DTU Aqua

Cruise Report

R/V Dana

Cruise 07/2025

”DK IBTS 3Q 2025”

Kai Wieland & Helle Rasmussen
Section for Monitoring Hirtshals

10/10/2025

Vessel: R/V DANA

Cruise dates (planned): 25/8 –14/9 2025

Cruise number: 07/25

Cruise name: DK IBTS 3Q 2025

Port of departure:	Hirtshals	**Date:**	25 August
Port of return:	Esbjerg*	**Date:**	14 September
Other ports:	Esbjerg	**Date and justification:**	5 September: 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
Martin Mølgaard	DTU Aqua, Monitoring	Technician, Fish lab
Per Christensen	DTU Aqua, Monitoring	Technician, Fish lab
Christian Petersen	DTU Aqua, Monitoring	Technician, CTD, Maintenance, e-DNA
Maria Lund Paulsen	Miljøstyrelsen	Water chemistry and mesozooplankton
Martin Søndergaard Jørgensen	Miljøstyrelsen	Water chemistry and mesozooplankton
Raida Kadir	SUST* Department of Oceanography	POGO Trainee**

Leg 2: Esbjerg – Hirtshals

Name	**Institute**	**Function and main tasks**
Kai Wieland	DTU Aqua, Monitoring	Cruise leader, Scientist, Fish lab
Rasmus Jensen	DTU Aqua, Monitoring	Technician, Fish lab
Tom Svoldgaard	DTU Aqua, Monitoring	Technician, Fish lab
Hans Henrik Jørgensen	DTU Aqua, Monitoring	Technician, Fish lab
Kasper Schaltz	DTU Aqua, Monitoring	Technician, Fish lab
Christian Petersen	DTU Aqua, Monitoring	Technician, CTD, Maintenance, e-DNA
Raida Kadir	SUST* Department of Oceanography	POGO Trainee**

*: Shahjalal University of Science and Technology, Bangladesh, **Partnership for Observation of the Global Ocean

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. Furthermore, the collection of e-DNA samples (cod-end water drop-off and surface layer reference samples) was added to the routine sampling programme.

The survey area to be covered by Denmark with RV Dana in the 3rd quarter 2025 was allocated during the IBTS Working Group meeting in April 2025.

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

Itinerary

R/V Dana left Hirtshals on Monday 25th August at 14:30 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 Thursday 4th September 16:00 to Friday 5th September 13:00 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 Sunday 14th September at 07:00 local time.

Favourable weather conditions prevailed during almost the entire survey (Fig. 2). While south-westerly wind winds above 15 m/s on occurred frequently during the 1st leg wind direction changed to south-east and south-west 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 rectangles in which two standard tows were planned, the second tow was 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:

43 valid GOV hauls and 3 invalid GOV hauls on standard positions. 2 of the invalid tows were repeated on near-by tracks whereas no alternative track in sufficient short distance has been available for the invalid tow in rectangle 31F2.

8 valid JTS610 hauls (of which 6 tows were done on standard positions and 2 tows were additional experimental hauls) and 1 invalid tow which was repeated on a near-by track.

66 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.

18 Mesozooplankton stations for environmental monitoring in the Danish EEZ.

Results

Routine sampling

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. Marport sensors for wing spread worked properly on most of stations, and the remaining five missing values for the standard tows can easily be estimated from the linear regression with door spread (Fig. 3b).

JTS610 headline height and door spread were close to or within the range of the target values. However, headline height was in two lower than expected in particular in two cases and an adjustment of the rigging and/or an increase of the number of floats will be done prior to the next survey.

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 45.5 tons (includes the JTS610

catches). Here, whiting and haddock were the most dominant species in weight whereas sprat and herring were most prominent in numbers.

The nominal tow duration for both, the GOV and the JTS trawl is 30 min. However, in some cases the available space between cables, pipelines and offshore windfarms is too short for a complete tow track. At 6 stations signals from a catch sensor and from the echosounder indicated high fish densities (see Fig. 4 for an example) tow duration was reduced to avoid catches larger than they can be handled.

Total catch in weight and in number and species richness at the trawl stations ranged from 45 kg (rectangle 32F2) to 3658 kg (rectangle 44F8) and from 762 individuals (rectangle 33F2) to 153562 individuals (rectangle 33F3) and from 11 to 30 different IBTS mandatory fish and invertebrate species per haul without a clear spatial pattern (Fig. 4). Mean fish length by tow ranging from 6 cm (rectangle 36F2, high amount of small horse mackerel) to 29 cm (rectangle 44F9) (Fig. 5).

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 haddock, mackerel, turbot, brill, and tub gurnard according to a request from the EU. The number of individuals (≥ 15 cm length) examined and the numbers of non-empty stomach collected for later analysis are listed in table 3.

Preliminary abundance indices of main commercial species indicate that whiting (age 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 1 and 2+) was common in the northern part of survey area whereas Norway pout and cod were extremely rare (Tab. 4; Note: saithe is usually not found at all in the area covered by Denmark in Q3).

Marine litter was recorded in each GOV and JTS 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 11.8 kg which consisted almost entirely of plastic.

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/JTS 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 15.1 to 19.5 and from 7.4 to 19.3 °C, respectively, with a presence of a pronounced thermocline at most the survey stations.

Sea surface temperature measure continuously along the cruise track indicate further that the water was highest in the southernmost part of the area with temperatures just below 20 ° and coolest in the western and northeastern part of the survey area with temperatures of about 16 °C (Fig. 6).

Miscellaneous

e-DNA samples (cod end water and reference sample) were collected from all valid trawl stations.

Samples of sprat were collected from three rectangles in the Dutch EEZ for a study on bacteria infestation conducted by the Wageningen Marine Research Institute.

Special observations

- Like in the most recent years, high catches of 0-group (4 – 6 cm) striped-red mullet in the south-eastern part of the survey area.

- Wide distribution of mackerel and starry smooth hound in the central and southern part of the survey area.

- Unusual large number of lesser-spotted dog fish in the southern part of the survey area.

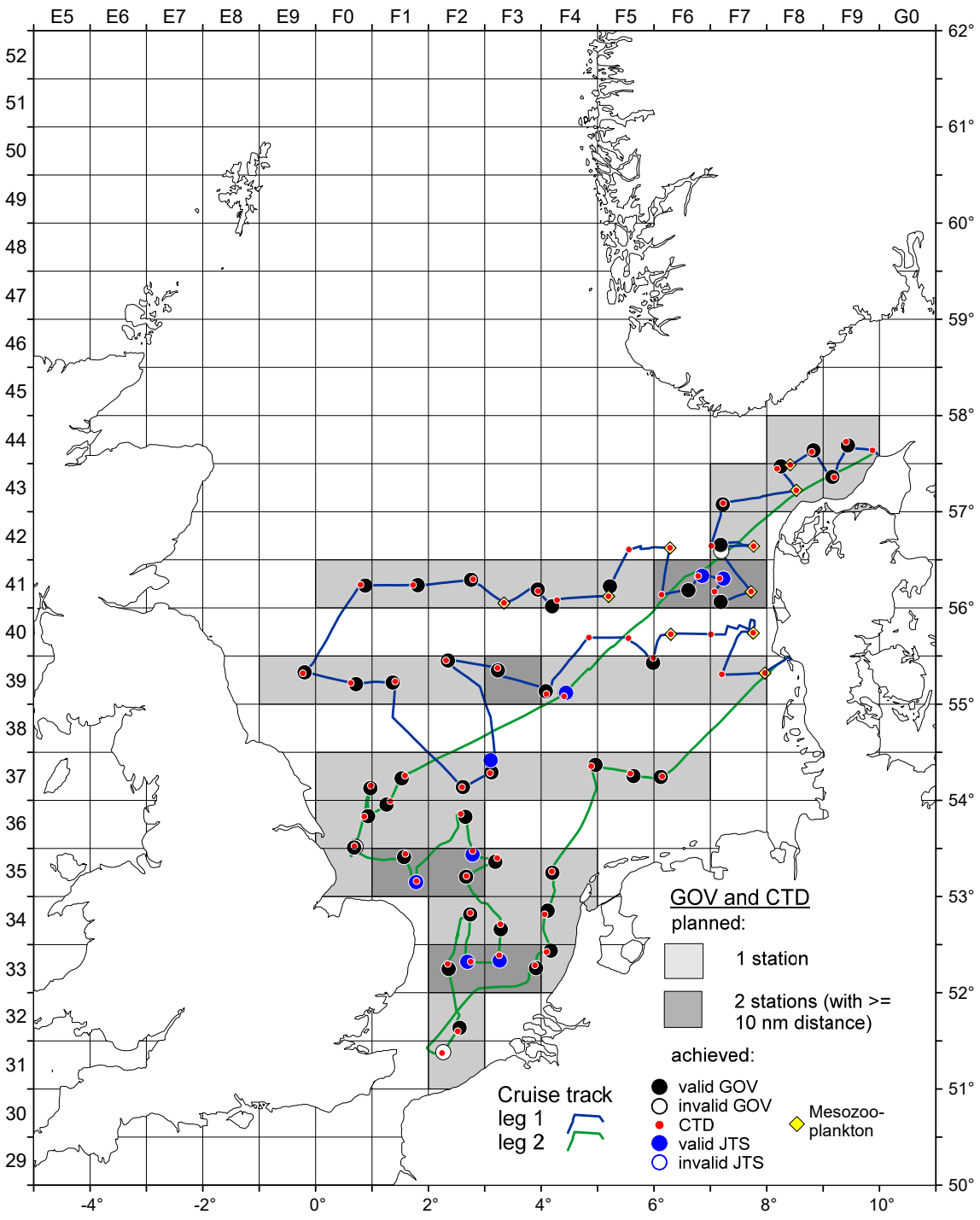

Fig. 1: Survey map with cruise track and sampling locations, RV Dana DK IBTS 3Q 2025.

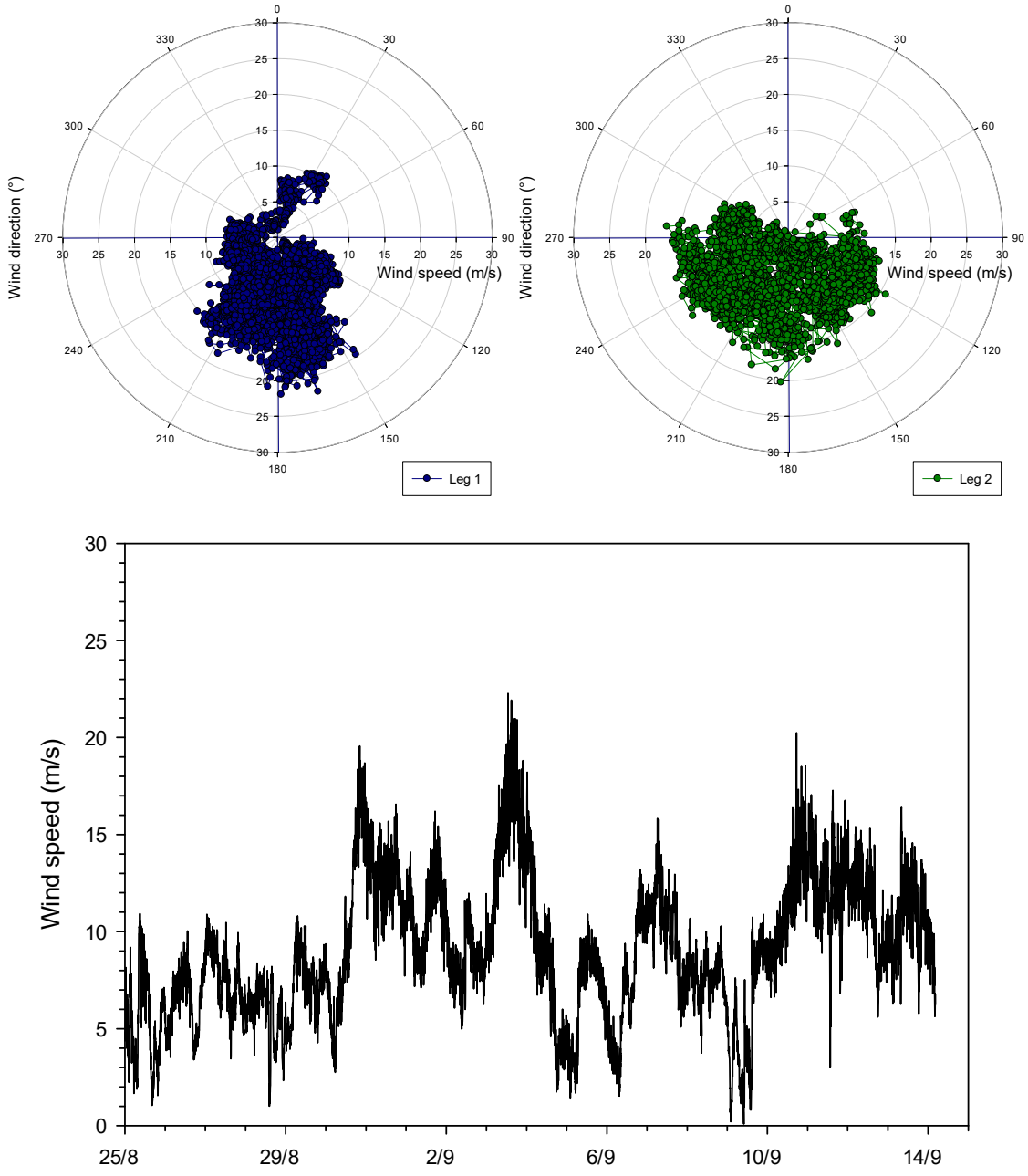

Fig. 2. Wind speed (m/s) and wind direction (°) recorded along the cruise track, RV Dana DK IBTS 3Q 2025.

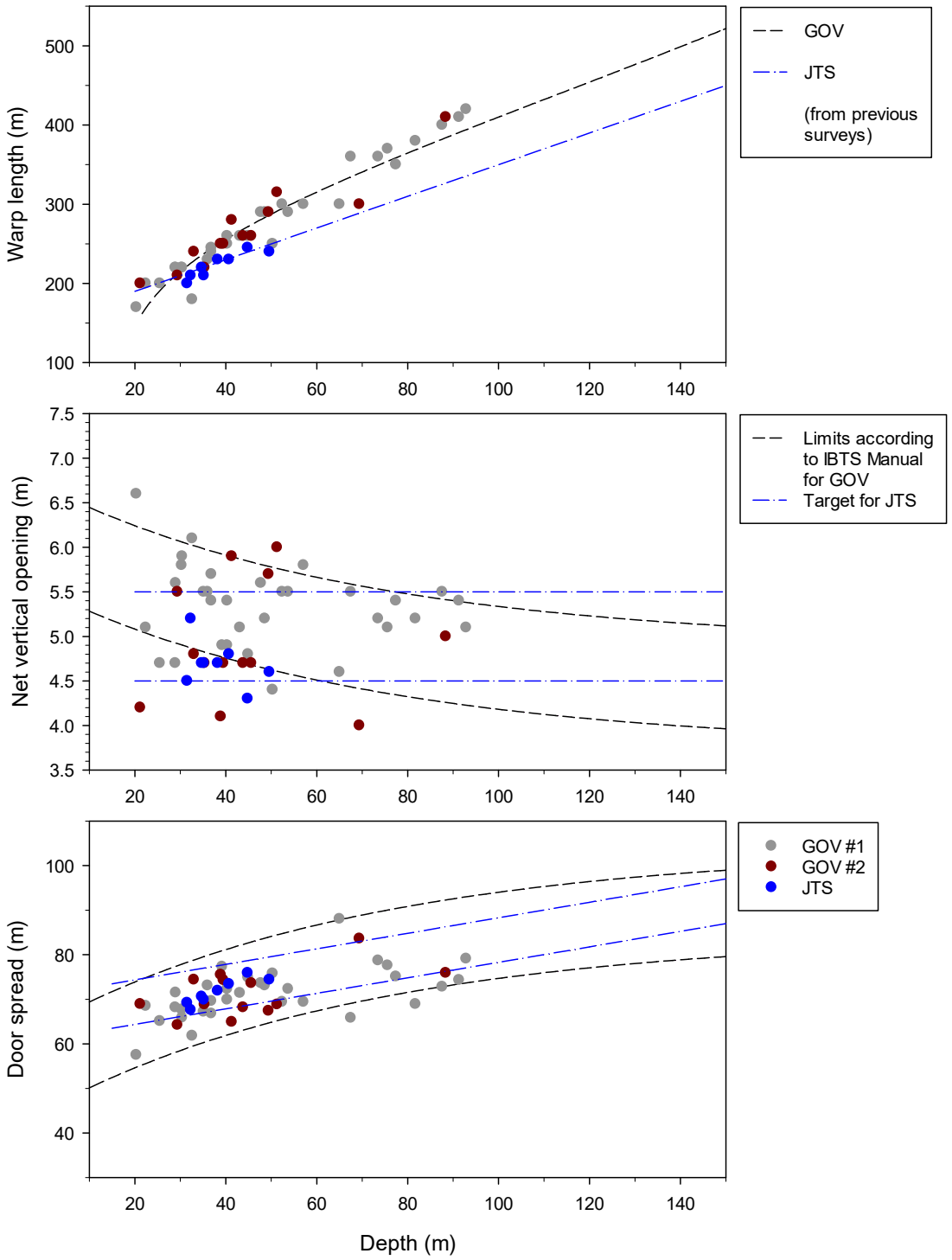

Fig. 3a: Warp length, net opening and door spread in relation to depth, RV Dana DK IBTS 3Q 2025.

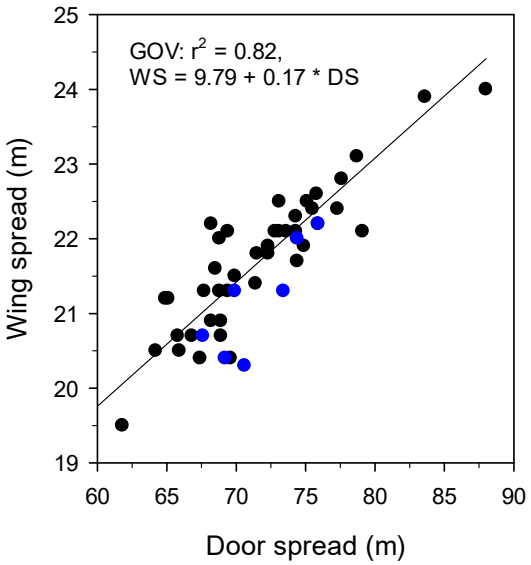

Fig. 3b: Relationship between door and wing spread, RV Dana DK IBTS 3Q 2025.

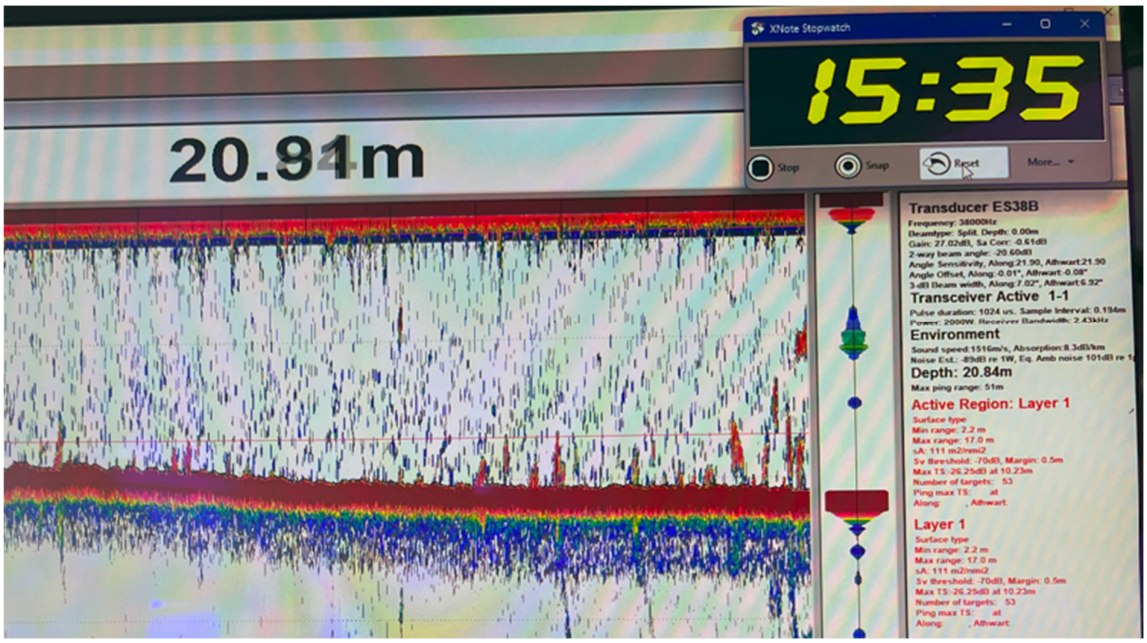

Fig. 4: Example for dense fish concentrations in the bottom layer (rectangle 33F3, catch: 1.5 ton of small herring and sprat in 16 min) , RV Dana DK IBTS 3Q 2025.

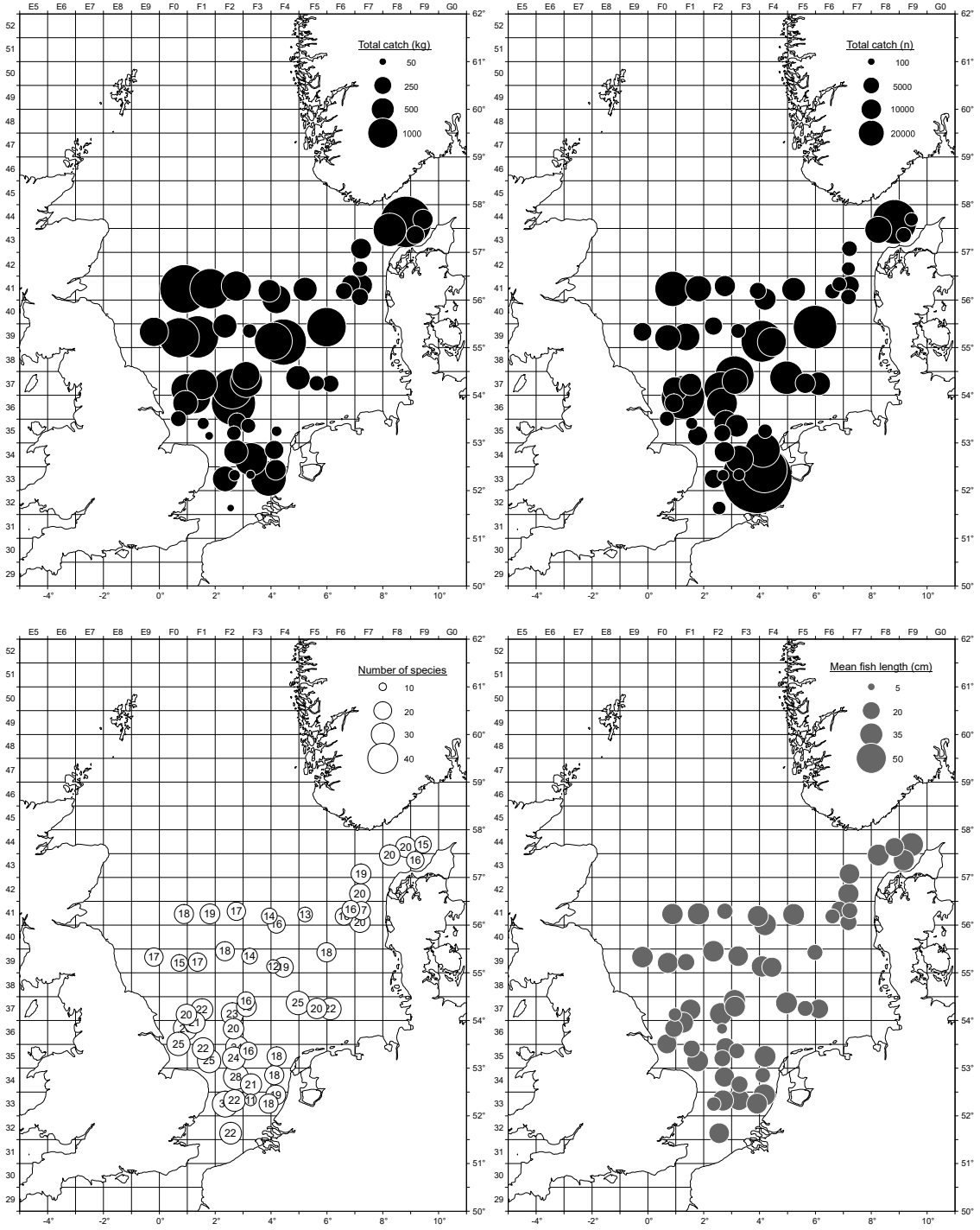

Fig. 5: Total catch of fish and shellfish in weight, in numbers, species richness and mean fish length per tow (Note: catch in weight and numbers not adjusted for differences in tow duration or swept area fished), Dana DK IBTS 3Q 2025.

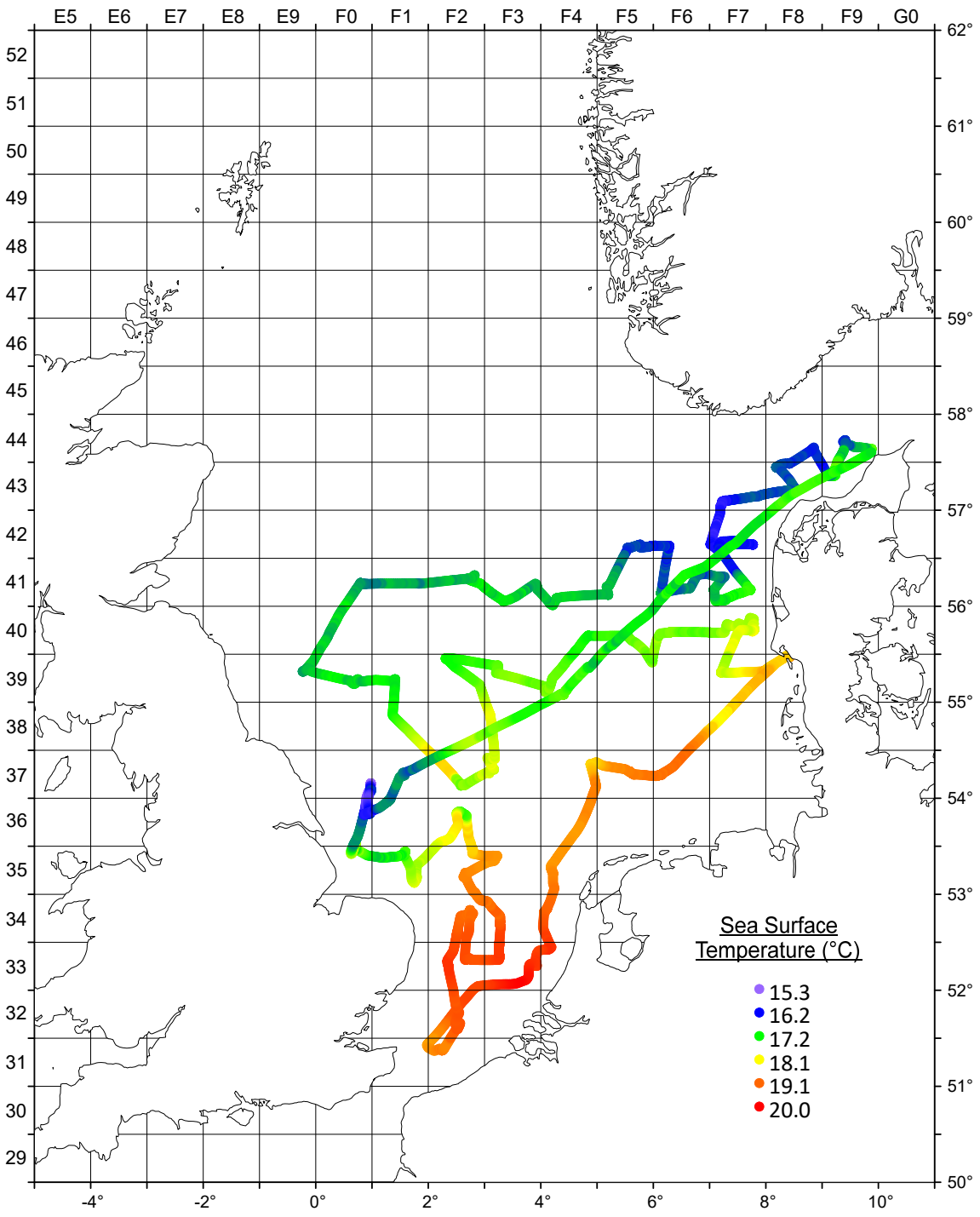

Fig. 6: Sea surface temperature along cruise track (Thermosalinograph, 4 m depth), Dana DK IBTS 3Q 2025.

Tab. 1: Species list, Dana DK IBTS 3Q 2025 (L: total length in cm below (fish); ML: mantle length (cephlapods); CPL or CPW: carapace length or width (crusteaceans).

Latin name	English name	Danish name	Weight (kg)	Number	L_{min} (cm)	L_{max} (cm)	Remark
Aequipecten opercularis	Queen scallop	Jomfruøsters	4.304	26	-	-	
Agonus cataphractus	Pogge	Panserulk	1.027	103	2.0	13.0	
Alloteuthis subulata	European common squid	Dværgblæksprutte	6.709	2076	1.0	14.0	ML
Amblyraja radiata	Starry ray	Tærbe	5.090	22	10.0	39.0	
Ammodytes marinus	Lesser sandeel	Havtobis	4.855	505	8.0	19.0	
Aphia minuta	Transparent goby	Glaskutling	0.001	1	4.0	4.0	
Argentina spp.	Silver smelts		0.010	1	12.0	12.0	
Arnoglossus laterna	Scaldfish	Tungehvarre	0.638	46	8.0	15.0	
Aspitriglia cuculus	Red gurnard	Tværstribet knurhane	3.907	40	20.0	27.0	
Blennius ocellaris	Butterfly blenny	Øjepletted tangkvabbe	0.012	1	9.0	9.0	
Buglossidium luteum	Solenette	Glastunge	1.199	106	7.0	12.0	
Callionymus lyra	Common dragonet	Stribet fløjfisk	10.429	237	4.0	24.0	
Callionymus maculatus	Spotted dragonet	Plettet fløjfisk	0.018	1	16.0	16.0	
Cancer pagurus	Edible crab	Taskekrabbe	71.624	219	6.8	19.6	CPW
Clupea harengus	Herring	Sild	9121.459	175629	6.5	33.0	
Dicentrarchus labrax	Bass	Havbars	3.379	3	32.0	54.0	
Echiichthys vipera	Lesser weever	Fjæsing lille	20.646	1091	6.0	17.0	
Eledone cirrhosa	Horned octopus	Eledone Blæksprutte	0.165	1	10.0	10.0	ML
Enchelyopus cimbrius	Four-bearded rockling	Firetrådet havkvabbe	9.721	229	13.0	29.0	
Engraulis encrasicolus	Anchovy	Ansjos	9.453	1215	4.0	12.0	
Eutrigla gurnardus	Grey gurnard	Grå knurhane	407.840	6184	12.0	40.0	
Gadus morhua	Cod	Torsk	57.435	147	10.0	68.0	
Galeorhinus galeus	Tope	Gråhaj	19.600	2	120.0	142.0	
Glyptocephalus cynoglossus	Witch	Skærising	1.133	6	26.0	32.0	
Black goby	True gobies	Sortkutling	0.032	2	10.0	11.0	
Gymnammodytes semisquamatus	Smoothed sandeel	Nøgentobis	0.017	1	20.0	20.0	
Helicolenus dactylopterus	Blue-mouth redfish	Blåkæft	0.130	1	19.0	19.0	
Hippocampus hippocampus	Short-snouted seahorse	Kortsnudet søhest	0.001	1	-	-	
Hippoglossoides platessoides	Long rough dab	Håising	56.416	1319	10.0	25.0	
Hippoglossus hippoglossus	Atlantic halibut	Helleflynder	2.000	1	57.0	57.0	
Homarus gammarus	European lobster	Hummer	9.848	15	5.6	13.4	
Hyperoplus lanceolatus	Greater sandeel	Plettet tobiskonge	11.457	404	15.0	30.0	
Illex coindetii	Southern shortfin squid	Rød blæksprutte	0.887	7	11.0	21.0	ML
Leucoraja naevus	Cuckoo ray	Pletrokke	0.365	1	40.0	40.0	
Limanda limanda	Dab	Ising	2658.547	49748	3.0	31.0	
Lithodes maja	Norway king crab	Troldkrabbe	2.240	5	11.1	11.3	CPL
Loliginidae			7.051	630	1.0	11.0	ML
Loligo spp.		Loligoblæksprutter	3.349	896	1.0	13.0	ML
Loligo forbesii	Northern squid		183.045	3594	2.0	31.0	ML
Loligo vulgaris	European squid	Europæisk Loligo	3.932	9	20.0	33.0	ML
Lophius piscatorius	Angler fish	Havtaske	2.671	3	26.0	52.0	
Maja squinado	Common spider crab	Edderkoppekrabbe	3.471	3	14.2	15.0	CPL
Melanogrammus aeglefinus	Haddock	Kuller	9312.764	33296	10.0	46.0	
Merlangius merlangus	Whiting	Hvilling	13380.429	130638	7.0	38.0	
Merluccius merluccius	Hake	Kulmule	15.477	12	24.0	83.0	
Microchirus variegatus	Thickback sole	Båndet tunge	0.085	6	8.0	13.0	
Micromesistius poutassou	Blue whiting	Blåhvilling	0.555	12	19.0	19.0	
Microstomus kitt	Lemon sole	Rødtunge	65.981	681	10.0	34.0	
Molva molva	Ling	Lange	0.375	2	29.0	36.0	
Mullus surmuletus	Striped red mullet	Stribet rød mulle	65.647	1008	4.0	29.0	
Mustelus asterias	Starry smooth-hound	Stjernehaj	260.895	161	21.0	106.0	
Myoxocephalus scorpius	Sculpin	Almindelig ulk	1.073	12	13.0	22.0	
Nephrops norvegicus	Norway lobster	Jomfruhummer	1.068	22	2.4	6.0	CPL
Pecten maximus	Great scallop	Stor kammusling	0.924	10	-	-	
Pholis gunnellus	Butter fish	Tangspræl	0.008	1	13.0	13.0	
Platichthys flesus	Flounder	Skrubbe	0.579	2	28.0	33.0	
Pleuronectes platessa	Plaice	Rødspætte	486.310	3953	12.0	51.0	
Pollachius pollachius	Pollack	Lyssej	2.930	1	74.0	74.0	
Pollachius virens	Saithe	Sej	1.536	4	27.0	40.0	
Pomatoschistus spp.	Sand gobies	Sandkutlinger	3.690	4611	2.0	5.0	
Raja brachyura	Blonde ray	Småplettet rokke	11.422	7	36.0	76.0	
Raja clavata	Thornback ray	Sømrokke	83.563	102	24.0	73.0	
Raja montagui	Spotted Ray	Storplettet Rokke	28.949	47	23.0	78.0	
Raja undulata	Undulate ray	Broget rokke	0.880	1	50.0	50.0	
Rossia macrosoma	Stout bobtail squid	Ross's blæksprutte	0.097	74	-	-	
Sardina pilchardus	Pilchard	Sardin	32.564	2973	5.0	24.0	
Scomber scombrus	Mackerel	Makrel	2477.881	15365	17.0	40.0	
Scophthalmus maximus	Turbot	Pighvarre	6.824	11	20.0	45.0	
Scophthalmus rhombus	Brill	Slethvarre	3.430	6	26.0	44.0	
Scyliorhinus canicula	Lesser-spotted dogfish	Småplettet rødhaj	858.777	1695	16.0	67.0	
Sepia officinalis	Common cuttlefish	Sepiablæksprutte	3.886	12	4.0	17.0	ML
Sepiola atlantica	Atlantic bobtail squid		0.004	4	-	-	
Solea solea	Sole	Tunge	22.479	318	15.0	36.0	
Spondyliosoma cantharus	Black sea bream	Almindelig havrude	0.012	1	9.0	9.0	
Sprattus sprattus	Sprat	Brisling	2849.811	279094	5.0	14.5	
Squalus acanthias	Spurdog	Pighaj	17.344	73	24.0	89.0	
Taurulus bubalis	Sea scorpion	Langtornet ulk	0.081	2	12.0	14.0	
Trachinus draco	Greater weever fish	Fjæsing	44.499	299	24.0	40.0	
Trachurus trachurus	Horse mackerel	Hestemakrel	2558.391	113180	4.0	38.0	
Trigla lucerna	Tub gurnard	Rød knurhane	10.587	33	21.0	47.0	
Trisopterus esmarkii	Norway pout	Sperling	109.322	14490	6.0	19.0	
Trisopterus luscus	Bib	Skægtorsk	39.284	373	16.0	29.0	
Trisopterus minutus	Poor-cod	Glyse	20.359	449	6.0	20.0	
Zeus faber	John dory	Sanktpetersfisk	1.130	3	25.0	28.0	

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 2025.

Species	Total	Remark
Herring (Clupea harengus)	319	for ageing
Sprat (Sprattus sprattus)	227	
Cod (Gadus morhua)	81	
Haddock (Melanogrammus aeglefinus)	357	
Whiting (Merlangius merlangus)	340	
Saithe (Pollachius virens)	4	
Norway pout (Trisopterus ermarkii)	50	
Mackerel (Scomber scombrus)	291	
Plaice (Pleuronectes platessa)	576	
Hake (Merluccius merlucius)	8	for other purposes
Turbot (Scophthalmus maximus)	6	
Brill (Scophthalmus rhombus)	4	
Tub gurnard (Chelidonichthys lucerna)	20	
Sum:	2283	

Tab. 3: Number of stomach data collected by species (V: everted, R: regurgitated, F: feeding, E: empty, -: not caught, Dana DK IBTS 3Q 2025.

	Number of stomachs per category		
Species	V	R	E + F
Haddock	0	12	192
Mackerel	0	0	116
Turbot	0	0	6
Brill	0	0	4
Halibut	0	0	0
Pollack	0	0	0
Tusk	0	0	0
Ling	0	0	0
Tub gurnard	0	0	17
		sum:	335

Tab. 4: Preliminary abundance indices (number per hour trawling) for commercial IBTS species per tow, Dana DK IBTS 3Q 2025.

		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		16	22			248			2										636	928					14	259
5	43F9							2	2							2				1911	39					101	425
6	44F8	8	79	4	150	99	494	103	860	860		371	415		197008	11970				8	20						51
10	43F8		40		60	402	954	32	782	758	1675	6	12		20625	3972					2						44
16	43F7		4			21	405	10	1398	96					76		2			877	208					4	287
21	42F7					14	203			4							8	4		434	32					28	297
25	41F7								4											1789	14					72	68
27	41F7				2			20	304	7										2936	291					155	250
29	41F6		22			32	412	4	399	38										228	302					85	479
31	41F6				4	61	288	34	714	28				6			431	33		2	4					63	214
37	41F5				834	183	206		2732	1185				2474	5330	27	4272	689									160
42	41F4				4955	1406	1480		2313	3021							28	78		4				2			126
44	41F3				1605	401	1053		890	1241						4	84	122			2						140
49	41F2				470	3120	2288		2153	1661			2			2	116	144			6		4			2	100
50	41F1		2		14	521	691		467	1176	1503	22	597		1506	20895				136	24						4
52	41F0	4	10			939	2950		161	3511	23895	113	380		421	27737				54	371			2			6
55	39E9		2	4		1664	2774		224	2891					30	22	1446	458		14	6						58
57	39F0		3			4959	5030		11663	15610					3	265	875	502		31	9						23
58	39F1		19		19	373	1252		6235	6858						31	4	35		11682	124					4	151
61	37F2		29	7		910	4552		5665	12003		34	319	2	78		41618				109						46
63	37F3					769	1977	232	31579	8823			8	24	55	4				4	294					12	208
64	37F3					81	272		2104	834				2293	663		59490	4249		2	2					32	526
66	39F2				128	969	810		10	8						4	2	2		2432						5	436
68	39F3					4	2		6	4										405	4					6	168
69	39F4		6	3		979	7146		3003	4819				735	134		117613				9					3	125
73	39F5		2	2	12	295	3217		7256	6673				3877	34	4	75203									2	70
87	37F6							550	214	2				517			2609			2						26	66
88	37F5							720	1013	10				2269	31		190			530	12					20	48
90	37F4				2			862	13148	323				779			33725			44	2					22	36
93	35F4							161	80	14				52			437									28	30
94	34F4							1383	88	14							1383	15		115	6					22	16
96	33F4							220	66	12							14			212	8					28	16
98	33F3								38	4				282261	1398		293686			113	30					38	8
104	32F2								7	45		4															11
106	33F2								3089	2520											2					10	58
109	34F2							2	6223	1436							2				10					36	131
110	33F2							2	273	147										54	60					8	22
112	33F3								8	18										6	4					6	2
114	34F3							246	24649	2218										4						36	82
117	35F2							95	1629	81				16	8		817	13								32	194
118	35F3							6	147	18				72	42		62			147	2					165	143
120	35F2							34	3627	140				874	16	2	9268			223						149	133
122	36F2							368	30535	4415							1086									94	401
125	35F1							7	154	135				2			1434									22	28
126	35F1								385	571							2				6					26	18
130	35F0		2						10	648				50	4		2453				4					2	2
132	37F0					8	6		7815	8325							4	2		26	32					62	76
133	36F0					6	10		645	1772											18					8	12
135	36F1						6		4773	3771						2	85374	2108		125	64					74	105
137	37F1		2			8	12		2547	1397						2	58	4		8259	190						147
141	39F4		58	8		3131	7417	869	12291	1862				4			18	2								8	180