



Supplement of

Fish functional groups of the North Atlantic and Arctic oceans

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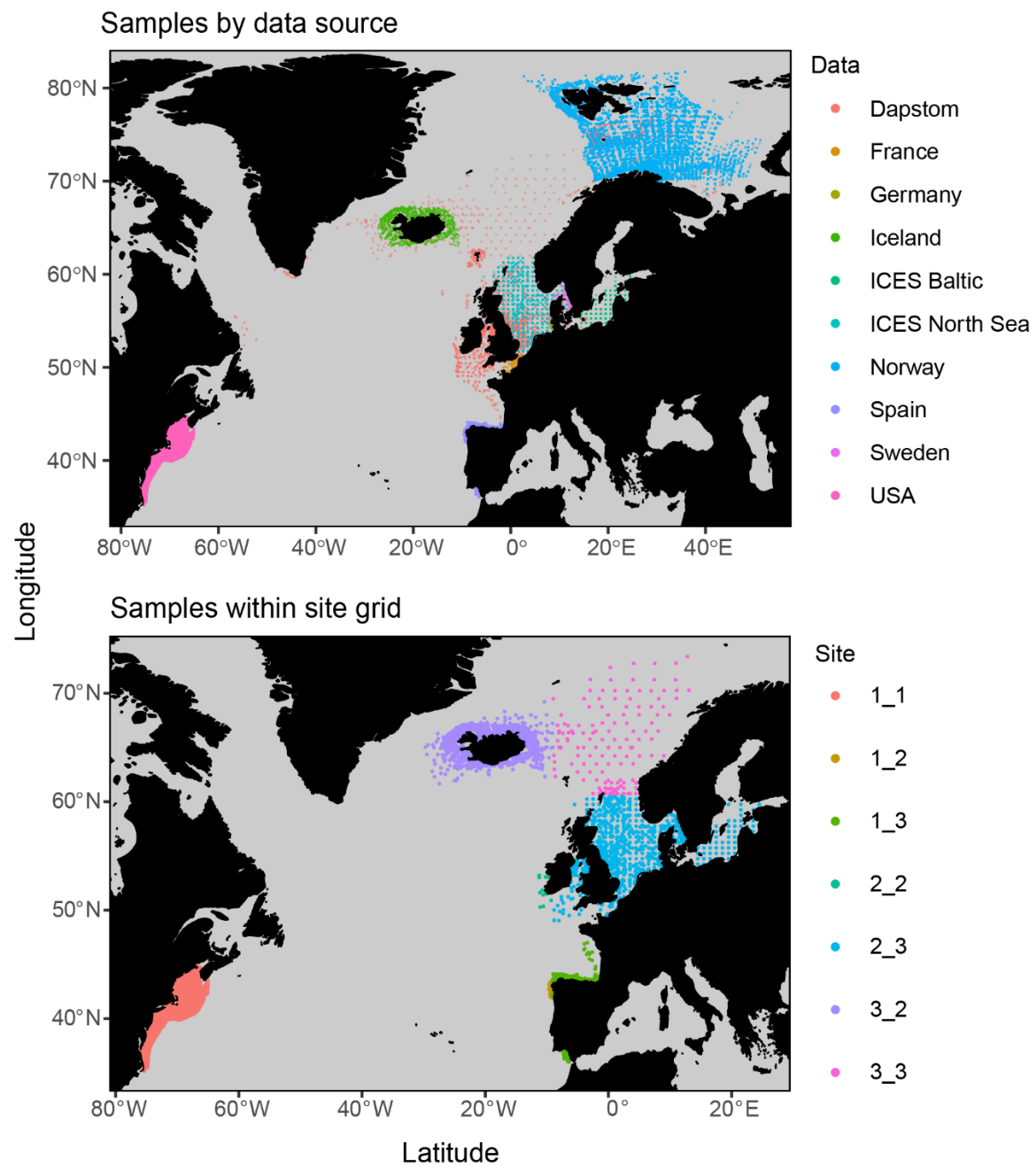


Figure S1: The sample distribution of different data sources and by site (see Table 1).

Table S1. AIC values for the full (top row) and nested models to assess the importance of all random effects. The term dropped indicates which term from the model was removed from the model above. * denotes an interaction with $\log_{10}(\text{predator weight})$, i.e., random slope and intercept, others are all random intercepts only.

Termed dropped	AIC
	1051829
n stomachs	1052150
Site	1056090
Year	1075564
Data	1076274
Prey functional group*	1194755
Predator taxa*	1364124

Table S2. Body size bins, $\log_{10}$ transformed body mass in grams, $\log_{10}$ transformed bin width and minimum and maximum body masses in grams of organisms by size bin.

Size bin	Log10(g)	Bin width	Min g	Max g
1	-7.579	0.813	1.03E-08	6.73E-08
2	-6.765	0.813	6.73E-08	4.38E-07
3	-5.952	0.813	4.38E-07	2.85E-06
4	-5.139	0.813	2.85E-06	1.85E-05
5	-4.326	0.813	1.85E-05	1.20E-04
6	-3.513	0.813	1.20E-04	7.83E-04
7	-2.699	0.813	7.83E-04	0.005095
8	-1.886	0.813	0.005095	0.033139
9	-1.073	0.813	0.033139	0.215543
10	-0.260	0.813	0.215543	1.401963
11	0.553	0.813	1.401963	9.11881
12	1.367	0.813	9.11881	59.31163
13	2.180	0.813	59.31163	385.7816
14	2.993	0.813	385.7816	2509.246
15	3.806	0.813	2509.246	16320.93
16	4.619	0.813	16320.93	106156.5
17	5.433	0.813	106156.5	690475.5
18	6.246	0.813	690475.5	4491071
19	7.059	0.813	4491071	29211349
20	7.872	0.813	29211349	1.9E+08

Table S3. Otter trawl surveys, the OSPAR Region in which they operate, the period over which they have been undertaken and the number of unique hauls (*n*).

Survey acronym ¹	OSPAR Region ¹	Quarter ¹	Years	<i>n</i>
BBICFraOT4	BBIC	4	1997-2020	1693
BBICnSpaOT4	BBIC	4	2011-2018	902
BBICPorOT4	BBIC	4	2005-2018	1045
BBICsSpaOT1	BBIC	1	2000-2020	673
BBICsSpaOT4	BBIC	4	2002-2020	691
CSFraOT4	CS	4	1997-2020	1180
CSIreOT4	CS	4	2003-2020	2353
CSNirOT1	CS	1	2008-2020	756
CSNirOT4	CS	4	2009-2020	698
CSScoOT1	CS	1	1997-2020	1082
CSScoOT4	CS	4	1997-2020	1210
GNSFraOT4	GNS	4	1998-2020	1907
GNSIntOT1	GNS	1	1997-2020	8827
WAScoOT3	WA	3	1999-2020	701
WASpaOT3	WA	3	2006-2018	1019

¹ Survey acronym convention: First 2 to 4 capitalised letters indicate the OSPAR Region (BBIC: Bay of Biscay and Iberian Coast; CS: Celtic Seas; GNS: Greater North Sea; WA – Wider Atlantic). Next capitalised and lowercase letters signify the country involved (Spa: Spain; Bel: Belgium; Por: Portugal; Fra: France; Eng: England; Ire: Republic of Ireland; Nir: Northern Ireland; Sco: Scotland; Ger: Germany; Int: International; Net: The Netherlands. International refers to the two international bottom trawl surveys carried out in the Greater North Sea under the International Council for the Exploration of the Sea (ICES). In the Bay of Biscay and Iberian Coast Region, Spanish surveys are further delimited by (n) for surveys operating in the northern Iberian Coast area and (s) for surveys operating in the southern Iberian Coast area. Next two capitalised letters indicate the type of survey (OT: otter trawl). Final number indicates the season in which the survey is primarily undertaken (1: January to March; 3: July to September; 4: October to December).

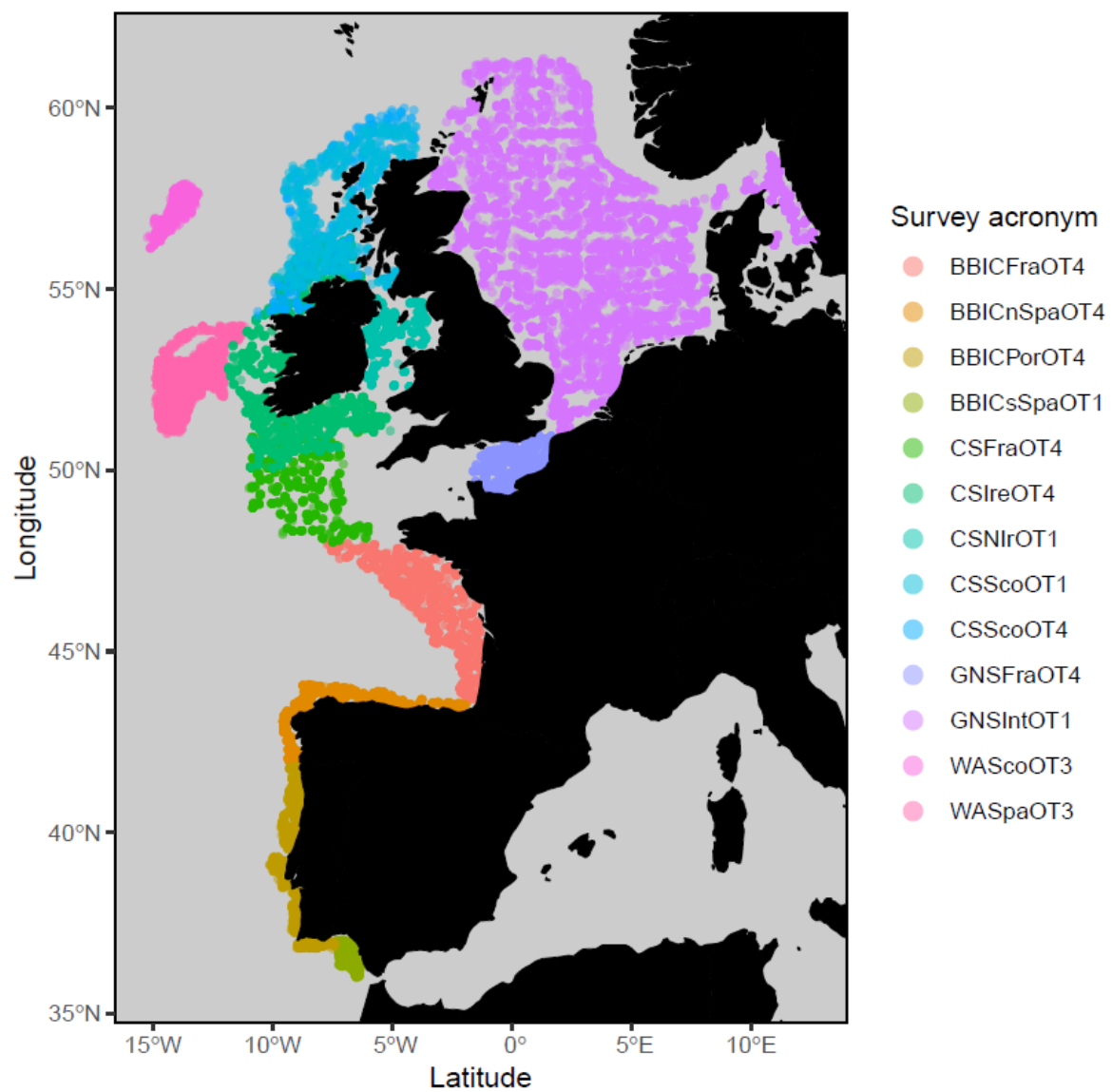


Figure S2. The spatial distribution of surveys. See Table S4 for survey acronyms.

Feeding guild classification

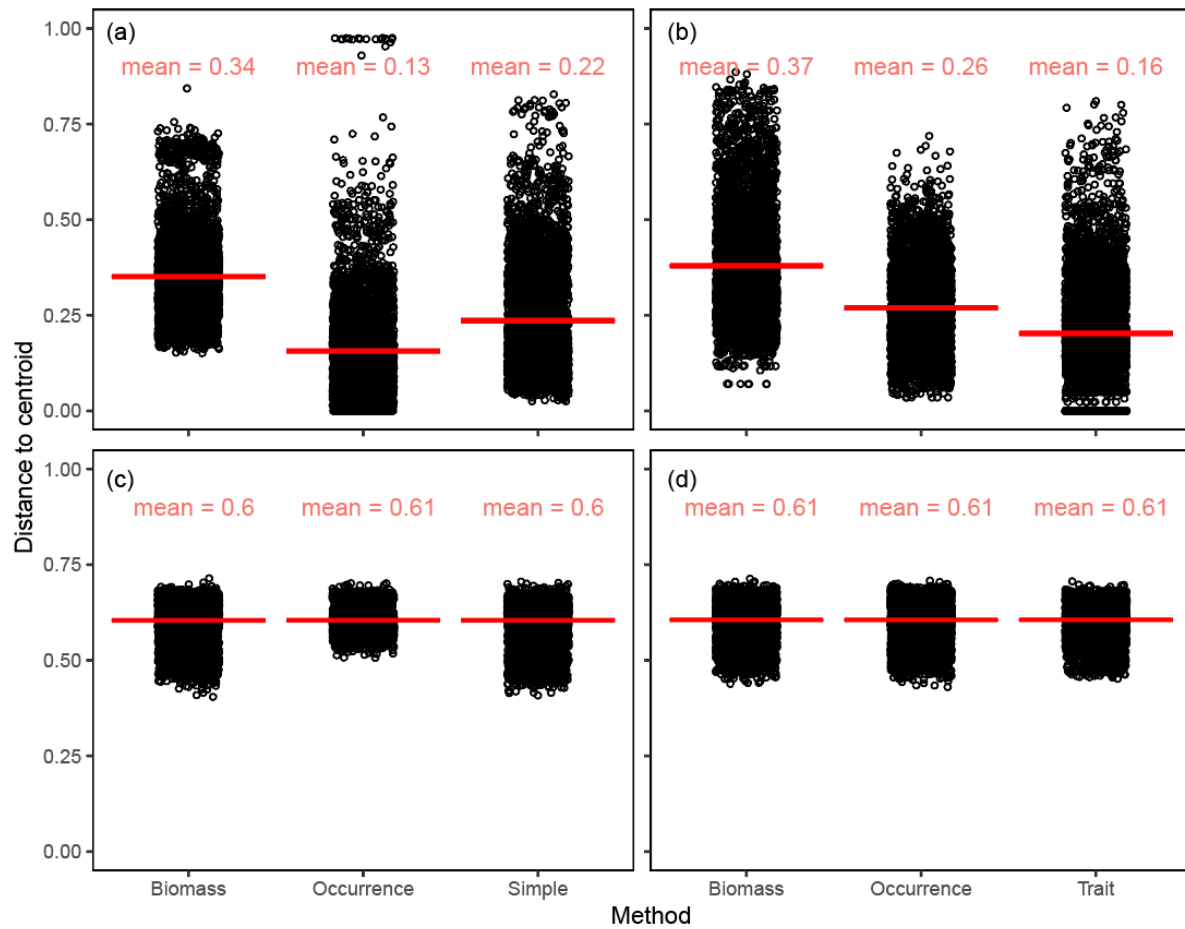


Figure S3: Differences in cluster-based methods used to assign feeding guilds (a, b) and those randomly generated (c, d) measured using mean distance to centroid of re-sampled stomach contents data (see also Table S5). Panels a and c show classifications using the full dataset with both observed and modelled data for prey weight and counts; panels b and d show classifications using only observed data for prey weight and counts from DAPSTOM, ICES Year of the Stomach and data from the Northeast US continental shelf. Each point shows the distance to centroid per feeding guild per resampling event per method. Feeding guild composition was more similar following resampling where distance to centroid was lower.

Table S4. Tukey's all-pairwise comparisons of mean distance to centroid (square root transformed) between feeding guild classification methods following analysis of variance of re-sampled stomach contents data. The data column indicates whether all data were used (i.e. observed and modelled data for prey weight and counts) or only observed data from DAPSTOM, ICES Year of the Stomach and data from the Northeast US continental shelf.

Test	Fit	SE	t	p	data
Occurrence - Biomass	-0.22	0.003	-78.862	0.001	all
Trait - Biomass	-0.117	0.003	-41.92	0.001	all
Trait - Occurrence	0.103	0.003	36.977	0.001	all
Occurrence - Biomass	-0.098	0.003	-29.34	0.001	observed
Trait - Biomass	-0.21	0.003	-62.849	0.001	observed
Trait - Occurrence	-0.112	0.003	-33.533	0.001	observed

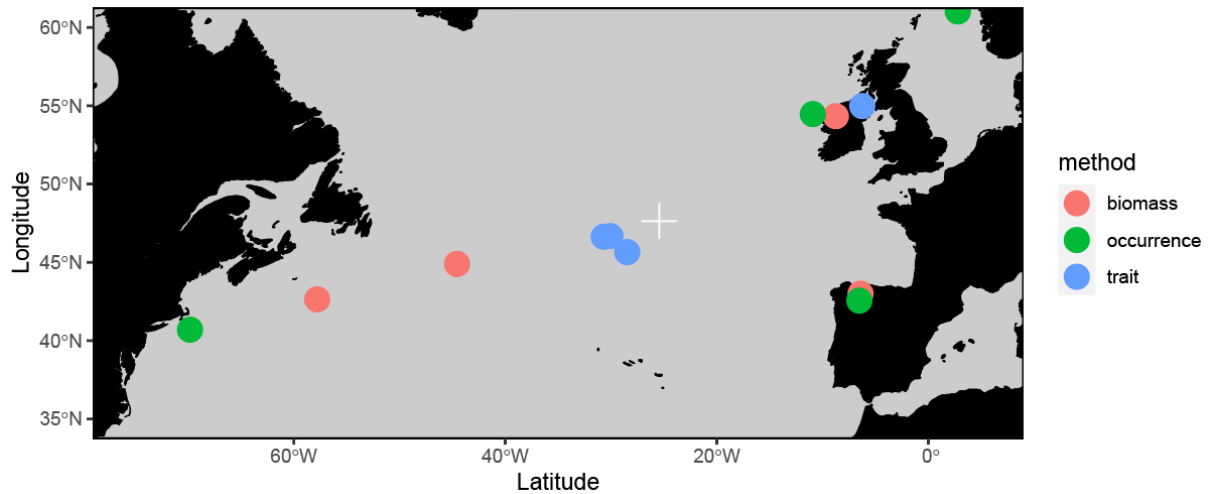


Figure S4: Method-specific feeding guild spatial centroids. Guilds for the trait method were closest to the data centroid (white cross) which shows that each guild contained fish found widely across the study region. The occurrence and biomass methods were more susceptible to large spatial gradients in prey composition meaning guilds were composed of fish largely found in the same area.

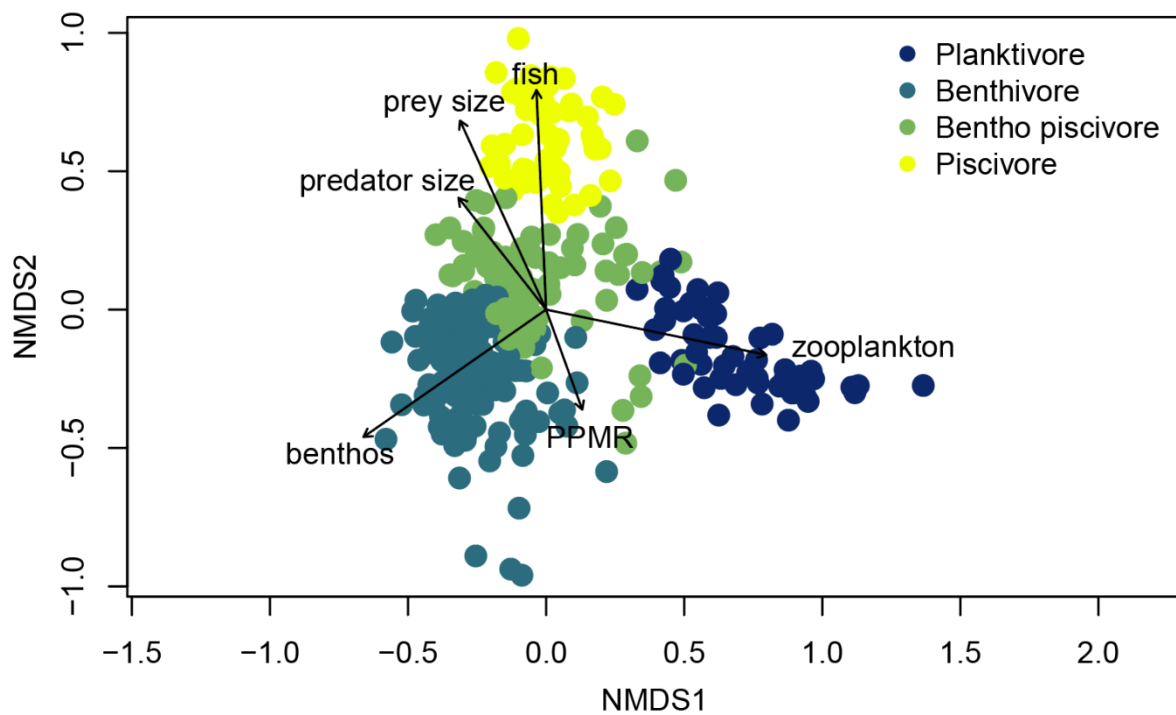


Figure S5: A non-metric multidimensional scaling analysis of the dissimilarities used in our cluster analysis which provide a more nuanced understanding (i.e., bounded data as opposed to categorical) of different predator feeding traits in relation to others'. Arrows show the direction of increasing values for the variables used in our cluster analysis. For unique species size class axis scores, see feeding guilds.csv published on the Cefas Data Hub at: <https://doi.org/10.14466/CefasDataHub.149> (Thompson et al., 2024).

Table S5. Taxa and sizes observed in the survey data with insufficient stomach contents data to be classified into feeding guilds. Fish are ordered by the sum of their biomass (kg per km²) observed across all hauls to help direct future stomach sampling by prioritising those contributing most to the fish assemblage across the study region.

Taxa	Min cm	Max cm	Sum kg per km2
<i>Capros aper</i>	8	16	3240041
<i>Trachurus trachurus</i>	5	10	1042657
<i>Capros aper</i>	4	8	441428
<i>Trachurus picturatus</i>	9	16	428259
<i>Sebastes viviparus</i>	15	28	419466
<i>Sardina pilchardus</i>	11	19	389717
<i>Gadiculus argenteus</i>	10	18	360658
<i>Argentina sphyraena</i>	21	38	337196
<i>Trachurus picturatus</i>	16	30	313069
<i>Engraulis encrasicolus</i>	6	11	265764
<i>Capros aper</i>	16	31	242370
<i>Sebastes viviparus</i>	8	15	221067
<i>Mustelus asterias</i>	50	92	176023
<i>Molva molva</i>	77	142	132724
<i>Scomber colias</i>	19	33	114984
<i>Galeorhinus galeus</i>	82	153	111270
<i>Conger conger</i>	110	191	95179
<i>Gadiculus argenteus</i>	6	10	89462
<i>Trachurus mediterraneus</i>	18	34	86786
<i>Scyliorhinus stellaris</i>	85	160	84060
<i>Platichthys flesus</i>	33	60	79759
<i>Maurollicus muelleri</i>	36	58	77134
<i>Boops boops</i>	18	33	76843
<i>Lepidion eues</i>	23	39	76313
<i>Molva molva</i>	42	77	73287
<i>Diplodus vulgaris</i>	15	27	68597
<i>Dipturus batis</i>	102	187	61092
<i>Mustelus asterias</i>	92	167	55315
<i>Raja brachyura</i>	70	125	55209
<i>Chimaera monstrosa</i>	30	55	54496
<i>Deania calcea</i>	87	154	54264
<i>Dipturus batis</i>	187	343	48680
<i>Dipturus batis</i>	55	102	41609
<i>Argentina silus</i>	11	20	40851
<i>Scyliorhinus stellaris</i>	45	85	36300
<i>Trachurus mediterraneus</i>	10	18	32564
<i>Dicentrarchus labrax</i>	61	114	30554
<i>Pollachius pollachius</i>	64	116	30073
<i>Micromesistius poutassou</i>	38	69	29757
<i>Raja brachyura</i>	39	70	29703

<i>Scomber colias</i>	10	19	29396
<i>Scymnodon ringens</i>	70	128	27806
<i>Deania calcea</i>	49	87	26632
<i>Cyclopterus lumpus</i>	38	71	23205
<i>Lophius piscatorius</i>	112	217	22100
<i>Dipturus nidarosiensis</i>	126	226	21348
<i>Raja undulata</i>	74	137	19993
<i>Glyptocephalus cynoglossus</i>	38	67	19115
<i>Serranus hepatus</i>	95	175	18942
<i>Cyclopterus lumpus</i>	20	38	18593
<i>Sprattus sprattus</i>	3	6	18436
<i>Coelorinchus caelorhincus</i>	8	15	16722
<i>Galeorhinus galeus</i>	153	286	15889
<i>Argentina sphyraena</i>	6	11	15738
<i>Sardina pilchardus</i>	6	11	15568
<i>Boops boops</i>	10	18	14845
<i>Micromesistius poutassou</i>	6	12	14300
<i>Molva macrophthalma</i>	98	174	14125
<i>Mustelus mustelus</i>	46	90	12942
<i>Mora moro</i>	34	61	12709
<i>Leucoraja circularis</i>	78	142	12328
<i>Myoxocephalus scorpius</i>	15	28	12301
<i>Spondyllosoma cantharus</i>	9	16	11753
<i>Raja microocellata</i>	68	123	11751
<i>Raja montagui</i>	65	115	10425
<i>Sparus aurata</i>	16	30	10399
<i>Trachurus mediterraneus</i>	5	10	10053
<i>Dipturus batis</i>	30	55	9798
<i>Coelorinchus caelorhincus</i>	27	49	9779
<i>Dasyatis pastinaca</i>	62	116	9115
<i>Mustelus asterias</i>	28	50	8518
<i>Trachurus mediterraneus</i>	34	65	8370
<i>Scymnodon ringens</i>	39	70	8338
<i>Callionymus maculatus</i>	11	21	8108
<i>Hoplostethus mediterraneus</i>	27	50	8077
<i>Mora moro</i>	19	34	7896
<i>Leucoraja circularis</i>	44	78	7040
<i>Microchirus variegatus</i>	18	33	6951
<i>Raja undulata</i>	40	74	6807
<i>Galeorhinus galeus</i>	44	82	6685
<i>Etmopterus spinax</i>	44	79	6577
<i>Phycis blennoides</i>	66	119	6512
<i>Epigonus telescopus</i>	17	32	6417
<i>Trachinus draco</i>	11	20	6258
<i>Chimaera monstrosa</i>	16	30	5688
<i>Cepola macrophthalma</i>	21	54	5475

<i>Coelorinchus caelorhincus</i>	49	89	5401
<i>Arnoglossus laterna</i>	104	180	5207
<i>Raja microocellata</i>	37	68	5060
<i>Lepidion eques</i>	14	23	5014
<i>Zeus faber</i>	55	105	4936
<i>Raja brachyura</i>	125	224	4908
<i>Macroramphosus scolopax</i>	12	23	4820
<i>Buglossidium luteum</i>	9	16	4815
<i>Trachyrincus scabrus</i>	16	28	4786
<i>Boops boops</i>	33	61	4731
<i>Diplodus vulgaris</i>	27	50	4630
<i>Brosme brosme</i>	61	109	4603
<i>Buglossidium luteum</i>	5	9	4532
<i>Dasyatis pastinaca</i>	34	62	4519
<i>Aphanopus carbo</i>	69	122	4475
<i>Glyptocephalus cynoglossus</i>	13	22	4232
<i>Argyrosomus regius</i>	35	67	4138
<i>Lamna nasus</i>	102	193	4120
<i>Sparus aurata</i>	30	56	4022
<i>Agonus cataphractus</i>	9	18	3903
<i>Trachurus picturatus</i>	30	54	3795
<i>Conger conger</i>	191	333	3780
<i>Mustelus mustelus</i>	90	178	3735
<i>Scyliorhinus stellaris</i>	24	45	3647
<i>Merlangius merlangus</i>	227	416	3638
<i>Molva molva</i>	23	42	3553
<i>Molva molva</i>	142	262	3511
<i>Callionymus maculatus</i>	5	11	3439
<i>Trisopterus luscus</i>	5	9	3383
<i>Malacocephalus laevis</i>	28	54	3366
<i>Leucoraja fullonica</i>	46	83	3341
<i>Brama brama</i>	29	51	3266
<i>Malacocephalus laevis</i>	54	103	3219
<i>Argyrosomus regius</i>	18	35	3207
<i>Leucoraja fullonica</i>	83	151	3188
<i>Dalatias licha</i>	74	136	3188
<i>Scorpaena scrofa</i>	27	51	3183
<i>Balistes capriscus</i>	29	53	3133
<i>Chelon labrosus</i>	31	56	3091
<i>Atherina presbyter</i>	6	11	3079
<i>Dipturus oxyrinchus</i>	81	139	3021
<i>Trachinus draco</i>	37	67	2950
<i>Nezumia aequalis</i>	25	47	2763
<i>Zenopsis conchifer</i>	57	99	2762
<i>Dicologlossa cuneata</i>	11	20	2735
<i>Mola mola</i>	36	66	2683

<i>Hydrolagus mirabilis</i>	24	44	2618
<i>Mola mola</i>	19	36	2615
<i>Callionymus lyra</i>	5	10	2591
<i>Merlangius merlangus</i>	67	123	2547
<i>SpondylIOSoma cantharus</i>	5	9	2470
<i>Dasyatis pastinaca</i>	116	215	2446
<i>Coelorinchus caelorhincus</i>	15	27	2354
<i>Sarda sarda</i>	21	38	2353
<i>Coelorinchus caelorhincus</i>	89	163	2336
<i>Pagellus acarne</i>	9	16	2319
<i>Cepola macrophthalma</i>	54	137	2262
<i>Alosa fallax</i>	38	69	2262
<i>Chelidonichthys lucerna</i>	61	114	2217
<i>Macroramphosus scolopax</i>	6	12	2213
<i>Myoxocephalus scorpius</i>	8	15	2188
<i>Coelorinchus caelorhincus</i>	4	8	2137
<i>Diplodus bellottii</i>	8	15	2086
<i>Dalatias licha</i>	41	74	2039
<i>Umbrina canariensis</i>	17	31	2039
<i>Somniosus microcephalus</i>	94	168	2018
<i>Raja brachyura</i>	22	39	1947
<i>Maurollicus muelleri</i>	23	36	1858
<i>Entelurus aequoreus</i>	18	37	1814
<i>Alosa fallax</i>	21	38	1813
<i>Myliobatis aquila</i>	38	82	1795
<i>Torpedo marmorata</i>	27	51	1753
<i>Beryx splendens</i>	26	48	1740
<i>Myxine glutinosa</i>	21	36	1738
<i>Lamna nasus</i>	193	364	1678
<i>Diplodus bellottii</i>	15	27	1672
<i>Lepidopus caudatus</i>	25	45	1669
<i>Atherina presbyter</i>	11	20	1664
<i>Scophthalmus maximus</i>	16	29	1635
<i>Lithognathus mormyrus</i>	30	56	1625
<i>Centrolophus niger</i>	36	63	1617
<i>Xiphias gladius</i>	80	145	1520
<i>Scophthalmus rhombus</i>	56	104	1519
<i>Dipturus nidarosiensis</i>	70	126	1491
<i>Epigonus telescopus</i>	9	17	1490
<i>Blennius ocellaris</i>	9	17	1483
<i>Pagrus pagrus</i>	27	51	1464
<i>Ammodytes</i>	27	52	1462
<i>Pagellus bellottii</i>	15	28	1426
<i>Echiichthys vipera</i>	5	9	1422
<i>Dicologlossa cuneata</i>	20	37	1399
<i>Spicara maena</i>	9	17	1398

<i>Dasyatis tortonesei</i>	62	116	1352
<i>Dasyatis tortonesei</i>	116	215	1328
<i>Mola mola</i>	66	123	1296
<i>Dipturus oxyrinchus</i>	139	238	1243
<i>Diplodus vulgaris</i>	8	15	1217
<i>Spicara maena</i>	17	31	1208
<i>Pagellus bogaraveo</i>	16	29	1177
<i>Gaidropsarus vulgaris</i>	35	62	1164
<i>Beryx decadactylus</i>	26	47	1149
<i>Engraulis encrasicolus</i>	132	243	1129
<i>Alepocephalus rostratus</i>	41	74	1121
<i>Centrolophus niger</i>	63	110	1056
<i>Gaidropsarus vulgaris</i>	19	35	1016
<i>Tetronarce nobiliana</i>	69	131	1008
<i>Syngnathus acus</i>	8	14	994
<i>Galeus atlanticus</i>	15	27	984
<i>Liparis liparis</i>	13	23	980
<i>Capros aper</i>	2	4	918
<i>Alepocephalus rostratus</i>	22	41	918
<i>Notacanthus bonaparte</i>	19	34	916
<i>Scomber colias</i>	33	58	902
<i>Labrus mixtus</i>	18	31	902
<i>Hippoglossus hippoglossus</i>	113	204	880
<i>Brama brama</i>	51	91	868
<i>Sebastes viviparus</i>	5	8	859
<i>Entelurus aequoreus</i>	37	75	843
<i>Anguilla anguilla</i>	58	105	835
<i>Beryx splendens</i>	14	26	833
<i>Dicentrarchus punctatus</i>	61	105	829
<i>Arnoglossus imperialis</i>	6	11	825
<i>Trisopterus minutus</i>	3	5	807
<i>Deania profundorum</i>	48	86	803
<i>Trachyrincus scabrus</i>	9	16	800
<i>Rajella bathyphila</i>	126	226	792
<i>Microstomus kitt</i>	5	10	787
<i>Notacanthus bonaparte</i>	34	63	775
<i>Balistes capriscus</i>	16	29	760
<i>Liparis liparis</i>	7	13	758
<i>Pagellus bogaraveo</i>	29	53	746
<i>Taurulus bubalis</i>	16	30	684
<i>Nezumia aequalis</i>	47	87	664
<i>Taurulus bubalis</i>	9	16	663
<i>Argyrosomus regius</i>	67	129	660
<i>Maurolicus muelleri</i>	58	94	646
<i>Raja undulata</i>	22	40	645
<i>Zeus faber</i>	105	201	639

<i>Malacocephalus laevis</i>	199	381	638
<i>Lepidotrigla cavillone</i>	17	30	630
<i>Serranus cabrilla</i>	17	33	627
<i>Notoscopelus kroyeri</i>	118	220	623
<i>Pagrus pagrus</i>	51	96	614
<i>Labrus bergylta</i>	30	55	598
<i>Tetronarce nobiliana</i>	37	69	580
<i>Molva dypterygia</i>	48	88	573
<i>Gadiculus argenteus</i>	3	6	571
<i>Chelidonichthys lucerna</i>	9	17	568
<i>Trachipterus arcticus</i>	111	207	556
<i>Gasterosteus aculeatus</i>	5	9	556
<i>Scymnodon ringens</i>	21	39	556
<i>Sarda sarda</i>	38	69	554
<i>Sphoeroides pachygaster</i>	27	51	554
<i>Sphoeroides pachygaster</i>	14	27	553
<i>Boops boops</i>	5	10	542
<i>Bathysolea profundicola</i>	12	21	542
<i>Cyclopterus lumpus</i>	11	20	540
<i>Anthias anthias</i>	10	20	528
<i>Schedophilus medusophagus</i>	27	49	527
<i>Nemichthys scolopaceus</i>	66	123	517
<i>Schedophilus medusophagus</i>	49	92	513
<i>Alosa fallax</i>	11	21	503
<i>Lumpenus lampretæformis</i>	8	21	495
<i>Pegusa lascaris</i>	18	32	492
<i>Sparus aurata</i>	56	104	490
<i>Leucoraja circularis</i>	142	255	481
<i>Scyliorhinus canicula</i>	88	157	478
<i>Xiphias gladius</i>	145	262	471
<i>Lithognathus mormyrus</i>	16	30	461
<i>Molva dypterygia</i>	88	159	441
<i>Engraulis encrasicolus</i>	3	6	440
<i>Chelon labrosus</i>	56	101	436
<i>Zeugopterus norvegicus</i>	8	14	431
<i>Scymnodon ringens</i>	128	234	428
<i>Squalus blainville</i>	45	84	423
<i>Leucoraja fullonica</i>	25	46	419
<i>Molva dypterygia</i>	27	48	415
<i>Heptranchias perlo</i>	73	133	413
<i>Microchirus variegatus</i>	5	10	396
<i>Deania calcea</i>	28	49	395
<i>Scyliorhinus canicula</i>	9	15	395
<i>Centrophorus granulosus</i>	76	136	388
<i>Myoxocephalus scorpius</i>	28	53	387
<i>Diplodus sargus</i>	30	54	369

<i>Syngnathus acus</i>	25	46	362
<i>Alopias vulpinus</i>	157	303	355
<i>Argyrosomus regius</i>	9	18	351
<i>Enchelyopus cimbrius</i>	7	13	346
<i>Mullus surmuletus</i>	5	9	343
<i>Xenodermichthys copei</i>	11	21	337
<i>Argentina sphyraena</i>	3	6	337
<i>Citharus linguatula</i>	20	37	332
<i>Epigonus telescopus</i>	32	61	327
<i>Deania profundorum</i>	86	153	327
<i>Coryphaenoides rupestris</i>	90	162	327
<i>Leucoraja circularis</i>	24	44	327
<i>Hippoglossoides platessoides</i>	3	6	324
<i>Dicentrarchus punctatus</i>	35	61	321
<i>Leucoraja naevus</i>	13	23	320
<i>Mustelus mustelus</i>	23	46	316
<i>Myliobatis aquila</i>	82	175	314
<i>Nezumia aequalis</i>	4	7	309
<i>Polyprion americanus</i>	53	100	305
<i>Scomber scombrus</i>	64	117	300
<i>Sarpa salpa</i>	29	54	298
<i>Dipturus oxyrinchus</i>	47	81	296
<i>Acantholabrus palloni</i>	16	30	295
<i>Notoscopelus kroyeri</i>	10	18	286
<i>Rajella bathyphila</i>	70	126	285
<i>Pholis gunnellus</i>	13	24	282
<i>Hydrolagus mirabilis</i>	44	79	280
<i>Trachipterus arcticus</i>	60	111	275
<i>Lophius budegassa</i>	5	9	267
<i>Nesiarchus nasutus</i>	73	134	267
<i>Gaidropsarus vulgaris</i>	11	19	262
<i>Pomatoschistus minutus</i>	3	6	258
<i>Stomias boa</i>	25	45	256
<i>Agonus cataphractus</i>	18	36	253
<i>Scorpaena loppei</i>	8	14	248
<i>Rostroraja alba</i>	73	134	244
<i>Amblyraja radiata</i>	6	11	242
<i>Umbrina canariensis</i>	31	56	241
<i>Sebastes viviparus</i>	28	50	241
<i>Serranus cabrilla</i>	9	17	239
<i>Raja clavata</i>	138	248	239
<i>Pagellus bogaraveo</i>	9	16	239
<i>Halargyreus johnsonii</i>	12	22	234
<i>Dipturus batis</i>	16	30	232
<i>Raja miraletus</i>	26	46	230
<i>Diplodus annularis</i>	15	27	229

<i>Synaphobranchus kaupii</i>	22	38	227
<i>Torpedo torpedo</i>	56	110	223
<i>Callanthias ruber</i>	9	17	223
<i>Aphia minuta</i>	3	5	222
<i>Trachurus trachurus</i>	3	5	219
<i>Rostroraja alba</i>	134	248	219
<i>Mora moro</i>	61	110	218
<i>Acipenser sturio</i>	80	148	218
<i>Chimaera monstrosa</i>	9	16	216
<i>Torpedo marmorata</i>	14	27	207
<i>Torpedo marmorata</i>	51	98	207
<i>Alosa alosa</i>	19	34	207
<i>Echiichthys vipera</i>	17	31	204
<i>Citharus linguatula</i>	6	11	202
<i>Labrus bergylta</i>	17	30	201
<i>Raja asterias</i>	39	69	200
<i>Maurolicus muelleri</i>	3	5	196
<i>Phycis phycis</i>	33	59	193
<i>Pollachius virens</i>	10	19	190
<i>Lycodes vahlii</i>	18	32	189
<i>Maurolicus muelleri</i>	5	9	185
<i>Pagellus bellottii</i>	8	15	179
<i>Lycodes vahlii</i>	10	18	174
<i>Solea senegalensis</i>	18	34	173
<i>Pagellus erythrinus</i>	8	15	172
<i>Leucoraja naevus</i>	73	130	167
<i>Argentina silus</i>	6	11	166
<i>Alepocephalus bairdii</i>	40	72	165
<i>Argentina sphyraena</i>	38	69	162
<i>Acantholabrus palloni</i>	9	16	159
<i>Stomias boa</i>	14	25	158
<i>Anguilla anguilla</i>	32	58	154
<i>Raja miraletus</i>	46	82	153
<i>Dicentrarchus punctatus</i>	21	35	152
<i>Pagrus auriga</i>	27	52	151
<i>Brosme brosme</i>	19	34	149
<i>Xenodermichthys copei</i>	6	11	149
<i>Limanda limanda</i>	3	6	147
<i>Alosa alosa</i>	34	61	147
<i>Taurulus bubalis</i>	5	9	146
<i>Symphodus roissali</i>	28	52	145
<i>Pomadasyus incisus</i>	16	31	144
<i>Alosa fallax</i>	6	11	144
<i>Aphanopus carbo</i>	39	69	144
<i>Cyttopsis rosea</i>	14	27	143
<i>Arnoglossus laterna</i>	4	7	143

<i>Nesiarchus nasutus</i>	40	73	142
<i>Sprattus sprattus</i>	71	130	141
<i>Umbrina canariensis</i>	9	17	140
<i>Cepola macrophthalma</i>	8	21	138
<i>Diplodus annularis</i>	8	15	138
<i>Belone belone</i>	61	110	135
<i>Raja montagui</i>	12	21	133
<i>Diplodus cervinus</i>	28	50	132
<i>Raja microocellata</i>	20	37	132
<i>Pagrus pagrus</i>	15	27	130
<i>Galeorhinus galeus</i>	23	44	129
<i>Polymetme thaeocoryla</i>	12	22	128
<i>Mora moro</i>	11	19	127
<i>Echiodon drummondii</i>	18	41	124
<i>Ephippion guttifer</i>	27	51	121
<i>Galeus melastomus</i>	8	14	120
<i>Blennius ocellaris</i>	17	32	120
<i>Gobius niger</i>	5	9	119
<i>Lepidion eques</i>	39	66	119
<i>Etmopterus spinax</i>	7	13	115
<i>Halargyreus johnsonii</i>	7	12	114
<i>Solea solea</i>	6	10	113
<i>Dentex canariensis</i>	28	53	111
<i>Sardinella aurita</i>	19	36	109
<i>Malacocephalus laevis</i>	8	15	109
<i>Rostroraja alba</i>	40	73	108
<i>Galeus atlanticus</i>	50	93	108
<i>Scorpaena loppei</i>	25	45	106
<i>Synchiropus phaeton</i>	13	28	102
<i>Dasyatis tortonesei</i>	34	62	101
<i>Merluccius merluccius</i>	3	6	101
<i>Alepocephalus bairdii</i>	22	40	100
<i>Liparis montagui</i>	8	16	96
<i>Malacocephalus laevis</i>	103	199	94
<i>Dalatias licha</i>	22	41	94
<i>Malacocephalus laevis</i>	4	8	93
<i>Beryx decadactylus</i>	14	26	88
<i>Microchirus boscanion</i>	9	17	85
<i>Ctenolabrus rupestris</i>	10	18	83
<i>Belone belone</i>	34	61	82
<i>Arnoglossus thori</i>	10	18	81
<i>Beryx decadactylus</i>	47	85	80
<i>Engraulis encrasicolus</i>	21	39	80
<i>Zeugopterus punctatus</i>	8	14	80
<i>Molva molva</i>	12	23	78
<i>Callionymus reticulatus</i>	6	12	78

<i>Molva dypterygia</i>	15	27	77
<i>Pagrus auriga</i>	52	98	77
<i>Labrus mixtus</i>	31	55	77
<i>Microchirus boscanion</i>	5	9	74
<i>Serranus hepatus</i>	4	8	74
<i>Microchirus azevia</i>	17	31	72
<i>Gaidropsarus vulgaris</i>	3	6	71
<i>Myxine glutinosa</i>	36	63	69
<i>Lepidopus caudatus</i>	82	150	68
<i>Nezumia aequalis</i>	7	13	67
<i>Callionymus maculatus</i>	3	5	66
<i>Gadiculus argenteus</i>	18	32	66
<i>Polymetme corythaeola</i>	13	23	65
<i>Myxine glutinosa</i>	12	21	65
<i>Buglossidium luteum</i>	16	29	65
<i>Phycis phycis</i>	18	33	65
<i>Hyperoplus lanceolatus</i>	8	15	65
<i>Lycodes gracilis</i>	11	26	63
<i>Maurolicus muelleri</i>	2	3	63
<i>Helicolenus dactylopterus</i>	52	94	63
<i>Osmerus eperlanus</i>	6	11	61
<i>Zoarces viviparus</i>	12	23	61
<i>Synaphobranchus kaupii</i>	12	22	61
<i>Zeugopterus norvegicus</i>	4	8	61
<i>Arnoglossus rueppelii</i>	12	22	57
<i>Trachyrincus scabrus</i>	49	88	56
<i>Arctozenus risso</i>	13	24	56
<i>Oxynotus paradoxus</i>	73	133	55
<i>Stomias boa</i>	82	147	55
<i>Atherina presbyter</i>	3	6	55
<i>Lampanyctus crocodilus</i>	12	23	52
<i>Hygophum benoiti</i>	30	54	51
<i>Pholis gunnellus</i>	24	44	51
<i>Ciliata mustela</i>	7	13	50
<i>Anthias anthias</i>	20	41	50
<i>Caranx rhonchus</i>	8	17	50
<i>Galeus murinus</i>	43	79	49
<i>Pegusa lascaris</i>	10	18	49
<i>Myoxocephalus scorpius</i>	5	8	49
<i>Umbrina cirrosa</i>	31	58	49
<i>Sardina pilchardus</i>	35	64	48
<i>Oxynotus paradoxus</i>	40	73	48
<i>Mugil cephalus</i>	31	59	48
<i>Arnoglossus imperialis</i>	19	35	48
<i>Gobius niger</i>	9	17	46
<i>Ciliata mustela</i>	23	41	46

<i>Deania profundorum</i>	27	48	46
<i>Hyperoplus lanceolatus</i>	4	8	46
<i>Alosa agone</i>	17	33	45
<i>Dicologlossa cuneata</i>	6	11	45
<i>Squalus blainville</i>	25	45	44
<i>Alepocephalus rostratus</i>	12	22	43
<i>Callionymus maculatus</i>	21	41	42
<i>Symphodus bailloni</i>	15	28	41
<i>Labrus mixtus</i>	10	18	41
<i>Rajella bathyphila</i>	39	70	41
<i>Microchirus theophila</i>	17	32	40
<i>Sphyraena sphyraena</i>	36	69	39
<i>Sprattus sprattus</i>	21	38	38
<i>Uranoscopus scaber</i>	29	53	38
<i>Ephippion guttifer</i>	14	27	37
<i>Dipturus nidarosiensis</i>	39	70	37
<i>Trachyrincus scabrus</i>	28	49	37
<i>Syngnathus acus</i>	14	25	36
<i>Citharus linguatula</i>	3	6	36
<i>Alosa alosa</i>	11	19	36
<i>Raja asterias</i>	69	123	35
<i>Coryphaenoides rupestris</i>	27	50	35
<i>Lepidion eues</i>	8	14	35
<i>Pollachius pollachius</i>	11	19	35
<i>Molva macrophthalma</i>	10	17	34
<i>Lampanyctus crocodilus</i>	7	12	34
<i>Halargyreus johnsonii</i>	22	40	34
<i>Scyliorhinus stellaris</i>	13	24	33
<i>Pomadourys incisus</i>	8	16	33
<i>Cyttopsis rosea</i>	8	14	33
<i>Lepidotrigla dieuzeidei</i>	17	31	33
<i>Pagrus pagrus</i>	8	15	31
<i>Lepidotrigla dieuzeidei</i>	5	9	31
<i>Callionymus reticulatus</i>	12	26	31
<i>Trigla lyra</i>	5	10	30
<i>Coryphaenoides rupestris</i>	50	90	29
<i>Myliobatis aquila</i>	18	38	29
<i>Syngnathus rostellatus</i>	9	15	29
<i>Pomatoschistus minutus</i>	33	58	28
<i>Bathysolea profundicola</i>	21	39	28
<i>Callanthias ruber</i>	5	9	28
<i>Spicara smaragdina</i>	10	18	27
<i>Maurollicus muelleri</i>	9	14	27
<i>Glyptocephalus cynoglossus</i>	7	13	27
<i>Echiodon dentatus</i>	20	36	26
<i>Spicara maena</i>	5	9	26

<i>Scomber scombrus</i>	6	11	26
<i>Liparis liparis</i>	4	7	26
<i>Gnathophis mystax</i>	20	36	26
<i>Ruvettus pretiosus</i>	77	140	26
<i>Pagellus acarne</i>	5	9	25
<i>Aphia minuta</i>	5	8	25
<i>Myoxocephalus scorpioides</i>	18	32	25
<i>Gaidropsarus vulgaris</i>	6	11	24
<i>Trachinus draco</i>	6	11	24
<i>Chaunax pictus</i>	14	27	24
<i>Myctophum punctatum</i>	6	10	24
<i>Hymenocephalus italicus</i>	13	24	24
<i>Galeus melastomus</i>	96	181	24
<i>Galeus murinus</i>	24	43	24
<i>Diplodus sargus</i>	16	30	23
<i>Raja brachyura</i>	12	22	23
<i>Dentex gibbosus</i>	31	57	22
<i>Dipturus oxyrinchus</i>	28	47	22
<i>Petromyzon marinus</i>	63	109	22
<i>Scorpaena scrofa</i>	8	15	21
<i>Liparis montagui</i>	4	8	21
<i>Solea senegalensis</i>	34	62	21
<i>Chaunax pictus</i>	27	49	21
<i>Monochirus hispidus</i>	8	14	20
<i>Lepidorhombus boschii</i>	3	6	20
<i>Hymenocephalus italicus</i>	24	43	20
<i>Pagellus erythrinus</i>	4	8	18
<i>Dasyatis pastinaca</i>	18	34	18
<i>Hyperoplus lanceolatus</i>	53	101	18
<i>Syngnathus acus</i>	4	8	18
<i>Arnoglossus thori</i>	5	10	17
<i>Ciliata septentrionalis</i>	9	16	17
<i>Cyttopsis rosea</i>	27	49	17
<i>Symphurus nigrescens</i>	6	11	17
<i>Nerophis ophidion</i>	25	50	17
<i>Gasterosteus aculeatus</i>	9	17	17
<i>Alosa agone</i>	33	62	17
<i>Micromesistius poutassou</i>	4	6	17
<i>Raja clavata</i>	7	13	17
<i>Nemichthys scolopaceus</i>	36	66	17
<i>Dentex maroccanus</i>	15	29	17
<i>Scorpaena loppei</i>	14	25	17
<i>Polymetme thaeocoryla</i>	22	40	17
<i>Phycis blennoides</i>	6	11	16
<i>Blennius ocellaris</i>	4	9	16
<i>Leucoraja circularis</i>	13	24	16

<i>Uranoscopus scaber</i>	16	29	16
<i>Trachyrincus scabrus</i>	5	9	16
<i>Pterycombus brama</i>	28	53	16
<i>Salmo salar</i>	32	59	16
<i>Dipturus nidarosiensis</i>	22	39	16
<i>Benthodesmus simonyi</i>	60	104	16
<i>Chelidonichthys lastoviza</i>	18	33	15
<i>Hydrolagus mirabilis</i>	13	24	15
<i>Labrus bergylta</i>	9	17	15
<i>Dentex gibbosus</i>	17	31	14
<i>Dentex canariensis</i>	15	28	14
<i>Chelidonichthys lastoviza</i>	10	18	14
<i>Microchirus theophila</i>	9	17	14
<i>Naucrates ductor</i>	28	53	14
<i>Eutrigla gurnardus</i>	3	5	14
<i>Rajella bathyphila</i>	22	39	13
<i>Raja undulata</i>	12	22	13
<i>Ciliata septentrionalis</i>	5	9	13
<i>Stromateus fiatola</i>	27	50	13
<i>Chlorophthalmus agassizi</i>	11	22	13
<i>Scorpaena scrofa</i>	15	27	13
<i>Centrolabrus exoletus</i>	19	33	13
<i>Buglossidium luteum</i>	3	5	13
<i>Helicolenus dactylopterus</i>	3	5	13
<i>Deania calcea</i>	16	28	13
<i>Rajella fyllae</i>	43	80	12
<i>Trachipterus trachipterus</i>	66	123	12
<i>Trachipterus arcticus</i>	32	60	12
<i>Chauliodus sloani</i>	18	33	12
<i>Monochirus hispidus</i>	14	25	12
<i>Lophius piscatorius</i>	4	8	12
<i>Stomias boa</i>	8	14	12
<i>Coryphaenoides rupestris</i>	15	27	12
<i>Chelidonichthys lucerna</i>	5	9	12
<i>Ciliata septentrionalis</i>	16	29	11
<i>Plectorhinchus mediterraneus</i>	30	54	11
<i>Chelidonichthys obscurus</i>	35	62	11
<i>Cyclopterus lumpus</i>	6	11	11
<i>Spratelloides lewisi</i>	11	20	11
<i>Dentex maroccanus</i>	29	56	11
<i>Notoscopelus kroyeri</i>	5	10	11
<i>Macrourus berglax</i>	18	35	11
<i>Zeugopterus punctatus</i>	14	26	11
<i>Pegusa lascaris</i>	5	10	10
<i>Osmerus eperlanus</i>	11	20	10
<i>Hoplostethus mediterraneus</i>	4	8	10

<i>Sarpa salpa</i>	16	29	10
<i>Pholis gunnellus</i>	7	13	10
<i>Lycenchelys sarsii</i>	10	16	10
<i>Dentex gibbosus</i>	9	17	9
<i>Gaidropsarus biscayensis</i>	7	12	9
<i>Torpedo marmorata</i>	7	14	9
<i>Symphurus nigrescens</i>	11	19	9
<i>Gaidropsarus mediterraneus</i>	23	42	9
<i>Mustelus asterias</i>	15	28	9
<i>Macrourus berglax</i>	35	65	9
<i>Triglops murrayi</i>	9	19	9
<i>Raja montagui</i>	7	12	8
<i>Lepidopus caudatus</i>	14	25	8
<i>Alosa agone</i>	9	17	8
<i>Synaphobranchus kaupii</i>	38	66	8
<i>Ophidion barbatum</i>	23	42	8
<i>Sardina pilchardus</i>	3	6	8
<i>Hygophum benoiti</i>	16	30	8
<i>Petromyzon marinus</i>	21	36	8
<i>Arctozenus risso</i>	24	44	7
<i>Brama brama</i>	16	29	7
<i>Coryphaenoides rupestris</i>	8	15	7
<i>Zenopsis conchifer</i>	11	19	7
<i>Melanostomias bartonbeani</i>	22	40	7
<i>Entelurus aequoreus</i>	9	18	7
<i>Agonus cataphractus</i>	2	5	7
<i>Spicara smaris</i>	18	35	7
<i>Parablennius gattorugine</i>	9	17	7
<i>Coelorinchus caelorhincus</i>	2	4	7
<i>Arctozenus risso</i>	7	13	7
<i>Zeugopterus punctatus</i>	4	8	7
<i>Umbrina canariensis</i>	5	9	7
<i>Centrolophus niger</i>	21	36	7
<i>Synaphobranchus kaupii</i>	7	12	7
<i>Arnoglossus rueppelii</i>	6	12	6
<i>Ctenolabrus rupestris</i>	5	10	6
<i>Zeugopterus regius</i>	8	14	6
<i>Zoarces viviparus</i>	23	43	6
<i>Arnoglossus laterna</i>	20	34	6
<i>Echiichthys vipera</i>	31	58	6
<i>Raniceps raninus</i>	17	29	6
<i>Nezumia aequalis</i>	2	4	6
<i>Maurollicus muelleri</i>	14	23	6
<i>Argyrosomus regius</i>	5	9	6
<i>Schedophilus medusophagus</i>	14	27	6
<i>Gaidropsarus mediterraneus</i>	12	23	6

<i>Clupea harengus</i>	2	3	6
<i>Benthodesmus elongatus</i>	35	60	6
<i>Trisopterus minutus</i>	32	59	6
<i>Leucoraja fullonica</i>	14	25	6
<i>Zenopsis conchifer</i>	6	11	6
<i>Epigonus denticulatus</i>	6	10	5
<i>Triglops murrayi</i>	5	9	5
<i>Diaphus dumerilii</i>	6	11	5
<i>Callionymus maculatus</i>	41	81	5
<i>Glyptocephalus cynoglossus</i>	4	7	5
<i>Gaidropsarus biscayensis</i>	12	22	5
<i>Nessorhamphus ingolfianus</i>	36	66	5
<i>Argyropelecus olfersii</i>	4	8	5
<i>Ophidion barbatum</i>	13	23	5
<i>Leucoraja naevus</i>	7	13	5
<i>Serranus scriba</i>	16	30	5
<i>Etmopterus pusillus</i>	24	44	5
<i>Raja miraletus</i>	14	26	5
<i>Anthias anthias</i>	5	10	5
<i>Sigmops bathyphilus</i>	24	43	5
<i>Microstomus kitt</i>	3	5	5
<i>Gaidropsarus macrophthalmus</i>	22	42	5
<i>Capros aper</i>	1	2	5
<i>Spinachia spinachia</i>	30	57	5
<i>Halobatrachus didactylus</i>	28	51	5
<i>Conger conger</i>	12	21	5
<i>Gnathophis mystax</i>	36	67	5
<i>Scorpaena loppei</i>	5	8	5
<i>Syngnathus acus</i>	46	82	4
<i>Petromyzon marinus</i>	36	63	4
<i>Gadella maraldi</i>	20	35	4
<i>Lepidorhombus whiffiagonis</i>	3	6	4
<i>Macrourus berglax</i>	10	18	4
<i>Lampanyctus fluviatilis</i>	18	32	4
<i>Symphodus bailloni</i>	8	15	4
<i>Serranus hepatus</i>	15	28	4
<i>Lycenchelys sarsii</i>	16	26	4
<i>Raniceps raninus</i>	9	17	4
<i>Pomatoschistus minutus</i>	10	18	4
<i>Magnisudis atlantica</i>	13	24	4
<i>Benthodesmus elongatus</i>	60	104	4
<i>Naucrates ductor</i>	15	28	4
<i>Spinachia spinachia</i>	16	30	4
<i>Argyropelecus olfersii</i>	8	15	4
<i>Lampanyctus fluviatilis</i>	32	58	4
<i>Microchirus azevia</i>	9	17	4

<i>Chelon labrosus</i>	17	31	3
<i>Chimaera monstrosa</i>	5	9	3
<i>Symphodus melops</i>	9	17	3
<i>Zoarces viviparus</i>	7	12	3
<i>Paraliparis membranaceus</i>	9	17	3
<i>Pontinus kuhlii</i>	16	30	3
<i>Trachurus picturatus</i>	5	9	3
<i>Myoxocephalus scorpioides</i>	10	18	3
<i>Mora moro</i>	6	11	3
<i>Caranx rhonchus</i>	17	32	3
<i>Argentina silus</i>	3	6	3
<i>Belone belone</i>	19	34	3
<i>Synchiropus phaeton</i>	6	13	3
<i>Serrivomer beanii</i>	36	66	3
<i>Gaidropsarus argentatus</i>	21	39	3
<i>Sphoeroides pachygaster</i>	7	14	3
<i>Labrus mixtus</i>	6	10	3
<i>Microchirus ocellatus</i>	9	16	3
<i>Myctophum punctatum</i>	3	6	3
<i>Anguilla anguilla</i>	18	32	3
<i>Boops boops</i>	3	5	3
<i>Notacanthus bonaparte</i>	10	19	3
<i>Sigmops bathyphilus</i>	13	24	3
<i>Scorpaena porcus</i>	8	15	3
<i>Callionymus lyra</i>	2	5	3
<i>Gadella maraldi</i>	11	20	3
<i>Polymetme corythaeola</i>	7	13	2
<i>Epigonus denticulatus</i>	10	18	2
<i>Alosa alosa</i>	6	11	2
<i>Trachurus mediterraneus</i>	3	5	2
<i>Echiodon drummondii</i>	8	18	2
<i>Paraliparis membranaceus</i>	5	9	2
<i>Symphodus roissali</i>	15	28	2
<i>Callionymus reticulatus</i>	3	6	2
<i>Macroramphosus scolopax</i>	3	6	2
<i>Pomatoschistus minutus</i>	2	3	2
<i>Bathysolea profundicola</i>	7	12	2
<i>Centrolabrus exoletus</i>	10	19	2
<i>Pomadasyus incisus</i>	4	8	2
<i>Spinachia spinachia</i>	5	9	2
<i>Diplodus vulgaris</i>	5	8	2
<i>Lycodes vahliei</i>	5	10	2
<i>Zeus faber</i>	2	4	2
<i>Pagellus bellottii</i>	4	8	2
<i>Chauliodus sloani</i>	10	18	2
<i>Buglossidium luteum</i>	2	3	2

<i>Arnoglossus thori</i>	18	33	2
<i>Spratelloides lewisi</i>	6	11	2
<i>Melanonus zugmayeri</i>	12	22	2
<i>Neoraja iberica</i>	12	22	2
<i>Chelidonichthys obscurus</i>	6	11	2
<i>Hygophum benoiti</i>	9	16	2
<i>Callanthias ruber</i>	17	31	2
<i>Serranus scriba</i>	9	16	2
<i>Echiodon dentatus</i>	11	20	2
<i>Arnoglossus imperialis</i>	3	6	2
<i>Pagrus pagrus</i>	4	8	2
<i>Nessorhamphus ingolfianus</i>	20	36	2
<i>Macroparalepis affinis</i>	13	24	2
<i>Peristedion cataphractum</i>	23	44	1
<i>Diplecogaster bimaculata</i>	2	4	1
<i>Lycodes gracilis</i>	5	11	1
<i>Petromyzon marinus</i>	12	21	1
<i>Ophichthus rufus</i>	38	72	1
<i>Diplodus sargus</i>	9	16	1
<i>Argyropelecus hemigymnus</i>	2	4	1
<i>Argyropelecus gigas</i>	8	15	1
<i>Echiostoma barbatum</i>	12	22	1
<i>Cepola macrophthalma</i>	3	8	1
<i>Lestidiops jayakari</i>	11	21	1
<i>Syngnathus rostellatus</i>	15	25	1
<i>Chlorophthalmus agassizi</i>	6	11	1
<i>Limanda limanda</i>	2	3	1
<i>Spondyliosoma cantharus</i>	2	5	1
<i>Mullus surmuletus</i>	3	5	1
<i>Peristedion cataphractum</i>	12	23	1
<i>Benthodesmus simonyi</i>	35	60	1
<i>Scomberesox saurus</i>	28	49	1
<i>Raniceps raninus</i>	5	9	1
<i>Alepocephalus bairdii</i>	12	22	1
<i>Rostroraja alba</i>	21	40	1
<i>Pagrus auriga</i>	14	27	1
<i>Callionymus reticulatus</i>	26	55	1
<i>Lepidion eques</i>	5	8	1
<i>Chaunax pictus</i>	8	14	1
<i>Chelidonichthys lastoviza</i>	6	10	1
<i>Hippocampus hippocampus</i>	8	16	1
<i>Scomberesox saurus</i>	15	28	1
<i>Pleuronectes platessa</i>	3	5	1
<i>Syngnathus rostellatus</i>	5	9	1
<i>Polymetme thaeocoryla</i>	7	12	1
<i>Myxine glutinosa</i>	7	12	1

<i>Hoplostethus atlanticus</i>	6	12	1
<i>Leptoclinus maculatus</i>	8	18	1
<i>Paralepis coregonoides</i>	13	24	1
<i>Zeugopterus regius</i>	14	25	1
<i>Hippocampus hippocampus</i>	5	8	1
<i>Ceratoscopelus maderensis</i>	6	11	1
<i>Raja brachyura</i>	7	12	1
<i>Liparis montagui</i>	16	30	1
<i>Lycodes gracilis</i>	26	59	1
<i>Parasudis fraserbrunneri</i>	12	21	1
<i>Ciliata mustela</i>	4	7	1
<i>Syngnathus typhle</i>	17	31	1
<i>Cyclopterus lumpus</i>	3	6	1
<i>Serranus cabrilla</i>	5	9	1
<i>Squalus blainville</i>	13	25	1
<i>Dipturus oxyrinchus</i>	16	28	1
<i>Ciliata septentrionalis</i>	3	5	1
<i>Osmerus eperlanus</i>	4	6	1
<i>Galeus atlanticus</i>	8	15	1
<i>Alepocephalus rostratus</i>	7	12	1
<i>Centrolabrus exoletus</i>	6	10	1
<i>Hydrolagus mirabilis</i>	7	13	1
<i>Thunnus thynnus</i>	9	18	1
<i>Echiodon drummondii</i>	41	91	1
<i>Microchirus variegatus</i>	3	5	1
<i>Stromateus fiatola</i>	8	15	1
<i>Phycis phycis</i>	10	18	1
<i>Chirostomias pliopterus</i>	12	22	1
<i>Gobius paganellus</i>	5	9	1
<i>Centroscyllium fabricii</i>	15	26	1
<i>Argyroleucus olfersii</i>	2	4	1
<i>Lumpenus lampraeformis</i>	3	8	1
<i>Gadella maraldi</i>	6	11	1
<i>Mustelus mustelus</i>	12	23	1
<i>Parablennius gattorugine</i>	5	9	1
<i>Polymetme corythaeola</i>	23	42	1
<i>Epigonus telescopus</i>	5	9	1
<i>Gaidropsarus mediterraneus</i>	7	12	1
<i>Gadiculus argenteus</i>	2	3	1
<i>Symphodus melops</i>	5	9	1
<i>Symphodus bailloni</i>	5	8	1
<i>Xenodermichthys copei</i>	3	6	1
<i>Trachyscorpia cristulata</i>	9	17	1
<i>Carapus acus</i>	20	36	1
<i>Pontinus kuhlii</i>	9	16	0
<i>Entelurus aequoreus</i>	4	9	0

<i>Molva molva</i>	7	12	0
<i>Echiodon drummondii</i>	4	8	0
<i>Cataetyx alleni</i>	12	22	0
<i>Arnoglossus thori</i>	3	5	0
<i>Diretmus argenteus</i>	8	14	0
<i>Sparus aurata</i>	5	9	0
<i>Etmopterus pusillus</i>	13	24	0
<i>Pagrus pagrus</i>	2	4	0
<i>Lobianchia gemellarii</i>	6	11	0
<i>Deania profundorum</i>	15	27	0
<i>Gaidropsarus macrophthalmus</i>	3	6	0
<i>Pagellus bogaraveo</i>	5	9	0
<i>Myctophum punctatum</i>	10	19	0
<i>Remora brachyptera</i>	10	19	0
<i>Symphodus roissali</i>	8	15	0
<i>Gasterosteus aculeatus</i>	3	5	0
<i>Microchirus theophila</i>	5	9	0
<i>Spinachia spinachia</i>	9	16	0
<i>Enchelyopus cimbrius</i>	4	7	0
<i>Liparis liparis</i>	2	4	0
<i>Scorpaena notata</i>	4	8	0
<i>Gobiidae</i>	11	20	0
<i>Scophthalmus rhombus</i>	5	9	0
<i>Chirolophis ascanii</i>	11	26	0
<i>Liparis montagui</i>	2	4	0
<i>Trisopterus luscus</i>	3	5	0
<i>Howella brodiei</i>	9	17	0
<i>Sebastes viviparus</i>	3	5	0
<i>Zeugopterus norvegicus</i>	2	4	0
<i>Sagamichthys schnakenbecki</i>	12	22	0
<i>Sparus aurata</i>	9	16	0
<i>Dentex maroccanus</i>	8	15	0
<i>Raja undulata</i>	6	12	0
<i>Hymenocephalus italicus</i>	4	7	0
<i>Leptagonus decagonus</i>	9	18	0
<i>Pagellus bellottii</i>	2	4	0
<i>Leucoraja circularis</i>	7	13	0
<i>Callionymus risso</i>	3	5	0
<i>Searsia koefoedi</i>	9	17	0
<i>Micrenophrys lilljeborgii</i>	10	18	0
<i>Nerophis ophidion</i>	13	25	0
<i>Chirolophis ascanii</i>	5	11	0
<i>Alosa alosa</i>	3	6	0
<i>Uranoscopus scaber</i>	8	16	0
<i>Squalus acanthias</i>	7	14	0
<i>Ceratospicopelus maderensis</i>	3	6	0

<i>Lithognathus mormyrus</i>	5	9	0
<i>Ammodytes</i>	4	7	0
<i>Chaunax pictus</i>	4	8	0
<i>Echiostoma barbatum</i>	7	12	0
<i>Carapus acus</i>	11	20	0
<i>Poromitra capito</i>	9	17	0
<i>Scyliorhinus stellaris</i>	7	13	0
<i>Serranus hepatus</i>	2	4	0
<i>Vinciguerria poweriae</i>	5	9	0
<i>Blennius ocellaris</i>	2	4	0
<i>Artediellus atlanticus</i>	5	10	0
<i>Taurulus bubalis</i>	3	5	0
<i>Scorpaena scrofa</i>	4	8	0
<i>Anarhichas lupus</i>	7	12	0
<i>Zenion hololepis</i>	5	9	0
<i>Paraliparis membranaceus</i>	3	5	0
<i>Gobius paganellus</i>	9	16	0
<i>Phycis blennoides</i>	4	6	0
<i>Myoxocephalus scorpius</i>	2	5	0
<i>Howella brodiei</i>	5	9	0
<i>Arctozenus risso</i>	4	7	0
<i>Zeugopterus regius</i>	4	8	0
<i>Dicentrarchus labrax</i>	5	10	0
<i>Aphia minuta</i>	2	3	0
<i>Leptoclinus maculatus</i>	18	41	0
<i>Nezumia sclerorhynchus</i>	10	17	0
<i>Notacanthus bonaparte</i>	5	10	0
<i>Guttigadus latifrons</i>	7	12	0
<i>Merluccius merluccius</i>	2	3	0
<i>Maurolucus muelleri</i>	1	2	0
<i>Torpedo marmorata</i>	4	7	0
<i>Scyliorhinus canicula</i>	5	9	0
<i>Paralepis coregonoides</i>	7	13	0
<i>Argentina sphyraena</i>	2	3	0
<i>Citharus linguatula</i>	2	3	0
<i>Leptoclinus maculatus</i>	4	8	0
<i>Poromitra crassiceps</i>	9	17	0
<i>Cyttopsis rosea</i>	4	8	0
<i>Benthoosema glaciale</i>	5	9	0
<i>Coryphaenoides rupestris</i>	5	8	0
<i>Spratelloides lewisi</i>	3	6	0
<i>Lampanyctus photonotus</i>	6	11	0
<i>Diaphus dumerilii</i>	3	6	0
<i>Evermannella balbo</i>	6	12	0
<i>Brosme brosme</i>	10	19	0
<i>Notoscopelus elongatus</i>	9	16	0

<i>Scomber colias</i>	6	10	0
<i>Monochirus hispidus</i>	4	8	0
<i>Acantholabrus palloni</i>	5	9	0
<i>Scymnodon ringens</i>	6	12	0
<i>Lycenchelys sarsii</i>	7	10	0
<i>Peristedion cataphractum</i>	7	12	0
<i>Sprattus sprattus</i>	2	3	0
<i>Micrenophrys lilljeborgii</i>	5	10	0
<i>Nansenia tenera</i>	7	12	0
<i>Hippoglossoides platessoides</i>	2	3	0
<i>Notoscopelus kroyeri</i>	3	5	0
<i>Trisopterus esmarkii</i>	2	3	0
<i>Hymenocephalus italicus</i>	2	4	0
<i>Trisopterus minutus</i>	2	3	0
<i>Syngnathus typhle</i>	9	17	0
<i>Micrenophrys lilljeborgii</i>	3	5	0
<i>Molva dypterygia</i>	8	15	0
<i>Diplecogaster bimaculata</i>	1	2	0
<i>Hippocampus guttulatus</i>	8	16	0
<i>Lophius budegassa</i>	2	5	0
<i>Lepidorhombus boscii</i>	2	3	0
<i>Gadella maraldi</i>	4	6	0
<i>Pollachius pollachius</i>	6	11	0
<i>Benthoosema glaciale</i>	3	5	0
<i>Lampanyctus crocodilus</i>	4	7	0
<i>Labrus bergylta</i>	5	9	0
<i>Alosa alosa</i>	2	3	0
<i>Molva molva</i>	4	7	0
<i>Brosme brosme</i>	6	10	0
<i>Gaidropsarus biscayensis</i>	4	7	0
<i>Dicologlossa cuneata</i>	3	6	0
<i>Ctenolabrus rupestris</i>	3	5	0
<i>Stomias boa</i>	4	8	0
<i>Arnoglossus rueppelii</i>	3	6	0
<i>Alosa agone</i>	5	9	0
<i>Belone belone</i>	10	19	0
<i>Chelidonichthys lucerna</i>	3	5	0
<i>Raniceps raninus</i>	3	5	0
<i>Microchirus ocellatus</i>	4	9	0
<i>Macrourus berglax</i>	5	10	0
<i>Brama brama</i>	5	9	0
<i>Chauliodus sloani</i>	6	10	0
<i>Centrolophus niger</i>	7	12	0
<i>Lepidotrigla cavillone</i>	3	5	0
<i>Zeugopterus punctatus</i>	2	4	0
<i>Sebastes mentella</i>	4	8	0

<i>Gobius niger</i>	3	5	0
<i>Pagellus acarne</i>	3	5	0
<i>Dysomma brevirostre</i>	11	20	0
<i>Chelidonichthys cuculus</i>	3	6	0
<i>Arnoglossus laterna</i>	2	4	0
<i>Phycis phycis</i>	5	10	0
<i>Nezumia aequalis</i>	1	2	0
<i>Halargyreus johnsonii</i>	4	7	0
<i>Bellottia apoda</i>	5	9	0
<i>Gobiidae</i>	5	10	0
<i>Gnathophis mystax</i>	11	20	0
<i>Glyptocephalus cynoglossus</i>	2	4	0
<i>Galeus melastomus</i>	4	8	0
<i>Echiichthys vipera</i>	3	5	0
<i>Anguilla anguilla</i>	6	10	0
<i>Triglops murrayi</i>	2	5	0
<i>Malacocephalus laevis</i>	2	4	0
<i>Anguilla anguilla</i>	10	18	0
<i>Micromesistius poutassou</i>	2	4	0
<i>Callanthias ruber</i>	3	5	0
<i>Sebastes mentella</i>	2	4	0
<i>Epigonus denticulatus</i>	3	6	0
<i>Setarches guentheri</i>	5	9	0
<i>Notoscopelus bolini</i>	5	9	0
<i>Conger conger</i>	7	12	0
<i>Serranus scriba</i>	3	5	0
<i>Trachinus draco</i>	3	6	0
<i>Pagellus bogaraveo</i>	3	5	0
<i>Molva macrophthalma</i>	5	10	0
<i>Lepadogaster lepadogaster</i>	2	4	0
<i>Lepidopus caudatus</i>	7	14	0
<i>Sander lucioperca</i>	5	10	0
<i>Chlorophthalmus agassizi</i>	3	6	0
<i>Arnoglossus imperialis</i>	2	3	0
<i>Cubiceps gracilis</i>	5	9	0
<i>Leucoraja naevus</i>	4	7	0
<i>Ammodytes</i>	2	4	0
<i>Gaidropsarus mediterraneus</i>	3	7	0
<i>Etmopterus spinax</i>	4	7	0
<i>Hippocampus hippocampus</i>	2	5	0
<i>Echiodon drummondii</i>	2	4	0
<i>Zeus faber</i>	1	2	0
<i>Argyropelecus aculeatus</i>	2	4	0
<i>Alosa fallax</i>	3	6	0
<i>Argyropelecus aculeatus</i>	4	8	0
<i>Trachurus trachurus</i>	2	3	0

<i>Lepidorhombus whiffiagonis</i>	2	3	0
<i>Squalus acanthias</i>	4	7	0
<i>Alepocephalus rostratus</i>	4	7	0
<i>Argyropelecus hemigymnus</i>	1	2	0
<i>Echiodon dentatus</i>	6	11	0
<i>Pholis gunnellus</i>	4	7	0
<i>Symphodus melops</i>	3	5	0
<i>Trigla lyra</i>	3	5	0
<i>Pomadasys incisus</i>	2	4	0
<i>Polymetme thaeocoryla</i>	4	7	0
<i>Acantholabrus palloni</i>	3	5	0
<i>Electrona risso</i>	4	7	0
<i>Symphurus nigrescens</i>	3	6	0
<i>Labrus mixtus</i>	3	6	0
<i>Amblyraja radiata</i>	3	6	0
<i>Scomber scombrus</i>	3	6	0
<i>Syngnathus rostellatus</i>	3	5	0
<i>Galeus melastomus</i>	2	4	0
<i>Epigonus constanciae</i>	3	6	0
<i>Cepola macrophthalma</i>	1	3	0
<i>Micrenophrys lilljeborgii</i>	2	3	0
<i>Lobianchia dofleini</i>	3	5	0
<i>Lobianchia gemellarii</i>	3	6	0
<i>Symphodus bailloni</i>	3	5	0
<i>Lophius piscatorius</i>	2	4	0
<i>Capros aper</i>	1	1	0
<i>Bathysolea profundicola</i>	4	7	0
<i>Arnoglossus thori</i>	2	3	0
<i>Alepocephalus bairdii</i>	4	7	0
<i>Callionymus lyra</i>	1	2	0
<i>Microstomus kitt</i>	2	3	0
<i>Spicara maena</i>	3	5	0
<i>Nezumia sclerorhynchus</i>	3	5	0
<i>Nezumia sclerorhynchus</i>	5	10	0
<i>Solea solea</i>	3	6	0
<i>Synaphobranchus kaupii</i>	4	7	0
<i>Cubiceps gracilis</i>	3	5	0
<i>Spinachia spinachia</i>	3	5	0
<i>Helicolenus dactylopterus</i>	1	3	0
<i>Apletodon dentatus</i>	2	3	0
<i>Hyperoplus lanceolatus</i>	2	4	0
<i>Phycis blennoides</i>	2	4	0
<i>Raja clavata</i>	2	4	0
<i>Chelidonichthys cuculus</i>	1	2	0
<i>Liparis liparis</i>	1	1	0
<i>Bathysolea profundicola</i>	1	2	0

<i>Nerophis lumbriciformis</i>	6	13	0
<i>Callionymus maculatus</i>	1	3	0
<i>Xenodermichthys copei</i>	2	3	0
<i>Chelidonichthys obscurus</i>	2	3	0
<i>Nerophis lumbriciformis</i>	13	25	0
<i>Coelorinchus caelorhincus</i>	1	2	0
<i>Nerophis ophidion</i>	6	13	0
<i>Hoplostethus atlanticus</i>	1	2	0
<i>Peristedion cataphractum</i>	3	7	0
<i>Ceratoscopelus maderensis</i>	2	3	0
<i>Coryphaenoides rupestris</i>	3	5	0
<i>Monochirus hispidus</i>	1	2	0
<i>Syngnathus typhle</i>	5	9	0
<i>Sprattus sprattus</i>	1	2	0
<i>Zeugopterus norvegicus</i>	1	2	0
<i>Nezumia bairdii</i>	2	4	0
<i>Agonus cataphractus</i>	1	2	0
<i>Bathysolea profundicola</i>	2	4	0
<i>Entelurus aequoreus</i>	2	4	0
<i>Callionymus reticulatus</i>	1	3	0
<i>Ctenolabrus rupestris</i>	1	3	0
<i>Gobiidae</i>	1	3	0
<i>Anguilla anguilla</i>	3	6	0
<i>Sardina pilchardus</i>	2	3	0
<i>Callionymus risso</i>	1	3	0
<i>Diaphus dumerilii</i>	2	3	0
<i>Syngnathus acus</i>	2	4	0
<i>Hymenocephalus italicus</i>	1	2	0
<i>Nezumia aequalis</i>	1	1	0
<i>Malacocephalus laevis</i>	1	1	0
<i>Microchirus variegatus</i>	1	2	0
<i>Trisopterus minutus</i>	1	2	0
<i>Argyropelecus olfersii</i>	1	1	0
<i>Zeus faber</i>	1	1	0
<i>Arnoglossus laterna</i>	1	2	0
<i>Arnoglossus laterna</i>	1	1	0
<i>Pholis gunnellus</i>	1	2	0
<i>Conger conger</i>	2	4	0
<i>Gobiidae</i>	1	2	0
<i>Malacocephalus laevis</i>	1	2	0
<i>Maurollicus muelleri</i>	1	1	0
<i>Trachurus trachurus</i>	1	2	0
<i>Merluccius merluccius</i>	1	1	0
<i>Sardina pilchardus</i>	1	2	0
<i>Nezumia bairdii</i>	1	1	0
<i>Coelorinchus caelorhincus</i>	1	1	0

<i>Squalus acanthias</i>	1	1	0
<i>Raja clavata</i>	1	1	0

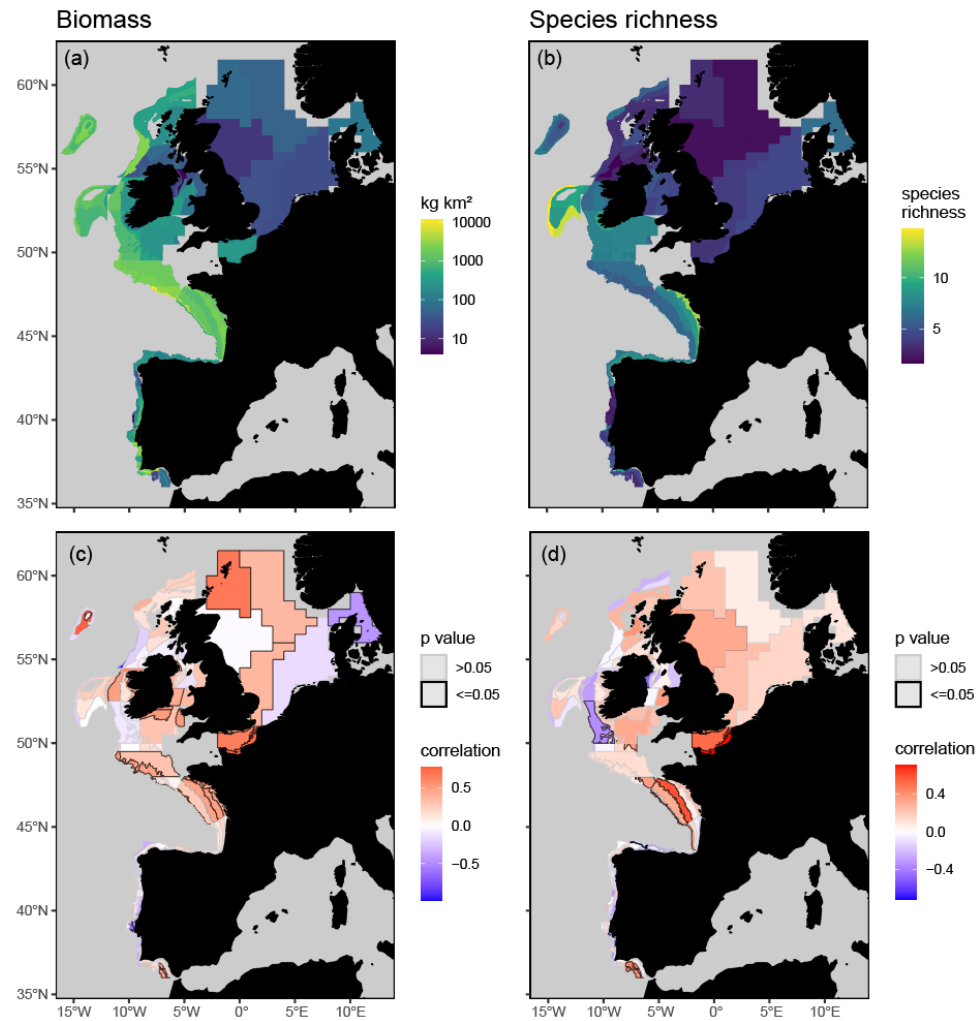


Figure S6: Mean spatial distribution (a, b) and temporal change (c, d) in unclassified fish biomass (a, c) and species richness (b, d) by assessment strata based on otter trawl data. Temporal increases and decreases are shown by red and blue cells, respectively (Kendall's τ scores of -1 to $+1$ represent a 100% probability of a decreasing or increasing trend, respectively). Assessment strata where the temporal change (correlation) is significant are highlighted with black borders.