# Bundesforschungsanstalt für Fischerei

# Institut für Seefischerei



Palmaille 9, 22767 Hamburg, & Tel. 040/389051224 & FAX 040/38905 263 & 07.03.2006 & Az.: Dr.WEg./Ull./v.S./2318

# FRV WALTHER HERWIG III

Cruise 283: IBTS 2006 (I)

#### **REPORT**

18.01. - 15.02.2006

## **Participants**

Wolfgang Ahlers Institute for Sea Fisheries, Cuxhaven Annika Elsheimer Institute for Sea Fisheries, Hamburg (ISH)

Gitta Hemken ISH
Dr. Matthias Kloppmann ISH
Melanie Kruppe ISH

Wolfgang Lange Voluntary helper, Hamburg

Johannes Radtke ISH

Sergey Schachray ISH (30.01. to 15.02.06)

Annett Seehagen ISH

Jens Ulleweit ISH (chief scientist 30.01. to 15.02.06)
Dr. Gerd Wegner ISH (chief scientist 18.01. to 29.01.06)

Holger Wiese ISH (18.01. to 29.01.06)

# **Objective**

Participation in the ICES co-ordinated 'International Bottom Trawl Survey' 2006, 1<sup>st</sup> 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 as well as of the pelagic species 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

18.01.2006 Departure Bremerhaven, arrival in the survey area and start of sampling 18.01. – 28.01. Sampling in the German Bight and central and north-western North Sea

28.01. (22:00) – 31.01. (09:00) Mid-term break in Bergen, Norway; exchange of scientific staff

31.01.2006 Start of leg 2

31.01. – 15.02 Sampling in the North and East of the investigation area

15.02.2006 Arrival in Bremerhaven

According to the international ICES program coordinated by the Netherlands (RIVO-DLO) 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, temperature and salinity measurements and nutrient samples were to be taken in each rectangle. Due to the good weather conditions, WALTHER HERWIG was able to work in 70 of the 75 rectangles assigned (Fig 1). In total, 140 MIK and 70 GOV hauls as well as 70 CTD profiles were conducted.

# **Results**

Sea surface temperatures in the investigation area were between 5.1 to 9.9°C (Mean 8.0°C). There was no thermal stratification discernible throughout the area.

Total catch of the GOV hauls was between 16 and 2790 kg. High numbers of both, juvenile and adult, haddock and Norway pout were caught, while whiting and cod only occurred in lower numbers. Also, abundance of mackerel, herring and sprat appeared to be low. Sprat were only encountered in the southern German Bight and in Moray Firth. Figure 2 shows the 1-group indices as average numbers/hour fishing of the demersal species (a to d) and of the pelagic species (e to g) from 2001 to 2006 calculated from German data.

Recruitment of haddock and Norway pout appeared to be better in 2006 than in the preceding years. (Fig. 2). However, the values are within the variability of the long term average and represent, thus, only an ordinary new year class rather than an extraordinarily good one. Cod and whiting show a slight increase in new year class strength, but the index is still below the long term average. Overall, for herring, sprat and mackerel there is a decrease compared to the year before.

The distribution of herring larvae caught with the MIK net is similar to 2005. They were concentrated in the central North Sea, where their abundance was higher than in the preceding year. In contrast, abundance of herring larvae in the northern parts of the investigated area had decreased. Mean abundance of the herring larvae remained, thus, at the same level as during the last years.

Remarkable were the high numbers of snake pipefish caught with the MIK net, and there seemed to be a distinct increase in their abundance. While in 2005 the maximum was 7 snake pipefish per haul, in 2006 it was 51 pipefish and 20 to 30 individuals were caught on a regular basis. Highest catches were recorded in the north-western part of the investigated area. Standard length of the pipefish was between 20 and 40 cm.

Gerd Wegner (chief scientist, 1<sup>st</sup> leg)

Jens Ulleweit (chief scientist, 2<sup>nd</sup> leg)

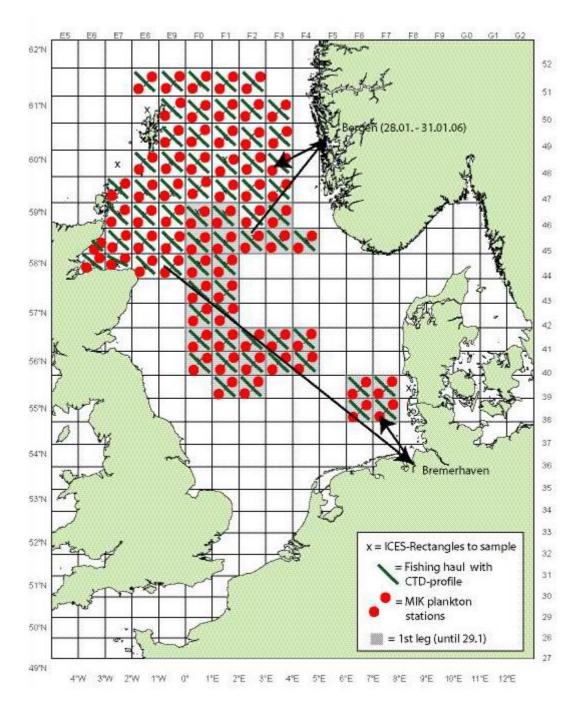


Fig.1: Fishing hauls and plankton stations carried out in the investigation area IBTS 1<sup>st</sup> quarter 2006, FRV "Walther Herwig III"

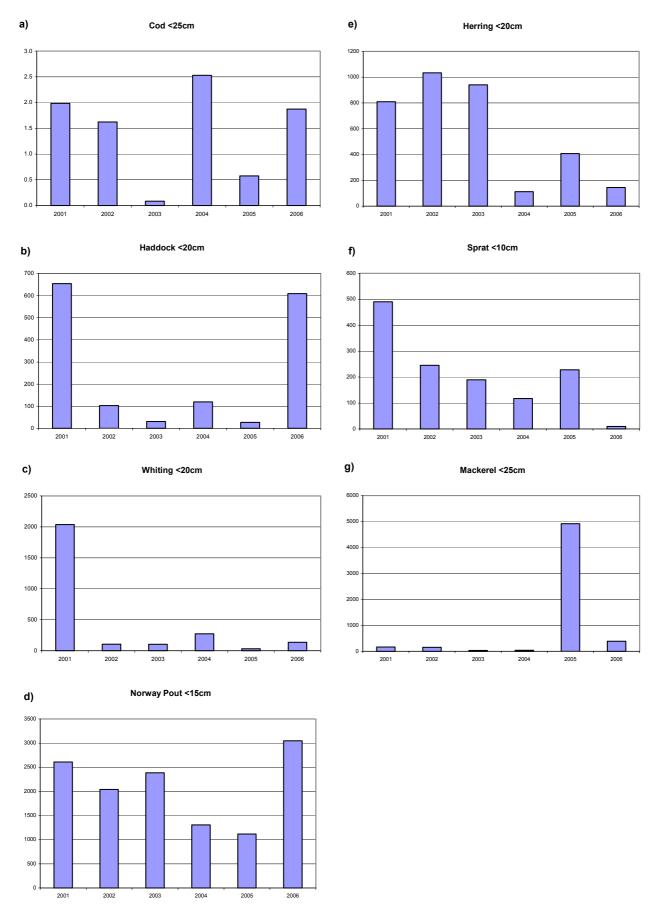


Fig.2: 1-group indices as average numbers/hour fishing of the demersal species cod, haddock, whiting and Norway pout (a to d) and of the pelagic species herring, sprat and mackerel (e to g) from 2001 to 2006 calculated from the German IBTS data (FRV "Walther Herwig III", IBTS 1<sup>st</sup> quarter)

# CRUISE SUMMARY REPORT

FOR COLLATIMG CENTRE USE

Centre: DOD	Ref. No.:		
Is data exchange restricted	☐ Yes	☐ In part	□ No

SHIP enter the full name and international radio call sign of the ship from which the data were collected, and indicate the type of ship, for example, research ship; ship of opportunity, naval survey vessel; etc.

Name: Walther Herwig III Call Sign: DBFR

Type of ship: FRV

CRUISE NO. / NAME 283

enter the unique number, name or acronym assigned to the cruise (or cruise leg, if appropriate).

**CRUISE PERIOD** 

start (set sail)

18/01/2006 day/ month/ year 15/02/2006 day/ month/ year

(return to port)

PORT OF DEPARTURE (enter name and country) Bremerhaven

PORT OF RETURN (enter name and country) Bremerhaven

RESPONSIBLE LABORATORY

enter name and address of the laboratory responsible for coodinating the scientific planning of

Name: Fed. Research Centre for Fisheries, Institute for Sea Fisheries

Address: Palmaille 9, D-22767 Hamburg

**Country: Germany** 

CHIEF SCIENTIST(S) enter name and laboratory of the person(s) in charge of the scientific work (chief of mission) during the cruise.

Dr. Gerd Wegner, Inst for Sea Fisheries (1st leg) Jens Ulleweit, Inst. for Sea Fisheries (2<sup>nd</sup> leg)

OBJECTIVES AND BRIEF NARRATIVE OF CRUISE enter sufficient information about the purpose and nature of the cruise so as to provide the context in which the report data were collected.

Participation in the ICES co-ordinated 'International Bottom Trawl Survey' 2006, 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 as well as of the pelagic species 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.

According to the international ICES program coordinated by the Netherlands (RIVO-DLO) 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 by the pelagic herring larvae net MIK during night. Additionally, temperature and salinity measurements and nutrient samples were to be taken in each rectangle. Due to the good weather conditions, WALTHER HERWIG was able to complete 70 of the 75 assigned statistical rectangles. In total, WALTHER HERWIG carried out 140 MIK and 70 GOV hauls as well as 70 CTD profiles.

PROJECT (IF APPLICABLE) if the cruise is designated as part of a larger scale cooperative project (or expedition), then enter the name of the project, and of organisation responsible for co-ordinating the project.

Project name: International Bottom Trawl Survey 1st Quarter

Coordinating body: ICES

PRINCIPAL INVESTIGATORS: Enter the name and address of the Principal Investigators responsible for the data collected on the cruise
and who may be contacted for further information about the data. (The letter assigned below against each Principal Investigator is used on pages
2 and 3, under the column heading 'Pl', to identify the data sets for which he/she is responsible)

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### MOORINGS, BOTTOM MOUNTED GEAR AND DRIFTING SYSTEMS

This section should be used for reporting moorings, bottom mounted gear and drifting systems (both surface and deep) deployed and/or recovered during the cruise. Separate entries should be made for each location (only deployment positions need be given for drifting systems). This section may also be used to report data collected at fixed locations which are returned to routinely in order to construct 'long time series'.

PI				TE POSITION  DATA TYPE Identify, as appropriate, the nature of the instrumentation the parameters (to be measured, the number of instruments and their depths, whether deployed and/o				
See top of page.	deg	ATITUDI min	N/S	deg	min	E/W	enter code(s) from list on cover page.	measured, the number of instruments and their depths, whether deployed and/or recovered, dates of deployments and/or recovery, and any identifiers given to the site.

#### SUMMARY OF MEASUREMENTS AND SAMPLES TAKEN

Except for the data already described on page 2 under 'Moorings, Bottom Mounted Gear and Drifting Systems', this section should include a summary of all data collected on the cruise, whether they be measurements (e.g. temperature, salinity values) or samples (e.g. cores, net hauls).

Separate entries should be made for each distinct and coherent set of measurements or samples. Different modes of data collection (e.g. vertical profiles as opposed to underway measurements) should be clearly distinguished, as should measurements/sampling techniques that imply distinctly different accuracy's or spatial/temporal resolutions. Thus, for example, separate entries would be created for i) BT drops, ii) water bottle stations, iii) CTD casts, iv) towed CTD, v) towed undulating CTD profiler, vi) surface water intake measurements, etc.

Each data set entry should start on a new line - it's description may extend over several lines if necessary.

NO, UNITS: for each data set, enter the estimated amount of data collected expressed in terms of the number of 'stations'; miles' of track; 'days' of recording; 'cores' taken; net 'hauls'; balloon 'ascents'; or whatever unit is most appropriate to the data. The amount should be entered under 'NO' and the counting unit should be identified in plain text under 'UNITS'.

Page   Page		under 'NO' and the counting unit should be identified in plain text under 'UNITS'.						
see piges         see piges <t< td=""><td></td><td></td><td></td><td></td><td>DESCRIPTION</td></t<>					DESCRIPTION			
AC   140   net hauls   B13   Plankton samples with Milk net					Identify, as appropriate, the nature of the data and of the instrumentation/sampling gear and list the parameters measured. Include any supplementary information that may be appropriate, e. g. vertical or horizontal profiles, depth			
A. B         70         cates         M99,H10         CTD-profiles and water bottles           A. D         not hauls         B14         Flshery haulswith the GOV net           B. D         I I I I I I I I I I I I I I I I I I I	page			from list on	horizons, continuous recording or discrete samples, etc. For samples taken for later analysis on shore, an indication should be given of the type of analysis planned, i.e. the purpose for which the samples were taken.			
A   70   ret hauls	A,C	140	net hauls	B13	Plankton samples with MIK net			
	A, B	70	casts	H09,H10	CTD- profiles and water bottles			
Please continue on separate sheet if nocessary	Α	70	net hauls	B14	Fishery haulswith the GOV net			
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TRACK CHART: You are strongly encouraged to submit, with the completed report, an annotated track chart illustrating the route followed and the points where measurements were taken.

Insert a tick(♥) in this box if a track chart is supplied

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**GENERAL OCEAN AREA(S):** Enter the names of the oceans and/or seas in which data were collected during the cruise – please use commonly recognised names (see, for example, International Hydrographic Bureau Special Publication No. 23, 'Limits of Oceans and Seas').

North Sea - Central and Northern part

**SPECIFIC AREAS:** If the cruise activities were concentrated in a specific area(s) of an ocean or sea, then enter a description of the area(s). Such descriptions may include references to local geographic areas, to sea floor features, or to geographic coordinates.

Please insert here the number of each square in which data were collected from the below given chart

217, 252, 181, 216

