



Søknad om forskningstokt i britisk farvann

Ref.id.: KS&SMS-5-4-03

Standard

Side 1 av 6

Application for Consent to conduct Marine Scientific Research

Date: 9 April 2018

1. General Information

1.1 Cruise name and/or number: Abundance and ecology of mesopelagic community 2018106

1.2 Sponsoring Institution(s):

| | |
|-------------------|---|
| Name: | Institute of Marine Research, Norway |
| Address: | P.O. Box 1870 Nordnes NO-5817 Bergen, Norway |
| Name of Director: | Sissel Rogne |

1.3 Scientist in charge of the Project:

| | |
|-----------------------------|---|
| Name: | Webjørn Melle |
| Country: | Norway |
| Affiliation: | Institute of Marine Research |
| Address: | P.O. Box 1870 Nordnes NO-5817 Bergen, Norway |
| Telephone: | +47 93004245 |
| Fax: | +47 55906580 |
| Email: | webjorn@hi.no |
| Website (for CV and photo): | https://www.hi.no |

1.4 Entity(ies)/Participant(s) from coastal State involved in the planning of the project:

| | |
|-----------------------------|--|
| Name: | Douglas Speirs |
| Affiliation: | University of Strathclyde |
| Address: | Department of Mathematics & Statistics, Livingstone Tower, 26 Richmond Street, Glasgow G41 2TR, Scotland, UK |
| Telephone: | +44(0)141 548 3813 |
| Fax: | +44 (0)141 552 2079 |
| Email: | d.c.speirs@strath.ac.uk |
| Website (for CV and photo): | https://www.strath.ac.uk/staff/speirsdouglasdr/ |

2. Description of Project

2.1 Nature and objectives of the project:

Explore the distribution, abundance and ecology of mesopelagic resources of the Northeast Atlantic.

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:

Dokumenter kan skrives ut, men kun elektronisk versjon ansees som oppdatert og gyldig.

Dok.id: D04616 Versjon: 1.04

Forfatter: BTC

Godkjent av: KRR

Sist endret: 23.10.2017

**2.3 Relevant previous or future research projects:**

The investigations build on the results of the EU funded Euro-Basin project and will be part of MEESO, which is now applied for to the commission in cooperation with UK scientists (ref. D. Speirs).

2.4 Previous publications relating to the project:

Irigoin, X., T. A. Klevjer, et al. (2014). "Large mesopelagic fishes biomass and trophic efficiency in the open ocean." Nat Commun 5.

St John, M. A., A. Borja, et al. (2016). "A dark hole in our understanding of marine ecosystems and their services: Perspectives from the mesopelagic community." Frontiers in Marine Science 3: 31.

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.

Northeast Atlantic waters between the Reykjanes ridge to the west, Iceland to the north and Scotland to the east. North of 56 ° N.

Coordinates encompassing working area are: (57.5° N, 30° W), (64° N, 30° W), (64° N, 9.5° W) and (57.5° N, 9.5° W).

Details in attached spreadsheet and in map of cruise tracks.

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.

Attached map.

4. Methods and means to be used**4.1 Particulars of vessel:**

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| Name: | G.O. Sars |
| Type/Class: | Research |
| Nationality (Flag State): | Norwegian |
| Identification Number (IMO/Lloyds No.): | 9260316 |
| Owner: | IMR |
| Operator: | IMR |
| Overall length (meters): | 77,5 m |
| Maximum draught: | 7,8 m |
| Displacement/Gross Tonnage: | 4067 |
| Propulsion: | Diesel-electric |
| Cruising & maximum speed: | 10/ 17 |
| Call sign: | LMEL |
| INMARSAT number and method and capability of communication (including emergency frequencies): | Phone: +47 55 90 64 40 Fax: +47 55 90 64 41 gosars@hi.no |
| Name of Master: | Preben Vindenes/ Svein-Roger Fredheim |
| Number of Crew: | 15 |

Dokumenter kan skrives ut, men kun elektronisk versjon ansees som oppdatert og gyldig.



| | |
|--------------------------------|----|
| Number of Scientists on board: | 15 |
|--------------------------------|----|

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|---|--|
| 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: | |

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| 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: | |

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| 4.4 other craft in the project, including its use: |
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| 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: |
| Hydrography | CTD cast | Seabird CTD |
| Nutrients and chlorophyll | Water bottles on CTD | Water bottles |
| Meso-plankton | Oblique net hauls to 1000m | Mocness |
| Macro-plankton micro-nekton | Oblique hauls to 1000m | Macroplankton trawls |
| Mesopelagic fish | Oblique hauls to 1000m | Multibeam pelagic trawl |
| Acoustics | Hull mounted | Simrad EK 80 |
| Acoustics | On towed platform to 1000m | Simrad EK 80 |



| | | |
|--------------------------|-------------------------------|-------------------------|
| Video images of plankton | Videosystem on towed platform | Video Plankton Recorder |
| Genetics | Samples of plankton and fish | Mocness and trawls |
| Stomach samples | Samples of plankton and fish | Mocness and trawls |
| | | |

4.6 Indicate nature and quantity of substances to be released into the marine environment:
Nothing

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):

Floating buoy with acoustics to be retrieved at the end of the cruise.

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:

Entering 5 June

Leaving 23 June

6.2 Indicate if multiple entries are expected:

Probably not

7. Port Calls

7.1 Dates and Names of intended ports of call:

No ports of call

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

Dokumenter kan skrives ut, men kun elektronisk versjon ansees som oppdatert og gyldig.



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| Project: |
| Free to participate in cruise and access to all data |

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| 8.2 Proposed dates and ports for embarkation/disembarkation: |
| 4 June Bergen, Norway |
| 24 June Bergen, Norway |

9. Access to Data, Samples and Research Results

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| 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: |
| December 2018 |

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| 9.2 Anticipated dates of submission to the coastal State of the final report: |
| December 2020 |

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| 9.3 Proposed means for access by coastal State to data (including format) and samples: |
| All data will be in open access database by December 2018. |

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| 9.4 Proposed means to provide coastal State with assessment of data, samples and Research results: |
| Written report by December 2019. |

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| 9.5 Proposed means to provide assistance in assessment or interpretation of data, samples And research results: |
| Cooperation with coastal state representatives in research project |

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| 9.6 Proposed means of making results internationally available: |
| Publication in peer reviewed journals |

10. Other permits Submitted

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| 10.1 Indicate other types of coastal state permits anticipated for this research (received or Pending): |
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11. List of Supporting Documentation

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

Contact information of the focal point:

Name: Webjørn Melle

Country: Norway

Affiliation: Institute of Marine Research

Address: P.O. Box 1870 Nordnes. NO-5817 Bergen, Norway

Telephone: +47 93004245

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