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SCIENTIFIC COUNCIL MEETING – JUNE 2004

**CANADIAN REQUEST FOR SCIENTIFIC ADVICE ON MANAGEMENT IN 2005
OF CERTAIN STOCKS IN SUBAREAS 0 TO 4**

1. Canada requests that the Scientific Council, at its meeting in advance of the 2004 Annual Meeting of NAFO, subject to the concurrence of Denmark (on behalf of Greenland), provide advice on the scientific basis for management in 2005 of the following stocks:

Shrimp (Subareas 0 and 1)
Greenland halibut (Subareas 0 and 1)

The Scientific Council has noted previously that there is no biological basis for conducting separate assessments for Greenland halibut throughout Subareas 0-3, but has advised that separate TACs be maintained for different areas of the distribution of Greenland halibut. The Council is asked therefore, subject to the concurrence of Denmark (on behalf of Greenland) as regards Subarea 1, to provide an overall assessment of status and trends in the total stock throughout its range and comment on its management in Subareas 0+1 for 2005, and to specifically:

- a) advise on appropriate TAC levels for 2005, separately, for Greenland halibut in the offshore area of Divisions 0A+1AB and Divisions 0B+1C-F. The Scientific Council is also asked to advise on any other management measures it deems appropriate to ensure the sustainability of these resources; and
- b) comment on the relationship between Greenland halibut in inshore waters of Cumberland Sound and the offshore waters of Division 0B and advise whether or not a separate management unit would be appropriate for Cumberland Sound Greenland halibut.

The Council also is asked to advise on appropriate TAC levels separately – for Greenland halibut in SA 2+Division 3K and for Divisions 3LMNO.

Scientific Council has, in the past, advised that fishing effort for Greenland halibut in SA2 + 3KLMNO should be distributed in relation to biomass. Scientific Council is requested to comment on:

- a) the current distribution of the resource between SA2+3K and 3LMNO and comment on how this compares with the current distribution of quota allocation; and
- b) the appropriate distribution of quota allocation if it was based on the distribution of biomass.

With respect to shrimp, it is recognized that the Council may, at its discretion, delay providing advice until later in the year, taking into account data availability, predictive capability, and the logistics of additional meetings.

2. Canada requests the Scientific Council to consider the following options in assessing and projecting future stock levels for Shrimp and Greenland halibut in Subareas 0 and 1:

- a) For those stocks subject to analytical-type assessments, the status of the stock should be reviewed and management options evaluated in terms of their implications for fishable stock size in both the short and long term. The implications of no fishing as well as fishing at $F_{0.1}$, and F_{2002} in 2005 and subsequent years should be evaluated in relation to precautionary reference points of both fishing mortality and spawning stock biomass. The present stock size and spawning stock size should be described in relation to those observed historically and those to be expected in the longer term under this range of fishing mortalities, and any other options Scientific Council feels worthy of consideration under a precautionary framework.

Opinions of the Scientific Council should be expressed in regard to stock size, spawning stock sizes, recruitment prospects, catch rates and catches implied by these management strategies for the short and long term. Values of F corresponding to the reference points should be given. Uncertainties in the assessment should be evaluated and presented in the form of risk analyses related to B_{lim} (B_{buf}) and B_{target} , and F_{lim} (F_{buf}) and F_{target} .

- b) For those stocks subject to general production-type assessments, the time series of data should be updated, the status of the stock should be reviewed and management options evaluated in the way described above to the extent possible. Management options should be within the precautionary framework.
- c) For those resources for which only general biological advice and/or catch data are available, few standard criteria exist on which to base advice. The stock status should be evaluated in the context of management requirements for long-term sustainability and management options evaluated in the way described above to the extent possible. Management options should be within the precautionary framework.
- d) Presentation of the results should include the following:
 - I. For stocks for which analytical-type assessments are possible:
 - A graph of historical yield and fishing mortality for the longest time period possible;
 - A graph of spawning stock biomass and recruitment levels for the longest time period possible;
 - Graphs and tables of catch options for the year 2005 and subsequent years over a range of fishing mortality rates (F) at least from $F=0$ to $F_{0.1}$ including risk analyses;
 - Graphs and tables showing spawning stock biomass corresponding to each catch option including risk analyses;
 - Graphs showing the yield-per-recruit and spawning stock per recruit values for a range of fishing mortalities.
 - II. For stocks for which advice is based on general production models, the relevant graph of production on fishing mortality rate or fishing effort.

In all cases, the reference points, $F=0$, actual F, and $F_{0.1}$ should be shown.

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Addendum

CANADIAN REQUEST FOR SCIENTIFIC ADVICE ON MANAGEMENT IN 2005 OF CERTAIN STOCKS IN SUBAREAS 0 TO 4 (received 1 April 2004)

Further to our letter of March 15, 2004, we would request that the following questions be submitted to the Scientific Council for its consideration at its June 2004 meeting.

The 2003 Scientific Council report for 3O redfish indicated that, "*Catches have averaged about 13,000 tons since 1960 and over the long term, catches at this level do not appear to have been detrimental.*" Catches of 3O redfish have been around 20,000t for the past three years.

Given the foregoing, we would like the Scientific Council to provide responses to the following questions:

1. Would catches in the range of 13,000-20,000t be detrimental to the 3O redfish stock?
2. Would catches above 20,000t be detrimental to the 3O redfish stock?
3. What is the relative strength of the 1988 year-class in relation to other strong year-classes that have supported this fishery?
4. Considering that there has not been any good recruitment since the 1988 year-class and given the slow growth of redfish, when is the earliest possible time that good recruitment could be expected to enter into this fishery?

Yours sincerely,
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