

Report

FRV Walther Herwig III - Cruise 372. IBTS Q1 2014

23.01. – 23.02.2014

Scientist in charge: Dr. M. H. F. Kloppmann

Objectives:

The International Bottom Trawl Survey (IBTS) is an internationally coordinated ICES program. The survey aims to provide ICES assessment and science groups with consistent and standardized data for examining spatial and temporal changes in (a) the distribution and relative abundance of fish and fish assemblages; and (b) of the biological parameters of commercial fish species for stock assessment purposes.

The main objectives are to:

- To determine the distribution and relative abundance of pre-recruits of the main commercial species with a view of deriving recruitment indices;
- To monitor changes in the stocks of commercial fish species independently of commercial fisheries data;
- To monitor the distribution and relative abundance of all fish species and selected invertebrates;
- To collect data for the determination of biological parameters for selected species;
- To collect hydrographical and environmental information;
- To determine the abundance and distribution of late herring larvae.

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Methods:

- Trawl hauls in allocated ICES statistical rectangles by means of the ICES standard bottom trawl GOV during daytime, one haul per rectangle
- Plankton hauls with a standardized 2 m midwater ring trawl (MIK) to a maximum depth of 100 m during nighttime, two hauls per rectangle.
- One CTD cast per each rectangle with a Seabird SBE 911 for hydrographical data
- Water bottle samples per each rectangle for microzooplankton sampling

Itinerary:

23.01.2014 (11:00) Embarkation of cruise participants
24.01.2014 (08:30) Depart Bremerhaven
24.01. – 20.02.14 Sampling / fishing in central and northern North Sea)
23.02.2014 (08:00) Dock Bremerhaven
23.02.2014 (10:00) Disembarkation of cruise participants, end of cruise.

Results:

Due to unprecedented rough weather conditions during the entire duration of the cruise, WALTHER HERWIG III was able to fish only 46 rectangles of the assigned 77 (Fig 1). 31 rectangles had to be skipped in consequence of bad weather predictions over the entire survey area.

Standardized total catches of the GOV hauls were between 8.1 and 4186 kg per 30 min trawling time, on average about 248 kg, which is within about the same range as in the previous year. Recruitment situation of the gadoids cod and haddock is still bad with abundance indices of 1-groups still far below the long term average while in whiting it was only slightly less than that. Also recruitment in Norway pout fell below the long term average while the 2013 year classes of herring and sprat were well above the long term mean (Table 1). The abundance index of mackerel recruits was again very low.

The MIK herring larvae index of 164.8 indicated at a higher recruitment in herring after a series of low index years since 2002. Herring larvae were found almost everywhere but showed two cores of abundance: one in the western central and another in the southeastern North Sea.

After a relatively warm winter, water temperatures were between 5.0 and 8.3 °C in their extremes but chiefly between 6.8 and 7.7 °C which is conspicuously warmer than in the previous year. The water column was always thermally well mixed.

For further details and results of the complete survey with participations from France, the Netherlands, Denmark, Scotland, Sweden, Norway, and Germany, please refer to the CSR (cruise summary report) site of BSH http://seadata.bsh.de/csr/retrieve/sdn2_index.html as well as to the respective chapter 4.1 of this year's IBTSWG report.

Tab.1: IBT-Survey: Comparison of abundance indices (n/h) of 2013 (final), 2014 (preliminary) with the long term mean, 1980 - 2013 (catches of all participating nations):

	final 2013	prelim. 2014	1980- 2013
cod	2.3	2.3	8
haddock	58.3	15	576
whiting	53.1	316	465
Norway pout	4464.4	1200	2858
herring	1665.1	3213	1963
sprat	709.5	4240	1107
mackerel	6.3	15	103

source: IBTSWG, April 2014

Participants

Annika Elsheimer	TI, Institute of Sea Fisheries, Hamburg (SF)
Christina Fromm	TI-SF
Gitta Hemken	TI-SF
Sakis Kroupis	TI-SF
Heike Schwermer	TI-SF
Lars Christiansen	TI-SF
Dr. Holger Haslob	TI-SF
Sergej Schachray	TI-SF
Annika Dose	TI-SF
Kora Thomsen	TI-SF
Dr. Matthias Kloppmann	TI-SF (chief scientist)

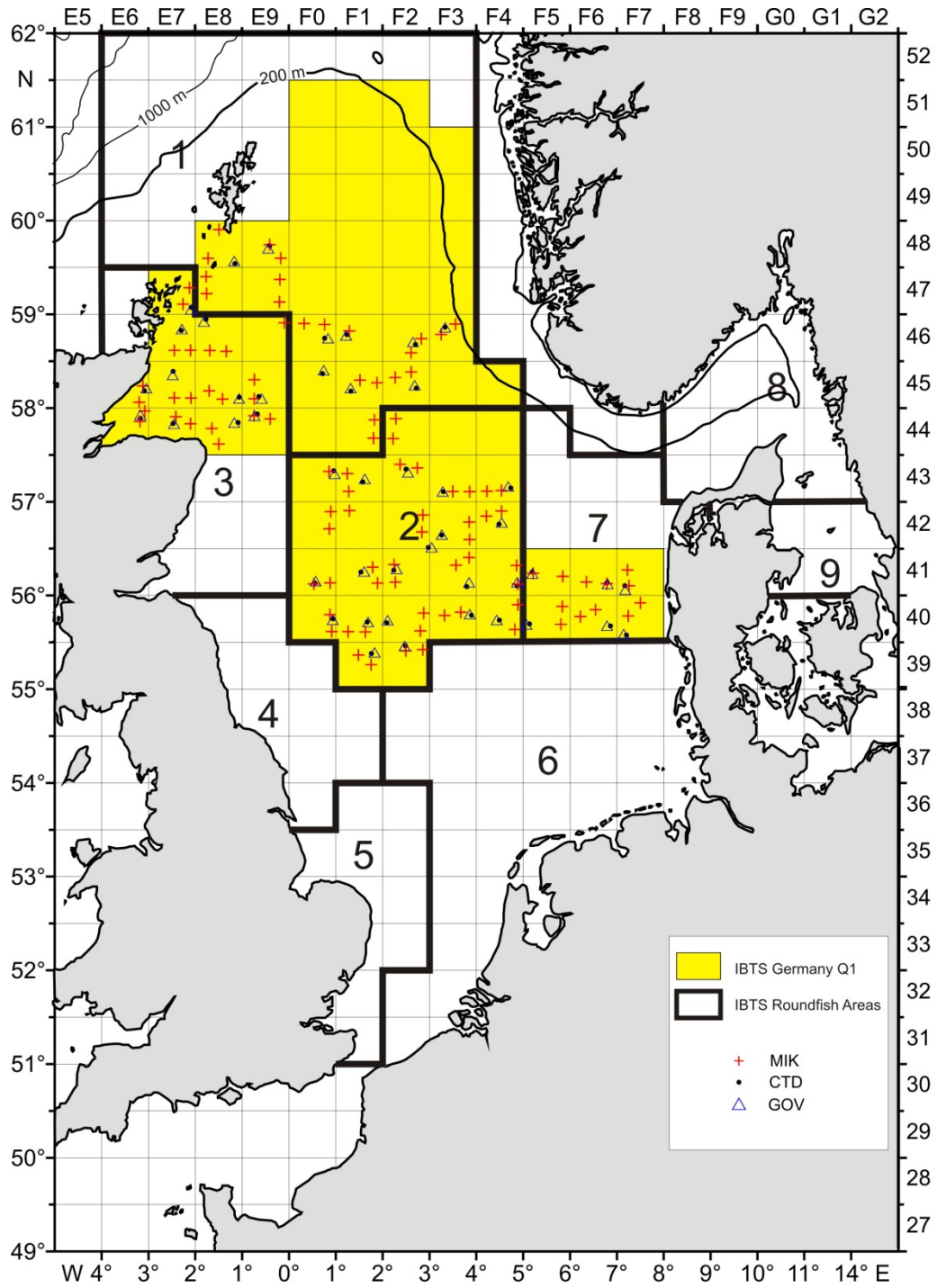


Fig. 1: GOV-hauls, CTD- and MIK-Stations of FFS WALTHER HERWIG III cruise 372.