

## **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.

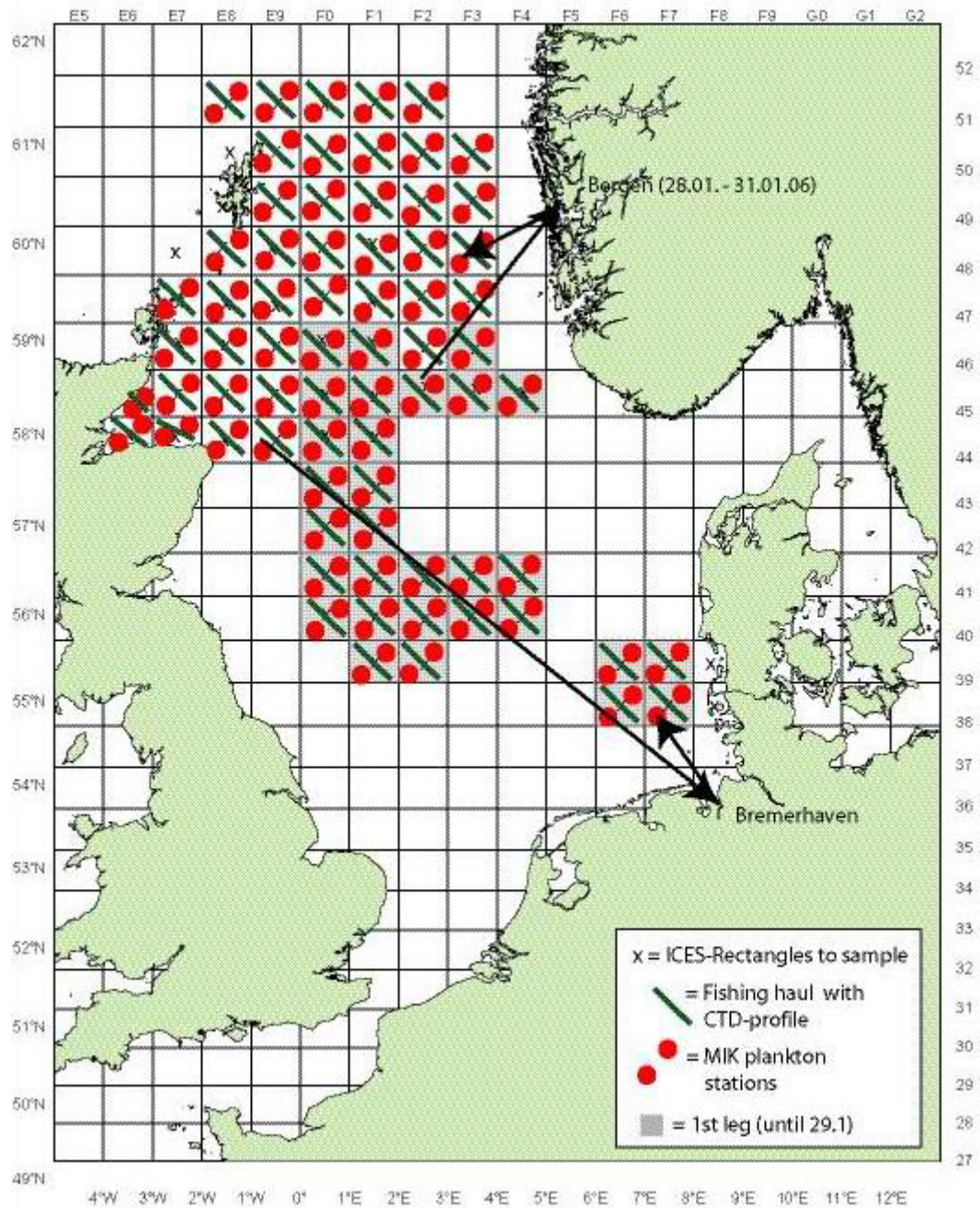
Recruitment of haddock and Norway pout appeared to be better in 2006 than in the preceding years. (Fig. 2). However, the values are within the variability of the long term average and represent, thus, only an ordinary new year class rather than an extraordinarily good one. Cod and whiting show a slight 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.

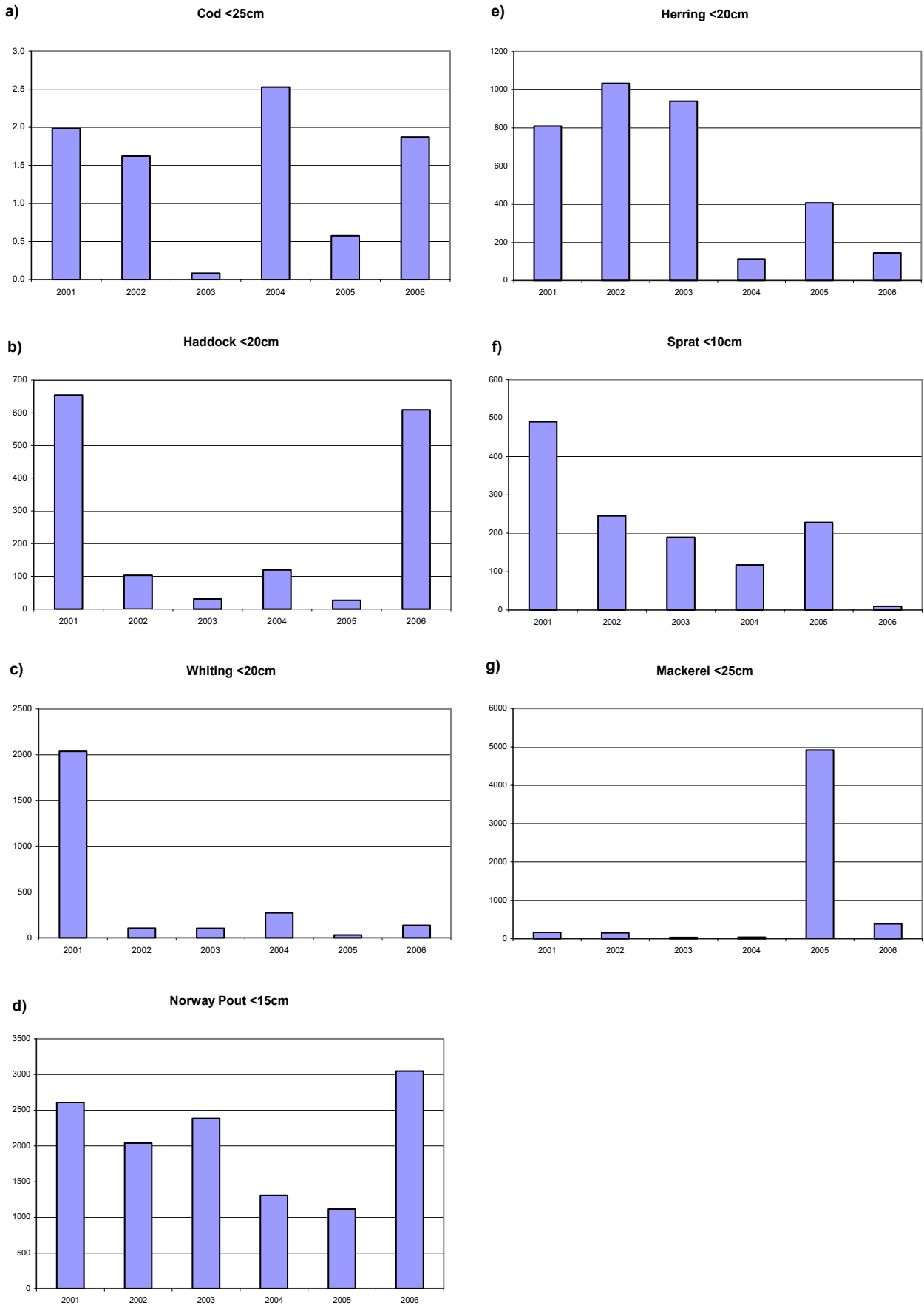
Remarkable were the high numbers of snake pipefish caught with the MIK net, and there seemed to be a distinct increase in their abundance. While in 2005 the maximum was 7 snake pipefish per haul, in 2006 it was 51 pipefish and 20 to 30 individuals were caught on a regular basis. Highest catches were 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 COLLATING CENTRE USE

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

**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 **18/01/2006** to **15/02/2006** end  
 (set sail) day/ month/ year 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 coordinating the scientific planning of the cruise

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 (1<sup>st</sup> 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 1<sup>st</sup> Quarter**Coordinating body: **ICES**







<b>TRACK CHART:</b> 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	<input style="width: 30px; height: 30px;" type="checkbox"/>
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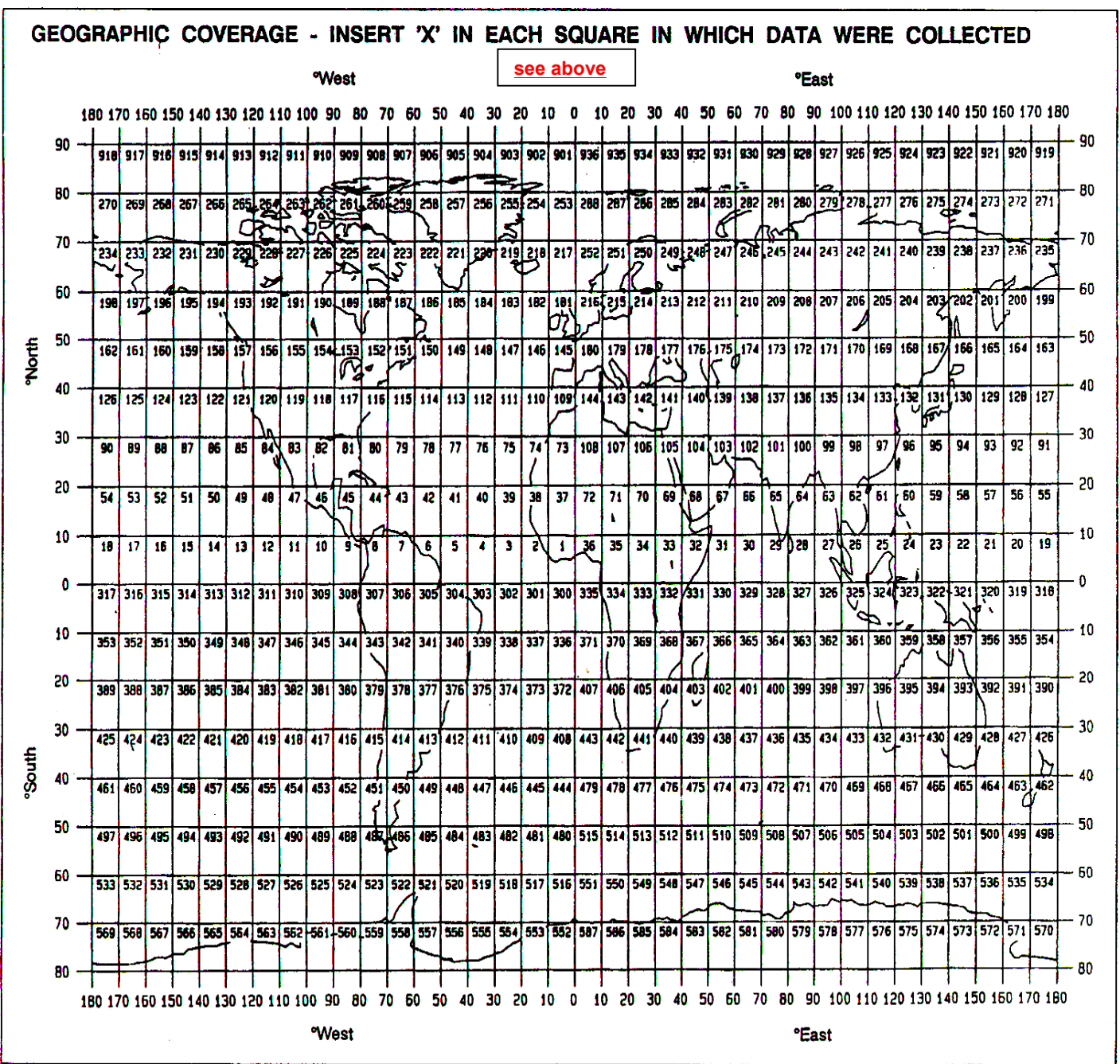
**GENERAL OCEAN AREA(S):** Enter the names of the oceans and/or seas in which data were collected during the cruise – please use commonly recognised names (see, for example, International Hydrographic Bureau Special Publication No. 23, 'Limits of Oceans and Seas').

**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**



**THANK YOU FOR YOUR COOPERATION**  
 Please send your completed report without delay to the collating centre indicated on the cover page