

Application for Consent to conduct
Marine Scientific Research

Date: January 20, 2019

1. General Information

1.1 Cruise name and/or number: 2019601

1.2 Sponsoring Institution(s):	
Name:	Norwegian Institute of Marine Research
Address:	P.O.Box 1870 Nordnes, N-5817 Bergen, Norway
Name of Director:	Sissel Rogne

1.3 Scientist in charge of the Project:	
Name:	Guldborg Søvik
Country:	Norway
Affiliation:	Norwegian Institute of Marine Research
Address:	P.O. Box 1870 Nordnes, N-5817 Bergen, Norway
Telephone:	(+47) 948 60 985
Fax:	(+47) 55 23 85 31
Email:	guldborg.soevik@hi.no
Website (for CV and photo):	http://hi.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:
<p><i>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 1980-1990s.</i></p>

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:
--

Eleni Theofania Skorda. 2018. Stomach sampling and analyses of shrimp predators in Skagerrak. Master thesis. Aquatic Science and Technology, DTU Aqua, Denmark. July 2018.

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.

ICES 2017. Report on the Long-term Management Strategy Evaluation for Northern Shrimp (*Pandalus borealis*) in Division 4.a East and Subdivision 20 (PandLTMS). October-November 2017, ICES CM 2017/ACOM:52. 182 pp.

ICES 2017. Report of the Workshop on management strategy evaluation for the *Pandalus* in Subdivision 3.a.20 and Division 4.a East fishery (WKPANDMSE), 23–25 August 2016, Bergen, Norway. ICES CM 2016/ACOM:54. 43 pp.

NAFO, ICES. 2017. NAFO/ICES *Pandalus* Assessment Group Meeting, 27 September to 3 October 2017. NAFO SCS Doc. 17/17. ICES CM 2017/ACOM:09. 84 pp. [Annual since 2004](#).

Søvik, G. and Thangstad, T. 2017. Results of the Norwegian Bottom Trawl Survey for Northern Shrimp (*Pandalus borealis*) in Skagerrak and the Norwegian Deep (ICES Divisions IIIa and IVa east) in 2017. NAFO SCR Doc. 17/072. 28 pp. [Annual since 2006](#).

Thangstad, T.H., Søvik, G., Gabrielsen, H., Henriksen, I., Karlsen, K. E., Kvalsund, M. og Vedholm, J. Reketokt i Norskerenna og Skagerrak januar 2017. Tokrapport/Havforskningsinstituttet/ISSN 1503 6294/Nr. 1 – 2018. 65 pp. [Annual since 2014](#).

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:	R/V Kristine Bonnevie
Type/Class:	research vessel
Nationality (Flag State):	Norwegian
Identification Number (IMO/Lloyds No.):	9062934
Owner:	Norwegian Institute of Marine Research
Operator:	Norwegian Institute of Marine Research
Overall length (meters):	56.75 meters
Maximum draught:	6.6 meters
Displacement/Gross Tonnage:	1444 BT
Propulsion:	Diesel
Cruising & maximum speed:	10 knots and 13 knots
Call sign:	LGWS
INMARSAT number and method and capability of communication (including emergency frequencies):	+47-5590 6420/23 (fax 21) Iridium: 00 881 631 413 517 GSM: +47 99 54 85 48 kbonnevie@hi.no 425852311@inmc.eik.com
Name of Master:	Tom Ole Drange / Kjell Ove Sandøy
Number of Crew:	14
Number of Scientists on board:	8

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 20 mm mesh size in the cod end, and 6 mm mesh size in inner net
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):
none

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 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 05 to 29, 2019.

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:
March 2019 (CSR)

9.2 Anticipated dates of submission to the coastal State of the final report:
October 2019 (Cruise report and ICES working group report)

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

9.4 Proposed means to provide coastal State with assessment of data, samples and Research results:
Data will be presented to the ICES working group on shrimp and results will be available in the final working group report from the group

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 shrimp working group report from ICES

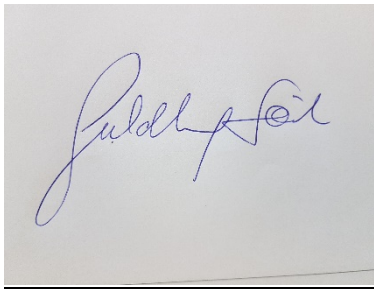
10. Other permits Submitted

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 stations Kristine Bonnevie Norwegian shrimp survey 2019_Flادن Ground_cruise no 2019601.doc: shows intended trawl stations on Fladen Ground Fladen Ground_survey stations_positions.xls

Signature:



Contact information of the focal point:

Name: Guldberg Søvik
Country: Norway
Affiliation: Norwegian Institute of Marine Research
Address: Institute of Marine Research
P.O.Box 1870 Nordnes
N-5817 Bergen
Norway
Telephone: (+47) 948 60 985
Fax: (+47) 55238531
Email: Guldberg.soevik@hi.no