 2016, in Reykjavik, Iceland.

It was **agreed** that:

STACTIC would forward STACTIC WP 16-32 relating to the EU footnotes in Annex I.A of the NAFO CEM to the Fisheries Commission for adoption.

STACTIC would forward to the EDG a review of the incorporation of footnote 21 of Annex I.A in the 2015 NAFO CEM into the current text of Article 6.3.f in the 2016 NAFO CEM, noting the United States' concerns that the text in Article 6.3.f does not accurately reflect the text that was in footnote 21, as mentioned above.

Canada would forward STACTIC WP 16-38 to the EDG for discussion in relation to the recommendation that was made at the STACTIC Intersessional meeting regarding harmonization of reporting in at-sea inspection forms within the text and Annexes of the CEM.

The next meeting of the EDG would take place 17-18 October 2016, in Reykjavik, Iceland.

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

The European Union presented STACTIC WP 16-31 - Notification of vessels fishing on the "Others" quota to Contracting Parties with an inspection presence in the Regulatory Area, outlining a proposed new measure for the NAFO Secretariat to inform Contracting Parties with an inspection presence when information is received in accordance with Article 5.3.e (Others quota). The European Union highlighted that Contracting Parties with an inspection presence currently do not have access to this information and the Secretariat noted that inspectors frequently inquire about these notifications and that this proposal would eliminate that issue. Contracting Parties were in agreement with the proposal put forward by the European Union. Canada requested an expansion of the proposal outlined in STACTIC WP 16-17 to reflect an obligation to notify Contracting Parties with an inspection presence with details of Contracting Party intentions to fish an "Others" quota as described in STACTIC WP 16-31.

Canada presented STACTIC WP 16-33 (Rev.) - Measures Concerning Vessels Demonstrating Repeat Non-compliance of Serious Infringements in the NAFO Regulatory Area (Discussion Paper). Canada noted that this paper was intended to engage Contracting Parties in a discussion about how to address the issue of repeated

non-compliance with the NAFO CEM. Contracting Parties were in agreement that STACTIC should seek a solution to the issue of repeat offenders, and Contracting Parties are requested to report at the next STACTIC Intersessional on the options available under their domestic legislation to address repeat serious infringements when such infringements are confirmed in port by the flag State Contracting Party. Some Contracting Parties that do not have an inspection presence in the NRA noted their frustration with not having access to certain information relating to infringements detected in port and that a review of the access rights within the CEM relating to infringements be conducted.

Canada presented STACTIC WP 16-34 - Clarification of the IMO numbering requirement in the NAFO CEM in response to a recommendation that was made at the May 2016 STACTIC Intersessional to clarify the wording related to the IMO requirement. Following discussions regarding the original intent of the IMO requirement, Canada decided to withdraw the paper with a view to discuss further with other Contracting Parties before the next STACTIC Intersessional.

Canada presented STACTIC WP 16-15 (Rev.) - Proposal on the notification process for the closure of directed fishing in the Regulatory Area for a particular stock under an “Others” Quota, following a recommendation made at the May 2016 STACTIC Intersessional. Following discussions and clarifications, the final proposal was agreed to by Contracting Parties and presented in STACTIC WP 16-15 (Rev. 5).

It was **agreed** that:

The proposal outlined by the European Union in STACTIC WP 16-31 relating to the notification to Inspectors of intention to target a species under an “Others” quota is incorporated into STACTIC WP 16-17 (Rev.) for adoption by the Fisheries Commission.

The discussion of the issue of repeat offenders be added to the agenda for the next STACTIC Intersessional meeting and that Contracting Parties would review their National legislation and report on their available options to address repeat offenders in the NRA in preparation for a discussion on options to deal with this issue.

STACTIC forward the proposal outlined by Canada in STACTIC WP 16-15 (Rev. 5) relating to the notification requirements for the uptake of an “Others” quota to the Fisheries Commission for adoption.

STACTIC forward to the EDG a request to review the access to port inspection reports.

12. Report and Recommendations of the Working Group to Review the NAFO Observer Scheme, June 2016

At the request of Contracting Parties to facilitate other discussions, this agenda item was discussed prior to Agenda Item 9. The STACTIC Chair, and also the chair of the Working Group to Review the NAFO Observer Scheme, presented STACTIC WP 16-35 (Rev.) - Report of the STACTIC Observer Program Review Working Group Montreal, Quebec, Canada, 28-30 June 2016. The chair presented some of the issues that were discussed at the meeting, and highlighted that one of the main issues remains that there needs to be more guidance on how STACTIC can interact with other NAFO bodies, specifically members of the Scientific Council to get their input on the scientific requirements for the NAFO Observer Program. The final version of the report was presented in STACTIC WP 16-35 (Rev. 5), which made the following recommendations:

- 1. That the Observer WG meet again in October 2016 or as soon as practicable thereafter to continue deliberations from this meeting.**
- 2. That STACTIC be allowed to invite members of SC to participate in future meetings of the WG and related STACTIC meetings if needed for specific issues.**
- 3. That the study proposed in SC WP 16-14 be endorsed by STACTIC.**

4. That the terms of Reference for the Observer Working Group be expanded to include consideration of electronic monitoring for appropriate fisheries.

It was agreed by STACTIC to forward the report to the Fisheries Commission. The Chair also presented STACTIC WP 16-36 (Rev.) - Draft Proposed changes to Article 30 for information purposes to STACTIC so they can review the progress that the working group has made to date on the review of the observer working group program.

STACTIC also agreed that the next meeting of the Working Group to Review the NAFO Observer Scheme would take place on 18-20 October 2016, in Reykjavik, Iceland.

It was **agreed** that:

STACTIC would forward the report of the Working Group to Review the NAFO Observer Scheme, June 2016 presented in STACTIC WP 16-35 (Rev. 5), including the recommendations, to the Fisheries Commission for adoption.

The next meeting of the Working Group to Review the NAFO Observer Scheme would take place on 18-20 October 2016, in Reykjavik, Iceland

13. Report of the Joint Advisory Group on Data Management (JAGDM), May-June 2016

The Chair of JAGDM (Lloyd Slaney, Canada) presented STACTIC WP 16-30 - Joint Advisory Group on Data Management (JAGDM) Meeting Highlights and discussed the highlights from the meeting that took place at the end of May 2016 (full report available in FC Doc. 16-04). One of the highlights from the meeting was that JAGDM had put forward a recommendation for harmonizing the COX messages between NEAFC and NAFO, as requested at the STACTIC Intersessional meeting in May 2016. This proposal was outlined in STACTIC WP 16-25 - Harmonization of COX messages between NAFO and NEAFC, and it was noted that it would facilitate data sharing between the two organizations. Iceland provided an update that there is a working group within NEAFC focused on Electronic Reporting Systems and that they would be looking at ways of implementing the proposal from JAGDM.

Canada then presented STACTIC WP 16-29 - Electronic Notification and Authorization (Article 25) and Electronic Catch Reporting (Article 28), and noted that JAGDM participants from Canada and Norway had completed this proposal outlining some clarification needed within the annexes of the NAFO CEM dealing with VMS/VTI messages. Canada noted that there is still more work required to further clarify the annexes of the CEM, but that this proposal was a starting point. Contracting Parties noted some inconsistencies in the elements within the annexes and Canada explained that there is a further need to look at those inconsistencies and clarify those as well. The STACTIC Chair requested that while JAGDM continue their work on clarifying the annexes, that they make a running list of the inconsistencies for review. The proposal put forward in STACTIC WP 16-29 was agreed to by STACTIC to forward to the Fisheries Commission.

It was **agreed** that:

STACTIC would forward STACTIC WP 16-29 relating to the clarification of the data elements in the annexes of the NAFO CEM to the Fisheries Commission for adoption.

As JAGDM continues their review of the annexes in the CEM relating to VMS/VTI reporting, that they keep a running list of other inconsistencies that should be addressed.

14. Confidentiality Measures in the NAFO CEM

The NAFO Secretariat presented STACTIC WP 16-37 - Existing Confidentiality Measures in the NAFO Conservation and Enforcement Measures in response to a recommendation from the May 2016 STACTIC Intersessional for discussion. Contracting Parties thanked the Secretariat for the thorough review of the existing measures and

sought clarification on how to move forward. The NAFO Secretariat noted that there are some areas where the CEM is not clear and that clarifying those would be a good first step. Canada agreed to draft a proposal for review at the next STACTIC Intersessional meeting to address those areas.

Denmark (in Respect of the Faroe Islands and Greenland) noted that they had previously presented a proposal relating to access rights of NAFO data and information and will be drafting a new proposal for presentation at the next STACTIC Intersessional meeting.

It was **agreed** that:

Canada would draft a proposal to address the areas in the NAFO CEM that were highlighted in STACTIC WP 16-37 that are requiring clarity on access rights to information.

Denmark, in Respect of the Faroe Islands and Greenland, will present a proposal on access rights to NAFO data and information at the next STACTIC Intersessional meeting.

15. Information Security Management System (ISMS)

The NAFO Secretariat presented STACTIC WP 16-27 - Access rights pilot: MCS Website in order to facilitate the expansion of the NAFO MCS website as proposed by the European Union in STACTIC WP 16-17 (Rev.). Contracting Parties requested some changes to the document for clarification and the final version was presented in STACTIC WP 16-27 (Rev.). STACTIC supported the Secretariat in applying the access rights outlined in STACTIC WP 16-27 (Rev.) when implementing the changes to the MCS website, as well as continuing the work of outlining access rights to all NAFO data and information for presentation at the next STACTIC Intersessional.

The NAFO Secretariat presented STACTIC WP 16-23 – NAFO Secretariat Backup Policy in response to a recommendation from the May 2016 STACTIC Intersessional. The Secretariat noted that this is the existing practice, but that it was not formally written down, and part of the ISMS audit from 2015 was to draft the policy. Participants reviewed the draft and requested a few changes for clarification and the final version is presented in STACTIC WP 16-23 (Rev.).

It was **agreed** that:

The NAFO Secretariat will apply the access rights outlined in STACTIC WP 16-27 (Rev.) when implementing the changes to the NAFO MCS website.

The NAFO Secretariat continues their work on outlining the access rights for all NAFO data and information for presentation at the next STACTIC Intersessional.

The NAFO Secretariat Backup Policy as drafted in STACTIC WP 16-23 (Rev.) be adopted.

16. Visma Contract Renewal

The NAFO Secretariat presented STACTIC WP 16-24 - Visma Contract Renewal relating to the upcoming expiry of the contract with Visma, the VMS Service provider. The Secretariat again highlighted their satisfaction with Visma and sought guidance from STACTIC on whether or not the Secretariat can move forward with contract renewal discussions or if Contracting Parties preferred for the Secretariat to issue a notice of tender for other potential service providers.

It was **agreed** that:

STACTIC endorses the Secretariat to move forward with the contract renewal with Visma as the VMS service provider for another term.

17. Other Matters

There were no other matters addressed under this agenda item.

18. Time and Place of next meeting

The next STACTIC Intersessional meeting will be hosted by the NAFO Secretariat in Halifax or by the United States in Boston, during the week of 08 May 2017.

19. Adoption of Report

The report was adopted on 22 September 2016.

20. Adjournment

The meeting was adjourned at 12:04pm on 22 September 2016. The Chair thanked the Secretariat for their support and the meeting participants for their cooperation and input. The participants likewise expressed their thanks and appreciation to the Chair for her leadership.

Annex 1. List of Participants

Judy Dwyer (Chair) Natasha Barbour Robert Lambert Lloyd Slaney Jackie Perry	Canada
Meinhard Gaardlykke Petur Jacobsen Mads T. Nedergaard	Denmark (in respect of the Faroe Islands and Greenland)
Aidas Adomaitis Genadijus Babcionis Carlos Chamizo Justine Jury Tomas Kazlauskas Indre Sidlauskienė Aronne Spezzani	European Union
Björgólfur H. Ingason Hrannar M. Asgeirsson	Iceland
Hitomi Ozawa Haruo Tominaga	Japan
Hanne Østgård	Norway
Vadim Agalakov	Russian Federation
Ian Callander Joe Heckwolf Moir Kelly Gene Martin Richard Usher	United States of America
Jana Aker Matt Kendall DJ Laycock	NAFO Secretariat

Annex 2. Agenda

1. Opening by the Chair
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Compliance review 2016 including review of reports of Apparent Infringements
5. Port State Control Alignment
6. Review and evaluation of Practices and Procedures
7. Review of current IUU list pursuant to NAFO CEM Article 53
8. Review of the implementation of new NAFO CEM measures
9. NAFO Monitoring, Control and Surveillance (MCS) Website
10. Editorial Drafting Group (EDG) of the NAFO CEM
11. New and Pending Proposals on Enforcement Measures: Possible Revisions of the NAFO CEM
12. Report and Recommendations of the Working Group to Review the NAFO Observer Scheme, June 2016
13. Report and Advice of the Joint Advisory Group on Data Management (JAGDM), May-June 2016
14. Confidentiality Measures in the NAFO CEM
15. Information Security Management System (ISMS)
16. Visma Contract Renewal
17. Other Matters
18. Time and place of next meeting
19. Adoption of Report
20. Adjournment

SECTION III

(193–201)

Report of the NAFO Editorial Drafting Group Meeting (EDG)**17–18 October 2016
Hafnarfjörður, Iceland****Contents**

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Report of the NAFO Editorial Drafting Group (EDG) (FC Doc. 16-22)

**17-18 October 2016
Hafnarfjörður, Iceland**

1. Opening of the meeting

The meeting opened at 09:00 hrs on Monday, 17 October 2016 at the Directorate of Fisheries in Hafnarfjörður, Iceland with representatives from the following Contracting Parties – Canada, the European Union, Iceland, and the United States of America (Annex 1).

2. Appointment of Rapporteur

Jana Aker (NAFO Secretariat) was appointed Rapporteur.

3. Adoption of Agenda

The Agenda was adopted (Annex 2).

4. Review of Footnote 21 from the 2015 Quota Table (Annex I.A)

This item was included on the agenda following the recommendation from STACTIC made in FC Doc. 16-20. Representatives from the United States raised the issue, noting that the incorporation of the text from footnote 21 (Annex I.A) of the 2015 NAFO CEM into the text of Article 6.3.f of the 2016 NAFO CEM (FC Doc. 15-08: Review of the footnotes associated to Annex I.A – Annual Quota Table) did not accurately reflect the wording that was originally in the footnote. It was agreed that Canada and the United States would work intersessionally to resolve the issue, and present a proposal at the STACTIC Intersessional meeting in May 2017.

It was **agreed** that:

- **Representatives from the United States and Canada would work intersessionally to review the incorporation of footnote 21 from Annex I.A of the 2015 NAFO CEM into the text of Article 6.3.f in the 2016 NAFO CEM following the proposal adopted by the Fisheries Commission in FC Doc. 15-08.**
- **The United States would develop a proposal for presentation at the 2017 STACTIC Intersessional meeting to better reflect the text of footnote 21 from Annex I.A of the 2015 NAFO CEM in the text of Article 6.3.f in the NAFO CEM.**

5. Harmonization of At-Sea Inspection Forms

This item was included on the agenda following the recommendation from STACTIC made in FC Doc. 16-20. STACTIC WP 16-38 was presented to STACTIC at the 2016 Annual Meeting, but Canada highlighted, at that time, that the EDG had not had sufficient time to review the changes prior to the Annual Meeting. The EDG reviewed the proposed changes in the working paper and discussed the need for consistency in data collection in the at-sea inspection forms. There were discussions regarding the standardization of terms throughout the NAFO CEM (e.g. a standard definition of tow time) so that data collected from different sources could be compared. The group also discussed that some of the data collected in the at-sea inspection form may no longer be relevant given the updated data reporting requirements within NAFO that have taken place since the form was first developed (e.g. section 14 may be redundant given that CAT reports now occur). It was noted that as the PSC3 was developed to mirror that of NEAFC, perhaps it could be considered to do the same with the at-sea inspection form.

Contracting Parties with an inspection presence (presently the European Union and Canada) agreed to discuss the form with their inspectors to determine what data are currently necessary to be collected during an at-sea

inspection, for the purpose of identifying non-compliance without adding unnecessary administrative burden. Canada and the European Union agreed to initiate the development of a proposal for the updated at-sea inspection form and present a draft to STACTIC at the Intersessional meeting in May 2017. However, it is anticipated that the catch estimation methodology study, which will begin in 2017, may lead to a standard methodology applied by the inspectors to identify 'fish observed in last tow', whilst still on deck. This may influence the fields of information required to be reported by the inspectors. Therefore, the form may require further revision once the study is complete and the results are available.

It was **agreed** that:

- **Canada and the European Union would discuss the at-sea inspection forms outlined in Annex IV.B of the NAFO CEM with their inspectors to determine what relevant information is required to be collected in the form for the purpose of completing an at-sea inspection to identify non-compliance without adding unnecessary administrative burden.**
- **Canada and the European Union would develop a proposal for an updated at-sea inspection form with input from at-sea inspectors for presentation to STACTIC at the 2017 Intersessional meeting.**

6. Port Inspection – Access rights to relevant information

The discussion was started during STACTIC at the 2016 Annual Meeting regarding access to information for conducting an inspection in port. Iceland agreed that as a port State it would be beneficial to have the rights of access not only to inspection reports for the last trip of a vessel (as is the current right), but also to historical at-sea inspection reports (which is not the current right). It was acknowledged by the European Union that having access to at-sea inspection reports for other Contracting Party vessels would also be of benefit to those with an at-sea inspection presence. It was noted that Canada, at the Annual Meeting agreed to draft a proposal in relation to the areas of the NAFO CEM where the access rights required clarity, as highlighted in STACTIC WP 16-37. It was also noted that Denmark (in Respect of the Faroe Islands and Greenland) had agreed to draft a proposal regarding access rights to information and data within the NAFO CEM (FC Doc. 16-20). Both papers will be presented at the 2017 STACTIC Intersessional. Canada also agreed to draft a proposal on the process for apparent infringements detected in port.

Iceland also flagged that the text in the NAFO CEM relating to the coverage of port inspections where vessels have Greenland halibut onboard is not entirely clear. Article 10.5.e states:

10.5 The following measures apply to vessels 24 meters or greater in overall length engaged in the Greenland halibut fishery in Subarea 2 and Divisions 3KLMNO:

- e. Each Contracting Party shall inspect each landing of Greenland halibut in its ports and prepare an inspection report in the format prescribed in Annex IV.C, which it shall transmit to the Executive Secretary within 14 working days from the date on which the inspection was completed.

Iceland noted that in the text of the chapeau gives the impression that it is only vessels engaged in a fishery for Greenland halibut that have to comply with these measures, but discussions with the group resulted in the common understanding that it is all vessels over 24 metres with any amount (including bycatch) of Greenland halibut onboard that require port inspection. Iceland noted that this language needs to be clarified and offered to draft a proposal to clarify the language with the assistance from EDG participants.

It was **agreed** that:

- **Canada would draft a proposal on the process for apparent infringements detected in port.**
- **Iceland would draft a proposal to clarify the language in Article 10.5.e of the NAFO CEM.**

7. Minor amendments to the MCS Website Proposal

Representatives from the European Union highlighted some minor amendments were needed within the MCS website proposal that was adopted by the Fisheries Commission (FC Doc. 16-08) to better reflect the existing access rights and current processes within the NAFO CEM. Those changes were made and are reflected in STACTIC EDG WP 16-01. During this review, representatives from the United States noted that there is some confusion relating to the use of the term “automatically” throughout the proposal, and now within the NAFO CEM, and noted that this may need clarification. The EDG agreed that this was something that should be reviewed in 2017. The European Union noted that there were some other items that would be good to have included on the MCS Website and agreed to draft a proposal with assistance from the NAFO Secretariat to have the additional items included, as well as review the term “automatically” throughout the NAFO CEM.

The group also noted that since there is going to be a large amount of changes to the MCS Website for 2017, that there may be a need for some training or tutorials on how to use the new functionality. The NAFO Secretariat offered to provide a virtual tutorial to teach users how to use the new functionality of the MCS Website before 01 January 2017.

It was **agreed** that:

- **The edits proposed in STACTIC EDG WP 16-01 be incorporated into the 2017 version of the NAFO CEM.**
- **The NAFO Secretariat would provide an online tutorial on how to use the new functionality of the MCS Website before 01 January 2017.**
- **The European Union, with the assistance from the NAFO Secretariat, would draft a proposal for the inclusion of additional items on the NAFO MCS Website, as well as review the term “automatically” throughout the NAFO CEM as it relates to the NAFO MCS website.**

8. Edits to the NAFO CEM Highlighted by the Secretariat

The NAFO Secretariat presented edits to the NAFO CEM for correction/clarification and those were presented in STACTIC EDG WP 16-02. The EDG reviewed and agreed with the edits, and clarified an issue regarding footnote 10 of Annex I.A, noting that the reference to footnote 4 was inadvertently removed in FC Doc. 15-08. The reference was re-inserted to the CEM, and the correction was reflected in STACTIC EDG WP 16-02 Rev.

It was **agreed** that:

- **The edits proposed in STACTIC EDG WP 16-02 Rev. be incorporated into the 2017 version of the NAFO CEM.**

9. 2017 NAFO CEM

The NAFO Secretariat presented the first draft of the 2017 NAFO CEM with all of the measures that were adopted at the 2016 Annual Meeting (GFS 16-274) incorporated as track changes.

The insertion of the new Article for the 3LN Redfish Conservation Plan and Harvest Control Rule (FC Doc. 16-15) highlighted the need for having separate sections within the NAFO CEM that outline the distinction between the conservation elements and the enforcement elements of the measures. It was decided that for 2017, the new 3LN Redfish measures would be inserted as Article 10 Bis. with a reference to Annex I.H that contains the 3LN Redfish Conservation Plan and Harvest Control Rule, and that the United States would draft a proposal to reconfigure the NAFO CEM to have one section solely for conservation measures, and one section solely for enforcement measures.

The group noted that the insertion of the new text in Article 12 - Conservation and Management of Sharks (FC Doc. 16-11) was not formatted in a consistent manner with other similar articles in the NAFO CEM. It was agreed that the EDG would develop a proposal to re-draft that article for presentation at the 2017 STACTIC Intersessional.

The group also reviewed FC Doc. 15-04 and STACTIC WP 15-17 which contained a list of terms from the STACTIC Ad hoc Working Group on Port State Control Alignment that the EDG should review throughout the NAFO CEM to ensure consistency with the updated text in the Port State Chapter. The group began to review the terms within the NAFO CEM, and felt that changing some of the terms for consistency resulted in a larger change than what was not believed to be the intention. It was decided that the NAFO Secretariat would follow up on the intention of the review before going through the NAFO CEM and changing all of the terms. The group did decide to align the term “entitled to fly its flag” throughout the NAFO CEM as they felt this change was strictly for consistency.

The group reviewed the insertion of the new text in Article 29.10.g.ii that was adopted by the Fisheries Commission in FC Doc. 16-13. The group noted that there are duties of the Executive Secretary as well as Contracting Parties within the paragraph, and there should be a distinction between them. The last sentence of the paragraph was very clearly a duty of the Contracting Party, so it was decided to separate that sentence into a new Article 29.12, but that further work was needed to align that text to make it consistent with the rest of the NAFO CEM. The European Union agreed to work on a re-draft of this text for presentation at the 2017 STACTIC Intersessional.

The remaining changes for 2017 were reviewed and some editorial changes were made by the EDG for consistency. The draft of the NAFO CEM was reviewed by EDG participants and finalized during a WebEx meeting on 18 November 2016. Items that the EDG agreed to review further in 2017 are outlined in Annex 3.

It was **agreed** that:

- **The United States would draft a proposal to reconfigure the NAFO CEM to have one section for conservation measures and one section for enforcement measures for presentation to STACTIC at the 2017 Intersessional meeting.**
- **The EDG would develop a proposal to re-draft the text for Article 12 adopted in FC Doc. 16-11, in order to make the text consistent with other sections of the NAFO CEM, for presentation at the 2017 STACTIC Intersessional.**
- **The NAFO Secretariat would follow up on the intention of reviewing the list of terms for consistency presented in FC Doc. 15-04 and STACTIC WP 15-17.**
- **The European Union would develop a draft revision of the text that was adopted in FC Doc. 16-13 in order to make it consistent with the rest of the CEM.**

10. Time and Place of Next Meeting

The next meeting of the EDG will take place as and when required.

11. Adoption of the Report

The report was adopted by the group via correspondence.

12. Adjournment

The meeting was adjourned via WebEx on 18 November 2016.

Annex 1. List of Participants

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Annex 2. Agenda

1. Opening of the meeting
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Review of Footnote 21 from the 2015 Quota Table (Annex I.A)
5. Harmonization of At-Sea Inspection Forms
6. Port Inspection Access
7. Clarifications to the MCS Website Proposal
8. Edits to the NAFO CEM Highlighted by the Secretariat
9. 2017 NAFO CEM
10. Time and Place of Next Meeting
11. Adoption of the Report
12. Adjournment

Annex 3. Items for review in 2017

The group agreed further review the following items in 2017:

1. Review of the incorporation of footnote 21 from the 2015 Annual Quota table into Article 6.3.f of the 2016 NAFO CEM – Lead: United States of America, Assistance from: Canada
2. Review and development of a draft At-Sea Inspection form for presentation at the May 2017 STACTIC Inter-sessionnal – Leads: Canada and the European Union
3. Clarification of the port inspection coverage where vessels have Greenland halibut onboard (Article 10.5.e) – Lead: Iceland; Assistance from: EDG members
4. Draft a proposal for the additional items that could be included on the NAFO MCS website and review the use of the term “automatically” throughout the NAFO CEM in relation to the MCS Website. – Lead: European Union; Assistance from: NAFO Secretariat.
5. Draft a proposal for the revision of the text in Article 29.10.g.ii and 29.12 to make it consistent with other sections of the NAFO CEM. – Lead: European Union; Assistance from: NAFO Secretariat.
6. Clarifying the text in Article 54.c. – Lead: EDG members
7. Clarifying the lists in Article 46.1.c-d. – Lead: EDG members

SECTION IV

(203–210)

Report of the NAFO STACTIC Observer Program Review Working Group**18–20 October 2016
Hafnarfjörður, Iceland****Contents**

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Report of the STACTIC Observer Program Review Working Group (FC Doc. 16-21)

18-20 October 2016
Hafnarfjörður, Iceland

1. Opening of the Meeting

The meeting was opened at 13:00 hrs on Tuesday, 18 October 2016 at the Directorate of Fisheries in Hafnarfjörður, Iceland with representatives from the following Contracting Parties – Canada, Denmark (in Respect of the Faroe Islands and Greenland), the European Union, Iceland, and the United States of America (Annex 1).

2. Appointment of Rapporteur

Jana Aker (NAFO Secretariat) was appointed Rapporteur.

3. Adoption of Agenda

The Agenda was adopted (Annex 2).

4. Action Plan for the Working Group

The Working Group decided that a formal Action Plan should be developed to facilitate specific tasks and timelines that the group need to achieve. The group developed a list of items that would need to be included in the Action Plan and that list is presented in STACTIC WG-OPR WP 16-03. The European Union agreed to take the itemized list and develop the Action Plan from it for presentation at the next meeting of the Working Group. Canada agreed to provide the European Union with examples of other action plans to assist with the development process.

It was **agreed** that:

- **the European Union would use the list presented in STACTIC WG-OPR WP 16-03 as a basis for developing the Action Plan for the NAFO STACTIC Observer Program Review Working Group for presentation at the next meeting of the Working Group.**
- **Canada would provide examples of other action plans to the European Union to assist with the development process of the Action Plan for the NAFO STACTIC Observer Program Review Working Group.**

5. Science Engagement

The group discussed the issue of science engagement within the Working Group and noted that there is a need for science input, but that the Scientific Council is extremely busy and may not have the time to participate in the Working Group. There was general agreement that there is a need to determine specific issues that need science engagement, and that there will likely need to be a phased approach throughout the development of the new NAFO Observer Program which may require science to answer broad questions in the beginning, and as the program gets refined, the group may require answers to more detailed questions. The group agreed on two questions to go back and ask their own scientists as a starting point, and those are outlined in STACTIC WG-OPR WP 16-04. The group also noted that the Catch Data Advisory Group (CDAG), which is a sub-group of the Ad Hoc Joint FC-SC Working Group on Catch Reporting (WG-CR), has been doing comparisons of the various sources of catch information that are provided to the Secretariat, and that these may also be good groups to involve in the Observer Program review discussions.

There was also discussion on whether the NAFO Observer program could have the capacity to serve both purposes of science and compliance observers. The current information being collected mainly serves a compliance objective, and there were questions as to whether that same observer could also conduct scientific sampling, or if that would be asking too much of the individual. It was noted that NAFO Observers could be required to be trained in biological sampling, but there would have to be a need from Contracting Parties and somewhere for the samples to go to be analyzed. Some flag States are currently doing this on their own with

their own scientific observers, so the discussion would have to be had with science to determine if there would be a need for this additional sampling from NAFO Observers.

The group also discussed that the bigger need is for a standard method of data collection rather than looking for the observers to collect more data. It was noted that the European Union Catch Estimates Study (SC WP 16-14) would be addressing catch estimate methodologies and that perhaps NAFO Observers could adopt the estimation strategies put forward in this study. The European Union noted that results from this study would hopefully be available in early 2018.

It was **agreed** that:

- **to help facilitate the beginning of science engagement for the NAFO Observer Program, participants would take the questions outlined in STACTIC WG-OPR WP 16-04 back to their own scientists, and the responses would be discussed at the next meeting.**
- **NAFO Catch Data Advisory Group (CDAG) members would arrange to put the question of the utility of observer data on the agenda for the next meeting of CDAG or the NAFO *Ad Hoc* Joint FC-SC Working Group on Catch Reporting (WG-CR).**

6. Review of Article 30

The group reviewed the draft Article 30 presented in WG-OPR Draft Article 30 - Version 3. Some changes were made to the draft and are reflected in WG-OPR Draft Article 30 - Version 4, but the discussion was halted because there needed to be a clear understanding from a compliance perspective exactly what was expected of the observer before the changes to the program could be drafted. The group walked through a timeline of what would be expected of an observer from a compliance perspective and that is outlined in STACTIC WG-OPR WP 16-05. It was felt that outlining the process of what would be required from a compliance perspective was a very useful exercise to facilitate the discussion of data collection requirements. Knowing the minimum requirements for compliance could then facilitate the discussion with science in terms of adding to those data collection requirements to enhance scientific function of the observer program within NAFO.

Part of the discussions revolved around requiring the electronic observer reports (OBRs) on a daily basis for all observers. Contracting Parties noted that there have been instances when the observer reports submitted have different catch amounts than those that are recorded in the daily catch reports (CATs). The timeline for submitting the observer report is 30 days following when the vessel lands in port, so by the time the report is received and the data sources are compared, it is too late to investigate the discrepancy. Having mandatory daily electronic observer reports for all vessels would lead to a more real time comparison of these catch data sources and may allow inspectors to detect incidences of discrepancies while the vessel is still operating within the NAFO Regulatory Area. The NAFO Secretariat agreed to do a comparison of the catch amounts in the OBR messages and the daily CATs for review at the next meeting.

The group also questioned what the difference was between the terms program and scheme. Chapter V of the 2016 NAFO CEM is titled Observer Scheme and Article 30 is titled Observer Program.

It was **agreed** that:

- **the NAFO Secretariat would prepare a comparison between the catch amounts in the OBR messages that have been received so far and the daily CATs for presentation at the next meeting of the NAFO STACTIC Observer Program Review Working Group.**

7. Code of Conduct for the NAFO Observer Program

The European Union presented STACTIC WG-OPR WP 16-01 which was a draft Code of Conduct for the NAFO Observer program. The group reviewed the draft and felt that many of the points within the document were already covered under the NAFO CEM, domestic or international legislation, or domestic observer programs.

It was decided that each Contracting Party would take the information presented in STACTIC WG-OPR WP 16-01 and divide it into 4 categories: 1. Covered under domestic observer programs, 2. Covered under domestic regulations or international law, 3. Covered under the current NAFO CEM, 4. Not covered by the above and should be incorporated into the NAFO CEM. Contracting Parties agreed to have their lists completed by 14 February 2017, and the Working Group would decide from there how to proceed with reviewing the lists. The NAFO Secretariat agreed to set up a SharePoint site for the Working Group to facilitate the sharing of this information as well as set up a discussion board to use between meetings.

It was **agreed** that:

- **Contracting Parties would review the information presented in STACTIC WG-OPR WP 16-01 and divide the information into the following four categories: 1. Covered under domestic observer programs, 2. Covered under domestic regulations or international law, 3. Covered under the current NAFO CEM, 4. Not covered by the above and should be incorporated into the NAFO CEM.**
- **Contracting Parties would have their lists completed by 14 February 2017, and the NAFO STACTIC Observer Program Review Working Group would decide from there how to proceed with reviewing the lists.**
- **the NAFO Secretariat would set up a SharePoint site for the NAFO STACTIC Observer Program Review Working Group to facilitate the sharing of information and discussions.**

8. Changes to Annex II.M of the NAFO CEM

The European Union prepared draft changes to Annex II.M in STACTIC WG-OPR WP 16-02, however this discussion was deferred to the next meeting.

9. Training and Equipment

As per the agreement, Contracting Parties started submitting their list of equipment and training for inspectors and observers. The NAFO Secretariat agreed to set up a SharePoint site for the Working Group to facilitate the sharing of this information between members of the group.

It was **agreed** that:

- **the NAFO Secretariat would set up a SharePoint site to facilitate the sharing of individual Contracting Party training and equipment information.**

10. Time and Place of Next Meeting

The next meeting of the STACTIC Observer Program Review Working Group will take place in conjunction with the STACTIC Intersessional during the week of 08 May 2017.

11. Adoption of the Report

The report was adopted via correspondence.

12. Adjournment

The meeting was adjourned at 18:00 hrs on 19 October 2016.

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Annex 2. Agenda

1. Opening of the Meeting
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Action Plan for the Working Group
5. Science Engagement
6. Review of Article 30
7. Code of Conduct for the NAFO Observer Program
8. Changes to Annex II.M of the NAFO CEM
9. Training and Equipment
10. Time and Place of Next Meeting
11. Adoption of the Report
12. Adjournment

SECTION V

(211–220)

**NAFO Joint Fisheries Commission-Scientific Council Working Group on
Catch Reporting (WG-CR)****06 February 2017
NEAFC Secretariat, London, UK****Contents**

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**NAFO Joint Fisheries Commission-Scientific Council Working Group on
Catch Reporting (WG-CR)**
(FC-SC Doc. 17-01)

6 February 2017
NEAFC Secretariat, London, UK

1. Opening

Katherine Sosebee (USA), co-Chair of the WG, opened the meeting at 10:00 hours on 6 February 2017 at the headquarters of the North East Atlantic Fisheries Commission (NEAFC) in London, UK. Temur Tairov (Russian Federation), co-Chair of the WG, joined the meeting via WebEx teleconference. Representatives from the following Contracting Parties were in attendance: Canada, Denmark (in respect of Faroe Island and Greenland), European Union, Japan, Russian Federation, and United States of America (Annex 1).

2. Appointment of Rapporteur

Tom Blasdale and Ricardo Federizon (NAFO Secretariat) were appointed co-Rapporteurs.

3. Adoption of Agenda

The revised provisional agenda previously circulated was adopted (Annex 2).

4. Review and provision of guidance of the catch estimation process and catch estimates of the priority Stocks 2+3KLMNO Greenland halibut, 3LNO American plaice, and 3M Cod

a. Work conducted by the NAFO Joint Fisheries Commission-Scientific Council Catch Data Advisory Group (CDAG) on the evaluation of the data sources and the development of catch estimate methodology.

The Catch Data Advisory Group (CDAG) met in early 2016 to compare the various NAFO catch data sources, and developed an Estimation Strategy (FC-SC Doc. 16-02). This strategy, presented in Annex 3 is based mainly on the use of Port Inspection data (PSC3)¹, as those are considered to be the most accurate because they are verified by an inspector. The Secretariat presented FC-SC CR-WP 17-05, which included the preliminary values calculated using the CDAG Estimation Strategy for the three priority stocks (3LMNO GHL, 3M COD, 3LNO PLA). The Secretariat highlighted a few challenges that were encountered when applying the method. These challenges included:

- The application of the rule to address discrepancies between daily catch records (CATs) and PSC3s, when the actual weight of the discrepancies is very low (footnote 2 of Estimation Strategy),
- Instances where the current method could not be applied, i.e. no PSC3 information is available for the flag State and therefore an alternate method is required (i.e. the “Leftover” column in Table 2 of FCSC CR-WP 17-05).

CPs noted that some flag States fishing solely for one species, and landing in their own ports are not required to undergo a port inspection under the NAFO CEM, and that perhaps the method is best applied to certain stocks (i.e. Greenland halibut, which requires 100% port inspection). The WG agreed to forward these issues back to CDAG to further refine the Estimation Strategy.

¹ Port Inspection protocol is described in Chapter VII: Port State Control of the NAFO Conservation and Enforcement Measures (NCEM). Each port inspection shall be documented by completing form PSC3. During inspection, landed fishery products by species and weight are recorded in the form. Completed PSC3s also includes information on product weight, conversion factor and equivalent live weight.

b. Work conducted by the Secretariat on the validation of the 2016 catch estimates.

CDAG considered and compared all data sources available to the Secretariat in 2016. It concluded that the daily catch reports² (CATs) were the primary data source for 2015 catches, but that the Haul by Haul³ (H × H) were not sufficiently complete for use in 2015, due to the restriction to the top three species. The Secretariat presented FC-SC CR-WP 17-03 (Revised), which included catch values on a trip by trip basis for fishing trips⁴ in the NAFO Regulatory Area that ended in 2016 for the three priority stocks (3LMNO Greenland halibut, 3LNO American plaice and 3M cod) from various data sources that are held at the NAFO Secretariat (daily CATs (Art. 28.6.c), H × H data (Art. 28.8.b), Observer data (Art. 30), and port inspection data (Chapter VII, Art. 10.5.e)). During the meeting, some discrepancies were corrected and the final version of the WP is FC-SC CR-WP 17-03 (Rev. 2).

The NAFO Secretariat also presented a comparison of the CAT data and the STATLANT data for 2015 in FC-SC CR-WP 17-04. Participants noted the values were slightly different from those presented at the 2016 Scientific Council meeting, and the Secretariat agreed to look into this further.

The WG agreed that follow-up work must be undertaken by the Secretariat to update and refine the catch estimates in consideration of these points of discussion. In addition, the update should consider a further scrutiny of fishing trips with Apparent Infringement⁵ or suspected mis-recording. At the time of the update, it is expected that the 2016 H × H data would be complete. Catch estimates from the observer⁶ data will be also included. The update will be presented by the Secretariat to the WG at the next meeting (see agenda item 11). One Contracting Party remarked that increasing the port inspection coverage, and consequently more complete PSC3 reports, would improve the catch estimation. Port States were encouraged to carry out port inspections to more than the minimum requirement of 15% coverage prescribed in the NCEM.

5. Discussion on the project proposal Study on Catch Estimates Methodologies

The EU presented the project proposal in FC-SC CR-WP 17-01 (Revised), which reflected feedback from CDAG and STACTIC (see FC-SC Doc. 16-02). The project outline envisions that the Secretariat would be the project proponent and that the Contracting Party would provide most of the funding.

Concern was raised about the possible involvement of CDAG in this project as it goes beyond any mandate given to CDAG and the Secretariat. It was noted that consideration of this study as a NAFO proposal would require more extensive review and engagement.

Contracting Parties discussed alternate approaches to advance this project and noted other projects in which the Secretariat provided support for projects that were not led by NAFO. Examples included NAFO's involvement in NEREIDA and ABNJ. EU indicated that it would explore an alternate way to have the project implemented. It will report back at the next meeting of this WG (see agenda item 11).

6. Discussion on the future of this WG and the Catch Data Advisory Group

The CDAG was created under the umbrella of this WG (FC-SC Doc. 15-01 and FC-SC Doc. 16-02). These two groups have essentially the same membership. The WG reflected on the purpose served by the continued existence of both groups and considered the discontinuation of CDAG.

² Article 28.6.c of the NCEM stipulates: every fishing vessel shall transmit electronically the quantity of catch retained and quantity discarded by species for the day, by Division, including nil catch returns, sent daily before 12:00 UTC. The daily catch report of the fishing vessel is identified as "CAT" in the NAFO Vessel Monitoring System.

³ Article 28.8.b of the NCEM stipulates the recording and submission requirements of catches on a haul by haul (or tow or set) basis, or logbook information, of each fishing vessel.

⁴ Per Article 1.7 of the NCEM, "fishing trip" for a fishing vessel 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 has been landed or transhipped.

⁵ Apparent Infringements are issued by at-sea inspectors. Mis-recording of catches is one of the serious infringements listed in the NCEM. At-sea inspection protocol and procedures relating of infringements are described in Chapter VI: Joint Inspection and Surveillance Scheme of the NCEM

⁶ Observers on board the fishing vessel as per Article 30.A of the NCEM.

It was noted that the two bodies had a different focus and specific Terms of Reference. In particular, CDAG had a very technical focus and operated in more informal structure that recognized the highly technical nature of the discussions. Recognizing the progress made by CDAG in 2016 and its plan to continue to refine the catch estimation method in 2017, it was agreed that the status quo be maintained at least for another year.

It was suggested that FC and SC evaluate the progress of CDAG in 2017 and give consideration to the longer-term needs relating to catch estimation. This could include the possible sunset of one or both bodies and/or merging or amending the Terms of Reference.

7. Advice for data collection for the NAFO Observer Program

The Chair of STACTIC, Judy Dwyer (Canada), noted the ongoing work of STACTIC Observer Program Review Working Group (WG-OPR) which reviews the NAFO Observer Scheme with the aim of improving it.

The NAFO Observer Scheme (Article 30 of the NCEM) was basically established for compliance purposes. However, the data collected by observers as prescribed in Annex II.M. of the NCEM relate primarily to catches of species on a haul by haul basis. The observer may also collect scientific data if so requested by the Fisheries Commission. The catch data, as well as the any other data that could be collected by observers, has potential benefit for a variety of users, but given that the WG-OPR is a STACTIC WG, discussions to date have centered on compliance uses. The WG-OPR is seeking input from other NAFO bodies on any other types of data that observers could collect, or on how the current data collection could be improved to optimize the value of the observer program.

The WG-OPR has been tasked to revisit the NAFO Observer Scheme to clarify its role and related tasks. In this vein, the observer should be a data collector to serve NAFO users, including the scientists. The Chair of STACTIC presented FC-SC CR-WP 17-02, which contained two questions from the WG-OPR to help facilitate the improvement of the NAFO Observer Program.

Feedback from this WG and SC potential users of the observer data was sought both on the utility of this data collection and on how to improve the quality of observer data for these users. The WG considered the observer data as potentially useful for scientific purposes and catch data comparison. The length frequency data could also be useful for the Scientific Council. Some scientists noted that to be valid, scientific data must be collected in a specific way and in an independent manner. Further scrutiny of the available observer data is needed to evaluate its usefulness. In this regard, the catch estimates from observer data will be included in the follow-up task that the Secretariat will undertake (see agenda item 4).

The SC Chair indicated that she would attend the next meeting of the WG-OPR in May 2017.

8. Recommendations to forward to FC and SC

This agenda item is deferred to the next meeting (see agenda item 11).

9. Other Matters

a. NAFO Working Group on Improving Efficiency of NAFO Working Group Process

The Secretariat reported on the progress of the NAFO WG on Improving Efficiency of NAFO WG Process. Feedback was sought on the possibility of allocating two-week period for the proposed WG meetings; and on the development of a clear communication mechanism amongst NAFO's subsidiary bodies to allow improved collaboration between them intersessionally.

Concerning the first issue, the WG is open to the possibility of a two-week period allocation for WG meetings as long as the period allocation gives consideration to the fact that some WG meetings must adapt to the timing

of the SC June Meeting and the Annual Meeting in September. If circumstances warrant, flexibility is needed to have meetings outside the two-week period. The preparation by the Secretariat in September 2017 of a tentative meeting calendar would be very useful and help improve the efficiency of the process.

Concerning the second issue, the WG would continue to reflect on the communication mechanism. The WG and CDAG can work intermittently via Share Point and when a meeting is necessary, it could be decided to have that meeting via WebEx.

10. Adoption of Report

The report was adopted by correspondence following the meeting.

11. Adjournment

The meeting was adjourned at 17:00 hours on 6 February. It was agreed that there will be a follow-up meeting, a joint WG-CR and CDAG meeting, sometime in the second half of March via Web-Ex. The co-Chair (SC Chair) will consult the participants via online survey to determine the exact date.

Annex 1. Participant List

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Annex 2. Provisional Agenda

1. Opening
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Review and provision of guidance of the catch estimation process and catch estimates of the priority Stocks 2+3KLMNO Greenland halibut, 3LNO American plaice, and 3M Cod
 - a. Work conducted by the NAFO Joint Fisheries Commission-Scientific Council Catch Data Advisory Group (CDAG) on the evaluation of the data sources and the development of catch estimate methodology,
 - b. Work conducted by the Secretariat on the validation of the 2016 catch estimates.
5. Discussion on the project proposal Study on Catch Estimates Methodologies
6. Discussion on the future of this WG and the Catch Data Advisory Group
7. Advice for data collection for the NAFO Observer Program
8. Recommendations to forward to FC and SC
9. Other Matters
 - a. NAFO Working Group on Improving Efficiency of NAFO Working Group Process
10. Adoption of Report
11. Adjournment

Annex 3. Catch Estimation Strategy developed by the Catch Data Advisory Group

Available Data

In recent years, there have been many improvements in the data that vessel masters are required to provide when fishing in the NAFO Regulatory Area (NRA). To date, CDAG has assessed the utility of these data sources and concluded that some data sources, such as tow by tow data, are not in a usable condition for this year.

It is anticipated that with recent improvements to the NAFO Conservation and Enforcement Measures (NCEM), as well as the resolution of technical issues relating to the submission and utilization of tow by tow data that this data source will be ready for use for the validation/estimation of 2016 catch. In the case of observer data, further assessment is required of the availability and improvements required to make that data useful.

In evaluating the utility of the current sources of data, CDAG decided that the most complete and timely data available are the daily catch reports (CAT)¹ which are reported by vessel masters to the Secretariat.

Given the completeness and timeliness of the CAT data, it is suggested that this be used as the base data.

Catch weighed off and recorded by port inspection (PSC3) is considered the most accurate. Based on these two factors, the following estimation methodology is proposed:²

1. Where PSC3 data is available, this equivalent live weight (plus recorded discard weight from CATs) be used;
2. For trips where no PSC3 data is available, a correction factor be applied to the sum of the CATs for that trip. The correction factor is defined as follows: the average per cent difference (weighted bycatch) between the CAT total and the PSC3 total for other trips by that same vessel;
3. If no PSC3 data is available at the vessel level, then a flag state factor be determined using the methodology in (2) using all vessels of that flag state;

¹ In some instances, SC documents refer to this as DCR

² In instances where the difference between CAT and PSC3 is greater than 50%, it is suggested that the Secretariat follow up with the appropriate Fisheries Monitoring Centre to ensure there is no administrative error. If no error exists but the discrepancy is related to extenuating circumstances which cannot be reconciled by the Secretariat, then the data from that trip should not be used in the development of any correction factor.

SECTION VI

(221–232)

**NAFO Joint Fisheries Commission-Scientific Council Working Group on
Risk-Based Management Strategies (WG-RBMS)****7–9 February 2017
NEAFC Secretariat, London, UK****Contents**

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NAFO Joint Fisheries Commission-Scientific Council Working Group on Risk-Based Management Strategies (WG-RBMS)

(FC-SC Doc. 17-02)

**7–9 February 2017
NEAFC Secretariat, London, UK**

1. Opening

Carsten Hvingel (Norway) and Jacqueline Perry (Canada), co-Chairs of the WG, opened the meeting at 10:00 hours on 07 February 2017 at the headquarters of the North East Atlantic Fisheries Commission (NEAFC) in London, UK. Representatives from the following Contracting Parties were in attendance: Canada, Denmark (in respect of Faroe Island and Greenland), European Union, Japan, Norway and the United States of America (Annex 1).

2. Appointment of Rapporteur

Tom Blasdale and Ricardo Federizon (NAFO Secretariat) were appointed co-Rapporteurs.

3. Adoption of Agenda

The revised provisional agenda previously circulated was adopted (Annex 2).

4. Discussion on the Timeline for the Revision of the NAFO PA Framework

A review of the work completed to date as well as the elements requiring study within Precautionary Approach Framework (PAF) was tabled. With respect to timelines, it was clear that many items which were intended to be completed by this time remain outstanding. While this WG recognized the ongoing effort of the individuals that are providing contributions to the PAF review, it also recognized that competing priorities and a limit of capacity have hindered progress on some of the more substantive tasks. For example, research to inform on appropriate risk levels under the revised PAF will require dedicated study. Prior to the meeting of this WG scheduled for the summer, the chair of the PAF WG will consult with WG members on both capacity and revised timelines, and will report back to the this WG.

5. Discussion on the Work Schedule for the 3M Cod Benchmark Assessment

The work plan previously agreed to by this WG in April 2016 was modified during the Annual Meeting in September 2016. The timeline for the NAFO 3M Cod Benchmark Assessment and the NAFO 3M Cod Management Strategy Evaluation (MSE) have been delayed one year reflecting the priority attached to the Greenland halibut MSE review. The updated work schedule is presented in Annex 3.

6. Greenland halibut (GHL) Management Strategy Evaluation (MSE) Review

The management strategy in place since 2010 for Greenland halibut was reviewed. The scope of the review covered the MSE elements including the management objectives, performance statistics (PS) and harvest control rules (HCR) as well as the general performance of the management strategy, challenges and identification of areas of improvement. Based on the review, management objectives, example performance targets, as well as HCR guidelines, were developed. In addition, the 2017 timeline for the GHL MSE was updated. The MSE elements, including Exceptional Circumstances, will be further refined in the latter meetings of this WG, the Scientific Council (SC), and the Fisheries Commission (FC).

Objectives of the GHL Management plan

The long-term objective is to achieve and to maintain the Stock Biomass and the Fishing Mortality in the 'safe zone', as defined by the NAFO Precautionary Approach framework (FC Doc. 04-18) and to ensure that fisheries resources are maintained at or restored to levels capable of producing maximum sustainable yield, per the

Convention objectives (resolution NAFO/GC Doc. 08-03). These general management objectives can be refined into measurable objectives as:

1. Restore to within a *prescribed period of time* or maintain at B_{msy}
2. The risk of failure to meet the B_{msy} target and interim biomass targets within a *prescribed period of time* should be kept moderately low
3. Low risk of exceeding F_{msy}
4. Very low risk of going below an established threshold (e.g. B_{lim}^{1*} or B_{lim} proxy)
5. Maximize yield in the short, medium and long term
6. The risk of steep decline of stock biomass should be kept moderately low
7. Keep inter annual TAC variation below established thresholds

It was noted that it will not be possible to meet all the objectives simultaneously and therefore some degree of “tradeoff” between objectives is to be expected.

The table below contains the list of objectives, and examples of what their potential corresponding Performance Targets (PT) might look like. Performance statistics (PS) will also need to be determined. These elements should be reviewed and may be revised or reconsidered to reflect the constraints of the technical execution of the MSE process and the upcoming assessment (April 2017) of the stock. The numbers (risk percentages, catch levels etc.) that appear in the table are intended to be illustrative, however agreement on specific details to allow identification of candidate HCRs will be required at the next meeting of WG-RBMS (April 2017).

Management Objectives	Performance Statistics	Example Performance Targets
Restore to within a <i>prescribed period of time</i> or maintain at B_{msy}	To be determined	To be determined
The risk of failure to meet the B_{msy} target and interim biomass targets within a <i>prescribed period of time</i> should be kept moderately low	To be determined	The probability of failure to meet a milestone within a prescribed period of time should be kept at 25% or lower
Low risk of exceeding F_{msy}	To be determined	The probability of F exceeding F_{msy} during the evaluation period should be kept at 30% or lower.
Very low risk of going below an established threshold [e.g. B_{lim}^{1*} or B_{lim} proxy].	To be determined	The probability of a total/exploitable biomass under an established threshold (e.g. B_{lim}/B_{lim} proxy) at 10% or lower
Maximize yield in the short, medium and long term	To be determined	The magnitude of the average TAC in the short, medium and long term should be maximized. The probability that the TAC is below 10,000t in any one year for the period year x to x+5 should be 25 % or lower.
The risk of steep decline of stock biomass should be kept moderately low	To be determined	The probability of a decline of 25% in terms of exploitable biomass from year x to x+5 is kept at 10% or lower.

¹ * As defined in the NAFO PA framework (FC Doc 04-18).

Management Objectives	Performance Statistics	Example Performance Targets
Keep inter annual TAC variation below “an established threshold”	To be determined	<p><i>Either</i></p> <p>This will be achieved through the constraint on the inter-annual TAC variation.</p> <p>At present this limit is 5%</p> <p><i>or</i></p> <p>a. The probability of annual TAC variations of greater than 15% be kept at 25% or lower and</p> <p>b. the probability of variation of more than 25% over any period of 3 years should be kept at 25% or lower.</p>

In the April 2017 stock assessment meeting, it would be helpful if SC could consider how the risk concept should be applied e.g. should performance relative to targets be assessed at the level of individual operating models or against a (possibly weighted) average of all models? The WG-RBMS should develop consistent quantitative counterparts to the risk levels (e.g. very low, low and moderately low) taking into consideration how these terms have been defined for other NAFO stocks.

The results provided for each operating model to the April 2017 SC meeting should include at least the following, where B refers to the exploitable component of the biomass (previously considered to be ages 5-9):

- $B_{\text{(current)}}$
- B_{msy} or proxy
- F_{msy} or proxy
- Thirty year projections of exploitable biomass for the scenarios of constant catches set equal to zero, the average catch over the five most recent years; and twice that average catch. These projections should show medians, 95% probability intervals (the uncertainty arising from fluctuations in future recruitment) and five individual trajectories (“worm plots”) for each scenario.

Guidelines for the development of HCRs

Within the management strategy evaluation, the performances of a variety of candidate Management Strategies and/or HCRs should be considered. The eventual selection amongst candidates will be based on the most robust results in terms of a set of agreed performance statistics. Empirical (non-model-based) HCRs are preferred as their outputs are more readily understood and therefore accepted by stakeholders. Nevertheless model-based HCRs will be considered provided their performance is shown to be better (time permitting).

The following guidelines are intended to assist with the development of appropriate HCRs:

General

The SC must advise what data (e.g. survey-based abundance estimates, catches) may be considered for input to management strategies/HCR i.e., as well as which metric (exploitable biomass or total biomass or abundance) to evaluate.

Restrictions to minimum/maximum changes in the TAC in terms of percentages and absolute numbers should be considered either as part of the HCR or as part of a suite of performance statistics (there is an initial preference for the former because it provides a degree of certainty for the industry). These restrictions may differ depending on the direction of the change and/or status of the stock.

Recent annual catches (and specifically their differences from the TAC intended) should also be considered as possible inputs (i.e. implementation error) bearing in mind the difficulties in estimating catches.

For empirical HCRs

Several alternative forms of empirical HCRs should be considered.

Management strategies/HCR might be refined by addition of surveys to serve as indices of recruitment in addition to others serving as indices of exploitable biomass.

The existing management strategies/HCR (based on the average of the recent trend in abundance indices from three surveys to adjust the TAC) should again be considered.

Variants of that management strategies/HCR which modify its control parameter values (e.g. λ), constraints and number of years and weighting of surveys in the “trend calculations” should also be considered.

For Model based HCRs

Model based rules should take into consideration that which was tested in the first Greenland halibut management strategy evaluation (SCR 09-37).

Development of the timeline

WG-RBMS reviewed the timeline agreed at the Annual Meeting in 2017. Below is a revised timeline. Events after the June SC meeting will be subject to further revision depending on progress.

1. February WG-RBMS meeting
2. Intersessional:
 - WebEx meeting to agree final data sets as soon as possible and no later than the end of the 1st week of March (date to be agreed by doodle poll)
 - Initial operating models fit to data for results to be tabled at April SC meeting
3. April SC meeting:
 - Review results from available operating models
 - Discuss elements of other possible operating models to be developed prior to June SC meeting
 - Develop advice for the WG-RBMS regarding quantification of objectives/performance criteria and constraints
 - Specify Management Strategies and/or HCRs “trials”, including operating model variants to be fit, projection specifications, observation models for future generated data, and performance statistics (initial quantification of objectives)
 - Possibly give guidance for development of Candidate Management Strategies and/or HCRs
4. Intersessional:
 - WG-RBMS meeting last week of April (possible venue Boston or WebEx)
 - Refinement of performance statistics including risk tolerances and constraints
 - Developers of Candidate Management Strategies and/or HCRs fit further operating models and generate performance statistics for trials for a set of initial Candidate Management Strategies and/or HCRs

5. June SC meeting:
 - Tabling of developers results
 - Review of operating model fits
 - Review of initial Candidate Management Strategies and/or HCRs results
 - Initial discussion on trial plausibility
 - Possibly add further trials and then finalize operating models and trials
 - Cull initial Candidate Management Strategies and/or HCRs to a smaller set and summarize results
6. WG-RBMS meeting (Date to be agreed after April RBMS meeting - at least two weeks after information from SC June meeting is made available and possibly linked with the WG-BDS meeting):
 - Review initial Candidate Management Strategies and/or HCRs results
 - Finalize objectives and their quantification
 - Advise direction for further Candidate Management Strategies and/or HCRs development
7. Intersessional:
 - Developers of Candidate Management Strategies and/or HCRs adjust their Candidate Management Strategies and/or HCRs towards direction advised
8. WG-RBMS (?) meeting
 - Developers of Candidate Management Strategies and/or HCRs table updated Candidate Management Strategies and/or HCRs results
 - Initial selection made of best performing Candidate Management Strategies and/or HCRs
9. Intersessional:
 - Developers of selected Management Strategies and/or HCRs finalize results for presentation to Commission
10. Commission meeting:
 - Commission adopts new Management Strategy and/or HCR.

7. Recommendations to forward to FC and SC

The WG-RBMS recommends Fisheries Commission to:

Consider and endorse the updated plan for the 3M cod benchmark (Annex 3).

On Greenland halibut:

The WG-RBMS recommends Scientific Council to:

- **Take into account the guidance on Management Objectives and the formulation of the HCRs developed by this WG.**
- **Reflect on potential updates to the Exceptional Circumstances Protocol**

The WG-RBMS commits to:

Reflect on potential updates to the Exceptional Circumstances Protocol

Further recommendations on Greenland halibut were deferred to the next meeting scheduled for April 2017.

8. Other Matters

a. NAFO Working Group on Improving Efficiency of NAFO Working Group Process

The Secretariat reported on the progress of the NAFO WG on Improving Efficiency of NAFO WG Process. Feedback was sought on the possibility of allocating two-week period for the proposed WG meetings; and on the development of a clear communication mechanism amongst NAFO's subsidiary bodies to allow improved collaboration between them intersessionally.

Concerning the first issue, the WG is open to the possibility of a two-week period allocation for WG meetings. However, the WG stressed that there would need to be flexibility to have meetings outside this period if circumstances warranted (see for example timeline in Section 6). The preparation by the Secretariat in September of a tentative meeting calendar would be very useful and help improve the efficiency of the process.

Concerning the second issue, the WG would continue to reflect on the communication mechanism. The WG can work intermittently via Share Point and when a meeting is necessary, it can be decided to have that meeting via WebEx.

9. Adoption of Report

The report was adopted by correspondence following the meeting.

10. Adjournment

The meeting was adjourned at 17:00 hours on 09 February 2017.

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Annex 2. Agenda

1. Opening
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Discussion on the Timeline for the Revision NAFO PA Framework
5. Discussion on the Work Schedule for the 3M Cod Benchmark Assessment
6. Greenland halibut (GHL) Management Strategy Evaluation (MSE) Review
7. Recommendations to forward to FC and SC
8. Other Matters
9. NAFO Working Group on Improving Efficiency of NAFO Working Group Process
10. Adoption of Report
11. Adjournment

Annex 3. Updated calendar of 3M Cod Benchmark Assessment and Management Strategy Evaluation

NAFO 3M Cod Benchmark calendar

1. The Scientific Council (SC), in **June 2016**, approved the main assessment issues to be revised during the 3M Benchmark (NAFO SCS Doc. 16-14). Among those issues, there is the FC request to the SC (request number 8, SC SCS Doc. 16-01) that the SC should, in 2016, *analyse whether the current F_{lim} value for 3M cod is currently underestimated and to revise, if required, the relevant fishing mortality and biomass reference points appropriately*. Both WG-RBMS and SC agree that the best forum to carry out the F_{lim} review is the benchmark process, so this task will be undertaken during that process.
2. **Before the end of 2017**, all data needed for the NAFO 3M Cod assessment will be reviewed and compiled.
3. **Between June 2017 and March 2018**, different teams of SC scientists will be working on the issues identified in the 2016 June SC meeting.
4. The benchmark will be carried out in April 2018. This may involve SC and external scientists.
5. The **June 2018** SC meeting will carry out a new assessment taking into account the Benchmark conclusions. This assessment would inform the TAC decision for 2019 because the MSE may not be finalised before September 2018 (see next section below - “NAFO 3M Cod MSE calendar”)

NAFO 3M Cod MSE calendar

Little progress is expected here before June 2018: this is because the results of the 3M cod benchmark will be required prior the resumption of the MSE process. This would be the expected steps:

1. In **June 2018**, a new 3M Cod assessment would be issued, according with the benchmark outputs as well as the reference points arising from any revisions of the PAF.
2. **After September 2018**, if the FC adopts any relevant new elements of the PAF, the WG-RBMS should revise the management objectives of the 3M cod MSE accordingly.
3. **Between September 2018 and March 2019**, different HCRs could be tested in order to see if they reach the established management objectives.
4. By **June 2019**, the WG-RBMS and SC may revise the 3M Cod MSE to enable the proposal of a HCR. This HCR may be submitted for approval to FC in September, 2019.

If and as approved by the FC, this HCR will be applied to determine the TAC in 2020 and onward.

SECTION VII
(pages 233–242)

Report of the Joint Advisory Group on Data Management (JAGDM) Meeting

22–23 March 2017
London, UK

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Report of the Joint Advisory Group on Data Management (JAGDM) Meeting

(FC Doc. 17-03)

22–23 March 2017

London, UK

1. Opening of the Meeting

The Chair Lloyd Slaney (Canada) opened the meeting and welcomed the participants, in particular CCAMLR and SEAFO Secretariats representatives.

The following Contracting Parties were present: DFG Faroes and Greenland, the European Union, Iceland and Norway from NAFO and NEAFC and Canada from NAFO.

Both NAFO and NEAFC Secretariats were present.

The full list of participants can be viewed in document JAGDM 2017-01-02, annexed to this report.

2. Appointment of the rapporteur

The NEAFC Secretariat was appointed as the rapporteur.

3. Discussion and adoption of the Agenda

The Agenda was adopted with the addition of two new items in agenda point 8.a Management of the websites / JAGDM and 9 “Any other business”.

8. Changes to the presentation of agenda on JAGDM website

9. Testing XML import into NEAFC EPSC application.

4. Data Exchange Statistics

a) NAFO

The NAFO Secretariat presented document JAGDM 2017-01-13. The participants discussed the information provided in the document and requested clarification on some of the anomalies outlined in the tables. It was noted that some of the anomalies were due to technical issues.

It was **agreed**:

- **That STACTIC should be advised of technical issues so that inconsistencies are not misinterpreted as compliance issues.**

b) NEAFC

The NEAFC Secretariat presented document JAGDM 2017-01-08 Rev1 on “Messages received in 2016” and document JAGDM 2017-01-09 on “Data exchange statistics”. The participants discussed the documents, noting some anomalies, but agreeing that there was a slight improvement from previous years and also commented that the new presentation charts were a positive development.



5. NEAFC issues

a) Any technical implications of the implementation of recommendations

i) Implementation of NEAFC Recommendation 2017:18

The NEAFC Secretariat presented JAGDM 2017-01-05 on “Technical implications of implementing NEAFC recommendation 2017:18” which changed the use of IMO numbers. The implementation of a mandatory “IMO number” in NEAFC created specific technical challenges as the required validation was not detailed. The IMO number is already mandatory in the vessel notification (NOT) when a vessel does not have an “external registration” (XR) number. Some vessels still do not have an IMO number and it is only required for vessels subject to IMO Resolution A.1078 (28), as such, it will be optional for the time being. The participants considered various possible technical options and the limitations of what could be done without specific instructions. The agenda item is a standing item for information so no decision was required.

ii) NEAFC Recommendation 2017:15

The NEAFC Secretariat presented document JAGDM 2017-01-04 on the amendment of the PSC 3 form. The Secretariat considered it important to officially inform the NAFO Secretariat of the changes since the form was specifically harmonised for use in NEAFC and NAFO. No further actions were required.

b) Issues Raised by PECMAC

i) EU Presentation on Flux Transportation Layer

The EU presented document JAGDM 2017-01-16 Rev1 on “FLUX transport layer – Business view”, followed by a technical presentation on recent “developments on the FLUX TL”. The participants requested clarification on the current status of FLUX implementation within EU. The EU technical representative agreed to do a specific DEMO showcasing the current use of TFLUX TL among Member States. Further questions were about the specific system architecture, details of the level of configurability in the Transport layer ‘envelope’ and specific technical ‘stacks’ which are currently supported and which will continue to be supported. Another question was about unique identifiers for the messages generated in the system, although this was explained at the time, the EU representatives will come back later with a detailed response. The two parts of this presentation were made by the EU participants, Pascal COLLOTTE for the business view, Rafael FERNANDEZ-FONT PEREZ for the recent developments.

c) NEAFC Information Security Management System (ISMS)

i) Changes to NEAFC Policy on Access to Documents

The NEAFC Secretariat presented document JAGDM 2017-01-03 on the “Policy on Access to Meeting Documents from NEAFC Meetings”. This document is a NEAFC Head of delegation letter which details the top-level policy decision.

The NEAFC Secretariat presented document JAGDM 2017-01-07 on “Implementing changes to document access policy”. The participants discussed at length, the extent to which JAGDM is the appropriate body to address this issue and how it should respond. After further discussion regarding practical implications and solutions for daily work, it was decided that the group provide a generic draft definition of what constitutes “business sensitive information”. As PECMAC will have the greatest number of documents which are considered ‘sensitive’ they will need to be fully appraised of the draft definition and given the opportunity to give specific guidelines on business sensitivity, which may be more appropriate.

It was **agreed**:

- That a generic definition for “business sensitive information” be provided.
- The revised document (Rev 2) will be sent by the Chair of JAGDM to the Chair of PECMAC for review.

ii) Possible Upgrade to ISO 27001:2013 version (ISMS article 4 last paragraph)

iii) Work of the Security System Administrators

iv) Information Security Incident Management (ISMS article 13)

v) Risk management (ISMS article 3) status of the work

The NEAFC secretariat briefly summarised information regarding the different items. These items were put on the agenda in 2014 but were not fully concluded in 2015, when only one meeting was held, or in 2016 when the work referred from NEAFC AHWG ERS was given priority. Some participants felt that there should be a special meeting to conclude on these issues and others felt that they could be taken at the next meeting, depending on whether or not other issues were referred to the group.

vi) Review of NEAFC Inventory

The NEAFC Secretariat introduced documents JAGDM 2017-01-14 on the “Summary of changes to NEAFC system in 2016 requiring changes to ISMS” and JAGDM 2017-01-15 on the “NEAFC system diagram” explaining the changes in 2016 both in the ISMS and the inventory. The participants requested clarification on specific issues. No further actions were required.

6. NAFO issues

a) Any technical implications of the implementation of recommendations

There were no recommendations with technical implications introduced in NAFO this year.

b) Recommendations for adopting an ISMS for NAFO

i) Secretariat backup policy

The NAFO Secretariat presented document JAGDM 2017-01-11 on the “NAFO Secretariat Backup Policy”. There were no comments.

ii) MCS access rights

The NAFO Secretariat briefly introduced document JAGDM 2017-01-10 on “Access rights pilot: MCS Website”. The participants briefly discussed the update.

c) Issues raised by STACTIC

No new requests were received from STACTIC.

d) Updated from STACTIC

i) MCS website changes

The NAFO Secretariat did a demonstration of their MCS (development) website including PSC management system; there was some consideration on the development and sharing of open source software and the participants also discussed the pros and cons of development and programming in different machine languages stressing the importance of developing strict rules for interfaces.

ii) Review of NAFO CEM Annexes

Canada briefly summarised recent developments on the NAFO Control and Enforcement Measures (CEM) annexes.

Canada will continue to work reviewing the CEM annexes for inconsistencies and cross references accuracy and Norway offered to support Canada's work on issues if any were discovered. In several occasions, it has been discovered that the use of footnotes have caused problems. Norway will prepare a document where the CEM Annex II.E VMS Data Format is splinted, one form for each message instead of using footnotes. This document will be discussed at the next JAGDM meeting. In this context, the participants also discussed the need to review the use of FAO codes and other possible international standards.

NEAFC secretariat foresee that the annexes of the Scheme of Control and Enforcement are likely to change substantially following the work of the ERS group and are considering any further harmonisation efforts in this content.

Canada will continue to review the CEM annexes and will prepare a document proposing additional amendments to provide further clarification within the annexes which will be discussed at the next meeting. Norway offered to support Canada on this initiative as needed.

It was agreed to continue the work (in particular CEM IIb) and discuss it at the next meeting. In this context, the participants also discussed the need to review the use of FAO codes and other possible international standards. NEAFC secretariat foresees that the annexes of the Scheme of Control and Enforcement are likely to change substantially following the work of the ERS group and are considering any further harmonisation efforts in this context.

It was **agreed:**

- **That Canada and Norway will prepare documents in an effort to provide further clarification within the CEM annexes which will be discussed at the next meeting.**

e) Status of other NAFO Projects

i) Flux transportation layer

The NAFO Secretariat gave a verbal update on the use of the EU ERS data using FLUX. Participants discussed aspects of the EU ERS data transfer.

ii) VISMA contract renewal

The NAFO Secretariat summarised the context of the contract renewal with the service provider VISMA.

7. Management of the North Atlantic Format

No issues were raised under this agenda point.

8. Management of the websites

a) JAGDM

The NEAFC Secretariat briefly commented on the new agenda module which would make small changes to the way agenda sections and subsections were numbered. This was raised as these changes will also need to be reflected in any paper documents for consistency. No comments were made.

The participants raised the issue of the login / logout timing when using the JAGDM website.

It was **agreed**:

- **That the NEAFC Secretariat will look into the login/logout timing issue on the JAGDM website.**

b) NAF

i) Updating the NAF website with codes in use by Contracting Parties

The NAFO Secretariat clarified which codes required updating within the site.

Norway raised the possibility to upload into the site documents relating to the ERS work on new NAF format codes taking place in NEAFC.

9. Any other business

The NEAFC Secretariat briefed the participants on the pilot develop upon request from Norway allowing for vessels' operators to export XML files generated from their own systems and send them into the application PSC forms, avoiding the need for any manual data entry. The participants did not comment.

The representative from the CCAMLR Secretariat summarised the experience with data gathering, processing and storage. Issues such as data quality evaluation and aggregate dispersed data (in different databases) and the use of recent technical developments to optimise data flow.

The Chair described recent developments in NAFO to improve data collection.

DFG Faroes described briefly the data collection and validation process.

The representative from the SEAFO Secretariat raised the point that there is a need for global agreement on data standards between international fisheries bodies. He questioned whether JAGDM's mandate included the possibility to establish JAGDM as a repository of data standards for fisheries data. The NEAFC Secretariat confirmed that JAGDM's Rules of Procedure make provision for collaboration amongst fisheries bodies to establish global standards for fisheries data.

Norway elaborated on the national data collection framework in particular related to scientific data and ERS data. Data exchange harmonisation between RFMOs is needed.

The EU elaborated on the different data sources and processes that often lead to different results.

DFG Greenland elaborated on the different users of data and the need to have ICES as a repository of data from the Regulatory Areas (NEAFC) and cross-validation (VMS, ERS, PSC landing notes, etc.)

The Chair concluded that there is a need to better understand and consider all global developments on standardisation and harmonisation of data processes, particularly data collection.

Participants exchanged views on data management and a possible way forward for JAGDM. No conclusion was reached.

10. Report to the Annual Meetings

The Chair will report to the NAFO Annual Meeting in September and the Vice-Chair will report to the NEAFC Annual Meeting in November.

11. Date and Place of the next meeting

The participants agreed to set tentative dates for the next meeting as 20/21 June 2017 in NAFO headquarters in Canada.

12. Closure of the Meeting

The Chair thanked the participants, the observers and the Secretariats for the excellent work and wished all a safe return home.

Annex 1. Participant List

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NAFO SECRETARIAT

Kendall, Matt

Laycock, DJ

NEAFC SECRETARIAT

Early, Anthony

Lewsley, Rachel

Neves, João

CANADA

Barbour, Natasha

DENMARK (IN RESPECT OF THE FAROE ISLANDS AND GREENLAND)

Gaardlykke, Meinhard

Lund Rossing, Mads

EUROPEAN UNION

Collotte, Pascal

Fernandez, Rafael

Magnússon, Leifur

Fasmer, Ellen (Vice Chair)

CAMMLR

Jones, Tim

SEAFO

Campanis, George

Annex 2. Agenda

1. Opening of the meeting
2. Appointment of the rapporteur
3. Discussion and adoption of the Agenda
4. Data Exchange Statistics
 - a. NAFO
 - b. NEAFC
5. NEAFC issues
 - a. Technical implications of the implementation of recommendation
 - i. Implementation of 'optional' in IMO recommendation
 - ii. For Information: Separation of product column in NEAFC PSC forms
 - b. Issues Raised by PECMAC
 - c. NEAFC Information Security Management System (ISMS)
 - i. Changes to NEAFC Policy on Access to Documents
 - ii. Possible Upgrade to ISO 27001:2013 version (ISMS article 4 last paragraph)
 - iii. The work of the Security systems administrators
 - iv. Information Security Incident Management (ISMS article 13)
 - v. Risk management (ISMS article 3) status of the work
 - vi. Annual Review of the NEAFC Inventory (ISMS article 7.1)
6. NAFO issues
 - a. Technical Implications of the implementation of recommendations
 - b. Recommendations for adopting an ISMS for NAFO
 - i. Secretariat backup policy
 - ii. MCS access rights
 - c. Issues raised by STACTIC
 - d. Updated from STACTIC
 - i. MCS website changes
 - ii. Review of NAFO CEM Annexes
 - e. Status of other NAFO projects
 - i. Flux transportation layer
 - ii. VISMA contract renewal
7. Management of the North Atlantic Format
8. Management of the websites
 - a. JAGDM
 - b. NAF
 - i. Updating the NAF website with codes in use by Contracting Parties
9. Any other business
10. Report to the Annual Meetings
11. Date and place of the next meeting
12. Closure of the meeting

SECTION VIII

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Report of the NAFO Joint Fisheries Commission-Scientific Council Working Group on Risk-Based Management Strategies (WG-RBMS)**25–27 April 2017
Falmouth, MA, US****Contents**

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

(FC-SC Doc. 17-03)

**25–27 April 2017
Falmouth, MA, USA**

1. Opening by the co-Chairs, Carsten Hvingel (Norway) and Jacqueline Perry (Canada)

The meeting was opened at 10:00 hours on 25 April 2017 at the Holiday Inn in Falmouth, Massachusetts, USA. Carsten Hvingel (Norway) and Jacqueline Perry (Canada), co-Chairs of the Working Group were unable to attend. Katherine Sosebee (USA) was elected as acting Chair. Representatives from the following Contracting Parties were in attendance: Canada, European Union, Japan and the United States of America (Annex 1).

2. Appointment of Rapporteur

The Senior Fisheries Commission and Scientific Council Coordinators (NAFO Secretariat) were appointed co-Rapporteurs.

3. Adoption of Agenda

The revised provisional agenda previously circulated was adopted (Annex 2).

4. Review of the recommendations from the WG-RBMS Meeting, 07-09 February 2017

The meeting recommendations are documented in FC-SC Doc. 17-02. They include:

- **Fisheries Commission to consider and endorse the updated plan for the 3M cod benchmark.**

The Working Group took note of the updated plan which was presented as Annex 3 of the FC-SC Doc. 17-02. It will endeavour to work on the 3M cod benchmark in accordance with the updated plan.

- **Scientific Council to take into account the guidance Management Objectives and the formulation of the HCRs developed by this WG, and to reflect on potential updates to the Exceptional Circumstances protocol.**

The Working Group discussed this recommendation under agenda items 5 - 8.

- **WG-RBMS to reflect on potential updates to the Exceptional Circumstances protocol.**

The Working Group discussed this recommendation under agenda item 9.

5. Matters arising from the SC Meeting, 03-07 April 2017 in Vigo, Spain

The SC NAFO Greenland Halibut Management Strategy Evaluation meeting, 03-07 April in Vigo, Spain was held in accordance with the MSE workplan adopted in September 2016 during the NAFO Annual Meeting. The final report of this meeting was not available in time to be considered by the present meeting due to the very large number of model runs that were done. A decision was taken to focus on the technical details of these results from the Vigo meeting, which resulted in lack of time to complete the report during the meeting as per normal practice. Parties recognized that the compressed timeline between the two meetings provided limited opportunity to prepare and finalize the report. To allow this Working Group the opportunity to discuss the report, a “working draft” was made available, although some sections (e.g. on State-Space Assessment Model) were not yet available. Candidate assessment models considered by the Vigo meeting included: Statistical-Catch-At-Age (SCAA), a variation of the State-Space Assessment Model developed by Nielsen and Berg (2014)

(hereafter referred to as SAM-style), Extended Survivor Analysis (XSA) and a Bayesian implementation of a series of Surplus Production Models. The SC also provided some preliminary evaluation of the performance of the 2010 MSE.

The EU expressed concern that the XSA model, which was agreed to be taken forward by this Working Group last year, appears to have been dropped from consideration in favour of the SAM-style model and that some runs of the SAM-style model included a spatial element that differentiates between the Newfoundland Shelf and Flemish Cap areas. The EU believed that this spatial model is likely to be unacceptable to the EU and possibly to other Commission members and its addition to the number of models already discussed could lead to delays in completing the MSE. There were conflicting views among scientists present about whether the spatial elements had been discarded in Vigo purely on scientific grounds. One of the Vigo meeting co-Chairs clarified that the spatial model development process was based upon patterns in the residuals of initial model runs, which had no spatial component, and was wholly independent of any other considerations. The SC Chair stated that, given the different interpretations on the work done on SAM-style models, all the models discussed at the Vigo meeting remained under consideration and a decision on which to take forward will be made by the SC at its June meeting.

6. Update on Progress to Develop Candidate Management Strategies and/or Harvest Control Rules (HCRs)

SCR 17-05 presents an example of the development of a suite of candidate Harvest Control Rules with the general form:

$$TAC_{y+1} = \omega TAC_y (1 + \gamma_{up/down} (J_y - 1))$$

where:

TAC_y is the TAC for year y ,

ω , γ_{up} and γ_{down} are tuning parameters (γ_{down} if $J_y < 1$ and γ_{up} if $J_y \geq 1$),

J_y is a measure of the immediate past level in the biomass indices that are available to use for calculations for year y ,

and a is a further tuning parameter which is part of the definition of J_y .

The Working Group discussed the implications of this format for the generation of Harvest Control Rules. The preliminary nature of the testing of this candidate HCR and the need for closer examination of the parameters was noted and it was agreed that further study was required. Insights gained through preliminary runs of the MSE will allow the range of candidate Harvest Control Rules under consideration to be reduced to a manageable number. The effects of varying the starting TAC and of including the assumption of unreported catches of up to 30% were examined through exploratory runs of the SCAA model under the baseline scenario. It was agreed that at least one run including future 30% unreported catches should be included for each trial. Participants also noted the concern expressed by SC that the agreed annual catch estimates (recently available) were appreciably higher than the TAC for 2011-14. Further, they recognized that recent estimates developed by the Catch Data Advisory group were more in line with TAC for 2015 and discrepancies between TAC and catch estimates would need to be considered in the development and implementation of the HCR.

A study of the Harvest Control Rule parameterization applied in SCR 17-05 indicated that further consideration should be given to additional parameter choices that place greater emphasis on responsiveness to changes in stock size (i.e. changes to J_y). The values used in the initial MSE work in SCR 17-05 result in limited TAC change even under very large changes in stock size – for example, a one year halving or doubling in stock size. It was agreed that parameter choices which make this HCR more responsive to stock size change would be considered in future work.

There was agreement that the existing slope-based HCR (as outlined in Annex I.F of the NAFO Conservation and Enforcement Measures), as well as possible variants of the same, would also be tested as an alternative to the target-based formulation put forward in SCR 17-05.

7. Finalization of management objectives and their corresponding Performance Targets and associated Performance Statistics

The finalization of the management objectives, performance targets and associated performance statistics continued. Table 1 below captures the progress made by the Working Group. Table 2 summarizes the performance targets that were considered to be either “required” or “desirable but secondary” performance targets.

The Working Group noted that risk thresholds associated with “required” as distinct from “desirable but secondary” performance target would likely differ to ensure that essential objectives under the management procedure would be met with high probability. It was difficult to reach agreement on other targets/thresholds in the absence of an assessment with projections that would inform the feasibility and/or trade-offs associated with reaching such targets. However, there was agreement on what performance statistics would be generated. A discussion on potential trade-offs will be required at a future meeting of the WG-RBMS.

8. Provision of advice concerning the direction for further Candidate Management Strategies and/or Harvest Control Rules (HCRs) development

Paring down exercise to limit the number of candidate management strategies and/or HCRs will be undertaken as preliminary results of the MSE simulations become available.

The work on the revised management strategies and/or HCRs is planned to proceed as follows:

1. The existing central Candidate Harvest Control Rules (HCRs) (SCR 17-05) will be used to identify those OMs which have the greatest impact on performance – this is called the Reference Set
2. A set of Candidate Management Strategies will be developed which are:
 - a. Tuned to the $P(B_Y < 0.3 B_{MSY}) \leq 0.10$ criterion for the 2018-2037 period, with $P(B_{2037} < B_{MSY}) \leq 0.5$ as a desirable secondary criterion
 - b. Show good performance over the Reference Set
 - c. Have investigated alternative form, i.e. aspects such as the value of the gamma parameter in the current central Candidate Harvest Control Rules (HCRs)
3. Since it is time-consuming and less-user-friendly for decision-makers to list values of performance statistics and provide plots for every combination of Candidate Management Strategy and Operating Model (OM), discretion may be used by the Scientific Council to provide:
 - a. Full output for the preferred 2 or 3 Candidate Management Strategies and the baseline plus a few members of the Reference Set of OMs
 - b. Reduced output for the remainder of the OMs of the Reference Set, plus any other HCRs for all the Reference Set of OMs
 - c. Tabular and summary comparative plot statistics for the remaining OMs
4. If possible, results will be circulated to SC members a few days before the start of the SC meeting for possible requests for a few additional runs.

9. Exceptional Circumstances Protocol

It was agreed to defer the discussions on Protocol until the HCR is selected.

10. Recommendations to forward to SC and FC

This item was deferred to the next meeting.

11. Other Matters

The next meeting of WG-RBMS will be held shortly after the June SC meeting to allow time for the completion of the SC report. Candidate dates for this meeting, based on the availability of Working Group members, were identified as the second week (10 – 14) of July or the second (14 – 18) or third (21 – 25) full weeks of August, with a preference for the July dates. These dates and the location of the meeting will be agreed after consultation with the WG-RBMS co-Chairs.

12. Adoption of Report

The report was adopted by correspondence following the meeting.

13. Adjournment

The meeting was adjourned at 15:00 hrs on 27 April 2017.

Table 1. Draft Table of Proposed Performance Statistics and Criteria

Management Objectives	Performance Measures – Vigo Draft	Performance Measures – Japan proposals – for each distribution median, 5%- and 95%ile are reported	Performance Measures and Criteria WG-RBMS, Falmouth	Example Performance Criteria (London)
1. Restore to within a prescribed period of time or maintain at B_{msy}	a) P_{2037} / P_{msy} where P_{msy} is the population level when maximum sustainable yield is achieved;	B^{5-9}_{2037} / B_{msy} B^{5-9}_{2027} / B_{msy} note B_{msy} refers to B^{5-9} , i.e. B_{exp}	$P(B_{2037} < B_{msy}) \leq 0.5$ $P(B_{2037} < 0.8 B_{msy}) \leq 0.25$ [Timeframe to be determined]	To be determined
2. The risk of failure to meet the B_{msy} target and interim biomass targets within a prescribed period of time should be kept moderately low	Need to see outputs in order to determine appropriate reference period	Covered by; B^{5-9}_{2037} / B_{msy} and indirectly by $B^{5-9}_{lowest(2018-2037)} / B_{msy}$	$P(B_{2022} < B_{2018}) \leq \alpha$ $\alpha = 0.10$ if $B_{2018} < 0.3 B_{msy}$ if $0.3 B_{msy} < B_{2018}$	The probability of failure to meet a milestone within a prescribed period of time should be kept at 25% or lower
3. Low risk of exceeding F_{msy}	b) $F_{highest} / F_{msy}$ where $F_{highest}$ is the highest F during each evaluation period (2018-2022, 2023-2027 and 2028-2037);		$count_y[P(F_y > F_{msy}) > 0.3]$ for $y = 2018$ to 2037	The probability of F exceeding F_{msy} during the evaluation period should be kept at 30% or lower.
4. Very low risk of going below an established threshold [e.g. B_{lim} or B_{lim} proxy].	No limit threshold has been defined	Covered by; $B_{sp(2037)} / B_{sp(2018)}$ And; $B^{5-9}_{2037} / B^{5-9}_{2018}$ $Bratio_{lowest} = \min_y [B_y / B_{msy}]$ for $y = 2018$ to 2037 $B^{5-9}_{lowest(2018-2037)} / B_{msy}$	$P[Bratio_{lowest} < 0.3] < 0.1$ For $y = 2018$ to 2037 $count_y[P(B_y < 0.3 B_{msy}) \geq 0.1]$	The probability of a total/exploitable biomass under an established threshold (e.g. B_{lim} / B_{lim} proxy) at 10% or lower

Management Objectives	Performance Measures – Vigo Draft	Performance Measures – Japan proposals – for each distribution median, 5%- and 95%ile are reported	Performance Measures and Criteria WG-RBMS, Falmouth	Example Performance Criteria (London)
5. Maximize yield in the short, medium and long term	c) (Average) annual catch over short, medium and long terms: $C_{2019}, C_{2020}, \sum_{y=2018}^{2022} C_y / 5,$ $\sum_{y=2018}^{2027} C_y / 10,$ $\sum_{y=2018}^{2037} C_y / 20$	Covered sufficiently by; Average annual catch (2018–2020) And: Average annual catch (2018–2037)		The magnitude of the average TAC in the short, medium and long term should be maximized. The probability that the TAC is below 10,000t in any one year for the period year x to x + 5 should be 25% or lower
6. The risk of steep decline of stock biomass should be kept moderately low	Proposal a. (considering only 5-year period) $P_{2022}/P_{2018}, P_{2027}/P_{2018} \text{ and } P_{2037}/P_{2018},$ where P_y is the population size in year y;	Covered indirectly by 7) $B^{5-9}_{\text{lowest}(2018-2037)} / B_{MSY}$	$P(B_{2022} < 0.75 B_{2018}) \leq \beta$ $\beta = 0.10 \text{ if } B_{2018} < 0.8 B_{MSY};$ $0.25 \text{ if } 0.8 B_{MSY} < B_{2018}$ Further consideration to be given to monitoring change beyond the initial five-year period. [3 year/5 year?]	The probability of a decline of 25% in terms of exploitable biomass from year x to x+5 is kept at 10% or lower.

Management Objectives	Performance Measures – Vigo Draft	Performance Measures – Japan proposals – for each distribution median, 5%- and 95%ile are reported	Performance Measures and Criteria WG-RBMS, Falmouth	Example Performance Criteria (London)
7. Keep inter annual TAC variation below “an established threshold”	<p>d) Average annual variation in <i>catch</i> over short and long terms:</p> $AAV_{2018-2022} = \frac{1}{5} \sum_{y=2018}^{2022} C_y - C_{y-1} / C_{y-1}$ <p>and</p> $AAV_{2018-2037} = \frac{1}{20} \sum_{y=2018}^{2037} C_y - C_{y-1} / C_{y-1}$ <p>$P > 15\%$ being the proportion of years during the projection period where</p> $\frac{ C_y - C_{y-1} }{C_{y-1}} > 0.15.$ <p>Catch constraints as part of the control rule or as a performance statistic to be determined.</p>	<p>Covered by;</p> <ol style="list-style-type: none"> 1. AAV (2018–2037) 		<p>Either this will be achieved through the constraint on the inter-annual TAC variation (at present this limit is 5%) or;</p> <p>a) The probability of annual TAC variations of greater than 15% be kept at 25% or lower and</p> <p>b) the probability of variation of more than 25% over any period of 3 years should be kept at 25% or lower.</p>

Additional Considerations

1. Starting TAC – 0, 12.5, 15, 17.5, 20, 25
2. Performance Statistic - Percentage of catch composed of the +group weight

Table 2. Performance Statistics and Criteria agreed as required/desirable performance statistics/criteria

Required performance statistics/criteria			
Performance statistic	Performance criterion	Relevant management objective	
$P(B_{2037} < B_{MSY})$	$P \leq 0.5$	Restore to within a prescribed period of time or maintain at B_{MSY}	
for $y = 2018$ to 2037; $count_y[P(F_y > F_{MSY}) > 0.3]$	Count	Low risk of exceeding F_{MSY}	
$P [B_{ratio}_{lowest} < 0.3]$ for $y = 2018$ to 2037 $count_y[P(B_y < 0.3 B_{MSY}) \geq 0.1]$	$P \leq 0.1$ Count	Very low risk of going below an established threshold [e.g. B_{lim} or B_{lim} proxy].	
Desirable secondary performance statistics/criteria			
Performance statistic	Performance criterion	Relevant management objective	
$P(B_{2037} < 0.8 B_{MSY})$	$P \leq 0.25$	Restore to within a prescribed period of time or maintain at B_{MSY}	
$P(B_{2022} < B_{2018})$	$P \leq \alpha$ Where; $\alpha = 0.10$ if $B_{2018} < 0.3 B_{MSY}$; 0.25 if $0.3 B_{MSY} < B_{2018}$	The risk of failure to meet the B_{msy} target and interim biomass targets within a prescribed period of time should be kept moderately low	
$P(B_{2022} < 0.75 B_{2018})$	$P \leq \beta$ Where; $\beta = 0.10$ if $B_{2018} < 0.8 B_{MSY}$; 0.25 if $0.8 B_{MSY} < B_{2018}$ Further consideration to be given to monitoring change beyond the initial five-year period. [3 year/5 year?]	The risk of steep decline of stock biomass should be kept moderately low	

C_{2019} C_{2020} $\sum_{y=2018}^{2022} C_y/5$ $\sum_{y=2018}^{2027} C_y/10$ $\sum_{y=2018}^{2037} C_y/20$		Maximize yield in the short, medium and long term
<p>For each year, y</p> $P\left(\frac{ C_y - C_{y-1} }{C_{y-1}} > 0.15\right)$ $AAV_{2018-2022} = \frac{1}{5} \sum_{y=2018}^{2022} \frac{ C_y - C_{y-1} }{C_{y-1}}$ <p>and</p> $AAV_{2018-2037} = \frac{1}{20} \sum_{y=2018}^{2037} \frac{ C_y - C_{y-1} }{C_{y-1}}$	$P \leq 0.15$	Keep inter annual TAC variation below “an established threshold”

Annex 1. Participant List

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Annex 2. Agenda

1. Opening
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Review of the recommendations from the WG-RBMS Meeting, 07-09 February 2017
5. Matters arising from the SC Meeting, 03-07 April 2017 in Vigo, Spain
6. Update on Progress to Develop Candidate Management Strategies and/or HCRs
7. Finalization of management objectives and their corresponding Performance Targets and associated Performance Statistics
8. Provision of advice concerning the direction for further Candidate Management Strategies and/or HCRs development
9. Exceptional Circumstances Protocol
10. Recommendations to forward to SC and FC
11. Other Matters
12. Adoption of Report
13. Adjournment

SECTION IX

(page 257–266)

Report of the NAFO STACTIC Observer Program Review Working Group (WG-OPR)

08 May 2017
Boston, MA, USA

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Report of the NAFO STACTIC Observer Program Review Working Group (WG-OPR) (FC Doc. 17-04)

**08 May 2017
Boston, MA, USA**

1. Opening

The Chair opened the meeting at 09:45 hours on Monday, 08 May 2017 at the Mariners House in Boston, United States of America with representatives from the following Contracting Parties – Canada, Denmark (in Respect of the Faroe Islands and Greenland), the European Union, Iceland, Japan, the Russian Federation, and the United States of America (Annex 1).

2. Appointment of Rapporteur

The NAFO Secretariat (Jana Aker) was appointed as Rapporteur.

3. Adoption of Agenda

The agenda was adopted (Annex 2).

4. Action Plan for the Working Group

The Chair highlighted STACTIC OPR-WP 17-02, and noted that this was a draft action plan that was created by the European Union as per a recommendation from the last report (FC Doc. 16-21). The group began a review of the draft action plan, discussing each of the items in detail. Many of the items discussed are reflected throughout the report under their respective agenda items. The action plan was partially revised, but will be refined further by the European Union for presentation and discussion at the next meeting.

During discussions, the Chair reminded the Group that there was direction from the Annual Meeting to expand the Terms of Reference of the Working Group to include consideration of electronic monitoring for appropriate fisheries. A representative from Canada agreed to draft the updated Terms of Reference for the Working Group for presentation at the next meeting.

Coverage Levels for the observer program were also discussed in detail, but no consensus was reached at this time. The group expressed a need for more information from the Scientific Council along with analysis of the current observer data before coverage levels could be set. A number of methods for developing coverage levels were discussed including having the Fisheries Commission set the levels annually based on assessments of conservation and compliance risks, and establishing a baseline coverage level and then increasing coverage for some fisheries according to the existing level of risk.

For some of the components of the Action Plan, the Working Group decided to delay discussion in order to first review the results of the Scientific Council survey discussed in agenda item 5.

It was **agreed** that:

- **The European Union would update the draft action plan to reflect discussions, for presentation and discussion at the next meeting.**
- **Canada would draft the revision to the Terms of Reference for the Observer Program Review Working Group.**
- **Updating the Terms of Reference be added as an item in the Action Plan.**

5. Observer Data Quality Enhancement

The Chair highlighted the discussions that were held at the FC-SC Working Group on Catch Reporting in February 2017 (FC-SC Doc. 17-01) relating to the quality of the Observer Program data in its current form. Participants at that meeting noted the data were useful, but would need to be reviewed more closely from a scientific perspective to further assess the usefulness. The European Union noted that they have been having discussions internally relating to the NAFO Observer Program, specifically in relation to their own Scientific Observer programs (i.e. those of Spain and Portugal), and offered to prepare a summary of those discussions for this Working Group.

Two representatives from the United States delegation of the NAFO Scientific Council (SC), including the current SC Chair, presented STACTIC OPR-WP 17-05 highlighting, from the perspective of the United States with input from a Canadian SC representative, current uses of the NAFO Observer Program data. Potential future uses of these data were also presented. They noted that the most recent review of the NAFO Observer Program data was completed in 2011, and there have been a lot of improvements since then, so it should be reviewed again. The Scientific Council representatives suggested the STACTIC WG-OPR query the SC to determine the existing and potential uses of the NAFO Observer data as well as the data improvements needed. The Working Group felt that this would be a good way forward, and the SC Chair agreed that the SC Participants would formulate a survey for distribution at the June 2017 Scientific Council meeting to obtain input from Scientific Council members on their current and potential uses of the NAFO Observer Program Data. The results of the survey will be incorporated into the June report of the Scientific Council.

The NAFO Secretariat agreed to assist in a review of the improvements to the NAFO Observer Program data since the last review and create a timeline of the improvements for presentation at the June 2017 Scientific Council meeting. One of the improvements discussed was species level identification for deep-sea and shark species. The SC representatives noted, as an example, that in the 2014 Annual Compliance Report (FC Doc. 15-21), most of the shark catch (45%) was reported as dogfishes (DGX), and that species level identification necessary for scientific use of the NAFO Observer data. Increased training on species identification would aide in the improvement of observer data quality, as well as all catch reporting data in NAFO. The group recalled that the European Union had shared the species ID guides of other RFMOs with NAFO, and Canada informed the group that they are developing a species ID smartphone app, and noted that the World Wildlife Fund (WWF) has developed one. The SC Representatives also noted the timeliness of report submissions as an issue as only 22% of the reports were submitted in the required timeline of 30 days following the end of the trip (FC Doc. 15-21). It was also noted that if a trip occurs at the end of one calendar year, and continues into the next calendar year, and the reports are submitted 30 days following the end of the trip, the SC may not have enough time to analyse the data from those trips before the SC meeting in June.

Representatives from Denmark (in Respect of the Faroe Islands and Greenland) (DFG) presented STACTIC OPR-WP 17-04 outlining some of the scientific data collection guidelines currently being used in Greenland. Contracting Parties thanked DFG for sharing their processes and noted their methods would result in more accurate data, but that it would be more labour intensive for scientists.

The European Union highlighted STACTIC OPR-WP 17-01 that was prepared by the NAFO Secretariat comparing the CATs total values with the OBR values. The European Union noted that the values were very close in some cases and questioned their accuracy. The main question discussed by the group was if the close values indicate complete accuracy of the observer and the Master in estimating catch, or if they mean the Masters or observers are sharing values.

It was **agreed** that:

- **The European Union would provide a summary of the discussions with their Member States relating to the NAFO Observer Program and their Scientific Observer programs.**

- **The Scientific Council representatives would develop a survey for distribution at the June 2017 Scientific Council meeting to determine the current and potential uses of the NAFO Observer Program data, and the necessary improvements, by other Scientific Council members and the results of the survey will be incorporated into the June Scientific Council report.**
- **The NAFO Secretariat will develop a timeline of improvements to the NAFO Observer Program data since the last review in 2011 for presentation at the June 2017 Scientific Council meeting.**

6. Review of Article 30

During the discussion of the action plan (STACTIC OPR-WP 17-02), it was noted that some components outlined in the draft action plan have already been completed in the latest draft of Article 30 (WG-OPR Draft Article 30 – Version 4). Participants noted that there was some confusion around which items were agreed to by consensus in the draft, and which were still outstanding. The European Union was requested and agreed to outline the specific items within the draft Article 30 that have been agreed to in the Action Plan as completed.

It was **agreed** that:

- **The European Union would incorporate the components of the draft Article 30 document into the Action Plan and mark the items that have been agreed to by the working group as completed.**

7. Code of Conduct for the NAFO Observer Program

The European Union presented the draft Code of Conduct for the NAFO Observer Program in STACTIC OPR-WP 16-01. Contracting Parties reiterated their concerns from the previous meeting that the current draft is overly prescriptive and could create issues with how individual flag State observer programs are operating. The European Union noted that other RFMOs, for which NAFO Contracting Parties are also members, operate under similar codes (e.g. the Bill of Rights), and that because as it is a 'Code', it is not a legally binding document. To address their specific concerns, the United States agreed to edit the pre-amble of the draft Code of Conduct, to ensure that this was explicit and it was clear that it was without prejudice to other international and national legislation / policies. Contracting Parties agreed that there was a need for some sort of Code of Conduct for the NAFO Observer Program, but that the draft should be more generalized and include clear text explaining the purpose and scope of the document. All other Working Group Participants with concerns over the draft agreed to submit comments to the European Union who agreed to revise the document accordingly. Contracting Parties also agreed that the document, when finalized, should not be incorporated into the NAFO CEM but could be posted to the Practices and Procedures webpage, or on the NAFO MCS Website.

The United States highlighted that there is currently an ongoing review of National and International Observer safety which should be completed in the Fall of 2017, and that they would share the results with the Working Group.

It was **agreed** that:

- **A Code of Conduct document for the NAFO Observer Program would be a helpful resource, but the scope and purpose should be clarified.**
- **If a final version of the Code of Conduct is agreed to, it should exist separately from the NAFO CEM, for example, on the Practices and Procedures webpage, or the NAFO MCS Website.**
- **The United States would edit the pre-amble of the draft Code of Conduct, to ensure that this was explicit, and it was clear that it was without prejudice to other international and national legislation/policies.**

- **Working Group participants with concerns over the draft Code of Conduct would submit comments to the European Union by 15 August 2017, who will revise the current draft to make it more generalized accordingly for review at the next meeting.**

8. Changes to Annex II.M of the NAFO CEM

The European Union presented STACTIC OPR-WP 16-02 and explained that it has been several years since the Annex had been reviewed and noted there were places for improvements. The European Union walked through the individual changes within the document, and highlighted some key changes. One change of note was an increase in the amount of details related to compliance for inspection purposes. Another was the inclusion of a comparison of the logbook data recorded by the Master in Part 4B to facilitate Port Inspectors. Observer reports are required to be submitted to Port Inspection authorities when a vessel lands in port, and adding this information would facilitate inspections. The European Union also highlighted the mandatory inclusion of Part 5 (Length Frequency Forms) and requested that this be reviewed as some flag State vessels carry Scientific Observers who collect this information. Meeting participants provided some preliminary comments to the European Union on the draft and some noted that they would like to review in further detail before providing more comments. Participants also noted that what is required in Annex II.M may change depending on the June survey results being conducted by the Scientific Council, and once the role of the observer is further refined and specific tasks defined.

It was **agreed** that:

- **Interested participants would review STACTIC OPR-WP 16-02 and provide comments to the European Union prior to the next meeting of the WG-OPR.**
- **The data collection requirements, as outlined in Annex II.M, for the NAFO Observer Program be added to the survey to the Scientific Council, highlighting the mandatory inclusion of Length Frequency measures for vessels that also carry a Scientific Observer onboard.**

9. Training and Equipment

Contracting Parties discussed the standards for training and minimum requirements for Observers in NAFO. The consensus of the working group on minimum training standards for NAFO Observers is that the NAFO CEM measures remain general (definition of observer in WG-OPR Draft Article 30 – Version 4), and the Code of Conduct document could identify some general best practices. Contracting Parties agreed that training and minimum requirements of Observers should be left up to the individual discretion of the Contracting Party. The Chair noted that there is a section on the Working Group SharePoint where the training manuals from individual Contracting Parties can be shared and reviewed.

Contracting Parties discussed their individual equipment requirements for Observer Programs. The European Union expressed that the ability to report independently, in real-time, and discreetly has been highlighted by their Member States as the most essential element to ensuring that Observer data is credible and useful. The United States explained some of their equipment requirements and offered to share cost estimates for the required equipment with the Working Group. They also highlighted the importance, for safety reasons, of having a two-way communication mechanism (e.g. Satellite phone) with the observers while they are working onboard vessels. The United States informed the group that they are conducting trials on such equipment and will share the results once finalized. Additionally, they are conducting a safety review of their international observer programs, and likewise would share the results when finalized. Contracting Parties agreed to investigate the potential costs within their jurisdiction for providing an independent source of two-way communication for all observers.

It was noted that the WWF had developed an app for observers to be able to report at sea. All agreed that it would be beneficial to investigate this further and possibly invite a representative from the WWF to share with the group their work on the development of safety measures, codes on conduct, and other aspects for applications in observer programs.

The Chair encouraged Contracting Parties to continue to share their training and equipment requirements on the Working Group SharePoint.

It was **agreed** that:

- **Training and minimum standards for Observers shall be left to the discretion of individual Contracting Parties, and the requirements in the NAFO CEM shall remain general (definition of observer in WG-OPR Draft Article 30 – Version 4).**
- **The United States would share their cost estimation for observer equipment, the results of the personal satellite communication devices, and the results of their international program review with the group when finalized (on the Working Group SharePoint).**
- **Contracting Parties will investigate the potential costs for providing an independent source of two-way communication for all observers and provide an update at the next WG-OPR meeting.**

10. Other Matters

a. NAFO Working Group on Improving Efficiency of NAFO Working Group Process

The Chair highlighted that there is an effort to develop a clear communication mechanism amongst NAFO's subsidiary bodies to allow improved collaboration between them intersessionally, and there is a proposal put forward to set aside two-week periods each year to schedule NAFO Working Group meetings. It was noted that this issue would be discussed further at the STACTIC Intersessional meeting on 09 May 2017.

11. Time and Place of Next Meeting

The next meeting will be scheduled at a later date.

12. Adoption of the Report

The report was adopted via correspondence following the meeting.

13. Adjournment

The meeting was adjourned at 17:15 hours on 08 May 2017.

Annex 1. List of Participants

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Annex 2. Agenda

1. Opening
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Action Plan for the Working Group
5. Observer Data Quality Enhancement
6. Review of Article 30
7. Code of Conduct for the NAFO Observer Program
8. Changes to Annex II.M of the NAFO CEM
9. Training and Equipment
10. Other Matters
 - a. NAFO Working Group on Improving Efficiency of NAFO Working Group Process
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12. Adoption of the Report
13. Adjournment

SECTION X
(pages 267–280)

**Report of the NAFO Standing Committee on International Control (STACTIC)
Interessional Meeting**

**09–11 May 2017
Boston, MA, USA**

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**Report of the NAFO Standing Committee on International Control (STACTIC)
Intersessional Meeting**
(FC Doc. 17-02)

**09–11 May 2017
Boston, MA, USA**

1. Opening by the Chair, Judy Dwyer (Canada)

The Chair opened the meeting at 10:00 hours on Tuesday, 09 May 2017 at the Mariners House in Boston, United States of America. The Chair welcomed representatives from the following Contracting Parties (CPs) – Canada, Denmark (in respect of Faroe Islands and Greenland), the European Union, Iceland, Japan, Norway, the Russian Federation, and the United States of America (Annex 1). The Chair thanked the United States for hosting and welcomed the Chair and vice-Chair of the Fisheries Commission and the Chair of the Scientific Council.

2. Appointment of Rapporteur

Jana Aker (NAFO Secretariat) was appointed as Rapporteur.

3. Adoption of Agenda

The following amendments were made to the agenda under agenda Item 17 – Other Matters:

- a) NAFO Working Group on Improving Efficiency of NAFO Working Group Process
- b) NAFO Amended Convention
- c) Transboundary reporting of catch

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

4. Compilation of fisheries reports for compliance review (2016), including review of Apparent Infringements

The Secretariat presented the draft compilation tables (STACTIC WP 17-03) and Contracting Parties are asked to further review the information presented in STACTIC WP 17-03 and provide comments and corrections to the NAFO Secretariat no later than 12 June 2017. Compilation tables will be transmitted to Contracting Parties on 19 June 2017, as per Rule 4.1 of the Fisheries Commission Rules of Procedure. Contracting Parties will be provided with their own vessel specific details. Contracting Parties provided comments on the draft compilation, the most significant being GHL landings not associated to PSC3 reports, fishing trips with no Observer reference, and the inclusion of Apparent Infringements that were detected during Port Inspections.

Regarding the trip catches, the Secretariat informed that for the first time, the catch estimates derived from the STACTIC catch data will be provided to the Scientific Council for its task in performing fish stock assessment. The catch estimates were derived using the methodology developed by the Catch Data Advisory Group (CDAG) of the Joint FC-SC Working Group on Catch Reporting (FC-SC Doc. 17-01).

The NAFO Secretariat presented STACTIC WP 17-22, which was the annual presentation of fisheries and compliance information for 2016. This presentation included several graphs and analyses that will eventually be incorporated into the draft Annual Compliance Review. The European Union highlighted the necessity to clarify the distinction of VMS and VTI information. The NAFO Secretariat also presented STACTIC WP 17-17 in response to a request from STACTIC to continue conducting specific analyses on declared and landed catches to facilitate compliance discussions. Iceland highlighted an issue relating to double counting by the Secretariat for one trip and the working paper was revised accordingly (STACTIC WP 17-17 (Revised)). Where anomalies

in catch reporting are present, the NAFO Secretariat will investigate and provide a report at the next Annual Meeting. The amount of bycatch of Greenland shark was highlighted, and a representative from the Scientific Council noted that the Scientific Council will be discussing Greenland shark bycatch at their June meeting.

The NAFO Secretariat also presented the information received in accordance with Article 40.1 in STACTIC WP 17-01 (Revised) as well as the compilation of Apparent Infringements detected at-sea since 2012 (STACTIC WP 17-02 (Revised)) for information. It was recalled that Contracting Parties must report annually at-sea and in port Apparent Infringements and provide information on their related follow-up. Contracting Parties are requested to update the information in STACTIC WP 17-01 (Revised) and STACTIC WP 17-02 (Revised) accordingly. STACTIC WP 17-01 (Revised), STACTIC WP 17-02 (Revised) and STACTIC WP 17-03 will subsequently all include Apparent Infringements detected at-sea and in port.

The NAFO Secretariat presented STACTIC WP 17-13 outlining the information that is currently being presented in the Annual Compliance Review. Canada presented STACTIC WP 17-26 proposing a modified process for the development of the Annual Compliance Review that would be incorporated into the proposed work planning process, which will be a collaboration between Contracting Parties engaged in the Joint Inspection and Surveillance Scheme. Contracting Parties agreed with the general concept of the compliance review process being presented by Canada, but expressed interest in having a more detailed description of the expected role of STACTIC, particularly as it relates to the work planning process. Iceland requested that the NAFO Secretariat include in the draft Annual Compliance Review an analysis of compliance with the 15% port inspection rule.

It was **agreed** that:

- **The NAFO Secretariat would provide the Contracting Party with their own vessel specific information within STACTIC WP 17-03, including vessel names.**
- **Contracting Parties would review the information in STACTIC WP 17-01 (Revised), STACTIC WP 17-02 (Revised), and STACTIC WP 17-03 for accuracy, and provide updates, comments, and/or corrections to the NAFO Secretariat no later than 12 June 2017.**
- **The NAFO Secretariat will conduct an analysis of compliance with the 15% port inspection provision for inclusion in the draft Annual Compliance Review.**
- **Canada would present a more detailed proposal for the Annual Compliance Review process and a separate proposal for outlining the potential work planning model with the inclusion of the role of STACTIC in the process.**

5. Measures concerning repeat non-compliance of serious infringements in the NAFO Regulatory Area

This item was added to the agenda following discussions at the September 2016 meeting of STACTIC on possible measures that could be included in the NAFO CEM to deter repeat non-compliance within the NAFO Regulatory Area. At the September meeting, Contracting Parties were tasked with reviewing their domestic legislation to determine if there were mechanisms available for such deterrence and report back to STACTIC. Iceland (STACTIC WP 17-16) and Canada (STACTIC WP 17-23) highlighted the options available within their domestic legal regimes. All other Contracting Parties then provided verbal updates on their own domestic tools for discouraging repeat non-compliance. The general consensus among Contracting Parties was that the NAFO CEM would have to remain somewhat general, with specifics left to the individual Contracting Parties. Canada agreed to draft a proposal to include measures to address repeat non-compliance, but requested written summaries from Contracting Parties on their domestic legislation in order to ensure that the draft proposal can accommodate the needs of all Contracting Parties.

It was **agreed** that:

- **Contracting Parties would provide Canada with the specific measures within their domestic legislation to address the issue of repeat non-compliance by 19 July 2017.**
- **Canada would draft a proposal for measures concerning repeat non-compliance of serious infringements in the NAFO Regulatory Area for presentation at the next Annual Meeting.**

6. Discussion on the bycatch analysis done by the Secretariat

At the 2016 Annual Meeting, the Fisheries Commission adopted the Working Group on Bycatches and Discards (WG-BDS) recommendation (FC Doc. 16-05), instructing the Secretariat to conduct bycatch analysis of CAT data, specifically that the Secretariat analyzes data for trends, patterns, anomalies:

- *In cases where bycatch thresholds are exceeded, the analysis should provide additional information on associated catch weights for specific stocks (3NO COD, 3M PLA, 3LNO PLA);*
- *Analysis should consider both historical and current CATs (2012 to current);*
- *Trends in reported catch of non-Annex I.A (3M WIT, 3M SKA).*

The NAFO Secretariat gave a presentation on the preliminary bycatch analysis of CATs for 2012-2016 in STACTIC WP 17-24. Contracting Parties thanked the Secretariat for the presentation but sought clarification on whether the analyses were meant to be reviewed for compliance purposes, and the Chair clarified that the work was completed for the WG-BDS, but is being presented to STACTIC for informational purposes. Contracting Parties highlighted some challenges with the way the data were being presented and the NAFO Secretariat agreed to update the presentation following input from the next meeting of the WG-BDS.

Contracting Parties discussed the challenges with complying with the bycatch rules outlined in Article 6 of the NAFO CEM where domestic discard bans exist.

It was **agreed** that:

- **The NAFO Secretariat would update the presentation in STACTIC WP 17-24 following input from the next meeting of the Working Group on Bycatches and Discards.**

7. Review and evaluation of Practices and Procedures

A representative from Iceland gave a presentation on their use of business intelligence software (Tableau) to improve their inspection regime. Contracting Parties thanked Iceland for the very informative presentation, and Iceland offered to provide more detailed information to Contracting Parties if they were interested. Iceland agreed to add descriptive text to the presentation so that it can be uploaded to the Practices and Procedures webpage, and the NAFO Secretariat would update the list presented in STACTIC WP 17-04.

It was **agreed** that:

- **Iceland would provide their presentation to the NAFO Secretariat for inclusion on the Practices and Procedures webpage.**

8. Review of current IUU list

The Secretariat presented the NAFO IUU List Update in STACTIC WP 17-05 and noted that there have been no changes to the IUU list since the last update at the 2016 NAFO Annual Meeting. The NAFO Secretariat also presented STACTIC WP 17-21, which was a letter received from officials in Cambodia relating to Cambodian flagged vessels, for information to Contracting Parties. The NAFO Secretariat indicated that it has responded to the Cambodian officials acknowledging the receipt of the letter.

9. Half-year review of the implementation of new NAFO CEM measures

The NAFO Secretariat presented STACTIC WP 17-06 highlighting the experiences of the NAFO Secretariat with the new measures adopted at the 2016 NAFO Annual Meeting. The Secretariat highlighted that the amendments to the measures adopted in FC-Doc. 16-14 and FC Doc. 16-07 relating to the “Others” quota, and in FC Doc. 16-19 (Revised) relating to the clarification of data elements (proposed by JAGDM) were all very useful changes that have helped to streamline processes and increase accuracy.

The Secretariat also highlighted a question related to a situation where the 5-day notification of the “Others” quota was sent, but the quota was not exhausted during the 5-day timeframe prior to the closure time, prompting a question about whether there was or should be, a mechanism for reopening the “Others” quota. Contracting Parties agreed that there is no mechanism in the current measures that would allow for the reopening of an “Others” quota. Contracting Parties also noted that because the quotas are so small, the reopening of an “Others” quota would open up the possibility of exceeding the quota and indicated a preference to maintain the status quo. During the discussion, it was also highlighted that no such reopening system exists for the 3M redfish fishery.

The Secretariat also highlighted an issue that was raised in relation to the revision of the Port State Control measures that were adopted in FC Doc. 16-06. It has been flagged to the Secretariat that there is confusion relating to the PSC1 approval process. Contracting Parties discussed this issue and noted that it was unclear if there was a requirement for confirmation from the flag State for a PSC1 where the vessel was entering port solely for “use of port services” with no landing or transshipment of fish. Canada highlighted that they prepared a summary of their understanding and the application of the current process and would share with interested Contracting Parties. There was also discussion on whether the entry of vessels into port for “use of port services” following a PSC1 approval process should count in the statistics for determining the 15% coverage of port inspections. Representatives who are also members of NEAFC noted that there is currently a working group in NEAFC that is looking at this same issue, and that it would be best if NAFO and NEAFC would operate with the same understanding of the process. The Chair requested the representatives who are also members of NEAFC inform the NAFO Secretariat when there is a decision made in NEAFC so that STACTIC can reflect on the decision and have a clear way forward for the next intersessional meeting.

It was **agreed** that:

- **The members who are also representatives of NEAFC would inform the NAFO Secretariat when there is a decision made in NEAFC to clarify the PSC1 approval process.**
- **The NAFO Secretariat would forward the information received from NEAFC to STACTIC for discussion.**

10. NAFO Monitoring, Control and Surveillance (MCS) Website

The NAFO Secretariat indicated that they have received positive feedback on the new developments to the NAFO MCS website, and invited Contracting Parties to continue to provide feedback on functionality as they are using the website. The NAFO Secretariat presented STACTIC WP 17-07 highlighting areas in the NAFO CEM referring to uploading information to a secure portion of the NAFO Website that could potentially be moved to the MCS Website, as well as information that is currently being posted to the MCS website that is not reflected in the NAFO CEM. The working paper also highlighted that the NAFO Secretariat will initiate a process for uploading historical reports (at-sea inspection, port inspection, observer) to the NAFO MCS Website dating back to 2010, as a start. The European Union requested that the information will have the ability to be filtered by the existence of an infringement and the type of infringement. Contracting Parties are concerned that the MCS Website, if the only place for many types of information also required by other NAFO Bodies, would need to have much wider access therefore was in danger of not being dedicated to its original purpose – a tool for MCS. The Ad hoc virtual NAFO Website Re-design Working Group: Phase II – Data Classification will now review access and location to all information, therefore it is suggested to wait for their conclusions before any more changes are made to the MCS website. Also, the NAFO Secretariat will discuss capabilities and options with the Database Developer/Programmer Analyst.

The United States questioned the current requirement to post the provisional IUU list on the secure portion of the NAFO Website and suggested that STACTIC may want to revisit this requirement at a future meeting.

The NAFO Secretariat presented STACTIC WP 17-08 highlighting potential technical improvements that could be made to the NAFO MCS Website. Contracting Parties expressed the most interest in the catch data query option, but reflected that the enhanced security option might not be practical for inspection vessels operating at sea given the communications challenges. Questions were raised about whether the quota monitoring option might be redundant since Contracting Parties would have their own methods for monitoring their own quota uptake. The NAFO Secretariat agreed to complete a demo of the data query option for the MCS Website for presentation at the Annual Meeting, and the representative from the Russian Federation offered to help test the software in the interim.

It was **agreed** that:

- **The European Union, with assistance from the NAFO Secretariat, would review the outcome of the Ad hoc virtual NAFO Website Re-design Working Group: Phase II – Data Classification and discuss the IT capabilities of the NAFO Secretariat, and come up with a way forward for posting the information outlined in STACTIC WP 17-07 to the NAFO MCS Website.**
- **The NAFO Secretariat would develop a demo of the catch data query addition to the NAFO MCS Website for presentation at the next Annual Meeting.**

11. Editorial Drafting Group (EDG) of the NAFO CEM

The Chair presented the two latest reports of the EDG (FC Doc. 16-22 and STACTIC EDG-WP 17-01) and highlighted the work that has been completed by the group since the last Annual Meeting. The Chair highlighted that the EDG is currently working on clarifying the language in Article 18.1, Article 5.3.e, and noted that any other small clarifications would be compiled into one proposal for presentation at the next Annual Meeting.

Following the recommendation from STACTIC at the 2016 Annual Meeting to review the incorporation of footnote 21 of the 2015 NAFO CEM into Article 6, the United States noted that they are still working bilaterally with Canada to develop a proposal addressing the issue and will provide an update at the Annual Meeting. Canada noted its willingness to continue discussions in an effort to reach consensus. The United States also reflected on the reconfiguration of the NAFO CEM into two sections, one for conservation and one for enforcement, and noted that they will provide an update of progress at the next Annual Meeting.

The Chair also presented STACTIC WP 17-09 and STACTIC WP 17-10 and noted that these changes are being proposed in order to align the text that was adopted at the 2016 Annual Meeting with rest of the measures. Contracting Parties agreed to forward these working papers to the Fisheries Commission for adoption.

It was **agreed** that:

- **The changes to the NAFO CEM presented in STACTIC WP 17-09 and STACTIC WP 17-10 be forwarded to the Fisheries Commission for adoption.**
- **The United States and Canada will continue to work bilaterally regarding the review of the incorporation of footnote 21 of the 2015 NAFO CEM into Article 6 and will provide an update at the next Annual Meeting.**

12. New and Pending Proposals on Enforcement Measures – possible revisions of the NAFO CEM

Iceland presented STACTIC WP 17-15, which was a proposal to include text in the NAFO CEM to prohibit landing or transshipping operations in port before the Estimated Time of Arrival (ETA) as stated in the PSC1 or PSC2 has expired. Contracting Parties were fully supportive of the concept presented, but offered some changes to the text, which was presented in STACTIC WP 17-15 (Revised). Contracting Parties agreed to forward the proposal presented in STACTIC WP 17-15 (Revised) to the Fisheries Commission for Adoption.

The European Union presented STACTIC WP 17-19, which included a complete revision of Chapter VI to better align with current processes and technologies for the At-Sea Inspection Scheme and strengthen enforcement capacity in a move to contribute to the fight against repeat non-compliance. The European Union also presented STACTIC WP 17-20, which included a revision of Chapter VII – Port State Control. The European Union also presented STACTIC WP 17-25, which included a summary of the suggested amendments in the previous two working papers. The European Union noted that for ease of review of the proposed provisions, they presented a clean version of the documents but would give the “track changes” versions to the NAFO Secretariat to circulate to meeting participants so that they would be able to review all of the changes being proposed. Contracting Parties thanked the European Union for their extensive work and provided preliminary comments on the proposals, but indicated a need to thoroughly review the “track changes” versions before endorsing the need to adopt any or all of the proposed changes.

It was **agreed** that:

- **The changes to the NAFO CEM presented in STACTIC WP 17-15 (Revised) be forwarded to the Fisheries Commission for adoption.**
- **The NAFO Secretariat would circulate, via email to the meeting participants, the “track changes” versions of STACTIC WP 17-19 and STACTIC WP 17-20.**
- **Contracting Parties would review the “track changes” versions of STACTIC WP 17-19 and STACTIC WP 17-20 and forward preliminary comments, where possible, on the documents to the European Union and the NAFO Secretariat by 19 July 2017.**
- **The proposals outlined in STACTIC WP 17-19 and STACTIC WP 17-20 be discussed further at the next Annual Meeting.**

13. Report and recommendations of the STACTIC Observer Program Review Working Group (WG-OPR)

The Chair presented the meeting report from the October meeting of the WG-OPR (FC Doc. 16-21) as well as the draft meeting report from the meeting that took place on 08 May 2017. The Chair highlighted that at the most recent meeting of the WG-OPR, there were representatives from the Scientific Council present and their input in the meeting was very informative to the review process of the NAFO Observer Program. The Chair highlighted that the Scientific Council representatives offered to survey the Scientific Council participants at their next meeting on the current and potential uses of the NAFO Observer Program data. The Chair also reported that the draft changes to Article 30 are still in progress and that the European Union has drafted an Action Plan for the working group to assist in itemizing the tasks that need to be completed. The report of the 08 May 2017 meeting will be finalized through email correspondence over the next few weeks.

14. Report and Advice of the Joint Advisory Group on Data Management (JAGDM)

The Chair of JAGDM (Lloyd Slaney – Canada) presented STACTIC WP 17-11 (Revised), which included a summary of the meeting highlights from the last meeting of JAGDM that took place in March 2017. Some of the highlights included the attendance of representatives from CCAMLR and SEAFO noting possible future collaboration on technical issues, presentations on data exchange statistics, the ongoing review of the NAFO CEM Annexes, and updates from the NAFO Secretariat on use of the EU ERS data using the FLUX transport layer.

15. Information Security Management System (ISMS)

The NAFO Secretariat presented STACTIC WP 17-12 highlighting that they will be receiving funding from the European Union to install enhanced security measures for critical web servers housed within the NAFO Secretariat, and testing will be conducted to ensure security. The NAFO Secretariat will present the results of the testing at the next Annual Meeting.

Iceland highlighted a concern relating to the NAFO Backup policy that was presented at the last Annual Meeting in STACTIC WP 16-23, specifically with the storage procedure of the weekly backup tapes. Contracting Parties requested the NAFO Secretariat to investigate other methods and include an estimate of costs at the next Annual Meeting.

It was **agreed** that:

- **The NAFO Secretariat will present an update on the new security measures, including the results of the testing at the next Annual Meeting.**
- **The NAFO Secretariat will investigate other methods for storing the weekly backup tapes, including an estimate of costs for presentation at the next Annual Meeting.**

16. Confidentiality measures in the NAFO CEM

The Chair highlighted GC WP 17-01 noting that it was in response to a recommendation from STACTIC at the 2016 Intersessional meeting, as well as from STACFAD at the 2016 Annual Meeting, to assign access rights to all of the NAFO data and information stored in the various NAFO Websites. It was noted that this is a first draft which is being reviewed by the Ad hoc virtual NAFO Website Re-design Working Group: Phase II – Data Classification. Contracting Parties were asked to review the information relating to the MCS Website and the NAFO Members Pages, noting that there was some redundancy, unnecessary administrative burden, and perhaps unnecessary restrictions in some of the information being located in both places. Contracting Parties noted that they would need more time to reflect on the utility and transparency aspects for housing some of the information on one webpage over another.

Canada provided an update on their progress in addressing areas in the NAFO CEM that require clarity on access rights as highlighted in STACTIC WP 16-37, noting that the proposal is in progress and will be presented at the Annual Meeting.

It was **agreed** that:

- **Canada would draft a proposal for addressing areas in the NAFO CEM that require clarity on access rights as highlighted in STACTIC WP 16-37 for presentation at the next Annual Meeting.**

17. Other Matters

a) NAFO Working Group on Improving Efficiency of NAFO Working Group Process

The Chair highlighted the request from the NAFO Working Group on Improving Efficiency of NAFO Working Group Process to discussing scheduling of NAFO Working Group Meetings. The Chair noted that STACTIC has already been making efforts to schedule its working group meetings together, or in conjunction with the Intersessional. The Chair also highlighted the proposal from the Working Group to set aside a two-week period each year to have all of the NAFO Working Group meetings. Contracting Parties were appreciative of the proposal, but were unsure of the feasibility of setting aside two weeks each year.

The other item for discussion was the development of a clear communication mechanism amongst NAFO Subsidiary bodies. Contracting Parties discussed the option of formalizing something within the NAFO Rules of Procedure to allow the Chairs to openly communicate when necessary as a potential option.

b) NAFO Amended Convention

The NAFO Secretariat presented STACTIC WP 17-14, which highlighted a change to the NAFO Rules of Procedure that will come into force on 18 May 2017 with the Amended Convention. Contracting Parties deliberated on the change to Rule 4.5 and noted that it should not impact the way STACTIC operates, but that confirmation may be required.

The NAFO Secretariat presented STACTIC WP 17-18 highlighting the editorial changes required in the NAFO CEM following the entry into force of the NAFO Amended Convention. The NAFO Secretariat offered to draft these changes and forward them to the EDG for review.

It was **agreed** that:

- **The NAFO Secretariat would draft the editorial changes to the NAFO CEM required following the entry into force of the NAFO Amended Convention and would forward them to the EDG for review.**

c) Transboundary reporting of catch

Canada gave a presentation to illustrate problems their inspectors are encountering with regard to the mis-recording of catch by division in the NAFO Regulatory Area. Canada suggested a possible way of addressing this issue would be to require reporting of catch by division when moving from one division to another. Contracting Parties deliberated, but no consensus on a way forward was reached at this time. Canada agreed to reflect on the discussions and investigate other options for possible presentation at the next Annual Meeting.

It was **agreed** that:

- **Canada would reflect on the discussions and investigate other options for addressing the issue of mis-recording of catch by division in the NAFO Regulatory area for possible presentation at the next Annual Meeting.**

18. Time and Place of next meeting

The next STACTIC meeting will be held at the Montréal Marriott Château Champlain Hotel, in Montréal, Québec, Canada, from 18-22 September 2017.

The Chair reminded Contracting Parties that the election of Chair and Vice Chair of STACTIC will be included on the agenda at the 2017 NAFO Annual Meeting.

19. Adoption of Report

The report was adopted on 11 May 2017, prior to the adjournment of the meeting.

20. Adjournment

The meeting was adjourned the meeting at 12:00 hours on 11 May 2017. The Chair thanked the United States for hosting the meeting and the NAFO Secretariat for their support during the meeting. She also thanked the meeting participants for their cooperation and input. The participants likewise expressed their thanks and appreciation to the Chair for her leadership.

Annex 1. List of Participants

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Annex 2. Agenda

1. Opening by the Chair, Judy Dwyer (Canada)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Compilation of fisheries reports for compliance review (2016), including review of Apparent Infringements
5. Measures concerning repeat non-compliance of serious infringements in the NAFO Regulatory Area
6. Discussion on the bycatch analysis done by the Secretariat
7. Review and evaluation of Practices and Procedures
8. Review of current IUU list
9. Half-year review of the implementation of new NAFO CEM measures
10. NAFO Monitoring, Control and Surveillance (MCS) Website
11. Editorial Drafting Group (EDG) of the NAFO CEM
12. New and Pending Proposals on Enforcement Measures – possible revisions of the NAFO CEM
13. Report and recommendations of the STACTIC Observer Program Review Working Group (WG-OPR)
14. Report and Advice of the Joint Advisory Group on Data Management (JAGDM)
15. Information Security Management System (ISMS)
16. Confidentiality measures in the NAFO CEM
17. Other Matters
 - a) NAFO Working Group on Improving Efficiency of NAFO Working Group Process
 - b) NAFO Amended Convention
 - c) Transboundary reporting of catch
18. Time and Place of next meeting
19. Adoption of Report
20. Adjournment