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**REPORT OF THE MEETING OF THE MANAGEMENT COMMITTEE FOR
CETACEANS**

12 September 2012, Svolvær, Norway

1. CHAIRPERSON'S OPENING REMARKS

The Chair, Ásta Einarsdóttir (Iceland), opened the meeting and welcomed all participants (Address Section 5.3).

2. ADOPTION OF AGENDA

The agenda (Appendix 1) was adopted.

3. APPOINTMENT OF RAPPORTEUR

The Secretariat was appointed as rapporteur.

4. CONSERVATION AND MANAGEMENT MEASURES FOR WHALE STOCKS

The Chair summarised past proposals for conservation and management and responses with reference to document NAMMCO/21/MC/3 (Section 2.2 Annex 1) and past requests to the Scientific Committee and responses with reference to document NAMMCO/21/MC/4 (Section 2.2 Annex 2), and NAMMCO/21/MC/5 (NAMMCO Annual report 2011, Section 2.1, Appendix 3) – recommendations to member countries in 2011. All new recommendations to member countries on scientific research arising and approved by the Management Committee for Cetaceans are contained in Appendix 2.

The Chair of the Scientific Committee, Lars Witting, presented the information on whale stocks from the Scientific Committee report (NAMMCO/21/6, Section 3.1).

4.1. Fin whales

Status of past proposals for Conservation and Management

In 2011 the Management Committee reiterated its endorsement from 2010 that an annual take of up to 154 fin whales from the West Iceland (WI) Sub area is sustainable for the next 5 years.

Requests from Council for advice from the Scientific Committee

There was one ongoing request to the Scientific Committee:

R-3.1.7 – NAMMCO/17-2008: to complete an assessment of fin whales in the North Atlantic and also to include an estimation of sustainable catch levels in the Central North Atlantic.

At **NAMMCO/19-2010** the Management Committee recommended that Iceland carry out the simulation trials required to check if catch levels for 60% tuning are

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sustainable in the long term as soon as possible. It was further recommended that studies should be carried out to help distinguish between alternative stock structure hypotheses, using several different approaches such as genetics, satellite telemetry and photo-identification.

Update from the Scientific Committee

The planned Icelandic rerunning of the trials with 60% tuning of the RMP has yet to be completed. Iceland included a stock structure hypothesis testing in its research proposal to the IWC in June 2012 but this was not finalised at the time of the NAMMCO SC meeting.

Iceland reported that there had been no fin whale hunt in Iceland the last 2 years and that it is anticipated that hunting will take place in 2013.

Conclusions by the Management Committee

The Management Committee **noted** the report and **reiterated its recommendations** from 2010.

The Management Committee further **noted** that there had been no catches of fin whales in Iceland in 2011 and 2012.

4.2. Humpback whales

Requests by Council for advice from the Scientific Committee

There was one pending request to the Scientific Committee:

R-3.2.4 - NAMMCO/15-2006: to conduct a formal assessment following the completion of the T-NASS. Furthermore to investigate the relationship between the humpback whales summering in West Greenland and other areas and incorporate this knowledge into the estimate of sustainable yields of West Greenland humpback whales.

At **NAMMCO/19-2010** the Management Committee recommended to run detailed simulation testing of the AWMP-C procedure. The development and simulation testing of management procedures for humpback whales in West Greenland is ongoing in the IWC, and it was recommended that NAMMCO relies on this work to avoid duplication.

Update from the Scientific Committee

The recommended analyses (see NAMMCO Annual report 2011, Section 2.1) to detect responsive movements to survey vessels in humpback whales will not be performed by Iceland.

It had been noted that humpback whales are present in areas off East Greenland that have not previously been surveyed, in agreement with information provided by observers on seismic surveys.

Conclusions by the Management Committee

The Management Committee **noted** the report.

4.3. Sei whales

Requests from Council for advice from the Scientific Committee

There was one pending request to the Scientific Committee:

R-3.5.3 amended NAMMCO/19-2010: to assess the status of sei whales in West Greenland waters and the Central North Atlantic, and provide minimum estimates of sustainable yield.

At **NAMMCO/20-2011** the Management Committee noted that the response from the Scientific Committee implies that although an assessment of sei whales can in theory be conducted it is not likely to result in a realistic estimate of sustainable yield. This is primary due to the lack of recent abundance estimates that cover more than a fraction of the distribution area for this stock. Therefore the Management Committee recommended that the Scientific Committee monitors the development and proceeds with an assessment as soon as sufficient data become available.

Update from the Scientific Committee

Sei whales are not a priority species for the coming surveys for Greenland, Norway, and the Faroes, and Iceland have not yet decided on the matter.

Iceland informed the meeting that sei whales might be one of the target species depending on the how the next surveys are designed.

Conclusions by the Management Committee

The Management Committee **noted** the report, and **reiterated its recommendation** from last year that the Scientific Committee monitors the development and proceeds with an assessment if and when sufficient data become available.

4.4. Minke whales

Status of past proposals for Conservation and Management

In 2011, based on new abundance estimates, the Management Committee agreed that annual removals of 229 minke whales from the CIC (Central Iceland Coastal) area are sustainable and precautionary at least for the period 2011 – 2016.

Requests from Council for advice from the Scientific Committee

There was one ongoing request to the Scientific Committee:

R-3.3.4 - NAMMCO/17-2008: to conduct a full assessment, including long-term sustainability of catches, of common minke whales in the Central North Atlantic once results from the 2009 survey become available.

Update from the Scientific Committee

At **NAMMCO/19 2010** the Management Committee for Cetaceans recommended calculating, as soon as possible, catch limits based on running the RMP on the Central North Atlantic medium area, with catch cascade allocation of catches to small areas.

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However no progress has been made partially because the Icelandic quotas have not been fully utilised.

It was reported that the logistics and specifications of the Norwegian Minke Whale DNA Register have now been reviewed. The register gives information on:

- Data for 98.6% of the whales landed from 1997 to 2010
- Probability of match between two whales from 0.0006 to 0.00000003 (5 vs 8 loci)
- Allows for verification of traded whale products *via* matches to the register
- Application of similar registers to other species has been evaluated
- Iceland has established a similar register for fin and minke whales.

Norway informed the meeting that, in addition to being a data base to monitor whale products, the register has proven very useful in giving information on minke whale biology and behaviour that are relevant for management. Norway did not conduct sighting surveys (with minke whales as prime target species) in 2012, but intend to do so in 2013 to complete the current 6-year cycle.

Conclusions by the Management Committee

The Management Committee **noted** the report from the Scientific Committee

4.5 Narwhal – West Greenland

Requests for advice from the Scientific Committee

There were four ongoing requests to the Scientific Committee:

R-3.4.10 - NAMMCO/14-2005: future surveys for beluga and narwhal should be planned using the international expertise available through the Scientific Committee, and with input from hunters at the planning stage. In addition, if and when new survey methods are applied, they should be calibrated against previously used methods so that the validity of the survey series for determining trends in abundance is ensured.

R-3.4.9 - NAMMCO/15-2005: to provide advice on the effects of human disturbance, including noise and shipping activities, on the distribution, behaviour and conservation status of belugas, particularly in West Greenland. In 2009 (NAMMCO/18) it was further specified that there was no need for a broad assessment for all marine mammals, and that focus would be on walrus, narwhal and beluga (ongoing).

R-3.4.11 – NAMMCO/17-2008: to update the assessment of both narwhal and beluga when new data are available.

R-3.4.12 - NAMMCO/19-2010: to provide advice on sustainable takes for narwhal from the Kane Basin in spring, summer and fall.

Advice from the Scientific Committee

West Greenland

The SC agreed on the metapopulation structure for narwhals in Baffin Bay, Hudson Bay, and adjacent waters as a useful approach for identifying summer aggregations as management units in narwhals. The model includes seasonal movements with relationships between stocks and hunting localities and satellite tracking of whales that return to summering grounds the following year suggest inter-annual site fidelity, with summer aggregations to some extent being demographically-independent subpopulations with minimal or no exchange of animals.

Narwhals in Canada constitute 5 separate stocks with some limited exchange between 3 of the stocks. Coastal summer aggregations in Greenland constitute 2 stocks in addition to 2 fall-winter aggregations supplied by narwhals from several summering stocks. Several of the narwhal stocks are mixing on the wintering areas in Baffin Bay-Davis Strait, but mating most likely occur after the initiation of migration towards summering areas.

The Scientific Committee recommends that a small Working Group (WG) fully explore the allocation of harvest to summer aggregations before the next NAMMCO/JCNC JWG meeting.

Aerial surveys conducted in the North Water in May resulted in new fully corrected abundance estimates of 10,677 (95% CI: 6,120-18,620) narwhals in 2009 and 4,775 (95% CI: 2,417-9,430) in 2010.

New data on age structure were reviewed by the Scientific Committee and these data from hunts were found to be useful for assessment models by providing better estimates of population growth.

The assessments of West Greenland narwhals were updated with age-structured data, recent abundance estimates, and catches. Several scenarios of stock delineations and harvest allocations were explored, and the Scientific Committee agreed that the current quotas are sustainable. A new and updated advice is expected from the next NAMMCO/JCNC JWG meeting based on a metapopulation model.

Area	Current quotas
Inglefield Bredning	85
Melville Bay	81
Uummannaq	85
Disko Bay	59
Total	310

East Greenland

Satellite tracking shows that narwhals in East Greenland have a yearly migration where they leave the fjords and move off the coast in winter. Whales from the Scoresby Sound area seem to belong to a stock separate from other narwhal

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aggregations in East Greenland, and the Scientific Committee agreed that narwhals in Scoresby Sound (Ittoqqortoormiit) and Kangerlussuaq-Sermilik (Tasiilaq) should be treated as 2 separate stocks.

Abundance estimates from 2008 are

- Scoresby Sound: 3,900 (95% CI:13,100-1,160)
- Kangerlussuaq-Sermilik: 1,520 (95% CI:5,540-417)

Age-structure data from Ittoqqortoormiit were applied to assessments of both East Greenland areas, and the harvest was found to select for older animals. It was estimated that narwhals in the Ittoqqortoormiit area have increased slightly, while narwhals in the Tasiilaq/Kangerlussuaq area might be stable. The current growth rate in the absence of harvest was estimated between 1.2% (95% CI:0–3.5) and 3.7% (95% CI:1.6–5.9), depending upon model and area.

The Scientific Committee agreed on the following new advice with a 70% probability of increase:

- Scoresby Sound: total removal per year 70
- Kangerlussuaq-Sermilik: total removal per year 18

The Scientific Committee recommended continued work on survey correction factors, collection of age-data for improved assessments, studies for the estimation of struck and loss rates, and further development of assessment models.

R. 3-4-9

Little information is available on the response of marine mammal populations to changing Arctic conditions including sea ice, climate, prey species and increasing human development (seismic, shipping, drilling). It is recommended to organize an international symposium on the effects of seismic and other development activities on Arctic marine mammals with a focus on beluga and narwhal.

Greenland informed the meeting that it is following the scientific advice given by NAMMCO and has set a quota level with a 70% probability of continued growth.

Greenland noted that the USA is planning a workshop on the anthropogenic impact on cetaceans with a more general focus than the Scientific Committee is planning. It was emphasised that efforts should be made not to duplicate work.

Age Estimation Workshops for narwhal and beluga

Two workshops were held in December 2011 and concluded that counting of tooth growth layers can only be used for belugas and not routinely in narwhal tusk. Furthermore, contrary to what has been the assumption before, the now accepted standard is one annual growth layer group (GLG). The Scientific Committee recommends standardization among laboratories. For narwhal, the aspartic acid racemization technique has proven promising and the Scientific Committee

recommends it for beluga for calibration and also as an alternative method. A final growth layer reading exercise in beluga is planned for later in 2012.

Conclusions by the Management Committee

The Management Committee **noted** the report and the new advice of total removals from Scoresby Sound and Kangerlussuaq-Sermilik.

The Management Committee further **endorsed the Scientific Committee recommendation** to fully explore the allocation of harvest to summer aggregations of narwhals in West Greenland before the next NAMMCO/JCNB JWG meeting, and also its recommendations to continue its work in line with work on survey correction factors, collection of age-data for improved assessments, studies for the estimation of struck and loss rates, and further development of assessment models.

The Management Committee **encouraged** the Scientific Committee to further plan an international symposium on the effects of seismic and other development activities with focus on narwhal and beluga. The Management Committee **noted** that two age estimation workshops had been held and that a final growth layer reading exercise would take place later in 2012.

4.6 Beluga - West Greenland

Requests by Council for advice from the Scientific Committee

There were four ongoing requests to the Scientific Committee:

R-3.4.9 - NAMMCO/15-2005: to provide advice on the effects of human disturbance, including noise and shipping activities, on the distribution, behaviour and conservation status of belugas, particularly in West Greenland. In 2009 (NAMMCO/18) it was further specified that there was no need for a broad assessment for all marine mammals, and that focus would be on walrus, narwhal and beluga (ongoing).

R-3.4.10 - NAMMCO/15-2005: future surveys for beluga and narwhal should be planned using the international expertise available through the Scientific Committee of NAMMCO, and with input from hunters at the planning stage. In addition, if and when new survey methods are applied, they should be calibrated against previously used methods so that the validity of the survey series for determining trends in abundance is ensured (ongoing).

R-3.4.11 – NAMMCO/17-2008: to update the assessment of both narwhal and beluga when new data are available.

R-3.4.13 - NAMMCO/19-2010: to reconsider the temporal and geographical restrictions on the takes of beluga from West Greenland within the framework of the NAMMCO/JCNB JWG in view of recent dynamic changes in the environment.

Advice from the Scientific Committee

R-3.4-11

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The Somerset Island stock supplies the belugas overwintering off West Greenland and in the North Water (Qaanaaq), where the majority of the removals take place. Although there are not enough data to quantify the influx of belugas from Cumberland Sound to West Greenland, it is unlikely that these animals contribute significantly to the exploited winter aggregation in Greenland.

Catches in West Greenland declined during 1979-2011 from about 1,300 in the early 1980s to levels below 300 whales per year after 2004. There are no research plans for quantification of struck and lost rates in belugas.

There are no new survey estimates from West Greenland (next 2012).

Aerial surveys conducted in the North Water in May resulted in fully corrected abundance estimates of 2,008 (95% CI 1,050-3,850) beluga in 2009 and 2,482 (95% CI 1,439-4,282) in 2010.

The assessments of West Greenland beluga were updated with age-structured data, recent abundance estimates, and catches. Results from different scenarios provided annual growth rate estimates from 3.2% to 5%, in the absence of harvest. The depletion ratio for 2012 was estimated to 44% (95% CI:16%–88%), with a yearly replacement of 510 (95% CI:170–780) individuals.

The Scientific Committee agreed that the revised assessment confirmed that the current removals based on the 2009 advice are sustainable. Based on a 70% probability of population increase, it is concluded that a total annual removal of 310 belugas in West Greenland is sustainable (excluding Qaanaaq). A new updated advice is expected at the next meeting based on a new abundance estimates from the spring survey in 2012, and the Scientific Committee noted that new abundance estimates for assessments should be available at least every 10th year.

No specific advice was given on the North Water (Qaanaaq), since the current removals remain at a low level relative to the population size. No advice was given for the harvest in Canada.

R-3.4.13

The Scientific Committee reiterated the recommendations for seasonal closures to allow for the possible reestablishment of local aggregations of belugas:

- Northern area (Ummannaq, Upernavik and Qaanaaq): June through August
- Central area (Disko Bay): June through October
- Southern area (south of Disko Bay to 65°N): May through October.
- The area south of 65°N: closed for hunting.

The purpose of these is to allow for the possibility of reestablishment of local aggregations of belugas in Greenland.

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Greenland informed the meeting that it has set a quota of 310 animals with a 70% probability which includes Qaanaaq even though the NAMMCO advice is currently excluding Qaanaaq. Greenland is therefore looking forward to a new advice for the Qaanaaq area.

Hunters have reported observations of beluga in East Greenland but there are so far no confirmed observations in East Greenland and the assumption is that the observed animals may be from the Spitsbergen stock.

The Faroese commended Greenland for implementing its multi-year management plans.

Greenland reported that hunters are obliged to report struck and lost (S/L) animals but very few reports are received. In Greenland the reported S/L are deducted from the quota which probably does not increase the hunters' motivation for reporting. One of the conclusions from the NAMMCO/JCNCB JWG was to increase the effort to collect S/L data both in Canada and Greenland.

Greenland acknowledged the recommendations on seasonal closure and informed the meeting that it will discuss the implementation of this advice nationally.

Conclusions by the Management Committee

The Management Committee **noted** the report and that the total annual removal of 310 belugas in West Greenland is sustainable and **endorsed the recommendations** on seasonal closures.

4.7 Northern bottlenose whales

Update from the Scientific Committee

The Faroese T-NASS 2007 data have been analysed together with data from CODA for a model-based estimate of abundance.

The Faroe Islands informed that at the next meeting in the WG on Abundance estimates, the feasibility of generating an abundance estimate of northern bottlenose whales will be explored.

Conclusion by the Management Committee

The Management Committee **noted** the report.

4.8 Killer whales

Requests by Council for advice from the Scientific Committee

There is one pending request:

R-3.7.2-NAMMCO/13-2004: to review the knowledge on the abundance, stock structure, migration and feeding ecology of killer whales in the North Atlantic, and to provide advice on research needs to improve this knowledge. Priority should be given to killer whales in the West Greenland – Eastern Canada area.

Update from the Scientific Committee

Studies of the genetic differentiation of north Atlantic killer whales and acoustic signals produced by killer whales were conducted in Icelandic waters in 2011.

Conclusions by the Management Committee

The Management Committee **noted** the update.

4.9 Long-finned pilot whales

Requests by Council for advice from the Scientific Committee

There were two ongoing requests for advice from the Scientific Committee:

R-3.8.5 - NAMMCO/19–2010: to assess the status of long-finned pilot whales in West Greenland waters and provide minimum estimates of sustainable yield.

R-3.8.6 – NAMMCO/20-2011 to continue work to complete a full assessment of pilot whales in the North Atlantic and provide advice on the sustainability of catches, as soon as necessary further information becomes available, with particular emphasis on the Faroese area and East and West Greenland. In the short term, the Scientific Committee was requested to provide a general indication of the level of abundance of pilot whales required to sustain an annual catch equivalent to the annual average of the Faroese catch in the years since 1997.

Advice from the Scientific Committee

R-3.8.6: A full assessment of pilot whale around the Faroe Islands is unlikely to be conducted in the near future due to lack of necessary information. For the short term advice both the AWMP-C procedure (which has been used for preliminary advice for baleen whales in West Greenland by NAMMCO and the IWC), as well as the PBR approach, could be used to reflect precautionary estimates of the minimum abundance estimates required to sustain the Faroese hunt.

The annual average catch in the Faroes since 1997 is 678 animals . The AWMP-C procedure needs an abundance estimate of 50,000, and the PBR approach an abundance estimate of 80,000, to conclude that the Faroese hunt is sustainable. However, the geographical range of the stock(s) that supply the Faroese hunt is unknown, and it is unresolved how the calculated estimates compare with the accepted estimate of 128,000 (95% CI: 75,700-217,000) pilot whales from the Icelandic and Faroe Islands area of T-NASS.

The Scientific Committee reiterated its previous recommendations which were endorsed by the Management Committee for Cetaceans at NAMMCO/20-2011 for further research to improve the basis for providing more robust estimates of pilot whale abundance, which include:

- tracking animals from as many schools as possible
- additional work on trends, abundance, and stock structure
- timely implementation of a long-term monitoring programme.

The Faroe Islands welcomed the new precautionary estimates by the Scientific Committee of the minimum abundance estimates required to sustain the Faroese hunt. The Faroe Islands informed that satellite tracking will continue to explore the geographical range of the animals recruiting to the Faroese catches; data necessary for performing a full assessment. It was suggested that the Scientific Committee look at alternative work to solve and speed up the stock structure issue. A new trend analysis has been finalised, no significant trend was detected in abundance estimates between the survey years 1989, 1995 and 2007. The long term sampling programme is in the planning stage.

R-3.8.5: The average annual catch in West Greenland during 1993-2007 was 126 whales. An aerial survey conducted in 2007 gave an estimate of 7,440 animals (95% CI 3,014-18,367). Applying a PBR approach estimates a sustainable harvest level of around 50 whales per year, while the AWMP-C procedure gives an annual take of 70 whales. However, the survey did not cover the entire range of pilot whales in West Greenland. The summer aggregation in West Greenland cannot be considered an isolated stock, as it is likely connected to pilot whales along Labrador and at Newfoundland, and the occurrence and abundance in West Greenland is probably influenced by the sea temperature regimes in the area although the extent of this is not known.

Greenland welcomed the advice and informed the meeting that this will be included in the upcoming Executive Order on hunting and protection of small cetaceans.

Conclusions by the Management Committee

The Management Committee **noted** that it is unlikely that a full assessment of the pilot whales in the North Atlantic can be conducted in the near future.

For the West Greenland hunt it is difficult to reach any conclusion on sustainability because there is too little information on the inter-relation between animals in Labrador and Newfoundland. Never the less the advice from the Scientific Committee provides a minimum estimate of sustainable yield.

The Management Committee concluded that the minimum level of abundance of pilot whales required to sustain an annual catch equivalent to the annual average of the Faroese drive hunt is estimated to be in the range of 50,000 to 80,000 animals.

4.10 White-beaked, white-sided and bottlenose dolphins

Requests from Council for advice from the Scientific Committee

There was one pending request to the Scientific Committee:

R-3.9.6 - NAMMCO/13-2004: to carry out assessments of these species when sufficient information was available on stock delineation, distribution, abundance and biological parameters to initiate the work.

Advice from the Scientific Committee

The average annual catch of white-beaked dolphins in West Greenland during 1993-

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2007 was 30 dolphins. In 2007 an aerial survey estimated an abundance of 11,801 animals (95% CI 7,562-18,416). Applying a PBR approach suggests that the sustainable harvest level of white-beaked dolphins taken from this abundance would be around 125 whales per year.

In 2011 the first stranding of a bottlenose dolphin in Iceland was recorded, which is also the first confirmed record of the presence of bottlenose dolphins in Icelandic territorial waters.

The Faroe Islands has collected samples from the drive hunt of white-sided dolphins in 2001-2009 and the analyses will be finalised within the next couple of years.

Greenland welcomed the new advise which will be included in the before mentioned new Executive Order on small cetaceans.

Conclusions by the Management Committee

The Management Committee **noted** the report and that the annual catch of white-beaked dolphins in West Greenland is sustainable.

4.11 Harbour porpoise

Requests for advice from the Scientific Committee

There is one ongoing request to the Scientific Committee:

R-3.10.1 - NAMMCO/7-1997: to conduct a comprehensive assessment of the harbour porpoise throughout its North Atlantic range.

Advice from the Scientific Committee

Norway's total annual by-catch estimate of 6,900 harbour porpoises raises concerns that the by-catch of harbour porpoises in Norway may not be sustainable. It is therefore recommended to initiate an assessment of harbour porpoises in Norway that include *i)* reviewing the by-catch estimates *ii)* examining the relevant abundance estimates *iii)* assessing the need for coastal surveys of harbour porpoises in Norway *iv)* investigating the use of satellite tracking for stock delineation, and *v)* evaluating the use of acoustic deterrents (pingers) in the gillnet fishery in order to reduce the by-catch.

Greenland now has sufficient data for an assessment of harbour porpoises in West Greenland and both Iceland and the Faroe Islands have abundance estimates as well as some estimates of by-catch in Iceland.

It is therefore suggested that assessments of harbour porpoise be attempted for all areas. This will require at least two meetings, with the first meeting providing a full assessment for West Greenland, and initiating the process for Norway, including a review of the method used for obtaining total by-catch estimates. The second meeting should focus on by-catch in Norway and Iceland, attempt to finalize assessments for Norway, Iceland and the Faroes, and could, if feasible, evaluate methods for reducing by-catch.

Greenland welcome the proposed work and urges it to take place as soon as possible as harbour porpoises is by far the most hunted small cetacean in Greenland.

Norway supported the suggested plan to undertake an assessment. Today Norway does not have very good abundance estimates for harbour porpoises, and it is anticipated that in order to assess the sustainability of the by-catch of harbour porpoises substantial work remains to be done.

Conclusions by the Management Committee

The Management Committee **noted** the report and endorsed the plans to undertake an assessment of harbour porpoises for all areas.

4.12 Bowhead whale

Update by the Scientific Committee

A genetic mark-recapture estimate in West Greenland revealed an abundance in 2009 of 1410 bowhead whales (95% CI: 783-2038) confirming an increase of observed animals in previous aerial surveys. A new abundance estimate based on aerial surveys and genetic mark-recapture will be available later in 2012.

One male tagged in Disko Bay in May 2010 moved into the Northwest Passage where it spend a couple weeks in September 2010 in close proximity of a bowhead whale tagged in Alaska in spring the same year. Both returned to their normal seasonal range, but the excursions suggest that bowhead whales from the Pacific and the Atlantic occasionally may be connected in years with little sea ice in the Northwest Passage.

Given the increase in sightings it is suggested that abundance trends are monitored for the East Greenland - Svalbard population. Norway will continue the passive acoustic monitoring with two extra devices in the northern Fram strait and north of Svalbard.

Conclusions by the Management Committee

The Management Committee **noted** the report.

4.13 Sperm whale

Past proposals for Conservation and Management

In 2011 the Management Committee recommended the re-processing of the T-NASS 2007 survey acoustic data from Iceland.

Update by the Scientific Committee:

The Icelandic and Faroese data may be reanalysed at end of 2012 (paid for by NAMMCO), and data will then be available for the development of abundance estimates by Iceland and the Faroe Islands.

Conclusions by the Management Committee

The Management Committee **noted** the report.

5. T-NASS 2015 and Survey Planning

The most optimal year for a large scale coordinated survey is 2015. The survey plans for the different countries are generally similar to those of the last T-NASS survey, with some exceptions described in the main report.

Based on the Working Group report and with reference to Council's decision that a new large-scale T-NASS survey of cetaceans in the North Atlantic is desirable within the near future, the SC discussed how best to approach such a large scale survey effort.

Based on experience from past surveys agreement was reached on the following specifications for a proper survey that could inform and improve management decisions:

- The survey should to the extent possible cover the potential range of the target species to provide robust abundance estimates useful for management;
- The following species were identified as being targets: long-finned pilot whales, humpback whales, fin whales, sei whales and minke whales;
- The survey should include all previously surveyed areas and it should be designed so that shifts in occurrence can be detected and that previously non-surveyed areas are covered if they are considered potentially important for abundance estimation;
- Fully corrected abundance estimates should be developed for all the areas and this will include double-platform design of survey vessels and aircrafts;
- Early in the planning stage it should be attempted to include Canada and Russia and neighboring countries in surveying parts of the Atlantic to ensure that all important areas are covered intensively;
- The survey should be planned for 2015 to ensure sufficient time for preparations and because other areas of the Atlantic likely will be covered by surveys conducted by the US and by EU. Seasonal timing will be agreed upon at a later meeting.

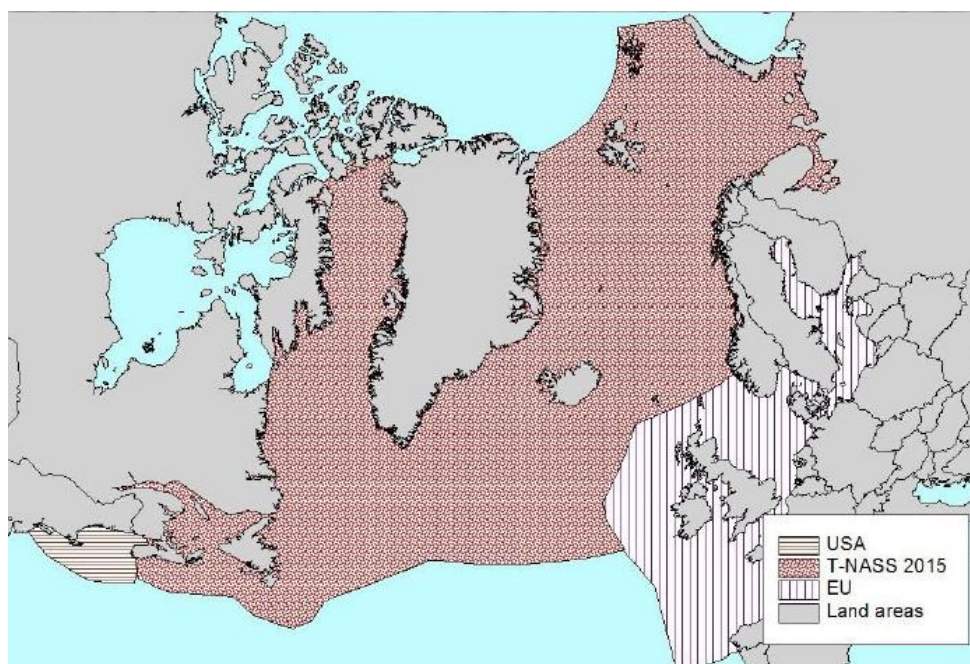


Figure 1. Proposed extent of the 2015 Trans-North Atlantic Sightings Survey (T-NASS-15).

The geographical extent of the survey is shown in Figure 1 above. In addition to areas covered in the past the following new areas were considered critically important to include in a TNASS-15 survey:

- The East Greenland shelf from Kap Farvel to about 80°N where significant numbers have been detected by platforms of opportunity in recent years;
- The offshore areas between the Labrador coast and the shelf areas of West Greenland that has not been surveyed in the past;
- The areas between Iceland and Jan Mayen should be surveyed in case it is not included in the Norwegian mosaic surveys, which is important for minke whales;
- Areas south of the Irminger Sea and generally south of 55°N where sei whales and pilot whales occur;
- Areas north of 70°N in West Greenland where recent catches of minke whales have been taken;
- Areas between east Iceland and Norway depending on the Norwegian mosaic survey effort;
- Areas in the northeast Barents Sea, Pechora Sea where Russian surveys have indicated increased presence of cetaceans.

Based on experience from past surveys the SC has estimated the costs for a large scale to be in the magnitude of 50mill NOK. In comparison the total cost of the T-NASS-07 survey was 30mill NOK, when corrected for inflation to 2012. Partial funding of the survey could cause gaps in coverage that will leave areas without data that cannot be

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included in the abundance estimates and will also reduce the options for detecting shift in abundance between areas and will hamper the assessment of whale stocks.

Aside from already planned national survey activities there are also plans for surveys of cetaceans funded by oil companies in areas where oil exploration is planned and there are also expected participations from Russia, Canada and other countries. However, the expenses for a large scale TNASS-15 cannot solely be covered by current national budgets or by NAMMCO funding. It is unlikely that funding for such an effort can be secured from scientific funding agencies and SC seeks the advice from the Council on if it is desired that SC continues its planning of a large scale TNASS-15 and on possible avenues for ensuring proper funding of the survey.

Conclusion from the Management Committee

The Management Committee emphasised that sighting surveys are of the outmost importance in order to be able to make abundance estimates and make informed management decisions with respect to hunting. The MC therefore requests the SC to continue their planning of T-NASS.

The economical aspects of T-NASS will be dealt with in FAC and the final discussions and deliberations was forwarded to Council.

10. Elections of officers

Ulla Svarrer Wang (Faroe Islands) was elected chair and Nette Levermann (Greenland) was elected vice-chair for the period 2012 – 2014.

AGENDA

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2. ADOPTION OF AGENDA
3. APPOINTMENT OF RAPPORTEUR
4. CONSERVATION AND MANAGEMENT MEASURES FOR WHALE STOCKS
 - 4.1 Fin whales
 - East-Greenland –Iceland stock*
 - West Greenland*
 - Faroe Islands*
 - Updates
 - 4.2 Humpback whales
 - Greenland*
 - Update
 - 4.3 Sei whales
 - Update
 - 4.4 Minke whales
 - Central North Atlantic*
 - West Greenland*
 - Updates
 - 4.5 Narwhal
 - West Greenland*
 - East 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
 - 4.6 Beluga
 - West 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 Northern bottlenose whales
 - Update
 - 4.8 Killer whales
 - Update
 - 4.9 Long-finned pilot whales
 - 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

Report of the Management Committee for Cetaceans

- 4.10 White-beaked, white-sided and bottlenose dolphins
 - Update
 - New proposals and recommendations for scientific research
 - Proposals for conservation and management
- 4.11 Harbour porpoise
 - 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
- 4.12 Sperm whale
 - Update
- 4.13 Bowhead whale
 - East Greenland - Svalbard*
 - West Greenland*
 - Update
 - New proposals and recommendations for scientific research
 - Proposals for conservation and management
5. T-NASS 2015 AND SURVEY PLANNING
6. PROCEDURES FOR DECISION-MAKING ON CONSERVATION AND MANAGEMENT MEASURES
7. ECOSYSTEM-BASED MANAGEMENT
8. USER KNOWLEDGE IN MANAGEMENT DECISION-MAKING
9. RELATED MANAGEMENT ISSUES⁴
 - 9.1 Marine mammal - fisheries interactions⁵
 - 9.2 Environmental questions
 - 9.3 By-catch data and monitoring
 - 9.4 Other topics
10. ELECTIONS
11. ANY OTHER BUSINESS

⁴ **Agenda Item 9:** These items have been placed separately from the individual species, because they overlap to varying extents with the work of other committees; items 9.1 – 9.3 incl. overlap with the Management Committee for Seals and Walruses, and will be discussed in a joint meeting of the two Management Committees; item 9.2 is also listed on the Council agenda.

⁵ **Agenda Item 9.1:** This item also includes Economic aspects of marine mammal – fisheries interactions and Multi-species approaches to management

LIST OF DOCUMENTS

Document no	Title	Agenda item
NAMMCO/21/MC/1	List of Documents	
NAMMCO/21/MC/2	Agenda	2.
NAMMCO/21/MC/3	Status of Past Proposals for Conservation and Management	4.
NAMMCO/21/MC/4	Summary of Requests by NAMMCO Council to the Scientific Committee, and Responses by the Scientific Committee	4.
NAMMCO/21/MC/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

Fin whales

Iceland:

The Management Committee for Cetaceans **reiterated previous recommendations** to carry out the simulation trials required to check if catch levels for 60% tuning are sustainable in the long term as soon as possible. It was further recommended that studies should be carried out to help distinguish between alternative stock structure hypotheses, using several different approaches such as genetics, satellite telemetry and photo-identification.

Narwhal

Greenland:

The Management Committee for Cetaceans **recommended** continued work on survey correction factors, collection of age-data for improved assessments, studies for the estimation of struck and loss rates, and further development of assessment models for the East Greenland narwhal.

The Management Committee for Cetaceans further **endorsed the recommendation** to fully explore the allocation of harvest to summer aggregations of narwhals in West Greenland before the next JWG meeting.

Beluga

Greenland:

The Management Committee for Cetaceans **reiterated previous recommendations** for seasonal closures to allow for the possible reestablishment of local aggregations of belugas:

1. Northern area (Ummannaq, Upernavik and Qaanaaq): June through August
2. Central area (Disko Bay): June through October
3. Southern area (south of Disko Bay to 65°N): May through October.
4. The area south of 65°N, closed for hunting.

Harbour porpoise

All countries:

The Management Committee for Cetaceans **recommended** that assessments of harbour porpoise be attempted for all areas. This will require at least two meetings, with the first meeting providing a full assessment for West Greenland, and initiating the process for Norway, including a review of the method used for obtaining total by-catch estimates. The second meeting should focus on by-catch in Norway and Iceland, attempt to finalize assessments for Norway, Iceland and the Faroes, and could, if feasible, evaluate methods for reducing by-catch.