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Proceedings of the National Marine Mammal Review Committee

Québec, February 18-20, 2002

John D. Neilson, Chairperson

Canadian Science Advisory Secretariat
200 Kent, Ottawa
Ontario, K1A 0E6

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ABSTRACT

The National Marine Mammal Review Committee (an entity of the Canadian Stock Assessment Secretariat) met in Quebec City, February 18 to 20, 2002. A main objective of the meeting was an evaluation of the status of Northern Québec beluga whales, and a series of working papers was reviewed pertaining to new survey information, harvest and population status. A stock status report describing key conclusions of the review was prepared and reviewed by the Committee.

Apart from reviewing the above work, the NMMRC also discussed the utility of hydroacoustic methods for marine mammal studies, a process for evaluating scientific permits for marine mammal research, and Departmental harbour porpoise research. Finally, summaries of current research initiatives on marine mammals were provided by representatives of each DFO region.

RÉSUMÉ

Le Comité national d’examen des mammifères marins (une composante du Secrétariat canadien pour l’évaluation des stocks) s’est réuni à Québec du 18 au 20 février 2002. L’évaluation de l’état de la population de béluga du Nouveau-Québec et l’examen d’une série de documents de travail sur les nouvelles données de relevé, la chasse et l’état de la population étaient les principaux points à l’ordre du jour. Le Comité a aussi préparé et passé en revue un rapport sur l’état du stock décrivant les principales conclusions de l’examen.

À part les travaux susmentionnés, le Comité a aussi discuté de l’utilité des méthodes hydroacoustiques pour l’étude des mammifères marins, d’un processus d’évaluation des permis de chasse des mammifères marins à des fins de recherche scientifique et des recherches menées par le Ministère sur le marsouin commun. En dernier lieu, des représentants de chaque région du MPO ont présenté des résumés des projets de recherche en cours dans leur région respective.

OPENING REMARKS

The Chairman welcomed participants (Annex 1). He gave a brief description of the meeting procedures, and the documentation requirements. The agenda (Annex 2) for the meeting was reviewed and adopted. The Chairman noted that there was good geographic representation at the meeting. He also welcomed three external reviewers to the meeting: Dr. Andrew Trites, University of British Columbia; Dr. Robert Michaud, Groupe de Recherche et d'Education sur les Mammifères Marins; and Dr. Michael Kingsley, Greenland Institute of Natural Resources, Nuuk. This meeting also benefited from the participation of Mr. Johnny Arnatuk of the Nunavik Hunters and Trappers Association.

REVIEW OF WORKING PAPERS, PRESENTATIONS, AND INFORMATIONAL ITEMS

Chairman's note: Dr. Yvan Simard, Université du Québec à Rimouski, was available at the start of the meeting to provide the NMMRC with an overview of his research on the utility of passive hydroacoustics for marine mammal research. This presentation was intended for the information of the meeting participants rather than for peer review. Dr. Simard has kindly provided a synopsis of his presentation for this Proceeding.

1. Use of passive acoustics as whale detectors

Presenter: Yvan Simard

Since whales spend up to 90% of their lifetime underwater, the potential of visual observations at the surface of the ocean to inform on their numbers, distributions or behaviours is limited. Technological developments in the last decade have shown that passive acoustic methods can largely contribute to solve this problem by remotely detecting the animals underwater through their frequent vocalisations. It then becomes possible to make use of such technologies to tackle fundamental questions on whale ecology such as *where*, *when* and *why* they use the ecosystem. Acoustic methods can produce a continuous dynamic image of whale space-time behaviour compared to the partial and static image that comes out of visual estimation surveys. Such information is essential to understand the needs and the role of these apex predators when using an ecosystem approach to management or for determining the critical habitats to protect.

Every marine mammal species produce specific vocalisations, which sometimes include subgroup dialects or sex differences. The centre frequency of the tonal calls is a function of body length. Mysticetes use low frequencies (<1000 Hz), and odontocetes vocalise at higher frequencies. Fins and blue whales for instance produce well-known and easily recognisable loud infrasounds (from 15-40 Hz). These typical calls were easily detected in exploratory recordings from a hydrophone in the St. Lawrence in 1998. Sound propagates efficiently in water, its attenuation being a function of absorption in the medium and spreading from the source location. Presence of sound channels associated with particular sound speed profiles reduces the dispersion of the sound energy, which allows low-frequency calls to propagate over large distances. The acoustic method to detect and localise whales in a given area involves four steps: detection, recognition, localisation and measurement of the sampling volume, and the determination of the calling fraction of the population. The degree of difficulty in accomplishing each of these steps is a function of the acoustic characteristics of the calls, the ambient noise background, the instrumentation configuration and sensitivity, the performance of the algorithms, and the precision required for localisation in two or three dimensions. The data processing can be efficiently automated.

The hydrophones could be deployed in various ways: shore cabled, from moorings of autonomous recorders on the bottom or in the water column, from buoys with or without surface (VHF or satellite) links, or from towed arrays. US Navy has installed an undersea surveillance system in the deep ocean with shore cabled systems after the Second World War. Researchers from a few civil laboratories were recently granted access to these acoustic recordings to look at the distribution of whales over the Pacific and the Atlantic throughout the annual cycle. The acoustic detection range is very large compared to visual methods. Several approaches have been used to acoustically measure whale densities in various regions of the world, even from a system as simple as a single hydrophone. The acoustic tracking of migrating whales passing along the coast off Point Barrow has been used in Alaska to estimate the size of the bowhead whale population since 1985 by supplemnting visual counts. Marine mammals reacting to the survey ship (e.g. porpoises) and those diving for long periods (e.g. sperm whales) cannot be detected properly in a visual survey without using acoustics from a towed array.

Small-to large-scale hydrophone arrays have been deployed on the bottom, or in sound channels or left drifting at the surface to detect and localise several species of cetaceans and pinnipeds. A panoply of hardware tools can be used to set up a recording system. They vary from very low costs, for dedicated research projects, to very high cost for permanent navy facilities over the large oceanic basins. In collaboration with the Engineering Department of the University of Québec at Rimouski, we have designed a low-cost (~5K US$) autonomous recorder for a pilot project on fin and blue whales in the St. Lawrence Estuary.

In Canada, various researchers have conducted several acoustic projects on marine mammals, but the interest in using passive acoustics to monitor marine mammals is very recent. Three pilot projects are presently under examination for: the right whales of the Bay of Fundy, the fin and blue whales of the St. Lawrence Estuary, and several cetacean species off the West Coast of the country. The Canadian expertise in this field is spread over the governmental institutions (DFO, DND), several universities, and the private sector. By combining this expertise we could rapidly develop means to efficiently take advantage of this emerging technology to study the whales in their environment and even implement new detection means to ensure better protection in critical habitats. The advantages of acoustic methods to observe and count whales are numerous, the most important one being the possibility to measure in continue for long periods of time over large basins, not only in the surface but also underwater, independently of the presence of light or good visibility conditions. The determination of critical habitats requires such continuous and long-term measurements. This approach is also non-intrusive, non-selective, and therefore respectful of the animals. By joining the efforts of all interested parties in a common project, the use of such new technologies for surveying whales in Canadian waters could materialise rapidly.

2. Population indices of beluga in James Bay, E. Hudson Bay, and Ungava Bay in summer 2001. By J.-F.Gosselin, V. Lesage, M. O. Hammill, and H. Bourdages. Working Paper #1.

Presenter: Jean-François Gosselin
Rapporteurs: R. Kent Smedbol/Garry Stenson

Summary (Provided by the Author(s))

Aerial systematic line transect surveys of beluga whales, *Delphinapterus leucas*, were conducted in James Bay, eastern Hudson Bay and Ungava Bay from 14 August to 3 September 2001. Coastal surveys were conducted on 28 August in Eastern Hudson Bay, on 4 September in Ungava Bay and on 5 September in Hudson Strait and along the northeastern Hudson Bay coast. An effective strip width of 638 m was estimated from the 717 beluga observed on east-west lines in James Bay (557 beluga) and eastern Hudson Bay (160 beluga). An estimated 7,901 (SE = 1,744) and 1,155 (SE = 507) beluga were present at the surface in the offshore areas of James Bay and Hudson Bay respectively. An additional 39 animals were observed in estuaries during the coastal survey resulting in an index estimate of 1,194 (SE = 507) in eastern Hudson Bay. No beluga were observed in Ungava Bay. Three beluga were observed along the coast near Salluit. Observations from the 1993 and 2001 systematic surveys were analysed using both line transect and strip transect methods to allow comparisons with the strip transect survey conducted in 1985. From 1985 to 2001, the number of beluga summering in James Bay increased fourfold, while numbers in eastern Hudson Bay have declined by almost half.

Discussion:

The authors presented analyses of the three surveys using both the line and strip transect methods. The committee agreed that the line transect surveys provide the best estimate for the population modelling work. Further, it was suggested that the authors add a paragraph summarizing the differences between strip and line transects.

There was some discussion about the need to modify the distance function, given the clumped distribution exhibited by the sampled individuals. The authors left-truncated the sighting data at 250 m, and tested for a relation between distance and group size. Group size decreased slightly with group distance. However, the sighting curve was fit to individuals and not groups, therefore this slight bias was not important, and the distance function was not modified. It was suggested that the authors include histograms of the group sizes observed in the manuscript to better illustrate the extent of aggregation.

It was noted that although every effort was made to conduct surveys quickly, there were some breaks during the surveys of each area. The possibility of movements between transect lines during the survey was discussed. However, such potential movements were not considered to have resulted in any bias because there was no evidence of migration over the survey period.

The impact of sea state on the ability to detect whales was discussed. Although there have been no formal analyses, it was noted that the majority of survey lines were carried out under good conditions of visibility and sea state.

The same aircraft and protocol from the 1993 survey were used in 2001. However, the 1985 strip transect survey was conducted using a different plane (Twin Otter) than used in subsequent line transect surveys (Cessna 337). The earlier survey was conducted at slower speeds and at lower altitudes while sightability of whales from the plane may have been lower. These differences may have resulted in a bias but the overall impact on the estimates was not clear. It was suggested that the authors include a table that compares differences in the survey techniques and the potential direction of the associated bias.

The Committee was informed that during the summer of 2001 (July and August), observers from local communities saw beluga along the Northwest coast of Ungava Bay. An estimate of 2000 individuals was provided. The question was raised as to why these animals were not detected in the survey. The coastal survey along Ungava Bay was conducted during a single day, and there is some chance that the survey may have missed beluga resident in the area at the time of the survey. However, the coastal survey covered more coastline than previous coastal surveys and no animals were seen in Ungava Bay in 2001, while animals have been seen in previous surveys.

Due to high variability in the survey estimates, it was difficult to detect differences between surveys. As a research recommendation for future work, it was suggested that alternative methods for the analysis of time series of surveys be considered, including the examination of transect differences between consecutive surveys.

The Committee discussed how to interpret the sightings observed around the Belcher Islands. Genetics data indicate that the harvest from this area is a mix of animals from the eastern Hudson Bay (EHB) and western Hudson Bay WHB stocks. However, the harvest extends over a long time period and includes the spring and autumn migratory periods. A large number of beluga were sighted near the Belcher Islands during the 1983 survey while few whales were present in this area in the 2001 survey. Given that the proportion of EHB beluga in the Belcher Island area may vary over seasons, the impact of stock mixing on the population estimates is not clear, but would likely have a greater impact on the earlier estimates. Various approaches were discussed to explore the distribution of sightings. One method may be to divide sightings among land claim areas and compare sightings by area. Another may be to exclude the Belcher Island sightings and reanalyze the surveys.

However, it is not clear where such boundaries should be drawn and thus it would be very difficult to interpret any such analysis. The current surveys provide an index of animals in the EHB area during the summer. Flying the surveys earlier in the year may reduce the likelihood of surveying mixed stocks as long as they are flown after migratory animals have left the area.

Stock structure of beluga in Hudson Bay was reviewed at the previous meeting of the NMMPRC. Genetic samples can be assigned to the EHB population fairly confidently but there was less power to assign animals to the WHB population.

There was a call for explanation for the need and use of Equation 6 in the working paper. The Jack-knife method was reviewed, and its use in the reduction of bias in parameter estimation (detection function, expansion component, and 1/EWS (effective width of strip)) was discussed and accepted.

3. Impact of Harvesting on Population Trends of Beluga in Eastern Hudson Bay. By H. Bourdages, M. Hammill and V. Lesage.

Presenter: Véronique Lesage/Hugo Bourdages
Rapporteur: Garry Stenson/Andrew Trites

<u>Summary</u>

(Management Plan and harvest summary provided by Véronique Lesage)

The new management plan agreed upon with Nunavik Inuit in April 2001 limited harvesting to 25 animals per community, with four Hudson Strait communities being allowed to harvest 30 individuals each. Ungava Bay communities were encouraged to take their quota outside of the Bay. Eastern Hudson Bay communities were allowed to kill a maximum of 15 individuals from each of the Nastapoka and Little Whale River estuaries. The rest of their quota was to be taken from James Bay (30 beluga) and Hudson Strait (65 beluga). Other measures, which included seasonal closures of some estuaries, were also incorporated into the plan (Anonymous 2001).

The eastern Hudson Bay communities harvested only one beluga in James Bay during an experimental hunt sponsored by Fisheries and Oceans Canada. The rest of their take was obtained from the Little Whale ($\geq$ 18 beluga) and Nastapoka (14 beluga, plus one struck and lost) rivers, and from other areas along the eastern Hudson Bay arc. The communities of Puvirnituq and Akulivik did not comply with the quotas, harvesting 50 and 33 beluga, respectively. The proportion of animals taken in eastern Hudson Bay by these two communities as opposed to Hudson Strait is unknown, owing to a low participation in the sampling program. These harvest statistics suggest for these five communities a total harvest from the eastern Hudson Bay stock of between 65 and 128 beluga, i.e. 2 to 4 times the initial quota.

The Hudson Strait communities of Salluit, Kangirsujjuaq, and Quartaq exceeded their quota, with harvests of 57, 34, and 60 beluga, respectively. The official harvest statistics indicate a harvest of 13 beluga by Ivujivik. However, this community has a history of heavy harvesting, and the figure provided to DFO is considered as an underestimation. Therefore, the total harvest by Hudson Strait communities was at least 164 beluga in 2001. None of the communities from Ungava Bay exceeded their quota. However, at least 21 beluga, and maybe as much as 91 were taken from Ungava Bay, i.e. from an area intended to be closed to hunting. The 21 beluga include 4 animals harvested in the Mucalic sanctuary.

The analysis of sex composition of the catches indicate that females are taken as often as males, and that beluga taken during the 1990s are significantly younger than those harvested in the 1980s.

(Summary of Modelling Results Provided by Hugo Bourdages)

This study presents different scenarios of past and future harvests, while incorporating new information on beluga abundance in James Bay, EHB, Hudson Strait, and Ungava Bay, genetic composition of the harvests, and harvest statistics from 2001. Harvest statistics indicate that the communities of Nunavik exceed quotas each year. Both a relatively simple model using population estimates, removals and rate of increase, and a more complex model introducing additional variables on stage-specific biological parameters were used to examine the impact of harvesting on the growth of the eastern Hudson Bay beluga population. The two models yielded very similar results. They both indicated a decline in EHB beluga population since 1985, a population size in 2001 of approximately 2045 individuals, and an underreporting of harvests prior to 1995 by a factor of 2.23-2.22.

The short- and longer-term impacts of future harvesting on the EHB beluga population were examined under different scenarios. However, the probability of decline on the short-term changed little between a harvest of 0 (48%) or 150 (56%) beluga from the EHB stock owing to the uncertainty surrounding the current estimates of population size. However, more certainty of a decline is acquired over time, and the influence of the number of removals per year is revealed more clearly over a longer time period. There is a 70–80% certainty of a decline in five or 10 years if over-harvesting practices similar to what was observed in 2001 (*i.e.* 125–150 EHB beluga) continue in the future. Reducing the quota to 25 beluga resulted in a 45% probability of a smaller stock in five years, whereas a complete cessation of EHB beluga harvesting resulted in a 35-40% probability that the stock will show no further decline in 5 years. Using minimum population estimates of 1657 and 1423 individuals for EHB beluga for Model 1 and 2, respectively, and a maximum annual rate of increase of 4%, the potential biological removal (PBR) is 15 individuals, assuming a recovery factor of 0.5 (for a threatened population which is not in decline). The PBR decreases to 9 beluga if this threatened population is assumed to be declining (recovery factor of 0.3), and to 3 beluga if it is considered endangered (recovery factor of 0.1).

In contrast with the EHB population, numbers of beluga in James Bay appear to have increased since 1985 to an estimated 10,504 beluga in 2001 (assuming an annual rate of increase of 0.03 to 0.04). The model fitted the data best when it was allowed to optimise the rate of increase. In this scenario, this population grew at a rate of 0.087 and was estimated to number 15,954 beluga in 2001.

Discussion

In the discussion of the harvest statistics, it was pointed out that catches from at least one community (Ivujivik) are likely an underestimate due to a lack of cooperation. The degree of underreporting is unknown but was considered to be large. Complete information (e.g. location, age) on catches were not available for a number of communities which increases the uncertainty in assigning harvests to beluga populations. Currently there appear to be few consequences to the communities of exceeding quotas or misreporting. However, once SARA becomes law, the consequences of exceeding quotas may result in increased underreporting.

It was felt that one of the reasons hunters may not support conservation methods is that they see large numbers of whales in areas where they were absent during surveys. This is particularly common in the Hudson Strait where whales from different populations winter. Hunting in the Hudson Strait includes a low proportion of EHB beluga. Scientists are attempting to explain the relationship among stocks and the concepts behind survey methodology to hunters but these efforts may have to be increased. Incorporating local people in the collection of data has improved acceptance in a number of Arctic communities.

The way in which the authors estimated the proportion of EHB beluga in the harvest from Hudson Strait communities was clarified. The estimate was based upon pooled samples from all four communities. However, the numbers of animals hunted from each community varied and there was limited sampling from the fall hunt. Additional sampling should be carried out to improve the estimate but this will require cooperation from all of the communities.

It was also noted that the estimates of catches are supposed to include the number of whales struck but not landed.

The data on the age structure of the harvest was updated. At the last meeting of the NMMPRC some suggestions were provided for additional analyses. The author indicated that a detailed analysis of the age data will be carried out in the coming year.

There was concern expressed that the parameters estimated during the fitting may be correlated and that this correlation is not accounted for in the forward projections. This may result in unrealistic estimates of the uncertainty associated with the projections. However, the direction and extent of this potential bias is unknown. It was suggested that the authors explore the impact of potential correlation in future runs of the model.

Comparing the survey estimates from James Bay results in an estimated rate of increase of 8.7%. Based on the biological characteristics of this population, it would be very difficult to obtain this rate of population increase even in the absence of any hunting. This degree of increase was considered to be unlikely and may have been affected by the presence of ice in the earlier estimate (the 1985 low estimate was due to ice) or migration from other areas (presumably Western Hudson Bay)- considered more likely for differences between 1993 and 2001.

Visibility of beluga will be affected by a number of factors such as the angle of observation and water turbidity. It was pointed out that the correction factor is only a concern for the area of maximum sightability as the sighting curve accounts for the reduction in visibility further out. Water clarity was considered to be high during the EHB and Ungava Bay surveys, and similar to many parts of the St. Lawrence Estuary. The water in the James Bay was considered to be slightly more turbid than observed in the rest of the survey.

The model was most sensitive to the correction factor used to estimate the proportion of beluga present at the surface. The authors used an estimate based on observations of beluga and models in the St. Lawrence Estuary. Other estimates, based on satellite telemetry data were also available. Discussion focused on the correction factor the authors applied, and whether other estimates could be applied from studies conducted in Greenland and Alaska. Another possibility raised was to consider the three Canadian estimates as a single experiment with three replications. The consensus of the group was that the authors should use an average of the 3 estimates presented in the paper, and apply it to their best model (2.3). (Chairman's note – this issue was later revisited, with a proposal to use the information from the St. Lawrence Estuary, since it was most directly applicable to aerial surveys. After some discussion, the Committee agreed with this conclusion.)

Model 1.4 reflects the genetic data and uses the population assessment data. It also includes an adjustment for the harvest. In contrast, Model 2 considers stage structure information and would be preferable over Model 1 if the detailed information it requires was available. Unfortunately, such data are not available. Therefore Model 1 is preferred over Model 2. It is also preferable to apply the simple model given that there are only three estimates of population size over time.

There was discussion of the treatment of Ungava Bay belugas in the model. The genetic stock structure of Ungava Bay beluga is not known, because animals that reside there are not supposed to be shot, and participation in the sampling program by communities that do harvest beluga in this area is low. Genetic information suggest that a proportion of the beluga harvested in Ungava Bay show haplotypes that are similar to eastern Hudson Bay beluga, although these haplotypes might be shared by the two stocks. Therefore the model must assume that belugas in

Ungava Bay with haplotypes similar to eastern Hudson Bay beluga come from this stock.

The NMMRC concluded that the models, choice of parameters and general conclusions all seem quite sensible.

The possibility of shifting hunting effort from eastern Hudson Bay and Ungava Bay to western Hudson Bay was discussed. However, there is uncertainty about how many animals are actually in the WHB with only two surveys conducted in the last 8 years. Furthermore, hunters don't have experience in this area, and would likely be reluctant to go where they are unfamiliar with local conditions.

The NMMRC recognized that these papers (Bourdages et al., Gosselin et al.) form the basis for the Stock Status Report and should be upgraded to research documents.

4. Use of the Little Whale and Nastapoka estuaries by humans and beluga during summer 2001. By DW Doidge and V. Lesage.

Presenter: Véronique Lesage
Rapporteur: Andrew Trites

<u>Summary</u>

Vessel traffic and the occurrence of beluga whales, *Delphinapterus leucas*, were monitored between July 23 and August 24, 2001, at the Little Whale (56°00'N 76°47'W) and Nastapoka (56°55'N 76°33'W) rivers in eastern Hudson Bay. Disturbance by vessel traffic (mainly freighter canoes) was almost daily at both sites, but Nastapoka is by far the busier place: 208 disturbance events in 31 days compared to 111 at Little Whale in 28 days. Following disturbance, whales were absent for longer periods from Nastapoka than Little Whale (median values 10.5 vs 22.3 hours). At both sites, when whales were not in the estuaries, further vessel traffic increased the duration of absence. This relationship was stronger at Nastapoka (R_s = 0.823, n = 12, p = 0.001) than at Little Whale (R_s = 0.523, n = 21, p = 0.01), which may indicate differences in underwater noise dissipation between the open coast at Little Whale versus the marine canyons in Nastapoka Sound. Whales also left the estuaries for no apparent reason, but were seen again much sooner compared to absences following disturbance. Published data on the sightings of individually recognizable beluga at the Nastapoka indicate that individuals that leave the estuary in response to disturbance are not the first animals to appear at the river after disturbance. Re-analysis of that data found no difference between the duration of absence of beluga from the river following hunting and motor traffic. The number of whales occupying the Nastapoka has declined since the mid-1980s when up to 250 beluga were seen; the maximum count in 2001 was 25 animals. Groups of 100+ animals still occur at Little Whale River. The decline in the number of whales

seen in the Nastapoka likely reflects the combination of a reduction in stock size and the whales' reduced use of the river due to disturbance. Daily boat traffic prevents the seasonal buildup in whale numbers that had been a feature of these estuaries two decades earlier. In August, Inukjuak hunters are the predominant users of the Nastapoka River whereas Little Whale River is used by the Kuujjuaraapimmiut and the Umiujamiut.

Discussion

One participant indicated that he believes the beluga population in Nastapoka has declined since 1985 based on the numbers seen in the estuary. About 400-500 animals cannot be accounted for and should be out in the estuary. Their absence from the estuary supports the view that the Nastapoka population has declined. The few groups that are left may be "gun-shy". There is also evidence from the harvested animals that the age structure has changed, as has the proportion of belugas with worn teeth.

The 2001 aerial survey data are not consistent with the conclusion that the Nastapoka population moved away because of disturbance. More belugas should have been observed in the offshore areas if noise was scaring them away from Nastapoka.

The conclusion of the group was that it is not possible at this time to tease apart whether the apparent decline of belugas in Nastapoka is due to deaths (by hunting or some other factor) or to a redistribution (caused by disturbance by vessels). The committee acknowledges that the closing of the Nastapoka estuary to boat traffic over a period of several years, and the concurrent monitoring of beluga numbers in the Estuary would be the only way to determine the reasons for the disappearance of beluga from this estuary.

Clarification by the authors was requested regarding a citation of Kingsley in the Introduction.

The NMMRC recommended that this paper should not be upgraded to a Research Document at this time, but should be revised and reconsidered at next year's meeting given its importance to determining the status of the stock as a whole. Hunters have been arguing that disturbance by boats has been happening, but whales do not appear to have gone to Little Whale or to the offshore stock.

In its current form, the paper does not adequately distinguish between disturbance effects or other causes of the population decline in Nastapoka. Further analysis is required.

Chairman's Note: At this point (Wednesday Morning) the meeting completed its peer review of the Northern Quebec Beluga Stock Status issues, and shifted attention to matters for discussion and information.

5. A Proposal for DFO-COSEWIC Interaction on Technical Issues. By DFO-COSEWIC Interaction Committee (DC3)

Presenter: Howard Powles (via telephone)
Rapporteur: Patrice Simon

Summary:

The document entitled: "A Proposal for DFO-COSEWIC Interactions on Technical Issues" was provided to the NMMRC for their information.

Andrew Trites provided a quick overview of how COSEWIC works. There are 28 members on COSEWIC and DFO is one of them. There are eight species specialist groups that provide the species assessments. The co-chairs of the specialist groups choose the members. There are 8 members on the Marine Mammals Specialist Group. The task of the specialist group is to review status reports, and assign a species status, based on information in the report. Each specialist group establishes a list of priority species for review. The authors of status report are chosen via a bidding process.

There is a formalized process to select species to be added on the list to do a status report. The criteria used to prioritize species included: time since last report (10 years), if there was a report produced in the past, and if there is a known risk for that species (e.g. high by-catch).

Howard Powles provided a background for the document presented. It was mentioned that the interaction between DFO and COSEWIC is an evolving issue. As COSEWIC get a stronger role in the new SARA legislation, it moved from being an informal to a high profile advisory body. DFO wants to ensure that its expertise can be made available to this process so that the COSEWIC assessments are based on all the information available. The document provided presents a way to offer DFO expertise to COSEWIC.

Discussion:

A question was asked whether the review would include DFO unpublished results only. The main focus would be for the information that DFO holds that is not easily accessed by the public without excluding published information. This would provide the most accurate picture of the status of the species. The reason to do this is not to assess the status but to ensure all the information is available to authors of status reports. COSEWIC is supposed to review status reports based on the best available information and DFO's role is to make this information available.

There was a question on what does "information" mean? Does it include raw, unanalyzed data? A COSEWIC report should be based on published information that is readily available. The main request would be for population assessment information (number, trend, and threats). In marine fish, the main interest is on trawl data that have not been analyzed for non-target species. If DFO thinks the information is relevant, it would be provided. This would include raw data and published documents. If COSEWIC wants unanalyzed data, DFO would provide it.

If DFO was making available unanalyzed data (e.g. haplotypes) that can be difficult to interpret, a RAP would review those data before they go out. Prior to any review meeting, the data should be prepared in a research document. The meeting proposed in the document would function to review the DFO information that is being provided to COSEWIC.

A concern was expressed about the fact that there is a lot of collaborative research, and the partner may not be willing to release the data before it is fully analyzed. It was mentioned that the interaction would evolve through time and that the process could be modified if necessary. Canadian Field Naturalist will not publish automatically the status report anymore.

6. Presentation on COSEWIC- Marine Mammal Specialist Group

Presenter: Andrews Trites
Rapporteur: Patrice Simon

Summary:

The list of the reports that are in final review, in progress, to be initiated or planned for the future was presented. This information is also provided at the following: http://www.cosepac.gc.ca/eng/sct2/index_e.htm.

Discussion:

There was a general discussion on traditional knowledge (TK) and on who should pay for the gathering of this information. The question of whom has the responsibility for collecting TK is unclear. DFO C&A region has collected TK without spending too much. However, collecting TK is often complex and expensive. Andrew Trites mentioned that the inclusion of TK is presently holding up the review process for Narwhal.

A question was asked on how would DFO funding would be influenced by COSEWIC species status. It was mentioned that DFO got new funding for SARA species.

7. Summary of Harbour Porpoise Workshop

Presenter: Garry Stenson
Rapporteur: Patrice Simon

Summary:

This topic was presented for the information of the NMMRC.

A Workshop was held in Halifax on March 26-28, 2001 to compile the existing information on harbour porpoise in the Atlantic. International experts were invited.

A summary of the workshop objectives and results follows below (provided by Garry Stenson):

Serious concerns have been raised regarding the status of the harbour porpoise populations in the North Atlantic and specifically for those inhabiting Atlantic Canadian waters. In 1991 harbour porpoise in these waters were classified as “Threatened” by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Since this time, important new data have become available in some parts of their range while in others, significant data gaps continue to exist. In order to gain a clear understanding of the current state of our knowledge of harbour porpoise in Atlantic Canada, the Department of Fisheries and Oceans convened a workshop to discuss harbour porpoise in Dartmouth, Nova Scotia 26-28 March 2001. Sixteen scientists from Canada, the United States and Greenland participated. The objectives of the workshop were to:

1) compile available information on the biology, abundance and by-catch of harbour porpoise in eastern Canadian waters,
2) identify gaps in our existing knowledge required to assess the status of harbour porpoise in these waters,
3) review methods for estimating harbour porpoise abundance and distribution, and
4) review methods for estimating harbour porpoise incidental mortality in fishing gear.

Information on stock identity, biological parameters, abundance, distribution, ecology, by-catch, and by-catch mitigation methods were presented and discussed. It was concluded that available data on stock identity are consistent with the three putative populations (Bay of Fundy/Gulf of Maine, Gulf of St. Lawrence and Newfoundland) proposed in the 1980s, but that significant sampling gaps remain. It was agreed that data exist to construct simple population models although these models will be limited due to the absence of data on survivorship of harbour porpoise. Good estimates of abundance in the Bay of Fundy/Gulf of Maine area are available, whereas estimates of abundance in the Gulf of St. Lawrence are incomplete and non-existent in Newfoundland and Labrador waters. Obtaining estimates in these latter areas was considered to be the highest priority for research. Such surveys should be designed for maximising the likelihood of observing small cetaceans. Although diets have been examined in various areas, ecological factors affecting porpoise abundance in Atlantic Canada are unknown. Estimates of current by-catch are not available from the Gulf of St. Lawrence and Newfoundland areas; the implementation of such monitoring programs is a high priority. Monitoring programs should include a variety of methods to determine levels of by-catch and must cover all of the fisheries that may catch porpoise. A number of mitigation methods have been shown to be effective in reducing by-catch. These include the use of pingers, time-area enclosures and gear modifications. Porpoise by-catch has likely declined in a number of areas recently, however, due to reduced effort in gillnet fisheries.

8. DFO process for scientific permits for Non-Governmental Organizations

Presenter: Jean-Marc Nadeau
Rapporteur: Patrice Simon

Summary:

A document entitled: "Draft Policy Regarding the Issuance of Scientific Research Licenses for Scientific Activities – Proposal from the Quebec Region" was provided (see Annex 3).

An increasing number of non-government organizations apply for permit to study marine mammals each year. There is a need for a clear policy to provide guidelines for the regional licensing procedures for scientific activities to allow the applicant to carry out scientific research activities on marine mammals in Quebec region.

Discussions:

One of the questions was whether DFO was in a position to require that the results of the study to be given to DFO at the end of the project. What should we ask of the study proponents in terms of a report to DFO?

DFO could ask for a progress report of the project summarizing the research activities that took place under the license. DFO can ask for a report of the field activity. This should be a condition on the issuance of license, i.e. that a report of the field activity be submitted.

John Neilson read some notes from Jerry Conway. He mentioned that Julie Davis (DFO, Ottawa) is leading the development of a policy from NHQ. The status of this initiative is unknown.

There was a discussion on what type of projects would need a license. It was suggested that if the research involve harassing them (based on the definition in the draft Whale Watching Guidelines), then a scientific license should be required.

It was mentioned that some outfitting groups use the research designation to promote their “whale watching activities” but do not conduct any research.

The Canadian Council on Animal Care (CCAC) has established standards for holding and handling animals. Possible linkages with the CCAC were discussed. DFO permits could be lined to CCAC approval. Local animal care committees review license applications for adherence to these standards and assess whether the knowledge gained is worth the handling or sacrifice of animals. It was also noted that regional scientists could make a contribution reviewing proposals, as far as science value, but that DFO Science did not wish to unduly increase workload or create a redundant review process. Therefore, in the case of proposals that are funded by NSERC or the USA National Science Foundation, a separate DFO science review would not be required since funding would be an indication of recognized science value.

There is an interest in developing a national policy for the issuance of scientific research licenses that would be consistent and uniform across the country.

Chairman’s Note: The meeting then recommenced review of the Northern Beluga Stock Status Report, as supplied by Mike Hammill.

It was recommended that information on lifespan be added into the section on Species Biology. In Table 1, it was pointed out that reported harvest is a minimum estimate so the word ‘reported’ should be replaced with ‘minimum’. Harvest numbers presented in the text were corrected and a recommendation was made that a 1996 column be added to Table 1. A question was raised about the information on tooth wear and there was discussion about the criteria used to class a tooth as worn.

There was discussion about interpretation of Figure 2. It was decided to take the text and cumulative curves out of Figure 2 and keep the histograms to make interpretation of the data easier for non-scientists.

Corrected harvest figures - 5402 beluga, equal to 425/year, and 2327 beluga, equal to 233/year, were provided for inclusion in the harvest table.

It was decided to move the information on the age of animals harvested into the Resource Status section of the SSR. The information was thought to be relevant to assessing stock trend.

The population projection model, rerun using an averaged correction factor for visibility at the surface, was discussed. There was a sense that using the averaged value may underestimate the population size. Committee members concluded that the magnitude of the correction factor significantly impacts model results and that this should be mentioned in the SSR as a source of uncertainty. It was decided that the SSR should use the St. Lawrence correction factor with a recommendation that if the Department wants to estimate beluga numbers with aerial surveys for management purposes, then estimating surface visibility of the whales is important.

Clarification of wording about estimates of numbers in Ungava Bay was discussed. It was noted that the population projection model was run with a harvest level of 150 animals and it was recommended that it be rerun using 140 animals, the level that is reported as the harvest. There was discussion about what should be included in Sources of Uncertainty. It was recommended that comments about estimates of small populations having high variances should go into the Research Document. The committee also recommended that the Research Document include a discussion about possible correlations among variables representing parameters that are fitted in forward projections.

It was noted that no matter what model or data are used, the stock outlook is the same. There was some discussion about how to present the recommendations for Total Allowable Harvest which ranges from 20 to 40, depending on which model is used. This harvest level would maintain the current population rather than allowing it to grow. It was further recommended that there should be no beluga harvested from Ungava Bay.

Points to include in the Summary were discussed. Revisions to the map were suggested, some place names need to be added.

REGIONAL RESEARCH REPORTS

Pacific Region

John Ford, who joined DFO in August of 2001, presented the report for Pacific Region. Harbour seal, Steller sea lion, California sea lion, Northern fur seal, Northern elephant seal, sea otters and killer whales are species of interest. Species at Risk funds have allowed the Region to expand its marine mammal program. It was noted that Peter Olesiuk is returning to DFO. Surveys of Harbour seals, Steller sea lions and sea otters are being planned along with other types of projects including a study of seasonal movements of resident killer whales. Cetaceans including North Pacific right whales, humpback whales, blue whales, fin whale, grey whales and harbour porpoise are high priority species.

Central and Arctic Region

Sue Cosens presented the report on research for Central and Arctic for 2002-2003. Studies focus on population structure, abundance and distribution and population biology. Priority species include narwhal, beluga, walrus, bowhead and ringed seals. One new scientist is joining the department in April, 2002 and hiring of a second marine mammal scientist under the Species at Risk Program is anticipated.

Québec Region

Mike Hammill outlined research priorities of Quebec Region. Prioirity species include harbour seals, grey seals, harp seals, hooded seals, belugas, fin whales, harbour porpoise.

The whale research group has grown with SARA funding but the seal group has declined in size. Seal projects include seal-fisheries interactions (harps and greys), Churchill harbour seals (with Ian Stirling) and contaminants in harbour seals (ecosystem health).

Beluga projects include St. Lawrence and Nunavik beluga abundance and fatty acid research, testing of suction cup attachments for tags. Harbour porpoise by-catch is being used for estimating levels of contaminants and estimating population parameters, etc.

Strandings are being checked for length and sex. Autopsies are done by a vet. Seals are used for short term studies such as *Trichinella* infection other disease work.

Maritimes Region

Lei Harris presented the report for Maritimes. The Species at Risk group now includes Ed Trippel, Rob Stevenson, Lei Harris and Kent Smedbol.

Gear entrapment of harbour porpoise is an issue. Testing of reflective gear and acoustic harassment devices is being done. For right whales the continuation of aerial and ship-based surveys is planned, fishing gear/right whale interactions will be studied and a database of opportunistic whale sightings will be developed. Disturbance to whales caused by whale watchers and other vessels will be described and quantified.

The Marine Mammal group at BIO consists of one scientist and one biologist. Both harbour and grey seals are of interest on the Scotian Shelf, but in the past several years our research has concentrated on grey seals. The long-term objective of our research is to understand the ecological role of pinnipeds in marine ecosystems and to apply this knowledge to fisheries and marine mammal conservation issues facing the Department. In addition to DFO A-base, funding for our research currently comes from NSERC, Smithsonian Institution, and the strategic science research fund under CDEENA.

Studies on grey seals focus on population dynamics, foraging and reproductive ecology (including energetics), diets, and ecological interactions between grey seals and commercial fish stocks. Much of our research is done collaboratively with our partners from Dalhousie University and the Smithsonian Institution. We are also working with National Geographic in a study of grey seal foraging using the Crittercam video-system. Our work with Dr. S. Iverson at Dalhousie aims to develop fatty acid signature analysis into a quantitative tool to estimate the diets of marine mammals and sea birds. Key recent findings from other studies include a new understanding of the spatial and temporal distribution of foraging effort throughout eastern Canada and seasonal patterns in energy storage and expenditure, both of which will enable us to better model predation mortality. We are also attempting to understand the linkage between the foraging behaviour of grey seals and their diets and to estimate the functional response of grey seal predation to changes in prey abundance. Finally, we have just completed a 5-year program of branding on Sable Island (over 2300 individuals), which has provided us with a new pool of known-aged seals to estimate vital rates in a population expected to experience density-dependent changes in fecundity and survivorship.

Newfoundland Region

The Newfoundland Marine Mammal Section consists of three scientists, three indeterminate technical staff and various term employees, casuals and/or students. Historically, research has focused upon harp and hooded seals, although studies on other species of seals and cetaceans such as harbour porpoise have been carried out.

The commercial seal hunt in Atlantic Canada is directed towards harp and hooded seals. A major objective of the Marine Mammal Section is to understand the population dynamics of these species to provide sound scientific advice to managers. This is the focus of ongoing research programs on trends in reproductive status, the age structure of the harvest, incidental catches and periodic surveys to estimate pup production. These data are incorporated into population models to provide estimates of total abundance and biological reference points. Studies to improve survey methods through the use of digital cameras and computer-assisted photographic analysis are also underway in conjunction with researchers in Quebec region.

Since the collapse of many groundfish stocks in the early 1990s, research has been directed towards estimating the potential impact of harp and hooded seal predation on prey species. This has resulted in increased requirements for understanding growth, diet and distribution of seals. Satellite telemetry studies have increased our knowledge of the pelagic distribution of harp and hooded seals tremendously.

In addition to research on harp and hooded seals, data are regularly collected from ringed, grey, harbour and bearded. Biological data including distribution, age, stomach contents, reproductive status and morphometrics are collected primarily through a collector program involving sealers and fishermen throughout the region.

Using funds from the Canadian Space agency, a study of ringed seal productivity and pupping habitat along the Labrador coast was recently initiated. The primary objective of this project is to evaluate the effectiveness of RADARSAT image for documenting sea ice habitat and detecting birth lairs in the area. If successful, it will be used to develop an abundance/productivity index.

A study of harbour seals as an indicator of Marine Ecosystem Health in Placentia Bay is underway. The objective of this project is to determine contaminant profiles and bioaccumulation pathways for harbour seals and their major prey species in Placentia Bay. Ecological data (including diet, reproductive status and age) are also being collected to properly interpret contaminant results from a marine ecosystem health perspective.

Given the poor salmon returns in some Newfoundland and Labrador rivers and the increased concern of seal predation, we have iniatiated a River Observation Logbook Program. The objective is to have DFO personnel working at fish counting facilities monitor the frequency of occurrence and nature of predator interactions. The Program will provide an opportunity to synthesize available information as well as provide direction for future research.

In order to assess the status of harbour porpoise, data are required on stock identity, biological parameters, distribution, abundance and mortality. Unfortunately, very few data are available from porpoise in Newfoundland and Labrador. To address this paucity of information on harbour porpoise in Newfoundland, a multi-year project was initiated in 2001.

In order to carry out the needed research we identified the need for a dedicated scientist studying cetaceans in the Newfoundland Region. Dr. J. Lawson was recently hired and began with DFO in January 2002.

Porpoise in the waters of Newfoundland and Labrador have been considered a single sub-population based upon samples collected primarily from the southeastern portion of the island (Fig 1). In order to determine the genetic relationship among porpoise within Newfoundland waters and their relationship with the Bay of Fundy/Gulf of Maine, Gulf of St. Lawrence and West Greenland sub-populations, fishermen were contacted and requested to provide porpoise caught in fishing gear. Thirty-five porpoise were collected in 2001 from all parts of the island. This study is being carried out in cooperation with Dr. P. Rosel ((NMFS, Charleston, South Carolina) who be conducting DNA sequencing and specific microsatellite assays to determine genetic relationships.

Some data on growth rates and reproductive rates of porpoise are available from a sample of porpoise collected in SE Newfoundland in the early 1990s. Analyses of these data have been completed and a manuscript describing growth will be published in 2002. The manuscript describing the results of the reproductive analyses has been completed and will be submitted for publication soon. Unfortunately, sample sizes are small and limited spatially and temporally. The animals obtained from fishermen in 2001 will provide additional samples to determine if the earlier data are representative of the entire sub-population. Porpoise were examined to determine sex, age, diet, growth rates, condition, and reproductive rates. Samples were also collected for contaminant analysis.

Preliminary data on the diet of harbour porpoise has been obtained by reconstructing the stomach contents of 134 animals caught in fishing gear in the early 1990s and 2002. Overall diet consisted mainly of small forage fish such as capelin, Atlantic herring and sand lance. However, there was considerable variation among areas with horned lanternfish also being an important prey in samples (n = 30) from the northeast coast. The small (n=15) sample from the west coast was highly variable with Pandalus, Atlantic cod, herring and capelin the most important prey.

In order to design appropriate methods of estimating abundance it is important to determine the distribution of harbour porpoise in waters of NF & L. Anecdotal sightings of marine mammals collected since the late 1970s have been compiled and distribution maps are being prepared. These maps will provide indications of the distribution of a wide variety of cetaceans within Newfoundland waters. Experienced observers were deployed on Platforms of Opportunity to obtain data on cetacean distribution. Sea-going scientific staff, ship personnel and fisheries observers were recruited and trained to gather sighting data while at sea. Fishermen were interviewed to obtain information on the distribution of porpoise in Newfoundland Region and areas of historical abundance have been identified.

In order to identify the best methods to assess abundance of porpoise in Newfoundland waters discussion were held with US and European researchers who have carried out a variety of aerial and shipboard surveys. DFO personnel participated in survey trials carried out by NMFS experts during which they gained valuable experience in survey methodology. Survey methodology was also discussed in detail at the Cetacean Abundance Workshop help in February 2002. This background will be used to determine the most appropriate survey methods for the Newfoundland subpopulation

The level of harbour porpoise bycatch in Newfoundland waters will be estimated using a combination of interviews, logbook programmes, and independent observer programmes. Historical attempts to estimate bycatch for various species of marine mammals and seabirds contain some qualitative information on the level of porpoise by-catch in Newfoundland in the late 1980s/early 1990s but no quantifiable estimates. An existing bycatch log-book programme directed towards seal catches in lumpfish nets is being expanded through the inclusion of fishermen participating in the Newfoundland and Quebec sentinel fisheries programs. Independent observers participating in the DFO observer programmes have been trained to collect information on bycatch (and collect biological data). Recently, a graduate student from Memorial University of Newfoundland has started a study of bycatch in Newfoundland fishing gear in order to quantify mortality levels in all sectors of the fishery.

Research for the coming year include:

- To publish results of historical analyses of growth, reproductive parameters, diet and incidental catches. Collections of porpoise for studies of diet and biological parameters will be continued.

- Analyses of stock identity will be completed and results presented for peer review.

- A study of contaminant levels in harbour porpoise will be initiated

- The observer programmes will be expanded to estimate incidental catches of porpoise in Newfoundland. If possible, preliminary results will be available for peer review.

- An extensive program of observers on Platforms of Opportunity will be developed to determine distribution of cetaceans in Newfoundland waters.

- Design and test survey methodologies for assessing abundance of harbour porpoise in our waters.

- Explore techniques for live-capturing porpoise and determine appropriate methods for deploying satellite transmitters on porpoise to determine distribution.

Research on other cetaceans is also being carried out. The general distribution of species such as dolphins and blue, humpback, fin, minke and beluga whales is being documented through the examination of historical whaling records, anecdotal sightings collected over the past 2 decades and sighting surveys conducted on Platforms of Opportunity. Stock identity and biological parameters are being monitored through the examination of stranded animals or biopsies. Abundance surveys are being planned as part of the national cetacean monitoring program.

PLANS FOR NEXT MEETING

The agenda and location of the next meeting was discussed. One agenda item proposed was a discussion about methods of estimating total allowable removals for marine mammals. Working papers on different methods and different management objectives would be required. Sue Cosens was volunteered to organize the contributions. Mike Hammill, Mike Kingsley and Pierre Richard were named as possible contributers. The discussion would focus on what approaches would best support our stock assessment and advisory role.

There was some discussion about the best time to hold the next meeting but no decision was made. It will be held in Nanaimo, B.C.

Annex 1. List of Participants

Name	Affiliation	Email Address (or FAX)
Arnatuk, Johnny	NHFTA	FAX (819) 964-0647
Bourdages, Hugo	DFO, Mont-Joli	Bourdagesh@dfo-mpo.gc.ca
Bowen, Don	DFO, Dartmouth	Bowend@mar.dfo-mpo.gc.ca
Cosens, Sue	DFO, Winnipeg	Cosenss@dfo-mpo.gc.ca
Ford, John	DFO, Nanaimo	Fordjo@pac.dfo-mpo.gc.ca
Gosselin, Jean-Francois	DFO, Mont-Joli	Gosselinj@dfo-mpo.gc.ca
Hammill, Mike	DFO, Mont-Joli	Hammillm@dfo-mpo.gc.ca
Harris, Lei	DFO, St. Andrews	Harrisle@mar.fo-mpo.gc.ca
Kingsley, Michael	Greenland Insitute of Natural Resources	Mcsk@natur.gl
Lawson, Jack	DFO, St. John's	Lawsonj@dfo-mpo.gc.ca
Lagace, Anne	DFO, Mont-Joli	Lagacea@dfo-mpo.gc.ca
Lesage, Veronique	DFO, Mont-Joli	Lesagev@dfo-mpo.gc.ca
Michaud, Robert	GREMM	Rmichaud@gremm.org
Nadeau, Jean-Marc	DFO, Quebec	Nadeaujm@dfo-mpo.gc.ca
Neilson, John	DFO, St. Andrews	Neilsonj@mar.dfo-mpo.gc.ca
O, Miriam	DFO, Nanaimo	Om@pac.dfo-mpo.gc.ca
Powles, Howard (by teleconference)	DFO, Ottawa	Powlesh@dfo-mpo.gc.ca
Simard, Yvan	DFO, Rimouski	Simardy@dfo-mpo.gc.ca
Simon, Patrice	DFO, Ottawa	Simonp@dfo-mpo.gc.ca
Sjare, Becky	DFO, St. John's	Sjareb@dfo-mpo.gc.ca
Smedbol, R. Kent	DFO, St. Andrews	Smedbolk@mar.dfo-mpo.gc.ca
Stenson, Garry	DFO, St. Johns	Stensong@dfo-mpo.gc.ca
Trites, Andrew	UBC, Vancouver	Trites@ zoology.ubc.ca

Annex 2. Agenda of NMMRC Meeting, Quebec, February 18-20, 2002

Time	Monday **Feb. 18**	Tuesday **Feb. 19**	Wednesday **Feb. 20**
09:00 - 09:30		NQ Beluga -- Updated Harvest Statistics	NMMRC/COSEWIC interactions
09:30 - 10:00		NQ Beluga -- New model of harvest	NMMRC/COSEWIC interactions (cont.)
10:00 - 10:30	Travel	"	Summary of Harbour Porpoise Workshop
10:30 - 11:00		"	Summary of Harbour Porpoise Workshop (cont.)
11:00 - 11:30		"	DFO Process for Scientific Permits for NGOs
11:30 - 12:00		NQ Beluga -- Estuarine disturbance	DFO Process for Scientific Permits for NGOs (cont.)
Lunch			
13:00 - 13:30	Call to Order, Introductions, Rapporteurs	NQ Beluga -- Estuarine disturbance (cont.)	Whelping of Harbour Seals in the St. Laurence Estuary
13:30 - 14:00	Passive Hydroacoustic Systems for MM Research	Review of NQ Beluga SSR (draft)	Whelping of Harbour Seals in the St. Laurence (cont.)*
14:00 - 14:30	"	Review of NQ Beluga SSR (draft, cont.)	Review of NQ Beluga SSR (final)
14:30 - 15:00	"	Review of NQ Beluga SSR (draft, cont.)	Review of NQ Beluga SSR (final, cont.)
15:00 - 15:30	NQ Beluga - Recent Aerial Surveys	Review of NQ Beluga SSR (draft, cont.)	Plans for 2003 NMMRC – Agenda Items, Timing
15:30 - 16:00	"	Regional Research Reports	Plans for 2003 NMMRC – Agenda Items, Timing (cont.)
16:00 - 16:30	"	Regional Research Reports (cont.)	

* This paper was withdrawn

Annex 3. Draft Policy Regarding the Issuance of Scientific Research Licences for Scientific Activities

Proposal from the Quebec Region

Purpose

The purpose of the present policy is to provide guidelines for the regional licensing procedures for scientific activities to allow the applicant to carry out scientific research activities on marine mammals in the Quebec Region (Fisheries and Oceans Canada.

What is a Scientific Licence?

Scientific licences are special permits issued by the Department of Fisheries and Oceans of Canada (DFO) to allow research to be conducted on mammals in the waters under the responsibility of the Quebec Region. These licences are issued pursuant to Section 52 of the Fishery (General) Regulations of the *Fisheries Act*. They authorize a person or an organization to carry out, under specific conditions, certain fishing operations which would otherwise be prohibited.

Who Can Obtain a Scientific Licence?

The DFO may issue a licence for scientific activities to any person or organization who plans to carry out, using recognized means and methods of scientific observation and experimentation, a project whose goal is the acquisition of scientific knowledge. Such projects shall be part of a scientific research initiative. Moreover, projects must be carried out by one or more persons whose aim is to have their work recognized by the scientific community. Excluded are projects that are unstructured, i.e. those for which no experimental or observation protocol has been clearly established and which have not been reviewed by a local Animal Protection Committee.

What Animals Are Covered By Scientific Licences?

Fisheries and Oceans Canada may issue scientific licences to carry out scientific activities that involve marine mammals covered by the *Fisheries Act* which are not the subject of any delegation of power to another government body.

Procedure For Issuing Licences

Resource Management Branch. The Resource Management Branch receives the various scientific licence applications and analyzes them in consultation with various experts. The Branch decides on the type of expertise needed, gathers together and comments on the opinions expressed by these experts, and makes a decision on whether or not to issue the licence.

Sciences Branch. The Sciences Branch (Maurice Lamontagne Institute - MLI) evaluates scientific projects forwarded by the Resource Management Branch on the basis of:

1. the scientific validity and relevancy of the proposed project as well as the qualifications and expertise of the applicant who wishes to carry out the project.
2. to ensure that the project meets CCAC standards. The Sciences Branch will require that any project that could cause stress, excessive discomfort, pain or severe distress to an animal in the application of the experimental protocol be reviewed by a local animal protection committee – MLI or by the Canadian Council on Animal Care (CCAC).
3. a precariousness status if need be. The project will have to be reviewed by the Programme Regional Co-ordinator on the Species at Risk to ensure that the proposed activity is in compliance with the (future) *Species at Risk Act* and the Restoration Strategy if the latter exists, or will not unnecessarily harm the species.

The Sciences Branch shall gather together the experts' opinions relative to the three above-mentioned aspects before submitting their recommendations to the Resource Management Branch.

MLI Animal Protection Committee (MLI-APC). Any project that could cause stress, excessive discomfort, pain or severe distress to an animal involved in a scientific study must be supported by a Certificate of Compliance with the standards of the Canadian Council on Animal Care (CCAC). As a member of the CCAC, DFO is formally committed to meeting the requirements of this organization, including guidelines concerning the use of live animals for research or educational purposes. Projects that require it shall be accompanied by a Certificate of Good Care pursuant to the CCAC guidelines, issued by the Animal Protection Committee of the scientific institution to which the applicant is affiliated. If such a committee is not accessible to the applicant, the latter shall present a protocol form for submission to the MLI Animal Protection Committee.

Saguenay-St. Lawrence Marine Park. In December 2001, the Saguenay-St. Lawrence Marine Park (SSLMP) tabled proposed regulations concerning marine environment activities in the Park. The evaluation of scientific projects carried out in the SSLMP by the DFO scientific staff, its partners, scientists or private organizations holding a licence issued by DFO shall take into consideration the Memorandum of Understanding signed between DFO and SSLMP within the frame of these regulations.

How To Obtain a Scientific Licence

Any person or organization who wishes to obtain a scientific licence to carry out scientific activities on marine mammals must complete the scientific licensing application form and forward it to the Resource Management Branch.

In cases when a Certificate of Compliance with CCAC standards is needed, it is the applicant's responsibility to obtain the said certificate from the Animal Protection Committee of the scientific institution to which he/she is affiliated or to complete the protocol form for submission to the Maurice Lamontagne Institute Animal Protection Committee.

The applicant must send his request in November of the year preceding the activities.

All applications are analyzed according to the criteria defined in the current policy. Should Fisheries and Oceans Canada refuse to issue a scientific licence, the applicant shall be informed of the reasons of the refusal in writing.

Réjeanne Camirand
February 18th, 2002