

Northwest Atlantic



Fisheries Organization

Serial No. N481

NAFO SCS Doc. 82/VI/1

Revised

SCIENTIFIC COUNCIL MEETING - JUNE 1982

Canadian Request for Scientific Advice Concerning Various Matters

by

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1. Advice on the Scientific Basis for Management in 1983 of Certain Stocks in Subareas 0 to 4.

- a) Canada requests that the Scientific Council, at its meeting in advance of the 1982 NAFO Annual Meeting, provide advice on the scientific basis for the management of the following fish and invertebrate stocks in 1983:

Cod (Div. 2J and 3KL; Div. 3N and 3O)
Redfish (Div. 3L and 3N)
American plaice (Div. 3L, 3N and 3O)
Witch flounder (Div. 3N and 3O)
Yellowtail flounder (Div. 3L, 3N and 3O)
Greenland halibut (Subarea 2 and Div. 3KL)
Roundnose grenadier (Subareas 2 and 3)
Silver hake (Div. 4V, 4W and 4X)
Capelin (Subarea 2 and Div. 3K; Div. 3LNO)
Squid (Subareas 3 and 4)

It is further suggested that, subject to the concurrence of the other coastal state concerned, the Scientific Council, prior to the 1982 Annual Meeting of NAFO, provide advice on the scientific basis for management in 1983 of the following stocks:

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

- b) Canada requests the Scientific Council to consider the following options in assessing and projecting future stock levels for those stocks listed above and for the Flemish Cap (Div. 3M) stocks:
- i) 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 of 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 a general reference point, the implications of continuing to fish at $F_{0.1}$ in 1983 and subsequent years should be evaluated. The present stock size should be described in relation to those observed historically and to those expected at the $F_{0.1}$ level. Management options for arriving at the latter stock size on a shorter time scale should be developed. Opinions of the Scientific Council should be expressed in regard to stock sizes, catch rates, and TACs implied by these management strategies for 1983 and the long term.
 - ii) For those stocks subject to general production-type assessments, 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 point should be the level of fishing effort ($\equiv F$) which is two-thirds that calculated to be required to take the MSY catch in the long term.
 - iii) 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 on stock status should, however, be weighted against a strategy of optimum yield management and maintenance of stock biomass at levels of about two-thirds that of the virgin stock.

- c) At the request of Canada, the Scientific Council at a special meeting in November 1981 provided advice on the scientific basis for management in 1982 of stocks of harp seals and hooded seals within national fishery limits in NAFO Subareas 0, 1, 2, 3 and 4. At this meeting, a new computer simulation model was presented which provided substantially higher estimates of replacement yields for harp seals than were formerly advised by NAFO. The Council noted that insufficient time was available to study the model thoroughly at this meeting and advised that further critical review should be undertaken before the results be adopted as a basis for major revision of management schemes for 1982.

Recognizing this advice, Canada requests that the Scientific Council reexamine the population status and dynamics of Northwest Atlantic harp seals, reviewing the model presented at the November 1981 meeting and commenting on:

- i) Current stock size and pup production and recent trends in these parameters.
- ii) Current replacement yield and sustainable yield at present stock size and in the long term, under varying options of age compositions in the catch, including that recently occurring.
- iii) Trends in population size based upon differing levels of total allowable catch which incorporate quota regulation of all removals except that by traditional hunting in the Canadian Arctic and at Greenland.
- iv) Trends in catches of harp seals in Canada, north of 60° N Latitude and in Greenland.

2. Statistics and Sampling

- a) Canada requests the Scientific Council to consider necessary alterations to statistical systems to permit the reporting of catches of the shrimp, *Pandalus montagui*, taken inside and to the west of NAFO Subarea 0.
- b) Canada requests the Scientific Council to provide advice on the level of biological sampling that would be appropriate for the International Observer Scheme, particularly in regard to depressed stocks where catches do not meet the criterion of 1,000 tons per quarter of the year.