PART J: MISCELLANEOUS

A – FISHERIES COMMISSION AND SCIENTIFIC COUNCIL *AD HOC* WORKING GROUP ON CATCH REPORTING, 3-4 FEBRUAURY 2014 - AGENDA

1. Opening
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Review of Terms of Reference
5. Review and follow-up to the Peer Review Expert Panel 2013 Recommendations
6. Evaluation of potential approaches and data sources (e.g. daily catch data, tow by tow data, log books, etc) to validate STATLANT 21 data and/or provide catch estimates
7. Prioritization of stocks for initial consideration
8. Consideration of term of reference (governance, participation) if it is advised that this ad hoc WG continues
9. Recommendations to forward to the Fisheries Commission and Scientific Council
10. Other Matters
11. Adoption of the Report
12. Adjournment

B - FISHERIES COMMISSION AND SCIENTIFIC COUNCIL JOINT WORKING GROUP ON RISK-BASED MANAGEMENT STRATEGIES, 5-7 FEBRUARY 2014 - AGENDA

1. Opening
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Review of Terms of Reference
5. Review and Update of the Precautionary Approach Framework
6. Review and Update of existing interim Conservation Plans and Management Strategies
7. 3NO Cod
8. 3LNO American Plaice
9. Follow-up to WGFMS-CPRS 2013 Recommendations
10. Evaluation and finalization of General Framework on Risk-based Management
11. Discussion on development of alternative strategies for stocks that may not be suited to formulaic rules and/or for stocks where reference points do not exist or cannot be developed.
12. Development of CPRS
    a. 3NO witch flounder
    b. 3LN redfish
    c. 3M cod
    d. 3L shrimp
13. Approach and workplan to review the Greenland Halibut Management Strategy Evaluation in 2017
14. Recommendations to forward to FC and SC
15. Other Matters
16. Adoption of the Report
17. Adjournment

C - THE *AD HOC* SCIENTIFIC COUNCIL WORKING GROUP ON CATCHES OF COD IN DIVISON 3M – AGENDA

An *ad hoc* subgroup of Scientific Council met via WebEx on 5 May 2014 to discuss progress to date and determine a plan of action on the issue of estimating catches for use in the Div. 3M cod assessment.

D - SCIENTIFIC COUNCIL *AD HOC* WORKING GROUP ON MANAGEMENT STRATEGIES FOR REDFISH IN DIV. 3LN, 13 MAY 2014

1. Opening
2. Appointment of rapporteur
3. Adoption of agenda
4. Review of recommendations
5. Review of operational models
6. Discussion on alternate HCR
7. Review of performance statistics
8. Discussion of exceptional circumstances
9. Discussion of review process (*i.e.* biennial assessment of the stock)
10. Other Matters
11. Adoption of Report
12. Adjournment

E – SCIENTIFIC COUNCIL MEETING, 31 MAY - 12 JUNE 2014 – AGENDA

I. Opening (Scientific Council Chair: Don Stansbury)
1. Appointment of Rapporteur
2 Presentation and Report of Proxy Votes
3. Adoption of Agenda
4. Attendance of Observers
5. Appointment of Designated Experts
6. Plan of Work
   a. General Discussion
   b. Stock Assessment Review and Assignment of Reviewers
   c. Procedures for interim monitoring reports
7. Housekeeping issues

II. Review of Scientific Council Recommendations in 2013

III. Fisheries Environment (STACFEN Chair: Estelle Couture)
1. Opening
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Review of Recommendations in 2013
5. Invited speaker
6. Integrated Science Data Management (ISDM) Report for 2013
7. Review of the physical, biological and chemical environment in the NAFO Convention Area during 2013
8. Interdisciplinary studies
9. Update of the on-line Annual Ocean Climate and Environmental Status Summary for the NAFO Convention Area
10. Formulation of recommendations based on environmental conditions during 2013
10. National Representatives
12. Other Matters
13. Adjournment

IV. Publications (STACPUB Chair: Margaret Treble)
1. Opening
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Review of Recommendations in 2013
5. Review of Publications
   a) Annual Summary
      i) Journal of Northwest Atlantic Fishery Science (JNAFS)
      ii) Scientific Council Studies
      iii) Scientific Council Reports
6. Other Matters
   a) Access to documents on the NAFO website
   b) ICES/NAFO Gadoid Symposium
   c) Future of JNAFS
7. Adjournment

V. Research Coordination (STACREC Chair: Kathy Sosebee)

1. Opening
2. Appointment of Rapporteur
3. Review of Recommendations in 2013
4. Fishery Statistics
   a) Progress report on Secretariat activities in 2013/2014
      i) STATLANT 21A and 21B
5. Research Activities
   a) Biological sampling
      i) Report on activities in 2013/2014
      ii) Report by National Representatives on commercial sampling conducted
      iii) Report on data availability for stock assessments (by Designated Experts)
   b) Biological surveys
      i) Review of survey activities in 2013 (by National Representatives and Designated Experts)
      ii) Surveys planned for 2014 and early 2015
   c) Tagging activities
   d) Other research activities
6. Review of SCR and SCS Documents
7. Other Matters
   a) Summary of progress on previous recommendations
   b) Stock Assessment Spreadsheets
   c) Standardization of Conversion Factors
8. Adjournment

VI. Fisheries Science (STACFIS Chair: Brian Healey)

1. Opening
2. General Review of Catches and Fishing Activity
3. Stock Assessments
   1. Greenland Halibut (*Reinhardtius hippoglossoides*) in SA 0, Div. 1A offshore and Div. 1B-F (fully assessed)
   2. Greenland Halibut (*Reinhardtius hippoglossoides*) Div. 1A inshore (fully assessed)
   3. Roundnose Grenadier (*Coryphaenoides rupestris*) in Subareas 0 and 1 (fully assessed)
   4. Demersal Redfish (*Sebastes* spp.) in SA 1 (fully assessed)
   5a. Wolffish in Subarea 1 (fully assessed)
   5b. American plaice (*Hippoglossoides platessoides*) in Subarea 1 (fully assessed)
   6. Cod (*Gadus morhua*) in Div. 3M (fully assessed)
   7. Redfish (*Sebastes mentella* and *Sebastes fasciatus*) in Div. 3M (monitor)
   8. American Plaice (*Hippoglossoides platessoides*) in Div. 3M (fully assessed)
   9. Cod (*Gadus morhua*) in NAFO Div. 3NO (monitor)
   10. Redfish (*Sebastes mentella* and *Sebastes fasciatus*) in Divisions 3L and 3N (fully assessed)
   11. American Plaice (*Hippoglossoides platessoides*) in Div. 3LNO (fully assessed)
   12. Yellowtail flounder (*Limanda ferruginea*) in Div. 3LNO (monitor)
   13. Witch Flounder (*Glyptocephalus cynoglossus*) in Div. 3NO (fully assessed)
   14. Capelin (*Mallotus villosus*) in Div. 3NO (monitor)
   15. Redfish (*Sebastes mentella* and *Sebastes fasciatus*) in Div. 3O (monitor)
   16. Thorny skate (*Amblyraja radiata*) in Div. 3LNO and Subdiv. 3Ps (fully assessed)
   17. White Hake (*Urophycis tenuis*) in Div. 3NO and Subdiv. 3Ps (monitor)
   18. Roughhead Grenadier (*Macrourus berglax*) in Subareas 2 and 3 (monitor)
   19. Witch Flounder (*Glyptocephalus cynoglossus*) in Div. 2J+3KL (monitor)

20. Greenland Halibut (*Reinhardtius hippoglossoides*) in SA 2 + Div. 3KLMNO (management strategy)
21. Northern Shortfin Squid (*Illex illecebrosus*) in Subareas 3+4 (monitor)

4. Stocks under a Management Strategy Evaluation (FC Item 3a)
   a) Greenland halibut in SA 2 and Div. 3KLMNO 5
5. Other Matters
   a) FIRMS Classification for NAFO Stocks
   b) Other Business
6. Adjournment

VII. Management Advice and Responses to Special Requests

1. Fisheries Commission (Annex 1)
   a) Request for Advice on TACs and Other Management Measures (Item 2, Annex 1))

   For 2015
   - Witch flounder in Div. 3NO

   For 2015 and 2016
   - Redfish in Div. 3LN
   - American plaice in Div. 3LNO
   - Thorny skate in Div. 3LNO

   For 2015, 2016 and 2017
   - American plaice in Div. 3M

   b) Monitoring of Stocks for which Multi-year Advice was provided in 2012 or 2013 (Item 2)
   - Redfish in Div. 3M
   - Cod in Div. 3NO
   - Yellowtail flounder in Div. 3LNO
   - Capelin in Div. 3NO
   - Redfish in Div. 3O
   - White hake in Div. 3NO
   - Witch flounder in Div. 2J + 3KL
   - Squid (Illex) in SA 3+4

   c) Special Requests for Management Advice
      i) Greenland halibut TAC (Item 3A) and exceptional circumstances in Greenland halibut MSE (Item 3b)
      ii) Reference points for cod in Div. 3M (Item 5)
      iii) Reference points for witch flounder in Div. 3NO (Item 6)
      iv) Full assessment of cod in Div. 3M and advice for 2015 (Item 7)
      v) Development of MSE workplan for cod in Div. 3M (Item 8)
      vi) Selectivity in Div. 3M cod and redfish fisheries (Item 9)
      vii) Availability of data and progress towards quantitative assessments (Item 10)
      viii) Development of MSE for redfish in Div. 3LN (Item 11)
      ix) Risk assessment for SAI on VME elements and species (Item 12)
      x) Summary of data available for identification of VMEs (Item 13a)
      xi) Extent of current closures and areas for prioritization by WGEAFFM (Item 13b)
      xii) Impacts of removing candidate VME closures from survey design (Item 14)
      xiii) Occurrence of sea pens around areas 13 and 14 (Item 15)
      xiv) Standardization of conversion factors (Item 16)

2. Coastal States
    a) Request by Denmark (Greenland) for Advice on Management in 2014 (Annex 2)
        i) Roundnose grenadier in SA 0+1 (Item 1)
        ii) Golden redfish, Atlantic wolfish, Spotted wolfish and American plaice in SA 1 (Item 2)
        iii) Greenland halibut in inshore areas of Div. 1A (Item 4)
        iv) *Pandalus borealis* east of Greenland and in the Denmark Strait (in conjunction with ICES). (Item 6)
    b) Request by Denmark (Greenland) and Canada for Advice on Management in 2014
        i) Greenland halibut in Div. 0A and the offshore area of Div. 1A, plus Div. 1B (Annex 2, Item 3.1; Annex 3, Item 1)
        ii) Greenland halibut in Div. 0B + Div. 1C-1F (Annex 2, Item 3.2, Annex 3, Item 1)
        iii) *Pandalus borealis* in SA 0 + 1 (Annex 2, Item 5; Annex 3, Item 2)
    c) Request by Canada for Advice on Management in 2014
        i) Harvest strategies for North Atlantic harp seal

VIII. Review of Future Meetings Arrangements
1. Scientific Council (in conjunction with NIPAG), 10 – 17 Sep 2014
2. Scientific Council, 22 – 26 Sep 2014
3. Scientific Council, Jun 2015
4. Scientific Council (in conjunction with NIPAG), Sep 2015
5. Scientific Council, Sep 2015
6. NAFO/ICES Joint Groups
    a) NIPAG, 10 – 17 Sep 2014
    b) NIPAG, 2015
7. WGEAFM
8. WGDEC
9. WGRP
10. WGHARP

IX. Arrangements for Special Sessions
1. Future Special Sessions
    a) ICES IMR NAFO Bottom Trawl Symposium, Tromso, Norway, 16 – 19 June 2014
    b) Suggestions for symposia

X. Meeting Reports
1. Working Group on Ecosystem Science and Assessment (WGESA), Nov 2013
2. Report from ICES-NAFO Working Group on Deepwater Ecosystems (WGDEC), Mar 2014
3. Report from Joint FC-SC Working Group on Risk Based Management Strategies (WG-RBMS), Feb 2014
4. Report from ad hoc Joint Working Group on Catch Reporting (WG-CR), Feb 2014
5. Meetings attended by the Secretariat:
    a) Eurostat Fisheries Statistics Working Group
    b) EU Data Collection Framework Revision Stakeholders Workshop
    c) FAO VME Database Workshop
6. ICES/NAFO Symposium on "Gadoid Fisheries: The Ecology and Management of Rebuilding"
7. World Conference on Stock Assessment Methods
8. Ad Hoc SC Working Group on Div. 3M Cod Catches
9. SC Working Group on Development of a Management Strategy for Div. 3LN Redfish

XI. Review of Scientific Council Working Procedures/Protocol
   1. General Plan of Work for September 2014 Annual Meeting
   2. Other Matters
      i) Colour coding of summary sheet indicators
      ii) Other business

XII. Other Matters
   1. Designated Experts
   2. Stock Assessment spreadsheets
   3. Meeting Highlights for NAFO Website
   4. Scientific Merit Awards
   5. Budget items
   6. Other Business
      i) North-west Atlantic Regional Workshop to Facilitate the Description of Ecologically or Biologically Significant Marine Areas (EBSAs)
      ii) Progress on Performance Assessment Recommendations
      iii) Protocol for development of management strategy evaluations

XIII. Adoption of Committee Reports
   1. STACFEN
   2. STACREC
   3. STACPUB
   4. STACFIS

XIV. Scientific Council Recommendations to General Council and Fisheries Commission

XV. Adoption of Scientific Council Report

XVI. Adjournment

F - FISHERIES COMMISSION AND SCIENTIFIC COUNCIL WORKING GROUP ON THE ECOSYSTEM APPROACH FRAMEWORK TO FISHERIES MANAGEMENT, 9-11 JULY 2014 - AGENDA

1. Opening
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Review of Terms of Reference
5. Engagement with Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB): Update and possible next steps
6. Consideration of Scientific Advice
    a. Review of Vulnerable Marine Ecosystems (VMEs) and fishery closures
        i. Summary of data available for identification of VMEs (Request 13a)
        ii. Occurrence of sea pens around Areas 13 and 14 (Request 15)
        iii. Extent of current closures and areas for prioritization (Request 13b) – Management responses to the available information
        iv. Consideration of removing candidate VME closures from survey design (Request 14)
    b. Significant Adverse Impact (SAI) on VME elements
        i. Risk assessment for SAI on VME elements and species (Request 12)
        ii. Workplan towards the assessment of NAFO bottom fisheries by 2016
7. Review of the provisions of Chapter II – Bottom Fisheries in the NAFO Regulatory Area --- of the NAFO Conservation and Enforcement Measures (NCEM) for the implementation of Article 24; and recommendations to the Fisheries Commission
8. Input and guidance on the development and application of Ecosystems Approach to Fisheries (EAF) Roadmap
    a. Overview of the EAF Roadmap: purpose and goals
    b. Operational expectations
    c. Consideration of workplan and prioritization
9. Recommendations to forward to Fisheries Commission and Scientific Council
10. Other Matters
    a. Corner Rise Seamount Splendid Alfonsino fisheries
    b. Convention on Biological Diversity
    c. Dr Enrique Cardenas Retirement
11. Adoption of Report
12. Adjournment

G - SCIENTIFIC COUNCIL MEETING, 10-17 SEPTEMBER 2014 - AGENDA

I. Opening (Chair: Don Stansbury)
   1. Appointment of Rapporteur
   2. Adoption of Agenda1
   3. Attendance of Observers
   4. Plan of Work

II. Review of Recommendations in 2013

III. NAFO/ICES Pandalus Assessment Group (Co-chairs Brian Healey and Michael Kingsley)

IV. Formulation of Advice (see Annexes 1–3 of Appendix I)
   1. Request from Fisheries Commission (Items 1 and 4 of Annex 1)
      a) Northern shrimp (Div. 3M)
      b) Northern shrimp (Div. 3LNO)
   2. Requests from Coastal States (Items 5 and 6 of Annex 2, Item 2 of Annex 3)
      a) Northern shrimp (Subareas 0 and 1)
      b) Northern shrimp (in Denmark Strait and off East Greenland)
      c) Harvest Control Rules (Item 7 of Annex 2)

V. Other Matters
   1. Scheduling of Future Meetings
   2. Topics for Future Special Sessions
   3. Other Business

VI. Adoption of Scientific Council and NIPAG Reports

VII. Adjournment

H - NAFO/ICES *PANDALUS* ASSESSMENT GROUP (NIPAG) MEETING, 10–17 SEPTEMBER 2014 - AGENDA

I. Opening (Co-chairs: Brian Healey and Michael Kingsley)

1. Appointment of Rapporteur
2. Adoption of Agenda1
3. Plan of Work

II. General Review

1. Review of Recommendations in 2013
2. Review of Catches

III. Stock Assessments

- Northern shrimp (Division 3M)
- Northern Shrimp (Divisions 3LNO)
- Northern shrimp (Subareas 0 and 1)
- Northern shrimp (in Denmark Strait and off East Greenland)
- Northern shrimp in Skagerrak and Norwegian Deep (ICES Divisions IIIa and IVa East)
- Northern Shrimp in Barents Sea and Svalbard area (ICES Sub-areas I & II)
- Northern shrimp in Fladen Ground (ICES Division IVa)

IV. Other Business

- FIRMS Classification for NAFO Shrimp Stocks

V. Adjournment

I - SCIENTIFIC COUNCIL MEETING, 22-26 SEPTEMBER 2014 – AGENDA

I. Plenary Session

1. Opening
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Plan of Work

II. Review of Scientific Council Recommendations

III. Research Coordination

1. Opening
2. Fisheries Statistics
   a) Progress Reports on Secretariat Activities
   b) Review of STATLANT21
3. Research Activities
   a) Surveys Planned for 2014 and early 2015
4. Other Matters
   a) Review of SCR and SCS Documents
   b) Other Business

IV. Fisheries Science

1. Opening
2. Nomination of Designated Experts
3. Other Matters
   a) Review of SCR and SCS Documents
   b) Other Business

V. Requests from the Fisheries Commission

1. Requests deferred from the June Meeting
   a) Availability of data and progress towards quantitative assessments (FC Request 10)
2. Ad hoc Requests from Current Meeting

VI. Meeting Reports

1. Joint Fisheries Commission – Scientific Council WG-EAFFM
2. ICES IMR Symposium: Effects of fishing on benthic fauna, habitat and ecosystem function.

VII. Review of Future Meeting Arrangements

VIII. Future Special Sessions

IX. Other Matters

1. Election of officers – STACFEN chair
2. Report of the Joint FC/SC Meeting

X. Adoption of Reports

1. Committee Reports of STACFIS and STACREC
2. Report of Scientific Council

XI. Adjournment

ANNEX 1. FISHERIES COMMISSION'S REQUEST FOR SCIENTIFIC ADVICE ON MANAGEMENT IN 2015 AND BEYOND OF CERTAIN STOCKS IN SUBAREAS 2, 3 AND 4 AND OTHER MATTERS

1. The Fisheries Commission with the concurrence of the Coastal State as regards to the stocks below which occur within its jurisdiction ("Fisheries Commission") requests that the Scientific Council provide advice in advance of the 2014 Annual Meeting, for the management of Northern shrimp in Div. 3M and in Div. 3LNO in 2015. The advice should be provided as a range of management options and a risk analysis for each option (rather than a single TAC recommendation) in accordance to Annex A or B as appropriate.

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

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. 3LNO	Witch flounder in Div. 3NO
White hake in Div. 3NO	
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 2014, advice should be provided for 2015 only for Witch Flounder in Div. 3NO, for 2015 and 2016 for American plaice in Div. 3LNO, Redfish in Div. 3LN, Thorny skates in Div. 3LNO and for 2015, 2016 and 2017 for American plaice in Div. 3M.

Advice should be provided using the guidance provided in **Annexes A or B as appropriate**, or using the predetermined Harvest Control Rules in the cases where they exist.

The Fisheries Commission also requests the Scientific Council to continue to monitor the status of all these stocks annually and, should a significant change be observed in stock status (e.g. from surveys) or in bycatches in other fisheries, provide updated advice as appropriate.

3. The Fisheries Commission adopted in 2010 an MSE approach for Greenland halibut stock in Subarea 2 + Division 3KLMNO (FC Doc. 10/12). This approach considers a survey based harvest control rule (HCR) to set a TAC for this stock on an annual basis. The Fisheries Commission requests the Scientific Council to:

   a) Monitor and update the survey slope and to compute the TAC according to HCR adopted by the Fisheries Commission according to Annex 1 of FC Document 10/12.

   b) Advise on whether or not an exceptional circumstance is occurring.

4. The scientific advice for Div. 3LNO shrimp is based on the assessment of fishable biomass and the trends of exploitation rates. Interactions between stocks are likely to occur and may substantially contribute to the total mortality of shrimp.

   The Fisheries Commission requests the Scientific Council to incorporate as much as possible information on stock interaction between these stocks in the management advice of Div. 3LNO shrimp and to provide sustainable exploitation rates on that basis.

5. The Fisheries Commission requests the Scientific Council to continue the work on reference points and provide B_{msy} and F_{msy} for cod in Div. 3M.

6. The Fisheries Commission requests the Scientific Council to provide reference points for Div. 3NO witch flounder including B_{lim}, B_{msy} and F_{msy} through modelling or proxies.

7. The Fisheries Commission requests the Scientific Council to conduct a full assessment of Div. 3M cod and provide advice for 2015 on a range of management options and associated risks regarding reference points, according to Annexes A or B.

8. The Fisheries Commission requests the Scientific Council to develop a work plan to perform a Management Strategy Evaluation for Div. 3M cod, to explore operating models that could be used and report back through the Working Group on Risk-Based Management Strategies.

9. The Fisheries Commission requests the Scientific Council to analyze and provide advice on management measures that could improve selectivity in the Div. 3M cod and Div. 3M redfish fishery in the Flemish Cap in order to reduce possible by catches and discards. The objective is to reduce the mixed fisheries between cod and redfish, the by-catch of non-targeted stocks and to analyze if the selectivity pattern could be improved to reduce the catch of undersized fish.

10. The Scientific Council provides advice for a number of stocks based only on qualitative assessments of survey trends and catches (e.g. Div. 3NO white hake, Div. 3O redfish). For some of these stocks the advice is to lower the TAC to recent level of catches. On the other hand, there is an important effort in biological sampling, collection of fishing activity data and fishery independent surveys. There is also an important progress in providing more data to the Scientific Council such as VMS. In spite of these efforts, no progress has been reached regarding quantitative assessments of many stocks. The Fisheries Commission requests the Scientific Council to provide an overview for all stocks on what biological and fishery information is currently available by Contracting Party and what is necessary to improve in terms of data collection in order to develop quantitative assessments and biological reference points for stocks managed by NAFO.

11. The Fisheries Commission requests the Scientific Council to explore models that could be used to conduct a Management Strategy Evaluation for Div. 3LN redfish and report back through the Working Group on Risk-Based Management Strategies during their next meeting.

12. The Fisheries Commission requests the Scientific Council to continue to develop work on Significant Adverse Impacts in support of the reassessment of NAFO bottom fishing activities required in 2016, specifically an assessment of the risk associated with bottom fishing activities on known and predicted VME species and elements in the NRA.

13. Considering that the current closures for VME indicators (i.e. species and elements in Annex I.E VI and VII) established under Chapter II of the NAFO Conservation and Enforcement Measures (NCEM) are due for revision in 2014, the Fisheries Commission requests the Scientific Council to:

    a. Summarize and assess all the data available collected through the NEREIDA project, CP RV surveys, and any other suitable source of information, to identify VMEs in the NRA, in accordance to FAO Guidelines and NCEM.

    b. Based on these analyses, evaluate and provide advice in the context of current closures specified in the NCEM for the protection of VMEs and prioritize areas for consideration by the Ecosystem Approach to Fisheries Working Group.

14. Recognizing the work done in NAFO to prevent significant adverse impacts to vulnerable marine ecosystems, and the need for effective stock assessments;

    Further recognizing that modifications to survey designs occur on regular basis in fisheries surveys in many cases,

    Fisheries Commission requests that Scientific Council investigate the impacts of removing the closed areas from the survey design for relevant stock surveys for consideration in the review of closed areas in 2014.

15. The Fisheries Commission Working Group on Vulnerable Marine Ecosystems (WGFMS-VME) considered the scientific advice available at the time of its last meeting held in April 2013. No consensus was reached between Contracting Parties regarding specific management measures that are best suited in protecting areas 13 and 14 as reflected in Figure 2 of the Working Group report (NAFO/FC Doc. 13/3) and defined by the coordinates indicated in page 10 of that report.

    New information from the EU Flemish Cap survey was expected to be available on sea pens later in 2013, which would help to clarify what type of management measures would best suit areas 13 and 14.

The Fisheries Commission requests the Scientific Council to provide the Fisheries Commission with the preliminary results or analysis, regarding occurrence of sea pens in areas towed close to areas 13 and 14 and advise if these reveal significant concentrations of VME indicators.

16. The Fisheries Commission requests the Scientific Council to evaluate and provide recommendations on the methodology for establishing standardized conversion factors outlined in STACTIC WP 13/3.

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

The Fisheries Commission request the Scientific Council to consider the following in assessing and projecting future stock levels for those stocks listed above. These evaluations should provide the information necessary for the Fisheries Commission to consider the balance between risks and yield levels, in determining its management of these stocks:

1. For stocks assessed with a production model, the advice should include updated time series of:

- Catch and TAC of recent years
- Catch to relative biomass
- Relative Biomass
- Relative Fishing mortality
- Stock trajectory against reference points
- And any information the Scientific Council deems appropriate.

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

- For stocks opened to direct fishing: 2/3 F_{msy}, 3/4 F_{msy}, 85% F_{msy}, 75% F_{2013}, F_{2013}, 125% F_{2013},
- For stocks under a moratorium to direct fishing: F_{2013}, $F = 0$.

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

Results from stochastic short term projection should include risks of stock population parameters increasing above or falling below available biomass and fishing mortality reference points. The table indicated below should guide the Scientific Council in presenting the short term projections.

				Limit reference points													
				P(F>Flim)			P(B<Blim)				P(F>Fmsy)			P(B<BmsyP			P(B2016 > B2013)
F in 2014 and following years*	Yield 2014 (50%)	Yield 2015 (50%)	Yield 2016 (50%)	2014	2015	2016	2014	2015	2016		2014	2015	2016	2014	2015	2016	
2/3 F_{msy}	t	t	t	%	%	%	%	%	%		%	%	%	%	%	%	%
3/4 F_{msy}	t	t	t	%	%	%	%	%	%		%	%	%	%	%	%	%
85% F_{msy}	t	t	t	%	%	%	%	%	%		%	%	%	%	%	%	%
0.75 X F_{2013}	t	t	t	%	%	%	%	%	%		%	%	%	%	%	%	%
F_{2013}	t	t	t	%	%	%	%	%	%		%	%	%	%	%	%	%
1.25 X F_{2013}	t	t	t	%	%	%	%	%	%		%	%	%	%	%	%	%
F=0	t	t	t	%	%	%	%	%	%		%	%	%	%	%	%	%

2. For stock assessed with an age-structured model, information should be provided on stock size, spawning stock sizes, recruitment prospects, historical fishing mortality. Graphs and/or tables should be provided for all of the following for the longest time-period possible:

- historical yield and fishing mortality;
- spawning stock biomass and recruitment levels;
- Stock trajectory against reference points

And any information the Scientific Council deems appropriate

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

- For stocks opened to direct fishing: $F_{0.1}$, F_{max}, 2/3 F_{max}, 3/4 F_{max}, 85% F_{max}, 75% F_{2013}, F_{2013}, 125% F_{2013},
- For stocks under a moratorium to direct fishing: F_{2013}, $F = 0$.

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

Results from stochastic short term projection should include:

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

				Limit reference points													
				$P(F > F_{lim})$			$P(B<B_{lim})$			$P(F>F_{0.1})$			$P(F>F_{max})$				$P(B_{2016} > B_{2013})$
F in 2014 and following years*	Yield 2014	Yield 2015	Yield 2016	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016		
$F_{0.1}$	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%		%
F_{max}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%		%
66% F_{max}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%		%
75% F_{max}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%		%
85% F_{max}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%		%
0.75 X F_{2013}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%		%
F_{2013}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%		%
1.25 X F_{2013}	t	t	t	%	%	%	%	%	%	%	%	%	%	%	%		%

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

For those resources for which only general biological and/or catch data are available, few standard criteria exist on which to base advice. The stock status should be evaluated in the context of management requirements for long-term sustainability and the advice provided should be consistent with the precautionary approach.

The following graphs should be presented, for one or several surveys, for the longest time-period possible:

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

And any information the Scientific Council deems appropriate

ANNEX 2. DENMARK (ON BEHALF OF GREENLAND) REQUEST FOR SCIENTIFIC ADVICE ON MANAGEMENT IN 2015 OF CERTAIN STOCKS IN SUBAREAS 0 AND 1

1. For Roundnose grenadier in Subarea 0 + 1 advice was in 2011 given for 2012-2014. Denmark (on behalf of Greenland) requests the Scientific Council to provide advice on the scientific basis for the management of Roundnose grenadier in Subarea 0 + 1 for 2015-2017.

2. Advice for golden red fish *(Sebastes marinus)*, demersal deep-sea redfish *(Sebastes mentella)* American plaice *(Hippoglossoides platessoides)*, Atlantic wolffish *(Anarhichas lupus)* and spotted wolffish *(A. minor)* in Subarea 1 was in 2011 given for 2012-2014. Denmark (on behalf of Greenland) requests the Scientific Council to provide advice for redfish *(Sebastes marinus)*, American plaice *(Hippoglossoides platessoides)*, Atlantic wolffish *(Anarhichas lupus)* and spotted wolffish *(A. minor)* on the scientific basis for the management of in Subarea 1A for 2015-2017.

3. Subject to the concurrence of Canada as regards Subareas 0 and 1, the Scientific Council is requested to provide advice on appropriate TAC levels for 2015 separately for Greenland halibut in 1) the offshore area of NAFO Division 0A and Division 1A plus Division 1B and, 2) NAFO Division 0B plus Divisions 1C-1F. The Scientific Council is also asked to advice on any other management measures it deems appropriate to ensure the sustainability of these resources.

4. Advice for Greenland halibut in Division 1A inshore was in 2012 given for 2013-2014. Denmark (on behalf of Greenland) requests the Scientific Council for advice for Greenland halibut in Division 1A inshore for 2015-2016.

5. Subject to the concurrence of Canada as regards Subarea 0 and 1, Denmark (on behalf of Greenland) further requests the Scientific Council before December 2014 to provide advice on the scientific basis for management of Northern shrimp *(Pandalus borealis)* in Subarea 0 and 1 in 2015 and for as many years ahead as data allows for.

6. Furthermore, the Scientific Council is in cooperation with ICES requested to provide advice on the scientific basis for management of Northern shrimp *(Pandalus borealis)* in Denmark Strait and adjacent waters east of southern Greenland in 2015 and for as many years ahead as data allows for.

ANNEX 3. REQUESTS FOR ADVICE FROM CANADA

1. Greenland halibut (Subareas 0 and 1)

The Scientific Council is requested, subject to the concurrence of Denmark (on behalf of Greenland) as regards Subarea 1, to provide an overall assessment of status and trends in the total stock area throughout its range and to specifically advise on TAC levels for 2015, separately, for Greenland halibut in Divisions 0A+1A (offshore) and 1B, and Divisions 0B+1C-F.[2] The Scientific Council is also asked to provide advice on any other management measures it deems appropriate to ensure the sustainability of these resources.

a) It is noted that at this time only general biological advice 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 and include likely risk considerations and implications as much as possible, including risks of maintaining current TAC levels and any risks and available details of observations that would support an increase or decrease in the TACs.

b) Recognizing that this is a data poor fishery, and that no model exists at this time to provide risk-based advice to inform management options, the Scientific Council is also asked to identify what would be required in order to provide risk based advice in the future.

The following graphs should be presented, for one or several surveys, for the longest time-period possible:

- historical catches;
- abundance and biomass indices;
- 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;
- stock trajectory against reference points

Any other information the Scientific Council feels is relevant should also be provided.

2. Shrimp (Divisions 0A and Subarea 1)

Canada requests the Scientific Council to consider the following options in assessing and projecting future stock levels for Shrimp in Subareas 0 and 1:

a) The status of the stock should be reviewed and management options evaluated in terms of their implications for fishable stock size, spawning stock size, recruitment prospect, catch rate and catch in both the short and long term. The implications of catch options ranging from 50,000 t to the catch corresponding to Z_{MSY}, in 10,000 t increments, should be forecast for 2015 through 2017 if possible, and evaluated in relation to precautionary reference points of both mortality and fishable stock biomass. The present stock size and fishable stock size should be described in relation to those observed historically and those to be expected in the longer term under this range of fishing mortalities, and any other options Scientific Council feels worthy of consideration.

b) Management options should be provided within the Northwest Atlantic Fisheries Organization Precautionary Approach Framework. Uncertainties in the assessment should be evaluated and presented in the form of risk analyses related to the limit reference points of B_{lim} and Z_{MSY}.

c) Presentation of the results should include the following:

- a graph and table of historical yield and fishing mortality for the longest time period possible;

[2] The Scientific Council has noted previously that there is no biological basis for conducting separate assessments for Greenland halibut throughout Subareas 0-3, but has advised that separate TACs be maintained for different areas of the distribution of Greenland halibut.

- a graph of biomass relative to B_{MSY}, and recruitment levels for the longest time period possible.
- a graph of the stock trajectory compared to B_{lim} and/or B_{MSY} and Z_{MSY}.;
- graphs and tables of total mortality (Z) and fishable biomass for a range of projected catch options (as noted in 2 a) for the years 2014 to 2017 if possible. Projections should include both catch options and a range of cod biomass levels considered appropriate by SC. Results should include risk analyses of falling below B_{MSY} and B_{lim}, and of exceeding Z_{MSY}.;
- a graph of the total area fished for the longest time period possible; and
- any other graph or table the Scientific Council feels is relevant.

3. Seals

Canada requests the Scientific Council to explore the impact of proposed harvest strategies that would maintain the North Atlantic harp seal population at a precautionary level of a PA framework, using the Canadian levels as a case study, and that would have a low risk of decreasing below the critical level.

LIST OF SCR AND SCS DOCUMENTS – 2014

SCR Documents

Doc No.	Serial No	Author	Title
SCR Doc. 14-001	N6284	Mads Hvid Ribergaard	Oceanographic Investigations off West Greenland 2013
SCR Doc. 14-002	N6292	O.A. Jørgensen	Survey for Greenland Halibut in NAFO Divisions 1C-1D, 2013
SCR Doc. 14-003	N6293	Rasmus Nygaard and Ole A. Jørgensen	Biomass and Abundance of Demersal Fish Stocks off West and East Greenland estimated from the Greenland Institute of Natural Resources Shrimp Fish Survey, 1988-2013
SCR Doc. 14-004	N6294	Boris Cisewski	Hydrographic conditions off West Greenland in 2013
SCR Doc. 14-005	N6295	Diana González-Troncoso and Xabier Paz	Results for Greenland halibut, American plaice and Atlantic cod of the Spanish survey in NAFO Div. 3NO for the period 1997-2013
SCR Doc. 14-006	N6296	Diana González-Troncoso and Xabier Paz	Yellowtail flounder, redfish (Sebastes spp) and witch flounder indices from the Spanish Survey conducted in Divisions 3NO of the NAFO Regulatory Area
SCR Doc. 14-007	N6297	Diana González-Troncoso and Xabier Paz	Biomass and length distribution for roughhead grenadier, thorny skate and white hake from the surveys conducted by Spain in NAFO 3NO
SCR Doc. 14-008	N6298	Zeliang Wang and Blair J.W. Greenan	Physical oceanographic conditions on Newfoundland Shelf / Flemish Cap – from a model perspective (1990-2012)
SCR Doc. 14-009	N6299	Adriana Nogueira, Xabier Paz and Diana González-Troncoso	Persistence and Variation on the Groundfish Assemblages on Flemish Cap (NAFO Divisions 3M): 2004-2013
SCR Doc. 14-010	N6300	E. Colbourne, J. Holden, J. Craig, D. Senciall, W. Bailey, P. Stead and C. Fitzpatrick	Physical Oceanographic Environment on the Newfoundland and Labrador Shelf in NAFO Subareas 2 and 3 during 2013
SCR Doc. 14-011	N6302	I. Yashayaev, E.J.H. Head, K. Azetsu-Scott, M. Ringuette, Z. Wang and S. Punshon	Environmental Conditions in the Labrador Sea during 2013
SCR Doc. 14-012	N6303	Esther Román, Concepción González-Iglesias and Diana González-Troncoso	Results for the Spanish Survey in the NAFO Regulatory Area of Division 3L for the period 2003-2013
SCR Doc. 14-013	N6304	D. Hebert and R. G. Pettipas	Physical Oceanographic Conditions on the Scotian Shelf and in the eastern Gulf of Maine (NAFO areas 4V,W,X) during 2013
SCR Doc. 14-014	N6306	G. Maillet, B. Casault, P. Pepin, C. Johnson, S. Plourde, M. Starr, C. Caverhill, H. Maass, J. Spry, S. Fraser, C. Porter, G. Redmond, T. Shears	Ocean Productivity Trends in the Northwest Atlantic During 2013
SCR Doc. 14-015	N6309	Bruce Bradshaw, Luc Bujold, Graham Glenn, Mathieu Ouellet, Krista Sun, Anh Tran Krista Sun, Anh Tran	Oceanography and Scientific Data NAFO Report 2013
SCR Doc. 14-016	N6310	Esther Román, Ángeles Armesto and Diana González-Troncoso	Results for the Atlantic cod, roughhead grenadier, redfish, thorny skate and black dogfish of the Spanish Survey in the NAFO Div. 3L for the period 2003-2013

SCR Doc. 14-017	N6311	Mónica Mandado	Results from Bottom Trawl Survey on Flemish Cap of July 2013
SCR Doc. 14-018	N6312	Diana González-Troncoso and Fernando González-Costas	3M cod assessment for different assumptions over M
SCR Doc. 14-019	N6313	Fernando González-Costas and Diana González–Troncoso	Biological Reference Points of 3M cod
SCR Doc. 14-020	N6314	M. A. Treble	Report on Greenland halibut caught during the 2013 trawl survey in NAFO Division 0B
SCR Doc. 14-021	N6316	Anna Chrysafi and Ole A. Jørgensen	MSY from catch and resilience
SCR Doc. 14-022	N6317	A. M. Ávila de Melo, Nuno Brites, R. Alpoim, and Diana González Troncoso	An ASPIC Based Assessment of Redfish (S. mentella and S. fasciatus) in NAFO Divisions 3LN (assuming that the highest apparently sustained historical average level of catch is a sound proxy to MSY)
SCR Doc. 14-023	N6318	M.R. Simpson, C.M. Miri, and R. Collins	Assessment of Thorny Skate (Amblyraja radiata Donovan, 1808) in NAFO Divisions 3LNO and Subdivision 3Ps
SCR Doc. 14-024	N6319	Robert Johnston and Katherine Sosebee	History of the United States Bottom Trawl Surveys, NAFO Subareas 4-7
SCR Doc. 14-025	N6320	Rasmus Nygaard	Assessment of Demersal Redfish in NAFO Subarea 1
SCR Doc. 14-026	N6321	Garry Stenson	The Status of Harp and Hooded Seals in the North Atlantic
SCR Doc. 14-027	N6322	O.A. Jørgensen and M. A. Treble	Assessment of the Greenland Halibut Stock Component in NAFO Subarea 0 + Division 1A Offshore + Divisions 1B-1F
SCR Doc. 14-028	N6324	Heino Fock and Christoph Stransky	Stock Abundance Indices and Length Compositions of Demersal Redfish and Other Finfish in NAFO Sub-area 1 and near bottom water temperature derived from the German bottom trawl survey 1982-2013
SCR Doc. 14-029	N6325	E. Lee, P. Regular, B. Brodie, R.M. Rideout, K. Dwyer, D. Ings, J, Morgan	An assessment of the witch flounder resource in NAFO Divisions 3NO
SCR Doc. 14-030	N6326	Carsten Hvingel and Michael C.S. Kingsley	Limit reference Flim at Fmsy – a Flimsy point? On some possible revisions of the NAFO Precautionary Approach framework
SCR Doc. 14-031	N6327	K.S. Dwyer, M.J. Morgan, W.B. Brodie, R. Rideout, D. Maddock Parsons, B.P. Healey and D. Ings	Survey indices and STATLANT 21A bycatch information for American plaice in NAFO Div. 3LNO
SCR Doc. 14-032	N6328	Rasmus Nygaard	Assessment of Other Finfish in NAFO Subarea 1
SCR Doc. 14-033	N6329	V. Khlivnoy and P. Zavoloka	Russian Research on Greenland Halibut (*Reinhardtius hippoglossoides*) in the West Greenland Area in 2001-2013
SCR Doc. 14-034	N6330	K.S. Dwyer, M.J. Morgan, W.B. Brodie, R. Rideout, D. Maddock Parsons, B.P. Healey and D. Ings	VPA for American plaice in Div. 3LNO
SCR Doc. 14-035	N6331	Diana González-Troncoso, Fernando González-Costas, Brian Healey, Joanne Morgan and Carsten Hvingel	Assessment of the Cod Stock in NAFO Division 3M
SCR Doc. 14-036	N6332	R. Alpoim, D. González-Troncoso and A. M. Ávila de Melo	An Assessment of American Plaice (Hippoglossoides platessoides) in NAFO Division 3M

SCR Doc. 14-037	N6333	Rasmus Nygaard	Assessment of wolffish in NAFO subarea 1
SCR Doc. 14-038	N6334	Rasmus Nygaard	Trawl, gillnet and longline survey results from surveys conducted by the Greenland Institute og Natural Resources in NAFO Division 1A Inshore
SCR Doc. 14-039	N6335	M.J. Morgan, R.M. Rideout, D. Ings, P.M. Regular, B. P. Healey	Greenland halibut (Reinhardtius hippoglossoides) in NAFO Subarea 2 and Divisions 3KLMNO: stock trends based on annual Canadian research vessel survey results.
SCR Doc. 14-040	N6336	G. Dauphin, J. Morgan, P. Shelton	Operating Models for Management Startegy Evaluation of Div. 3LN Redfish
SCR Doc. 14-041	N6338	Rasmus Nygaard	Assessment Greenland Halibut Stock Component in NAFO Division 1A Inshore
SCR Doc. 14-042	N6339	Vinnichenko V.I., Kanishchev A.A., Fomin K.Yu., Gavrilik T.N. and Zavoloka P.A.	Occurence of Deep-water Corals and Sponges Within NAFO Regulatory Area Based on the Data of Observations Onboard Russian Fishing Vessels During 2008-2013
SCR Doc. 14-043	N6340	Aldo P. Solari	A Bayesian Approach to the Assessment of West Greenland Halibut: Rationale and Critique.
SCR Doc. 14-044	N6341	Fernando González-Costas, Diana González-Troncoso, David Miller, Agurtzane Urtizberea, Ane Iriondo and Dorleta García	Developing of a 3M cod MSE
SCR Doc. 14-045	N6342	Estelle Couture and Rick Rideout	Standardizing the traffic light approach for reporting on Convention Objectives
SCR Doc. 14-046	N6348	Nanette Hammeken Arboe	Catch Table Update for the West Greenland Shrimp Fishery
SCR Doc. 14-047	N6349	Casas, J.M., E. Román, J. Teruel, and M. Álvarez	Northern Shrimp (*Pandalus borealis*, Krøyer) from EU-Spain Bottom Trawl Survey 2014 in NAFO Div. 3LNO
SCR Doc. 14-048	N6350	D.C. Orr and D.J. Sullivan	The 2014 assessment of the Northern Shrimp (*Pandalus borealis*, Kroyer) resource in NAFO Divisions 3LNO
SCR Doc. 14-049	N6351	J. M. Casas	Northern Shrimp (*Pandalus borealis*) on Flemish Cap Surveys 2014
SCR Doc. 14-050	N6352	J. M. Casas	Assessment of the International Fishery for Shrimp (*Pandalus borealis*) in Division 3M (Flemish Cap), 1993-2014
SCR Doc. 14-051	N6353	C. Hvingel and T. H. Thangstad	Research survey results pertaining to northern shrimp (*Pandalus borealis*) in the Barents Sea and Svalbard area 2004-2013
SCR Doc. 14-052	N6354	AnnDorte Burmeister and Michael C.S. Kingsley	The West Greenland trawl survey for *Pandalus borealis*, 2014, with reference to earlier results
SCR Doc. 14-053	N6355	Carsten Hvingel and Trude H. Thangstad	The Norwegian fishery for northern shrimp (*Pandalus borealis*) in the Barents Sea and round Svalbard 1970-2014
SCR Doc. 14-054	N6356	G. Søvik and T. H. Thangstad	Results of the Norwegian Bottom Trawl Survey for Northern Shrimp (*Pandalus borealis*) in Skagerrak and the Norwegian Deep (ICES Divisions IIIa and IVa east) in 2014
SCR Doc. 14-055	N6357	Zakharov D.V.	Results of Russian investigations of the northern shrimp in the Barents Sea in 2004-2014
SCR Doc. 14-056	N6358	Carsten Hvingel	An assessment of the North Sea shrimp stock using a Bayesian surplus production model
SCR Doc. 14-057	N6359	Helle Siegstad	Results of the Greenland Bottom Trawl Survey for Northern shrimp (*Pandalus borealis*) Off East Greenland (ICES Subarea XIV b), 2008-2014
SCR Doc. 14-058	N6360	Michael C. S. Kingsley	Numbers of Age-2 Shrimps in West Greenland—again

SCR Doc. 14-059	N6361	Michael C. S. Kingsley	A Provisional Assessment of the Shrimp Stock off West Greenland in 2014
SCR Doc. 14-060	N6362	Nanette Hammeken Arboe	The Fishery for Northern Shrimp (*Pandalus borealis*) in Denmark Strait / off East Greenland 1978 - 2014
SCR Doc. 14-061	N6363	Nanette Hammeken Arboe	The Fishery for Northern Shrimp (*Pandalus borealis*) off West Greenland, 1970–2014
SCR Doc. 14-062	N6364	Michael C. S. Kingsley	Revised treatment of cod survey data in assessing the West Greenland stock of *Pandalus borealis*
SCR Doc. 14-063	N6367	G. Søvik and T. H. Thangstad	The Norwegian Fishery for Northern Shrimp (*Pandalus borealis*) in Skagerrak and the Norwegian Deep (ICES Divisions IIIa and IVa east), 1970-2014
SCR Doc. 14-064	N6368	Carsten Hvingel	Shrimp (*Pandalus borealis*) in the Barents Sea – Stock assessment 2012
SCR Doc. 14-065	N6370	M. Ulmestrand, S. Munch-Petersen, G. Søvik and O. Eigaard	The Northern shrimp (*Pandalus borealis*) Stock in Skagerrak and the Norwegian Deep (ICES Divisions IIIa and IVa East)
SCR Doc. 14-066	N6371	Martin Jørgensen, Sten Munch-Petersen, Anders Nielsen, Guldborg Søvik, Mats Ulmestrand, Jennifer Devine, Ole Ritzau Eigaard	Introducing time-varying natural mortality in the length-based assessment model for the *Pandalus Borealis* stock in ICES Div. IIIa and IVa east
SCR Doc. 14-067	N6397	M. C. S. Kingsley	Shrimps and Cod in West Greenland, and How Many of the One are Eaten by the Other
SCR Doc. 14-068	N6407	Ane Iriondo, Niels Hintzen, Fernando González-Costas, David Miller, Diana González-Troncoso and Agurtzane Urtizberea	Spatial and seasonal fleet activity and cod distribution in Flemish Cap
SCR Doc. 14-069	N6412	P. Pepin *et al.*	Ecoregions (Final)
SCR Doc. 14-070	N6413	R. Anderson *et al.*	Impacts of Other Activities

SCS Documents

Doc No.	Serial No	Author	Title
SCS Doc. 14-001	N6278		FC Request for Advice
SCS Doc. 14-002	N6280	Greenland	Request for Advice 2015
SCS Doc. 14-003	N6281	Canada	Request for Advice 2015
SCS Doc. 14-004	N6285		Report of the *ad hoc* Scientific Council Working Group on Catches of Cod in Division 3M.
SCS Doc. 14-005	N6286		Report of the Scientific Council - 13 May (3LN Redfish MSE)
SCS Doc. 14-006	N6287	F. González-Costas, D. González-Troncoso, G. Ramilo, E. Román, M. Casas, M. Mandado, M. Sacau, J. L. del Rio and. J. Lorenzo	Spanish Research Report for 2013
SCS Doc. 14-007	N6288	T. Reilly	Historical ICNAF catch stats
SCS Doc. 14-008	N6289		List of Sampling Data 2013
SCS Doc. 14-009	N6290		Tagging 2013
SCS Doc. 14-010	N6301	J. Vargas, R. Alpoim, E. Santos and A. M. Ávila de Melo	PORTUGUESE RESEARCH REPORT FOR 2013
SCS Doc. 14-011	N6305	K.A. Sosebee	United States Research Report for 2013
SCS Doc. 14-012	N6307	Greenland Institute of Natural Resources	Denmark/Greenland Research Report for 2013
SCS Doc. 14-013	N6308	K. Fomin and V. Khlivnoy	Russian Research Report for 2013
SCS Doc. 14-014	N6315	D. Richards	Canadian Research Report for 2013 Newfoundland and Labrador Region
SCS Doc. 14-015	N6323	H. O. Fock and A. Akimova	German Research Report for 2013
SCS Doc. 14-016	N6337	S. Sirp	Estonian Research Report for 2013
SCS Doc. 14-017	N6343		Report of the SC 30 May-12 June 2014
SCS Doc. 14-018	N6365		Report of NIPAG – 10-17 September 2014
SCS Doc. 14-019	N6366		Report of Scientific Council (Shrimp) Meeting - 10-17 September 2014
SCS Doc. 14-020	N6394		Report of the Scientific Council September - 22-26 September 2014
SCS Doc. 14-021	N6395		Available Data from the Commercial Fisheries Related to Stock Assessment (2012) and Inventory of Biological Surveys Conducted in the NAFO Area in 2013 and Biological Surveys Planned for 2014 and Early-2015
SCS Doc. 14-022	N6396		Year to Year Surveys by Stock
SCS Doc. 14-023	N6410		WG-ESA Report
SCS Doc. 14-023	N6415	Canada	Standardized Conversion Factors in the NAFO Regulatory Area: Pilot Project

LIST OF REPRESENTATIVES, ADVISERS, EXPERTS AND OBSERVERS, 2014

A	Fisheries Commission and Scientific Council *ad hoc* Working Group on Catch Reporting, 3-4 February 2014
B	Fisheries Commission and Scientific Council Joint Working Group on Risk-Based Management Strategies, 5-7 February 2014
C	Scientific Council *ad hoc* Working Group on Catches of Cod in Division 3M – 5 May 2014
D	Scientific Council *ad hoc* Working Group on Management Strategies for Redfish in Div. 3LN, 13 May 2014
E	Scientific Council Meeting, 31 May - 12 June 2014
F	Fisheries Commission and Scientific Council Working Group on the Ecosystem Approach Framework to Fisheries Management, 9-11 July 2014
G	Scientific Council Meeting, 10-17 September 2014
H	NAFO/ICES *Pandalus* Assesment Group (NIPAG) Meeting, 10–17 September 2014
I	Scientific Council Meeting, 22-26 September 2014
*	Representing Scientific Council

CANADA										
Anderson, Kevin	A/Regional Director, Fish Management, Fisheries and Oceans Canada, P. O. Box 5667, St. John's, NL A1C 5X1 Phone: +709 772 4543 – Email: kevin.anderson@dfo-mpo.gc.ca		B							
Beazley, Lindsay	Fisheries & Oceans Canada, BIO, P. O. Box 1006, Dartmouth, N.S. B2Y 4A2 E-mail: lindsay.beazley@dfo-mpo.gc.ca									I
Brodie, Bill	Senior Science Coordinator/Advisor on NAFO, Science Br., NL Region, Fisheries and Oceans Canada, 80 East White Hills Rd., P. O. Box 5667, St. John's, NL A1C 5X1 Phone: +709 772 3288 – Email: bill.brodie@dfo-mpo.gc.ca	A *	B *							
Chapman, Bruce	Executive Director, Groundfish Enterprise Allocation Council, 1362 Revell Dr., Manotick, ON K4M 1K8 Phone: +613 692 8249 – Email: bchapman@sympatico.ca		B				F			
Cogswell, Andrew	Fisheries & Oceans Canada, BIO, P. O. Box 1006, Dartmouth, NS B2Y 4A2 Phone: +902-426-2030 – E-mail: Andrew.cogswell@dfo-mpo.gc.ca					E				
Colbourne, Eugene B.	Science Br., Fisheries & Oceans Canada, P.O. Box 5667, St. John's, NL A1C 5X1 Phone: +709-772-6106 – E-mail: eugene.colbourne@dfo-mpo.gc.ca					E				
Couture, Estelle	Fish Population Science, Fisheries and Oceans Canada, 200 Kent Street (Stn. 12S53), Ottawa, ON K1A 0E6 Phone: +613-990-0259 – Email: estelle.couture@dfo-mpo.gc.ca		B			E				I
Day, Robert	Director, International Fisheries Management Bureau, Fisheries and Oceans Canada, 200 Kent St., Ottawa, ON K1A 0E6 Phone: +613 991 61 35 – Email: robert.day@dfo-mpo.gc.ca	A	B				F			
Dauphin, Guillame	Science Br., DFO Newfoundland & Labrador, P.O. Box 5667, St. John's, NL A1C 5X1 E-mail: guillame.dauphin@dfo-mpo.gc.ca		B		D	E				
Dwyer, Karen	Science Br., Fisheries & Oceans Canada, P.O. Box 5667, St. John's, NL A1C 5X1 Phone: +709-772-0573 – E-mail: karen.dwyer@dfo-mpo.gc.ca					E				
Dwyer, Shelley	Resource Policy & Development Officer, Government of Newfoundland and Labrador, 30 Strawberry Marsh Road, St. John's, NL A1B 4J6 Email: shelleydwyer@gov.nl.ca		B							
Gilchrist, Brett	Senior International Fisheries Officer, International Fisheries Management Bureau, Fisheries and Oceans Canada, 200 Kent St., Ottawa, ON K1A 0E6 Phone: +1 613 991 0218 – Email: brett.gilchrist@dfo-mpo.gc.ca	A	B				F			

Healey, Brian P.	Science Br., Fisheries & Oceans Canada, P.O. Box 5667, St. John's, NL A1C 5X1 Phone: +709-772-8674 – E-mail: brian.healey@dfo-mpo.gc.ca			C	D	E		G	H	I
Hebert, Dave	Fisheries & Oceans Canada, BIO, P. O. Box 1006, Dartmouth, NS B2Y 4A2 Phone: +902-426-1216 – E-mail: dave.hebert@dfo-mpo.gc.ca					E				
Ings, Danny	Science Br., Fisheries & Oceans Canada, P.O. Box 5667, St. John's, NL A1C 5X1 E-mail: danny.ings@dfo-mpo.gc.ca				D	E				
Kenchington, Ellen	Fisheries & Oceans Canada, BIO, P. O. Box 1006, Dartmouth, NS B2Y 4A2 Phone: +902-426-2030 – E-mail: ellen.kenchington@dfo-mpo.gc.ca					E	F			
Koen-Alonso, Mariano	Science Br., Fisheries & Oceans Canada, P.O. Box 5667, St. John's, NL A1C 5X1 Phone: +709-772-2047 – E-mail: mariano.koen-alonso@dfo-mpo.gc.ca					E				I
Lee, Eugene	Science Br., Fisheries & Oceans Canada, P.O. Box 5667, St. John's, NL A1C 5X1 E-mail: eugene.lee@dfo-mpo.gc.ca					E				
Lambert, Robert	Acting Director of Conservation and Protection (C&P) NCR, NL Region, Fisheries and Oceans Canada, 80 East White Hills Rd., P. O. Box 5667, St. John's, NL A1C 5X1 Phone: +709 772 5482 – Email: robert.lambert@dfo-mpo.gc.ca	A								
Maddock Parsons, Dawn	Science Br., Fisheries & Oceans Canada, P.O. Box 5667, St. John's, NL A1C 5X1 Phone: +709-772-7703 – E-mail: dawn.parsons@dfo-mpo.gc.ca				D	E				
Maillet, Gary	Science Br., Fisheries & Oceans Canada, P.O. Box 5667, St. John's, NL A1C 5X1 Phone +709-772-7675 – E-mail: gary.maillet@dfo-mpo.gc.ca					E				
Morgan, M. Joanne	Science Br., Fisheries & Oceans Canada, P. O. Box 5667, St. John's, NL A1C 5X1 Phone: +709-772-2261 – E-mail: joanne.morgan@dfo-mpo.gc.ca	A	B	C	D	E				
Orr, David	Fisheries and Oceans Canada, Northwest Atlantic Fisheries Centre, P.O. Box 5667, St John's, NL A1C 5X1 Phone +709 772 7343 – Email: david.orr@dfo-mpo.gc.ca							G	H	
Power, Don	Science Br., Fisheries & Oceans Canada, P.O. Box 5667, St. John's, NL A1C 5X1 Phone: +709-772-4935 – E-mail: don.power@dfo-mpo.gc.ca				D	E		G	H	I
Rideout, Rick	Science Br., Fisheries & Oceans Canada, P.O. Box 5667, St. John's, NL A1C 5X1 Phone: +709-772-6975 – E-mail: rick.rideout@dfo-mpo.gc.ca				D	E				
Shackell, Nancy	Fisheries & Oceans Canada, BIO, P. O. Box 1006, Dartmouth, NS B2Y 4A2 E-mail: nancy.shackell@dfo-mpo.gc.ca					E				
Simpson, Mark R.	Science Br., Fisheries & Oceans Canada, P.O. Box 5667, St. John's, NL A1C 5X1 Phone: +709-772-4841 – E-mail: mark.r.simpson@dfo-mpo.gc.ca					E				
Stansbury, Don	Science Br., Fisheries & Oceans Canada, P.O. Box 5667, St. John's, NL A1C 5X1 Phone: +709-772-0559 – E-mail: don.stansbury@dfo-mpo.gc.ca	A	B*	C	D	E		G	H	I
Stenson, Garry	Science Br., Fisheries & Oceans Canada, P.O. Box 5667, St. John's, NL A1C 5X1 Phone: +709-772-0559 – E-mail: garry.stenson@dfo-mpo.gc.ca					E				
Sullivan, Loyola	Ocean Choice International, 1315 Topsail Rd., P. O. Box 8274, Stn. A, St. John's, NL A1B 3N4 Phone: +709 782 6244 – Email: lsullivan@oceanchoice.com		B							

Treble, Margaret	Fisheries & Oceans Canada, Freshwater Inst., 501 University Cres., Winnipeg, MT R3T 2N6 Phone: +204-984-0985 – E-mail: margaret.treble@dfo-mpo.gc.ca					E				
Walsh, Ray	Regional Manager, Fisheries Management, Fisheries and Oceans Canada, P.O. Box 5667, St. John's, NL A1C 5X1 Phone: +709 772 4472 – Email: ray.walsh@dfo-mpo.gc.ca	A	B				F			
Wang, Zeliana	Fisheries & Oceans Canada, BIO, P. O. Box 1006, Dartmouth, NS. B2Y 4A2 E-mail: zeliana.wang@dfo-mpo.gc.ca					E				
DENMARK										
Ole Ritzau Eigaard	DTU-AQUA Technical University of Denmark, Charlottenlund Slot, DK-2920, Charlottenlund Phone: +45 21154565 – Email: ore@aqua.dtu.dk							G	H	
Jørgensen, Ole	DTU-AQUA Technical University of Denmark, Charlottenlund Slot, DK-2920 Charlottenlund, Denmark Phone : +45 3588 3300 – E-mail : olj@aqua.dtu.dk					E				
GREENLAND										
Burmeister, AnnDorte	Greenland Institute of Natural Resources, P. O. Box 570. GL-3900, Nuuk Phone: +299 36 1200 - Email: anndorte@natur.gl							G	H	
Jacobsen, Petur M.	Head of Section, Grønlands Fiskerilicenskontrol, Postbox 501, DK-3900 Nuuk, Greenland Phone: +299 345393 – Fax: +299 323235 – Email: pmja@nanoq.gl	A								
Hammeken-Arboe, Nanette	Greenland Institute of Natural Resources, P. O. Box 570. GL-3900, Nuuk Phone: +299 36 1200 – Email: nanette@natur.gl							G	H	
Kingsley, Michael C.S.	Rue Principal, Cortiça, Apartado No. 3, 3300-357 São Martinho da Cortiça, Portugal Phone +351 23 945 8224 – Email: mcskingsley@gmail.com							G	H	
Nygaard, Rasmus	Greenland Institute of Natural Resources, P.O. Box 570, DK-3900 Nuuk, Greenland Phone : +299 361200 – E-mail : rany@natur.gl					E				
Siegstad, Helle	Greenland Institute of Natural Resources, P. O. Box 570. GL-3900, Nuuk Phone: +299 36 1200 – Email: helle@natur.gl							G	H	
Solari, Aldo	Greenland Institute of Natural Resources, P.O. Box 570, DK-3900 Nuuk, Greenland Phone : +299 361200 – E-mail : apso@natur.gl					E				
EUROPEAN UNION										
Alpoim, Ricardo	Instituto Portugues do Mar e da Atmosfera, I.P., Av. de Brasilia, 1449-006 Lisbon, Portugal Phone: +351 21 302 7000 – E-mail: ralpoim@ipma.pt				D	E	F			I
Avila de Melo, Antonio	Instituto Portugues do Mar e da Atmosfera, I.P., Av. de Brasilia, 1449-006 Lisbon, Portugal Phone: +351 21 302 7000 – E-mail: amelo@ipma.pt				D	E				I
Batista, Emilia	Direcao-Geral de Recursos Naturais, Seguranca, Servicos Maritimos, Avenida da Brasilia, 1449-030 Lisbon, Portugal Phone: +351 742 3629 – E-mail: ebatista@dgrm.mamaot.pt	A	B				F			
Casas Sanchez, José Miguel	Instituto Espanol de Oceanografia, Centro Oceanografio, De Vigo, Subida a Radiofaro, 50 P.O. Box 1552, E-36200 Vigo (Pontevedra), Spain Phone +34 986 492 111 – Email: mikel.casas@vi.ieo.es							G	H	
Cisewski, Boris	Institut fur Seefischerei, Palmaille 9, D-22767 Hamburg, Federal Republic of Germany Phone: + 49 40 38905 169 – E-mail: boris.cisewski@ti.bund.de					E				

Dapšys, Rimantas	Fisheries Control and Monitoring Division, Fisheries service under the Ministry of Agriculture, J.Lelevelio g. 6, 01031 Vilnius, Lithuania Phone: +370 52 391181 - Email.: rimantas.dapsys@zuv.lt							G			
de Cardenas, Enrique	Secretariat General del Mar, Ministerio de Medio Ambiente y Medio Rural y Marino, Velázquez, 144, 28006 Madrid, Spain Phone: +34 91 347 6110 – Email: edecarde@magrama.es						F				
Dross, Nicolas	International Relations Officer, International Affairs, Law of the Sea and Regional Fisheries Organizations, European Commission, Directorate General for Fisheries and Maritime Affairs (DG MARE.B.1), Rue Joseph II, 99, 1000 Brussels, Belgium Phone: +32 2 298 0855 – Email: nicolas.dross@ec.europa.eu	A	B				F				
Duarte, Rafael	European Commission, Directorate General for Fisheries and Maritime Affairs, Rue Joseph II, 79 (02/217), B-1049, Brussels, Belgium Phone: +32 2 299 0955 – Email: rafael.duarte@ec.europa.eu	A	B								
Gonzalez-Troncoso, Diana	Instituto Español de Oceanografia, Aptdo 1552, E-36280 Vigo (Pontevedra), Spain Phone: +34 9 86 49 2111 – E-mail: diana.gonzalez@vi.ieo.es	A	B	C	D	E					I
Gonzalez-Costas, Fernando	Instituto Español de Oceanografia, Aptdo 1552, E-36280 Vigo (Pontevedra), Spain Phone: +34 9 86 49 2111 – E-mail: fernando.gonzalez@vi.ieo.es	A*	B*	C	D	E					I
Kenny, Andy	CEFAS, Lowestoft Laboratory, Lowestoft, UK E-mail : andrew.kenny@cefas.co.uk					E	F				I
Mandado, Monica	Instituto de Investigaciones Marinas, Eduardo Cabello 6, 36208 Vigo Phone: +34 9 86 23 1930 – E-mail: mandado@iim.csic.es					E					I
Perez Rodriguez, Alfonso	Institute of Marine Research, P.O. Box 1870, N-5817 Bergen, Norway E-mail: perezra@imr.no										I
Sacau-Cuadrado, Mar	Instituto Español de Oceanografia (IEO), E-36200 Vigo (Pontevedra) Phone: +34 98 649 2111 – Email: mar.sacau@vi.ieo.es						F				I
Schuller, Herbert	European Commission, International Relations Officer, International Affairs, Law of the Sea and Regional Fisheries Organisations Directorate General for Fisheries and Maritime Affairs Rue Joseph II, 99, 1049 Brussels, Belgium Phone: +32 2 229 53892 – Email: herbert.schuller@ec.europa.eu						F				
Sirp, Silver	Estonian Marine Institute, University of Tartu, Maealuse 14, 12618 Tallinn, Estonia Phone +372 5295396 - Email: silver.sirp@ut.ee							G			
Tuvi, Aare	Senior Officer, Fishery Resources Dept. Ministry of the Environment Ravala 8, 10143 Tallinn, Estonia Phone: + (372) 6604 544 – Email: aare.tuvi@envir.ee						F				
Vigneau, Joel	IFREMER, Station de Port-en-Bessin, P. O. Box 32, 14520 Port-en-Bessin, France Phone : +33 231 515 600 – E-mail : joel.vigneau@ifremer.fr					E					I
FRANCE (SPM)											
Goraguer, Herlé	IFREMER, Station de Lorient, 8, rue Francois Toullec, 56100 Lorient, France E-mail: h.goraguer@ifremer.fr										I
JAPAN											
Okuda, Takehiro	Research Scientist, National Research Institute of Far Seas Fisheries, Fisheries Research Agency, 2-12-4, Fukuura, Kanazawa-ku, Yokohama, 236-8648 Phone/Fax : +81 45 788 7504 – Email: okudy@affrc.go.jp						F				

Nishida, Tom	National Research Institute of Far Seas Fisheries, 5-7-1, Orido, Shimizu-ward, Shizuoka City, 424-8633 Phone: +81 54 336-6052 – E-mail: tnishida@affrc.go.jp	A	B			E	F			
Yonezaki, Shiroh	National Research Institute of Far Seas Fisheries, 2-12-4 Fukuura, Kanazawam 236-8684 Phone: +81 45 788-7501 – E-mail: yonez@affrc.go.jp					E				
ICELAND										
Benediktsdóttir, Brynhildur	Special Adviser, Department of International Affairs, Ministry of Industry and Innovation, Skulagata 4, 150 Reykjavik Phone: +354 545 8300 – Email: brynhildur.benediktsdottir@anr.is						F			
NORWAY										
Bergstad, Odd Aksel	Principal Research Scientist, Institute of Marine Research Flødevigen, N-4817 His Phone: +47 37 05 90 19 – Email: odd.aksel.bergstad@imr.no						F			
Søvik, Guldborg	Institute of Marine Research, P.O. Box 1870, N-5817 Bergen Phone +47 5523 5348 – Email: guldborg.soevik@imr.no							G	H	
Hvingel, Carsten	Institute of Marine Research, P.O. Box 1870, N-5817 Bergen, Norway Phone: +47 77609750 – E-mail: carsten.hvingel@imr.no	A	B			E		G	H	I
Palmason, Snorri	Senior Adviser, Directorate of Fisheries, P. O. Box 2009 Nordnes, NO-5817 Bergen Phone: +47 55 23 80 00 / 8394 – Email: snorri.palmason@fiskeridir.no						F			
SWEDEN										
Ulmestrand, Mats	Swedish University of Agricultural Sciences (SLU), Department of Aquatic Resources, Institute of Marine Research, P.O Box 4,S- 453 21 Lysekil Phone +46 10 478 4048 – Email: mats.ulmestrand@slu.se							G	H	
RUSSIAN FEDERATION										
Babayan, Vladimir	Russian Federal Research Institute of Fisheries & Oceanography (VNIRO), K. 17, V. Krasnoselskaya, Moscow, 107140 Phone: +499 264 9078 – E-mail: vbabayan@vniro.ru					E				
Fomin, Konstantin	Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO), 6 Knipovich St., Murmansk 183763 Phone: +7 8152 436 177 — E-mail:fomin@pinro.ru				D	E	F			I
Tretiakov, Ivan	Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO), 6 Knipovich St., Murmansk 183763 Phone: +7 8152 47 2469 — E-mail: tis@pinro.ru					E				I
Savchenko, Igor	Representative of the Federal Agency for Fisheries of the Russian Federation in Canada, 5885 Cunard Street, Apt. 1206, Halifax NS, Canada B3K 1E3 Phone: +1 902 999 1615 – Email: is5@mail.ru		B				F			
Denis Zakharov	Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO), 6 Knipovich St., Murmansk 183763 Phone +47 8152 47 2464 - Email: zakharovden@yandex.ru							G	H	

UNITED STATES OF AMERICA										
Christel, Doug	Fishery Policy Analyst, Sustainable Fisheries Div., US Dept. of Commerce, NOAA, National Marine Fisheries Service, 55 Great Republic Drive, Gloucester, MA 01930 Phone: +978 281 9141 – Email: douglas.christel@noaa.gov	A	B							
Hendrickson, Lisa	National Marine Fisheries Service, NEFSC, 166 Water St., Woods Hole, MA 02543 E-mail: lisa.hendrickson@noaa.gov					E				
Moran, Patrick	Foreign Affairs Specialist, Office of International Affairs (F/IA), National Marine Fisheries Service, U.S. Dept. of Commerce, 1315 East-West Hwy., Silver Spring, MD 20910 Phone: 301-427-8370 – Email: pat.moran@noaa.gov						F			
Sosebee, Kathy	National Marine Fisheries Service, NEFSC, 166 Water St., Woods Hole, MA 02543 Phone: +508-495-2372 – E-mail: katherine.sosebee@noaa.gov	A	B	C	D	E				I
Warner-Kramer, Deirdre	Senior Foreign Affairs Officer, Office of Marine Conservation (OES/OMC), Department of State, Washington, DC 20520 Phone +1 202 647 2883 – Email: warner-kramerdm@state.gov						F			

OBSERVERS										
Chamberlin, Sarah	Environment Information: Use & Influence Research Initiative, Dalhousie University, Rowe Building, School of Information Management, University Avenue, Halifax, Nova Scotia, Canada. E-mail: sarah.chamberlin@dal.ca					E				
Diz, Daniela	Consultant, Conservation Approaches, WWF-Canada, Atlantic Region, 5251 Duke St. Suite 1202, Halifax, NS, Canada B3J 1P3 Phone: +902 482-1105 ext. 23 – E-mail: ddiz@wwfcanada.org					E	F			
Grant, Catherine	Ecology Action Centre, 2705 Fern Lane, Halifax, NS, Canada B3K 4L3 Phone: +902 446-4840 – E-mail: marine@ecologyaction.ca					E				I
Lugar, Jay	Marine Stewardship Council, 6303 Willow Street, Halifax, NS, B3L 1P1 Phone: +902-492-2469 – E-mail : jay.lugar@msc.org					E				
MacDonald, Bertrum	Environment Information: Use & Influence Research Initiative, Dalhousie University, Rowe Building, School of Information Management, University Avenue, Halifax, NS, Canada Phone: +902 494 2472 – E-mail: bertrum.macdonald@dal.ca					E				
McLean, Shelby	Environment Information: Use & Influence Research Initiative, Dalhousie University, Rowe Building, School of Information Management, University Avenue, Halifax, NS, Canada. Phone: +902 494 2472 – mail: shelby.mclean@dal.ca					E				
Montero, Carlos	Marine Stewardship Council (MSC), Spain and Portugal Fisheries Officer, Paseo de la Habana, 26, 7-4 28036, Madrid, Spain Phone:+674071053 – Email: carlos.montero@msc.org									I
Ryan, Janice	Fishery Advisor , WWF-Canada, TD Place, Suite 305, 140 Water Street, St. John's, NL, Canada A1C 6H6 Phone: +709 722 9453 Ext. 2224 – Email: jryan@wwfcanada.org		B							
Sanders, Jessica	FAO, Fishery Liaison Officer, Policy, Economics and Institutions Service, Fisheries and Aquaculture Dept., Food and Agriculture Organization of the United Nations (FAO), Viale delle Terme di Caracalla, 00153 Rome, Italy. E-mail: jessica.sanders@fao.org									I

Schleit, Katie	Ecology Action Centre, 2705 Fern Lane, Halifax, NS, Canada B3K 4L3 Phone: +902 446-4840 – E-mail: marine@ecologyaction.ca					E				I
Soomai, Suzuette	Environment Information: Use & Influence Research Initiative, Dalhousie University, Rowe Building, School of Information Management, University Avenue, Halifax, NS, Canada E-mail: suzuette.soomai@dal.ca		B			E				
Wilson, Lee	Environment Information: Use & Influence Research Initiative, Dalhousie University, Rowe Building, School of Information Management, University Avenue, Halifax, NS, Canada E-mail: lee.wilson@dal.ca					E				

NAFO SECRETARIAT		
Fred Kingston	Executive Secretary	fkingston@nafo.int
Neil Campbell	Scientific Council Coordinator	ncampbell@nafo.int
Barbara Marshall	Information Officer	bmarshall@nafo.int
Stan Goodick	Deputy Executive Secretary/Senior Finance and Staff Adminstrator	sgoodick@nafo.int
Ricardo Federizon	Fisheries Commission Coordinator	rfederizon@nafo.int
Alexis Pacey	Publications Manager	apacey@nafo.int
Lisa Lefort	Executive Assistant	llefort@nafo.int
Matthew Kendall	IT Manager	mkendall@nafo.int
Mark Harley	Database Manager	mharley@nafo.int
Sarah Burton	Office Administrator	sburton@nafo.int
Mariel Murazzi	Intern	

MERIT AWARDS

Year	Recipient	Institute
2009	Ralph Mayo	NMFS Woods Hole, MA, USA
2010	Dr. Manfred Stein	Institut fur Seefischerei, Hamburg, Germany
2011	Dr. Vladimir Rikhter	AtlantNIRO, Kaliningrad, Russian Federation
2013	Bill Brodie	DFO, St. John's, NL, Canada
2013	Jean-Claude Mahé	IFREMER Lorient, France

LIST OF RECOMMENDATIONS IN 2014

From the FC-SC Joint Working Group on Risk-Based Management Strategies – 5-7 Feb 2014

8. Approach and workplan to review the Greenland Halibut Management Strategy Evaluation in 2017

In order to provide the Fisheries Commission with the opportunity to approve the review of the Greenland halibut MSE during its 2017 September meeting, the following work plan was proposed:

5. Until 2016 Scientific Council will continue to evaluate the harvest control rule based on the primary indicators (catches and surveys indices).

6. During its 2016 June meeting Scientific Council should update two assessment models, one XSA based and one SCAA based, and evaluate the development of the stock since the introduction of the MSE.

9. Recommendations to forward to FC and SC

1. In order for the WG to start the process of revising the PA framework the WG **recommends** SC provide feedback on the following*:*

- Discuss the relevance and implications of:
- having F_{lim} at F_{msy}
- F_{msy} as a target
- These analyses should include situations where quantitative analysis of uncertainty are limited and situations where uncertainty has been well incorporated into evaluation of Harvest Control Rules.
- Consider the utility of buffers (particularly B_{buf}) in the framework and in management plans and provide advice on whether the use of buffers is considered appropriate for stocks which have B_{lim}.

Note: the WG recommends that B_{isr} is not considered part of the PA (but may be used as an interim milestone to aid decision making).

- The working group noted that SC, in its 2013 June report, concluded that reference points can theoretically be constructed for all stocks, and that this work is given high priority. The WG recommends SC provide a status report and possible timelines for this work for consideration of Fisheries Commission in September 2014.
- In its assessments and advisory sheets, the working group **recommends** Scientific Council provide a table or list of reference points available for each stock that includes information on their derivation, and if reference points are missing, explain why.

4. The WG **recommends** SC discuss selection of operating models and evaluate the Div. 3LN Redfish management strategy relative to the performance statistics prior to the 2014 Annual Meeting (Annex 7).

5. The WG **recommends** SC comment on likely by-catch levels associated with the implementation of the proposed HCR for 3LN Redfish.

6. The WG **recommends** SC to discuss selection of operating models and evaluate the Div. 3M Cod management strategy prior to the 2015 Annual Meeting.

From the 30-May-12 June Scientific Council Meeting

The recommendations made by STACFEN for the work of the Scientific Council as **endorsed** by the Council, are as follows:

- STACFEN **recommends** that *consideration of support for one invited speaker to address emerging issues and concerns for the NAFO Convention Area during the June Meeting.*
- STACFEN **recommends** that *further studies be directed toward integration of environmental information with changes in the distribution and abundance of resource populations.*

The recommendations made by STACPUB for the work of the Scientific Council as **endorsed** by the Council, are as follows:

- STACPUB **recommends** that *in order for authors to receive an SCR number they must submit a Title, Author and Abstract or Description of the document*.
- STACPUB **recommends** that *an excerpt from the Scientific Council meeting report that contains the advice and answers to the Fisheries Commission and coastal states requests be prepared and placed in a prominent place on the public website for easy accessibility*.
- STACPUB **recommends** that *the Secretariat work on providing direct links to key pages of the NAFO website and continue to provide easier access to documents and other information. STACPUB asked that these tasks be given a high priority by the Secretariat*.
- **STACPUB recommends** that *the NAFO Secretariat investigate options to promote the Journal using social media*.
- **STACPUB recommends** that the *NAFO Secretariat improve the visibility of the Journal by placing a prominent link directly on the NAFO website's homepage.*

There were no recommendations for Scientific Council from STACREC.

The recommendations made by STACFIS for the work of the Scientific Council as **endorsed** by the Council, are as follows:

- STACFIS **recommends** that *the Secretariat use the information from VMS data to construct measures of effort (e.g. as in SCR 13/01) and compare this information to effort reported via DCR, as a means to validate these effort records.*

For Witch Flounder in Div. 3NO

Due to the uncertainty associated with the data the Scientific Council **recommends** that *the stock should undergo another full assessment in 2015*.

For Spotted Wolffish in SA1

The Scientific Council reiterated the **recommendation** that *the easily discernible species be separated in catch statistics*.

From STACFIS

2. General Review of Catches and Fishing Activity

STACFIS noted that both the ad-hoc WG on catch reporting (SCS Doc. 14/04) and STACTIC (FC Doc. 14/03) have had encouraging discussions about the provision of haul by haul logbook data to the Secretariat. STACFIS considers that the provision of haul by haul data is of critical importance to the auditing process for the reliability of STATLANT data and **recommended** that *such data be submitted to Secretariat in real time if possible for use by the Scientific Council for assessment purposes*. More generally, this data should be available for all fisheries affecting NAFO managed stocks. Further, STACFIS **recommended** that *the Secretariat use the information from VMS data to construct measures of effort (e.g. as in SCR Doc. 13/01) and compare this information to effort reported via DCR, as a means to validate these effort records*. Given that DCR information is only available for fisheries operating in the NRA, priority should be towards Div. 3M cod, Div. 3LNO American plaice and SA 2+ Div. 3KLNMO Greenland halibut, followed by any stock having an assessment in 2015.

4. Redfish in SA1

STACFIS reiterated the **recommendation** that *the species composition and quantity of redfish discarded in the shrimp fishery in SA 1 be further investigated*.

05b. American plaice in Subarea 1

STACFIS **recommended** that *the species composition and quantity of American plaice discarded in the shrimp - fishery in SA1 be further investigated.*

STACFIS **recommended** that *the distribution of these species in relation to the main shrimp-fishing grounds in SA1 be investigated, in order to further discover means of reducing the amount of discarded American plaice in the by-catch.*

6. Cod in Div. 3M

STACFIS **recommended** that *an age reader comparison exercise be conducted*.

STACFIS **recommends** that *the most recent catch at age figures will revised*.

7. Redfish in Div. 3M

STACFIS **recommended** that, *in order to confirm the most likely redfish depletion by cod on Flemish Cap, and be able to have an assessment independent approach to the magnitude of such impact and to the size structure of the redfish most affected by cod predation, the existing feeding data from the past EU surveys be analyzed and made available.*

STACFIS reiterated its **recommendation** that *the important line of ecosystem research based on the feeding sampling routine of the EU survey catch be done on an annual basis.*

8. American plaice in Div. 3M

STACFIS **recommends** that *several input frameworks be explored in both models (such as: q's; M (e.g. in relation to $F_{0.1}$); ages dependent of the stock size; the proxies and its distribution in the VPA-type Bayesian model).*

Due to the recent improved recruitment at low SSB, STACFIS **recommends** *to explore the Stock/Recruitment relationship and B_{lim}.*

10. Redfish in Div. 3LN

STACFIS **recommends** that *risks associated with the stock falling below B_{lim} in the various projection scenarios be presented*.

11. American plaice in Div. 3LNO

STACFIS **recommended** that *investigations be undertaken to compare ages obtained by current and former Canadian age readers.*

STACFIS **recommends** that *investigations be undertaken to examine the retrospective pattern and take steps to improve the model.*

13. Witch flounder in Div 3NO

STACFIS **recommends** *further investigation of survey indices of witch flounder in Div. 3NO in conjunction with those of Subdiv. 3Ps.*

Considering that Canadian autumn surveys are no longer planned for the deep waters of in Div. 3NO beyond 400 fathoms (732m), STACFIS **recommends** that *indices of abundance and biomass be developed that are comparative to the strata covered in the spring surveys.*

STACFIS **recommends** that *research into surplus production modelling in a Bayesian framework continue for Div. 3NO witch flounder*.

14. Capelin in Div. 3NO

STACFIS reiterates its **recommendation** *that initial investigations to evaluate the status of capelin in Div. 3NO should utilize trawl acoustic surveys to allow comparison with the historical time series.*

15. Redfish in Div. 3O

STACFIS **recommended** that *for Redfish in Div. 3O, a recruitment index be developed for this stock*.

16. Thorny skate in Div. 3LNO

STACFIS **recommends** that *further work be conducted on development of a quantitative stock model.*

STACFIS **recommends** that *survey indices be investigated to compare catch rates in relation to depth in the spring and autumn surveys, stock distribution and comparison between Div. 3LNO and Subdivision 3Ps.*

17. White hake in Div. 3NO

STACFIS **recommended** that *survey conversion factors between the Engel and Campelen gear be investigated for this stock.*

21. Northern shortfin squid in SA 3+4

STACFIS **recommended** that *gear/vessel conversion factors be computed to standardize the 1970-2003 relative abundance and biomass indices from the July Div. 4VWX surveys*.

From the FC-SC WGEAFFM, 9-11 July 2014

9. Recommendations to forward to Fisheries Commission and Scientific Council

7. That the FC and SC support continuing analysis by the WG of areas on the Tail of the Grand Bank (Div. 3O closure and related areas).

8. That the FC and SC support continuing analysis by the WG of areas 13 and 14 (Eastern Flemish Cap), and FC consider possible closed areas, if proposals are made at the Annual Meeting.

10. That priority attention by FC and SC and their constituent bodies be given to the areas identified in Annex 5 that include external factors (e.g. climate change and oil and gas development), bycatch and discards, multispecies interactions, and VMEs including concluding the assessment of bottom fisheries for 2016.

11. That FC and SC consider the revised Terms of Reference at their September 2014 joint session and have FC and SC adopt the revisions in their respective meetings. Consideration could also be given to making terms of reference consistent across all joint FC-SC working groups.

12. Request that the SC provide annual updates to the FC-SC Working Group on Ecosystem Approach Framework to Fisheries Management pertaining to the 2016 review of significant adverse impacts of NAFO bottom fisheries on VMEs in the NRA.

From the NIPAG Meeting, 10-17 September 2015

1. Northern Shrimp in Div. 3M

For Northern Shrimp in Div. 3M NIPAG **recommends** that *further exploration of the relationship between shrimp, cod and the environment be continued in WGESA and NIPAG encourages the shrimp experts to be involved in this work.*

3. Northern Shrimp in SA 0+1

- *given that the CPUE series for the Greenland sea-going and coastal fleets continue to agree while neither agrees with changes in the survey estimates of biomass since 2002, possible causes for change in the relationship between fishing efficiency and biomass should be investigated;*
- *the relationship between estimated numbers of small shrimps and later estimates of fishable biomass should be investigated anew.*

NIPAG **recommends** that *the structure and coding in the assessment model of the relationship between cod biomass, shrimp biomass and estimated predation should be reviewed, including an analysis of the error variation*.

NIPAG **recommends** *that further refinements to the "partial MIXing" method of estimating numbers at age should be explored*.

Survey trends inshore and offshore are divergent and NIPAG **recommends** *exploration of the nature and implications of this divergence*.