| Havforskningsinstituttet   |                          |                    |                     | Ref.id.: KS&SMS.5.4-03     |                   |
|--|--------------------------|--------------------|---------------------|----------------------------|-------------------|
| Mal søknad Britiske Myndigheter - Application for Consent to<br>conduct Marine Scientific Research |                          |                    |                     | Standard                   |                   |
| Versjon:<br>1.02   | Opprettet:<br>11.12.2013 | Skrevet av:<br>BTC | Godkjent av:<br>KRR | Gjelder fra:<br>11.12.2013 | Sidenr:<br>1 av 7 |

Application for Consent to conduct Marine Scientific Research

### Date: 16. March 2020

### 1. General Information

1.1 Cruise name and/or number:

International Ecosystem Summer Survey in the Nordic Seas (IESSNS) / Cruise number 2020 813. The application includes two chartered fishing vessels from Norway for scientific surveys to be conducted during the annual international mackerel-ecosystem survey in summer

| 1.2 Sponsoring Institution(s): |   |
|--------------------------------|---|
| Name:                          | Institute of Marine Research (IMR)      |
| Address:                       | Nordnesgaten 50, NO-5817 Bergen, Norway |
| Name of Director:              | Sissel Rogne                            |

| 1.3 Scientist in charge | e of the Project:   |  |  |
|-------------------------|---|--|--|
| Name:                   | Leif Nøttestad  |  |  |
| Country:                | Norway  |  |  |
| Affiliation:            | Principal Scientist at IMR and Adjunct Professor at UiB                   |  |  |
| Address:                | Nordnesgaten 33, NO-5817 Bergen   |  |  |
| Telephone:              | +47 99 22 70 25   |  |  |
| Fax:                    | +47 55 23 86 87   |  |  |
| Email:                  | leif.nottestad@hi.no  |  |  |
| Website (for CV and     | https://www.researchgate.net/profile/Leif Nottestad/contributions         |  |  |
| photo):                 | http://www.imr.no/om_havforskningsinstituttet/ansatte/n/leif_nottestad/en |  |  |

| 1.4 Entity(ies)/Participant(s) from coastal State involved in the planning of the project: |  |  |
|--|--|--|
| Name:  |  |  |
|  | Research institutes and scientists from EU,<br>Iceland, Faroe Islands, Greenland and<br>Norway |  |
| Affiliation:   |  |  |
| Address:   |  |  |
| Telephone:   |  |  |
| Fax:   |  |  |
| Email:   |  |  |
| Website (for CV and photo):  |  |  |

#### 2. Description of Project

#### 2.1 Nature and objectives of the project:

The major aim is abundance estimation with precision estimates of Northeast Atlantic (NEA) mackerel. Secondary aim is abundance estimation of Atlantic blue whiting and Norwegian spring-spawning herring, thereby establishing new fishery independent indices on abundance to be used in the assessment of these stocks. An important objective is also to understand the Norwegian Sea ecosystem and especially the distribution, migration, feeding and spatial overlap of important pelagic planktivorous species (mackerel, herring



and blue whiting) in relation to hydrography, plankton and top predators.

There is also concrete plans to cover the North Sea during the IESSNS 2020 by a Danish vessel starting and finishing in Skagen in July 2020. The final preparation is not yet available. Contact person is Kaj Wieland at DTU Aqua in Denmark.

There is also an intention to perform a survey west of the British Isles with a Scottish vessel during IESSNS 2020. This is not yet confirmed. Contact person is Steven Mackinson.

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:IESSNS survey used for assessment purposes on NEA mackerel and Atlantic blue whiting in ICES

2.3 Relevant previous or future research projects:

**ICES WGNAPES** 

2.4 Previous publications relating to the project: See ICES WGWIDE (2019) and WGIPS (2020) reports for previous reports and publications

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.

Northern North Sea. There will be about 5 sampling stations within UK waters (see attached map with survey lines. The exact coordinates are not available yet due to randomized sampling design, which we have not finalized yet.

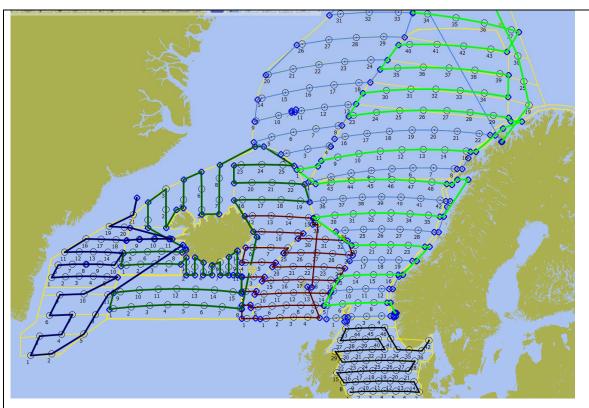
3.2 Attach chart(s) at an appropriate scale (1 page, high-resolution) showing the geographical Areas of the intended work and, as far as practicable, the location and depth of sampling Stations, the tracks of survey lines, and the locations of installations and equipment.



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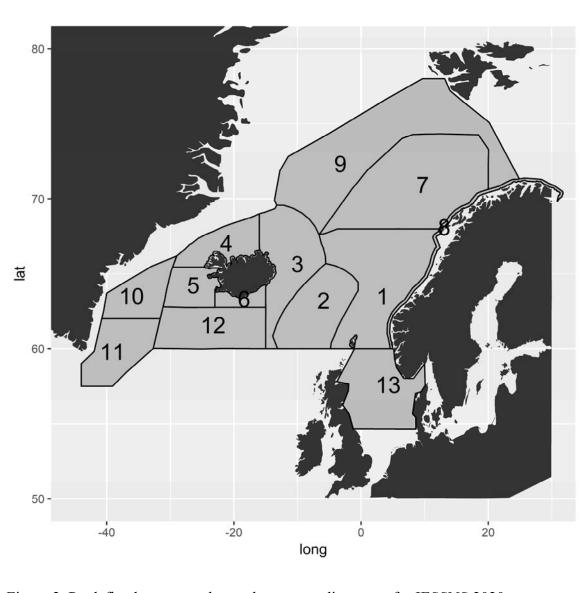
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**Figure 1.** Preliminary surface stations (circles) and transects (various coloured lines). Norway participate with 2 vessels, otherwise 1 vessel from Faroe Islands, Iceland, Greenland, and Denmark for IESSNS in July-August 2020.



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# Figure 2. Predefined strata number and corresponding areas for IESSNS 2020.

| 4.1 Particulars of vessel:              |  |  |
|---|--|--|
| Name:                                   | M/V "Vendla"                                 |  |
| Type/Class:                             | Fishing vessels: combined stern trawlers and |  |
|   | purse seiners                                |  |
| Nationality (Flag State):               | Norwegian                                    |  |
| Identification Number (IMO/Lloyds No.): | IMO 9646091                                  |  |
| Owner:                                  | Vendla AS, Torangsvåg, Norway                |  |
| Operator:                               | Nils Geir Østervold                          |  |
| Overall length (meters):                | 76.44 m                                      |  |
| Maximum draught:                        | 9.30 m                                       |  |
| Displacement/Gross Tonnage:             | 2987   |  |
| Propulsion:                             | MaK 8M32C Diesel Engine                      |  |
| Cruising & maximum speed:               | 10 & 16 knots                                |  |
| Call sign:                              | LCYN   |  |

### 4. Methods and means to be used



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| INMARSAT number and method and<br>capability<br>of communication (including emergency<br>frequencies): | 0047 21038181      |
|--|--------------------|
| Name of Master:  | Ole Morten Troland |
| Number of Crew:  | 8                  |
| Number of Scientists on board:   | 9                  |

| 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  | Methods to be used:          | Instruments to be used:   |  |
| Measurements:   |                              |                           |  |
| Pelagic trawling  | Multpelt 832 trawling 30 min | Trawl sensors and cameras |  |
| CTD   | CTD casts 0-500 m depth      | Seabird and SAIV sonde    |  |
| Plankton sampling   | WP2 sampling 0-200 m depth   |                           |  |



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4.6 Indicate nature and quantity of substances to be released into the marine environment: None, except for fuel for propulsion

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:

3.-15. July 2020

6.2 Indicate if multiple entries are expected: No

### 7. Port Calls

7.1 Dates and Names of intended ports of call:

No port calls needed

7.2 Any special logistical requirements at ports of call: No

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

Not relevant

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: ICES IESSNS survey

ICES IESSING Survey

8.2 Proposed dates and ports for embarkation/disembarkation:

Not applicable

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:25. August 2020

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

9.3 Proposed means for access by coastal State to data (including format) and samples:

Access via ICES WGWIDE

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

Access via ICES WGWIDE

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

Access via ICES WGWIDE

9.6 Proposed means of making results internationally available:

Access via ICES WGWIDE

10. Other permits Submitted

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

None

11. List of Supporting Documentation

11.1 List of attachments, such as additional forms required by the coastal State, etc.: None

Signature:

Contact information of the focal point: Name: Leif Nøttestad Country: Norway Affiliation: Institute of Marine Research Address: Nordnesgaten 33, NO-5817 Bergen, Norway Telephone: +47 99 22 70 25 Fax: +47 55 23 86 87 Email: leif.nottestad@hi.no