National Science Advisory Process concerning corals, sponges, and hydrothermal vents in Canadian waters.

March 9 – 12, 2010
The Westin Hotel, Ottawa, Ontario

Chair: William B. Brodie

Terms of Reference

Context

Canada is committed both domestically and internationally to conserve, manage, and exploit fish stocks in a sustainable manner, as well as to manage the impacts of fishing on sensitive benthic areas.

In December 2006, Canada endorsed *Resolution 61/105* of the United Nations General Assembly (UNGA) which calls on States to directly, or through Regional Fisheries Management Organizations and Arrangements (RFMO/A), apply the precautionary approach and ecosystem approach in order to sustainably manage fish stocks and protect vulnerable marine ecosystems (VME) from significant adverse impacts (SAI).

At the request of The Food and Agriculture Organization of the United Nations (FAO) Committee on Fisheries (COFI), the *International Guidelines for the Management of Deep-sea Fisheries in the High Seas* were drafted by relevant experts to assist States and RFMO/As to sustainably manage deep-sea fisheries consistent with the precautionary approach and to guide the implementation of *UNGA Resolution 61/105*. The *FAO Guidelines* provide criteria to aid in the identification of VME and also provide examples of potentially vulnerable species groups, communities, habitats, and features. In addition, States and RFMO/As are instructed that they should have an appropriate protocol identified in advance for how fishing vessels should respond to encounters with a VME in the course of fishing operations.

The *FAO Guidelines* also state that, if after assessing all available scientific and technical information, the presence of VME or the likelihood that fishing activities would cause SAI on VME cannot be adequately determined, States should only authorise fishing activities to proceed in accordance with:

i. precautionary conservation and management measures to prevent SAI as described in paragraph 65 of the *Guidelines*;
ii. a protocol for encounters with VME consistent with paragraphs 67-69; and
iii. measures, including ongoing scientific research, monitoring, and data collection, to reduce uncertainty.

In support of international commitments, in particular *UNGA Resolution 61/105* and the related *FAO Guidelines*, Canada is domestically implementing the Sustainable Fisheries

Framework (SFF) which aims to ensure that fisheries are environmentally sustainable while supporting economic prosperity. The SFF incorporates the precautionary and ecosystem approaches into fisheries management decisions to support continued health and productivity of Canada's fisheries and healthy fish stocks, while managing impacts on biodiversity and fisheries habitat.

A key component of the SFF is the *Policy for Managing the Impacts of Fishing on Sensitive Benthic Areas* (released in April 2009) The *Policy* will aid in the management of fisheries to mitigate impacts of fishing on sensitive benthic areas or avoid impacts of fishing that are likely to cause serious or irreversible harm to sensitive marine habitats, communities, and species. Under the SFF and for the purposes of this advisory process, consistent with the *FAO Guidelines*, serious or irreversible harm is defined as '*impacts that compromise ecosystem integrity (i.e. ecosystem structure or function) in a manner that: (i) impairs the ability of affected populations to replace themselves; (ii) degrades the long-term natural productivity of habitats; or (iii) causes, on more than a temporary basis, significant loss of species richness, habitat or community types*'.

In addition, there are a number of regional coral and sponge conservation plans/strategies which outline conservation, management, and research objectives that reflect fishing and non-fishing impacts on corals and sponges in Canadian waters. For example, the Maritimes Region has had a coral conservation plan in place since 2006 (up for review in 2011) and the Pacific Region is planning to release a coral and sponge conservation strategy in 2010. Finally, under the Health of the Oceans initiative, the Newfoundland and Labrador Region has committed to develop a coral and sponge conservation strategy by 2012.

A national Canadian Science Advisory Secretariat (CSAS) science advisory process will be held in Ottawa from March 9-12, 2010 which will aid in advancing Canada's aforementioned domestic and international commitments to manage the impacts of fishing on sensitive benthic areas. Specifically, this advice will provide science input to the *Policy* regarding the location of corals, sponges and hydrothermal vents within the Canadian Exclusive Economic Zone (EEZ).

Objectives

This science advisory process will consider only selected benthic attributes (i.e. coldwater corals, sponge-dominated communities, and hydrothermal vents).

Although additional relevant working papers may be considered, the primary information sources for consideration at this science advisory process are the relevant working papers submitted by researchers in the DFO Regions.

The workshop participants will discuss the following questions with regard to the working papers:

1. Do the submitted working papers provide comprehensive coverage of the topic and is treatment of the information included within them balanced?
2. Is there any other relevant scientific information or literature available that has not been considered in the primary working papers?

In addition, based on the information in the working papers, the workshop participants will intend to fulfill the following objectives:

1. Based on available information, and to the extent possible, provide advice on the ecological function/role of corals, sponges, and hydrothermal vents.
2. Based on available information, and to the extent possible, provide advice on the susceptibility of corals, sponges, and hydrothermal vents to fishing impacts as well as their potential for recovery once impacted.
3. Based on 1) and 2) above, indicate what would be appropriate ecological goals for managing impacts on corals, sponges, and hydrothermal vents.
4. To the extent possible, map where corals, sponges, and hydrothermal vents are known to occur or could potentially occur within the Canadian EEZ, based on available data, predictive modelling, and topographical, hydro-physical, or geological features, taking guidance from the illustrations in the *FAO Guidelines (Annex 1)*.
5. a) When indicators (e.g. spatial extent, abundance, species richness, rareness, etc…) of the ecological function served by corals, sponges, and hydrothermal vents are used, discuss the strengths and weaknesses of these indicators.
   b) For any of the indicators considered appropriate in 5a), describe the ecological basis that a conservation limit or threshold should have.
   c) To the extent possible, estimate the threshold where the indicator has those properties described in 5b). If sufficient information does not currently exist, outline the science that is necessary to allow the conservation limit or threshold to be estimated.
   d) To the extent possible, map the results of c).
6. Provide guidance on the key elements that are necessary for the development of a scientifically-based encounter framework which would afford protection to benthic attributes at risk from serious or irreversible harm due to fishing activities.

Note: This science advisory process will provide the best scientific advice possible with the information available and a full explanation of the level of certainty associated with this advice.

Outputs

Outputs from the meeting will include CSAS Research Document(s) based on the aforementioned submitted working papers, a CSAS Science Advisory Report, and CSAS Proceedings to document the discussion of the meeting.

Participation

This science advisory process will follow the standard CSAS National Advisory Process (NAP), and will include experts from DFO Science and other sectors of the Department, as well as a broad range of invited external participants (e.g. fishing industry stakeholders, academia, non-governmental organizations, etc.) who can contribute to the Science debate. The invited experts will be selected for objectivity and credibility among peers and balanced across the diverse perspectives.

Role of Participants

This meeting is intended to provide an open and transparent peer-review of the existing scientific information which will provide ample opportunity for knowledgeable individuals to contribute to achieving the objectives outlined in the Terms of Reference. As such, attendees are expected to participate fully in the discussion and offer objective, informative, and constructive input that will inform this scientific process. It is not intended that participants will attend the meeting merely to be informed on this issue nor to advance a particular position without scientific foundation.