Application for Consent to conduct
Marine Scientific Research

Date: _____10.11.2015_____

1. General Information

1.1 Cruise name and/or number:
Norwegian Shrimp Survey in Skagerrak and the Norwegian Deep (cruise no. 2016601)

1.2 Sponsoring Institution(s):	
Name:	Institute of Marine Research
Address:	P.O. Box 1870 Nordnes N-5817 BERGEN NORWAY
Name of Director:	Tore Nepstad / Sissel Rogne (from 2016)

1.3 Scientist in charge of the Project:	
Name:	*Guldborg Søvik*
Country:	Norway
Affiliation:	Institute of Marine Research
Address:	*Institute of Marine Research* *P.O.Box 1870 Nordnes* *N-5817 Bergen* *Norway*
Telephone:	*(+47)55238539*
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Email:	Guldborg.soevik@imr.no
Website (for CV and photo):	http://www.imr.no/om_havforskningsinstituttet/ansatte/s/guldborg_sovik/nb-no

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:

*Survey of shrimp (*Pandalus borealis*) (for stock assessment) and demersal fish in the Norwegian Deep and Skagerrak. Measurements of salinity and temperature (CTD). Survey of shrimp on Fladen Ground: this shrimp stock has not been fished for many years and we wish to investigate whether the stock has collapsed or not. The plan is to trawl the same 10-12 stations as were trawled back in the 1980-90s.*

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:

Annual survey as part of the assessment of the shrimp stock in Skagerrak and the Norwegian Deep.

Fladen Ground was covered by this survey in 1987, 1988, 1989, 1991, 1993, 1994.

2.4 Previous publications relating to the project:

ICES working group on Pandalus stocks (NIPAG), yearly reports since 1984.

Tveite, S. 2000. Suitability of a fixed station shrimp abundance survey in the Skagerrak-Norwegian Deeps for stock assessments and associated research. J. Northw. Atl. Fish. Sci. 27: 177-182.

Knutsen, H., Jorde, P.E., Gonzalez, E.B., Eigaard, O.R., Pereyra, R.T., Sannæs, H., Dahl, M., André, C., Søvik, G. 2015. Does population genetic structure support present management regulations of the northern shrimp (Pandalus borealis) in Skagerrak and the North Sea? ICES Journal of Marine Science 72(3): 863-871.

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.

Skagerrak/Norwegian Deep: 5700N 0300E, 5730N 1100E, 5900N 1100E, 6000N 0300E

Fladen Ground:
5730 N 0100W, 5930N 0100W, 5730N 0300E, 5930N 0300E

See attachment for coordinates

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 attachment for area and location of survey stations

4. Methods and means to be used

4.1 Particulars of vessel:	
Name:	"Håkon Mosby"
Type/Class:	Fishery Research Ship
Nationality (Flag State):	Norwegian
Identification Number (IMO/Lloyds No.):	7922233
Owner:	Institute of Marine Research
Operator:	Institute of Marine Research
Overall length (meters):	48 metres
Maximum draught:	4.5 metres
Displacement/Gross Tonnage:	497
Propulsion:	diesel
Cruising & maximum speed:	10 knots
Call sign:	L J I T
INMARSAT number and method and capability of communication (including emergency frequencies):	+47 5590 6420/23 (fax 21) GSM 97 70 14 13
Name of Master:	*Tom Ole Drange / Kjell Ove Sandøy*
Number of Crew:	11
Number of Scientists on board:	6

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:
Length and weight measurements of samples of all fish and crustacean species caught	Bottom trawling.	*Bottom trawl: Campelen 1800, with 6 mm mesh size in inner net in the cod end*
Temperature, salinity measurements, water samples		*CTD*

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):
no

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:
Entry will be totally dependent on weather conditions. If weather conditions are bad, the

priority will be to cover the shrimp grounds in Skagerrak and the Norwegian Deep. Fladen Ground will only be covered if time and weather allow. The cruise will last from January 08 to February 02, 2016.
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

7.2 Any special logistical requirements at ports of call:

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

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:
No representative of the coastal state is involved in the research survey

8.2 Proposed dates and ports for embarkation/disembarkation:
No embarkation in UK

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:
June 2016

9.2 Anticipated dates of submission to the coastal State of the final report:
October 2016

9.3 Proposed means for access by coastal State to data (including format) and samples:
Through principal scientist, and through the NAFO / ICES shrimp working group (NIPAG)

9.4 Proposed means to provide coastal State with assessment of data, samples and Research results:
Data will be presented to the ICES/NAFO working group on shrimp (NIPAG) in a NAFO Scientific Document. Results will also be available in the final working group report from NIPAG

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

9.6 Proposed means of making results internationally available:
Through a NAFO Scientific Document, working group report from NIPAG, per review publication

10. Other permits Submitted

10.1 Indicate other types of coastal state permits anticipated for this research (received or Pending):
Coastal state permits from Sweden and Denmark for trawling in their EEZ in Skagerrak

11. List of Supporting Documentation

11.1 List of attachments, such as additional forms required by the coastal State, etc.:
Map survey area Haakon Mosby Norwegian shrimp survey 2016_cruise no 2016601.doc: shows area of shrimp survey Map survey stations Haakon Mosby Norwegian shrimp survey 2016_cruise no 2016601.doc: shows positions of intended trawl stations during the shrimp survey Map survey stations Haakon Mosby Norwegian shrimp survey 2016_Fladen Ground_cruise no 2016601.doc: shows intended trawl stations on Fladen Ground Fladen Ground_survey stations_positions.xls

Signature:

Contact information of the focal point:
Name: Guldborg Søvik
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