CRUISE SUMMARY REPORT

FOR COLLATIMG CENTRE USE Centre: DOD Ref. No.: Is data exchange restricted Yes In part Nο

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.

Call Sign: DBFR Name: FRV "Walther Herwig III"

Type of ship: Fisheries Research Ves

CRUISE NO. / NAME WH240

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

CRUISE PERIOD 21/06/2002 to 12/07/2002 end start (set sail) day/ month/ year day/ month/ year (return to port)

PORT OF DEPARTURE (enter name and country) Bremerhaven (GER)

PORT OF RETURN (enter name and country) Bremerhaven (GER)

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

Name: Institut für Seefischerei, Bundesforschungsanstalt

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 Christopher Zimmermann, Inst 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.

Cruise WH240 was conducted in the framework of the international hydroacoustic survey on pelagic fish in the North Sea, which is co-ordinated by an ICES planning group. Further contributors to the quasi-synoptic survey are the national fisheries research institutes of Scotland, Norway, Denmark and The Netherlands. The results are delivered to the ICES herring assessment working group, they represent since 1984 the most important fishery independent data for the assessment of herring stocks in the area.

Acoustic measurements were conducted between 0600 and 2200 on East-West or North-South transects with 15 nm distance inbetween. For the identification of echo traces and further biological sampling, 37 hauls with

Objectives: Hydroacoustic recording of pelagic fish stocks, biological sampling for the verification of echos, calibration of the hydroacoustic equipment, intercalibration with other vessels participating in the survey, hydrographic investigations.

Narrative: FRV "Walther Herwig III" left the port of Bremerhaven in the evening of June 21st, and calibrated the hydroacoustic equipment under favourable conditions in the morning of June 22nd off Helgoland. Therefore, it was not necessary to sail to Kristiansand. Until June 25th, the vessel surveyed areas with historically low density of clupeids, as fishing was not possible due to a failure of the fishing winch. "Walther Herwig III" returned to her home port for repair until June 29th and covered the remaining area with frequent sampling until July 11th. The planned intercalibration with the dutch FRV "Tridens" had to be postponed to next year as she was already behind schedule. "Walther Herwig III" reached Bremerhaven at 12th July 2002 at noon, having sailed 2840 nm.

An extended cruise report giving age disaggregated abundance and biomass of clupeids and detailed hydrographic data will be available after final data and sample evaluation in early December 2002. This report will be delivered to and published by the ICES Planning Group for Herring Surveys.

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: Int'l hydroacoustic survey on pelagic fish in the

Coordinating body: ICES/PG Herring Surveys

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 C Zimmermann (Inst Seefischerei, BFA Fi
- B. Dr E Bethke (Inst Fischereitechnik und Fischq
- C. M Stein (Inst Seefischerei, BFA Fischerei)

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 See		ATITUDE	Ē Ī	TE POSITION LONGITUDE			DATA TYPE enter	DESCRIPTION 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.
top of page.	deg min		N/S	deg	min	E/W	code(s) from list on cover page.	
								none
								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'.

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PI	NO	UNITS	DATA	DESCRIPTION				
FI	INO	UNITS	TYPE	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				
see page	see above	see above	Enter	horizons, continuous recording or discrete samples, etc. For samples taken for later analysis on shore, an indication				
2	above	above	code(s)	should be given of the type of analysis planned, i.e. the purpose for which the samples were taken.				
			from list on cover					
			page					
Α	37	stations	B14	Pelagic Trawl Hauls for Verification of Echos: Species composition, Sub-Sampling of Herrin				
В	2300	n.mi.	G73	Track used for Echo Integration				
С	43	stations	H10	Vertical CTD Profiles				
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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

45	
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	d

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').

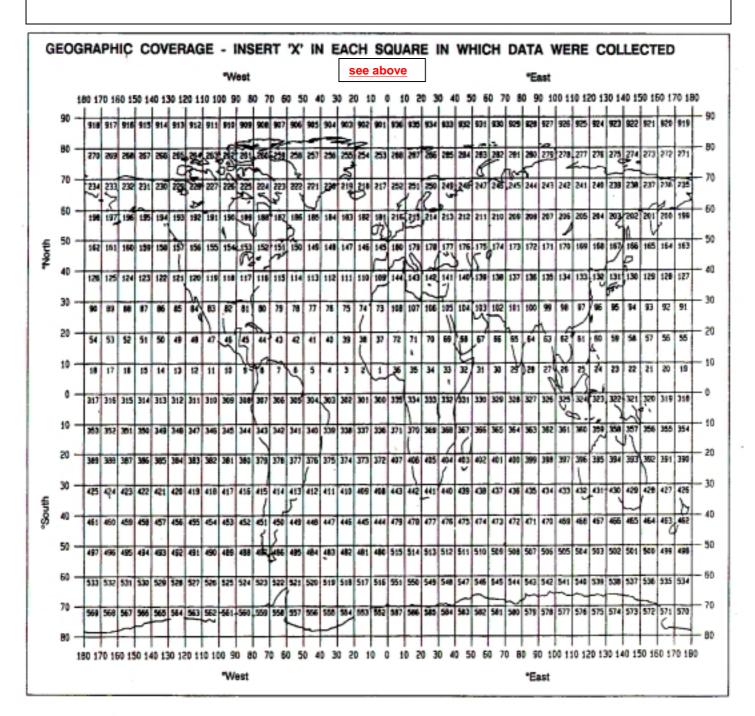
North Sea

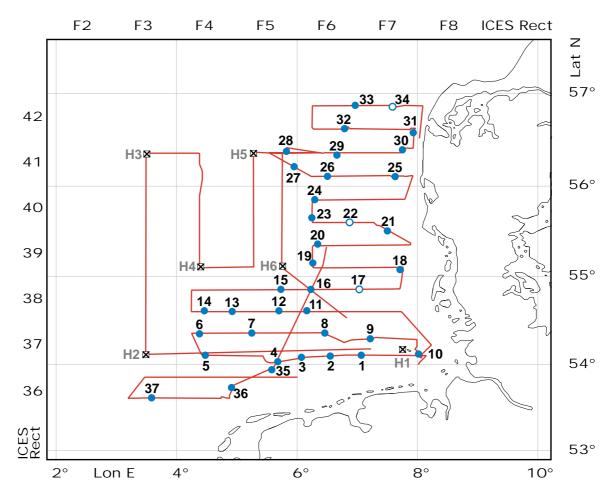
SPECIFIC AREAS: If the cruise activities were concentrated in a specific area(s) of an ocean or sea, then enter a description of the area(s). Such descriptions may include references to local geographic areas, to sea floor features, or to geographic coordinates.

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

216

Dogger, German Bight, Fisher





- Cruise track as used for echo integration
- 30 Pelagic trawl and hydrography stations (filled: >200 clupeids h⁻¹)
- H5 Hydrographic station only

Figure 1. FRV "Walther Herwig III", cruise 240: International hydroacoustic survey on herring in the North Sea, 21 June 2002 -12 July 2002: **Cruise track** and positions of trawl- and hydrographic stations.