Bundesforschungsanstalt für Fischerei

Institut für Seefischerei

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FRV WALTHER HERWIG III

Cruise 296: IBTS 2007 (I)

17.01. – 16.02.2007

REPORT

Participants

Annika Elsheimer	Institute for Sea Fisheries, Hamburg (ISH)
Thomas Groß	ISH
Gitta Hemken	ISH
Dr. Matthias Kloppmann	ISH
Wolfgang Lange	Voluntary helper, Hamburg
Andreas Lemke	ISH
Sergej Schachray	ISH
Annett Seehagen	ISH
Jana Stone	Voluntary helper, Oldenburg
Dr. Gerd Wegner	ISH (chief scientist)

Objective

Participation in the ICES co-ordinated 'International Bottom Trawl Survey' 2007, 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.

Narrative

Time schedule

19.01.2007 (12:30)	Departure Bremerhaven (delayed due to severe storm),
20.01. – 02.02.	Sampling in the German Bight, central and north-western North Sea
03.02. (11:00) – 06.02. (08:00)	Break in Haugesund, Norway (extended due to storm)
06.02.2007	Start of leg 2
06.02. – 15.02	Sampling in the northern part of the investigation area and German Bight
15.02.2007 (23:00)	Arrival in Bremerhaven

According to the international ICES program coordinated by the Netherlands' Institute for Marine Resources and Ecosystem Studies (IMARES) 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 rough weather conditions, WALTHER HERWIG was able to work only in 67 of the 75 rectangles assigned (Fig 1). In total, 133 MIK and 64 GOV hauls as well as 64 CTD profiles were conducted.

Results

Sea surface temperatures in the investigation area were between 4.9 to 9.1°C (mean 8.5°C). Originating from the Norwegian Coastal Current, thermal and haline stratification was found in the north-eastern squares. Slight vertical differences in temperature and salinity occurred in the Scottish coastal waters.

Total catches of the GOV hauls were between 8 and 1136 kg, generally less than during the years before. Larger numbers of both, juvenile and adult, haddock and Norway pout were caught nearly in all areas, while whiting and especially cod only occurred in lower numbers. Also, abundance of mackerel, herring and sprat appeared to be low. Sprat was caught only in the German Bight and in the Orkney / Moray Firth area.

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 2007 calculated from German data.
Only the recruitment of Norway pout appeared to be better in 2007 than in the preceding years, sprat is better than last year. All other indices decreased compared to the year before. Except Norway pout, the indices are below the long term averages.

Generally, the distribution of herring larvae caught with the MIK net is similar to the previous years. The larvae were concentrated in central and northern parts of the North Sea. However, their abundance was only half of that of the preceding year.

In nearly the same distribution area, the numbers of snake pipefish caught with the MIK decreased in comparison to the previous year. While in 2006 the maximum was 51 snake pipefish per haul, in 2007 it was only 14 specimens. Most of the time catches remained below 10 specimens per haul. Highest abundances were recorded northeast of the Shetland Islands. Again, their standard length varied between 20 and 40 cm.

Gerd Wegner

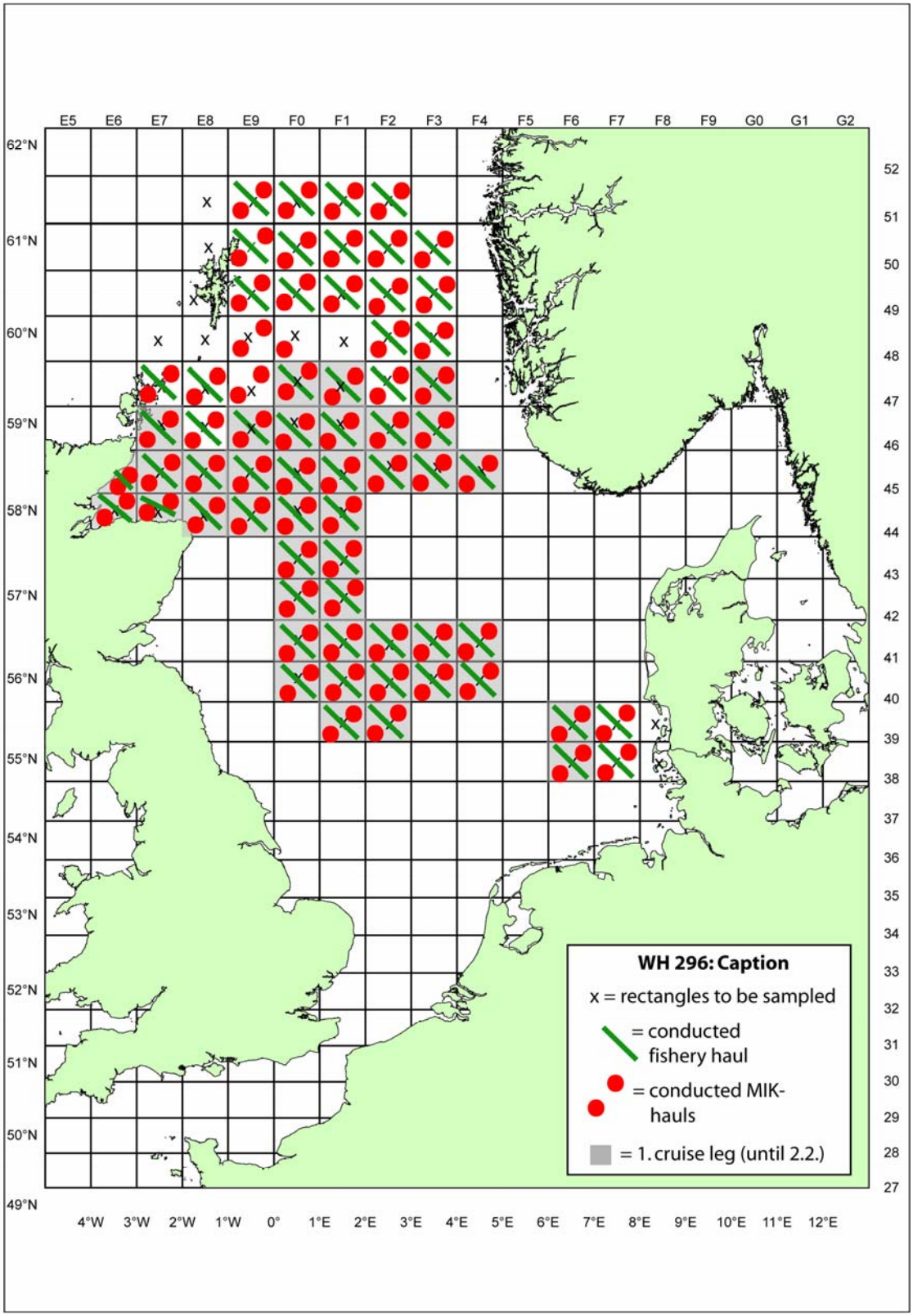


Fig.1: Fishing hauls and plankton stations carried out in the investigation area IBTS 1st quarter 2007, FRV "Walther Herwig III"

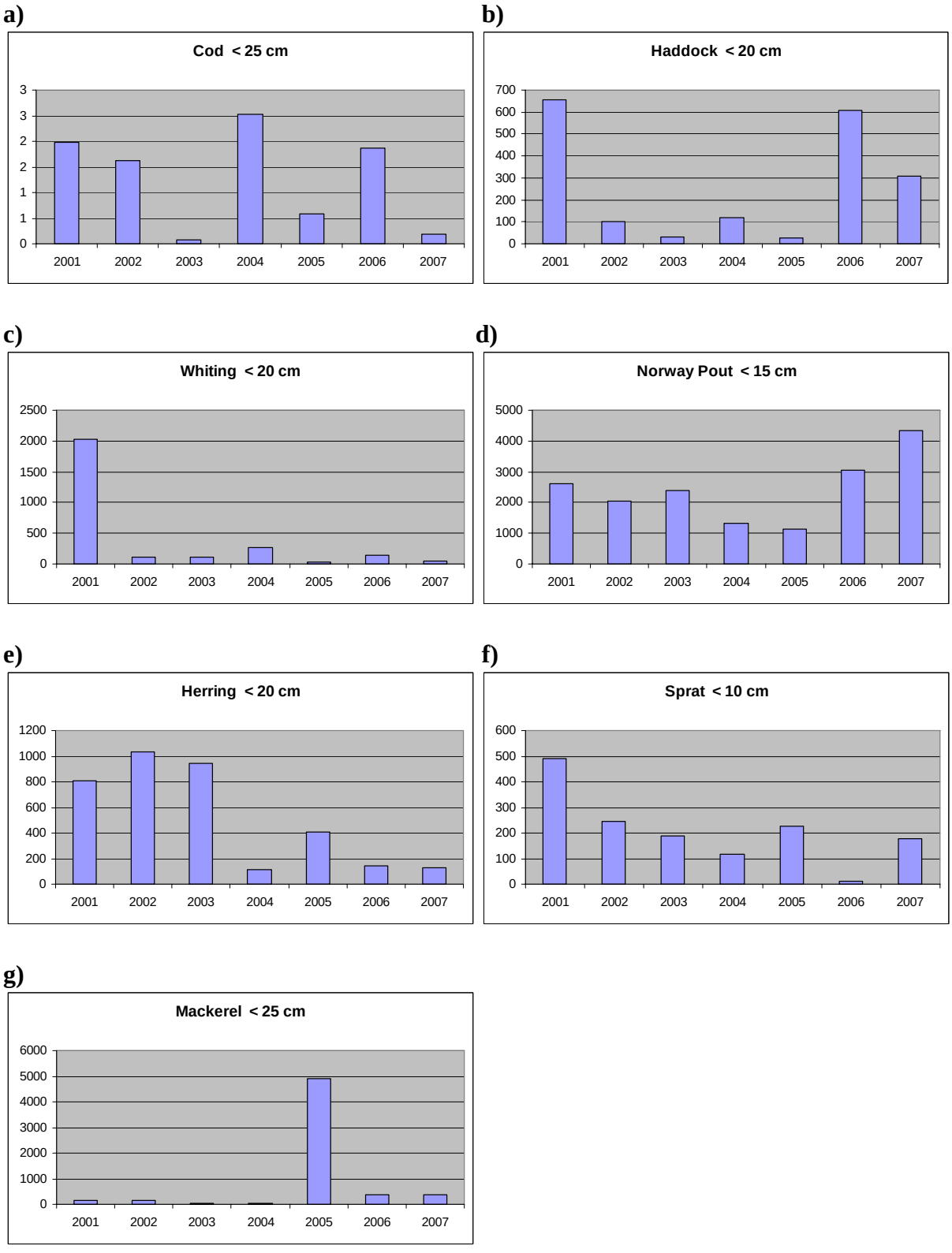


Fig.2: 1-group indices as average numbers/hour fishing of the demersal species cod, haddock, whiting and Norway pout (a to d) and of the pelagic species herring, sprat and mackerel (e to g) from 2001 to 2007 calculated from the German IBTS data (FRV "Walther Herwig III", IBTS 1st quarter)

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 WH 296

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

CRUISE PERIOD start (set sail) 19/01/2007 day/ month/ year to 15/02/20076 day/ month/ year end (return to port)

PORT OF DEPARTURE (enter name and country) **Bremerhaven (Gernany)**

PORT OF RETURN (enter name and country) **Bremerhaven (Germany)**

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

Name: BFA für Fischerei, Institut für Seefischerei

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. G. Wegner, Institut für Seefischerei

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.

National part of:
International Bottom Trawl Survey 2007 - 1,
ICES coordinated

General operational methods:
- bottom trawling (GOV)
- Plankton hauling (MIK)
- CTD profiling and nutrient sampling

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:

Coordinating body:

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 furtherinformation about the data. (The letter assigned below against each Principal Investigator is used on pages 2 and 3, under the column heading 'PI', to identify the data sets for which he/she is responsible)

A. **Dr. S. Ehrich, Institut für Seefischerei,**

B. **Dr. G. Wegner, Institut für Seefischerei,**

C. **Dr. U Brockmann, Bio- und Geochemie Univ. Ham**

D. .....

E. .....

F. .....

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	APPROXIMATE POSITION						DATA TYPE	DESCRIPTION
	LATITUDE			LONGITUDE				
See top of page.	deg	min	N/S	deg	min	E/W	enter code(s) from list on cover page.	Identify, as appropriate, the nature of the instrumentation the parameters (to be) 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.
								Please continue on separate sheet if necessary

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'.

PI see page 2	NO see above	UNITS see above	DATA TYPE Enter code(s) from list on cover page	DESCRIPTION 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 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	**64**	**64**	**B19**	**bottom trawls by GOV**
A	**133**	**133**	**B09, B**	**Zooplanktonand larvae hauls by MIK**
B	**64**	**64**	**H10**	**CTD profiles between surface and bottom**
C	**64**	**64**	**H22,24**	**stations with nutrient samples in different depths**
				Please continue on separate sheet if necessary

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** ☒

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').

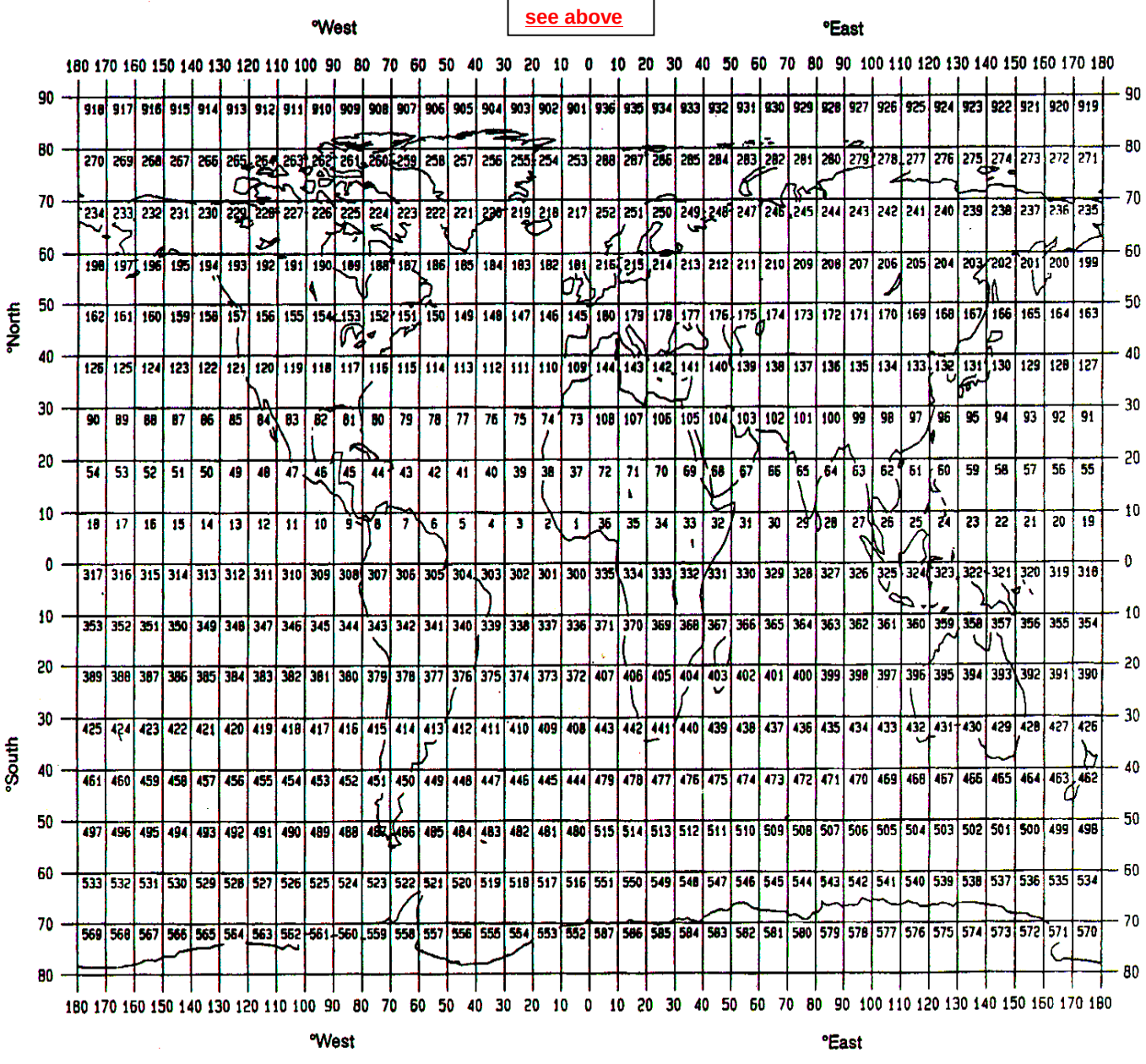
North Sea

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

North Sea: 181, 216, 217 252

GEOGRAPHIC COVERAGE - INSERT 'X' IN EACH SQUARE IN WHICH DATA WERE COLLECTED

see above



THANK YOU FOR YOUR COOPERATION

Please send your completed report without delay to the collating centre indicated on the cover page