International Council for the Exploration of the Sea

C.M.1977/F:30
Demersal Fish (Northern) Committee

COD STOCKS IN 1976 - Introduction to 'Annales Biologiques', Vol. 33

Landings of East Greenland cod doubled to 12 000 tonnes in 1976, notwithstanding the poor state of the stock as indicated in an Icelandic contribution. The 1968 and 1970 year classes continued to dominate the catches in the summer months, but they were negligible on the southern banks in the autumn. The Icelandic surveys estimated the 1973 year class as a rich one and confirmed observations of the preceding year on the higher than expected strength of the 1972 year class, both off East Greenland and off Iceland. These year classes, 1973 in particular, predominated in the spring and autumn catches.

The 1973 and 1972 year classes were also dominant in the Federal Republic of Germany and Icelandic mixed cod fisheries during the second half of 1976. The above-average 1970 year class and the 1968 year class (the latter strengthened by immigrants of East Greenland origin) formed the mainstay of the Icelandic "spawning" fishery (January-May) and the Federal Republic of Germany fishery for prespawners carried out off SW Iceland in March/April. Since only 30% of the 1972 year class and 10% of the 1973 year class cod caught in the "spawning" fishery reached maturity in 1976, the 1970 year class is expected to make the major contribution to the 1977 spawning stock. The total cod catch from the Iceland Grounds was reduced to about 348 000 tonnes in 1976 from 371 000 tonnes in 1975.

The total catch of Arcto-Norwegian cod, including catches of coastal cod, exceeded the 1975 level of 886 000 tonnes by about 21 000 tonnes. The very rich 1970 year class and the average 1969 year class contributed greatly to the catches, though the importance of the year classes of 1971 and, particularly, 1972 continued to increase. Soviet contributions report that the 1972 year class and the apparently strong 1973 year class predominated in the southern Barents Sea; both of them were also prominent in the German Democratic Republic catches in the Bear Island-Spitsbergen area late in the year. The Federal Republic of Germany contribution, however, indicates that only few cod of age groups younger than the 1970 year class were found in Sub-area I and Division IIb during the summer survey. Soviet investigations confirmed the high abundance of the 1975 year class in Sub-area I and indicated its unusually high density in the northeastern and eastern Barents Sea during the 1975/1976 Young Cod Survey. The German Democratic Republic contribution suggested that the great fluctuations of catch rates in the cod fishery in Division IIb observed during the late months of 1976 might have been caused by abnormally high sea temperatures in the area. With the 1974 year class as the only weak one since 1969, in general the 1976 data confirmed the impression of the preceding year that the state of the Arcto-Norwegian cod spawning stock continues to improve.

Catches from the Faroese Grounds continued to increase and surpassed a level of 41 000 tonnes in 1976 with the recruitment of the 1973 and 1972 year classes, which are estimated to be strong.

The declining trend in recent catches from the North Sea was arrested in 1976 when the total cod catch exceeded the 1975 level of 187 000 tonnes by about 20 000 tonnes. As in the two previous years, cod of age group 2 dominated the catches. A French contribution, the only one relating to the North Sea area, indicates that while the decreased catches in the Straits of Dover area also depended mainly on the 1974 year class, it was replaced in the last quarter of 1976 by cod of the 1973 and 1972 year classes which had probably been attracted from the area south of the Dogger Bank by more favourable hydrographic conditions. Unlike the 1973 year class the 1974 year class seems to be strong, so it will probably continue as a major catch component into 1977, since, furthermore, the International Young Herring Survey showed that the 1975 cod year class appears to be poor.

An Irish contribution reports that the 1971 year class lost its importance in the Killybegs fishery in Division VIa and that the 1972 year class was being gradually replaced by the 1973 and 1974 year classes. Total landings from Sub-area VI might have exceeded the 1975 level of some 13 000 tonnes and, as in the North Sea, they were overwhelmingly dominated by the 1974 year class, which is assumed to be very strong.

The relatively abundant 1972 year class was replaced in importance by younger age groups and this led to the somewhat reduced catches from the Irish Sea in 1976. While indicating the prevalence of the 1974 year class in the area, the Irish contribution draws attention to the high percentage of the 1975 year class in the landings at Howth.

Cod catches in the entire Baltic area increased from 234 000 tonnes in 1975 to about 261 000 tonnes in 1976, with the total increase taking place in the Baltic Sea proper. The Federal Republic of Germany, Polish, and Soviet contributions attribute the increase to the strong 1972 year class, which continued to dominate the catches. All contributions indicate the strong representation of the 1973 year class, which appears to be more abundant than would have been expected from earlier egg and larval surveys. The proportion of the 1972 year class in Finnish trawl catches decreased, and a Finnish contribution indicates that this might have been partially caused by increased migrations to the central and eastern areas of the Baltic Sea proper in 1976 as shown by tagging results. Increased migrations of spawning cod within the Baltic Sea in 1976 are also indicated in the Soviet contribution, which, together with the Federal Republic of Germany contribution, reports an improved hydrographic regime in the Bornholm, Gotland and Gdańsk Deeps and in the Slupsk Furrow area in 1976, owing to the very large inflow of Kattegat water during the 1975/1976 winter months. This resulted in dense and stable demersal concentrations of spawning cod, which contributed to the success of the bottom-trawl fishery. The prevalence in the catches of age groups older than 1975 (including the strong 1972 year class) provided for high abundance of eggs and larvae of the 1976 year class.

V. M. Nikolaev
ICES
Charlottenlund Slot
2920 Charlottenlund
Denmark