

Proceedings of the RAP Meeting on Baffin Bay and Hudson Bay Narwhal

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Introduction

The Resource Assessment Process (RAP) meeting to discuss eastern Arctic narwhal stocks was held in Iqaluit, N.W.T. in conjunction with a Nunavut Wildlife Management Board (NWMB) workshop on management options for narwhal hunting. The RAP meeting took place on 26 May 1998, the first day of the three day workshop. This was the first official RAP meeting in the Central and Arctic Region. Reviews of draft Stock Status Reports (SSR's) for Baffin Bay narwhal and Hudson Bay narwhal, translated into Inuktitut and distributed prior to the meeting, were the focus of this meeting. The agenda is itemized in Annex 1. Participants in the RAP meeting are listed in Annex 2.

The agenda was reviewed and adopted as presented. Opening remarks were made by NWMB staff, providing the background to and nature of the discussions to be held over the three day meeting.

DFO presented background information on the Resource Assessment Process, describing the nature of the RAP, the roles of DFO and other RAP participants, and the resulting products of the RAP. It was indicated that the format of the final version of the Stock Status Reports was subject to change to more closely resemble the national standard; the basic text as presented would remain the same, apart from revisions to reflect changes discussed and agreed to in the meeting. A proposed schedule of the regional process for the approval and release of Stock Status Reports and Proceedings was introduced for examination (Annex 3) and for discussion after the review of the Stock Status Reports.

Baffin Bay Narwhal

Stock Definition

Several comments were made about Traditional Knowledge concerning stock identity. Comments were made that differences between narwhals in Canadian waters and those in Greenland waters have been recognized by visiting hunters in both areas. Two types of narwhal are recognized based on appearance. A smaller type of whale with a smaller tusk is thought to come from Greenland. It was also indicated that behavioural differences among narwhal are often observed by hunters traveling and hunting in different areas; these differences are interpreted as stock differences. For instance, narwhal in Pond Inlet are observed to behave much differently to hunting than those in Grise Fiord. Hunters also have observed that narwhal in Canada are more easily approached and hunted by kayak than those in Greenland. It was acknowledged that, combined with recent genetic work, there is growing evidence that there is likely more than one stock present among the Baffin Bay narwhal. Until this evidence is resolved, it was agreed that they will be treated as one stock. It was agreed that a sentence referring to behavioural differences possibly indicating stock differences be added to this section.

There was a suggestion that a separate section dealing specifically with Traditional Knowledge could be included in the report. This was considered possible but was countered with the comment that it would probably be better to integrate the relevant Traditional Knowledge into each section.

Stock Size

A discussion about the negative and potentially large biases inherent in population estimates of narwhal led to general agreement that the description of these biases should be presented prior to the description of survey results. However, it was also stated that it is difficult to apply correction factors based on current estimates of bias, since it is unclear how these biases may vary for: different ice or sea conditions, different times or areas, different sex or age classes. Thus it was said that for any particular survey the actual level of bias is uncertain.

Change in Stock Size

It was reported that the Scientific Working Group of the Canada-Greenland Commission had concluded that the Baffin Bay narwhal stock was likely not currently subject to over-exploitation based on current levels of harvest and their widespread distribution. In Pond Inlet, hunters believe the population of narwhal to be increasing, based on the numbers of females with calves migrating through during the fall. In addition, a review of the Traditional Knowledge studies indicated that most hunters interviewed believed the population size to be the same or increasing.

Reproduction and Population Growth

There was considerable discussion about calving intervals and sustainable harvest rate. Some hunters believe that narwhals give birth annually while scientific evidence suggests that on average a female gives birth every three years. A review of Traditional Knowledge studies indicated that most hunters (~70%) in the interviewed thought that narwhals give birth every one or two years. Pond Inlet hunters see some females with three calves (a young-of-the-year, a yearling and a two-year-old), suggesting a yearly calving interval. It was suggested that yearly calving may be true of some healthy females over a period of several years, but it is unlikely that all mature females give birth every year. It was agreed that both traditional and scientific views be expressed in the Stock Status Report.

It was suggested that the causes of natural mortality be indicated.

There was discussion about the population growth rate and its use in justifying or setting harvest levels. Some said that the upper value of the indicated range (3-4%) was justifiable and should be used exclusively. Others suggested a cautious approach would be better, suggesting that if one was to use the population growth rate as a guide for setting quotas or harvest level

targets, one would be wise to use half the maximum rate, so as to ensure no over-exploitation. It was also suggested that a bias in the hunt for one sex or another would influence the population growth rate.

Current Catch Levels

There was some discussion about the numbers killed in Greenland and how it may impact the Canadian portion of the stock. It was indicated that Greenland probably does take some Canadian whales, but that the proportion, and thus its impact, is still not known.

Hunting Losses

There was discussion about whether to include information on hunting losses. It was stated that losses are a standard element in all Stock Status Reports for harvested species and are an important element in determining total removal rates. It was suggested that information on hunting losses be included in the section on Current Catch Levels since losses are a result of the catch. It was also suggested that only the average loss rate be stated. It was indicated that it is sometimes hard to tell if a whale injured in the hunt will survive or not.

Other Possible Impacts

The potential of whale entanglement in lost fishing gear was brought up as another possible impact on narwhal. There was some discussion about the effect of fisheries, particularly the turbot fishery on narwhal population growth and the need for research into these effects. There was also concern raised about the use of nets in taking narwhal, particularly the potential of narwhal avoiding areas where they are normally migrate or move through due to detection of nets by echolocation (SONAR).

Outlook

The view of the Canada/Greenland Scientific Working Group on the outlook of the narwhal population was summarized. This states that the population is likely stable if hunting levels are not increased but if hunting levels are to be increased substantially, more information would be required to determine if the new levels would be sustainable.

Other Comments

It was indicated that an ongoing study in Pond Inlet was documenting the importance of the narwhal to the people of the Baffin region as a food and element of cultural value. It was suggested and agreed that a section on the importance of narwhal (culturally, nutritionally, economically) to the local people be described in the report.

Hudson Bay Narwhal

Stock Definition

It was reported that the numbers determined for Repulse Bay and Southampton Island area are similar to the numbers determined for the eastern Hudson Strait and are assumed to be the same stock. It was indicated that hunters do not see narwhal passing through Hudson Strait in fall. In response, it was suggested that narwhal are probably moving through the strait far offshore.

Stock Size

Based on the estimates for diving narwhals, it was asked whether the number of narwhal in Hudson Bay could be estimated at 2700. The reply was that yes, this is quite possible although the dive behaviour of only a few tagged animals have been documented.

Change in Stock Size

It was pointed out that there have been no studies of Traditional Knowledge that deal with this area. Additionally, no participants of the meeting were from Repulse Bay or surrounding areas and thus there was nothing to contribute with regard to local knowledge.

Reproduction and Population Growth

It was indicated that this section was similar to the same section for Baffin Bay narwhal, since the only information on this topic comes from Baffin Bay narwhals. It was suggested that the same comments regarding the Baffin Bay narwhal be applied to this section.

Current Catch Levels

A need for updates to the table on catch levels was indicated. It was suggested that an indication of the quota for each community should be added to the table. It was noted that the narwhal catches attributed to Rankin Inlet were taken in Repulse Bay (by Rankin Inlet hunters) and a footnote to this effect should be included in the table.

Hunting Losses

There was discussion about the reporting of loss rates. As for the Baffin Bay narwhal, it was agreed that this section should be integrated with the Current Catch Levels section and that simply the average loss rate level be reported.

Other Possible Impacts

It was noted that there is not any turbot fishing in this area and are not affected by this industry. Other than this, the same considerations as apply to the Baffin Bay narwhal should apply.

Outlook

There was some question about the use of the term “deep water habits” (why was it not used for Baffin Bay narwhal?). This was clarified by indicating that waters in the Hudson Bay are generally much more shallow than the Baffin Bay waters; though narwhal are seen in shallow water, their preference for deep water probably takes them further offshore where they are more remote from hunters.

Other Comments

The schedule for the revision and review of the Stock Status Reports and Proceedings was discussed. It was generally thought that 2 weeks was insufficient to review the report and proceedings. The schedule was revised to allow four weeks for review by RAP participants.

It was asked whether there could be another format for the distribution of the Stock Status Report to local people (i.e. pamphlet, poster). DFO indicated that alternate formats for publication to communities would be considered.

Comments on Review of the Revised Draft

RAP participants were provided a subsequent opportunity to review the SSR reports (and Proceedings) which were revised based on their comments at the RAP meeting. There was some discussion over whether there is a current hunting bias toward males, and the potential effect this would have on the sustainable hunting rate. It was recommended that: i) the sex ratio of the recent harvest be determined through the analysis of available data from narwhal tag returns, and; ii) the implications of the sex ratio of the harvest on sustainable hunting rate be evaluated. It was agreed that such analyses should be completed for future updates of the SSR's.

Annex 1. Agenda for Eastern Arctic Narwhal RAP

May 26, 1998 Parnaivik Board Room, Iqaluit, NT.

1. Opening Prayer
2. Review and Adoption of Agenda
3. Opening Statement **Ben Kovic**
4. Opening Remarks **Dan Pike**
5. Introduction **Larry Dueck**
 - i) Background of Stock Assessment Process
 - ii) Roles and responsibilities (DFO and participants)
 - iii) Approval process and results of RAP
 - iv) General Remarks on the approach for this review
6. Baffin Bay Narwhal **Pierre Richard**
7. Hudson Bay Narwhal

Annex 2. Participants at Eastern Arctic Narwhal RAP meeting

L. Dueck - (DFO, C&A)
P. Richard (DFO, C&A)
G. Weber (DFO, Iqaluit)
D. Pike (N.W.M.B.)
R. Mike (N.W.M.B.)
B. Kovic (N.W.M.B.)
M. Nashook (Interpreter)
D. Alagalak (KWF)
J. Aooloo (Mittimatalik HTO)
J. Ikkidluak (QWB)
D. Igutsaq (Taloyoak HTO)
J. Ell (Chair of Workshop)

Annex 3. Stock Status Report Generation, Approval and Release Process

1. Assignment of writing of draft SSR
2. Preliminary review and revision of draft SSR by colleagues in region
3. Schedule Review Assessment Process (RAP) meeting
4. Translation (into Inuktitut) and distribution of draft SSR to RAP participants prior to RAP meeting
5. RAP meeting (scientists, co-managers, resource users)
6. Revision, translation, and re-distribution of draft SSR and Proceedings to RAP participants (within three weeks of RAP meeting)
7. Individual review of revised SSR and Proceedings, submission of comments and approval of draft by RAP participants (within two weeks of receiving revised SSR)
8. Translation of comments into English (if required); final revision of SSR and submission to regional RAP coordinator and Regional Director, Science (within two weeks of receiving comments and approval by RAP participants; or three weeks if translations required)
9. Sign-off of SSR and Proceedings by RAP coordinator (S. Cosens) and Regional Director, Science (J. Cooley)
10. Submission of briefing notes, SSR and Proceedings to Headquarters upon signoff
11. Release of SSR regionally and in HQ
12. Translation of final SSR (Inuktitut) and distribution to RAP participants, DFO area office, and HTO's.