

FRV WALTHER HERWIG III

Cruise 341: IBTS 2011 (I)

20.01. – 17.02.2011

REPORT

Scientist in charge: Dr. G. Wegner

Objective

Participation in the ICES co-ordinated 'International Bottom Trawl Survey' 2011, 1st quarter, in the North Sea.

The objective of the survey is to estimate the strength of the upcoming year classes of the demersal fish species cod, haddock, whiting and Norway Pout, to some degree also pelagic species like herring, sprat and mackerel. In addition, the distribution and abundance of herring larvae are to be investigated. Temperature, salinity, and nutrients in the area of investigation are monitored.

Narrative

Time schedule

20.01.2011 (14:00)	Departure Bremerhaven,
20.01. – 02.02.	Sampling / fishing (German Bight, central and north-eastern North Sea)
03.02. (10:00 – 10:00)	Staff disembarking and embarking on Aberdeen roads
04.02. – 15.02	Sampling / fishing (northern and central North Sea)
17.02.2011 (12:30)	Arrival Bremerhaven

The IBTS is an internationally coordinated ICES program. The rectangles assigned to Germany in the northern and central North Sea were to be fished by means of the ICES standard bottom trawl GOV during daytime and the standard plankton MIK (Methot-Isaac-Kidd) net during nighttime. Additionally, in each rectangle temperature and salinity measurements as well as nutrient samples were to be taken. Due to rough weather conditions during the second half of the cruise, WALTHER HERWIG III was able to fish in 67 rectangles of the assigned 77 (Fig 1). Five squares were dropped in consequence of bad weather prediction in the northeastern area, another three squares in the southern part of the assigned area and two off Sylt by bad weather at the end of the cruise. In total, 138 MIK and 67 valid GOV hauls as well as 67 CTD profiles were conducted.

Results

Total catches of the GOV hauls were between 15 and 6.300 kg, in mean 392 kg, about 50 kg more than during the year before. Compared with the previous year, less juvenile cod, haddock, whiting, Norway pout, as well as sprat and mackerel were caught by "Walther Herwig III". Only young herring was more abundant than last year.

The total number of herring larvae from the MIK net hauls was of the same magnitude than that of last year. Caused by the predominating northern wind component over the northern North Sea during the preceding months, the distribution of the larvae was different to previous years. In the northern squares only few or no larvae were caught, in the central North Sea the abundance was comparable to last year. The largest concentrations were found in the inner Morray Firth.

The wind influence on the water mass distribution is obvious by the increased salinities (up to 0.05 ppt) in the central part of the northern North Sea.

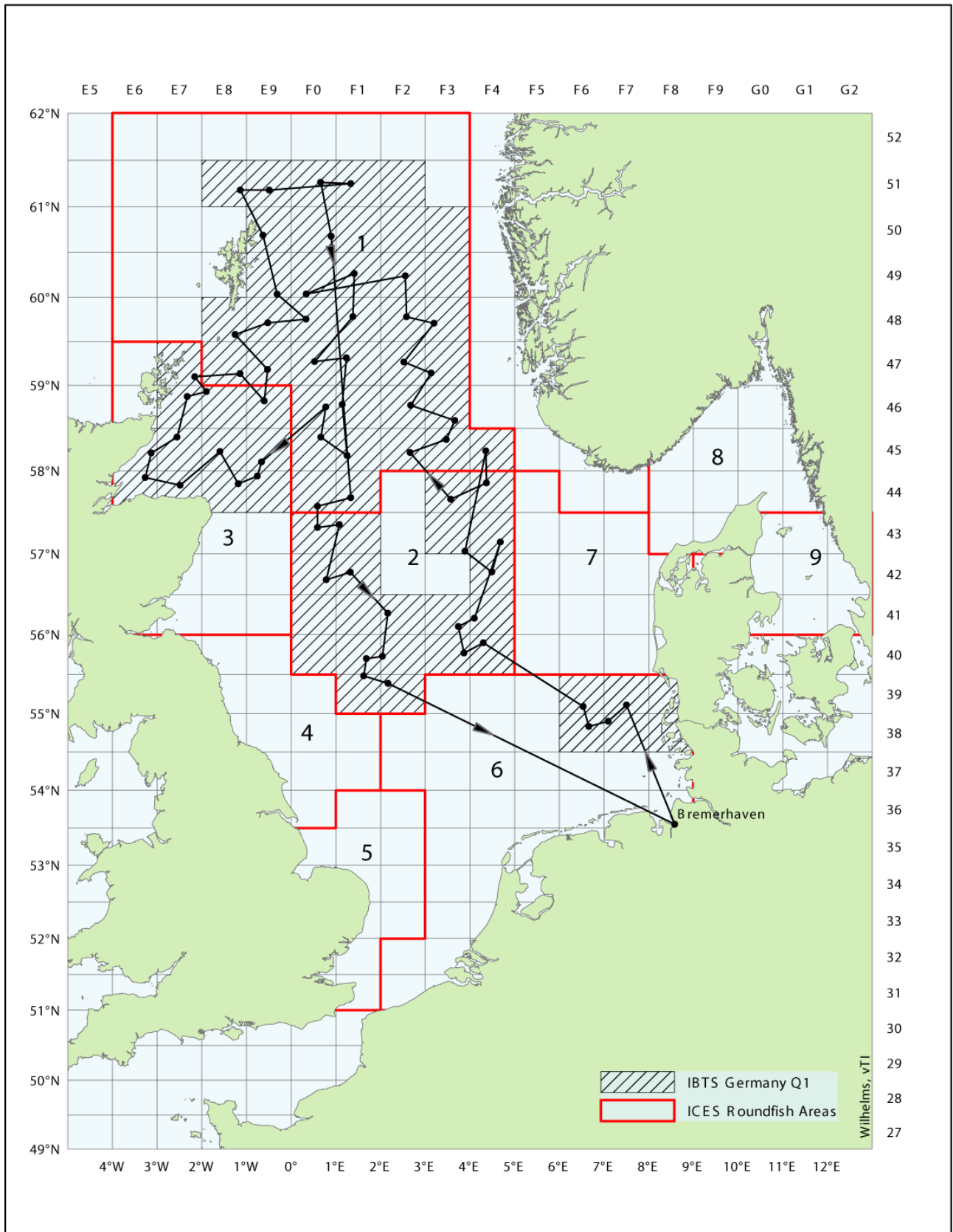
The sea surface temperatures in the investigation area varied between 2.4 to 9.2°C, predominantly between 6.4 and 87.5°C. The strong cooling since November 2010 led to surface temperatures of about 0.5 to 1 K below the long time means in the central northern area in December '10 and January '11, whilst in February '11 the temperatures corresponded to the mean values. Except very few stations at the Norwegian Deep, the water masses were vertically totally mixed in the whole working area. Thus, oxygen saturation was found in all depths.

Participants

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Gitta Hemken	vTI, SF
Dr. Matthias Kloppmann	vTI, SF
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Dr. Gerd Wegner



IBTS 1st quarter 2011
Track of cruise 341 of FRV "Walther Herwig III"