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Denmark (Greenland) Request for Scientific Advice on
Management of Certain Stocks in 1990

by

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1. Denmark, on behalf of Greenland, requests the Scientific Council of NAFO at its June 1989 Meeting to provide advice on the status of the stocks and on the biological basis for management in 1990 and as many years onward as the data allow for the following stocks:
 - a) Stocks occurring in Subarea 1
 - i) Atlantic cod
 - ii) Redfish (by species, if possible)
 - iii) Wolffish (by species (A. minor and A. lupus), if possible)
 - iv) Any other stock (of commercial interest) of invertebrates and finfish in Subarea 1 for which data allow a status report
 - b) Stocks overlapping Subareas 0 and 1 (subject to the concurrence of Canada)
 - i) Greenland halibut
 - ii) Roundnose grenadier
 - iii) Northern shrimp (Pandalus borealis)
2. In the analyses on which management advice will be based, the following should be included:
 - a) For cod in Subarea 1, the current stock size and its age composition and distribution should be analyzed and form the basis for management options in which catch and catch composition (by age-groups) and the resultant stock size and spawning stock size are to be given, with the following examples of options:
 - i) $F = (0.1)$ from 1990 onward
 - ii) $F = F(\text{max})$ from 1990 onward
 - iii) F from 1990 onward equal to that F -value which for 1989 corresponds to the set TAC for that year of 90,000 tons
 - iv) A steady catch level from 1990 onward with the annual catch equal to the catch for 1990 by options I, II and III, respectively, and a steady catch level of 90,000 tons
 - v) Same options as in iv) above except that F -values not be allowed to exceed 0.60

The above mentioned analyses should be based upon a catch in 1989 equal to the set TAC of 90,000 tons. Special attention should be paid to the sizes of the 1984 and 1985 year-classes. The size of these year-classes should be quantified, if necessary by upper and lower limits, and their expected spatial distribution in 1989 and 1990 described. Likewise, the expected length distribution of the fishable stock in 1989 and 1990 should be described, especially in relation to distribution below 40 cm, between 40 and 55 cm, and above 55 cm (total length), if possible by gear type.

- b) For redfish the implications upon stocks of a continued catch equal to the TAC for 1989 (19,200 tons) should be analyzed. By-catches of redfish (including discards) in fisheries for species other than redfish, especially the fisheries for shrimp and cod, should be taken into account.
- c) For Greenland halibut the analyses should incorporate description of the spatial distribution of the fisheries and the implications of local fisheries (in Subarea 1) on the local stock components as well as on the total stock complex (Subareas 0+1). (Canada may wish to give further guidelines).

- d) For northern shrimp, the Scientific Council is requested to evaluate the possible recruitment relationships between the stock components north and south of 71°N and their implications on stocks and fisheries management. An attempt to quantify discards of shrimp should again be made, and the implications on the stocks and advice on catch levels inside safe biological limits should be analyzed.
3. As in the past, advice on status of stock and management options for shrimp at East Greenland should also be provided in cooperation with ICES. The advice should also concern the recent Greenland management policy at East Greenland with regard to the setting of separate quotas for areas outside the main fishing area. The possible effect on conservation of shrimp as a consequence of the ice coverage of the water should be evaluated.
4. The Scientific Council should feel free to report on such other invertebrates and finfish stocks in Subarea 1 and on such other scientifically-based management options for the above mentioned Subarea 1 stocks as it feels applicable.