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Northwest Atlantic Fisheries Organization

Report of the Fisheries Commission and its Subsidiary Body (STACTIC)

38th Annual Meeting of NAFO
19-23 September 2016
Varadero, Cuba

NAFO
Dartmouth, Nova Scotia, Canada
2016

Report of the Fisheries Commission and its Subsidiary Body (STACTIC)

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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 *Ad Hoc* Working Group on Catch Reporting
WG-BDS	NAFO Fisheries Commission *Ad Hoc* 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, 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 (RBMS), and Ecosystem Approach Framework to Fisheries Management (EAFFM). 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 that 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 ⅔ 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 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, transhipment 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

CHAIRS

NAFO President/Chair of General Council

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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	**Accepted** the meeting report. **Adopted** all FC-specific recommendations with amendment to the GHL timeline/workplan (Annex 6). **Adopted** the Greenland halibut MSE timeline (Annex 7). **Adopted** the supplementary guidance to the 3LN Redfish Conservation Plan and HCR and **incorporated** them into the NCEM (Annex 8).
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 *Sebastes mentella* (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	**Set** the TAC at 7 000 tonnes, applicable for 2017 and 2018. **Updated** footnote 13 of the Quota Table**.**
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 (*Illex*) 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, transhipment 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	**Accepted** the meeting report**.** **Adopted** all FC-specific recommendations (Annex 11). **Adopted** the proposal to close to bottom fishing the new Area 14 (Annex 12).
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	**Accepted** the meeting report**.** **Adopted** all recommendations (Annex 14). **Decided** to continue the ad hoc WG for another year**.**
16. Reports of STACTIC (from May 2016 intersessional meeting and this Annual Meeting)	**Accepted** the STACTIC May 2016 Intersessional Meeting Report and the current meeting report (see Part II of this Report). **Adopted** *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*).* **Adopted** *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). **Adopted** *Development of the NAFO MCS website and updating of the CEM text to formalize report posting obligations* (Annex 17), **Adopted** *Electronic Notification and Authorization (Article 25) and Electronic Catch Reporting (Article 28)* (Annex 18), **Adopted** *Notification of vessels fishing on the "Others" quota to Contracting Parties with an inspection presence in the Regulatory Area* (Annex 19), **Adopted** *New text for EU footnotes associated to CEM Annex I.A* (Annex 20)*,* **Accepted** *Annual Compliance Review 2016, for fishing year 2015* (Annex 21)*.*
17. Other Matters pertaining to Conservation and Enforcement Measures	**Adopted** *Transmission of aggregated VMS data to Contracting Parties for non-inspection purposes* (Annex 22).
18. Other Business	**Decided** that WG on Improving Efficiency continue its work for the 2016-2017 NAFO year under the same TOR

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**:**

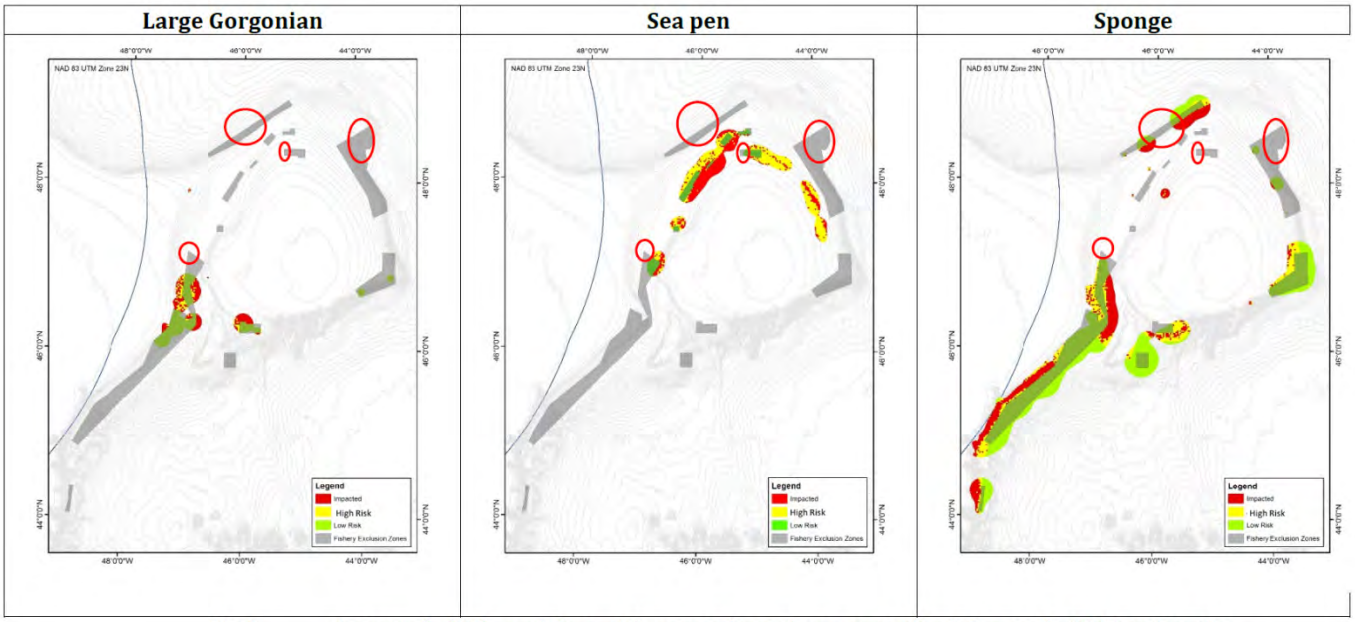


Fig.3. Impacted, high and low risk areas have been quantified for each VME using the corresponding cut-off values (see Annex VIII, section 4.2.5.)

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.

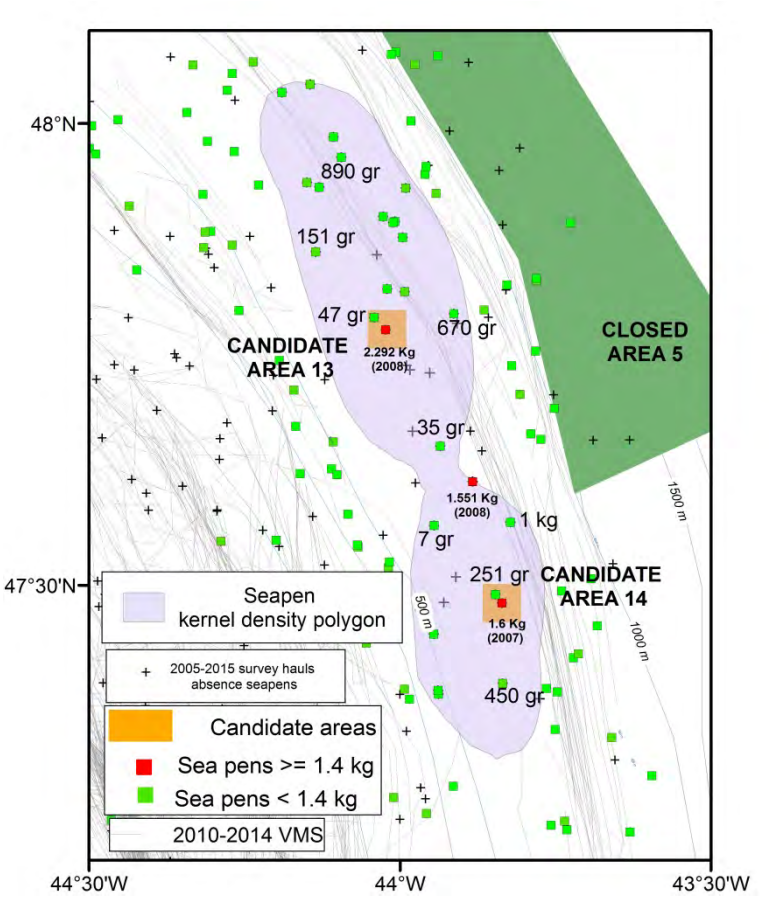
As a result of lowering the sea pens threshold to 1.4 Kg (NAFO SCS Doc. 13-024), a third survey tow (1.5 Kg) was added to those surveys over the threshold, having as a result a proposal for a larger polygonal area over 200 Km^2.

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:

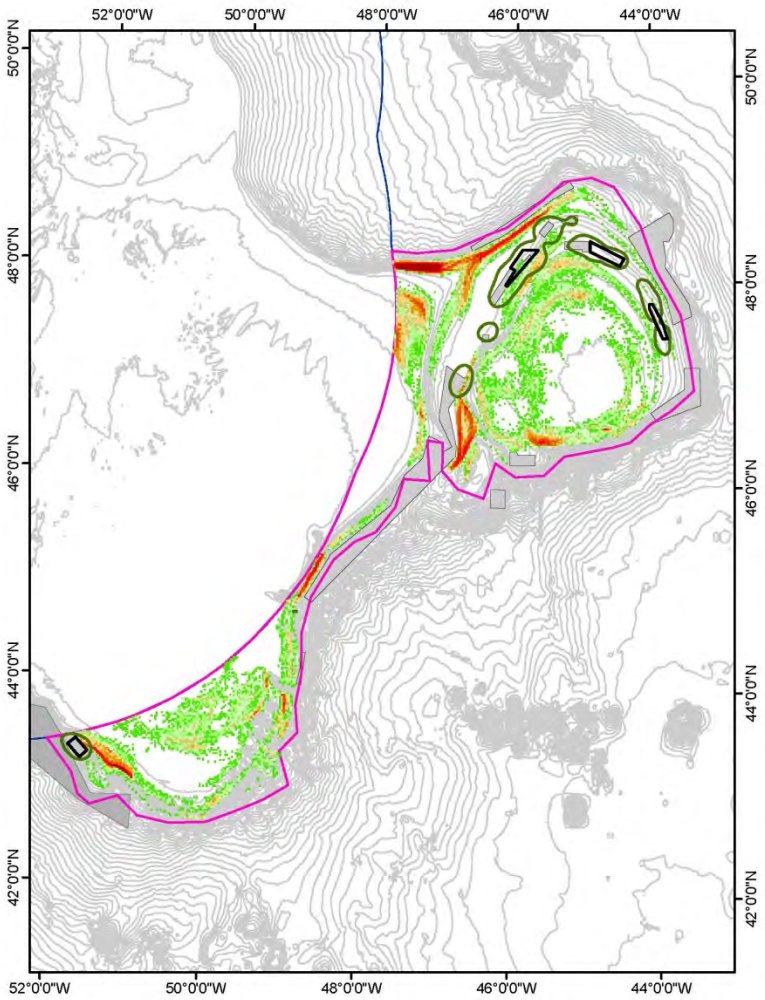
The closure of the original proposed areas 13 and 14 does not make any difference in terms of the overall seapen area and biomass protected and consequently would not be expected to result in any change to the overall risk evaluation. The closure of the polygon proposed in 2013 that joins the two original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

	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**	
SAI criteria	**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).

Yearly basis	Two year basis	Three year basis
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 2017 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:

1. 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 spreadsheetstock 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 SCAA[1] – 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 5.I and 5.II]
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)

$TACy+1 = TACy (1 + \lambda \times slope)$

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 Bmsy, 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 Bmsy;

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 (Blim): 30% of Bmsy
   b) Limit reference point for fishing mortality (Flim): Fmsy

3. **Performance Statistics (levels of risks that apply to section 4):**
   a) Very low (< 10%) probability of biomass declining below Blim.
   b) Low (< 30%) probability of fishing mortality >Fmsy
   c) Less than 50% probability of declining below 80% Bmsy on or before 2021

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

a) When biomass is below Blim:
   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 Blim and 80% of Bmsy
   i. TAC's should be set at a level(s) to allow for growth to above 80% of Bmsy or to avoid or mitigate further decline in biomass consistent with explicit rebuilding objectives[2]

c) When biomass is above 80% of Bmsy
   i. TAC's should be set at a level(s) to maintain biomass above 80% of Bmsy or to avoid or mitigate decline below 80% of Bmsy

d) If fishing mortality is above Fmsy
   i. Fishing mortality should be reduced to a level below Fmsy.

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

Annex 3.1
NAFO – Risk-Based Management Strategy for 3LN Redfish[3]

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 GHL 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 2017[4]

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 GHL HCR

Step VIII – NAFO Annual Meeting – September 2017

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

[4] 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)

$TACy+1 = TACy (1 + \lambda \times slope)$

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 objectives[5]

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}.

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

Annex I.
NAFO – Risk-Based Management Strategy for 3LN Redfish[6]

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:

3. 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.
4. Conduct a full review/ evaluation of the management strategy at the end of the 7-year implementation period.

[6] 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
Stock Specification	COD 3L	COD 3M		COD 3NO	RED 3LN		RED 3M	RED 3O	REB 1F_2_3K (i.e. Sub-Area 2 and Divs. 1F+3K)	PLA 3LNO	PLA 3M	YEL 3LNO
% of TAC			% of 3M Cod TAC			% of 3LN Redfish TAC						
Contracting Party												
Canada		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]

Annex I.A

(2017)

Species	Witch			White hake	Capelin	Skates	Greenland halibut	Squid (*Illex*)	Shrimp	
Stock Specification	**WIT 3L**	**WIT 3NO**		**HKW 3NO**	**CAP 3NO**	**SKA 3LNO**	**GHL 3LMNO**	**SQI 3_4 (i.e. Sub-areas 3+4)**	**PRA 3L**	**PRA 3NO**
% of TAC			**% of 3NO Witch TAC**							
Contracting Party										
Canada		1 335	60.00	294	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	588	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	59	0	1 167	1 399	749	0	
Ukraine							-		0	
United States of America		-			-		-	453	0	
Others		22	1.00	59	-	258	0	794	0	
TOTAL ALLOWABLE CATCH	*[11]	2 225[16]	100.00	1 000	*[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-carcass weight ratio has not proven effective as a conservation measure for sharks. Current scientific evidence clearly indicates that the fins-to-carcass weight ratio varies widely among species, as does the fin types used in calculations, the type of carcass 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-carcass 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-carcass 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, transhipment 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~~n~~ 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

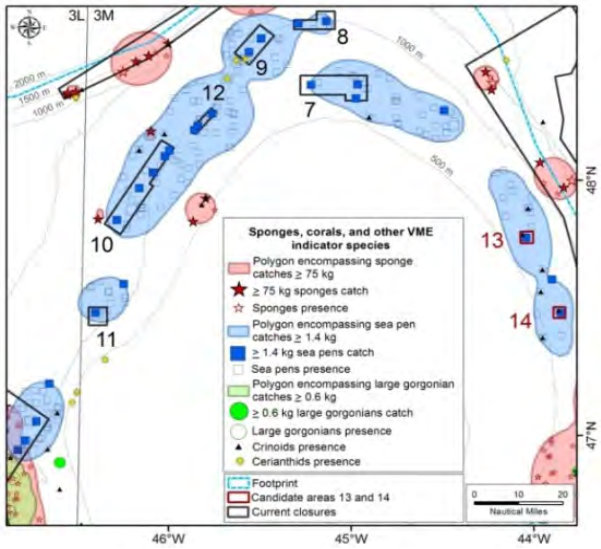


Figure 1. Closed Areas 7 – 12 and Candidate Areas 13 and 14.

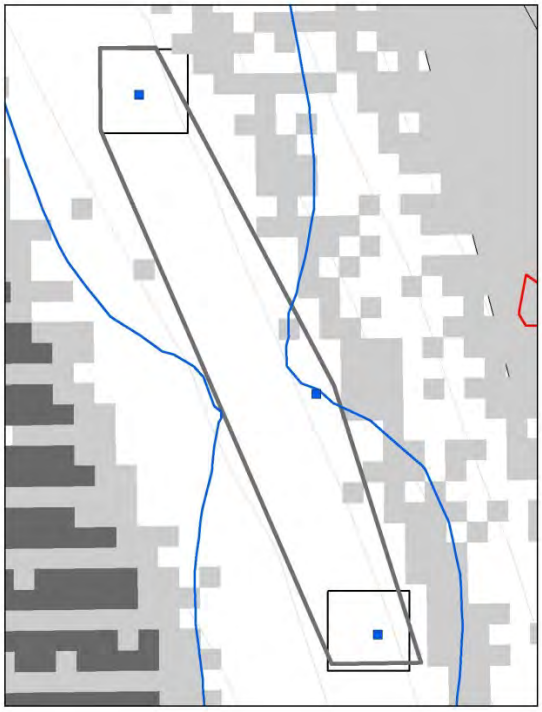


Figure 2. Candidate Areas 13 and 14.

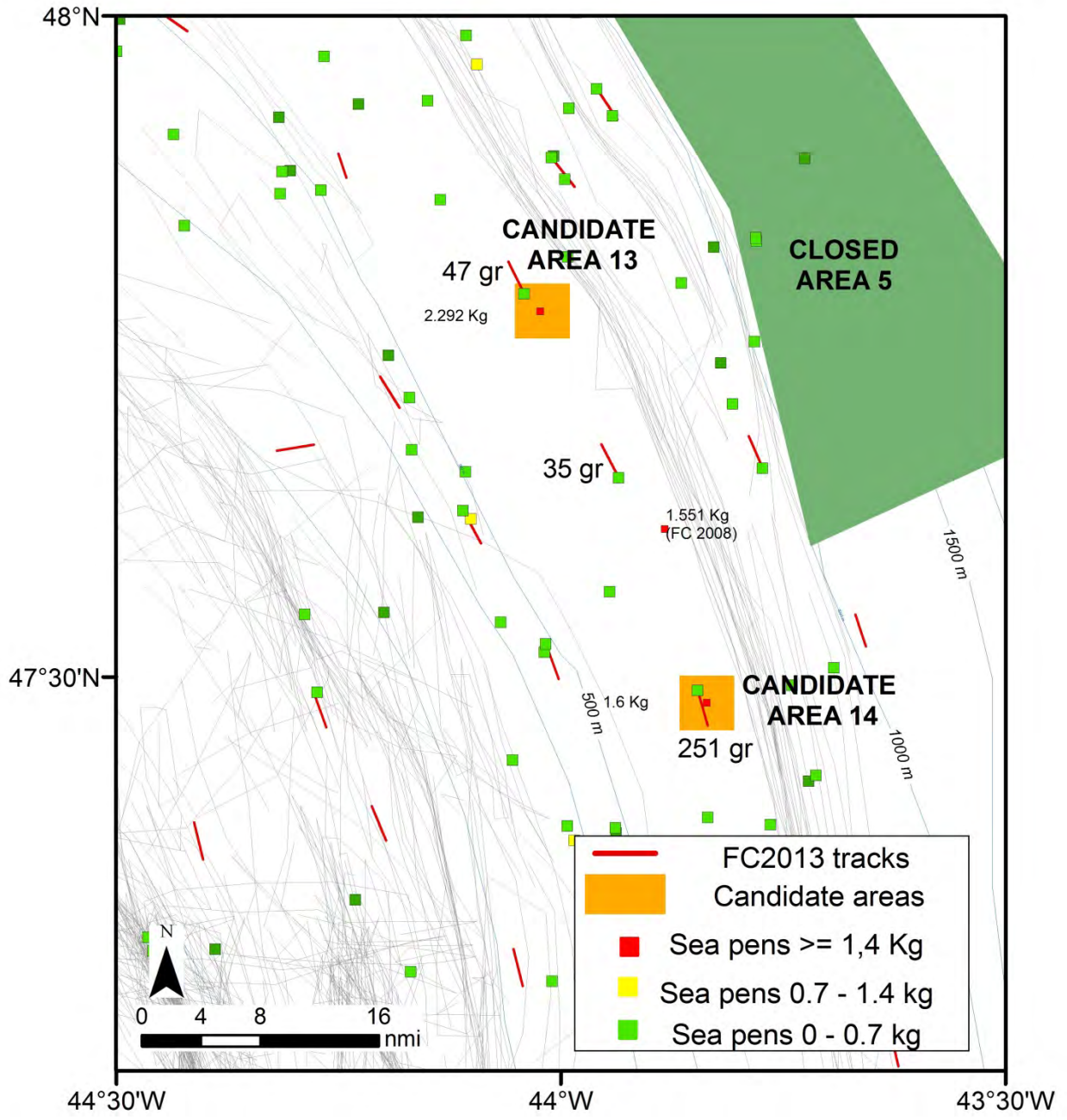


Figure 3. Candidate Areas 13 and 14.

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)

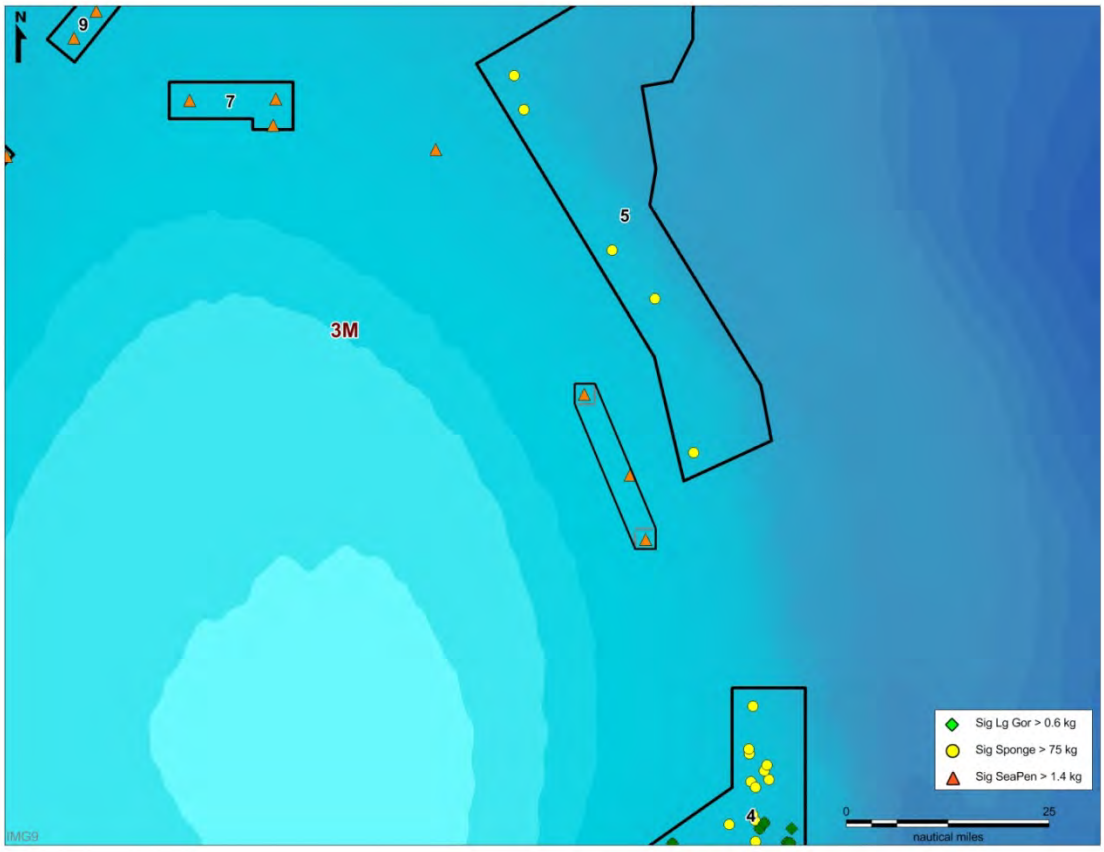
> "*Taking note of the recent SAI assessment from the SC, that FC consider management response, if appropriate, including the possible closure of the areas previously identified as sea pen candidate areas 13 and 14 (Eastern Flemish Cap) if proposals are made at the annual meeting….*"

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	-43989833

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

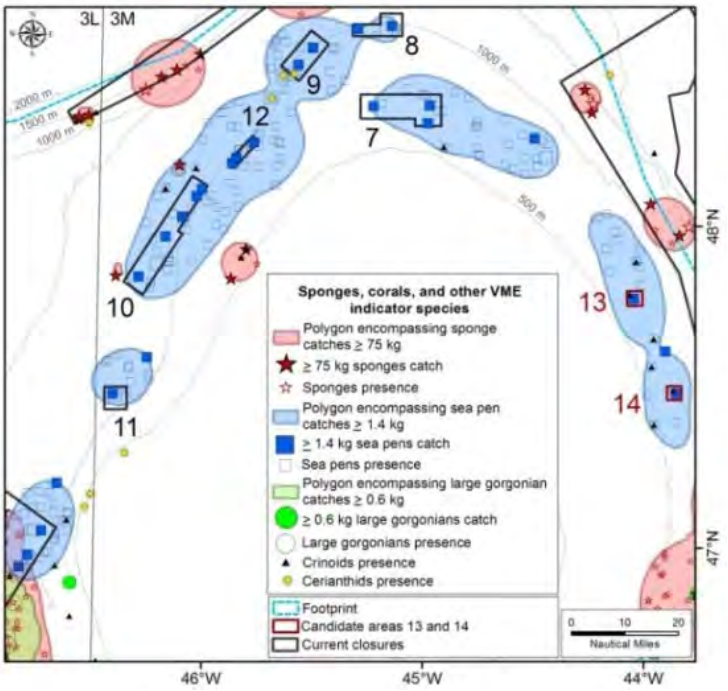


Figure 1. Closed Areas 7 – 12 and Candidate Areas 13 and 14.

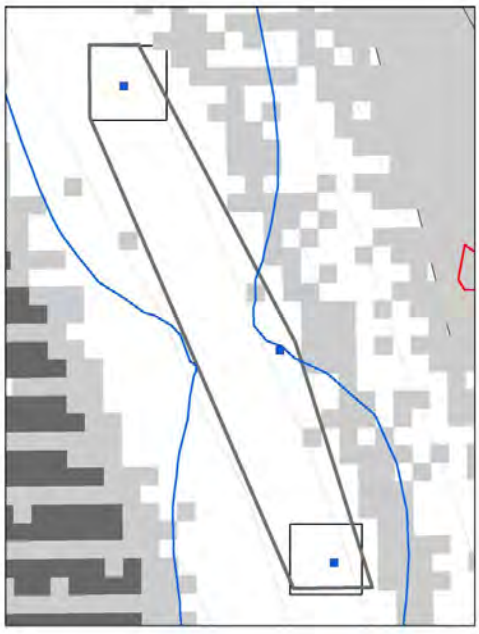


Figure 2. Candidate Areas 13 and 14 from 2003-2013 VMS data.

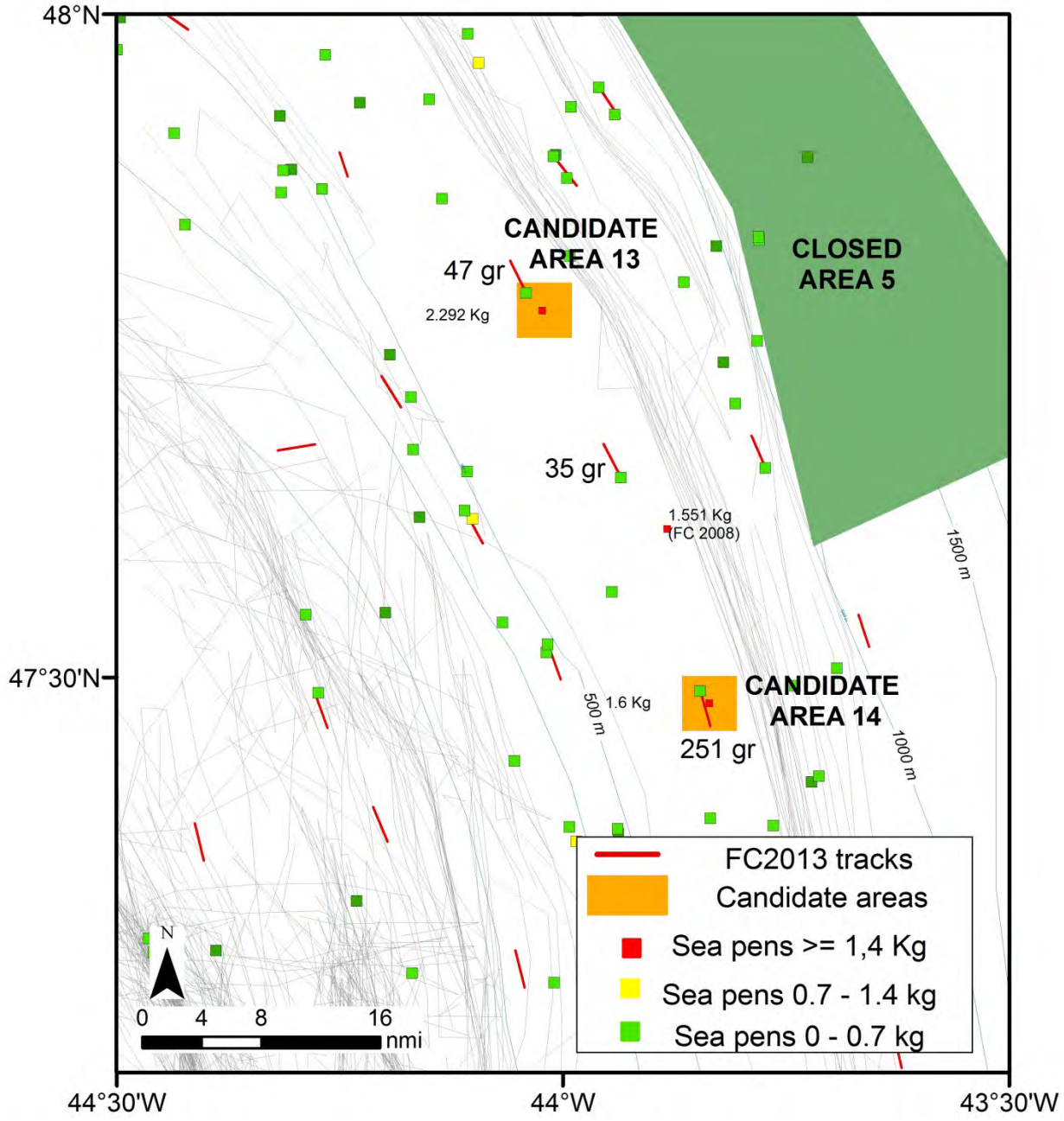


Figure 3. Candidate Areas 13 and 14.

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 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 transhipping 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, transhipment 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 eliminated 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, transhipping, 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. "Transhipment" 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, transhipping 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, transhipping 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, transhipments, 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, transhipment 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, transhipments, 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 transhipment 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, transhipment 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 transhipments 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 transhipment 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 transhipment;

    (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 transhipment 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 transhipping 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 transhipment 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 transhipment.

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 transhipment 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 transhipments 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 transhipment 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, transhipment 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, transhipment 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 transhipment 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 transhipment 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 Transhipment:**	
Last port of call:		**Date:**	
Estimated Date of Arrival:		**Estimated Time (UTC) of Arrival:**	

Frozen products only		**Fresh products only**		**Fresh and frozen products**	

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 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 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**		**Fresh and frozen products**	

Catch Information for Donor Vessels *A separate form shall be completed for each Donor Vessel*			
Name of Vessel	**IMO Number[1]**	**Radio Call Sign**	**Flag State**

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 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' beneficial owner2:			**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

B 1. 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**

B 2. FISH LANDED OR TRANSHIPPED*

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

Species4	Product[5]	Area of catch	Product weight landed in kg	Con-version 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:

B 3. 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:	

B 4. FISH RETAINED ON BOARD

Species4	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	Vessel on IUU vessel list

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

Observations:

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							
Lenghtening Piece							
Codend							

D. Observations by the master:

I, ……the undersigned, Master of the vessel ……..hereby 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.

Signature: _____ Date : _____

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 INFRIGEMENT 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, transhipment 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;
(ii) 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.

<u>Section 0</u>: 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.

<u>Section 1</u>: 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;

<u>Section 2</u>: 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;

<u>Section 3</u>: 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 2. Each Contracting Party that intends to apply paragraph B.1 shall: (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.
Article 30.B.9.a
Duties of the Executive Secretary 9. The Executive Secretary: (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

OBR reports

Article 30.B.9.b
Duties of the Executive Secretary 9. The Executive Secretary: (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;

Section 4: Sea Inspection Scheme:

Notification requirements

Article 32.1.a to c
Notification Requirements **1.** Each Contracting Party shall, no later than 1 December each year, posts to the NAFO MCS Website, in PDF format, notification of: (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; (b) its provisional plan for assigning inspectors and platforms to this Scheme in the following calendar year; (c) the particulars for communicating to its competent authority immediate notification of infringements in the Regulatory Area, and (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.
Article 32.3.a
Duties of the Executive Secretary 3. The Executive Secretary: (a) ensures that the information referred to in paragraph 1 (a to d) is automatically made available to all Contracting Parties; and

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.

<u>Section 5</u>: 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 transhipment. 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 transhipment 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/WDDDMM (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~~	~~M[1]~~	~~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	M[1]	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; S~~s~~peed at the fixing of the position transmitted from the vessel ~~time of transmission~~
Course	CO	M	Activity detail; C~~c~~ourse 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.
Transhipment	TRA	Report on quantities to be on-loaded (receiving vessel) or off-loaded (donor vessel), for each transhipment.
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 transhipment.

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/speciesspaceweightspacespeciesspaceweightspace speciesspaceweight//
Observer on board	OO	M	Activity detail; "Yes" or "No"
End of record	ER	M	System detail; indicates end of the record

Annex II.F

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/speciesspaceweightspacespeciesspaceweightsp acespeciesspaceweightspace//
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/speciesspaceweightspacespeciesspaceweightspaces pecies 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

[1] Optional 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

4) "Catch on crossing Boundary" 3L report (for PRA)

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, "COB" for Cross Boundary 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) ~~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
Relevant Area	RA	M	Activity detail; NAFO Division entering from
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//
Area of entry	AE	M	Activity detail; NAFO Division entering into
Catch species live weight	OB	M	Activity detail; Total quantity by species on board rounded to the nearest 100 kg, upon crossing the 3L border. 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/speciesspaceweightspacespeciesspaceweightspace speciesspaceweight//
Days Fished	DF	M	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 time 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

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; 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	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~~
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/speciesspaceweightspacespeciesspaceweights 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 time 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; 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	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 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//
Catch species live weight	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/speciesspaceweightspacespeciesspaceweightspacespeciesspaceweight//
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 time 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 speciesspaceweightspacespeciesspaceweightspace//
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/speciesspaceweightspacespeciesspaceweightspace 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 ***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***
	CAP 3NO		# 2 ***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***
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 ***Including allocations to Estonia, Latvia, Lithuania and Poland, as applied by NAFO since 2005 following their accession to the EU***
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.[6]

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).

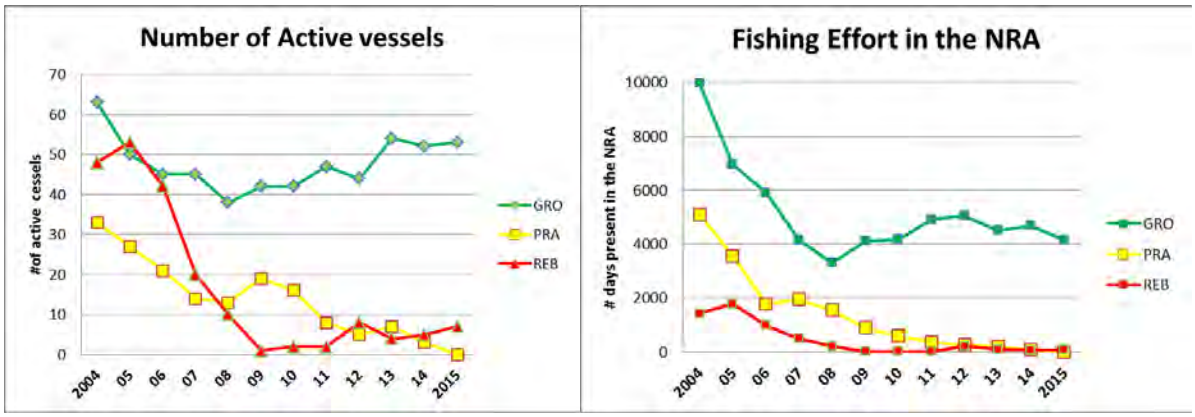


Figure 1. *The trend of fishing effort in the NAFO Regulatory Area in the period 2004-2015.*

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.

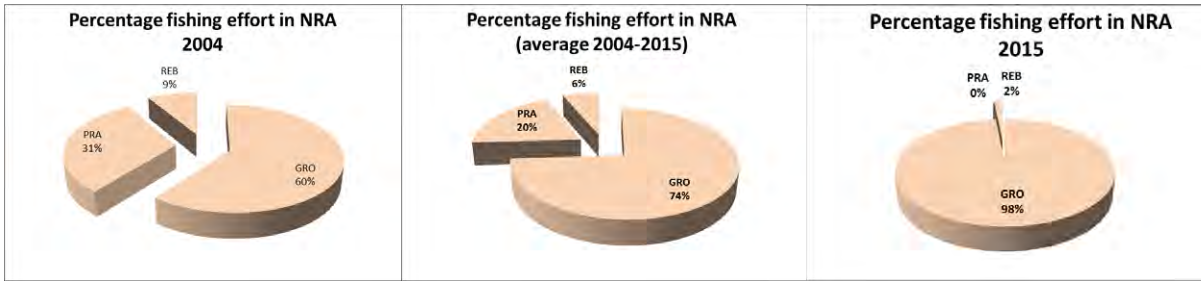


Figure 2. *Fishing effort proportions of the three different fishery types (2004-2015) suggesting a shift in fisheries over the years).*

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.

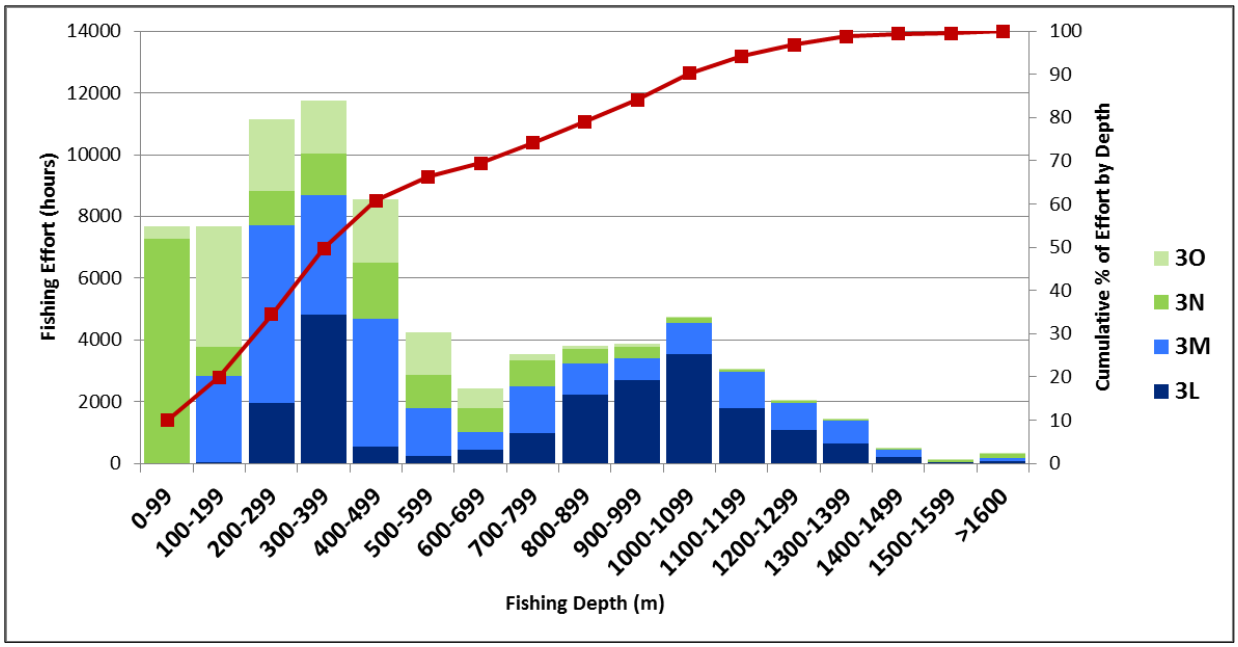


Figure 3. *Distribution of groundfish fishing effort by depth in the NRA in 2015 (Divisions 3L, 3M, 3N, and 3O).*

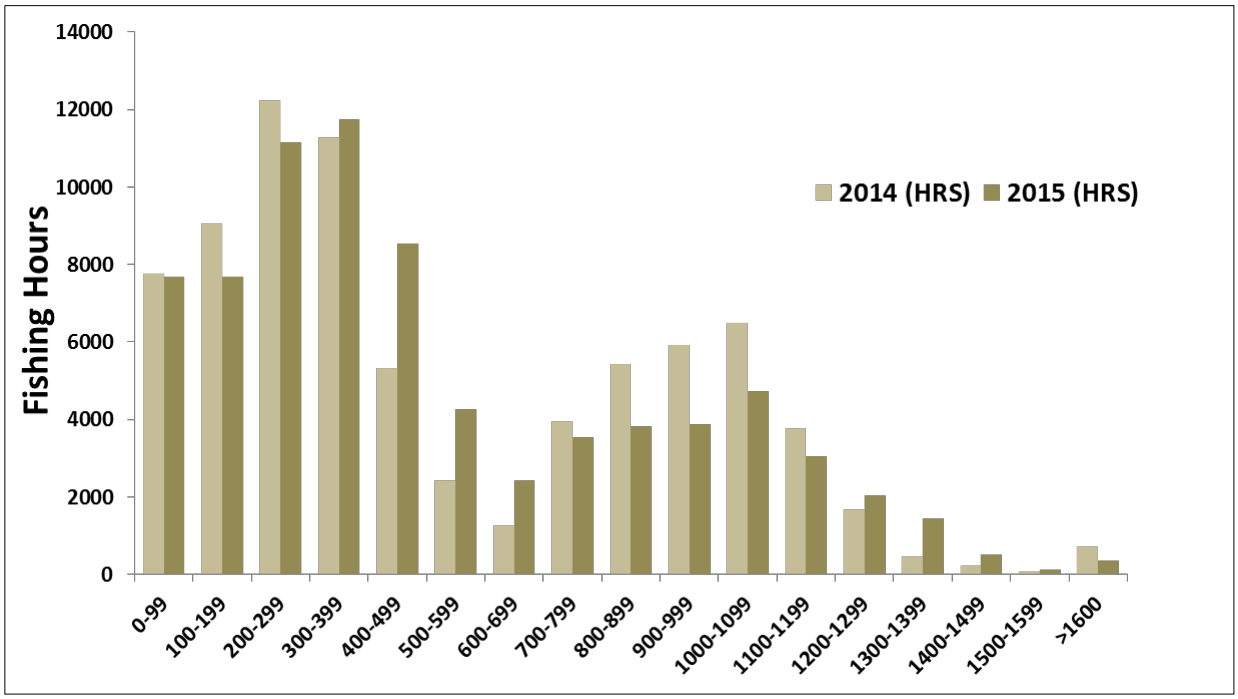


Figure 4. *2014-2015 Comparison of groundfish fishing effort distribution by depth in the NRA (Div. 3LMNO).*

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.

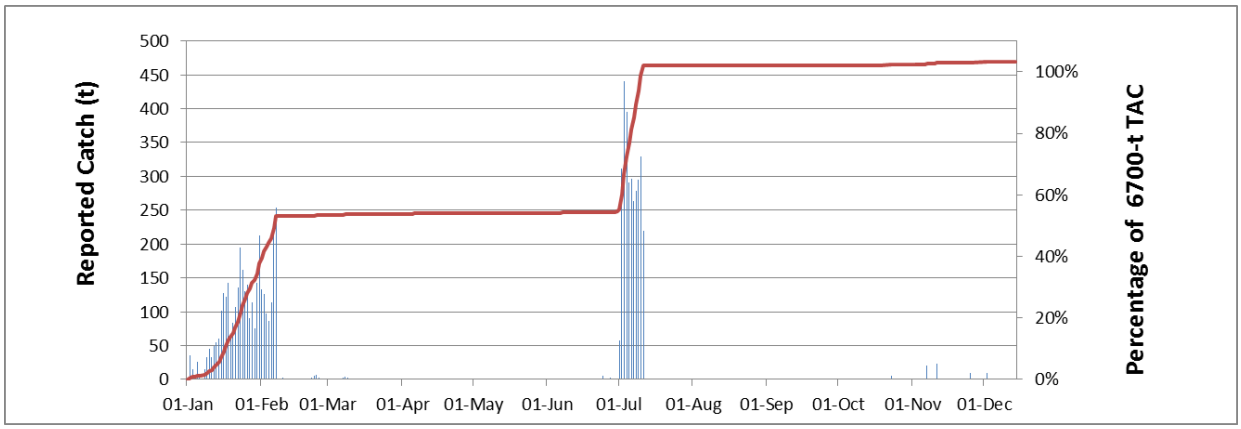


Figure 5. *Daily 3M redfish catches of all vessels in 2015*

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.

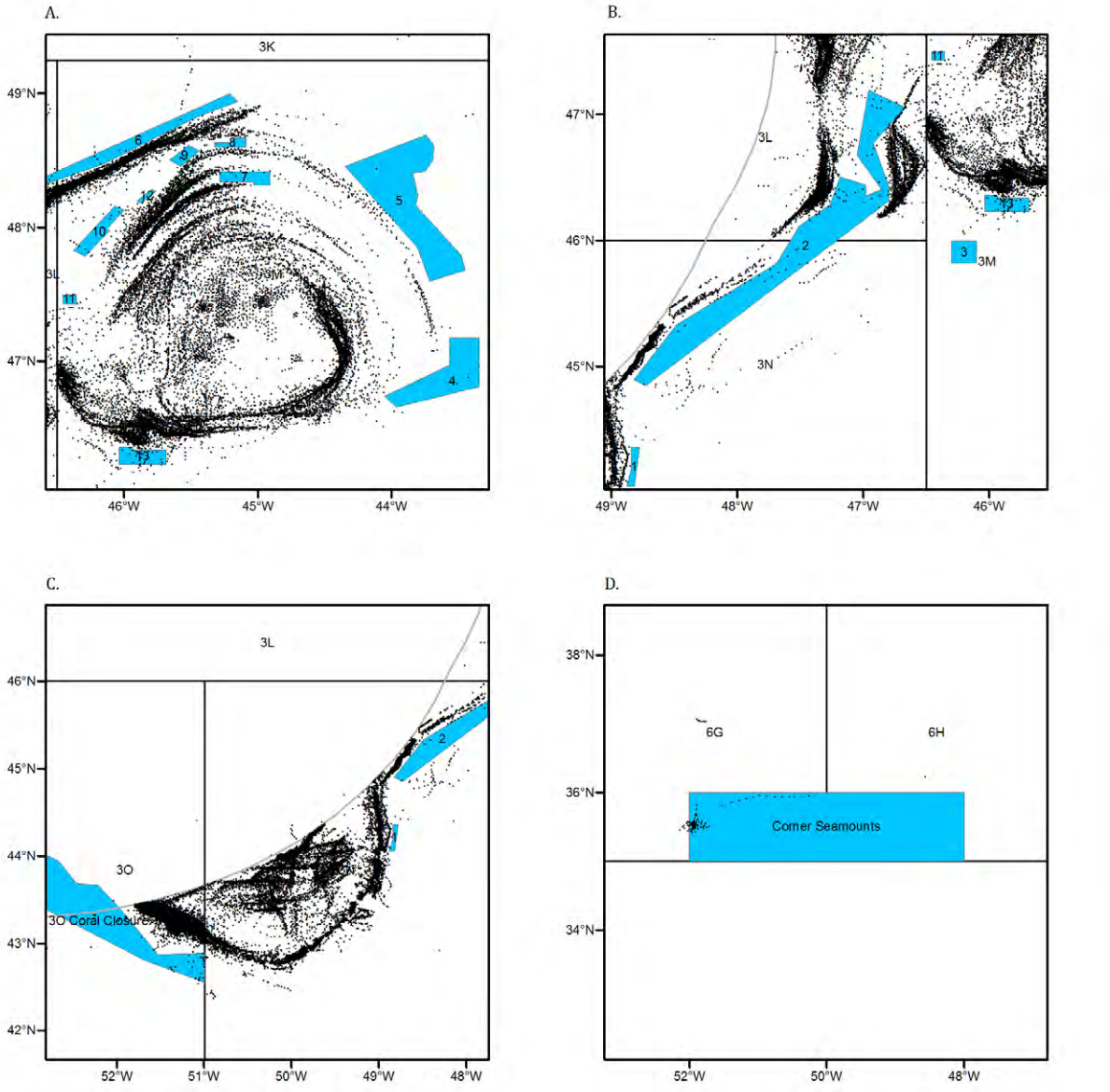


Figure 6. *VMS position plots of all vessels at speed 0.5 -5.0 knots in the NRA in 2015 in relation to the VME closed areas and Corner Seamount. A: Flemish Cap, B: Flemish Pass, C: Division 3O Coral Zone, D: Corner Seamount.*

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 fining practices, and there has never been an incident of shark fining 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).

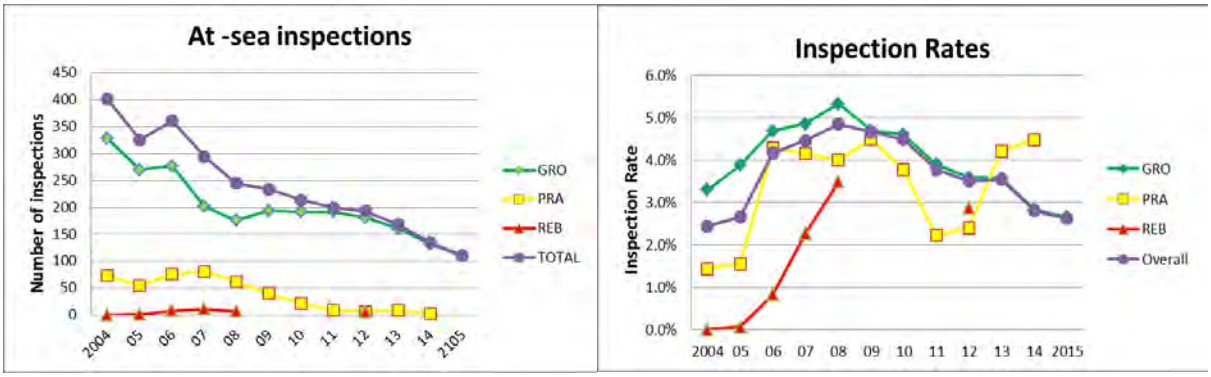


Figure 7. *Number of At-Sea Inspections and Inspection rates (number of at-sea inspection/vessel-days) in the NAFO Regulatory Area by fishery type.*

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 mis-labelling, 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 transhipping 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.

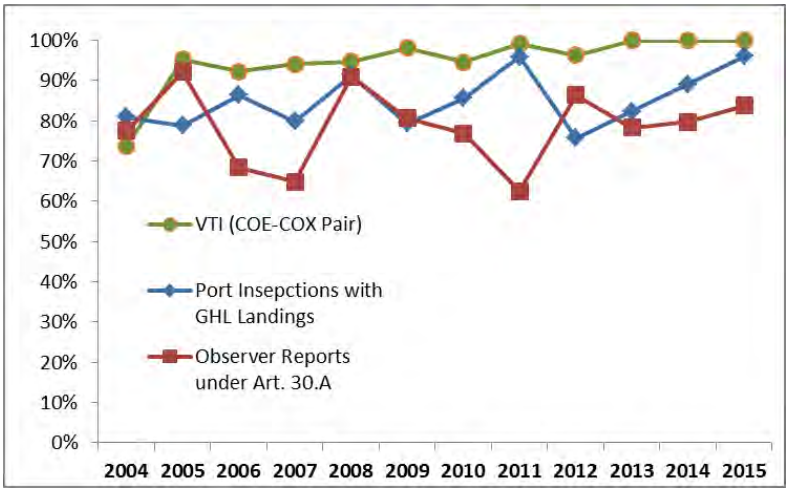


Figure 9. *Percentage coverage of fishing effort by VTI (COE-COX Pairs), Port Inspection and Observer Reports as a measure of compliance to report submission requirements.*

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 ± 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.

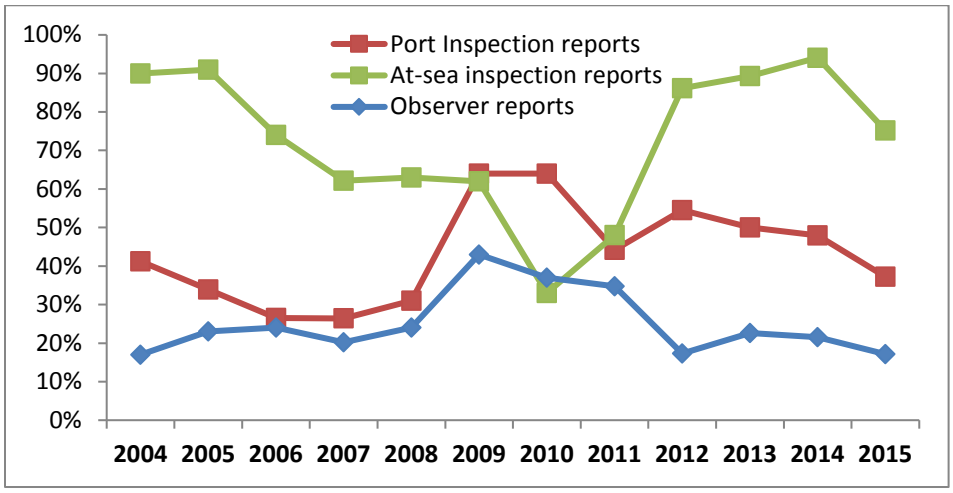


Figure 10. *Timeliness of submission of reports. Reports received 30 days after assignment or inspection are considered late.*

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. <u>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</u>. The Contracting Party <u>requesting</u> 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 *(in the past JAGDM meets twice annually – early in the year then again in May/June)*	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
back-to-back with another WG, when possible	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 *(in the past JAGDM meets twice annually – early in the year then again in May/June)*	NAFO Secretariat Halifax, Nova Scotia
1-15 Jun.	NAFO Scientific Council and its Standing Committees	Halifax, Nova Scotia
after June meeting and prior to the Ann. Mtg.	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 *Pandalus* Assessment Meeting	TBD
18-22 Sep.	NAFO 39th 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.

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 Sidlauskiene 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 Moira 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