



Federal Research Centre for Fisheries
Institute for Sea Fisheries, Hamburg

Survey Report

International Bottom Trawl Survey, 1st Quarter 2002

**Cruise of the FRV “Walther Herwig III”
18.01.-15.02. 2002**



Survey number WH 236

Cornelius Hammer

INTRODUCTION

The cruise 236 of RV "Walther Herwig III" was part of the ICES coordinated International Bottom Trawl Survey, performed in the first quarter of the year. This survey has been successfully conducted since several years and contributes to important assessment indices for the ICES working groups. The focus of this survey is on the demersal fish fauna of the North Sea. During the survey each statistical rectangle is fished by bottom trawl gear (GOV) twice by different nations however. The effort distribution was organised by RIVO-DLO and also the data were collated from the different research vessels by RIVO-DLO during their surveys. Participating nations during the first quarter survey were France, Denmark, Norway, Netherlands, Scotland and Germany.

Trawl samples were usually taken during daytime hours. The same stations were revisited during night time to collect herring larvae with the MIK net.

PARTICIPANTS

Dr. Cornelius Hammer	Federal Research Centre for Fisheries (Cruise Leader)
Gerd Wegner	Federal Research Centre for Fisheries, Hamburg
Gitta Hemken	Federal Research Centre for Fisheries, Hamburg
Jörg Appelt	Federal Research Centre for Fisheries, Hamburg
Ingo Wilhelms	Federal Research Centre for Fisheries, Hamburg
Horst Haiden	Federal Research Centre for Fisheries, Hamburg
Annett Seehagen	Student helper
Isabel Schmalenbach	Student helper
Frank Fuhr	Student helper
Thomas Mattishek	Student helper
Felix Bracht	Volontär

TIME SCHEDULE

Date	Comments
18/01, 16:00 hrs	Departure Bremerhaven
19/01	Cruising
19/01-02.02.	Sampling
03/04.02	Break in Starvanger, Norway
04-14.02	Sampling
15.02, 13:30 hrs	End of survey in Bremerhaven

RESULTS

Fish sampling

A total of 78 GOV hauls were made in the areas assigned for the German research vessel and in those rectangles in Roundfish Area 7 where additional hauls were taken on the way from Bremerhaven to the area of investigation (Fig. 1). In general the weather conditions were rough, with an average wind force of approximately 7 Bft. In spite of this it was still possible to maintain the sampling schedule nearly throughout the entire survey. Only occasionally trawling and MIK zooplankton sampling had to be interrupted briefly, when stronger gales occurred. However, due to gales MIK sampling was not possible in ICES rectangle 51E8. Neither bottom trawl catches nor MIK zooplankton catches were taken in the rectangles 50E8 and 47E7, due to both bad weather conditions and difficult trawling grounds.

From the trawl hauls the usual biological measurements were taken and otoliths were dissected by species and Roundfish Area, according to the IBTS instructions. General observations were that younger haddock (approx. 25 cm TL) was very abundant in the north-western area, whereas larger haddock was relatively rare. As expected, cod was very rare throughout the entire surveyed area.

Zooplankton Sampling

A total of 81 MIK samples were taken (Fig. 1, 2). As in previous years the number of larvae was considerably lower in the northern North Sea than in the central part, south of 58°N.

Oceanography

Temperature and salinity were measured near the bottom on each of the 78 fishery stations. For this purpose the vertical distribution of the parameters was determined between surface and near-bottom layer by means of the SeaBird CTD-system. Water samples were taken for further salinity determination in the laboratory. Additional water samples were taken from different depths for nutrient determination in the Institute for Bio-Geo-Chemistry of the University of Hamburg.

The water body of the North Sea was generally homogeneously mixed, due to the wintery situation and wind-induced intensive mixing. This was found to be different only on the westerly and southerly rims of the Norwegian Deep. Due to the relatively mild winter were

water temperatures of approximately 6-9°C over the long-term average: in the northern area were the anomalies 0.5 – 1 K, and in the southern part 1.5 K.

The preliminary measurements of the salinity show both positive anomalies (up to 0,1 psu) and also negative deviations (ca. 0,1 psu in the high sea areas, and up to 0,4 psu in the strongly variable coast areas of the German Bight). In general the increased salinities were found in the area influenced by the Atlantic water, north of the line northern Shetlands – Great Fisher Bank and southern tip of Norway.

Acknowledgements

In spite of the unfavourable conditions during this cruise were the spirits high in both scientific and vessel crew. For this the vessel crew and the scientific crew shall be thanked for. Special thanks shall be attributed to the two volunteers, Sigrid Hartmann and Felix Bracht, helping a great deal in processing the fish.

Dr. Cornelius Hammer
(Cruise Leader)

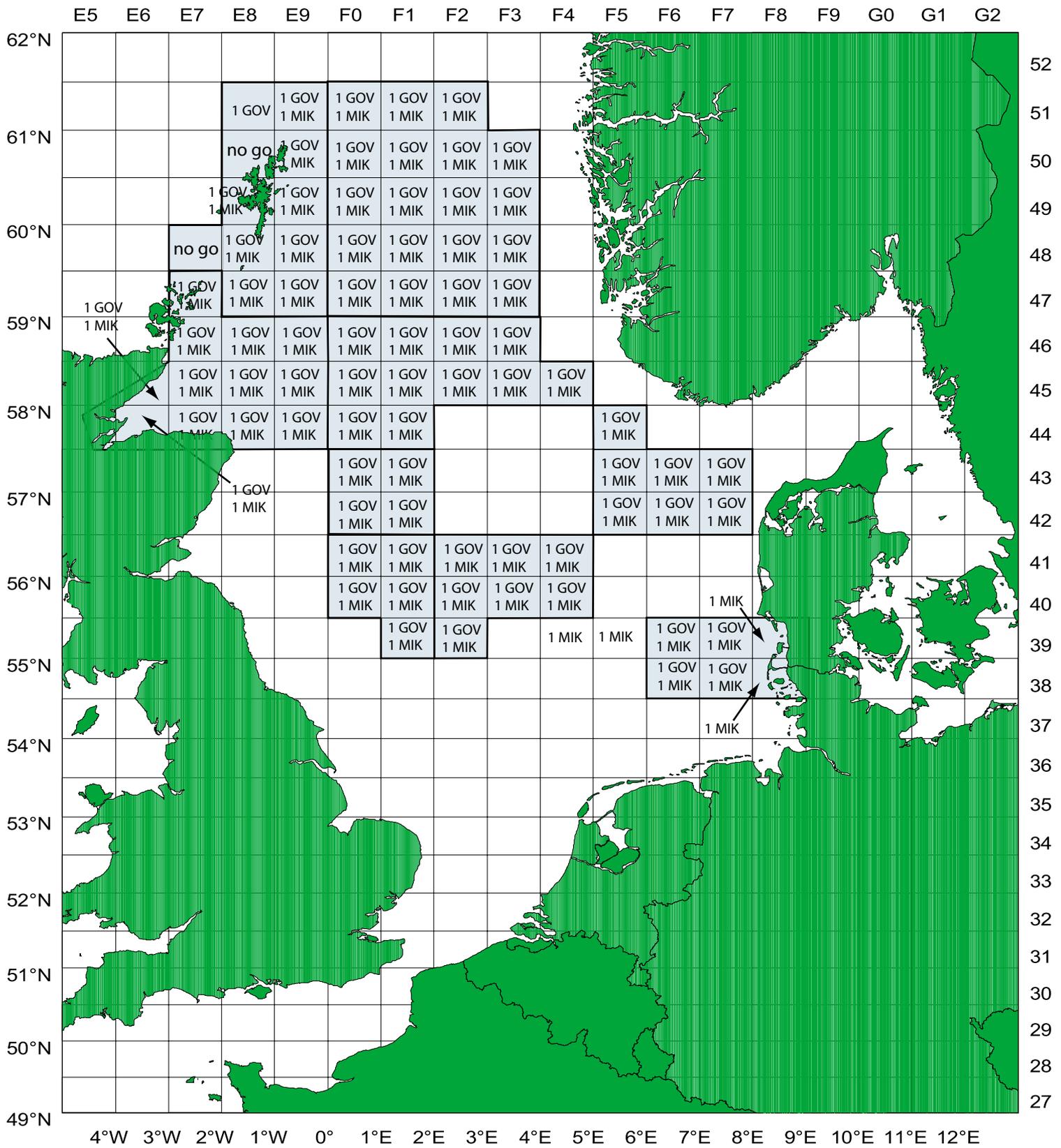


Fig. 1. IBTS 1st Quarter, RV Walther Herwig III, Cruise 236, 18.01.-- 15.02.2002