Thünen-Institut für Seefischerei

Palmaille 9, 22767 Hamburg Telefon 040 38905-196 Telefax 040 38905-263 30.05.2016 Az.: Dr.Kl./vS./4056

Report
FRV Walther Herwig III – Cruise 392. IBTS Q1 2016
25.01. – 25.02.2016

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:

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

Verteiler:
TI - Seefischerei
Saßnitzer Seefischerei e. G.

per E-Mail:
BMEL, Ref. 614
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Bundesanstalt für Landwirtschaft und Ernährung, Hamburg
Schiffsführung FFS "Walther Herwig"
Präsidialbüro (Michael Welling)
Personalreferat Braunschweig
TI - Fischereiökologie
TI - Ostseefischerei Rostock
FIZ-Fischerei
TI - PR
MRI - BFEL HH, FB Fischqualität
Dr. Rohlf/SF - Reiseplanung Forschungsschiffe
Fahrtteilnehmer
Bundesamt für Seeschifffahrt und Hydrographie, Hamburg
Mecklenburger Hochseefischerei GmbH, Rostock
Doggerbank Seefischerei GmbH, Bremerhaven
Deutscher Fischerei - Verband e. V., Hamburg
Leibniz-Institut für Meereswissenschaften IFM-GEOMAR
H. Cammann-Oehne, BSH
Deutscher Hochseefischerei-Verband e.V.
DFFU

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:

25.01.2016 (11:00) Embarkation of cruise participants
25.01.2016 (14:00) Depart Bremerhaven
26.01. – 04.02.16 Sheltering at Helgoland Roads due to a series of passing storms
05.02. – 22.02.16 Sampling / fishing in central and northern North Sea
24.02.2014 (20:00) Dock Bremerhaven
25.02.2014 (10:00) Disembarkation of cruise participants, end of cruise.

Results:

Due to unprecedented rough weather conditions at the beginning of the cruise, Walther Herwig III was not able to enter the survey area for 10 days and sheltered instead at Helgoland Roads. Only on 4 February weather forecasts finally were in favor for commencement of survey activities. However, weather remained unstable during the entire duration of the cruise, therefore WALTHER HERWIG III was able to fish only 48 rectangles of the assigned 76 (Fig 1). 28 rectangles had to be skipped in consequence of bad weather predictions over the entire survey area. Of the planned 152 MIK stations, 100 could be completed.

Standardized total catches of the GOV hauls were between 17.3 and 2186 kg per 30 min trawling time, on average about 358 kg, which is more than in both previous years. Recruitment situation of the gadoids cod, haddock and whiting is poor or very poor with abundance indices of 1-groups below or far below the long term average, while for Norway pout, it was only slightly less than that. Also the index for the 1-ringer herring was only just half of the long-term mean, while sprat was the only species with a recruitment value above its long-term average (Table 1). The abundance index of mackerel recruits was only slightly below the long-term average.

The MIK herring larvae index of 99.8 indicated a moderately high recruitment in herring contrasting to the conspicuously low index in 2015. However, herring larvae were only found in two spots in the southern and eastern North Sea, close to the Dutch, German and Danish coasts. Everywhere else, herring larvae were not very abundant.

After another warm winter, water temperatures were between 6.2 and 7.9 °C and in most cases > 7°C. 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 5.1 of this year's IBTSWG report.

Tab.1: IBT-Survey: Comparison of abundance indices (n/h) of 2015 (final), 2016 (preliminary) with the long term mean, 1980 - 2015 (catches of all participating nations):

	final 2015	prelim. 2016	1980- 2015
cod	2.8	**1.3**	7
haddock	388.2	**96**	532
whiting	315.0	**314**	456
Norway pout	6679.8	**2881**	2925
herring	3933.5	**1081**	2041
sprat	3218.2	**1388**	1208
mackerel	81.0	**2**	97

source: IBTSWG, April 2016

Participants

Dr. Matthias Kloppmann (chief scientist)	Thuenen Insitute of Sea Fisheries (TI-SF)
Andrij Martynenko	TI-SF
Finn Werner	TI-SF
Gitta Hemken	TI-SF
Annika Elsheimer	TI-SF
Annika Dose	TI-SF
Erik Sulanke	TI-SF
Simon Wieser	TI-SF
Felix Müller	TI-SF
Sven Matern	TI-SF
Sergej Schachray	TI-SF

Dr. Matthias Kloppmann

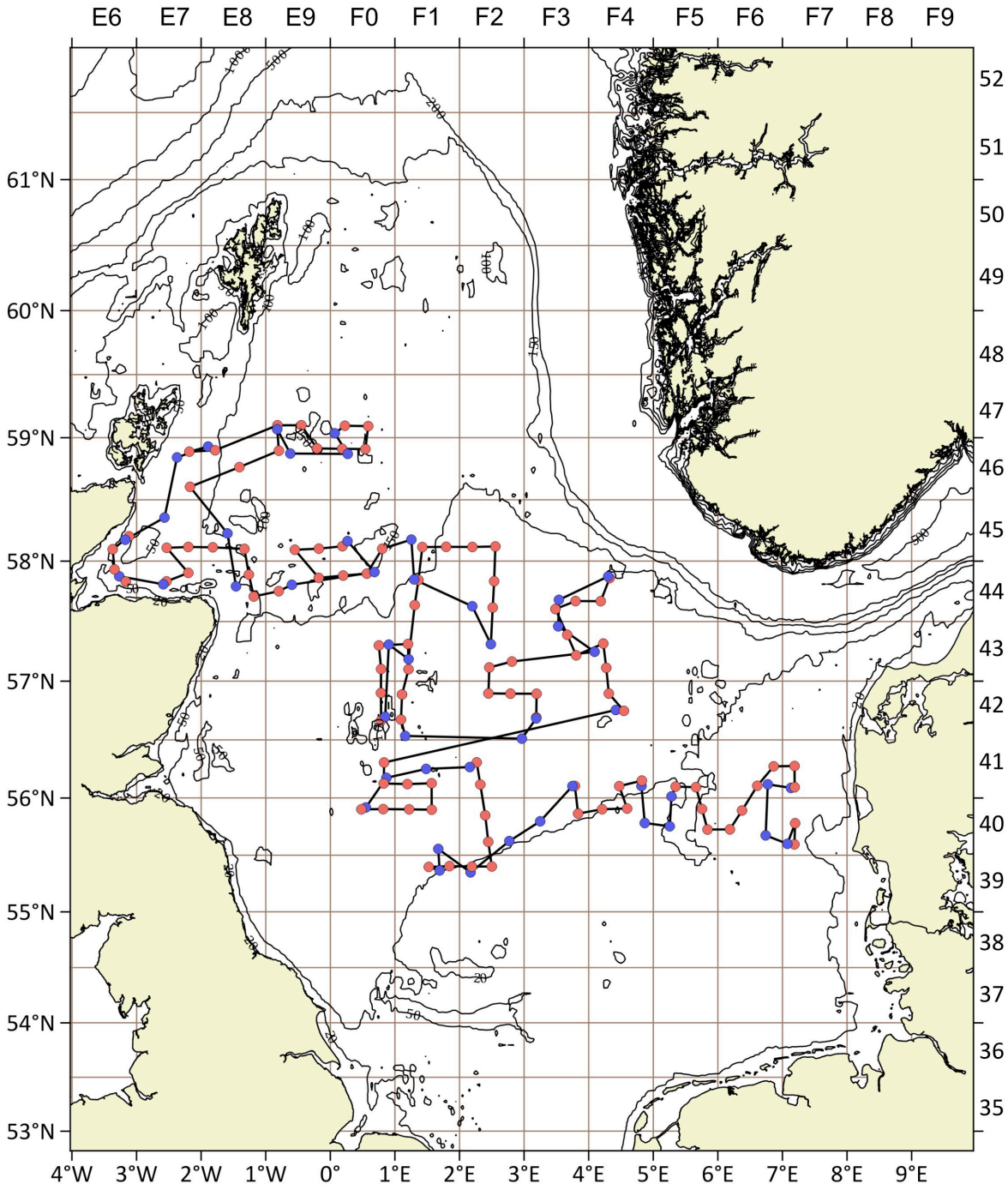

Fig. 1: GOV-hauls, CTD- and MIK-stations of FRV WALTHER HERWIG III cruise 392. Blue spots: combined CTD and GOV trawl stations, red spots: MIK stations. The black line indicates the traveled routes between stations.