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Application for Consent to conduct
Marine Scientific Research

Date: 18 November, 2018

1. General Information

1.1 Cruise name and/or number:	
FRV Dana	Cruise No. 10/2019

1.2 Sponsoring Institution(s):	
Name:	Thuenen-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 Kloppmann
Country:	Germany
Affiliation:	Thuenen-Institute of Sea Fisheries
Address:	Herwigstr. 31, 25752 Bremerhaven
Telephone:	+49 471 94460 367
Fax:	+49 471 94460 199
Email:	matthias.kloppmann@thuenen.de
Website (for CV and photo):	www.thuenen.de/en/starteseite/institutes/sea-fisheries.html

1.4 Entity(ies)/Participant(s) from coastal State involved in the planning of the project:	
Name:	Finlay Burns
Affiliation:	Marine Scotland
Address:	375 Victoria Road, Aberdeen AB11 9DB
Telephone:	+44 1 224295 376
Fax:	
Email:	burnsf@marlab.ac.uk
Website (for CV and photo):	

2. Description of Project

2.1 Nature and objectives of the project:
Participation in the ICES coordinated International Bottom Trawl Survey (IBTS) 2019 of the first quarter (Q1) in the North Sea

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 Bottom Trawl Survey, Q1, in the North Sea, coordinated by ICES

2.3 Relevant previous or future research projects:
Cruise is part of a standard series coordinated by ICES since mid-1960's

2.4 Previous publications relating to the project:
All data are stored at ICES DATRAS and published in the framework of reports of the respective ICES working group: e.g. ICES 2017: Interim Report of the International Bottom Trawl Survey Working Group (IBTSWG), ICES CM 2017/SSGIEOM:01

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.
Central and southern North Sea between 54° N to57° N, particularly in those rectangles assigned to Germany by ICES (see attached map) with 1- 2 CTD and fishery haul, and 2 - 4 plankton tows per each ICES rectangle. There is no particularly specified cruise track or fixed station schedule planned for the survey. All station positions as well as their consecutive order will be planned during the cruise depending on the prevailing weather. See map below and attached Excel sheet for possible trawl positions in each rectangle where sampling is planned.

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.

4. Methods and means to be used

4.1 Particulars of vessel:	
Name:	Dana
Type/Class:	Fisheries Research Vessel (+100A5E2)
Nationality (Flag State):	Denmark
Identification Number (IMO/Lloyds No.):	7912680
Owner:	Denmark
Operator:	DTU Aqua (National Institute of Aquatic Resources Kemitorvet, Building 202, DK-2800 Kgs. Lyngby
Overall length (meters):	78,43
Maximum draught:	6.30
Displacement/Gross Tonnage:	2483 BRZ
Propulsion:	Diesel
Cruising & maximum speed:	11 Kn / 14 Kn
Call sign:	OXBH
INMARSAT number and method and capability of communication (including emergency frequencies):	Inmarsat Fleet Broadband +871 32 19 384 20 UKW channel 16
Name of Master:	Jesper Sandager
Number of Crew:	20
Number of Scientists on board:	10 - 12

4.2 Particulars of Aircraft*: none*	
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): *none*	
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:
none

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):
Fishery	Bottom Trawling	GOV	yes
Fish larvae	Plankton catches	2 m pelagic ring trawl	yes
water	CTD casts and bottles	Seabird SBE 19	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):
none

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:
First entry: 04/01/2019 Final departure: 21/01/2019
6.2 Indicate if multiple entries are expected:
yes

7. Port Calls

7.1 Dates and Names of intended ports of call:
none

7.2 Any special logistical requirements at ports of call:
none

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

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:
Observers of coastal state are welcome provided the availability of accommodation space

8.2 Proposed dates and ports for embarkation/disembarkation:
Esbjerg 03/01/2019 and Hirtshals 22/01/2019,

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:
Generally, all data will be uploaded to ICES DATRAS for further treatment about 4 weeks after the cruise. *Furthermore:* *1. Cruise summary report through official channels; English summary will be available about 4 weeks after the trip from the BSH website server:* http://seadata.bsh.de/csr/retrieve/dod_index.html *2. Short report latest by end of March 2019* *3. ICES IBTS Working Group Report, end of May 2019*

9.2 Anticipated dates of submission to the coastal State of the final report:
End March 2019

9.3 Proposed means for access by coastal State to data (including format) and samples:
The official ICES data portals (DATRAS and oceanography portal) http://www.ices.dk/marine-data/data-portals/Pages/DATRAS.aspx http://www.ices.dk/marine-data/data-portals/Pages/ocean.aspx

9.4 Proposed means to provide coastal State with assessment of data, samples and Research results:
Data will be available through ICES, cruise reports through official channels

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

9.6 Proposed means of making results internationally available:
Results are internationally available through ICES http://www.ices.dk/Pages/default.aspx

10. Other permits Submitted

10.1 Indicate other types of coastal state permits anticipated for this research (received or pending):
Norway, the Netherlands, and Germany

11. List of Supporting Documentation

11.1 List of attachments, such as additional forms required by the coastal State, etc.:
Excel sheet and map with possible trawl positions in ICES rectangles where sampling is planned

Signature: 

Contact information of the focal point:
Name: Matthias Kloppmann
Country: Germany
Affiliation: Thuenen Institute of Sea Fisheries
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Fax: +49 471 94460 199
Email: matthias.kloppmann@thuenen.de

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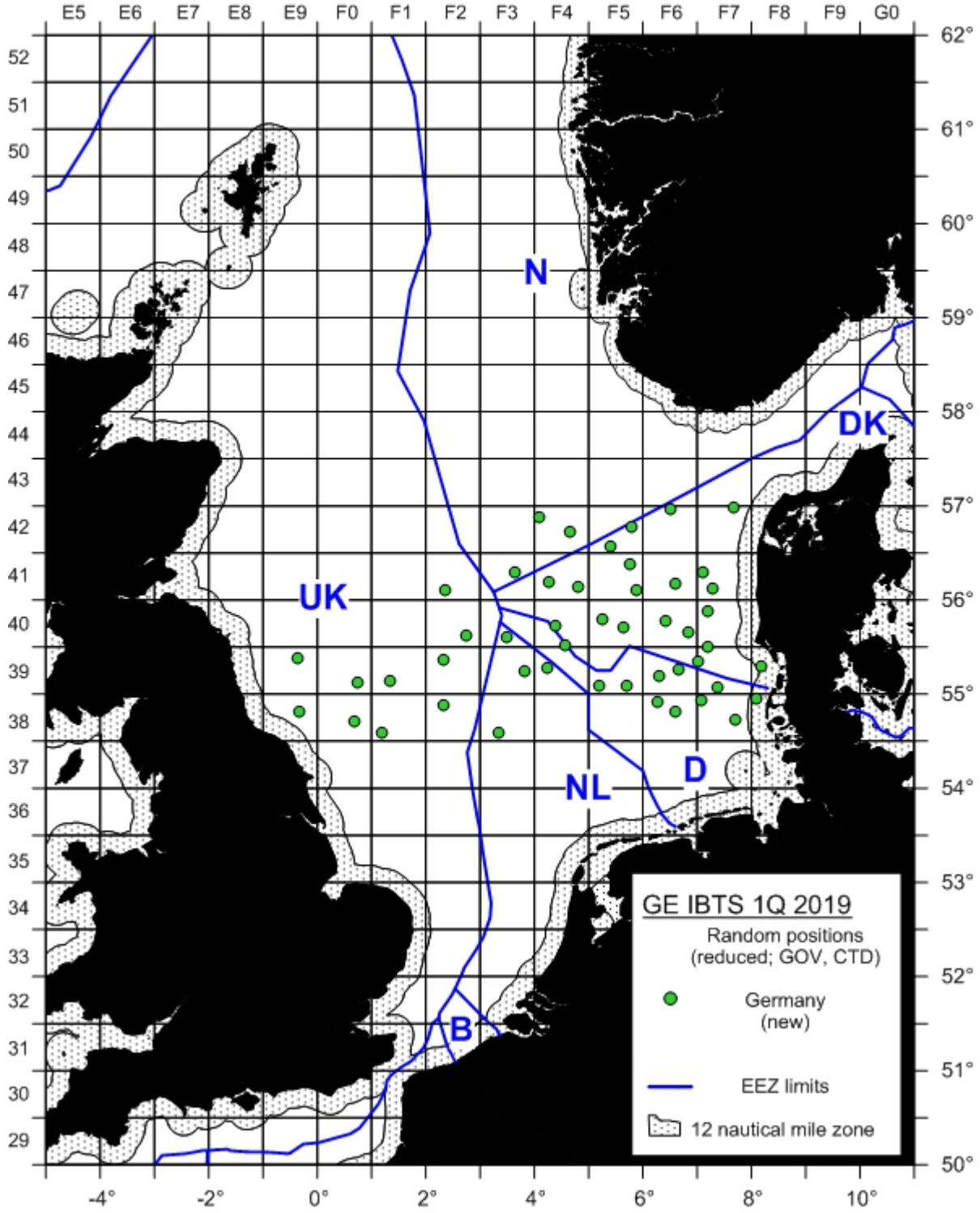
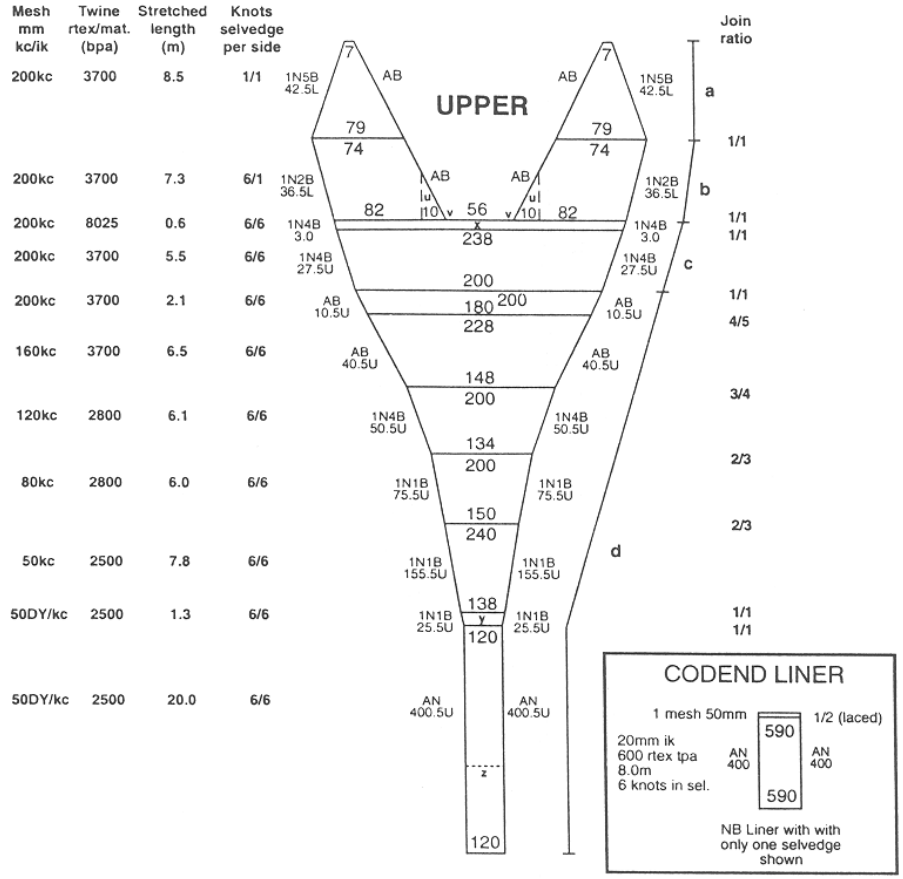
IBTS 2019(I)

Survey plan for the German participation in the IBTS Q1, Replacement Walther Herwig III cruise 424, 24/01 – 25/02/2019):

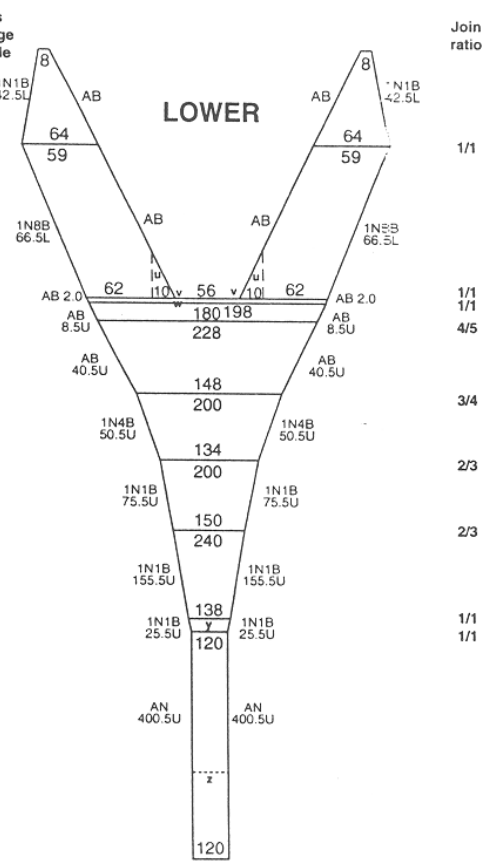


Construction of the 36/47 GOV trawl (adapted from drawings of the Institute des Peches Maritimes, Boulogne/Mer)

Mesh mm kc/ik	Twine rtex/mat. (bpa)	Stretched length (m)	Knots selvedge per side	Join ratio
200kc	3700	8.5	1/1	1/1
200kc	3700	7.3	6/1	1/1
200kc	8025	0.6	6/6	1/1
200kc	3700	5.5	6/6	1/1
200kc	3700	2.1	6/6	4/5
160kc	3700	6.5	6/6	3/4
120kc	2800	6.1	6/6	2/3
80kc	2800	6.0	6/6	2/3
50kc	2500	7.8	6/6	1/1
50DY/kc	2500	1.3	6/6	1/1
50DY/kc	2500	20.0	6/6	



Mesh mm kc/ik	Twine rtex/mat. (bpa)	Stretched length (m)	Knots selvedge per side	Join ratio
200kc	5500	8.5	1/1	1/1
200kc	5500	13.3	6/1	1/1
200kc	8025	0.4	6/6	1/1
200kc	5500	1.7	6/6	4/5
160kc	3700	6.5	6/6	3/4
120kc	2800	6.1	6/6	2/3
80kc	2800	6.0	6/6	2/3
50kc	2500	7.8	6/6	1/1
50DY/kc	2500	1.3	6/6	1/1
50DY/kc	2500	20.0	6/6	



Headline : 36m (15.50 + 5.00 + 15.50) x 14mm ϕ wire (f/c) served (6/19 - 12/6/1 65.8kg/100m).
Fishingline : 47.20m (21.10 + 5.00 + 21.10) x 22mm ϕ combination wire 6 strand/steel core 54.6kg/100m).
Winglines : Upper 8.2m, Lower 8.2m x 20mm ϕ combination wire (6 strand/steel core 54.6kg /100m)

a - 7.1m x 14mm ϕ wire (6/19 - 12/6/1 - 65.8kg/100m)
b - 6.7m x 20mm ϕ combination wire (6 strand/steel core - 54.4kg/100m)
c - 5.55m x 20mm ϕ combination wire (6 strand/steel core - 54.4kg/100m)
d - length for length x 22mm ϕ nylon (3 strand - 26kg/100m)

u - Gussets 8025rtex
v - 4 meshes gathered at quarters

w - 200 198
x - 240 238
y - 138 120

z - Joining position for Liner

kc = knot centre to knot centre
ik = inside knot measurement
tpa = polyamide twine/twisted
bpa = polyamide twine/braided
dy = double yarn

Method of join used, sewing.
Type of knot, weavers knot.

NOTE TO NETMAKERS

The numbers of meshes shown for netting panel widths do NOT include selvedge meshes. Five meshes (six knots) per selvedge must be added where indicated. Conversely to obtain panel depths one row (1/2 mesh) must be subtracted from each panel as the joining row is included in the number of meshes deep. The total numbers of meshes (width and depth) for each individual panel are set out in GOV 36/47 Groundfish Survey Trawl Checklist (Page 2 of 5)

GOV standard fishing gear (trawl construction)

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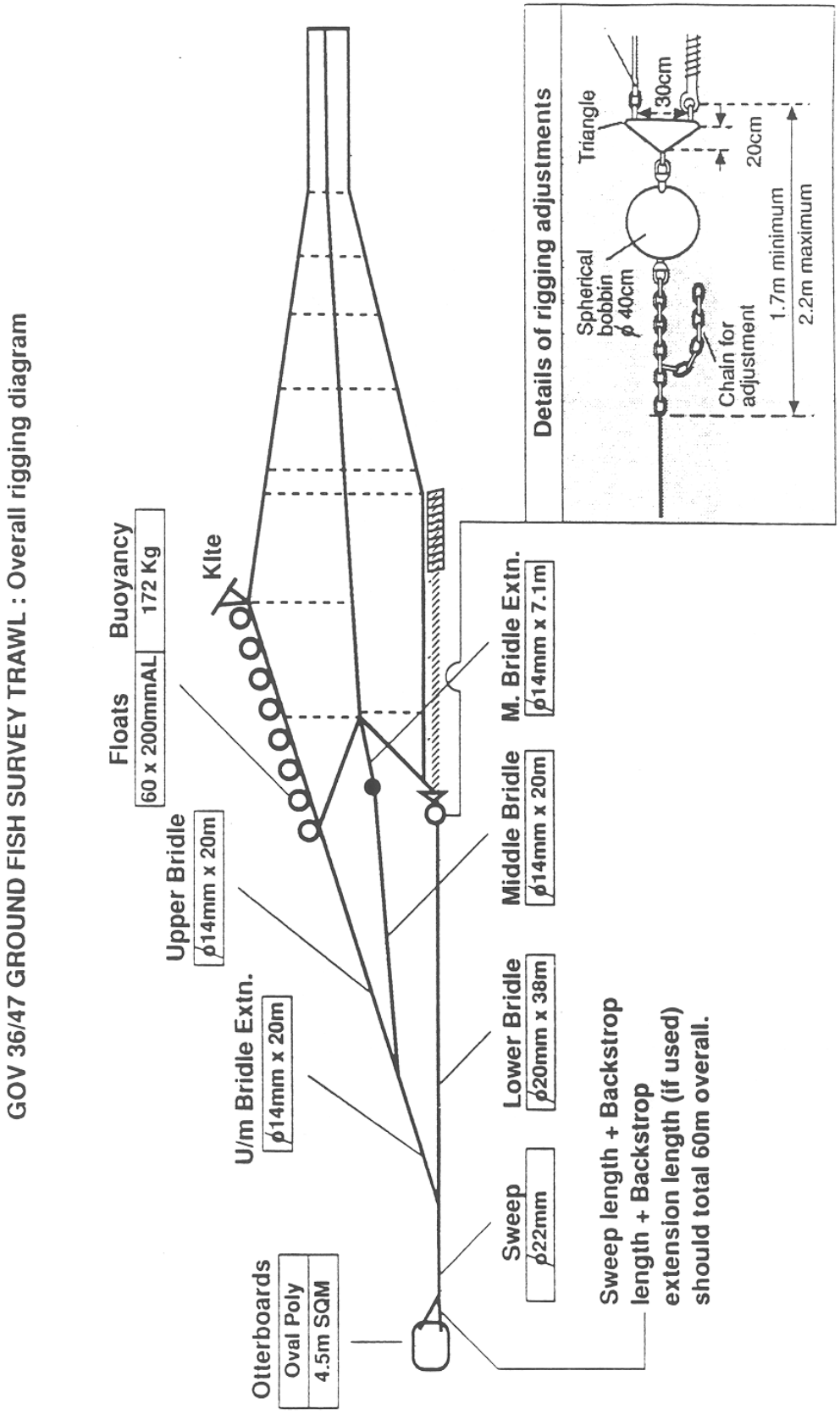
GOV standard fishing gear (rigging)



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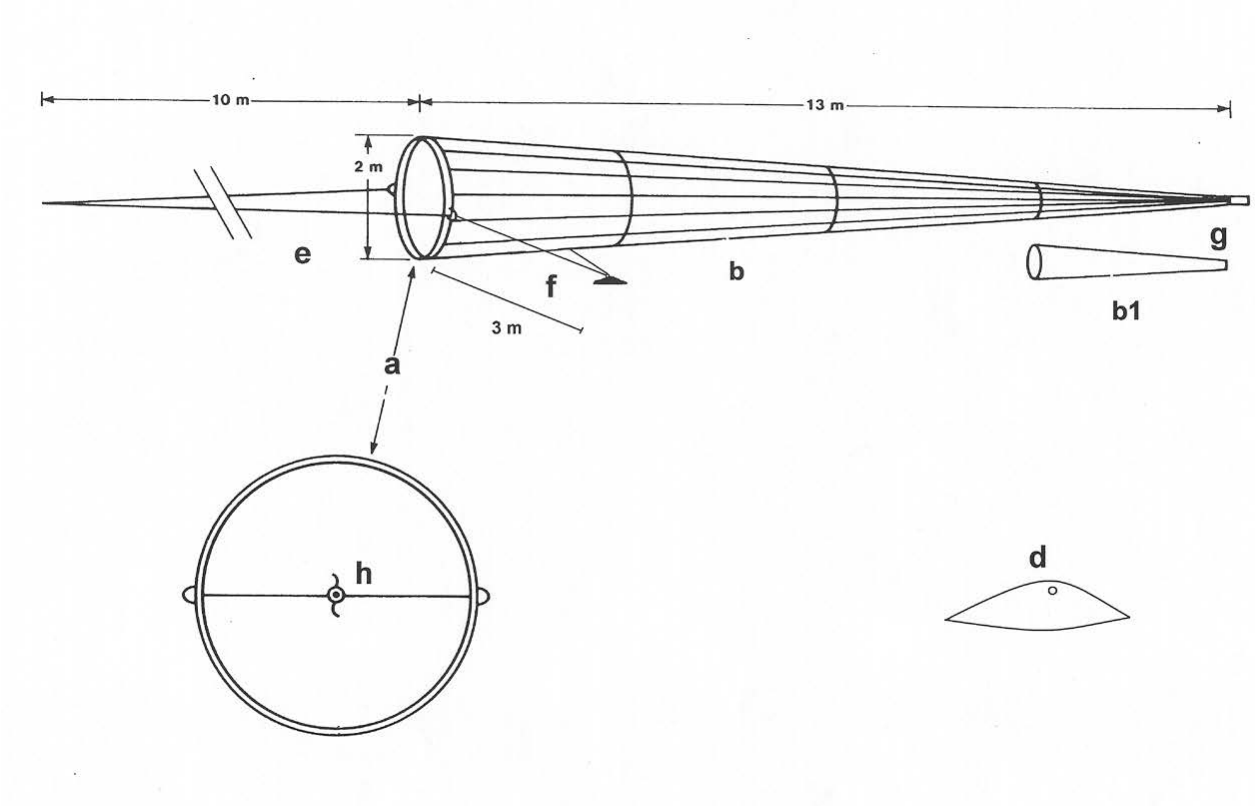
Construction and rigging of the MIK plankton net



a) Ring of 2 meter diameter.

b) Black net of 1.6 mm pore, 13 meter long, strengthened by nylon or canvas straps. In the last metre of the net a 500 µm net is inserted (b1)

d) Saddle shaped weight or depressor.

e) Pair of 10 meter long bridles to the gear.

f) Pair of 3.0 meter long bridles to the weight or depressor.

g) Cod-end bucket (Ø 11 cm), netting of 500 µm

h) Flow meter mounted on a string crossing the ring, positioned in the center of the ring.