Application for Consent to conduct
Marine Scientific Research

Date: 02.02.2015

1. General Information

1.1 Cruise name and/or number: 2015107

1.2 Sponsoring Institution(s):	
Name:	Geophysical Institute, University of Bergen
Address:	P.O. Box 7803, N-5020 Bergen, Norway
Name of Director:	Nils Gunnar Kvamstø

1.3 Scientist in charge of the Project:	
Name:	Are Olsen
Country:	Norway
Affiliation:	Geophysical Institute, University of Bergen
Address:	P.O. Box 7803, N-5020 Bergen, Norway
Telephone:	+47 55584781
Fax:	+47 5589883
Email:	are.olsen@gfi.uib.no
Website (for CV and photo):	http://www.uib.no/en/persons/Are.Christian.Sviggum.Olsen

1.4 Entity(ies)/Participant(s) from coastal State involved in the planning of the project:	
Name:	
Affiliation:	
Address:	
Telephone:	
Fax:	
Email:	
Website (for CV and photo):	

2. Description of Project

2.1 Nature and objectives of the project:
The cruise is carried out at part of the Norwegian Research Council funded project Subpolar North Atlantic Climate States (SNACS), aiming to determine the impacts of climate on the hydrographical state, biogeochemistry and carbon cycle in the Subpolar North Atlantic. The project covers multiple time scales since the last glacial until the present, and will also use the insight that is obtained for the evaluation of global earth system models and their uncertainties. At the cruise we will obtain seawater T/S and chemistry data, as well as geological sediment records allowing us to tackle these issues. More details on the project are available on the home page, www.snacs.no

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:

2.3 Relevant previous or future research projects:

2.4 Previous publications relating to the project:

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.
Area of operation is the North Atlantic Sea, including work inside the UK EEZ. 50°N-65°N 45°W-6°E

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 Fig. 1 for preliminary sampling positions.

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
Overall length (meters):	77.5
Maximum draught:	7.3
Displacement/Gross Tonnage:	4067 tons
Propulsion:	DC-Electric
Cruising & maximum speed:	10-11 knots, 17 knots
Call sign:	LMEL
INMARSAT number and method and capability of communication (including emergency frequencies):	Telephone: +47 55906440 Telefax:: +47 55906441 E-mail: GOSars@IMR.no
Name of Master:	John Hugo Johnsen / Preben Vindenes
Number of Crew:	15
Number of Scientists on board:	16

4.2 Particulars of Aircraft:	
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 Vehicle (AUV):

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:

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:	To be carried out within 12nm (yes or no):
Seawater temperature and salinity	Rosette mounted CTD sonde	SBE 911 CTD	Yes
Water samples for analysis of dissolved oxygen, macronutrients, dissolved inorganic carbon, total alkalinity, stable carbon isotopes	24 bottle rosette	Various instrument for chemical analysis.	Yes
Geological sediment cores	Gravity corer + multi corer		No

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:
NA

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:
NA

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):
NA

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:
Sometime within the period 15.04 – 20.04. Timing and location of where the vessel will be is weather dependent and therefore difficult to predict.

6.2 Indicate if multiple entries are expected:
No

7. Port Calls

7.1 Dates and Names of intended ports of call:
None in UK waters

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:
Representatives are welcome onboard, but no concrete plans have been made

8.2 Proposed dates and ports for embarkation/disembarkation:
NA

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 will be available 2 months after the cruise, preliminary data will be available 4 months after the cruise. Final data will be available for interested parties 1 year after the cruise.

9.2 Anticipated dates of submission to the coastal State of the final report:
International report produced by a post-cruise meeting in the end of August

9.3 Proposed means for access by coastal State to data (including format) and samples:
Data will be made available in the form of a WOCE exchange formatted spreadsheet. The sediment cores will be stored at the University of Bergen and be made available upon request.

9.4 Proposed means to provide coastal State with assessment of data, samples and Research results:
All research results will be described in papers submitted to international peer-reviewed scientific journals

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

9.6 Proposed means of making results internationally available:
All data will be submitted to national and international data centres (i.e. Norwegian Marine Data Centre, PANGEA data publisher for Earth and Environmental Science, and Bjerknes Climate Data Centre), and will be made openly accessible at the end of the project period, 2017.

10. Other permits Submitted

10.1 Indicate other types of coastal state permits anticipated for this research (received or Pending):
Application for work in Greenland, Faroese and Ireland EEZs pending approval.

11. List of Supporting Documentation

11.1 List of attachments, such as additional forms required by the coastal State, etc.:
Figure of survey area, excel spreadsheet with preliminary sampling locations

Signature:

Contact information of the focal point:
Name: Are Olsen
Country: Norway
Affiliation: Geophysical Institute, University of Bergen
Address: P.O.Box 7803, N-5020 Bergen Norway
Telephone: +47 55584781
Fax: +47 55589883
Email: are.olsen@gfi.uib.no

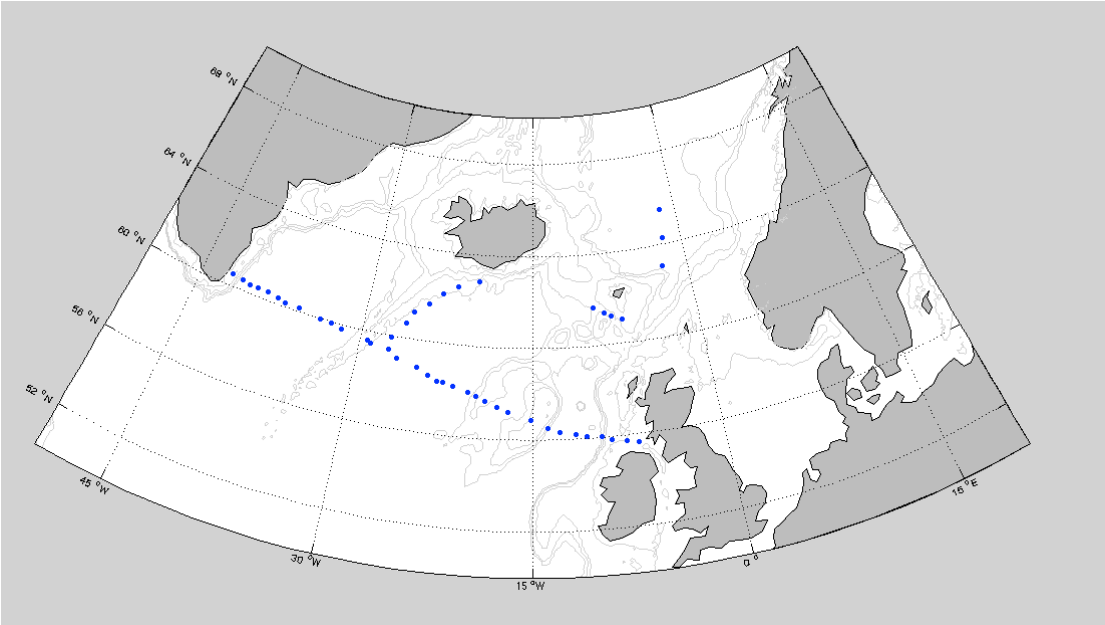

Fig. 1 Preliminary sampling locations at the 2015 SNACS cruise.