Northwest Atlantic Fisheries Organization

Serial No. N1260

NAFO/FC Doc. 86/10
(Revised)

EIGHTH ANNUAL MEETING - SEPTEMBER 1986

Revised Canadian Proposal for Fisheries Commission Request for Scientific Advice on Management in 1988 of Certain Stocks in Subareas 2 to 4

1. The Fisheries Commission with the concurrence of the Coastal State requests that the Scientific Council, at a meeting in advance of the 1987 Annual Meeting, provide advice on the scientific basis for the management of the following fish and invertebrate stocks or groups of stocks in 1988:

   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)

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. 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 evaluated in relation to spawning stock size. As general reference points the implications of fishing at $F_{0.1}$, F_{1986}, and F_{max} in 1988 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 1988 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 on 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 that 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.

   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 it 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 1988 over a range of fishing mortality rates (F) at least from $F_{0.1}$ to F_{max}.

- a graph showing spawning stock biomasses at 1.1.1989 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.