

**Transboundary Resource Assessment Committee (TRAC)
Spiny Dogfish Benchmark and Assessment**

**March 30 – April 3 2009 (DATA)
January 25-26 2010 (MODEL)
Woods Hole, Ma.**

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. In addition to annual assessment reviews, TRAC also periodically conducts “benchmark reviews”, which examine methodologies that may be most suited for assessment of a particular stock and establish an approach to be followed.

Spiny dogfish has not previously been assessed through the TRAC process. However, scientists from both countries have participated in the peer review of each other’s spiny dogfish assessments at various times in the past. The last Northeast Regional Stock Assessment Workshop (SAW) Review was conducted in June 2006. The last DFO assessment of spiny dogfish occurred in November 2007.

At the Canada / US Scientific Discussions in April 2007 (at the request of the Transboundary Resource Management Steering Committee), it was agreed that a TRAC benchmark of spiny dogfish would be conducted in 2009. Subsequently, it was agreed that a data inputs meetings would be held in the spring of 2009 and the modeling review and assessment would be held in summer/fall 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 (March/April 2009)

- Review progress made on the recommendations from the 43rd SAW meeting and the 2007 DFO assessment.
- Update results with the latest information from fisheries and research surveys.
 - Description of the US and Canadian spiny dogfish fisheries, commercial and recreational.
 - Landings by year, gear, and area.
 - Trends in size composition and sex.
 - Description of the indices of abundance.
- Review methods for discard estimation and imputation of historical estimates.

- Consider data requirements for spatially-structured population model and evaluate sufficiency of existing data to support multi-stock/area models of dynamics.
 - Summarize progress/results of ongoing/completed genetic identification studies.
 - Review existing tagging studies.
- Investigate reproductive biology of spiny dogfish.
 - Update measures of reproductive potential and their implications for rebuilding.
- Review factors influencing availability of spiny dogfish to survey gear including ontogenetic and environmental factors.
- Update various fishery-independent monitoring surveys and explore inter-relationships among surveys.
- Evaluate existing diet composition data and implications for population level consumption estimates.

Modeling Meeting and Assessment (December 2009 or January 2010)

- Review the assessment model formulation issues and recommend an approach for stock status determination.
 - Exploration of length-based forward projection models and other relevant approaches.
- Apply the agreed assessment approach to update the status of the Northwest spiny dogfish stock through 2008 and characterize the uncertainty of estimates.
- Identify candidate mechanisms for reduced recruitment since 1997.
- Investigate implications of skewed sex ratio on pup production.
- Review the biological reference points for F and spawning stock biomass to meet management requirements of both countries.
- Review forecasting approach and conduct projections to meet the management requirements of both countries.
- Identify potential future work (tagging and genetic studies, and other collaboration between both countries) that may improve the determination of stock status.
- Consider ecosystem implications of spiny dogfish consumption of prey species, and potential competition with other species.

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