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SCIENTIFIC COUNCIL MEETING – JUNE 2002

**CANADIAN REQUEST FOR SCIENTIFIC ADVICE ON MANAGEMENT IN 2003
OF CERTAIN STOCKS IN SUBAREAS 0 TO 4**

1. Canada requests that the Scientific Council, at its meeting in advance of the 2002 Annual Meeting of NAFO, subject to the concurrence of Denmark (on behalf of Greenland), provide advice on the scientific basis for management in 2003 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 2003. In particular, the Council is asked to advise on appropriate TAC levels separately for Division 0B+1B-F (offshore), for SA 2+Division 3K and for Divisions 3LMNO, and to make recommendations on the distribution of fishing effort within each of these three geographic areas.

Given that Greenland halibut in the offshore area of Division 0A+1A is currently being managed separately from the remainder of SA 0+1, the Scientific Council is requested to:

- a) provide an assessment of the status of the Greenland halibut stock component in Division 0A+1A;
- b) advise on an appropriate TAC level for 2003 for Greenland halibut in the offshore area of Division 0A+1A and any other management measures the Scientific Council deems appropriate to ensure the sustainability of the resource;
- c) comment on the relationship between Greenland halibut in the offshore area of Division 0A+1A and the remainder of SA 0+1 as well as the potential impact of any fishery in Division 0A+1A on stock development throughout SA 0+1; and
- d) outline the elements of a scientific program necessary to provide a detailed response to "c" above and the timeframe if such a program were implemented.

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_{2001} in 2003 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 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 2003 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.

3. For the cod stock in Divisions 2J+3KL, the Scientific Council is requested to report on recent trends in the total and spawning biomass based on the most recent stock status update.
4. With respect to redfish stock in Division 3O, the Scientific Council is requested provide the following:
 - a) Information on the fishing mortality on redfish in Division 3O in recent years, as well as information on by-catches of other groundfish in the 3O redfish fishery;
 - b) Information on abundance indices and the distribution of the stock in relation to groundfish resources, particularly for the stocks which are under moratorium;
 - c) Information on the distribution of redfish in Division 3O, as well as a description of the relative distribution inside and outside the NAFO Regulatory Area;
 - d) Advice on reference points and conservation measures that would allow for exploitation of this resource in a precautionary manner;
 - e) Information on annual yield potential for this stock in the context of (d) above;
 - f) Identification and delineation of fishery areas and exclusion zones where fishing would not be permitted, with the aim of reducing the impact on the groundfish stocks which are under moratorium, particularly juveniles;
 - g) Determination of the appropriate level of research that would be required to monitor the status of this resource on an ongoing basis with the aim of providing catch options that could be used in the context of management by Total Allowable Catch (TAC); and
 - h) Information on the size composition in the current catches and comment on these sizes in relation to the size at sexual maturity.

Yours sincerely,

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