Iceland

APPLICATION FOR A RESEARCH CRUISE WITHIN A COASTAL STATE's FISHERY LIMITS

A. GENERAL

1.	**NAME OF RESEARCH SHIP**	R/V DANA	**CRUISE NO.**	03/25
2.	**DATES OF CRUISE**	**FROM** 22 April 2025	**TO**	16 May 2025
3.	**OPERATING AUTHORITY**	National Institute of Aquatic Resources (DTU-AQUA) Danish Technical University Kemitorvet, building 202 DK-2800 Kgs. Lyngby Telephone: +45 35883300		
4.	**OWNER (if different for para.3)**	Danish Technical University DK-2800 Lyngby, Denmark		
5.	**PARTICULARS OF SHIP**	**NAME**	R/V DANA	
		NATIONALITY	Danish	
		OVERALL LENGTH (metres)	78 metres	
		MAXIMUM DRAUGHT (metres)	5.7 metres	
		NET TONNAGE	669.53 t	
		METHOD OF PROPULSION	Diesel	
		CALL SIGN	OXBH	
		REGISTERED PORT & NUMBER (if reg. fishing vessel)	Hirtshals, Denmark	
6.	**CREW**	**NAME OF MASTER**	Ulrich Berggren Jensen	
		NUMBER OF CREW	12-18	
7.	**SCIENTIFIC PERSONNEL**	**NAME AND ADDRESS OF SCIENTIST IN CHARGE**	Susan Mærsk Lusseau National Institute of Aquatic Resources (DTU-AQUA) Danish Technical University North Sea Research Park DK-9850 Hirtshals, Denmark E-mail:smalu@aqua.dtu.dk	
		TEL/TELEX/FAX NO	Tel: +45 35 88 32 00	
		NUMBER OF SCIENTISTS	10	

8. **GEOGRAPHICAL AREA IN WHICH SHIP WILL OPERATE** (with reference in Latitude and Longitude):

Acoustic survey in Norwegian Sea (Figure 1):
Latitude limits 62° 0.0' N to 72° 0.0' N, Longitude limits 5° 0.0' W to 20° 0.0' E

9. **BRIEF DESCRIPTION OF PURPOSE OF CRUISE:**
Echo integration of herring and blue whiting and pelagic fishing in connection with the International Ecosystem Survey in Norwegian Sea, IESNS.

10. **DATES AND NAMES OF INTENDED PORTS OF CALL:**
None planned in Iceland

11. **ANY SPECIAL REQUIREMENTS AT PORTS OF CALL**: N/A

B. DETAIL

1. **NAME OF RESEARCH SHIP** R/V DANA **CRUISE NO.** 03/25

2. **DATES OF CRUISE** **FROM** 22 April 2025 **TO** 16 May 2025

3. **PURPOSE OF RESEARCH AND GENERAL OPERATIONAL METHODS:**

The survey on Dana is a component of the larger joint International Ecosystem Survey of the Norwegian Sea (IESNS), which is coordinated under the auspices of the International Council for the Exploration of the Seas (ICES). The cruise on Dana represents the DK/EU contribution to this joint survey and carries scientists from Denmark, Germany, Ireland, Sweden and Netherlands. In addition to this EU contribution to the IESNS applied for here, vessels from Norway, Iceland, UK and Faroe Islands also participate.

The aim of the survey is to provide acoustic estimation of abundance of herring and blue whiting in the Norwegian Sea for use in the stock assessments carried out in ICES in the Working Group for Widely distributed stocks (WGWIDE).

The survey is an acoustic trawl survey using scientific echosounders operated at 38kHz for echo integration along pre-determined transects lines running parallel in East-West direction. Species verification and biological samples of target species of herring and blue whiting are collected by pelagic surface and midwater trawling with a relatively small midwater trawl (24m vertical opening) on fish aggregations detected acoustically.

The survey also contribute to the monitoring of the hydrographic and plankton conditions of the Norwegian Sea and adjacent waters for studies on how feeding, distribution and migration of herring and other pelagic fishes are influenced by these conditions.

Plankton sampling is carried out using vertical tows with a WP2 plankton sampler to a depth of 200m at predetermined stations approximately 60nmi apart along the transects and Hydrographic data (temperature and salinity) is collected with a Seabird CTD probe from 0-1000 m depth in association with the plankton stations.

The exact track arrangement within the survey area for the 2025 survey has not yet been determined but it is expected to be similar to previous years as shown in Figure 1. The allocation of transects will be done early in 2025 prior to the survey by the survey coordinator (Are Salthaug, IMR, Bergen). Dana will carry out transects within this area as assigned by the survey coordinator.

Dana will begin the acoustic trawl survey in the south of the area completing assigned transects in a northerly progression. Dana will go to Bodø in Norway on 4 - 5 May 2025 for a change of crew and will complete the survey in Tromsø, Norway by 16 May 2025.

4. **PLEASE ATTACH CHART showing, at the appropriate scale the geographical area of the intended work, the areas to be fished, positions of intended stations, tracks of survey lines, positions of moored/seabed equipment etc.:**

Please see figure appended to end of this document.

Figure 1: Survey area for the IESNS with acoustic transects and CTD and plankton stations as carried out in 2024. The 2025 survey will cover the same area with similar spacing between transects and hydrographic stations. At the time of this application the transects have not yet been assigned to the participating vessels for the 2025 survey and it is therefore not possible to indicate yet which of these will be covered by Dana in the 2025 survey.

5a. **TYPES OF SAMPLES REQUIRED e.g. Geological/water/plankton/fish. If fishing gear is to be used please indicate what fish stocks will be worked, the maximum quantity required of each species/stock and the quantity of fish to be retained on board:**

Pelagic fish, water and plankton

Target of fish sampling are Norwegian spring spawning herring and Blue whiting. Based on previous survey we do not expect to exceed 5T in total of each of the target species distributed over 15-20 trawl hauls. Between 100 and 250 fish of each species will be retained for measuring (length and weight) and extraction of otoliths for age determination. All fish will be released back to the sea after sampling is finished.

5b. **METHODS BY WHICH SAMPLES WILL BE OBTAINED (e.g. dredging/coring/drilling/fishing etc.)**

Pelagic trawling by using a midwater trawl and a midwater plankton sampler.

Water sampling using a Sea Bird CTD probe with mounted water samplers.

6a. **DETAILS OF MOORED EQUIPMENT:**

Dates:	**Laying**	**Recovery**	**Description**	**Latitude**	**Longitude**

None

6b. **FULL DESCRIPTION FOR ALL FISHING GEAR TO BE USED (e.g. bottom trawl, mesh size, attachments etc.):**

Pelagic trawl (Fotø), codend mesh size 16 mm, vertical opening of 25m.

Plankton WP2-net, codend mesh size 180 µm, opening of 60cm diameter

Sea Bird CTD probe (Temperature and salinity) with mounted water samplers.

7. **ANY HAZARDOUS MATERIALS e.g. chemicals/explosives/gases/radioactives etc)**

(use seperate sheet if necessary) None

(a) TYPE OF TRADE NAME

(b) CHEMICAL CONTENT (& FORMULA)

(c) IMO IMDG CODE Reference & UN Number

(d) QUANTITY & METHODS OF STOWAGE ON BOARD

(e) IF EXPLOSIVES give date(s) of detonation

- **Method of detonation**
- **Position of detonation**
- **Frequency of detonation**
- **Depth of detonation**
- **Size of explosive charge in Kgs**

8. **PLEASE SET OUT DETAILS OF:**

(a) ANY RELEVANT PREVIOUS/FUTURE CRUISES:

The IESNS has been carried out annually in April/May since 2004 with DK/EU participation and is expected to continue after 2025 also.

(b) ANY PREVIOUSLY PUBLISHED RESEARCH DATA RELATING TO THE PROPOSED CRUISE: (Attach separate sheet if necessary)

Annual ICES working group reports (PGNAPES 2003 – 2009, WGNAPES 2010-2011, WGIPS 2012-2024) are available on www.ices.dk.

9. **NAMES AND ADDRESSES OF SCIENTISTS IN COASTAL STATE(S) IN WHOSE WATERS THE PROPOSED CRUISE TAKES PLACE WITH WHOM PREVIOUS CONTACT HAS BEEN MADE:**

Sigurvin Bjarnason

Marine and Freshwater Research Institute

Fornubúðir 5, IS-220 Hafnarfjörður

Telephone: +354-575 2098

Mail: sigurvin.bjarnason@hafogvatn.is

10. **STATE:**

(a) WHETHER VISITS TO THE SHIP IN PORT BY COASTAL STATE SCIENTISTS WILL BE ACCEPTABLE:

Yes – by prior arrangement

(b) WHETHER IT WILL BE ACCEPTABLE TO CARRY ON BOARD AN OBSERVER FOR ANY PART OF THE CRUISE:

Yes – by prior arrangement

(If 'yes' please indicate possible dates and ports of embarkation/disembarkation)

Hirtshals 22 April 2025, Bodø 4-5 May 2025, Tromsø 16 May 2025.

(c) WHEN RESEARCH DATA FROM THE INTENDED CRUISE IS LIKELY TO BE MADE AVAILABLE TO THE COASTAL STATE AUTHORITIES AND BY WHAT MEANS:

The acoustic data and biological data (catch composition, measured lengths, weights and ages of target species) will be publicly available in the ICES Acoustic trawl database by August 2025 (https://www.ices.dk/data/data-portals/Pages/acoustic.aspx).

Full cruise report and combined results from the survey will be available on the ICES WGIPS website after the annual meeting in January 2026 (https://www.ices.dk/community/groups/Pages/WGIPS.aspx)

If the report will not be available within 12 months of the cruise, please set out, an explanation for the delay indicating when the report will be available.

12. **SCIENTIFIC EQUIPMENT**

COASTAL STATE: Iceland
PORT CALL: N/A

DATES: 22/4 2025 – 16/5 2025

Complete the following table –
separate copy for each coastal state

Indicate 'yes' or 'no' other than for fishing gear when the total hours of fishing in each zone should be indicated

LIST SCIENTIFIC WORK BY FUNCTION **e.g. :** **Magnetometry** **Gravity diving** **Seismics** **Bathymetry** **Seabed sampling** **Trawling** **Echo sounding** **Water sampling** **U/W TV** **Moored instruments** **Towed instruments**	**Water Column**	**Fisheries Research within fishing limits**	**Research concerning Continental shelf out of Coastal State's margin**	**DISTANCE FROM COAST**		
				Within 3 NM	**Between 3-12 NM**	**Between 12 and 200 NM**
Echo sounding	entire	Yes	Yes	No	No	Yes
Towed instruments	entire	Yes	Yes	No	No	Yes
Trawling (fish) only pelagic	entire	Yes	Yes	No	No	Yes
Trawling (plankton)	entire	Yes	Yes	No	No	Yes

Rikke Larsen .....

Dated: 20/12 '24

(On behalf of the Principal Scientist)

NB IF ANY DETAILS ARE MATERIALLY CHANGED REGARDING DATES/AREA OF OPERATION AFTER THIS FORM HAS BEEN SUBMITTED THE COASTAL STATE AUTHORITIES MUST BE NOTIFIED IMMEDIATELY.

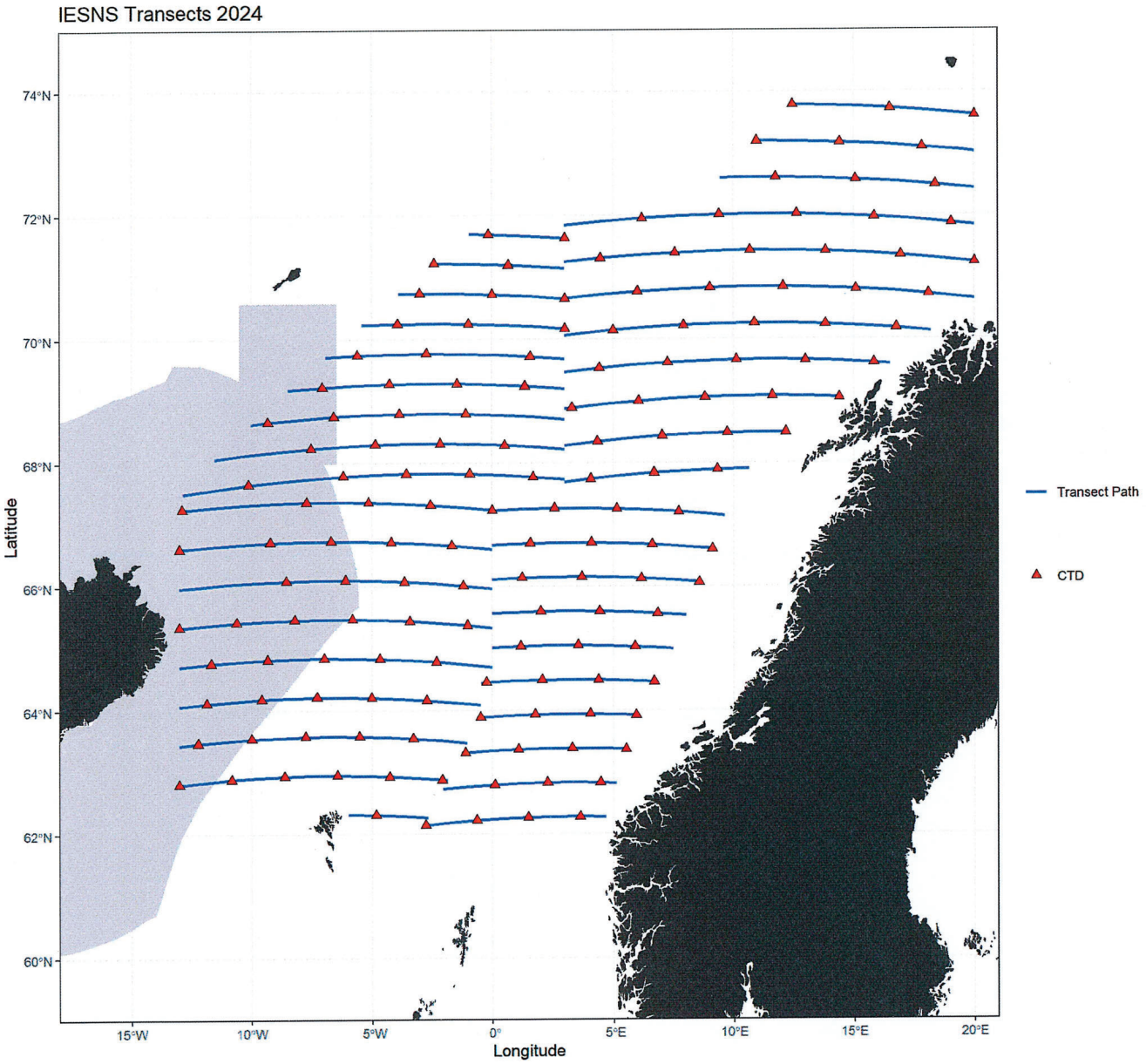

Fig. 1: Survey area for the IESNS with acoustic transects and CTD and plankton stations as carried out in 2024. The 2025 survey will cover the same area with similar spacing between transects and hydrographic stations. At the time of this application the transects have not yet been assigned to the participants of the 2025 survey and it is therefore not possible to indicate yet which of these will be covered by Dana in the 2025 survey.