

APPLICATION FOR A RESEARCH CRUISE WITHIN A COASTAL STATE'S FISHERY LIMITS

A. GENERAL

1. **NAME OF RESEARCH SHIP** DANA **CRUISE NO.** 05/2007
2. **DATES OF CRUISE** **FROM** 04.09.2007 **TO** 17.09.2007
3. **OPERATING AUTHORITY** Danish Institute for Fisheries Research
Charlottenlund Castle
DK-2920 Charlottenlund
Telephone: 33 96 33 00 Telex: 67765 dfhh dk Fax: 33963333 E-mail: hfi@dfu.min.dk
4. **OWNER (if different for para.3)** Ministry of Food, Agriculture and Fisheries
Holbergsgade 2, DK-1057 Copenhagen K
5. **PARTICULARS OF SHIP**
- | | |
|-------------------------------------|--------------------------------------|
| NAME | DANA |
| NATIONALITY | Danish |
| OVERALL LENGTH (metres) | 80 metres |
| MAXIMUM DRAUGHT (metres) | 6.3 metres |
| NET TONNAGE | 669.53 t |
| METHOD OF PROPULSION | Steam Turbine/Diesel/Diesel Electric |
| CALL SIGN | OXBH |
| REGISTERED PORT & NUMBER | Hirtshals |
- (if reg. fishing vessel)
6. **CREW**
- | | |
|-----------------------|--------------|
| NAME OF MASTER | Frode Larsen |
| NUMBER OF CREW | 28 |
7. **SCIENTIFIC PERSONNEL**
- | | |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| NAME AND ADDRESS OF SCIENTIST IN CHARGE | Dr. A.W. Visser
Danish Institute for Fisheries Research
Kavalergården 6
DK-2920 Charlottenlund, Denmark |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
- | | |
|-----------------------------|----------------------------------|
| TEL/TELEX/FAX NO | 33 96 33 00 / 33 96 34 34 |
| NUMBER OF SCIENTISTS | 15 |
8. **GEOGRAPHICAL AREA IN WHICH SHIP WILL OPERATE** (with reference in Latitude and Longitude):
57°00'N - 55°00'N , 03°40'E - 06°00'E
9. **BRIEF DESCRIPTION OF PURPOSE OF CRUISE:**
Assessing the extent and importance of subsurface primary production in the North Sea during summer months, and its impact on higher trophic consumers
10. **DATES AND NAMES OF INTENDED PORTS OF CALL:**
NONE
11. **ANY SPECIAL REQUIREMENTS AT PORTS OF CALL:**
NONE

B. DETAIL

1. **NAME OF RESEARCH SHIP** DANA **CRUISE NO.** 05/2007
2. **DATES OF CRUISE** **FROM** 04.09.2007 **TO** 17.09.2007

3. **PURPOSE OF RESEARCH AND GENERAL OPERATIONAL METHODE**

The purpose of the cruise is to investigate the subsurface phytoplankton production in the North Sea adjacent to the Dogger Bank. During the summer, traditional thinking has that primary production is suppressed due the nutrient limitation. However, previous surveys have shown significant active production taking place at the height of summer at depths of 20 to 30 m below the surface.

The survey will be composed of 2 repeated transects

From 3°40'E 56°50'N to 5°20'E 55°00'N and

From 2°50'E 56°40'N to 4°30'E 55°00'N

using a towed undulating CTD on 1 leg, and performing traditional CTD casts on the 2 nd. leg. These will also include water sampling, phytoplankton nets, and zooplankton pumps. In addition, a drifting buoy equipped with sediment traps and termistors will be deployed at 4°00'E 57°00'N. The buoy will be visited every 24 hours. In the meantime, its position will be monitored, and it will be relocated to its initial start position if its displacement becomes too great.

4. **PLEASE ATTACH CHART showing, at the appropriate scale the geographical area of the intended work, the areas to be fished, positions of intended stations, tracks of survey lines, positions of moored/seabed equipment etc.:**
See map

- 5a. **TYPES OF SAMPLES REQUIRED e.g. Geological/water/plankton/fish. If fishing gear is to be used please indicate what fish stocks will be worked, the maximum quantity required of each species/stock and the quantity of fish to be retained on board:**

Samples: Water, phytoplankton, zooplankton.

Fishing Gear: None

Species; No fish species

- 5b. **METHODS BY WHICH SAMPLES WILL BE OBTAINED (e.g. dredging/coring/drilling/fishing etc.)**

Plankton samples will be collected using vertical hauls on plankton nets, as well as zooplankton pumps.

Water samples will be collected using water sampling rosette. Marine snow, and copepod faecal pellets will be collected in drifting sediment traps.

- 6a. **DETAILS OF MOORED EQUIPMENT:**

Dates:	<u>Laving</u>	<u>Recovery</u>	<u>Description</u>	<u>Latitude</u>	<u>Longitude</u>
None					

- 6b. **FULL DESCRIPTION FOR ALL FISHING GEAR TO BE USED (e.g. bottom trawl, mesh size, attachments etc.):** None

7. ANY HAZARDOUS MATERIALS e.g. chemicals/explosives/gases/radioactives etc)
(use separate sheet if necessary) None

(a) TYPE OF TRADE NAME

(b) CHEMICAL CONTENT (& FORMULA)

(c) IMO IMDG CODE Reference & UN Number

(d) QUANTITY & METHODS OF STOWAGE ON BOARD

(e) IF EXPLOSIVES give date(s) of detonation

- Method of detonation
- Position of detonation
- Frequency of detonation
- Depth of detonation
- Size of explosive charge in Kgs

8. PLEASE SET OUT DETAILS OF:

(a) ANY RELEVANT PREVIOUS/FUTURE CRUISES:

This cruise is a part of an international EU funded research program with a total of 8 multinational cruises with participants from Norway, Denmark, Germany, United Kingdom.

(b) ANY PREVIOUSLY PUBLISHED RESEARCH DATA RELATING TO THE PROPOSED CRUISE: (Attach separate sheet if necessary)

Richardson, K. Visser, A.W., Bo Pedersen, F., 2000 Subsurface phytoplankton blooms fuel pelagic production in the North Sea. J. Plankton Res. 22, 1663-1671.

9. NAMES AND ADDRESSES OF SCIENTISTS IN COASTAL STATE(S) IN WHOSE WATERS THE PROPOSED CRUISE TAKES PLACE WITH WHOM PREVIOUS CONTACT HAS BEEN MADE:

Dr.Mike R. Heath (heathmr@marlab.ac.uk)

Fisheries Research Services Marine Laboratory (Tel. +44(0)1224876544 / Fax: +45(0)1224295511)

Victoria Road

Aberdeen AB 11 9 DB

Scotland

STATE:

(a) WHETHER VISITS TO THE SHIP IN PORT BY COASTAL STATE SCIENTISTS WILL BE ACCEPTABLE:

YES

(b) WHETHER IT WILL BE ACCEPTABLE TO CARRY ON BOARD AN OBSERVER FOR ANY PART OF THE CRUISE

Yes by special arrangement. Embarkation and disembarkation from Hirtshals, DK.

(If 'yes' please indicate possible dates and ports of embarkation/disembarkation)

(c) WHEN RESEARCH DATA FROM THE INTENDED CRUISE IS LIKELY TO BE MADE AVAILABLE TO THE COASTAL STATE AUTHORITIES AND BY WHAT MEANS:

Cruise reports on data collected will be available within 3 months. Results of analyses will be made available through publication in internationally reviewed journals.

If the report will not be available within 12 months of the cruise, please set out, an explanation for the delay indicating when the report will be available.

12. SCIENTIFIC EQUIPMENT

COASTAL STATE: The Netherlands

PORT CALL: None

Complete the following table –
separate copy for each coastal state

DATES:

Indicate 'yes' or 'no' other than for fishing gear when the total hours of fishing in each zone should be indicated

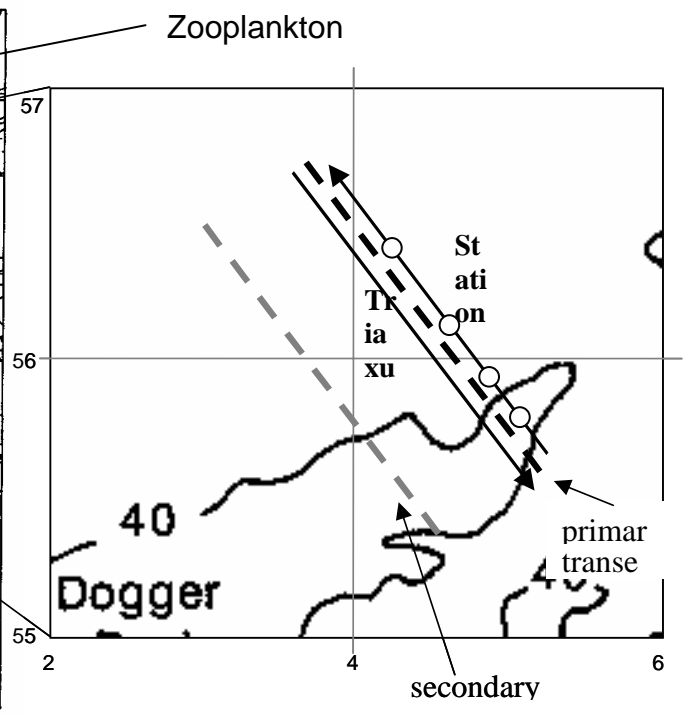
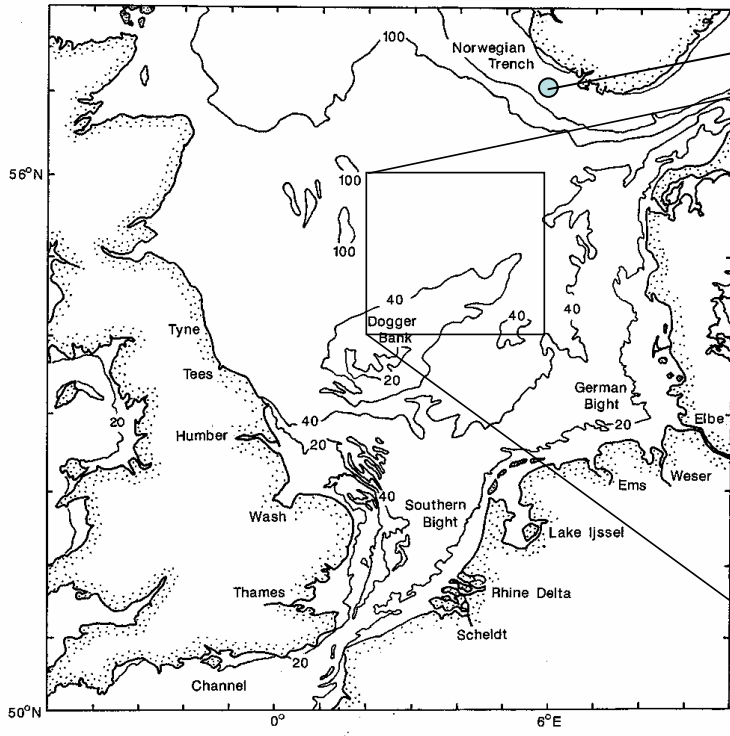
LIST SCIENTIFIC WORK BY FUNCTION e.g. : Magnetometry Gravity diving Seismics Bathymetry Seabed sampling Trawling Echo sounding Water sampling U/W TV Moored instruments Towed instruments	Water Column	Fisheries Research within fishing limits	Research concerning Continental shelf out of Coastal State's margin	DISTANCE FROM COAST		
				Within 3 NM	Between 3-12 NM	Between 12 and 200 NM
Water sampling	Yes	Yes	No	No	No	Yes
U/W TV	Yes	Yes	No	No	No	Yes
Towed instruments	Yes	Yes	No	No	No	Yes
Echo sounding	Yes	Yes	No	No	No	Yes

...Nina Holm.....

Dated:08.05..... 2007.....

(On behalf of the Principal Scientist)

NB IF ANY DETAILS ARE MATERIALLY CHANGED REGARDING DATES/AREA OF OPERATION AFTER THIS FORM HAS BEEN SUBMITTED THE COASTAL STATE AUTHORITIES MUST BE NOTIFIED IMMEDIATELY.



Zooplankton

Station

primary transe

secondary