GB

Application for Consent to conduct
Marine Scientific Research

Date: _24.01.2020____

1. General Information

1.1 Cruise name and/or number:
Solea SB 779

1.2 Sponsoring Institution(s):	
Name:	Thünen Institute of Sea Fisheries
Address:	Herwigstr. 31, 27572 Bremerhaven, Germany
Name of Director:	Dr. Gerd Kraus

1.3 Scientist in charge of the Project:	
Name:	Dr. Matthias Schaber
Country:	Germany
Affiliation:	Thünen Institute of Sea Fisheries
Address:	Herwigstr. 31, 27572 Bremerhaven, Germany
Telephone:	+49 (0)471 94460 452
Fax:	+49 (0)471 94460 199
Email:	matthias.schaber@thuenen.de
Website (for CV and photo):	https://www.thuenen.de/en/sf/personal/wissenschaftliches-personal/schaber-matthias-dr/

1.4 Entity(ies)/Participant(s) from coastal State involved in the planning of the project:	
Name:	S. Maersk Lusseau
Affiliation:	Marine Scotland Science, Marine Laboratory
Address:	375 Victoria Road, Aberdeen, AB11 9DB, UK
Telephone:	+44 1224 876544
Fax:	+44 1225 295511
Email:	s.lusseau@marlab.ac.uk
Website (for CV and photo):	www.marlab.ac.uk

2. Description of Project

2.1 Nature and objectives of the project:
Estimation of stock size parameters of small pelagics (herring, sprat, anchovy, sardine) as part of an international, ICES-coordinated hydroacoustic survey

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:
International Council for the Exploration of the Sea (ICES), HERAS

2.3 Relevant previous or future research projects:
186th cruise of FRV “Walther Herwig III”, 1997 196th cruise of FRV “Walther Herwig III”, 1998 444th cruise of FRV “Solea”, 1999 218th cruise of FRV “Walther Herwig III”, 2000

478th cruise of FRV “Solea”, 2001 240th cruise of FRV “Walther Herwig III”, 2002 253rd cruise of FRV “Walther Herwig III”, 2003 265th cruise of FRV “Walther Herwig III”, 2004 544th cruise of FRV “Solea”, 2005 559th cruise of FRV “Solea”, 2006 576th cruise of FRV “Solea”, 2007 591st cruise of FRV “Solea”, 2008 607th cruise of FRV “Solea”, 2009 624th cruise of FRV “Solea”, 2010 642nd cruise of FRV “Solea”, 2011 658th cruise of FRV “Solea”, 2012 675th cruise of FRV “Solea”, 2013 690th cruise of FRV “Solea”, 2014 706th cruise of FRV “Solea”, 2015 722th cruise of FRV “Solea”, 2016 736th cruise of FTV “Solea”, 2017 750th cruise of FTV “Solea”, 2018 764th cruise of FTV “Solea”, 2019

2.4 Previous publications relating to the project:
Refer to annual reports of the ICES Working Group of International Pelagic Surveys (WGIPS) and the ICES Herring Assessment Working Group (HAWG), available at www.ices.dk

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.
52°00 N – 57°00 N, 02°30 W-09°00 E. Survey area including strata, waypoints and transects depicted in attached map. The proposed overall survey area refers to the survey area/strata allocated to all participants of this internationally coordinated survey. While the coordinates of the waypoints/hydroacoustic transects (see below) relate to the actual survey strata allocated to the German vessel “Solea” that will be covered during the 779th cruise, the larger area proposed here contains also strata that will be covered by the Dutch vessel “Tridens” but in case of unforeseen delays in survey progress of the Dutch participants (severe weather) may be allocated to “Solea” by the cruise coordinator (IMR Bergen, Norway). So the larger geographical area provided in this notification (in relation to the area covered by the waypoints of the 779th survey of FRV “Solea”) is a precautionary measurement to facilitate a possible expansion of the German survey area in case this is required for the coordinated survey progress.

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.
The MSR will mainly be taking place within England Territorial Waters (see attached map and table), but due to international survey coordination and an unlikely but possible allocation of additional transects may extend into Scottish Territorial Waters as well. Proposed cruise track (waypoints, hydroacoustic transects) depicted in attached map. Proposed waypoint and transect positions are also provided in attached table. Minor deviations from the proposed transects/waypoints possible due to obstacles, nautical requirements, adaptive survey coordination etc.

Waypoints/Transect positions proposed: Please see attached table/spreadsheet

4. Methods and means to be used

4.1 Particulars of vessel:	
Name:	FRV “Solea”
Type/Class:	Research Vessel
Nationality (Flag State):	Germany
Identification Number (IMO/Lloyds No.):	9314583
Owner:	Federal Republic of Germany
Operator:	Bundesanstalt für Landwirtschaft und Ernährung
Overall length (meters):	42.74
Maximum draught:	4.20
Displacement/Gross Tonnage:	638
Propulsion:	Diesel Electric
Cruising & maximum speed:	12 kn
Call sign:	DBFH
INMARSAT number and method and capability of communication (including emergency frequencies):	Tel.: +870 773 900 091 Fax: +870 783 829 945
Name of Master:	V. Koops (or deputy)
Number of Crew:	14
Number of Scientists on board:	7

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, full description of scientific instruments to be used(for fishing gear specify type and dimension) and location			
Types of samples and Measurements:	Methods to be used:	Instruments to be used:	To be carried out within 12nm (yes or no):
Fish samples	Trawl haul	See attached drawing	Yes
Hydrography	CTD casts	Seabird CTD probe	Yes
Hydroacoustics	Echosounder	Simrad EK80, CS90	Yes

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):
No installations

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:
29.06.2020-19.07.2020 (multiple re-entries expected due to transect design)
6.2 Indicate if multiple entries are expected:
yes

7. Port Calls

7.1 Dates and Names of intended ports of call:
Aberdeen (UK), Newcastle/Tynemouth (UK). Date not fixed as depending on work schedule and intended as option in case of severe weather.

7.2 Any special logistical requirements at ports of call:
no

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 Project:
Co-financed by EU

8.2 Proposed dates and ports for embarkation/disembarkation:
None

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:
Within 2 months

9.2 Anticipated dates of submission to the coastal State of the final report:
Within 12 months

9.3 Proposed means for access by coastal State to data (including format) and samples:
ICES Acoustic Trawl Database. Post-processed acoustic and biotic data (available as .XML or .CSV)

9.4 Proposed means to provide coastal State with assessment of data, samples and Research results:
Annual Report of ICES Herring Assessment Working Group (HAWG) and ICES Working Group of International Pelagic Surveys (WGIPS)

9.5 Proposed means to provide assistance in assessment or interpretation of data, samples And research results:
ICES Herring Assessment Working Group (HAWG) and Working Group of International Pelagic Surveys (WGIPS)

9.6 Proposed means of making results internationally available:
ICES Herring Assessment Working Group (HAWG) and Working Group of International Pelagic Surveys (WGIPS)

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.:
Fig 1. Map of survey area and preliminary/proposed cruise track Fig 2. Technical drawings of trawl gear employed

Signature:

Contact information of the focal point:
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Fax: +49 (0)471 94460 199
Email: matthias.schaber@thuenen.de

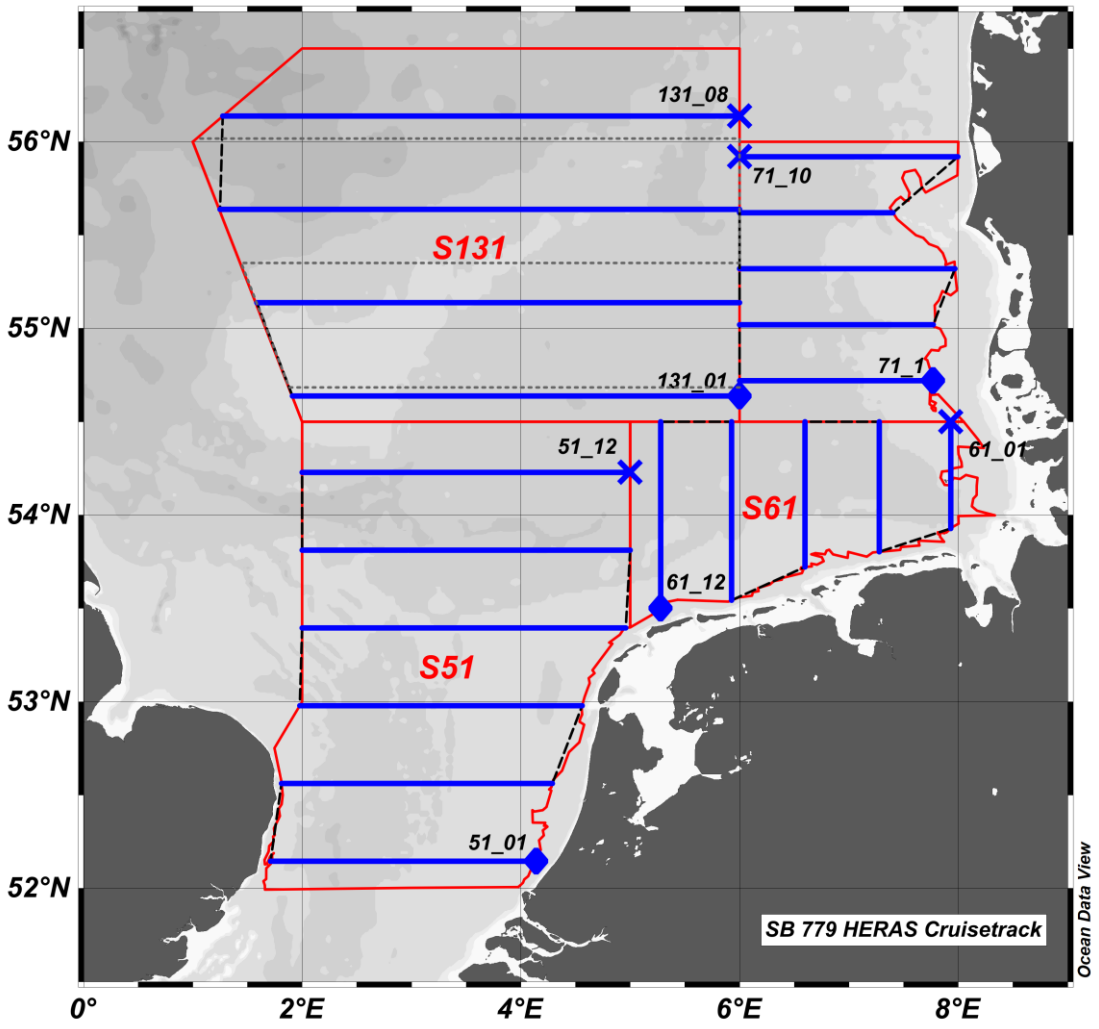

Fig 1: Survey area and cruise track for FRV "Solea" cruise SB779, 2020. Survey area and strata (S51, S61, S71 and S131, outlined in red) as in the previous year. Hydroacoustic transects – thick blue lines. Diamonds – start of transect per stratum (waypoint indicated); Crosses – end of transect per stratum (waypoint indicated). Trawl stations will be based on hydroacoustic fish registrations. Grey dotted lines in stratum 131 indicate alternative transects (3 instead of 4 in that stratum, increased intertransect spacing) that are proposed in case of survey time restrictions due to bad weather etc.

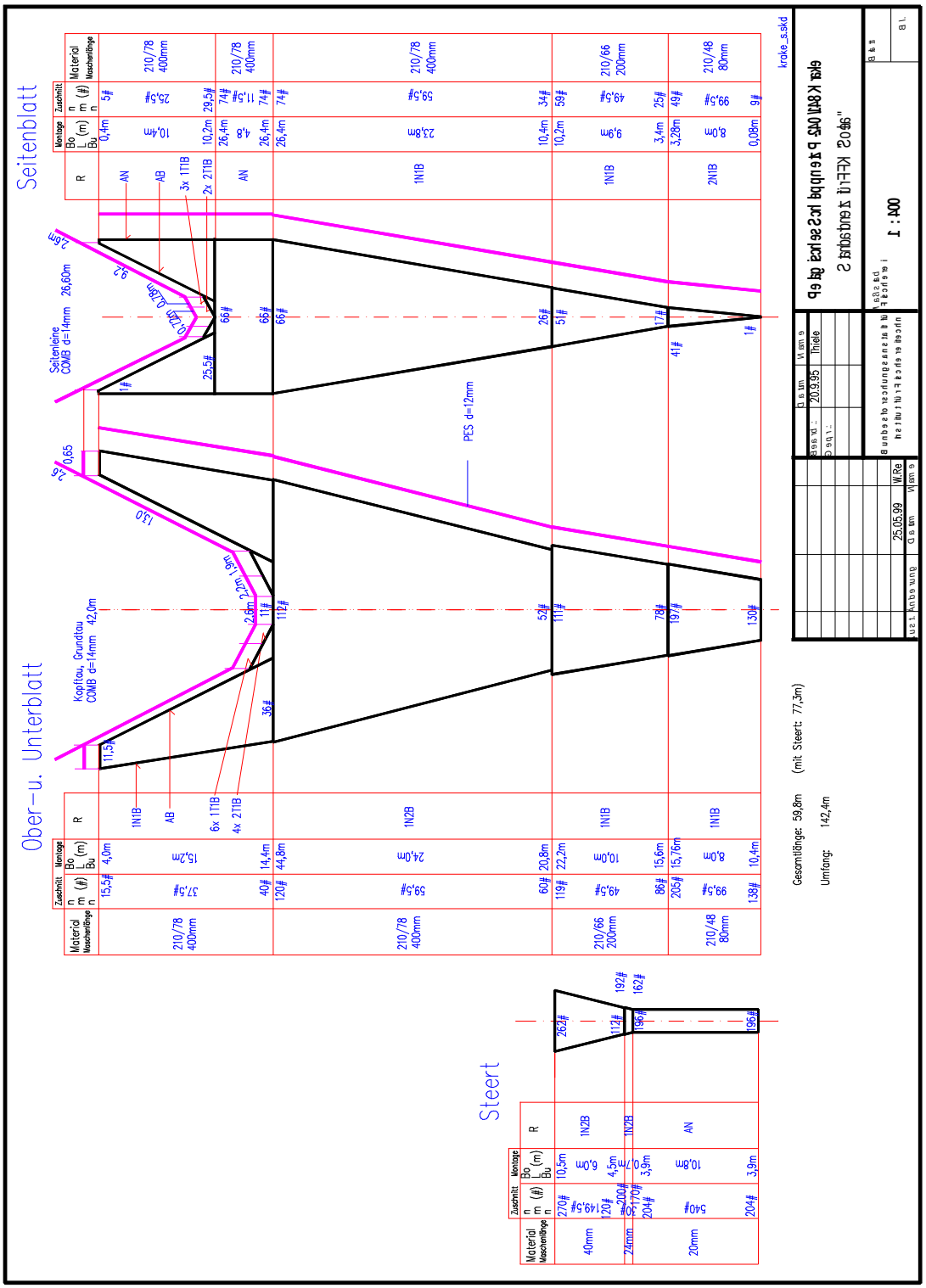

Fig 2a: Technical specifications of trawl net employed.

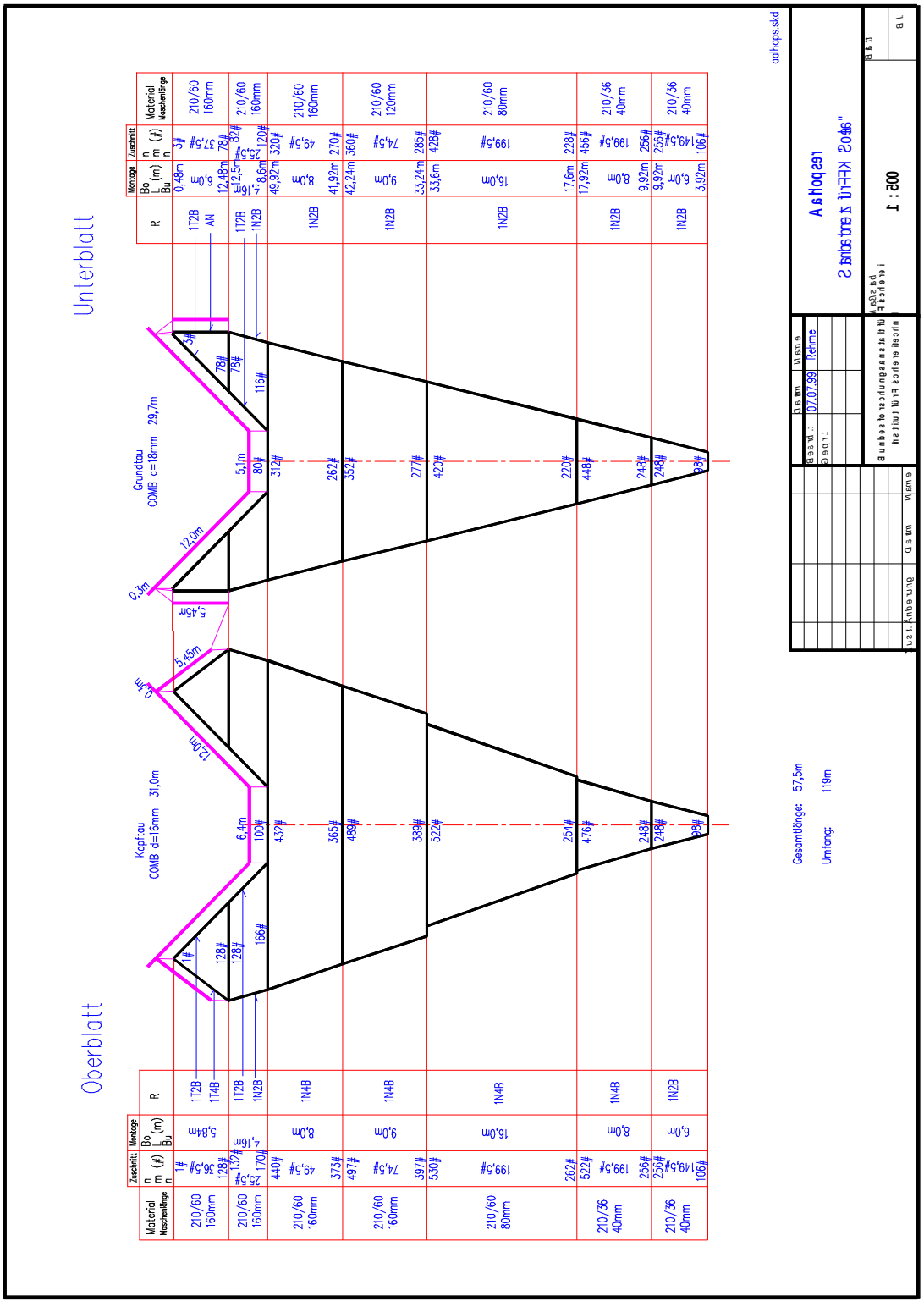

Fig 2b: Technical specifications of trawl net employed.