

Northwest Atlantic



Fisheries Organization

Serial No. N2656

NAFO/FC Doc. 95/22

17TH ANNUAL MEETING - SEPTEMBER 1995

**Fisheries Commission's Request for Scientific Advice on
Management in 1997 of Certain Stocks in Subareas 3 and 4**

1. The Fisheries Commission with the concurrence of the Coastal State as regards the stocks below which occur within its jurisdiction, requests that the Scientific Council, at a meeting in advance of the 1996 Annual Meeting, provide advice on the scientific basis for the management of the following fish and invertebrate stocks or groups of stocks in 1997:

- Cod (Div. 3NO; Div. 3M)
- Redfish (Div. 3LN; Div. 3M)
- American plaice (Div. 3LNO; Div. 3M)
- Witch flounder (Div. 3NO)
- Yellowtail flounder (Div. 3LNO)
- Capelin (Div. 3NO)
- Squid (Subareas 3 and 4)
- Shrimp (Div. 3M)
- Greenland halibut (Subareas 2 and 3)

2. The Commission and the Coastal State request the Scientific Council to consider the following options in assessing and projecting future stock levels for those stocks listed above:

- a) For those stocks subject to analytical dynamic-pool 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. As general reference points the implications of fishing at $F_{0.1}$, F_{1995} and F_{max} in 1997 and subsequent years should be evaluated. The present stock size and spawning stock size should be described in relation to those observed historically and those expected in the longer term under this range of options.

Opinions of the Scientific council should be expressed in regard to stock size, spawning stock sizes, recruitment prospects, catch rates and TACs implied by these management strategies for 1997 and the long term. Values of F corresponding to the reference points should be given and their accuracy assessed.

- 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. In this case, the general reference points should be the level of fishing effort or fishing mortality (F) which is calculated to be required to take the MSY catch in the long term and two-thirds of that effort level.
- c) For those resources of which only general biological and/or catch data are available, no standard criteria on which to base advice can be established. The evidence of stock status should, however, be weighed against a strategy of optimum yield management and maintenance of stock biomass at levels of about two-thirds of the virgin stock.
- d) Spawning stock biomass levels that might be considered necessary for maintenance of sustained recruitment should be recommended for each stock. In those cases where present spawning stock size is a matter of scientific concern in relation to the continuing productive potential of the stock, management options should be offered that specifically respond to such concerns.
- e) Presentation of the result should include the following:
 - i) for stocks for which analytical dynamic-pool type assessments are possible:
 - a graph of yield and fishing mortality for at least the past 10 years.
 - a graph of spawning stock biomass and recruitment levels for at least the past 10 years.
 - a graph of catch options for the year 1997 over a range of fishing mortality rates (F) at least from $F_{0.1}$ to F_{max} .
 - a graph showing spawning stock biomass at 1.1.1998 corresponding to each catch option.
 - graphs showing the yield-per-recruit and spawning stock per-recruit values for a range of fishing mortality.
 - 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 three reference points, actual F, F_{max} and $F_{0.1}$ should be shown.

- 3. The Fisheries Commission with the concurrence of the Coastal State requests that the Scientific Council continue to provide information, if available, on the stock separation in Div. 2J+3KL and the proportion of the biomass of the cod stock in Div. 3L in the Regulatory Area and a projection if possible of the proportion likely to be available in the Regulatory Area in future years. Information is also requested on the age composition of that portion of the stock occurring in the Regulatory Area.

4. Noting that the Scientific Council held a Symposium on Seals in the Ecosystem, the Fisheries Commission requests that studies are continued on the impact of marine mammals on fish populations, together with recommendations on research needed to quantify further interactions.
5. Noting the Scientific Council's recommendations for coordinated research on Greenland halibut in particular the implementation of a large-scale research survey, the Fisheries Commission and the two Coastal States emphasize the urgency of acquiring basic information to study on the distribution and stock status. The Scientific Council is requested to pursue its coordinated efforts and member countries are urged to commit the necessary resources to the research.
6. It is noted that the Scientific Council has provided some advice on the 3 following questions but the Council is requested to keep these questions under review:

- a) TAC's for Greenland halibut in SA 2+ Div. 3K and Div. 3LMNO

The Fisheries Commission has subdivided the 1995 TAC for Greenland halibut in SA 2+3 into two TAC's for SA 2 + Div. 3K and Div. 3LMNO. In responding to the Commission's request for advice for the management of Greenland halibut in SA 2+3 for 1996, the Scientific Council should recommend an overall TAC for SA 2+3 and provide advice on dividing the overall TAC into two TAC's for SA 2 + Div. 3K and for Div. 3LMNO.

- b) Further measures to protect juvenile fish of regulated species, e.g. area/seasonal closures

Taking into account available information on the geographical and seasonal distribution of regulated species of various sizes, identify, where practical and sufficient information is available, seasonal and area fishery closures which would reduce the proportion of juveniles of regulated species in commercial catches.

- c) Optimal minimum fish sizes

Taking into account the implications on conservation of the stocks and long-term harvest of alternative sizes at first entry into the fishery, recommend optimal (in terms of maximum yield per recruit) minimum fish sizes for regulated species in the NRA, and advise on the corresponding minimum mesh sizes for trawls and other gear.