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Cruise Report FRV "SOLEA" Cruise 710 01. - 19.10.2015

Hydroacoustic survey for the assessment of small pelagics in the Baltic Sea

Scientists in charge: Dr. Tomas Gröhsler (TI-OF) & Dr. Matthias Schaber (TI-SF)

1. In a nutshell

The cruise was part of an international hydroacoustic survey providing information on stock parameters of small pelagics in the Baltic Sea, coordinated by the ICES Working Group of International Pelagic Surveys (WGIPS) and the ICES Baltic International Fish Survey Group (WGBIFS). FRV "Solea" participated for the 28th time. The survey area covered the western Baltic Sea including Kattegat, Belt Sea, Sound and Arkona Sea (ICES Subdivisions SD 21, 22, 23 and 24). Altogether, 1230 nm of hydroacoustic transects were covered.

In the majority of sampled rectangles, mean NASC values per nautical mile were distinctly below the high values measured in 2014 but also below the long-time mean values recorded. Only in few rectangles in ICES SD 23 and SD 24 mean NASC values were higher than in the previous year. Additionally, NASC values above thelong-term mean were only measured in one rectangle (in SD 23). In this area, like in previous years, very high NASC values originating from dense aggregations of herring were recorded.

For species allocation and identification, altogether 59 fishery hauls were conducted.

Distribution list: BLE, Hamburg Schiffsführung FFS "SOLEA" Deutsche Fischfang-Union Sassnitzer Seefischerei e. G. Landesverband der Kutter- u. Küstenfischer DFFU Cuxhaven BMEL, Ref. 614 Thünen-Institut - Pressestelle, Dr. Welling Thünen-Institut - Präsidialbüro Thünen-Institut - Institut für Fischereiökologie Thünen-Institut - Institut für Seefischerei Thünen-Institut - Institut für Ostseefischerei Thünen-Institut - FIZ-Fischerei

BFEL HH, FB Fischqualität Reiseplanung Forschungsschiffe, Herr Dr. Rohlf Fahrtteilnehmer Bundesamt für Seeschifffahrt und Hydrographie, Hamburg Mecklenburger Hochseefischerei Sassnitz Doggerbank Seefischerei GmbH, Bremerhaven Deutscher Fischerei-Verband e. V., Hamburg Leibniz-Institut für Meereswissenschaften IFM-GEOMAR BSH, Hamburg Leibniz-Institut für Ostseeforschung Warnemünde Institut für Fischerei der Landesforschungsanstalt LA für Landwirtschaft, Lebensmittels. und Fischerei Euro-Baltic Mukran

2. Cruise objectives

The following objectives were planned for SB710:

- Hydroacoustic measurements for the assessment of small pelagics in Kattegat and western Baltic Sea including Belt Sea, Sound and Arkona Sea (ICES SD 21, 22, 23, 24)
- (Pelagic) trawling according to hydroacoustic measurements
- Hydrographic measurements on hydroacoustic transects and after each fishery haul
- Identification and recording of species- and length-composition of trawl catches
- Collection of biological samples of herring, sprat and additionally European anchovy and cod for further analyses

3. Cruise narrative and preliminary results

3.1 Cruise narrative (Matthias Schaber & Tomas Gröhsler)

FRV "Solea" was equipped with all hydroacoustic equipment and biological sampling gear on October 1st. On the same afternoon, "Solea" left Marienehe port for the calibration of scientific echosounders. The calibration site off Kühlungsborn was chosen according to prevailing weather conditions providing good conditions for calibration. Both the 38 and 120 kHz transducer were calibrated with calibration values regarded as very good. After calibration FRV "Solea" returned to Marienehe port the same evening for preparation of further equipment and embarkation of rest of scientific crew. Leaving of port and start of survey was scheduled for October 3rd. Hydroacoustic survey operations commenced October 3rd at 05:00 PM in SD 24.

Generally, survey operations were conducted during nighttime to account for the more pelagic distribution of clupeids during that time. On October 6th, after covering 3 of 5 transects in SD 24 survey operations were located to SD 22 due to the forecast of bad weather. However, survey operations in SD 22 had also to be interrupted after the first night due to unfavorable weather conditions. The survey commenced on 7th October in SD23. The remaining two northernmost transects of SD 24 were covered thereafter. The survey continued on 10th October in SD 22. After accomplishing two transects in SD 22, FRV "Solea" entered Kiel port on 12th October for a partial exchange of the scientific crew before leaving the harbor again to commence survey operations on the same evening in SD 22. Survey operations in SD 21 started on 14th October and could be accomplished afterwards without any loss of time.

On October 18th, 01:17 AM the scientific program was finished near Kullen area (Kattegat) and FRV "Solea" left the survey area to steam to Copenhagen port (disembarking of one member of scientific crew) and onward to Marienehe port, where the ship arrived on October 18th, 16:00 PM. All hydroacoustic equipment and biological sampling gear was disarmed on 19th October.

Altogether, the following survey schedule was accomplished:

- Kattegat (SD 22) 10 14.1 - Kattegat (SD 21) 14 18.1	 Sound Arkona Sea Belt Sea Kattegat 	23) 07 08.10. 24) 08 10.10. 22) 10 14.10. 21) 14 18.10.
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Total survey time	15 nights
Fishery hauls	59
CTD-casts	84
Hydroacoustic transects	1230 nm

Overall hydroacoustic transect length was 1230 nm (2014: 1217 nm).

3.2 Hydroacoustic sampling (Matthias Schaber)

Hydroacoustic data were recorded with a Simrad EK60 scientific echosounder with hullmounted 38 kHz and 120 kHz transducers. Post-processing and analysis were accomplished with Myriax EchoView 6 software. The transducer settings applied were in accordance with the specifications provided in ICES (2014). Calibration of both 38 and 120 kHz transducer took place off Kühlungsborn at good overall weather conditions. The 38 kHz transducer was calibrated three times at two different pulse lengths, the 120 kHz transducer twice at two different pulse lengths. Calibration results were considered very good based on the calculated RMS values.

During the survey, hydroacoustic data were recorded at a standard ship speed of 10 kn leading to daily transect lengths of roughly 90 to 100 nm. Figure 1 depicts the spatial distribution of mean NASC values (5 nm intervals) measured on the hydroacoustic transects covered in 2015. In almost all rectangles surveyed, mean NASC values per nautical mile were distinctly below the observations recorded in 2014 and also below the long-time survey average. On ICES subdivision scale, mean NASC values were lower than in the previous year in SD 21, 22 and 24 while in SD 23 mean NASC values were higher than in 2014.

In SD 21, mean NASC per 1 nm EDSU was lower in than both the previous year and the longtime survey average in all rectangles surveyed. As in the previous year, increased aggregations of clupeids were measured in the northern part of the Kattegat (rectangle 43G1), but mean and overall NASC values also in this area were significantly lower than in 2014.

Also in SD 22, mean NASC values recorded were lower than the previous year and the survey average in all rectangle surveyed. Notable but small aggregations of clupeids were only recorded in the western part of Kiel Bight (38G0) and north/east of Fehmarn Island (38G1, 37G1) while the distribution was irregular along the rest of the survey transect in the remaining parts of the subdivision.

The large aggregations of big herring that can be observed annually in SD 23 in the Öre Sound were again present in autumn 2015. NASC values in rectangle 40G2 covering the aggregation hotspot in this area were slightly lower than the high levels measured in 2014 but still significantly higher than the long-time survey average. Like in 2014 the herring aggregations expanded north towards the narrow Helsingör/Helsingborg strait into rectangle 41G2 with corresponding NASC values similar to the previous year.

As in 2014, highest fish densities in SD 24 were recorded north and east of Rügen Island and also in the central parts of the Arkona Sea (37G3, 38G3 and southern 39G3). In most of the rectangles surveyed however, mean NASC values were lower than in the previous year. In rectangles 38G4 (southeastern Arkona Sea) and 39G2 (northwestern Arkona Sea, near Öre Sound mouth), NASC values were above the 2014 results (but below average).

The final analysis of hydroacoustic data will be accomplished in the first quarter of 2016.

3.3 Biological sampling (Tomas Gröhsler)

To validate and allocate echorecordings, altogether 59 fishery hauls were conducted (Figure 2). Trawling time was 30 minutes. On all stations a pelagic trawl net "Krake" (PSN 388) was employed.

Subdivision	Hauls (n)
21	19
22	18
23	3
24	19

Fishery hauls according to ICES Subdivision:

The following samples were collected and frozen for further processing at TI-OF to identify additional biological parameters of stock structure (e. g. sex, maturity, age):

• 1,745 herring, 904 sprat and 287 European anchovies.

The following numbers of frozen samples for genetic investigations, stock discrimination and evaluation of distribution patterns in Danish waters were further collected for DTU aqua, Charlottenlund, DK:

- 44 herring (*Clupea harengus*)
- 18 anchovy (Engraulis encrasicolus)

Species	Length measurements	Number of hauls
CLUPEA HARENGUS	11,178	58
CRYSTALLOGOBIUS LINEARIS	33	10
CTENOLABRUS RUPESTRIS	14	6
CYCLOPTERUS LUMPUS	4	3
ENGRAULIS ENCRASICOLUS	1,666	43
EUTRIGLA GURNARDUS	32	10
GADUS MORHUA	312	27
GASTEROSTEUS ACULEATUS	427	19
GOBIUS NIGER	15	5
HIPPOGLOSSOIDES PLATESSOIDES	11	3
LIMANDA LIMANDA	639	31
MERLANGIUS MERLANGUS	614	46
MERLUCCIUS MERLUCCIUS	13	6
MYOXOCEPHALUS SCORPIUS	3	3
OSMERUS EPERLANUS	4	3
PLATICHTHYS FLESUS	55	20
PLEURONECTES PLATESSA	42	9
POMATOSCHISTUS MINUTUS	154	24
PSETTA MAXIMA	5	3
SCOMBER SCOMBRUS	333	12
SPRATTUS SPRATTUS	9,235	54
SQUALUS ACANTHIAS	5	3
SYNGNATHUS TYPHLE	9	8
TRACHINUS DRACO	428	26
TRACHURUS TRACHURUS	53	22
TRISOPTERUS ESMARKI	79	4
Others	404	57

Altogether, the following species were sampled and processed:

The overall catch composition (kg $0.5 h^{-1}$) per trawl haul according to ICES Subdivision 21, 22, 23 and 24 is given in Tables 1-4. Altogether, 39 different species were recorded. Herring were caught in 58, sprat in 54 hauls. As in previous years, mean catch rates per station (kg $0.5 h^{-1}$) were lowest in SD 22 and highest in SD 23. In contrast to the last year where sardines (*Sardina pilchardus*) were caught in SD 21, this species did not appear in 2015 catches. As in last year anchovy (*Engraulis encrasicolus*) was present in most catches. Anchovies were caught throughout the survey area (exception SD 23) in 43 out of 59 hauls, including the majority of hauls in SD 21. In some hauls in SD 22, anchovies contributed the bulk of clupeid catches.

Figures 3 and 4 show relative length-frequency distributions of herring and sprat in ICES subdivisions 21, 22, 23 and 24 for the years 2014 and 2015. Compared to results from the previous survey in 2014, the following conclusions for herring can be drawn (Fig. 3):

- Catches in SD 21 show a bimodal distribution characterized by the presence of the incoming year class (<=15 cm) and older herring (>15 cm). This is in contrast to 2014, where the fraction of older herring was mostly absent.
- SD 22 shows the incoming year class with only one mode at 10.75 cm while in 2014 two modes were observed at 12.75 cm and 15.25 cm. Older fishes show another mode at 16.75 cm (17.75 cm in 2014). In contrast to previous year this year's results show fewer larger herring.
- In SD 23, larger herring (> 20 cm) dominate catches. The contribution of larger herring is more pronounced compared to the previous year when herring of the incoming year class were present with two modes at ca. 7.25 cm and at 11.75 cm.
- In SD 24, the herring length-frequency distribution is characterized by the incoming year class (<=15.00 cm) and older herring (>15 cm), whereas in 2014 it was dominated by the incoming year class (mode at 11.25 cm) with only few older fishes.
- Altogether, the present contribution of the incoming year class (ca. <15 cm) seemed to be less pronounced than previous year.

Relative length-frequency distributions of sprat in the years 2015 and 2014 (Fig. 4) can be characterized as follows:

- In SD 21, 22 and 23 catch numbers of the incoming year class (<= 10 cm) are virtually absent. The catches are now mostly dominated by the contribution of larger sprat (ca. >10 cm). The highest contribution of very large sprat is found in SD 23 (mode at 15.75 cm).
- In SD 24, the sprat length-frequency distribution is similar compared to 2014 with a bimodal distribution of both incoming year class (< 10 cm) and older sprat.
- Altogether, the present contribution of the incoming year class (ca. <10 cm) is very low.

3.4 Hydrography (Matthias Schaber)

Profiles of hydrographic parameters temperature, salinity and oxygen concentration were measured with a "Sea-Bird SBE 19 plus"-CTD probe with water sampler after each fishery haul or in regular intervals on the transects to allow for a sufficient coverage of the survey area. Additional water samples from different depth layers were collected daily for the calibration of salinity measurements and oxygen concentration measurements (the latter with Winkler titration).

Altogether, 84 CTD-profiles were measured. CTD stations as well as horizontal gradients of temperature, salinity and oxygen concentration both at the surface and at the seafloor are displayed in Figure 5. Like in 2014, surface temperatures were comparatively high especially in the Arkona Sea. Overall surface temperatures ranged from ca. 11.5 °C in SD 21 to 15.5 °C in the southeastern SD 24. Bottom temperatures in the southern Kattegat were higher than surface temperatures with values around 14.5 °C, while in the northern Kattegat in deeper water temperatures at the seafloor were around 8.5 °C. In the remaining survey area, especially in SD 22 and SD 24, seafloor temperatures were similar to surface temperatures. Surface salinities ranged from ca. 22 psu in the Kattegat to ca. 8 psu in the eastern Arkona Sea. Bottom salinities showed a similar gradient but were generally higher in the range of 35 psu (northern part of survey area in SD 21) to ca. 9.5 psu (SD 24). Surface layers were well oxygenated throughout the survey area. Signs of oxygen depletion were as in previous years evident in bottom layers of some areas in SD 22. In SD 22, oxygen depletion in the inner and southern Mecklenburg Bight as well as the southern part of the little Belt and the eastern Kiel Bight had proceeded to almost anoxic conditions near the seafloor.

Name	Function	Institute
0103.10.20154/Calibra	ation of hydroacoustic equipment	
Dr. M. Schaber	Hydroacoustics, Cruise leader	TI-SF
V. Kalter	Student assistant	TI-SF
B. Stefanowitsch	Student assistant	TI-SF
0319.10.2015/Survey		
Dr. M. Schaber	Hydroacoustics, Cruise leader	TI-SF (0312.10.)
Dr. T. Gröhsler	Hydroacoustics, Cruise leader	TI-OF (1219.10.)
I. Hennings	Fishery biology	TI-OF (1219.10.)
S. Hagemann	Fishery biology	TI-OF (0312.10.)
V. Kalter	Fishery biology, Student assistant	TI-SF
M. Koth	Fishery biology	TI-OF
T. Møller	Fishery biology	DTU Aqua, Charlottenlund, (DK)
B. Stefanowitsch	Hydroacoustics, Student assistant	TI-SF

4. Cruise Participants

5. Acknowledgments

We hereby thank all participants, the crew of FRV "Solea" and Captain S. Meyer for their outstanding cooperation and commitment.

6. Literature

ICES (2014). SISP Manual of International Baltic Acoustic Surveys (IBAS). Report of the Baltic International Fish Survey Working Group (WGBIFS). ICES CM 2014/SSGESST:13

Dr. Tomas Gröhsler (TI-OF) (Scientist in charge)

Dr. Matthias Schaber (TI-SF) (Scientist in charge)

Figures



Figure 1: FRV "Solea" cruise 710/2015. Cruisetrack (thin dashed lines) and mean NASC (5nm intervals, dots). ICES statistical rectangles are indicated in the top and right axis. Thick dashed lines separate ICES subdivisions (SD).



Figure 2: FRV "Solea" cruise 710/2015. Cruisetrack (thin dashed lines) and fishery hauls (red dots). ICES statistical rectangles are indicated in the top and right axis. Thick dashed lines separate ICES subdivisions (SD).



Figure 3: FRV "Solea" cruise 710/2015: Herring (*Clupea harengus*) length-frequency distribution compared to previous year (cruise 694/2014).



Figure 4: FRV "Solea" cruise 710/2015: Sprat (*Sprattus sprattus*) length-frequency distribution compared to previous year (cruise 694/2014).



Figure 5: FRV "Solea" cruise 710/2015: Hydrography. CTD stations are depicted as blue dots in the area map (far right). Temperature (°C, top panels), salinity (PSU, middle panels and oxygen concentration (ml/l, lower panels) at the surface (left) and near the seafloor (right). Surface oxygen concentration levels are displayed at 5 m depth.

Tables

Table 1: FRV "Solea" cruise 710/2015: Catch composition (kg $0.5 h^{-1}$) by haul in SD 21.

Species/ICES Rectangle 4161 4160 4161 4161 4161 4161 4161 4161 4161 426	Haul No.	41	42	43	44	45	46	47	48	49	50	51	
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pomaroschistrus minutrus 8.77 16.92 5.66 1.1 7.57 0.64 17.54 SCOMPER SCOMBRUS 8.77 16.92 5.66 1.1 7.57 0.64 17.54 SCOMPARUS SCOMBRUS 2.07 1.91 1.31 0.05 0.09 109.16 0.09 216.67 0.07 1.98 SYNGMATHUS SPRATTUS 0.01 0.21 0.07 0.17 0.12 0.20 2.8 7.64 0.43 0.26 2.62 TRACHINUS SPRACT 0.09 0.21 0.07 0.17 0.12 0.20 2.8 7.64 0.43 0.26 2.42 TRACHINUS SPACT 0.07 1.73 3.42 12.98 21.05 12.405 14.34 3.67 0.54 10.33 TRSOPTERUS SEMARY 0.07 5.64 5.7 5.8 5.9 Total 3.67 0.54 16.4 16.22 2.22 2.12 2.12 14.02 0.02 0.22 2.22 16.14 16.2 <	PLEURONECTES PLATESSA								0.09				
SCOMBER SCOMERUS 8.77 16.92 5.66 1.1 7.57 0.64 17.54 SCOPHTALMUS RNOMBUS SEPIOLA 0.09 109.16 0.09 216.67 0.07 0.19 SQUALUS ACAMTHIAS 1.91 1.31 0.05 0.09 109.16 0.09 216.67 0.07 0.19 SQUALUS ACAMTHIAS 1.99 0.21 0.07 0.17 0.12 0.20 0.28 7.64 0.43 0.26 2.62 SYNGNATHUS TRACHURUS 0.00 1.9 0.21 0.07 0.17 0.12 0.20 0.28 7.64 0.43 0.26 2.62 TRACHURUS TRACHURUS 0.00 1.41 4 4 0.01 + + + 0.01 + + + 0.01 + + + 0.01 + + + 0.01 - 0.02	POMATOSCHISTUS MINUTUS											0	
SCOPHTALAUUS RIMONBUS International and the arrow from the second transmission of transmissic transmission of transmission of transmission of tran	SCOMBER SCOMBRUS				8.77	16.92	5.66	1.1		7.57	0.64	17.54	
SEPTOLA 0.01 0.91 1.31 0.05 0.09 109.16 0.09 216.67 0.07 1.98 6.51 SQUALUS ACANTHIAS 1.09 0.21 0.07 0.17 0.12 0.20 0.28 7.64 0.43 0.26 2.667 1.98 6.51 SYNGNATHUS TYPHLE + 1 0.00 1.4 + 4 0.01 + + 0.01 + + 0.01 + + 0.01 + + 0.01 + + 0.01 + + 0.01 + + 0.01 + + + 0.01 + + + + + + + + + + + + 0.02 0.03 0.03 0.01 0.02 0.02 0.03 0.01 0.04 0.22 0.29 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	SCOPHTHALMUS RHOMBUS												
SPRATTUS SPRATTUS 2.07 1.91 1.31 0.05 0.09 109.16 0.09 216.67 0.07 1.98 SYNGNATHUS TYPHLE + + - - - - 6.51 TRACHINUS TRACHURUS 0.03 0.01 + + + 0.01 0.2 0.26 0.28 7.64 0.43 0.26 2.62 TRACHINUS TRACHURUS 0.03 0.01 + + + 0.01 - + + 0.01 0.13 0.02 7.64 0.43 8.41 8.02 3.472 TRISOPTERUS ESMARKI 5.78 5.8 5.5 5.5 5.5 5.7 5.8 5.7 7.8 5.9 7.64 16.32 5.92 7.72 7.3 3.42 12.98 16.31 3.67 0.53 1.03 3.67 0.53 1.63 3.62 1.64 16.64 16.32 5.92 2.672 205.13 205.13 1.64 16.90 1.64 1.63 2.92 1.18 1.64 1.63 1.65 3.92 1.63 3.63 <th>SEPIOLA</th> <th></th> <th>0.01</th>	SEPIOLA											0.01	
SQUALUS ACAMTHIAS SYNGNATHUS TYPHLE + - - -	SPRATTUS SPRATTUS	2.07	1.91	1.31	0.05	0.09	109.16	0.09	216.67		0.07	1.98	
SYNGNATHUS TYPHLE +	SQUALUS ACANTHIAS											6.51	
TRACHINUS DRACO 1.09 0.21 0.07 0.17 0.12 0.20 0.28 7.64 0.43 0.26 2.62 TRACHURUS STACHURUS 0.01 + + + 0.01 + + + 0.01 + + + 0.01 + + + 0.01 + + + 0.01 + + + 0.01 + + + 0.01 + </th <th>SYNGNATHUS TYPHLE</th> <th>+</th> <th></th>	SYNGNATHUS TYPHLE	+											
TRACHURUS TRACHURUS 0.03 0.01 + + + 0.01 + + 0.01 0.1 0.1 1 TRISOPTENUS ESMARKI 6.08 57.37 3.42 12.98 21.05 124.06 40.6 242.03 8.41 8.02 34.72 Medusae 4.55 0.78 1.83 3.05 0.00 0.27 0.36 1.34 3.67 0.54 0.03 Species/ICES Rectangle 4361 4361 4362 4262 4262 4262 4162 20.72 205.13 0.07 1.64 16.32 5.92 26.72 205.13 0.07 1.64 16.32 5.92 20.72 20.51.3 0.07 1.03 <td< th=""><th>TRACHINUS DRACO</th><th>1.09</th><th>0.21</th><th>0.07</th><th>0.17</th><th>0.12</th><th>0.2</th><th>0.28</th><th>7.64</th><th>0.43</th><th>0.26</th><th>2.62</th></td<>	TRACHINUS DRACO	1.09	0.21	0.07	0.17	0.12	0.2	0.28	7.64	0.43	0.26	2.62	
TRISOPTERUS ESMARKI ++ 120al 6.08 57.37 3.42 12.98 21.05 124.06 44.06 242.05 8.02 8.02 8.02 8.02 8.02 8.02 4.06 242.05 8.02 8.02 8.02 8.02 0.05 Mail No. 52 53 54 55 57 58 50 Total Species/ICES Rectangle 43G1 43G1 <th colsp<="" th=""><th>TRACHURUS TRACHURUS</th><th>0.03</th><th>0.01</th><th>+</th><th>+</th><th>+</th><th>0.01</th><th>+</th><th>+</th><th></th><th>0.01</th><th>0.13</th></th>	<th>TRACHURUS TRACHURUS</th> <th>0.03</th> <th>0.01</th> <th>+</th> <th>+</th> <th>+</th> <th>0.01</th> <th>+</th> <th>+</th> <th></th> <th>0.01</th> <th>0.13</th>	TRACHURUS TRACHURUS	0.03	0.01	+	+	+	0.01	+	+		0.01	0.13
Total 6.08 57.37 3.42 12.98 21.05 12.06 4.06 242.03 8.41 8.02 34.72 Medusae 4.55 0.78 1.83 3.05 0.00 0.27 0.36 1.34 3.67 0.54 0.03 Species/ICES rectangle 43G1 43G1 43G1 43G2 42G2 42G2 42G2 42G2 42G2 42G2 42G2 42G2 42G2 26.72 205.13 CRANGON CRANGON 0.07 5.64 16.32 5.92 26.72 205.13 CRANGON RANGON 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 1.94 EUTRIGLA GURNARDUS 0.02 0.29 1.18 GASTEROSTEUS ACULEATUS 0.02 0.02 0.23 0.37 0.36 0.03 6.85 0.02 0.02 0.02 0.03 0.42 URANDA 0.02 0.02 0.02 0.02 0.02 0.02	TRISOPTERUS ESMARKI											+	
Medusae 4.35 0.78 1.83 3.05 0.00 0.27 0.38 1.34 3.67 0.54 0.03 Haul No. 52 53 54 55 56 57 58 59 Total Species/ICES Rectangle 43G1 43G1 43G1 43G2 42G2 44G2 41G2 CLUPEA HARENGUS 3.58 36.20 5.64 16.64 16.32 5.92 26.72 205.13 CRANGON CRANGON 0.07 + + + + + + + + + + 0.07 CRNSTALLOGOBIUS LINEARIS . 0.07 . + + + + + + + + + + + + + + 0.19 ENGRAULIS ENCRASICOLUS 0.02 0.03 0.31 0.30 0.34 0.32 0.29 1.18 GADUS MORHUA 0.02 0.10 0.01 0.02 0.02	Total	6.08	57.37	3.42	12.98	21.05	124.06	4.06	242.03	8.41	8.02	34.72	
Haul No. 52 53 54 55 56 57 58 59 Total Species/ICES Rectangle 4361 4361 4362 4262 4262 4262 4262 4162 CLUPEA HARENGUS 3.58 36.20 5.64 16.64 16.32 5.92 26.72 205.13 CRANGON CRANGON 0.07 + + + + + 0.07 CRYSTALLOGOBIUS LINEARIS 0.02 0.03 0.31 + 0.08 0.08 0.01 1.94 EUTRIGLA GURNARDUS 0.18 0.10 0.04 0.22 0.29 1.18 GADUS MORHUA 0.55 3.92 16.00 8.90 9.04 44.04 GASTEROSTEUS ACULEATUS 0.13 0.03 0.31 0.31 0.31 0.32 0.21 0.59 0.81 0.30 0.42 ILIMANDA LIMANDA 0.13 0.03 0.42 0.41 2.93 0.41 2.93 MERLUCCIUS MERLANGUS </th <th>Medusae</th> <th>4.55</th> <th>0.78</th> <th>1.83</th> <th>3.05</th> <th>0.00</th> <th>0.27</th> <th>0.36</th> <th>1.34</th> <th>3.67</th> <th>0.54</th> <th>0.03</th>	Medusae	4.55	0.78	1.83	3.05	0.00	0.27	0.36	1.34	3.67	0.54	0.03	
Species/ICES Rectangle 43G1 43G1 43G2 42G2 42G													
CLUPEA FIAREMODS 3.58 36.20 5.64 16.64 16.32 5.92 26.72 205.13 CRANGON CRANGON 0.07 + + + + 0.07 CRYSTALLOGOBIUS LINEARIS + + + + + - 0.01 CRYCLOPTERUS LUMPUS 0.02 0.03 0.31 + 0.08 0.05 0.08 0.01 1.94 EUTRIGLA GURNARDUS 0.18 0.10 0.04 0.22 0.29 1.18 GADUS MORHUA 0.13 0.02 0.17 0.02 0.02 0.19 LIMANDA LIMANDA 0.13 0.03 0.34 0.37 0.36 0.03 6.85 LOLIGO FORBESI 0.04 0.01 0.10 0.01 0.02 0.23 0.37 0.09 0.85 MERLUCCIUS MERLANGUS 0.61 5.32 0.21 0.59 0.81 0.30 1.25 0.44 12.93 MERLANGUS MERLANGUS 0.61 5.32 0.21 0.59 0.81 0.30 0.55 0.05 PUELURONKERLANGUS M	Haul No.	52	53	54	55	56	57	58	59	Total			
CRAINGON CARSON 0.07 +	Haul No. Species/ICES Rectangle	52 43G1	53 43G1	54 43G1	55 43G2	56 42G2	57 42G2	58 42G2	59 41G2	Total			
CRUSTRALEOGNUSS LIMEARUS - + </th <th>Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANCON CRANCON</th> <th>52 43G1 3.58</th> <th>53 43G1 36.20</th> <th>54 43G1</th> <th>55 43G2 5.64</th> <th>56 42G2 16.64</th> <th>57 42G2 16.32</th> <th>58 42G2 5.92</th> <th>59 41G2 26.72</th> <th>205.13</th> <th></th> <th></th>	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANCON CRANCON	52 43G1 3.58	53 43G1 36.20	54 43G1	55 43G2 5.64	56 42G2 16.64	57 42G2 16.32	58 42G2 5.92	59 41G2 26.72	205.13			
CYCLOPTERUS LUMPUS 0.02 0.03 0.31 + 0.08 0.01 1.94 ENGRAULIS ENCRASICOLUS 0.02 0.03 0.31 + 0.08 0.01 0.94 44.04 GADUS MORHUA 0.65 3.92 16.00 8.90 9.04 44.04 GASTEROSTEUS ACULEATUS 0.65 3.92 16.00 8.90 9.04 44.04 IPPOGLOSSOTDES PLATESSOIDES 0.02 0.17 0.34 0.37 0.36 0.03 6.85 LOLGO FORBESI 0.04 0.01 0.10 0.01 0.02 0.05 0.03 0.42 MERLANGUS MERLANGUS 0.14 0.00 0.02 0.23 0.37 0.09 0.85 MYSIDACEA + 0.02 + 0.02 0.05 0.03 0.41 0.9 POMATOSCHISTUS MINUTUS + + 0.05 0.05 0.05 0.05 SCOMBER SCOMBRUS 1.28 0.46 0.44 61.88 79.34 29.18 26.34 540.32 SQUALUS ACANTHIAS 0.02 0.01	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CPYSTAL LOCORTUS LINEADIS	52 43G1 3.58	53 43G1 36.20 0.07	54 43G1	55 43G2 5.64	56 42G2 16.64	57 42G2 16.32	58 42G2 5.92	59 41G2 26.72 +	Total 205.13 0.07			
ENGRAULIS ENCRASICOLUS 0.02 0.03 0.31 + 0.08 0.05 0.08 0.01 1.94 EUTRIGLA GURNARDUS 0.18 0.65 3.92 16.00 8.90 9.04 44.04 GADUS MORHUA 0.65 3.92 16.00 8.90 9.04 44.04 GASTEROSTEUS ACULEATUS 0.65 3.92 16.00 8.90 9.04 44.04 IMPPOGLOSSOIDES PLATESSOIDES 0.02 0.17	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOL ARPUS PUPESTRIS	52 43G1 3.58	53 43G1 36.20 0.07	54 43G1 +	55 43G2 5.64 +	56 42G2 16.64 +	57 42G2 16.32	58 42G2 5.92 +	59 41G2 26.72 +	Total 205.13 0.07 + 0.01			
EUTRIGLA GURNARDUS 0.13 0.13 0.03 0.01 0.04 0.22 0.29 1.18 GADUS MORHUA 0.65 3.92 16.00 8.90 9.04 44.04 GASTEROSACULEATUS 0.65 3.92 16.00 8.90 9.04 44.04 HIPPOGLOSSOIDES PLATESSOIDES 0.02 0.17 0.34 0.37 0.36 0.03 6.85 LIMANDA LIMANDA 0.13 0.03 0.34 0.37 0.36 0.03 6.42 MERLANGUS MERLANGUS 0.61 5.32 0.21 0.59 0.81 0.30 1.25 0.44 12.93 MERLANGUS MERLUCCIUS 0.14 0.00 0.02 0.23 0.37 0.09 0.85 NYSIDACEA + 0.05 0.66 1.26 2.01 0.02 0.05 0.05 0.05 PLEURONECTES PLATESSA 0.02 0.01 + <	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS	52 43G1 3.58	53 43G1 36.20 0.07	54 43G1 +	55 43G2 5.64 +	56 42G2 16.64 +	57 42G2 16.32	58 42G2 5.92 +	59 41G2 26.72 +	Total 205.13 0.07 + 0.01 0.19			
GADUS MORHUA 0.65 3.92 16.00 8.90 9.04 44.04 GASTEROSTEUS ACULEATUS 0.02 0.17 0.02 0.02 HIPPOGLOSSOIDES PLATESSOIDES 0.02 0.13 0.03 0.34 0.37 0.36 0.03 6.85 LOLIGO FORBESI 0.04 0.01 0.10 0.01 0.02 0.05 0.03 0.42 MERLANGUS MERLANGUS 0.61 5.32 0.21 0.59 0.81 0.30 1.25 0.44 12.93 MERLUCCIUS MERLUCCIUS 0.14 0.00 0.02 0.23 0.37 0.09 0.85 MYSIDACEA + 0.02 + 0.05 0.02 0.05 0.02 PLEURONECTES PLATESSA - 0.05 0.66 1.26 2.01 POMATOSCHISTUS MINUTUS + + + + + + + SCOPHTHALMUS RHOMBUS 1.28 - 0.15 0.16 59.79 0.56 SUALUS ACANTHIAS 9.28 0.46 0.44 61.88 79.34 29.18 26.34	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS	52 43G1 3.58	53 43G1 36.20 0.07	54 43G1 + 0.31	55 43G2 5.64 +	56 42G2 16.64 +	57 42G2 16.32	58 42G2 5.92 +	59 41G2 26.72 +	Total 205.13 0.07 + 0.01 0.19 1.94			
GASTEROSTEUS ACULEATUS 0.02 0.17 0.02 0.17 HIPPOGLOSSOIDES PLATESSOIDES 0.02 0.17 0.34 0.37 0.36 0.03 6.85 LUMANDA LIMANDA 0.01 0.01 0.01 0.01 0.02 0.05 0.03 0.42 LOLIGO FORBESI 0.04 0.01 0.10 0.01 0.02 0.05 0.03 0.42 MERLUCCIUS MERLUCCIUS 0.14 0.00 0.02 0.23 0.37 0.09 0.85 MYSIDACEA + 0.02 + - - 0.02 0.05 0.05 PLEURONECTES PLATESSA - 0.05 - - 0.05 0.05 0.05 SCOMBER SCOMBRUS 1.28 - 0.15 0.16 1.26 2.01 POMATOSCHISTUS MINUTUS + + + - + + + SCOPHTHALMUS RHOMBUS 1.28 2.25 0.03 0.01 0.19 SPRATTUS SPRATTUS 9.28 0.46 0.44 61.88 79.34 29.18 26.34 540.	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS	52 43G1 3.58 0.02 0.18	53 43G1 36.20 0.07 0.03	54 43G1 + 0.31	55 43G2 5.64 + +	56 42G2 16.64 + 0.08 0.10	57 42G2 16.32	58 42G2 5.92 + 0.08 0.22	59 41G2 26.72 + 0.01 0.29	Total 205.13 0.07 + 0.01 0.19 1.94 1.18			
HIPPOGLOSSOIDES PLATESSOIDES 0.02 0.17 0.34 0.37 0.36 0.03 6.85 LIMANDA LIMANDA 0.13 0.03 0.34 0.37 0.36 0.03 6.85 LOLIGO FORBESI 0.04 0.01 0.10 0.01 0.02 0.05 0.03 0.42 MERLANGUS MERLANGUS 0.61 5.32 0.21 0.59 0.81 0.30 1.25 0.44 12.93 MERLOCTUS MERLUCCIUS 0.14 0.00 0.02 0.23 0.37 0.09 0.85 MYSIDACEA + 0.02 + - 0.02 0.05 0.02 PLEURONECTES PLATESSA - - 0.05 - 0.02 0.01 SCOMBER SCOMBRUS 1.28 - 0.15 0.16 59.79 - - +	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA	52 43G1 3.58 0.02 0.18	53 43G1 36.20 0.07 0.03	54 43G1 + 0.31	55 43G2 5.64 + + 0.65	56 42G2 16.64 + 0.08 0.10 3.92	57 42G2 16.32 0.05 0.04 16.00	58 42G2 5.92 + 0.08 0.22 8.90	59 41G2 26.72 + 0.01 0.29 9.04	Total 205.13 0.07 + 0.01 0.19 1.94 1.18 44.04			
LIMANDA LIMANDA 0.13 0.03 0.34 0.37 0.36 0.03 6.85 LOLIGO FORBESI 0.04 0.01 0.10 0.01 0.01 0.02 0.05 0.03 0.42 MERLANGUS MERLANGUS 0.61 5.32 0.21 0.59 0.81 0.30 1.25 0.44 12.93 MERLUCCIUS MERLUCCIUS 0.14 0.00 0.02 0.23 0.37 0.09 0.85 MYSIDACEA + 0.02 + 0.23 0.37 0.09 0.85 PLEURONECTES PLATESSA 0.02 + - - 0.05 0.05 0.02 POMATOSCHISTUS MINUTUS +	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS	52 43G1 3.58 0.02 0.18	53 43G1 36.20 0.07	54 43G1 + 0.31	55 43G2 5.64 + + 0.65	56 42G2 16.64 + 0.08 0.10 3.92	57 42G2 16.32 0.05 0.04 16.00	58 42G2 5.92 + 0.08 0.22 8.90	59 41G2 26.72 + 0.01 0.29 9.04	Total 205.13 0.07 + 0.01 0.19 1.94 1.18 44.04 0.02			
LOLIGO FORBESI 0.04 0.01 0.01 0.01 0.02 0.05 0.03 0.42 MERLANGIUS MERLANGUS 0.61 5.32 0.21 0.59 0.81 0.30 1.25 0.44 12.93 MERLUCCIUS MERLANGUS 0.61 0.02 0.02 0.23 0.37 0.09 0.85 MYSIDACEA + 0.02 - 0.66 1.26 2.01 PDEMPROPS NORVEGICUS - 0.05 - 0.05 0.05 POMATOSCHISTUS MINUTUS + + 0.16 2.01 - + </th <th>Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS HIPPOGLOSSOIDES PLATESSOIDES</th> <th>52 43G1 3.58 0.02 0.18 0.02</th> <th>53 43G1 36.20 0.07 0.03 0.17</th> <th>54 43G1 + 0.31</th> <th>55 43G2 5.64 + + 0.65</th> <th>56 42G2 16.64 + 0.08 0.10 3.92</th> <th>57 42G2 16.32 0.05 0.04 16.00</th> <th>58 42G2 5.92 + 0.08 0.22 8.90</th> <th>59 41G2 26.72 + 0.01 0.29 9.04</th> <th>Total 205.13 0.07 + 0.01 0.19 1.94 1.18 44.04 0.02 0.19</th> <th></th> <th></th>	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS HIPPOGLOSSOIDES PLATESSOIDES	52 43G1 3.58 0.02 0.18 0.02	53 43G1 36.20 0.07 0.03 0.17	54 43G1 + 0.31	55 43G2 5.64 + + 0.65	56 42G2 16.64 + 0.08 0.10 3.92	57 42G2 16.32 0.05 0.04 16.00	58 42G2 5.92 + 0.08 0.22 8.90	59 41G2 26.72 + 0.01 0.29 9.04	Total 205.13 0.07 + 0.01 0.19 1.94 1.18 44.04 0.02 0.19			
MERLANGIUS MERLANGUS 0.61 5.32 0.21 0.59 0.81 0.30 1.25 0.44 12.93 MERLUCCIUS MERLUCCIUS 0.14 0.00 0.02 0.23 0.37 0.09 0.85 MYSIDACEA + 0.02 + - 0.05 0.05 0.05 PLEURONECTES PLATESSA 0.05 0.66 1.26 2.01 POMATOSCHISTUS MINUTUS + + + + + SCOMBER SCOMBRUS 1.28 0.15 0.16 59.79 SCOPHTHALMUS RHOMBUS 1.28 0.01 + + 0.03 0.01 0.19 SPRATTUS SPRATTUS 9.28 0.46 0.44 61.88 79.34 29.18 26.34 540.32 SQUALUS ACANTHIAS 1.35 2.25 - + + + 10.11 10.11 SYNGNATHUS TYPHLE 1.35 2.25 - + + + 10.11 10.11 10.11 10.11 10.11 10.11 10.11 10.11 10.11 10.11 10.11 10.11	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS HIPPOGLOSSOIDES PLATESSOIDES LIMANDA LIMANDA	52 43G1 3.58 0.02 0.18 0.02 0.13	53 43G1 36.20 0.07 0.03 0.17 0.03	54 43G1 + 0.31	55 43G2 5.64 + + 0.65	56 42G2 16.64 + 0.08 0.10 3.92 0.34	57 42G2 16.32 0.05 0.04 16.00 0.37	58 42G2 5.92 + 0.08 0.22 8.90 0.36	59 41G2 26.72 + 0.01 0.29 9.04 0.03	Total 205.13 0.07 + 0.01 0.19 1.94 1.18 44.04 0.02 0.19 6.85			
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SEPIOLA 0.02 0.01 + + 0.11 0.03 0.01 0.19 SPRATTUS SPRATTUS 9.28 0.46 0.44 61.88 79.34 29.18 26.34 540.32 SQUALUS ACANTHIAS 1.35 2.25 10.11 SYNGNATHUS TYPHLE	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULTS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS HIPPOGLOSSOIDES PLATESSOIDES LIMANDA LIMANDA LOLIGO FORBESI MERLANGIUS MERLANGUS MERLUCCIUS MERLANGUS MERLUCCIUS MERLANGUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS SCOMBER SCOMBRUS	52 43G1 3.58 0.02 0.18 0.02 0.13 0.04 0.61 + 1.28	53 43G1 36.20 0.07 0.03 0.17 0.03 0.01 5.32 0.14 0.02 +	54 43G1 + 0.31 0.10 0.21 0.00 + +	55 43G2 5.64 + + 0.65 0.01 0.59 0.02 0.05	56 42G2 16.64 + 0.08 0.10 3.92 0.34 0.01 0.81	57 4262 16.32 0.05 0.04 16.00 0.37 0.02 0.30 0.23 0.66 0.16	58 42G2 5.92 + 0.08 0.22 8.90 0.36 0.05 1.25 0.37 1.26 +	59 4162 26.72 + 0.01 0.29 9.04 0.03 0.03 0.03 0.04 0.09	Total 205.13 0.07 + 0.01 0.19 1.94 1.18 44.04 0.02 0.19 6.85 0.42 12.93 0.85 0.42 12.93 0.85 0.02 0.05 2.01 + 59.79			
SPRATIUS 9.28 0.46 0.44 61.88 79.34 29.18 26.34 540.32 SQUALUS ACANTHIAS 1.35 2.25 10.11 SYNGNATHUS TYPHLE + - + TRACHINUS DRACO 0.31 0.07 0.9 1.06 1.04 0.59 18.11 TRACHURUS TRACHURUS 0.01 + 0.02 0.02 0.24 TRISOPTERUS ESMARKI 0.14 0.84 0.01 - 0.99 Total 15.62 44.65 0.69 8.31 87.35 115.11 48.69 63.59 906.21 Medusae 0.12 0.00 0.43 0.10 0.00 0.00 0.33 17.40	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS HIPPOGLOSSOIDES PLATESSOIDES LIMANDA LIMANDA LOLIGO FORBESI MERLANGIUS MERLANGUS MERLUCCIUS MERLUCCIUS MYSIDACEA NEPHROPS NORVEGICUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS SCOMBER SCOMBRUS	52 43G1 3.58 0.02 0.18 0.02 0.13 0.04 0.61 + 1.28	53 43G1 36.20 0.07 0.03 0.17 0.03 0.01 5.32 0.14 0.02 +	54 43G1 + 0.31 0.10 0.21 0.00 + +	55 43G2 5.64 + 0.65 0.01 0.59 0.02 0.05	56 42G2 16.64 + 0.08 0.10 3.92 0.34 0.01 0.81	57 4262 16.32 0.05 0.04 16.00 0.37 0.02 0.30 0.23 0.66 0.16 0.56	58 42G2 5.92 + 0.08 0.22 8.90 0.36 0.05 1.25 0.37 1.26 +	59 4162 26.72 + 0.01 0.29 9.04 0.03 0.03 0.03 0.04 0.09	Total 205.13 0.07 + 0.01 0.19 1.94 1.18 44.04 0.02 0.19 6.85 0.42 12.93 0.85 0.02 0.05 2.01 + 59.79 0.56			
SQUALUS ACANITIAS 1.35 2.25 10.11 SYNGNATHUS TYPHLE + + + + TRACHINUS DRACO 0.31 0.07 0.9 1.06 1.04 1.05 0.59 18.11 TRACHURUS TRACHURUS 0.01 + + 0.02 0.02 0.24 TRISOPTERUS ESMARKI 0.14 0.84 0.01 - 0.99 Total 15.62 44.65 0.69 8.31 87.35 115.11 48.69 63.59 906.21 Medusae 0.12 0.00 0.43 0.10 0.00 0.00 0.33 17.40	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS HIPPOGLOSSOIDES PLATESSOIDES LIMANDA LIMANDA LOLIGO FORBESI MERLANGUS MERLANGUS MERLUCCIUS MERLUCCIUS MYSIDACEA NEPHROPS NORVEGICUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS SCOPHTHALMUS RHOMBUS SEPIOLA	52 43G1 3.58 0.02 0.18 0.02 0.13 0.04 0.61 + 1.28 0.02 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	53 43G1 36.20 0.07 0.03 0.17 0.03 0.11 5.32 0.14 0.02 + 0.011	54 43G1 + 0.31 0.00 0.21 0.00 + + +	55 43G2 5.64 + + 0.65 0.01 0.59 0.02 0.05	56 42G2 16.64 + 0.08 0.10 3.92 0.34 0.01 0.81 0.15 0.15	57 4262 16.32 0.05 0.04 16.00 0.37 0.02 0.30 0.23 0.66 0.16 0.56	58 42G2 5.92 + 0.08 0.22 8.90 0.36 0.05 1.25 0.37 1.26 + 0.03	59 4162 26.72 + 0.01 0.29 9.04 0.03 0.03 0.03 0.04 0.09	Total 205.13 0.07 + 0.19 1.94 1.18 44.04 0.02 0.19 6.85 0.42 12.93 0.85 0.02 0.05 2.01 + 59.79 0.56 0.19 0.56 0.19 0.56 0.19			
TRACHINUS DRACO 0.31 0.07 0.9 1.06 1.04 1.05 0.59 18.11 TRACHINUS TRACHURUS 0.01 + + 0.02 0.24 TRISOPTERUS ESMARKI 0.14 0.84 0.01 0.99 Total 15.62 44.65 0.69 8.31 87.35 115.11 48.69 63.59 906.21 Medusae 0.12 0.00 0.43 0.10 0.00 0.00 0.03 17.40	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS HIPPOGLOSSOIDES PLATESSOIDES LIMANDA LIMANDA LOLIGO FORBESI MERLANGIUS MERLANGUS MERLUCCIUS MERLANGUS MERLUCCIUS MERLUCCIUS MYSIDACEA NEPHROPS NORVEGICUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS SCOMBER SCOMBRUS SCOPHTHALMUS RHOMBUS SEPIOLA SPRATTUS SPRATTUS	52 43G1 3.58 0.02 0.18 0.02 0.13 0.04 0.61 + 1.28 0.02 9.28	53 43G1 36.20 0.07 0.03 0.01 5.32 0.14 0.02 + 0.01 0.45	54 43G1 + 0.31 0.10 0.21 0.00 + + +	55 43G2 5.64 + + 0.65 0.01 0.59 0.02 0.05 + 0.44	56 42G2 16.64 + 0.08 0.10 3.92 0.34 0.01 0.81 0.15 0.15 0.11 61.88	57 4262 16.32 0.05 0.04 16.00 0.37 0.02 0.30 0.23 0.66 0.16 0.56 79.34	58 42G2 5.92 + 0.08 0.22 8.90 0.36 0.05 1.25 0.37 1.26 + 0.03 29.18	59 4162 26.72 + 0.01 0.29 9.04 0.03 0.03 0.03 0.04 0.09 0.01 26.34	Total 205.13 0.07 + 0.01 0.19 1.94 1.18 44.04 0.02 0.19 6.85 0.42 12.93 0.85 0.02 0.05 2.01 + 59.79 0.56 0.19 540.32 2.01			
TRACHURUS TRACHURUS 0.31 0.07 0.9 1.06 1.04 1.05 0.59 18.11 TRACHURUS T	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS HIPPOGLOSSOIDES PLATESSOIDES LIMANDA LIMANDA LOLIGO FORBESI MERLANGIUS MERLANGUS MERLUCCIUS MERLUCCIUS MYSIDACEA NEPHROPS NORVEGICUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS SCOMBER SCOMBRUS SCOPHTHALMUS RHOMBUS SEPIOLA SQUALUS ACANTHIAS SYMCHAREN CLUPANEL	52 43G1 3.58 0.02 0.18 0.02 0.13 0.04 0.61 + 1.28 0.02 9.28	53 43G1 36.20 0.07 0.03 0.01 5.32 0.14 0.02 + 0.01 0.46 1.35	54 43G1 + 0.31 0.10 0.21 0.00 + + +	55 43G2 5.64 + + 0.65 0.01 0.59 0.02 0.05 + 0.44	56 42G2 16.64 + 0.08 0.10 3.92 0.34 0.01 0.81 0.15 0.15 0.11 61.88 2.25	57 4262 16.32 0.05 0.04 16.00 0.37 0.02 0.30 0.23 0.66 0.16 0.56 79.34	58 42G2 5.92 + 0.08 0.22 8.90 0.36 0.35 0.37 1.25 0.37 1.26 + 0.03 29.18	59 4162 26.72 + 0.01 0.29 9.04 0.03 0.04 0.09 0.04 0.09 0.04 0.09	Total 205.13 0.07 + 0.01 0.19 1.94 1.18 44.04 0.02 0.19 6.85 0.42 12.93 0.85 0.02 0.05 2.01 + 59.79 0.56 0.19 540.32 10.11			
TRISOPTERUS ESMARKI 0.01 + + 0.02 0.02 0.24 Total 0.14 0.84 0.01 0.99 0.02 0.02 0.04 0.99 Total 15.62 44.65 0.69 8.31 87.35 115.11 48.69 63.59 906.21 Medusae 0.12 0.00 0.43 0.10 0.00 0.00 0.03 17.40	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS HIPPOGLOSSOIDES PLATESSOIDES LIMANDA LIMANDA LOLIGO FORBESI MERLANGUS MERLANGUS MERLUCCIUS MERLUCCIUS MYSIDACEA NEPHROPS NORVEGICUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS SCOPHTHALMUS RHOMBUS SEPIOLA SPRATTUS SPRATTUS SQUALUS ACANTHIAS SYNGNATHUS TYPHLE TDACHIMUS DPACO	52 43G1 3.58 0.02 0.18 0.02 0.13 0.04 0.61 + 1.28 0.02 9.28 0.21	53 43G1 36.20 0.07 0.03 0.17 0.03 0.11 5.32 0.14 0.02 + 0.01 0.46 1.35	54 43G1 + 0.31 0.10 0.21 0.00 + + +	55 43G2 5.64 + + 0.65 0.01 0.59 0.02 0.05 0.05 + 0.44	56 42G2 16.64 + 0.08 0.10 3.92 0.34 0.01 0.81 0.15 0.15 0.11 61.88 2.25	57 4262 16.32 0.05 0.04 16.00 0.37 0.30 0.37 0.30 0.23 0.66 0.16 0.56 79.34	58 42G2 5.92 + 0.08 0.22 8.90 0.36 0.05 1.25 0.37 1.26 + 0.03 29.18	59 4162 26.72 + 0.01 0.29 9.04 0.03 0.03 0.03 0.03 0.09 0.09 0.01 26.34	Total 205.13 0.07 + 0.01 0.19 1.94 1.18 44.04 0.02 0.19 6.85 0.42 12.93 0.85 0.02 0.05 2.01 + 59.79 0.56 0.19 540.32 10.11 + 18 18 10 10 10 10 10 10 10 10 10 10			
Total 15.62 44.65 0.69 8.31 87.35 115.11 48.69 63.59 906.21 Medusae 0.12 0.00 0.43 0.10 0.00 0.00 0.33 17.40	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS HIPPOGLOSSOIDES PLATESSOIDES LIMANDA LIMANDA LOLIGO FORBESI MERLANGIUS MERLANGUS MERLUCCIUS MERLUCCIUS MYSIDACEA NEPHROPS NORVEGICUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS SCOMBER SCOMBRUS SCOPHTHALMUS RHOMBUS SEPIOLA SPRATTUS SPRATTUS SQUALUS ACANTHIAS SYNGNATHUS TYPHLE TRACHINUS DRACO TRACHUBUS TPACHURDUS	52 43G1 3.58 0.02 0.18 0.02 0.13 0.04 0.61 + 1.28 0.02 9.28 0.31 0.01	53 43G1 36.20 0.07 0.03 0.17 0.03 0.01 5.32 0.14 0.02 + 0.01 0.46 1.35	54 43G1 + 0.31 0.01 0.21 0.00 + + + +	55 43G2 5.64 + + 0.65 0.01 0.59 0.02 0.05 0.02 0.05 + 0.44 0.9	56 42G2 16.64 + 0.08 0.10 3.92 0.34 0.01 0.81 0.15 0.15 0.11 61.88 2.25 1.06	57 4262 16.32 0.05 0.04 16.00 0.37 0.02 0.30 0.23 0.66 0.16 0.56 79.34	58 42G2 5.92 + 0.08 0.22 8.90 0.36 0.05 1.25 0.37 1.26 + 0.03 29.18 1.05	59 4162 26.72 + 0.01 0.29 9.04 0.03 0.03 0.04 0.09 0.01 26.34 0.59	Total 205.13 0.07 + 0.01 0.19 1.94 1.18 44.04 0.02 0.19 6.85 0.42 12.93 0.85 0.02 0.05 2.01 + 59.79 0.56 0.19 540.32 10.11 + 18.11 2.22			
Medusae 0.12 0.00 0.43 0.10 0.00 0.00 0.00 0.03 17.40	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS HIPPOGLOSSOIDES PLATESSOIDES LIMANDA LIMANDA LOLIGO FORBESI MERLANGIUS MERLANGUS MERLUCCIUS MERLUCCIUS MYSIDACEA NEPHROPS NORVEGICUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS SCOMBER SCOMBRUS SCOPHTHALMUS RHOMBUS SEPIOLA SPRATTUS SPRATTUS SQUALUS ACANTHIAS SYNGNATHUS TYPHLE TRACHINUS DRACO TRACHURUS TRACHURUS HENDON STOPPENIS ESMAPKT	52 43G1 3.58 0.02 0.18 0.02 0.13 0.04 0.61 + 1.28 0.02 9.28 0.31 0.01 0.14	53 43G1 36.20 0.07 0.03 0.17 0.03 0.01 5.32 0.14 0.02 + 0.01 0.46 1.35 + 0.84	54 43G1 + 0.31 0.10 0.21 0.00 + + + + +	55 43G2 5.64 + + 0.65 0.01 0.59 0.02 0.05 + 0.44 0.9 0.01	56 42G2 16.64 + 0.08 0.10 3.92 0.34 0.01 0.81 0.15 0.15 0.11 61.88 2.25 1.06	57 4262 16.32 0.05 0.04 16.00 0.37 0.02 0.30 0.23 0.66 0.16 0.56 79.34 1.04 0.02	58 42G2 5.92 + 0.08 0.22 8.90 0.36 0.05 1.25 0.37 1.26 + 0.03 29.18 1.05 0.02	59 4162 26.72 + 0.01 0.29 9.04 0.03 0.03 0.03 0.04 0.09 0.01 26.34 0.59	Total 205.13 0.07 + 0.01 0.19 1.94 1.18 44.04 0.02 0.19 6.85 0.42 12.93 0.85 0.42 12.93 0.85 0.02 0.05 2.01 + 59.79 0.56 0.19 540.32 10.11 + 18.11 0.24 0.24 0.24 0.19 1.18			
	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS HIPPOGLOSSOIDES PLATESSOIDES LIMANDA LIMANDA LOLIGO FORBESI MERLANGIUS MERLANGUS MERLUCCIUS MERLUCCIUS MERLANGIUS MERLUCCIUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS SCOMBER SCOMBRUS SCOPHTHALMUS RHOMBUS SEPIOLA SPRATTUS SPRATTUS SQUALUS ACANTHIAS SYNGNATHUS TYPHLE TRACHINUS DRACO TRACHURUS TRACHURUS TRISOPTERUS ESMARKI	52 43G1 3.58 0.02 0.18 0.02 0.13 0.04 0.61 + 1.28 0.02 9.28 0.31 0.01 0.01 0.01 15 62	53 43G1 36.20 0.07 0.03 0.17 0.03 0.17 0.3 0.14 0.02 + 0.01 0.46 1.35 + 0.46 1.35 + 44.65	54 43G1 + 0.31 0.00 + + + + 0.07 + 0.69	55 43G2 5.64 + + 0.65 0.01 0.59 0.02 0.05 0.05 + 0.44 0.9 0.01 8.31	56 42G2 16.64 + 0.08 0.10 3.92 0.34 0.01 0.81 0.15 0.11 61.88 2.25 1.06	57 4262 16.32 0.05 0.04 16.00 0.37 0.02 0.30 0.23 0.66 0.16 0.56 79.34 1.04 0.02	58 42G2 5.92 + 0.08 0.22 8.90 0.36 0.05 1.25 0.37 1.26 + 0.03 29.18 1.05 0.02 48.69	59 4162 26.72 + 0.01 0.29 9.04 0.03 0.03 0.03 0.03 0.03 0.03 0.09 0.01 26.34 0.59	Total 205.13 0.07 + 0.01 0.19 1.94 1.18 44.04 0.02 0.19 6.85 0.42 12.93 0.85 0.42 12.93 0.85 0.02 0.05 2.01 + 59.79 0.56 0.19 540.32 10.11 + 18.11 0.24 0.99 906 21			
+ _ C ((() N))	Haul No. Species/ICES Rectangle CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CTENOLABRUS RUPESTRIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS HIPPOGLOSSOIDES PLATESSOIDES LIMANDA LIMANDA LOLIGO FORBESI MERLANGUS MERLANGUS MERLUCCIUS MERLUCCIUS MYSIDACEA NEPHROPS NORVEGICUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS SCOMBER SCOMBRUS SCOPHTHALMUS RHOMBUS SEPIOLA SPRATTUS SPRATTUS SQUALUS ACANTHIAS SYNGNATHUS TYPHLE TRACHINUS DRACO TRACHURUS TRACHURUS TRISOPTERUS ESMARKI Total MEdUSAE	52 43G1 3.58 0.02 0.18 0.02 0.13 0.04 0.61 + 1.28 0.02 9.28 0.31 0.01 0.14 15.62 0.12	53 43G1 36.20 0.07 0.03 0.17 0.03 0.17 0.03 0.11 0.32 0.14 0.02 + 0.01 0.46 1.35 + 0.84 44.65 0.09	54 43G1 + 0.31 0.00 + + + + 0.07 + 0.69 0.43	55 43G2 5.64 + + 0.65 0.01 0.59 0.02 0.05 0.05 + 0.44 0.9 0.01 8.31 0.10	56 42G2 16.64 + 0.08 0.10 3.92 0.34 0.01 0.81 0.15 0.11 61.88 2.25 1.06 87.35 0.00	57 42G2 16.32 0.05 0.04 16.00 0.37 0.02 0.30 0.23 0.66 0.16 0.56 79.34 1.04 0.02 115.11 0.00	58 42G2 5.92 + 0.08 0.22 8.90 0.36 0.05 1.25 0.37 1.26 + 0.03 29.18 1.05 0.00 48.69 0.00	59 4162 26.72 + 0.01 0.29 9.04 0.03 0.03 0.44 0.09 0.01 26.34 0.59 0.33	Total 205.13 0.07 + 0.19 1.94 1.18 44.04 0.02 0.19 6.85 0.42 12.93 0.85 0.02 0.05 2.01 + 59.79 0.56 0.19 540.32 10.11 + 18.11 0.24 0.99 906.21 17.40			

Table 2: FRV Solea	cruise 710	J/201	o: Cat	ch co	mposii	лоп (к	.g 0.5	n) D	y naui	in SD	22.
Haul No. Species/ICES Rectangle	12 39G1	13 39G0	25 37G1	26 37G1	27 37G1	28 38G1	29 38G0	30 37G0	31 38G0	32 38G0	33 38G0
AGONUS CATAPHRACTUS											
CARCINUS						0.07	0.05				
CLUPEA HARENGUS	0.01	0.11	0.46	1.54	2.49	11.40	0.52	2.62	0.09	0.50	0.51
CRANGON CRANGON									+		+
CRYSTALLOGOBIUS LINEARIS	+						+	+			
CTENOLABRUS RUPESTRIS	0.05										
CYCLOPTERUS LUMPUS			.				0.32				
ENGRAULIS ENCRASICOLUS	0.09	0.03	0.11	0.03	0.20	3.02	0.72	0.03	0.28	0.72	2.89
GADUS MORHUA					3.27	0.16		5.90			
GASTEROSTEUS ACULEATUS	2.48		0.08		0.03	0.17				0.04	+
GOBIUS NIGER	0.03				0.17	0.06					
HIPPOGLOSSOIDES PLATESSOIDE			0.05		0.17	4.10	0.10	10.20	1.04	2.57	
LIMANDA LIMANDA	0.56		0.05		2.58	4.19	0.13	19.26	1.94	3.57	
				0 66						0.00	
MEDI ANGTUS MEDI ANGUS			0.11	0.00	0 55	0.19		0.20			0.01
MYOYOCEPHALUS SCOPPTUS	0.21		0.11		0.55	0.10		0.59	т	Ŧ	0.01
DI ATTCHTHYS EI ESUS	0.21				0.23			6 22	0.42	0.80	
PLEURONECTES PLATESSA					0.25			11 35	0.42	0.00	
POMATOSCHISTUS MINUTUS	0.01				+	+		0.01	+	+	
ΡSETTA ΜΑΧΙΜΑ								2.18		-	
SCOPHTHALMUS RHOMBUS											
SOLEA VULGARIS						0.06		0.36			
SPRATTUS SPRATTUS	+	0.06	7.61	0.06	94.09	41.47	0.05	38.42	0.09	4.59	0.10
SYMPHODUS MELOPS	0.02										
SYNGNATHUS TYPHLE	+					+			+	+	+
TRACHINUS DRACO								0.08		0.02	
TRACHURUS TRACHURUS			0							0	
Total	3.46	0.20	8.42	2.29	103.61	60.78	1.79	86.82	2.82	10.24	3.51
Medusae	0.01	0.63	2.78	0.33	0.16	0.60	0.49	7.86	4.47	1.22	1.47

Medusae	0.01	0.63	2.78	0.33	0.16	0.60	0.49	7.86
Haul No.	34	35	36	37	38	39	40	Total
Species/ICES Rectangle	39G0	39F9	40G0	40G0	41G0	40G1	40G0	
AGONUS CATAPHRACTUS						0.02		0.02
CARCINUS								0.12
CLUPEA HARENGUS	0.05	0.46	0.10	0.12	0.03	0.21	0.03	21.25
CRANGON CRANGON								+
CRYSTALLOGOBIUS LINEARIS			+					+
CTENOLABRUS RUPESTRIS					0.01	+	0.02	0.08
CYCLOPTERUS LUMPUS								0.32
ENGRAULIS ENCRASICOLUS		0.24	0.02	0.03	0.09	0.01	0.09	8.60
GADUS MORHUA					0.09			9.42
GASTEROSTEUS ACULEATUS	0.77	4.51		0.01	0.01	+	0.02	8.12
GOBIUS NIGER					+			0.09
HIPPOGLOSSOIDES PLATESSOIDES								0.17
LIMANDA LIMANDA	0.02	0.72		0.06	0.56	0.31	0.08	34.03
LOLIGO FORBESI					0.02	0.01	+	0.03
MELANOGRAMMUS AEGLEFINUS								0.66
MERLANGIUS MERLANGUS		+	0.01	+		+	0.01	1.26
MYOXOCEPHALUS SCORPIUS					0.14			0.35
PLATICHTHYS FLESUS					0.12			7.79
PLEURONECTES PLATESSA								11.35
POMATOSCHISTUS MINUTUS						0.00		0.02
PSETTA MAXIMA								2.18
SCOPHTHALMUS RHOMBUS				0.16				0.16
SOLEA VULGARIS								0.42
SPRATTUS SPRATTUS	0.14	0.14		0.01		0.72		187.55
SYMPHODUS MELOPS							0.10	0.12
SYNGNATHUS TYPHLE								+
TRACHINUS DRACO				0.04	0.05	1.14	0.09	1.42
TRACHURUS TRACHURUS				0.01	+	+		0.01
Total	0.98	6.07	0.13	0.44	1.12	2.42	0.44	295.54
Medusae	0.49	3.23	15.90	6.00	5.15	2.50	0.18	53.47

Table 2: FRV "Solea" cruise 710/2015: Catch composition (kg 0.5 h^{-1}) by haul in SD 22.

 Table 3: FRV "Solea" cruise 710/2015: Catch composition (kg $0.5 h^{-1}$) by haul in SD 23.

Haul Ne	14	15	16	Total
naui no.	14	15	10	Iotai
Species/ICES Rectangle	40G2	40G2	41G2	
CARCINUS	0.07			0.07
CLUPEA HARENGUS	644.34	778.58	0.72	1423.64
CTENOLABRUS RUPESTRIS			0.02	0.02
EUTRIGLA GURNARDUS			0.06	0.06
GADUS MORHUA	289.41	114.47		403.88
LIMANDA LIMANDA	0.24		6.73	6.97
LOLIGO FORBESI			0.01	0.01
MELANOGRAMMUS AEGLEFINUS		2.29		2.29
MERLANGIUS MERLANGUS		1.27	0.15	1.42
PLATICHTHYS FLESUS		0.56		0.56
SPRATTUS SPRATTUS	0.85	41.90	0.64	43.39
SYNGNATHUS TYPHLE		+		+
TRACHINUS DRACO			0.39	0.39
TRACHURUS TRACHURUS			+	+
Total	934.91	939.07	8.72	1882.70
Medusae	0.00	0.00	0.24	0.24
			+ =	< 0.01 kg

							_	-	-		
Haul No. Species/ICES Rectangle	1 3762	3862	3863	3863	3864	3863	3763	8 3864	3864	10 38G3	3862
AGONUS CATAPHRACTUS											
CLUPEA HARENGUS	1.85	7.05	4.61	10.10	58.99	13.25	52.54	68.34	7.95	12.02	7.74
CRANGON CRANGON	1.05	,105		10.10	50.55	10120	52151	00.01	7155	12:02	
CRYSTALLOGOBIUS LINEARIS				+							
		0 32									
	0.05	0.52	0.06		0.04	0.04	0.05				
	0.05	0.01	0.00		0.04	0.04	0.05				
			0.77		20.96	8 06	4 4 1	2 62	1 10	0.40	
			0.77		20.00	0.00	4.41	2.05	4.40	0.49	0.10
CORTUS NICED		т	Ŧ	Ŧ							0.19
											0.05
			0.46			0.07					0.65
MEDI ANCTUS MEDI ANCUS	0.01	0.01	0.46	2.05	0.42	0.07			0.56	2 72	0.05
MERLANGIUS MERLANGUS	0.01	0.01	0.20	3.65	0.42	0.19		0.10	0.56	2.72	
OCMEDUC EDEDI ANUC				0.04	0.01	0.00		0.18			
DI ATTOUTUYO ELECUIO			0.45	0.04	0.01	0.06	1.00	0.10	0.26	0.16	
			0.45	0.84	0.13	1.58	1.06	0.13	0.26	0.16	1.14
PLEURONECTES PLATESSA		0.18	1.64								0.21
POMATOSCHISTUS MINUTUS		+	0.01	+				+	+	+	+
											0.68
RUTILUS RUTILUS							3.42				
SCOMBER SCOMBRUS				0.97							
SPRATTUS SPRATTUS	0.47	20.5	108.06	233.89	2.64	51.59	131.01	1.64	6.35	27.26	18.76
SYNGNATHUS TYPHLE											
TRACHINUS DRACO											0.04
TRACHURUS TRACHURUS			0.01								
Total	2.38	28.07	116.27	249.69	83.09	74.84	192.49	72.92	19.60	42.65	29.44
Medusae	0.99	0.07	0.52	0.67	0.08	1.90	0.02	1.39	7.85	1.10	0.31
Haul No.	17	18	19	20	21	22	23	24	Total		
Haul No. Species/ICES Rectangle	17 39G2	18 39G3	19 39G3	20 39G4	21 39G4	22 39G3	23 39G3	24 39G2	Total		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS	17 39G2	18 39G3	19 39G3	20 39G4	21 39G4	22 39G3	23 39G3	24 39G2 +	Total +		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS	17 39G2 13.46	18 39G3 11.27	19 39G3 12.83	20 39G4 36.08	21 39G4 77.74	22 39G3 34.78	23 39G3 12.63	24 39G2 + 20.33	Total + 463.56		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON	17 39G2 13.46 +	18 39G3 11.27 +	19 39G3 12.83	20 39G4 36.08 +	21 39G4 77.74	22 39G3 34.78	23 39G3 12.63 +	24 39G2 + 20.33 +	Total + 463.56 +		
Haul No. <u>Species/ICES Rectangle</u> AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS	17 39G2 13.46 +	18 39G3 11.27 +	19 39G3 12.83	20 39G4 36.08 +	21 39G4 77.74	22 39G3 34.78	23 39G3 12.63 +	24 39G2 + 20.33 +	Total + 463.56 + +		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS	17 39G2 13.46 +	18 39G3 11.27 +	19 39G3 12.83	20 39G4 36.08 +	21 39G4 77.74	22 39G3 34.78	23 39G3 12.63 +	24 39G2 + 20.33 +	Total + 463.56 + + 0.32		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS	17 39G2 13.46 +	18 39G3 11.27 +	19 39G3 12.83	20 39G4 36.08 + 0.01	21 39G4 77.74	22 39G3 34.78	23 39G3 12.63 + 0.01	24 39G2 + 20.33 + 0.02	Total + 463.56 + + 0.32 0.29		
Haul No. <u>Species/ICES Rectangle</u> AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS	17 39G2 13.46 + 0.06	18 39G3 11.27 +	19 39G3 12.83	20 39G4 36.08 + 0.01	21 39G4 77.74	22 39G3 34.78	23 39G3 12.63 + 0.01	24 39G2 + 20.33 + 0.02	Total + 463.56 + + 0.32 0.29 0.06		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA	17 39G2 13.46 + 0.06 1.02	18 39G3 11.27 +	19 39G3 12.83	20 39G4 36.08 + 0.01	21 39G4 77.74	22 39G3 34.78	23 39G3 12.63 + 0.01	24 39G2 + 20.33 + 0.02	Total + 463.56 + + 0.32 0.29 0.06 56.99		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS	17 39G2 13.46 + 0.06 1.02	18 39G3 11.27 + 3.17	19 39G3 12.83 7.58	20 39G4 36.08 + 0.01 1.70	21 39G4 77.74	22 39G3 34.78 1.35	23 39G3 12.63 + 0.01	24 39G2 + 20.33 + 0.02	Total + 463.56 + + 0.32 0.29 0.06 56.99 0.19		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER	17 39G2 13.46 + 0.06 1.02	18 39G3 11.27 + 3.17	19 39G3 12.83 7.58	20 39G4 36.08 + 0.01 1.70	21 39G4 77.74 0.47	22 39G3 34.78 1.35	23 39G3 12.63 + 0.01	24 39G2 + 20.33 + 0.02 + +	Total + 463.56 + + 0.32 0.29 0.06 56.99 0.19 0.03		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER	17 39G2 13.46 + 0.06 1.02 0.01	18 39G3 11.27 + 3.17	19 39G3 12.83 7.58	20 39G4 36.08 + 0.01 1.70	21 39G4 77.74 0.47	22 39G3 34.78 1.35	23 39G3 12.63 + 0.01	24 39G2 + 20.33 + 0.02 + +	Total + 463.56 + + 0.32 0.29 0.06 56.99 0.19 0.03 0.01		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA	17 39G2 13.46 + 0.06 1.02 0.01	18 39G3 11.27 + 3.17	19 39G3 12.83 7.58	20 39G4 36.08 + 0.01 1.70	21 39G4 77.74 0.47	22 39G3 34.78 1.35	23 39G3 12.63 + 0.01	24 39G2 + 20.33 + 0.02 + +	Total + 463.56 + + 0.29 0.06 56.99 0.19 0.03 0.01 1.41		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA MERI ANGIUS MEEL ANGUS	17 39G2 13.46 + 0.06 1.02 0.01	18 39G3 11.27 + 3.17	19 39G3 12.83 7.58	20 39G4 36.08 + 0.01 1.70 0.14	21 39G4 77.74 0.47	22 39G3 34.78 1.35	23 39G3 12.63 + 0.01	24 39G2 + 20.33 + 0.02 + + +	Total + 463.56 + + 0.29 0.06 56.99 0.19 0.03 0.01 1.41 34.66		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA MERLANGUS MERLANGUS MYOXOCEPHAL US SCORPTUIS	17 39G2 13.46 + 0.06 1.02 0.01	18 39G3 11.27 + 3.17	19 39G3 12.83 7.58 0.33	20 39G4 36.08 + 0.01 1.70 0.14	21 39G4 77.74 0.47 6.43	22 39G3 34.78 1.35 19.91	23 39G3 12.63 + 0.01 0.09 +	24 39G2 + 20.33 + 0.02 + + +	Total + 463.56 + + 0.32 0.29 0.06 56.99 0.19 0.03 0.01 1.41 34.66 0.18		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA MERLANGIUS MERLANGUS MYOXOCEPHALUS SCORPIUS OSMEPIIS EPEPI ANIIS	17 39G2 13.46 + 0.06 1.02 0.01	18 39G3 11.27 + 3.17	19 39G3 12.83 7.58 0.33	20 39G4 36.08 + 0.01 1.70 0.14	21 39G4 77.74 0.47 6.43	22 39G3 34.78 1.35 19.91	23 39G3 12.63 + 0.01 0.09 +	24 39G2 + 20.33 + 0.02 + + + 0.03	Total + 463.56 + + 0.32 0.29 0.06 56.99 0.19 0.03 0.01 1.41 34.66 0.18 0.11		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA MERLANGIUS MERLANGUS MYOXOCEPHALUS SCORPIUS OSMERUS EPERLANUS DI ATICHTHYS EI ESUS	17 39G2 13.46 + 0.06 1.02 0.01	18 39G3 11.27 + 3.17	19 39G3 12.83 7.58 0.33	20 39G4 36.08 + 0.01 1.70 0.14	21 39G4 77.74 0.47 6.43	22 39G3 34.78 1.35 19.91	23 39G3 12.63 + 0.01 0.09 + 0.85	24 39G2 + 20.33 + 0.02 + + +	Total + 463.56 + + 0.32 0.29 0.06 56.99 0.19 0.03 0.01 1.41 34.66 0.18 0.11 9.08		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA MERLANGIUS MERLANGUS MYOXOCEPHALUS SCORPIUS OSMERUS EPERLANUS PLATICHTHYS FLESUS DI EUDONECTES DI ATESSA	17 39G2 13.46 + 0.06 1.02 0.01 0.26	18 39G3 11.27 + 3.17 0.64	19 39G3 12.83 7.58 0.33	20 39G4 36.08 + 0.01 1.70 0.14 0.22 0.09	21 3964 77.74 0.47 6.43	22 39G3 34.78 1.35 19.91 1.36	23 39G3 12.63 + 0.01 0.09 + 0.85	24 39G2 + 20.33 + 0.02 + + + 0.03	Total + 463.56 + + 0.29 0.06 56.99 0.19 0.03 0.01 1.41 34.66 0.18 0.11 9.08 0.11		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA MERLANGIUS MERLANGUS MYOXOCEPHALUS SCORPIUS OSMERUS EPERLANUS PLATICHTHYS FLESUS PLATICHTHYS FLESUS PLEURONECTES PLATESSA POMATOSCHISTIUS MINITUS	17 39G2 13.46 + 0.06 1.02 0.01 0.26 0.00	18 39G3 11.27 + 3.17 0.64	19 39G3 12.83 7.58 0.33 0.33	20 39G4 36.08 + 0.01 1.70 0.14 0.22 0.09	21 3964 77.74 0.47 6.43	22 39G3 34.78 1.35 19.91 1.36	23 39G3 12.63 + 0.01 0.09 + 0.85 0.22	24 39G2 + 20.33 + 0.02 + + + 0.03	Total + 463.56 + + 0.22 0.29 0.06 56.99 0.19 0.03 0.01 1.41 34.66 0.18 0.11 9.08 2.45		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA MERLANGIUS MERLANGUS MYOXOCEPHALUS SCORPIUS OSMERUS EPERLANUS PLATICHTHYS FLESUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS PSETTA MAYIMA	17 39G2 13.46 + 0.06 1.02 0.01 0.26 0.00	18 39G3 11.27 + 3.17 0.64 0.01	19 39G3 12.83 7.58 0.33 0.33 0.01	20 39G4 36.08 + 0.01 1.70 0.14 0.22 0.09 0.02 0.48	21 3964 77.74 0.47 6.43	22 39G3 34.78 1.35 19.91 1.36	23 39G3 12.63 + 0.01 0.09 + 0.85 0.22	24 3962 + 20.33 + 0.02 + + + 0.03 0.01	Total + 463.56 + + 0.32 0.29 0.06 56.99 0.19 0.03 0.01 1.41 34.66 0.18 0.18 0.11 9.08 2.45 0.28 1.16		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA MERLANGIUS MERLANGUS MYOXOCEPHALUS SCORPIUS OSMERUS EPERLANUS PLATICHTHYS FLESUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS PSETTA MAXIMA	17 39G2 13.46 + 0.06 1.02 0.01 0.26 0.00	18 39G3 11.27 + 3.17 0.64 0.01	19 39G3 12.83 7.58 0.33 0.33 0.01	20 39G4 36.08 + 0.01 1.70 0.14 0.22 0.09 0.02 0.48	21 3964 77.74 0.47 6.43	22 39G3 34.78 1.35 19.91 1.36	23 39G3 12.63 + 0.01 0.09 + 0.85 0.22	24 3962 + 20.33 + 0.02 + + + 0.03 0.01	Total + 463.56 + + 0.29 0.02 0.09 0.19 0.03 0.01 1.41 34.66 0.18 0.11 9.08 2.45 0.28 1.16 3.42		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA MERLANGIUS MERLANGUS MYOXOCEPHALUS SCORPIUS OSMERUS EPERLANUS PLATICHTHYS FLESUS PLATICHTHYS FLESUS PLATICHTHYS FLESUS PLATICHTHYS MINUTUS PSETTA MAXIMA RUTILUS RUTILUS	17 39G2 13.46 + 0.06 1.02 0.01 0.26 0.00	18 39G3 11.27 + 3.17 0.64 0.01	19 39G3 12.83 7.58 0.33 0.33 0.01	20 39G4 36.08 + 0.01 1.70 0.14 0.22 0.09 0.02 0.48	21 3964 77.74 0.47 6.43	22 39G3 34.78 1.35 19.91 1.36	23 39G3 12.63 + 0.01 0.09 + 0.85 0.22	24 39G2 + 20.33 + 0.02 + + + 0.03 0.01	Total + 463.56 + + 0.22 0.29 0.06 56.99 0.19 0.01 1.41 34.66 0.18 0.11 9.08 2.45 0.28 1.16 3.42		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA MERLANGIUS MERLANGUS MYOXOCEPHALUS SCORPIUS OSMERUS EPERLANUS PLATICHTHYS FLESUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS PSETTA MAXIMA RUTILUS RUTILUS SCOMBER SCOMBRUS SCOMBER SCOMBRUS	17 3962 13.46 + 0.06 1.02 0.01 0.26 0.00	18 39G3 11.27 + 3.17 0.64 0.01	19 39G3 12.83 7.58 0.33 0.1 0.24	20 39G4 36.08 + 0.01 1.70 0.14 0.22 0.09 0.02 0.48	21 3964 77.74 0.47 6.43	22 39G3 34.78 1.35 19.91 1.36	23 39G3 12.63 + 0.01 0.09 + 0.85 0.22	24 3962 + 20.33 + 0.02 + + + 0.03 0.01	Total + 463.56 + + 0.32 0.29 0.06 56.99 0.19 0.03 0.01 1.41 34.66 0.18 0.11 9.08 2.45 0.28 1.16 3.42 1.21 783.14		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA MERLANGIUS MERLANGUS MYOXOCEPHALUS SCORPIUS OSMERUS EPERLANUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS PSETTA MAXIMA RUTILUS RUTILUS SCOMBER SCOMBRUS SPRATTUS SPRATTUS SYMENAS	17 39G2 13.46 + 0.06 1.02 0.01 0.26 0.00 22.25	18 39G3 11.27 + 3.17 0.64 0.01 21.83	19 39G3 12.83 7.58 0.33 0.33 0.01 0.24 48.8	20 39G4 36.08 + 0.01 1.70 0.14 0.22 0.09 0.02 0.48 10.61	21 3964 77.74 0.47 6.43	22 39G3 34.78 1.35 19.91 1.36 16.86	23 39G3 12.63 + 0.01 0.09 + 0.85 0.22 10.61	24 39G2 + 20.33 + 0.02 + + + 0.03 0.01 49.67	Total + 463.56 + + 0.32 0.29 0.06 56.99 0.19 0.03 0.01 1.41 34.66 0.18 0.11 9.08 2.45 0.28 1.16 3.42 1.21 783.14		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA MERLANGIUS MERLANGUS MYOXOCEPHALUS SCORPIUS OSMERUS EPERLANUS PLATICHTHYS FLESUS PLATICHTHYS FLESUS PLATICHTHYS FLESUS PLATICHTHYS FULSUS SCOMBER SCOMBRUS SPRATTUS SPRATTUS SYNGNATHUS TYPHLE THACHTWIS PDATO	17 39G2 13.46 + 0.06 1.02 0.01 0.26 0.00 22.25	18 39G3 11.27 + 3.17 0.64 0.01 21.83	19 39G3 12.83 7.58 0.33 0.33 0.01 0.24 48.8	20 39G4 36.08 + 0.01 1.70 0.14 0.22 0.09 0.02 0.48 10.61	21 3964 77.74 0.47 6.43 0.34	22 39G3 34.78 1.35 19.91 1.36 16.86	23 39G3 12.63 + 0.01 0.09 + 0.85 0.22 10.61	24 39G2 + 20.33 + 0.02 + + + 0.03 0.01 49.67 +	Total + 463.56 + + 0.22 0.29 0.06 56.99 0.19 0.01 1.41 34.66 0.18 0.11 9.08 2.45 0.28 1.16 3.42 1.21 783.14 783.14		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA MERLANGIUS MERLANGUS MYOXOCEPHALUS SCORPIUS OSMERUS EPERLANUS PLATICHTHYS FLESUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS PSETTA MAXIMA RUTILUS RUTILUS SCOMBER SCOMBRUS SPRATTUS SPRATTUS SYNGNATHUS TYPHLE TRACHINUS DRACO	17 39G2 13.46 + 0.06 1.02 0.01 0.26 0.00 22.25	18 39G3 11.27 + 3.17 0.64 0.01 21.83	19 39G3 12.83 7.58 0.33 0.33 0.01 0.24 48.8	20 39G4 36.08 + 0.01 1.70 0.14 0.22 0.09 0.02 0.48 10.61	21 3964 77.74 0.47 6.43 0.34	22 39G3 34.78 1.35 19.91 1.36 16.86	23 39G3 12.63 + 0.01 0.09 + 0.85 0.22 10.61	24 3962 + 20.33 + 0.02 + + + 0.03 0.01 49.67 +	Total + 463.56 + + 0.32 0.29 0.06 56.99 0.19 0.03 0.01 1.41 34.66 0.18 0.11 9.08 2.45 0.28 1.16 3.42 1.21 783.142 + + 0.04 -		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA MERLANGIUS MERLANGUS MYOXOCEPHALUS SCORPIUS OSMERUS EPERLANUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS PSETTA MAXIMA RUTILUS RUTILUS SCOMBER SCOMBRUS SYNGNATHUS TYPHLE TRACHURUS TRACHURUS	17 39G2 13.46 + 0.06 1.02 0.01 0.26 0.00 22.25	18 39G3 11.27 + 3.17 0.64 0.01 21.83	19 39G3 12.83 7.58 0.33 0.33 0.01 0.24 48.8	20 39G4 36.08 + 0.01 1.70 0.14 0.14 0.22 0.09 0.02 0.48 10.61	21 3964 77.74 0.47 6.43 0.34	22 39G3 34.78 1.35 19.91 1.36 16.86	23 39G3 12.63 + 0.01 0.09 + 0.85 0.22 10.61	24 39G2 + 20.33 + 0.02 + + + 0.03 0.01 49.67 +	Total + 463.56 + + 0.32 0.29 0.19 0.03 0.01 1.41 34.66 0.18 0.11 9.08 2.45 0.28 1.16 3.42 1.21 783.14 + 0.4 0.05 0.05 0.11 0.05 0.15 0.28 0.15 0.28 1.16 0.32 0.28 1.21 0.32 0.28 1.21 0.32 0.04 0.05 0		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA MERLANGIUS MERLANGUS MYOXOCEPHALUS SCORPIUS OSMERUS EPERLANUS PLATICHTHYS FLESUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS PSETTA MAXIMA RUTILUS RUTILUS SYNGNATHUS TYPHLE TRACHINUS DRACO TRACHURUS TRACHURUS Total	17 3962 13.46 + 0.06 1.02 0.01 0.26 0.00 22.25 37.06	18 39G3 11.27 + 3.17 0.64 0.01 21.83 36.92	19 39G3 12.83 7.58 0.33 0.33 0.33 0.01 0.24 48.8 70.12	20 39G4 36.08 + 0.01 1.70 0.14 0.22 0.09 0.02 0.48 10.61 49.35	21 3964 77.74 0.47 6.43 0.34 84.98	22 39G3 34.78 1.35 19.91 1.36 16.86 74.26	23 39G3 12.63 + 0.01 0.09 + 0.85 0.22 10.61 24.41	24 39G2 + 20.33 + 0.02 + + + 0.03 0.01 49.67 + 70.06	Total + 463.56 + + + 0.02 0.29 0.09 0.03 0.01 1.41 34.66 0.18 0.11 9.08 2.45 0.28 1.16 3.42 1.22 1.21 783.14 + 0.01 1358.60		
Haul No. Species/ICES Rectangle AGONUS CATAPHRACTUS CLUPEA HARENGUS CRANGON CRANGON CRYSTALLOGOBIUS LINEARIS CYCLOPTERUS LUMPUS ENGRAULIS ENCRASICOLUS EUTRIGLA GURNARDUS GADUS MORHUA GASTEROSTEUS ACULEATUS GOBIUS NIGER LEANDER LIMANDA LIMANDA MERLANGIUS MERLANGUS MYOXOCEPHALUS SCORPIUS OSMERUS EPERLANUS PLATICHTHYS FLESUS PLEURONECTES PLATESSA POMATOSCHISTUS MINUTUS PSETTA MAXIMA RUTILUS RUTILUS SCOMBER SCOMBRUS SPRATTUS SPRATTUS SYNGNATHUS TYPHLE TRACHINUS TRACHURUS Total Medusae	17 39G2 13.46 + 0.06 1.02 0.01 0.26 0.00 22.25 37.06 4.52	18 39G3 11.27 + 3.17 0.64 0.01 21.83 36.92 2.26	19 39G3 12.83 7.58 0.33 0.33 0.01 0.24 48.8 70.12 0.40	20 39G4 36.08 + 0.01 1.70 0.14 0.22 0.09 0.02 0.48 10.61 49.35 3.64	21 3964 77.74 0.47 6.43 0.34 84.98 0.30	22 39G3 34.78 1.35 19.91 1.36 16.86 74.26 1.02	23 39G3 12.63 + 0.01 0.09 + 0.85 0.22 10.61 24.41 2.36	24 3962 + 20.33 + 0.02 + + + 0.03 0.01 49.67 + 70.06 0.96	Total + 463.56 + + 0.32 0.29 0.06 56.99 0.19 0.03 0.01 1.41 34.66 0.18 0.11 9.08 0.18 0.11 9.08 1.16 0.28 1.21 783.14 + 0.28 1.21 783.14 + 0.04 0.01 1358.60 30.34 2.45 2.45 2.45 3.55 3.		

Table 4: FRV "Solea" cruise 710/2015: Catch composition (kg $0.5 h^{-1}$) by haul in SD 24.