PART B: SCIENTIFIC COUNCIL MEETING, SEPTEMBER 21-25 2009

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Anthony Thompson - SC Coordinator, Don Power – SC Chair

Don Power accepting a Merit Award from Antonio Vázquez

REPORT OF SCIENTIFIC COUNCIL MEETING

21–25 September 2009

Chair: Don Power Rapporteur: Anthony Thompson

I. PLENARY SESSIONS

The Scientific Council met at the Radisson, SAS Royal Hotel, Bergen, Norway, during 21–25 September 2009, to consider the various matters in its Agenda. Representatives attended from Canada, Denmark (in respect of Faroe Islands and Greenland), European Union (Estonia, France, Latvia, Portugal and Spain), Norway and Russian Federation. 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 1045 hours on 21 September 2009.

The Chair welcomed participants to the 31st annual meeting.

The Provisional Agenda was adopted with minor additions. The Council appointed Anthony Thompson, the Scientific Council Coordinator, as rapporteur.

The Chair, on behalf of Scientific Council, welcomed Robert Rangely from WWF-Canada, Louise Hill from WWF-UK, and Nina Jensen from WWF-Norway, as observers to the meeting.

The Council and its Standing Committees met through 21–25 September 2009 to address various items in its agenda. The Council considered and adopted the reports of the STACFIS and STACREC Standing Committees on 24 September 2009. The final session was called to order at 0900 hours on 25 September 2009. The Scientific Council then considered and adopted its report of this meeting. The meeting was adjourned at 1230 hours on 25 September 2009.

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 D.

II. REVIEW OF SCIENTIFIC COUNCIL RECOMMENDATIONS

The Council noted recommendations made in June 2009 pertaining to the work of the Standing Committees were addressed directly by the Standing Committees, while recommendations pertaining specifically to the Council's work will be addressed under each relevant topic of the Council agenda:

From the Scientific Council Meeting 1–15 June 2006

XII. Other Matters 5. NAFO Reform

Scientific Council **recommended** that *boundaries of Divisions 3M and 3L be re-defined so that 3M includes that small rectangle currently in 3L.*

STATUS: This was discussed by General Council at this Annual Meeting and the proposal to change the boundaries was not accepted.

XII. Other Matters 5. Other Business a) VMS data

Scientific Council **recommended** that *position be reported at shorter intervals than the current 2 hours, and the NAF fields for speed (code SP) and course (code CO) be added to the POS reports transmitted to the Secretariat.*

STATUS: This was discussed by Fisheries Commission at this Annual Meeting and reporting at one-hourly intervals along with course and speed was adopted.

From Scientific Council Meeting 5-19 June 2008

VII. Management Advice and Responses to Special Requests 1. Fisheries Commission (Appendix V, Annex 1) e) Special Requests for Management Advice vi) Protection of vulnerable marine ecosystems

c) Methods for monitoring the health of VMEs

VME Data Collection Protocol

Scientific Council **recommended** that *the collection protocol be reviewed and re-drafted, possibly at the Fisheries Commission ad hoc Working Group of Managers and Scientists on VME to take in to account the above issues.*

STATUS: The status of this recommendation was reported in June 2009 (SCS Doc. 09/23, p. 2) where it was noted that the accepted protocol is in Annex XXV of the 2009 CEM. The text of this has now been incorporated in to a reporting form.

III. RESEARCH COORDINATION

The Council adopted the Report of the Standing Committee on Research Coordination (STACREC) as presented by the Chair, Ricardo Alpoim. 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, Michael Kingsley. The full report of STACFIS is in Appendix II.

V. SPECIAL REQUESTS FROM THE FISHERIES COMMISSION

1. Request from Fisheries Commission

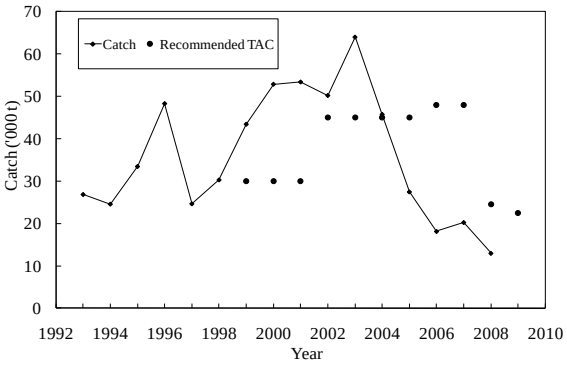
a) Northern shrimp (*Pandalus borealis*) in Div. 3M

Background: The shrimp fishery in Div. 3M began in late-April 1993. Initial catch rates were favorable and, shortly thereafter, vessels from several nations joined. Between 1993 and 2004 the number of vessels ranged from 40–110. In 2006 there were approximately 20 vessels fishing shrimp in Div. 3M. No information is available on the number of vessels taking part in the shrimp fishery in 2007 and 2008.

Fishery and catches: This stock is under effort regulation. Recent catches were as follows.

	Catch ('000 t)			TAC ('000 t)	
Year	NIPAG	21A		Recommended	Agreed
2005	27	27		45	er
2006	18	18		48	er
2007	20	20[1]		48	er
2008		13[1]		(17-32)[3]	er
2009		3[2]		(18-27)[4]	er

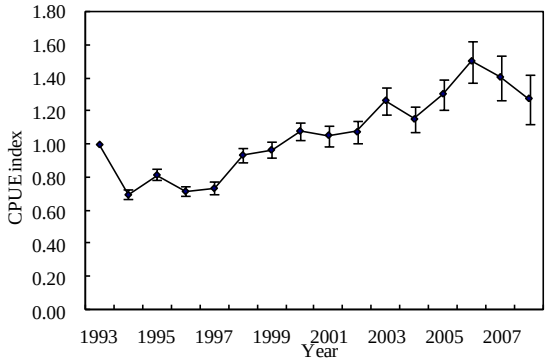
[1] Provisional.
[2] Preliminary to 1 September, 2009.
[3] Scientific Council recommended exploitation level for 2008 and 2009 not exceed 2005 and 2006 levels.
[4] Scientific Council recommended that a TAC for 2009 should not exceed the 2005 and 2006 exploitation level.
er = effort regulation.



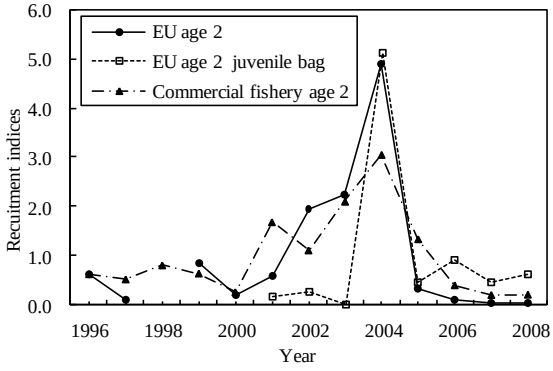
Data: Catch, effort and biological data were available from several Contracting Parties. Time series of size and sex composition data were available mainly from two countries between 1993 and 2005 and survey indices were available from EU research surveys (1988–2009). For lack of samples from the commercial fishery since 2006, length distributions from the EU survey have been used instead. Problems about suspected misreporting of catches since 2005 have been resolved to enable a standardized CPUE series which also accounted for changes in gear (single, double and triple trawl), fishing power and seasonality.

Assessment: No analytical assessment is available and fishing mortality is unknown. Evaluation of stock status is based upon interpretation of commercial fishery and research survey data.

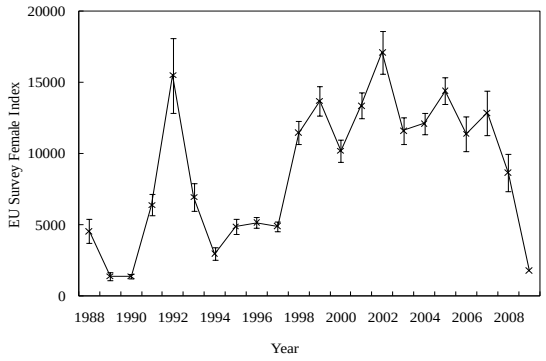
CPUE: Standardized catch rates declined from 1993 to 1994, was at low levels to 1997, then it gradually increased to 2006. Since 2006 although still high, the standardized CPUE has declined, however due to the low numbers of observations there is considerable uncertainty regarding the 2008 point. [This section was not updated for the interim monitoring report.]



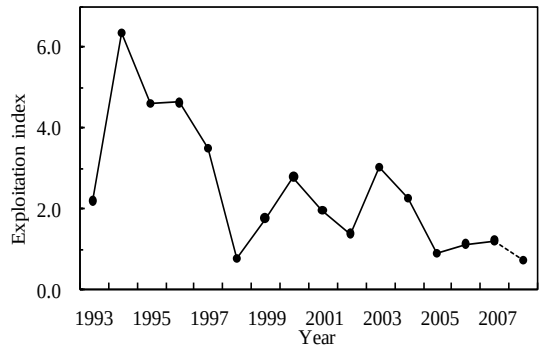
Recruitment: The 2002 year-class was strong, but all later year-classes have been much weaker.



SSB: The survey index of female biomass increased from 1997 to 1998 and fluctuated without trend between 1998 and 2007, but the 2009 survey index was the lowest since 1989.



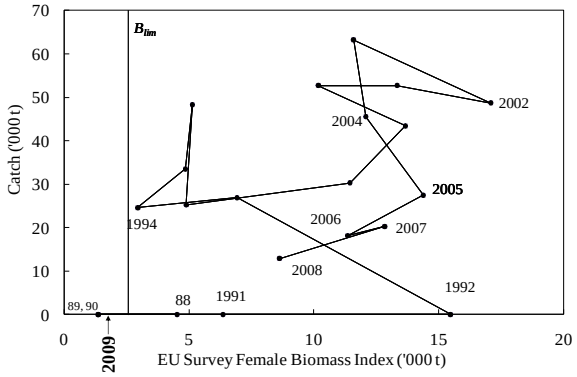
Exploitation rate: The exploitation rate projected for 2008 was the lowest in the historical series continuing a decreasing trend initiated in 2004. This trend appears to be mostly due to decreasing catches. [This section was not updated for the interim monitoring report.]



State of the Stock: The indices of biomass in the July 2009 survey showed a sharp decline, confirming recent downward trends, even though the levels of exploitation have been low since 2005. The most recent estimate of stock size is below B_{lim}. Due to the continued poor recruitment, there are also serious concerns that the stock will stay at low levels.

Recommendations: The stock is now below B_{lim} i.e. has now entered the collapse zone defined by the NAFO PA framework, and recruitment prospects remain poor. Therefore, Scientific Council recommended that the fishing mortality be set as close to zero as possible in 2010.

Reference Points: Scientific Council considers that 15% of the maximum survey female biomass index, *i.e*. 2 600 t, is a limit reference point for biomass (B_{lim}) for northern shrimp in Div. 3M. It is not possible to calculate a limit reference point for fishing mortality. The biomass is now estimated to be below B_{lim}.



Sources of Information: SCR Doc. 04/64, 74, 08/65, 67, 68, 77, 09/50; SCS Doc. 04/12

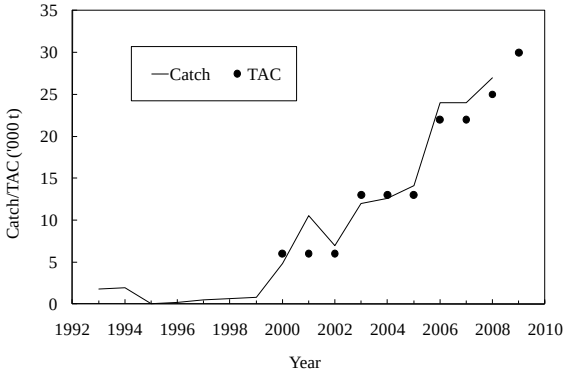
b) Northern shrimp (*Pandalus borealis*) in Div. 3LNO

Background: Most of this stock is located in Div. 3L and exploratory fishing began there in 1993. The stock came under TAC regulation in 2000, and fishing has been restricted to Div. 3L.

Fishery and catches: Several countries participated in the fishery in 2008. The use of a sorting grid to reduce bycatches of fish is mandatory for all fleets in the fishery. Recent catches from the stock are as follows:

	Catch ('000 t)		TAC ('000 t)	
Year	NIPAG	21A	Recommended	Agreed
2005	14	14	13	13[3]
2006	24	22	22	22[3]
2007	24[2]	21[1]	22	22[3]
2008		27[1]	25	25[3]
2009		17[2]	25	30

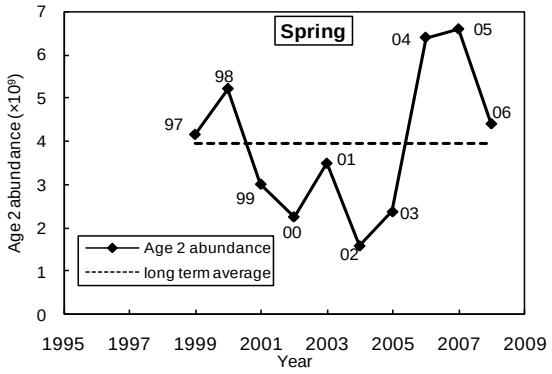
[1] Provisional.
[2] Preliminary to 1 September 2009.
[3] DFG did not agree to the quotas of 144 t (2003–2005), 245 t (2006–2007) or 278 t (2008), and set their own quota of 1 344 t (2003–2005) and 2 274 t (2006–2008). The increase is not included here.

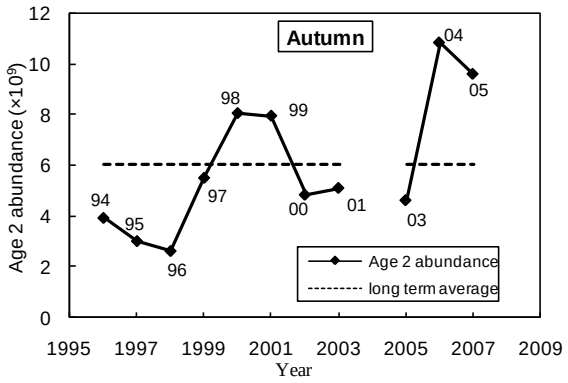


Data: Catch, effort and biological data were available from the commercial fishery. Biomass and recruitment indices as well as size and sex composition data were available from research surveys conducted in Div. 3LNO during spring (1999 to 2009) and autumn (1996 to 2008). The Canadian survey in autumn 2004 was incomplete.

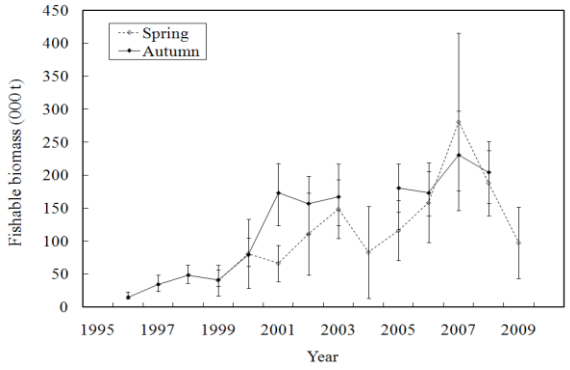
Assessment: Analytical assessment methods have not been established for this stock. Evaluation of the status of the stock is based upon interpretation of commercial fishery and research survey data.

Recruitment: The 2005 year class was particularly strong at age 2 in both the spring and autumn surveys. The 2006 year class was slightly above average in the 2008 spring survey. [This index was not updated for the interim monitoring report.]





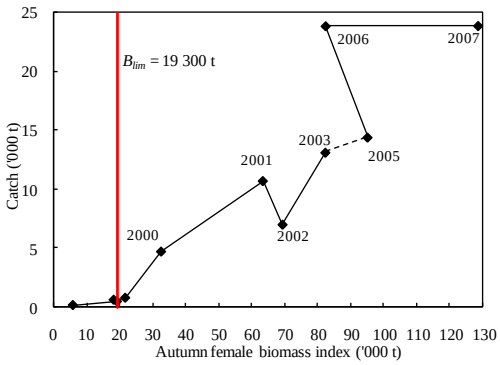
Biomass: The autumn 2008 survey biomass estimate was the second highest in the autumn series, lower only than the 2007 value. The spring 2009 biomass estimate declined from 2008, following a decline from the peak value in 2007. The decline in the spring series is about 65% from 2007 to 2009 for the fishable biomass index.



Fishing mortality: The exploitation rate index is used as a proxy for fishing mortality. The index of exploitation has remained below 14%. [This section was not updated for the interim monitoring report.]

State of the Stock: Biomass indices peaked in 2007 and have since declined. The most recent survey index, *i.e*. that from spring 2009, is 65% lower than the 2007 value. Scientific Council was unable to update its information on the size distribution of the stock.

Precautionary Approach Reference Points: Scientific Council considers that the point at which a valid index of stock size has declined by 85% from the maximum observed index level provides a proxy for B_{lim} for northern shrimp in Div. 3LNO. It is not possible to calculate a limit reference point for fishing mortality. The SSB is still expected to be well above B_{lim}, but the 2008 value is not yet available. Scientific Council notes that the most recent values for fishable biomass put the stock above B_{lim}.



Recommendation: The most recent survey results show a steep decline in stock size, and Scientific Council urges caution in the setting of TACs. This downturn in biomass is unexpected as recruitment has been reasonable in recent years. The recent exploitation rates of about 14% may be too high. Scientific Council therefore urges caution in the exploitation of the stock and considers that exploitation rates should not be raised, but kept below recent levels.

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

2. Deferred from June 2009 Scientific Council meeting

a) Review of Mid-Water Trawl Mesh Size Reduction to 100 mm or Lower

Fisheries Commission requested *Scientific Council to examine the consequences resulting from a decrease in mesh size in the mid-water trawl fishery for redfish in Div. 3M, to 100 mm or lower (Annex 1, Item 13).*

Scientific Council reviewed a re-analysis of existing trawl selectivity data from pelagic trawl fisheries conducted from 1978-2005 by PINRO Russia for deep-water redfish (SCR Doc. 09/52). Scientific Council was informed that square mesh codends were used in these experiments and could not utilize the results in light of the predominantly diamond mesh codends in use for midwater trawling in the NRA. Scientific Council noted that further mesh selectivity experiments are planned by Russian Federation and, therefore, Scientific Council deferred providing advice at this time and will re-visit this request in 2010 meeting when it is anticipated the results of these experiments would be available.

b) Work arising via the NAFO Conservation and Enforcement Measures (CEM, Chapter 1bis)

i) General issues

The Scientific Council Chair presented to Fisheries Commission the concerns regarding references made to Scientific Council in the NAFO Control and Enforcement Measures (CEM). These are detailed in the June 2009 report (SCS Doc. 09/23, p. 40-41). Scientific Council noted that a drafting committee had, at this Annual Meeting, been struck by Fisheries Commission to work on various issues of clarity within the text of the CEM, and requested that the Secretariat inform the drafting committee of the concerns of Scientific Council and make the appropriate documentation available to them for their consideration.

ii) Future Fishing Plans

Fishing plans for 2010 for Japan and Iceland were reviewed by Scientific Council in June 2009. Fishing plans for 2010 for Canada, Russia, Norway and Greenland were reviewed by Scientific Council at this September 2009 meeting. In general, all the submitted fishing plans contained details of anticipated fishing activity for various target species, usually by division, and sometimes giving details of gear and fishing depth. All submitted plans contained statements that fishing would follow the regulations and guidelines described in the CEM, and included information that fishing would be in areas previously fished. The submitted information does follow the general guidelines as presently described in the CEM.

The *Ad hoc* Working Group of Fisheries Managers and Scientists (WGFMS) provided a framework for evaluating risk of Significant Adverse Impacts (SAIs) of fishing activities on vulnerable marine ecosystems (VMEs) (FC Doc. 08/08; FC Doc. 09/1, Annex 25). Until practical measures for determining significant adverse impacts have been established, it is difficult for Scientific Council to provide further guidance on what information should be provided in fishing plans. Scientific Council also notes that Fisheries Commission has also been requested to provide guidance on this topic.

3. *Ad hoc* requests from current meeting

Scientific Council received three separate requests from Fisheries Commission shown in a, b and c below. 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 reports of the Scientific Council.

a) Scientific Council Response to Fisheries Commission requests – Various Stocks

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

QUESTION 1 From the Russian Federation regarding Div. 3NO White Hake:

Right from the beginning of the regulation of white hake, the TAC for this stock has been annually set at a level of 8 500 tons. A TAC of 850 tons is recommended for 2010-2011. The Russian Federation proposes to entrust the Scientific Council to explain what has happened to the white hake population during one year that resulted in a reduction of the TAC for this stock by 10 times?

Response:

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

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

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

QUESTION 2 From the Russian Federation regarding Div. 3M Cod:

Biological and fishery information available on Div. 3M cod made it possible to perform different stock projections and calculate various TACs for 2010-2012. Based on the results obtained, the Scientific Council advised to resume a small amount of directed fishery on this stock under condition that a fishing mortality for 2010 will not exceed F_{2008}. Russian Federation proposes to entrust the Scientific Council to provide an estimation of the TAC for the stock to be further considered by the Fisheries Commission.

Response:

The best advice from Scientific Council for the catch of Div. 3M cod in 2010 with a fishing mortality that would not exceed F_{2008} is a catch that should not exceed 4 125 t.

QUESTION 3 From Norway on redfish in Div. 3M:

In FCWP 09/2 [see SCS Doc. 09/23, pg. 12] Scientific Council refers to three species of redfish being fished on Flemish Cap (NAFO Div. 3M):

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

1. At what depth range is the fishery on theses three redfish species taking place?

2. What is the total catch by species?

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

Response:

1. There are three species of redfish in NAFO Division 3M: golden redfish (*Sebastes marinus*), Acadian redfish (*Sebastes fasciatus*) and deep-sea redfish (*Sebastes mentella*) Due to their resemblance *S. mentella* and *S. fasciatus* are commonly designated as beaked redfish and treated as a single stock unit. The golden redfish fishery is mainly pursued in the shallower depths of the Flemish Cap bank down to 300m whereas most of the beaked redfish catches came from depths of 300-750 m.

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

Fishery	2005	2006	2007	2008
Golden redfish (*Sebastes marinus*)	1 779	860	1 192	5 297
Beaked redfish (*Sebastes mentella* and *S. fasciatus*)	4 771	6 296	5 470	3 168

3. The bycatch of cod for the combined redfish fishery has increased over the past few years to around 870 t in 2008. The percentage bycatch is likely to increase with the expected future increase of the cod population. The cod bycatch has not been estimated for the two separate redfish fisheries from the commercial fleets. However, and taking into account the available EU survey data, most of the cod has been distributed (until last year at least, and despite a gradual expansion of the stock to deeper waters) at depths down to 300 m. So, most likely the majority of the 2005-2008 cod bycatch has been taken from the golden redfish fishery.

QUESTION 4 From Canada on Shrimp in Div. 3L:

What is the effect on Spawning Stock Biomass (SSB) with 2010 fishing at: 30 000t? 27 000t? 24 000t? Is there a stock-recruit relationship?

Is there any information on the exploitation rate of shrimp stocks from other jurisdictions that would be pertinent to the current exploitation rate of 14%? We were of an understanding that the exploitation rates in the Div. 3L shrimp fishery were conservative. Please comment.

Response:

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

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

3. The 2008 Scientific Council advice states "Scientific Council has imperfect information on sustainable exploitation rates but does have some evidence that they may differ widely between stocks. Other points in establishing an appropriate exploitation rate for shrimp stocks include ecosystem considerations, noting that shrimp is an important forage species, as well as management considerations (desire for stable TACs, or desire for gradual increases in biomass and TAC, *etc*). There is no target exploitation rate established for this stock, and no PA reference points based on fishing mortality."

b) Scientific Council Response to Fisheries Commission requests – Greenland Halibut

The following nine questions from the Fisheries Commission on Greenland halibut were posed by the EC and Canada.

QUESTION 1:

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

Response:

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

XSA formulation gives the best retrospective patterns and this provides further confirmation of the robustness of this model.

QUESTION 2:

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

Response:

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

QUESTION 3:

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

Response:

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

QUESTION 4:

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

Response:

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

QUESTION 5:

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

Response:

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

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

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

QUESTION 6:

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

Response:

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

QUESTION 7:

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

Response:

There may be ways to correct estimates of stock size to account for retrospective pattern. This has to be conducted age by age. However the retrospective analysis conducted in the last assessment (SCR Doc. 08/48) showed that the revision ratio is dependent on cohort. Recent studies have been conducted in that field and should be pursued but none have been sufficiently reviewed or accepted by Scientific Council. Scientific Council therefore considers that without a valid model to compute revised estimates of stock number, projections using only revision based on application a raw correction factor are misleading and should not be undertaken. Scientific Council cannot therefore

answer the request quantitatively. However on a qualitative point of view, if input biomass had been higher and fishing mortality lower, projections would be less pessimistic and it is in the scope of possibilities that current F could be in the vicinity of or below F_{max}.

QUESTION 8:

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

Response:

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

QUESTION 9:

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

Response:

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

c) Scientific Council Response to Fisheries Commission requests – Shrimp

The following four questions from the Fisheries Commission on shrimp stocks [Div. 3LNO and Div. 3M] were posed by the EC.

QUESTION 1:

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

Response:

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

QUESTION 2:

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

Response:

(a) Cod predation: shrimp appeared in Flemish Cap in high enough density to allow commercial fishing only after the cod stock collapsed. The rebuilding of the cod stock in Div. 3M is likely to cause a reduction of the shrimp stock; (b) Stocks of other predators, notably redfish, are also increasing; and (c) Scientific Council cannot exclude that environmental or other habitat changes are also involved.

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

Response:

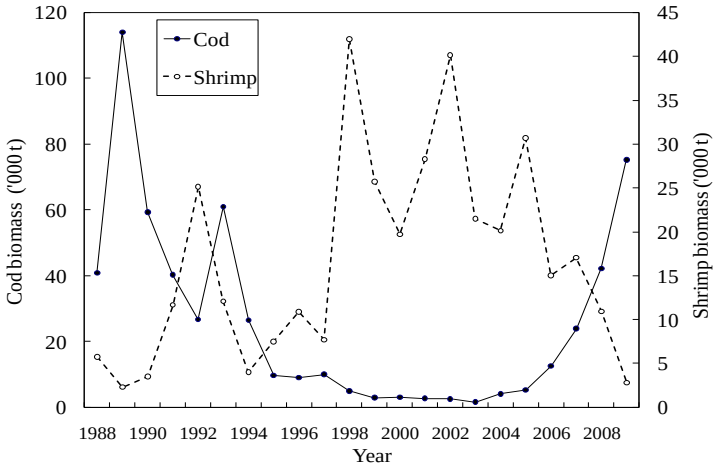
Yes: Survey design, vessel, gear and other procedures were the same as in previous years. 178 valid hauls were done, and nothing extraordinary happened as to doubt the survey results. Available results are final as far as biomass is concerned, and analysis of lengths and ages will also be available for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

QUESTION 4:

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

Response:

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



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

VI. MEETING REPORTS

1. Final Report of the *ad hoc* Working Group on Assessment Methods for SA 2 + Div. 2J+3KLMNO Greenland Halibut

The report of the *ad hoc* Working Group on Assessment Methods for SA 2 + Div. 2J+3KLMNO Greenland Halibut held in Dartmouth on 1-3 June 2009 was presented to Scientific Council. It was noted that the conclusions contained within the report were discussed at the June 2009 Scientific Council meeting (SCS Doc. 09/23, p. 36-38 and p. 56-58). The Chair of Scientific Council thanked the group for their excellent work.

VII. REVIEW OF FUTURE MEETING ARRANGEMENTS

1. Special Session, November 2009

The Special Session of Scientific Council in 2009 is the symposium entitled "Rebuilding Depleted Fish Stocks – Biology, Ecology, Social Science and Management" is to be held on 3-6 November 2009 in Warnemünde, Rostock, Germany.

2. Scientific Council, October/November 2009

The Scientific Council confirmed the dates and venue of the next Scientific Council /NIPAG meeting will be held from 21–29 October 2009 at the NAFO Headquarters, Dartmouth, Nova Scotia, Canada.

3. Scientific Council WG EAFM, February 2010

The next meeting of the Working group will be held at the Institute of Marine Research, Vigo, Spain, from 1-5 February 2010.

4. Scientific Council, May/June 2010

The NAFO *ad hoc* Catch Assessment Working Group will meet by correspondence on 27 May 2010. Scientific Council agreed that its June meeting will be held on 3-16 June 2010 with the meeting venue being the Alderney Landing, Dartmouth, Nova Scotia, Canada. It is noted that this is one day less than previously agreed owing to a rearrangement of the meeting dates of the standing committees.

5. Scientific Council, September 2010

Scientific Council noted that the Annual Meeting will be held on 20-24 September 2010. The meeting will be in Halifax, N.S., Canada unless an invitation to host the meeting is extended by a Contracting Party. No decision was made on the dates of the 2010 special session.

6. Scientific Council, October/November 2010

The dates and venue of the Scientific Council/NIPAG meeting will be decided at the 2009 Meeting. Provisional dates and venue are 20–28 October 2010 at the ICES Headquarters, Copenhagen, Denmark (NAFO *Sci. Coun. Rep.*, 2008, p. 267).

7. ICES/NAFO Joint Groups

a) NIPAG, 21-29 October 2009, Dartmouth

This meeting is scheduled to take place in conjunction with the Scientific Council meeting at the NAFO Headquarters in Dartmouth, NS, Canada.

b) WGDEC, 2010

The next meeting will be held in Copenhagen, Denmark, in 2010. Scientific Council has submitted a request to be included in WGDEC's TORs (see SCS Doc. 09/23, p. 54)

c) NIPAG, October/November 2010

The dates and venue will be decided at the October 2009 meeting.

VIII. FUTURE SPECIAL SESSIONS

1. Workshop on New Assessment Methods, 2010

The Chair and Scientific Council Coordinator contacted Designated Experts and other participants of Scientific Council after last June's meeting but, although there was some interest, there is no identified coordinator and no firm suggestions on the precise subject matter for the workshop. Scientific Council discussed the possibility of a "training course" format for such a workshop. The Scientific Council Coordinator has been asked to contact some assessment biologists and ICES, which has a stock assessment training program, to inquire about opportunities to deliver such a workshop.

2. Topics for Future Special Sessions

It was noted that NAFO is a co-organizer and a co-sponsor of the “Hydrobiological and ecosystem variability in the ICES area during the first decade of the XXI century” that is due to be held on 10-12 May 2011 as recommended by STACFEN at the June 2009 meeting. ICES have contacted the Secretariat and Chair of Scientific Council regarding a NAFO co-convenor. The Chair of Scientific Council has contacted various members of STACFEN but has not yet identified a person or persons than can help in the coordination of this meeting. There were no other submissions for topics to be discussed by Scientific Council at this time. Given there is now a STACFEN Chair in place (see Item IX.1) this item is referred to the STACFEN Chair for further consideration.

IX. SCIENTIFIC COUNCIL WORKING PROCEDURES AND PROTOCOL

1. Elections of Chairs

Confirmation has now been received from the candidates identified for the positions of the Chair of the STACREC and STACFEN Standing Committees. Council is very pleased to announce that the new STACREC Chair will be Carsten Hvingel from Norway and the new STACFEN Chair will be Gary Maillet from Canada.

2. Timetable and Frequency of Assessments

Stock	Frequency (pre-2006)	Frequency (from 2006)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Multi-year Assessments												
American plaice in Div. 3LNO	2	2	+	i	+	i	+	i	+	i	+	i
Cod in Div. 3NO	2	3	+	i	+	i	i	+	i	i	+	i
Redfish in Div. 3LN	2	3(2)	+	i	+	i (+)	i	+	i	+	i	+
Witch flounder in Div. 2J + 3KL	2	3	+	i	+	i	i	+	i	i	+	i
Redfish in Div. 3M	2	2	+	i	+	i	+	i	+	i	+	i
Roughhead grenadier in SA 2+3	2	3	+	i	+	i	i	+	i	i	+	i
Redfish in Div. 3O	2	3	+	i	+	i	i	+	i	i	+	i
Redfish in SA 1	2	3	+	i	+	i (+)	i	+	i	i	+	i
Other finfish in SA 1	2	3	+	i	+	i (+)	i	+	i	i	+	i
Cod in Div. 3M	2	3(2)	i	+	i	+	i (+)	+	i	+	i	+
American plaice in Div. 3M	2	3	i	+	i	+	i	i	+	i	i	+
Witch flounder in Div. 3NO	2	3	i	+	i	+	i	i	+	i	i	+
Yellowtail flounder in Div. 3LNO	2	2(2)	i	+	i	+	i (+)	i	+	i	+	i
Squid (*Illex*) in SA 3+4	2	3	i	+	i	+ (i)	i	-	-	-	-	-
Capelin in Div. 3NO	2	2	+	i	+	i	+	i	+	i	+	i
Thorny skate in Div. 3LNOPs	2	2	i	+	i	+	i	+	i	+	i	+
White hake in Div. 3NOPs	2	2	+	i	+	i	+	i	+	i	+	i
Roundnose grenadier in SA 0+1	3	3	+	i	i	+	i	i	+	i	i	+
Roundnose grenadier in SA 2+3	-	3	-	-	-	-	-	-	-	-	-	-
Annual Assessment												
Greenland halibut in SA 2 + Div. 3KLMNO	1	1	+	+	+	+	+	+	+	+	+	+
Greenland halibut in SA0+1 offshore & Div. 1B-F	1	1	+	+	+	+	+	+	+	+	+	+
Greenland halibut in Div. 1A inshore	1	1 or 2	+	+	+	? (+)	+	?	+	?	+	?
Northern shrimp in Div. 3M	1	1	+	+	+	+	+	+	+	+	+	+
Northern shrimp in Div. 3LNO	1	1	+	+	+	+	+	+	+	+	+	+
Northern shrimp in SA 0+1	1	1	+	+	+	+	+	+	+	+	+	+
Northern shrimp in Denmark Strait	1	1	+	+	+	+	+	+	+	+	+	+

Subject to the precise nature of the requests for advice from Fisheries Commission and Coastal States, the assessments will follow the timetable as agreed last year. Any modifications will be agreed at the October 2010 meeting of Scientific Council.

Assessment frequencies within a full assessment and interim monitoring schedule, as agreed in September 2006. Advice by the Fisheries Commission and Coastal State is requested annually, bi-annually or tri-annually as indicated beginning in 2007(+ is full assessment year, i is interim monitor, - no assessment undertaken or currently planned). The i(+) is a specially requested full assessment instead of a planned interim monitoring, in some cases a change in full assessment frequency followed (noted in brackets where applicable).

3. Review of Structure of Scientific Council

The Chair presented some aspects of the restructuring of Scientific Council and its Standing Committees dealing with the timing of the meeting of Scientific Council and the Standing Committees during next June's meeting. It was decided, as a pilot, to hold the meetings of the four standing committees during the first eight days, i.e. on 3-10 June 2010. The Chairs of the Standing Committees are asked to select their meeting dates prior to the distribution of the provisional agenda that is sent out 60 days before the meeting. Scientific Council will meet on 11-16 June 2010 to conduct its business. With the exception of opening the meeting, there will be no meetings of Scientific Council during the first eight days. It is noted that this results in a reduction of one day over the total meeting period.

In conjunction with these changes, the Council also noted the following changes:

(1) STACFIS will take responsibility for finalizing all those sections of the Scientific Council Summary Sheet with the exception of the Recommendation and Special Comments sections.

(2) As noted in June 2009, the chair of STACREC will assume the role of chair of the *ad hoc* Catch Assessment Working Group and work through correspondence.

After some discussion, it was decided that the NAFO *ad hoc* Catch Assessment Working Group would meet by correspondence one week prior to the commencement of the June STACFIS meeting on 27 May 2010 to finalize catch statistics and to allow Designated Experts to start their assessments.

X. OTHER MATTERS

1. Mesh size in the redfish fishery

Scientific Council reviewed a document (SCR Doc. 09/52) relevant to the Fisheries Commission request (Annex 1, Item 13) as well as a review of information from previous Council reports on issues of mesh size in redfish fisheries.

Scientific Council discussed the selectivity results presented in the research document and continue to be concerned that there appears to be little difference in the size-ranges of redfish retained by meshes of different sizes over the 90-130 mm mesh range. In addition, details on the configurations and hanging ratios of the cod-end mesh used in the research trials and those of commercial vessels were lacking. Scientific Council **recommended** that *further at-sea trials be conducted using square and diamond shaped meshes in the cod-end and that greater detail of the exact specifications of the research and commercial gears in use be documented.* Scientists from the Russian Federation recorded that they expect to be able to conduct such trails and to provide a report back to Scientific Council in 2010.

It was noted that a cod-end containing redfish rapidly rises to the surface due to hydrostatic pressures and rather special conditions develop within the cod-end that results in the tension being taken off the meshes, thus allow them to open up and cause fish loss. It was therefore felt that the change of mesh size alone may not be a solution to the problem, and that some other gear modification may be more effective. Therefore, Scientific Council **recommended** that *the loss of redfish by mid-water and bottom trawls, during the later stages of hauling when the net comes to the surface, be referred to ICES for possible submission as a TOR to the ICES-FAO Working Group on Fishing Technology and Fish Behaviour (WGFTFB) to investigate possible technical measures that could reduce the loss of redfish at the surface due to their developed buoyancy.*

2. Other Business

a) Merit Awards

The Chair asked members to nominate scientists from Scientific Council for the Scientific Merit Awards. The outgoing Chairs received awards as follows:

Donald Power, Science Branch., DFO Newfoundland & Labrador, Canada, for his service as the Chair of Scientific Council.

Ricardo Alpoim, , Instituto Nacional dos Recursos Biológicos, I.P. INRB/IPIMAR, Portugal, for his service as the Chair of the Standing Committee of Research Coordination (STACREC) and Vice-Chair of Scientific Council.

Michael Kingsley, Greenland Institute of Natural Resources, Greenland, for his services as Chair of the Standing Committee on Fisheries Science (STACFIS).

Manfred Stein, Institut fur Seefischerei, Federal Republic of Germany, for his service as the Chair of the Standing Committee on Publications (STACPUB) and as Interim Chair of the Standing Committee on Fisheries Environment STACFEN).

b) Fisheries Science and Management Network for EU Fishing Areas (TXOTX) – an EU FP7 project

The completion of the TXOTX questionnaire was discussed. It was noted that the Scientific Council Coordinator, several designated experts of STACFIS and several members of the standing committees and working groups have

already completed sections relevant to their duties within NAFO. These submissions were not reviewed by Scientific Council in plenary and the current Chair would complete sections 1 and 5 and send on the entire completed questionnaire by mid-October. The response has been good and TXOTX have expressed gratitude for the time spent by NAFO Scientific Council members in completing their sections of the questionnaire.

It is expected that TXOTX will report back to Scientific Council on the benefits they received and outline the benefits of this exercise to NAFO.

XI. 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 25 September 2009 considered and adopted its own report.

XII. ADJOURNMENT

The Scientific Council Chair thanked the Chairs of STACFIS and STACREC, the Designated Experts, and the members of Scientific Council, and members of the Secretariat, for their hard work and valuable contributions to the meeting. The Chair, noting this is his last meeting, acknowledged the invaluable support he received from the Scientific Council Coordinator, Dr. Anthony Thompson over the past two years as well as the support of Barb Marshall. The Chair also wanted to recognize the tremendous effort of the members of its Working Group on the Ecosystem Approach to Fisheries Management (WGEAFM) over the past two years in addressing Fisheries Commission requests regarding Vulnerable Marine Ecosystems pertinent to the United Nations General Assembly resolution 61/105 on Sustainable Fisheries. In particular, the Chair wanted to acknowledge the effort of Dr. Mariano Koen-Alonso (co-Chair WGEAFM) and Dr. Ellen Kenchington and for their roles in coordinating the analyses and presenting the WGEAFM reports that formed the basis of the Scientific Council responses.

There being no other business, the meeting was adjourned at 1230 hours on 25 September 2009.

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

Chair: Ricardo Alpoim Rapporteur: Estelle Couture

The Committee met at the Radisson SAS Royal Hotel, Bergen, Norway during 22 September 2009 to discuss matters pertaining to statistics and research referred to it by the Scientific Council. Representatives attended from Canada, Denmark (in respect of Faroe Islands and Greenland), European Union (Estonia, France, Latvia, Portugal and Spain), Norway, and Russian Federation.

1. Opening

The Chair opened the meeting by welcoming the participants and appointed Estelle Couture (Canada) as rapporteur. The Agenda was adopted.

2. Fisheries Statistics

a) Progress Reports on Secretariat Activities

i) Review of STATLANT 21

No update was made since last June's meeting, any update will be made available on the web page.

During 2007 the Secretariat began a review of the accessibility of the STATLANT 21 data on the website and the feasibility of harmonizing the 21A and 21B databases. STACREC noted that there are additional sources of information concerning catches that may be used in the assessments and that this should be indicated on the web site. The Secretariat found larger issues than initially thought and over the last number of months have developed a work plan to address them in the coming year.

3. Research Activities

a) Surveys Planned for 2009 and Early-2010

The planned surveys are outlined in SCS Doc. 09/24. Participants were asked to check the document for completeness and accuracy. The draft will be completed it at the next Scientific Council meeting in October 2009.

4. External Cooperation

a) Report of the Fisheries Resources Monitoring System (FIRMS) training session, July 2009

A training workshop was held during 20-25 July 2009 at the NAFO Secretariat, led by Aureliano Gentile from the FIRMS Secretariat, FAO. The training was attended by Barbara Marshall and George Campanis, as well as two members from the IATTC Secretariat. The training showed how to use the on-line editing tool to prepare FIRMS submissions in an XML compliant format. This will allow the Secretariat to submit the stock information in a more timely manner than previously. Shortly after the training the six Fact Sheets (Summary Sheets) from 2009 were published.

During the training, insight was obtained on how to structure documents for possible future applications within the Secretariat.

b) Guidance for upcoming CWP and FIRMS meetings

The next meetings of CWP and FIRMS are in February 2010 in Hobart, Australia. Scientific Council will be represented by a member of the NAFO Secretariat, who will discuss any relevant agenda items with the STACREC Chair in advance of the meeting.

5. Other Matters

a) Review of SCR and SCS Documents

No documents were presented at this meeting.

b) Other Business

STACREC Chair made a suggestion to publish survey/research needs in a single document. Committee members indicated that such a document would be useful for quick reference of scientific surveys/research needs in order to improve the assessment of the various NAFO stocks. The document would include information such as:

- data collection needs
- research priorities
- survey coverage
- other relevant information

The Scientific Council Coordinator indicated that the Secretariat would support the production of such a publication. The Secretariat and STACREC Chair will work together to produce a document for presentation to Scientific Council.

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

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

Chair: Michael Kingsley Rapporteurs: Various

The Committee met at the SAS Radisson Royal Hotel, Bergen, Norway from 21-25 September 2009, to consider matters referred to it by Scientific Council. Representatives attended from Canada, Denmark (in respect of Faroe Islands and Greenland), European Union (Estonia, France, Latvia, Portugal and Spain), Norway, and Russian Federation. The Scientific Council Coordinator was in attendance.

I. OPENING

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

II. INTERIM MONITORING UPDATES

STACFIS was asked to update the assessments of Northern shrimp in Div. 3M and Northern shrimp in Div. 3LNO that had been reviewed at the meeting of NIPAG in Oct–Nov 2008.

1. Northern Shrimp (*Pandalus borealis*) in Div. 3M

(SCR Doc. 09/50)

Interim Monitoring Report

a) Introduction

The fishery on this stock is managed by effort regulation. No analytical assessment is available for this stock; full assessments are based on the review of series of indices of survey biomass, CPUE, recruitment potential (numbers at age 2), and catch. Scientific Council has in the past had difficulty in estimating the potential yield from the stock, but at its meeting in Oct–Nov 2007 expressed concern about the possible future state of the stock owing to poor recruitment indices in recent years, although at the same time it noted that biomass indices were still at high levels. Scientific Council recommended in October 2008 that exploitation levels for 2009 and 2010 should not exceed the exploitation levels that have occurred since 2005.

b) Data

The interim monitoring report was based on updates of survey biomass index series with 2009 values for total and female survey biomasses, and of the recruitment index series, and on catch-to-date information for the current year. Surveys use a Lofoten trawl with 35-mm codend mesh, but fitted with a juvenile bag with 10-mm mesh.

c) Results

Catches to early September 2009, 2 615 t, were smaller than the corresponding value, 8 000 t, in September 2008, and the lowest ever observed; there are no effort measures associated with these catches. Survey indices of both total and female biomass for 2009 were the lowest since 1989 and, even though both indices had shown considerable variation since 1989, they undoubtedly indicate a sharp decline in stock size. The index of potential recruitment, estimated numbers of age-2 shrimps, remained comparable to the low level seen in 2005 and since.

STACFIS concluded that the information available shows a significant decline in stock biomass since the most recent full assessment, and cannot conclude that there is “no significant change”.

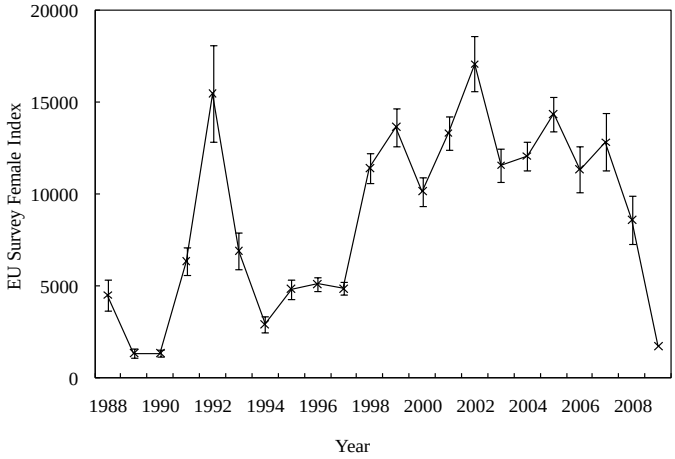


Fig. 1.1 Northern Shrimp in Division 3M: EU Survey index of female biomass, 1988–2009.

2. Northern Shrimp (*Pandalus borealis*) in Div. 3LNO

Interim Monitoring Report (SCR Doc. 09/51)

a) Introduction

The fishery on this stock is restricted to Div. 3L, where over 95% of the total survey biomass in these Divisions is found. Since 2000 it has been managed by TAC, 83% of which is allocated to Canada. In 2004 Scientific Council recommended for 2006 a TAC of 22 000 t, which was 12% of the most recent value of an index of fishable biomass. Fisheries Commission set the TAC for 2008 at 25 000 t, and at 30 000 t for 2009. No analytical assessment is available for this stock; full assessments are based on the review of series of indices of biomass from 3 research trawl surveys, a standardized CPUE index series from the Canadian large-vessel fleet, catches, and size distributions in samples from surveys and from commercial catches by some fleets.

b) Data

The interim monitoring report was based on updates of the Canadian survey biomass index series from autumn 2008 and spring 2009. These surveys use a Campelen shrimp trawl, with a 12.7-mm-mesh liner in a 44-mm-mesh codend. Biomass estimates were calculated using ogive mapping.

c) Results

The autumn 2008 survey biomass estimate was the second highest in the autumn series, lower only than the 2007 value. The spring 2009 biomass estimate declined from 2008, following a decline from the peak value in 2007. The decline in the spring series fishable biomass index is about 65% from 2007 to 2009.

Given the recent declines in the survey biomass estimates, STACFIS was not able to conclude that there is no significant change in the state of the stock since the most recent full assessment, which occurred in October 2008. The inverse-variance-weighted mean fishable biomass from the last 4 survey index points was 174,000 t. This is only 14% lower than the value calculated in October 2008 and is still comparable to the long-term average. However, this statistic makes no attempt to identify or extrapolate trends in stock size and may not be fully appropriate if the stock is indeed undergoing a decline. STACFIS therefore advises caution in interpreting this value and in using it for TAC calculations.

III. NOMINATION OF DESIGNATED EXPERTS

The Chair noted that the present Designated Expert for Cod in Div. 3NO and Redfish in Div. 3O, Joanne Morgan, will become Chair of STACFIS, and that the present Designated Expert for American Plaice in Div. 3M will become Chair of Scientific Council. The meeting was informed that Don Power (Canada) is proposed as Designated Expert for Cod in Div. 3NO and Redfish in Div. 3O and this proposal was accepted. The meeting was also informed that Ricardo Alpoim (EU-Portugal) will continue as Designated Expert for American plaice in Div. 3M, and that appropriate arrangements for Chairing the meeting during this assessment will be made.

The Chair noted that STACFIS had been informed in June 2009 that Michael Kingsley (Greenland) was proposed as Designated Expert for Northern Shrimp in SA 0+1.

The persisting vacancy in the position of Designated Expert for Northern Shortfin Squid in SA 3+4 was noted; the Chair of Scientific Council was still unable to tell the Standing Committee that any Contracting Party had offered to designate an expert for this stock. At the close of the meeting, therefore, the list of Designated Experts stood as follows:

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	Don Power	Tel: +1 709-772-4935	don.power@dfo-mpo.gc.ca
Redfish Div. 3O	Don Power	Tel: +1 709-772-4935	don.power@dfo-mpo.gc.ca
American Plaice in Div. 3LNO	Karen Dwyer	Tel: +1 709-772-0573	karen.dwyer@dfo-mpo.gc.ca
Witch flounder in Div. 3NO	Karen Dwyer	Tel: +1 709-772-0573	karen.dwyer@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 Oceanografia, 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
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	Bjarne Lyberth	Tel: +299 36 1200	bjly@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

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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	Ilya Skryabin	Tel: +7 8152 450568	skryabin@pinro.ru

Vacant

Northern Shortfin Squid in SA 3+4	Vacant

IV. OTHERS MATTERS

1. Review of SCR and SCS Documents

SCR Doc. 09/50, Division 3M Northern shrimp (*Pandalus borealis*)–Interim Monitoring Update, by J.M. Casas Sánchez and SCR Doc. 09/51, Divisions 3LNO Northern shrimp (*Pandalus borealis*)–Interim Monitoring Update, by D.C. Orr, P.J. Veitch and D.J. Sullivan were reviewed in the context of updating the assessments of these two stocks. No other SCR or SCS Documents were presented to STACFIS review.

2. Other Business

There was no other business and the meeting was adjourned.