

Draft Terms of Reference

Zonal Peer Review Meeting (by Tele/videoconference)

Scientific Advice for the Seal Management Plan

September 7-8, 2005

Chairperson: Patrice Simon

Background

The 2003-2005 Atlantic Seal Management Plan ends in 2005. A new Atlantic Seal Management Plan will be developed for the 2006 season onward. The Harp and Grey Seal populations were surveyed in 2004 and most of the results were peer reviewed in May 2005. In order to develop the new Atlantic Seal Management Plan, scientific advice was requested on various management options for grey and harp seals.

Meeting objectives

Current population models will be projected forward to examine various harp seal harvest scenarios suggested by Fisheries managers. The objective of the meeting will be to review the inputs used in these models as well as to answer to specific questions regarding seal harvest from the Fisheries and Aquaculture Management Directorate. In particular, the following aspects will be reviewed:

1. The parameters used in the harvest simulation model for harp seal.
2. Uncertainties and assumptions associated with the parameters and results of the harvest simulation model for harp seal.
3. Reference and limit points used in the Objective Based Fisheries Management Plan for the Atlantic Harp Seal (i.e. Should the reference limit points of 30, 50 and 70% of the maximum population size used in the 2003-2005 Atlantic Seal Management Plan be applied directly to the new population estimate ?)
4. Implication of different survey intervals for the harp seal population.
5. Proportion of harp seal born in each pupping area and their relationship with each other.
6. Factors that need to be considered in the establishment of harp seal harvest strategies for 2006 onward.
7. The results of the pup production estimate for Scotian Shelf grey seal were reviewed in May 2005. A new population estimate was computed based on this pup production estimate. The methodology and results of this new population estimate will be reviewed. The new population estimate will be used to compute a Potential Biological Removal (PBR).

The review is not intended to re-evaluate the harp or grey seal pup production estimates or the harp seal total population estimates as these were peer reviewed previously (see background documents below). Particular emphasis will be put on the review of the

input parameters for the harvest simulations for harp seal. Once this is done, the model will be runned to examine various harvest scenarios. The results will be forwarded to the peer review group for comments. A second meeting will be organized if needed to go over the group`s comments. The results will be sent to Fisheries and Aquaculture Management Directorate before October 15, 2005 to be used as scientific advice for the development of the next Atlantic Seal Management Plan.

Attendance

Patrice Simon, DFO, Ottawa

Mike Hammill, DFO, Quebec Region

Garry Stenson, DFO Newfoundland and Labrador Region

Don Bowen, DFO Maritimes Region

Solange Brault, University of Massachusetts, Boston, USA

John Harwood, Sea Mammal Research Unit, University of St Andrews, St Andrews, UK

Working papers

The working papers submitted for review are as follows:

- 1) Harvest simulation model
- 2) Scotian Shelf grey seal population estimate
- 3) Brief summary of the information available on proportion of harp seal born in each pupping area (one pager)

We expect all of the documents needed for this meeting to be available by August 26, 2005.

Output of the meeting

Following the meeting, the draft proceedings and other resulting documents will be distributed to the participants for review. A second conference call may be scheduled if necessary, at the beginning of October.

Output of the meeting will be documented via standard CSAS publications (one proceedings and two research documents). The first research document will address the harp seal harvest simulation model parameters, the assumptions and uncertainties associated with it and the results of the simulation model for various harvest scenarios using the most recent Atlantic Seal population abundance estimate. The second one will be on the Scotian Shelf grey seal population estimate.

Background Documents

The following list of background documents is available to the participants:

Application of the Precautionary Approach and Conservation Reference Point to the Management of Atlantic Seals: A Discussion Paper. By Hammill, M. and Stenson, G.
http://www.dfo-mpo.gc.ca/csas/Csas/publications/ResDocs-DocRech/2003/2003_067_e.htm

Bowen, W. D., J. I. McMillan, W. Blanchard. submitted. Pup production and age of primiparity indicated reduced rate of population increase of grey seals at Sable Island. Marine Mammal Science.

Harvest Simulations for 2003-2006 Harp Seal Management Plan By Hammill, M. and Stenson, G. Research Document 2003/068.
http://www.dfo-mpo.gc.ca/csas/Csas/publications/ResDocs-DocRech/2003/2003_068_e.htm

2004 Pup Production of Harp Seals, *Pagophilus groenlandicus*, in the Northwest Atlantic. G.B. Stenson, M.O. Hammill, J. Lawson, J.F. Gosselin and T. Haug . Research Document 2005/037.
http://www.dfo-mpo.gc.ca/csas/Csas/publications/ResDocs-DocRech/2005/2005_037_e.htm

Pup production of non-Sable Island grey seals, in 2004. Mike O. Hammill and Jean-François Gosselin. Research Document 2005/033
http://www.dfo-mpo.gc.ca/csas/Csas/publications/ResDocs-DocRech/2005/2005_033_e.htm

Abundance of Northwest Atlantic grey seals in the Gulf of St. Lawrence and along the Nova Scotia Eastern Shore. Mike Hammill. Research Document 2005/036.
http://www.dfo-mpo.gc.ca/csas/Csas/publications/ResDocs-DocRech/2005/2005_036_e.htm

DFO, 2005. Stock assessment of northwest Atlantic harp seals (*Pagophilus groenlandicus*). DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2005/037
http://www.dfo-mpo.gc.ca/csas/Csas/status/2005/SAR-AS2005_037_E.pdf