

NAMMCO



Meeting of the Management Committee for Cetaceans

*2 April 2019
Tórshavn, Faroe Islands*

REPORT

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1. CHAIR'S OPENING REMARKS

The Chair of the NAMMCO Management Committee for Cetaceans (MCC), Nette Levermann (GL) welcomed the participants and noted some small changes in the time schedule.

2. ADOPTION OF AGENDA

The Chair noted that the NASS survey had not been included in the circulated agenda and proposed to take this item after the species updates. The agenda was adopted with this minor amendment.

3. CONSERVATION AND MANAGEMENT MEASURES FOR WHALE STOCKS

The Chair outlined the list of documents and drew particular attention to:

- NAMMCO/27/MC/05A summarising recent (from 2016) proposals for conservation and management and recommendations for research to member countries and responses to these.
- NAMMCO/27/MC/06 summarising active requests to the Scientific Committee and responses to these requests.

The Chair noted that she would be inviting member countries to provide updates from member countries under each of the agenda items and that these would be recorded in document NAMMCO/27/MC/05A and included as an Annex to this report. She also informed the management committee that the Vice Chair of the Scientific Committee (SC), Bjarni Mikkelsen, would present the information on cetaceans from the Scientific Committee report (NAMMCO/27/08) under each species.

3.1 FIN WHALE

3.1.1 Active Requests from Council

- **R-1.7.11 (ongoing):** *Develop estimates of abundance and trends as soon as possible once the survey has been completed, with the primary target species (fin, minke and pilot whales) as a first priority, and secondary target species as a second priority.*
- **R-1.7.12 (ongoing):** *Greenland requests the SC to give information on sustainable yield based on new abundance estimates expected from TNASS2015 for all large baleen whales in West Greenland waters*

3.1.2 Updates from the Scientific Committee

With regard to R-1.7.11, in 2018 at the 25th meeting of the SC (SC25) a revised abundance estimate for Iceland/Faroes was endorsed, with a total abundance of 36,773 (CV=0.17, 95% CI=25,811-52,392) fin whales, corrected for perception bias. Work to answer this request remains ongoing for Norway. It was noted that an overview of the status of all abundance estimates at the end of 2018 was available in Appendix 6 of the SC25 report.

In relation to R-1.7.12, SC25 noted that this work remains to be done for fin whales. However, it also noted that the IWC has agreed on the AWMP for fin whales in West Greenland and endorsed the resulting quotas.

SC25 was happy to note that in 2018, the IUCN issued a revision of their assessment of fin whales at a global level and the fin whale is no longer considered endangered (EN) but classified as vulnerable (VU) and increasing. In the national assessments of Iceland, Norway and Greenland it is classified as Least Concern (LC).

SC25 also heard that during the 2018 fin whaling season in Iceland, two anomalous whales were landed at the whaling station in Hvalfjordur. The whales had characteristics (e.g. colour pattern and

morphology) of both fin and blue whales. Genetic analysis showed that the whales were hybrids. In total, six fin-blue whale hybrids have been landed at Hvalfjordur since 1983 and two additional ones have been identified by biopsies taken in Icelandic waters. Most of these hybrids had a blue whale mother and fin whale father. The hybrids caught in 2018 were extracted from the quota as fin whales. There was also an update that there had been successful tagging efforts of fin whales in Norway.

3.1.3 Recommendations from the Scientific Committee

The Chair drew attention to document NAMMCO/27/MC/05A, noting that prior to NAMMCO 27, there was 1 proposal for conservation and management and 3 for research. Updates were given by Iceland and Greenland.

All recommendations and updates are recorded in document NAMMCO/27/MC/05A, which is also available as Annex 1 to this report.

Comments from Member Countries

Iceland informed that the government of Iceland recently issued quotas for 2019-2023 in accordance with advice from the NAMMCO SC. In 2018, the fin whale hunt resumed with a catch of 146 animals (including the 2 hybrids). There had been no catches for the two previous years.

Greenland pointed to their national progress report as containing information on quotas and catches for 2018. It was also noted that as part of the work by the Píkialasorsuaq commission in Qaanaaq and Upernavik areas, hunters have observed an increase in large whales in the northern areas.

3.1.4 Conclusion

The MCC noted the report of the SC and the updates provided on the existing proposals for conservation and management and recommendations for research. It also noted the new abundance estimate for Iceland/Faroes.

3.2 HUMPBACK WHALE

3.2.1 Active Requests from Council

- **R-1.7.11 (ongoing):** *Develop estimates of abundance and trends as soon as possible once the survey has been completed, with the primary target species (fin, minke and pilot whales) as a first priority, and secondary target species as a second priority.*
- **R-1.7.12 (ongoing):** *Greenland requests the SC to give information on sustainable yield based on new abundance estimates expected from TNASS2015 for all large baleen whales in West Greenland waters*
- **R-3.2.4-amended (ongoing):** *To conduct a formal assessment following the completion of the T-NASS...In addition the Scientific Committee is requested to investigate the relationship between the humpback whales summering in West Greenland and other areas and incorporate this knowledge into their estimate of sustainable yields of West Greenland humpback whales. **Amendment (NAMMCO/24):** adds the following text: "The SC is further asked to provide advice on future catch levels of humpback whales in West Greenland at different probability levels for a non-declining population evaluated over a 5 year period, similar to the procedure for the advice generated for beluga, narwhal and walrus. The advice should include the latest abundance estimate."*

3.2.2 Updates from the Scientific Committee

With regard to R-1.7.11, the work remains ongoing under the large whale assessment working group. SC25 endorsed a revised abundance estimate for Iceland/Faroes based on the 2015 data and the total abundance was 9867 (CV=0.37, 95% CI=4,854-20,058), which was corrected for perception bias.

For R-1.7.12 it was noted that advice was given on this under the IWC.

An update on tagging efforts in Iceland, East Greenland and Norway was provided.

SC25 had significant discussion on the amended request R-3.2.4 and provided a more detailed explanation and justification for its advice and choice of model. It noted that the MCC had challenged the appropriateness of using Strike Limit Algorithms (SLAs) due to fact that these have typically been based on 'needs statements'. SC25 described technical differences between the SLA and RMP. It then particularly emphasized that although the use of SLAs in the IWC requires 'needs statements', they can also be applied without such statements and that the advice generated by the SC was based on the humpback SLA without any use of such a needs statement. SC25 therefore reiterated its recommendation that SLAs provide the best scientific basis for advice on sustainable takes of large whales in Greenland. The SC therefore asked for further guidance on the status of R-3.2.4 on the basis of this update.

3.2.3 Recommendations from the Scientific Committee

The Chair drew attention to document NAMMCO/27/MC/05A, noting that prior to NAMMCO 27, there were 2 proposals for conservation and management (both of which had not been endorsed) and 1 for research. There was also one new recommendation for research from the SC. Updates were given by Iceland, Norway and Greenland.

All recommendations and updates are recorded in document NAMMCO/27/MC/05A, which is available as Annex 1 to this report.

New Recommendations for Research

- SC25 proposed that a workshop on humpback tagging projects across the Atlantic be organised in 2020 to coincide with the IWC meeting and that the NAMMCO Secretariat take responsibility for contacting relevant groups in the Caribbean region.

Comments from Member Countries & Observers

Norway provided further information on its satellite tagging, photo id and biopsy sampling efforts.

Greenland thanked the SC for its further explanation of the choice of SLAs and highlighted that the Government of Greenland does not support the use of needs statements within the context of NAMMCO, not only for advice on humpback whales but also for bowhead, fin and minke whales.

Japan supported Greenland that catch limits should be set by the best available scientific knowledge and not be based on needs statements.

The Chair asked if given the explanation from SC25, the previous proposals for conservation and management could now be endorsed and this was agreed to by all.

3.2.4 Conclusion

The MCC noted the report of the SC and agreed to endorse the proposals for conservation and management from previous years. The MCC also agreed that further work to address R-3.2.4-amended was no longer an urgent priority.

The MCC also endorsed the recommendation for a workshop on humpback tagging across the North Atlantic.

3.3 COMMON MINKE WHALE

3.3.1 Active Requests from Council

- **R-1.7.11 (ongoing):** *Develop estimates of abundance and trends as soon as possible once the survey has been completed, with the primary target species (fin, minke and pilot whales) as a first priority, and secondary target species as a second priority.*
- **R-1.7.12 (ongoing):** *Greenland requests the SC to give information on sustainable yield based on new abundance estimates expected from TNASS2015 for all large baleen whales in West Greenland waters*

3.3.2 Updates from the Scientific Committee

With regard to R-1.7.11, SC25 noted that this has been done, except for coastal areas of Iceland and that the Norwegian survey results will come in 2020. Work to develop a number of preliminary estimates was described and it was noted that SC25 endorsed an estimate for joint Central North Atlantic minke whale abundance of 48,016 (CV=0.23, 95% CI=30,709-75,078).

It also noted that in relation to R-1.7.12, advice had been generated through the IWC using a newly developed SLA for the hunt of common minke whales in West Greenland.

Comments from Member Countries

Norway provided further information on the Norwegian hunt of minke whales last year, noting that 11 vessels participated in the hunt, a quota of 1278 was available, and 454 animals were caught (including two struck and lost).

Iceland also provided an update on its minke whale hunt in 2018, noting that from a quota of 217, 6 animals were caught.

3.3.3 Recommendations from the Scientific Committee

The Chair drew attention to document NAMMCO/27/MC/05A, noting that prior to NAMMCO 27, there was 1 proposal for conservation and management and 1 for research. Updates on these were given by Iceland.

All recommendations and updates are recorded in document NAMMCO/27/MC/05A, which is available as Annex 1 to this report.

3.3.4 Conclusion

The MCC noted the SC report, the updates provided and the new abundance estimate.

3.4 BELUGA

3.4.1 Active Requests from Council

- **R-3.4.9 (ongoing):** *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*
- **R-3.4.11 (standing):** *To update the assessment of both narwhal and beluga*
- **R-3.4.14 (ongoing):** *To examine the data existing on beluga in East Greenland (sightings, strandings, by-catch and catch) and examine how this material can be used in an assessment process and advice on how this data can be improved.*

3.4.2 Updates from the Scientific Committee

With regard to R-3.4.9, SC25 noted that this work remains ongoing and that R-3.4.11 is regularly done by the NAMMCO-JCNB joint working group (JWG). SC25 also agreed with the proposal from the JWG that its next meeting be postponed from March 2019 until 2020.

For R3.4.14, SC25 noted that there is currently no data on strandings, by-catch or catch in East Greenland. There have been a few rare sightings (e.g. one sighting in NASS 2015) but there is not enough data to carry out an assessment or provide advice for beluga in East Greenland. The SC therefore considered this request to have now been answered.

The publication of the Global Review of Monodontids (GROM Report) was presented.

It was noted that new genetic research has revealed that a strange odontocete found in Disko Bay in the 1990s was a narwhal/beluga hybrid.

3.4.3 Recommendations from the Scientific Committee

The Chair drew attention to document NAMMCO/27/MC/05A, noting that prior to NAMMCO 27, there were 3 proposals for conservation and management (1 of which had not been endorsed) and 3 for research. Updates were given by Greenland. The chair noted that two of the previous proposals for conservation and management related to the Mary River project and had therefore been addressed under the MCJ.

All recommendations and updates are recorded in document NAMMCO/27/MC/05A, which is available as Annex 1 to this report.

Comments from Member Countries

Greenland noted that the 2019 quota of 340 animals follows the scientific recommendation. However, the Government of Greenland is not implementing the recommendation of seasonal closures because in the proposed area for this, there is disturbance from non-hunting related activities (e.g. shipping, commercial and recreational fisheries) and it is therefore of the opinion that to re-establish the population in this area, all of these non-hunting related activities would also have to be stopped and this is not feasible. Greenland noted that there may be some changes in the distribution of Greenland halibut in the Nuuk area that could also be having an impact on the population.

3.4.4 Conclusion

The MCC noted the SC report and that R-3.4.14 was now complete. It also agreed to the proposal from SC25 that next meeting of the JWG be postponed from March 2019 until 2020.

3.5 NARWHAL

3.5.1 Active Requests from Council

- **R-3.4.9 (ongoing):** *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; narwhal added at NAMMCO 23*
- **R-3.4.11 (standing):** *To update the assessment of both narwhal and beluga*

3.5.2 Updates from the Scientific Committee

With regard to R-3.4.9, SC25 noted that there is an ongoing study in Greenland that should inform this request. In regard to R-3.4.11, it noted that this is done regularly by the NAMMCO-JCNB JWG and it remains as a standing request.

An overview of recent research indicating that narwhal have a strong preference for water below 2°C was provided. Experimental work reporting reactions of narwhals to seismic activity was also noted as expected to contribute to the understanding of the effects of disturbance on the species.

In 2017, SC24 endorsed a proposal from the NAMMCO-JCNB JWG that three rather than two management areas should be recognized in East Greenland. MCC26 requested more information on the rationale for this proposal, as well as for the recommendations given regarding hunting prohibitions south of 68°N. SC25 responded to this by noting that the recommendation to recognize 3

separate management areas was made as a consequence of the fact that, despite intense coverage, no narwhals were seen south of 68°N (south of Kangerlussuaq) during the survey in 2016. The abundance of narwhals south of Kangerlussuaq was therefore considered as being so low that catches in this area would not be sustainable. The SC emphasised that the decline in abundance suggested by the 2008 and 2016 surveys was also supported by the declining population trajectory estimated by the assessment. The delineation of three management areas for East Greenland and hunting prohibitions south of 68°N were recommendations based on the precautionary principle as one way to avoid further depletion or, in worst-case, the eradication of local narwhal stocks.

SC25 expressed deep concern regarding the status of East Greenland narwhal stocks and a situation in which high catches continue for a declining population. It agreed that action on this issue was urgent and of high priority and strongly reiterated its previous recommendations and advice that catch quotas in Ittoqqortormiit and Kangerlussuaq should be reduced to less than 10 animals per year and no hunting be permitted south of 68°.

Comments from Member Countries

Greenland noted that there is ongoing work to improve hunt statistics, including the implementation of a new internet and app-based reporting system.

Greenland also noted that the quotas being used were in line with the management advice from 2015 but that the advice from 2017 had not been implemented since the government had been waiting for further information to be provided by the SC, which had now been received. The Executive Order regulating narwhals and beluga will be revised in 2019, due to changes in management units in East Greenland by the SC. It was emphasised that there are different views on this issue between hunters and scientists. The hunters believe that the number of narwhals is higher than that indicated by scientists. According to the law in Greenland, which requires governments to listen to advice from both hunters and scientists, the quota for narwhal was increased following pressure and advice from user organisations and municipalities. The additional allocated quotas were caught in Disko bay but not in Melville bay.

For East Greenland, it was noted that there had only been 1 management unit in 2012, with a proposal that this become 2 in 2015, followed by a proposal for 3 management units only two years later in 2017. This degree of change over such a short period of time makes it difficult for the hunters to believe in the accuracy of the scientific advice. It was also noted that dropping the quotas to the extent proposed by the scientific advice would create significant difficulties for the hunters.

Greenland also noted hunters had reported observing anatomical differences (different sizes and appearances) between narwhals and that this could point to different distributional ranges or sub-populations. Hunters have been asked to provide a detailed description of these difference and provide it to the Greenland Institute of Natural Resources (GINR).

It was also noted that a high numbers of narwhals were observed in Ittoqqortormiit in the summer 2018 and that this may be linked to disturbances coming from the increasing number of tourist cruises or from killer whales.

3.5.3 Recommendations from the Scientific Committee

The Chair drew attention to document NAMMCO/27/MC/05A, noting that prior to NAMMCO 27, there were 3 existing proposals for conservation and management (none of which has not been endorsed). SC25 also made 1 new recommendation for research.

All recommendations and updates are recorded in document NAMMCO/27/MC/05A, which is available as Annex 1 to this report.

New Recommendations for Research

- SC25 recommended that an *ad hoc* working group meeting on the population status of narwhal in East Greenland be convened and report its results to SC26 in 2019.

3.5.4 Conclusion

The MCC endorsed the recommendation for an *ad hoc* working group meeting on the population status of narwhal in East Greenland and based on the new information provided by SC25, agreed to endorse all three previous proposals for conservation and management.

3.6 SEI WHALE

3.6.1 Active Requests from Council

- ***R-1.7.12 (ongoing):*** Greenland requests the SC to give information on sustainable yield based on new abundance estimates expected from TNASS2015 for all large baleen whales in West Greenland waters
- ***R-3.5.3 amended (ongoing):*** assess the status of sei whales in West Greenland waters and the Central North Atlantic and provide minimum estimates of sustainable yield

3.6.2 Updates from the Scientific Committee

With regard to R-1.7.12, there was insufficient data to generate an abundance estimate for this species. This was because recent surveys have not specifically targeted sei whales and were too early in the season to generate a meaningful abundance estimate. R-3.5.3 has not been answered as there is no recent abundance estimate available to inform such an assessment.

A thesis on sei whale ecology and management in the North Atlantic was recently completed. It involved a comparison of genotypes from Iceland, Gulf of Maine and the Azores and indicated that there was low genetic divergence among the North Atlantic locations, which was consistent with the range of movement shown in tracking studies. However, the high level of uncertainty precluded the rejection of the presence of multiple stocks in the North Atlantic.

3.6.3 Recommendations from the Scientific Committee

The Chair drew attention to document NAMMCO/27/MC/05A, noting that prior to NAMMCO 27, there were no proposals for conservation and management or research. For reference, all recommendations and updates are recorded in document NAMMCO/27/MC/05A, which is available as Annex 1.

3.6.4 Conclusion

The MCC noted the SC report.

3.7 NORTHERN BOTTLENOSE WHALE

3.7.1 Active Requests from Council

There are no active requests for this species.

3.7.2 Updates from the Scientific Committee

SC25 noted that there was an unusual number of strandings in the eastern and northern parts of Iceland this summer (14 strandings in 10 different episodes, as well as 4 strandings of other beaked whales). There was also 3-4 strandings of bottlenose whales in Norway during the same period and news of an unusually high number of beaked whale strandings in the UK and Ireland.

It was also noted that bottlenose whales interact with the cod longline fishery in the Barents Sea.

Comments from Member Countries

Iceland provided an update that the unusually high number of stranding events continued into the autumn and there is now participation from Iceland in a collaborative effort between scientists in the north east Atlantic to take samples and investigate any potential connection of these stranding events to military activities known to take place around the same time. Data has been given to the UK scientists who are leading the follow up research. The news of the strandings was delivered via the established stranding network of the Marine and Freshwater Research Institute (MFRI).

3.7.3 Recommendations from the Scientific Committee

The Chair drew attention to document NAMMCO/27/MC/05A, noting that prior to NAMMCO 27, there were no proposals for conservation and management or research. SC25 made one new recommendation for research. For reference, all recommendations and updates are recorded in document NAMMCO/27/MC/05A, which is also available as Annex 1 to this report.

New Recommendations for Research

- SC25 recommended that an analysis of sighting data from 2015 be done.

3.7.4 Conclusion

The MCC noted the SC report and endorsed the recommendation that an analysis of sighting data from 2015 be carried out.

3.8 KILLER WHALE

3.8.1 Active Requests from Council

- ***R-3.7.2 (ongoing):*** *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.*

3.8.2 Updates from Scientific Committee

With regard to R-3.7.2, SC25 noted that this review had now been completed and the resulting advice formulated as recommendations for research.

The review provided by Jourdain and colleagues (SC/25/18) noted that research in some of the most highly investigated regions (including Norway and Iceland) has enabled a better understanding of occurrence patterns, major food sources, abundance and population structuring of North Eastern Atlantic killer whales. However, in contrast, much less is known about killer whales occurring in the middle and Western Atlantic. The review concluded that: a) there is a marked imbalance of published research across regions and topics; b) that there and urgent need for research on abundance and population structure off Eastern Canadian Arctic, Newfoundland–Labrador and both West and East Greenland; and c) across most regions, conservation status assessments have not been conducted, highlighting a need for ongoing and future studies to collect the information required to undertake these assessments.

SC25 also discussed the recently published paper by Desforges and colleagues (SC/25/FI/29) on the impact of pollutant on global killer whale populations and a working paper critically reviewing this article by SC member Witting (SC/25/20).

It was noted that the research indicated that killer whales in Norway, Iceland and southeast Greenland are closely related but that the populations in Norway and Iceland are predominantly fish eaters while those in southeast Greenland feed on marine mammals. The research also reported significantly higher levels of PCBs in killer whales from southeast Greenland. The article concluded that 10 out of 19 killer whale populations globally have a moderate or high risk of extinction in the future due to high levels

of PCB pollution negatively affecting their reproductive capacity and that the threatened stocks would either be living in some of the most polluted areas or feeding on marine mammals. This means that while killer whales around Norway and Iceland may be doing well, those feeding on marine mammals around southeast Greenland are at a high risk of decline.

The response to this article presented in the working paper from Witting (SC/25/20) suggested that the claimed high risk of decline or extinction could be due to an unrealistically low maximum growth rate being used in the model (0.88% compared to levels of 2-2.5% from other studies), and that applying higher rates of increase would have made the predicted decline unwarranted.

SC25 requested clarification on the management objectives for killer whales and noted that there is currently insufficient information to perform an assessment of the sustainability of the harvest in Greenland. Since it would take several years to obtain the necessary information, the hunt should be regulated in a precautionary way.

Comments from Member Countries

Greenland made a statement relevant for all small cetaceans, except narwhal and beluga. This was that they are currently working on a new executive order for the hunting of small cetaceans, which is expected to be sent to public hearing later this year. This will include killer whales, harbour porpoise, pilot whales and other small cetaceans and will be formulated in the same way as for narwhal and beluga, with the possibility to set quotas and requirements for reporting catches and struck and lost. There have also been discussions with the Institute of Natural Resources to prioritise killer whale reporting since catches for consumption (both human and animal consumption) have increased. The increased consumption of killer whales poses a human health concern due to the high level of PCBs that have been documented. There is now a proposal to use this information to support advice to stop the killer whale hunt.

Since it is only Greenland that hunts killer whales, the Chair asked Greenland to specifically answer the question related to clarifying management objectives. Greenland answered that the killer whale has not traditionally been targeted but is now being caught, particularly in northeast Greenland. Greenland referred to the information already provided on the new executive order under development. Narwhal and Beluga have a block quota, with an aim to have a 70% chance of increase. The same approach will be applied to small cetaceans but given the high level of PCBs, there will be a recommendation not to hunt or eat killer whales. This means that there are no plans to develop management objectives.

3.8.3 Recommendations from the Scientific Committee

The Chair drew attention to document NAMMCO/27/MC/05A, noting that prior to NAMMCO 27, there was 1 proposal for conservation and management and 2 recommendations for research. Updates on these were given by Iceland and Norway. SC25 also made 2 new proposals for conservation and management and 2 new recommendations for research.

All recommendations and updates are recorded in document NAMMCO/27/MC/05A, which is available as Annex 1 to this report.

New Proposals for Conservation & Management

- SC25 proposed that catch records in Greenland should be validated and reporting (including struck and lost) should be improved and included in existing mandatory schemes.
- SC25 proposed that Greenland regulate the hunt and restrict quotas in a precautionary way.

New Recommendations for Research

- SC25 recommended that further monitoring and sampling occur in all NAMMCO countries and pollutant and genetic analyses be conducted.

- SC 25 recommended that further research on abundance and population structure in the West Atlantic be conducted.

3.8.4 Conclusion

The MCC noted the SC report, welcomed the review that had been conducted and agreed that request R-3.7.2 had now been answered. The MCC also endorsed the new proposals for conservation and management and recommendations for research.

3.9 PILOT WHALE

3.9.1 Active Requests from Council

- **R-1.7.11 (ongoing):** *Develop estimates of abundance and trends as soon as possible once the survey has been completed, with the primary target species (fin, minke and pilot whales) as a first priority, and secondary target species as a second priority.*
- **R-3.8.6 (ongoing):** *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 SC 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.*

3.9.2 Updates from Scientific Committee

With regard to R-1.7.11, a new abundance estimate was endorsed by SC25 for Iceland/Faroes (revised 2015) with a total abundance of 344,148 (CV=0.35, 95% CI=162,795-727,527) pilot whales. This estimate had been corrected for perception bias. SC25 noted that there was no significant trend in the numbers of individuals or groups of long finned pilot whales in either the 6 or 3 Survey Index Regions, and no consistent trend over the 28 years period from 1987 to 2015.

For R-3.8.6, SC25 noted that this work is ongoing and will be addressed under the pilot whale WG planned for 2020. It emphasized that it would be valuable to have an external expert as invited chair.

A summary of recent research with satellite transmitters was presented and it was noted that tagging efforts in the Faroe Islands will continue.

The IUCN review of assessments of pilot whales changed their status from Data Deficient (DD) to Least Concern (LC). The IUCN review noted that no declines have been detected in the harvested populations, which SC25 emphasized as a positive development.

Comments from Member Countries

The Faroe Islands stated that it looks forward to the conclusion of the pilot whale assessment as this is the primary species targeted in the drive hunts.

3.9.3 Recommendations from the Scientific Committee

The Chair drew attention to document NAMMCO/27/MC/05A, noting that prior to NAMMCO 27 there was 1 previous recommendation for research and that SC25 had made 1 new recommendation for research. All recommendations and updates are recorded in document NAMMCO/27/MC/05A, which is also available as Annex 1 to this report.

New Recommendations for Research

- SC25 recommended that a pre-assessment meeting for the pilot whale working group be held to ensure that the data necessary for performing an assessment is available.

3.9.4 Conclusion

The MCC noted the SC report and the new abundance estimate. It endorsed the recommendation that a pre-assessment meeting be held prior to the PWWG to ensure that all the necessary data for an assessment is available.

3.10 WHITE-BEAKED, WHITE-SIDED AND BOTTLENOSE DOLPHIN

3.10.1 Active Requests from Council

- *R-3.9.6 (ongoing): To carry out assessments of dolphin species.*

3.10.2 Updates from Scientific Committee

With regard to R-3.9.6 SC25 noted that there are abundance estimates and catch data available, however, it did not consider performing assessments for dolphin species a priority due to assessments of other species being deemed more urgent. The SC recommended that Council consider whether this request remains valid and what priority it should be given.

New abundance estimates for white-sided and white-beaked dolphins were endorsed by SC25. White-sided dolphins: Iceland/Faroes revised 2015 = total abundance 131,022 (CV=0.73, 95% CI=35,251-486,981), corrected for perception bias. White-beaked dolphins: Iceland/Faroes revised 2015 = total abundance 159,000 (CV=0.63, 95% CI=49,957-506,054), corrected for perception bias.

SC25 noted that there had been increased catches of white-beaked dolphins in East Greenland due to shrinking ice and perhaps in part, a decrease in the numbers of narwhals available in the area.

Comments from Member Countries

The Faroe Islands asked for clarification as to why the SC did not see R-3.9.6 as a priority, given that white-sided dolphins are one of the species hunted in the Faroe Islands. The removals of white-beaked dolphins taking place in Greenland was also noted. The Vice Chair of the SC stated that the suggestion that R-3.9.6 may not be considered a priority was related to the existing workload for performing assessments. The Faroe Islands expressed that it considers this request as still valid, especially for white-sided dolphins, and that the SC should not consider this assessment as any less urgent or of lower priority than other requests for assessments.

3.10.3 Recommendations from the Scientific Committee

The Chair drew attention to document NAMMCO/27/MC/05A, noting that prior to NAMMCO 27, there were no proposals for conservation and management or research. For reference, all recommendations and updates are recorded in document NAMMCO/27/MC/05A, which is available as Annex 1 to this report.

3.10.4 Conclusion

The MCC noted the SC report and the new abundance estimates. It concluded that performing assessments of dolphin species remained a valid request and had the same level of priority as assessments of other species for which there are removals.

3.11 HARBOUR PORPOISE

3.11.1 Active Requests from Council

- *R-3.10.1 (ongoing): To perform a comprehensive assessment of the species throughout its range, which might include distribution and abundance, stock identity, biological parameters, ecological interaction, pollutants, removals and sustainability of removals.*

3.11.2 Updates from Scientific Committee

With regard to R-3.10.1, SC25 noted that this request would be specifically addressed during the NAMMCO/IMR International Workshop on the Status of Harbour Porpoises in the North Atlantic (held in Tromsø in December 2018) and the harbor porpoise working group (held in Copenhagen in March 2019). Summaries of the terms of reference for both of these meetings was provided and it was noted that the results of both events will be reported to SC26 and CN28.

An overview of relevant ongoing research was presented. This included: a) a recently completed PhD thesis in Greenland, b) an ongoing genetic mark-recapture kinship analysis (with the potential to help estimate abundance and trends) in Iceland, and c) the genetic analysis and fjord system surveys taking place in Norway. It was also noted that although it is legal to harvest harbour porpoise in the Faroes, there is no tradition for this and it is mandatory to report catches.

Comments from Member Countries

Norway asked a question of what was being referred to by the phrase “throughout its range” in R-3.10.1. The Vice-Chair of the SC stated that this should be interpreted as referring to the area of relevance to NAMMCO member countries. The Chair highlighted that in the full text of the original request it specified a focus on the North Atlantic.

Norway noted that at the Tromsø workshop two assessments were performed for the area along the Norwegian coastline, one for the North Sea and one for the area above 62 degrees North. However, three genetic studies have been conducted and all came to the same conclusion that there is no defined stock boundary along the Norwegian coast, only differences linked to separation by distance. On the basis of this, it recommended that in the future, stock assessments be done for the whole Norwegian coast, including for the Barents Sea. Abundance estimates are now available to support such an assessment.

Greenland noted that when the executive order for small cetaceans that is currently under development is finalised, it will include a priority list for management for the 6 small cetaceans (not including narwhal and beluga). This will include the killer whale as top priority, followed by the harbour porpoise, pilot whale, bottle nose whale and then the dolphin species.

3.11.3 Recommendations from the Scientific Committee

The Chair drew attention to document NAMMCO/27/MC/05A, noting that prior to NAMMCO 27, there was 1 proposal for conservation and management and 3 recommendations for research. It was noted that SC25 also reiterated the previous recommendation that a combined genetic analysis with samples from all NAMMCO countries be performed. Updates on these proposals and recommendations were given by Iceland and Norway. The Chair noted that R-3.10.1 was older than 10 years, however, since the work remained ongoing, the MCC agreed to renew the request.

All recommendations and updates are recorded in document NAMMCO/27/MC/05A, which is also available as Annex 1 to this report.

3.11.4 Conclusion

The MCC noted the SC report and looked forward to receiving more information from the workshop and working group at the next meeting. The MCC also agreed to renew R-3.10.1.

3.12 SPERM WHALE

3.12.1 Active Requests from Council

There are no active requests for this species.

3.12.2 Updates from Scientific Committee

SC25 endorsed two abundance estimates for the sperm whale. Iceland/Faroes 2007: total abundance 12,220 (CV= 0.38, 95% CI= 5,807-25,717). This was corrected for perception bias, but not availability bias. Iceland/Faroes revised 2015: total abundance 23,166 (CV= 0.59, 95% CI= 95 7,669-68,709). This was corrected for perception bias, but not availability bias. It was noted that Norway intends to finish the estimates from previous surveys in the near future.

3.12.3 Recommendations from the Scientific Committee

The Chair drew attention to document NAMMCO/27/MC/05A, noting that prior to NAMMCO 27, there was 1 recommendation for research.

All recommendations and updates are recorded in document NAMMCO/27/MC/05A, which is also available as Annex 1 to this report.

3.12.4 Conclusion

The MCC noted the SC report and the new abundance estimates.

3.13 BOWHEAD WHALE

3.13.1 Active Requests from Council

There are no active requests for this species.

3.13.2 Updates from the Scientific Committee

An update of recent tagging efforts and research was provided. An affinity to the cold polar masses in Baffin Bay was shown by 100 tracked bowhead whales that left the West Greenland feeding grounds in spring when sea temperatures were rising. Nine whales were tagged from helicopter in August/September close to the Greenland coast at 79-80°N. Animals from the Fram Strait spread throughout the assumed distributional area; from the east coast of Greenland via Svalbard into western Russian waters. It was also noted that tagging efforts off Spitsbergen will continue, that there is an intention to conduct a mark-recapture abundance analysis in West Greenland as an input to the IWC, and Canada plans to conduct another survey in 2020 for the high arctic that will include bowhead whales.

Comments from Member Countries & Observers

Greenland noted that the stock in West Greenland is shared with Canada but there have been no catches in Greenland over the last three years.

Canada provided an update on the Inuit subsistence hunt of bowheads in 2018. A small Inuit subsistence harvest of Eastern Canada-West Greenland (EC-WG) bowhead whales occurs annually in Canadian waters. This fishery is subject to provisions of the Nunavut Agreement (NA), the Nunavik Inuit Land Claims Agreement (NILCA), the Fisheries Act and its supporting regulations.

A community's bowhead harvest is licenced by Fisheries and Oceans Canada (DFO) only if the associated Hunt Plan has been approved by the appropriate Regional Wildlife Organization. The DFO Marine Mammal Fishing Licence authorizes individual Hunt Captains "...to hunt and land one, or strike two bowhead whales whichever occurs first." The primary killing device is the penthrite grenade. Unused strikes cannot be carried over between years.

In the eastern Canadian Arctic, the combined maximum take is now seven (7) EC-WG bowhead whales per year. Of these, five (5) are allocated within the Nunavut Settlement Area and two (2) within the Nunavik Marine Region.

During the most recent 4-year interval (2015-2018), a combined total of eight (8) bowhead hunts were conducted and 7 bowheads were successfully landed (see chart below).

To date, two (2) bowhead harvests have been allocated for 2019 within the Nunavut Settlement Area. The remaining harvest allocation decisions within Nunavut Settlement Area and the Nunavik Marine Region are pending approval.



Year	Community	Harvested	Struck	Landed	Sex	Length (m)
2015	Naujaat, NU	16-Sep-2015	1	1	F	14.00
2015	Hall Beach, NU	02-Sep-2015	1	0	-	n/a
2016	Igloolik, NU	20-Aug-2016	1	1	F	8.23
2016	Pangnirtung, NU	09-Sep-2016	1	1	F	11.74
2017	Kangiqtusuaq, QC	31-Aug-2017	1	1	F	14.00
2018	Coral Harbour, NU	28-Jun-2018	1	1	F	8.00
2018	Naujaat, NU	26-Aug-2018	1	1	F	17.0
2018	Iqaluit, NU	15-Aug-2018	1	1	F	10.0

3.13.3 Recommendations from the Scientific Committee

The Chair drew attention to document NAMMCO/27/MC/05A, noting that prior to NAMMCO 27, there were no proposals for conservation and management or recommendations for research for this species. For reference, recommendations and updates are recorded in document NAMMCO/27/MC/05A, which is also available as Annex 1 to this report.

3.13.4 Conclusion

The MCC noted the SC report and the update from Canada.

3.14 BLUE WHALE

3.14.1 Active Requests from Council

- **R-1.7.12 (ongoing):** Greenland requests the SC to give information on sustainable yield based on new abundance estimates expected from TNASS2015 for all large baleen whales in West Greenland waters

3.14.2 Updates from Scientific Committee

With regard to R-1.7.12, it was noted that a new abundance estimate had been endorsed by SC25 for the NASS area but there was no abundance estimate available for the western Atlantic. Iceland/Faroes revised 2015: total abundance = 3000 (CV= 0.4, 95% CI=1377-6534), corrected for perception bias. There was not enough information to determine trends.

It was noted that the IWC recommended that an estimate of blue whales be generated through the use of photo ID catalogues and had requested participation from Iceland, the US and Canada.

It was noted that three tags had been deployed and four biopsies collected in Norway and that there was an intention to continue tagging efforts in Svalbard.

Comments from Member Countries

Greenland noted that there is no intention to start hunting blue whales so request R-1.7.12 does not need to be continued for this species.

3.14.3 Recommendations from the Scientific Committee

The Chair drew attention to document NAMMCO/27/MC/05A, noting that prior to NAMMCO 27, there were no proposals for conservation and management or recommendations for research for this species.

For reference, all recommendations and updates are recorded in document NAMMCO/27/MC/05A, which is also available as Annex 1 to this report.

3.14.4 Conclusion

The MCC noted the SC report and the new abundance estimate.

3.15 ABUNDANCE ESTIMATES WORKING GROUP & SURVEYS

3.15.1 Updates from Scientific Committee

An overview of the status of the abundance estimates from the abundance estimates working group (AEWG) 2018 was presented. It was noted that significant progress had been made and that the AEWG suggests that the remaining analysis and revisions may be completed and presented at the next WG meeting in Autumn 2019. The completion and endorsement of these estimates would mean that the data collected through the TNASS 2007 and NASS 2015/16 surveys, as well as the Norwegian mosaic surveys, would have all been analysed. This represents considerable progress. SC25 commended the work done and encouraged that the final steps be taken to conclude the analysis in 2019.

An update on ongoing research projects was provided. This included a UK based project on oceanographic features driving decadal-scale changes in cetacean distribution and abundance in the North Atlantic and a US based project mapping density of cetaceans in the North Atlantic at different times of the year. It was noted that there are plans to finalise this project within the next three months and that financial support had been provided by NAMMCO in June and November 2018.

The new cooperation between NAMMCO and the IWC regarding AEWGs was presented. This initiative is based on an agreement between the SC and CN that a formal cooperation between NAMMCO and the IWC would be beneficial for ensuring agreement on criteria for endorsing abundance estimates. As a first step in this cooperation, the Chair of the AEWG in each organization will participate in the meetings of the other. This began in May 2018. SC25 welcomed this cooperation and saw it as particularly beneficial for supplementing the expertise of each WG, reducing duplication of work, and ensuring common agreement on adopted estimates.

CN26 charged the SC to begin the planning of the next survey and prepare a tentative budget to be submitted to CN27, supporting Russian participation as well as a western extension so that a new trans-Atlantic NASS could be achieved, noting that collaboration with other European and American surveys

should also be favoured. The AEWG provided recommendations for the next survey related to its extent, timing and priorities. SC25 decided that it was important to discuss the rationale behind this series of surveys, their frequency and whether another form should be adopted, possibly with specific surveys answering specific questions of importance. It noted that the RMP of IWC requires updates every 8 years, which would require the next survey be done in 2023. During SC25, Canada indicated that they would conduct a large cetacean survey in 2026 in the North West Atlantic. SC25 agreed that if such a series of surveys is to be continued, the best year would be 2023, although this could wait until 2026 if efforts in the North West Atlantic should be joined. The SC therefore requested further input from Council and deferred the discussion on focus, timing, and budget to its next meeting.

3.15.2 Recommendations from the Scientific Committee

The Chair drew attention to document NAMMCO/27/MC/05A, noting that prior to NAMMCO 27, there were two recommendations for research related to surveys. SC25 made three new recommendations for research. Updates were provided by Iceland.

All recommendations and updates are recorded in document NAMMCO/27/MC/05A, which is also available as Annex 1 to this report.

New Recommendations for Research

- Given that performing surveys is a costly and time-consuming exercise, SC25 requested input from Council on: a) the desired timing (2022-2023 or 2026 to join the North West Atlantic), and b) the scope of these surveys (e.g. should they be species specific) before further planning.
- SC25 recommended that the cooperation with the IWC continue and that a joint survey database be developed and hosted by NAMMCO.
- SC25 supported the recommendation from the AEWG that a workshop on novel methods for abundance surveys and estimations be held before the next NASS.

Comments from Member Countries

Iceland noted that there is a trade-off associated with either timing, however, its preference was that the next survey take place in 2023. This was noting that deferring the next survey until 2026 to coordinate with the US/Canada would mean not meeting the requirements of the RMP for updates every 8 years.

3.15.3 Conclusion

The MCC endorsed the new recommendations for research and agreed that 2023 was the most desirable year for the next survey to be conducted.

4. ANY OTHER BUSINESS

There was no other business.

5. CLOSING REMARKS

The chair thanked the delegates and observers for their participation and closed the meeting.

APPENDIX 1: DRAFT AGENDA**MANAGEMENT COMMITTEE FOR CETACEANS***2 April 2019, Tórshavn, Faroe Islands***DRAFT ANNOTATED AGENDA**

AGENDA ITEMS	DOCUMENT REFERENCE
1. CHAIRMAN'S OPENING REMARKS	
2. ADOPTION OF AGENDA	
3. CONSERVATION AND MANAGEMENT MEASURES FOR WHALE STOCKS	
3.1. Fin whale	NAMMCO/27/08, Item 9.1 NAMMCO/27/MC/05 NAMMCO/27/MC/06, R-1.7.11, R-1.7.12
3.2. Humpback whale	NAMMCO/27/08, Item 9.2 NAMMCO/27/MC/05 NAMMCO/27/MC/06, R-1.7.12, R-3.2.4-amended
3.3. Common minke whale	NAMMCO/27/08, Item 9.3 NAMMCO/27/MC/05 NAMMCO/27/MC/06, R-1.7.11, R-1.7.12
3.4. Beluga	NAMMCO/27/08, Item 9.4 NAMMCO/27/MC/05 NAMMCO/27/MC/06, R-3.4.9, R-3.4.11, R-3.4.14
3.5. Narwhal	NAMMCO/27/08, Item 9.5 NAMMCO/27/MC/05 NAMMCO/27/MC/06, R-3.4.9, R-3.4.11
3.6. Sei whale	NAMMCO/27/08, Item 9.6 NAMMCO/27/MC/05 NAMMCO/27/MC/06, R-1.7.12, R-3.5.3 amended
3.7. Bottlenose whale	NAMMCO/27/08, Item 9.7 NAMMCO/27/MC/05
3.8. Killer whale	NAMMCO/27/08, Item 9.8 NAMMCO/27/MC/05 NAMMCO/27/06, R-3.7.2
3.9. Pilot whale	NAMMCO/27/08, Item 9.9

	NAMMCO/27/MC/05 NAMMCO/27/MC/06, R-3.8.6
3.10. White-beaked, white-sided and bottlenose dolphin	NAMMCO/27/08, Item 9.10 NAMMCO/27/MC/05 NAMMCO/27/MC/06, R-3.9.6
3.11. Harbour porpoise	NAMMCO/27/08, Item 9.11 NAMMCO/27/MC/05 NAMMCO/27/MC/06, R-3.10.1
3.12. Sperm whale	NAMMCO/27/08, Item 9.12 NAMMCO/27/MC/05
3.13. Bowhead whale	NAMMCO/27/08, Item 9.13 NAMMCO/27/MC/05
3.14. Blue whale	NAMMCO/27/08, Item 9.14 NAMMCO/27/MC/05 NAMMCO/27/MC/06, R-1.7.12
4. ANY OTHER BUSINESS	

ANNOTATIONS

Agenda Item 3

The Vice Chair of the Scientific Committee will report from the relevant discussions in the Scientific Committee under each species, which will follow the document NAMMCO/27/08 *Report of the 25th meeting of the Scientific Committee*.

The Vice Chair will also present information regarding the Scientific Committee's responses to ongoing or standing requests for advice from Council. The requests from Council are numbered using the format R-X.Y.Z. The request numbers are listed in the agenda above while the full text of the request can be found in the document NAMMCO/27/MC/06 *Summary of Requests by NAMMCO Council to the Scientific Committee, and Responses by the Scientific Committee*.

New proposals and recommendations from the Scientific Committee to the Management Committee will be presented, as outlined in document NAMMCO/27/MC/05-A *Recent Proposals for Conservation and Management and Research Recommendations*. Document NAMMCO/27/MC/05-B is an overview of all such proposals prior to 2016.

The Management Committee will discuss updates from the member countries on the proposals for conservation and management measures under each species and if agreed upon, propose new measures.

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APPENDIX 3: LIST OF DOCUMENTS

DOCUMENT NO	TITLE	AGENDA ITEM
NAMMCO/27/MC/01	Joint List of Documents for the Management Committees	
NAMMCO/27/MC/02	Draft Agenda MCJ	
NAMMCO/27/MC/03	Draft Agenda MCSW	
NAMMCO/27/MC/04	Draft Agenda MCC	
NAMMCO/27/MC/05-A	Recent (from 2016) proposals for Conservation and Management and Research Recommendations	MCJ, MCC, MCSW
NAMMCO/27/MC/05-B	Proposals for Conservation and Management and Research Recommendations up to 2016	MCJ, MCC, MCSW
NAMMCO/27/MC/06	Summary of Requests by NAMMCO Council to the Scientific Committee, and Responses by the Scientific Committee	MCJ, MCC, MCSW
NAMMCO/27/08	Report of the 25th Meeting of the Scientific Committee	MCJ, MCC, MCSW

MC: Management Committee

MCJ: Joint Meeting of the Management Committees

MCC: Management Committee for Cetaceans

MCSW: Management Committee for Seals and Walruses