Serial No. N5735 NAFO/FC Doc. 09/21

Northwest Atlantic Fisheries Organization

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

31st Annual Meeting, 21 - 25 September 2009
Bergen, Norway

NAFO
Dartmouth, N.S., Canada
2009

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I. Opening Procedure (*Agenda items 1-4*)

1. Opening by the Chair, Vladimir Shibanov (Russian Federation)

The meeting was opened by the Chair, Vladimir Shibanov (Russian Federation), at 12:00 hrs on Monday, September 21, 2009. Representatives from the following Contracting Parties (CPs) were in attendance: Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), the European Union (EU), France (in respect of St. Pierre et Miquelon), Iceland, Japan, Republic of Korea, Norway, Russian Federation, Ukraine, and the United States of America (USA) (Annex 1).

Representatives from the Food and Agriculture Organization of the United Nations (FAO), Pew Environment Group, and the World Wildlife Fund–Canada (WWF) were also present as Observers. The North East Atlantic Fisheries Commission (NEAFC) was represented by Denmark (in respect of the Faroe Islands and Greenland).

2. Appointment of Rapporteur

Ricardo Federizon, Fisheries Commission Coordinator (NAFO Secretariat), was appointed Rapporteur for this meeting. As Rapporteur, he was responsible to maintain and prepare the record of decisions taken by the Fisheries Commission (Annex 2).

3. Adoption of Agenda

Sub-item 9.11 "Thorny Skate in Divisions 3LNO" was inserted. The adopted agenda is presented in Annex 3.

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

The Chair of the Standing Committee on International Control (STACTIC), Mads Trolle Nedergaard (DFG) presented the results of STACTIC May 2009 intersessional meeting (FC Doc 09/3). He outlined the issues of bycatches, transfer of fishing possibilities from shared quota allocations, and NAFO Conservation and Enforcement Measures Editorial Review being brought forward to the Fisheries Commission for clarification and the pending proposals which would be further discussed in this meeting. Regarding the issues mentioned above, STACTIC was instructed to deliberate further on these and report back to the Fisheries Commission (see item 15.1 – 15.3).

The recommendations from the intersessional meeting would be forwarded to the Fisheries Commission together with the recommendations from this Annual Meeting (see item 15).

II. Administrative (*Agenda item 5*)

5. Review of Commission Membership

The review of the Commission membership was conducted at the General Council session. It was noted that the membership of the Fisheries Commission is currently twelve (12). All Contracting Parties have voting rights in 2010.

III. Scientific Advice (*Agenda items 6 -7*)

6. Consideration of the Scientific Assessments

a) Presentation of scientific advice by the Scientific Council Chair

- Scientific advice on fish stocks

The Scientific Council Chair, Don Power (Canada), presented a summary of scientific advice to the Fisheries Commission. The Scientific Council Chair indicated that the scientific advice of particular stocks include comments and caveats. He urged the Fisheries Commission to consult the relevant SCS documents when considering management and conservation measures of the fish stocks. Details of the scientific advice for fish stocks are contained in SCS Doc 09/23 from the June 2009 Scientific Council

meeting. An updated advice on the shrimp stocks was presented, replacing the previous advice contained in SCS Doc 08/25 from the October 2008 Meeting.

The following stocks were fully assessed including elaboration of scientific advice and recommendations for 2010:

- **Shrimp in Division 3M**. The indices of biomass in the July 2009 survey showed a sharp decline, confirming recent downward trends, even though the levels of exploitation have been low since 2005. The most recent estimate of stock size is below B_{lim}. Due to the continued poor recruitment, there are also serious concerns that the stock will stay at low levels. The stock has now entered the collapse zone defined by the NAFO Precautionary Approach framework, and recruitment prospects remain poor. Therefore, Scientific Council recommends that the fishing mortality be set as close to zero as possible in 2010.
- **Shrimp in Divisions 3LNO.** The most recent survey results show a steep decline in stock size, and Scientific Council urges caution in the setting of TACs. This downturn in biomass is unexpected as recruitment has been reasonable in recent years. The recent exploitation rates of about 14% may be too high. Scientific Council therefore urges caution in the exploitation of the stock and considers that exploitation rates should not be raised, but kept below recent levels.

Catch options	Exploitation rate
20 000 t	11.49%
25 000 t	14.37%
30 000 t	17.24%
35 000 t	20.11%

- **Greenland halibut in Subarea 2 + Divisions 3KLMNO**. To provide a consistent increase of the 5+ exploitable biomass, fishing mortality should be reduced to a level not higher than $F_{0.1}$.

The following stocks were fully assessed including elaboration of scientific advice for 2010 and 2011:

- **American Plaice in Divisions 3LNO**. No directed fishery. Bycatches should be kept to the lowest possible level and restricted to unavoidable bycatch in fisheries directing for other species.
- **Yellowtail flounder in Divisions 3LNO**. Any TAC option up to 85% F_{msy}. For 2010, 85% F_{msy} equates to TAC of 25 500 t; for 2011, this equates to 23 500 t.
- **Redfish in Division 3M.** Catch of all three redfish stocks/species in Div. 3M should not exceed 8 500 t which is in the range of catches in recent years.
- **Cod in Division 3M.** There is sufficient evidence to allow a small amount of directed fishing. A fishing mortality not to exceed F_{2008} will allow further recovery of the stock.
- **White hake in Divisions 3NOPs.** The catch in Div. 3NO, at the current TAC of 8 500 t, is unrealistic. Catches should not exceed the 2006-2008 average annual catch level of 850 t. Catches in Subdivision 3Ps should not exceed the 2006-2008 average annual catch level of 1 050t.
- **Capelin in Divisions 3NO.** No directed fishery.

On the following stocks, multi-year scientific advice was provided. The Scientific Council reviewed the status of these stocks at the June 2009 meeting, and found no significant change to alter the advice. Accordingly, the Scientific Council reiterates the previous advice as follows:

- **Redfish in Divisions 3LN.** The total catch in 2010 should not exceed 3 500 t. This total catch should include directed catches and all bycatches taken in other fisheries.
- **Thorny Skate in Divisions 3LNOPs.** The total catch in 2010 should not exceed 6 000 t.
- **Witch Flounder Divisions 3NO.** No directed fishing. Bycatches in fisheries targeting other species should be kept at the lowest possible level.
- **American Plaice in Division 3M.** No directed fishing. Bycatch should be kept at the lowest possible level.
- **Redfish in Division 3O.** Scientific Council is unable to advise on an appropriate TAC in 2010.

- **Cod in Divisions 3NO.** No directed fishery. Bycatches should be kept at the lowest possible level and restricted to unavoidable by catch in fisheries directed for other species. Efforts should be made to reduce current level of bycatch.
- **Witch flounder in Divisions 2J + 3KL.** No directed fishing. Bycatches in fisheries targeting other species should be kept at the lowest possible level.

On the following topics, the SC Chair referred to the specific sections in SCS Doc 09/23 regarding the SC response on the Special Request for Management Advice:

- **The Precautionary Approach (**Page 20 of the SCS Doc 09/23)
- **Evaluation of Recovery Plans (**Page 21 of the SCS Doc 09/23)
- **Review of pelagic redfish distribution and stock affinities (**Pages 21-22 of the SCS Doc 09/23)
- **Cod bycatch reduction measure for Cod in Divisions 3NO (**Pages 22-25 of the SCS Doc 09/23)
- **Evaluation of alternative assessment methods for Greenland halibut in SA2 + Div. 3KLMNO (**Pages 36-39 of the SCS Doc 09/23)
- **Specific projections for recovering stocks (cod in Div. 3M, American plaice in Div. 3LNO) (**Page 39 of the SCS Doc. 09/23)
- **Consequences of mid-water trawl size reduction to 100 mm or lower** (Page 46 of the SCS Doc 09/23)
- **Overview of role of seals in the marine ecosystem and impact on fish stocks (**Pages 67-68 and pages 67-69 of the SCS Doc 09/23)

- **Vulnerable Marine Ecosystems (VMEs) and other ecosystem considerations**

  - **On significant concentration of corals.** The SC Chair indicated that the Scientific Council response on the Fisheries Commission Request concerning corals (item 9a of FC Doc 08/19) was first presented at the ad Hoc Working Group of Fishery Managers and Scientists Meeting held in Vigo, Spain in March 2009. Details of the response are contained in pages 255- 262 of the Scientific Council 2008 Report. Three main coral taxa were evaluated: sea pens (Pennatulaceans), small gorgonians (*Acanella*), and large gorgonians (*Keratoisis, Acanthogorgia, Paragorgia,* etc). The term "key location" was introduced to express an area in which a collection of significant coral concentrations was found. The key locations (Figures 2-6 in pages 255-262 of the Scientific Council 2008 Report) were for the most part nested within the candidate VMEs identified previously (Figure 6 in page 45 of the Scientific Council 2008 Report).

  - **On significant concentration of sponges.** The SC Chair indicated that the Scientific Council response on the Fisheries Commission Request concerning sponges (item 9b of FC Doc 08/19) was first presented at the ad Hoc Working Group of Fishery Managers and Scientists Meeting held in Bergen, Norway in September 2009. Details of the response are contained in pages 27 - 43 of the Scientific Council June 2009 meeting report (SCS Doc 09/23). Large sponges (*Geodia spp*.) was evaluated. Using a 75 kg weight threshold criteria (from research survey catch data), significant concentrations of sponges were identified. The locations of the significant concentrations are shown in Figure 2 on page 29 of the Scientific Council June 2009 meeting report (SCS Doc 09/23).

  The Scientific Council Chair further noted that concerning both corals and sponges:

    - the identification of the areas of significant concentrations in no way suggests an alteration of the map of the candidate VMEs previously identified (see Figure 6 in page 45 of the Scientific Council 2008 Report).
    - a high resolution habitat mapping is required to identify the candidate VMEs with greater certainty (e.g. through camera surveys and ROV activities) and will also allow monitoring of health and recovery.
    - a 4 nm-buffer zone around the position of each of the significant coral and sponge concentration was used to delineate the areas of concentration. The buffer zone was considered conservative and precautionary until detailed

mapping of these areas and additional research on buffer areas becomes available.

- **Other issues (as determined by Scientific Council Chair)**

  The concept of "Management Strategy Evaluation" (MSE) was presented. MSE involves the evaluation of alternative management strategies encompassing clearly defined harvest controls against a range of simulated realizations of the true fishery and fish stock dynamics. The aim is to find those management strategies that are robust to the uncertainties while achieving performance statistics required by the managers (page 62-63 of SCS Doc 09/23). MSE could be considered for application in the management of Greenland halibut (see item 9.6).

b) Feedback to the Scientific Council regarding its work during this Meeting

Questions and enquiries for further clarification arose in response to the Scientific Council Chair's presentation, to which the Scientific Council prepared responses during the meeting. The questions from the Fisheries Commission and the responses from the Scientific Council are compiled in Annex 4. These concern the white hake in Divisions 3NO, cod in Division 3M, redfish in Division 3M, Greenland halibut in Subarea 2 and Divisions 3KLMNO, and shrimp in Divisions 3M and 3LNO.

Regarding the pelagic redfish distribution and stock affinities, the Russian Federation expressed its concern regarding disagreement among experts of the Workshop on Redfish Stock Structure (WKREDS) over the structure of *Sebastes mentella* in the Irminger Sea and adjacent areas, and therefore highlighted the need to continue investigations into the issue and reserved its position in respect of any decisions made on the basis of recommendations of this Workshop.

7. Formulation of Request to the Scientific Council for Scientific Advice on the Management of Fish Stocks in 2011 and on other matters

The Fisheries Commission **adopted** FC WP 09/24 Rev. containing its request to the Scientific Council for scientific advice on management in 2011 and beyond of certain stocks in subareas 2, 3, and 4 and on other matters (Annex 5)

IV. Conservation of Fish Stocks in the Regulatory Area (*Agenda items 8-10*)

The Quota Table for 2010 can be found in Annex 6 of this Report.

8. Management and Technical Measures for Fish Stocks in the Regulatory Area, 2010

8.1 Cod in Division 3M

It was decided to re-open this fishery. The Total Allowable Catch (TAC) was set at 5 500 t. The allocation scheme was based on the scheme of the 1998 Quota Table, the year before the moratorium was declared. Article 12.1 a) and d) of the NAFO Conservation and Enforcement Measures was revised limiting the bycatch to 1 250 kg or 5%, whichever is greater (Annex 7).

It was not a unanimous decision on the TAC. The decision was reached through a voting procedure in accordance with Article XIV of the NAFO Convention. Norway and USA contended that the TAC of 5 500 t was contrary to the scientific advice given by the Scientific Council and they voted against the proposition of 5 500 t TAC. Iceland abstained and Norway gave the following statement:

> "…this stock has been under moratorium for a decade. In order to allow further recovery of the stock the Scientific Council advised that the fishing mortality for 2010 should not exceed F_{2008}. With a 50% yield this corresponds to a TAC of 4 125 t.
>
> In order to provide for a sustainable fishery on this stock based on the precautionary approach. Norway proposed that the TAC for 2010, including bycatches, should not exceed this level.
>
> We do appreciate the other Parties' efforts to reach consensus on the TAC. However, in light of what was just explained, it was not possible for Norway to accept reopening of the cod

fishery in Division 3M on the basis of a TAC which is 33% higher than the advice given by the Scientific Council. Norway therefore voted against the proposed TAC of 5 500 t."

With regards to the allocation scheme, the USA noted that there is no consensus that a reopened fishery should be managed under the quotas that were in effect when the fishery was closed. This view was shared by Iceland, Japan, Korea, and Ukraine. Ukraine gave the following statement:

"… although we had accepted the quota allocation for 2010, it is proposed to reconsider this very allocation scheme in the future in order to comply with provisions of UNFSA, particularly the last two sentences of paragraph 3, Article 8: *States having a real interest in the fisheries concerned may become members of such organization or participants in such arrangement. The terms of participation in such organization or arrangement shall not preclude such States from membership or participation; nor shall they be applied in a manner which discriminates against any State or group of States having a real interst in the fisheries concerned*."

8.2 Redfish in Division 3M (TAC and mesh size)

It was decided to set the TAC at a level of 10 000 t. The allocation scheme (quotas) would be the same as in 2009. No new mesh size regulation was decided.

Denmark (in respect of the Faroe Islands and Greenland) indicated that the lack of agreed allocation and continued system of "first-come first-fish" applied to this stock is unacceptable and should be revisited in detail at subsequent meetings.

Footnote 8 of the Quota Table was revised to make it consistent with the new requirement of weekly catch reporting for all fisheries in all areas.

8.3 Shrimp in Division 3M

No decision on management and technical measures was made at this meeting. An intersessional meeting would be held on 6 November* at the NEAFC Headquarters in London, UK to decide on the measures. (*It was subsequently agreed through correspondence that the meeting would be held on 16 November).

9. Management and Technical Measures for Fish Stocks Straddling National Fishing Limits, 2010

9.1 American plaice in Divisions 3LNO

There would be no directed fishery applicable in years 2010 and 2011. A 15% bycatch requirement involving this stock and the yellowtail fishery in Divisions 3LNO applies (See Footnote 21 of the 2010 Quota Table).

9.2 Yellowtail flounder in Divisions 3LNO (PA Framework)

It was decided that the TAC is 17 000 t, same as in 2009. Management measures on the stock for subsequent years will be reviewed at the next Annual Meeting. A 15% bycatch requirement involving this stock and the American plaice in Divisions 3LNO applies (See Footnote 21 of the 2010 Quota Table).

9.3 Redfish in Divisions 3LN

It was decided to re-open this fishery at the TAC of 3 500 t. The allocation scheme is based on the scheme of the 1997 Quota Table, the year before the moratorium was declared. This scheme is reflected in the new footnote 24 of the Quota Table. Ukraine accepted the quota allocation scheme for 2010, but reminded the necessity to reconsider basic principles of quota allocation. This view was shared by Iceland.

Article 12.1 a) and d) of the NAFO Conservation and Enforcement Measures was revised limiting the bycatch of this stock to 1 250 kg or 5%, whichever is greater (Annex 7).

9.4 Redfish in Division 3O

The TAC of 20 000 t and the allocation scheme of 2009 will be continued in 2010.

9.5 Capelin in Divisions 3NO

It was re-iterated that there would be no directed fishery applicable in years 2010 and 2011. Bycatch provisions as stipulated in Articles 12, paragraph 1.b) of the NAFO Conservation and Enforcement Measures shall apply.

9.6 Greenland halibut in Subarea 2 and Divisions 3KLMNO

The TAC of 16 000 t (11 856 t in Divisions 3LMNO) and the allocation scheme of 2009 will be continued in 2010.

In making the decision, the Fisheries Commission acknowledged the information and advice received from the Scientific Council. It was also mindful of the quality of the data and the robustness of models used by the Scientific Council in its formulation of advice. There were concerns that the objectives of the Rebuilding Plan are not being attained. The underlying reasons for this are complex. USA indicated that the issue of data quality could be one of the root causes of controversy. Given the discrepancy in recent years with the Greenland halibut catch estimates, Canada and the EU agreed to engage in a review of the catch estimates provided by the Scientific Council and the reported catch by Contracting Parties, and provide for transmission to the Scientific Council the outcome.

The Scientific Council Chair presented the concept of Management Strategy Evaluation (MSE) as an alternative approach to decision-making which could be applied on this stock (see item 6a – Other Issues). In consideration of the MSE, the Fisheries Commission established a Working Group to refine the current MSE framework to help inform management of this stock. The terms of reference of this Working Group is presented in Annex 8. The Fisheries Commission will consider the report from this Working Group including any recommendations and options contained therein as the basis for a risk management based decision on the TAC level for 2011 and beyond.

9.7 White hake in Divisions 3NO

It was decided that the TAC is set at 6 000 t.

9.8 Shrimp in Divisions 3LNO

It was decided that the TAC of 30 000 t and the allocation scheme of 2009 be continued in 2010.

Norway indicated that it would have preferred to follow the scientific advice and that it accepted the TAC of 30 000 t for the sake of consensus. A reservation by Denmark (in respect of the Faroe Islands and Greenland) on the allocation scheme, as in previous years, was noted.

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

It was decided that the TAC of 12 516 t and the allocation scheme of 2009 will be continued in 2010. The TAC is subject to revision in accordance with Footnote 10 of the Quota Table.

Footnote 2 of the Quota Table was revised to make it consistent with the new requirement of weekly catch reporting for all fisheries in all areas.

9. 10 Cod in Divisions 3NO

It was decided to continue the moratorium. Bycatch provisions in Article 12, paragraph 1.b) of the NAFO Conservation and Enforcement Measures shall apply.

Canada stressed that bycatch protocol should be respected and more effort should be made to keep the bycatch on this stock at the minimum.

9. 11 Thorny skate in Divisions 3LNO

It was decided that the TAC is set at 12 000 t.

10. Cod Management Policy

Discussion on this item centered on the re-opening of fish stocks under moratorium, e.g. cod in Division 3M and redfish in Divisions 3LN. An information paper was circulated concerning the consideration of criteria for reopening a fishery in light of the precautionary approach. The criteria include: protection of spawners,

protection of pre-recruits, concerns with bycatch, and concern of bycatch of other species. Further discussion on these criteria was held when item 8.1 was deliberated.

V. Ecosystem Considerations (*Agenda items 11-13*)

11. Reports of the Ad Hoc Working Group of Fishery Managers and Scientists on VMEs (March and September Meetings)

Bill Brodie (Canada), Chair of the Ad Hoc Working Group, presented the recommendations from the March and September 2009 meetings for adoption, review, or endorsement concerning:

a) Closure of specific areas of high concentration of corals in the NAFO Regulatory Area (Annex 9);

b) Closure of specific areas of high concentration of sponges in the NAFO Regulatory Area (Annex 10);

c) Encounter threshold levels (Annex 11);

d) Exploratory Fishery Data Collection Form (Annex 12);

e) Impact Assessment of Bottom Fishing in relation to Article 4bis – Assessment of bottom fishing, particularly subarticle;

f) NAFO Coral Identification Guide.

The Fisheries Commission **adopted** Recommendations a) – d), **conducted** a review regarding Recommendation e) and gave instructions for the WG to review this matter (see below), and **endorsed** Recommendation f).

Regarding Recommendations a) and b), the delineation of the areas of high concentration of corals and sponges made by the Scientific Council (see item 6a) served as the basis of the delineation of the proposed closed areas.

Regarding Recommendation c), the proposed threshold levels in the Interim Encounter Provision would be 60 kg of live coral and/or 800 kg of live sponge.

Regarding Recommendation d), the form would be intended for use during exploratory fishery in accordance with Article 5bis 2(b) of the NAFO Conservation and Enforcement Measures (NCEM). The form captures all the information required as stipulated in the template Data Collection Plan described in Annex XXV of the NCEM.

Regarding Recommendation e), it was recognized that the problem of implementation of Article 4bis might lie on the lack of guidelines for the Contracting Parties in the preparation and submission of fishing plans, and on the impracticability of the required deadlines of submissions. The Fisheries Commission also gave further instructions to the ad Hoc WG to conduct further review of the provisions concerning VMEs and bottom fishing stipulated in the Chapter 1bis of the NAFO Conservation and Enforcement Measures, and report back to the Fisheries Commission. The specifics of the follow-up instructions are presented in (Annex 13).

Regarding Recommendation f), the NAFO Coral Identification Guide would be used in accomplishing the Exploratory Fishery Data Collection Form.

With the adoption of the new measures concerning Vulnerable Marine Ecosystems, the Secretariat was instructed to submit as soon as possible (in advance of the UNGA conference in November 2009) a progress report to the United Nations General Assembly on NAFO's decisions in response to the UNGA Resolution 61/105 which calls for Regional Fisheries Management Organizations (RFMOs) to take action on the protection of Marine Vulnerable Ecosystems.

The Secretariat was also instructed to note the progress NAFO has made in protecting VMEs in the NAFO Press Release for this Annual Meeting.

12. Identification of existing bottom fishing areas (Footprint)

The NAFO Secretariat presented FCWP 09/1 Rev. which specifies the delineation of the existing bottom fishing areas through a polygon defined by a series of coordinates (footprint as defined in Article 2bis of the NAFO Conservation and Enforcement Measures) (Annex 14). The Fisheries Commission supported the draft footprint. Noting that it may be modified, as stipulated in Article 2bis.4, to incorporate any new information the Fisheries Commission instructed the ad hoc Working Group of Fishery Managers and Scientists to further review the draft footprint. After the review, the ad hoc working group would report back to the Fisheries Commission in 2010 (see Annex 13).

13. Other considerations (e.g. seals)

Denmark (in respect of the Faroe Islands and Greenland) acknowledged the comprehensive review of the Scientific Council (see item 6a) of the current scientific knowledge on the interactions of marine mammals and fish wherein the important role of seals was highlighted, particularly on the role of seals as top predators of cod. In response to a question from Denmark (in respect of the Faroe Islands and Greenland) regarding the conservation and management implications of the recently adopted EU import ban on seal products, Canada referred to the need to consider the ecosystem implications of growing seal populations, where hunts do not occur such as grey seals in the Southern Gulf of the St. Laurence. In this particular area, the cod fishery has been closed for several years and stocks are not recovering due to seal predation. Canada reiterated that the Canadian harp seal hunt is a legitimate, sustainable and science-based activity that is important not only for small fishing communities, but also for its role in maintaining a healthy population of seals and a balance in the ecosystem. Canada thanked the Scientific Council for its evaluation of the present knowledge related to the role of seals in the marine ecosystem and of the Northwest Atlantic and their impact on fish stocks in the NAFO Regulatory Area.

Denmark (in respect of the Faroe Islands and Greenland) underlined the responsibility of fisheries managers to consider the issue of marine mammal-fisheries interactions. The Fisheries Commission should therefore keep these issues under consideration at future meetings. These views were supported by most other delegations.

VI. Conservation and Enforcement Measures (*Agenda items 14-16*)

14. Review of Chartering Arrangements

A report on the chartering arrangement was presented by the NAFO Secretariat (FC WP 09/9). There were five charter arrangements made in 2008 and three arrangements in January-September 2009. The Secretariat noted that all chartering requirements, stipulated in Article 19 of the NAFO Conservation and Enforcement Measures, were complied with. The Secretariat requested the Contracting Parties concerned that notification on the actual commencement, suspension, resumption and termination dates of charter arrangements be transmitted to the Secretariat in a timely manner for a more effective monitoring of the catches.

15. Reports of STACTIC (from May 2009 intersessional meeting and current Annual Meeting)

The May 2009 intersessional meeting report was presented under item 4.

The STACTIC Chair presented the results of the STACTIC Report (see Part II of this Report) which include the following sub-items:

15.1 Bycatch issues

Bycatch issues were identified at the May 2009 intersessional meeting and brought forward to the Fisheries Commission (see item 4) for clarification. The Fisheries Commission instructed STACTIC to deliberate on this issue at this meeting. Pending further developments related to the reopening of fisheries of some stocks under moratorium, STACTIC referred this matter back to the Fisheries Commission for further clarification.

As a result of the reopening of the 3M cod fishery and 3LN redfish fishery, these issues were further addressed and additional conditions were adopted for these fisheries (see item 8.1 and 9.3 above and Annex 7).

15.2 Transfer of fishing possibilities from quota allocations shared by other Contracting Parties

The issue of transfer was identified at the May 2009 intersessional meeting and brought forward to the Fisheries Commission (see item 4) for clarification. The Fisheries Commission instructed STACTIC to deliberate on this issue at this meeting. It was acknowledged by STACTIC that there is a need to determine

whether it is the intention of the Fisheries Commission to allow the transfer of a shared quota, e.g. Redfish in Subarea 2 and Divisions 1F+3K. STACTIC referred this mater back to the Fisheries Commission for further clarification.

15.3 NAFO Conservation and Enforcement Measures Editorial Review

This topic was discussed at the May 2009 intersessional meeting and brought forward to the Fisheries Commission (see item 4) for clarification. The Fisheries Commission instructed STACTIC to address this matter at this meeting. STACTIC agreed to establish an Editorial Drafting Group to make editorial changes in the NAFO Conservation and Enforcement Measures. The group would provide a status report at the next STACTIC Intersessional meeting.

15.4 Recommendations

The following recommendations were forwarded to the Fisheries Commission for adoption and acceptance:

a) Use of VMS Information for Search and Rescue (Annex 15);

b) Proposal for improved VMS Reporting (Annex 16);

c) Proposal for Improved Catch Reporting (Annex 17);

d) Port State Measures – Administrative Changes (Annex 18)

e) Annual Compliance Review 2009 (Annex 19)

The Fisheries Commission **adopted** all recommendations.

During the deliberation of this item, Denmark (in respect of the Faroe Islands and Greenland) commented on the trend of increased inspection rate on the fishing vessels. She cited an example of a fishing vessel which was inspected five times in July 2009 in a span of three weeks. The unusually high frequency of being inspected has become disruptive in the fishing operations and it may contradict the intent of Article 29.6 which ensures equal treatment through an equitable distribution of inspections. She indicated that this issue should be examined and discussed in the subsequent meetings in STACTIC.

The USA reported on its collaborative work with the Canadian inspectors since June 2008. During four separate patrols, a total of 24 joint inspections were conducted. During 27 flights, there were 164 vessel sightings. The USA thanked Canada for their cooperation in arranging these joint efforts.

The USA referred to Section 10 iii on shared quotas of the STACTIC report and proposed that, as shared quotas do not constitute exclusive individual entitlements, they cannot be transferred. The Fisheries Commission adopted this view.

16. Vessel Monitoring System (VMS) Reporting Requirements

This item was covered with the adoption of Recommendation b) in item 15.4.

VII. Closing Procedure (*Agenda items 17-20*)

17. Election of Chair

Kate Sanderson (Denmark in respect of the Faroe Islands and Greenland) was elected the Chair of the Fisheries Commission. With her election, the Vice-Chair position was vacated. The election of the new Vice-Chair will be held at the next Annual Meeting.

18. Time and Place of the Next Meeting

An intersessional meeting will be held on 6 November 2009* at the NEAFC Headquarters in London, UK to discuss and decide on 2010 management measures for shrimp in Division 3M. (*It was subsequently agreed through correspondence that the meeting would be held on 16 November 2009.)

19. Other Business

Under this item, Japan touched briefly upon the recent development with respect to the conservation of Atlantic bluefin tuna stating:

"…there have been moves to list Atlantic bluefin tuna on Appendix I of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), which means the restriction of international trade of this species tuna species. Japan fully shares the concern over the difficulties the ICCAT (International Commission for the Conservation of Atlantic Tunas) faces in the management of bluefin tuna resource in the Atlantic, but it still believes that ICCAT should have the first and foremost responsibility for the management of tuna resources in the Atlantic. Depriving ICCAT of management authority would discourage Contracting Parties which have been making effort for the conservation and rational utilization of tuna resources. Japan is concerned that the recent trend suggests that this is not limited to ICCAT but other RFMOs, including NAFO, may face the similar situation in the future."

20. Adjournment

In his valedictory address as out-going Chair of the Fisheries Commission, Dr. Vladimir Shibanov expressed his thanks to all delegations for their cooperation during the last four Annual Meetings. He also thanked the Secretariat for all the hard work and support to the Fisheries Commission. He expressed his special warmest appreciation to the hosting Contracting Party, Norway, for the excellent facilities arranged during the Annual Meeting. Contracting Parties expressed their appreciation to Dr. Shibanov for his excellent services as Chair of the Fisheries Commission, as well as to Norway for hosting this Annual Meeting.

The meeting was adjourned at 1300 on Friday, 25 September 2009.

Annex 1. List of Participants

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Annex 2. Record of Decisions by the Fisheries Commission (Annual Meeting 2009)

Substantive Issues (Agenda item):	**Decision/Action:**
6. Scientific Advice	**Noted** Scientific Council Chair's presentation.
7. Formulation of Request to the Scientific Council for Scientific Advice on the Management of Fish Stocks in 2011	**Adopted** FC WP 09/24 Revised.
8. Management and Technical Measures for Fish Stocks in the Regulatory Area, 2010	(see 2010 Quota Table)
8.1 Cod in Division 3M	**Re-opened** the fishery after 11 years of moratorium. TAC was set at 5 500 t. **Inserted** footnote 23 in the Quota Table concerning allocation scheme. The statement of Ukraine is noted. **Adopted** FC WP 09/25 Revised concerning bycatch provisions.
8.2 Redfish in Division 3M	TAC was set at 10 000 t. **Revised** footnote 8 of the Quota Table concerning catch reporting.
8.3 Shrimp in Division 3M	Management decision will be made at an intersessional meeting on 6 November 2009*. (*It was subsequently agreed through correspondence that the meeting would be held on 16 November 2009.)
9. Management of Technical Measures for Fish Stocks Straddling National Fishing Limits, 2010	(see 2010 Quota Table)
9.1 American plaice in Divisions 3LNO	No directed fishery. Applicable in years 2010 and 2011. 15% bycatch requirement involving this stock and the yellowtail fishery in Divisions 3LNO applies.
9.2 Yellowtail flounder in Divisions 3LNO (PA framework)	TAC set at 17 000 t. 15% bycatch requirement involving this fishery and the American plaice in Divisions 3LNO applies.
9.3 Redfish in Divisions 3LN	**Re-opened** the fishery after 12 years of moratorium. TAC was set at 3 500 t **Inserted** footnote 24 in the Quota Table concerning allocation scheme. The statement of Ukraine is noted. **Adopted** FC WP 09/25 Revised concerning bycatch provisions.
9.4 Redfish in Divisions 3O	TAC was set at 20 000 t.
9.5 Capelin in Divisions 3NO	No directed fishery. Applicable in years 2010 and 2011.
9.6 Greenland halibut in Subarea 2 and Divisions 3KLMNO	TAC was set at 16 000 t (11 856 t in 3LMNO). **Adopted** FC WP 09/23 concerning the formation of the Working Group on Management Strategy Evaluation.

9.7 White hake in Divisions 3NO	TAC was set at 6 000 t.
9.8 Shrimp in Divisions 3LNO	TAC at Division 3L was set at 30 000 t. Allocation scheme is maintained. The reservation of Denmark (in respect of the Faroe Islands and Greenland) on the allocation scheme was noted.
9.9 Pelagic *Sebastes mentella* (oceanic redfish) in the NAFO Convention Area	TAC was set at 12 516 t.
9.10 Cod in Divisions 3NO	No directed fishery.
9.11 Thorny Skate in Divisions 3LNO	TAC was set at 12 000 t.
11. Reports of the Ad Hoc Working Group of Fishery Managers and Scientists on VMEs	**Adopted** FC WP 09/11 Annex 1 concerning interim measures to protect significant coral concentrations. **Adopted** FC WP 09/11 Annex 2 concerning interim measures to protect significant sponge concentrations. **Adopted** FC WP 09/11 Annex 3 concerning encounter provisions for Vulnerable Marine Ecosystems (threshold levels). **Adopted** FC WP 09/11 Annex 4 concerning Exploratory Fishery Data Collection Form. **Endorsed** the NAFO Coral Identification Guide. **Adopted** FC WP 09/26 concerning follow-up instructions to the ad hoc Working Group to review the provisions of Chapter Ibis of the NAFO Conservation and Enforcement Measures.
12. Identification of existing bottom fishing areas (Footprint)	Supported FC WP 09/1 Revised concerning the delineation of the existing bottom fishing areas in the NAFO Regulatory Area.
15. Reports of STACTIC (from May 2009 intersessional meeting and current Annual Meeting)	**Adopted** STACTIC WP 09/7 Revised concerning VMS information for Search and Rescue. **Adopted** STACTIC WP 09/13 concerning improved VMS reporting. **Adopted** STACTIC WP 09/19 Revision 3 concerning improved catch reporting system. **Adopted** STACTIC WP 09/22 Revised concerning administrative changes in the Port State Measures. **Accepted** STACTIC WP 09/18 Revision 2 concerning Annual Compliance Review for 2008.
17. Election of Chair	**Elected** Kate Sanderson (Denmark in respect of the Faroe Islands and Greenland) as Chair of the Fisheries Commission.
18. Time and Place of the Next Meeting	Intersessional Meeting on 6 November 2009* in London, UK to discuss management measures for shrimp in Division 3M. (*It was subsequently agreed through correspondence that the meeting would be held on 16 November 2009.)

Annex 3. Agenda

I. Opening Procedure

1. Opening by the Chair, Vladimir Shibanov (Russian Federation)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Guidance to STACTIC necessary for them to complete their work (Monday)

II. Administrative

5. Review of Commission Membership

III. Scientific Advice

6. Consideration of the scientific assessments
   a. Presentation of scientific advice by the SC Chair
      - Scientific advice on fish stocks
      - VMEs and other ecosystem considerations
      - Other issues (as determined by SC Chair)
   b) Feedback to the Scientific Council regarding its work during this Meeting
7. Formulation of Request to the Scientific Council for Scientific Advice on the Management of Fish Stocks in 2011 and on other matters

IV. Conservation of Fish Stocks in the Regulatory Area

8. Management and Technical Measures for Fish Stocks in the Regulatory Area, 2010
   8.1 Cod in Division 3M
   8.2 Redfish in Division 3M (TAC and mesh size)
   8.3 Shrimp in Division 3M
9. Management and Technical Measures for Fish Stocks Straddling National Fishing Limits, 2010
   9.1 American plaice in Divisions 3LNO
   9.2 Yellowtail flounder in Divisions 3LNO (PA framework)
   9.3 Redfish in Divisions 3LN
   9.4 Redfish in Division 3O
   9.5 Capelin in Divisions 3NO
   9.6 Greenland halibut in Subarea 2 and Divisions 3KLMNO
   9.7 White hake in Divisions 3NO
   9.8 Shrimp in Divisions 3LNO
   9.9 Pelagic *Sebastes mentella* (oceanic redfish) in the NAFO Convention Area
   9.10 Cod in Divisions 3NO
   9.11 Thorny Skate in Divisions 3LNO
10. Cod Management Policy

V. Ecosystem Considerations

11. Reports of the Ad Hoc Working Group of Fishery Managers and Scientists on VMEs (March and September Meetings)
12. Identification of existing bottom fishing areas (Footprint)
13. Other considerations (e.g. seals)

VI. Conservation and Enforcement Measures

14. Review of Chartering Arrangements
15. Reports of STACTIC (from May 2009 intersessional meeting and current Annual Meeting)
    15.1 Bycatch issues
    15.2 Transfer of fishing possibilities from quota allocations shared by other Contracting Parties
    15.3 NAFO Conservation and Enforcement Measures Editorial Review
    15.4 Recommendations
16. Vessel Monitoring System (VMS) Reporting Requirements

VII. Closing Procedure

17. Election of Chair
18. Time and Place of the Next Meeting
19. Other Business
20. Adjournment

Annex 4. Scientific Council Responses to Questions from the Fisheries Commission

(FC Working Papers 09/16, 09/20, and 09/22)

(FC Working Paper 09/16)

The following four questions were received by Scientific Council from the Fisheries Commission. Responses are provided after each question.

QUESTION 1 on Div. 3NO White hake

Right from the beginning of the regulation of white hake, the TAC for this stock has been annually set at a level of 8,500 tons. A TAC of 850 tons is recommended for 2010-2011.

Russian Federation proposes to entrust the SC to explain what has happened to the white hake population during one year that resulted in a reduction of the TAC for this stock by 10 times?

RESPONSE:

Scientific Council noted its advice has not changed substantially since 2007.

In 2007, Scientific Council noted under **State of the Stock**: Following the dominance of 1999 fish in 2000, a progression of this year-class is observed through subsequent years leading to increased catches in the white hake fishery in 2002-2003, when fish reached harvestable sizes, followed by a reduction in catches thereafter. Both catches and survey biomass indices were much reduced in 2004-2005 relative to 2000-2001. In 2007, Scientific Council **Recommended**: Given the recent declines in stock biomass indices and the current low recruitment, Scientific Council advises that catch of white hake in Div. 3NO, at the current TAC of 8 500 tons, is unrealistic and should not exceed their current level. Current catch levels were 900-1300 t for 2004-2006 in Div 3NO.

In 2009, Scientific Council **recommended** an annual catch of 850 t for 2010, and this is consistent with the advice given 2 years ago but is slightly lower due lower average annual catch level from 2006-2008 caused by the further disappearance of the strong year-class of 1999.

QUESTION 2 on Div. 3M Cod

Biological and fishery information available on Div. 3M cod made it possible to perform different stock projections and calculate various TACs for 2010-2012. Based on the results obtained, the Scientific Council advised to resume a small amount of directed fishery on this stock under condition that a fishing mortality for 2010 will not exceed F_{2008}.

Russian Federation proposes to entrust the Scientific Council to provide an estimation of the TAC for the stock to be further considered by the Fisheries Commission.

RESPONSE:

The best advice from Scientific Council for the catch of Div. 3M cod in 2010 with a fishing mortality that would not exceed F_{2008} is a catch that should not exceed 4125 t.

QUESTION 3 on Div. 3M Redfish

In Fisheries Commission WP 09/2 Scientific Council refers to three species of redfish being fished on Flemish Cap (NAFO Div. 3M):

Deep-water redfish (*S. mentella*), Golden redfish (*S. marinus*) and Acadian redfish (*S. fasciatus*).

1. At what depth range is the fishery on theses three redfish species taking place?
2. What is the total catch by species?

3. What is the estimated by-catch of cod in each of the fisheries targeting these redfish species?

RESPONSE:

1. There are three stocks of redfish in NAFO Division 3M: golden redfish (*Sebastes marinus*), Acadian redfish (*Sebastes fasciatus*) and deep-sea redfish (*Sebastes mentella*) Due to their resemblance *S. mentella* and *S. fasciatus* are commonly designated as beaked redfish and treated as a single stock unit.

   The golden redfish fishery is mainly pursued in the shallower depths of the Flemish Cap bank down to 300m whereas most of the beaked redfish catches came from depths of 300-750 m.

2. Currently, official reporting by Contracting Parties is for all three species combined. In order to estimate a proxy of the beaked redfish catch, a 2005-2008 revision of the logbooks from the monitored vessels has been carried out. This exercise allowed for the most recent years the split of the STACFIS redfish catches (t) on Div. 3M into golden redfish and beaked redfish:

	2005	2006	2007	2008
Golden redfish (*Sebastes marinus*)	1779	860	1192	5297
Beaked redfish (*Sebastes mentella and Sebastes fasciatus*)	4771	6296	5470	3168

3. The bycatch of cod for the combined redfish fishery has increased over the past few years to around 889~900 t in 2008. The percentage bycatch is likely to increase with the expected future increase of the cod population. The cod bycatch has not been estimated for the two separate redfish fisheries from the commercial fleets. However, and taking into account the available EU survey data, most of the cod has been distributed (until last year at least, and despite a gradual expansion of the stock to deeper waters) at depths down to 300 m. So, most likely the majority of the 2005-2008 cod bycatch has been taken by the golden redfish fishery.

QUESTION 4 on Div. 3L Shrimp

1. What is the effect on Spawning Stock Biomass (SSB) with 2010 fishing at:
   a. 30,000t?
   b. 27,000t?
   c. 24,000t?
2. Is there a stock-recruit relationship?
3. Is there any information on the exploitation rate of shrimp stocks from other jurisdictions that would be pertinent to the current exploitation rate of 14%? We were of an understanding that the exploitation rates in the 3L shrimp fishery were conservative. Please comment.

RESPONSE:

1. The exploitation rates (catch over the current average fishable biomass of 174 000 t) for the above catches are (a) 17.2%, (b) 15.5% and (c) 13.8%, respectively. Scientific Council expects that the exploitation rate on the fishable biomass and the SSB will be about the same, but will depend on the details of the size composition of the stock and the catch.

2. No clear stock-recruitment relationship exists for this stock.

3. The 2008 Scientific Council advice states "Scientific Council has imperfect information on sustainable exploitation rates but does have some evidence that they may differ widely between stocks. Other points in establishing an appropriate exploitation rate for shrimp stocks include ecosystem considerations, noting that

shrimp is an important forage species, as well as management considerations (desire for stable TACs, or desire for gradual increases in biomass and TAC, *etc*). There is no target exploitation rate established for this stock, and no PA reference points based on fishing mortality."

(FC Working Paper 09/20)

Answers to Questions on Greenland Halibut for the Scientific Council as posed by the EC and Canada

Scientific Council notes that these responses are only for the clarification of the advice and do not in any way alter or change the advice published in the reports of the Scientific Council.

1) The SC was asked to comment on robustness of the current assessment model. Can you demonstrate how the XSA model is robust? Has any other analysis confirmed the proposed the XSA formulation?

The XSA model is widely used for assessments and provides consistency across stocks and across years. Scientific Council examined the XSA model, as applied to the SA2 + Div. 3KLMNO Greenland halibut stock, thoroughly in 2004 and has been reviewed in subsequent years. And in 2009, Scientific Council noted that XSA and most of the alternate models examined could broadly reproduce the same trends when run with similar or the same data sets. Therefore, the continued use of the XSA model is not considered to be invalidated by this exercise. The present XSA formulation gives the best retrospective patterns and this provides further confirmation of the robustness of this model.

2) Why does the SC maintain the same views of the state of the GHL stock as last year after serious problems have been detected in input data?

Despite the problems with the input data already pointed out in the Scientific Council report, the Scientific Council used the 2008 assessment because it allowed for the making of projections comparable to those previously provided.

3) The SC reports that if there are trends in F the use of “shrinkage might not be advisable”. Clearly there has been a trend of decreasing fishing effort which is generally associated with declining fishing mortality. Would this information lead SC to use model formulations without shrinkage?

No, not necessarily on its own. The application of shrinkage depends on many factors, namely on the magnitude of the retrospective patters including fishing mortality and SSB. The accepted XSA model (with ‘shrinkage’) averages fishing mortality over the most recent years in order to stabilize the results and reduce year-to-year variations that otherwise reveal themselves not only as strong retrospective effects in assessments, but also as unstable and continually varying advice. Although there is a recent declining trend in fishing mortality, and the use of shrinkage might not usually be advisable, the strong retrospective patterns of recent assessments makes the use of shrinkage necessary.

4) The last statement in the report of SC on this issue suggests that “major divergences between the XSA with “shrinkage” and other models occur in the most recent years and this warrants continuing investigation”. What further investigation is planned?

With the upcoming availability of new survey results and pending on the satisfactory completion of the 2009 Div. 2J3K Canadian Autumn survey, Scientific Council expects to be able in June 2010 to investigate further formulations of the XSA model.

5) What percent of 5+ biomass does ages 5-9 contribute a) in 2003 [*in the 2004 assessment*], b) [*in 2008*] in the most recent assessment? How does SC reconcile declining 5+ biomass since 2003 with the age 5-9 biomass index that has tripled since 2003?

Examination of the trend in the survey biomass index reveals that the recent increase is due to year-to-year detected increases in individual cohort abundances. This may reveal a catchability change. Therefore the increase detected in the survey biomass index may not be entirely real.

Biomass (t) in various age-classes calculated from the 2004 and 2008 assessments.

	2004 assessment	2008 assessment	
Age-class	Biomass In 2003	Biomass in 2003	Biomass in 2008
5	11 003	19 418	8 748
6	13 565	21 921	17 718
7	19 868	23 840	23 695
8	14 085	13 261	12 306
9	7 062	6 213	5 723
10	4 243	3 234	2 898
11	2 615	2 425	2 688
12	1 641	1 501	1 694
13	1 151	858	1 509
14+	1 578	1 174	2 073
5+	78 814	95 847	81 059
5-9	65 583	84 653	68 190
% 5-9/5+	85.4%	90.2%	86.3%

6) The SC estimates that about 20% of total biomass is in 3LMNO; if ages 5-9 biomass is similarly distributed, then about [14,000 t] of the XSA estimated [70,000 t] of ages 5-9 would be present in that area. Average recruitment would add about [3,000 t] to this amount annually. The SC estimated annual catch from this area is about 18,000 t, which is virtually the entire age 5-9 biomass as estimated by the XSA. Is there evidence of a net migration of age 5-9 biomass of more than 10,000 t into this area each year? Is this situation suggestive of the XSA assessment biomass estimates being too low?" Is there any other explanation?

Movements within a stock are not uncommon and in the case of Greenland halibut, the net migrations into and out of the NRA / CAN EEZ, from waters beyond the maximum fishing depth, or areas not covered by the surveys, are unknown. It is hence very unwise to partition XSA results into only parts of the distribution occupied by the stock. Scientific Council does not consider that this kind of partitioned analysis constitutes a valid criticism of the assessment. In order to investigate possible explanations, Scientific Council would need additional sources of information that could come from, for example, tagging studies and extended surveys over the entire stock area.

7) The GHL assessment model used by the SC has a consistent pattern to underestimate biomass and overestimate fishing mortality. We can illustrate this with the year 2004, the first year of application of this plan. Biomass was estimated in 2005 as 63,000 t and in 2008 was estimated again as 87,000 t; this means that the new estimation is about 30% more than what was estimated at the first time. The contrary occurs with fishing mortality, which the estimation for the same year decreases from 0.71 (2005 assessment) to 0.49 (2008 assessment), about 30% less. How would projections be affected if the input biomass had been 30% higher and fishing mortality 30% lower? If the current fishing mortality has been overestimated by 30%, are we above Fmax?

There may be ways to correct estimates of stock size to account for retrospective pattern. This has to be conducted age by age. However the retrospective analysis conducted in the last assessment (SCR Doc. 08/48) showed that the revision ratio is dependent on cohort. Recent studies have been conducted in that field and should be pursued but none have been sufficiently reviewed or accepted by Scientific Council. Scientific Council therefore considers that without a valid model to compute revised estimates of stock number, projections using only revision based on application a raw correction factor are misleading and should not be undertaken. Scientific Council cannot therefore answer the request quantitatively. However on a qualitative point of view, if input biomass had been higher and fishing mortality lower, projections would be less pessimistic and it is in the scope of possibilities that current F could be in the vicinity of or below F_{max}.

8) Explain how the Management Strategy Approach (MSE) proposed by SC for the GHL stock would help to address the uncertainties in the advice/management for this stock?

MSE allows various management strategies to be evaluated against a suite/series of operational models which are chosen to reflect a range of possible realities (uncertainties) regarding stock size and biological parameters. The MSE process involves the inputs of managers, fishing industry and scientists who agree on various factors including objectives, management strategies, harvest control rules and statistics to measure the performance of the agreed strategies.

9) Could the SC calculate what TAC would result for GHL in 2010 if the "model free" method is used as the management strategy?

The "Model free" constitutes a simple TAC adjustment strategy that uses the change in perceived status of the stock (from research surveys) to adjust the TAC of the next year. As a result, TAC may increase when survey indices show an increased trend and decrease if they decline. This was one of the strategies investigated in the MSE, and it performed well within the context of a long-term management strategy evaluation that has defined and constrained harvest control rules. It is premature for Scientific Council at this moment to calculate the GHL TAC for 2010 based on this method for two reasons: first, because the Canadian Autumn survey in 2008 was not completed and that survey series provide the more representative index of GHL abundance, and second, because the method uses some parameters that should be carefully considered, such as number of years to be used to calculate the trend in survey biomass as well the factor in the involved equation (see Shelton and Miller 2009: *NAFO SCR Doc*. 09/37), and both require further analysis.

(FC Working Paper 09/22)

Answers to Questions to the Scientific Council on the shrimp stocks [*3LNO and 3M*] by EU

Scientific Council notes that these responses are only for the clarification of the advice and do not in any way alter or change the advice published in the reports of the Scientific Council.

1. As the preliminary overview of the shrimp stock assessment show that biomass has decreased several times should it reflect in the CPUE data?

Response: Not necessarily, it has been observed in other shrimps stocks that CPUEs can be maintained in the early phases of stock decline. Updated CPUE data were not available for the interim monitoring report.

2. What might be the reasons of such sharp stock decline on 3M shrimp taken into account the substantial decrease of fishing effort?

Response:
Cod predation: shrimp appeared in Flemish Cap in high enough density to allow commercial fishing only after the cod stock collapsed. The rebuilding of the cod stock in Div. 3M is likely to cause a reduction of the shrimp stock.

Stocks of other predators, notably redfish, are also increasing.

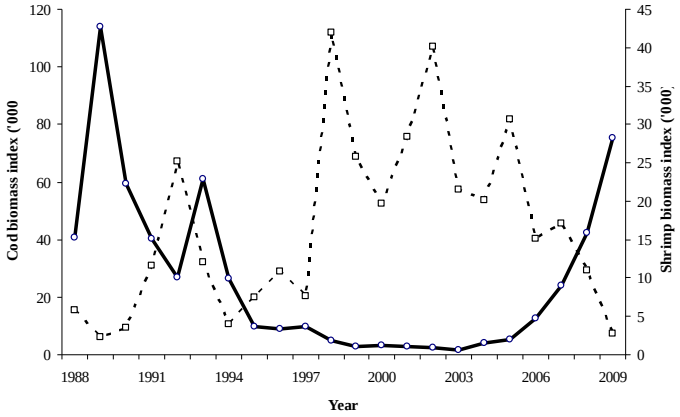
Scientific Council cannot exclude that environmental or other habitat changes are also involved.

3. Was the survey in 2009 in 3M conducted on exactly the same conditions as previous years?

Response: Yes: Survey design, vessel, gear and other procedures were the same as in previous years. 178 valid hauls were done, and nothing extraordinary happened as to doubt the survey results. Available results are final as far as biomass is concerned, and analysis of lengths and ages will also be available for the October meeting.

4. Are there any correlations between shrimp stocks (3L and 3M) and predator species, e.g. cod and redfish?

Yes, certainly for cod in Div 3M and possibly for the others. The figure below (SCR Doc 09/50) illustrates this inverse relationship and, even if the correlation of values was not calculated, it reflects what is expected from the cod-shrimp behaviour, as noted in the response to question 2.



EU survey cod biomass (solid line) and total shrimp biomass (dashed line) in the years 1988-2009 on Flemish Cap.

Scientific Council proposes that any other relationships be investigated for presentation this October.

Annex 5. Fisheries Commission's Request for Scientific Advice on Management in 2011 and Beyond of Certain Stocks in Subareas 2, 3 and 4 and Other Matters

(FC Working Paper 09/24, Rev. **now** FC Doc. 09/17)

Mindful of the desire to move to a risk-based approach in the management of fish stocks, Fisheries Commission with the concurrence of the Coastal State as regards to the stocks below which occur within its jurisdiction, requests the Scientific Council, in the provision of advice, to provide a range of management options as well as a risk analysis for each option as outlined in the provisions below, rather than a single TAC recommendation.

1. The Fisheries Commission with the concurrence of the Coastal State as regards the stocks below which occur within its jurisdiction, requests that the Scientific Council, at a meeting in advance of the 2010 Annual Meeting, provide advice on the scientific basis for the management of the following fish and invertebrate stocks or groups of stocks in 2011:

   Northern shrimp in Div. 3M, 3LNO
   Greenland halibut in SA 2 and Div. 3KLMNO

Noting that SC will meet in October of 2009, FC requests SC to update its advice for 2010, as well as to provide advice for 2011, for both shrimp stocks referenced above.

2. The Fisheries Commission with the concurrence of the Coastal State as regards the stocks below which occur within its jurisdiction, requests that the Scientific Council, at a meeting in advance of the 2010 Annual Meeting, provide advice on the scientific basis for the management of the following fish stocks according to the following assessment frequency (unless Fisheries Commission requests additional assessments) :

Two year basis	Three year basis
American plaice in Div. 3LNO	American plaice in Div. 3M
Capelin in Div. 3NO	Cod in Div. 3NO
Cod in Div. 3M	Northern shortfin squid in SA 3+4
Redfish in Div 3LN	Redfish in Div. 3O
Redfish in Div. 3M	Witch flounder in Div. 2J+3KL
Thorny skate in Div. 3LNOPs	Witch flounder in Div. 3NO
White hake in Div. 3NOPs	
Yellowtail flounder in Div. 3LNO	

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

In 2010, advice should be provided for 2011 and 2012 for thorny skate in Div. 3LNOPs, for redfish in Div. 3LN and for cod in Div. 3M and for 2011, 2012 and 2013 for redfish in Div. 3O, for cod in Div. 3NO, and for witch flounder in Div. 2J+3KL.

- In 2008, advice was provided for 2009, 2010 and 2011 for cod in Div. 3M, American plaice in Div. 3M, witch flounder in Div. 3NO, and northern shortfin squid in SA 3+4. These stocks will be next assessed in 2011. For cod in Div. 3M, the Scientific Council conducted full assessments and provided advice in 2008 and 2009 for this stock.
- In 2009, advice was provided for 2010 and 2011 for American plaice in Div. 3LNO, yellowtail flounder in Div. 3LNO, redfish in Div. 3M, white hake in Div. 3NO and capelin in Div. 3NO. These stocks will next be assessed in 2011. [see also item 12 for an additional request for American plaice in 3LNO]

The Fisheries Commission 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 by-catches in other fisheries, provide updated advice as appropriate.

3. The Commission and the Coastal State 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:

   a) The preferred tool for the presentation of a synthetic view of the past dynamics of an exploited stock and its future development is a stock assessment model, whether age-based or age-aggregated.

   b) For those stocks subject to analytical-type assessments, the status of the stocks should be reviewed and catch options evaluated in terms of their implications for fishable stock size in both the short and long term. As general reference points, the implications of fishing at $F_{0.1}$ and F_{2009} in 2011 and subsequent years should be evaluated. The present stock size and spawning stock size should be described in relation to those observed historically and those expected in the longer term under this range of options.

   c) For those stocks subject to general production-type assessments, the time series of data should be updated, the status of the stock should be reviewed and catch options evaluated in the way described above to the extent possible. In this case, the level of fishing effort or fishing mortality (F) required to take two-thirds MSY catch in the long term should be calculated.

   d) 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.

   e) Spawning stock biomass levels considered necessary for maintenance of sustained recruitment should be recommended for each stock. In those cases where present spawning stock size is a matter of scientific concern in relation to the continuing reproductive potential of the stock, options should be offered that specifically respond to such concerns.

   f) Information should be provided on stock size, spawning stock sizes, recruitment prospects, fishing mortality, catch rates and catches implied by these management strategies for the short and the long term in the following format:

      I. For stocks for which analytical-type assessments are possible, graphs should be provided of all of the following for the longest time-period possible:
         - historical yield and fishing mortality;
         - spawning stock biomass and recruitment levels;
         - catch options for the year 2011 and subsequent years over a range of fishing mortality rates (for as many years as the data allow)
         - (F) at least from $F_{0.1}$ to F_{max};
         - spawning stock biomass corresponding to each catch option;
         - yield-per-recruit and spawning stock per recruit values for a range of fishing mortalities.

      II. For stocks for which advice is based on general production models, the relevant graph of production as a function of fishing mortality rate or fishing effort should be provided. Age aggregated assessments should also provide graphs of all of the following for the longest time period possible:
         - exploitable biomass (both absolute and relative to B_{MSY})
         - yield/biomass ratio as a proxy for fishing mortality (both absolute and relative to F_{MSY})
         - estimates of recruitment from surveys, if available.

      III. Where analytical methods are not attempted, the following graphs should be presented, for one or several surveys, for the longest time-period possible:
         - time trends of survey abundance estimates, over:
         - an age or size range chosen to represent the spawning population
         - an age or size-range chosen to represent the exploited population

- recruitment proxy or index for an age or size-range chosen to represent the recruiting population.
- fishing mortality proxy, such as the ratio of reported commercial catches to a measure of the exploited population.

For age-structured assessments, yield-per-recruit graphs and associated estimates of yield-per-recruit based reference points should be provided. In particular, the three reference points, actual F, $F_{0.1}$ and F_{max} should be shown.

4. Noting the Precautionary Approach Framework as endorsed by Fisheries Commission, the Fisheries Commission requests that the Scientific Council provide the following information for the 2010 Annual Meeting of the Fisheries Commission for all stocks under its responsibility requiring advice for 2011:

   a) the limit and precautionary reference points as described in Annex II of the UN Fisheries Agreement indicating areas of uncertainty (for those stocks for which precautionary reference points cannot be determined directly, proxies should be provided);
   b) the stock biomass and fishing mortality trajectory over time overlaid on a plot of the PA Framework (for those stocks where biomass and/or fishing mortality cannot be determined directly, proxies should be used);
   c) information regarding the current Zone the stock is within as well as proposals regarding possible harvest strategies which would move the resource to (or maintain it in) the Safe Zone, including medium term considerations and associated risk or probabilities which will assist the Commission in developing the management strategies described in paragraphs 4 and 5 of Annex II in the Agreement.

5. The following elements should be taken into account by the Scientific Council when considering the Precautionary Approach Framework:

   a) References to "risk" and to "risk analyses" should refer to estimated probabilities of stock population parameters falling outside biological reference points.
   b) Where reference points are proposed by the Scientific Council as indicators of biological risk, they should be accompanied by a description of the nature of the risk associated with crossing the reference point such as recruitment overfishing, impaired recruitment, etc.
   c) When a buffer reference point is proposed in the absence of a risk evaluation in order to maintain a low probability that a stock, measured to be at the buffer reference point, may actually be at or beyond the limit reference point, the Scientific Council should explain the assumptions made about the uncertainty with which the stock is measured.
   d) Wherever possible, short and medium term consequences should be identified for various exploitation rates (including no fishing) in terms of yield, stability in yield from year to year, and the risk or probability of maintaining the stock within, or moving it to, the Safe Zone. Whenever possible, this information should be cast in terms of risk assessments relating fishing mortality rates to the trends in biomass (or spawning biomass), the risks of stock collapse and recruitment overfishing, as well as the risks of growth overfishing, and the consequences in terms of both short and long term yields.
   e) When providing risk estimates, it is very important that the time horizon be clearly spelled out. By way of consequence, risks should be expressed in timeframes of 5, 10 and 15 years (or more), or in terms of other appropriate year ranges depending on stock specific dynamics. Furthermore, in order to provide the Fisheries Commission with the information necessary to consider the balance between risks and yield levels, each harvesting strategy or risk scenario should include, for the selected year ranges, the risks and yields associated with various harvesting options in relation to B_{lim},

6. Many of the stocks in the NAFO Regulatory Area are well below any reasonable level of B_{lim} or B_{buf}. For these stocks, the most important task for the Scientific Council is to inform on how to rebuild the stocks. In this context and building on previous work of the Scientific Council in this area, the Scientific Council is requested to evaluate various scenarios corresponding to recovery plans with timeframes of 5 to 10 years, or longer as appropriate. This evaluation should provide the information necessary for the Fisheries Commission to consider the balance between risks and yield levels, including information on the consequences and risks of no action at all.

a) information on the research and monitoring required to more fully evaluate and refine the reference points described in paragraphs 1 and 3 of Annex II of the Agreement; these research requirements should be set out in the order of priority considered appropriate by the Scientific Council;
b) any other aspect of Article 6 and Annex II of the Agreement which the Scientific Council considers useful for implementation of the Agreement's provisions regarding the precautionary approach to capture fisheries; and
c) propose criteria and harvest strategies for new and developing fisheries so as to ensure they are maintained within the Safe Zone.
d) Provide, at its annual meeting in 2010, an overview of strategies to recover depleted fish stocks in the Northwest Atlantic, taking into account the proceedings of the NAFO co-sponsored "ICES PICES UNCOVER Symposium on Rebuilding Depleted Fish Stocks - Biology, Ecology, Social Science and Management Strategies" which is to take place November 3-6 2009 in Warnemünde, Germany.

7. Noting the FC Rebuilding Plan for 3NO cod adopted in September 2007, Fisheries Commission requests Scientific Council to advise, before September 2010, on possible measures the Commission may consider to ensure by-catch of cod is kept at the lowest possible level.

8. Recognizing the initiatives on vulnerable marine ecosystems (VME) through the work of the WGFMS, and with a view to completing fishery impact assessments at the earliest possible date, the Scientific Council is requested to provide the Fisheries Commission at its next annual meeting in 2010:

   a) guidance on the content of fishing plans/initial assessments for the purpose of evaluating significant adverse impacts on VMEs and identify viable risk evaluation methodologies for the standardized assessment of fishery impacts.
   b) In light of the use of existing encounter protocols in tandem with the closed areas for corals and sponges:
      i. assess new and developing methodologies that may inform the Fisheries Commission on any future review of the thresholds levels
      ii. review and report on new commercial bycatch information as it becomes available, and.
      iii. in light of i.) review the ability of the current encounter threshold values of 60 kg live coral and 800 kg sponge to detect new VME areas as opposed to cumulative catches of isolated individuals.

9. Recognizing that areas closed to all bottom fishing activities for the protection of vulnerable marine ecosystems as defined in Article 15, including inter alia:
   • Fogo Seamounts 1
   • Fogo Seamounts 2
   • Orphan Knoll
   • Corner Seamounts
   • Newfoundland Seamounts
   • New England Seamounts
   and associated protocols for vessels conducting exploratory fishing in those areas, expire on December 31, 2010.

   Mindful of the call for review of the above measures based on advice from the Scientific Council, Fisheries Commission requests that Scientific Council:

   a) Review any new scientific information on the Fogo Seamounts 1, Fogo Seamounts 2, Orphan Knoll, Corner Seamounts, Newfoundland Seamounts and New England Seamounts which may support or refute the designation of these areas as vulnerable marine ecosystems.
   b) Review any exploratory fishing activity on the seamounts in the context of significant adverse impact to vulnerable marine ecosystems and review current exploratory fishing data collection protocols operating in the seamount closure areas as defined in Article 15 for their usefulness in providing scientific information.
   c) Review the potential for significant adverse impact of pelagic, long-line and other fishing gear types other than mobile bottom gear on seamount vulnerable marine ecosystems.

10. With respect to Northern shrimp (*Pandalus borealis*) in Div. 3LNO, noting the NAFO Framework for Precautionary Approach and recognizing the desire to demonstrate NAFO's commitment to applying the precautionary approach, Fisheries Commission requests the Scientific Council to :

    a) identify F_{msy}
    b) identify B_{msy}
    c) provide advice on the appropriate selection of an upper reference point for biomass (e.g. B_{buf})

    Fisheries Commission also requests the Scientific Council to provide information on the effect of the following catch levels in 2011 of 24,000t, 27,000t and 30,000t on the projected SSB and provide risk analyses where possible.

11. In considering the possible contribution of fishery catches to changes in stock size of 3M shrimp, it is noted that catches are summed by calendar year, but the surveys are executed in the summer. Is the temporal distribution of shrimp catches through the year well enough known to allow partial contribution of year's catches to stock-size changes to be calculated? On average, what fraction of the year's catches is taken before the execution of the survey?

12. Noting the scientific advice provided in 2009 on American Plaice in Div. 3LNO, that the stock is estimated to increase and will likely surpass Blim by 2010 under all fishing mortality scenarios considered (except for Flim), Fisheries Commission requests the Scientific Council to conduct a full assessment in 2010, provide catch, biomass, and fishing mortality projections where possible, for as many years as the data will allow, at the following levels of fishing mortality: F=0; $F_{0.1}$; and F_{2009}, in addition to any projections that SC would find useful and provide a risk analysis as outlined in paragraph 5.

Annex 6. Quota Table 2010 (NCEM Annex I.A)

QUOTA TABLE. Total allowable catches (TACs) and quotas (metric tons) for 2010 of particular stocks in Subareas 1-4 of the NAFO Convention Area. The values listed include quantities to be taken both inside and outside the 200-mile fishing zone, where applicable.

Species	Cod				Redfish					American plaice		Yellowtail
Division/Contracting Party	3L	3M	% of 3M Cod TAC	3NO	3LN	% of 3LN Redfish TAC	3M	3O	Sub-Area 2 and Div. 1F+3K	3LNO	3M	3LNO
Canada		44	0.80	0	1491	42.60	500	6000	385[2,4]	0	0	16575[5]
Cuba		204	3.70	-	343	9.80	1750		385[2,4]	-	-	-
Denmark (Faroe Islands and Greenland)		1229	22.35	-	-		69[19]		9627[2,3]	-	-	-
European Union		3136[25]	57.03	0[11]	638[26]	18.23	7813[12]	7000	9627[2,3] 2503[2,15]	0	0[11]	-
France (St. Pierre et Miquelon)		-		-	-		69[19]		385[2,4]	-	-	340[5]
Iceland		-		-	-		-		9627[2,3]	-	-	-
Japan		-		-	-		400	150	385[2,4]	-	-	-
Korea		-		-	-		69[19]	100	385[2,4]	-	-	-
Norway		509	9.25	-	-		-		9627[2,3]	-	-	-
Russia		356	6.47	0	1007	28.77	9137	6500	9627[2,3]	-	0	-
Ukraine								150	385[2,4]			
United States of America		-		-	-		69[19]		385[2,4]	-	-	-
Others		22	0.40	0	21	0.60	124	100	-	0	0	85[5]
TOTAL ALLOWABLE CATCH	*[9]	5500[23]	100.0	*[9]	3500[24]	100.0	10000[8]	20000	12516[10,17]	*[21,16]	*[9,16]	17000[21,22]

Species	Witch		White hake	Capelin	Skates	Greenland halibut	Squid (Illex)[1]	Shrimp	
Division/Contracting Party	3L	3NO	3NO	3NO	3LNO	3LMNO	Sub-areas 3+4	3L	3NO
Canada		0	1765	0	2000	1778	N.S.[6]	24990	
Cuba		-		0		-	510	334	
Denmark (Faroe Islands and Greenland)		-		-		206	-	334	
European Union		0[11]	3529	0[11]	7556	6951[18]	N.S.[6] / 611[13]	1670[14]	
France (St. Pierre et Miquelon)		-		-		194	453	334	
Iceland		-		-		-	-	334	
Japan		-		0		1215	510	334	
Korea		-		-		-	453	334	
Norway		-		0		-	-	334	
Russia		0	353	0	2000	1512	749	334	
Ukraine						-		334	
United States of America		-		-		-	453	334	
Others		0	353	-	444	0[7]	794	0	
TOTAL ALLOWABLE CATCH	*[9]	*[16,9]	6000	*[20,9]	12000	11856	34000[16]	30000	*[9]

* Ban on fishing in force.

1. Any quota listed for squid may be increased by a transfer from any "coastal state" as defined in Article 1, paragraph 3 of the NAFO Convention, provided that the TAC for squid is not exceeded. Transfers made to Contracting Parties conducting fisheries for squid in the Regulatory Area shall be reported to the Executive Secretary, and the report shall be made as promptly as possible.
2. The Executive Secretary shall notify without delay all Contracting Parties the dates on which accumulated reported catch taken by vessels of Contracting Parties estimated equal to 50% and then 100% of that allocation.
3. Quota to be shared by vessels from Denmark (Greenland and Faroe Islands), European Union, Iceland, Norway and Russia. Catches in the NAFO Convention Area shall be deducted from the quotas allocated in the NEAFC Convention Area.
4. Quota to be shared by vessels from Canada, Cuba, France (St. Pierre et Miquelon), Japan, Korea, Ukraine and USA.
5. Contracting Parties shall inform the Executive Secretary before 01 December 2009 of the measures to be taken to ensure that total catches do not exceed the levels indicated.
6. The allocation 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 (= 29.458 tons).

7. In 2005, the previous 935 t "Others" quota was assigned to three Contracting Parties. When the TAC exceeds 30,000 t the next 1,300 t beyond 30,000 will be allocated to an Others quota which can be accessed by those who do not hold Greenland halibut allocation. In deciding the relevant contributions of Contracting Parties to the 1,300 t Others quota, the Fisheries Commission will take into account the fact that some Contracting Parties received a benefit from the 935 t quota which was reassigned in 2005.
8. Not more than 5000 tons may be fished before 01 July 2010. The Executive Secretary shall notify without delay all Contracting Parties of the date on which, for this stock, accumulated reported catch taken by vessels of the Contracting Parties is estimated to equal 50% and then 100% of the TAC.
9. The provisions of Article 12, paragraph 1.b) of the Conservation and Enforcement Measures shall apply.
10. In the case of the NEAFC decision which modifies the level of TAC in 2010 as compared to 2009, these figures shall be accordingly adjusted by NAFO and formalized through a mail vote.
11. 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).
12. 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.
13. 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.
14. Including allocations of 334 tonnes each for Estonia, Latvia, Lithuania and Poland out of a TAC of 30,000 tonnes, following their accession to the European Union
15. Allocation of 2,234 tonnes for Lithuania and 269 tonnes to Latvia following their accession to the European Union.
16. Applicable to 2010 and 2011.
17. The quota shares in footnotes 4 and 15 can only be fished in the NAFO Regulatory Area. If an increase in the overall TAC as defined in footnote 10 leads to an increase in these shares, the first 500 tonnes of that increase shall be added to the quota share referred to in footnote 4.
18. Including an allocation of 389 tonnes for Estonia, Latvia, and Lithuania following their accession to the European Union.
19. Notwithstanding the provisions of footnote 8 and without prejudice to future agreements on allocations, these quotas may be fished in their entirety by these Contracting Parties.
20. Applicable until at least 2012.
21. In lieu of Article 12.1 (a) and (b) of the CEM, the following by-catch provisions for American plaice only in the 3LNO yellowtail fishery shall apply: Contracting Parties fishing for yellowtail flounder allocated under the NAFO allocation table will be restricted to an overall Am. plaice by-catch harvest limit equal to 13% of their total yellowtail fishery as calculated in accordance with Article 12.1 (c). For 2010, the by-catch percentage will increase to 15% unless a Scientific Council projection indicates that this rate is likely to undermine stock recovery or cause an unreasonable delay in reaching B_{lim}, in which case the increase may be subject to a reassessment by the Fisheries Commission.
22.. Following the NAFO annual meeting and prior to January 1 of the succeeding year, at the request of the USA, Canada will transfer 1000 tonnes of its 3LNO yellowtail quota to the USA.
23. The allocation key of this stock is based on the 1998 Quota Table. In 1999, a moratorium on cod in Division 3M was declared.
24. The allocation key of this stock is based on the 1997 Quota Table. In 1998, a moratorium on redfish in Division 3LN was declared.
25. Including fishing entitlements of 61 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 209 tons for Poland following their accession to the European Union.
26. Including fishing entitlements of 173 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.

Annex 7. Reopening of Cod in Division 3M and Redfish in 3LN

(FC W.P. 09/25, Rev. **now** FC Doc. 09/15)

Explanatory Memorandum

Following a precautionary approach, it would be sensible to restrict by-catch to 5%, similar to provisions in Article 12(b) of the NCEMs, to ensure further rebuilding of 3M cod and 3LN Redfish stocks**.** If in 2011 Scientific Advice confirms that further rebuilding of these stocks has occurred, the Fisheries Commission could revisit the by-catch issue.

It is understood that, in accordance with Article 3of the NCEMs, Contracting Parties shall not conduct fisheries which take catch, including by-catch, beyond the quota allocated to the Contracting Parties. To ensure overall quotas are not exceeded it will be necessary to close directed fisheries before the allocated quota is fully taken and ensure sufficient quota remains for by-catch in other fisheries.

Accordingly, it proposed that the following specific measures shall be applicable with regard to the cod fishery in Division 3M and the redfish fishery in Divisions 3LN.

Proposal

Article 12 By-catch Requirements

1. By-catch retained on board

a) Vessels of a Contracting Party shall limit their by-catch to a maximum of 2500 kg or 10%, whichever is the greater, for each species listed in Annex I for which no quota has been allocated in that Division to that Contracting Party. However, for cod in Division 3M and Redfish in Divisions 3LN vessels of a Contracting Party shall limit their by-catch to a maximum of 1250 kg or 5% whichever is greater.

b) …

c) …

d) In accordance with the provisions of Article 3, a Contracting Party shall close its directed fisheries for cod in Division 3M and redfish in Divisions 3LN when the catches plus the by-catch estimated to be taken in the remainder of the year equals 100% of the quota allocated for that stock to that Contracting Party. After the date of closure of the directed fishery, vessels of a Contracting Party shall limit their by-catches to a maximum of 1250kg or 5% whichever is greater, within their allocated quota.

Annex 8. Risk Management / Management Strategy Evaluation Approach to Greenland Halibut

(FC W.P. 09/23 **now** FC Doc. 09/18)

Introduction

In 2003, NAFO agreed to a fifteen-year Rebuilding Plan for the Greenland halibut stock in Subarea 2 and Divisions 3KLMNO. The objective of the plan is to attain a level of exploitable biomass 5+ of 140,000t on average, allowing for a stable yield over the long term in the Greenland halibut fishery. The Plan provided for gradual reductions in the TAC from 2004 to 2007 with a TAC of 16,000t in 2007. From 2008 and onward the plan allowed for a +- 15% change in the TAC adjusted based on Scientific Council (SC) advice.

In 2008 and 2009, the TAC of 16,000t was maintained in light of scientific uncertainty. For 2010, SC has advised that the stock is not rebuilding according to plan and recommended that the TAC be reduced to 8,807t based on 2009 catches being constant with the 2008 Scientific Council (SC) estimated catch (21,178t). SC notes that an updated assessment was not conducted due to survey coverage deficiencies with the 2008 Canadian fall survey; the absence of this information has increased uncertainty associated with this advice.

Further, in its June 2009 Report, the Scientific Council noted that the uncertainties with the present assessment may stem primarily from the structure of the input data and the underlying dynamics of the stock. Uncertainties with the data structure relate primarily to commercial catch data, difficulties in measuring abundance of pre-recruits, and difficulties in measuring abundance of age 10+.

In light of the continued uncertainty and the need to move forward with an appropriate management plan for this stock, there is a need to engage a process that allows for development of a risk management approach. This approach would be used by Fisheries Commission in establishing annual TAC's and for considering possible modifications to the longer term approach to the Greenland Halibut rebuilding plan. It is proposed that this work will draw from the 2007-09 Management Strategy Evaluation (MSE) study initiated by the Scientific Council.

Explanatory Notes

1. Management Strategy Evaluation is comprised of:
   - a reference set of operating models that specifies alternative possible realities regarding the true state of the stock,
   - the input data,
   - the "assessment model" that specifies what data to use,
   - the harvest control rules that explain mathematically how the rules will be triggered by the assessment information (e.g. when to increase or lower TAC),
   - performance statistics (stock growth, catch variability, etc.) and risk tolerances to be used in harvest control rule selection

2. In February 2008, a SC Study Group undertook efforts to evaluate alternative management approaches for Greenland halibut. Following from this, a study that includes results for seven alternative management strategies applied to eight different operating models was endorsed by Scientific Council in 2009. Management strategies incorporating feedback harvest control rules either based on survey data directly (model free approach) or the annual XSA assessment of the stock size and the TAC in the previous year, appear to show the most promise. SC presented a report on these findings and possible management application of MSE for Greenland halibut to FC at the 2010 NAFO annual meeting.

Proposal

1. Establish a Working Group of Fisheries Commission, co-chaired by someone from Scientific Council (SC), with representation from fisheries managers, SC and industry to consider and refine the current MSE framework to help inform management of Greenland Halibut. Specific focus of the group should include, reviewing models and revising if necessary, defining acceptable levels of risk, selecting appropriate performance indicators,

considering alternative management strategies and related harvest control rules, and projecting/evaluating outputs of the risk management framework utilizing one or more assessment models.

2. The Fisheries Commission will consider the Report from this Working Group, including any recommendations and options contained therein as the basis for a risk management based decision on the TAC level for 2011 and beyond.

3. It is anticipated that the Working Group would need to meet / communicate regularly between September 2009 and June 2010. Further, the working Group would remain in place at least until 2011 to allow for further refinement of the framework following initial implementation.

Annex 9. Interim Measures to Protect Significant Coral Concentrations

(FC W.P. 09/11, Annex 1 **now** FC Doc. 09/11)

Background

In 2006, the United National General Assembly (UNGA) in its Sustainable Fisheries Resolution 61/105 called for States and Regional Fisheries Management Organizations (RFMOs) to adopt conservation and management measures in order to prevent significant adverse impacts on vulnerable marine ecosystems. UNGA will review the actions of States and RFMO in this respect in the fall of 2009.

Mindful of the work of the FAO in facilitating the development of international guidelines for the management of deep-sea fisheries operating in the high seas that serve to guide the identification of VMEs

Noting the commitment of NAFO Contracting Parties to implement an ecosystem approach and implement measures following the precautionary approach to address the impacts of fishing on VMEs

Recognizing the significant steps already taken by NAFO to protect Vulnerable Marine Ecosystems (VMEs) in the NAFO Regulatory Area (NRA) including inter alia:

- the closure of four seamounts to commercial fishing (2006)
- the establishment of a 3O Coral Protection Zone (2007)
- the closure of the Fogo Seamounts (2008)
- the adoption of a comprehensive framework for the implementation of UNGA Resolution 61/105 including provisions for the identification of existing bottom fishing areas (footprint), assessment of bottom fishing, Exploratory Fishery Protocol for new fishing areas and the interim Encounter provisions for VMEs in both fished and unfished areas of the NRA (2008)

Further recognizing the numerous international scientific research efforts that are designed to enhance knowledge in the area of VMEs, in particular with respect to addressing knowledge gaps on benthic habitat, communities and species in the NAFO Regulatory Area, especially the upcoming Spanish survey in 2009 and the Canadian survey in 2010

Conscious of the 2008 Intersessional Fisheries Commission Meeting which established a process to determine the boundary for existing fisheries and non-fished areas, and the 2008 NAFO Annual Meeting Fisheries Commission request to Scientific Council to more precisely identify significant concentrations of corals at its October 2008 meeting and significant concentrations of sponge at its June 2009 meeting

Recognizing the SC response which identified remaining concentrations of corals in its October 2008 report

It is proposed that, as part of a continuing commitment to implement the UNGA Resolution, the Working Group of Fisheries Managers and Scientists recommends to the Fisheries Commission for adoption in September 2009:

1. Establishment of additional coral protection zones in Divisions 3L and 3M:

Insert new Article 16 (2) of NCEM:

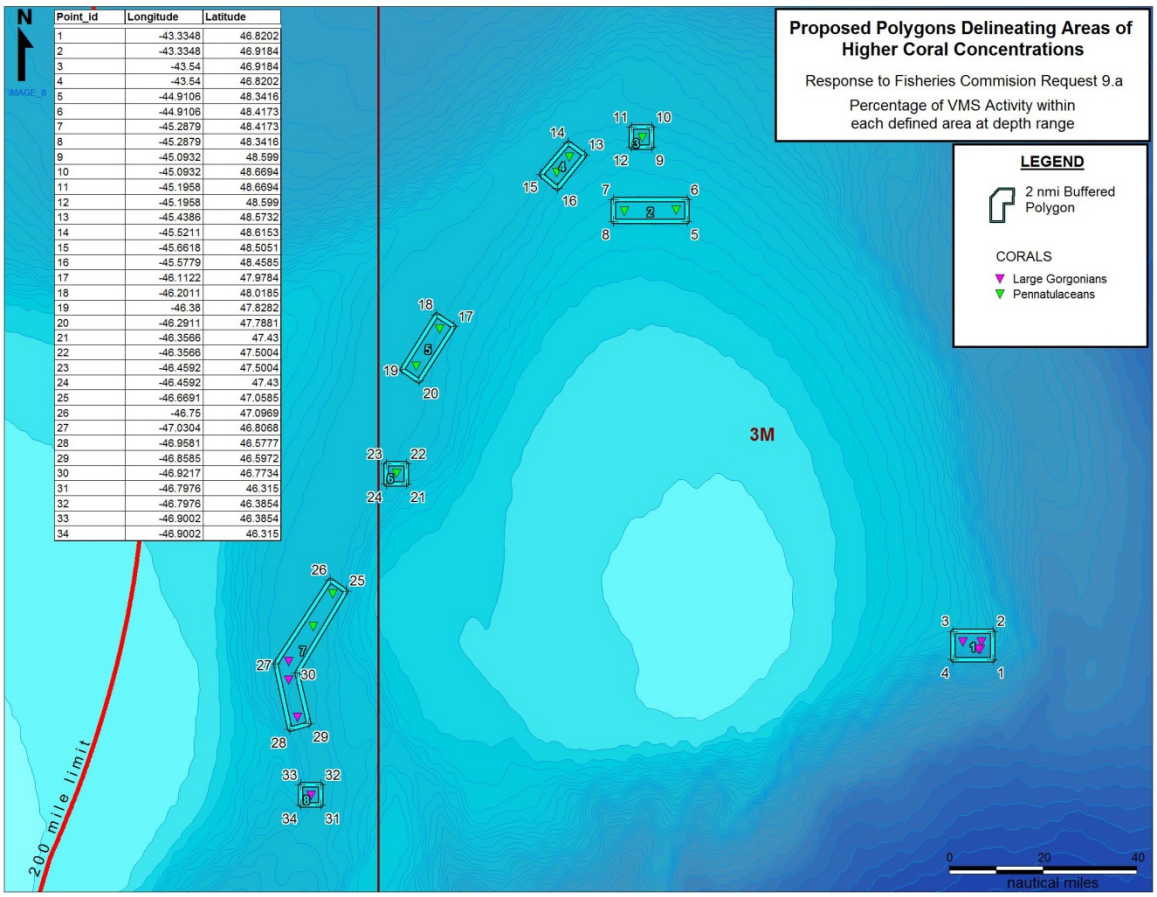
2. As of January 1, 2010 the following areas shall be closed on an interim basis to all bottom fishing activities until December 31, 2011. The closed areas are defined by connecting the following coordinates (in numerical order and back to coordinate 1).

Revoke current Article 16 (2) as this work has been completed.

Amendment to Article 16 (3)

3. The measures referred to in Article 16(1) shall be reviewed in 2012 by the Fisheries Commission taking account the advice from the Scientific Council and the Working Group of Fisheries Managers and Scientists, and a decision shall be taken on future management measures.

Area	Sub-Area	Coordinate 1	Coordinate 2	Coordinate 3	Coordinate 4
Eastern Flemish Cap	1	46°49'13"N 43°20'05"W	46°55'06"N 43°20'05"W	46°55'06"N 43°32'24"W	46°49'13"N 43°32'24"W
Northern Flemish Cap	1	48°20'30"N 44°54'38"W	48°25'02"N 44°54'38"W	48°25'02"N 45°17'16"W	48°20'30"N 45°17'16"W
Northern Flemish Cap	2	48°35'56"N 45°05'36"W	48°40'10"N 45°05'36"W	48°40'10"N 45°11'45"W	48°35'56"N 45°11'45"W
Northern Flemish Cap	3	48°34'24"N 45°26'19"W	48°36'55"N 45°31'16"W	48°30'18"N 45°39'42"W	48°27'31"N 45°34'40"W
Northwest Flemish Cap	1	47°58'42"N 46°06'44"W	48°01'07"N 46°12'04"W	47°49'42"N 46°22'48"W	47°47'17"N 46°17'28"W
Northwest Flemish Cap	2	47°25'48"N 46°21'24"W	47°30'01"N 46°21'24"W	47°30'01"N 46°27'33"W	47°25'48"N 46°27'33"W
Southwest Flemish Pass	1	47°03'31"N 46°40'09"W	47°05'49"N 46°45'00"W	46°48'24"N 47°01'49"W	46°34'40"N 46°57'29"W
		Coordinate 5	46°35'50"N 46°51'31"W	Coordinate 6	46°46'24"N 46°55'18"W
Southwest Flemish Pass	2	46°18'54"N 46°47'51"W	46°23'07"N 46°47'51"W	46°23'07"N 46°54'01"W	46°18'54"N 46°54'01"W



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5	-44.9106	48.3416
6	-44.9106	48.4173
7	-45.2879	48.4173
8	-45.2879	48.3416
9	-45.0932	48.599
10	-45.0932	48.6694
11	-45.1958	48.6694
12	-45.1958	48.599
13	-45.4386	48.5732
14	-45.5211	48.6153
15	-45.6618	48.5051
16	-45.5779	48.4585
17	-46.1122	47.9784
18	-46.2011	48.0185
19	-46.38	47.8282
20	-46.2911	47.7881
21	-46.3566	47.43
22	-46.3566	47.5004
23	-46.4592	47.5004
24	-46.4592	47.43
25	-46.6691	47.0585
26	-46.75	47.0969
27	-47.0304	46.8068
28	-46.9581	46.5777
29	-46.8585	46.5972
30	-46.9217	46.7734
31	-46.7976	46.315
32	-46.7976	46.3854
33	-46.9002	46.3854
34	-46.9002	46.315

Annex 10. Interim Measures to Protect Significant Sponge Concentrations

(FC W.P. 09/11, Annex 2 **now** FC Doc. 09/12)

Background

In 2006, the United National General Assembly (UNGA) in its Sustainable Fisheries Resolution 61/105 called for States and Regional Fisheries Management Organizations (RFMOs) to adopt conservation and management measures in order to prevent significant adverse impacts on vulnerable marine ecosystems. UNGA will review the actions of States and RFMO in this respect in the fall of 2009.

Mindful of the work of the FAO in facilitating the development of the International Guidelines for the Management of Deep-sea Fisheries operating in the high seas that serve inter alia to guide the identification of VMEs;

Noting the commitment of NAFO Contracting Parties to implement an ecosystem approach and implement measures following the precautionary approach to address the impacts of fishing on VMEs;

Recognizing the significant steps already taken by NAFO to protect Vulnerable Marine Ecosystems (VMEs) in the NAFO Regulatory Area (NRA) including inter alia:
• the closure of four seamount areas to commercial fishing (2006)
• the establishment of a 3O Coral Protection Zone (2007)
• the closure of the Fogo Seamounts (2008)
• the adoption of a comprehensive framework for the implementation of UNGA Resolution 61/105 including provisions for the identification of existing bottom fishing areas (footprint), assessment of bottom fishing, Exploratory Fishery Protocol for new fishing areas and the interim Encounter provisions for VMEs in both fished and unfished areas of the NRA (2008);

Further recognizing the numerous international scientific research efforts that are designed to enhance knowledge in the area of VMEs, in particular with respect to addressing knowledge gaps on benthic habitat, communities and species in the NAFO Regulatory Area, especially the Spanish lead international survey in 2009-2010;

Conscious of the 2008 Annual Meeting in Vigo, where the Fisheries Commission requested advice from the Scientific Council regarding significant concentrations of sponges (FC Doc. 08/19).

Recognizing the SC response which identified significant sponge concentrations in the NAFO Regulatory Area in its June 2009 report.

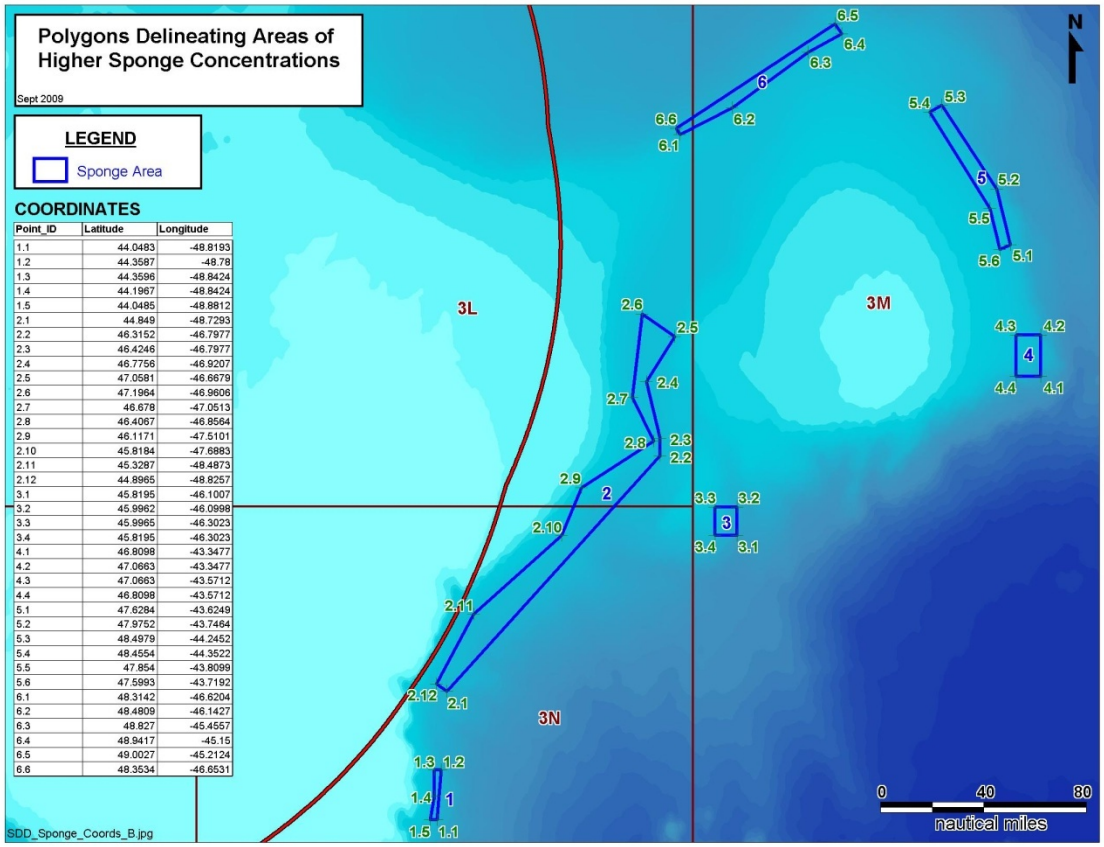
It is proposed that, as part of a continuing commitment to implement the UNGA Resolution, the Working Group of Fisheries Managers and Scientists recommends to the Fisheries Commission for adoption in September 2009:

1. Establishment of sponge protection zones in Divisions 3L, 3M and 3N:

Establish Article 16 bis of NCEM “Sponge Protection Zones”

1. As of January 1, 2010 the following areas shall be closed on an interim basis to all bottom fishing activities until **December 31, 2011.** The closed areas are defined by connecting the following coordinates (in numerical order and back to coordinate 1).

2. The measures referred to **in Article 16 bis (1)** shall be reviewed before 2012 by the Fisheries Commission taking account the advice from the Scientific Council and the Working Group of Fisheries Managers and Scientists, and a decision shall be taken on future management measures.



COORDINATES

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1.3	44.3596	-48.8424
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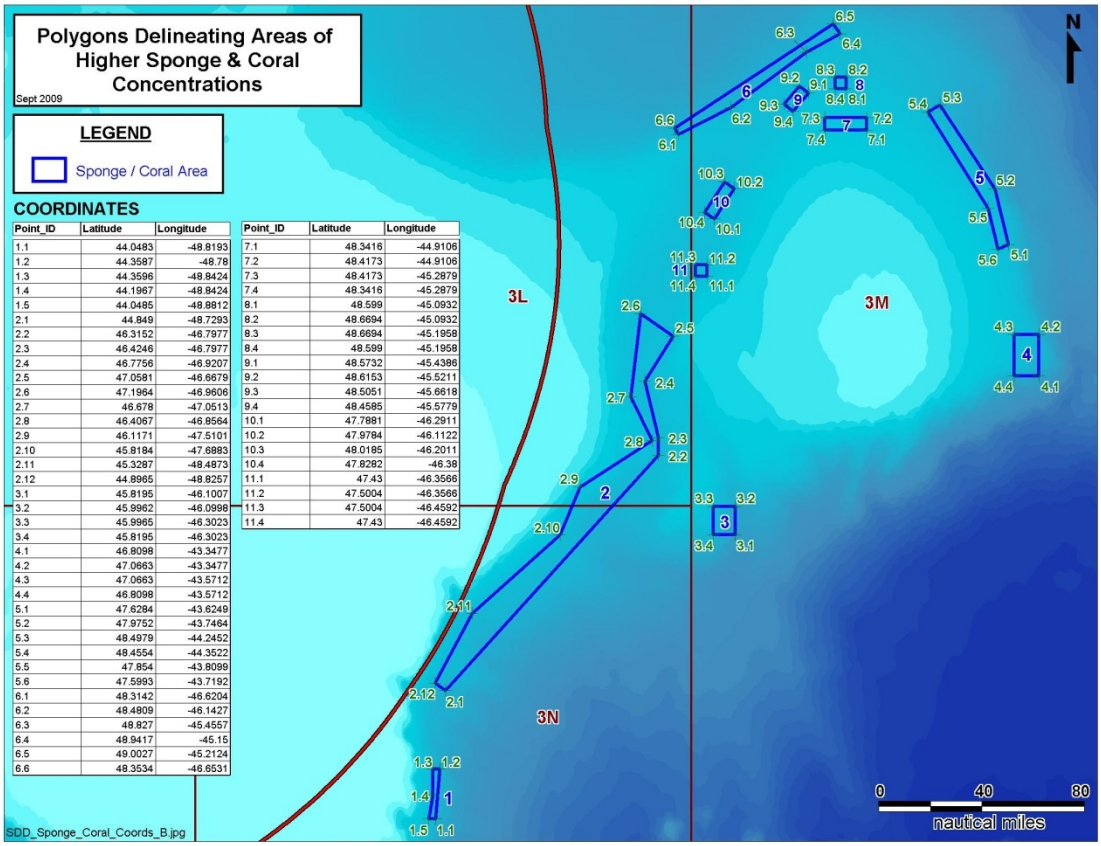
1.5	44.0485	-48.8812
2.1	44.849	-48.7293
2.2	46.3152	-46.7977
2.3	46.4246	-46.7977
2.4	46.7756	-46.9207
2.5	47.0581	-46.6679
2.6	47.1964	-46.9606
2.7	46.678	-47.0513
2.8	46.4067	-46.8564
2.9	46.1171	-47.5101
2.10	45.8184	-47.6883
2.11	45.3287	-48.4873
2.12	44.8965	-48.8257
3.1	45.8195	-46.1007
3.2	45.9962	-46.0998
3.3	45.9965	-46.3023
3.4	45.8195	-46.3023
4.1	46.8098	-43.3477
4.2	47.0663	-43.3477
4.3	47.0663	-43.5712
4.4	46.8098	-43.5712
5.1	47.6284	-43.6249
5.2	47.9752	-43.7464
5.3	48.4979	-44.2452
5.4	48.4554	-44.3522
5.5	47.854	-43.8099
5.6	47.5993	-43.7192
6.1	48.3142	-46.6204
6.2	48.4809	-46.1427
6.3	48.827	-45.4557
6.4	48.9417	-45.15
6.5	49.0027	-45.2124
6.6	48.3534	-46.6531

2. The WGFMS further recommends that the Fisheries Commission considers combining the recommendations of the Report of the WGFMS of March 2009 on corals [Annex 6 of NAFO/FC Doc. 09/2] and sponges as defined in paragraph 1 above, “Establishment of sponge protection zones in Divisions 3L, 3M and 3N”.



COORDINATES

Point_ID	Latitude	Longitude
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1.2	44.3587	-48.78
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1.5	44.0485	-48.8812
2.1	44.849	-48.7293
2.2	46.3152	-46.7977
2.3	46.4246	-46.7977
2.4	46.7756	-46.9207
2.5	47.0581	-46.6679
2.6	47.1964	-46.9606
2.7	46.678	-47.0513
2.8	46.4067	-46.8564
2.9	46.1171	-47.5101
2.10	45.8184	-47.6883
2.11	45.3287	-48.4873
2.12	44.8965	-48.8257
3.1	45.8195	-46.1007
3.2	45.9962	-46.0998
3.3	45.9965	-46.3023
3.4	45.8195	-46.3023
4.1	46.8098	-43.3477
4.2	47.0663	-43.3477
4.3	47.0663	-43.5712
4.4	46.8098	-43.5712
5.1	47.6284	-43.6249
5.2	47.9752	-43.7464
5.3	48.4979	-44.2452
5.4	48.4554	-44.3522
5.5	47.854	-43.8099
5.6	47.5993	-43.7192
6.1	48.3142	-46.6204
6.2	48.4809	-46.1427
6.3	48.827	-45.4557
6.4	48.9417	-45.15
6.5	49.0027	-45.2124
6.6	48.3534	-46.6531

Point_ID	Latitude	Longitude
7.1	48.3416	-44.9106
7.2	48.4173	-44.9106
7.3	48.4173	-45.2879
7.4	48.3416	-45.2879
8.1	48.599	-45.0932
8.2	48.6694	-45.0932
8.3	48.6694	-45.1958
8.4	48.599	-45.1958
9.1	48.5732	-45.4386
9.2	48.6153	-45.5211
9.3	48.5051	-45.6618
9.4	48.4585	-45.5779
10.1	47.7881	-46.2911
10.2	47.9784	-46.1122
10.3	48.0185	-46.2011
10.4	47.8282	-46.38
11.1	47.43	-46.3566
11.2	47.5004	-46.3566
11.3	47.5004	-46.4592
11.4	47.43	-46.4592

Annex 11. Encounter Provisions for Vulnerable Marine Ecosystems

(FC W.P. 09/11, Annex 3 **now** FC Doc. 09/13)

In 2006, the United National General Assembly (UNGA) in its Sustainable Fisheries Resolution 61/105 called for States and Regional Fisheries Management Organizations (RFMOs) to adopt conservation and management measures in order to prevent significant adverse impacts on vulnerable marine ecosystems.

Mindful of the work of the FAO in facilitating the development of International Guidelines for the Management of Deep-sea Fisheries operating in the high seas that serve *inter alia* to guide the identification of VMEs;

Noting the commitment of NAFO Contracting Parties to implement an ecosystem approach and implement measures following the precautionary approach to address the impacts of fishing on VMEs;

Recognizing the significant steps already taken by NAFO to protect Vulnerable Marine Ecosystems (VMEs) in the NAFO Regulatory Area (NRA) including inter alia:

- the closure of four seamount areas to commercial fishing (2006)
- the establishment of a 3O Coral Protection Zone (2007)
- the closure of the Fogo Seamounts (2008)
- the adoption of a comprehensive framework for the implementation of UNGA Resolution 61/105 including provisions for the identification of existing bottom fishing areas (footprint), assessment of bottom fishing, Exploratory Fishery Protocol for new fishing areas and the interim Encounter provisions for VMEs in both existing and new fishing area of the NRA (2008);

Further recognizing the numerous international scientific research efforts that are designed to enhance knowledge in the area of VMEs, in particular with respect to addressing knowledge gaps on benthic habitat, communities and species in the NAFO Regulatory Area, especially the Spanish lead international survey in 2009-2010; and

Further recognizing the proposal for closed areas for corals and sponges put forward by the September 2009 meeting of the Working Group of Fisheries Managers and Scientists to Fisheries Commission.

The Working Group of Fisheries Managers and Scientists strongly believed that the recommended coral and sponge closed areas and the interim encounter provision thresholds are integral and therefore urged that the Fisheries Commission consider these recommendations as a package.

Therefore, it is proposed that, as part of a continuing commitment to implement the UNGA Resolution, the Working Group of Fisheries Managers and Scientists recommends to the Fisheries Commission for adoption in September 2009:

1. The Fisheries Commission amend the text of Article 5bis 3) as follows:

For both existing and new fishing areas, an encounter with primary VME indicator species is defined as a catch per set (e.g. trawl tow, longline set, or gillnet set) of more than **60** kg of live coral and/or **800** kg of live sponge. These thresholds are set on a provisional basis and may be adjusted as experience is gained in the application of this measure.

Annex 12. Exploratory Fishery Data Collection Form
(FC W.P. 09/11, Annex 4 **now** FC Doc. 09/14)

Exploratory Fishery Data Collection Form

Flag state		Day	Month	Year		Trawl 1	Trawl 2	Trawl 3
Vessel					Trawl type			
Call sign					Number of meshes			
					Mesh size			

TOW START					TOW END				
GMT time		Pos		Depth m	GMT time		Pos		Depth m
hour	min	grd	min		hour	min	grd	min	

Corals total kg.	
Sponges total kg.	

Organisms identified to the lowest taxonomic unit*	Bio Sa.	VI Sp.	Weight*	
			Act.	Est.

Bio Sa. Biological Sampling	Tick for biological sample taken	Refer to annex 1 FAO international
VI Sp. Vulnerable Indicator species	Tick for biological sample taken	guidelines for the management of
Weight	Tick for weight estimated or actual	deep-sea fisheries in the high seas

*Use NAFO Coral Identification Guide

Annex 13. Follow-up by the Working Group of Fishery Managers and Scientists

(FC W.P. 09/26 **now** FC Doc. 09/19)

In 2006, the United National General Assembly (UNGA) in its Sustainable Fisheries Resolution 61/105 called for States and Regional Fisheries Management Organizations (RFMOs) to adopt conservation and management measures in order to prevent significant adverse impacts on vulnerable marine ecosystems.

Mindful of the work of the FAO in facilitating the development of international guidelines for the management of deep-sea fisheries operating in the high seas that call for mapping of existing bottom fisheries;

Noting the NCEM of 2008 that called for Contracting Parties to submit comprehensive maps of existing fishing areas to the Executive Secretary for the purpose of producing a map illustrating the combined bottom fishing areas within the NRA (Chapter 1bis, Article 2bis); and

Recognizing the very significant work of the NAFO Secretariat in processing the submissions of the Contracting Parties and preparing a footprint map for review by the Scientific Council pursuant to the above.

Proposal

It is proposed that, prior to the 2010 NAFO Annual Meeting, the Working Group of Fisheries Managers and Scientists (WGFMS) undertake and report back to Fisheries Commission on the following:

1. Further review of data collection in exploratory and existing fishing areas;

2. Further examination of the delineation of the Fishing Footprint based on the work undertaken by the NAFO Executive Secretariat and tabled in FC Working Paper 09/01 (Revised);

3. Review and update Chapter Ibis to reflect the work that has now been completed; and

4. Further review of fishery assessment guidelines.

Annex 14. Delineation of Existing Bottom Fishing Areas in the NAFO Regulatory Area

(FC Working Paper 09/1, Rev. **now** FC Doc. 09/20)

Introduction

In 2007, the United Nations General Assembly (UNGA Res. 61/105, paragraph 83) requested Regional Fisheries Management Organizations to regulate bottom fisheries that cause a significant adverse impact on vulnerable marine ecosystems. Guidelines on implementation drafted by FAO during 2007–2009 call for the mapping of existing bottom fisheries (FAO, 2009, section 5). Fisheries Commission (FC) drafted a new chapter for the NAFO Conservation and Enforcement Measures (NCEM) in 2008 that calls for the submission of maps identifying bottom fishing areas in the NRA for 1987-2007 with trawl activity given priority (NCEM, 2009, Chapter 1bis, Article 2bis). The Secretariat received the relevant information from Flag states and presented the compiled maps to FC and Scientific Council (SC) during the September 2008 Annual Meeting in Vigo, Spain (FC WP 08/25, 08/25 Addendum, 08/25 Addendum 2). Owing to the presence of anomalous fishing positions, FC requested flag States to "submit or re-submit their respective footprint data" (FC Doc. 08/22, section V, paragraph 13). The Working Group of Fishery Managers and Scientists (FCWG FMS), during its meeting held in Vigo, Spain during March 2009 (FC Doc. 09/02), reviewed a draft presentation by the NAFO Secretariat on data submitted by flag States for the delineation of the existing fishing footprint (FCWG WP 09/2 Revised and FC Doc. 09/02 Annex 5). It was decided that the Secretariat would proceed with preparing a draft footprint map that includes boundary coordinates for review by SC in June 2009 and then FC in September 2009. Russia and Spain submitted their point data, respectively, during and soon after the FCWG FMS March 2009 meeting. The working paper (FCWG WP 09/2 Revised and addendum) provided a framework for the development of NAFO's bottom fishing footprint.

Submissions

Ten flag States provided bottom fishing activity coordinates, three of which (Portugal, Japan, and Norway) further provided speed information. Germany's submitted an image of their fishing activity that did not contain bottom fishing in the NRA during the 1987–2007 period, and was thus omitted in the analysis. A summary of flag State submissions is given in Table 1.

The Vessel Monitoring System (VMS) dataset covering years 2003-2007, held by the NAFO Secretariat, was not used in the delineation of the footprint since this information had already been included in the flag State submissions. A visual examination of area of fishing activity derived from the Secretariat's VMS data showed that this was well within the footprint defined by the flag State submissions.

Table 1. Summary of flag State submissions on bottom fishing activities in the NRA for the period 1987-2007.

	Submission Information		Data Supplied				Filter
Flag State	Date	Data format	Years	Lat/Lon[1]	Date/time	Speed (knots)	Speed (knots)
Canada	18-Sep-08	point data	1987-2007	dec	year	-	-
Estonia	12-Sep-08	haul data	1996-2007	dec	year	-	-
Faroe Is.	16-Sep-08	haul data	2003-2007	dec	year	-	-
Germany	03-Mar-09	-	2001-2007	-	-	-	-
Greenland	10-Sep-08	haul data	1993-2008	deg	year	-	-
Iceland[2]	19 (23) Sep 08	point data	1993-2006	dec	-	-	-
Japan	24-Nov-08	point data	2001-2007	dec	date/time	0-6.9	1.0-4.0
Norway	30-Dec-08	point data	2000-2007	dec	year/month	1.0-5.0	1.0-4.0
Portugal	12-Sep-08	point data	1997-2007	deg	date/time	0-14.0[4]	1.0-4.0
Russia[3]	16-Apr-09	point data	1987-2007	dec	year/month/day	-	-
Spain[3]	24-Apr-09	point data	1987-2007	dec	year	-	-

[1] dec: decimal degrees as DD.dddd; deg: DDMMdd

[2] Iceland re-submitted their information after the September 2008 Annual meeting.

[3] Russia and Spain submitted their point data, respectively, during and soon after the FCWGFMS March 2009 meeting.
[4] Submission indicated maximum speed of 28.0 knots which is assumed to be an outlier.
- not submitted or no information.

Depth distribution of trawl fishery

An analysis of the Secretariat's VMS data (2003-2007) for fishing vessels travelling at 2.0-4.0 knots, that were assumed to be actively trawling at these speeds, showed a bimodal peak with very little evidence of fishing beyond 1600m. The shallow water component (0-700m) represents a variety of groundfish and shrimp, whereas the deepwater component of this fishery is mainly Greenland halibut (Figure 1).

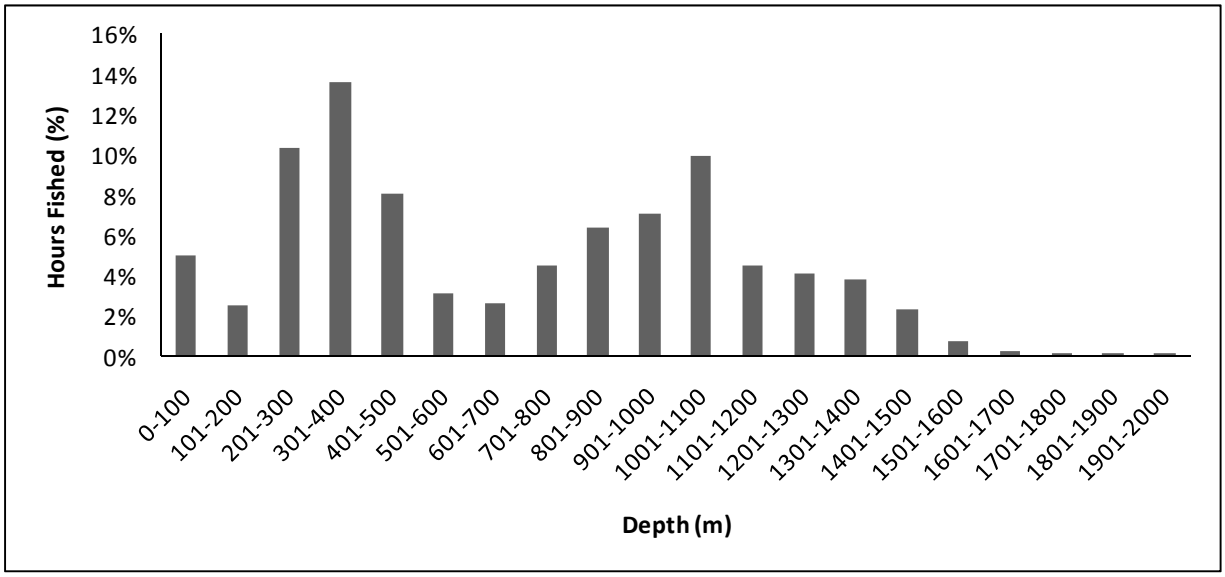

Figure 1. Percentage of fishing activity, assumed to be trawling, by depth within the NRA. The source data was the Secretariat's VMS data for 2003-2007.

Seamounts

There has been some bottom fishing on seamounts within the NRA (SCR Doc 07/06). Also, examination of the VMS dataset reveals that there had been bottom fishing activities in the Corner Rise seamounts as reflected in Figure 4a of FCWG WP 09/2 Revised. Only one of the Corner Rise seamounts would have had enough fishing activity to qualify as an existing fishing area, with fishing activity in the Newfoundland and New England seamounts likely falling below the threshold level for inclusion. However, these seamounts are now closed to all bottom fishing activities until a review is carried out in 2010.

Footprint Map

An existing bottom fishing area is defined as "areas where VMS data and/or other available geo-reference data indicating bottom fishing activities have been conducted at least in two years within a reference period of 1987 to 2007 (NCEM, 2009, Chapter 1bis paragraph 3). The data received by the Secretariat from Flag states were therefore combined based on year and filtered to include only coordinates that appeared in at least two different years. Data received from flag States with speed included (Japan, Norway and Portugal) were filtered to include actual fishing activity. A coordinate with a corresponding speed of between 1.0 and 4.0 knots was deemed to be fishing. Conversely, coordinates with associated speeds outside of this 1.0-4.0 knots range were excluded from the footprint map as they were deemed to be from vessels dodging bad weather or steaming (WGDEC, 2008). A plot comparison of the originally submitted (unfiltered) and filtered data-points is shown in Figure 2a and 2b.

The data received by the Secretariat from Flag states includes both point and haul data from varying sources i.e. VMS, logbook, and observers. In order to standardize the information and create a composite map, all haul-by-haul data start and end coordinates were combined and plotted as distinct points. Latitude and longitude coordinates were

plotted based on the WGS 84 datum. Contours were derived from an interpolation (kriging) of GEBCO (1x1 minute) bathymetric data, and correspond closely to those on the Gulf of Maine Canadian Hydrographic Service chart No. 4001.

For the purpose of plotting, a grid is defined as the unit for a “fishing spot”. Plots of various grid sizes were prepared, shown in Figures 3a-c. A 5nm×5nm square was chosen as the basis for delineating the footprint because this is the largest grid size that would not double count 2-hourly reported VMS data (noting that a trawler would travel 6-7nm during a 2 hour tow). The delineation of the footprint boundary was achieved by simply drawing a boundary around the observed fishing activity. The footprint map is shown in Figure 4a and Figure 4b.

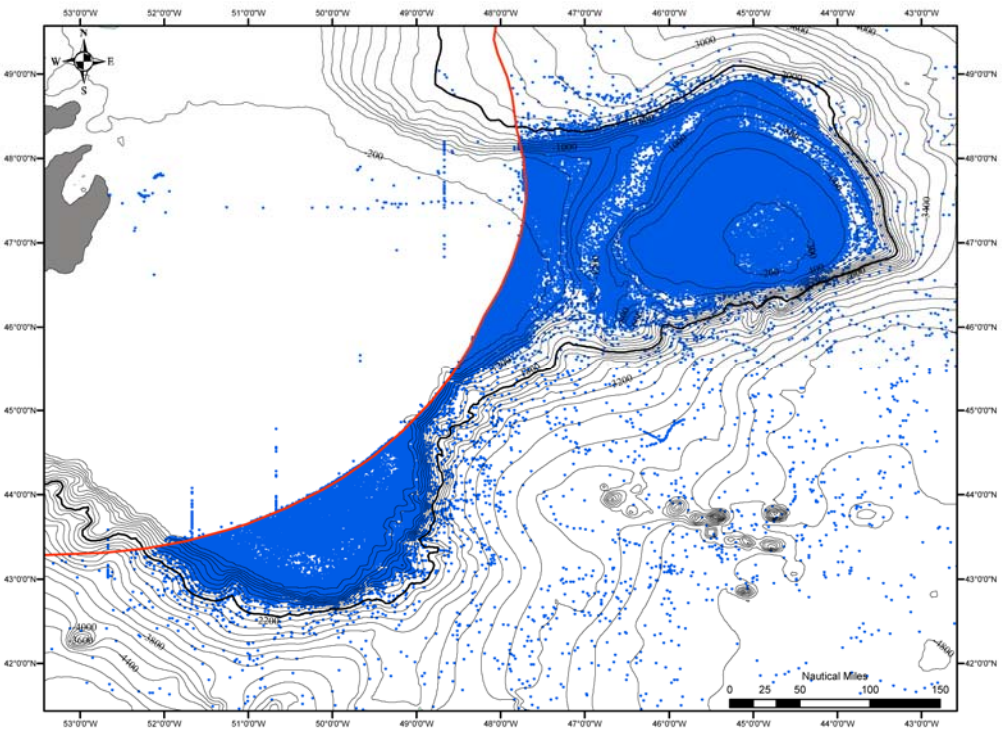

Figure 2a. Composite plot of coordinates of bottom fishing activity data submitted by all flag States for 1987-2007 (unfiltered).

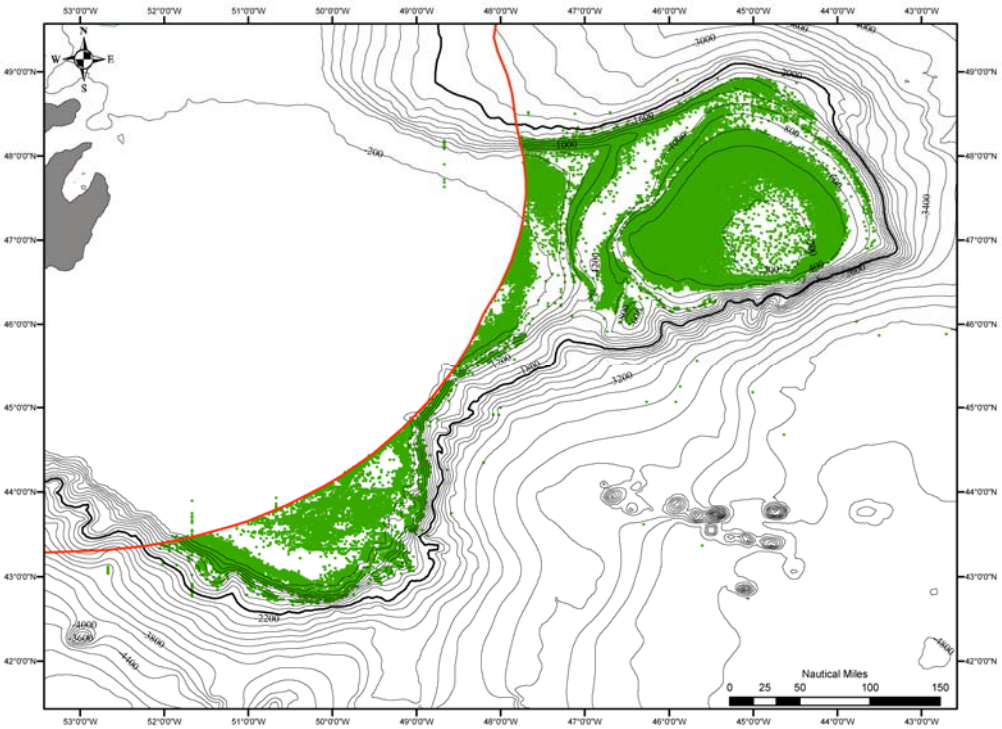

Figure 2b. Composite plot of coordinates of bottom fishing activity data submitted by all flag States for 1987-2007 filtered by criteria of occurrence (at least in two different years) and speed (1.0-4.0 knots).

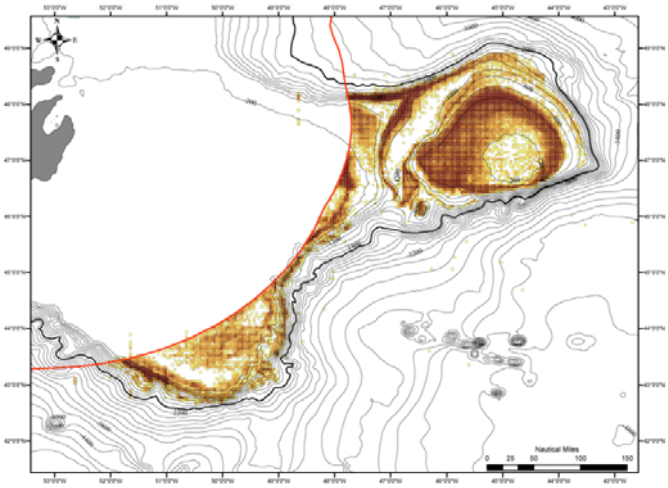

Figure 3a. Footprint map using the 2.5 x 2.5 nm grid.

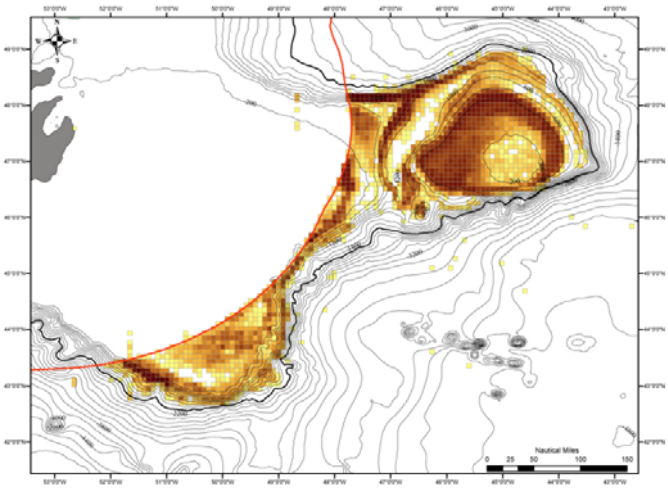

Figure 3b. Footprint map using the 5 x 5 nm grid.

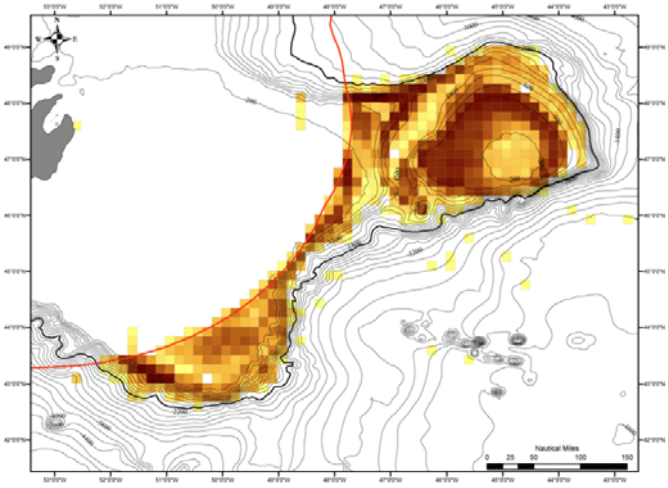

Figure 3c. Footprint map using the 10 x 10 nm grid

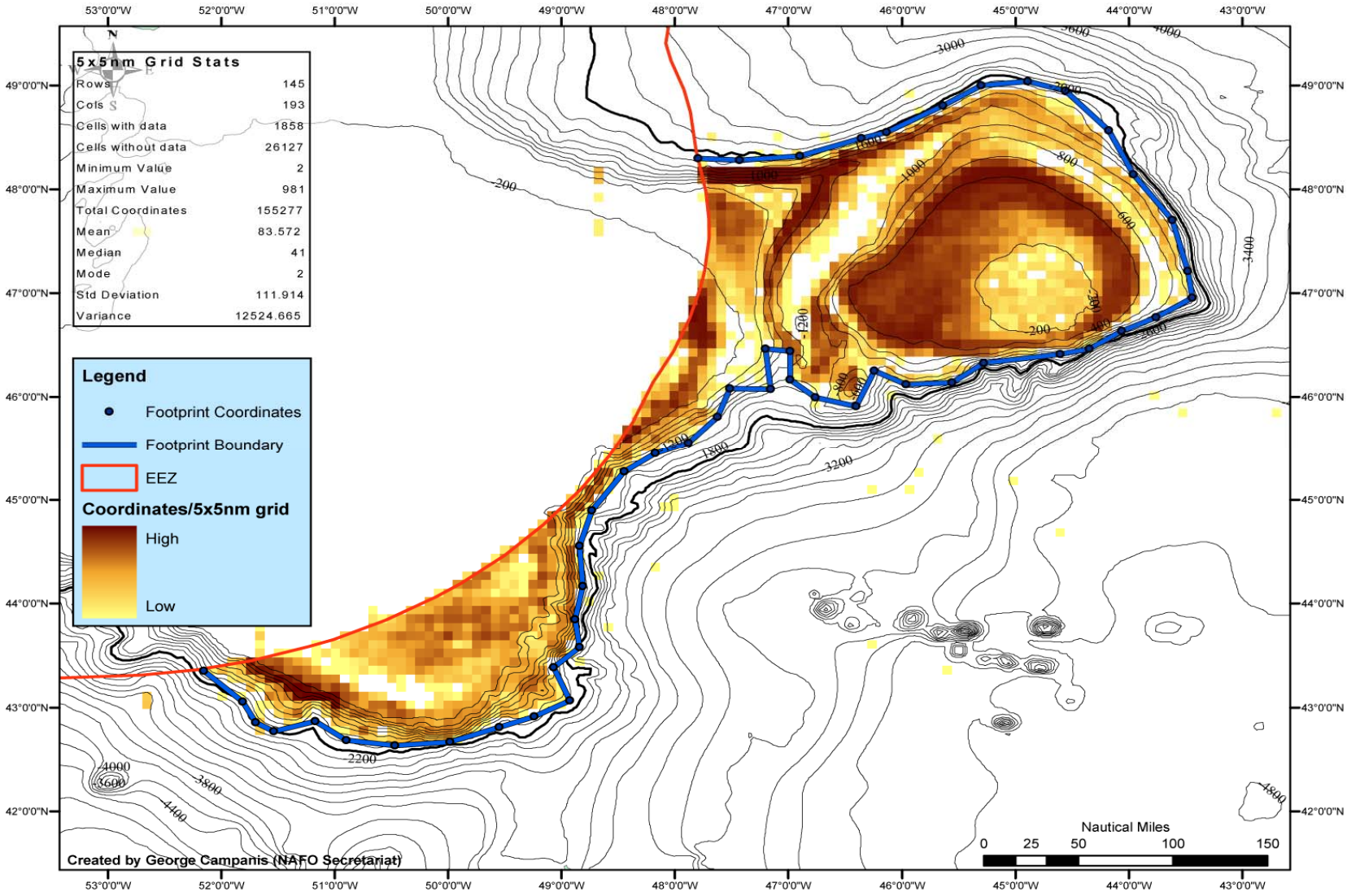

Figure 4a. Footprint map based on 5 x 5 nm grid, showing relative intensity of bottom fishing activities.

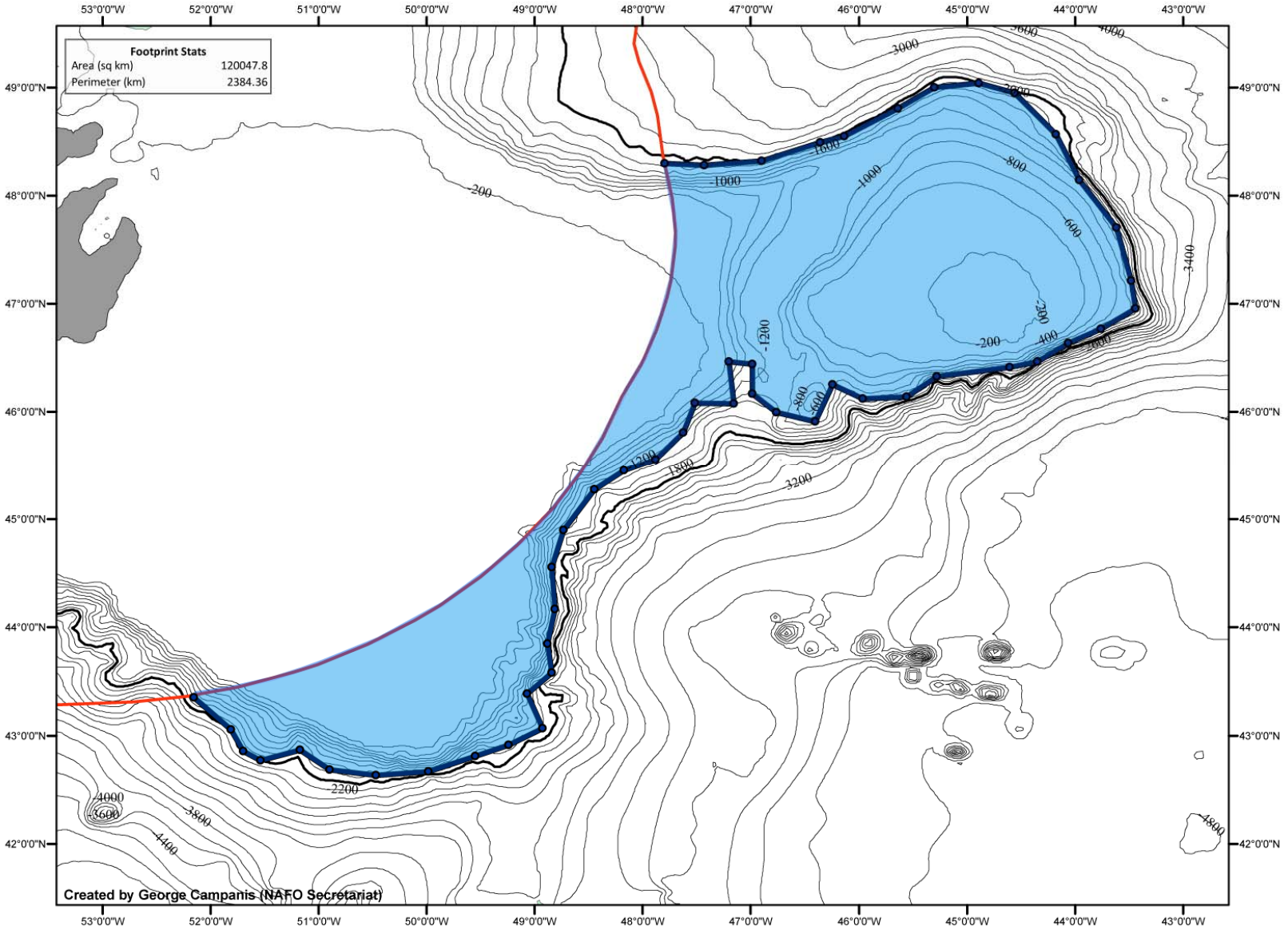

Figure 4b. Footprint map based on 5 x 5 nm grid with calculated total area and perimeter (UTM NAD 83 Zone 23 projection).

Proposed Footprint Boundary Coordinates

Coordinate points defining the boundary of the footprint (Figures 4a and b) are presented in Table 2. The boundary intersects the Canadian EEZ and therefore only coordinates east of the EEZ are presented. Coordinates 1 and 50 represent the northern and southern intersect with the Canadian EEZ, respectively.

Table 2. Boundary points delineating the footprint in the NRA.

The Canadian EEZ boundary of the western side to the following coordinates within the NRA on the eastern side:

Point No.	Latitude	Longitude
1	48°17'39"N	EEZ boundary[1]
2	48°16'51"N	47°25'37"W
3	48°19'15"N	46°53'48"W
4	48°29'21"N	46°21'17"W
5	48°32'43"N	46°08'04"W
6	48°48'10"N	45°37'59"W
7	48°59'54"N	45°17'46"W
8	49°02'20"N	44°53'17"W
9	48°56'46"N	44°33'18"W
10	48°33'53"N	44°10'25"W
11	48°08'29"N	43°57'28"W
12	47°42'00"N	43°36'44"W
13	47°12'44"N	43°28'36"W
14	46°57'14"N	43°26'15"W
15	46°46'02"N	43°45'27"W
16	46°38'10"N	44°03'37"W
17	46°27'43"N	44°20'38"W
18	46°24'41"N	44°36'01"W
19	46°19'28"N	45°16'34"W
20	46°08'16"N	45°33'27"W
21	46°07'13"N	45°57'44"W
22	46°15'06"N	46°14'21"W
23	45°54'33"N	46°24'03"W
24	45°59'36"N	46°45'33"W
25	46°09'58"N	46°58'53"W
26	46°26'32"N	46°58'53"W
27	46°27'40"N	47°12'01"W
28	46°04'15"N	47°09'10"W
29	46°04'53"N	47°31'01"W
30	45°48'17"N	47°37'16"W
31	45°33'14"N	47°52'41"W
32	45°27'14"N	48°10'15"W
33	45°16'17"N	48°26'50"W
34	44°54'01"N	48°43'58"W
35	44°33'10"N	48°50'25"W
36	44°09'57"N	48°48'49"W
37	43°50'44"N	48°52'49"W
38	43°34'34"N	48°50'12"W
39	43°23'13"N	49°03'57"W
40	43°03'48"N	48°55'23"W
41	42°54'42"N	49°14'26"W
42	42°48'18"N	49°32'51"W
43	42°39'49"N	49°58'46"W
44	42°37'54"N	50°28'04"W
45	42°40'57"N	50°53'36"W
46	42°51'48"N	51°10'09"W
47	42°45'59"N	51°31'58"W
48	42°51'06"N	51°41'50"W
49	43°03'56"N	51°48'21"W
50	43°22'12"N	EEZ boundary[2]

[1] approximately 47°47'45"W
[2] approximately 52°09'46"W

Discussion

The submitted data did not distinguish between mobile and static fishing gears, and therefore only a generalized fishing footprint can be given. The ICES-NAFO WGDEC developed vessel speed criteria in discerning the activity of the fishing vessel. If the vessel was travelling between 1-2 knots, it could be either dodging in poor weather, laying gillnets or laying longlines; between 2-4 knots, it could be bottom trawling. Thus the speed range of 1.0–4.0 knots was used as the filtering criteria. The inclusion of speeds between 1-2 knots may account for the static gears like gillnets and longlines.

The delineated fishing footprint in Figure 4a-b is based on the submitted bottom fishing activity by Flag states over a 20 year period and satisfying the criteria of twice within a 5nm×5nm square and does not closely follow a particular depth contour. Both the depth histogram (Figure 1) and the footprint map (Figure 4a-b) show that fishing is much reduced below 1600m.This would approximate to the maximum depth at which a trawl normally operates.

References

FAO. 2009. Technical Consultation on International Guidelines for the Management of Deep-Sea Fisheries in the High Seas. *FAO Fisheries and Aquaculture Report*, FIEP/R881 (Tri), No. 881, 87 pp. [see ftp://ftp.fao.org/FI/DOCUMENT/tc-dsf/2008_2nd/2_1e.pdf for advance copy, web only]
FC Doc. 08/22. Report of the Fisheries Commission 30th Annual Meeting, 22 - 26 September 2008, Vigo, Spain. NAFO. 86 pp. http://archive.nafo.int/protect/fc/2008/fcdoc08-22.pdf

FC Doc. 09/02. Report of the ad hoc Working Group of Fishery Managers and Scientists, 19-20 March 2009, Vigo, Spain. http://archive.nafo.int/protect/fc/2009/fcdoc09-02.pdf

FC WP 08/25. Identification of existing bottom fishing areas (footprint). 12 pp. http://archive.nafo.int/protect/fc/2008/fcwp08-25.pdf

FC WP 08/25 (Addendum). Identification of existing bottom fishing areas (footprint) 2 pp. http://archive.nafo.int/protect/fc/2008/fcwp08-25add.pdf

FC WP 08/25 (Addendum 2). Identification of existing bottom fishing areas (footprint). 5 pp. http://archive.nafo.int/protect/fc/2008/fcwp08-25add2.pdf

FCWG WP 09/2 Revised Identification of Bottom Fishing Area (footprint) 11 pp. http://archive.nafo.int/protect/fc/2009/wgfms/fcwgwp09-02rev.pdf

FCWG WP 09/2 Revised (Addendum) Identification of Bottom Fishing Area (footprint) 1 p. http://archive.nafo.int/protect/fc/2009/wgfms/fcwgwp09-02revadd.pdf

NCEM, 2009. NAFO Conservation and Enforcement Measures. 92 pp. http://www.nafo.int/fisheries/CEM/CEM.pdf

Thompson, A., and G. Campanis. 2007. Information on Fishing On and Around the Four Closed Seamount Areas in the NRA. 10 p. NAFO SCR Doc 07/06. http://www.nafo.int/science/publications/SCDocs/2007/abstracts/abstract006.html

UNGA. 2007. Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments. A/RES/61/105. http://daccessdds.un.org/doc/UNDOC/GEN/N06/500/73/PDF/N0650073.pdf?OpenElement

WGDEC. 2008. Report of the ICES-NAFO Joint Working Group on Deep Water Ecology (WGDEC), 10–14 March 2008, Copenhagen, Denmark. ICES CM 2008/ACOM:45. 126 pp. http://www.ices.dk/reports/ACOM/2008/WGDEC/WGDEC_2008.pdf

Annex 15. Use of VMS Information for Search and Rescue

(STACTIC W.P. 09/7, Rev. **now** FC Doc. 09/7)

Background:

During the summer of 2008 the Iceland and US Coast Guard participated in a Search and Rescue (SAR) exercise. It was noted that there were not any provisions in the NAFO Conservation and Enforcement Measures that permitted the use of VMS information for Search and Rescue or safety purposes. Article 26 (VMS) and Annex XIX did not specifically authorize the use of VMS information for these purposes.

At the September 2008 meeting at Vigo it was generally agreed that the use of VMS for SAR and maritime safety purposes should be authorized. Several countries indicated that domestic legislation or policy permitted the use of domestic VMS for purposes other than Fisheries compliance. Iceland, United States and Canada were tasked to cooperate on developing a proposal for review.

Proposal:

Amend Article 26 to add a new paragraph 13 as follows:

13. Contracting Parties and the Secretariat may provide and/or use the NAFO VMS data for Search and Rescue and maritime safety purposes.

Annex 16. Proposal for Improved VMS Reporting

(STACTIC W.P. 09/13 **now** FC Doc. 09/8)

Introduction

VMS reporting as it is practised today is insufficient to monitor compliance of vessels e.g. regarding fisheries entries into closed boxes. The data are also insufficient to answer questions of the spatial and temporal extent of fisheries and to differentiate between fisheries types.

As was demonstrated in the footprint exercise in NAFO the VMS information is not accurate enough to clearly designate areas as fishing areas and non-fishing areas. According to Article 26, 8 "*The Executive secretary shall make VMS data available in a summary form to the Scientific Council following specific requests from the Fisheries Commission to the Scientific Council to determine fishing effort on and around vulnerable habitats and for any other purpose*" It has been stated in these reports that it is difficult to make accurate reports based on the present reporting system. It has been pointed out in NAFO SCR Doc. 07/48 Serial No. N5400 in the analysis in NAFO SCR Doc. 08/30 Serial No. N5530 and more subtly in NAFO SCR Doc. 07/06 Serial No. N5347 and NAFO SCR Doc.07/90 Serial No. N5481[1].

Similarly NEAFC asked for ICES advice in 2009 regarding the usefulness of their VMS data (requirements very similar to the ones in NAFO). The answer from ICES included the following (9.3.2.3)[2]:

a) including in catch reports the fishing gear used if available;
b) increasing frequency of transmission (ideally once a day and reported on haul by haul basis) and completeness of catch reports (catching all species in the catch);
c) increasing the polling frequency of VMS data
d) requiring transmission of vessel speed and heading.

By adding course and speed to the data elements and increasing the VMS communication to once every hour the traceability of vessels will be improved considerably and it will be in line with the advice from NAFO scientific council and ICES.

This proposal should also be seen in connection with improved catch reporting.

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[1] NAFO reports can be found here
NAFO SCR Doc. 07/06 Serial No. N5347 http://archive.nafo.int/open/sc/2007/scr07-006.pdf Information on Fishing On and Around the Four Closed Seamount Areas in the NRA
NAFO SCR Doc. 07/48 Serial No. N5400 http://www.nafo.int/publications/frames/science.html Information on Fishing Effort in the NRA for 2006
NAFO SCR Doc. 08/30 Serial No. N5530 http://archive.nafo.int/open/sc/2008/scr08-030.pdf NAFO SCR Doc.07/90 Serial No. N5481 Requirements to estimate fishing effort from VMS transmissions
http://archive.nafo.int/open/sc/2007/scr07-090.pdf Analysis of Shrimp Fishing Effort Using VMS data

[2] ICES advice to NEAFC can be found here
9.3.2.1
http://www.ices.dk/committe/acom/comwork/report/2009/Special%20Requests/NEAFC%20information%20on%20distribution%20of%20vulnerable%20habitats.pdf
9.3.2.2
http://www.ices.dk/committe/acom/comwork/report/2009/Special%20Requests/NEAFC%20use%20and%20quality%20of%20VMS%20data.pdf
9.3.2.3
http://www.ices.dk/committe/acom/comwork/report/2009/Special%20Requests/NEAFC%20suitable%20criteria%20for%20differentiating%20fisheries%20into%20possible%20management%20types.pdf

Proposal

To be added to Article 26, 1.

d) vessel speed

e) vessel course/heading

Must be added to Annex IX VMS Data Format

Data Element	Code	Mandatory/Optional	Remarks
Speed	SP	M	Activity detail; speed at time of transmission
Course	CO	M	Activity detail; course at time of transmission

Must be added to Annex XXII C. Format for electronic exchange of fisheries monitoring information (The North Atlantic Format).

Category	Data Element	Field code	Type	Contents	Definitions
Activity Details	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

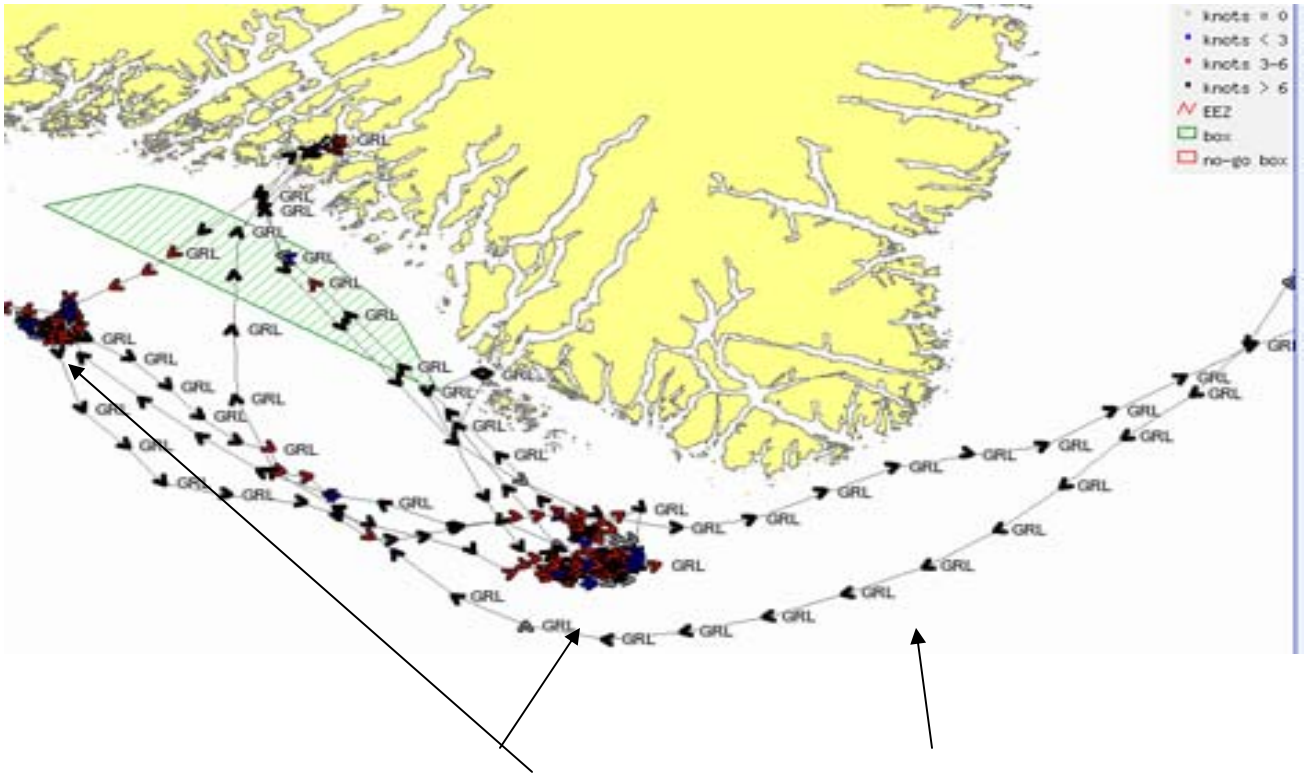
Change in Article 26, 1.

…The satellite monitoring device shall ensure the automatic communication at least once every hour ….

Amendment to table in Article 27

Report:	Code:	Remarks:
Positon	POS	Position report every hour

EXAMPLE



Closed area

Typical fishing pattern at slow speed

Steaming (>6knot = black)

Example of 1 hour VMS plot with course and speed. This vessel is not fishing illegally in the closed area. It is obvious that it is fishing in two areas outside the box and steaming the rest of the time.

Annex 17. Proposal for Improved Catch Reporting

(STACTIC W.P. 09/19, Rev. 3 **now** FC Doc. 09/9)

Introduction

At the STACTIC meeting in St. Pierre et Miquelon in 2009 DFG agreed to make a proposal for an improved catch reporting in the shrimp fishery in Division 3M and 3L, two management areas where the stocks are managed by fishing days and tonnes respectively. A uniform reporting system must be in place in order to make the control more transparent and effective. A reporting system based on weekly catches as well as daily catches should include quantities as well as number of fishing days.

As the CEM contains miscellaneous catch reporting rules it would simplify reporting obligations if the same rules were applicable in all fisheries in the regulatory area. Shrimp in Div. 3L, for example, are to be reported every day, Greenland halibut is to be reported on a five day basis in Subarea 2 and Divisions 3KLMNO while Redfish in some areas are to be reported every second week until catches reaches 50%, after which time weekly notification shall apply. These varying rules make it difficult to make a standardized reporting regime (especially the five days requirement).

When changing the reporting system in the shrimp fisheries it is obvious to introduce the weekly catch reporting in general for all fisheries in the Regulatory Area.

Proposal

To simplify, streamline and make the reporting regime more effective it is suggested to introduce a weekly catch report (CAT) in all areas for all fisheries. The weekly catch report is already implemented in NEAFC.

A daily catch report (CAT) is suggested in the:

- Div. 3L shrimp fishery
- "Others" quota in accordance with Article 3 paragraph 3.
- Greenland halibut in Subarea 2 and divisions 3KLMNO after 75% of the quota has been taken.

Catch prior to entry and exit from 3L have to be reported (Article 27.1c) as a CAT. It is suggested to keep this requirement as no alternative report exists.

Modification of Article 7.6.d)
Reference to five days becomes weekly basis
Reference to three days becomes daily basis
Delete the last sentence in Art. 7.6.d) second paragraph. "*The report shall for the first time be transmitted at the latest ten days after the entry into the Regulatory Area or after the beginning of the fishing trip*".

Modification of Article 25.3
Reference to 48 hours becomes daily

Modification of Article 25.4
The daily notification shall be a daily CAT as specified in Annex X.2)

Modification to Annex X. 2)
The Data Element "Daily Catch" to become "Catch"
The remarks for that Data Element to become;
"Activity detail; Cumulative catch retained on board by species, either since commencement of fishing in the R.A. of last "Catch" report (CAT) or (CAX) if such report is sent according to Chapter VII, in pairs as needed.
FAO species code
Live weight in kilograms, rounded to the nearest 100 kilograms."
The Date Element "Days fished" to be made mandatory

New bullet point c) Article 27

c) Catch report. This report shall be made by the master of the vessel for all species (3 alpha code) and stock area, in kg (rounded to the nearest 100 kilograms), including nil catch returns. The report shall contain the catches of the specified period:

i) On a weekly basis: catch cumulated in a week period from Monday to Sunday midnight preceding the report. The first report shall be made on the first Monday after the entrance in the NAFO Regulatory Area. The report shall be sent each Monday before 12.00 hours UTC.
This message is identified as CAT

ii) On a daily basis, if so specified in the CEM: The report shall be sent each day before 12.00 hours UTC of the day after fishing. This message is identified as CAT

Current bullet point “c” to become “d”, “d” to become “e” and “e” to become “f”.

Table in Article 27 to be amended

Report:	Code:	Remarks:
Catch	CAT	*Reporting of catches; daily, weekly and prior to crossing the boundary to 3L as appropriate*

Text that can be omitted from the CEM

Annex I.A. - Annual Quota Table (notes)

2. The Contracting Parties shall notify the Executive Secretary every second week of catches taken by its vessels from this allocation until accumulated reported catch reaches 50%, after which time weekly notification shall apply. (…)

8. Each Contracting Party shall notify the Executive Secretary every second week of catches taken by its vessels from this stock until accumulated reported catch reaches 50%, after which time weekly notification shall apply. (…)

Annex 18. Port State Measures Administrative Changes

(STACTIC W.P. 09/22, Rev. **now** FC Doc. 09/10)

Explanatory Memorandum

At the 2008 NAFO annual meeting, Fisheries Commission amended the NAFO Conservation and Enforcement Measures to include Port State Measures. The Port State Measures currently include duties for the Port State Contracting Parties, Flag State Contracting Party, the Secretariat and the master of the vessel. Chapter V Port State Control Article 46.3 – Duties of the Port State Contracting Party are required to designate the competent authority which shall act as the contact point for the purposes of receiving notifications under Article 48 (1, 2 and/or 3)…… etc. There currently is not a requirement for the Flag State Contracting Party to provide a point of contact for Port State Contracting Parties as required under Article 46 5.

Proposal

Amend Chapter V – Port State Control, Article 47, Duties of the Flag State Contracting Party as follows:

Add:

3. **The Flag 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 46 (5) and providing confirmation in accordance with Article 46 (6), and communicate this information to the NAFO Secretariat for dissemination to Contracting Parties.**

Amend Chapter V – Port State Control, Article 49, Duties of the Executive Secretary as follows:

Add:

1 d) The information about the designated competent authorities in each Flag State Contracting Party.

Annex 19. Annual Compliance Review 2009
(Compliance Report for Calendar Year 2008)

(STACTIC W.P. 09/18, Rev. 2 **now** FC Doc. 09/16)

1. Introduction

In 2004, NAFO introduced its first compliance review (FC Doc. 04/13). This review uses information from diverse NAFO monitoring, control and surveillance activities to determine how well the international fisheries complied with the annually updated NAFO Conservation and Enforcement Measures (NCEM). The review also assesses the performance of NAFO Contracting Parties with regard to their reporting obligations.

The format of the compliance review is being continuously developed by the Standing Committee on International Control (STACTIC). The current 2009 NAFO compliance review compares information for the years 2004 to 2008 from the following sources: a) Vessel Monitoring System (VMS), b) Observer Reports, c) Port Inspection Reports, d) At-sea Inspection Reports and e) Reports on Dispositions of Apparent Infringements. More detailed data compilation tables were complied by the NAFO Secretariat and circulated to the Contracting Parties in June 2009.

2. Fishing Activities (effort) in the NAFO Regulatory Area

In the years covered by this review, the fishery in the NAFO Regulatory Area (NRA) has continually diminished. In 2004, there were 134 active vessels operating in the NRA. However, by 2008 the number of active vessels had decreased to 60, representing a 55-percent decrease (Figure 1). This decrease is particularly pronounced in the pelagic redfish fishery where the number of vessels has dropped by almost 79 percent; from 48 in 2004 to only 10 in 2008.

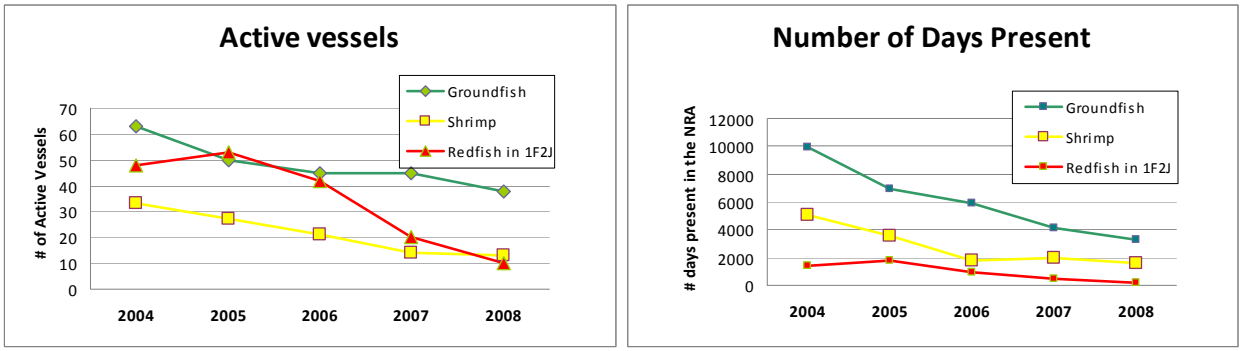


Figure 1. *Number of vessels and vessel days in the NAFO Regulatory Area by fishery type*

The fishing effort is measured in vessel-days per year in the NRA. Vessel-days are determined by the position reports transmitted by the vessels through their respective Fisheries Monitoring Centers via the vessel's VMS. Although the number of vessels decreased by 55 percent, from 2004 to 2008, total fishing effort diminished by 69 percent; from 16,480 days to 5,054 days (Figure 1, Table 5). The fact that fishing effort has declined more than the number of vessels per year suggests that the average duration of the fishing trips has become shorter over time. NAFO identifies three main different fishery types; the groundfish, shrimp and pelagic redfish fisheries. Currently, almost two thirds of the fishing effort can be attributed to the groundfish fishery (65 percent) whereas the pelagic redfish fishery accounts for only 4 percent of current fishing effort. It should be noted that the number of vessel days in the NRA for the pelagic redfish fishery declined by 86 percent, from 1,414 days in 2004 to 201 days in 2008, as compared to a 70 percent decline in the shrimp fishery and a 67 percent decline in the groundfish fishery.

3. Compliance by Fishing Vessels

To ensure that vessels fishing in the NRA adhere to the NCEMs, NAFO monitors, surveys and controls the fishery. In this context NAFO conducts joint at-sea inspections by NAFO-certified inspectors as well as inspections in NAFO member ports. Through the random at-sea and obligatory port inspections, NAFO is able to uncover infringements of the NAFO regulations and collect evidence for the following prosecution within the legal system of each NAFO flag state. Prior to 2009, port state Contracting Parties were required to conduct port inspections on all vessels landing or transshipping fish species from the NRA. Under the recently implemented Port State Control measures, port state Contracting Parties are only required to carry out inspections on vessels from other Contracting

Parties at a rate of 15 percent a year. However, the compulsory inspection of all vessels is still in force for landings of NAFO species under a recovery plan.

Although the total number of at-sea inspections decreased from 401 inspections in 2004 to 245 inspections in 2008, the frequency rate of at-sea inspections in relation to the effort (number of inspections per vessel-days per year) actually increased from 2.4 percent in 2004 to 4.8 percent in 2008 (Figure 2, Table 5). Inspection rates increased in all three fishery types since 2004. Since 2006, inspection rates have continued to increase for the redfish and groundfish fisheries, but have declined slightly for the shrimp fishery.

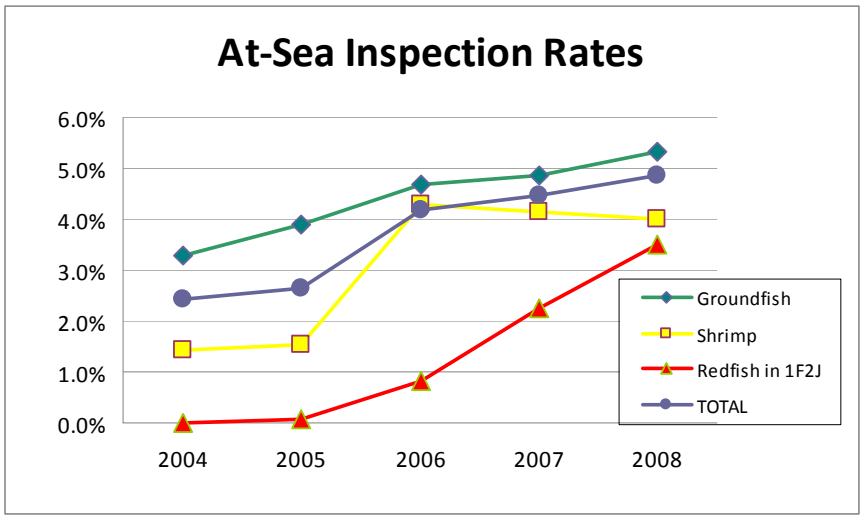


Figure 2. *Inspection rates (number of at-sea inspection/vessel-days) in the NAFO Regulatory Area by fishery type.*

NAFO inspectors cite a vessel if they have reason to suspect that the vessel breached one or more NAFO regulations. During the review period, at-sea inspectors issued a minimum of 5 citations in 2008, and a maximum of 20 citations in 2005[3] (Table 5). The annual citation rate (the number of citations issued in relation to the number of inspections conducted) for at-sea inspections has steadily declined since 2005 (Figure 3). In contrast, the citation rate for port inspections nearly doubled between 2006 and 2007, but declined dramatically in 2008 to the lowest in the time series. Specifically, only 3 citations were issued from port inspections in 2008 (Table 5).

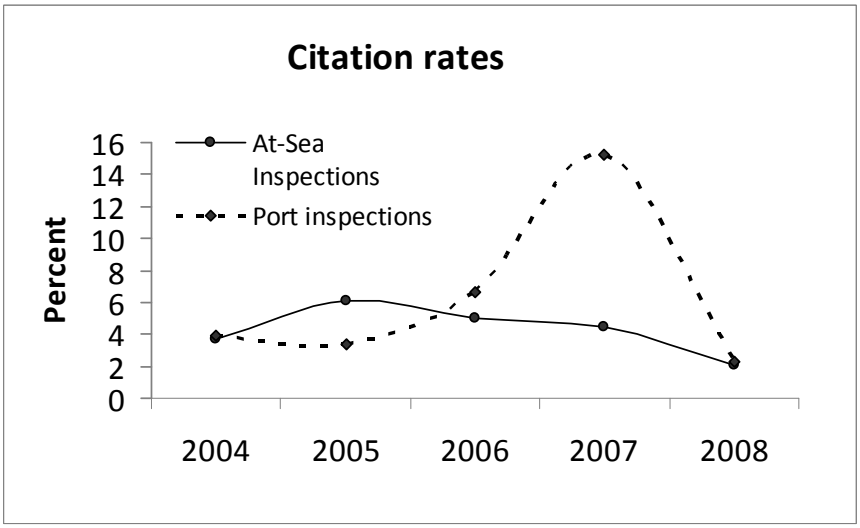


Figure 3*. Percentage of inspections that resulted in a citation at sea and in port*

Each citation issued by NAFO inspectors can list one or more infringement. NAFO recognizes 10 serious infringements (NCEM Article 37.1). NAFO inspectors also detect other infringements that are not classified as

[3]Inspections for the sole purpose of confirming a previous citation were not counted.

serious, such as missing stowage plans or product labels. The frequency of infringements found by NAFO inspectors during the review period is presented in Figure 4. More detail on these infringements for the years 2004 through 2008 is provided in Table 5. The most frequent infringement is inaccurate recording of catches, a serious offence that was particularly pronounced in 2007 and 2008 by port inspectors (59 percent and 67 percent of total inspections, respectively). However, the actual number of infringements of this type declined dramatically between 2007 and 2008; from 16 to 2 infringements (Table 5).

The percentage of infringements by fisheries type is displayed in Figure 5. More than half of all infringements come from groundfish vessels, and up until 2008, groundfish vessels accounted for at least half of all serious infringements. This can be attributed to the fact that groundfish fishery effort constitutes more than half of the total fishing effort in the NRA in terms of vessel-days (Table 5). It should be noted that the number of serious infringements from groundfish vessels decreased dramatically in 2008. It should be further noted that all infringements detected by port inspectors involved groundfish vessels (Table 5).

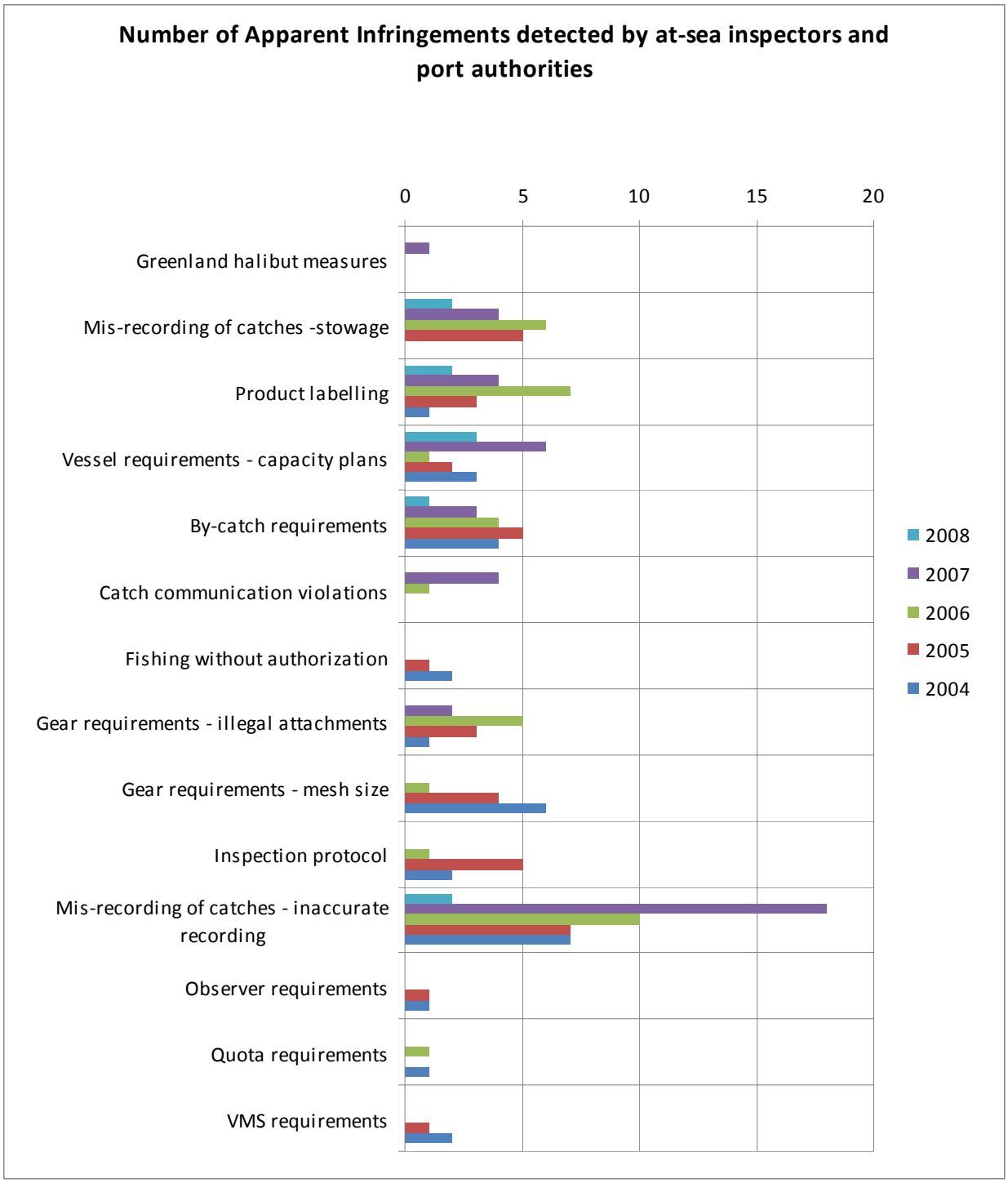


Figure 4. *Apparent Infringements detected by NAFO at-sea and port inspectors. *Please note that the first 4 are non-serious infringements and the remaining 10 are serious infringements.*

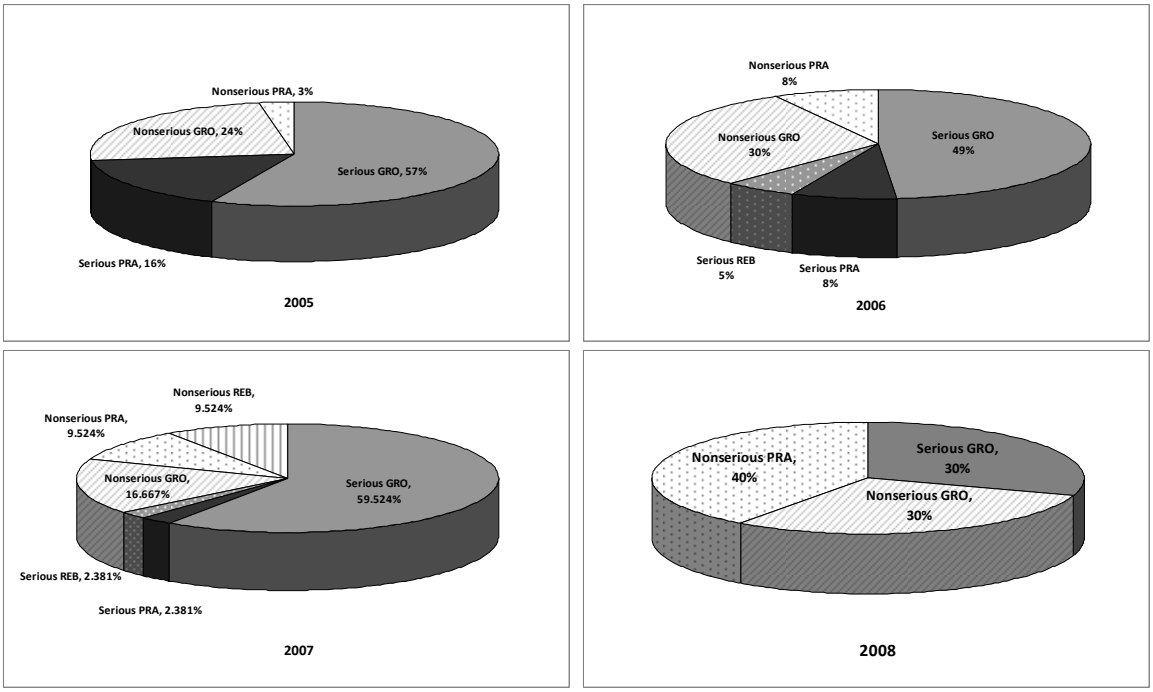


Figure 5. *Percentages of serious (dark areas) and non-serious (light areas) infringements (by fishery type) detected by at-sea and port inspectors.*

4. Reporting obligations by fishing vessels and NAFO Contracting Parties

Monitoring the NAFO fisheries includes submission of reports on catch and effort by vessels from different sources: VMS reports such as Catch-on-Entry (COE) and Catch-on-Exit (COX) are submitted by the fishing vessels through their respective Fisheries Monitoring Centers; port inspection reports by the port authorities; and observer reports[4] by the flag state members. These reports from different sources allow a comparative analysis of catches, should ideally cover 100 percent of the fishing trips, and should account for all the days the fishing vessels are present in the NRA. Figure 6 shows the relative coverage of fishing trips from the reports received; deviations from 100 percent are caused by missing reports.[3] Since 2005, catch reports received by NAFO VMS have become the most complete source on catch-by-vessel information, although the submission of port inspection and observer reports improved in 2008.

Submission of observer reports decreased in 2006 and 2007, but increased again in 2008. The drop in observer reporting rate in 2006 and 2007 is not due to a decline in the actual number of observer reports received by NAFO resulting from implementation of the electronic reporting scheme, which allows vessels to reduce their observer coverage by 25 percent in if they submit daily electronic catch reports. Rather, the reporting compliance of vessels participating in that scheme has been accounted for in Figure 6 and Table 1 (i.e., if daily catch reports are 4 times the number of observer reports, the vessel is considered compliant). However, factors relating to implementation of this electronic reporting scheme may have impacted observer compliance rates during these two years. The electronic reporting scheme was originally a pilot project in 2006, and was fully implemented in 2007. In 2008, only two Contracting Parties participated in this scheme (Norway and the Faroe Islands).

[4] Vessels fishing in the NRA are required to have 100% observer coverage, i.e. presence of an independent observer on board at all times. Since 2007, Contracting Parties can alternatively opt for a daily electronic catch reporting scheme (see CEM, Chapter VII) which allows them to reduce the observer coverage on their vessels by up to 25%.

[3] The percentage coverage for VMS catch reports (COE-COX) shown in Figure 6 was calculated from the number of days as indicated in each report and the total effort (vessel-days) as validated from the VMS position reports. Port reports included transhipments at sea (particularly important for the pelagic redfish fishery).

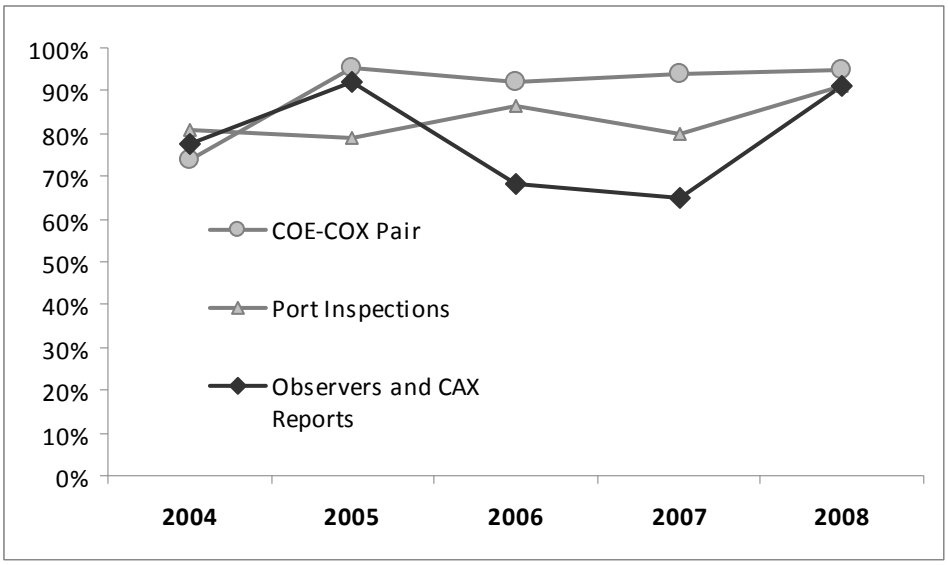


Figure 6. *Percentage coverage of fishing effort by VMS, Port Inspection and Observer Reports.*

Another issue is the timeliness of reports submitted by Contracting Parties to the NAFO Secretariat. Articles 28 and 35 of the NCEMs require that at-sea and observer reports be submitted within 30 days (of completion of assignment for observer reports). Under the Port State Control measures implemented in 2009, port State Contracting Parties are required to transmit the Port State Control inspection form (form PSC 3) to the Executive Secretary "without delay." However, this provision was not in effect for 2008, Thus, the 30-day requirement in force for port inspection reports in 2008 is considered in this analysis. In comparison to port inspection and observer reports, at-sea inspection reports are submitted in a more timely fashion. However, the timeliness of the at-sea inspection reports has declined since 2005, from an on time rate of 91 percent in 2005, to 63 percent in 2008. It should be noted that timeliness of submission does not necessarily equate to a failure to submit the required reports.

During the course of the 2009 Annual NAFO Meeting, concerns were raised by Contracting Parties regarding the quality of the reports received. As such, the Secretariat was asked to provide a summary of their experience with these reports. This is as follows:

> The lack of uniformity in format of the submitted observer reports may compromise the quality of the reports in general. However total catch information by species contained in the observer reports were compared to other sources (e.g., VMS hail reports and Port Inspection reports), where possible, and the comparison shows that there is a general agreement of the catch information among various sources.

Upon further discussion with the Secretariat it was noted that lack of uniformity with these reports is also an issue, making it time consuming to compile the annual compilation tables provided to Contracting Parties. It was also noted that corrections to individual reports must be handled on an individual basis, further complicating the compilation of annual information to assess compliance. Finally, one of the Contracting Parties noted that malformed reports, such as COE and COX reports. These malformed reports cannot be processed, and, therefore, cannot be forwarded to the systems that provide information to patrol platforms on a real-time basis impacting monitoring and surveillance activities.

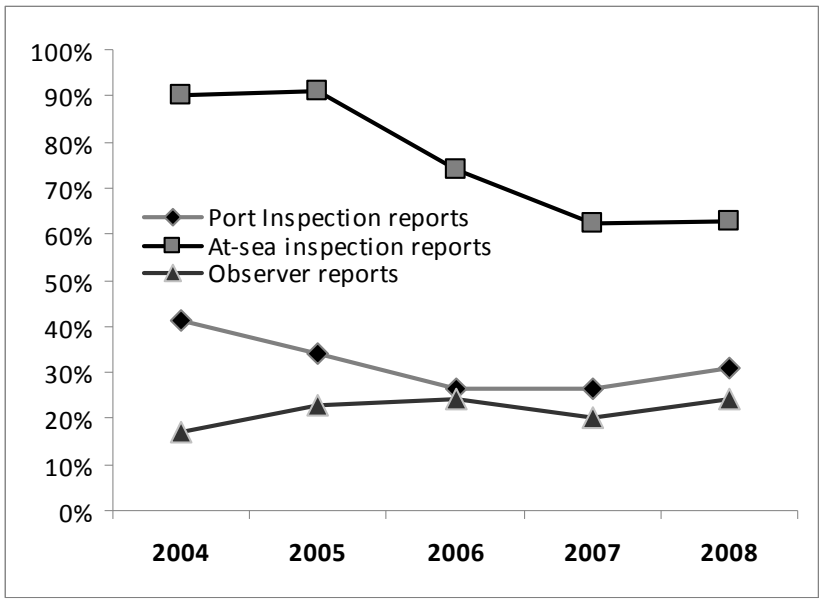


Figure 7. *Timeliness of submission of reports.*

5. Follow-up to infringements

Flags states are obligated to follow-up with further investigations and legal prosecution when NAFO inspectors issue a citation against a Contracting Party vessel. The Secretariat receives information on the status of each case. The legal procedure can take longer than one year and it is, therefore, not expected that by 2008 all cases originating during the previous years could be resolved. This information is reflected in Figure 8 and also in Table 6.

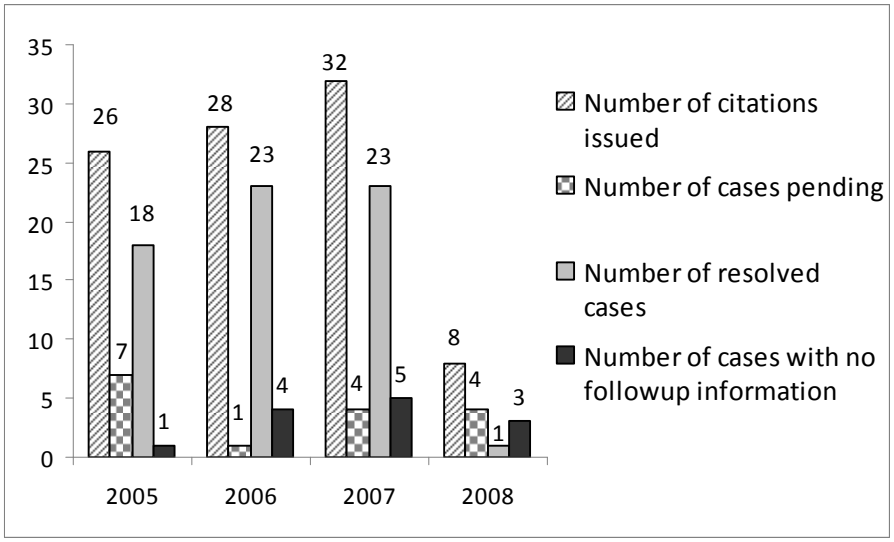


Figure 8. *Legal resolution of citations against vessels fishing in the NAFO Regulatory Area by year in which the citations were issued (as of March 2009). A citation is an inspection report (from at-sea or port inspectors) that lists one or more infringements. Inspections carried out for confirming a previous citation are not counted.*

6. Observed trends (period 2004 to 2008)

- The total fishing effort in the NAFO area continues to decline both in terms of number of vessels and fishing days in the NRA since 2004. Between 2007 and 2008, the number of vessels declined by 21 percent and effort declined by 23 percent. In the groundfish fisheries, the number of active vessels has steadily declined since 2004, remained stable between 2006 and 2007, and declined again in 2008. Conversely, there has been a

marked decline in the number of active vessels in the pelagic redfish and shrimp fisheries, particularly in the redfish fishery where the number of vessels has declined by 76 percent since 2006. In terms of vessel days, a decline in total fishing effort was observed across all 3 fishing types (groundfish, shrimp, and pelagic redfish) in 2008, with pelagic redfish showing the largest decline of 59 percent (in comparison to 2007).

- The number of at-sea inspections has declined overall since 2004, despite a slight increase in 2006. This is likely due to the reduced number of active vessels fishing in the NRA. Conversely, the rate of at-sea inspections per vessel fishing day has increased since 2004 across all three fishery types, from 2.4 percent in 2004 to 4.8 percent in 2008.

- The number of citations resulting from at-sea inspections varied from 5 to 20 during the 5-year period. The citation rate decreased slightly since 2005, but has remained generally stable over the time period.

- There was a 45 percent decline in port inspections from 2004 to 2007, but a slight increase between 2007 and 2008 (6 percent). The number of vessels cited by port authorities per year varied from a high of 16 in 2007 to a low of 2 in 2008. The number of apparent infringements issued ranged from 27 (2007) to 3 (2008), demonstrating a 89 percent decline in 2008 in comparison to 2007.

- During the 5 year period, a total of 97 apparent infringements resulted from at-sea inspections and 59 from port inspections. The apparent infringement category “Mis-recording of Catches” (Both Stowage and Inaccurate recording related) accounted for 30 of the apparent infringements issued at sea (31 percent) and 29 in port **(**52 percent). These infringements were issued more frequently in relation to groundfish fisheries.

- The follow-up on apparent infringements is of concern, with an increasing percentage of cases having no follow-up information from the Contracting Party. For example, although the total number of citations declined in 2008 by 75 percent, the number of cases with no follow-up information only declined by 40 percent. The Contracting Party may be following up on the apparent infringement, but may not have reported the status back to the NAFO Secretariat.

- Delayed submission of inspection (at sea and in port) and observer reports by Contracting Parties remains an issue. The general trend in timeliness of reporting is static for both observer and port inspection reports. However, there is a notable decrease in the timeliness of at-sea inspection reports.

7. Annexes (the "Report tables)

Table 1. Submission of Fishing Reports*

Year	Days at the Regulatory Area (Effort)	Number of Days accounted by COE-COX pairs	Percentage of Effort accounted by COE-COX pairs	Number of Days accounted by Port Inspection and TRA reports	Percentage of Effort accounted by Port Inspection and TRA reports	Number of Days accounted by Observer and CAX reports	Percentage of Effort accounted by Observer and CAX reports
2004	16480	12156	74%	13327	81%	12779	78%
2005	12290	11706	95%	9679	79%	11326	92%
2006	8663	7991	92%	7488	86%	5921	68%
2007	6598	6210	94%	5269	80%	4276	65%
2008	5054	4785	95%	4613	91%	4596	91%

*COE = Catch on entry, COX = Catch on exit, TRA = transhipment, CAX = Daily catch report

Table 2. Timely submission of Port Inspection Reports

Year	2004	2005	2006	2007	2008
Total Number of Port Inspection Reports received	228	177	151	125	133
Total Number of Port Inspection Reports received late	134	117	111	92	92
Percentage % of late Port Inspection Reports	59%	66%	74%	74%	69%

NB: Article 45 (2008 NECMs) stipulates the transmission of port inspection reports to the Secretariat within 30 days on which the landing was completed.

Port Inspection Reports are submitted by the CP of the Port Inspection Authority.

Table 3. Timely submission of At-Sea Inspection Reports

Year	2004	2005	2006	2007	2008
Total Number of at-sea Inspections	401	326	361	296	263
Number of at-sea Inspections received late	40	30	95	112	96
Percentage % of late at-sea Inspection Reports	10%	9%	26%	38%	37%

NB: Timely submission means transmission of the report with 30 days.

At-sea Inspection Reports are submitted by the CP with inspection presence at NAFO Regulatory Area.

Table 4. Timely submission of Observer Reports

Year	2004	2005	2006	2007	2008
Total Number of Observers Reports	211	170	114	84	126
Number of Observers Reports received late	176	131	87	67	96
Percentage % of late Observers Reports	83%	77%	76%	80%	76%

NB: Article 24 stipulates the transmission of the observer reports to the Secretariat within 30 days after the completion of the observer's assignment.

Observer Reports are submitted by the Flag State of the vessels.

Table 5-2004, part 1. Effort, at-sea inspections and AIs by fisheries type

Fisheries*	GRO	PRA	REB	Total
Number of vessels	63	33	48	134**
Days Present in NRA	9966	5100	1414	16480
Number of at-sea inspections	328	73	0	401
Number of at-sea inspection report containing citation of one or more AIs	13	2	0	15
Number of vessels cited with AIs at sea	10	2	0	12
AIs issued by category - from at-sea inspections***				
Greenland halibut measures	0	0	0	0
Mis-recording of catches -stowage	0	0	0	0
Product labeling	0	1	0	1
Vessel requirements - capacity plans	3	0	0	3
By-catch requirements	3	0	0	3
Catch communication violations	0	0	0	0
Fishing without authorization	0	1	0	1
Gear requirements - illegal attachments	1	0	0	1
Gear requirements - mesh size	5	0	0	5
Inspection protocol	2	0	0	2
Mis-recording of catches - inaccurate recording	1	0	0	1
Observer requirements	0	1	0	1
Quota requirements	1	0	0	1
VMS requirements	0	2	0	2
TOTAL	16	5	0	21

* GRO = groundfish primarily in Divs. 3KLMNO; PRA = shrimp fisheries in Divs. 3LM; REB = redfish in Divs. 1F2J

** Some vessels switched directed species within the year.

*** AIs from citation reports serving to confirm an incident are not counted. AI categories in bold are considered serious.

Table 5-2004, part 2. Effort, port inspections and AIs by fisheries type

FISHERIES*	GRO	PRA	REB	Total
Number of vessels	63	33	48	134**
Days Present in NRA	9966	5100	1414	16480
Number of port inspections	85	138	5	228
Number of port inspection report containing citation of one or more AIs	9	0	0	9
Number of vessels cited with AIs by port authorities	9	0	0	9
AIs issued by category - from port inspections***				
Greenland halibut measures	0	0	0	0
Mis-recording of catches -stowage	0	0	0	0
Product labelling	0	0	0	0
Vessel requirements - capacity plans	0	0	0	0
By-catch requirements	1	0	0	1
Catch communication violations	0	0	0	0
Fishing without authorization	1	0	0	1
Gear requirements - illegal attachments	0	0	0	0
Gear requirements - mesh size	1	0	0	1
Inspection protocol	0	0	0	0
Mis-recording of catches - inaccurate recording	6	0	0	6
Observer requirements	0	0	0	0
Quota requirements	0	0	0	0
VMS requirements	0	0	0	0
TOTAL	9	0	0	9

Table 5-2005, part 1. Effort, at-sea inspections and AIs by fisheries type

FISHERIES*	GRO	PRA	REB	Total
Number of vessels	50	27	53	116**
Days Present in NRA	6948	3558	1784	12290
Number of at-sea inspections	270	55	1	326
Number of at-sea inspection report containing citation of one or more AIs	16	4	0	20
Number of vessels cited with AIs at sea	14	3	0	17
AIs issued by category - from at-sea inspections***				
Greenland halibut measures	0	0	0	0
Mis-recording of catches -stowage	5	0	0	5
Product labelling	2	1	0	3
Vessel requirements - capacity plans	2	0	0	2
By-catch requirements	2	0	0	2
Catch communication violations	0	0	0	0
Fishing without authorization	0	1	0	1
Gear requirements - illegal attachments	2	1	0	3
Gear requirements - mesh size	3	0	0	3
Inspection protocol	3	1	0	4
Mis-recording of catches - inaccurate recording	5	1	0	6
Observer requirements	0	1	0	1
Quota requirements	0	0	0	0
VMS requirements	0	1	0	1
TOTAL	24	7	0	31

* GRO = groundfish primarily in Divs. 3KLMNO; PRA = shrimp fisheries in Divs. 3LM; REB = redfish in Divs. 1F2J

** Some vessels switched directed species within the year.

*** AIs from citation reports serving to confirm an incident are not counted. AI categories in bold are considered serious.

Table 5-2005, part 2. Effort, port inspections and AIs by fisheries type

FISHERIES*	GRO	PRA	REB	Total
Number of vessels	50	27	53	116**
Days Present in NRA	6948	3558	1784	12290
Number of port inspections	80	87	10	177
Number of port inspection report containing citation of one or more AIs	6	0	0	6
Number of vessels cited with AIs by port authorities	6	0	0	6
AIs issued by category - from port inspections***				
Greenland halibut measures	0	0	0	0
Mis-recording of catches -stowage	0	0	0	0
Product labeling	0	0	0	0
Vessel requirements - capacity plans	0	0	0	0
By-catch requirements	3	0	0	3
Catch communication violations	0	0	0	0
Fishing without authorization	0	0	0	0
Gear requirements - illegal attachments	0	0	0	0
Gear requirements - mesh size	1	0	0	1
Inspection protocol	1	0	0	1
Mis-recording of catches - inaccurate recording	1	0	0	1
Observer requirements	0	0	0	0
Quota requirements	0	0	0	0
VMS requirements	0	0	0	0
TOTAL	6	0	0	6

Table 5-2006, part 1. Effort, at-sea inspections and AIs by fisheries type

FISHERIES*	GRO	PRA	REB	Total
Number of vessels	45	21	42	92**
Days Present in NRA	5908	1776	979	8663
Number of at-sea inspections	277	76	8	361
Number of at-sea inspection report containing citation of one or more AIs	11	5	2	18
Number of vessels cited with AIs at sea	10	4	2	16
AIs issued by category - from at-sea inspections***				
Greenland halibut measures	0	0	0	0
Mis-recording of catches -stowage	5	1	0	6
Product labelling	1	2	0	3
Vessel requirements - capacity plans	1	0	0	1
By-catch requirements	2	0	0	2
Catch communication violations	0	0	0	0
Fishing without authorization	0	0	0	0
Gear requirements - illegal attachments	2	2	1	5
Gear requirements - mesh size	0	0	1	1
Inspection protocol	0	1	0	1
Mis-recording of catches - inaccurate recording	4	0	0	4
Observer requirements	0	0	0	0
Quota requirements	0	0	0	0
VMS requirements	0	0	0	0
TOTAL	15	6	2	23

* GRO = groundfish primarily in Divs. 3KLMNO; PRA = shrimp fisheries in Divs. 3LM; REB = redfish in Divs. 1F2J

** Some vessels switched directed species within the year.

*** AIs from citation reports serving to confirm an incident are not counted. AI categories in bold are considered serious.

Table 5-2006, part 2. Effort, port inspections and AIs by fisheries type

FISHERIES*	GRO	PRA	REB	Total
Number of vessels	45	21	42	92**
Days Present in NRA	5908	1776	979	8663
Number of port inspections	76	56	19	151
Number of port inspection report containing citation of one or more AIs	10	0	0	10
Number of vessels cited with AIs by port authorities	10	0	0	10
AIs issued by category - from port inspections***				
Greenland halibut measures	0	0	0	0
Mis-recording of catches -stowage	0	0	0	0
Product labelling	4	0	0	4
Vessel requirements - capacity plans	0	0	0	0
By-catch requirements	2	0	0	2
Catch communication violations	1	0	0	1
Fishing without authorization	0	0	0	0
Gear requirements - illegal attachments	0	0	0	0
Gear requirements - mesh size	0	0	0	0
Inspection protocol	0	0	0	0
Mis-recording of catches - inaccurate recording	6	0	0	6
Observer requirements	0	0	0	0
Quota requirements	1	0	0	1
VMS requirements	0	0	0	0
TOTAL	14	0	0	14

Table 5-2007, part 1. Effort, at-sea inspections and AIs by fisheries type

FISHERIES*	GRO	PRA	REB	Total
Number of vessels	45	14	20	76**
Days Present in NRA	4158	1948	488	6594
Number of at-sea inspections	202	81	11	294
Number of at-sea inspection report containing citation of one or more AIs	4	5	4	13
Number of vessels cited with AIs at sea	4	5	4	13
AIs issued by category - from at-sea inspections***				
Greenland halibut measures	0	0	0	0
Mis-recording of catches -stowage	3	1	0	4
Product labeling	0	1	0	1
Vessel requirements - capacity plans	0	2	4	6
By-catch requirements	0	0	0	0
Catch communication violations	0	0	0	0
Fishing without authorization	0	0	0	0
Gear requirements - illegal attachments	0	1	1	2
Gear requirements - mesh size	0	0	0	0
Inspection protocol	0	0	0	0
Mis-recording of catches - inaccurate recording	2	0	0	2
Observer requirements	0	0	0	0
Quota requirements	0	0	0	0
VMS requirements	0	0	0	0
TOTAL	5	5	5	15

* GRO = groundfish primarily in Divs. 3KLMNO; PRA = shrimp fisheries in Divs. 3LM; REB = redfish in Divs. 1F2J

** Some vessels switched directed species within the year.

*** AIs from citation reports serving to confirm an incident are not counted. AI categories in bold are considered serious.

Table 5-2007, part 2. Effort, port inspections and AIs by fisheries type

FISHERIES*	GRO	PRA	REB	Total
Number of vessels	45	14	20	76**
Days Present in NRA	4158	1948	488	6594
Number of port inspections	67	51	7	125
Number of port inspection report containing citation of one or more AIs	19	0	0	19
Number of vessels cited with AIs by port authorities	16	0	0	16
AIs issued by category - from port inspections***				
Greenland halibut measures	1	0	0	1
Mis-recording of catches -stowage	0	0	0	0
Product labeling	3	0	0	3
Vessel requirements - capacity plans	0	0	0	0
By-catch requirements	3	0	0	3
Catch communication violations	4	0	0	4
Fishing without authorization	0	0	0	0
Gear requirements - illegal attachments	0	0	0	0
Gear requirements - mesh size	0	0	0	0
Inspection protocol	0	0	0	0
Mis-recording of catches - inaccurate recording	16	0	0	16
Observer requirements	0	0	0	0
Quota requirements	0	0	0	0
VMS requirements	0	0	0	0
TOTAL	27	0	0	27

Table 5-2008, part 1. Effort, at-sea inspections and AIs by fisheries type

FISHERIES*	GRO	PRA	REB	Total
Number of vessels	38	13	10	60**
Days Present in NRA	3302	1551	201	5054
Number of at-sea inspections	176	62	7	245
Number of at-sea inspection report containing citation of one or more AIs	2	3	0	5
Number of vessels cited with AIs at sea	2	3	0	5
AIs issued by category - from at-sea inspections***				
Greenland halibut measures	0	0	0	0
Mis-recording of catches -stowage	1	1	0	2
Product labelling	1	0	0	1
Vessel requirements - capacity plans	0	3	0	3
By-catch requirements	1	0	0	1
Catch communication violations	0	0	0	0
Fishing without authorization	0	0	0	0
Gear requirements - illegal attachments	0	0	0	0
Gear requirements - mesh size	0	0	0	0
Inspection protocol	0	0	0	0
Mis-recording of catches - inaccurate recording	0	0	0	0
Observer requirements	0	0	0	0
Quota requirements	0	0	0	0
VMS requirements	0	0	0	0
TOTAL	3	4	0	7

* GRO = groundfish primarily in Divs. 3KLMNO; PRA = shrimp fisheries in Divs. 3LM; REB = redfish in Divs. 1F2J
** Some vessels switched directed species within the year.
*** AIs from citation reports serving to confirm an incident are not counted.
AI categories in bold are considered serious.

Table 5-2008, part 2. Effort, port inspections and AIs by fisheries type

FISHERIES*	GRO	PRA	REB	Total
Number of vessels	38	13	10	60**
Days Present in NRA	3302	1551	201	5054
Number of port inspections	70	60	2	132
Number of port inspection report containing citation of one or more AIs	3	0	0	3
Number of vessels cited with AIs by port authorities	2	0	0	2
AIs issued by category - from port inspections***				
Greenland halibut measures	0	0	0	0
Mis-recording of catches -stowage	0	0	0	0
Product labelling	1	0	0	1
Vessel requirements - capacity plans	0	0	0	0
By-catch requirements	0	0	0	0
Catch communication violations	0	0	0	0
Fishing without authorization	0	0	0	0
Gear requirements - illegal attachments	0	0	0	0
Gear requirements - mesh size	0	0	0	0
Inspection protocol	0	0	0	0
Mis-recording of catches - inaccurate recording	2	0	0	2
Observer requirements	0	0	0	0
Quota requirements	0	0	0	0
VMS requirements	0	0	0	0
TOTAL	3	0	0	3

* GRO = groundfish primarily in Divs. 3KLMNO; PRA = shrimp fisheries in Divs. 3LM; REB = redfish in Divs. 1F2J
** Some vessels switched directed species within the year.
*** AIs from citation reports serving to confirm an incident are not counted.
AI categories in bold are considered serious.

Table 6. Resolution of Apparent Infringement (AI) Cases (as of March 2009)

	2005	2006	2007	2008
Number of citations issued*	26	28	32	8
Number of cases pending	7	1	4	4
Number of resolved cases	18	23	23	1
Number of cases with no followup information	1	4	5	3

* Number of at-sea and port inspection reports issuing serious and non-serious AIs.
A report may contain one or more AI.
Reports serving to confirm identical cases are not counted.

PART II

Report of the Standing Committee on International Control (STACTIC)
21-25 September 2009
Bergen, Norway

1. Opening of the Meeting (Chair: Mads Nedergaard, Denmark (in respect of the Faroe Islands and Greenland))

The Chair opened the meeting at 1400 hours on Monday, 21 September at the Radisson SAS Royal Hotel in Bergen, Norway and welcomed representatives of Canada, Denmark (in respect of the Faroe Islands and Greenland), EU, France (in respect of St. Pierre-et-Miquelon), Iceland, Japan, Norway, the Russian Federation, the United States and the NAFO Secretariat to the STACTIC meeting.

No opening statements were made.

2. Appointment of Rapporteur

Mr. Peter DeCola (United States) was appointed rapporteur.

3. Adoption of Agenda

The Chair introduced the agenda and opened the floor to comments. The following comments were made:

- The representative from Canada suggested adding the following discussion items under agenda item 5, but then later agreed to bring these issues up during course of meeting as appropriate:
    - Product labeling
    - Duration of an inspection
    - Documentation of permits
    - Inspection Party composition
    - Shrimp strengthening bags
- The Chair noted that Fisheries Commission (FC) had approved STACTIC's recommendation to establish an editorial board to review and better organize the NAFO Conservation and Enforcement Measures (NCEMs).
- Representatives from Canada and the EU both stated that the points on bycatch and shared quotas referred back to STACTIC by the FC are not appropriate issues to be addressed by STACTIC, but are policy issues that should be handled by the FC. The Chair agreed with their comments and decided to place these two items under agenda item 10.
- The representative of Denmark (in respect of the Faroe Islands and Greenland) requested to add a proposal to its working paper on catch reporting under agenda item 8iii.

The agenda was adopted with these modifications (Annex 1).

4. Compliance review 2008 including review of reports of apparent infringements

The Chair introduced the agenda item and requested that the Chair of the Compliance Report Drafting Group (DG) made a presentation on the compilation of fisheries reports and the 2008 annual compliance review process (STACTIC Working Paper 09/18).

Consensus of the representatives was that the report:

- Needed to summarize the enforcement data presented (with full data set in the background on the NAFO secure website or made available at the Contracting Party's (CP) request);
- Needs to focus on assessing the effectiveness of specific conservation and enforcement issues to determine success; and
- Should be able to show trends (i.e. fishing vessel effort) as well as historical statistics.

It was agreed that a wider mandate for the DG was necessary to expand upon what is currently included in compliance report to make it more useful. It was also noted that information in several STACTIC working papers could be combined into the report (specifically, STACTIC Working Papers 09/10, 09/12, 09/14, and FC Doc. 09/05), and DG explored how to best consolidate this information. The representative of Canada suggested to STACTIC that the working paper on objectivity be consolidated in some fashion into the compliance report, but that specific formula used to assess objectivity be eliminated since several representatives noted that this measure was not particularly useful. Chair agreed with this approach, and noted that more detailed CP level information should not be included in the compliance report, but that this report should only contain summary information. The DG also suggested that the working papers containing detailed information on inspections and apparent infringements be eliminated since this information is available in summary form in FC DOC 09/05 and in the compliance report. This information could be made available on secure portion of NAFO website instead, or upon request of CPs.

It was agreed that the DG will continue to brainstorm potential metrics for measures of effectiveness to include in future compliance reports and will also liaison with Secretariat concerning additional information needed to make such changes to the compliance report. Recommendations regarding changes to the compliance report will be presented at the intercessional meeting.

To begin addressing concerns raised by several representatives concerning quality of COE/COX/observer reports, STACTIC agreed to include a summary of Secretariat's experience with various reports received from CPs such as catch, observer, and inspection reports in the this year's compliance report. After further thought and discussion, the Chair requested that the Secretariat look further into this matter and work with Canada to share their experiences and identify where the breakdown is and recommend appropriate solutions.

The Chair thanked the Compliance Report Drafting Group for its work to date and directed it to continue working closely with the Secretariat to prepare another draft for the 2010 NAFO intercessional meeting.

It was agreed to adopt and submit STACTIC Working Paper 09/18 Rev2 to the Fisheries Commission.

5. Review and evaluation of NAFO Compliance objectives

The Chair opened the agenda item and asked the representative of Canada to summarize its previously introduced discussion paper presented at the last STACTIC intercessional meeting entitled NAFO Compliance Tools/Measures Possible Discussion Topics (STACTIC Working Paper 09/08). Discussion centered on the following items:

a) Electronic/Satellite/Remote Monitoring

- Two hour intervals for VMS data is insufficient to monitor compliance with respect to closed areas. One hour reporting is necessary to effectively enforce VMEs (small sponge/coral areas).
- Data on course and speed is very helpful from a compliance perspective to determine whether a vessel is fishing or transiting through an area.
- The representative of Iceland noted that the additional polling and data would not be expensive to add.

It was agreed to forward STACTIC Working Paper 09/13 to the Fisheries Commission for adoption.

b) In-Port/Land based Monitoring

- The representative of the EU submitted a checklist for landing procedures STACTIC Working Paper 09/17.

The representatives will reflect on this proposal and provide input at the STACTIC intercessional meeting.

c) At-Sea Monitoring

- The representative of Canada submitted a discussion paper on joint enforcement (STACTIC Working Paper 09/15) to formalize a protocol based on joint inspections with the United States over the past few years to enhance the efficiency and effectiveness of the Joint Inspections and Surveillance Scheme and improve the proficiency of inspectors in the NAFO Regulatory Area (NRA).

The representatives will reflect on this proposal and provide input at the STACTIC intercessional meeting.

d) Aerial Surveillance

The representatives will reflect on this matter and provide any comments at the STACTIC intercessional meeting.

6. Review of IUU pursuant to NAFO CEM Article 52.3

The Chair opened the agenda item and the following discussion points were made:

- The fishing vessel Aquamarine II was delisted from the NEAFC IUU list and several other vessels rendered permanently inoperable are candidates for delisting.
- Discussion ensued as to whether NAFO should have its own procedures for delisting permanently inoperable vessels.

It was agreed to wait until NEAFC addresses this issue at their annual meeting in November (London) and see if their procedures meet NAFO's needs. This item will be addressed at the next STACTIC intercessional meeting.

It was also agreed to adopt STACTIC Working Paper 09/11 (NAFO IUU List Update). The agenda item was closed.

7. Implementation of Port State Measures

The Chair opened the agenda item and the following discussion points were made:

- The FAO is done with their port state measures agreement, but this has not yet gone through the process of being adopted.
- The reporting requirements under NEAFC and NAFO are different and can present challenges to CPs.
- It is desirable to look at the FAO framework and the representative from the EU has the intention to make proposals, if appropriate, that would harmonize Port State measures with other schemes dealing with IUU issues.
- The representative of Canada drafted a discussion paper dealing with the flag state competent authority (STACTIC Working Paper 09/22) as part of a seven working paper submission under agenda item 10.

It was agreed to adopt and submit STACTIC Working Paper 09/22 Rev to the Fisheries Commission. The agenda item was closed.

8. Possible Amendments of Conservation and Enforcement Measures

i. Automated COE/COX comparison between NAFO and NEAFC reports

The Chair opened the agenda item and noted that this has been a long-standing issue. The representative of Iceland noted that they looked into this issue previously, but the COE/COX messages forwarded to NAFO and NEAFC must be improved before these reports can be compared automatically.

As noted in Agenda item 4, the Chair requested that the Secretariat look further into this matter and work with Canada to share their experiences with problematic reporting and identify where the breakdown is and recommend appropriate solutions.

The agenda item will be reviewed when appropriate.

ii. Editorial Changes to the CEM

The Chair opened the agenda item and noted that the Fisheries Commission approved an Editorial Drafting Group (EDG) to make editorial changes to the CEMs.

- It was agreed that three contracting parties (Canada, European Union, and United States) would comprise the EDG.
- The anticipated timeline for this work would be one year.
- It was agreed that most work can be done via e-mail and the EDG can meet a day or 2 before the STACTIC intercessional meeting.

- Representatives not participating in the EDG are encouraged to provide comments to the EDG through the Secretariat.
- The main tasks for the EDG are:
    - Clean up/reorganize text.
    - Remove antiquated comments.
    - Make suggestions for new measures.

It was agreed that the EDG would provide a status report at the next STACTIC intercessional meeting.

iii. Improved catch reporting in the shrimp fisheries

The Chair opened the agenda item and discussed what eventually became a joint proposal by representatives from Denmark (in respect of the Faroe Islands and Greenland) and Iceland contained in STACTIC Working Paper 09/19 to eliminate varying catch reporting requirements by modifying to either a standard weekly or daily catch report requirement. As a general rule, catch reporting was introduced as a weekly requirement for all fisheries and daily reporting in certain fisheries.

The Chair noted that hopefully, the e-logbook, which will be introduced as an experiment in the near future, will solve many of the reporting requirements.

It was agreed to adopt and submit STACTIC Working Paper 09/19, Rev. 3 to the Fisheries Commission. The agenda item was closed.

9. Omega Mesh Gauge

The Chair opened the agenda item and asked the representative of the EU to provide a demonstration of the electronic mesh gauge device. A presentation was provided on the history of the electronic gauge project and the current design specifications of the gauge. A demonstration on how to use this equipment was also given.

Several representatives noted that their inspectors were testing the electronic mesh gauge. While there are initial indications of positive performance of this device, there was hesitance to recommend its full scale implementation until more experience with the device is obtained.

This item will be revisited at an appropriate time.

10. Other matters

The Chair opened the agenda item and the following issues were discussed:

i. Location of STACTIC Intercessional Meetings

The representative of Iceland submitted a proposal under STACTIC Working Paper 09/16 to reduce the costs and rigor of travelling for the STACTIC intercessional meetings by alternating meeting locations every other year.

It was agreed that for planning purposes, the STACTIC intercessional meeting should be held during a fixed period each year (some time in first two weeks in May) and at a more convenient location.

ii. Bycatch Retention and Landing Requirements

The representatives suspended discussion on this matter pending further developments related to the reopening of fisheries under moratorium.

It was agreed that STACTIC would refer the matter back to the Fisheries Commission for further clarification.

iii. Shared Quotas

There is concern regarding the transfer of shared quotas between CPs. There is a need to determine if the Fisheries Commission intended for CPs in a shared quota arrangement to be able to transfer the right to catch shared quota to

another CP. By way of further explanation, shared quota (e.g., Sub-Area 2 & Div. 1F+3K Redfish) is allocated to certain CPs on a first-come, first-served basis so that none of these CPs has exclusive right or "ownership" of such quota. It seems inconsistent, therefore, with the concept of "shared" quota for one of these CPs to be able to transfer the right to fish for such quota, up to and including the entire quota, if such CP does not exclusively "own" that quota.

It was agreed to refer this matter to the attention of the Fisheries Commission.

iv. Canadian Discussion Papers

The representative of Canada presented the following discussion items, submitted as STACTIC working papers intended to continue discussions on common compliance matters.

- 09/20 – Duration of an Inspection
- 09/21 – Inspection Party Composition
- 09/23 – Product Labeling
- 09/24 – Verification of Authorization to Fish
- 09/25 – Shrimp Strengthening Bags
- 09/26 – Net retrieval time

It was agreed that further reflection and consultation with industry is necessary. These issues will be deferred to the next STACTIC intercessional meeting.

11. Election of Vice-Chair

Mr. Gene Martin (United States) agreed to serve another term and will serve as Vice Chair for the next two years.

12. Time and Place of next meeting

The next meeting of STACTIC will take place in the Faroe Islands in May, 2010

13. Adoption of Report

The report was adopted by the representatives.

14. Adjournment

The meeting adjourned at 1622 on Wednesday, 23 September 2009.

Annex 1. Agenda

1. Opening by the Chair, Mads Nedergaard (Denmark in respect of the Faroe Islands and Greenland)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Compliance review 2008 including review of reports of apparent infringements
5. Review and evaluation of NAFO Compliance objectives
    a) Electronic/Satellite/Remote Monitoring
    b) In-Port/Land based Monitoring
    c) At-Sea Monitoring
    d) Aerial Surveillance
6. Review of current IUU list pursuant to NAFO CEM Article 57.3
7. Implementation of Port State Control Measures
8. Possible Amendments of Conservation and Enforcement Measures
    i. Automated COE/COX comparison between NAFO and NEAFC reports
    ii. Editorial changes to the CEM
    iii. Improved catch reporting in the shrimp fisheries
9. Omega Mesh Gauge
10. Other matters
    i. Location of STACTIC Intersessional Meetings
    ii. Bycatch Retention and Landing Requirements
    iii. Shared Quotas
    iv. Canadian Discussion Papers
11. Election of Vice-Chair
12. Time and Place of the next STACTIC Meeting
13. Adoption of Report
14. Adjournment