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FRV WALTHER HERWIG III

Cruise 248: IBTS 2003 (I)

REPORT

17.01. – 16.02.2003

Participants

Gerd Wegner	BFA für Fischerei, Hamburg (in charge)
Wolfgang Ahlers	BFA für Fischerei, Ast. Cuxhaven
Jörg Appel	BFA für Fischerei, Hamburg
Kristian Dittmann	BFA für Fischerei, Hamburg (student helper)
Frank Fuhr	BFA für Fischerei, Hamburg (student helper)
Gudrun Gentschow	BFA für Fischerei, Hamburg
Horst Haidn	BFA für Fischerei, Hamburg
Dr. Ingo Heidbrink	Deutsche Schiffahrtsmuseum Bremerhaven
Sakis Kroupis	BFA für Fischerei, Hamburg
Ingo Wilhelms	BFA für Fischerei, Hamburg

Objectives

1. Participation in the ICES co-ordinated 'International Bottom Trawl Survey' 2003 (I) in the North Sea
2. Distribution of temperature, salinity and nutrients in the area of investigation

Narrative

Time schedule

17.01.2003, 14:00	Departure Bremerhaven
18.01.	Cruising to easternmost stations of the central working area
19.01.-03.02.	Sampling in the northern and central areas
04./05.02.	Break in Aberdeen, Scotland
05.02.-15.02.	Sampling in the central and southern areas
16.02.2003, 11:00	End of survey in Bremerhaven

According to the international ICES program coordinated by the Netherlands (RIVO-DLO) the rectangles assigned to Germany in the northern and central North Sea were fished by means of the ICES standard bottom trawl GOV during daytime and by the pelagic herring larvae net MIK during night. Additional temperature and salinity measurements and nutrient samples were taken in each rectangle.

Results

The total catches of the 71 GOV hauls were within the variations of the preceding years. With respect to the species, the numbers of individuals decreased in nearly all areas for all species except herring and sprat. A comparison of the German 1-group fish numbers from the period 2000 to 2003 in the ICES roundfish areas (see table) demonstrates the absolutely disappointing recruitment situation for cod, haddock, mackerel and even whiting. Only for herring and sprat an satisfying recruitment can be expected.

Numbers of 1-group (ICES def.; 60 min trawling time)

year	area	herring <20cm	cod <25cm	haddock <20cm	whiting <20cm	mackerel <25cm	sprat <10cm	Norw. pout <15cm
2000	1	2928	90	169298	2517	850	4	544125
2001	1	4942	99	35166	2090	12402	150	153505
2002	1	166	8	6706	290	11744	2	135152
2003	1	452		1897	239	2231		156941
2000	2	101210	454	77402	8725	10	237	198464
2001	2	18388	40	2190	1361	131	6	27779
2002	2	49752	35	227	3890	98		5130
2003	2	19921	2	48	455	207	2	2913
2000	3	25220	98	63226	34144	4	4129	40930
2001	3	7618	6	12364	7321	6	2288	17008
2002	3	1427	74	970	3675	10	10758	16753
2003	3	1533	2	242	6100	4	254	9470
2000	6	115713	66	224	57884	93	37249	
2001	6	30567	6	12	143964	4	34835	
2002	6	28266	8		236		8105	
2003	6	44815	2		466		13205	

The distribution of the herring larvae caught by the MIK was changed in comparison with those of the previous years. The largest concentrations were transported from the Moray Firth area towards northeastern directions into the open North Sea, perhaps by the offshore component of the momentary meteorological conditions. Thus, the larvae were spread over a larger area. The relative length distribution of the herring larvae indicate decreased growth compared to the previous years.

Different hydrographic situations were met in the working areas. Regionally too warm water in the central part was opposed by temperatures corresponding to the mean values in the outer parts. Only in the southeastern region water temperatures were below the long term means due to strong winter cooling. In the central areas, the salinities were below the mean values while those of the incoming Atlantic water were above.

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