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**REPORT OF THE MEETING OF THE
MANAGEMENT COMMITTEE FOR SEALS AND WALRUSES**

9 September 2009, Tromsø, Norway

1. CHAIRPERSON'S OPENING REMARKS

The Chair Amalie Jessen (Greenland) welcomed the delegates (members listed in Section 5) and the observers to the Management Committee for Seals and Walruses.

2. ADOPTION OF AGENDA

The agenda was adopted (Appendix 1).

3. APPOINTMENT OF RAPPORTEUR

The Secretariat was appointed as rapporteur.

4. CONSERVATION AND MANAGEMENT MEASURES FOR SEAL STOCKS

Documents to the meeting were compiled in Appendix 2. Past proposals for conservation and management and responses with reference to document NAMMCO/18/MC/3 (section 2.2 ANNEX 1) and past requests to the Scientific Committee and responses with reference to document NAMMCO/18/MC/4 (Section 2.2 ANNEX 2) were summarised. All recommendations to member countries agreed below are listed in Appendix 3.

4.1 Harp Seals

Requests by Council for advice from the Scientific Committee

There were three ongoing requests to the Scientific Committee:

- To regularly update the stock status of North Atlantic harp and hooded seals as new information becomes available. The Management Committee for Seals and Walruses noted the likely impact of increasing abundance of these species on fish stocks. For harp seals in the Northwest Atlantic, the immediate management objective is to maintain the stocks at their present levels of abundance (R-2.1.4 - NAMMCO/12-2003).
- To evaluate how a projected decrease in the total population of Northwest Atlantic harp seals might affect the proportion of animals summering in Greenland (R-2.1.6 - NAMMCO/14-2005).
- To provide advice on Total Allowable Catches (TAC) for the management of harp seals and the establishment of a quota system for the common stocks between Norway and the Russian Federation, leaving full freedom to the Committee to decide on the best methods to determine this parameter based on an ecosystem approach (R-2.1.10 - NAMMCO/17-2008).

Report of the Management Committee for Seals and Walruses

In addition there was a **new request** for advice (NAMMCO/18-2009):

“The Scientific Committee is requested to evaluate how a projected increase in the total population of Northwest Atlantic harp seals might affect the proportion of animals summering in Greenland”. See below under *Recommendations for scientific research*.

Advice from the Scientific Committee

In response to R-2.1.4 - NAMMCO/12-2003, the Scientific Committee endorsed an update of the stock status of North Atlantic harp seals made by the ICES-NAFO Working Group WGHARP at its 2008 meeting. For the Greenland Sea harp seal stock which is currently considered data poor, the catch option should be based upon the use of the Potential Biological Removal (PBR) approach. This produces a recommended TAC of 40,383 seals. A harvest at this level, with takes of pups and older age animals in proportion to their composition of the population, would reduce the 1+ population over the next 10 years by 7%.

For the White Sea / Barents Sea harp seal stock, the potentially low accuracy of recent surveys led to the conclusion that the stock had to be considered (for now) data poor, with a recommendation based on the PBR approach be used to define the TAC which was set at 21,881 seals.

The Scientific Committee noted that this is a standing request that will be taken up again when new data become available.

With respect to R-2.1.6 - NAMMCO/14-2005, the Scientific Committee had recommended several times (Scientific Committee meetings 13, 14, 15) that this question be referred to the ICES-NAFO Working Group WGHARP. However, since this has not been done by Greenland, the Scientific Committee tasked the Marine Mammal-Fisheries Interaction (MMFI) Working Group (WG) to deal with the request.

The Management Committee for Seals and Walruses noted that the Scientific Committee concluded that there were clear positive correlations between catches of harp seals off northwest and southwest Greenland and abundance estimates of these seals off Canada. Hence a decrease in the numbers of seals in Canada is likely to cause a decrease of the catches in Greenland. This relationship might not be linear, but is difficult to quantify. So as to proceed, the Scientific Committee suggested an attempt at multi-linear regression analysis which takes account of any information available on annual hunting effort and periods for which the seals stay off Greenland, as well as the Canadian abundance estimates. This would also allow the calculation of confidence limits associated with any estimate of a decrease in catch.

With respect to R-2.1.10 - NAMMCO/17-2008, the ICES-NAFO WGHARP provided advice in October 2008, that was used to set the 2009 quotas for northeast Atlantic harp seals by the Joint Norwegian Russian Fisheries Commission. The Scientific Committee had endorsed this advice at its 2009 meeting. WGHARP will meet again in August 2009 to review the research activities that are currently in progress, including but not

limited to, new pup surveys in the White Sea and the collection of new reproduction data during the current hunt in the Greenland Sea. Once these data are available, it will be possible to provide updated advice for the two populations for 2010 and following years. This advice will provide information on the level of total removals that can be sustained.

Dividing the total removals for each population into national allocations is traditionally carried out through bilateral negotiations in the Joint Norwegian Russian Fisheries Commission. The Management Committee for Seals and Walruses noted that the Scientific Committee needed clarification from the Council on the request of the establishment of a quota system. The Scientific Committee also wished a clarification from Council about the definition of “ecosystem approach” in the establishment of a quota system.

For clarification, the Management Committee for Seals and Walruses wished to specify to the Scientific Committee that the “ecosystem approach” to management for one species involves the use of information about predation from or on other species when quotas are set, but multi-species modelling is not yet at a stage where this can be effected. The TAC are estimated by the Scientific Committee whereas quotas are traditionally set bilaterally by hunting nations.

Joint Harp seal ecology research programme

The Scientific Committee reported a joint project between Norway and Russia where there had been problems in tagging seals because Russia authorities had refused permission to operate in the White Sea which was the most important tagging area for understanding migrations. Last year the Council agreed to send a recommendation to the Russian authorities, which had not been done yet. Advice from the Russian Federation was sought as to how to follow up a request to Russia concerning permission.

Recommendations for scientific research

The Management Committee for Seals and Walruses **noted** a number of recommendations from the Scientific Committee to member nations which are to be found in Appendix 3.

Noting these Scientific Committee recommendations, and due to changes in environmental conditions, the Management Committee for Seals and Walruses forwarded a **new request for advice** which is indicated above.

Regarding conservation and management issues, Greenland informed that a new executive order on seals will come into force in 2010.

4.2 Hooded Seals

Requests by Council for advice from the Scientific Committee

There were two ongoing requests:

- Noting the likely impact of increasing abundance of these species on fish stocks, the Scientific Committee is requested to regularly update the stock

Report of the Management Committee for Seals and Walruses

status of North Atlantic harp and hooded seals as new information becomes available (R-2.1.4 - NAMMCO/12-2003).

- Investigate possible reasons for the apparent decline of Greenland Sea stock of hooded seals; and assess the status of the stock on basis of the results from the planned survey in 2007 (R-2.1.9 - NAMMCO/16-2007).

Advice from the Scientific Committee

In response to request R-2.1.4 - NAMMCO/12-2003, the Scientific Committee endorsed an update of the stock status of North Atlantic hooded seals, which had been made by the ICES-NAFO working group WGHARP at its 2008. Considering that the population in the Greenland Sea in 2007 was still well below N_{lim} , and the results of the 2007 survey were similar to those in 2005, the Scientific Committee reiterated its recommendation from SC 14 that the catches in the Greenland Sea be restricted to necessary scientific catches and to satisfy local needs at roughly current levels.

The Management Committee for Seals and Walruses **noted** the Scientific Committee's conclusion that the reasons for the decline of the stock are still not understood, in answer to R-2.1.9 - NAMMCO/16-2007. A reduction in extent and concentration of drift ice has occurred in the Greenland Sea between Greenland and the Jan Mayen Island. These changes must have resulted in substantial changes in breeding habitat for the Greenland Sea populations of harp and hooded seals. These changes in ice-conditions may have triggered behavioural changes of such a magnitude as a relocation of breeding for at least parts of the populations. Recent low pup production in hooded seals, and new (2007 and 2008) discoveries of breeding harp seals in areas outside those used historically by the species could both be indicative of such changes.

Recommendations for scientific research

The Management Committee for Seals and Walruses **noted** that the Scientific Committee strongly recommended that high priority be given in the coming years to activities by Norwegian and cooperating scientists to address the questions related to the apparent decline of hooded seals in the Greenland Sea.

The Management Committee for Seals and Walruses also **noted** that the Scientific Committee strongly recommended investigating the possible relocation of hooded seal breeding patches and continuing the biological sampling from the Greenland Sea and Northwest Atlantic hooded seals including subsequent analysis.

The Management Committee for Seals and Walruses **endorsed** both the above recommendations.

4.3 Ringed Seals

Recommendations for scientific research

The Management Committee for Seals and Walruses **endorsed** the Scientific Committee's reiteration of its previous recommendations to perform abundance estimates on sea ice in offshore areas. The Management Committee for Seals and Walruses also endorsed the recommendation for obtaining new abundance estimates

and increasing the effort in tagging for the better understanding of movements recognizing the difficulties and the expense of surveys.

4.4 Grey Seals

Recommendations for scientific research

The Scientific Committee considered that it was timely to hold a Working Group meeting on grey seals (or preferably on coastal seals, jointly with harbour seals), and recommended its convening in early 2011. This WG would make a thorough review of the Norwegian Management plan and could proceed with an assessment.

Iceland communicated that work on grey seals will be taken up as soon as possible.

With reference to earlier recommendations on the need for further data on abundance and removals, the Faroes reported that the collection of data on removals is under way with the aim of developing a stock estimate within the next couple of years.

The Management Committee for Seals and Walruses **noted** the considerations and all suggestions by the Scientific Committee and **recommended** the convening of a WG on Coastal Seals to review the Norwegian Management plan in view of an assessment. The Management Committee for Seals and Walruses also **supported** the recommendations concerning the compilation and reporting of Faroese removal and abundance data, and the Icelandic research data (refer to Appendix 3).

4.5 Harbour Seals

Requests by Council for advice from the Scientific Committee

There was one ongoing request that the Scientific Committee conducts a formal assessment of the status of harbour seals around Iceland and Norway as soon as feasible (R-2.5.2 - NAMMCO/16-2007).

Advice from the Scientific Committee

At its 2007 meeting (SC/15), the Scientific Committee recommended that an assessment be conducted in 2010 after the third Norwegian survey, leaving Iceland time for developing a management plan. However, the Norwegian survey will take place in mid-summer 2010, and the results of the survey will probably not be available before early 2011, therefore the Scientific Committee recommended that an assessment be conducted in early 2011. Data on removals are still needed both for Iceland and Norway.

Recommendations for scientific research

The Management Committee for Seals and Walruses **noted** the recommendations made by the Scientific Committee to member nations concerning research programmes, management objectives, surveys and by-catch data collection (refer to Appendix 3).

Proposals for conservation and management

The Management Committee for Seals and Walruses **endorsed** a total ban on hunt for this species in Greenland as recommended by the Scientific Committee, and also

supported the recommendation for a formal assessment of the stocks in all areas and the establishment of clear management objectives.

The Management Committee for Seals and Walruses welcomed the comment by Greenland that in fact a ban on the hunt is already being processed.

4.6 Walrus

Requests by Council for advice from the Scientific Committee

There were three ongoing requests to the Scientific Committee:

- To provide advice on the effects of human disturbance, including fishing and shipping activities, in particular scallop fishing, on the distribution, behaviour and conservation status of walrus in West Greenland (R-2.6.3 - NAMMCO/15-2006).
- To provide a formal assessment of the Davis Strait stock as soon as finalization of the catch series is complete and the results from the planned 2007 survey are available. The Scientific Committee was then requested to provide estimate of sustainable yields of the North Water and West Greenland stocks of walrus (R-2.6.4 - NAMMCO/16-2007).
- To provide a full assessment of North Water, West Greenland-Eastern Baffin Island and East Greenland stocks (R-2.6.5 - NAMMCO/17-2008).

Advice from the Scientific Committee

With the current actual state of knowledge, the Scientific Committee was unable to answer the first request (R-2.6.3 - NAMMCO/15-2006). The walrus disturbance study on Svalbard will help only in answering the problem of disturbance by tourists. The Scientific Committee referred, however, to the answer to request R-3.4.9 – NAMMCO/17-2008 for beluga (refer to the Report of the Management Committee for Cetaceans, section 2.1, Item 4.1).

With respect to requests R-2.6.4 - NAMMCO/16-2007 and 2.6.5 NAMMCO/17-2008, the Scientific Committee reiterated its recommendation that Greenland makes progress on the old catch series, as well as provides the results of the 2009 surveys and tagging experiments, before the next assessment meeting in November 2009.

Greenland underlined that work on the catch series is finished and quotas have been allocated according to advice from the Scientific Committee (including “struck and loss” compensation), and that the quota is set as a multi-year quota of 3 years.

The Management Committee for Seals and Walruses **endorsed** the recommendations by the Scientific Committee and **commended** Greenland for the progress made on catch compilation and quotas.

4.7 Bearded seal

The Management Committee for Seals and Walruses **noted** the Scientific Committee recommendation that the status of this species be assessed as no information on

abundance and stock status exists and the species is being exploited in both Greenland and on Svalbard (refer Appendix 3).

5. PROCEDURES FOR DECISION-MAKING ON CONSERVATION AND MANAGEMENT MEASURES

5.1 General Models

Requests by Council for advice from the Scientific Committee

There was one ongoing request that the Scientific Committee should study general models for conservation and management of baleen whales, *inter alia* based on Norwegian studies presented to the Scientific Committee of the IWC (R-1.6.3 - NAMMCO/17-2008).

Advice from the Scientific Committee

While this request was focused on large whales, the Management Committee for Seals and Walruses **noted** that the Scientific Committee recommends an examination of seal models. This could be a general request next year after input from member countries.

The Management Committee for Seals and Walruses therefore **endorsed** the recommendation which will be revisited next year.

6. USER KNOWLEDGE IN MANAGEMENT DECISION-MAKING

There were no comments.

7. RELATED MANAGEMENT ISSUES – Joint session with the Management Committee for Cetaceans

7.1 Marine mammal - fisheries interactions

Requests by Council for advice from the Scientific Committee

There had been two earlier standing requests:

- To monitor progress made in multi-species modelling and in the collection of input data and to decide when enough progress has been made to warrant further efforts in this area. Future meetings should focus on assessing modelling results from the Scenario Barents Sea model and possibly the GADGET-based template models for other areas, if they are developed. The Scientific Committee should also consider the feasibility of connecting the multi-species models with simple economic models at that time (R 1.4.6. – NAMMCO/12-2003).
- To review the results of the Icelandic programme on the feeding ecology of minke whales and multi-species modelling as soon as these become available. The SC is requested to review the results of the Icelandic programme on the feeding ecology of minke whales and multi-species modelling as soon as these become available (R-1.1.6. – NAMMCO/16-2007).

In addition there was a more recent one:

Report of the Management Committee for Seals and Walruses

- In addressing the standing requests on ecosystem modelling and marine mammal and fisheries interaction (*above*), to extend the focus to include all areas under NAMMCO jurisdiction. In the light of the distributional shifts (of species) seen under T-NASS 2007, the Scientific Committee should investigate dynamic changes in spatial distribution due to ecosystem changes and functional responses (R-1.1.8. – NAMMCO/17-2008).

The Scientific Committee estimated that developments in modelling and other progress which had occurred in Norway, Canada and Japan warranted a review of the state of the art in this field and forwarded this task to the WG on Marine Mammal-Fisheries Interaction (MMFI). A working group meeting had been held in April 2009. Progress in this field had not been as extensive as hoped, for several species in the ecosystem, especially on diet. The general review on the Iceland minke whale programme had been delayed as the work was not yet completed. Several recommendations for further research on diet had been formulated. Regular meetings were recommended for updating progress and knowledge.

Multi-species modelling was considered good for a general understanding of the ecological relations between species but its present development does not allowed to provide quantitative management advice, which is presently given by single species management. Additional research is required in order to develop ecosystem models to a point where it **may** become possible to use them to provide quantitative management advice.

Acknowledging the suggestions made by the WG on MMFI, the Scientific Committee recommended, as the best way forward, carrying out the modelling exercise for comparing the results of different models on the same ecosystem(s) using a common dataset.

Lars Walløe (Chair of the MMFI WG), provided background for the work of the WG as well as presenting further detailed developments in the field of marine mammal-fisheries interactions. He presented the specificity of the four modelling approaches proposed, below. Potential candidates have been identified to undertake the work.

1. Minimal realistic model implemented using GADGET
2. Ecopath with Ecosim
3. Time series regression
4. A simple biomass-based model such as one recently applied in eastern Canada.

The exercise should be carried out preferably for two areas. Likely candidates include the Barents Sea and the region around Iceland. The projected investigation would require a funded multi-year project. Once funding is obtained, selection of appropriate area(s) should, if necessary, be decided by a working group of experts knowledgeable in the data requirements and availability.

The tentative schedule provided for the work was articulated around 4 key-step meetings with a 2-year period as a realistic time-span for the whole process:

1. A meeting to compile detailed proposals and budgets; leaders of the different modelling teams would be essential participants; meeting to be held as soon as feasible.
2. A data-oriented meeting – common data would need to be carefully pre-agreed to ensure that the results from the different models were comparable.
3. Meetings of the modelling groups to critically compare and suggest improvements to their first attempts in fitting their models to the data.
4. A meeting at which final model results would be tabled for consolidation, and draft consequent management-related recommendations would be developed.

Because of the magnitude of the exercise and the need for simultaneous coordinated international effort, the Scientific Committee felt it **needed clear indications** that the Council wished to proceed in this direction. Furthermore the Scientific Committee recommended an expression of interest from member countries towards the coordination of funding applications.

Both the Faroe Islands and Greenland enquired about whether modelling could take into account changing environmental factors e.g. temperature, and were assured that this was indeed the case.

Walløe provided in addition, a ball-park estimate of overall costs which might approach 2 – 2.5 million NOK. It was clear that a balance between funds available, time scale and also political and scientific necessity would rank the priority of this item.

The Management Committees **expressed** a general support for the modelling exercise proposed and **recommended** the Secretariat and the Scientific Committee to continue in the planning. External funding will be sought.

7.2 Environmental questions

The Chair invited information on dietary issues from the Faroe Islands. The Faroe Islands noted that this was not an issue of relevance to management. However, at previous meetings, the Council agenda item on environmental issues has been used to discuss health questions related to the consumption of marine mammals, such as the presentation last year of the report of the Expert Workshop on health benefits of whale and seal oil.

On this basis the Faroe Islands informed the Committee of recent developments with regard to dietary recommendations in the Faroe Islands for the consumption of pilot whale meat and blubber. New scientific information had recently been published on the prevalence of Parkinson's disease in the Faroe Islands and high mercury levels linked to pilot whale consumption, which had received much attention. However, no conclusions had as yet been drawn as to whether there was a need to amend the existing dietary recommendations from 1998, which are already highly precautionary with regard to recommended consumption levels. An information note on the issue was

available on www.whaling.fo and would be given to the Secretariat for distribution to delegations and observers.

The Faroese delegation stressed that the major focus for NAMMCO with regard to the issue of contaminant levels in whale meat and blubber should be the common concern about the need for effective measures in industrial countries to reduce and eliminate global pollution of the marine environment at its source. Industrial nations should be actively safeguarding the rights of coastal nations to the sustainable use of their marine resources and not using contaminant levels in marine mammals as an argument against sustainable whaling and sealing.

7.3 By-catch data and monitoring

Efforts are being made to include mandatory reporting of marine mammal by-catch in all fishing vessel logbooks in the Faroe Islands. It should be noted that logbooks are already mandatory on all vessels over 15 tonnes. There was still uncertainty whether by-catch in Greenland was reported as such or as catch and the Scientific Committee recommend all by-catches be reported as such. In Iceland there had been progress in monitoring but no results as yet. Norway reported that it has a reference fleet as a trial for by-catch reporting. It is hoped that data will be available and analysed at the end of 2009. The findings should be available for reporting next year.

The Scientific Committee had proposed last year to cooperate with other organisations dealing with by-catch, on assessing by-catch monitoring systems. ICES and ASCOBAMS had been approached for organising a common workshop on monitoring. The ICES relevant study group was positive to cooperation, but ICES commitment was dependent on its main Advisory Committee approval (meeting in October). The Management Committees noted that ICES collaboration is potentially valuable and also cost-effective.

Access to data is not easy. Assessment of total by-catch and recommendation on sustainability of by-catch is currently not possible until all removals (catch and by-catch) are known. Education of hunters to report by-catch is needed. In Greenland, it is necessary to have all catches reported (noting that by-catch is catch).

The Management Committees **noted** the work undertaken by the Scientific Committee for organising a joint workshop with ICES, focussing on by-catch monitoring systems and reviewing the advantages and disadvantages of existing observation schemes for marine mammals, and **recommended** moving forward on this matter.

7.4 Other topics

The Management Committees **reiterated** that catch data series should be deposited at the Secretariat and that the details of the process of delivery and the format of data are at the discretion of the Secretariat in accordance with the needs of the Scientific Committee.

8. TRADE ISSUES AND THE EU BAN OF IMPORT OF SEALSKIN

NAMMCO Annual Report 2009

The ban on the import of sealskin was adopted by the EU in July 2009. Although NAMMCO does not have the competence to deal with trade regulation, the Management Committee for Seals and Walruses noted that such a ban can have serious implications for conservation and management: noting that major stocks of seals in the North Atlantic were under-utilised and this situation was only likely to become more extreme with the closure of markets. The Management Committee for Seals and Walruses **reiterated** its grave concern that the EU has imposed a prohibition that will have serious consequences for sealing nations.

Norway and Greenland informed the Management Committee for Seals and Walruses on their deliberations in relation to influencing the preparation of the EU ban. Greenland further informed that it has been contacted by a private consultant COWI which the EU has asked to undertake an assessment on the traceability of sealskin.

9. ELECTIONS

Amalie Jessen (Greenland) was re-elected as Chair for the next 2 years.

Hild Ynnesdal (Norway) was elected as Vice-Chair for the next 2 years.

10. ANY OTHER BUSINESS

The format of the Agenda will be revised for the next meeting.

11. ADOPTION OF REPORT

The report was adopted by correspondence.

AGENDA

1. CHAIRMAN'S OPENING REMARKS
2. ADOPTION OF AGENDA
3. APPOINTMENT OF RAPPORTEUR
4. CONSERVATION AND MANAGEMENT MEASURES FOR SEAL STOCKS
 - 4.1 Harp Seals
 - Greenland Sea
 - Barents / White seas
 - NW Atlantic
 - Status of past proposals
 - Requests by Council for advice from the Scientific Committee
 - Responses by the Scientific Committee
 - New proposals and recommendations for scientific research
 - Proposals for conservation and management
 - 4.2 Hooded Seals
 - Greenland Sea
 - Barents / White seas
 - NW Atlantic
 - Status of past proposals
 - Requests by Council for advice from the Scientific Committee
 - Responses by the Scientific Committee
 - New proposals and recommendations for scientific research
 - Proposals for conservation and management
 - 4.3 Ringed Seals
 - Greenland
 - Others?
 - Status of past proposals
 - Requests by Council for advice from the Scientific Committee
 - Responses by the Scientific Committee
 - New proposals and recommendations for scientific research
 - Proposals for conservation and management
 - 4.4 Grey Seals
 - Norway
 - Iceland
 - Faroe Islands
 - Status of past proposals
 - Requests by Council for advice from the Scientific Committee
 - Responses by the Scientific Committee
 - New proposals and recommendations for scientific research
 - Proposals for conservation and management
 - 4.5 Harbour Seals
 - Norway
 - Greenland
 - Iceland
 - Status of past proposals

NAMMCO Annual Report 2009

- Requests by Council for advice from the Scientific Committee
- Responses by the Scientific Committee
- New proposals and recommendations for scientific research
- Proposals for conservation and management

4.6 Walrus

Greenland

- Status of past proposals
- Requests by Council for advice from the Scientific Committee
- Responses by the Scientific Committee
- New proposals and recommendations for scientific research
- Proposals for conservation and management

4.7 Bearded seal

Norway

Greenland

5. PROCEDURES FOR DECISION-MAKING ON CONSERVATION AND MANAGEMENT MEASURES
 - 5.1 General Models
6. USER KNOWLEDGE IN MANAGEMENT DECISION-MAKING
7. RELATED MANAGEMENT ISSUES
 - 7.1 Marine mammal - fisheries interactions
 - 7.2 Environmental questions
 - 7.3 By-catch data and monitoring
 - 7.4 Other topics
8. TRADE ISSUES AND THE EU BAN OF IMPORT OF SEALSKIN
9. ELECTIONS
10. ANY OTHER BUSINESS.

Appendix 2 - LIST OF DOCUMENTS

| | |
|-----------------|--|
| NAMMCO/18/SMC/1 | List of Documents |
| NAMMCO/18/SMC/2 | Agenda |
| NAMMCO/18/MC/3 | Status of Past Proposals for Conservation and Management |
| NAMMCO/18/MC/4 | Summary of Requests by NAMMCO Council to the Scientific Committee, and Responses by the Scientific Committee |
| NAMMCO/18/5 | Report of the Sixteenth Meeting of the Scientific Committee. |

Appendix 3 - RECOMMENDATIONS TO MEMBER COUNTRIES

Harp seal

Norway:

Work conducted in Norway (including new assessment of biological parameters) will help in addressing the questions of the maintained low pup production of hooded seals in the Greenland Sea. The Scientific Committee **strongly recommended** that these activities are given high priority in the coming years. The Scientific Committee **reiterated its recommendation** to investigate the possible presence of alternative whelping patches.

The Scientific Committee **recommends** that Norway should ensure that the harp seal population in the Northeast Atlantic is maintained as data rich.

The Scientific Committee also **endorsed** the WGHARP recommendation to implement the four-tiered management strategy which aligns with the Norwegian management strategy for Greenland Sea harp seals, once the population becomes data rich.

In addition, it is **recommended** that questions related to the problems for harp seals in the White Sea should be addressed jointly by Norwegian and Russian scientists.

Hooded seal

Norway:

The Scientific Committee **strongly recommended** that high priority be given in the coming years to activities by Norwegian and cooperating scientists to address the questions related to the apparent decline of hooded seals in the Greenland Sea.

Grey seal

Iceland:

The Scientific Committee **recommended** the compilation of Icelandic research data from various bodies conducting work on seals and the central archival of these with a future assessment work in mind, in particular with regards to the age data. .

Faroe Islands:

With regards to the present estimate of a harvest up til 40% of the population annually, the Scientific Committee **urged** the Faroe Islands to estimate their present removals

and abundance off their coast. The Scientific Committee **strongly recommended** that all efforts be made in providing a proper estimate of population size and catch at its next meeting.

The Scientific Committee also **recommended** that the Faroe Islands define clear management objectives for grey seals, and that the reporting of grey seal catches in the Faroe Islands be made mandatory and enforced.

Norway:

The Scientific Committee **recommends** maintaining efforts to keep populations as data rich, with reviews every 5 years. It also recommends that the Russian grey seal breeding colonies on the Murman Coast, last covered in 199, be surveyed again and that Seven Islands further east should be surveyed soon, preferably in 2010.

Concerning the new Norwegian Management plan, the Scientific Committee **recommended** that a better way of taking uncertainties into consideration be developed and that an expert working group make an in depth evaluation of the plan, including a comparison with existing management models for e.g. harp and hooded seals.

Harbour seal

Greenland:

The Scientific Committee **commended** and **supported** the continuation of the research programme in Greenland. A total ban on hunting for this species in Greenland is **recommended**, and a formal assessment of the stocks in all areas and the establishment of clear management objectives should be undertaken.

Iceland:

The Scientific Committee **reiterated a recommendation** for a formal assessment of the Icelandic stock and the establishment of clear management objectives.

Iceland and Norway:

The Scientific Committee **reiterated its recommendation** that both Iceland and Norway ensure better information on by-catch as well as collect information on the proportion of direct catch and by-catch and age composition. Continued and frequent abundance surveys were also **recommended**.

Norway: The Scientific Committee **recommended** that the population be maintained as data rich. Concerning the new Norwegian Management plan, the Scientific Committee **recommended**, as for the grey seal management plan, that a better way of taking uncertainties into consideration be developed and that an expert working group make an in depth evaluation of the plan, including a comparison with existing management models for e.g. harp and hooded seals.

Bearded seal

All: The Scientific Committee **recommended** that the status of this species be assessed.