

Terms of Reference

Annual Meeting of the National Marine Mammal Peer Review Committee (NMMPRC)

October 29 – November 1st, 2007
Freshwater Institute
501 University Cres.
Winnipeg, Manitoba
Chairperson: Don Bowen

Introduction

NMMPRC holds a meeting once a year to conduct scientific peer review of marine mammal issues. This approach gives the opportunity to bring together the experts on marine mammals from DFO (also with specific contributions from non-DFO experts) to ensure high quality control of the scientific results and to provide sound scientific basis for the management and conservation of marine mammals in Canada. The agenda of the meeting encompasses topics to peer review to provide the best scientific advice for decision-making. When time allows, this annual meeting is also an opportunity to look at ongoing research projects to provide some feedback or guidance to the scientists involved.

Grey seals

Context

The last grey seal population estimates were computed from an aerial surveys and ground counts conducted in the Gulf of St. Lawrence and on the Scotian Shelf in 2004. New aerial surveys and ground counts were conducted in 2007 to estimate pup production and derive a population estimate for the eastern Canadian grey seal population. These new pup production estimates and recent data on reproduction rates, catch, and a new population assessment will be presented. This information will be used to compute a new harvest limits for the Gulf of St. Lawrence and the Scotian Shelf components of the grey seal population.

These new updates on the population status will also be used in an upcoming workshop on the impacts of grey seals of fish stocks.

Working papers

Three working papers on grey seals will be the subject of a peer review:

1. Review of Pup Production Estimates on the Scotian Shelf (D. Bowen)
2. Review of Pup Production Estimates in the Gulf of St-Lawrence (M. Hammill)
3. Review of new Population Assessment of eastern Canadian grey seals (L. Thomas, M. Hammill and D. Bowen)

Output of the meeting

Three Research Documents and one Science Advisory Report are expected.

Bowhead Whale

Context

The eastern Canadian Arctic population of bowhead whales is up for SARA listing. As such, research has been conducted in the past few years to refine our understanding of historical population levels, current abundance, seasonal distribution and movements, and stock identity.

A review of historical whaling data has been conducted and provides the basis for an improved estimate of historical bowhead whale abundance prior to Basque whaling in the 16th century. Such information is important in establishing recovery targets under a *Recovery Strategy*. A paper on this topic will be reviewed.

The 2005 COSEWIC designation for this population was provided on the basis of two stocks. More recent research of whale movements, peer reviewed in 2006, indicated that there is little evidence for the existence of two stocks. The existence of a single stock, likely segregated on the basis of age and reproductive class, was accepted as the working hypothesis by the MMPRC in 2006. Ongoing research and analysis in this regard, intended to strengthen the case for the single stock hypothesis, will be reviewed. One paper related to this topic will present recent information based on 2006 tag data and an updated overview of bowhead whale movements and seasonal distribution.

A second paper on the topic of stock identity will present an analysis of genetics data. Since the last review of bowhead genetics, data has been collected for an additional 21 microsatellite loci. This represents a significant increase in the amount of genetic information for the comparison of groups of samples to examine potential stock relationships. The analysis of this new data will be reviewed.

The most recent abundance estimate for the eastern Canadian Arctic bowhead whale population was reviewed by the MMPRC in 2006. Although accepted by the MMPRC, criticism at the International Whaling Commission regarding potential shortfalls and procedural issues prompted a re-analysis of the data. This re-analysis will be reviewed.

The Eastern Arctic Bowhead Science Advisory Report is being reviewed. It is a compilation of the bowhead research reviewed to date by the NMMPRC and information gathered from a stock assessment meeting held in Iqaluit in 2006 where both scientific and Inuit knowledge of the eastern arctic bowhead population were discussed. The Advisory report will document our current state of knowledge of this population.

Working papers

Five working papers will be the subject of a peer review:

1. Review of Bowhead Catch History in the context of the review of the current estimate of pre-commercial whaling population size (J.Higdon)
2. Review of new tagging data (L. Dueck)
3. Review of new genetics data (L. Postma)
4. Review of new Population Estimates (L. Dueck)
5. Review of the draft Science Advisory Report of Bowhead Whale (K. Martin)

Output of the meeting

Four Research documents and one Science Advisory Report on Bowhead Whale

Transient Killer Whale

Context

The Northeast Pacific Transient Killer Whale population was designated as 'threatened' by COSEWIC in 2001, and listed under SARA in 2003. Current numbers are approximately 200 animals. Transient killer whales are long-lived upper trophic level predators that are considered to be at risk because of their small population size, their very low reproductive rate, and their extremely high levels of chemical contaminants that are persistent, bioaccumulative, and toxic.

As required under Species at Risk Act (SARA), a Transient Killer Whale Working Group was formed to develop a strategy to promote the recovery of this population. A draft Recovery Strategy was completed

in June 2007. Also as part of the SARA process, a Recovery Potential Assessment (RPA) was drafted to investigate life history parameters for transients, including the ability of the population to grow and recover. This work will inform both the determination of population recovery and assist in the establishment of future population objectives.

The RPA of the Transient Killer Whale population will be the subject of this year's review.

Working papers

One working paper will be the subject of a peer review:

1. Review of the Recovery Potential Assessment for the Northeast Pacific Transient Killer Whale population (J. Ford)

Output of the meeting

A Recovery Potential Assessment on Transient Killer Whales will be generated.

Steller Sea Lions

Context

An updated assessment on the abundance and population trends of Steller sea lions in BC will be presented based on a province-wide survey conducted in 2006. A second Res Doc will be presented comparing counts made from 35mm film and digital images, to ensure the transition to digital photography provides a consistent time-series, especially for pup counts. Steller sea lions in BC were designated as of 'Special concern' by COSEWIC in 2003, and listed under SARA in 2004. The updated information on the status of Steller sea lions is required for developing a Management Plan for this species, which must be completed by the end of 2007.

Working papers

1. An evaluation of Steller sea lion (*Eumetopias jubatus*) pup counts from 35mm oblique photographs and digital images.
2. Recent trends in the abundance of Steller sea lions (*Eumetopias jubatus*) in British Columbia
3. A Science Advisory Report on the status of Steller Sea Lion (*Eumetopias jubatus*) in BC.

Output of the meeting

Two research documents and one Science Advisory Report are expected.

Beluga, Narwhal and Walrus

Context

Eastern Arctic Area Fisheries Management is requesting scientific advice for total allowable harvest levels on all populations of beluga, narwhal and walrus found in and outside of the Nunavut settlement area.

Working papers

Three working papers on beluga, narwhal and walrus will be reviewed. The preliminary titles of these papers are:

1. Beluga: Advice on Total Allowable Harvest in Nunavut
2. Narwhal: Advice on Total Allowable Harvest in Nunavut
3. Walrus: Advice on Total Allowable Harvest in Nunavut

Output of the meeting

Scientific advice on the three species above will be formulated.

A Proceeding report will also be produced to document the key discussions at the meeting.