### Application for Consent to conduct Marine Scientific Research

Date: \_19. February 2014\_\_\_\_

### 1. General Information

### 1.1 Cruise name and/or number: 2014113

1.2 Sponsoring Institution(s):	
Name:	Department of Earth Science, University of Bergen
Address:	Allegt 41, N-5007 Bergen
Name of Director: Gunn Mangerud	

1.3 Scientist in charge of the Project:	
Name:	Berit Oline Hjelstuen
Country:	Norway
Affiliation:	Dr.
Address:	Department of Earth Science
	University of Bergen
	Allegt 41
	N-5007 BERGEN NORWAY
Telephone:	+47 55583507
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Email:	berit.hjelstuen at geo.uib.no
Website (for CV and photo):	http://www.uib.no/personer/Berit.Hjelstuen

1.4 Entity(ies)/Participant(s) from coastal State involved in the planning of the project:		
Name:	Dave Roberts	
Affiliation:	Dr	
Address:	Department of Geography, Durham University, Durham, UK	
Telephone:	0191 334 1935	
Fax:	0191 3341801	
Email:	D.H.Roberts@durham.ac.uk	
Website (for CV and photo):	https://www.dur.ac.uk/geography	

### 2. Description of Project

2.1 Nature and objectives of the project:

The main purpose of the research cruise is to collect geological and geophysical data in order to reconstruct the last deglaciation of the northern North Sea.

2.2 If designated as part of a larger scale project, then provide the name of the project and the organisation responsible for coordinating the project: The cruise is part of the EU-funded GLANAM project (<u>http://www.glanam.org/</u>). The University of Bergen, Department of Earth Science, is responsible for coordinating this project.

2.3 Relevant previous or future research projects: None

2.4 Previous publications relating to the project: None

## 3. Geographical Areas

3.1 Indicate geographical areas in which the project is to be conducted (with reference in Latitude and longitude in decimal degrees, including coordinates of cruise/track/way points/sampling stations). Please provide coordinates in a separate excel spreadsheet. The cruise study area is the North Sea Fan, Northern North Sea, Norwegian Channel and Skagerrak, within box bounded by 56°N – 64°N and 1.5°W – 11°E (See also Figure 1 and Excel sheet)

3.2 Attach chart(s) at an appropriate scale (1 page, high-resolution) showing the geographical Areas of the intended work and, as far as practicable, the location and depth of sampling Stations, the tracks of survey lines, and the locations of installations and equipment. See Figure 1 (Attachment 2)

# 4. Methods and means to be used

4.1 Particulars of vessel:			
Name:	"G.O.Sars"		
Type/Class:	Research vessel		
Nationality (Flag State):	Norwegian		
Identification Number (IMO/Lloyds No.):	9260316		
Owner:	Institute of Marine Research/University of Bergen		
Operator:	Institute of Marine Research, P.O.Box 1870 Nordnes,		
	N-5024 Bergen, Norway		
Overall length (meters):	77,5		
Maximum draught:	7,30		
Displacement/Gross Tonnage:	4067		
Propulsion:	DC-Electric		
Cruising & maximum speed:	10-11 knots, 17 knots		
Call sign:	LMEL		
INMARSAT number and method and	Telephone: +47 55906440		
capability of communication (including	Telefax:: +47 55906441		
emergency frequencies):	E-mail: GOSars@IMR.no		
Name of Master:	John Hugo Johansen/ Preben Vindenes		
Number of Crew:	15		
Number of Scientists on board:	Max 20		

4.2 Particulars of Aircraft: NA	
Name:	
Make/Model:	
Nationality (flag State):	
Website for diagram & Specifications:	
Owner:	
Operator:	
Overall Length (meters):	
Propulsion:	
Cruising & Maximum speed:	-
Registration No.:	
Call Sign:	
Method and capability of communication	
(including emergency frequencies):	
Name of Pilot:	
Number of crew:	
Number of scientists on board:	
Details of sensor packages:	
Other relevant information:	

4.3 Particulars of Autonomous Underwater V	/ehicle (AUV): NA
Name:	
Manufacturer and make/model:	
Nationality (Flag State):	
Website for diagram & Specifications:	
Owner:	
Operator:	
Overall length (meters):	
Displacement/Gross tonnage:	
Cruising & Maximum speed:	
Range/Endurance:	-
Method and capability of communication	
(including emergency frequencies):	
Details of sensor packages:	
Other relevant information:	

4.4 other craft in the project, including its use: NA

4.5 Particulars of methods and full description of scientific instruments to be used(for fishing gear specify type and dimension)				
Types of samples and Measurements:	Methods to be used:	Instruments to be used:		
Sediment samples	Various types of sediment coring systems	Gravity corer, calypso corer, box corer, multi corer		
Water characteristics	Underwater unit with sensor for conductivity, temperature, pressure and oxygen.	911 <i>plus</i> CTD system		
Seismic profiling	High resolution seismic profiling system (keel mounted)	TOPAS PS18		
Bathymetric profiling	Multibeam echosounder (keel mounted)	MBE302, MBE1002		

4.6 Indicate nature and quantity of substances to be released into the marine environment: None

4.7 Indicate whether drilling will be carried out. If yes, please specify: No

4.8 Indicate whether explosives will be used. If yes, please specify type and trade name, Chemical content, depth of trade class and stowage, size, depth of detonation, frequency of Detonation, and position in latitude and longitude: No

### 5. Installations and Equipment

Details of installations and equipment (including dates of laying, servicing, method and Anticipated timeframe for recover, as far as possible exact locations and depth, and Measurements): N/A

### 6. Dates

6.1 Expected dates of first entry into and final departure from the research area by the research vessel and/or other platforms:

The date for first and final departure is 8. July 2014 and 14. July 2014, respectively.

6.2 Indicate if multiple entries are expected:

Multiple entries within the time period (8.-14. July 2014) may be expected

7. Port Calls

7.1 Dates and Names of intended ports of call: No port calls planned

7.2 Any special logistical requirements at ports of call: NA

7.3 Name/Address/Telephone of shipping agent (if available): NA

8. Participation of the representative of the coastal State

8.1 Modalities of the participation of the representative of the coastal State in the research Project:

Partner in the GLANAM project (<u>http://www.glanam.org/</u>)

8.2 Proposed dates and ports for embarkation/disembarkation:

Embarkation: Bergen 8. July 2014. Disembarkation: Bergen 14. July 2014

9. Access to Data, Samples and Research Results

9.1 Expected dates of submission to coastal State of preliminary report, which should include The expected dates of submission of the data and research results: Preliminary report expected at the end of the cruise – 14. July 2014

9.2 Anticipated dates of submission to the coastal State of the final report:

Final report expected 3 months after end of cruise.

9.3 Proposed means for access by coastal State to data (including format) and samples: Access to data and samples trough the GLANAM-project

9.4 Proposed means to provide coastal State with assessment of data, samples and Research results:

Proposed means: This will be handled through the GLANAM-project

9.5 Proposed means to provide assistance in assessment or interpretation of data, samples And research results:

This will be carried out through the GLANAM-project

9.6 Proposed means of making results internationally available: This will be done by participation in international conferences/workshops and by publishing in international journals.

10. Other permits Submitted

10.1 Indicate other types of coastal state permits anticipated for this research (received or Pending): NA

11. List of Supporting Documentation

11.1 List of attachments, such as additional forms required by the coastal State, etc.:

- 1. Excel sheet with study area coordinates
- 2. Figure 1 Planned study area

Signature:

Berit Ohine Hjelstven

Contact information of the focal point: Name: Berit Oline Hjelstuen Country: Norway Affiliation: Dr Address: Allegt 41, N-5007 Bergen Telephone:+ 47 55 58 35 07 Fax: + 47 55 58 36 60 Email: <u>berit.hjelstuen@geo.uib.no</u>



Figure 1. Study area with planned location of TOPAS profiles and gravity cores

