Ref.id.: KS&SMS-05-4-02 Standard CRUISE NO.: 2022841 1. NAME OF RESEARCH SHIP: MV Brennholm

From: 7th June 2022 To: 27th June 2022 2. DATES OF CRUISE

3. OPERATING AUTHORITY: Brennholm AS TELEPHONE: +47-995 68658; +47-90822505 TELEFAX: TELEX:

4. OWNER Lars Einar Sandtorv

5. PARTICULARS OF SHIP: Fishing Vessel

Name: MV Brennholm Nationality: Norwegian Overall length: 75.4 M Maximum draught: 7.4 M Net tonnage: 799 NT **Propulsion: Propeller** Call sign: LIWG Registration port and number (if registered fishing vessel): Bergen, H-1-BN

6. <u>CREW</u>

Name of master: Lars Anton Eidesvik Number of crew: 10-15

7. SCIENTIFIC PERSONNEL

Name and address of scientist in charge:

Anders Thorsen

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Institute of Marine Research Postbox 1870 Nordnes 5817 Bergen Nordnesgaten 50, 5005 Bergen Norway e-mail: anders.thorsen@hi.no

Tel/telex/fax no.: +47-95873368

No. of scientists: 6

8. <u>GEOGRAPHICAL AREA IN WHICH SHIP WILL OPERATE (with reference to</u> <u>latitude and longitude).</u> The survey area will be north of 59 °N, south of 66 °N, east of 17 °W, and west of 11 °E.

9. BRIEF DESCRIPTION OF PURPOSE OF CRUISE

Data collected from the surveys provide an estimate of the total annual egg production that in turn provides an estimate of spawning-stock biomass for both the western and North Sea Atlantic mackerel stocks. It also provides a relative abundance index of spawning for horse mackerel in the Northeast Atlantic.

https://www.ices.dk/community/groups/Pages/WGMEGS.aspx

10. DATES AND NAMES OF INTENDED PORTS OF CALL

Torshavn, the Faroe Islands, expected around June 19th-20th, but may take place at any time during survey period.

11. ANY SPECIAL REQUIREMENTS AT PORTS OF CALL

None

1. Part B: Details

1. <u>NAME OF RESEARCH SHIP:</u> Brennholm <u>CRUISE NO.:</u> 2022841

2. DATES OF CRUISE From: June 7th 2022 To: June 27th 2022

3.

a) **<u>PURPOSE OF RESEARCH:</u>**

Data collected from the surveys provide an estimate of the total annual egg production that in turn provides an estimate of spawning-stock biomass for both the western and North Sea Atlantic mackerel stocks. It also provides a relative abundance index of spawning for horse



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mackerel in the Northeast Atlantic.

https://www.ices.dk/community/groups/Pages/WGMEGS.aspx

b) <u>GENERAL OPERATIONAL METHODS (including full description of any fish</u> gear, trawl type, mesh size, etc.)

Activities include pelagic trawling (Multpelt 830m Pelagic Trawl) for mackerel, use of echosounder and sonar, CTD (salinity, temperature, and depth), and Gulf VII (towed plankton net, 280 μ m mesh size) for fish eggs. The Gulf VII is planned to be used on every station to a depth of 200 meters. Pelagic trawling for mackerel will happen 1-2 times a week at opportunity. Typically, we will catch a few hundred kilos each time, and in total less than 5 tones. The catch will be taken from the quota of the fishing vessel.

4. <u>ATTACH CHART</u> showing (on an <u>appropriate</u> scale) the geographical area of intended work, positions of survey lines, positions of moored/seabed equipment, areas to be fished

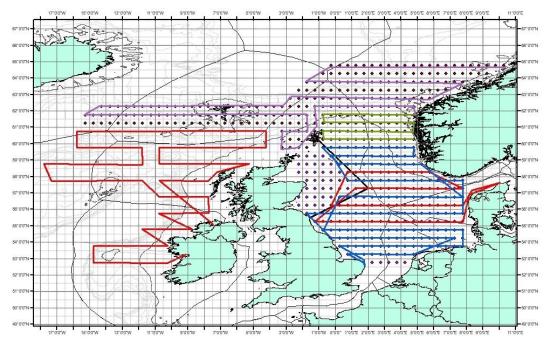


Figure 1. MV Brennholm will follow the purple and green lines, stations are marked with dots. The remaining cruise lines with stations will be operated by collaborating nations organized by ICES (WGMEGS).

a) <u>TYPES OF SAMPLES REQUIRED</u> (e.g., geological/water/plankton/fish/radionuclide)

Dokumenter kan skrives ut, men kun elektronisk versjon ansees som oppdatert og gyldig.Dok.id: D03697 Versjon: 1.03 Forfatter: TOD Godkjent av: PWN Siz

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<u>Adult mackerel</u> <u>Plankton samples</u> <u>Salinity, temperature, and sampling depth</u>

b) <u>METHODS OF OBTAINING SAMPLES</u> (e.g., dredging/coring/drilling/fishing, etc. When using stocks being worked, quantity of each species required, and quantity of fish to be retained on board)

Adult Mackerel will be detected by echo sound and sonar

Adult mackerel will be caught by Multpelt 830m Pelagic Trawl.

<u>Plankton samples will be taken by Gulf VII with 280 µm mesh size towed from 0 to 200 M depth.</u>

Salinity, temperature, and sampling depth will be obtained by CTD (RBR Concerto³) mounted on Gulf VII.

6. **DETAILS OF MOORED EQUIPMENT**

<u>Dates</u> Moored equipment will not be used. <u>Laying Recovery Description Depth Latitude Longitude</u>

7. <u>ANY HAZARDOUS MATERIALS</u> (chemicals/explosives/gases/radioactives, etc.)

(Use separate sheet if necessary)

Ethanol:

a) Type and trade name NIL

Ethanol (>99 %), absolute alcohol

- b) <u>Chemical content</u> (and formula) NIL Ethanol, C₂H₆O
- c) <u>IMO IMDG code (reference and UN no.) NIL</u> FN-number IMDG: 1170

Transport class IMDG: 3

Packaging group IMDG: II

d) Quantity and method of storage on board NIL

5 litres in 1 litre bottles, stored in ventilated chemical closet

Formalin:

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- a) Type and trade name: Formalin
- b) Chemical content (and formula): 37 % Formaldehyde (CH₂O), 10 % methanolIMO
- c) IMDG code (reference and UN no.): UN number 2209
- d) Quantity and method of storage on board: 5 l, ventilated chemical closet
- e) If explosives give dates of detonation
 - Method of detonation
 - Position of detonation
 - Frequency of detonation
 - Depth of detonation

- Size of explosive charge in kg

8. DETAIL AND REFERENCE OF

- a) <u>Any relevant previous/future cruises</u>
 Survey has taken place every third year since 1979 and is planned to do so also in the future.
- b) <u>Any previously published research data relating to the proposed cruise</u> After each survey WGMEGS (ICES working group for Mackerel and Horse mackerel egg surveys) will make a report.

Last report:

https://www.ices.dk/sites/pub/Publication%20Reports/Forms/DispForm.aspx?ID=37 988

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

Anna Heiða Ólafsdóttir

MARINE AND FRESHWATER RESEARCH INSTITUTE

Fornubúðum 5

220 Hafnarfjörður, Iceland

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

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Tel: + 354 575 2000 Fax: + 354575 2001

10. **<u>STATE</u>**

- a) <u>Whether visits to the ship in port by scientists of the coastal state concerned will be</u> <u>acceptable (Yes/no)</u> Yes
- b) <u>Participation of an observer from the coastal state for any part of the cruise together</u> <u>with the dates for embarkation and disembarkation</u> Yes
- c) When research data from the intended cruise are likely to be made available to the coastal state and by what means

Survey report will be available less than 6 months after survey

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2. Part C. Scientific Equipment

Complete the following table using a separate page for <u>each</u> coastal state

Coastal state: Faroe Islands

Port of call: Tórshavn

Dates: June 7th to June 27th

			Distance from coast		
Types of samples and measurements:	Methods to be used:	Instruments to be used:	0-4 nm	4-12 nm	12-200 nm
Fish sampling	Pelagic trawl	Multpelt 832 trawl	х	Х	Х
Water characteristics	CTD profiles	RBR Concerto ³	х	Х	х
Acoustic detection of fish	Acoustic	Sonar and echosounder	х	Х	Х
Sampling for fish egg and larvae	Plankton nets	Gulf VII with 280 µm mesh size	X	х	х

Coastal state: Iceland

Port of call: None

Dates: June 7th to June 27th

			Distance from coast		
Types of samples and measurements:	Methods to be used:	Instruments to be used:	0-4 nm	4-12 nm	12-200 nm
Fish sampling	Pelagic trawl	Multpelt 832 trawl		Х	Х
Water characteristics	CTD profiles	RBR Concerto ³		х	х
Acoustic detection of fish	Acoustic	Sonar and echosounder		х	Х
Sampling for fish egg and larvae	Plankton nets	Gulf VII with 280 µm mesh size		х	х

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

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Anders Thorsen (On behalf of the Principal Scientist)

Dated: Bergen 02.03.2022

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.