

## Report

### FRV Walther Herwig III - Cruise 382. IBTS Q1 2015

22.01. – 23.02.2015

Scientist in charge: Dr. H. Haslob

#### Objectives:

The International Bottom Trawl Survey (IBTS) is an internationally coordinated ICES programme. 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;
- 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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#### Verteiler:

TI - Seefischerei  
Saßnitzer Seefischerei e. G.

#### per E-Mail:

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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:

22.01.2015 (12:40) Embarkation of cruise participants  
22.01.2015 (14:00) Depart Bremerhaven  
23.01. – 06.02. Sampling / fishing in central and northern North Sea)  
06.02. (Evening) – 09.02. (Morning) Lerwick  
09.02. - 19.01.15 Sampling / fishing in central and northern North Sea)  
20.02.2015 (15:00) Dock Bremerhaven  
20.02.2015 (16:40) Disembarkation of cruise participants, end of cruise.

## Results:

WALTHER HERWIG III was able to fish 69 rectangles of the assigned 77 (Fig 1). 8 rectangles had to be skipped in consequence of bad weather predictions over the northern survey area.

Standardized total catches of the GOV hauls were between 13.3 and 742.8 kg per 30 min trawling time, on average about 132.0 kg, which is less compared to the previous year (Min.: 8.1 kg; Max.: 4186.0 kg; Avg.: 248.0 kg). Recruitment situation of the gadoids cod and haddock is still bad with abundance indices of 1-groups still below the long term average. However, the abundance index of haddock increased compared to the last year value (Figure 2). In whiting the index was also below the long term average but higher compared to the previous year. Recruitment in Norway pout was well above the long term average. The 2014 year classes of herring and sprat were again above the long term mean and were for both species the highest for the whole time series (Table 1, Figure 2). The abundance index of mackerel recruits was again below the long term average but five times higher compared to the 2014 value.

The MIK herring larvae index was 20.9. This index is very low and much less than the last year's estimate (164.8) for the 2013 year class. The 2015 value is only 19.3 % of the long term mean, and indicates the lowest recruitment since the year class of 1977. In the southern and northern North Sea as well as Skagerrak and Kattegat, herring larvae abundances were very low or large herring larvae didn't occur there at all, the latter being particularly true for the German Bight and the northern North Sea. The only area of higher abundance was that east of the northern English coast.

After a relatively warm winter, water temperatures were between 6.2 and 8.4 °C in their extremes but chiefly between 7.3 and 7.8 °C which is conspicuously warmer than in the previous year. The water column was well mixed in most of the stations.

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](http://seadata.bsh.de/csr/retrieve/sdn2_index.html) as well as to the respective chapter of this year's IBTSWG report.

**Tab.1: IBT-Survey: Comparison of abundance indices (n/h) of 2014 (final), 2015 (preliminary) with the long term mean, 1980 - 2014 (catches of all participating nations):**

	<b>final 2014</b>	<b>prelim. 2015</b>	<b>1980- 2014</b>
<b>cod</b>	3.8	<b>2.7</b>	8
<b>haddock</b>	24.1	<b>316</b>	529
<b>whiting</b>	269.9	<b>378</b>	460
<b>Norway pout</b>	831.6	<b>6988</b>	2847
<b>herring</b>	2634.9	<b>5161</b>	1971
<b>sprat</b>	3007.8	<b>4285</b>	1150
<b>mackerel</b>	14.8	<b>76</b>	98

source: IBTSWG, March 2015

### **Participants**

Annika Elsheimer	TI, Institute of Sea Fisheries, Hamburg (SF)
Gitta Hemken	TI-SF
Sakis Kroupis	TI-SF
Lars Christiansen	TI-SF
Sergej Schachray	TI-SF
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Sven Matern	TI-SF
Malte Ferber	TI-SF
Linda Olmos-Pino	TI-SF
Dr. Holger Haslob	TI-SF (chief scientist)



Dr. Holger Haslob

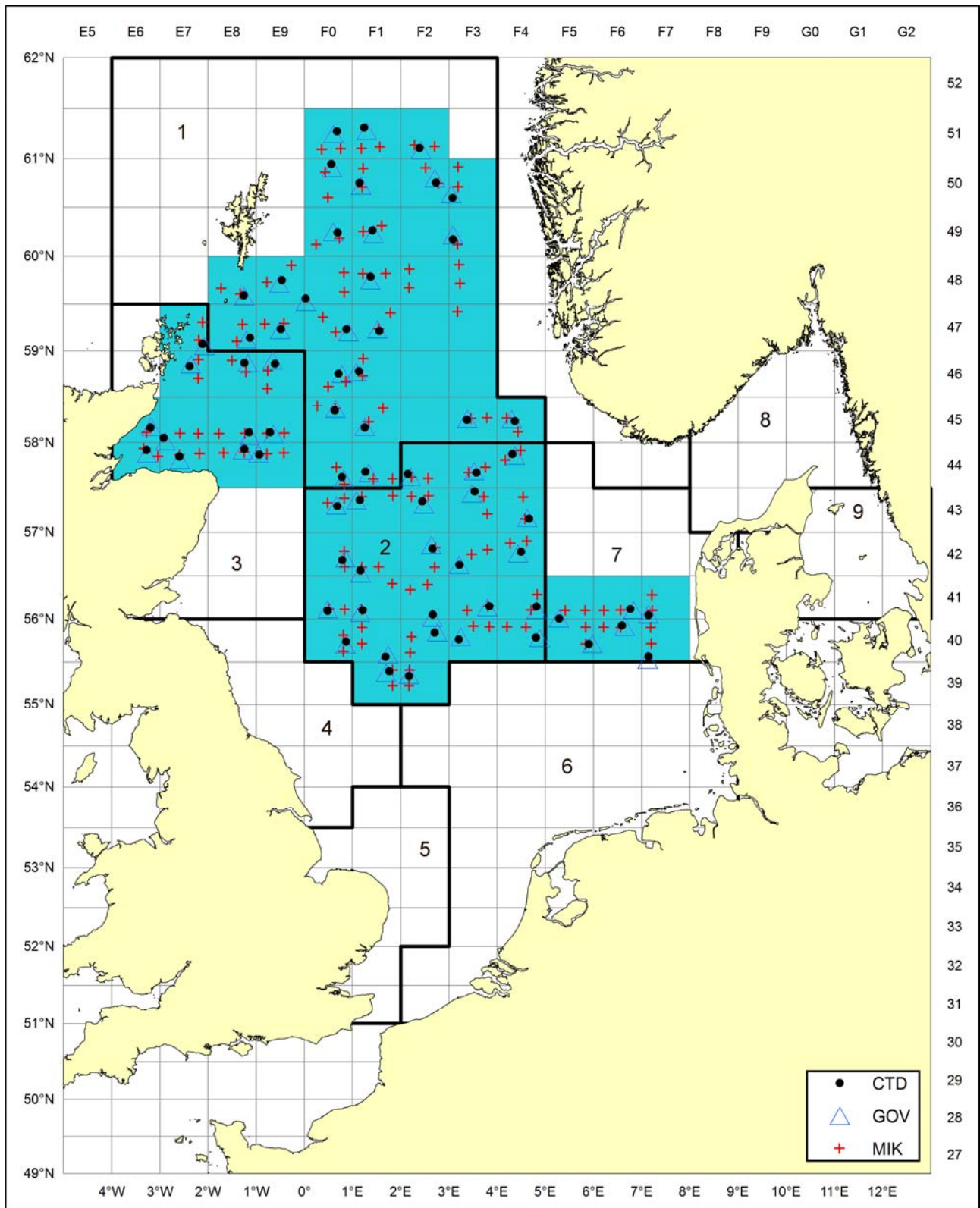


Fig. 1: GOV-hauls, CTD- and MIK-Stations of FFS WALTHER HERWIG III cruise 382. Numbers indicate Roundfish Areas

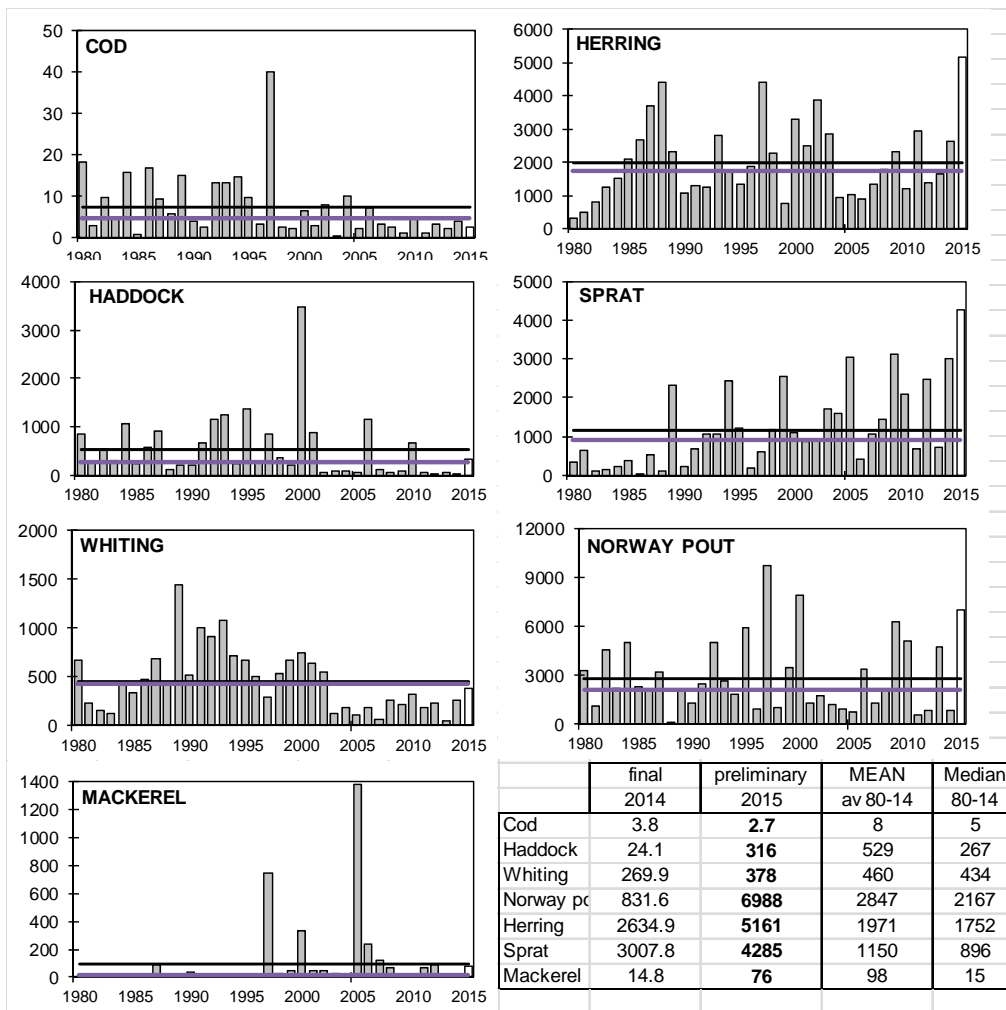


Fig. 2: Time-series of indices for 1-group (1-ring) herring, sprat, haddock, cod, whiting, Norway pout, and mackerel caught during the quarter 1 IBTS survey in the North Sea, Skagerrak and Kattegat. Indices for the last year are preliminary, and based on a length split of the catches. Horizontal black line is the mean for years 80-14, while the purple line is the median 80-14. Figure taken from the IBTSWG Report 2015 (ICES).