

**2.2**

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

12 September 2012, Svolvær, Norway

**1. CHAIRPERSON'S OPENING REMARKS**

The Chair, Arne Bjørge (Norway), was appointed to stand in for Hild Ynnesdal (Norway) who could not participate to the meeting. Bjørge welcomed the delegates (members listed in Address Section 5.3) and the observers to the Management Committee for Seals and Walruses.

**2. ADOPTION OF AGENDA**

The agenda was adopted (Appendix 1). The Chair reminded the Committee that agenda items 5. to 8. would be dealt with jointly together with the Management Committee for Cetaceans.

**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. Status of Past Proposals for Conservation and Management and Responses with reference to document NAMMCO/21/MC/3 (Section 2.2, ANNEX 1) and summary of Requests by Council to the Scientific Committee and Responses with reference to document NAMMCO/21/MC/4 (Section 2.2, ANNEX 2) were summarised. The list of past recommendations to member countries was presented for information in document NAMMCO/21/MC/5 (NAMMCO Annual report 2011, Section 2.1, Appendix 3). All new recommendations to member countries agreed below are listed in Appendix 3.

The Chair of the Scientific Committee, Lars Witting, presented the information on seal and walrus stocks from the Scientific Committee report (NAMMCO/21/6) under each species.

**4.1 Harp Seals**

**Requests by Council for advice from the Scientific Committee**

**R-2.1.4 - NAMMCO/12-2003** (standing): To regularly update the stock status of North Atlantic harp and hooded seals as new information becomes available.

**R-2.1.10 – NAMMCO/17-2008** (standing): To provide advice on Total Allowable Catches 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.

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**R-2.1.11 - NAMMCO/18-2009** (pending): To evaluate how a projected increase in the total population of Northwest Atlantic harp seals might affect the proportion of animals summering in Greenland.

### Advice from the Scientific Committee

The Scientific Committee examined the information provided by the ICES/NAFO Working Group (WG) on Harp and Hooded Seals (WGHARP) which had met during August 2011.

For the White Sea/Barents Sea (**R-2.1.4**) a modified population model with time-varying fecundity estimated 1,364,700 (95% C.I. 1,230,384 – 1,498,916) animals in 2011, with the sustainable catch (**R-2.1.10**) being 15,827 1+ animals (or an equivalent number of pups, where one 1+ seal is balanced by 2 pups).

The Greenland Sea population (**R-2.1.4**) seems to be data rich and the population model estimates indicate a substantial increase from 1970 to 650,000 (95% CI: 379,000-920,000) in 2011. A sustainable catch (**R-2.1.10**) will have to approximate 16,737 animals of the 1+ age class or 33,474 pups. Alternatively, given that the latest estimate is the largest, the 80% probability of less than 30% declined gives a sustainable catch of 25,000 animals of class 1+ if adequate monitoring is put in place.

Regarding **R-2.1.11** the Scientific Committee reported that abundance estimates from West Greenland need to be developed to discriminate between actual and perceived changes in abundance. The population is believed to approach carrying capacity and this is normally associated with new factors becoming important for a continued growth of the population. It is therefore uncertain whether the distribution of the seals in the years to come is predictable based on hind-cast analysis. Such analyses will, however, be important to describe how distribution patterns change as the population and the environment change. Historically the abundance of seals in Greenland waters was positively associated with increases in the harp seal population. Since 2000, it appears that ecological and hydrographical changes have changed the relationship, and possibly led to decreases in harp seals. However, there are insufficient data available to adequately analyse the latter.

### Recommendations to member countries

The Management Committee for Seals and Walruses **endorsed** the Scientific Committee recommendations to limit the catches for the common stock between Norway and Russia (**R-2.1.10**) for the White Sea/Barents Sea to 15,827 1+ animals (or an equivalent number of pups, where one 1+ seal is balanced by 2 pups) and for the Greenland Sea to 16,737 animals of the 1+ age class or 33,474 pups; as an alternative 25,000 animals of class 1+ if adequate monitoring is put in place.

### Any other business

Norway reported that WGHARP has recently developed a population model which includes fecundity data. This model is more realistic than the previous one, but the figures for population abundance and therefore the allowable catches are lower. Norway also commented on the poor ice conditions in recent years which probably

will have a great influence on the population.

Greenland expressed appreciation for the response from the ICES/NAFO WGHARP and their consideration at their last meeting of request **R-2.1.11**. It is understandable that this is not a simple question that can be answered based on available data, but one which will require new abundance estimates with several surveys at various times of the year for some years. Greenland expressed the intention to establish a dialogue with the Institute of Natural Resources and the Hunters and Fishermen Association (KNAPK) in order to define consider our further approach.

Greenland has in 2012, as in previous years, given Norway permission to carry out scientific work on seals and to take harp seals within the Greenland EEZ.

Canada reported that the surveys in 2012 have been completed and the results will be communicated as soon as the peer review is passed. The harvest has been very low also due to poor ice conditions, and it has not fully utilised the Total Allowable Catch.

#### **4.2 Hooded Seals**

##### **Requests by Council for advice from the Scientific Committee**

**R-2.1.4 - NAMMCO/12-2003** (standing): 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.

##### **Advice from the Scientific Committee**

In response to request **R-2.1.4**, the Scientific Committee reported that the ICES-NAFO WG meeting on Harp and Hooded Seals in August 2011 had reviewed the status of hooded seals in the Greenland Sea (NAMMCO/21/6). The 2007 abundance estimate is of 16,140 pups, which is considerably lower than in 1997. The population model estimate for 2011 was 85,000 to 106,000. This is well below the limit of 173,000 (30% of the maximum estimate of 575,000) animals, where WGHARP recommends that catches shall not occur. Therefore, no catches of hooded seals should be taken from the Greenland Sea, except for local catches in East Greenland.

##### **Recommendations to member countries**

The Management Committee for Seals and Walruses **welcomed** the information provided by the Scientific Committee jointly with the ICES/NAFO WGHARP and the 2012 harp and hooded seal surveys.

The Management Committee **reviewed** the recommendations of the ICES-NAFO WG on Harp and Hooded Seals and continued to **support** the recommendations for the Greenland Sea.

##### **Any other business**

The 1956 -2006 data from the Northwest Atlantic showed that the age at birth increased from 4.4 (1956-78) to 6.1 (1989-95). Pregnancy rates declined from 91-98% to 7.4-7.9%

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Norwegian survey in 2012 in the Greenland Sea also identified patches of hooded seals even if it was designed for harp seals and this data might yield a new abundance estimate. The analysis of data from the 2010 scientific sampling programme to investigate the reasons for the significantly lower abundance of this species compared to earlier years will be performed in the next years.

Greenland has in 2012, as in previous years, given Norway permission to carry out scientific work on seals and to take hooded seals within the Greenland Exclusive Economic Zone (EEZ).

All models runs indicated a decrease in the Greenland Sea Hooded Seal population from the late 1940s and up to the early 1980s. The population has remained at this low level up to this date despite reduced hunting pressure. Although difficult ice conditions may have contributed, the low population level of hooded seals is far from fully understood. Samples have, however, been collected for use in studies for potential factors such as reduced fecundity, diseases, predation by polar bears and food shortage. The collected material is presently being analysed.

### 4.3 Ringed Seals

#### **Requests by Council for advice from the Scientific Committee**

**R-2.3.1- NAMMCO/5-1995** (standing): To advise on stock identity of ringed seals (*Phoca hispida*) for management purposes and to assess abundance in each stock area, long-term effects on stocks by present removals in each stock area, effects of recent environmental changes (*i.e.* disturbance, pollution) and changes in the food supply, and interactions with other marine living resources.

**R-2.3.2 - NAMMCO/7-1997** (standing): To advise on what scientific studies need to be completed to evaluate the effects of changed levels of removals of ringed seals in West and East Greenland.

#### **Recommendations for scientific research**

The Management Committee for Seals and Walrus welcomed the deployment of satellite tags and **reiterated its recommendation** from the previous year to perform abundance estimates on sea ice in offshore areas but also including that updated information on fjord area occupancy is also needed.

#### **Any other business**

The Scientific Committee reported on the increased effort in research on this species towards gathering of data on movement, dive behaviour and environmental preferences of ringed seals with the use of satellite tracking devices both in Svalbard and in Greenland both in 2011 and 2012.

Norway noted that fjord ice, on which this species depends, is diminishing at a time of the year critical for survival and that data is needed to evaluate the extent of this phenomenon.

### 4.4 Grey Seals

#### **Requests by Council for advice from the Scientific Committee**

**R-2.4.2 - NAMMCO/11-2002** (standing): The Scientific Committee had previously provided advice in response to a request to review and assess abundance and stock levels of grey seals in the North Atlantic, with an emphasis on their role in the marine ecosystem in general, and their significance as a source of nematode infestations in fish in particular (NAMMCO 1995). Given the apparent stock decline in Iceland, an apparent increase in Southwest Norway and in the United Kingdom, and the fact that this species interacts with fisheries in three NAMMCO member countries, the Management Committee **recommended** that the Scientific Committee provide a new assessment of grey seal stocks throughout the North Atlantic.

#### **Advice from the Scientific Committee**

The Scientific Committee recommends convening a WG meeting to finalise **R-2.4.2** in 2014 when the current studies on this species are expected to have produced results.

#### **Recommendations**

The Management Committee for Seals and Walrus **endorsed** the recommendation to prepare for an assessment, and **recommended** that the Scientific Committee proceeds with it.

#### **Other information**

The Scientific Committee reported on increased efforts in seal by-catch reporting in Iceland, but warned of the frequency of unidentified seals in the reports. A survey is expected for the summer/autumn 2012.

Norway reported on progress in the new assessment for this species and oriented the Management Committee that data on stock structure from the whole north Atlantic has been analysed and the results will be available in the next months. Norway and Russia are planning a joint research programme in the Barents Sea.

Grey seals have been protected in Greenland since 2010 according to an Executive Order.

Iceland communicated that new surveys and a catch reporting system are planned for the near future and that efforts towards the identification of the reasons behind and the quantification of the increase in pup production during the late decade.

In the Faroe Islands, studies have included the collection of samples for stock delineation. Results are expected during 2013. The mandatory reporting system for grey seal removals in aquaculture farms has been in place since 2011 and some adjustments have been implemented to improve the reporting. Abundance surveys are planned for the coming years. Due to difficulties in estimating the abundance of this species in the Faroe Islands various assessment approaches probably need to be used.

### **4.5 Harbour Seals**

#### **Requests by Council for advice from the Scientific Committee**

**R-2.5.2 - NAMMCO/16-2007** modified **NAMMCO/19-2010** (pending): To conduct a formal assessment of the status of harbour seals for all areas as soon as feasible.

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### **Advice from the Scientific Committee**

The Scientific Committee **recommended** convening a WG meeting to finalise **R-2.4.2** in 2014 when the current studies on this species are expected to have produced results.

### **Recommendations:**

The Management Committee **reiterated its recommendation** to obtain updated information on abundance and struck and lost figures. In the case of struck and lost data it **recommended** that a struck and lost factor be developed.

### **Any other business**

The Scientific Committee reported about the Norwegian aerial surveys for this species in 2011-2013. These are meant to update the earlier surveys from the years 2003-2006.

An abundance estimate of 11,000 (95% CI:8,000-16,000) was produced for Iceland and the figures are similar to the estimates from 2003 and 2006.

Tagging in South Greenland showed local movements and a coastwise breeding migration along the east coast in the period mid-June to mid-July. There are plans for installing monitoring cameras for the small groups present on the west coast.

In Norway, seals are hunted at sea and struck and lost data are important for assessment. The monitoring in place in Norway includes self-reporting for struck and lost, but there is no evaluation of the system.

Harbour seals have been protected in Greenland since 2010 according to an Executive Order.

Icelandic catches have not increased in the recent years and are low. Information on this species will be updated after an aerial survey during summer 2013.

## **4.6 Walrus**

### **Requests by Council for advice from the Scientific Committee**

**R-2.6.3 - NAMMCO/15-2006** (ongoing): The Scientific Committee should 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.

### **Advice from the Scientific Committee**

Owing to a lack of explicit studies, the Scientific Committee is not in a strong position to provide advice on the effects of human disturbance on walrus.

The Scientific Committee **recommended** convening a Working Group meeting in the winter/spring 2012/2013 to reassess this species.

### **Recommendations for Scientific Research**

Walrus quotas in Greenland presently follow the scientific advice and the quota level

has probability of sustainability of 70 % or more until 2014. The present quota block covers the years 2010-2012.

**In a new request (R-2.6.6)**, the Management Committee **requested** the Scientific Committee to investigate the possibility to include a carryover for quotas in order to include this possibility in the next hearing for the new quota block period.

**Any other business**

A survey in 2011 estimates the Pechora Sea population at a minimum of 3,900 (95% CI:3,750-4,290) and a special monitoring programme related to oil exploration was initiated in 2010.

Norway reported on the continuation of the monitoring programme for potential impact of tourist activities on the haulouts.

Greenland recently produced new abundance estimates, using the associated tagging data for bias correction, for the North Water surveys of 2010.

A hunter interview on walrus has been performed by the Greenland Institute of Natural Resources and the results will be presented as soon as they are available.

**4.7 Bearded seal**

The Scientific Committee communicated that some limited satellite tracking of bearded seals is ongoing and continuing in Svalbard and Greenland. The Committee noted that this species, as in the case of ringed seals, faces ice-related challenges due to global change.

The Management Committee **welcomed** this progress and **reiterated its recommendation** that efforts be renewed towards gathering information on biology, abundance and stock status with the view to an assessment.

**JOINT SESSION OF BOTH MANAGEMENT COMMITTEES**

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

No issues were raised under this agenda item.

**6. ECOSYSTEM BASED MANAGEMENT**

Norway reported that two integrated management plans are already in place, for the Barents Sea and Norwegian Sea respectively, and that a third one for the North Sea is being prepared. Information on these is available upon request or on the web.

Canada reported that it is undertaking a process to revise its management plan for walrus, with the implementation of a new Integrated Fisheries Management Plan for

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walrus expected in 2013. This new plan will, to a large extent, make use of spatial planning to set harvest limits.

The 3rd Arctic Council Ecosystem-Based Management Experts Group Meeting will take place 3-5 October in Tromsø and NAMMCO has been invited to observe.

### 7. USER KNOWLEDGE IN MANAGEMENT DECISION-MAKING

The Management Committee **charged** Arne Bjørge (Norway) to observe at the presentation at the University of Tromsø of a project involving Traditional Ecological Knowledge.

Greenland oriented the Management Committees that a pilot project in three areas in North Greenland, working with local documentation and local management of living resources has been running since 2010. The final visit to the settlements will take place at end of September 2012 and an evaluation of the project will be presented at NAMMCO 22. Furthermore, there is continuing collaboration between the Hunters and Fishermen Association (KNAPK) and Greenland Institute of Natural Resources, based on a written agreement.

The Chair of the Committee on Hunting Methods informed that hunters' knowledge is an important and acknowledged part of the Committee's discussion of hunting methods and its recommendations to the Council. He also pointed at other activities where hunters' knowledge is important for a successful outcome, like sighting surveys for whales.

### 8. RELATED MANAGEMENT ISSUES

#### 8.1 Marine-mammal – fisheries interaction

The Scientific Committee was informed about applications to NORA and the EU for financing the project on testing different modelling approaches. There were positive reviews from NORA but no funding obtained. The Committees **recommend** seeking national funding for this project.

In Norway, a project in Porsanger fjord investigates the ecological role of harbour seals using GSM tags, diet studies and estimates of fish resources. In the Barents Sea, using data from the Ecosystem Surveys, a study examines habitat use and prey of white-beaked dolphins and another investigates habitat use of baleen whales in relation to fish, krill and copepods.

The Icelandic minke whale programme is up for review in the IWC with a deadline in winter 2012/13. Efforts are being made to complete the studies and they will be presented to the Scientific Committee at its 2013 meeting. An Icelandic project is underway on salmon fisheries-seal interactions in Northwest Iceland.

#### 8.2 Environmental questions

The Management Committee **underlined** the serious situation for ice-breeding seals



when the extent and quality of sea ice is rapidly changing under the current climate change.

### 8.3 By-catch data and monitoring

Monitoring of Norwegian gillnetters for monkfish and cod (2006-8) has yielded a by-catch estimate of 6,900 harbour porpoises. This by-catch would require a population of at least 400,000 to be sustainable. However the abundance along the Norwegian coast is unknown and the North Sea estimate of around a third of a million is not necessarily relevant. Norway has an unknown, but potentially high by-catch of harbour and grey seals.

The by-catch numbers of harbour porpoises, grey seals, and harbour seals could also be high in Iceland, based on preliminary information presented to the NAMMCO-ICES workshop in 2010. Reporting is often of unidentified seals, making it difficult to estimate by-catch for species. The Scientific Committee **reiterated its recommendation** to obtain updated information on abundance and struck and lost figures. In the case of struck and lost data it **recommended** that a struck and lost factor be developed.

The Management Committee **endorsed the Scientific Committee recommendation** that total by-catch estimates be attempted for all species (*e.g.* harbour porpoises, grey seals, and harbour seals) and that assessments of sustainability proceed through the relevant WGs.

By-catch in the Faroe Islands and Greenland is likely a small problem due to the absence of gillnets used in fisheries.

A small revision of the Greenlandic reporting system for catch, by-catch and struck and lost is underway and a process of digitalization of the hunting license system and catch reporting system will incorporate these issues in a more standard way. Greenland also reminded the Committee that a report on struck and lost rates based on a questionnaire study had been published in 2006 and it can be diffused to any interested parties.

The Scientific Committee **recommended** that:

- By-catch estimates are attempted where lacking
- By-catch estimates are validated in WGs
- Appropriate are the Harbour porpoise WG and Grey and harbour seal WG
- The sustainability of by-catch is assessed by WGs
- By-catches be reduced as much as possible, irrespectively of sustainability.

The Management Committee **endorsed** the recommendations from the Scientific Committee and **noted** the updates from member countries.

### 8.4 Other Topics

None were noted.

**9. TRADE ISSUES AND THE EU BAN ON IMPORT OF SEALSKIN**

In relation to the 2010 EU ban, Greenland has worked intensively through the Danish embassies, on informing on the negative effects the ban gives, and that the Inuit exemption has not helped on the trade of sealskin resulting in about 250.000 skins in storage. Greenland had reported during a public hearing in Brussels February 7th, 2012 on the consequences of the ban, including a revised “White Paper on Seal Management in Greenland”. Greenland also informed that it has received information that Russia recently has introduced exemptions for sealskin produced by Inuit people.

The Government of Greenland has produced a white paper on the Management and Utilisation of Seals in Greenland available at:

[http://www.nanoq.gl/emner/landsstyre/departementer/departement\\_for\\_fiskeri/~medi a/7F9AFE61E16845F7A92AA52563437165.ashx](http://www.nanoq.gl/emner/landsstyre/departementer/departement_for_fiskeri/~medi a/7F9AFE61E16845F7A92AA52563437165.ashx)

Several collaboration information projects with the Hunters and Fishermen Association (KNAPK) and an external media company have been initiated.

Norway and Canada oriented on the status of the World Trade Organisation (WTO) case. The panel selection has not yet been started, but it should happen this month. A realistic timeline sees the production of a final report by the middle of 2013.

**10. ANY OTHER BUSINESS**

A proposal to streamline the agenda of the Management Committees was submitted by Greenland, and will be further developed by the Chairs of the Committees.

**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**

*White / Barents seas*

*Greenland Sea*

*Northwest 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*

*Northwest 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?*

- Updates

**4.4 Grey Seals**

*Greenland*

*Norway*

*Faroe Islands*

*Iceland*

- 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**

*Greenland*

*Norway*

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### *Iceland*

- 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

#### **4.6 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**

### *Greenland*

### *Norway*

- Updates

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

#### **6. ECOSYSTEM-BASED MANAGEMENT**

#### **7. USER KNOWLEDGE IN MANAGEMENT DECISION-MAKING**

#### **8. RELATED MANAGEMENT ISSUES<sup>6</sup>**

##### **8.1 Marine mammal - fisheries interactions<sup>7</sup>**

##### **8.2 Environmental questions**

##### **8.3 By-catch data and monitoring**

##### **8.4 Other topics**

#### **9. TRADE ISSUES AND THE EU BAN OF IMPORT OF SEALSKIN**

#### **10. ANY OTHER BUSINESS**

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<sup>6</sup> **Agenda Item 8:** These items have been placed separately from the individual species, because they overlap to varying extents with the work of other committees; items 8.1 – 8.3 incl. overlap with the Management Committee for Cetaceans, and will be discussed in a joint meeting of the two Management Committees; item 8.2 is also listed on the Council agenda.

<sup>7</sup> **Agenda Item 8.1:** This item also includes Economic aspects of marine mammal – fisheries interactions and Multi-species approaches to management.

**LIST OF DOCUMENTS**

<b>Document no</b>	<b>Title</b>	<b>Agenda item</b>
NAMMCO/20/SMC/1	List of Documents	
NAMMCO/20/SMC/2	Agenda	2.
NAMMCO/20/MC/3	Status of Past Proposals for Conservation and Management	4.
NAMMCO/20/MC/4	Summary of Requests by NAMMCO Council to the Scientific Committee, and Responses by the Scientific Committee	4.
NAMMCO/20/SMC/5	Recommendations to member countries 2010	4.
NAMMCO/20/6 and ANNEXES	Report of the Eighteenth Meeting of the Scientific Committee	4., 5., 6., 7., 8. and 9.

## RECOMMENDATIONS TO MEMBER COUNTRIES 2012

### Harp seals

#### *Norway, Greenland:*

The Management Committee for Seals and Walruses **endorsed** the Scientific Committee recommendations to limit the catches for the common stock between Norway and Russia (**R-2.1.10**) for the White Sea/Barents Sea to 15,827 1+ animals (or an equivalent number of pups, where one 1+ seal is balanced by 2 pups) and for the Greenland Sea to 16,737 animals of the 1+ age class or 33,474 pups; as an alternative 25,000 animals of class 1+ if adequate monitoring is put in place.

### Hooded seals

#### *Norway, Greenland:*

The Management Committee for Seals and Walruses **reviewed** the recommendations of the ICES-NAFO WG on Harp and Hooded Seals and continued to **support** the recommendations for no catches of hooded seals to be taken from the Greenland Sea, except for local catches in East Greenland.

### Ringed seals

#### *Greenland:*

The Management Committee for Seals and Walruses **reiterated its recommendation** from the previous year to perform abundance estimates on sea ice in offshore areas but also included that updated information on fjord area occupancy is also needed.

### Harbour seals

#### *All countries:*

The Management Committee for Seals and Walruses **reiterated its recommendation** to obtain updated information on abundance and struck and lost figures. In the case of struck and lost data it **recommended** that a struck and lost factor be developed.

### Bearded seals

#### *Norway, Greenland:*

The Management Committee for Seals and Walruses **reiterated its recommendation** that efforts be renewed towards gathering information on biology, abundance and stock status with the view to an assessment.

### By-catch

#### *Iceland, Norway:*

The Management Committee for Seals and Walruses **endorsed the SC recommendation** that total by-catch estimates be attempted for all species (*e.g.* harbour porpoises, grey seals, and harbour seals) and that assessments of sustainability proceed through the relevant WGs.

#### *All countries:*

The Management Committee for Seals and Walruses **recommended** that:

- By-catch estimates are attempted where lacking

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- By-catch estimates are validated in WGs
- Appropriate are the Harbour porpoise WG and Grey and harbour seal WG
- The sustainability of by-catch is assessed by WGs
- By-catches be reduced as much as possible, irrespectively of sustainability.