

## Terms of Reference

### National Workshop on the Evaluation of a Quantitative Biological Risk Assessment Tool (QBRAT) Through Various Case Studies

November 29-30, 2006, Ottawa, Ontario

Chairperson: Nicholas Mandrak

### Background

Risk analysis has been identified as an important tool for DFO and can be applied to many of DFO's science priorities, including AIS, SAR, climate change, and fish habitat modification. The development of the national framework for conducting biological risk assessments of aquatic invasive species (by Mandrak and Cudmore) serves as guidelines for the development of a variety of risk assessment tools. One of these tools is the Quantitative Biological Risk Assessment Tool (QBRAT) (Koops and Cudmore) which will quantitatively assess the risk of aquatic invasive species. The results of this meeting will represent a potential tool to be used for science and policy, and will include a description of how to implement the tool and historical case studies, for the development of management decisions with respect to aquatic invasive species. A software interface for QBRAT has been developed providing the ability to enter probabilities, costs (economic and environmental) of impacts and remediation and uncertainty to estimate risk. QBRAT will: (i) make risk assessments more defensible; (ii) clearly identify costs and effective targeting of resources; (iii) identify knowledge gaps and future research needs; (iv) identify which components of the risk assessment are most important for the assignment of risk; and (v) increase the level of certainty. Case studies from across the regions and taxa groups have been selected to be applied to QBRAT to identify any gaps in the tool or problems in the software. This is required in order to make QBRAT more defensible. The case study leaders and their case studies are:

Leader	Case Study	DFO Region
Becky Cudmore	Round goby in Lake Simcoe	C&A
Dr. Ora Johannsson	<i>Bythotrephes</i> in Ontario inland lakes	C&A
Dr. Tom Therriault	Tunicate species (tbd)	Pacific
Dr. Mike Bradford	TBD	Pacific
Dr. Andrea Locke (unconfirmed)	Green crab	Gulf
Dr. Chris McKindsey	Codium	Quebec

## **Objectives**

The objective for the workshop is:

1. To evaluate QBRAT through a variety of case studies in order to finalize this tool.

The workshop will generate a proceedings report summarizing the case studies and discussions critically evaluating QBRAT. This will be published as part of the Canadian Science Advisory Secretariat (CSAS) Proceedings Series. A CSAS Research Document outlining QBRAT will also be produced after the workshop.

## **Location and Date**

Courtyard Marriott, Ottawa, Ontario, November 29 (8:30-4:30), November 30 (8:30-11:30)

## **Participants**

Participants (approx. 30) will include the research project leaders, case study leaders and internal (DFO Science) and external individuals with relevant expertise in quantitatively assessing risk, as well as assessing the biological risk of aquatic invasive species.

## **Timetable**

- June, 2006 – presentation of QBRAT at a National Risk Assessment Methods Workshop (Burlington) – all case study leaders were participants
- July, 2006 – send Version 2 of QBRAT to case study leaders
- July – November, 2006 – case study leaders to research elements required to conduct their case studies through QBRAT
- November 2006 – case study leaders to submit working papers on their case studies to be circulated to participants two weeks prior to workshop
- November 29-30, 2006 – Complete the review of QBRAT through the review of the various working papers (case studies)
- February, 2007 – send draft proceedings to participants
- March, 2007 - finalize proceedings, submit to CSAS
- March, 2007 – finalize the Research Document outlining QBRAT, submit to CSAS