

## **PART B**

### **Scientific Council Meeting, 19-23 September 2005**

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## SCIENTIFIC COUNCIL MEETING, 19-23 SEPTEMBER 2005

Chair: M. Joanne Morgan

Rapporteur: Barbara Marshall

### I. PLENARY SESSIONS

The Scientific Council met at the Radisson SAS, Tallinn, Estonia during 19-23 September 2005. Representatives attended from Canada, European Union (Estonia, France, Germany, Latvia, Lithuania, Poland, Portugal and Spain), Iceland, Republic of Korea, Russian Federation and United States of America. Members of the NAFO Secretariat were in attendance.

The Executive Committee met prior to the opening session of the Council, and the Provisional Agenda, plan of work and other related matters were discussed.

The opening session of the Council was called to order at 0930 hours on 19 September 2005.

The Chair welcomed everyone to Tallinn, Estonia and to this venue for the Meeting. Barbara Marshall, NAFO Secretariat was appointed rapporteur.

The Provisional Agenda was **adopted** as presented (Part D, Agenda II, this volume), noting some items that would normally be discussed by STACPUB will be discussed by Scientific Council under "Other Matters". Additional items may be addressed subject to Fisheries Commission requests during the course of this meeting.

The Council noted the Provisional Agenda for the Scientific Council Meeting on shrimp during 26 October-3 November 2005 in Dartmouth, Nova Scotia, Canada, was circulated in accordance with the Rules of Procedures on 29 August 2005.

The Council and its Standing Committees met through 19-23 September 2005 as needed. At its sessions on 22 September 2005, the Council considered and **adopted** the reports of the Standing Committees (STACFIS, STACREC).

The concluding session was called to order at 1000 hours on 23 September 2005 when the Council addressed other outstanding agenda items. The Scientific Council then considered and **adopted** its report of this meeting.

The meeting was adjourned at 1015 hours on 23 September 2005.

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

The Agenda, List of Research (SCR) and Summary (SCS) Documents, List of Representatives and Advisers/Experts of this meeting are given in Part D, this volume.

The Council's considerations on the Standing Committee Reports, and other matters addressed by the Council follow in Sections II-XIII.

### II. REVIEW OF SCIENTIFIC COUNCIL RECOMMENDATIONS FROM JUNE 2005

The Council reviewed the following:

Recognizing the importance of reliable catch estimates to stock assessments and the considerable efforts of some Contracting Parties to produce more accurate catch estimates, Scientific Council **recommended** that *all Contracting Parties take measures to improve the accuracy of their catch estimates.*

The Chair of Scientific Council wrote a letter about this matter to the Chair of Fisheries Commission on 12 July 2005. The matter was also highlighted by the Chair of Scientific Council during her presentation of scientific advice to the Fisheries Commission.

The Joint NAFO-ICES Working Group on Harp and Hooded Seals (WGHARP) will meet in St. John's during 30 August to 3 September 2005. Scientific Council **recommended** that the WGHARP review the recent assessment of the status of harp seals conducted by Canada and report its findings to the Annual Meeting of Scientific Council during 19-23 September 2005. Scientific Council also **recommended** that the WGHARP provide to the September 2005 Annual Meeting of Scientific Council the results of studies that are carried out regarding harp and/or hooded seals in the Northwest Atlantic, in particular any available results from tagging studies using satellite telemetry tracking.

This matter was addressed in Section VI below.

### III. FISHERIES SCIENCE

The Council **adopted** the Report of the Standing Committee on Fisheries Science (STACFIS) as presented by the Chair, Hilario Murua. The full report of STACFIS is at Appendix I.

### IV. RESEARCH COORDINATION

The Council **adopted** the Report of the Standing Committee on Research Coordination (STACREC) as presented by the Chair, Antonio Vazquez. The full report of STACREC is at Appendix II.

The recommendation made by STACREC as **endorsed** by the Council is as follows:

1. *the digitization of observer data be carried out and that these data then be made available to Scientific Council.*

### V. SPECIAL REQUESTS FROM FISHERIES COMMISSION

#### 1. Update on Advice for Northern Shrimp in Division 3M

Scientific Council reviewed the EU multi-species bottom trawl survey index and the commercial catch data for Div. 3M northern shrimp (*Pandalus borealis*). The female biomass index in the 2005 EU survey was similar to that of 2003 and 2004.

Scientific Council concluded that there was no basis for change in the 2006 advice for this stock.

#### 2. Update on Advice for Northern Shrimp in Divisions 3LNO

Scientific Council reviewed the Div. 3LNO northern shrimp (*Pandalus borealis*) biomass and abundance indices from the autumn 2004 and spring 2005 Canadian Research Vessel bottom trawl surveys. The autumn survey was incomplete in 2004, but this index has been stable at a high level since 2000. Biomass from the spring 2005 survey was similar in magnitude to the high values seen in 2002-2004.

Based on this review, Scientific Council concluded that there is no basis to change its 2006 advice for this stock.

### VI. WORKING GROUP REPORTS

#### 1. Report of WGHARP (SCS Doc. 05/17)

The document "The Report of the Joint ICES/NAFO Working Group on Harp and Hooded Seals" was reviewed. The NAFO Scientific Council had requested that the WGHARP review the recent assessment of Northwest Atlantic harp seals and the results of other ongoing studies on harp and/or hooded seals in the NW Atlantic, in particular any available results from tagging studies using satellite telemetry tracking. The Working Group reviewed the methods used during the 2004 pup production survey of harp seals and the data used to assess current abundance of NW Atlantic harp seals. It concluded that the methods used were appropriate, consistent with previous recommendations of WGHARP and comparable to those used in the past. As a result,

WGHARP considered the estimates obtained from the reproductive, survey and modeling studies to be the best approximations of our current knowledge on this population.

WGHARP reviewed the results of current research on harp and hooded seals in the Northwest Atlantic. These studies included the use of satellite tags in stock structure studies, for both harp and hooded seals. The Working Group noted that although these studies will provide us with significant new information on these populations, many of these studies are still underway and that final results were not available. However, it is anticipated that many of these studies will be completed within the coming year and results presented at the next meeting of WGHARP. It anticipated that this meeting will focus on comparative studies of hooded seals and will provide a major advancement of our knowledge on this species.

During its meeting, the Working Group continued discussions on the implementation of Biological Reference Points for harp and hooded seals. WGHARP requested that NAFO Scientific Council review the progress made and provide comments on the appropriateness of the approach proposed. Scientific Council noted the progress made by the WG on the biological reference points for harp and hooded seals. It noted the similarities between this approach and the biomass limit reference points used for groundfish and shrimp. Although a detailed review of this report was not possible at this Scientific Council meeting, implementation of this framework should aid in the management of these seal species.

## VII. REVIEW OF FUTURE MEETING ARRANGEMENTS

### 1. Scientific Council Meeting on Shrimp, 26 October-3 November 2005

The Council noted that the dates of the meeting are 26 October-3 November 2005 and the meeting will be held at the NAFO Secretariat Headquarters in conjunction with the ICES WGPAND. With respect to the Scientific Council work, the Council noted its Provisional Agenda for this meeting was circulated on 29 August 2005.

### 2. Scientific Council Meeting, June 2006

The Scientific Council reconfirmed that its meeting of 1-15 June 2006 will be held at Alderney Landing, Dartmouth, Nova Scotia, Canada.

### 3. Annual Meetings, September 2006-2008

The NAFO Annual Meeting is scheduled for 18-22 September 2006, preceded by the Scientific Council Symposium "*Environmental and Ecosystem Histories in the Northwest Atlantic - What Influences Living Marine Resources?*" to be held 13-15 September. The venue will be Holiday Inn, Dartmouth, NS, Canada.

The Council noted that the dates of this and the 2007 meeting are causing conflicts for scientists who wish to attend the ICES Annual Science Conference and Council may have to look at alternative arrangements for Scientific Council Symposia and workshops in the future. The dates for 2007 Annual Meeting are 24-28 September and for 2008, 23-27 September. If Scientific Council symposia continue to be held in conjunction with the Annual Meeting they will be held in the week following.

### 4. Scientific Council Meeting on Shrimp, 2006

The dates and venue of the shrimp assessment meeting will be decided at the October-November 2005 Meeting. The decision will be based on possible future working arrangement with ICES WGPAND.

### 5. Scientific Council Meeting, June 2007

The Council agreed to the tentative dates of 31 May-14 June 2007 for this meeting to be held at the Alderney Landing, Dartmouth, Nova Scotia, Canada. Exact dates and length of meeting will be decided in June 2006.

## VIII. FUTURE SPECIAL SESSIONS

### 1. Progress on Special Session for 2006

The Scientific Council reviewed progress for its 2006 Symposium entitled "*Environmental and Ecosystem Histories in the Northwest Atlantic - What Influences Living Marine Resources?*" This Symposium is to be held in conjunction with the NAFO 28<sup>th</sup> Annual Meeting, at the Holiday Inn Harbourview, in Dartmouth, Nova Scotia, Canada, 13-15 September 2006. The Symposium will be co-convened by Bill Brodie (Canada), Jason Link (USA), Helle Siegstad (Denmark/Greenland), and Manfred Stein (EU-Germany), and organized by the NAFO Secretariat.

A poster with the Symposium announcement has been developed and will be circulated shortly after the current Annual Meeting. A web page will also be established on the NAFO website. Invited keynote speakers will be sought for some of the theme sessions.

Council was pleased with the progress to date and thanked the co-conveners for their work.

### 2. Topics for Special Session 2007

A proposal for a Symposium entitled "*Reproduction and Recruitment in Marine Fish Stocks*" was presented.

The continuance of reduced fish stock sizes, and the attention given to their plight has raised concerns that stock rebuilding will be a lengthy process with uncertain results. Reproduction is inherent to stock rebuilding in the degree to which its many facets influence recruitment levels. Parental stock composition has been demonstrated to be a key governing factor shaping recruitment and recently led managers to recognize that levels of spawning stock biomass can be an imperfect measure of stock reproductive potential when used to predict year-class strength. Size-selective harvesting over generations has also possibly contributed to altering the genetic composition and growth potential of fish. Environmental factors influencing growth and reproduction combined with the effects of exploitation on population structure will generate yearly changes in reproductive potential and survivorship of gametes and larvae. Hence, a wide suite of variables spanning a significant portion of the ontogeny interact to influence recruitment variability. Forecasting trends in recruitment and potential stock rebuilding will assist managers to make appropriate decisions for stock closures, openings or implementation of cautious harvesting regimes.

The objective of this proposed Symposium is to have presentations made on the science of reproduction and recruitment in marine fish stocks, with application to fishery resource management. The Symposium will have a broad application as it will principally attract scientists spanning the areas of reproduction, early life history and recruitment. The Symposium should also be of interest to resource managers given the focus on identifying factors that may inhibit stock rebuilding. It will build on previous accomplishments of NAFO that were published in the Journal of Northwest Atlantic Fishery Science. Specifically, the 1998 Symposium "*Variations in Maturation, Growth, Condition and Spawning Stock Biomass Production in Groundfish*" and the 2003 volume of the NAFO Working Group on Reproductive Potential entitled "*Reproductive Potential of Fish Stocks of the North Atlantic*".

The following topics would be used to develop Symposium Sessions: Maturation, fecundity, gamete quality, spawning behaviour, reproductive strategies, larval characteristics, genetics, effects of size-selective harvesting, spawner characteristics, demography, condition, maternal and paternal factors, stock reproductive potential, progeny growth and survivorship, environmental factors, recruitment variability, individual and population modelling, management advice.

Scientific Council considers this an excellent Symposium topic and agreed that it should form the basis for a Special Session to be held in 2007. It is suggested that the addition of topics covering invertebrate reproduction be considered. In addition consideration should be given to including co-convenors that work on species other than cod. Scientific Council looks forward to a progress report for consideration at its June 2006 Meeting.



## IX. SCIENTIFIC COUNCIL WORKING PROCEDURES AND PROTOCOL

### 1. Timetable and Frequency of Assessments

The following schedule of Scientific Council assessments reflects decisions that some stocks should be reviewed on a multi-year basis, with monitoring during the interim years. The frequency of assessments will be reviewed at the June 2006 Meeting of Scientific Council.

Since 1999, the Scientific Council has agreed to the following overall schedule (+ is assessment year, *i* is interim monitor, - is no assessment) subject to the Fisheries Commission and Coastal State requests for advice and concurrence:

Stock	2001	2002	2003	2004	2005	2006	2007
<b>Multi-year Assessments</b>							
American plaice in Div. 3LNO	+	+	+	<i>i</i>	+	<i>i</i>	+
Cod in Div. 3NO	+	<i>i</i>	+	<i>i</i>	+	<i>i</i>	+
Redfish in Div 3LN	+	<i>i</i>	+	<i>i</i>	+	<i>i</i>	+
Witch flounder in Div. 2J+3KL	+	<i>i</i>	+	<i>i</i>	+	<i>i</i>	+
Redfish in Div. 3M	+	+	+	<i>i</i>	+	<i>i</i>	+
Roughhead grenadier in SA 2+3	<i>i</i>	-	+	<i>i</i>	+	<i>i</i>	+
Redfish in Div. 3O	-	-	+	<i>i</i>	+	<i>i</i>	+
Redfish in SA1	+	<i>i</i>	+	<i>i</i>	+	<i>i</i>	+
Other finfish in SA1	+	<i>i</i>	+	<i>i</i>	+	<i>i</i>	+
Cod in Div. 3M	<i>i</i>	+	<i>i</i>	+	<i>i</i>	+	<i>i</i>
American plaice in Div. 3M	<i>i</i>	+	<i>i</i>	+	<i>i</i>	+	<i>i</i>
Witch flounder in Div. 3NO	<i>i</i>	+	<i>i</i>	+	<i>i</i>	+	<i>i</i>
Yellowtail flounder in Div. 3LNO	+	+	<i>i</i>	+	<i>i</i>	+	<i>i</i>
Squid ( <i>Illex</i> ) in SA 3+4	+	+	<i>i</i>	+	<i>i</i>	+	<i>i</i>
Capelin in Div. 3NO	+	+	+	<i>i</i>	+	<i>i</i>	+
Thorny skate in Div. 3LNO	-	-	-	+	<i>i</i>	+	<i>i</i>
White hake in Div. 3NOPs	-	-	-	-	+	<i>i</i>	+
Roundnose grenadier in SA 0 +1	<i>i</i>	+	<i>i</i>	<i>i</i>	+	<i>i</i>	<i>i</i>
<b>Annual Assessment</b>							
Greenland halibut in SA2 + Div. 3KLMNO	+	+	+	+	+	+	+
Greenland halibut in SA0 + 1 offshore and Div. 1B-F	+	+	+	+	+	+	+
Greenland halibut in Div. 1A inshore	+	+	+	+	+	+	+
Northern shrimp in Div. 3M	+	+	+	+	+	+	+
Northern shrimp in Div. 3LNO	+	+	+	+	+	+	+
Northern shrimp in SA 0+1	+	+	+	+	+	+	+
Northern shrimp in Denmark Strait	+	+	+	+	+	+	+

### 2. Proposals to Shorten June Meeting

Council held a productive discussion on proposals to make more efficient use of the time allocated to the June Scientific Council meetings. The aim of these proposals was both to allow the meetings to be shortened and to free more time during the meeting for full discussion of some issues related to assessments. It was agreed that one of the most important steps in this would be to try to arrive at catch estimates in advance of the meeting. This will involve discussions among a small working group. In addition the deadline for the submission of catch statistics would need to be advanced. In order to enhance Scientific Council's ability to produce catch estimates in advance of the June meeting, Scientific Council **recommends** that *the deadline for submission of STATLANT 21A data be set at 1 May in each year starting in 2006.*

Interim monitoring reports should be sent to the chair of STACFIS two weeks prior to the start of the meeting in the format agreed in June 2005. Only issues that Designated Experts think need to be highlighted would be discussed during the June meeting, other discussion would focus on editorial aspects of the STACFIS report.

Many assessments can probably be conducted less frequently than every 2 years. Ricardo Alpoim and Bill Brodie will develop a tentative schedule of assessments to be reviewed in June 2006.

It was agreed that the time allotted to the discussion of assessments should not be limited. However, the Chair of STACFIS should remind Designated Experts to highlight only the main results of the assessment and any changes from the previous assessment of the stock.

There was considerable discussion of the possibility of rescheduling some of the Standing Committee work. It was agreed that only a single day needs to be scheduled for STACFEN. A portion of the STACREC agenda has already been moved to the September meeting. An attempt can be made to table most SCS documents instead of presenting them in plenary. Purely technical items of STACREC and STACPUB can be merely tabled or discussed by a smaller group.

The meeting work schedule was also discussed. The Chair of Scientific Council should consider extending the work day to 1830 h. In addition most of the Executive Committee meeting can be conducted via email prior to the meeting. The Chair of Scientific Council should also consider starting the meeting in the afternoon of the first day to allow registration and meeting set up to occur in the morning.

## X. ECOSYSTEM APPROACH TO FISHERIES MANAGEMENT

A joint session of the Scientific Council, Fisheries Commission and General Council was held to hold preliminary discussions on this issue. This included a presentation by FAO.

Council then held its own discussion of this issue. It was noted that it will be important that the roles of Scientific Council and the Fisheries Commission are clearly delineated very early in the process as NAFO moves forward with an Ecosystem Approach to Fisheries Management. This may require the participation of some members of the Fisheries Commission in Scientific Council meetings where the issue is addressed.

## XI. OTHER MATTERS

### 1. Fahay Monograph

Council discussed the most appropriate format of this book and decided that a 2 volume hard cover version was the best. Scientific Council **recommends** that *the Monograph by M. Fahay entitled 'Early Stages of Fishes in the Western North Atlantic Ocean North of 35°N and West of 40°W' be published in 2 volumes and be in hard cover.* The cost of each volume to readers should be discussed with the author by the Secretariat. The price should ensure cost recovery and be reasonable/affordable but perhaps be able to generate some income to support other publication initiatives.

It was noted during this discussion that there is a need for a general policy for NAFO publication costs. It was also noted that Council is still concerned about the lack of historical publications on the NAFO website. It is anticipated that the hiring of a network administrator will result in the ability of NAFO to host its own website and provide sufficient space for all issues of the Journal and all years of SCR documents and other reports to remain available on the website.

### 2. Editorial Board

In June 2005 STACPUB **recommends** that *we continue to publish Journal papers on-line under the name Journal of Northwest Atlantic Fisheries Science and the printed Journal be given up. However, the Committee recognized the importance of the opinion of the Associate Editors of the Journal. The status quo will continue until the Chair of STACPUB confers with the Associate Editors, and if any of them have strong concerns this*

*decision will be revisited by June 2006 Meeting.* As there were strong objections to eliminating the printed version of the Journal, the status quo will remain in effect and the matter will be discussed again in June 2006.

Three Associate Editors have stepped down from the Journal. The Chair thanked James Weinberg, Fred Serchuk and Peter Shelton for their service as Associate Editors. Bo Bergstrom from Greenland was suggested as a potential associate editor in the field of invertebrate fisheries biology. The Chair of STACPUB will write to thank the former Associate Editors and to invite Dr. Bergstrom to join the Editorial Board. The positions of biomathematics and the need for 3 vertebrate fish Associate Editors will be reconsidered.

### 3. Provision of Monthly Catch Statistics by Secretariat

For stock assessment purposes it is important to have catch data by country instead of by Contracting Party. Some difficulty was encountered at this meeting in obtaining monthly catch statistics by country for shrimp for 2005. Noting that data for provisional letters are submitted pursuant to Conservation and Enforcement Measures, Scientific Council **recommends** that *Fisheries Commission revise the Conservation and Enforcement Measures to require submission of data by country for the monthly letters on provisional catch statistics.*

Many people are still not clear about the reporting of catch under charter or quota transfer arrangement. Therefore, Scientific Council **recommends** that *the Secretariat provide a clear explanation of the reporting of catch statistics under charter and quota transfer arrangements.* It was noted that the Excel spreadsheet designed by the Secretariat and available on the website was useful and Scientific Council **recommends** that *the spreadsheet of catch statistics be updated to expedite access to these data by Designated Experts.*

### 4. Questions from the Fisheries Commission

The Fisheries Commission requested the Scientific Council to provide: *information on the by-catch of juvenile Greenland halibut in the shrimp fishery in Division 3M.*

By-catch information is available from the Icelandic fishery but it is not clear how representative this is of the fishery as a whole. There are data available for several other fleets but analyses were not possible at this meeting. Scientific Council can not advise on the magnitude of any impact of the Div. 3M shrimp fishery on juvenile Greenland halibut at this time.

Scientific Council reiterates its recommendation from the September 2004 Meeting that Contracting Parties provide all available data on by-catch and discards of Greenland halibut in Subarea 2 and Divisions 3KLMNO shrimp fishery for consideration in future assessments. Scientific Council further **recommends** that *data collected by Contracting Parties on species taken as by-catch in or discarded from the shrimp fishery be made available for consideration in future assessments.*

The Scientific Council was also asked: *to evaluate the impact of increased levels of TAC for shrimp in Divisions 3LNO on the juvenile component of the Greenland halibut stock in Divisions 2J+3KLMN stock.*

Catch in the Canadian shrimp fishery in Div. 3L averaged 2 kg/ton of shrimp. As this fishery constitutes the bulk of the catch in the area this can be considered representative of the fishery as a whole. A 9 000 ton increase in quota would therefore be expected to result in an 18 ton increase in the by-catch of juvenile Greenland halibut.

The Fisheries Commission also requested: *noting that prospects for rebuilding this stock are poor; can SC advise how the original expected results of the Greenland halibut Rebuilding Plan can be achieved?*

The Fisheries Commission rebuilding plan for Greenland halibut has never been evaluated in its entirety by Scientific Council. Council is uncertain of the intent of the plan beyond the TACs established for 2004 to 2007 and the stated biomass target of 140 000 tons of 5+ biomass. In order to address this question specific information on how the Fisheries Commission intends to reach this target over the term of the rebuilding plan is required.

It was agreed that STACTIC would forward the following requests through the Fisheries Commission to the Scientific Council at its September 2005 Meeting.

- *Is there a scientific justification for reducing the mesh size in Division 3O and what would be the effect of a reduction of mesh size on the level of mortality?*
- *Would a harmonization of mesh size with NEAFC in Divisions 1F2GJH3K have a detrimental effect on the target species and other fisheries in the area?*

*When considering such questions, the Scientific Council should assess the implications for by-catch, the need for minimum fish sizes and the relevance of introducing technical conservation measures, such as square mesh gear.*

Scientific Council is unable to address these questions at this time.

The Fisheries Commission requested the Scientific Council to examine: *the utility of introducing a scientific observer programme run by NAFO and aimed at enhancing the collection of data on the status of stocks. In this respect, a scientific observer programme is understood as meaning that the observer be tasked only to collect data/information for stock assessment to be used by the Scientific Council. Scientific observers will not conduct any activity related to control/enforcement and compliance.*

The Scientific Council is specifically asked: *to provide advice on the possible structure and coverage of such a programme. The Scientific Council should in this respect take into account the scientific observer programme which is being run by CCAMLR and assess if a similar system could be implemented in NAFO.*

While Scientific Council recognizes the usefulness of scientific data from commercial fisheries it is not able to advise on the question at this time. As the nature of any such program 'run by NAFO' is unclear, further guidance on this is required from the Fisheries Commission.

## 5. **Administrative Issues**

Council discussed 3 issues relevant to the administration of NAFO.

The first issue related to changes in personnel supporting the work of Scientific Council without prior communication with Council. Scientific Council Chair is asked to transmit to the Executive Secretary the need to enhance communication between the Council and the Executive Secretary. Council urges the Chair of Scientific Council and the Executive Secretary to engage in a constructive dialogue to review past problems in order to improve future communications.

The second issue related to the proposed modernization of NAFO. Any change in the structure and functioning of NAFO is of importance to all constituent bodies. Council asks the Chair of Scientific Council to write to the Chairs of General Council and Fisheries Commission to suggest that all constituent bodies including Scientific Council be fully involved in modernization initiatives.

The development of performance evaluation indicators for Secretariat support was discussed. The Chairs of Scientific Council and its Standing Committees are asked to develop a short list of items that are important to Scientific Council in terms of support for its work. This list should be submitted to the Chair of General Council, the Chair of STACFAD and the Executive Secretary as part of the process of developing overall criteria.

## 6. **Appreciation for Dedicated Service of Mr. Tissa Amaratunga, Former Deputy Executive Secretary**

The former Deputy Executive Secretary of NAFO, Mr. Tissa Amaratunga is no longer in the employ of NAFO. During his 17 years of service, Mr. Amaratunga's main role was in support of the work of Scientific Council. His work included aid in the preparation for meetings, assistance during meetings and with the finalization of meeting reports. He played a key role in the work of both the Standing Committee on Research Coordination and the Standing Committee on Publications. He was technical editor of the Journal of Northwest Atlantic Fishery Science. Over the years Mr. Amaratunga carried out his duties effectively and efficiently and was committed to facilitating the work of Scientific Council and NAFO. Scientific Council has been fully satisfied with his support and gratefully acknowledges his many years of dedicated service.

## **XI. ADOPTION OF REPORTS**

### **1. Committee Reports STACFIS, STACREC**

The Council at its session on 22 September 2005 considered and **adopted** the reports of its Standing Committees, STACFIS and STACREC. These reports are given in Appendix I and II, respectively.

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

The Council at its concluding session on 23 September 2005 considered and **adopted** its own Report.

## **XII. ADJOURNMENT**

The Chair thanked members of Scientific Council for their contributions during this meeting and the various meetings over the course of her tenure. The Chair also thanked the Standing Committee Chairs for their outstanding contributions during the last 2 years. Appreciation was extended to the NAFO Secretariat for their dedicated support during the meeting. Ron Myers and Forbes Keating of the Secretariat will soon retire. The Chair thanked them for their many years of dependable service to NAFO and in particular their efforts in support of the work of Council.

The Chair wished all incoming and returning Committee Chairs all the best. Thanks were also extended for the local support offered during this annual meeting in Tallinn.

The incoming Chair then thanked Joanne Morgan for her contribution to the Scientific Council in the last two years and for her efforts in creating a cohesive group that worked well together.

There being no other business, the meeting was adjourned at 1015 hours on 23 September 2005.



**Scientific Council Meeting, 19-23 September 2005**

**Standing** (left to right): Manfred Stein, Toomas Saat, Enrique De Cárdenas, Femando Gonzalez-Costas, Chris Allen, Antonio Vázquez, Hilario Murua, Dave Orr, Bill Brodie, Fred Serchuk, Ricardo Alpoim, Eugene Colboume, Aleksandrs Kozlovskis, Vladimir Babayan, Romas Statkus

**Kneeling** (left to right): Silver Sirp, Unnur Skúladóttir, Joanne Morgan, Seok-Gwan Choi

**Missing:** Konstantin Gorchinsky, Jerzy Janusz, Suzanna Junquera, Jean-Dominique LeGarrec, Barbara Marshall



**STACFIS in session**

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

Chair: Hilario Murua

Rapporteurs: Various

### I. OPENING

The Committee met at the Radisson SAS, Tallinn, Estonia during 20-22 September 2005, to consider and report on matters referred to it by the Scientific Council, particularly those pertaining to the provision of scientific advice on certain finfish and invertebrate marine stocks. Representatives attended from Canada, European Union (Estonia, Germany, Latvia, Lithuania, Poland, Portugal and Spain), Iceland, Republic of Korea, Russian Federation and United States of America.

The Chair, Hilario Murua (European Union), opened the meeting by welcoming participants. The provisional agenda was reviewed and **adopted** with no modifications.

### II. NOMINATION OF DESIGNATED EXPERTS

STACFIS reviewed the list of Designated Experts for the stocks which would be assessed and for which management advice is requested by the Fisheries Commission and Coastal States. The final nomination of the Designated Experts will be conducted through the normal confirmation process between the various national institutes and Secretariat. The nominations to date by STACFIS for the 2006 assessment are:

- From the Science Branch, Northwest Atlantic Fisheries Centre, Department of Fisheries and Oceans, P. O. Box 5667, St. John's, NL A1C 5X1, Canada [Telephone: listed below – Fax: + 709-772-4188 – E-mail: listed below]

for	Cod in Div. 3NO	Joanne Morgan	Tel: +709-772-2261	<a href="mailto:morganj@dfo-mpo.gc.ca">morganj@dfo-mpo.gc.ca</a>
	Redfish Div. 3O	Dawn Maddock Parsons	Tel: +709-772-2495	<a href="mailto:parsonsdad@dfo-mpo.gc.ca">parsonsdad@dfo-mpo.gc.ca</a>
	American Plaice in Div. 3LNO	Karen Dwyer	Tel: +709-772-0573	<a href="mailto:dwverk@dfo-mpo.gc.ca">dwverk@dfo-mpo.gc.ca</a>
	Witch flounder in Div. 3NO	Dawn Maddock Parsons	Tel: +709-772-2495	<a href="mailto:parsonsdad@dfo-mpo.gc.ca">parsonsdad@dfo-mpo.gc.ca</a>
	Witch flounder in Div. 2J+3KL	Dawn Maddock Parsons	Tel: +709-772-2495	<a href="mailto:parsonsdad@dfo-mpo.gc.ca">parsonsdad@dfo-mpo.gc.ca</a>
	Yellowtail flounder in Div. 3LNO	Steve Walsh	Tel: +709-772-5478	<a href="mailto:walshs@dfo-mpo.gc.ca">walshs@dfo-mpo.gc.ca</a>
	Greenland halibut in SA 2+3KLMNO	Brian Healey	Tel: + 709-772-8674	<a href="mailto:healevbp@dfo-mpo.gc.ca">healevbp@dfo-mpo.gc.ca</a>
	Northem shrimp in Div. 3LNO	David Orr	Tel: +709-772-7342	<a href="mailto:orrd@dfo-mpo.gc.ca">orrd@dfo-mpo.gc.ca</a>
	Thorny skate in Div. 3LNO	David Kulka	Tel: + 709-772-2064	<a href="mailto:kulkad@dfo-mpo.gc.ca">kulkad@dfo-mpo.gc.ca</a>
	White hake in Div. 3NO	David Kulka	Tel: + 709-772-2064	<a href="mailto:kulkad@dfo-mpo.gc.ca">kulkad@dfo-mpo.gc.ca</a>

- From AZTI Tecnalia, Food and Fisheries Technological Institute, Herrera kalia, Portualde z/g 20110 Pasaia (Basque Country), Spain [Phone: +34 943 004800 – Fax: +34 943 004801 –E-mail: [hmurua@pas.azti.es](mailto:hmurua@pas.azti.es)]

for Cod in Div. 3M Hilario Murua

- From the Instituto Español de Oceanografía, Aptdo 1552, E-36280 Vigo (Pontevedra), Spain [Telephone: +34 9 86 49 2111 – Fax: +34 9 86 49 2351 – E-mail: [fernando.gonzalez@vi.ieo.es](mailto:fernando.gonzalez@vi.ieo.es)]

for	Roughhead grenadier in SA 2+3	Fernando Gonzalez-Costas
	Roundnose grenadier in SA 2+3	Fernando Gonzalez-Costas

- From the Instituto Nacional de Investigacao Agrária e das Pescas (INIAP/IPIMAR), Av. de Brasilia, 1449-006 Lisbon, Portugal [Telephone: +351 21 302 7000 – Fax: +351 21 301 5948 – E-mail: listed below]

for	American plaice in Div. 3M	Ricardo Alpoim	<a href="mailto:ralpoim@ipimar.pt">ralpoim@ipimar.pt</a>
	Redfish in Div. 3M	Antonio Avila de Melo	<a href="mailto:amelo@ipimar.pt">amelo@ipimar.pt</a>
	Redfish in Div. 3LN	Antonio Avila de Melo	<a href="mailto:amelo@ipimar.pt">amelo@ipimar.pt</a>

- From the Greenland Institute of Natural Resources, P. O. Box 570, DK-3900 Nuuk, Greenland  
[Telephone: +299 36 1238 – Fax: +299 39 1200 – E-mail: listed below]
 

for	Redfish in SA1	Helle Siegstad	<a href="mailto:helle@natur.gl">helle@natur.gl</a>
	Other Finfish in SA1	Helle Siegstad	<a href="mailto:helle@natur.gl">helle@natur.gl</a>
	Greenland halibut in Div. 1A	Bjarne Lyberth	<a href="mailto:bjly@natur.gl">bjly@natur.gl</a>
	Northern shrimp in SA 0+1	Michael Kingsley	<a href="mailto:mcsk@natur.gl">mcsk@natur.gl</a>
	Northern shrimp in Denmark Strait	Helle Siegstad	<a href="mailto:helle@natur.gl">helle@natur.gl</a>
  
- From the Danish Institute for Fisheries Research, Charlottenlund Slot, DK-2920, Charlottenlund, Denmark  
[Telephone: +45 33 96 33 00 – Fax: +45 33 96 33 33 – E-mail: [olj@dfu.min.dk](mailto:olj@dfu.min.dk)]
 

for	Roundnose grenadier in SA 0+1	Ole Jørgensen	
	Greenland halibut in SA 0+1	Ole Jørgensen	
  
- From the Marine Research Institute, Skulagata 4, P. O. Box 1390, 121 - Reykjavik, Iceland  
[Telephone: +354 552 0240 – Fax: +354 562 3790 – E-mail: [unnur@hafro.is](mailto:unnur@hafro.is)]
 

for	Shrimp in Div. 3M	Unnur Skúladóttir	
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- From Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO), 6 Knipovich Street, Murmansk, 183763, Russia [Telephone: +7 8152 45 0568 – Fax: +7 8152 47 3331 – E-mail: [sergegol@pinro.ru](mailto:sergegol@pinro.ru)]
 

for	Capelin in Div. 3NO	Serge Golovanov	
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- From the National Marine Fisheries Service, NEFSC, 166 Water St, Woods Hole, MA 02543  
[Telephone: +508-495-2285 – Fax: +508-495-2393 – E-mail: [lisa.hendrickson@noaa.gov](mailto:lisa.hendrickson@noaa.gov)]
 

for	Northern Short fin Squid in SA 3+4	Lisa Hendrickson	
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### III. OTHER MATTERS

#### 1. Review of SCR and SCS Documents (SCR Doc. 05/71)

STACFIS reviewed a paper entitled "A PA-compliant rebuilding plan for 2+3KLMNO Greenland halibut based on the 2005 NAFO assessment". Stochastic long-term projections were conducted based on the results of the June 2005 assessment of Greenland halibut in SA2+Div.3KLMNO. Projections were conducted from 2005 to 2020 at different levels of fishing mortality:  $F = 0.5 \times F_{0.1}$ ,  $F = 0.8 \times F_{0.1}$ ,  $F = F_{0.1}$ ,  $F = F_{MAX}$ ,  $F = F_{current}$  and  $F_{vary}$  which is defined as:  $F = 0.5 \times F_{0.1}$  when  $B \leq 80\,000$  tons,  $F = 0.8 \times F_{0.1}$  when  $80\,000 \text{ tons} < B \leq 140\,000$  tons and  $F = F_{0.1}$  when  $B > 140\,000$  tons. Summary performance statistics in terms of biomass and catch are provided at 5, 10 and 15 year intervals. Substantial reductions in  $F$  from its current level are required to allow this stock to rebuild to the stated target of 140 000 tons of 5+ biomass. Only at  $F_{vary}$  or at  $F_{0.1}$  or less is there a high probability (>70%) of reaching or exceeding 140 000 tons of 5+ biomass by 2020.

STACFIS considered the methods of this paper to be sound and the results clear. Additional analyses incorporating the TACs set by the Fisheries Commission Greenland halibut rebuilding plan to end of 2007 would be useful.

#### 2. Other Business

There being no other business, the Chair extended particular gratitude to the Secretariat for their assistance and support not only for work at the meetings but throughout the year. Noting that his term was ending the STACFIS Chair gave special thanks to Mr. Tissa Amaratunga for his help during the last two years. Acknowledgements were also given to the Chair of Scientific Council for her overall leadership during the past two years and all participating members for their cooperation in conducting their assessments. The meeting was adjourned.



## **APPENDIX II. REPORT OF THE STANDING COMMITTEE ON RESEARCH COORDINATION (STACREC)**

Chair: Antonio Vázquez

Rapporteur: W. Bill Brodie

The Committee met at the Radisson SAS, Tallinn, Estonia during 21-22 September 2005 to discuss matters pertaining to statistics and research referred to it by the Scientific Council. Representatives attended from Canada, European Union (Estonia, Germany, Latvia, Lithuania, Poland, Portugal and Spain), Iceland, Republic of Korea, Russian Federation and United States of America.

### **1. Opening**

The Chair opened the meeting by welcoming the participants and appointed Bill Brodie (Canada) as rapporteur. The Provisional Agenda as presented was **adopted**.

### **2. Fisheries Statistics**

#### **a) Progress Report on Secretariat Activities**

##### **i) Acquisition of STATLANT 21 Data**

There was considerable improvement in data acquisition since June 2005. Most Contracting Parties have reported, although some data remain outstanding. STACREC reiterates the importance for Contracting Parties to submit STATLANT data in due time to allow Scientific Council to produce stock assessments.

##### **ii) Publication of statistical information**

When catch information arrives at the NAFO Secretariat, the NAFO website is updated promptly. The last Statistical Bulletin was the one for 1999, and there is a need to revisit the Scientific Council's decision re publication of these Bulletins, and the criteria to decide when catch statistics are no longer considered to be provisional. Criteria should perhaps be final submission of all data for a given year by Contracting Parties, or confirmation from Contracting Parties that no fishing activity occurred in the reporting period.

#### **b) Revision of the North Atlantic Format (NAF) for Position and Catch Reporting**

At the last CWP Meeting, a proposal was made to harmonize VMS and daily catch reporting between NAFO and NEAFC. STACREC reviewed the data tables in question, and discussed a number of items. Several points were clarified, such as data fields for various species, discards, regulated vs non-regulated species, etc. Data are entered into the NAFO database, and are available from NAFO, although there may be confidentiality issues with respect to release of data. STACREC concluded that there were no problems identified with this format.

### **3. Research Activities**

#### **a) Surveys Planned for 2004 and Early-2005 (SCS Doc. 05/16)**

Participants were asked to please check these lists of data and to give corrections to Secretariat at this meeting.

#### 4. NAFO Observer Program

##### a) Digitization of Available Data

The Chair introduced the item and provided the backgrounds, noting that there was no consensus in the June 2005 STACREC Meeting. It was noted that Scientific Council members generally have access to NAFO observer data from their own country, and if NAFO digitizes these observer reports, this would allow sharing with other Scientific Council members. There was no objection to this proposal, and STACREC **recommends** that *the digitization of observer data be carried out and that these data then be made available to Scientific Council.*

#### 5. Stock Assessment Database

##### a) Evaluation of the Current Procedure

The Chair noted that data for only 3 stocks have been added to the database since May, and that these results are not satisfactory. STACREC agreed that this process is a good one, and that the benefits of data sharing and archiving are numerous. STACREC encourages Designated Experts to submit the 2005 assessment data. If necessary, the STACREC chair should contact DE's requesting a set of data for each stock.

#### 6. Other Matters

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

There were no documents to be reviewed.

##### b) Other Business

There being no other business, the Chair thanked the rapporteur, all meeting participants, the NAFO Secretariat for their valuable support, and closed the meeting.