

**NATURAL ENVIRONMENT RESEARCH COUNCIL
(BRITISH ANTARCTIC SURVEY)**

**APPLICATION FOR CONSENT TO CONDUCT MARINE SCIENTIFIC
RESEARCH IN AREAS UNDER NATIONAL JURISDICTION OF ICELAND**

Date: 27th March 2006

1. General information

1.1 Cruise name and/or number: JR153

1.2 Sponsoring institution:

Name: Institute of Marine Research

Address: P.O. Box 1870 Nordnes, N-5817 Bergen, NORWAY

Name of director: Tore Nepstad

1.3 Scientist in charge of the project:

Name: Henrik Søliland (Email: henrik@imr.no)

Address: P.O. Box 1870 Nordnes, N-5817 Bergen, NORWAY

Telephone: +47 55238453

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1.4 Scientist(s) from Iceland involved in the planning of the project

Hedinn Valdemarsson

Marine Research Institute

Skulagata 4, P.O. Box 1390

121 Reykjavik

Iceland

Email: hv@hafro.is

1.5 Submitting officer:

Name and address: Mr Chris Hindley (Ship Operations and Programme Manager)
British Antarctic Survey, High Cross, Madingley Road
Cambridge CB3 0ET UK

Telephone: + 44 1223 221497

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2. Description of project (Attach additional pages as necessary)

2.1 Nature of objectives of the project:

The primary objective is to study the spreading of Arctic Intermediate Water and its interaction with the warm Atlantic waters in the Norwegian Sea.

The project addresses the circulation of Arctic Intermediate Water (AIW) and its interaction with the warm Atlantic waters in the Norwegian Sea using acoustically tracked subsurface drifters (RAFOS floats), 30 drifters at 800m and 60 drifters at 200m.

This cruise is to recover the moorings.

2.2 Relevant previous or future research cruises:

The sound sources were deployed in September/October 2004, on a research cruise on R/V Endeavor. Endeavor is operated by University of Rhode Island, Rhode Island, USA, for the National Science Foundation.
This cruise is the final field stage of this project.

2.3 Previously published research data relating to the project:
None

3. Methods and means to be used

3.1 Particulars of vessel

Name: RRS James Clark Ross
 Nationality: British (Falkland Island Registration)
 Owner: Natural Environment Research Council (NERC)
 Operator: British Antarctic Survey
 Overall length: 99.04m
 Maximum draught: 6.4m
 Net tonnage: 1719 Tonnes Gross tonnage: 5732 Tonnes
 Propulsion: Diesel Electric, Single Fixed Prop 8500 SHP
 Cruising speed: 12 Kts Maximum speed: 16 kts
 Call sign: ZDLP
 Method and capability of communication (including telex, frequencies):
 Voice/Fax/Telex: Inmarsat Voice 374033920 / Fax 374033924 / Tlx 374033926
 Name of master: Capt Graham Chapman
 Number of crew: 28
 Number of scientists on board: 1

3.2 Aircraft or other craft to be used in the project: None

3.3 Particulars of methods and scientific instruments

| Types of samples and data | Methods to be used | Instruments to be used |
|---------------------------|---------------------------------|---------------------------------|
| None | Recovery of subsurface mooring. | Acoustic release unit , 12.5kHz |

3.4 Indicate whether harmful substances will be used: No

3.5 Indicate whether drilling will be carried out: No

3.6 Indicate whether explosives will be used: No

4. Installations and equipment

Details of installations and equipment (dates of laying, servicing, recovery; exact locations and depth):

Table 1: Sound source moorings - This chart covers the full work area, which is in EEZ of Iceland, Faeroes, and Norway

| Site | latitude | longitude | date | Ocean |
|------|----------|-----------|------|-------|
|------|----------|-----------|------|-------|

| | | | | depth (m) |
|---|--------------|--------------|-------------|-----------|
| 1 | 63° 51.49' N | 3° 37.74' E | Sep 21 2004 | 1533 |
| 2 | 68° 54.57' N | 1° 23.75' W | Sep 24 2004 | 2192 |
| 3 | 65° 02.97' N | 7° 33.06' W | Sep 26 2004 | 1424 |
| 4 | 62° 42.74' N | 14° 13.39' W | Sep 28 2004 | 1497 |
| 5 | 61° 43.26' N | 11° 54.18' W | Sep 29 2004 | 1221 |
| 6 | 63° 30.55' N | 5° 57.48' W | Sep 29 2004 | 1875 |
| 7 | 62° 54.33' N | 2° 14.14' W | Sep 30 2004 | 1688 |
| 8 | 67° 51.43' N | 5° 56.77' E | Jul 31 2005 | 1361 |

5. Geographical areas

5.1 Indicate geographical areas in which the project is to be conducted (with reference in latitude and longitude):

See locations in para 4

5.2 Attach chart (s) at an appropriate scale showing the geographical areas of the intended work and, as far as practicable, the positions of intended stations, the tracks of survey lines, and the locations of installations and equipment.

See para 4

6. Dates

6.1 Expected dates of first entry into and final departure from research area of the research vessel:

Entry: 25/6/06

Exit: 1/7/06 Recovering moorings numbers 1 – 7 – 6 – 4 – 5 (see para 4)

A second entry is required after a return to the UK.

Second entry 21/7/06

Second exit 25/7/06 Recovering moorings 3 – 8 – 2 (see para 4)

6.2 Indicate if multiple entry is expected: See 6.1

7. Port calls

7.1 Dates and names of intended ports of call in Iceland - None

7.2 Any special logistical requirements at ports of call: N/A

7.3 Name/Address/Telephone of shipping agent (if available) N/A

8. Participation

8.1 Extent to which Iceland will be enabled to participate or to be represented in the research project:

One berth for an observer from each coastal state is offered in accordance with UNCLOS Art 249 (1a).

8.2 Proposed dates and ports for embarkation/disembarkation:

For first entry embarkation at Leith UK 23/6/06 – Disembarkation Stornoway UK 2/7/06

For second entry embarkation in the Clyde UK 20/7/06 – Disembarkation Longyearben 28/7/06

9. Access to data, samples and research results

9.1 Expected dates of submission to Iceland of preliminary reports which should include the expected dates of submission of the final results:

Year: 2007, Month:03, Day: 01

9.2 Proposed means for access by Iceland to data and samples:

Access by Iceland through cooperating scientist , Hedinn Valdemarsson at Marine Research Institute, Reykjavik

9.3 Proposed means to provide Iceland with assessment of data, samples and research results or provide assistance in their assessment or interpretation:

Assessment provided through cooperating scientist , Hedinn Valdemarsson at Marine Research Institute, Reykjavik

9.4 Proposed means of making research results internationally available:

The results will be published in international peer reviewed scientific journals.

10. COMPLETE THE FOLLOWING TABLE - SEPARATE PAGE FOR EACH COASTAL STATE:

COASTAL STATE: Iceland

PORT CALL: None

DATES: None

SCIENTIFIC EQUIPMENT _____ INDICATE "YES" OR "NO" and Distance from Coastal Baseline

| List Scientific Work by Function eg: Magnetometry Gravity, Diving, Seismic, Bathymetry, Seabed Sampling, Trawling, Echo Sounding, Water Sampling U/W T.V.: Moored and Towed instrument | Water Column Incl. Sediment Sampling on the Seabed | Fisheries Research within Fishing Limits | Research Concerning the Natural Resources of the Continental Shelf or its Physical Characteristics | Distance from Coast | |
|---|--|--|--|--|---------------------|
| | | | | Within 12 NM indicate between 0 & 3 NM or 3 & 12 NM | Between 12 - 200 NM |
| Bathymetry CTD Water samples Acoustic profiling Atmospheric profiling Mooring Recovery | | | | | Yes |

C J H Hindley Ship Operations Manager BAS
(On behalf of the Principal Scientist)