

**Transboundary Resource Assessment Committee (TRAC)
Mackerel Benchmark and Assessment**

**October 22-23, 2009 (DATA review)
Winter 2010 (MODEL review)**

TERMS OF REFERENCE

Context

The TRAC was established in 1998 to peer review assessments of transboundary resources in the Georges Bank area and thus to ensure that the management efforts of both Canada and USA, pursued either independently or cooperatively, are founded on a common understanding of resource status

Prior to 2009, scientists from both countries participated in the peer review of each other's mackerel assessments. The last meeting occurred during December 2005. At that meeting, after reviewing several model formulations, consensus was reached on using an Age Structured Assessment Program (ASAP) model to assess the current status of the Northwest Atlantic mackerel stock.

At the Canada / US Scientific Discussions in April 2007 it was agreed that a TRAC benchmark and assessment of mackerel would be conducted in 2009, with a data inputs meetings to be held in the summer/fall of 2009 and the modeling review and assessment to be held in December 2009.

The purpose of these meetings is to review and incorporate any new information from survey indices and the fisheries, revisit any model formulation issues and recommend a suitable approach upon which to base management advice.

Objectives

Data Inputs Meetings (October 2009)

- Update results with the latest information from fisheries and research surveys.
 - Description of the US and Canadian mackerel fisheries,
 - Review adequacy of the sampling coverage of mackerel fisheries of NMFS, DFO, and industry sampling programs
 - Update landings and discards at age
 - Review of indices of abundance, including update of the Canadian Egg survey.
 - Description of the US index of abundance and the implications of the change in the NEFSC trawl vessel.
 - Identify or consider other abundance indices.
 - Review results of the otolith exchange study.
 - Review temporal and spatial distribution of the stock in both US and Canadian waters.

- Review progress made on the recommendations from previous assessments.

Modeling Meeting and Assessment (Winter 2010)

- Review the assessment model formulation issues and recommend an approach for stock status determination.
 - Exploration of VPA models, forward projection models (e.g. ASAP), and other relevant approaches.
 - Review the retrospective pattern and consider alternative model formulations to address its impact on uncertainty in status determination and harvest forecast.
- Apply the agreed assessment approach to update the status Northwest Atlantic mackerel stock through 2008 and characterize the uncertainty of estimates.
- Review the harvest strategy biological reference points to meet management requirements of both countries.
- Review approach for the provision of projections to meet the management requirements of both countries.
- Consider the stock implications of unattained short-term yields.
- Identify potential future work (International egg survey, tagging and genetic studies, and other collaboration between both countries) that would improve the determination of stock status.
- Consider role of mackerel as forage for predators and evaluate feasibility of incorporating predatory consumptive removals into assessment models..

Outputs

TRAC Proceedings, which will document the details of the review and summarize the consensus results

TRAC Reference Documents

Participants

NEFSC and DFO Stock Assessment teams and other
Invited external reviewers
Representatives from US and Canadian management
US State and Canadian provincial representatives
US and Canadian fishing industry participants