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COD STOCKS IN 1979

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ICES



Preliminary 1979 figures indicate that the total cod catch from the ICES Statistical Area has continued to decrease, by about 218 000 tonnes from the 1978 level of 1 644 000 tonnes.

Off Iceland, however, catches of cod increased from 328 000 tonnes in 1978 to 355 000 tonnes in 1979. The 1973 year class, confirmed as strong, dominated the catches together with the 1975 year class, which now appears to be stronger than anticipated, though still not above average. Recruitment of the 1976 year class to the mixed cod fishery is expected to be strong in 1980.

Results of both the joint Soviet-Icelandic investigations on hydrobiological conditions in the Norwegian Sea and Icelandic waters (in May-June 1979) and the 0-Group Fish Survey in Icelandic and East Greenland waters (in August-September 1979) indicate lower than average water temperatures in the area surveyed. The temperatures appear to have influenced the abnormally small size of the 0-group cod, whose overall abundance index was lower than average. As in recent years, the heaviest concentrations were recorded off the north coast of Iceland, but in 1979 only scattered records were obtained elsewhere. However, as in 1978, some drift of 0-group cod across the Dohrn Bank area towards East Greenland was observed.

Catches of cod off East Greenland declined further from the low 1978 level of 5 000 tonnes. Catches of 2 000 tonnes and 6 000 tonnes were reported for 1978 and 1979, respectively, from the grounds in Sub-area XII adjacent to Division Va.

On the Faroese Grounds the originally strong 1973 year class still made the major contribution to the 1979 catches, which decreased to 25 000 tonnes from about 35 000 tonnes in 1978. The 1974-1976 year classes were nearly equally represented in the catches, numerically. As indicated in the Report on the

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International O-Group Survey in Faroe waters in 1979, abnormally low water temperatures in winter and early spring affected the average size of O-group cod in this area as well. The abundance index of the 1979 year class is below average, but better than that of the 1977 year class.

Except for the area west of Bear Island, abnormally low water temperatures were registered for the second consecutive year by the International O-Group Survey in the Barents Sea and adjacent waters. This accentuated the westward shift in the distribution of Arcto-Norwegian cod that started in 1978. Very few young cod were recorded by the USSR Young Fish Survey in the autumn and winter of 1978/1979 in the eastern and, unlike 1978, coastal areas, since cod wintered west of 34°E. The resultant lower stock density in Sub-area I was, probably, one of the reasons for the drastically reduced catch from this area. Coupled with a further reduction in the catch taken in Division IIb, this resulted in a sharp decrease, for the second consecutive year, in the total cod catch from the Northeast Arctic, from 945 000 tonnes in 1977 to 733 000 tonnes in 1978 and to 465 000 tonnes in 1979. The results of the Norwegian Acoustic and of the USSR Groundfish Surveys indicate a sharp drop in the total abundance indices of cod from 1978 to 1979 (and from 1979 to 1980).

Results of the above-mentioned surveys and of sampling the commercial catches indicate that the originally strong 1973 year class has lost its dominant position to the 1975 year class, the strength of which has been confirmed. However, the former continued to make an important contribution to the catches, followed by the 1974 year class, which is poor. The originally prominent 1970 year class was still well represented off the Norwegian coast and in the Bear Island-Spitsbergen area, as indicated in the Federal Republic of Germany and Soviet contributions.

USSR Young Fish and Norwegian Acoustic Surveys confirmed the findings of the International O-Group Surveys in the Barents Sea and adjacent waters on the low abundance of the 1976-1978 year classes. Since the abundance index of the 1979 year class was also estimated to be low by the International O-Group Survey, this means that there will be four consecutive poor year classes recruiting to the fishery in the early 1980s and that the state of the spawning stock will have to depend to a very great extent on the residual strength of the 1975 year class.

West of Scotland (including Rockall) the catches increased to nearly 17 000 tonnes from 14 000 tonnes in 1978. An Irish contribution indicates that in the Greencastle fishery, after two years of continued dominance by the strong 1976 year class, juvenile 1-group cod became preponderant. In the Killybegs fishery the originally very strong 1974 year class lost its leading position to the 1975 year class; the 1977 year class was also strongly represented. It is interesting to note that the strong 1976 year class, which continued to dominate in total catches in Division VIa, formed a much lower proportion of Irish landings at Killybegs in 1977-1979. An O-group gadoid survey to the west of Scotland, conducted by Scotland in conjunction with the International O-Group Gadoid Survey in the North Sea in 1979, indicated that there was no discontinuity in the distribution of any species between the west of Scotland and the North Sea. Results of the survey suggest that O-group cod (as well as haddock and whiting) are gradually carried into the North Sea.

West and south of Ireland, catches of cod were around 3 000 tonnes in 1978 and 1979.

The total catch from the Irish Sea was restored to the 1977 level of 8 000 tonnes, after a decrease to 6 000 tonnes in 1978. The Irish contribution indicates that

although the 1976 year class was still of major commercial importance, catches were dominated numerically by juvenile cod, mainly of age group 1, in 1979.

In the English Channel, catches decreased to 8 000 tonnes from 11 000 tonnes in 1978. The 1976 year class, which recruited strongly to the fishery in 1978, lost its leading position to the 1977 year class, though it was still well represented.

In the North Sea, dominance of 2-group cod in the catches continued in 1979, as in all recent years except 1977 when the weak 1975 year class was recruiting to the fishery. The other major catch component was the 1976 year class, which is still obviously a strong one. Results of the International Young Herring Survey (IYHS) confirm the conclusions of the International 0-Group Gadoid Survey that the 1978 year class is weaker than the below-average 1977 year class. Preliminary results of the 1980 IYHS indicate that the strength of the 1979 year class, as 1-group cod, appears to be lower than previously estimated, though not below average. The total catch decreased from 261 000 to 228 000 tonnes.

In the Skagerrak and Kattegat the total catch decreased from 45 000 tonnes in 1978 to approximately 32 000 tonnes in 1979. As in 1978, the strong 1976 year class continued to dominate catches from the Kattegat, while in the Skagerrak it was exceeded, in numbers, by the 1977 year class. From the preliminary results of the 1980 IYHS, the 1979 year class, as 1-group cod, appears to be the strongest in recent years in the Kattegat.

There was a sharp increase in total cod catch in the Baltic area, from 195 000 tonnes in 1978 to 268 000 tonnes in 1979. The Baltic Sea proper accounted for practically the entire increase. The Federal Republic of Germany contribution indicates an even lower oxygen content in the bottom water layers of the Bornholm Basin than in 1978. The same was true of the Southern Gotland Basin and the Gdańsk Deep, where the catch rates by bottom trawl were very high owing to denser cod concentrations in smaller than usual areas. It is interesting to note that, as in 1978, a Soviet contribution reports mass migrations of cod to the Gulf of Riga and the Gulf of Finland. On most fishing grounds the catches were dominated by the strong 1976 year class; however, in the southwestern areas this year class was once again exceeded in the catches by fish of age group 2. As in 1978, the preponderance of the 1977 year class was observed in the Arkona Basin, where oxygen conditions improved in 1979. Polish and Soviet contributions also indicate that the 1977 year class now appears to be of above average strength. Indications in the Federal Republic of Germany and Soviet contributions of the lower than average abundance of juvenile cod were confirmed by the preliminary results of national young fish surveys, which estimated both the 1978 and the 1979 year classes as below average.