

**PART C: SCIENTIFIC COUNCIL MEETING – 17-21 SEPTEMBER 2012**

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**SCIENTIFIC COUNCIL MEETING PARTICIPANTS SEPTEMBER 2012**

Back room (left to right): Ivan Tretiakov, Alexander Fomin, Herlé Goraguer, Bill Brodie, Estelle Couture, Joanne Morgan, Jean-Claude Mahé, Neil Campbell, Antonio Vázquez, Ricardo Alpoim, Mar Sacau, Carsten Hvingel, Mariano Koen-Alonso, Don Stansbury, Ellen Kenchington, Javier Murillo

Front Row: Vladimir Babayan, Maria Pochtar, Vladimir Zabavnikov, Jean Landry, Alexi Orlov, Fernando Gonzalez, Diana Gonzalez-Troncoso, Silver Sirp, Andy Kenny, Gary Maillet

## **REPORT OF SCIENTIFIC COUNCIL MEETING**

**17-21 September 2011**

Chair: Carsten Hvingel

Rapporteur: Neil Campbell

### **I. PLENARY SESSIONS**

The Scientific Council met at the Park Inn Pribaltiskya, St Petersburg, Russia, during 17-21 September 2012, to consider the various matters in its agenda. Representatives attended from Canada, European Union (Estonia, France, Portugal, Spain and the United Kingdom), France (with respect to St. Pierre et Miquelon), Japan, Norway, the Russian Federation and Ukraine. The Scientific Council Coordinator was in attendance.

The Executive Committee met prior to the opening session of the Council to discuss the provisional agenda and plan of work.

The opening session of the Council was called to order at 0940 hours on 17 September 2012.

The Chair welcomed participants to the 34<sup>th</sup> Annual Meeting and thanked the representatives of the Russian Federation for their hospitality in hosting this event.

The provisional agenda was adopted with minor additions. The Council appointed Neil Campbell, the Scientific Council Coordinator, as rapporteur. The Chair welcomed the WWF, as observers to this annual meeting.

The Council and its Standing Committees met through 17-21 September 2012 to address various items in its agenda. The Council considered and adopted the reports of the STACFIS and STACREC Standing Committees on 20 September 2012. The final session was called to order at 0915 hours on 21 September 2012. The Scientific Council then considered and adopted its report of this meeting. The meeting was adjourned at 0930 hours on 21 September 2012.

The Reports of the Standing Committees as adopted by the Council are appended as follows: Appendix I - Report of Standing Committee on Research Coordination (STACREC), and Appendix II - Report of Standing Committee on Fisheries Science (STACFIS).

The Agenda, List of Research (SCR) and Summary (SCS) Documents, and the List of Representatives, Advisers and Experts, are given in Part E, this volume. The Scientific Council plan of action in response to the NAFO Performance Assessment is given in Annex 1.

### **II. REVIEW OF SCIENTIFIC COUNCIL RECOMMENDATIONS**

**From Scientific Council Meeting, 1-14 June 2012**

#### **XII. OTHER MATTERS**

##### **6. Other Business**

###### **a) Quality of catch information for assessments**

Scientific Council noted the concerns expressed by STACFIS regarding the quality of catch data available to perform assessments.

Contracting Parties have the responsibility to report accurate catches to NAFO via STATLANT 21 submissions, and Scientific Council has the responsibility to “compile” these catches for NAFO. Scientific Council considered that it is not its responsibility to provide the best catch figures, nevertheless Scientific Council requests clarification on which NAFO body is responsible for validating the quality of the STATLANT catch figures submitted, to enable the

Scientific Council to carry out assessments in a timely manner. If it is the job of Scientific Council, Scientific Council recognizes that the availability of more information will improve the catch quality, for example inspection reports, daily catch reports and VMS data, may be required for this task.

Scientific Council **recommended** that *General Council clarify the responsibilities of NAFO bodies and Contracting Parties with respect to determining the quality of STATLANT 21 data.*

STATUS: No progress to date.

### III. RESEARCH COORDINATION

The Council adopted the Report of the Standing Committee on Research Coordination (STACREC) as presented by the Chair, Don Stansbury. The full report of STACREC is at Appendix I.

### IV. FISHERIES SCIENCE

The Council adopted the Report of the Standing Committee on Fisheries Science (STACFIS) as presented by the Chair, Jean-Claude Mahé. The full report of STACFIS is in Appendix II.

### V. SPECIAL REQUESTS FROM THE FISHERIES COMMISSION

The following requests were received during the current meeting (FC WP 12/12). Scientific Council noted 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 previous reports of the Scientific Council.

#### 1. 3M Cod

*Scientific Council noted that the 3M cod Spawning Stock Biomass (SSB) has increased to the highest value of the time series and is now well above  $B_{lim}$ . What is the risk of decline in spawning stock biomass to values below  $B_{lim}$  in the next two years if fishing mortality is at the level of  $F_{max}$  in 2013?*

Scientific Council responded:

Based on the current assessment results, the risk of the stock going below  $B_{lim}$  by the end of 2013 while fishing at  $F=0.135$  (equal to the 2012 estimate of  $F_{max}$ ) is less than 0.1%.

#### 2. 3LN Redfish and 3LNO Shrimp

*The fishing mortality of 3LN redfish is at historical low levels and biomass is at high levels and well above  $B_{lim}$ . The Scientific Council advises that the fishing mortality should be maintained around current levels and that increases should be taken with caution. The Fisheries Commission requests the Scientific Council to provide information on:*

*1) What levels of increase would be considered as cautious by the SC? Could a TAC increase of 15% or 25% be considered as cautious?*

Scientific Council responded:

Scientific Council is at the moment not able to quantify the level of “cautiousness” related to the various TAC increases. This is a newly opened fishery and the information available in the data regarding stock response to exploitation in combination with the limitations in the current modeling framework used does not allow this.

*2) Noting the biological interactions between redfish, cod and shrimp in the Flemish Cap and that such interactions are likely to occur in the Grand Banks, what would be the level of improvement of the 3LNO shrimp stock expected*

*by increasing the harvesting of redfish? By lowering the natural mortality over the 3LNO shrimp stock, could it be expected that sustainable harvesting levels of shrimp would be higher than in previous years?*

Scientific Council responded:

The available diet information for the Newfoundland shelf and Grand Bank indicates that shrimp is an important prey for redfish, but it is also an important prey for other groundfish species like cod, American plaice, and Greenland halibut. The Grand Bank has a more complex food web structure than the Flemish Cap, so predicting the outcome of a reduction of redfish on shrimp, even in a semi-quantitative manner, is not possible at this time. A reduction of predation mortality from just one of these predators may not necessarily have detectable effects on the shrimp stock. Work towards developing multispecies models to explore these issues is one of the components of the SC Roadmap to EAF.

### **3. 3LNO Thorny Skate**

*The scientific council indicated that Canadian spring surveys that cover the NRA show an increasing trend of thorny skate since 1997 and that the autumn surveys are stable. In spite of the increase, survey indices are low compared to historical levels of the 1980s. On the other hand, the index of fishing mortality has been low since 2005 and recruitment index is 50% above average in the last two years. There is no analytical assessment for this stock.*

*1) Considering the low exploitation rates, has the Scientific Council identified other sources of mortality besides fishing, which could be driving the dynamics of this stock?*

Scientific Council responded:

No specific causes of natural mortality have been identified for this stock.

*2) The high survey values in the 1980s and the lower indices since 1997 were obtained with a distinct survey method (Engel and Campelen). Could this different method be influencing the perception of stock size throughout the whole time series?*

Scientific Council responded:

The biomass index of Div. 3LNO thorny skate showed a large decline from the mid-1980s to the mid-1990s. This decline in population size occurred prior to the change in survey gear which occurred in autumn 1995 at the low point in stock size. There has been some increase since that time but the stock remains at a low level. The change in survey gear is not considered a factor in the perception of stock status.

### **4. 3NO Witch**

*Does SC have information on the bycatch of 3NO witch in the yellowtail fishery, and if so does it consider this level of bycatch to be harmful to the recovery of the 3NO witch stock?*

Scientific Council responded:

The bycatch of 3NO witch in the Canadian yellowtail fishery ranged from 11 to 40 tons/year from 2007-2011 (SCS 12/19, page 28). Over this period, this represents on average, about 8.9% of the total annual estimated bycatch of 3NO witch. SC does not have estimates of fishing mortality for 3NO witch, but considers it unlikely that catches of that magnitude would have a major impact on the recovery of the resource

### **5. 3NO Cod**

*What is the basis of different survey trends apparent in Div. 3NO cod between Canadian and EU surveys and what are the implications for the view of status of the stock?*

Scientific Council responded:

Div. 3NO Canadian spring and autumn surveys cover most of the total distribution of the stock while the Div. 3NO EU-Spain survey is only outside off the Canadian EEZ (in the NAFO Regulatory Area) and covers only a smaller part of stock distribution.

The EU-Spain survey series is poorly fitted by the assessment model used and is not included in the actual assessment of the stock.

## **VI. MEETING REPORTS**

### **1. Fisheries Commission WGFMS-CPRS**

This Fisheries Commission Working Group met by WebEx, on 4 September 2012, and was chaired by Jean-Claude Mahé (EU-France). The Scientific Council was advised of progress in this group by the Chair in his presentation of the report to Fisheries Commission.

### **2. Fisheries Commission WGFMS-VME**

This Fisheries Commission Working Group met at the Directorate of Fisheries, Bergen, Norway, during 10 – 13 September 2012, and was chaired by Bill Brodie (Canada). The Scientific Council was advised of progress in this group during the Chair's presentation of the report to Fisheries Commission. The Chair also informed Scientific Council that he was stepping down from this role. Scientific Council thanked him for the valuable service he performed during his tenure.

### **3. Meetings Attended by the Secretariat**

The annual meeting of the FAO Aquatic Science and Fisheries Abstracts meeting was held at the Marine Institute, Galway, Ireland, during 25 – 29 June 2012, and was attended by Alexis Pacey, NAFO Publications Manager. A full report of this meeting was deferred until the next meeting of STACPUB in June 2013.

## **VII. REVIEW OF FUTURE MEETING ARRANGEMENTS**

### **1. Scientific Council / NIPAG, October 2012**

The Scientific Council noted that the dates and venue of the next Scientific Council /NIPAG meeting will be held from 17-24 October 2012 at the Marine Institute, Tromsø, Norway.

### **2. WGEAFM, November 2012**

WGEAFM will meet at the NAFO Secretariat, Dartmouth, Canada, during 21-30 November 2012.

### **3. WGDEC, March 2013**

The ICES – NAFO Working Group on Deepwater Ecosystems will meet at the ICES Headquarters during 25 – 29 March 2013.

### **4. Scientific Council, June 2013**

The Scientific Council June meeting will be held on 7-20 June 2013 at the Alderney Landing, Dartmouth, NS, Canada.

### **5. Scientific Council, September 2013**

Scientific Council noted that the Annual Meeting will be held on 23-27 September 2013 at the Westin Hotel, Halifax, NS, Canada, unless an invitation to host the meeting is extended by a Contracting Party.

## **6. Scientific Council / NIPAG, October 2013**

The need, timing and location for this meeting will be discussed at the October 2012 meeting.

## **7. Scientific Council, June 2014**

Scientific Council agreed that its June meeting will be held during 6 - 19 June 2014 with the meeting venue being the Alderney Landing, Dartmouth, Nova Scotia, Canada, or as decided at the 2013 meeting.

## **8. Scientific Council, September 2014**

Scientific Council noted that the Annual Meeting will be held on 22-26 September 2014 at the Westin Hotel, Halifax, NS, Canada, unless an invitation to host the meeting is extended by a Contracting Party.

# **VIII. FUTURE SPECIAL SESSIONS**

Scientific Council will support two special sessions in 2013.

## **1. ICES/NAFO Gadoid Symposium**

NAFO Scientific Council agreed, jointly with ICES, to co-sponsor a symposium on Gadoid fisheries: the ecology and management of rebuilding, to be held at the Algonquin Hotel, St. Andrews, New Brunswick, during 15-18 October 2013. The organizing committee is being co-convened by Ed Trippel (Canada) and Fritz Köster (Denmark), and is comprised of Jason Link (USA), Olav Kjesbu (Norway), Doug Swain (Canada), and Jonna Tomkiewicz (Denmark). A flyer announcing the conference will be published now that funding has been agreed, and abstracts will be due end of April 2013.

## **2. World Conference on Stock Assessment Methods**

NAFO has been involved with the ICES Strategic Initiative on Stock Assessment Methods since its inception in 2010, and supported the attendance of Brian Healey at a workshop organized under this initiative. A conference on stock assessment methods will be held in Boston, USA, during 15 – 19 July 2013, and the NAFO Secretariat has been informed of developments by the chair of the Steering Committee. The steering committee consists of Mark Dickey-Collas, Doug Butterworth, Steve Cadrin, Carmen Fernández, Jean-Jacques Maguire, Richard Methot, José De Oliveira, Ana Parma, Cathy Dichmont, Victor Restrepo, Yimin Ye and Laurie Kell. A questionnaire for designated experts has been submitted to the Secretariat and will be circulated to Designated Experts for completion. Members of Scientific Council are encouraged to seek support for participation in this conference.

# **IX. OTHER MATTERS**

## **1. Matters arising from the NAFO Performance Assessment**

Scientific Council discussed the recommendations to the Council from the Performance Assessment Report (GC WP 11/09 (Rev.)) and those produced by the General Council Working Group in March 2012 (GC Doc. 12/1). Scientific Council addressed the appropriateness of the bodies each recommendation was directed to, as well as the assigned priority, and produced a set of specific actions to be taken in order to proceed with implementation of the Panel's recommendations (Appendix VII). This will be forwarded to the chairs of General Council and Fisheries Commission for their consideration.

## **2. Report of the Peer Review of STACFIS Catches**

Scientific Council received the progress report prepared by the Peer Review of STACFIS Catches. The issues raised can be broken into short- and longer term objectives.

Two perspectives:



1. Long term solution: secure that reliable catch data are submitted to Scientific Council.
2. Short term solution: provide fix to secure that 2013 stock assessment can be performed and management advice derived.

Ad. 1. Scientific Council has discussed various options which they intend to promote through the peer review group on the method of catch estimation for NAFO stocks.

Ad. 2. The only option at this stage is to assume that the STATLANT data represents an inaccurate estimate of catch for some stocks. When used in the assessment this will translate into increased uncertainty which will be reflected in the assessment results and hence requires more precaution in the advice.

Scientific Council **recommended** that *DE's meet with the chairs of STACFIS and STACREC to prepare a way to deal with these challenges in advance of the June Scientific Council meeting.*

### **3. Report of the Joint FC/SC Meeting**

As recommended by the General Council Working Group (GC Doc. 12/1), an informal joint session of Scientific Council and Fisheries Commission was held during the Annual Meeting. This session was attended by the Chairs of Scientific Council and Fisheries Commission, the Chairs of STACFEN, STACREC STACFIS, WGFMS-VME and -CPRS, along with representatives and delegates from the Contracting Parties. The SC Chair reported the main outcomes to the Council in plenary.

It was noted that much of the interaction between SC and FC takes place in WG-VME and WG-CPRS working groups. Both SC and FC supported the proposal to extend the terms of reference for these groups and the idea that they will become joint FC/SC groups, with co-chairs from each body, and will report back to both. WG-CPRS will be expanded to address revisions to the PA framework and describing management objectives for all stocks, while WG-VME will be expanded to cover the EAFM and fisheries assessments. The reporting structure around these groups needs to be properly defined to avoid duplication of efforts, and this is something that will be addressed inter-sessionally.

It was agreed to hold a similar meeting at the 2013 Annual Meeting, and CPs, SC and FC are welcome to make suggestions as to the topics which need to be discussed.

### **4. Merit Award Nominations**

Scientific Council was advised that after a long and productive career, Antonio Vázquez (EU – Spain) was planning to retire in 2013. Antonio has been involved in NAFO and ICNAF work since 1974, during which time he has been a highly valued colleague, acting as Vice-Chair and Chair of Scientific Council (2004-2007), authoring many research documents and leading many research projects for the benefit of NAFO Scientific Council. The EU Delegation proposed that Scientific Council award Antonio a Merit Award. This proposal was warmly supported by members of Scientific Council. The award will be formally presented during the June Scientific Council meeting.

## **X. ADOPTION OF REPORTS**

### **1. Committee Reports of STACREC and STACFIS**

The Council reviewed and adopted the Reports of the Standing Committees (STACREC and STACFIS).

### **2. Report of Scientific Council**

The Council at its concluding session on 21 September 2012 considered and adopted its own report.

## **XI. ADJOURNMENT**

There being no other business, the meeting was adjourned at 1030 hours on 21 September 2011.

**Annex 1. Scientific Council plan of action in response to the NAFO Performance Assessment.**

<b>PRP</b>	<b>Recommendation</b>	<b>Responsible Body</b>	<b>Priority</b>	<b>GC Proposal</b>	<b>Prospective SC Action</b>
4 Chapter 6, 6.3 #1, p. 132	Encourages NAFO to continue developing cooperative relationships with other RFMO/As and International Organizations, as appropriate, to achieve its objectives and facilitate its work.	GC/ FC/SC	ST	The WG recommends to GC to continue developing and strengthening cooperation with other RFMOs and international organizations in line with Article XVII of the NAFO amended convention.	<i>Scientific Council has long standing and ongoing connections and commitments with other international scientific organizations (e.g. ICES, PICES, NAMMCO) and plans to continue with these.</i>  <i>Scientific Council made specific comments in support of ongoing cooperation in relation to seals and whales (ICES WGHARP) in the NAFO Regulatory Area, in light of their omission from the new convention in their June 2012 report (SCS Doc. 12-18).</i>
7 Chapter 4, 4.4.3 #5, p. 92	Careful consideration should be given to developing and consolidating NAFO fishery resources data-access and utilization rules. These should take into consideration intellectual property rights related to scientific analyses as well as industrial confidentiality provisions to be attached to certain categories of data (e.g. detailed fishing location).	FC/SC /SEC		The WG recommends that:  FC, possibly upon input from the SC/STACREC, develops and consolidates rules to facilitate access and utilization of data hosted by the Secretariat including in particular, VMS data, for scientific purposes;  FC encourages the SC to use VMS data for preparation of advice  FC strengthens rules on secure and confidential treatment of data taking into consideration intellectual property rights and commercial sensitivity of information taking into account experiences in other RFMOs.	<i>Scientific Council has used VMS data in the preparation of its responses to Fisheries Commission requests, and is keen to make further use of such data.</i>

8 Chapter 4, 4.4.1 #6 p. 87	The PRP noted the potential utility of VMS information in verifying stock assessment input data. It suggested that this potential should be further investigated and, in particular, possible rules should be considered to govern the use of VMS data. Such rules would be in the interests of reaching a common understanding on how and why VMS data should be used as well as on avoiding overly-restrictive usage conditions.	FC/SC	MT	<i>See above</i>	<i>See above</i>
9 Chapter 4, 4.4.3 #2, p. 91	From the information available, the PRP noted that it was largely unable to determine to what extent Contracting Parties directly share fishing and research vessel data. However, the manner in which such data are used by the Scientific Council for assessment purposes strongly suggests close and significant sharing/exchanging of such data by the NAFO body corporate.	SC/ CPs	ST	<i>See above</i>	<i>See above</i>
10 Chapter 4, 4.4.2 3 & 4 p. 90	Encourages NAFO to continue to address the data requirements attached to implementation of UNGA Resolution 61/105, with some urgency.  All efforts should be expended to encourage the timely submission of marine living resources information to expedite the comprehensive collection of essential data to improve knowledge of the benthos, and benthic environment, in the NAFO Convention Area as a whole.	FC/SC /CPs	MT          ST	Taking into account the progress made in 2011 the WG recommends that:  FC, upon recommendation of the SC and the FC WGFMS VME, reviews data requirements for the implementation of UNGA Resolution 61/105 on a regular basis and at the latest in 2014 as foreseen by NAFO CEM (Article 21), once the information from the NEREIDA project is available (MT);  In addition the WG urges CPs to comply with reporting requirements as laid down in Chapter II of NAFO CEM (ST).	<i>Scientific Council, through its Working Group on the Ecosystem Approach to Fisheries Management, has tabled a number of proposals for data needs to support the reassessment of VMEs in 2014 and fishery plans in 2016 (e.g. fishery independent survey data, VMS, haul-by-haul catches, observer reports, etc.). These views were endorsed by SC in June 2012. The key element is that data is available at the finest level possible (e.g. haul by haul), so that Scientific Council can determine the best way to analyze it.</i>

<p>11 Chapter 4, 4.2.2 #1, p. 74</p>	<p>Suggests that NAFO consider enhancing its application of risk-based assessment approaches (e.g. the Greenland Halibut Management Strategy Evaluation and Kobe Matrix) when evaluating management strategies.</p>	<p>FC/SC</p>	<p>MT</p>	<p>The WG recommends that the FC mandates the FC WGFMS-CPRS to consider the broader use of the PA framework, extension of management strategy evaluation and/or other risk-based management approaches (e.g. Kobe matrix) including conservation plans and rebuilding strategies, as appropriate.</p>	<p><i>Rather than directing this work to the WGFMS-CPRS, Scientific Council supports the establishment of a joint FC/SC working group on the precautionary approach framework to address all issues regarding the implementation and extension of the current framework and implementation of management strategy evaluations. Further discussions will be held with Fisheries Commission on this matter.</i></p>
<p>12 Chapter 4, 4.6.6 #3, p. 110</p>	<p>Encourages NAFO to broaden consideration of MSE-type approaches to managing other fisheries for which it is responsible.</p>	<p>FC/SC</p>		<p><i>See above</i></p>	<p><i>See above</i></p>
<p>3 Chapter 4, 4.2.3 #5, p.110  Chapter 4, 4.2.4 #1, p.76</p>	<p>Encourages NAFO to consolidate its policy to address ecosystem management considerations, including by compiling the information necessary for evaluating trends in the status of dependent, related and associated species specifically. A consolidated list of bycatch species, for instance, should be included in the NCEM to assist monitoring of bycatch during directed fishing.</p>	<p>FC/SC</p>	<p>MT</p>	<p>The WG recommends that:  SC prepares recommendations on how to implement the next steps of the Roadmap for Developing an Ecosystem Approach to Fisheries for NAFO based on its ToR and in line with the recommendations of the Performance Review Report and that it examines the application of the Ecosystem Approach to Fisheries in other RFMOs to that end;  SC consider the usefulness and practicability of identifying the different types of ecosystems present in the NAFO area; SC continues to take into account environmental factors impacting on NAFO fisheries;  FC and SC jointly develop the definition of bycatch, compile a consolidated list of the main relevant bycatch species (commercial, non-commercial, targeted, non-targeted, VMEs, ...) and consider the issue of bycatches in the framework of conservation plans and rebuilding strategies, management plans and other</p>	<p><i>Work on how to implement the Roadmap to EAF is already ongoing and potential avenues had been presented for discussion with FC and WGFMS-VME through the SC proposal for developing fisheries assessments. As part of this process SC supports the creation of a SC/FC working group to address EAF issues.</i>  <i>SC and its WGEAFM are already working on the delineation of ecoregions and identification of candidate ecosystem-level management areas. As part of the work in STACFEN and WGEAFM, studies looking at the impact on environmental drivers on fish stocks are also underway. This information is expected to be integrated with multispecies models and single species stock assessments as part of the implementation of the Roadmap to EAF.</i></p>

				<p>management measures; (ST)</p> <p>The SC, as appropriate, adjusts the data collection requirements to include the information necessary for evaluating trends in the status of dependent, related and associated species to address ecosystem management considerations.</p> <p><i>See also recommendations 14, 15 and 16</i></p>	<p><i>SC has already requested access to VMS and tow-by-tow information to further its VME studies and develop SAI assessments; this information request also includes bycatch and non-commercial species data. These data are expected to feed into the analyses and models required for the development of the Roadmap to EAF.</i></p> <p><i>See also response to recommendation 10.</i></p>
14 Chapter 4, 4.3 #6, p. 81	Recommends that NAFO consider augmenting its efforts to implement a more EAF friendly management approach as well as to embrace the PAF more widely. If bycatch continues to be a problem, then NAFO ecosystem-based management and its EAF may fall short of best practice.	FC/SC	MT	<i>See 13</i>	<i>See above</i>
15 Chapter 4, 4.3 #7, p. 81	Strongly encourages the development, and consolidation, of the Scientific Council's EAF Roadmap. It also encourages NAFO as a whole to give strategic consideration as to how the Roadmap may assume a more holistic focus so that it addresses ecosystem components more widely, not just those for harvested, or associated, species alone. In these terms, NAFO should focus on the sustainable use of the entire ecosystem for which it is responsible rather than just fishery-target species.	FC/SC	MT	<i>See 13</i>	<i>See above</i>
16 Chapter 4, 4.6.2 #5, p.97	Endorses NAFO's continuing execution of its customary (target species-directed) management requirements and assessments for the stocks that it manages. It should also strive to address new challenges associated with further development of the EAF (Section 4.3) and increased formalization of the PAF (Section 4.6.2) etc. The use of standardized, well-understood and scientifically robust	FC/SC	MT	<i>See above</i>	<i>See above</i>

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16 Chapter 4, 4.6.2 #5, p.97	Endorses NAFO's continuing execution of its customary (target species-directed) management requirements and assessments for the stocks that it manages. It should also strive to address new challenges associated with further development of the EAF (Section 4.3) and increased formalization of the PAF (Section 4.6.2) etc. The use of standardized, well-understood and scientifically robust	FC/SC	MT	See above	<i>See above</i>

17 Chapter 4, 4.6.3 #3 p. 107	Encourages NAFO to review the Exploratory Fisheries Protocol with a view to developing a strategic framework for conservation and management measures for all potential new and exploratory fisheries. In this respect, NAFO may wish to take account of the way in which CCAMLR has approached the issue in terms of developing a unified regulatory framework.	FC/SC	MT	The WG recommends that the FC mandates the WGFMS-VME to review the Exploratory Fisheries Protocol with a view to developing a strategic framework for conservation and management measures for all potential new and exploratory fisheries.	<p><i>Scientific Council notes the current meeting of the WGFMS-VME made a recommendation to FC to expand its terms of reference to have a wider view of the ecosystem approach. Scientific Council supports this measure, along with the proposal to expand the terms of reference of WGFMS-CPRS to cover wider aspects of the precautionary approach, and the proposal to make both of these joint FC-SC bodies.</i></p> <p><i>Scientific Council is unclear as to the relevance of this recommendation, given the lack of specific proposal to SC. It is not apparent what form such a proposed “strategic framework” would take.</i></p>
18 Chapter 4, 4.6.4 #2, 3 & 4 p. 108	Recognizes that a NAFO strategic imperative should be to articulate a specific plan aimed at developing ways to conserve biodiversity. NAFO, in general, and the Scientific Council in particular, are also encouraged to formally determine the potential effects that areas closed to fishing are likely to exert in terms of affecting fishing, protecting habitats and conserving biodiversity in the NAFO Convention Area.	FC/SC /SEC/ CPs	LT	Taking into account the recommendations on the Ecosystem Approach and the mandate of the 2007 NAFO amended Convention, the WG recommends that the FC mandates the WGFMS-VME to analyse, based on an overview provided by the Secretariat, the way other RFMOs address the need to conserve biodiversity as a basis for discussions in the FC on a possible strategy for biodiversity.	<p><i>Scientific Council recognizes that the development of ways to conserve biodiversity is fundamental to the roadmap to the ecosystem approach, and SC will continue its work to support the implementation of this roadmap. Issues of biodiversity, such as the definition of ecoregions, are currently being investigated by the WGEAFM.</i></p> <p><i>Given the fact that the recommendation from the panel extends to the NAFO Convention Area, Scientific Council believes that Contracting Parties, especially coastal States, should be added to the list of responsible bodies.</i></p>
19 Chapter 4, 4.6.4 #2, p. 108	NAFO’s efforts to address potential threats to biodiversity in the Convention Area are largely linked to the management of relevant fisheries and their likely impacts. In this respect, NAFO has not articulated any specific plans aimed at developing ways to conserve biodiversity. The PRP sees the development of such plans as a strategic imperative for NAFO.	FC/SC	MT	<i>See above</i>	<i>See above</i>

20 Chapter 4, 4.6.4 #3, p. 108	The PRP notes that NAFO has not yet attempted to formally determine the potential effects that areas closed to fishing are likely to exert in terms of affecting fishing, protecting habitats and conserving biodiversity in the Convention Area. NAFO in general, and the Scientific Council in particular, are encouraged to consider such matters.	SC	LT	<i>See above</i>	<i>See above</i>
24 Chapter 4, 4.4.1 #4, p. 87	Recommends that the Fisheries Commission and the Scientific Council promptly resolve any discrepancies between STATLANT 21A catch estimates and those of STACFIS, if possible, or at least provide some guidance on how they arise, including underlying assumptions made and/or consequences anticipated.	GC/ FC/SC /CPs	ST	The WG recommends that GC submits the issue of catch discrepancy between STATLANT 21A catch estimates and those of STACFIS to an external peer review process.	<i>Scientific Council has cooperated with the group conducting the peer review into catch estimation methods of STACFIS, and will be pleased to support the group in the second part of their work, examining the discrepancy between the STACFIS and STATLANT figures.</i>
25 Chapter 4, 4.5 #1, p. 96	<p>Consideration should be given on how dialogue between the Scientific Council and the Fisheries Commission could be strengthened, while still maintaining the intended ‘philosophical’ separation between them. The content of any such dialogue should be considered in terms of providing both groups with the best information available so that decisions, or actions, are based on interpretable, unambiguous and informed understanding. The detailed recommendations below outline two possible areas to be considered in the interests of improving the use of the Scientific Council’s advice by the Fisheries Commission.</p> <p>These include:</p> <p>Tabular presentation of key management decisions to be taken rather than decisions being obscured in other documentation. This would serve as a ‘targeted framework’ and could extend the use of</p>	FC/SC	ST	<p>The WG recommends that:</p> <p>FC considers more regular inter-sessional meetings between managers and scientists for issues requiring discussion (e.g. via WebEx or teleconference),</p> <p>A joint meeting of the FC and SC be held at the upcoming Annual Meeting or as soon as possible thereafter, to discuss the appropriate means to address, amongst other issues, broader implementation of the PAF, updating the framework for provision of advice, updating the template for the presentation of advice and recommendations, and the improvement of the process to develop questions to the SC.</p> <p>FC develop a framework for the presentation of key management decisions.</p>	<p><i>Scientific Council notes that the recommendations arising from the GC Working Group in response to this point are directed to the Fisheries Commission. Scientific Council further notes the Performance Assessment Panel’s proposal that SC develop more “user friendly” documentation of concepts and methods, and feels the creation of such documentation, for example a glossary of key terms, would be beneficial.</i></p> <p><i>Recognising the need for transparency, further steps, such as the public archiving of assessment data, could be considered.</i></p>



	<p>standardized management procedures by providing more risk-based, or risk-determined scientific advice.</p> <p>Developing consolidated descriptions of the scientific approaches models and underlying assumptions used by the Scientific Council. This could be in the form of a users' manual outlining, with attached lay explanations, the various assessment being undertaken.</p>				
26 Chapter 4, 4.5 #7, p. 98	Suggests that NAFO as a whole may wish to reflect on the use, and allocation, of its scientific capacity from time-to time, although the burden of scientific input appears to be shared by all NAFO Contracting Parties in proportion to their respective fishery activities.	FC/SC /CPs	MT	The WG recommends the FC and SC analyse the availability of and the need for scientific capacity and identifies possibilities to extend scientific expertise by specific schemes (e.g. scholarship, meeting participation fund, etc.).	<i>Scientific Council supports this proposal, but recognizes that such changes required to expand the capacity of SC to address requests from FC will require financial support from Contracting Parties, through support of their own scientists' participation in NAFO activities, and through increased budgets of Scientific Council.</i>
34 Chapter 7, 7.5 #2, p. 148	Highlights the point that, reports should be as succinct as possible and confined to matters of substance only to improve documentation of meeting outcomes. Technical details can be provided in appendices and as far as possible reports should represent a distillation of collective views, unless otherwise decided for controversial/high priority subjects. Executive summaries of key conclusions and decisions should be provided if possible.	All bodies	ST	The WG recommends that all NAFO bodies strive for clear and succinct reporting as recommended by the review panel and that the Secretariat provides proper guidance to rapporteurs and Chairs to that end.	<i>Scientific Council advice is given in summary sheets at the start of SC report, with technical details given in appendices and research documents. In 2012, SC began the process of revising the summary sheets to make the advice more prominent.</i>
35 Chapter 4, 4.9 #3, p. 115	If the situation should evolve, the PRP suggests that the above Resolution conditions may need to be reviewed in respect of NAFO addressing all the explicit provisions of UNFSA Article 11 that need to be taken into account when allocating fishing opportunities to new Members.	FC/SC	LT	The WG recommends that NAFO reconsider previous work undertaken by the Working Group on the Allocation of Fishing Rights to Contracting Parties of NAFO and review the Resolution to Guide the Expectations of Future New Members with Regard to Fishing Opportunities in the NAFO Regulatory Area (NAFO GC Doc. 99/8), should new members join the organization or new fisheries come under NAFO management.	<i>Quota allocation is not an issue for Scientific Council.</i>

Chapter 4, 4.6.2	Urges the Scientific Council to review the current absence of any formally defined decision rule(s) framework for the application of the PAF. The Panel notes that this gap may exacerbate perceived differences between the Scientific Council and Fisheries Commission. The Scientific Council should also develop a strategy to be used in applying the PAF to new and exploratory fisheries specifically.	SC			<p><i>Scientific Council feels this recommendation should also be addressed to Fisheries Commission.</i></p> <p><i>See response to “11 Chapter 4, 4.2.2 #1, p. 74” above.</i></p>
Chapter 4, 4.5	Tabular presentation of key management decisions to be taken rather than decisions being obscured in other documentation. The would serve as a ‘targeted framework’ and could extend the use of standardized management procedures by providing more risk- based, or risk-determined scientific advice.				<p><i>Scientific Council is taking steps to try to expand the risk based approach to advice but the ability to do so will be limited in some cases where data currently do not allow the use of quantitative assessment models.</i></p>
Chapter 4, 4.6.2	Developing consolidated descriptions of the scientific approaches, models and underlying assumptions used by the Scientific Council. This could be in the form of a users’ manual outlining, with attached lay explanations, the various assessment being undertaken.				<p><i>See response to “25, Chapter 4, 4.5 #1, p. 96” above.</i></p> <p><i>As an outcome of the SISAM initiative which NAFO has been a partner in, Scientific Council is co-sponsoring the World Conference on Stock Assessment methods in July 2013 and will consider the results of this initiative.</i></p>
Chapter 4, 4.5	Suggests that the extent to which various reference points were being taken into account when stock recovery plans are being considered should be made much more explicit and should be documented alongside the PAF.				<p><i>Scientific Council feels that this recommendation is best directed to the FC WGFMS – CPRS. Scientific Council could take into account specific rebuilding plans and reference points when formulating advice on those where such plans are in place.</i></p>
Chapter 5, 6.1	Urges the Scientific Council to give careful consideration to improving its explanation of both the scientific processes it follows and the conclusions and results/advice it provides.				<p><i>Scientific Council has changed the way it provides advice to make the recommendation more prominent. Work is ongoing to investigate alternative ways of presenting its advice.</i></p>

## APPENDIX I. REPORT OF STANDING COMMITTEE ON RESEARCH COORDINATION (STACREC)

Chair: Don Stansbury

Rapporteur: Barbara Marshall

The Committee met at the Park Inn, Pribaltiskya St. Petersburg. Russia, during 19 September 2012, to consider the various matters in its Agenda. Representatives attended from Canada, European Union (Estonia, France, Portugal and Spain), France (with respect to St. Pierre et Miquelon), Norway, Russian Federation and USA. The Scientific Council Coordinator was in attendance.

### 1. Opening

The Chair opened the meeting and welcomed everyone. Barbara Marshall was appointed the Rapporteur.

### 2. Fisheries Statistics

#### a) Progress Reports on Secretariat Activities

There were no activities to report.

#### b) Review of STATLANT 21

The following table updates the situation with the submission of STATLANT. There are still a few outstanding submissions but in general the submission rate is acceptable.

TABLE 1. Dates of receipt of STATLANT 21A and 21B reports for 2008-2010 up to 19 September 2012.

Country/Component	STATLANT 21A (deadline, 1 May)			STATLANT 21B (deadline 31 August)		
	2009	2010	2011	2009	2010	2011
CAN-CA	31 Mar 10	31 Mar 11	24 Apr 12	30 Aug 10	8 Aug 11	
CAN-M						
CAN-SF	14 May 10	28 Apr 11	14 May 12	21 May 10	10 June 11	
CAN-G	2 Jun 10	29 Apr 11	29 Apr 12	1 Sep 2010	27 July 11	
CAN-N	29 Apr 10	29 Apr 11	30 Mar 12	3 Sep 10	31 Aug 11	31 Aug 12
CAN-Q	11 Mar 11			11 Mar 11		
CUB			4 May 12			
E/EST	30 Apr 10	27 Apr 11	17 May 12	26 Aug 10	31 Aug 11	1 Aug 12
E/DNK	24 May 10		18 May 12	24 May 10		31 Jul 12*
E/FRA-M			21 May 12			7 Jul 12
E/DEU	27 Apr 10	28 Apr 11	26 Apr 12	31 Aug 10	23 Aug 11	4 Jul 12
E/NLD						
E/LVA	2 Jun 10	14 Apr 11	17 May 12	2 Jun 10	16 Aug 11	2 Aug 12
E/LTU			2 May 12	22 Mar 11		1 Sep 12
E/POL	22 Jul 10 (no fishing)		26 Apr 12 (no fishing)			31 Aug 12 (no fishing)

Country/Component	STATLANT 21A (deadline, 1 May)			STALANT 21B (deadline 31 August)		
	2009	2010	2011	2009	2010	2011
E/PRT	11 May 10	27 Apr 11	8 May 12 (revised 29 May 12)	31 Aug 10	31 Aug 11	7 Sep 12
E/ESP	3 Jun 10		30 May 12	3 Jun 10	11 May 11	31 Aug 12
E/GBR	2 Jun 10	1 Jun 11	26 Apr 12	2 Jun 10	16 Aug 11	
FRO	1 Jun 10	6 May 11	30 Apr 12	1 Jun 10	6 May 11	30 Apr 12
GRL	28 Jun 10	27 Apr 11	19 Apr 12		29 Apr 11	24 Aug 12
ISL	9 Jun 10 (no fishing)	4 May 11	31 May 12		1 Sep 11	31 May 12
JPN			25 Apr 12 (no fishing)			25 Apr 12 (no fishing)
KOR						
NOR	15 Apr 10	28 Apr 11	27 Apr 12	31 Aug 10	19 Aug 11	26 Aug 12
RUS	3 Jun 10	27 Apr 11	29 Apr 12	21 Jun 10 (Revised 13 Apr 11)	26 Jul 11	27 Aug 12
USA	26 May 10	16 May 11	21 May 12			
FRA-SP	2 Jun 10	29 Apr 11	14 May 12	1 Sep 10	4 Aug 11	7 Jul 12
UKR		20 Jan 11 (no fishing)				

\* Effort only

### 3. Research Activities

#### a) Surveys Planned for 2012 and Early-2013

Designated Experts were requested to check and update the information contained in SCS Doc. 12/12.

### 4. Other Matters

#### a) Review of SCR and SCS Documents

SCR Doc. 12/1 was not able to be reviewed in June. This document was not reviewed during this meeting. The Secretariat will contact the author, explain the policy and see if he wishes to resubmit it next year.

#### b) Other Business

##### *i) Stock-by-stock Research Vessel Surveys Reported*

In Studies No. 34 the Secretariat had compiled a report entitled "Stock-by-stock Research Vessel Surveys Reported, 1991-2000". In 2011, STACREC noted that in light of discussions about data sharing and making knowledge of data available it would be a prudent to compile this information for 2001-2010.

The Secretariat has begun the compilation of this and should have a draft ready to be reviewed. The Secretariat will circulate the compilation to each DE and they are requested to review the information before it is published next year.

### 5. Adjournment

The meeting was adjourned at 1430 on 19 September 2011.

## APPENDIX II. REPORT OF STANDING COMMITTEE ON FISHERIES SCIENCE (STACFIS)

Chair : Jean-Claude Mahé

Rapporteur: Various

The Committee met at the Park Inn, St. Petersburg, Russia, during 17-21 September 2012, to consider the various matters in its Agenda. Representatives attended from Canada, European Union (Estonia, France, Portugal, Spain and the United Kingdom), France (with respect to St. Pierre et Miquelon), Norway, Russian Federation and USA. The Scientific Council Coordinator was in attendance.

### 1. Opening

The Chair opened the meeting by welcoming participants. The provisional agenda was reviewed and adopted, and a plan of work developed for the meeting.

### 2. Any matter outstanding from the WebEx SC Meeting, 27 August-7 September 2012

#### a) Northern Shrimp in Div. 3M and Div. 3LNO

The Chair informed the meeting that the assessments for Div. 3M and Div. 3LNO Northern shrimp had been updated during a SharePoint and WebEx meeting of STACFIS. The assessments were completed at that time and there were no outstanding issues.

### 3. Nomination of Designated Experts

There are likely to be some changes in Designated Experts for stocks over the next year. The current list of Designated Experts is given below and will be nominated again. The relevant institutes will be contacted to confirm the Designated Experts.

The nominated Designated Experts for 2013 are:

From the Science Branch, Northwest Atlantic Fisheries Centre, Department of Fisheries and Oceans, P. O. Box 5667, St. John's, NL, Canada A1C 5X1, Canada (Fax: + 709-772-4188)

Cod in Div. 3NO	Rick Rideout	Tel: +1 709-772-4935	rick.rideout@dfo-mpo.gc.ca
Redfish Div. 3O	Rick Rideout	Tel: +1 709-772-4935	rick.rideout@dfo-mpo.gc.ca
American Plaice in Div. 3LNO	Karen Dwyer	Tel: +1 709-772-6975	karen.dwyer@dfo-mpo.gc.ca
Witch flounder in Div. 3NO	Bill Brodie	Tel: +1 709-772-3288	bill.brodie@dfo-mpo.gc.ca
Witch flounder in Div. 2J+3KL	Dawn Maddock Parsons	Tel: +1 709-772-2495	dawn.parsons@dfo-mpo.gc.ca
Yellowtail flounder in Div. 3LNO	Dawn Maddock Parsons	Tel: +1 709-772-2495	dawn.parsons@dfo-mpo.gc.ca
Greenland halibut in SA 2+3KLMNO	Brian Healey	Tel: +1 709-772-8674	brian.healey@dfo-mpo.gc.ca
Northern shrimp in Div. 3LNO	David Orr	Tel: +1 709-772-7343	david.orr@dfo-mpo.gc.ca
Thorny skate in Div. 3LNO	Mark Simpson	Tel: +1 709-772-4148	mark.r.simpson@dfo-mpo.gc.ca
White hake in Div. 3NO	Mark Simpson	Tel: +1 709-772-4148	mark.r.simpson@dfo-mpo.gc.ca

From the Instituto Español de Oceanografía, Aptdo 1552, E-36200 Vigo (Pontevedra), Spain (Fax: +34 986 49 2351)

Roughhead grenadier in SA 2+3	Fernando Gonzalez-Costas	Tel: +34 986 49 2111	fernando.gonzalez@vi.ieo.es
Roundnose grenadier in SA 2+3	Fernando Gonzalez-Costas	Tel: +34 986 49 2111	fernando.gonzalez@vi.ieo.es
Cod in Div. 3M	Diana Gonzalez-Troncoso	Tel: +34 986 49 2111	diana.gonzalez@vi.ieo.es
Shrimp in Div. 3M	Jose Miguel Casas Sanchez	Tel: +34 986 49 2111	mikel.casas@vi.ieo.es

From the Instituto Nacional de Recursos Biológicos (INRB/IPIMAR), Av. de Brasilia, 1449-006 Lisbon, Portugal (Fax: +351 21 301 5948)

American plaice in Div. 3M	Ricardo Alpoim	Tel: +351 21 302 7000	ralpoim@ipimar.pt
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Redfish in Div. 3M	Antonio Avila de Melo	Tel: +351 21 302 7000	amelo@ipimar.pt
Redfish in Div. 3LN	Antonio Avila de Melo	Tel: +351 21 302 7000	amelo@ipimar.pt

From the Greenland Institute of Natural Resources, P. O. Box 570, DK-3900 Nuuk, Greenland (Fax: +299 36 1212)

Redfish in SA1	Rasmus Nygaard	Tel: +299 36 1200	rany@natur.gl
Other Finfish in SA1	Rasmus Nygaard	Tel: +299 36 1200	rany@natur.gl
Greenland halibut in Div. 1A	Rasmus Nygaard	Tel: +299 36 1200	rany@natur.gl
Northern shrimp in SA 0+1	Michael Kingsley	Tel: +299 36 1200	mcsk@natur.gl
Northern shrimp in Denmark Strait	Nanette Hammeken	Tel: +299 36 1200	nanette@natur.gl

From the Danish Institute for Fisheries Research, Charlottenlund Slot, DK-2920, Charlottenlund, Denmark (Fax: +45 33 96 33 33)

Roundnose grenadier in SA 0+1	Ole Jørgensen	Tel: +45 33 96 33 00	olj@dfu.min.dk
Greenland halibut in SA 0+1	Ole Jørgensen	Tel: +45 33 96 33 00	olj@dfu.min.dk

From Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO), 6 Knipovich Street, Murmansk, 183763, Russia (Fax: +7 8152 47 3331)

Capelin in Div. 3NO	Ivan Tretiakov	Tel: +7 8152 450568	tis@pinro.ru
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From National Marine Fisheries Service, NEFSC, 166 Water St., Woods Hole, MA 02543

Northern Shortfin Squid in SA 3 & 4	Lisa Hendrickson	Tel: +1 508 495-2285	lisa.hendrickson@noaa.gov
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#### 4. Other Matters

##### a) Review of SCR and SCS Documents

There were no papers presented to STACFIS.

##### b) Other Business

There being no other business STACFIS Chair thanked the Designated Experts for their competence and very hard work and the Secretariat for its great support. The STACFIS Chair also thanked the Chair of Scientific Council, and the Scientific Council Coordinator for their support and help. The meeting was adjourned at 1315 on 20 September.