United Kingdom (England and Scotland)

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

A. GENERAL

1.	**NAME OF RESEARCH SHIP**	DANA	**CRUISE NO.** 08/2020
2.	**DATES OF CRUISE**	**FROM** 28/7 2020	**TO** 14/8 2020
3.	**OPERATING AUTHORITY**		
3.	**OPERATING AUTHORITY**	DTU Aqua (National Institute of Aquatic Resources) Kemitorvet, Building 202 DK-2800 Kgs. Lyngby Telephone: +45 35 88 33 00 Fax.: +45 35 88 33 33 E-mail: aqua@aqua.dtu.dk	
4.	**OWNER (if different for para.3)**		
5.	**PARTICULARS OF SHIP**	**NAME**	DANA
		NATIONALITY	Danish
		OVERALL LENGTH (metres)	80 metres
		MAXIMUM DRAUGHT (metres)	6.3 metres
		NET TONNAGE	669.53 t
		METHOD OF PROPULSION	Steam Turbine/Diesel/Diesel Electric
		CALL SIGN	OXBH
		REGISTERED PORT & NUMBER (if reg. fishing vessel)	Hirtshals
6.	**CREW**	**NAME OF MASTER**	Jesper Sandager
		NUMBER OF CREW	20
7.	**SCIENTIFIC PERSONNEL**	**NAME AND ADDRESS OF SCIENTIST IN CHARGE**	Kai Wieland / Helle Rasmussen DTU Aqua North Sea Science Park Willemoesvej 2 DK-9850 Hirtshals
		TEL NO / FAX NO	+45 35 88 33 00 / +45 35 88 33 33
		NUMBER OF SCIENTISTS	10

8. **GEOGRAPHICAL AREA IN WHICH SHIP WILL OPERATE** (with reference in Latitude and Longitude):
   51°00'N - 58°00'N , 02°00'W -10°00'E
9. **BRIEF DESCRIPTION OF PURPOSE OF CRUISE:**
   IBTS (International Bottom Trawl Survey)
10. **DATES AND NAMES OF INTENDED PORTS OF CALL:**
    NONE
11. **ANY SPECIAL REQUIREMENTS AT PORTS OF CALL:**
    NONE

B. DETAIL

1. **NAME OF RESEARCH SHIP** DANA **CRUISE NO.** 08/2020

2. **DATES OF CRUISE** **FROM** 28/7 2019 **TO:** 14/8 2020

3. **PURPOSE OF RESEARCH AND GENERAL OPERATIONAL METHODE**

International Bottom Trawl Survey. Bottom Trawling and Pelagic sampling.

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.:**

See enclosed map and station list

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:**

Fish: Herring, cod, haddock, whiting, sprat, Norway pout, mackerel, fish larvae and water

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

Fishing

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.):**

GOV Bottom trawl (16 mm)

ISAAC-KIDD MIDWATER TRAWL (MIK) and Bongo net: Pelagic fish larvae (5 mm).

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:

NS-IBTS 1981 – 2019

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

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:**

Jim Ellis	**Finlay Burns**
CEFAS	**Marine Scotland Science**
Lowestoft Laboratory	**Marine Laboratory**
Lowestoft	**Aberdeen**
UK	**UK**

10. **STATE:**

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

YES

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

YES

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

By Special arrangement

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

ICES DATRAS September 2020, IBTSWG March 2021

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: United Kingdom (England and Scotland)
PORT CALL: None

DATES: 28/7 – 14/8 2020

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

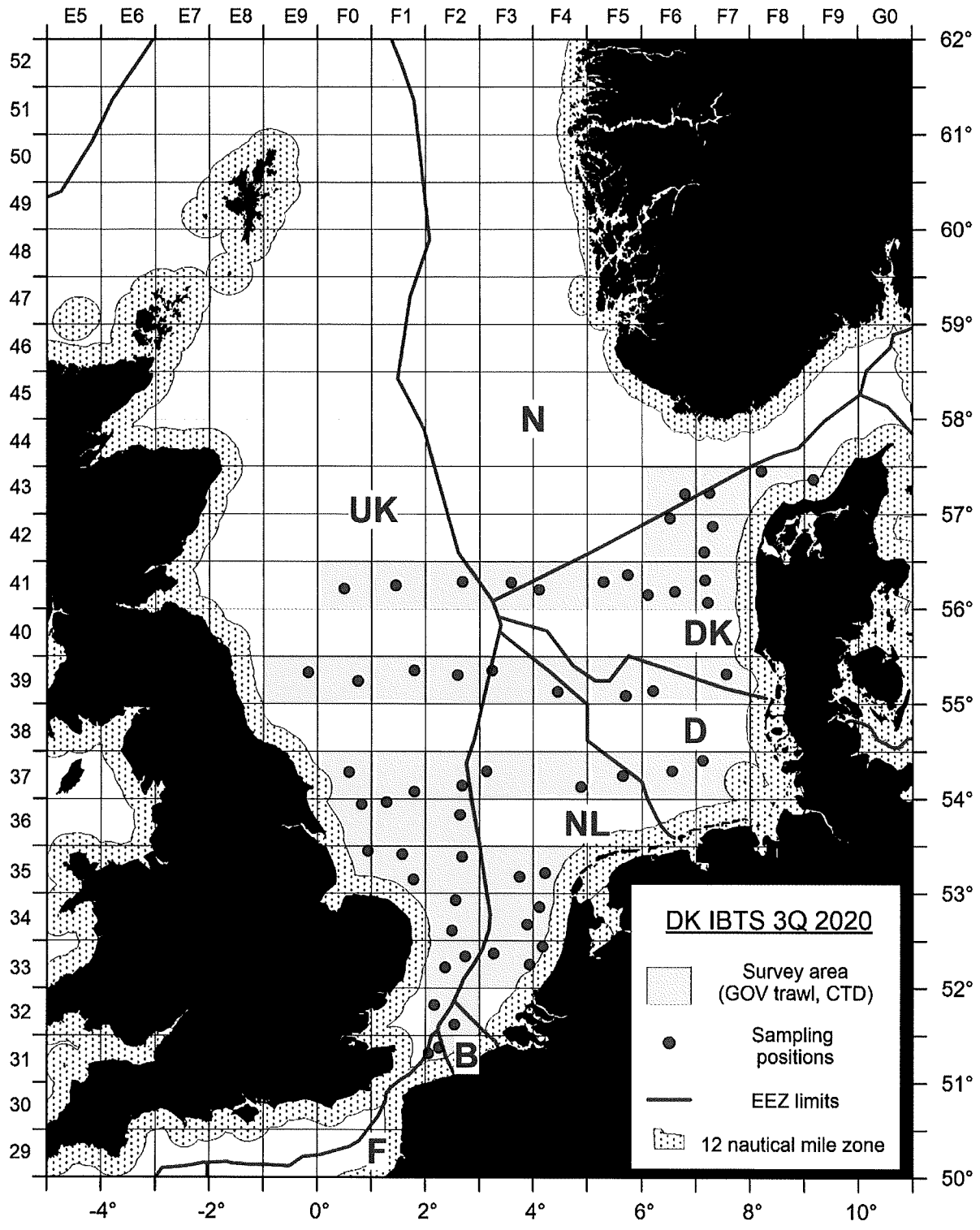
LIST SCIENTIFIC WORK BY FUNCTION **e.g. :** **Magnetometry** **Gravity diving** **Seismics** **Bathymetry** **Seabed sampling** **Trawling** **Echo sounding** **Water sampling** **U/W TV** **Moored instruments** **Towed instruments**	**Water Column**	**Fisheries Research within fishing limits**	**Research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

.....Linda Stuhr Christensen..... **Dated:** 10/1-20

(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.

Survey map


E5 E6 E7 E8 E9 F0 F1 F2 F3 F4 F5 F6 F7 F8 F9 G0
52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29
62° 61° 60° 59° 58° 57° 56° 55° 54° 53° 52° 51° 50°
-4° -2° 0° 2° 4° 6° 8° 10°
N
UK
DK
D
NL
B
F
DK IBTS 3Q 2020
Survey area (GOV trawl, CTD)
Sampling positions
EEZ limits
12 nautical mile zone

Station list

Station	StatRec	ShootLat	ShootLon	HaulLat	HaulLon	StartLatDegMin	StartLonDegMin	EndLatDegMin	EndLonDegMin
1	43F9	57.3613	9.1668	57.3708	9.1099	57 ° 21.678 'N	9 ° 10.008 'E	57 ° 22.248 'N	9 ° 6.594 'E
2	43F8	57.4540	8.2123	57.4735	8.2568	57 ° 27.240 'N	8 ° 12.738 'E	57 ° 28.410 'N	8 ° 15.408 'E
3	43F7	57.2232	7.2526	57.2104	7.2193	57 ° 13.392 'N	7 ° 15.156 'E	57 ° 12.624 'N	7 ° 13.158 'E
4	43F6	57.2126	6.7970	57.1892	6.8417	57 ° 12.756 'N	6 ° 47.820 'E	57 ° 11.352 'N	6 ° 50.502 'E
5	42F7	56.6019	7.1504	56.5727	7.1806	56 ° 36.112 'N	7 ° 9.025 'E	56 ° 34.364 'N	7 ° 10.834 'E
6	42F7	56.8712	7.3055	56.8375	7.3009	56 ° 52.272 'N	7 ° 18.330 'E	56 ° 50.250 'N	7 ° 18.054 'E
7	42F6	56.9604	6.5158	56.9615	6.4553	56 ° 57.624 'N	6 ° 30.948 'E	56 ° 57.690 'N	6 ° 27.318 'E
8	41F7	56.3037	7.1700	56.2996	7.1103	56 ° 18.220 'N	7 ° 10.200 'E	56 ° 17.977 'N	7 ° 6.619 'E
9	41F7	56.0677	7.2191	56.0600	7.1610	56 ° 4.060 'N	7 ° 13.144 'E	56 ° 3.599 'N	7 ° 9.658 'E
10	41F6	56.1827	6.6086	56.1826	6.5493	56 ° 10.960 'N	6 ° 36.518 'E	56 ° 10.957 'N	6 ° 32.958 'E
11	41F6	56.1498	6.1099	56.1408	6.0551	56 ° 8.986 'N	6 ° 6.595 'E	56 ° 8.447 'N	6 ° 3.303 'E
12	41F5	56.3595	5.7351	56.3815	5.7787	56 ° 21.568 'N	5 ° 44.105 'E	56 ° 22.891 'N	5 ° 46.722 'E
13	41F5	56.2885	5.2906	56.2989	5.2310	56 ° 17.310 'N	5 ° 17.436 'E	56 ° 17.934 'N	5 ° 13.860 'E
14	41F4	56.2074	4.1061	56.2276	4.1547	56 ° 12.446 'N	4 ° 6.367 'E	56 ° 13.658 'N	4 ° 9.281 'E
15	41F3	56.2805	3.5888	56.2599	3.6354	56 ° 16.827 'N	3 ° 35.325 'E	56 ° 15.596 'N	3 ° 38.124 'E
16	41F2	56.2861	2.6872	56.2913	2.7452	56 ° 17.167 'N	2 ° 41.229 'E	56 ° 17.476 'N	2 ° 44.710 'E
17	41F1	56.2477	1.4457	56.2509	1.4755	56 ° 14.862 'N	1 ° 26.742 'E	56 ° 15.054 'N	1 ° 28.530 'E
18	41F0	56.2134	0.4907	56.2468	0.5007	56 ° 12.804 'N	0 ° 29.442 'E	56 ° 14.808 'N	0 ° 30.042 'E
19	39F7	55.3178	7.5637	55.3234	7.5064	55 ° 19.065 'N	7 ° 33.821 'E	55 ° 19.402 'N	7 ° 30.382 'E
20	39F6	55.1395	6.2011	55.1289	6.1463	55 ° 8.371 'N	6 ° 12.064 'E	55 ° 7.735 'N	6 ° 8.776 'E
21	39F5	55.0898	5.6963	55.1024	5.6445	55 ° 5.390 'N	5 ° 41.776 'E	55 ° 6.144 'N	5 ° 38.672 'E
22	39F4	55.1298	4.4523	55.1014	4.4230	55 ° 7.785 'N	4 ° 27.136 'E	55 ° 6.082 'N	4 ° 25.378 'E
23	39F3	55.3552	3.2338	55.3232	3.2172	55 ° 21.312 'N	3 ° 14.025 'E	55 ° 19.390 'N	3 ° 13.031 'E
24	39F2	55.3078	2.5974	55.2793	2.5675	55 ° 18.467 'N	2 ° 35.846 'E	55 ° 16.758 'N	2 ° 34.052 'E
25	39F1	55.3543	1.7920	55.3378	1.7416	55 ° 21.255 'N	1 ° 47.519 'E	55 ° 20.270 'N	1 ° 44.497 'E
26	39F0	55.2441	0.7450	55.2138	0.7211	55 ° 14.646 'N	0 ° 44.700 'E	55 ° 12.828 'N	0 ° 43.266 'E
27	39E9	55.3351	-0.1716	55.3457	-0.1160	55 ° 20.106 'N	0 ° 10.296 'W	55 ° 20.742 'N	0 ° 6.960 'W
28	37F7	54.4094	7.1208	54.3857	7.1609	54 ° 24.565 'N	7 ° 7.245 'E	54 ° 23.140 'N	7 ° 9.656 'E
29	37F6	54.2957	6.5546	54.3058	6.5003	54 ° 17.742 'N	6 ° 33.275 'E	54 ° 18.346 'N	6 ° 30.015 'E
30	37F5	54.2474	5.6472	54.2672	5.6020	54 ° 14.841 'N	5 ° 38.832 'E	54 ° 16.033 'N	5 ° 36.117 'E
31	37F4	54.1291	4.8863	54.1063	4.8390	54 ° 7.746 'N	4 ° 53.178 'E	54 ° 6.378 'N	4 ° 50.340 'E
32	37F3	54.2927	3.1284	54.3078	3.1794	54 ° 17.562 'N	3 ° 7.704 'E	54 ° 18.468 'N	3 ° 10.764 'E
33	37F2	54.1409	2.6821	54.1393	2.6264	54 ° 8.454 'N	2 ° 40.926 'E	54 ° 8.358 'N	2 ° 37.584 'E
34	37F1	54.0783	1.7899	54.0795	1.8464	54 ° 4.698 'N	1 ° 47.394 'E	54 ° 4.770 'N	1 ° 50.784 'E
35	37F0	54.2834	0.5812	54.3016	0.5322	54 ° 17.004 'N	0 ° 34.872 'E	54 ° 18.096 'N	0 ° 31.932 'E
36	36F2	53.8324	2.6419	53.8481	2.5930	53 ° 49.944 'N	2 ° 38.514 'E	53 ° 50.886 'N	2 ° 35.580 'E
37	36F1	53.9673	1.2782	53.9363	1.2977	53 ° 58.039 'N	1 ° 16.691 'E	53 ° 56.178 'N	1 ° 17.860 'E
38	36F0	53.9457	0.8167	53.9458	0.7623	53 ° 56.742 'N	0 ° 49.002 'E	53 ° 56.748 'N	0 ° 45.738 'E
39	35F4	53.2169	4.2207	53.2467	4.1982	53 ° 13.011 'N	4 ° 13.241 'E	53 ° 14.801 'N	4 ° 11.892 'E
40	35F3	53.1801	3.7465	53.1485	3.7646	53 ° 10.808 'N	3 ° 44.788 'E	53 ° 8.907 'N	3 ° 45.877 'E
41	35F2	53.3901	2.6819	53.3565	2.6857	53 ° 23.406 'N	2 ° 40.914 'E	53 ° 21.390 'N	2 ° 41.142 'E
42	35F1	53.1472	1.7782	53.1215	1.7461	53 ° 8.832 'N	1 ° 46.692 'E	53 ° 7.290 'N	1 ° 44.766 'E
43	35F1	53.4159	1.5707	53.4485	1.5834	53 ° 24.952 'N	1 ° 34.244 'E	53 ° 26.908 'N	1 ° 35.006 'E
44	35F0	53.4492	0.9374	53.4742	0.9031	53 ° 26.952 'N	0 ° 56.244 'E	53 ° 28.452 'N	0 ° 54.186 'E
45	34F4	52.8550	4.1172	52.8286	4.0853	52 ° 51.298 'N	4 ° 7.034 'E	52 ° 49.717 'N	4 ° 5.118 'E
46	34F3	52.6706	3.8931	52.6550	3.9414	52 ° 40.237 'N	3 ° 53.583 'E	52 ° 39.297 'N	3 ° 56.485 'E
47	34F2	52.6071	2.4937	52.5922	2.4485	52 ° 36.426 'N	2 ° 29.622 'E	52 ° 35.532 'N	2 ° 26.910 'E
48	34F2	52.9303	2.5637	52.9652	2.5771	52 ° 55.818 'N	2 ° 33.822 'E	52 ° 57.912 'N	2 ° 34.626 'E
49	33F4	52.4399	4.1765	52.4244	4.1290	52 ° 26.394 'N	4 ° 10.589 'E	52 ° 25.461 'N	4 ° 7.742 'E
50	33F3	52.2501	3.9336	52.2652	3.8851	52 ° 15.004 'N	3 ° 56.015 'E	52 ° 15.914 'N	3 ° 53.104 'E
51	33F3	52.3685	3.2650	52.3357	3.2652	52 ° 22.110 'N	3 ° 15.900 'E	52 ° 20.139 'N	3 ° 15.914 'E
52	33F2	52.3350	2.7437	52.3213	2.6948	52 ° 20.100 'N	2 ° 44.623 'E	52 ° 19.279 'N	2 ° 41.687 'E
53	33F2	52.2222	2.3662	52.2557	2.3595	52 ° 13.331 'N	2 ° 21.973 'E	52 ° 15.342 'N	2 ° 21.570 'E
54	32F2	51.8251	2.1630	51.8571	2.1746	51 ° 49.506 'N	2 ° 9.780 'E	51 ° 51.426 'N	2 ° 10.476 'E
55	32F2	51.6181	2.5394	51.6487	2.5621	51 ° 37.086 'N	2 ° 32.364 'E	51 ° 38.922 'N	2 ° 33.726 'E
56	31F2	51.3721	2.2485	51.3923	2.2799	51 ° 22.326 'N	2 ° 14.910 'E	51 ° 23.538 'N	2 ° 16.794 'E
57	31F2	51.3133	2.0577	51.3301	2.0925	51 ° 18.798 'N	2 ° 3.462 'E	51 ° 19.806 'N	2 ° 5.550 'E