

Cruise Report

R/V Dana

Cruise 10/2026

"DK IBTS 3Q 2026"

Kai Wieland & Helle Rasmussen
Section for Monitoring Hirtshals

18.09.2026



Vessel: R/V DANA

Cruise dates (planned): 18/8 –8/9 2026

Cruise number: 10/26

Cruise name: DK IBTS 3Q 2026

Port of departure:	Hirtshals	Date:	18 August
Port of return:	Esbjerg*	Date:	7 September
Other ports:	Esbjerg	Date and justification:	28 August: Scheduled exchange of scientific staff and crew

Participants

Leg 1: Hirtshals – Esbjerg		
Name	Institute	Function and main tasks
Helle Rasmussen	DTU Aqua, Monitoring	Cruise leader, Technician, Fish lab
Maria Jarnum	DTU Aqua, Monitoring	Technician, Fish lab
Rasmus Jensen	DTU Aqua, Monitoring	Technician, Fish lab
Stina B. Hansen	DTU Aqua, Monitoring	Technician, Fish lab
Kasper Nygaard Schaltz	DTU Aqua, Monitoring	Technician, Fish lab
Bastian Huwer	DTU Aqua, Monitoring	Scientist, MIK (Fish larvae)
Ronny Sørensen	DTU Aqua, Monitoring	Technician, CTD, Maintenance
Martin Kortegaard Nielsen	Miljøstyrelsen	Water chemistry and mesozooplankton
Martin Søndergaard Jørgensen	Miljøstyrelsen	Water chemistry and mesozooplankton
Pedro Magalhaes	NIOZ*	Technician, Fish lab (pel. fish sampling)
Esin Yüksel Durmaz	DTU Aqua, Oceanography	MIK (Jellyfish)
Ash Aaron Mooney	DTU Aqua, student	MIK (Jellyfish)
Leg 2: Esbjerg – Hirtshals		
Name	Institute	Function and main tasks
Kai Wieland	DTU Aqua, Monitoring	Cruise leader, Scientist, Fish lab
Thomas Møller	DTU Aqua, Monitoring	Technician, Fish lab
Tom Svoldgaard	DTU Aqua, Monitoring	Technician, Fish lab
Hans Henrik Jørgensen	DTU Aqua, Monitoring	Technician, Fish lab
Per Christensen	DTU Aqua, Monitoring	Technician, Fish lab
Bodil Berendt Toftegård	DTU Aqua, Oceanography	Technician, CTD, Maintenance
Pedro Magalhaes	NIOZ*	Technician, Fish lab (pel. fish sampling)
Leo Joseph Sheils	DTU Aqua, Ecosystem based Marine Management	PhD student, Fish lab

*: Royal Netherlands Institute for Sea Research

Objectives

The survey is part of the 3rd quarter International Bottom Trawl Survey (IBTS) in the North Sea, which is coordinated by the ICES International Bottom Trawl Survey Working Group and has been conducted with standard fishing gear in the 3rd quarter since 1991.

The IBTS aims to provide ICES assessment and science groups with consistent and standardized data for examining spatial and temporal changes in (a) the distribution and relative abundance of fish and fish assemblages; and (b) of the biological parameters of commercial fish species for stock assessment purposes. The main objectives in the 3rd quarter IBTS are to:

- To determine the distribution and relative abundance of pre-recruits of the main commercial species (cod, haddock, whiting, Norway pout, saithe, herring, sprat, mackerel and plaice) with a view of deriving recruitment indices;
- To monitor changes in the stocks of commercial fish species independently of commercial fisheries data;
- To monitor the distribution and relative abundance of all captured fish species and selected invertebrates;
- To collect data for the determination of biological parameters for selected species;
- To collect hydrographical and environmental information.
- To collect information of the amount and distribution of marine litter

Technical details are described in the current version of the survey manual (ICES. 2020. Manual for the North Sea International Bottom Trawl Surveys. Series of ICES Survey Protocols SISP 10-IBTS 10, Revision 11. 102 pp. <http://doi.org/10.17895/ices.pub.7562> , and ICES. 2013.

Collection of fish stomachs was added according to a request from the EU, and for this a 5-year rolling scheme of species has been adopted.

The survey area to be covered by Denmark with RV Dana in the 3rd quarter 2026 was allocated during the IBTS Working Group meeting in April 2026. At this meeting, a plan for the implementation of the new standard survey trawl was discussed. This plan was later revised and the list of rectangles in which the old gear (GOV) and where the new gear (JTDS) should be used was received after an intersessional meeting.

The survey objectives were extended by environmental monitoring in the Danish EEZ collecting information on water chemistry and zooplankton for national purposes. For doing so, two days with additional external funding were added to the period of the 1st cruise leg.

In addition, sampling for fish larvae and jellyfish with a 2 m midwater ring net (MIK) during the night was planned for the 1st leg of the cruise.

Itinerary

R/V Dana left Hirtshals on Tuesday 18th August at 10:00 local time, and the field work started in the western Skagerrak (Fig. 1) on the same day. R/V Dana stayed in the port of Esbjerg from Friday 28th August 7:30 to 15:15 for a scheduled exchange of scientific staff

and crew and fieldwork resumed on the next day in the morning. R/V Dana returned to Hirtshals on Monday 7th September at 09:00 local time.

Favourable weather conditions prevailed during almost the entire survey (Fig. 2). While north-westerly wind above 15 m/s occurred frequently during the 1st leg, wind direction changed to north-east and east during the main part of the 2nd leg with wind speeds below 15 m/s almost all the time.

Achievements

Most of standard trawl hauls were carried out with a 36/47 polyethylene GOV (chalut á Grande Overture Verticale) with the standard groundgear A (see IBTS Manual for specifications), 60 m sweeps and Vonin flyers replacing the standard kite, representing the standard rigging used for the IBTS on DANA since 2019. In about 25 % of the rectangles in which other countries were obliged to use the GOV, standard tows were conducted with the JTS610 downscaled version (see recent IBTSWG reports for specifications) which will become the new IBTS standard gear.

The following activities were achieved:

36 valid GOV hauls and 1 invalid GOV hauls on standard positions. The invalid tow was repeated on a near-by track. The previously used track in rectangle 31F2 was discarded because trawl damages occurred there in the past three years. Two alternative tracks used by other countries in this rectangle were checked but were judged as unsuitable (crossing two sea cables in a traffic zone or too rough bottom). The second tow in rectangle 37F1 was an additional haul which was conducted to prove the suitability of an alternative track in this area.

19 valid JTS610 hauls (of which 18 tows were done on standard positions and 1 tow was an additional experimental haul).

73 CTD profiles (with additional sensors for e.g., dissolved oxygen and turbidity). At 20 CTD stations located in the Danish EEZ bottle samples were taken for water chemistry.

32 Plankton stations (at 10 different locations) for environmental monitoring in the Danish EEZ.

36 valid and 2 invalid MIK (2 m ring net) stations for fish larvae and jellyfish. In addition, 2 stations for flowmeter calibration.

Results

Trawl performance

GOV trawl parameters for the standard tows (vertical net opening and door spread) as monitored with a Scanmar system were in the range or close to the suggested limits specified in the IBTS manual in most cases (Fig. 3a). The remaining deviations for mainly net opening from the theoretical values based on flume tank experiments can likely be

attributed to the high sensibility of the GOV to minor changes in the rigging, current effects and bottom type.

JTS610 headline height and door spread were close to or within the range of the preliminary target values (Fig. 3a). However, headline height was in several tows lower than expected. In these cases, the towing was conducted against currents being stronger than 0.5 kn (Fig. 3b) and it appears that in such situation door and wing spread become a bit too wide although warp length was reduced as much as possible without losing proper ground contact. Angle of attack (Bridle angle), however, was within or very close to the predefined targets in all cases (Fig. 3b).

Marport sensors for wing spread worked properly on most of stations for both gears, and the remaining five missing values for the standard tows can easily be estimated from the linear regression with door spread.

Nominal tow duration for both gears is 30 min. However, in several cases the towing time was shortened. At 13 stations the echo sounder and the catch sensor indicated (Fig. 4) a high risk that the catch was becoming too large to be handled safely. Other reasons for the tow duration disruption was the towing track with suitable conditions (bottom roughness, safety distance to cables and pipelines, ship traffic) was too short (2 stations).

Trawl catches

In total, about 80 different species of fish, cephalopods and crustaceans were found in catches (Tab. 1) and the total weight of the catches was 35 tons (for both gears combined). Here, whiting and haddock were the most dominant species in weight whereas sprat, whiting and herring were most prominent in numbers.

Total catch in weight and in number and species richness at the trawl stations ranged from 37.5 kg (rectangle 33F3) to 2400 kg (rectangle 41F1, 10 min tow, 2.1 t herring) and from 680 individuals (rectangle 33F3) to 237419 individuals (rectangle 35F3) and from 11 to 29 different fish and IBTS mandatory invertebrate species per haul (Fig. 5). Mean fish length by tow ranged from 6.6 cm (rectangle 35F3, high amount of small sprat) to 31.6 cm (rectangle 35F0, Tope and Porkbeagle shark) (Fig. 5). In general, low biomass but high abundance and diversity and low average length was recorded in the southeastern part of the survey area (English Channel) whereas catches were more uniform in the northern survey area (central North Sea and Skagerrak).

Length measurements were made for all commercial and non-commercial fish species. Sharks, skates and rays and selected shellfish species were measured separately by sex (length composition and weight). Single fish data (length, weight) and otoliths were collected for the main commercial species (cod, haddock, whiting, Norway pout, saithe, herring, sprat, mackerel and plaice (Tab. 2).

Stomach data were collected for turbot, brill, and grey gurnard, red gurnard and tub gurnard according to a request from the EU. Together with the stomachs single fish length and weight were recorded (Tab. 2).

Preliminary abundance indices of main commercial species indicate that whiting (age 0, 1 and 2+), sprat (age 1) but also mackerel (age 1 and 2+) and plaice (age 1 and 2+) were widely distributed in the survey area. Haddock (age 0, 1 and 2+) was common in the

northern part of survey area whereas Norway pout and cod were extremely rare (Tab. 3; Note: saithe is usually not found at all in the area covered by Denmark in Q3).

Marine litter was recorded in each GOV and JTDS catch using four main categories: plastic, glass, metals and miscellaneous, which were subdivided into several minor categories to meet the request by the ICES Working Group for Marine Litter. The total amount of marine litter sorted from the catches retained in the codend was 6.1 kg which consisted mainly of plastic.

Hydrography

Temperature, salinity and dissolved oxygen content at surface and bottom were extracted from the CTD profiles for storage in the institute's fish data base. The temperature and salinity values will be submitted to the ICES DATRAS database together with the GOV/JTDS catch results at the trawl stations to DATRAS, and the complete CTD profiles will be submitted to the ICES hydrographical data centre. The surface and bottom temperatures ranged from 16.0 to 20.4 and from 7.5 to 20.4 °C, respectively.

Sea surface temperature measure continuously along the cruise track indicate further that the water was warmest in the southernmost part of the area with temperatures just below 21 ° and coolest in the western and northeastern part of the survey area with temperatures of about 16 °C (Fig. 6). Transects at 54°00'n and 55°30'N indicated the presence of a pronounced thermocline in the northern area whereas in the central eastern area warm water extended from top to bottom and cooler water without stratification was found in the central western area (Fig. 7).

Special observations

- High catches of 0-group (4 – 6 cm) striped-red mullet in the south-eastern part of the survey area.
- Wide distribution of mackerel throughout the entire the survey area.
- Large number of lesser-spotted dog fish in the south-western part of the survey area.
- High abundance of small (1 - 3 cm ML) squid (*Loligo* sp.) in the entire survey area.

Miscellaneous

Samples of sprat, herring, mackerel and horse mackerel were collected for diet studies conducted by the Royal Netherlands Institute for Sea Research from as many tows as possible.

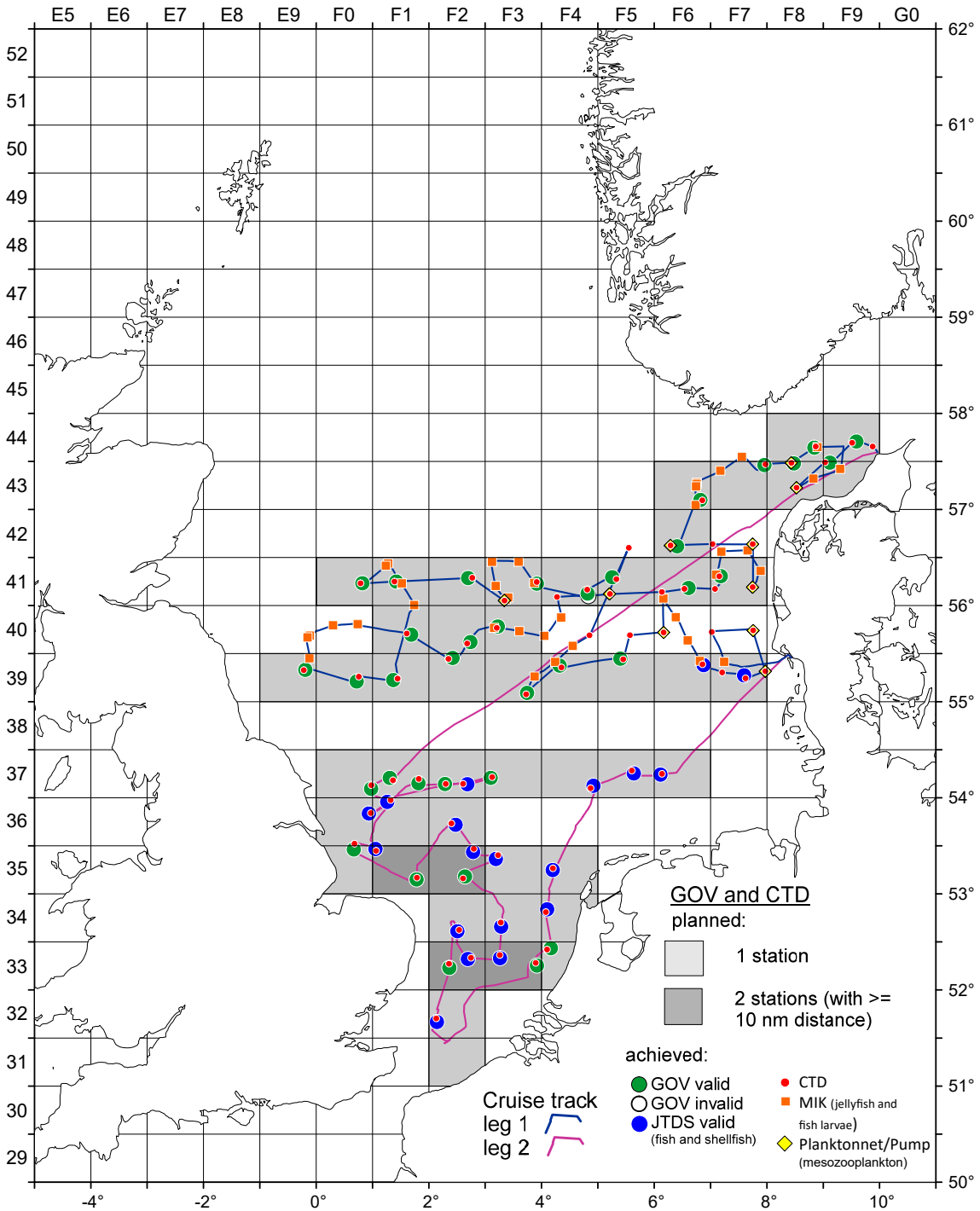


Fig. 1: Survey map with cruise track and sampling locations, RV Dana DK IBTS 3Q 2026.

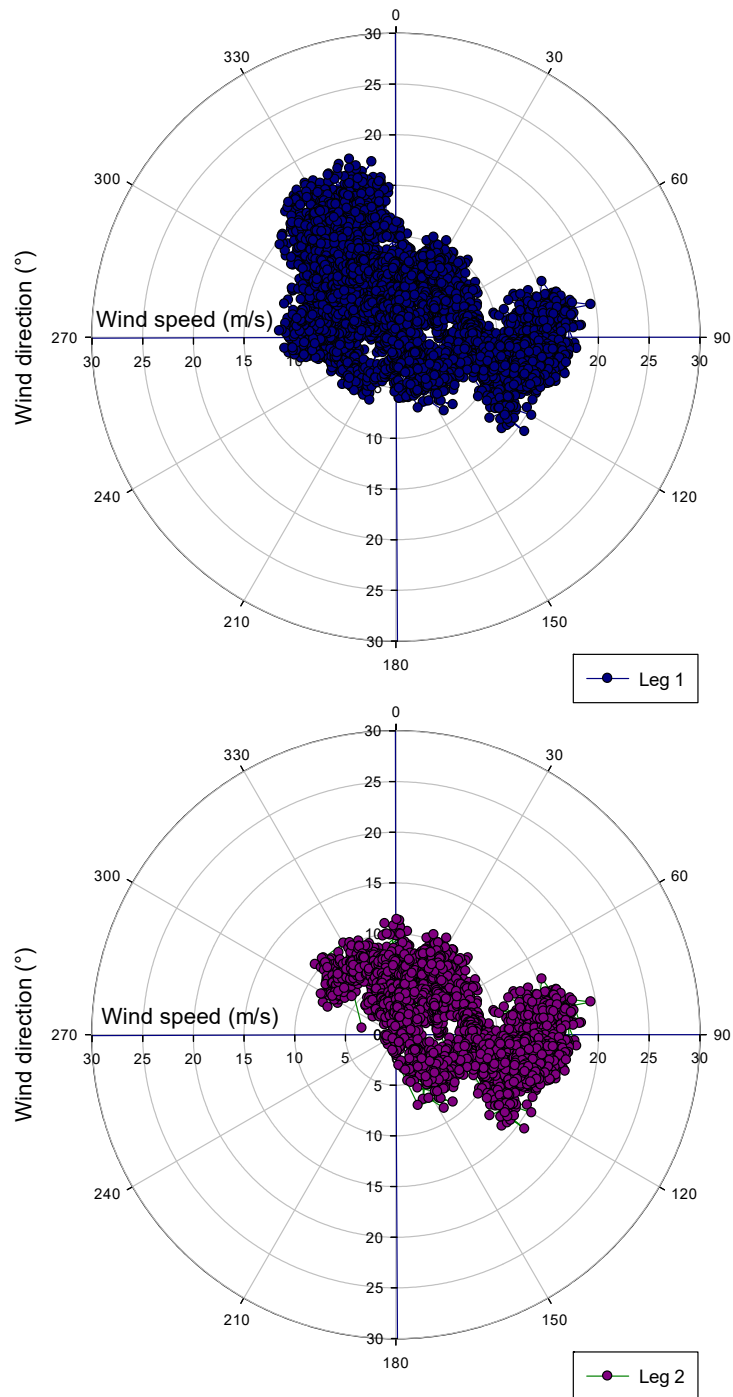


Fig. 2. Wind speed (m/s) and wind direction (°) recorded along the cruise track, RV Dana DK IBTS 3Q 2026.

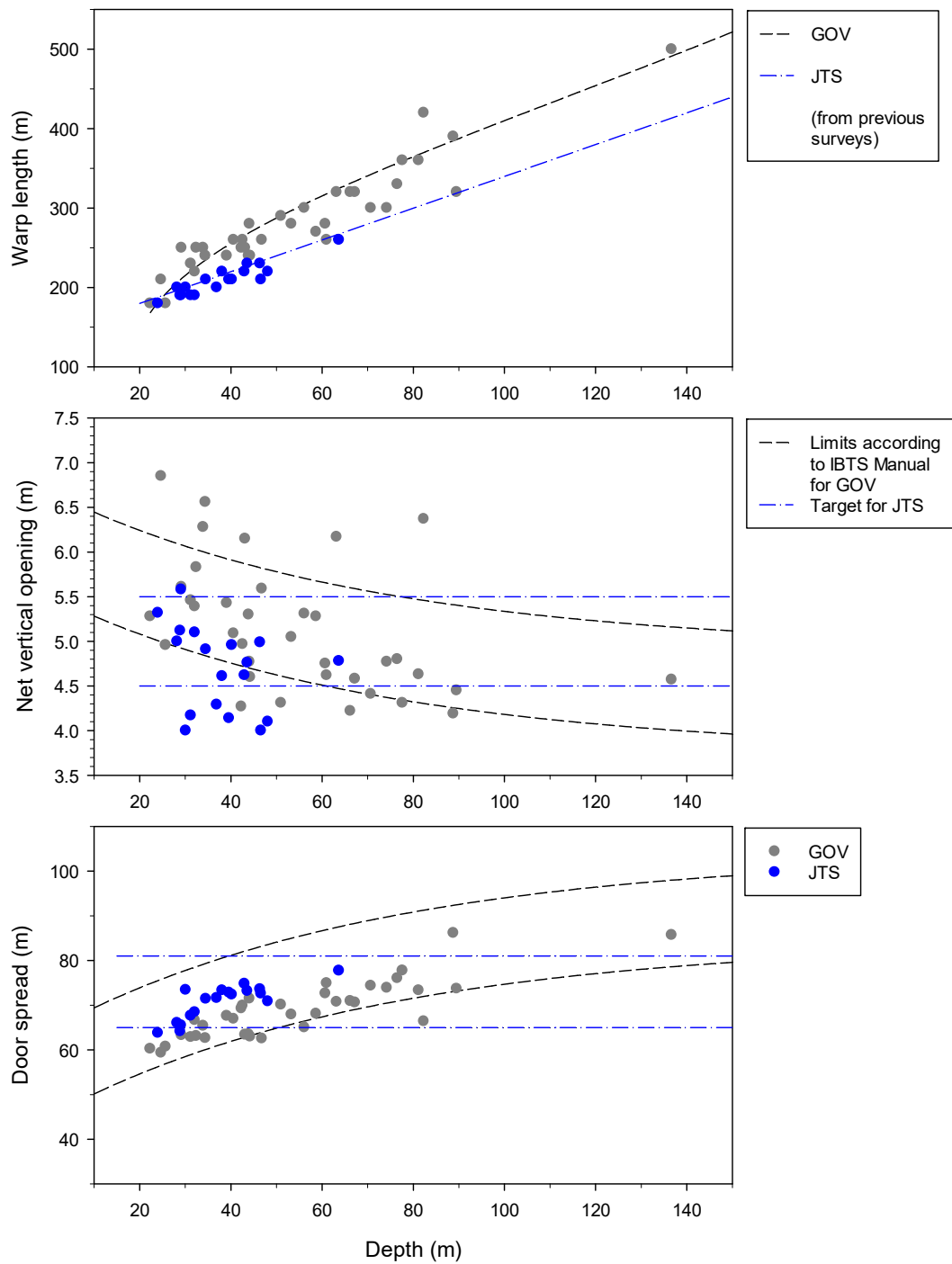


Fig. 3a: Warp length, net opening and door spread in relation to depth, RV Dana DK IBTS 3Q 2026.

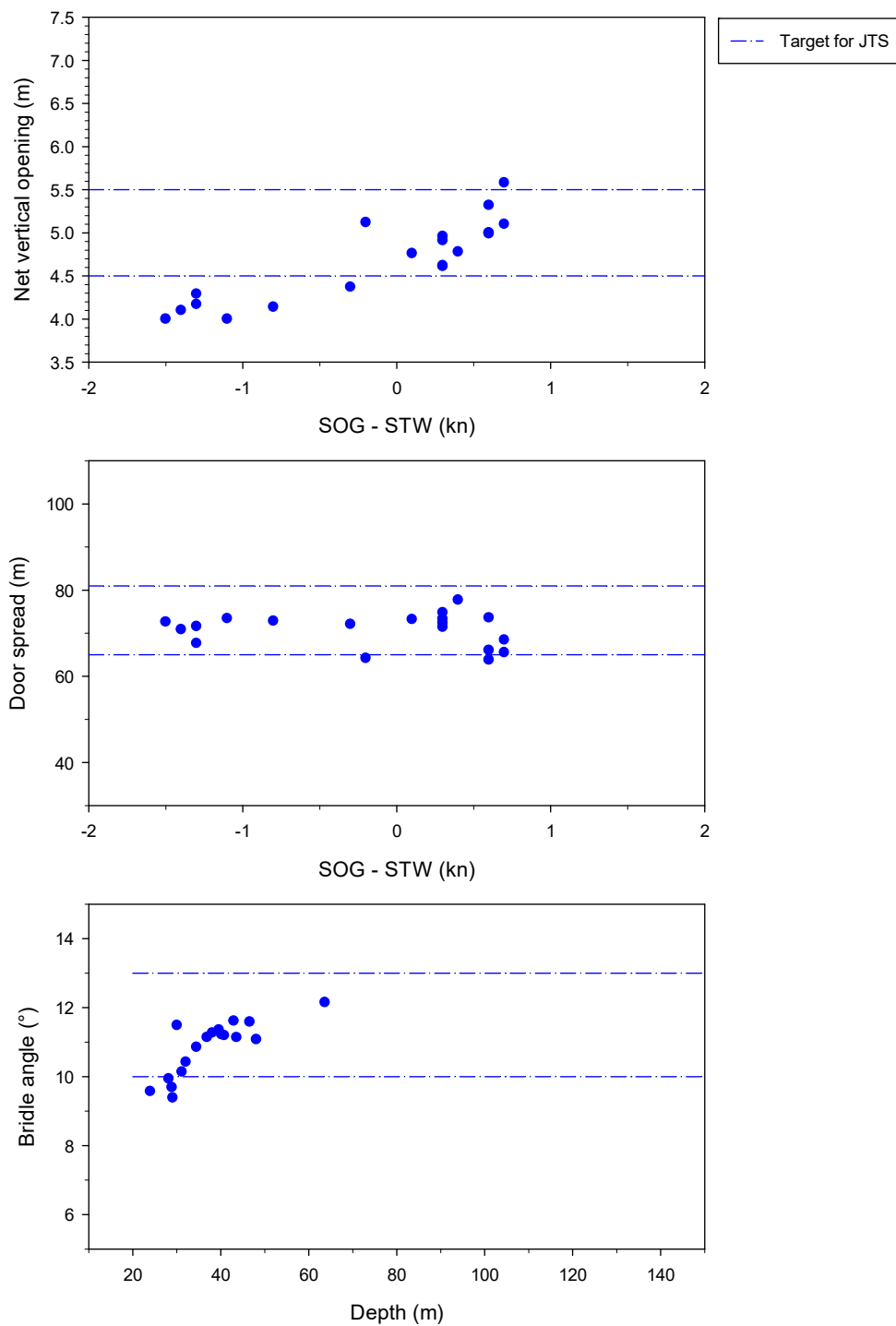


Fig. 3b: Vertical net opening and door spread of the JTS Trawl in respect to bottom current and bridle angle in relation to depth, RV Dana DK IBTS 3Q 2025.

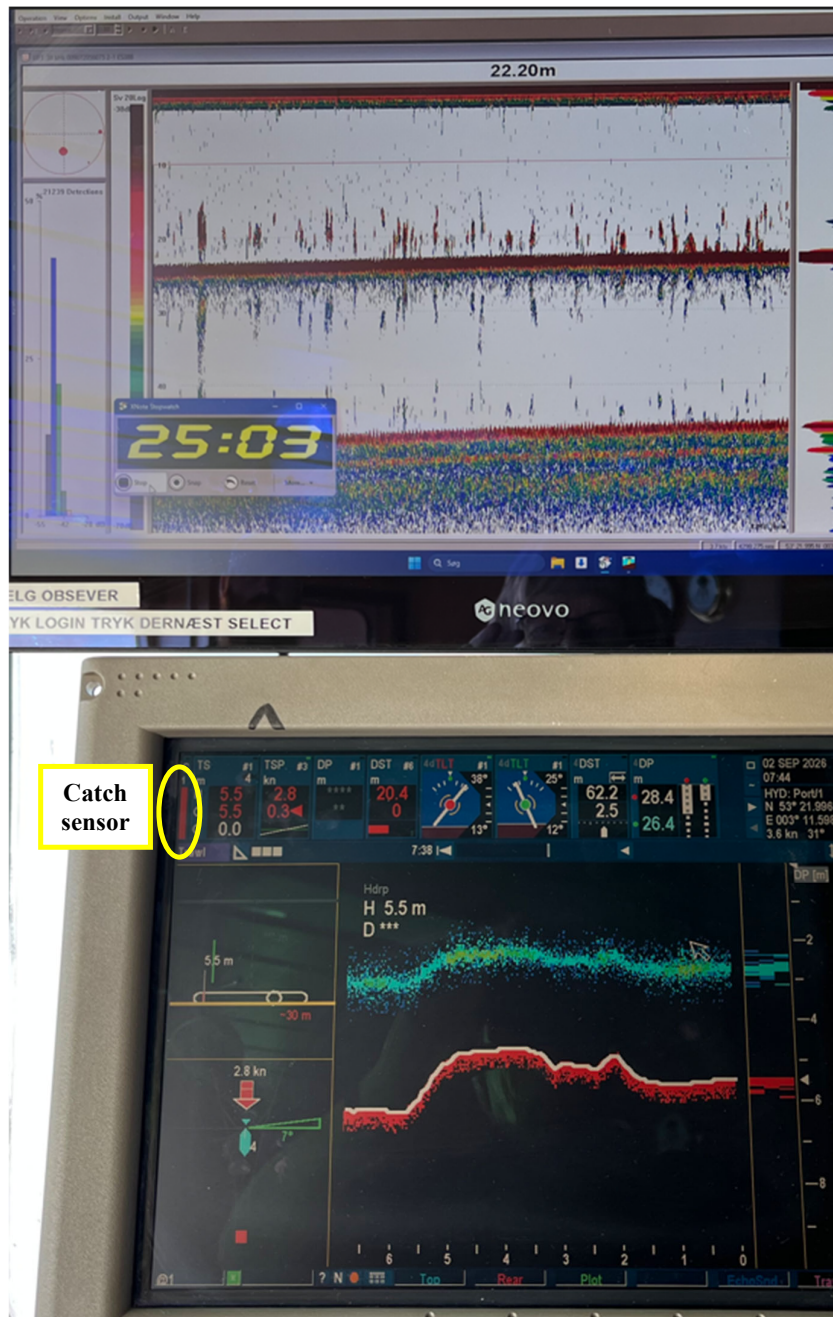


Fig. 4: Example for shortened tow duration due dense fish concentrations in the bottom layer and indication from the catch sensor for a very large ($>> 500$ kg) catch, RV Dana DK IBTS 3Q 2026.

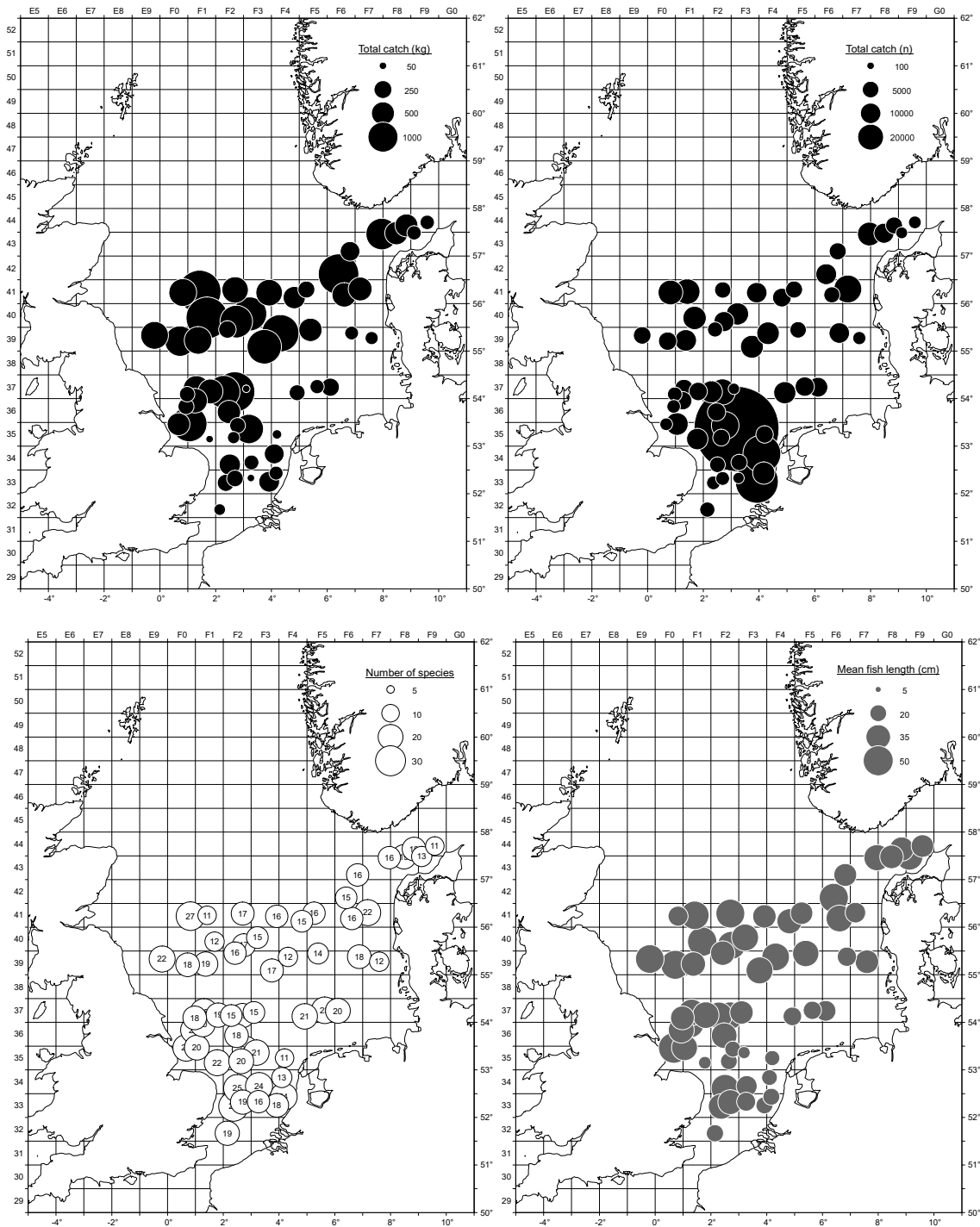


Fig. 5: Total catch of fish and shellfish in weight, in numbers, species richness and mean fish length per tow (Note: catch in weight and numbers not adjusted for differences in tow duration or swept area fished, mean fish length: without cephalopods and crustaceans), Dana DK IBTS 3Q 2026.

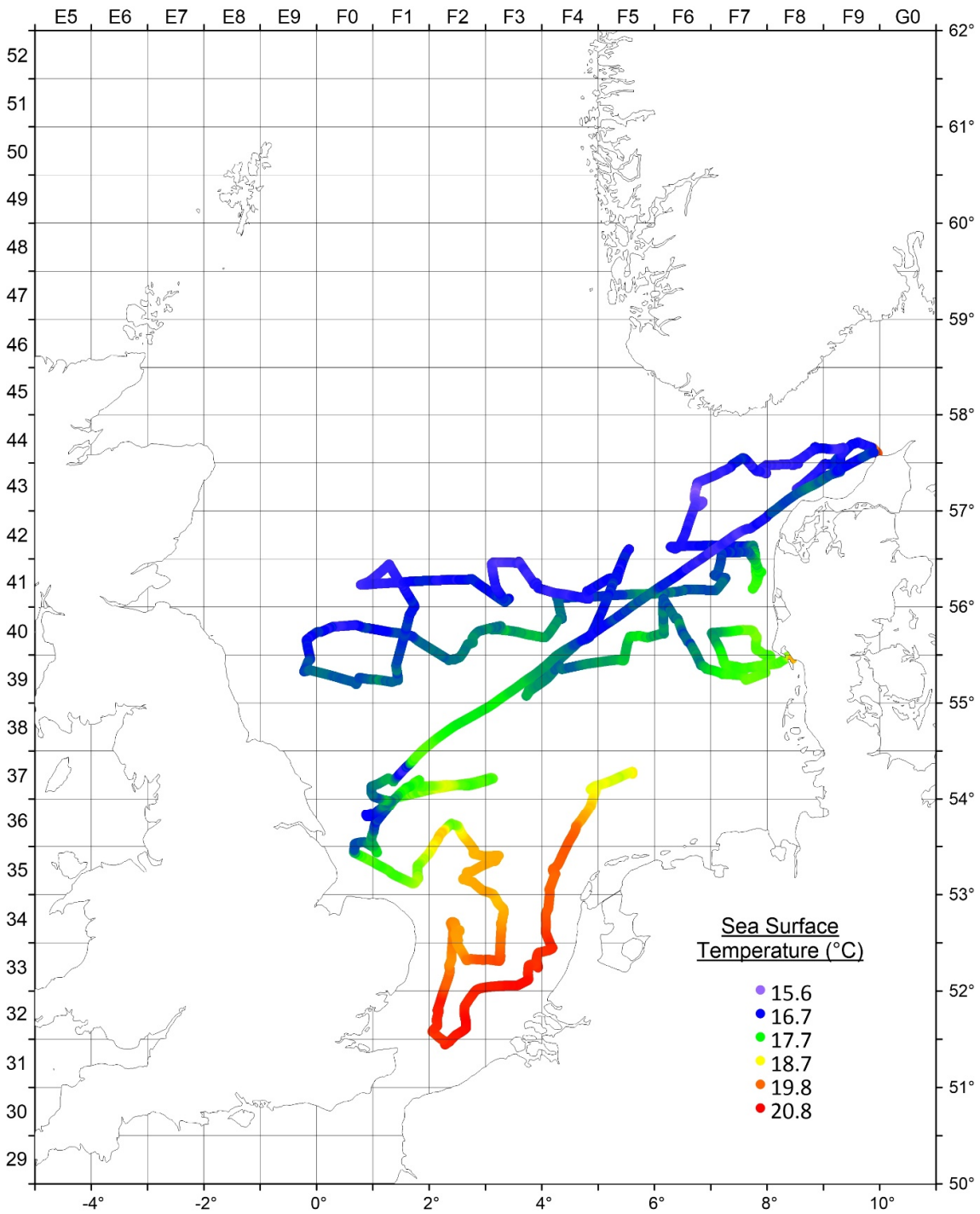


Fig. 6: Sea surface temperature along cruise track (Thermosalinograph, 4 m depth), Dana DK IBTS 3Q 2026.

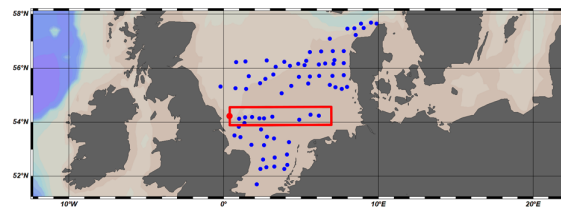
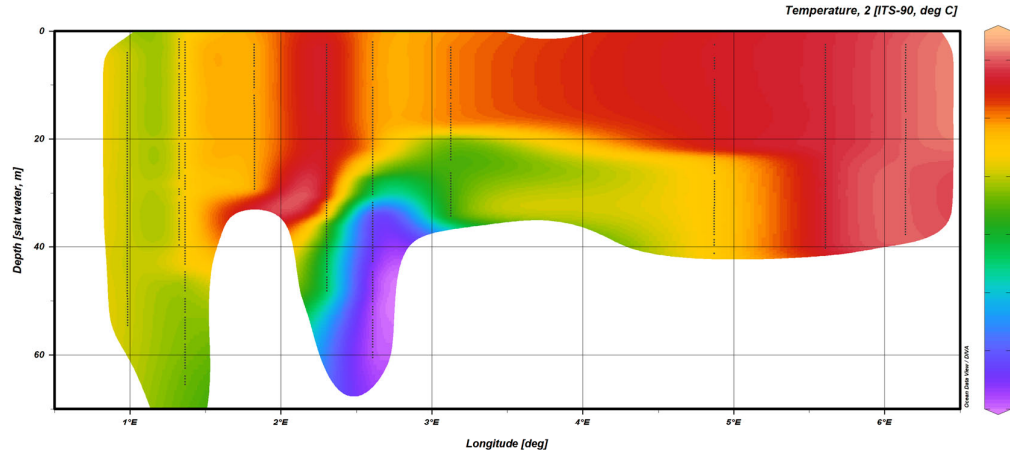
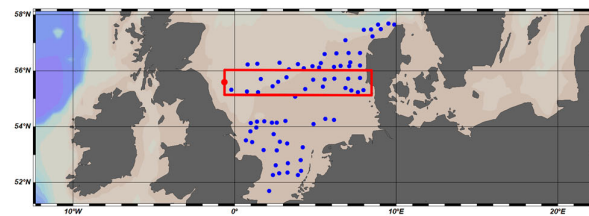
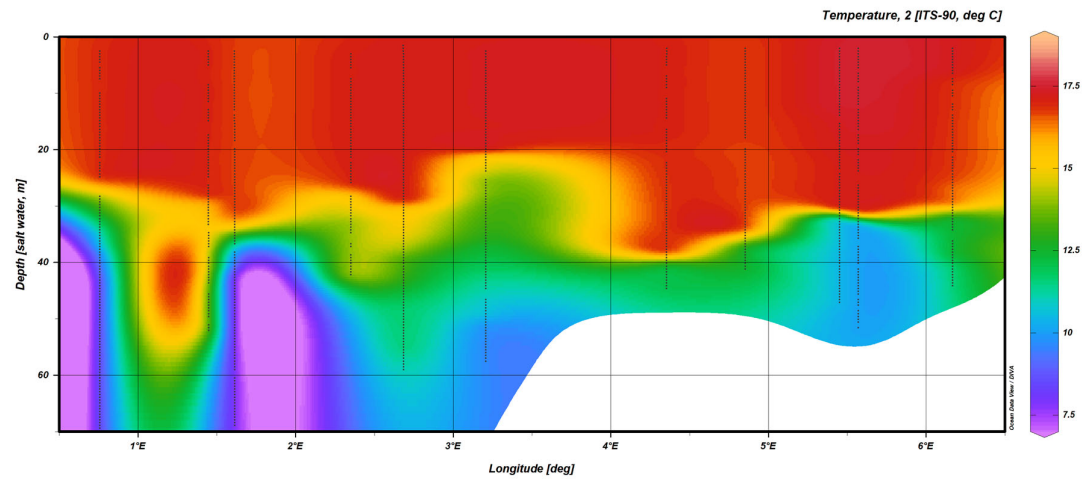


Fig. 7: Temperature transects at about 54°00'N and 55°30'N.

Tab. 1: Species list, Dana DK IBTS 3Q 2026 (L: total length in cm below (fish); ML: mantle length (cephlapods); CPL or CPW: carapace length or width (crustaceans)).

Latin name	English name	Danish name	Weight (kg)	Number	L _{min} (cm)	L _{max} (cm)	Remark
Aequipecten opercularis	Queen scallop	Jomfrustær	4.162	93	-	-	
Agonus cataphractus	Pogge	Panserulk	0.118	9	9.0	13.0	
Alloteuthis media	Midsized squid		13.399	1792	2.0	14.0	ML
Amblyraja radiata	Starry ray	Tærbe	17.847	61	8.0	62.0	
Ammodytes marinus	Lesser sandeel	Havtobis	0.050	15	6.5	15.5	
Amoglossus laterna	Scaldfish	Tungevarre	0.497	65	5.0	13.0	
Aspitriglia cuculus	Red gurnard	Tværstribet knurhane	0.446	4	20.0	25.0	
Aurelia aurita	Common jellyfish	Vandmand	9.120	-	-	-	
Blennius ocellaris	Butterfly blenny	Øjepletlet tangkvabbe	0.008	1	8.0	8.0	
Buglossidium luteum	Solenette	Glastunge	0.941	85	6.0	12.0	
Callionymus lyra	Common dragonet	Stribet fløjfisk	6.037	156	10.0	24.0	
Callionymus maculatus	Spotted dragonet	Plettet fløjfisk	0.038	1	22.0	22.0	
Cancer pagurus	Edible crab	Taskekrabbe	24.803	53	8.7	19.7	CPW
Ciliata mustela	Five-bearded rockling	Femtrådet havkvabbe	0.044	1	17.0	17.0	
Clupea harengus	Herring	Sild	5017.584	87439	6.5	33.5	
Dicentrarchus labrax	European seabass	Havbars	12.155	13	33.0	63.0	
Echiichthys vipera	Lesser weever	Fjæsing lille	15.612	801	6.0	17.0	
Eledone cirrhosa	Horned octopus	Eledone Blæksprutte	0.263	3	-	-	
Enchelyopus cimbrius	Four-bearded rockling	Firetrådet havkvabbe	1.899	44	8.0	25.0	
Engraulis encrasicolus	Anchovy	Ansjos	1.917	507	4.0	16.0	
Entelurus aequoreus	SNAKE PIPEFISH	Snippe	0.025	3	29.0	41.0	
Eutrigla gurnardus	Grey gurnard	Grå knurhane	431.923	5772	10.0	36.0	
Gadus morhua	Cod	Torsk	33.989	81	23.0	55.0	
Galeorhinus galeus	Tope	Gråhaj	225.272	26	37.0	150.0	
Glyptocephalus cynoglossus	Witch	Skærsing	3.817	17	20.0	40.0	
Helicolenus dactylopterus	Blue-mouth redfish	Blåkæft	1.184	6	20.0	26.0	
Hippoglossoides platessoides	Long rough dab	Håising	88.274	1983	10.0	28.0	
Homarus gammarus	European lobster	Hummer	19.478	27	7.2	17.6	CPL
Hyperoplus lanceolatus	Greater sandeel	Plettet tobiskonge	2.966	97	10.0	30.5	
Illex coindetii	Southern shortfin squid	Rød blæksprutte	6.255	48	9.0	22.0	ML
Lamna nasus	Porbeagle shark	Sildehaj	115.000	1	236.0	236.0	
Leucoraja naevus	Cuckoo ray	Pletrokke	0.170	1	31.0	31.0	
Limanda limanda	Dab	Ising	2480.863	39368	5.0	32.0	
Lithodes maja	Norway king crab	Troldekrabbe	3.665	7	7.2	12.2	CPL
Loliginidae			2.013	2720	1.0	7.0	ML
Loligo	Loligo sp	*Loligoblæksprutter	26.479	1335	1.0	13.0	ML
Loligo forbesii	Northern squid	Loligoblæksprutte	513.700	8311	2.0	32.0	ML
Loligo vulgaris	European squid	Europæisk loligo	3.489	6	9.0	37.0	ML
Lophius piscatorius	Angler fish	Havtaske	11.348	12	25.0	55.0	
Lycodes gracilis	Vahls eelpout	Ålebromse	0.020	1	18.0	18.0	
Maja squinado	Common spider crab	Edderkoppekrabbe	0.990	1	14.2	14.2	CPL
Melanogrammus aeglefinus	Haddock	Kuller	8886.802	32166	8.0	52.0	
Merlangius merlangus	Whiting	Hvilling	10382.097	92596	4.0	40.0	
Merluccius merluccius	Hake	Kulmule	50.686	50	10.0	96.0	
Microchirus variegatus	Thickback sole	Båndet tunge	0.059	1	17.0	17.0	
Micromesistius pouassou	Blue whiting	Blåhvilling	6.889	52	20.0	32.0	
Microstomus kitt	Lemon sole	Rødtunge	111.597	1134	12.0	36.0	
Molva molva	Ling	Lange	3.924	5	32.0	73.0	
Mullus surmuletus	Striped red mullet	Stribet rød Mulle	29.909	667	5.0	33.0	
Mustelus asterias	Starry smooth-hound	Stjernehaj	306.034	237	45.0	108.0	
Myoxocephalus scorpius	Sculpin	Almindelig ulk	0.241	3	15.0	20.0	
Nephrops norvegicus	Norway lobster	Jomfruhummer	33.456	1283	2.2	5.6	CPL
Pecten maximus	Great scallop	Stor kammusling	0.688	5	0.0	0.0	
Platichthys flesus	Flounder	Skrubbe	4.688	20	19.0	34.0	
Pleuronectes platessa	Plaice	Rødspætte	599.127	4641	9.0	45.0	
Pollachius virens	Saithe	Sej	3.128	9	27.0	47.0	
Pomatoschistus spp.	Sand gobies	*Sandkutlinger	1.200	1504	2.0	6.0	
Raja brachyura	Blonde ray	Småpletlet rokke	8.062	7	31.0	74.0	
Raja clavata	Thornback ray	Sømrøkke	13.907	16	34.0	62.0	
Raja montagui	Spotted Ray	Storpletlet Rokke	8.204	16	32.0	53.0	
Rossia macrosoma	Stout bobtail squid	Ross's blæksprutte	0.062	35	-	-	
Sardina pilchardus	Pilchard	Sardin	36.146	3601	5.0	25.0	
Scomber scombrus	Mackerel	Makrel	2220.468	14665	4.0	44.0	
Scophthalmus maximus	Turbot	Pighvarre	8.534	14	21.0	45.0	
Scophthalmus rhombus	Brill	Slethvarre	6.878	10	24.0	52.0	
Scyliorhinus canicula	Lesser-spotted dogfish	Småpletlet rødhaj	452.760	1035	18.0	71.0	
Sepia officinalis	Common cuttlefish	Sepiablæksprutte	2.351	11	3.0	17.0	ML
Sepioteuthis atlantica	Atlantic bobtail squid		0.003	3	-	-	
Solea solea	Sole	Tunge	11.175	137	15.0	34.0	
Sparus aurata	Gilthead seabream	Guldbrasen	0.284	2	20.0	21.0	
Sprattus sprattus	Sprat	Brisling	455.104	243320	5.0	15.0	
Squalus acanthias	Spurdog	Pighaj	18.128	54	24.0	89.0	
Taurulus bubalis	Sea scorpion	Langtornet ulk	0.091	2	11.0	15.0	
Todaropsis eblanae	Lesser flying squid	Todaropsis eblanae	0.230	1	14.0	14.0	ML
Trachinus draco	Greater weever fish	Fjæsing	21.325	120	26.0	41.0	
Trachurus trachurus	Horse mackerel	Hestemakrel	2039.845	62927	3.0	36.0	
Trigla lucerna	Tub gurnard	Rød knurhane	8.312	22	22.0	48.0	
Trisopterus esmarkii	Norway pout	Sperling	53.679	9485	5.0	20.0	
Trisopterus luscus	Bib	Skægtorsk	145.423	1207	16.0	28.0	
Trisopterus minutus	Poor-cod	Glyse	16.438	250	10.0	21.0	
Zeus faber	John dory	Sanktpetersfisk	0.426	2	13.0	27.0	

Tab. 2: Preliminary numbers of single fish data (length, individual weight, and sex; maturity for herring, sprat and hake; maturity checks (if spawning or not) for mackerel and gadoids), Dana DK IBTS 3Q 2026.

Species	Total	Remark
Herring (<i>Clupea harengus</i>)	642	for ageing
Sprat (<i>Sprattus sprattus</i>)	159	
Cod (<i>Gadus morhua</i>)	55	
Haddock (<i>Melanogrammus aeglefinus</i>)	410	
Whiting (<i>Merlangius merlangus</i>)	365	
Saithe (<i>Pollachius virens</i>)	6	
Norway pout (<i>Trisopterus ermarkii</i>)	27	
Mackerel (<i>Scomber scombrus</i>)	365	
Plaice (<i>Pleuronectes platessa</i>)	635	
Hake (<i>Merluccius merluccius</i>)	48	for other purposes
Turbot (<i>Scophthalmus maximus</i>)	9	
Brill (<i>Scophthalmus rhombus</i>)	7	
Grey gurnard (<i>Eutrigla gurnadus</i>)	101	
Red gurnard (<i>Aspitrigla cuculus</i>)	4	
Tub gurnard (<i>Chelidonichthys lucerna</i>)	16	
Sum:	2849	

Tab. 3: Preliminary abundance indices (number per hour trawling) for commercial IBTS species per tow, Dana DK IBTS 3Q 2026.

		COD			HADDOCK			WHITING			NORWAY POUT			HERRING			SPRAT		MACKEREL			SAITHE			PLAICE		
assumed Age:		0	1	2+	0	1	2+	0	1	2+	0	1	2+	0	1	2+	1	2+	0	1	2+	0	1	2+	0	1	2+
Length:		<18	18-37	≥38	<17	17-29	≥30	<17	17-23	≥24	<13	13-15	≥16	<15.5	15.5-22.5	≥23	<13	≥13	<17	17-29	≥30	<22	22-32	≥33	<10	10-18	≥19
St No	Rect																										
2	44F9																			9	6					36	345
4	43F9																			314	36					4	222
14	44F8		42	2	683	32	717	349	19	627	813	1535	60	2	161	242					175						24
19	43F8		6		5081	212	123	417	1324	2602	179	12		11	4	8					68		2				101
21	43F7		53	3	218		134	65		39		567	262		11500	15737					8						
29	43F6				4137	56	645	24	93	555					2					4	12					3	351
30	42F6		28			227	10351		4053	4609										106	514		24				402
50	41F7				376			25353	437					125	461		12	2		8	2					304	607
52	41F6				193	60	1789	46	56	14				4	6	4	52	14		22	26					36	272
65	40F3				139	1583	3122		1951	7937						18				80	514						316
66	40F2				469	3912		1713	4406							32				152	76					2	277
68	39F2				86	79	266	7	35	161										60	227					2	207
70	40F1					1113	1912		195	3279		5				12627					6266						65
78	39E9		4	4	122	405	1976		77	1898	171					1544				20	976			2		14	150
79	39F0		2		327	1026	3643		387	3618						2				2	6					2	40
81	39F1				3691	499	489		137	1589										282	743					4	257
88	41F0		6	2		59	1366			2601	15464	2	4		45	2615				2	129			2			12
90	41F1					924	3696		50	1112					456	69308				24	467						89
91	41F2			2	10	713	3395		80	546						6					6						155
105	41F3				31	562	2707	10	243	1240				103	227	26	344	302	5139	17	79					2	469
107	41F5				939	158	466	2	1124	1764						239	70	8	2	8						2	307
109	39F3				18	134	188		68	248				2223	1112	79	753	395									173
117	39F4				36	439	4289	4	9987	10403				4		8				499	2775						515
118	39F5		4		701	2780	6415	4	5564	9765										56	63					4	552
120	39F6				9	119	1959	89	1461	1351				364	6	12	307	60			24	3				24	196
132	39F7				661			2243	52											156	6					298	70
134	41F4				9			342	57											72	78				3	132	39
147	37F5							28										2		10						66	116
148	33F2							5462						379		2	1155			18						55	31
150	35F4							12186	1233	40				94			2515	15								46	38
153	34F4							110	4											84	20					20	14
154	33F3							12						853	3				51	343	3					33	18
156	32F2							54	28					10549			4	2	24	74						26	24
158	33F4							153	24					135667			11082	3	6	51						12	12
160	35F3									7										10	17						22
162	36F2							2	8	76										104	84						12
165	35F1							8	613	1908						2				10	24					18	66
166	35F0		2	2		2				6										32	24						26
168	35F1							16	26	2										2	2					6	
170	37F3							1104	556	17				4						14	6					2	10
173	37F2							850						116			2243									8	102
174	37F2							696	88	35				1440			446827		1080	9929						28	176
176	37F1							4865	74	94				8377	2		12764			42	2					8	60
178	36F1								1552	3218										395	263					143	444
181	37F0							24	8	24				131	2		11476		2	2						2	4
182	37F1					4	14	14	1061								4				10						2
184	36F0		6						2	18	2					2				6	36						
187	35F2									14				8						2						76	144
188	35F2		2	24		3	201			2829	17720	40		90	10	2	269				2						68
191	34F3					3	57	177	3187	16862											33					91	787
192	33F3								2351	4041				6						386	205					33	361
195	33F2						4		420	1342				178			12			8	44						4
196	37F4				38				987	5830				56		2	106			153	242					54	162
198	37F6				398				234	1234						4				6	4					4	46
200	34F2				5	54	157		1550	5888				54		32	62	12		34	86					4	100

