ADDITIONAL DOCUMENTS 2020 ANNUAL REPORT ON THE ACTIVITY OF THE SPANISH FISHING FLEET

Article 22 of Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013, on the adjustment and management of fishing capacity.

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A. ANNEX I: STRUCTURE OF THE FLEET

The **Fishing Fleet Register (REGFLOP)** is organised by method and fishing ground where each vessel has its main licence. There may be variations in the type of activity carried out by each vessel throughout the year, requiring authorisations and temporary fishing permits, or temporary changes in fishing method.

Below are tables with the detailed structure of the fleet and its trend.
It should be noted that these tables contain, firstly, the total fleet registered throughout the year, including all vessels that make up the population, whether active or inactive. Secondly, they contain the registered fleet at year end which, as we shall see, does not necessarily match with the number of vessels registered earlier, as those that were permanently removed from the register at some point during the year are not included here.

REGISTERED FLEET AT YEAR END (ACTIVE AND INACTIVE)

	2012	2013	2014	2015	2016	2017	2018	2019	2012-2013 Variation	2013-2014 Variation	2014-2015 Variation	2015-2016 Variation	2016-2017 Variation	2017-2018 Variation	2018-2019 Variation
No VESSELS	10 116	9 871	9 635	9 409	9 299	9 146	8 972	8 884	-2.42%	-2.39%	-2.35%	-1.17%	-1.65%	-1.90%	-0.98%
KW	871 956.77	846 718.74	821 611.98	799 011.23	789 574.52	782 570.27	777 953.73	777 321.03	-2.89%	-2.97%	-2.75%	-1.18%	-0.89%	-0.59%	-0.08%
GT	384 795.73	372 617.02	357 556.35	342 568.58	337 678.90	333 812.81	331 457.57	332 444.64	-3.16%	-4.04%	-4.19%	-1.43%	-1.14%	-0.71%	0.30%

REGISTERED VESSELS AT YEAR END 2012-2019									
FISHING GROUND	METHOD	2012	2013	2014	2015	2016	2017	2018	2019
NATIONAL FISHING GROUND	TRAWLING	921	909	858	834	825	808	793	780
	SMALL-SCALE GEAR	7 782	7 602	7 474	7 326	7 216	7 106	6 977	6 921
	PURSE-SEINING	624	612	601	588	617	563	547	540
	PURSE-SEINING (BLUEFIN TUNA)	6	6	6	6	6	6	6	6
	POLE-AND-LINE TUNA-FISHING						48	55	53
	BOTTOM-SET LONGLINING	157	153	143	137	130	119	112	107
	SURFACE LONGLINING	148	146	141					
	FIXED GILLNETTING	32	31	31	26	24	24	23	21
	BOTTOM-SET GILLNETTING	53	51	50	46	45	43	40	40
	SUBTOTAL	9 723	9 510	9 304	8 963	8 863	8 717	8 553	8 468
EU FISHING GROUNDS	TRAWLING	74	70	58	55	52	51	46	44
	PASSIVE GEAR	69	66	62	57	55	55	60	60
	SUBTOTAL	143	136	120	112	107	106	106	104
INTERNATIONAL FISHING GROUNDS	TRAWLING	108	94	91	89	86	85	83	82
	FREEZER TUNA PURSE-SEINING	32	32	30	26	26	26	26	27
	BOTTOM-SET LONGLINING	3	3	3	3	4	3	4	4
	SURFACE LONGLINING	94	92	86					
	SUBTOTAL	237	221	210	118	116	114	113	113
NO ASSIGNED FISHING GROUND	NO ASSIGNED METHOD	13	4	1					
CONSOLIDATED REGISTER OF SURFACE LONGLINERS					216	213	209	200	199
	TOTALS	10 116	9 871	9 635	9 409	9 299	9 146	8 972	8 884

CHARACTERISTICS OF THE ACTIVE FLEET (2019) BY REGISTERED METHOD AT 31/12/2019

	REGISTERED ACTIVE VESSELS BY FISHING GROUND	VESSELS	TOT GT	TOT KW	VESSELS (%)	GT (%)	KW (%)	MEAN LENGTH	MEAN AGE
NATIONAL FISHING GROUND	VESSELS USING SMALL-SCALE GEAR (CANARY ISLANDS)	524	1 852.52	14 960.41	91.29%	40.93%	63.46%	8.00	40
	POLE-AND-LINE TUNA-FISHING VESSELS (CANARY ISLANDS)	50	2 674.06	8 613.58	8.71%	59.07%	36.54%	18.37	26
	SUBTOTAL	574	4 526.58	23 573.99					
	BOTTOM TRAWLERS (CANTABRIA NW)	69	15 654.36	27 188.86	1.59%	28.96%	13.69%	28.34	19
	VESSELS USING SMALL-SCALE GEAR (CANTABRIA NW)	3 899	11 013.55	94 322.92	89.78%	20.37%	47.50%	6.80	35
	PURSE SEINERS (CANTABRIA NW)	255	21 158.11	60 971.48	5.87%	39.14%	30.71%	22.53	21
	BOTTOM-SET LONGLINERS (CANTABRIA NW)	59	2 626.44	7 479.77	1.36%	4.86%	3.77%	16.61	19
	FIXED GILLNETTERS (CANTABRIA NW)	21	1 012.78	2 889.03	0.48%	1.87%	1.45%	17.11	18
	BOTTOM-SET GILLNETTERS (CANTABRIA NW)	40	2 594.79	5 707.91	0.92%	4.80%	2.87%	18.48	20
	SUBTOTAL	4 343	54 060.03	198 559.97					
	BOTTOM TRAWLERS (GULF OF CÁDIZ)	123	5 240.23	18 917.02	18.64%	53.03%	41.70%	18.80	18
	VESSELS USING SMALL-SCALE GEAR (GULF OF CÁDIZ)	475	2 786.18	17 661.51	71.97%	28.20%	38.94%	9.55	26
	PURSE SEINERS (GULF OF CÁDIZ)	62	1 854.38	8 782.80	9.39%	18.77%	19.36%	17.34	20
	SUBTOTAL	660	9 880.79	45 361.33					
	BOTTOM TRAWLERS (MEDITERRANEAN)	575	33 340.30	103 106.00	28.17%	69.98%	54.58%	20.35	24
	VESSELS USING SMALL-SCALE GEAR (MEDITERRANEAN)	1 240	5 388.01	45 932.65	60.75%	11.31%	24.32%	8.78	32
	PURSE SEINERS TARGETING BLUEFIN TUNA (MEDITERRANEAN)	6	1 612.36	5 845.01	0.29%	3.38%	3.09%	38.68	17
	PURSE SEINERS (MEDITERRANEAN)	188	7 052.22	31 743.46	9.21%	14.80%	16.80%	18.26	26
	BOTTOM-SET LONGLINERS (MEDITERRANEAN)	32	247.04	2 277.23	1.57%	0.52%	1.21%	10.83	29
	SUBTOTAL	2 041	47 639.93	188 904.35					
	SUBTOTAL FOR NATIONAL FISHING GROUND	7 618	116 107.33	456 399.64					

EU FISHING GROUNDS	BOTTOM TRAWLERS (ICES ZONES VB, VI, VII and VIII abde)	29	10 139.06	16 354.22	28.43%	36.20%	35.18%	35.35	17
	TRAWLERS (PORTUGUESE WATERS)	13	2 025.20	4 151.04	12.75%	7.23%	8.93%	25.64	17
	VESSELS USING PASSIVE GEAR (ICES ZONES VB, VI, VII and VIII abde)	56	15 325.72	24 997.19	54.90%	54.72%	53.77%	30.72	18
	BOTTOM-SET LONGLINERS UNDER 100 GRT (VIII abde)	4	515.16	984.10	3.92%	1.84%	2.12%	22.75	22
	SUBTOTAL FOR EU FISHING GROUNDS	102	28 005.14	46 486.55					
INTERNATIONAL FISHING GROUNDS	FREEZER TRAWLERS (INTERNATIONAL AND THIRD-COUNTRY WATERS)	52	29 314.95	40 478.08	49.06%	21.84%	22.69%	41.52	19
	FREEZER TRAWLERS (NAFO)	20	23 276.40	24 245.42	18.87%	17.34%	13.59%	58.75	23
	FREEZER TUNA SEINERS (ATLANTIC, INDIAN AND PACIFIC OCEANS)	17	38 441.00	56 009.95	16.04%	28.64%	31.40%	80.04	28
	FREEZER TUNA SEINERS (INDIAN AND PACIFIC OCEANS)	10	34 909.88	48 705.76	9.43%	26.01%	27.30%	99.31	13
	COD-FISHING VESSELS	4	7 882.00	8 264.42	3.77%	5.87%	4.63%	63.14	15
	BOTTOM-SET LONGLINERS (INTERNATIONAL AND THIRD-COUNTRY WATERS)	3	383.3	681.81	2.83%	0.29%	0.38%	24.61	22
	SUBTOTAL FOR INTERNATIONAL FISHING GROUNDS	106	134 207.53	178 385.44					
CRSL	CONSOLIDATED REGISTER OF SURFACE LONGLINERS	181	44 498.27	62 097.82				28.32	20
	TOTAL ACTIVE SPANISH FLEET, 2019	**8 007**	**322 818.27**	**743 369.44**					
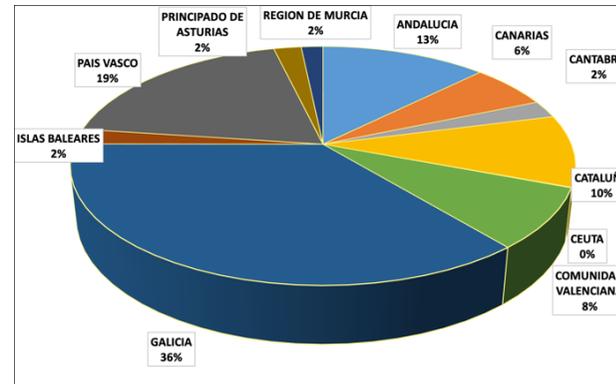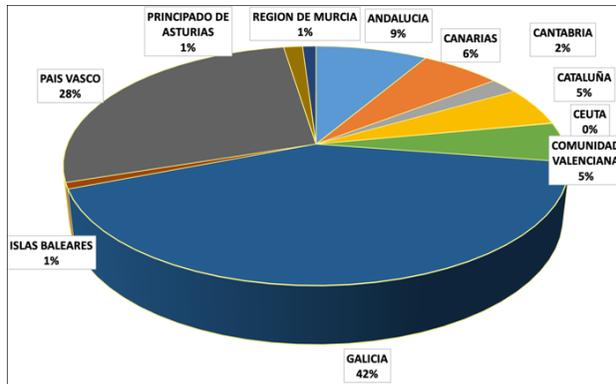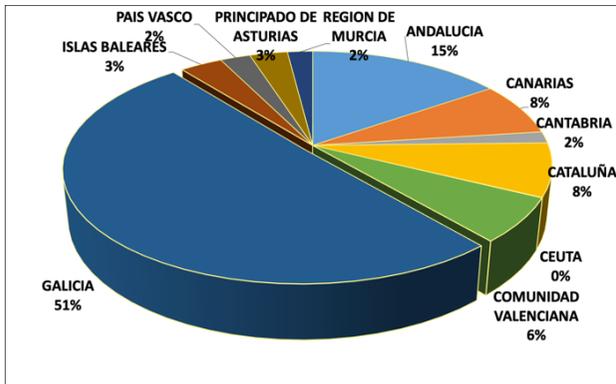
Breakdown of fishing vessels by Autonomous Community

Breakdown of tonnage (GT) by Autonomous Community

Breakdown of power (kW) by Autonomous Community

B. ANNEX II: FISHERIES: MANAGEMENT OF FISHING

2019 FISHERY ACTIVITY BY SUPRA-REGION AND MAIN GEAR AER CLASSIFICATION

Vessels by segment, length, gear and supra-region

SUPRA-REGION	GEAR	0-10	10-12	12-18	18-24	24-40	>40	TOTAL
NORTH ATLANTIC	GILLNETS		108	149	28			285
	DREDGES	1 640	18	88				1 746
	TRAWLNETS			55	73	98	14	240
	POTS		75	55				130
	HOOKS		68	66	28	32		194
	SURFACE LONGLINES					34		34
	POLYVALENT PASSIVE GEAR					59		59
	POLYVALENT ACTIVE AND PASSIVE GEAR	2 082	51	32				2 165
	PURSE SEINES		18	95	97	70		280
Total for NORTH ATLANTIC		*3 722*	*338*	*540*	*226*	*293*	*14*	*5 133*
NORTH ATLANTIC, CANARY ISLANDS	POTS		14					14
	HOOKS		42	33		22		97
	POLYVALENT ACTIVE AND PASSIVE GEAR	450						450
	PURSE SEINES			13				13
Total for CANARY ISLANDS		*450*	*56*	*46*	*0*	*22*	*0*	*574*
ATL MA	HOOKS			16				16
Total for MOROCCO		*0*	*0*	*16*	*0*	*0*	*0*	*16*
MEDITERRANEAN	GILLNETS		81	59				140
	DREDGES		59	13				72
	TRAWLNETS		17	145	290	125		577
	POTS		24	25				49
	HOOKS		40	20				60
	SURFACE LONGLINES			31	20			51
	POLYVALENT ACTIVE AND PASSIVE GEAR	101	826	13				940
	PURSE SEINES		16	71	79	24		190
Total for MEDITERRANEAN		*101*	*1 063*	*377*	*389*	*149*	*0*	*2 079*
OFRs	TRAWLNETS					38	32	70
	HOOKS					17		17
	SURFACE LONGLINES					64	27	91
	PURSE SEINES						27	27
Total for OTHER FISHING REGIONS		*0*	*0*	*0*	*0*	*119*	*86*	*205*
TOTAL ACTIVE FISHING FLEET (2019)		**4 273**	**1 457**	**979**	**615**	**583**	**100**	**8 007**

MANAGEMENT OF FISHING ACTIVITY BY THE SPANISH FLEET

1. - North Atlantic Ocean (NAO)

1.1 Management of fishing activity in the North Atlantic national fishing ground (FAO 27.8.c-27.9.a)

In the **CNW national fishing ground (27.8.c),** there were 4 343 vessels active (which is 54% of the total active fleet), the majority of which measured less than 12 metres and used small-scale gear and dredges to fish for molluscs. These were followed by purse seiners with 255 vessels, which fished for chub mackerel, horse mackerel, anchovy and sardine; however, this fleet changes method, mainly to pole lines, live bait and trolling lines, in the tuna and mackerel fisheries in zones VII and VIII abd. These were followed in number by bottom trawlers, which have decreased to 69 vessels and which fished for hake, mackerel and blue whiting, then finally bottom-set longliners (59 vessels) and 61 gillnetters (fixed and bottom-set), which fished for mackerel, hake and conger.

Within the actions aimed at improving fishery management, temporary changes in method are authorised, provided that the state of the fishery resources allows for this, with the exception of changing to trawling, which is not permitted.

There were 660 vessels that fished in the **Gulf of Cádiz (27.9.a)** in 2019 (8.24% of the total), the majority of which used artisanal methods (gillnets, hooks and mechanical dredges mainly to fish for striped venus) and, although they do not provide large catch volumes, they are of great socio-economic importance at local level. In addition to them, we must also highlight 123 bottom trawlers (chub mackerel, octopus and shrimp) and 62 purse-seiners (anchovy, sardine, chub mackerel and horse mackerel).

For the fleets in the Cantabria and NW zone and the Gulf of Cádiz and the trawler fleet in Portuguese waters, i.e. in all the Iberian waters in the Atlantic Ocean, a ministerial order has been drawn up which increases flexibility on transfers of allocated fishing opportunities. The order, which will be published in 2020, may in the future have the effect of reducing fishing effort, as it may have the effect of concentrating fishing opportunities on fewer vessels for a certain method by means of the definitive transfers that have been made possible, albeit it only between vessels from the same register, never between vessels from different registers.

As regards the **Canary Islands (FAO 34.1.2)** fleet, it should be noted that it is the smallest fleet, in which over 64% of the active vessels fish for fewer than 90 days per year. In 2019, 574 vessels were active, 13 of which were purse seiners (horse mackerel, chub mackerel, round sardinella and sardine), 450 used polyvalent gear, 14 used pots and 97 used hooks (with higher catches of tuna and native species). It is important to highlight the markedly artisanal nature of fishing activity in the Canary Islands, the management plan for which has been amended by Order APA/441/2019.

1.2 Management of fishing activity in non-Spanish EU waters

The Spanish fleet fishing in EU waters is divided between trawlers in Portuguese waters and the fleet fishing in EU27 North Atlantic waters. In the ICES EU waters of zones Vb, VI, VII and VIII abde, 85 vessels operated in fisheries for demersal species (hake, anglerfish and megrim), with 29 vessels using bottom trawl nets and 56 vessels using passive gear (gillnets and bottom-set longlines).

In Portuguese waters, eight trawlers operated in zone 27.9a, primarily fishing for blue whiting and Southern hake. Five trawlers in this register fish in tuna fisheries in Senegalese waters.

2019 was the first year in which the European Union legislation on the landing obligation fully entered into force, which has posed a great challenge due to the existence of many stocks of "choke species" in the zones being fished, where Spain has no quota allocation for these stocks. For this reason, at the beginning of the year, Spain obtained quotas for these stocks, through exchanges with other Member States, and various measures were implemented, such as rules on movements, catch limits, application of interspecies flexibility, etc.

In 2019, the renewal of the agreement with Portugal that began in 2017, the main new features of which are certain unloading limitations and reciprocal compliance with closures for the inland water trawler fleet, could not be completed given the provisional situation of the Spanish Parliament. In contrast, Portugal was able to ratify the agreement.

1.3. Fisheries management in non-EU North Atlantic waters

EU fishing activities in the North Sea and North-East Atlantic are closely linked to those of our neighbours: Norway, Iceland and the Faroe Islands. With many of the target actions being shared across the borders, it makes sense for the 4 parties to coordinate their activities; therefore, in 2019, negotiations were carried out for the annual renewal of the Arrangement with Norway and the Faroe Islands. In Norway, the Spanish fleet composed of four vessels on the cod-fishing fleet register had fishing opportunities for Arctic cod and redfish under this Arrangement.

In 2019, eight trawlers fishing for demersal species (roundnose grenadier, redfish and halibut) operated in the NAFO zone and these fishing opportunities were established through Council Regulation (EU) 2018/120, as amended on 31 October 2019. There is also sporadic activity by vessels from Community waters (Gran Sol) that fish for hake and associated species. 12 of the vessels in the NAFO fleet operated mostly in South Atlantic waters (SEAFO), fishing for Argentine hake.

2. - Mediterranean

The Spanish Mediterranean is a mixed and multi-species fishery in which the vast majority of the fleet are vessels using small-scale gear (1 240 vessels). This segment is followed by the trawler fleet, with a mean length of about 20 metres (575 vessels), which mainly fishes for mullet, octopus, hake and Aesop shrimp, and the purse seiner fleet (188 vessels), which catches pelagic species, including *inter alia* anchovy, sardine, horse mackerel and round sardinella. Six vessels (the largest) authorised to fish for bluefin tuna should be added to the latter fleet.

It is important to point out the Multiannual Plan for the fisheries exploiting demersal stocks in the western Mediterranean Sea, which meant that throughout 2019 work has been carried out to draw up an order to allow its application in Spain. The main element of this plan is the establishment of a fishing effort management scheme in the form of fishing days for the trawler fleet, in order to reach the Maximum Sustainable Yield before 2015 for the different populations.
Furthermore, the current Integrated Management Plan for the Mediterranean, which concerns fisheries made with purse seines, trawl nets, passive gear and small-scale gear, was extended for another year.

In addition, various biological closures were implemented through a single Order, in the coastal areas of the Autonomous Communities of Catalonia, Valencia, Murcia, Andalusia and the Balearic Islands.

3. - Other fishing regions

3.1 Fleet in international and third-country waters

In 2019, this fleet had 52 active freezer trawlers. These operated either in international waters or within the third-country EEZs set up under the EU fisheries arrangements with Mauritania and Guinea Bissau. Thus, during 2019, the implementing protocol for Guinea Bissau entered into force and Mauritania's was extended for a year. These are multi-species arrangements that cover tuna species and small pelagic fish, as well as cephalopods, shrimp and demersal species.
Three vessels operate with bottom-set longlines for alfonsino; the rest of the fleet primarily operate in various fishing grounds with authorisations for tuna and seabream.

Finally, it is worth noting the Fishing Arrangements that the European Union has in place with third countries that are of interest to Spain and the Protocols of which were in force as at 31 December 2019: Cabo Verde, Cook Islands, Côte d'Ivoire, Faroe Islands, Gambia, Greenland, Guinea Bissau, Liberia, Mauritania, Mauritius, Morocco, Norway, Russia, São Tomé and Príncipe, Senegal and Seychelles.

3.2 Freezer tuna fleet

Throughout 2019, this fleet comprised 27 vessels that continue to operate in international waters regulated by regional fisheries organisations covering the Pacific, Indian and Atlantic Oceans and in the EEZs of countries where a Community arrangement exists, or in those for which they have acquired private licences. They mainly fish for skipjack, yellowfin and bigeye tuna.

On 31 July 2019, the European Union and Gambia signed a new six-year Sustainable Fisheries Partnership Agreement (SFPA) and the associated protocol.

3. SURFACE LONGLINER FLEET

This fleet operates in national and international waters of the Atlantic, Indian and Pacific Oceans and in the EEZs of countries with which a Community arrangement exists or in those for which it has acquired private licences. It forms part of the Consolidated Register of Surface Longliners, with the majority of its catches comprising swordfish, pelagic sharks and tuna. In 2019, 181 vessels participated in this fishery, including the Mediterranean.

C. ANNEX III: TREND IN FLEET AND FISHERIES

TRENDS IN LICENCES/AUTHORISATIONS/TFPs

TREND IN LICENCES/AUTHORISATION/TFPs (the number of licences may or may not coincide with the number of active vessels, as one vessel may have more than one licence throughout the year)

NATIONAL FISHING GROUND

		LICENCES										
		2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
CANARY ISLANDS	SMALL-SCALE GEAR	901	889	872	805	799	771	751	751	805	667	623
	POLE-AND-LINE TUNA-FISHING	14	14	13	13	13	12	12	45	41	47	55
	SUBTOTAL	915	903	885	818	812	783	763	796	846	714	678
CANTABRIA NW	BOTTOM TRAWLING	117	111	101	99	99	93	80	81	83	76	74
	SMALL-SCALE GEAR	4 948	4 885	4 767	4 627	4 546	4 473	4 400	4 265	4 210	4 141	4 136
	PURSE SEINES	304	294	284	280	278	272	264	267	266	262	260
	BOTTOM-SET LONGLINING	86	84	79	79	79	71	68	67	67	63	61
	FIXED GILLNETTING	33	33	34	32	31	31	26	24	23	21	24
	BOTTOM-SET GILLNETTING	57	57	54	53	51	50	46	48	47	43	42
	SUBTOTAL	5 545	5 464	5 319	5 170	5 084	4 990	4 884	4 752	4 696	4 606	4 597
GULF OF CÁDIZ	BOTTOM TRAWLING	159	149	147	142	142	139	127	134	132	130	126
	SMALL-SCALE GEAR	546	582	580	572	578	571	563	556	554	552	535
	PURSE SEINES	97	92	89	88	87	86	84	86	128	81	79
	SUBTOTAL	802	823	816	802	807	796	774	776	814	763	740
MEDITERRANEAN	BOTTOM TRAWLING	797	743	703	680	671	626	617	610	611	597	583
	SMALL-SCALE GEAR	2 024	1 951	1 871	1 778	1 723	1 658	1 612	1 502	1 780	1 442	1 411
	PURSE SEINES	268	260	246	243	239	231	228	222	223	215	204
	PURSE-SEINING (BLUEFIN TUNA)	6	6	6	6	6	6	-	-	-	-	6
	BOTTOM-SET LONGLINING	104	100	87	78	75	71	69	56	73	45	42
	SUBTOTAL	3 199	3 060	2 913	2 785	2 714	2 592	2 526	2 390	2 687	2 299	2 246
	TOTALS	10 461	10 250	9 933	9 575	9 417	9 161	8 947	8 714	9 043	8 382	8 261

EU FISHING GROUNDS

		LICENCES										
		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
PORTUGUESE WATERS	*TRAWLING*	25	21	14	13	13	14	14	15	15	16	14
ICES ZONES Vb, VI, VII and VIII abde	*BOTTOM TRAWLING AND PASSIVE GEAR (bottom-set gillnets and longlines)*	175	170	146	115	114	88	82	87	87	89	88
ZONES VIII abde	*BOTTOM-SET LONGLINERS UNDER 100 GRT*	25	24	21	15	15	15	11	12	12	9	7
	TOTALS	225	215	181	143	142	117	107	114	114	114	109

INTERNATIONAL WATERS

		TFP										
		2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
LONG-DISTANCE TRAWLERS	*COD-FISHING VESSELS*	10	10	9	9	4	7	10	11	4	4	4
	NAFO	24	22	24	24	14	24	22	11	9	11	10
	INTERNATIONAL AND THIRD-COUNTRY WATERS	102	91	91	89	136	117	227	226	207	186	116
FREEZER TUNA SEINERS	*ATLANTIC*	33	23	22	22	21	21	18	22	17	16	10
	INDIAN, PACIFIC	10	10	10	10	10	9	11	16	14	10	17
POLE-AND-LINE TUNA-FISHING VESSELS	*ATLANTIC*	-	-	-	-	-	-	-	-	7	7	7
BOTTOM-SET LONGLINERS	*INTERNATIONAL AND THIRD-COUNTRY*	5	4	4	4	7	6	6	7	3	3	3
TOTALS		**184**	**160**	**160**	**158**	**192**	**184**	**294**	**293**	**261**	**237**	**167**

SURFACE LONGLINERS

	TFP										
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
ZONE 1. MEDITERRANEAN	*92*	70	92	89	76	75	73	71	52	50	56
ZONE 2. NATIONAL WATERS UP TO 80 MILES OUT	*68*	73	63	71	73	72	60	61	73	62	56
ZONE 3. NATIONAL WATERS BEYOND 80 MILES OUT AND THE ATLANTIC NORTH OF THE 5° N PARALLEL	*87*	*89*	*78*	*97*	*89*	*82*	*69*	*74*	*80*	*71*	*66*
ZONE 4. THE ATLANTIC SOUTH OF THE 5° N PARALLEL	*40*	*43*	*43*	*41*	*34*	*32*	*31*	*27*	*27*	*28*	*27*
ZONE 5. INDIAN OCEAN	*16*	14	13	17	22	21	19	16	12	12	11
ZONES 6 and 7. PACIFIC OCEAN	*32*	28	26	31	30	28	25	28	31	28	36
TOTALS	**335**	**317**	**315**	**346**	**324**	**310**	**277**	**277**	**275**	**251**	**252**

*As we have already pointed out, a vessel can have more than one licence if it operates in more than one fishing ground. This is the case for surface longliners.

D. ANNEX IV: FISHING EFFORT ADJUSTMENT SCHEMES

LIST OF FISHING EFFORT SCHEMES

Every year, there is a series of closure periods, regulated by law, to ensure the balanced and responsible exploitation of fishery resources. These closure periods make it possible to protect, conserve and regenerate these resources and their ecosystems, by adapting the effort of the fleet to the situation regarding these resources.

TEMPORARY CLOSURES			
FISHING GROUND	GEAR	ZONE/SPECIES	DURATION
Gulf of Cádiz	purse seine fishing		From 1 December to 31 January
		Meagre (Argryosomus regius)	During April, May and June
	Trawl net		From 15 September to 30 October
	All	Octopus	From 1 May to 15 July
Cantabria and NW zone	Trawl net	Getaria	From 1 September to 31 December
		El Callejón and La Carretera	From 1 September to 1 March
		A Coruña-Cedeira	From 1 October to 31 January
	Bottom-set gillnet and fixed gillnet	Punta de la Vaca	From 1 November to 31 May
		From cardinal point 43°43'N - 005°51'W to 43°48'N - 005°51'W	From 2 March to 31 August
	Bottom-set gillnet	From cardinal point 43°33'N - 004°30'W to 43°41'N - 005°07'W	From 1 January to 31 May
Mediterranean	Trawl net	From Cubelles to the Gola Sur (Southern Arm) of the River Ebro	From 1 May to 30 June
		From the Gola Sur (Southern Arm) of the River Ebro to level with Almenara	From 1 July to 31 August
		From cardinal point 40°30'N - 1°30'E to 40°52'N - 1°26'E	From 1 June to 30 July
		From level with Almenara to Punta de la Escaleta	From 1 May to 31 May
		From Punta de la Escaleta	From 1 June to 30 June
		Murcia	From 18 May to 16 June
		Aesop shrimp in Cubelles	From 4 February to 5 March
		Aesop shrimp in Palamós	From 5 January to 5 March
	purse seine fishing	France and the mouth of the River Tordera	From 20 December to 19 January
		From the River Tordera to Torre Barona	From 4 December to 6 January
		From Torre Barona to Cubelles	From 20 December to 19 January
		From Cubelles to the River Senia	From 20 December to 16 February
		From the River Senia to the Gola del Perelló	From 1 December to 31 January
		Gola del Perelló	From 6 December to 5 January
		Region of Murcia	From 21 December to 19 January

Also, the EMFF may provide aid for measures aimed at the temporary cessation of fishing activities. In 2019, this aid has been forwarded to vessels that have stopped their activity due to the following closure periods:

TEMPORARY STOPPAGES FINANCED
Article 33(1)(a) of the EMFF Regulation. Gulf of Cádiz management plan, purse seine fishing
Article 33(1)(a) of the EMFF Regulation. Ría de Nalón eel exploitation plan
Article 33(1)(c) of the EMFF Regulation. Management plan for fishing using mechanised dredges or trawl nets on the Mediterranean coast of Andalusia
Article 33(1)(c) of the EMFF Regulation. Management plan for bottom trawlers operating in the Mediterranean
Article 33(1)(c) of the EMFF Regulation. Management plan for purse seiners operating in the Mediterranean
Article 33(1)(c) of the EMFF Regulation. Management plan for surface longliners operating in the Mediterranean

Taking into account the tonnage and power of the vessels that benefited from this aid and the number of calendar days for which they stopped operations (30 days), we can say that this aid enabled a decrease in the capacity of the Spanish fleet of 159 492.61 GT and a reduction in power of 403 008.38 kW, for 30 days in 2019.

In addition, in the case of trawlers and purse seiners in the Gulf of Cádiz, these stoppages enabled (once those in receipt of aid are removed) a decrease of 313 094.36 GT and 1 213 653.21 kW, with a reduction in effort of 60 days for purse seiners and 45 days for trawlers. Finally, it cannot be forgotten that the effort was reduced by 75 days for the entire octopus fishing fleet.

The following should be noted for the surface longliner fleet and the fleet operating outside European Union waters:

- A temporary closure for swordfish fishing in the Mediterranean Sea for all surface longliners from 1 January to 31 March.
- ICCAT: a closure period for FADs is established for all purse seiners from 1 January to 28 February in 2020 and from 1 January to 31 March in 2021, throughout the area covered by the Convention. No drifting FADs can be installed during the 15-day period prior to the start of the closure.
- WCPFC: a closure period for FADs for all purse seiners from July to September between parallels 20° N and 20° S and a ban on fishing using FADs during April and May.
- IATTC: there is a closure period for fishing applicable to all purse seiners from 9 November to 19 January of the following year. There is also a special closure for tropical tuna fishing within the area between 96° and 110° W and between 4° N and 3° S, known as the "corralito", from 9 October to 8 November of each year.

E. ANNEX V: ENTRY/EXIT SCHEME

ADDITIONS TO AND PERMANENT REMOVALS FROM THE 2019 FISHING FLEET REGISTER			
WITH DATE OF PERMANENT REMOVAL FROM THE REGISTER IN 2019			
STATUS	VESSELS	GT	KW
Reported as deregistered	7	19.22	155.93
List change (neither 3rd nor 4th)	4	5.09	58.84
Scrapped	42	581.61	2 450.28
Exported/transferred	11	2 093.03	3 378.15
Renewal not requested (5 years)	46	955.11	2 785.33
Accident	18	954.43	1 994.67
Other	3	2.46	22.80
	131	**4 610.95**	**10 846.00**

REGISTER ADDITIONS (THIRD LIST) 2019			
REASON FOR REGISTRATION	VESSELS	GT	KW
Flagging	1	2.98	56.60
List change	6	6.44	60.83
New construction	33	4 835.73	7 763.96
	40	**4 845.15**	**7 881.39**

FLEET REGISTRATIONS AND DEREGISTRATIONS IN THE LAST 6 YEARS

YEAR OF REMOVAL	AID	ADDITION OF VESSELS TO THE REGISTER			PERMANENT REMOVAL OF VESSELS FROM THE REGISTER BY DATE OF PERMANENT REMOVAL		
		VESSELS	TOT_GT	TOT_KW	VESSELS	TOT_GT	TOT_KW
2014	WITH AID				108	10 996.16	24 009.84
	WITHOUT AID	49	5 992.49	12 133.23	183	10 896.05	21 677.63
		49	**5 992.49**	**12 133.23**	**291**	**21 892.21**	**45 687.47**
2015	WITH AID				97	10 093.95	19 800.36
	WITHOUT AID	49	8 328.32	12 456.51	186	15 466.97	25 720.34
		49	**8 328.32**	**12 456.51**	**283**	**25 560.92**	**45 520.70**
2016	WITH AID						
	WITHOUT AID	51	1 100.45	3 247.46	135	4 832.42	10 563.64
		51	**1 100.45**	**3 247.46**	**135**	**4 832.42**	**10 563.64**
2017	WITH AID				41	2 088.74	6 711.54
	WITHOUT AID	43	2 637.25	5 232.37	165	4 224.20	9 066.40
		43	**2 637.25**	**5 232.37**	**206**	**6 312.94**	**15 777.94**
2018	WITH AID				60	1 529.74	6 359.86
	WITHOUT AID	58	6 017.94	8 098.38	173	7 837.68	13 995.32

		58	6 017.94	8 098.38	233	9 367.42	20 355.18
2019	WITH AID				6*	254.8	808.28
	WITHOUT AID	40	4 845.15	7 881.39	125	4 356.15	10 037.71
		40	**4 845.15**	**7 881.39**	**131**	**4 610.95**	**10 845.99**

*These correspond to the acceptance of replacement resources from the 2017 closure period.

F. ANNEX VI: ADMINISTRATIVE PROCEDURES

LEGISLATION

Law 33/2014 of 26 December 2014 amending Law 3/2001 of 26 March 2001 on State sea fisheries, which aims primarily to step up the deterrence and prevention of illegal fishing by vessels appearing on international lists of IUU fishing, including a more forceful and appropriate legal response to allow action to be taken against the real beneficiaries of illegal fishing, and with a firm commitment to preventing, deterring and prosecuting any Spanish participation or connection to this type of activity.

MANAGEMENT PLANS AND RECOVERY OF SPECIES

- Order APA/807/2019 26 July 2019 laying down measures to limit catch volumes for bigeye tuna (*Thunnus obesus*) in the Atlantic Ocean during the 2019 fishing season.

- Decision of 31 July 2019 of the General Secretariat for Fisheries laying down the catch volume limit for bigeye tuna (*Thunnus obesus*) in the Atlantic Ocean during the 2019 fishing season, as laid down in Order APA/807/2019, of 26 July 2019.

- Decision of 9 August 2019 of the General Secretariat for Fisheries, amending the Decision of 31 July 2019, laying down the catch volume limit for bigeye tuna (*Thunnus obesus*) in the Atlantic Ocean during the 2019 fishing season, as laid down in Order APA/807/2019, of 26 July 2019.

- Order APA/22/2019 16 January 2019 regulating fishing for yellowfin tuna by the freezer tuna seiners in the Indian Ocean during the 2019 fishing season.

- Decision of 18 January 2019 of the Directorate General of Fishery Resources, amending Annex I to Order APA/22/2019 of 16 January 2019 regulating fishing for yellowfin tuna by the freezer tuna seiners in the Indian Ocean during the 2019 fishing season.

- Decision of 12 August 2019 of the Directorate General of Fishery Resources, amending Annex I to Order APA/22/2019 of 16 January 2019 regulating fishing for yellowfin tuna by the freezer tuna seiners in the Indian Ocean during the 2019 fishing season.

- Royal Decree 46/2019 of 8 February 2019 regulating the bluefin tuna fishery in the Eastern Atlantic and the Mediterranean.

- Decision of 4 March 2019 of the General Secretariat for Fisheries publishing the allocation of quotas for bluefin tuna and the specific register of the fleet authorised to fish for bluefin tuna, created by Royal Decree 46/2019 of 8 February 2019 regulating the bluefin tuna fishery in the Eastern Atlantic and the Mediterranean.

- Decision of 4 March 2019 of the General Secretariat for Fisheries laying down the provisions for the 2019 bluefin tuna season for vessels authorised to fish actively for bluefin tuna in the Canary Island fishing ground according to Royal Decree 46/2019 of 8 February 2019 regulating the bluefin tuna fishery in the Eastern Atlantic and the Mediterranean.

- Decision of 29 March 2019 of the General Secretariat for Fisheries laying down the provisions for the 2019 bluefin tuna season for the fleet included in list g), using small-scale gear in the Mediterranean, of the specific register for the fleet authorised to fish for bluefin tuna.

- Decision of 22 April 2019 of the General Secretariat for Fisheries laying down provisions for the 2019 bluefin tuna season for by-catches by trolling liners in the North-East Atlantic and the Bay of Biscay and surface longliners in the North Atlantic.

- Decision of 26 April 2019 of the General Secretariat for Fisheries laying down the provisions for the

2019 bluefin tuna season for the fleet included in list h), artisanal vessels fishing in the Strait with catch limits, from the specific register of the fleet authorised to fish for bluefin tuna.

- ICCAT recommendation 18-02 laying down a Multiannual Management Plan for bluefin tuna in the Eastern Atlantic Ocean and the Mediterranean Sea.

- Decision of 20 May 2019 of the General Secretariat for Fisheries laying down the provisions for implementation of the Recovery Plan for Bluefin Tuna in the Eastern Atlantic Ocean and the Mediterranean Sea for 2019

- Decision of 23 October 2019 of the General Secretariat for Fisheries laying down the provisions for the 2019 reopening of the bluefin tuna fishery for vessels authorised to fish actively for bluefin tuna in the Canary Islands fishing ground according to Royal Decree 46/2019 of 8 February 2019 regulating the bluefin tuna fishery in the Eastern Atlantic and the Mediterranean.

- Decision of 25 February 2019 of the General Secretariat for Fisheries publishing the updated fleet register of cod-fishing vessels.

- COUNCIL REGULATION (EU) 2019/124 of 30 January 2019 fixing for 2019 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters.

- Decision of 25 February 2019 of the General Secretariat for Fisheries publishing the updated fleet register of NAFO freezer trawlers.

- Decision of 25 February 2019 of the General Secretariat for Fisheries publishing updated information on Annexes I, II, III, IV, V, VI, VII, VIII and IX to the Order of 21 December 1999.

- COUNCIL REGULATION (EU) 2019/124 of 30 January 2019 fixing for 2019 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters.

- Order APA/514/2019 of 26 April 2019 laying out standards for the application of exemptions to the landing obligation and for improved selectivity of fishing gear.

- Order APA/359/2019 of 26 March 2019, amending Order AAA/661/2016 of 3 April 2016 laying down criteria for the landing of red seabream caught in Union waters and international waters in zones VI, VII and VIII of the International Council for the Exploration of the Sea (ICES) with regard to the establishment of closure periods in certain areas of the Cantabria and North-West fishing ground.

- Order APA/247/2019 of 5 March 2019, amending Order AAA/661/2016 of 3 April 2016 laying down criteria for the landing of red seabream caught in Union waters and international waters in zones VI, VII and VIII of the International Council for the Exploration of the Sea (ICES).

- Order APA/515/2019 of 26 April 2019, correcting errors in Order APA/441/2019 of 9 April 2019, amending Order AAA/2536/2015 of 30 November 2015 regulating maritime fishing gear and methods and establishing a management plan for vessels on the fleet registers for the Canary Islands National Fishing Ground.

- Order APA/441/2019 of 9 April 2019, amending Order AAA/2536/2015 of 30 November 2015 regulating maritime fishing gear and methods and establishing a management plan for vessels on the fleet registers for the Canary Islands National Fishing Ground.

- Order APA/380/2019 of 26 March 2019 regulating temporary stoppages for trawler and purse seiner fishing in certain areas on the Mediterranean coast.

- Order APA/247/2019 of 5 March 2019, amending Order AAA/661/2016 of 3 April 2016 laying down criteria for the landing of red seabream caught in Union waters and international waters in zones VI, VII and VIII of the International Council for the Exploration of the Sea (ICES).

- Decision of 19 March 2019 of the General Secretariat for Fisheries publishing the quotas for mackerel, horse mackerel in zone VIII c and horse mackerel in zone IX a for vessels on the Cantabria and North-West zone purse seiner register in 2019. https://www.boe.es/diario_boe/txt.php?id=BOE-A-2019-4481.

- Decision of 11 March 2019 of the General Secretariat for Fisheries publishing the register of vessels using bottom-set longlines authorised to fish for hake in the Cantabria and North-West fishing ground in 2019, as well as the individual hake quota assigned to each vessel.

- Decision of 11 March 2019 of the General Secretariat for Fisheries laying down the individual fishing opportunities and individual fishing quotas for 2019 for vessels on the bottom trawling register that are authorised to fish in the Cantabria and North-West fishing ground in 2019.

- Decision of 27 February 2019 of the General Secretariat for Fisheries publishing the updated fleet register of bottom trawlers in sub-zone IX waters falling under the sovereignty or jurisdiction of Portugal as per the International Council for the Exploration of the Sea.

- Decision of 27 February 2019 of the General Secretariat for Fisheries publishing the updated register of high-seas fleets, distant-water fleets, and longliners over and under 100 GRT operating within the geographical limits of the North East Atlantic Fisheries Commission.

- Decision of 8 February 2019 of the General Secretariat for Fisheries publishing the individual hake quotas for the register of vessels using bottom-set gillnets that are authorised to fish for hake in the Cantabria and North-West fishing ground in 2019.

- Decision of 28 January 2019 of the General Secretariat for Fisheries laying down initial quotas for 2019, available by method or register, for the various species included in the management plans for vessels registered in the national fishing grounds of Cantabria and North-West and the Gulf of Cádiz, as well as bottom trawling vessels fishing in Portuguese waters.

G. ANNEX VII: INDICATORS MEASURING THE BALANCE BETWEEN FISHING CAPACITY AND FISHING OPPORTUNITY

METHODOLOGY TO ESTABLISH ACTIVE POPULATION BY SUPRA-REGION AND MAIN FISHING GEAR; DETERMINATION OF INDICATORS

With regard to **economic indicators**, it should be noted that, for some segments of the Spanish fishing fleet, the segmentation is so aggregated that it does not represent the reality of the fisheries, giving a distorted impression of the segments in balance/imbalance. When only analysing data call information, the economic data are aggregated at supra-regional level only and show the same profitability for a NAFO trawler, for example, as for a trawler in the Gulf of Cádiz, which is not accurate. Therefore, in the Action Plan, we have segmented the population by fishing ground and have obtained data from the economic survey for these segments, thus allowing us to adjust the economic indicator.

As regards the **biological indicator**, the **SHI** calculations do not provide a clear picture of the actual situation currently facing the fleet — which may have changed considerably — due to the lack of scientific data on fishing mortality. Furthermore, many stocks do not account for more than 40% of the catch value (which is needed for the indicator to be reliable), and that prevents us from knowing if that segment is exerting a high level of pressure on a vulnerable stock, thereby leaving the segment without an indicator. This is frequent in certain Spanish multi-species fleets, meaning that the SHI is sometimes missing.

Also, the **SAR** is considered difficult to calculate as it requires knowledge of the SAR caught by the other fleets (EU and international), together with the degree of error that may be produced. We have only used the indicator where SAR species constitute 10% of a segment's catch weight.

Finally, as regards the **technical indicator**, there are various guidelines given for calculating the maximum number of days at sea for the segment (220, 260, real maximum, average of the top ten vessels, etc.) and, depending on which one is chosen, the results can be very different. Spain has chosen to use the average of the top ten vessels, as that is recommended by the JRC and seems to be the most appropriate for our fishing fleet. However, in order to work in line with the AER used for all Member States, the 220 day indicator has also been included. It is true, however, that this data may not be adequate for some segments either, primarily the artisanal fleet, which fishes very few days a year, as the vast majority of the fleet is not professional, which inevitably gives them a technical indicator in imbalance.

To classify the active population by supra-regions and fishing gear — where fleets have carried out the most activity and primarily with a certain gear — the following studies are carried out for each vessel:

- For vessels of more than 10 metres in length (or those of less than 10 metres with the required data), a detailed study is performed on their SMC/VMS positions (to know the number of days at sea and vessel position while fishing/sailing) and on the databases of declared catches according to the fishing gear used on most days.

- For vessels of less than 10 metres in length, a supra-region and fishing gear are assigned based on registered method. If small-scale gear is used, PMP is assigned. Regarding fishing days, as the vessels that make one-day trips are those of less than 10 metres in length, they have been assigned one fishing day per sales note day. This is the minimum, however, as previous studies have found that one sales note day may equal 2.5 days at sea; therefore, the activity estimated for the artisanal fleet is the minimum that is actually carried out. Vessels that primarily had sales notes on which molluscs made up over 50% of their weight are classified as DRB (trawlers and dredgers).

From 2014, and in order to study the **surface longliner** fleet independently and separate it from the rest of the hook gears, all vessels that primarily fish with surface longlines have been classified as **PGO (currently named HOK-LLD).** This will allow us to study the biological, economic and technical indicators of the surface longliner fleet and separate it from bottom-set longliners, trolling liners, pole liners, etc. This year, to identify this part of the fleet, they have been assigned the name HOK-LLD following the guidelines for the 2020 Data Call, thus adding the gear indicator, which makes it possible to identify a group of vessels that predominantly or exclusively use a specific type of tool within a type of gear.

Furthermore, as the Spanish fleet is highly active and operates in many different fishing grounds, it has been segmented in more detail in the ACTION PLAN, allowing us to differentiate between vessels that fish in certain fishing grounds or others. Thus, for example, among the vessels operating in the North Atlantic, a distinction has been made between those in the national fishing ground and those in EU waters (to that end, those that fish in ICES waters with passive gear — gillnets and bottom longlines — have been classified as PGP); and ICES trawlers in zone VIII abde were separated from those fishing in NEAFC/NAFO waters (mainly by length). This segmentation, which is increasingly more detailed, has resulted in a lack of continuity in many segments throughout the years studied.

To determine the indicators, the data available on the Spanish fleet have been taken into account, with the following exceptions summarised below:

- Until 2011, the population was segmented according to the licences and fishing authorisations held by each vessel. From 2012, a detailed analysis of the real activity of each vessel has been made, which is based on catch declarations, logbooks, sales notes and VMS positions. Hence the difference between the 2008-2010 populations and the segmentation of the following years; in order to have 2011 data, the population was re-segmented based on real activity, not licences, which is why the 2011 data have been modified.

- As the Spanish fleet operates in such different fisheries and in numerous fishing grounds, its segmentation into only three supra-regions — as per the economic data call — does not provide the information needed to establish a balance between capacity and opportunity. Given that only three supra-regions are defined (North Atlantic, Mediterranean and other fishing regions), with the addition of the Morocco and Canary Islands region since last year, the economic indicators obtained for the trawler fleet in the North Atlantic, for example, include fisheries as distinct as NEAFC cod-fishing vessels or NAFO trawlers, which have nothing in common with trawlers operating in the national fishing ground. For this reason, more detailed studies of the Spanish fleet have been carried out, which are presented and analysed in the action plan. This report only presents the data for the supra-regions as defined by the economic data call.

- Each year we try to establish a segmentation that allows us to provide more accurate and detailed data to make a clearer distinction between the different fisheries in which the Spanish fleet operates.

- In 2014, in order to obtain some indicators for the surface longliner fleet (fishing primarily for swordfish and other migratory species), this type of vessel was classified as PGO so it could be differentiated from the other hook gears (HOK: bottom-set longlines, trolling lines, pole lines, etc.). That is why PGO appeared for the first time in 2014 and why vessels classified as HOK logically

decreased. To identify them this year, rather than continuing to use this nomenclature (which was creating confusion with the surface longliners of other Member States), and following the recommendations of the JRC, the type of hook used by these vessels has been specified. Therefore, this year, HOK-LLD will be used to denote the gear instead of PGO.

INDICATORS

1. - BIOLOGICAL INDICATORS

1.   A. SUSTAINABLE HARVEST INDICATOR (SHI)

This indicator measures how much a fleet segment's revenue depends on overexploited stocks at levels above MSY. This requires a scientifically based assessment of stocks (fishing mortality rate and Fmsy), together with the value of the catch of each exploited population.

It should be noted that when the assessed stocks represent less than 40% of the total value/weight of the segment's catch, the indicator is not representative and therefore is left blank (not because it has not been calculated but, as we say, because it is not representative). Most segments of the Spanish multi-species fleet are in this situation; specifically, there are no mortality studies for, *inter alia*, certain species fished in OFRs, for NAFO species, or for species fished in CECAF zones or in the different Mediterranean GSAs.

Calculation:

The data used have been taken from the application:
http://sirs.agrocampus-ouest.fr/stecf_balance_2019/index.php?action=fiche&type_code=ME&atl_version=0&idlang=uk

The following pages include the values we have used to evaluate the indicator. Interpreting the

values: The traffic light system applied was as follows:

Less than or equal to 1 = green (biological balance)
Greater than 1 and less than 1.2 = yellow (slight biological imbalance)
Greater than or equal to 1.2 = red (biological imbalance)

Stock (NORTH ATLANTIC SURVEYS)

TYPE	FishStock	F_etoile2	stock_overexploited	AL3	division
ATL	cod.2127.1f14	0.97	FALSE	cod	21
ATL	reb.2127.dp	6.53	TRUE	reb	21
ATL	pla-3lno	1.05	TRUE	pla	21.3.L
ATL	yel-3lno	0.31	FALSE	yel	21.3.L
ATL	cod-3m	0.42	FALSE	cod	21.3.M
ATL	yel-3lno	0.31	FALSE	yel	21.3.N
ATL	pla-3lno	1.05	TRUE	pla	21.3.N
ATL	wit-3no	0.45	FALSE	wit	21.3.N
ATL	wit-3no	0.45	FALSE	wit	21.3.O
ATL	pla-3lno	1.05	TRUE	pla	21.3.O
ATL	yel-3lno	0.31	FALSE	yel	21.3.O
ATL	reb.2127.dp	6.53	TRUE	reb	27
ATL	bil-ne	1.59	TRUE	bil	27
ATL	mac.27.nea	1.25	TRUE	MAC	27
ATL	had.27.1-2	1.12	TRUE	HAD	27.1
ATL	cod.27.1-2	1	TRUE	COD	27.1
ATL	reg.27.1-2	5.8	TRUE	reg	27.1
ATL	POK.27.1-2	0.65	FALSE	POK	27.1
ATL	ghl.27.561214	1.34	TRUE	GHL	27.12
ATL	ghl.27.561214	1.34	TRUE	GHL	27.14
ATL	had.27.1-2	1.12	TRUE	HAD	27.2
ATL	cod.27.1-2	1	TRUE	COD	27.2
ATL	POK.27.1-2	0.65	FALSE	POK	27.2
ATL	reg.27.1-2	5.8	TRUE	reg	27.2
ATL	hom.27.2a4a5b6a7a-ce-k8	0.62	FALSE	HOM	27.2.a
ATL	had.27.46a20	1.18	TRUE	HAD	27.4
ATL	lez.27.4a6a	0.4	FALSE	LEZ	27.4.A
ATL	ghl.27.561214	1.34	TRUE	GHL	27.5
ATL	hom.27.2a4a5b6a7a-ce-k8	0.62	FALSE	HOM	27.5.b
ATL	bli27.5b,6,7	0.25	FALSE	bli	27.5.b
ATL	had.27.5b	1.05	TRUE	HAD	27.5.b
ATL	bli27.5b,6,7	0.25	FALSE	bli	27.6
ATL	ghl.27.561214	1.34	TRUE	GHL	27.6
ATL	hke.27.3a46-8abd	0.81	FALSE	HKE	27.6
ATL	pok.27.3a46	0.99	FALSE	pok	27.6
ATL	had.27.46a20	1.18	TRUE	HAD	27.6.A
ATL	hom.27.2a4a5b6a7a-ce-k8	0.62	FALSE	HOM	27.6.a
ATL	lez.27.4a6a	0.4	FALSE	LEZ	27.6.A
ATL	nep.fu.11	0.86	FALSE	nep	27.6.a
ATL	lez.27.6b	0.77	FALSE	lez	27.6.b
ATL	hke.27.3a46-8abd	0.81	FALSE	HKE	27.7
ATL	bli27.5b,6,7	0.25	FALSE	bli	27.7
ATL	ank27.7,8abd	0.73	FALSE	ank	27.7
ATL	hom.27.2a4a5b6a7a-ce-k8	0.62	FALSE	HOM	27.7.a
ATL	hom.27.2a4a5b6a7a-ce-k8	0.62	FALSE	HOM	27.7.b
ATL	nep.fu.16	1.61	TRUE	nep	27.7.b
ATL	had-7b-k	1.93	TRUE	HAD	27.7.b
ATL	had-7b-k	1.93	TRUE	HAD	27.7.c
ATL	nep.fu.16	1.61	TRUE	nep	27.7.c
ATL	hom.27.2a4a5b6a7a-ce-k8	0.62	FALSE	HOM	27.7.c
ATL	hom.27.2a4a5b6a7a-ce-k8	0.62	FALSE	HOM	27.7.e
ATL	had-7b-k	1.93	TRUE	HAD	27.7.e

ATL	had-7b-k	1.93	TRUE	HAD	27.7.f
ATL	hom.27.2a4a5b6a7a-ce-k8	0.62	FALSE	HOM	27.7.f
ATL	hom.27.2a4a5b6a7a-ce-k8	0.62	FALSE	HOM	27.7.g
ATL	nep.fu.2021	0.28	FALSE	nep	27.7.g
ATL	had-7b-k	1.93	TRUE	HAD	27.7.g
ATL	had-7b-k	1.93	TRUE	HAD	27.7.h
ATL	nep.fu.2021	0.28	FALSE	nep	27.7.h
ATL	hom.27.2a4a5b6a7a-ce-k8	0.62	FALSE	HOM	27.7.h
ATL	hom.27.2a4a5b6a7a-ce-k8	0.62	FALSE	HOM	27.7.j
ATL	nep.fu.16	1.61	TRUE	nep	27.7.j
ATL	had-7b-k	1.93	TRUE	HAD	27.7.j
ATL	had-7b-k	1.93	TRUE	HAD	27.7.k
ATL	nep.fu.16	1.61	TRUE	nep	27.7.k
ATL	hom.27.2a4a5b6a7a-ce-k8	0.62	FALSE	HOM	27.7.k
ATL	hom.27.2a4a5b6a7a-ce-k8	0.62	FALSE	HOM	27.8
ATL	boc.27.6-8	0.61	TRUE	boc	27.8
ATL	whb.27.1-91214	1.42	TRUE	WHB	27.8
ATL	pil-27.8abd	1.52	TRUE	pil	27.8.a
ATL	sol.27.8ab	1.13	TRUE	SOL	27.8.a
ATL	bss.27.8ab	1.03	TRUE	bss	27.8.a
ATL	ank27.7,8abd	0.73	FALSE	ank	27.8.a
ATL	hke.27.3a46-8abd	0.81	FALSE	HKE	27.8.a
ATL	NEP-2324	1.09	TRUE	NEP	27.8.A
ATL	mon.27.78abd	0.89	FALSE	mon	27.8.a
ATL	mon.27.78abd	0.89	FALSE	mon	27.8.b
ATL	NEP-2324	1.09	TRUE	NEP	27.8.B
ATL	hke.27.3a46-8abd	0.81	FALSE	HKE	27.8.b
ATL	ank27.7,8abd	0.73	FALSE	ank	27.8.b
ATL	bss.27.8ab	1.03	TRUE	bss	27.8.b
ATL	sol.27.8ab	1.13	TRUE	SOL	27.8.b
ATL	pil-27.8abd	1.52	TRUE	pil	27.8.b
ATL	ank27.8c9a	0.24	FALSE	ank	27.8.c
ATL	ldb.27.8c9a	0.47	FALSE	ldb	27.8.c
ATL	hke.27.8c9a	2.38	TRUE	HKE	27.8.c
ATL	pil-27.8c9a	1.43	TRUE	pil	27.8.c
ATL	meg.27.8c9a	0.9	FALSE	meg	27.8.c
ATL	mon.27.8c9a	0.39	FALSE	mon	27.8.c
ATL	mon.27.78abd	0.89	FALSE	mon	27.8.d
ATL	hke.27.3a46-8abd	0.81	FALSE	HKE	27.8.d
ATL	ank27.7,8abd	0.73	FALSE	ank	27.8.d
ATL	pil-27.8abd	1.52	TRUE	pil	27.8.d
ATL	ank27.8c9a	0.24	FALSE	ank	27.9.a
ATL	hke.27.8c9a	2.38	TRUE	HKE	27.9.a
ATL	ldb.27.8c9a	0.47	FALSE	ldb	27.9.a
ATL	hom.27.9a	0.26	FALSE	HOM	27.9.a
ATL	meg.27.8c9a	0.9	FALSE	meg	27.9.a
ATL	mon.27.8c9a	0.39	FALSE	mon	27.9.a
ATL	pil-27.8c9a	1.43	TRUE	pil	27.9.a
ATL	nep.fu.2829	0.46	FALSE	nep	27.9.a
ATL	nep.fu.2627	0.32	FALSE	nep	27.9.a

Stock (MEDITERRANEAN AND TUNA SURVEYS)

TYPE	FishStock	F_etoile2	stock_overexploited	AL3	division	GSA
MED	pil-gsa01	1.06	TRUE	pil	37.1.1	SA 1
MED	pil-gsa03	0.89	FALSE	pil	37.1.1	SA 3
MED	pil-gsa06	2.27	TRUE	pil	37.1.1	SA 6
MED	nep-gsa05	5.62	TRUE	nep	37.1.1	SA 5
MED	nep-gsa06	3.67	TRUE	nep	37.1.1	SA 6
MED	mon-gsa01_05_06_07	2.05	TRUE	MON	37.1.1	SA 1
MED	mon-gsa01_05_06_07	2.05	TRUE	MON	37.1.1	SA 5
MED	mon-gsa01_05_06_07	2.05	TRUE	MON	37.1.1	SA 6
MED	mur-gsa05	2.57	TRUE	mur	37.1.1	SA 5
MED	mut-gsa01	5.67	TRUE	mut	37.1.1	SA 1
MED	mut-gsa06	5.48	TRUE	mut	37.1.1	SA 6
MED	dps-gsa01	4.86	TRUE	dps	37.1.1	SA 1
MED	dps-gsa03	1.86	TRUE	dps	37.1.1	SA 3
MED	dps-gsa05	1.09	TRUE	dps	37.1.1	SA 5
MED	dps-gsa06	2.53	TRUE	dps	37.1.1	SA 6
MED	ara-gsa01	1.37	TRUE	ara	37.1.1	SA 1
MED	ara-gsa02	2.13	TRUE	ara	37.1.1	SA 2
MED	ara-gsa05	1.48	TRUE	ara	37.1.1	SA 5
MED	ara-gsa06	3	TRUE	ara	37.1.1	SA 6
MED	ane-gsa06	1.19	TRUE	ane	37.1.1	SA 6
MED	hke-gsa01	5.65	TRUE	hke	37.1.1	SA 1
MED	hke-gsa02	8.18	TRUE	hke	37.1.1	SA 2
MED	hke-gsa03	7.26	TRUE	hke	37.1.1	SA 3
MED	hke-gsa04	8.18	TRUE	hke	37.1.1	SA 4
MED	hke-gsa05	4.96	TRUE	hke	37.1.1	SA 5
MED	hke-gsa06	5.86	TRUE	hke	37.1.1	SA 6
MED	sbr-gsa01_03	1.9	TRUE	sbr	37.1.1	SA 1
MED	sbr-gsa01_03	1.9	TRUE	sbr	37.1.1	SA 3
MED	sol-gsa07	7.41	TRUE	SOL	37.1.2	SA 7
MED	sbg-gsa07	2.37	TRUE	sbg	37.1.2	SA 7
MED	hke-gsa07	14.33	TRUE	hke	37.1.2	SA 7
MED	bss-gsa07	3.94	TRUE	BSS	37.1.2	SA 7
MED	mut-gsa07	2.03	TRUE	mut	37.1.2	SA 7
MED	mon-gsa01_05_06_07	2.05	TRUE	MON	37.1.2	SA 7
MED	hom-gsa09_10_11	2.43	TRUE	hom	37.1.3	
MED	hke-gsa09_10_11	2.64	TRUE	hke	37.1.3	sa 9
MED	hke-gsa09_10_11	3.93	TRUE	hke	37.1.3	sa 10
MED	hke-gsa09_10_11	3.93	TRUE	hke	37.1.3	sa 11
MED	ara-gsa09	0.84	FALSE	ara	37.1.3	SA 9
MED	ars-gsa09_10_11	1.96	TRUE	ARS	37.1.3	
MED	hke-gsa12_13_14_15_16	4.17	TRUE	hke	37.2.2	

TYPE	FishStock	F_etoile2	stock_overexploited	AL3	division
TUN	bft-wa	0.56	FALSE	BFT	21
TUN	bet-atl	1.63	TRUE	BET	21
TUN	alb-na	0.54	FALSE	ALB	21
TUN	swo-na	0.78	FALSE	swo	21
TUN	yft-atl	0.77	FALSE	YFT	21

TUN	yft-atl	0.77	FALSE	YFT	27
TUN	swo-na	0.78	FALSE	swo	27
TUN	alb-na	0.54	FALSE	ALB	27
TUN	bft-ea	0.34	FALSE	BFT	27
TUN	bet-atl	1.63	TRUE	BET	27
TUN	bet-atl	1.63	TRUE	BET	31
TUN	alb-na	0.54	FALSE	ALB	31
TUN	bft-wa	0.56	FALSE	BFT	31
TUN	swo-na	0.78	FALSE	swo	31
TUN	yft-atl	0.77	FALSE	YFT	31
TUN	yft-atl	0.77	FALSE	YFT	34
TUN	swo-na	0.78	FALSE	swo	34
TUN	alb-na	0.54	FALSE	ALB	34
TUN	bft-ea	0.34	FALSE	BFT	34
TUN	bet-atl	1.63	TRUE	BET	34
TUN	bft-ea	0.34	FALSE	BFT	37
TUN	alb-med	1.8	TRUE	ALB	37
TUN	swo-med	1.85	TRUE	swo	37
TUN	swo-sa	0.98	FALSE	swo	41
TUN	yft-atl	0.77	FALSE	YFT	41
TUN	alb-sa	0.54	FALSE	ALB	41
TUN	bet-atl	1.63	TRUE	BET	41
TUN	bft-wa	0.56	FALSE	BFT	41
TUN	bet-atl	1.63	TRUE	BET	47
TUN	alb-sa	0.54	FALSE	ALB	47
TUN	yft-atl	0.77	FALSE	YFT	47
TUN	swo-sa	0.98	FALSE	swo	47
TUN	yft-io	1.2	TRUE	YFT	51
TUN	swo-io	0.79	FALSE	swo	51
TUN	alb-io	1.11	TRUE	ALB	51
TUN	bet-io	0.76	FALSE	BET	51
TUN	bet-io	0.76	FALSE	BET	57
TUN	alb-io	1.11	TRUE	ALB	57
TUN	swo-io	0.79	FALSE	swo	57
TUN	yft-io	1.2	TRUE	YFT	57

Stock (OFR SURVEYS)

TYPE	FishStock	F_etoile2	stock_overexploited	AL3	division
OFR	hkm-34.1_3	1.37	TRUE	hkm	34.1
OFR	gpw-34.1_3	1.89	TRUE	gpw	34.1
OFR	hkm-34.1_3	1.37	TRUE	hkm	34.2
OFR	hkm-34.1_3	1.37	TRUE	hkm	34.3
OFR	gpw-34.1_3	1.89	TRUE	gpw	34.3
OFR	dps-34.3.1.2_3	0.85	FALSE	dps	34.3.1
OFR	bum-io	1.18	TRUE	BUM	51
OFR	bsh-io	0.86	FALSE	bsh	51
OFR	blm-io	0.96	FALSE	BLM	51
OFR	mls-io	1.99	TRUE	MLS	51
OFR	sfa-io	1.04	TRUE	sfa	51
OFR	sfa-io	1.04	TRUE	sfa	57

OFR	mls-io	1.99	TRUE	MLS	57
OFR	blm-io	0.96	FALSE	BLM	57
OFR	bum-io	1.18	TRUE	BUM	57

SHI IN THE NORTH ATLANTIC, 2018

SEGMENT		TOT_VAL AT-RISK STOCK	TOT_VAL STRATUM	PERCENT	FISHSTOCK	VAL_STOCK	F_etoile2	F_ETOILE2XVALOR	stock_overexploited	SHI
DFN	3	8 734 348.51	20 068 750.56	44%	alb-na	2 147 066.94	0.54	1 159 416.15	FALSE	1.28
					ank27.7,8abd	206.25	0.73	150.56	FALSE	
					ank27.8c9a	79 133.40	0.24	18 992.02	FALSE	
					bet-atl	25 684.02	1.63	41 864.95	TRUE	
					bil-ne	15.15	1.59	24.09	TRUE	
					hke.27.3a46-8abd	119.35	0.81	96.67	FALSE	
					hke.27.8c9a	2 848 490.06	2.38	6 779 406.34	TRUE	
					hom.27.2a4a5b6a7a-ce-k8	83 165.88	0.62	51 562.85	FALSE	
					hom.27.9a	116 334.99	0.26	30 247.10	FALSE	
					ldb.27.8c9a	1 854.08	0.47	871.42	FALSE	
					mac.27.nea	2 038 961.13	1.25	2 548 701.41	TRUE	
					meg.27.8c9a	926.29	0.9	833.66	FALSE	
					mon.27.8c9a	1 390 660.80	0.39	542 357.71	FALSE	
					pil-27.8c9a	754.69	1.43	1 079.21	TRUE	
					sol.27.8ab	219.04	1.13	247.52	TRUE	
					whb.27.1-91214	111.88	1.42	158.87	TRUE	
					yft-atl	644.56	0.77	496.31	FALSE	
	4	8 282 048.38	11 204 321.53	74%	alb-na	2 657 838.88	0.54	1 435 233.00	FALSE	1.48
					ank27.7,8abd	171.56	0.73	125.24	FALSE	
					ank27.8c9a	2 870.71	0.24	688.97	FALSE	
					bet-atl	13 900.51	1.63	22 657.83	TRUE	
					bss.27.8ab	240.90	1.03	248.13	TRUE	
					hke.27.3a46-8abd	74 146.93	0.81	60 059.01	FALSE	
					hke.27.8c9a	3 869 677.80	2.38	9 209 833.16	TRUE	
					hom.27.2a4a5b6a7a-ce-k8	69 139.47	0.62	42 866.47	FALSE	
					hom.27.9a	22 528.00	0.26	5 857.28	FALSE	
					ldb.27.8c9a	369.98	0.47	173.89	FALSE	
					mac.27.nea	1 000 322.33	1.25	1 250 402.91	TRUE	
					mon.27.8c9a	570 316.76	0.39	222 423.54	FALSE	
					whb.27.1-91214	524.55	1.42	744.86	TRUE	
DTS	5	55 539 645.87	126 526 627.08	44%	ank27.8c9a	12 502.54	0.24	3 000.61	FALSE	1.32
					bft-ea	938.91	0.34	319.23	FALSE	
					bli27.5b,6,7	99 296.45	0.25	24 824.11	FALSE	
					boc.27.6-8	89.64	0.61	54.68	FALSE	
					bss.27.8ab	522 178.82	1.03	537 844.18	TRUE	
					had.27.46a20	8 927.16	1.18	10 534.05	TRUE	
					hke.27.3a46-8abd	17 868 686.05	0.81	14 473 635.70	FALSE	
					hke.27.8c9a	9 064 306.99	2.38	21 573 050.64	TRUE	
					hom.27.2a4a5b6a7a-ce-k8	168 706.75	0.62	104 598.19	FALSE	
					hom.27.9a	88 356.65	0.26	22 972.73	FALSE	
					ldb.27.8c9a	2 347.33	0.47	1 103.25	FALSE	
					lez.27.4a6a	1 208 877.35	0.4	483 550.94	FALSE	
					lez.27.6b	276 705.86	0.77	213 063.51	FALSE	
					mac.27.nea	9 191 654.36	1.25	11 489 567.95	TRUE	
					meg.27.8c9a	5 486.48	0.9	4 937.83	FALSE	

				mon.27.8c9a	52 590.96	0.39	20 510.47	FALSE	
				nep.fu.11	610.00	0.86	524.60	FALSE	
				nep.fu.16	1 547 350.71	1.61	2 491 234.64	TRUE	
				nep.fu.2021	5 326.93	0.28	1 491.54	FALSE	
				nep.fu.2627	43 198.48	0.32	13 823.51	FALSE	
				nep.fu.2829	86 588.32	0.46	39 830.63	FALSE	
				pok.27.3a46	5 279.10	0.99	5 226.31	FALSE	
				reb.2127.dp	97.95	6.53	639.61	TRUE	
				sol.27.8ab	52 587.03	1.13	59 423.34	TRUE	
				whb.27.1-91214	15 226 955.05	1.42	21 622 276.17	TRUE	
	6	24 316 053.63	56 536 162.47	43%	bli27.5b,6,7	10 744.20	0.25	2 686.05	FALSE	1.54
					boc.27.6-8	20.80	0.61	12.69	FALSE	
					bss.27.8ab	169 828.18	1.03	174 923.03	TRUE	
					cod.2127.1f14	223 332.40	0.97	216 632.43	FALSE	
					cod.27.1-2	17 524 322.79	1	17 524 322.79	TRUE	
					cod-3m	1 495 973.58	0.42	628 308.90	FALSE	
					ghl.27.561214	478 848.34	1.34	641 656.78	TRUE	
					had.27.1-2	109 784.00	1.12	122 958.08	TRUE	
					hke.27.3a46-8abd	809 143.52	0.81	655 406.25	FALSE	
					hke.27.8c9a	383.52	2.38	912.78	TRUE	
					mac.27.nea	30 569.40	1.25	38 211.75	TRUE	
					pla-3lno	357 605.29	1.05	375 485.55	TRUE	
					POK.27.1-2	52 234.24	0.65	33 952.26	FALSE	
					reb.2127.dp	2 563 179.90	6.53	16 737 564.75	TRUE	
					sol.27.8ab	26 448.09	1.13	29 886.34	TRUE	
					whb.27.1-91214	8 616.48	1.42	12 235.40	TRUE	
					wit-3no	51 694.51	0.45	23 262.53	FALSE	
					yel-3lno	403 324.39	0.31	125 030.56	FALSE	
	2	2 774 141.40	5 473 792.48	51%	alb-na	694 227.84	0.54	374 883.03	FALSE	1.37
					ank27.7,8abd	41.19	0.73	30.07	FALSE	
					ank27.8c9a	4 484.48	0.24	1 076.28	FALSE	
					bet-atl	7 265.01	1.63	11 841.97	TRUE	
					bss.27.8ab	16.06	1.03	16.54	TRUE	
					hke.27.3a46-8abd	42 377.44	0.81	34 325.73	FALSE	
					hke.27.8c9a	779 974.64	2.38	1 856 339.64	TRUE	
					hom.27.2a4a5b6a7a-ce-k8	18 775.85	0.62	11 641.03	FALSE	
					hom.27.9a	5 217.74	0.26	1 356.61	FALSE	
					ldb.27.8c9a	47.56	0.47	22.35	FALSE	
					mac.27.nea	1 191 800.79	1.25	1 489 750.99	TRUE	
					mon.27.8c9a	19 662.88	0.39	7 668.52	FALSE	
					sol.27.8ab	46.25	1.13	52.26	TRUE	
					whb.27.1-91214	10 203.67	1.42	14 489.21	TRUE	
HOK	3	5 199 764.75	9 267 105.76	56%	alb-na	1 709 082.23	0.54	922 904.40	FALSE	1.36
					ank27.7,8abd	37.38	0.73	27.29	FALSE	
					ank27.8c9a	24.42	0.24	5.86	FALSE	
					bet-atl	19 346.96	1.63	31 535.54	TRUE	
					bft-ea	50 669.07	0.34	17 227.48	FALSE	
					bil-ne	3.57	1.59	5.68	TRUE	
					bss.27.8ab	249.73	1.03	257.22	TRUE	
					hke.27.3a46-8abd	78 326.95	0.81	63 444.83	FALSE	
					hke.27.8c9a	1 693 225.21	2.38	4 029 876.00	TRUE	
					hom.27.2a4a5b6a7a-ce-k8	29 262.47	0.62	18 142.73	FALSE	
					hom.27.9a	324.33	0.26	84.33	FALSE	
					ldb.27.8c9a	46.79	0.47	21.99	FALSE	
					mac.27.nea	1 558 990.04	1.25	1 948 737.55	TRUE	
					meg.27.8c9a	57.63	0.9	51.87	FALSE	
					mon.27.8c9a	45 281.54	0.39	17 659.80	FALSE	
					sbr-gsa01_03	565.38	1.9	1 074.22	TRUE	

Group	N	Val1	Val2	%	Species	Value A	Factor	Value B	Flag	Score
					sol.27.8ab	73.92	1.13	83.53	TRUE	RED
					whb.27.1-91214	14 197.13	1.42	20 159.92	TRUE	
	4	7 151 947.61	9 051 283.81	79%	alb-na	4 347 164.84	0.54	2 347 469.01	FALSE	0.97
					ank27.8c9a	778.09	0.24	186.74	FALSE	
					bet-atl	11 871.25	1.63	19 350.14	TRUE	
					hke.27.3a46-8abd	124.32	0.81	100.70	FALSE	
					hke.27.8c9a	984 895.88	2.38	2 344 052.19	TRUE	
					hom.27.2a4a5b6a7a-ce-k8	7 854.49	0.62	4 869.78	FALSE	
					mac.27.nea	1 754 322.91	1.25	2 192 903.64	TRUE	
					meg.27.8c9a	57.65	0.9	51.89	FALSE	
					mon.27.8c9a	1 475.17	0.39	575.32	FALSE	
					pil-27.8abd	2 776.28	1.52	4 219.95	TRUE	
					pil-27.8c9a	32 817.11	1.43	46 928.47	TRUE	
					whb.27.1-91214	7 809.62	1.42	11 089.66	TRUE	
	5	6 157 895.05	6 970 873.93	88%	alb-na	4 479 819.06	0.54	2 419 102.29	FALSE	0.76
					ank27.8c9a	350.92	0.24	84.22	FALSE	
					bet-atl	6 312.20	1.63	10 288.89	TRUE	
					bft-ea	35 784.15	0.34	12 166.61	FALSE	
					hke.27.8c9a	166 299.08	2.38	395 791.81	TRUE	
					hom.27.2a4a5b6a7a-ce-k8	2 544.82	0.62	1 577.79	FALSE	
					mac.27.nea	1 401 542.37	1.25	1 751 927.96	TRUE	
					mon.27.8c9a	598.69	0.39	233.49	FALSE	
					pil-27.8abd	63 872.72	1.52	97 086.53	TRUE	
					pil-27.8c9a	573.77	1.43	820.49	TRUE	
					whb.27.1-91214	197.27	1.42	280.12	TRUE	
HOK-LLD	4	2 259 188.68	3 914 643.72	58%	alb-na	403 957.30	0.54	218 136.94	FALSE	0.84
					bet-atl	73 664.32	1.63	120 072.84	TRUE	
					swo-med	167 036.20	1.85	309 016.97	TRUE	
					swo-na	1 614 530.86	0.78	1 259 334.07	FALSE	
PGP	5	71 535 474.79	80 702 419.98	89%	ank27.7,8abd	39.85	0.73	29.09	FALSE	0.81
					bli27.5b,6,7	103 932.42	0.25	25 983.11	FALSE	
					bss.27.8ab	9 529.52	1.03	9 815.41	TRUE	
					hke.27.3a46-8abd	71 418 820.15	0.81	57 849 244.32	FALSE	
					mon.27.78abd	68.63	0.89	61.08	FALSE	
					pok.27.3a46	3 084.22	0.99	3 053.38	FALSE	
PMP	3	1 223 955.68	2 716 554.02	45%	alb-na	653 922.93	0.54	353 118.38	FALSE	1.05
					ank27.8c9a	2 061.73	0.24	494.82	FALSE	
					bet-atl	5 969.58	1.63	9 730.42	TRUE	
					bil-ne	5.95	1.59	9.46	TRUE	
					hke.27.8c9a	230 622.29	2.38	548 881.05	TRUE	
					hom.27.2a4a5b6a7a-ce-k8	8 184.85	0.62	5 074.61	FALSE	
					hom.27.9a	1 627.50	0.26	423.15	FALSE	
					ldb.27.8c9a	15.74	0.47	7.40	FALSE	
					mac.27.nea	283 661.54	1.25	354 576.93	TRUE	
					mon.27.8c9a	37 520.11	0.39	14 632.84	FALSE	
					pil-27.8c9a	333.46	1.43	476.85	TRUE	
					yft-atl	30.00	0.77	23.10	FALSE	
PS	5	55 506 496.59	93 791 864.90	59%	alb-na	38 172 965.74	0.54	20 613 401.50	FALSE	0.73
					bet-atl	4 474.48	1.63	7 293.40	TRUE	
					bft-ea	987 271.86	0.34	335 672.43	FALSE	
					bil-ne	148.38	1.59	235.92	TRUE	
					bss.27.8ab	1 679.05	1.03	1 729.42	TRUE	
					hom.27.2a4a5b6a7a-ce-k8	2 167 237.76	0.62	1 343 687.41	FALSE	
					hom.27.9a	938 699.95	0.26	244 061.99	FALSE	
					mac.27.nea	6 801 567.65	1.25	8 501 959.56	TRUE	
					pil-27.8abd	5 529 507.83	1.52	8 404 851.90	TRUE	

				pil-27.8c9a	902 943.89	1.43	1 291 209.76	TRUE	

ANALYSIS OF THE SUSTAINABLE HARVEST INDICATOR IN THE NORTH ATLANTIC

GEAR	LENGTH	2016	2017	2018	Weighted 2016-2018
DFN	12-18			1.28	1.28
	18-24	1.64	1.44	1.48	1.49
DTS	24-40	1.35	1.21	1.32	1.29
	>40	0.81	0.98	1.54	1.28
PS	24-40		1.32	0.73	0.93
HOK	10-12		1.40	1.37	1.38
	12-18	1.36	1.27	1.36	1.33
	18-24	1.11	1.03	0.97	1.01
	24-40	0.63	0.81	0.76	0.76
HOK-LLD	18-24		0.91	0.84	0.86
PGP	24-40	0.96	0.79	0.81	0.83
PMP	12-18	1.11	1.07	1.05	1.06

We observe that, in general terms, the Spanish fleet operating in the North Atlantic shows a dependence on overexploited stocks in the fleet of gillnetters, trawlers and vessels using hooks up to 18 m in length, though it has not been possible to determine whether this is due exclusively to fleets in the national fishing ground, or the ICES or NAFO fleets; therefore, said survey is not considered appropriate for the Spanish fleet, hence the creation of indicators in the action plan for the fleet disaggregated into fishing grounds.

SHI IN THE NORTH ATLANTIC/CANARY ISLANDS

SEGMENT		TOT_VAL AT-RISK STOCK	TOT_VAL STRATUM	PERCENT	FISHSTOCK	VAL_STOCK	F_etoile2	F_ETOILE2XVALOR	stock_overexploited	SHI
HOK	2	1 179 554.01	2 934 493.17	40%	alb-na	496 770.31	0.54	268 255.97	FALSE	0.58
					bet-atl	127 451.38	1.63	207 745.75	TRUE	
					bft-ea	499 240.43	0.34	169 741.75	FALSE	
					yft-atl	56 091.89	0.77	43 190.76	FALSE	
	3	2 614 676	3 881 318	67%	alb-na	789 413.12	0.54	426 283.08	FALSE	1.08
					bet-atl	1 360 061.84	1.63	2 216 900.80	TRUE	
					bft-ea	431 893.35	0.34	146 843.74	FALSE	
					gpw-34.1_3	136.00	1.89	257.04	TRUE	
					yft-atl	33 171.43	0.77	25 542.00	FALSE	
	5	6 325 181	8 459 638	75%	alb-na	717 730.76	0.54	387 574.61	FALSE	1.42
					bet-atl	5 190 154.47	1.63	8 459 951.79	TRUE	
					bft-ea	388 248.23	0.34	132 004.40	FALSE	

| | | | | | yft-atl | 29 047.38 | 0.77 | 22 366.48 | FALSE | |

ANALYSIS OF THE SUSTAINABLE HARVEST INDICATOR IN THE NORTH ATLANTIC/CANARY ISLANDS

GEAR	LENGTH	2016	2017	2018	Weighted Average 2016-2018
HOK	10-12	0.63	0.71	0.58	0.73
	12-18	0.63	0.83	1.08	1.10
	24-40	0.93	1.02	1.42	1.44
PMP	10-12	0.73	1.00		0.91

Although still in balance, the situation worsened for the HOK 12-18 segment, above all due to its increased dependency on bigeye tuna (an overexploited stock).

The situation of the HOK 24-40 segment also worsened, as it showed less dependence on healthy stocks (mainly yellowfin tuna).

SHI IN THE MEDITERRANEAN

SEGMENT		TOT_VAL AT-RISK STOCK	TOT_VAL STRATUM	PERCENT	FISHSTOCK	VAL_STOCK	F_etoile2	F_ETOILE2XVALOR	stock_overexploited	SHI
DTS	4	48 947 834.98	92 799 073.40	53%	alb-med	29.23	1.8	52.61	TRUE	3.57
					ane-gsa06	64 413.64	1.19	76 652.23	TRUE	
					ara-gsa01	2 172 196.50	1.37	2 975 909.21	TRUE	
					ara-gsa02	929 859.05	2.13	1 980 599.78	TRUE	
					ara-gsa05	5 236 881.95	1.48	7 750 585.29	TRUE	
					ara-gsa06	9 073 194.44	3	27 219 583.32	TRUE	
					bss-gsa07	227.49	3.94	896.31	TRUE	
					dps-gsa01	2 610 711.41	4.86	12 688 057.45	TRUE	
					dps-gsa03	5 829.15	1.86	10 842.22	TRUE	
					dps-gsa05	628 000.43	1.09	684 520.47	TRUE	
					dps-gsa06	7 760 551.80	2.53	19 634 196.05	TRUE	
					hke-gsa01	1 343 441.82	5.65	7 590 446.28	TRUE	
					hke-gsa02	5 505.65	8.18	45 036.22	TRUE	
					hke-gsa03	1 973.68	7.26	14 328.92	TRUE	
					hke-gsa04	21 278.45	8.18	174 057.72	TRUE	
					hke-gsa05	385 376.75	4.96	1 911 468.68	TRUE	
					hke-gsa06	7 380 985.97	5.86	43 252 577.78	TRUE	
					hke-gsa07	323 284.69	14.33	4 632 669.61	TRUE	
					mon-gsa01_05_06_07	2 247 484.01	2.05	4 607 342.22	TRUE	
					mur-gsa05	494 327.35	2.57	1 270 421.29	TRUE	
					mut-gsa01	346 738.77	5.67	1 966 008.83	TRUE	
					mut-gsa06	2 947 019.11	5.48	16 149 664.72	TRUE	
					mut-gsa07	184 640.06	2.03	374 819.32	TRUE	
					nep-gsa05	1 088 147.14	5.62	6 115 386.93	TRUE	
					nep-gsa06	3 614 062.90	3.67	13 263 610.84	TRUE	
					pil-gsa01	3 438.19	1.06	3 644.48	TRUE	
					pil-gsa06	53 073.44	2.27	120 476.71	TRUE	
					sbg-gsa07	3 243.01	2.37	7 685.93	TRUE	
					sbr-gsa01_03	16 435.20	1.9	31 226.88	TRUE	

					Especie					
					sol-gsa07	1 643.31	7.41	12 176.93	TRUE	
					swo-med	3 840.39	1.85	7 104.72	TRUE	
	5	66 445 727.35	84 848 179.64	78%	alb-med	3.85	1.8	6.93	TRUE	3.26
					ane-gsa06	58 622.57	1.19	69 760.86	TRUE	
					ara-gsa01	1 250 662.18	1.37	1 713 407.19	TRUE	
					ara-gsa02	290 574.92	2.13	618 924.58	TRUE	
					ara-gsa05	2 822 045.24	1.48	4 176 626.96	TRUE	
					ara-gsa06	46 874 720.75	3	140 624 162.25	TRUE	
					bss-gsa07	145.77	3.94	574.33	TRUE	
					dps-gsa01	273 049.54	4.86	1 327 020.76	TRUE	
					dps-gsa03	25.85	1.86	48.08	TRUE	
					dps-gsa05	427 881.32	1.09	466 390.64	TRUE	
					dps-gsa06	2 532 921.47	2.53	6 408 291.32	TRUE	
					hke-gsa01	334 502.48	5.65	1 889 939.01	TRUE	
					hke-gsa02	2 680.67	8.18	21 927.88	TRUE	
					hke-gsa03	4.00	7.26	29.04	TRUE	
					hke-gsa04	13 959.37	8.18	114 187.65	TRUE	
					hke-gsa05	128 021.91	4.96	634 988.67	TRUE	
					hke-gsa06	5 151 304.00	5.86	30 186 641.44	TRUE	
					hke-gsa07	286 319.61	14.33	4 102 960.01	TRUE	
					mon-gsa01_05_06_07	1 092 725.97	2.05	2 240 088.24	TRUE	
					mur-gsa05	79 396.84	2.57	204 049.88	TRUE	
					mut-gsa01	7 137.19	5.67	40 467.87	TRUE	
					mut-gsa06	1 542 382.75	5.48	8 452 257.47	TRUE	
					mut-gsa07	49 366.54	2.03	100 214.08	TRUE	
					nep-gsa05	786 664.00	5.62	4 421 051.68	TRUE	
					nep-gsa06	2 377 331.65	3.67	8 724 807.16	TRUE	
					pil-gsa01	89.38	1.06	94.74	TRUE	
					pil-gsa06	48 349.33	2.27	109 752.98	TRUE	
					sbg-gsa07	370.62	2.37	878.37	TRUE	
					sbr-gsa01_03	12 584.08	1.9	23 909.75	TRUE	
					sol-gsa07	404.98	7.41	3 000.90	TRUE	
					swo-med	1 478.52	1.85	2 735.26	TRUE	
HOK	3	1 574 063.17	2 509 700.98	63%	alb-med	485.04	1.8	873.07	TRUE	0.83
					bft-ea	1 512 162.02	0.34	514 135.09	FALSE	
					hke-gsa05	111.19	4.96	551.50	TRUE	
					hke-gsa06	3 434.85	5.86	20 128.22	TRUE	
					hke-gsa07	53 222.85	14.33	762 683.44	TRUE	
					hke-gsa09_10_11	839.91	2.64	2 217.36	TRUE	
					hke-gsa09_10_11	839.91	3.93	3 300.85	TRUE	
					hom-gsa09_10_11	3.90	2.43	9.48	TRUE	
					mon-gsa01_05_06_07	128.93	2.05	264.31	TRUE	
					mut-gsa06	139.20	5.48	762.82	TRUE	
					sbr-gsa01_03	3 505.08	1.9	6 659.65	TRUE	
					swo-med	30.20	1.85	55.87	TRUE	
HOK-LLD	3	5 037 765	5 143 372	98%	alb-med	91 553.25	1.8	164 795.85	TRUE	1.71
					bft-ea	457 917.15	0.34	155 691.83	FALSE	
					hke-gsa06	279.13	5.86	1 635.70	TRUE	
					swo-med	4 488 015.77	1.85	8 302 829.17	TRUE	
	4	6 565 539.76	6 675 600.78	98%	alb-med	45 969.77	1.8	82 745.59	TRUE	1.54
					bet-atl	737.39	1.63	1 201.95	TRUE	
					bft-ea	383.18	0.34	130.28	FALSE	
					swo-med	5 734 500.92	1.85	10 608 826.70	TRUE	
					swo-na	783 948.50	0.78	611 479.83	FALSE	
		556 97 0.61	1 341 0 26.99		ane-gsa06	40 085.22	1.19	47 701.41	TRUE	
					bft-ea	1 257.60	0.34	427.58	FALSE	
					hke-gsa01	49.76	5.65	281.14	TRUE	
					hom.27.9a	876.97	0.26	228.01	FALSE	

GEAR									
PS	2			42%	mut-gsa01	691.71	5.67	3 922.00	TRUE	**1.35**
					pil-gsa01	386 494.25	1.06	409 683.90	TRUE	
					pil-gsa06	127 515.10	2.27	289 459.28	TRUE	
	3	15 345 943.29	22 571 821.67	68%	alb-med	853.52	1.8	1 536.34	TRUE	**1.47**
					ane-gsa06	7 353 282.67	1.19	8 750 406.38	TRUE	
					bft-ea	129 620.92	0.34	44 071.11	FALSE	
					hke-gsa01	994.56	5.65	5 619.26	TRUE	
					hke-gsa06	15.44	5.86	90.48	TRUE	
					mon-gsa01_05_06_07	1 006.49	2.05	2 063.30	TRUE	
					mut-gsa01	405.71	5.67	2 300.38	TRUE	
					pil-gsa01	3 321 957.59	1.06	3 521 275.05	TRUE	
					pil-gsa03	16.16	0.89	14.38	FALSE	
					pil-gsa06	4 533 216.63	2.27	10 290 401.75	TRUE	
					sbg-gsa07	1 291.29	2.37	3 060.36	TRUE	
					sbr-gsa01_03	750.80	1.9	1 426.52	TRUE	
					swo-med	2 531.51	1.85	4 683.29	TRUE	
	4	34 073 455.30	41 033 188.73	83%	alb-med	350.06	1.8	630.11	TRUE	**1.47**
					ane-gsa06	22 078 695.20	1.19	26 273 647.29	TRUE	
					hke-gsa06	26.31	5.86	154.18	TRUE	
					mon-gsa01_05_06_07	50.85	2.05	104.24	TRUE	
					mut-gsa06	70.47	5.48	386.18	TRUE	
					pil-gsa01	2 815 125.66	1.06	2 984 033.20	TRUE	
					pil-gsa03	6 186.03	0.89	5 505.57	FALSE	
					pil-gsa06	9 151 946.03	2.27	20 774 917.49	TRUE	
					sbr-gsa01_03	1 785.38	1.9	3 392.22	TRUE	
					swo-med	19 219.31	1.85	35 555.72	TRUE	
	5	29 907 229	30 396 933	98%	ane-gsa06	7 394 597.46	1.19	8 799 570.98	TRUE	**0.77**
					bft-ea	19 122 314.45	0.34	6 501 586.91	FALSE	
					pil-gsa01	14 969.67	1.06	15 867.85	TRUE	
					pil-gsa06	3 369 162.37	2.27	7 647 998.58	TRUE	
					swo-med	6 184.87	1.85	11 442.01	TRUE	

ANALYSIS OF THE SUSTAINABLE HARVEST INDICATOR IN THE MEDITERRANEAN

GEAR	LENGTH	2016	2017	2018	Weighted Average 2016-2018
DTS	18-24	**3.96**	**4.08**	**3.57**	**3.77**
	24-40	**4.12**	**4.25**	**3.26**	**3.67**
HOK	12-18		**2.09**	**0.83**	**1.25**
HOK-LLD	12-18	**1.55**	**1.60**	**1.71**	**1.66**
	18-24	**1.66**	**1.54**	**1.72**	**1.66**
PMP	12-18	**3.21**	**3.57**		**3.45**
PS	10-12			**1.35**	**1.35**
	12-18	**1.74**	**1.54**	**1.47**	**1.53**
	18-24	**1.67**	**1.55**	**1.47**	**1.52**
	24-40	**0.96**	**0.83**	**0.77**	**0.81**

We observe a strong dependence on overexploited stocks in the Mediterranean which, in general, has worsened compared with 2017, so the Mediterranean management and recovery plan has been implemented.

SHI IN THE OTHER WATERS

SEGMENT		TOT_VAL AT-RISK STOCK	TOT_VAL STRATUM	PERCENT	FISHSTOCK	VAL_STOCK	F_etoile2	F_ETOILE2XVALOR	stock_overexploited	SHI
PS	6	154 719 932.28	349 969 525.96	44%	alb-io	1 357.04	1.11	1 506.31	TRUE	1.07
					alb-na	37 896.00	0.54	20 463.84	FALSE	
					bet-atl	10 545 203.89	1.63	17 188 682.34	TRUE	
					bet-io	28 880 554.52	0.76	21 949 221.44	FALSE	
					blm-io	3 350.45	0.96	3 216.43	FALSE	
					yft-atl	29 324 909.09	0.77	22 580 180.00	FALSE	
					yft-io	85 926 661.29	1.2	103 111 993.55	TRUE	

ANALYSIS OF THE SUSTAINABLE HARVEST INDICATOR IN OTHER WATERS

GEAR	LENGTH	2016	2017	2018	Weighted Average 2016-2018
HOK	24-40	0.93	1.01		0.98
PS	>40	0.97	0.98	1.07	1.03

1.B. INDICATOR FOR STOCKS AT RISK (SAR)

This indicator is used as a complementary indicator to the SHI and enables us to identify whether populations with a high level of biological risk are being exploited.

Calculation

For this indicator, the species considered to be at high risk are those included in the report: "Assessment of balance indicators for key fleet segments and review of national reports on Member States efforts to achieve balance between fleet capacity and fishing opportunities (STECF-19-13)" **ANNEX V – SAR STOCK SELECTION**

Interpretation
The segment is considered to be in imbalance when the stock at risk accounts for more than 10% of its catches, or if that segment catches over 10% of the catch of the stock at risk.

SAR STOCKS FOR WHICH SPAIN REPORTED CATCHES, 2018			
AL3	Species_name	Division	SAR_STOCK
AAN	Acipenser nudiventris	37	AAN-37
BLI	Blue ling	27.12	BLI.NEA
BLI	Blue ling	27.8	BLI.NEA
BLI	Blue ling	27.9	BLI.NEA
BSK	Basking shark	37	BSK.37
CCT	Sand tiger shark	37	CCT-37-34
CCT	Sand tiger shark	34.1.1	CCT-37-34
CCT	Sand tiger shark	34.1.2	CCT-37-34

CFB	Black dogfish	27	CFB-GEN
CFB	Black dogfish	37	CFB-GEN
CIO	Daggernose shark	27	CIO-GEN
CIO	Daggernose shark	37	CIO-GEN
COD	Atlantic cod	27.1	COD-27.1-27.2
COD	Atlantic cod	27.2	COD-27.1-27.2
COD	Atlantic cod	21.3.N	COD-213N-213O
COD	Atlantic cod	21.3.O	COD-213N-213O
CWO	Leafscale gulper shark	37	CWO-GEN
CYO	Portuguese dogfish	27	CYO.27.NEA
DCA	Birdbeak dogfish	37	DCA-GEN
DCA	Birdbeak dogfish	51	DCA-GEN
DGS	Picked dogfish	27	DGS-27
DPS	Deep-water rose shrimp	34.1.1	DPS-CECAF_3411
ELE	European eel	37	ELE-MED
ELE	European eel	27	ELE.27.NEA
ETX	Velvet belly	27	ETX-GEN
ETX	Velvet belly	37	ETX-GEN
GAG	Tope shark	37	GAG-37
GAG	Tope shark	27.8	GAG-278_279
GAG	Tope shark	27.9	GAG-278_279
GAM	Mouse catshark	37	GAM-ALL_WATERS
GBR	Rubberlip grunt	34.1.1	GBR-CECAF-3411
GPW	White grouper	34.3	GPW-34.3
GUC	Cape bonnetmouth	27	GUC-27
GUZ	Guitarfishes nei	27.8	GUZ-278
HER	Autumn-spawning herring	27.6.a	HER.6A7BC
HER	Autumn-spawning herring	27.7.b	HER.6A7BC
HER	Autumn-spawning herring	27.7.c	HER.6A7BC
HKE	European hake	34.1.1	HKE-MOROCAN
HOM	Horse mackerel	34.1	HOM-341
LOO	Smalltooth sand tiger shark	37	LOO-37
MLS	Striped marlin	51	MLS-51-57
MLS	Striped marlin	57	MLS-51-57
MPO	Bull ray	27.9	MPO-27-34-37
MPO	Bull ray	34.1.2	MPO-27-34-37
MPO	Bull ray	34.1.1	MPO-27-34-37
MPO	Bull ray	37	MPO-27-34-37
NEP	Norway lobster	27.9.a	NEP-FU-2627
NEP	Norway lobster	27.8.c	NEP-FU2531
ORY	Orange roughy	47	ORY-SEA
ORY	Orange roughy	27	ORY.COM
PIL	European pilchard (sardine)	27.8.c	SAR-SOTH
PIL	European pilchard (sardine)	27.9.a	SAR-SOTH
PLA	American plaice	21.3.M	PLA-21-3M
POR	Porbeagle	27	POR.NEA-NWA-SEA-SWA-MED
POR	Porbeagle	37	POR.NEA-NWA-SEA-SWA-MED
POR	Porbeagle	41	POR.NEA-NWA-SEA-SWA-MED
REB	Beaked redfish	27.14	REB.27.14
RED	Atlantic redfishes	27.14	RED.27.14
RGL	Butterfly ray	37	RGL-37
RJA	White skate	27.9	RJA-279
RJU	Undulate ray	27.8.c	RJU_278C
RJU	Undulate ray	27.9.a	RJU_279A
RMH	Lesser devil ray	37	RMH-GEN
RMM	Devil fish	37	RMM-GEN

RPC	Dwarf swordfish	27.9	RPC-279-37
RPC	Dwarf swordfish	37	RPC-279-37
SAA	Round sardinella	34.1	SAA-CECAF_NORTH
SAA	Round sardinella	34.3	SAA-CECAF-SOUTH
SAE	Madeiran sardinella	34.1	SAE-CECAF-NORTH
SAW	Sawfish	27.9	SAW-ALL-WATERS
SAW	Sawfish	37	SAW-ALL-WATERS
SBL	Bluntnose sixgill shark	27	SBL-GEN
SBL	Bluntnose sixgill shark	34	SBL-GEN
SBL	Bluntnose sixgill shark	37	SBL-GEN
SBR	Red seabream	27.7	SBR-678
SBR	Red seabream	27.8	SBR-678
SBR	Red seabream	27.6	SBR-678
SMA	Shortfin mako shark	37	SMA-37
SMA	Shortfin mako shark	21	SMA-21-27
SMA	Shortfin mako shark	27	SMA-21-27
SPK	Great hammerhead shark	37	SPK-37
SUA	Sawback angelshark	37	SUA-37
SUT	Smoothback angelshark	37	SUT-37
SWO	Swordfish	37	SWO-37
SYR	Knifetooth dogfish	27	SYR-GEN
SYR	Knifetooth dogfish	34	SYR-GEN
SYR	Knifetooth dogfish	37	SYR-GEN
WHM	Atlantic white marlin	27	WHM-27-34
WHM	Atlantic white marlin	34	WHM-27-34
WIT	Witch flounder	21.3.L	WIT-213L
WIT	Witch flounder	21.3.N	WIT-213N-3O
WIT	Witch flounder	21.3.O	WIT-213N-3O
YFT	Yellowfin tuna	51	YFT-INDIAN-OCEAN

No consideration has been given as to whether more than 10% of this total stock is fished for by fleets from other countries, as that information cannot be fully known until the STECF tables (which contain this data for other Member States) are published. These tables would still be incomplete, though, as they would not reflect the data for non-EU countries.

SAR RESULTS, 2016-2018

	SUPRA-REGION	GEAR	LENGTH	SAR_STOCK	TOT_WEIGHT	TOT_WEIGHT_STRATA	PERCENT
2016	NORTH ATLANTIC	PS	10-12	HOM.27.2A4A5B6A7A-CE-K8	481 364.40	2 226 804.27	21.62%
			24-40	HOM.27.2A4A5B6A7A-CE-K8	5 769 747.14	34 961 229.76	16.50%
	MEDITERRANEAN	DTS	24-40	HKE-37	708 296.30	5 647 283.31	12.54%
		PMP	12-18	PIL-GSA6	458 309.20	2 132 473.50	21.49%
		PS	12-18	PIL-GSA6	2 652 242.67	14 262 216.77	18.60%
			18-24	PIL-GSA6	4 513 012.71	23 353 172.71	19.33%
			24-40	PIL-GSA6	1 045 475.15	5 595 168.72	18.69%
2017	NORTH ATLANTIC	DTS	>40	COD-27.1-27.2	14 325 259.85	34 169 352.31	41.92%
	MEDITERRANEAN	PGO	12-18	SWO-37	727 009.27	1 087 853.14	66.83%
			18-24	SWO-37	754 125.48	1 157 553.98	65.15%
2018	NORTH ATLANTIC	DTS	>40	COD-27.1-27.2	13 143 354.33	32 956 438.36	39.88%
	MEDITERRANEAN	HOK-LLD	12-18	SWO-37	595 941.38	745 855.53	79.90%
			18-24	SWO-37	759 536.56	970 717.47	78.24%
	OFR	PS	>40	YFT-INDIAN-OCEAN	45 354 928.98	278 890 894.66	16.26%

2 - FLEET OPERATIONAL CAPABILITY INDICATORS

2. <u>A - INACTIVITY INDICATOR</u>

This indicator describes how intensively the vessels in a fleet segment are used. This is because inactive vessels constitute unused capacity and, as such, reduce overall technical efficiency.

This indicator refers to vessels that have not fished a single day throughout the year. They are classified by length and supra-region according to their registered method, which is the closest estimate to where they would have fished had they been active.

Under normal conditions, it can be expected that 20% of the registered fleet may be inactive due to repairs, conversions, pending sale, etc. If more than 20% is inactive, it indicates a possible imbalance.

2019		0-10	10-12	12-18	18-24	24-40	>40	TOTAL	TOTAL GT	TOTAL KW
NORTH ATLANTIC	Subtotal active	3 722	338	540	226	293	14	5 133	111 868.56	310 360.06
	INAC	434	15	36		19		504	4 439	16 219
	TOTAL	4 156	353	576	226	312	14	5 637	116 307.96	326 578.99
	% inactive	10.44	4.25	6.25	0.00	6.09	0.00	8.94	3.82	4.97
CANARY ISLANDS	Subtotal active	450	56	46		22		574	4 527	23 574
	INAC	140	19					159	629	3 454
	TOTAL	590	75	46		22		733	5 155.74	27 028.32
	% inactive	23.73	25.33	0.00		0.00		21.69	12.20	12.78
MOROCCO	Subtotal active			16				16	121	849
	INAC							0		
	TOTAL			16				16	120.90	848.72
	% inactive			0.00				0.00	0.00	0.00
MEDITERRANEA	Subtotal active	101	1 063	377	389	149		2 079	50 098	193 925
	INAC	60	205	41	16			322	2 342	14 520
	TOTAL	161	1 268	418	405	149		2 401	52 440.02	208 445.36
	% inactive	37.27	16.17	9.81	3.95	0.00		13.41	4.47	6.97
OTHER WATERS	Subtotal active					119	86	205	156 204	214 661
	INAC					22		22	6 822	10 586
	TOTAL					141	86	227	163 026.62	225 247.25
	% inactive					15.60	0.00	9.69	4.18	4.70
	INACTIVE	634	239	77	16	41	0	1 007	14 233	44 779
	TOTAL	4 907	1 696	1 056	631	624	100	9 014	336 930	787 300
	% inactive	12.92	14.09	7.29	2.54	6.57	0.00	11.17	4.22	5.69
	Active							8 007	322 818.27	743 369.44
	Inactive							1 007	14 232.97	44 779.20
	TOTAL							9 014	337 051.24	788 148.64

CHANGE (%) IN INACTIVE VESSELS, 2011-2019

	NORTH ATLANTIC								
	2011	2012	2013	2014	2015	2016	2017	2018	2019
0-10	16.80	15.00	13.92	12.55	13.54	12.15	11.80	11.75	10.44
10-12	4.07	4.50	3.89	4.28	3.67	3.63	4.21	6.59	4.25
12-18	4.13	4.22	4.36	4.77	3.65	4.39	4.28	6.04	6.25
18-24	3.21	3.40	1.88	1.15	1.56	0.41	1.23	0.00	0.00
24-40	5.38	4.75	4.42	6.32	3.85	5.90	4.17	7.21	6.09
>40	20.69	24.00	19.23	18.18	10.00	0.00	7.14	0.00	0.00
TOTAL	13.30	12.08	11.18	10.34	10.80	9.95	9.68	10.06	8.94

	MEDITERRANEAN								
	2011	2012	2013	2014	2015	2016	2017	2018	2019
0-6	66.94	63.00	54.18	53.54	51.10	48.10	44.10	43.82	37.27
6-12	19.28	18.53	16.97	14.78	14.05	15.13	15.28	19.15	16.17
12-18	5.07	5.15	5.29	6.51	6.01	9.07	8.35	12.33	9.81
18-24	2.20	2.29	2.81	3.09	2.10	1.92	1.43	5.31	3.95
24-40	2.11	1.63	5.52	2.84	3.61	1.90	1.25	0.00	0.00
>40									
TOTAL	18.89	17.58	15.60	14.24	13.28	13.80	13.07	16.25	13.41

	OTHER REGIONS								
	2011	2012	2013	2014	2015	2016	2017	2018	2019
0-10	35.11	34.29	26.44	24.35	22.88	20.78			
10-12	14.75	19.12	11.67	7.35	7.58	6.59			
12-18	8.70	16.42	8.22	6.25	3.53	8.06			
18-24	29.17	40.00	100.00	100.00	100.00	15.38	100.00		
24-40	13.82	11.17	15.64	13.94	14.47	12.24	10.85	15.15	15.60
>40	6.06	4.90	6.32	8.33	7.53	7.06	4.55	0.00	0.00
TOTAL	26.33	26.25	21.14	19.14	17.83	16.27	9.13	9.35	9.69

	CANARY ISLANDS		
	2017	2018	2019
0-10	22.37	22.73	23.73
10-12	6.25	23.08	25.33
12-18	6.52	0.00	0.00
18-24	100.00		
24-40	0.00	0.00	0.00
>40			
TOTAL	19.55	20.59	21.69

	TOTAL FLEET								
	2011	2012	2013	2014	2015	2016	2017	2018	2019
0-10	22.30	20.29	17.51	15.97	16.32	14.66	14.29	14.21	12.92
10-12	15.96	15.62	14.04	12.29	11.66	12.41	12.63	16.72	14.09
12-18	4.74	5.24	4.95	5.56	4.55	6.49	5.96	8.27	7.29
18-24	3.36	3.66	3.00	2.93	2.17	1.64	1.95	3.37	2.54
24-40	6.86	5.59	7.48	7.23	6.35	6.38	4.65	6.85	6.57
>40	9.38	8.66	9.09	10.17	7.96	5.88	4.90	0.00	0.00
TOTAL	16.37	15.23	13.49	12.38	12.23	11.68	11.34	12.57	11.17

A general improvement in the operational capability of the Spanish fishing fleet has been observed during the nine-year period from 2011-2019. Thus, despite the fact that in 2018 inactivity increased for almost all fishing grounds and vessel lengths, this year is still continuing in line with the trend that had been occurring since 2011. More specifically, from analysis of the data on inactivity by supra-region, we can highlight that:

The same thing is happening in the North Atlantic, with inactivity falling from 13.30% in 2011 to 8.94% in 2019.

This is also the case in the Mediterranean, though the high level of inactivity of the artisanal fleet is noteworthy, especially in the 0-10 m segment, where it stands at 37.27%.

The "Other Regions" supra-region saw a significant fall in inactivity from 2016 to 2017 due to the fact that 2017 was the first year that the regions of Morocco and the Canary Islands were separated from this region. However, the last three years have seen a slow but steady rise in inactivity.

In this respect, there is a high level of inactivity in the artisanal fleet in the Canary Islands region, exceeding 20%.

The indicators that work out to 0% indicate that all the vessels in that segment have been active. These segments were the 18-24 m and >40 m segments in the North Atlantic, the 24-40 m segment in the Mediterranean, the >40 m segment in Other Regions and the 12-18 m and 24-40 m segments in the Canary Islands.

In contrast, where there is no indicator for a segment, there have been no vessels in that length segment (either because they do not exist or because they have been grouped in other segments due to statistical confidentiality).

The following graphs show fleet inactivity:
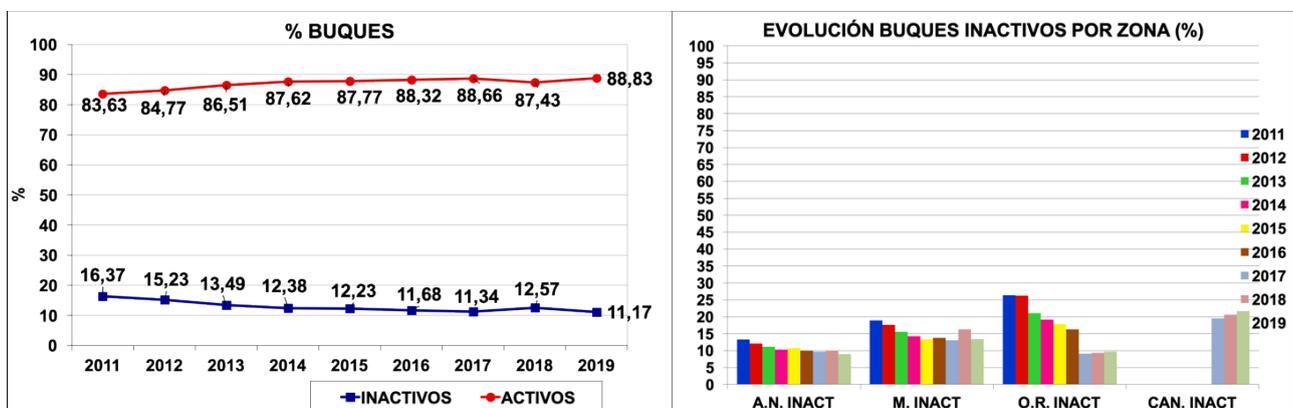
2. B - FLEET UTILISATION INDICATOR

This indicator measures the ratio between a fleet's potential maximum effort and that which it actually carries out, providing a quick calculation of fleet utilisation.

The "Guidelines, COM 2014" allow for this value to be calculated in two versions.

In Spain, the **theoretical maximum indicator** has been calculated following the recommendations given by the JRC on calculating the maximum number of days, using data from the Data Collection Framework, which suggests taking the average of the ten vessels with the most activity (taking into account the distribution of the days at sea by stratum).

We believe that this is the most representative indicator for our fleet as considering ten vessels instead of only one partly prevents exceptional and unrealistic cases from presenting a distorted picture of the activity in a segment, more so if we take into account that there are many fleets subject to effort limits on fishing days, as well as *inter alia* temporary stoppages and biological closures, or weather conditions.

However, in Spain, a table is also provided showing the indicator that uses 220 as the maximum number of days and is the indicator obtained by STECF when there is no calculation data available.

Calculation:

Data on days at sea for each vessel over 12-15 metres in length were obtained from the fisheries monitoring centre (for those with the device known as a blue box). Therefore, the survey accounts not only for effective fishing days but also for the days after a vessel leaves port, as days spent navigating are considered fishing activity.

However, for vessels not required to carry a blue box (those less than 10 metres in length), the number of fishing days was calculated by using the days with catch declarations (when available) or by sales notes. Although this calculation is not exact, given that a single sales note may correspond to two or three fishing days, it is the most precise figure that could be produced for the artisanal fleet.

In addition, to obtain a value that reflects the real trend of the segment, the weighted average of the last three years was calculated, granting greater weight to the most recent year (2018) than earlier years.

Interpretation

To assess the results, we consider that indicator values greater than or equal to 0.9 represent fleets with a highly homogeneous level of activity. Values below 0.7 indicate an inefficient fleet, as the fishing effort deployed is significantly below the maximum effort it could exert. Therefore, values between 0.7 and 0.9 reflect a moderately homogeneous fleet, becoming more homogeneous as the indicator increases.

The indicators calculated for 2016-2018 are shown in the following table

| | Stratum | Gear | Length | 2016 | 2017 | 2018 | 2016-2018 | | INDICATOR FOR 220 MAXIMUM DAYS | | | |
									2016	2017	2018	2016-2018
North Atlantic	DTS	Bottom trawl nets	3	0.88	0.86	0.85	0.86		0.82	0.80	0.81	0.81
			4	0.88	0.82	0.81	0.82		0.88	0.83	0.84	0.84
			5	0.82	0.81	0.81	0.81		1.19	1.18	1.18	1.18
			6	0.71	0.83	0.70	0.74		0.95	1.09	0.81	0.91
	PS	Purse seines	2	0.78	0.74	0.85	0.81		0.45	0.43	0.39	0.41
			3	0.72	0.66	0.68	0.68		0.71	0.65	0.60	0.63
			4	0.85	0.79	0.78	0.80		0.87	0.81	0.73	0.77
			5	0.84	0.83	0.80	0.82		0.84	0.83	0.74	0.78
	DFN	Gillnets	2	0.72	0.69	0.66	0.68		0.71	0.68	0.63	0.66
			3	0.76	0.74	0.74	0.74		0.84	0.82	0.80	0.81
			4	0.90	0.90	0.84	0.86		1.01	1.01	0.94	0.97
	HOK	Hooks	2	0.68	0.61	0.56	0.59		0.51	0.47	0.44	0.46
			3	0.70	0.63	0.63	0.64		0.75	0.68	0.63	0.67
			4	0.77	0.76	0.76	0.76		0.89	0.86	0.74	0.80
	HOK-LLD	Surface longlines	5	0.69	0.70	0.88	0.80		0.79	0.77	0.58	0.67

Region	Code	Gear	N									
			4	1.00	0.99	1.12	1.07		1.00	0.99	0.94	0.96
			5	0.97	0.98	0.93	0.95		1.33	1.38	1.39	1.38
	FPO	Pots	2	0.83	0.75	0.73	0.75		0.77	0.71	0.69	0.70
			3	0.88	0.77	0.80	0.80		0.78	0.69	0.74	0.73
	DRB	Dredges	1	0.48	0.52	0.49	0.50		0.50	0.54	0.52	0.52
			2	0.85	0.74	0.63	0.70		0.54	0.47	0.26	0.36
			3	0.77	0.63	0.81	0.75		0.57	0.47	0.27	0.37
		Polyvalent gear	1	0.44	0.44	0.42	0.43		0.50	0.46	0.44	0.46
			2	0.64	0.58	0.59	0.59		0.52	0.48	0.46	0.48
			3	0.83	0.82	0.70	0.75		0.82	0.81	0.61	0.70
			5	0.90	0.95	0.88	0.90		1.23	1.31	1.29	1.29
Mediterranea	DTS	Bottom trawl nets	2	0.82	0.69	0.78	0.76		0.73	0.60	0.60	0.62
			3	0.81	0.80	0.80	0.80		0.86	0.85	0.86	0.85
			4	0.77	0.75	0.74	0.75		0.92	0.91	0.92	0.92
			5	0.83	0.79	0.78	0.79		0.95	0.91	0.93	0.93
	PS	Purse seines	2	0.80	0.76	0.75	0.76		0.72	0.68	0.61	0.65
			3	0.83	0.85	0.87	0.86		0.97	1.00	0.97	0.98
			4	0.89	0.87	0.87	0.87		1.06	1.04	1.02	1.03
			5	0.48	0.51	0.48	0.49		0.51	0.55	0.51	0.52
	DFN	Gillnets	2	0.71	0.71	0.65	0.68		0.69	0.68	0.61	0.64
			3	0.81	0.80	0.79	0.79		0.79	0.77	0.75	0.76
	HOK	Hooks	2	0.62	0.51	0.54	0.54		0.54	0.44	0.37	0.42
			3	0.68	0.68	0.57	0.62		0.58	0.57	0.43	0.49
	HOK-LLD	Surface longlines	3	0.71	0.70	0.78	0.75		0.68	0.66	0.67	0.67
			4	0.82	0.82	0.87	0.85		0.81	0.80	0.82	0.81
	FPO	Pots	2			0.79	0.79				0.59	0.59
			3	1.24	1.02	1.04	1.06		1.14	0.98	1.14	1.09
	DRB	Dredges	2	0.65	0.67	0.56	0.60		0.43	0.44	0.35	0.39
			3	0.99	0.89	0.94	0.93		0.88	0.77	0.80	0.80
		Polyvalent gear	1	0.38	0.38	0.40	0.39		0.33	0.34	0.34	0.34
			2	0.49	0.51	0.44	0.47		0.51	0.50	0.43	0.46
			3	0.90	0.83	0.87	0.86		0.86	0.80	0.53	0.65
Other Regions	DTS	Bottom trawl nets	5	0.85	0.81	0.77	0.79		1.30	1.24	1.23	1.24
			6	0.84	0.88	0.81	0.83		1.24	1.30	1.15	1.21
	PS	Purse seines	6	0.96	0.89	0.92	0.92		1.46	1.36	1.33	1.36
	HOK	Hooks	5	0.79	0.72	0.96	0.87		1.12	1.01	1.19	1.13
	HOK-LLD	Surface longlines	5	0.86	0.90	0.89	0.89		1.38	1.45	1.41	1.42
			6	0.95	0.88	0.95	0.93		1.52	1.41	1.53	1.49
Canary Islands	PS	Purse seines	3		0.68	0.74	0.72			0.60	0.58	0.59
	HOK	Hooks	2		0.58	0.55	0.56			0.29	0.30	0.30
			3		0.70	0.69	0.69			0.60	0.52	0.55
			5		0.92	0.91	0.92			0.90	0.92	0.91
	PMP	Polyvalent active and passive gear	1		0.32	0.32	0.32			0.35	0.35	0.35
	FPO	Pots	2		0.92	0.71	0.78			0.45	0.34	0.37
MA	HOK	Hooks	3		1.12	1.18	1.16			0.88	0.41	0.56

3 - ECONOMIC INDICATORS

3. A - CR/BER

This indicator measures short-term economic profitability. It compares current revenue (CR) with break-even revenue (BER), which is the revenue needed to cover the fixed and variable costs incurred in carrying out the activity.

Calculation:

CR (current revenue) = income from fishing activity + income from other vessel operations

BER = fixed costs / (1 - (variable costs / current revenue))

Where:

– **Fixed costs** = depreciation + non-variable costs + opportunity costs

Opportunity cost of capital is not included for the calculation as it assesses long-term profitability, which is already assessed in the RoFTA.

- **Variable costs** = crew wages and salaries + unpaid labour + repair and maintenance costs + energy costs + other variable costs.

The following data are needed for the calculation:

- Current revenue (not including subsidies), which is comprised of:
  o Income from fishing activity
  o Income from other vessel operations, such as tourism, recreational fishing, etc.
- Fixed costs, which are divided into:
  o Annual depreciation or amortisation
  o Non-variable costs, including:
    ▪ Machinery and equipment rental
    ▪ Insurance premiums
    ▪ Repair and maintenance of fixed tangible assets on land
    ▪ Water, gas, electricity (land)
    ▪ Commissions (land)
    ▪ Transport and freight (land)
    ▪ Office material (land)
    ▪ Communications (land)
    ▪ Legal and accounting advice, IT, advertising (land)
    ▪ Guild and/or associations fees

- Travel and subsistence allowances for land-based personnel

- Other land expenses

- Other taxes on production

- Total cost of land-based salaried personnel

- Variable costs, which comprise:

    o Crew wages and salaries

    o Unpaid labour (imputed value of unpaid labour)

    o Costs of spare parts, vessel repair and maintenance

    o Energy costs (fuel)

    o Other variable costs, which include:

        - Bait, salt, ice, containers and packaging

        - Supplies

        - Fishing gear

        - Lubricants

        - Communications

        - Transport and freight

        - Travel and subsistence allowances

        - Port charges

        - Port fees

        - Guild and/or association fees

        - Licences

        - Other vessel expenses

All these variables are taken directly from the Economic Survey of Marine Fisheries (which is produced by the Ministry of Agriculture, Food and the Environment) except for one: **imputed value of unpaid labour.** The statistics team calculates this value by comparing the hours of non-salaried labour to the mean hours of salaried workers.

Interpretation:

If the value is greater than one, sufficient revenue was generated to cover costs. The greater the value, the more profitable the sector will be. Conversely, the stratum is not economically sustainable if the value is less than one, as it indicates that insufficient revenue was generated to cover the costs incurred. If the value of the indicator is negative, it means that variable costs exceeded generated revenue. These cases are marked in dark red. Finally, indicator values close to one (0.9-1.0), indicate a certain degree of economic balance.

3. B - RoFTA (%)

This indicator measures the long-term economic profitability of the sector. It compares the return on investment with the return that would have been gained if the investment had been made at a long-

term risk-free interest rate (TRP). As a comparison, we used ten-year government bonds with convergence criteria, taken from the Bank of Spain Statistical Bulletin. To avoid fluctuations (due mainly to the financial crisis), instead of using the value of the bond in a given year, the arithmetic mean of the five years prior to the year of study was used. Below is the TRP obtained for the five years under study:

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
TRP	3.94	3.99	3.97	4.14	4.47	4.78	4.82	4.56	4.06	3.25	2.4

Calculation:

RoFTA (%) = (net profit / capital value) * 100

Where:

- **Net profit** = (income from fishing activity + other income from vessel operations) - (crew wages and salaries + unpaid labour + energy costs + repair and maintenance costs + other variable costs + non-variable costs + depreciation).

All the variables used to calculate these two indicators are taken directly from the Economic Survey of Marine Fisheries (which is produced by the Ministry of Agriculture, Food and the Environment), except for one: **capital value.** The statistics team calculates this value by following the perpetual inventory method (PIM) proposed in the capital evaluation report from study No FISH/2005/03.

(In Spain, we calculate the RoFTA and not the ROI because we cannot estimate the value of the fishing rights).

Interpretation:

The sector is deemed profitable when the RoFTA is higher than this interest rate, indicating that a greater return is being generated by the fishing activity than would have been obtained by investing the capital.

When the RoFTA is negative this means that the net profit is negative as revenue is less than total costs.

Finally, there are some cases in which the RoFTA is positive yet lower than the TRP. These strata do make a profit but are not as profitable as the TRP.

Special cases:

We encountered some difficulties in calculating the indicators:

o   The existence of strata with missing data, which distorted the value obtained and even made it impossible to calculate. These data include depreciation and non-variable costs. Until this year, they had been imputed using the mean for the other years. However, this year we decided not to impute these values so as to use the same data as we have provided to the Commission.

o   There are also several strata that do not have personnel costs, specifically, the value of unpaid

personnel. In these cases, no value has been assigned either, since it has been verified that there is a great degree of variability in terms of the personnel of the stratum across the other years, both in terms of the number and type of people (paid and unpaid) and in terms of costs.

o Finally, we have also found several segments where the "other income" variable has a value of zero. However, given the high level of variability of this data from one year to the next, it has been impossible for us to impute the value. In contrast, this fact has meant that, this year, several segments have a much worse indicator value than in other years, as their income is much lower than in previous series.

o Negative results are due to variable costs exceeding current income. This may be because either current income is too low or because some of the variable cost components are too high.

Following a detailed analysis of the data, it has become clear that in our case these negative values are primarily due to low income. Thus, this year, the strata that have a negative indicator value are: in the Atlantic region, HOK4; in the Mediterranean, PMP1, DRB2 and DRB3; in Other regions, DTS5; in the Canary Islands, HOK5 and PMP1; and finally the hooks stratum, length 3 m, in the Morocco region. We have been able to verify that the income from fishing activity is down (compared to last year's data) by an amount ranging from 30% in the AHOK4 or BDRB2 strata, for example, to 65% in the DRB3 stratum in the Mediterranean and the PMP1 stratum in the Canary Islands, to a high of 72% such as in the BPMP1 stratum.

o Based on this data, we can state that within the AHOK4 segment, one of the reasons for the decrease in income could be due to the absence of the "other income" variable.

o In respect of the BPMP1 segment, it should be noted that the 73% drop in income compared to 2017 could be due to the figure for 2017 being incorrect, as the values for this year are more similar to those of 2016, although they are still lower.

o It should be noted that, despite the number of vessels in the BDRB2 segment rising from 39 to 56, the income figure fell by 32%. In the BDRB3 segment, income fell by 65%, while the number of vessels decreased to 13 compared to the 14 from the previous year. This drop is due to the fact that the statistical data do not reflect reality, given that they were extremely high for 2017 and very low for 2018, when compared to the value of catches landed.

o In the 2016 fleet report, it was noted that the CDTS5 stratum experienced a rise that was due to a high increase in statistical income. In 2018 there was a sharp decline in statistical income, which corresponds to the actual catches landed, leading this fleet to an economic imbalance.

o In view of the fact that the Canary Islands region (separated from the Other Regions) has only been under study for two years, it will be necessary to wait for a series of result for at least four years before being able to evaluate the results (Spain presents them in the action plan); however, the economic imbalance is confirmed for vessels using hooks in the 5 m length segment and for artisanal fleets using polyvalent gear and pots.

o In Morocco, income has fallen by 72% compared to 2017, due to the fact that the number of vessels has also fallen by 58%, due to the end of this agreement in the middle of the year.

The indicators obtained in the last three years are presented in the following table, together with their weighted average, so as to obtain a value that reflects the real trend of the segments, assigning a greater weighting to the latest year (2018) than to previous years:

Stratum	Gear	Length	CR/BER					RoFTA (%)			
			2016	2017	2018	2016-2018		2016	2017	2018	2016-2018
DTS	Bottom trawl nets	3	2.81	3.99	2.61	3.03		165.50	39.93	53.74	65.76
		4	4.01	2.76	4.49	3.93		303.37	81.37	92.36	119.36
		5	3.42	2.40	1.14	1.82		72.24	73.59	6.95	35.32
		6	3.56	3.07	1.53	2.26		625.05	306.34	28.16	192.91
PS	Purse seines	2	5.08	-1.42	1.08	0.93		129.58	-84.68	1.85	-4.63
		3	7.23	3.00	2.42	3.27		132.38	85.42	58.50	76.74
		4	5.40	1.96	1.64	2.27		82.08	48.16	16.35	34.83
		5	9.75	4.12	4.07	4.89		146.08	82.53	86.00	93.59
DFN	Gillnets	2	16.01	0.66	3.23	4.32		169.75	-12.24	78.90	65.84
		3	3.89	4.33	1.10	2.42		54.88	92.99	2.74	35.97
		4	0.79	1.82	1.26	1.35		-10.36	21.07	9.86	10.17
HOK	Hooks	2	3.74	1.08	5.60	4.04		145.65	2.38	138.14	100.42
		3	4.12	3.58	2.46	3.01		41.19	81.07	38.79	51.21
		4	1.71	2.06	-0.23	0.70		15.31	43.76	-33.24	-4.30
		5	13.14	15.38	2.86	7.90		253.80	152.18	25.63	94.38
HOK-LLD	Surface longlines	4	8.75	10.29	1.79	5.21		292.50	272.27	27.34	135.20
		5	3.95	2.97	2.54	2.86		60.58	54.31	38.78	46.33
FPO	Pots	2	7.35	3.44	2.31	3.35		51.40	60.43	44.43	50.00
		3	5.43	6.40	0.86	3.09		26.14	65.07	-5.78	19.02
DRB	Dredges	1	11.56	1.96	5.41	5.30		93.28	12.69	46.35	43.44
		2	14.45	2.69	4.52	5.41		89.83	27.85	17.50	30.79
		3	4.12	2.24	2.69	2.76		42.87	18.30	18.05	21.67
Polyvalent gear		1	2.52	3.10	3.48	3.23		32.57	41.46	88.99	67.35
		2	1.97	6.20	7.26	6.20		18.56	199.13	62.01	94.98
		3	6.44	2.59	1.38	2.45		51.37	41.88	13.99	27.30
		5	3.35	2.19	1.56	1.99		164.86	92.39	34.76	69.81

Stratum: North Atlantic

Region	Code	Gear	No.								
Mediterranean	DTS	Bottom trawl nets	2	9.14	1.85	2.51	3.27	62.63	41.88	49.23	49.05
			3	5.38	2.57	3.27	3.37	73.14	64.12	84.98	77.33
			4	3.75	1.91	1.96	2.20	47.81	38.86	47.33	44.98
			5	3.19	1.32	1.21	1.53	45.30	15.79	9.88	16.63
	PS	Purse seines	2	9.11	30.89	0.46	10.39	107.68	194.05	-29.40	54.02
			3	3.65	3.25	1.83	2.50	70.70	62.72	42.00	52.02
			4	4.02	2.26	2.90	2.87	49.02	42.97	64.80	56.31
			5	2.56	2.78	5.15	4.10	100.25	115.34	175.47	147.54
	DFN	Gillnets	2	3.54	1.28	1.47	1.71	64.24	10.57	7.55	16.51
			3	1.41	1.55	0.83	1.12	21.20	27.85	-7.06	6.95
	HOK	Hooks	2	13.17	-0.49	2.08	2.93	221.16	-57.99	33.94	34.42
			3	3.52	3.80	1.46	2.42	12.79	40.66	22.45	26.27
	HOK-LLD	Surface longlines	3	5.26	1.88	1.79	2.31	87.83	41.44	58.20	57.64
			4	2.67	1.99	2.94	2.63	42.13	45.31	68.49	58.10
	FPO	Pots	2			0.20	0.20			-39.85	-39.85
			3	6.16	1.55	1.42	2.13	318.41	26.17	26.89	68.33
	DRB	Trawl nets and dredgers	2	1.11	1.16	-9.33	-4.84	3.19	7.66	-69.54	-37.09
			3	3.01	1.11	-1.68	-0.21	22.93	1.74	-61.67	-31.47
		Polyvalent gear	1	3.31	15.51	-36.60	-16.01	32.64	267.14	-73.11	39.21
			2	8.69	1.32	1.40	2.42	126.67	15.29	24.50	36.47
			3	3.22	1.77	1.26	1.68	52.49	11.59	5.90	14.18
Other Regions	DTS	Bottom trawl nets	5	2.87	1.01	-0.39	0.47	112.40	0.76	-124.48	-54.86
			6	1.89	2.30	3.39	2.87	160.97	198.13	177.53	181.05
	PS	Purse seines	6	2.30	2.32	1.51	1.85	61.78	100.37	50.52	66.37
	HOK	Hooks	5	3.03	4.78	3.92	4.04	79.86	170.63	162.57	153.06
	HOK-LLD	Surface longlines	5	2.83	2.16	0.74	1.44	96.66	62.74	-17.95	21.48
			6	1.88	2.53	2.11	2.20	90.02	65.50	47.06	58.47
Canary Islands	PS	Purse seines	3		2.61	4.78	4.05		156.85	78.27	104.46
	HOK	Hooks	2		7.24	3.19	4.54		173.10	81.72	112.18
			3		6.60	1.77	3.38		136.16	21.95	60.02
			5		0.36	-0.77	-0.40		-30.42	-53.25	-45.64
	PMP	Polyvalent active and passive gear	1		0.91	-2.96	-1.67		-4.50	-87.20	-59.63
	FPO	Pots	2		0.45	2.12	1.56		-39.56	35.30	10.35
MA	HOK	Hooks	3		4.06	-5.04	-2.01		29.18	-56.15	-27.70

3. C - NVA/FTE

This indicator reflects net value added, or unit produced per worker. In other words, it is the approximate contribution to the sector per full-time employee. It therefore measures the competitiveness of the sector. It can also be interpreted as an indicator of the workers' standard of living or social well-being if it can be confirmed that an increase in productivity is accompanied by a wage increase.

Calculation:

NVA = (income from fishing activity + other income from vessel operations) - (energy costs + repair and maintenance costs + other variable costs + non-variable costs + depreciation).

FTE is the unit of work that a full-time employee carries out in one year.

Interpretation:

An increase in its value can be due to two main reasons, or a combination of both:
- If the number of FTE workers remains the same, there is an increase in income and/or a decrease in production costs.
- If both income and costs remain stable, there is a decrease in the number of workers.

From an economic point of view, both options are considered valid; however, from a social point of view, the fact that a company increases its profits at the cost of reducing the number of employees implies an increase in the work pressure on employees, who must make more effort (due to the decrease in the number of contracted personnel) to obtain the same benefit. Therefore, this indicator and its trend must be studied with caution, while also analysing the FTE value.

Special cases:

As we are using the same data as when calculating the aforementioned economic indicators, the strata with missing data are the same.

It should be noted that, in this table, the strata OFR-DTS5 has negative values as income is lower than total costs (without taking into account costs per worker).

The indicators obtained for 2016-2018 are:

| | Stratum | Gear | Length | NVA/FTE | | | |
				2016	2017	2018	2016-2018
North Atlantic	DTS	Bottom trawl nets	3	42 227	19 049	26 712	26 739
			4	50 571	29 449	31 044	33 378
			5	63 466	60 264	43 388	51 078
			6	115 513	126 079	78 354	97 298
	PS	Purse seines	2	14 760	15 411	33 557	25 687
			3	26 389	25 336	27 898	26 951
			4	28 601	27 801	23 981	25 732
			5	50 251	41 842	43 680	44 094
	DFN	Gillnets	2	20 933	11 788	37 044	27 526
			3	20 313	26 225	16 204	19 654
			4	18 095	23 449	20 802	21 172
	HOK	Hooks	2	24 113	10 787	20 858	18 446
			3	18 364	31 435	21 133	23 681
			4	20 456	24 822	12 851	17 357
			5	35 696	40 501	19 607	27 875
	HOK-LLD	Surface longlines	4	50 410	54 419	26 073	37 648
			5	37 763	39 539	27 331	32 309
	FPO	Pots	2	18 457	23 751	16 950	19 108
			3	17 009	34 271	13 768	20 089
	DRB	Trawl nets and dredgers	1	12 813	18 523	24 666	21 217
			2	41 097	11 953	29 264	26 008
			3	17 483	16 688	27 490	22 974
		Polyvalent gear	1	16 181	15 588	19 854	18 110
			2	12 863	47 990	28 169	31 646

Region	Code	Gear					
			3	21 730	24 969	29 532	27 114
			5	68 603	61 009	46 767	53 955
Mediterranean	DTS	Bottom trawl nets	2	31 567	30 099	24 998	27 394
			3	34 593	29 691	31 713	31 547
			4	29 068	29 889	31 127	30 479
			5	38 761	28 519	29 928	30 788
	PS	Purse seines	2	15 141	16 895	27 322	22 603
			3	18 869	19 334	21 272	20 375
			4	19 322	23 599	31 652	27 590
			5	67 629	73 282	112 960	95 147
	DFN	Gillnets	2	23 468	18 933	13 335	16 382
			3	16 942	15 294	16 908	16 452
	HOK	Hooks	2	39 146	11 857	19 298	20 007
			3	28 640	27 985	23 315	25 410
	HOK-LLD	Surface longlines	3	24 102	24 386	34 831	30 314
			4	25 459	43 045	34 374	35 578
	FPO	Pots	2			9 957	9 957
			3	40 038	26 151	26 042	28 073
	DRB	Dredges	2	22 166	14 563	9 592	12 809
			3	29 110	15 593	16 245	17 897
		Polyvalent gear	1	19 071	11 131	12 005	12 765
			2	22 353	22 970	19 789	21 064
			3	32 863	19 456	22 279	22 984
Other Regions	DTS	Bottom trawl nets	5	21 133	14 088	-1 511	6 181
			6	43 052	47 646	65 516	57 201
	PS	Purse seines	6	94 305	119 866	67 348	86 204
	HOK	Hooks	5	43 818	30 736	34 476	34 742
	HOK-LLD	Surface longlines	5	31 746	28 493	14 725	21 090
			6	26 553	39 144	27 064	30 442
Canary Islands	PS	Purse seines	3		46 640	23 281	31 068
	HOK	Hooks	2		46 397	38 606	41 203
			3		32 291	31 495	31 760
			5		19 480	10 741	13 654
	PMP	Polyvalent active and passive gear	1		26 698	19 484	21 889
	FPO	Pots	2		5 744	31 609	22 987
MA	HOK	Hooks	3		24 035	24 805	24 548

2018 FINAL INDICATOR

Stratum	Gear	Length	CR/BER	RoFTA (%)	TECHNICAL 220 INDICATOR	SHI	SAR	OVERALL INDICATOR
NAO	DTS — Bottom trawl nets	3	2.61	53.74	0.81	< 40%		3
		4	4.49	92.36	0.84	< 40%		3
		5	1.14	6.95	1.18	1.32		2
		6	1.53	28.16	0.81	1.54	COD-27	2
	PS — Purse seines	2	1.08	1.85	0.39	< 40%		2
		3	2.42	58.50	0.60	< 40%		2
		4	1.64	16.35	0.73	< 40%		3
		5	4.07	86.00	0.74	0.73		3
	DFN — Gillnets	2	3.23	78.90	0.63	< 40%		2
		3	1.10	2.74	0.80	1.28		2
		4	1.26	9.86	0.94	1.48		2
	HOK — Hooks	2	5.60	138.14	0.44	1.37		2
		3	2.46	38.79	0.63	1.36		2
		4	-0.23	-33.24	0.74	0.97		1
		5	2.86	25.63	0.58	0.76		3
	HOK-LLD — Surface longlines	4	1.79	27.34	0.94	0.84		3
		5	2.54	38.78	1.39	< 40%		3
	PGP — Polyvalent passive gear	5	1.56	34.76	1.29	0.81		3
	PMP — Polyvalent active and passive gear	1	3.48	88.99	0.44	< 40%		2
		2	7.26	62.01	0.46	< 40%		2
		3	1.38	13.99	0.61	1.05		2
	FPO — Pots	2	2.31	44.43	0.69	< 40%		2
		3	0.86	-5.78	0.74	< 40%		1
	DRB — Dredges	1	5.41	46.35	0.52	< 40%		2
		2	4.52	17.50	0.26	< 40%		2
		3	2.69	18.05	0.27	< 40%		2
MBS	DTS — Bottom trawl nets	2	2.51	49.23	0.60	< 40%		2
		3	3.27	84.98	0.86	< 40%		3
		4	1.96	47.33	0.92	3.57		2
		5	1.21	9.88	0.93	3.26		2
	PS — Purse seines	2	0.46	-29.40	0.61	1.35		1
		3	1.83	42.00	0.97	1.47		2
		4	2.90	64.80	1.02	1.47		2
		5	5.15	175.47	0.51	0.77		2
	DFN — Gillnets	2	1.47	7.55	0.61	< 40%		2
		3	0.83	-7.06	0.75	< 40%		1
	HOK — Hooks	2	2.08	33.94	0.37	< 40%		2
		3	1.46	22.45	0.43	0.83		3
	HOK-LLD — Surface longlines	3	1.79	58.20	0.67	1.71	SWO-37	2
		4	2.94	68.49	0.82	1.72	SWO-37	2
	PMP — Polyvalent active and passive gear	1	-36.60	-73.11	0.34	< 40%		1
		2	1.40	24.50	0.43	< 40%		2
		3	1.26	5.90	0.53	< 40%		2
	FPO — Pots	2	0.20	-39.85	0.59	< 40%		1
		3	1.42	26.89	1.14	< 40%		3
	DRB — Dredges	2	-9.33	-69.54	0.35	< 40%		1
		3	-1.68	-61.67	0.80	< 40%		1
OFR	DTS — Bottom trawl nets	5	-0.39	-124.48	1.23	< 40%		2
		6	3.39	177.53	1.15	< 40%		3
	PS — Purse seines	6	1.51	50.52	1.33	1.07	YFT	2
	HOK — Hooks	5	3.92	162.57	1.19	< 40%		3
	HOK-LLD — Surface longlines	5	0.74	-17.95	1.41	< 40%		2
		6	2.11	47.06	1.53	< 40%		3

	Code	Gear							
IC	PS	Purse seines	3	4.78	78.27	0.58	< 40%		2
	HOK	Hooks	2	3.19	81.72	0.30	0.58		3
			3	1.77	21.95	0.52	1.08		2
			5	-0.77	-53.25	0.92	1.42		1
	PMP	Polyvalent active and passive gear	1	-2.96	-87.20	0.35	< 40%		1
	FPO	Pots	2	2.12	35.30	0.34	< 40%		2
MA	HOK	Hooks	3	-5.04	-56.15	0.41	< 40%		1

H. ANNEX VIII: SUMMARY OF INDICATORS OVER 2016-2018. OVERALL INDICATORS

OVERALL INDICATOR AND WEIGHTING

The following calculations are made to assess the balance of each fleet segment in the action plan:

1. **Annual overall indicator**: this makes it possible to see the annual trend for each fleet segment.
2. **Weighted balance indicator (balance/imbalance)** - Weighted average over 2016-2018: this determines, for each fleet segment, the situation of the balance between the fishing capacity of the segment and the fishing opportunities of the fishing ground in which it operates.

1. **Annual overall indicator**.

This indicator is the result of the weighting of the **partial indicators,** which include two economic indicators (CR/BER and RoFTA (%)), one technical indicator (fleet activity) and one biological indicator (SHI).

It is obtained via the following process:

Step 1 <u>Standardisation of the results of economic, technical and biological indicators.</u>

Each of these partial indicators is measured using a different scale. In order to weight them, their results are standardised to a scale of 1, 2 or 3, in accordance with the following scheme:

- Value 1 (red) indicates a clear imbalance for the partial indicator

- Value 2 (yellow) indicates a relative imbalance for the partial indicator

- Value 3 (green) indicates a balance for the partial indicator

Step 2 <u>Determination of the atypical nature of the result of the partial indicators</u>.

We used a box plot to determine outliers in the data series for each partial indicator. The aim is to weight the results of each partial indicator to provide a lower weighting for outlying values.

To that end, it is first necessary to take the median, which represents the midpoint of a data series, and the quartiles representing the lowest and highest 25% of the values.

The data series is divided into three segments, assigning a lower weighting to the values furthest from a normal distribution:

- $[Q_1 - 1.5 \ast IC, Q_3 + 1.5 \ast IC]$ The values in this interval are concentrated around the central point of the distribution. We assigned them a value of 3.

- $(Q_3 + 1.5 \ast IC, Q_3 + 3 \ast IC]$ and $[Q_1 - 3 \ast IC, Q_1 - 1.5 \ast IC)$ The mild outliers are located in these intervals; in other words, the values that stray from the central point of the distribution but are accounted for in the study. We assigned them a value of 2.

- $> Q_3 + 3 \ast IC$ and $< Q_1 - 3 \ast IC$. Extreme outliers are located in these sections, which are those values that deviate significantly from the centre of the distribution. We assigned them a value of 1.

Step 3 <u>Calculation of the annual overall indicator for each fleet segment</u>

The result of each partial indicator for each fleet segment in Step 1 (values 1, 2 and 3) is multiplied by the weighting in step 2 (3, 2 and 1 for the indicators, with the result being divided by the sum of the

weighted values:

$$\text{Final indicator} = \frac{\text{CRInd/BER*WeightedCR/BER} + \text{TechInd*WeightedTech} + \text{RoFTAInd*WeightedRoFTA} + \text{BioInd*WeightedBio}}{\text{WeightedCR/BER} + \text{WeightedRoFTA} + \text{WeightedTech} + \text{WeightedBio}}$$

In this manner, one of the following results is obtained for the **annual overall indicator for each fleet segment**:

- Green, if the result was 3: balance
- Yellow, if the result was 2: relative imbalance
- Red, if the result was 1: imbalance

Therefore, this indicator shows the situation concerning the balance/imbalance of each segment, taking into account the data obtained in a single year.

In view of the fact that these indicators can undergo significant annual variations due to specific situations affecting the fleet, resources or the statistical study itself, the assessment of the situation concerning the imbalance of fleet segments is carried out using data from the most recent three years, in accordance with the Guidance provided by the European Commission. To that end, a balance indicator is calculated as described in the following section.

2. **Balance indicator (balance/imbalance)** - **Weighted average over 2016-2018**

In the 2020 action plan, the data corresponding to the years **2016, 2017 and 2018** have been taken into consideration for studying whether each segment was in balance or imbalance.

This indicator is calculated based on the weighted values of the partial indicators (the two economic indicators, the technical indicator and the biological indicator) for each fleet segment, obtained during the three-year study period.

First, the weighted average is calculated for the partial indicators (the two economic indicators, the technical indicator and the biological indicator) for the three years of the study period. The weighting is carried out assigning a value of 4 to 2018, 2 to 2017 and 1 to 2016, in accordance with the following formula:

$$\text{Weighted average indicator} = \frac{\text{CR/BER 2016*1 + CR/BER 2017*2 + CR/BER 2018*4}}{7}$$

In this way, the aim is to allocate greater importance to the most recent data as opposed to what happened in previous years.

Once the weighted partial indicators have been obtained, steps 1, 2 and 3 of the previous section are followed to obtain the indicator for the balance (balance/imbalance) of each fleet segment.

The indicators obtained for 2011-2018 are:

Stratum	Gear	Length	OVERALL INDICATOR							
			2011	2012	2013	2014	2015	2016	2017	2018
North Atlantic										
DTS	Bottom trawl nets	3	3	3	1	1	3	3	3	3
		4	2	1	3	2	3	3	3	3
		5	2	3	1	3	2	2	2	2
		6	2	3	2	3	3	3	3	2
PS	Purse seines	2	2	1	3	3	2	3	1	2
		3	2	2	2	2	2	3	2	2
		4	2	2	1	1	3	3	3	3
		5	3	3	3	3	3	3	2	3
DFN	Gillnets	2	2	1	1	1	3	3	1	2
		3	2	1	1	2	1	3	3	2
		4	3	2	2	2	2	1	2	2
		5		3						
HOK	Hooks	1		3						
		2	2	1	1	2	2	2	2	2
		3	1	1	2	2	2	2	2	2
		4	1	2	2	2	3	2	2	1
		5	2	3	2	1	1	2	3	3
HOK-LLD	Surface longlines	4				3	3	3	3	3
		5				3	3	3	3	3
FPO	Pots	2	1	1	1	1	3	3	3	2
		3	1	1	1	1	3	3	2	1
DRB	Dredges	1	2	1	1	1	2	2	2	2
		2	1	2	3	3	2	3	2	2
		3	1	3	3	1	3	3	2	2
Polyvalent gear		1	1	2	1	1	2	2	2	2
		2	2	1	1	2	2	2	2	2
		3	2	1	3	1	3	2	2	2
		4	3		2					
		5	3		3	2	3	3	3	3
Mediterranean										
DTS	Bottom trawl nets	2	3	3	3	3	3	3	2	2
		3	1	3	1	3	3	3	3	3
		4	1	2	2	2	2	2	3	2
		5	1	1	1	2	2	2	3	2
PS	Purse seines	2	2	2	2	3	3	3	2	1
		3	2	2	1	2	2	2	2	2
		4	2	2	1	2	2	2	2	2
		5	3	3	2	2	2	2	2	2
DFN	Gillnets	2	2	3	3	1	2	3	2	2
		3	1	1	3	1	1	3	3	1
HOK	Hooks	2	1	1	1	1	2	2	1	2
		3	1	2	1	1	2	2	2	3
		4	2	2	2					
HOK-LLD	Surface longlines	3				2	1	2	2	2
		4				2	2	2	2	2
FPO	Pots	2	3	1						1
		3		1	1	3	3	3	3	3
DRB	Dredges	2	1	1	1	1	3	2	2	1
		3	3	3	3	3		3	2	1
Polyvalen		1	1	1	3	2	1	2	2	1

Region	Code	Gear	No.								
		t gear	2	1	1	1	1	2	2	2	2
			3	1	2	1	1	3	2	2	2
Other Regions	DTS	Bottom trawl nets	5	3	1	1	3	3	3	3	2
			6	3	1	3	3	3	3	3	3
	PS	Purse seines	3	2	1	3	3	3	3		
			6	3	3	3	3	2	3	3	2
	HOK	Hooks	2	2	1	2	2	2	2		
			3	1	3	1	1	2	2		
			4	2	2				3		
			5	3	2	3	1	3	3	3	3
			6	3	2	2					
	HOK-LLD	Surface longlines	5				3	3	3	3	2
			6				3	3	3	3	3
	FPO	Pots	2							1	
			3	1	3		1	1			
		Polyvalent gear	1	1	1	1	1	2	2		
			2	1	1	1	2	1	1		
			3			3	3	2			
			5	2		2	1	2			
Canary Islands	PS	Purse seines	3							2	2
	HOK	Hooks	2							2	3
			3							2	2
			5							2	1
	PMP	Polyvalent active and passive gear	1							1	1
			2							1	
	FPO	Pots	2							1	2
MA	HOK	Hooks	3							3	1

SUMMARY OF INDICATORS BY YEAR

2016

Stratum	Gear	Length	CR/BER	RoFTA (%)	NVA/FTE	TECHNICAL INDICATOR	SHI	SAR	OVERALL INDICATOR
North Atlantic	ADTS — Bottom trawl nets	3	2.81	165.50	42 226.94	0.88			3
		4	4.01	303.37	50 571.49	0.88			3
		5	3.42	72.24	63 465.60	0.82	1.35		2
		6	3.56	625.05	115 513.31	0.71	0.81		3
	APS — Purse seines	2	5.08	129.58	14 759.89	0.78		HOM 27	3
		3	7.23	132.38	26 389.45	0.72			3
		4	5.40	82.08	28 601.50	0.85			3
		5	9.75	146.08	50 250.83	0.84		HOM 27	3
	ADFN — Gillnets	2	16.01	169.75	20 932.61	0.72			3
		3	3.89	54.88	20 313.13	0.76			3
		4	0.79	-10.36	18 095.26	0.90	1.64		1
	AHOK — Hooks	2	3.74	145.65	24 113.07	0.68			2
		3	4.12	41.19	18 363.53	0.70	1.36		2
		4	1.71	15.31	20 455.63	0.77	1.11		2
		5	13.14	253.80	35 695.97	0.69	0.63		2
	APGO — Surface longlines	4	8.75	292.50	50 410.41	1.00			3
		5	3.95	60.58	37 763.11	0.97			3
	APGP — Polyvalent passive gear	5	3.35	164.86	68 603.42	0.90	0.96		3
	APMP — Polyvalent active and passive gear	1	2.52	32.57	16 180.82	0.49			2
		2	1.97	18.56	12 862.90	0.64			2
		3	6.44	51.37	21 730.38	0.84	1.11		2
	AFPO — Pots	2	7.35	51.40	18 456.77	0.83			3
		3	5.43	26.14	17 008.60	0.88			3
	ADRB — Dredges	1	11.56	93.28	12 812.53	0.48			2
		2	14.45	89.83	41 097.18	0.85			3
		3	4.12	42.87	17 483.14	0.77			3
Mediterranea	BDTS — Bottom trawl nets	2	9.14	62.63	31 566.58	0.82			3
		3	5.38	73.14	34 592.70	0.81			3
		4	3.75	47.81	29 067.84	0.77	3.96		2
		5	3.19	45.30	38 761.40	0.83	4.12	HKE-37	2
	BPS — Purse seines	2	9.11	107.68	15 140.96	0.80			3
		3	3.65	70.70	18 868.95	0.83	1.74	PIL-GSA6	2
		4	4.02	49.02	19 322.38	0.89	1.67	PIL-GSA6	2
		5	2.56	100.25	67 629.47	0.48	0.96	PIL-GSA6	2
	BDFN — Gillnets	2	3.54	64.24	23 468.36	0.71			3
		3	1.41	21.20	16 941.65	0.81			3
	BHOK — Hooks	2	13.17	221.16	39 145.80	0.62			2
		3	3.52	12.79	28 639.96	0.68			2
	BPGO — Surface longlines	3	5.26	87.83	24 102.40	0.71	1.55		2
		4	2.67	42.13	25 459.07	0.82	1.66		2
	BPMP — Polyvalent active and passive gear	1	3.31	32.64	19 071.32	0.37			2
		2	8.69	126.67	22 352.93	0.53			2
		3	3.22	52.49	32 862.50	0.91	3.21	PIL-GSA6	2
	BFPO — Pots	3	6.16	318.41	40 037.69	1.24			3
	BDRB — Dredges	2	1.11	3.19	22 166.39	0.65			2
		3	3.01	22.93	29 109.55	0.99			3

	Gear	Gear name	Length	CR/BER	RoFTA	NVA/FTE	TECHNICAL INDICATOR	SHI	SAR	OVERALL INDICATOR
Other	CDTS	Bottom trawl nets	5	2.87	112.40	21 133.38	0.85			3
			6	1.89	160.97	43 052.36	0.84			3
	CPS	Purse seines	3	19.14	625.42	39 886.68	0.91			3
			6	2.30	61.78	94 305.26	0.96	0.97		3
	CHOK	Hooks	2	4.73	36.45	22 422.86	0.64	0.63		2
			3	0.28	-7.61	22 880.05	0.71	0.63		2
			4	3.89	376.89	49 425.51	0.89			3
			5	3.03	79.86	43 818.02	0.79	0.93		3
	CPGO	Surface longlines	5	2.83	96.66	31 746.22	0.86			3
			6	1.88	90.02	26 553.45	0.95			3
	CPMP	Polyvalent active and passive gear	1	5.33	45.10	17 791.92	0.31			2
			2	0.45	-62.12	8 410.02	0.67	0.73		1
	CFPO	Pots	2	-2.27	-55.20	15 038.14	0.82			1

2017

	Gear	Length	CR/BER	RoFTA (%)	NVA/FTE	TECHNICAL INDICATOR	SHI	SAR	OVERALL INDICATOR
NAO	DTS	3	3.99	39.93	19 049	0.80	< 40%	null	3
		4	2.76	81.37	29 449	0.83	< 40%	null	3
		5	2.40	73.59	60 264	1.18	1.21	null	2
		6	3.07	306.34	126 079	1.09	0.98	COD-27.1-27.2	3
	PS	2	-1.42	-84.68	15 411	0.43	< 40%	null	1
		3	3.00	85.42	25 336	0.65	< 40%	null	2
		4	1.96	48.16	27 801	0.81	< 40%	null	3
		5	4.12	82.53	41 842	0.83	1.32	null	2
	DFN	2	0.66	-12.24	11 788	0.68	< 40%	null	1
		3	4.33	92.99	26 225	0.82	< 40%	null	3
		4	1.82	21.07	23 449	1.01	1.44	null	2
	HOK	2	1.08	2.38	10 787	0.47	1.40	null	2
		3	3.58	81.07	31 435	0.68	1.27	null	2
		4	2.06	43.76	24 822	0.86	1.03	null	2
		5	15.38	152.18	40 501	0.77	0.81	null	3
	PGO	4	10.29	272.27	54 419	0.99	0.91	null	3
		5	2.97	54.31	39 539	1.38	< 40%	null	3
	PGP	5	2.19	92.39	61 009	1.31	0.79	null	3
	PMP	1	3.10	41.46	15 588	0.46	< 40%	null	2
		2	6.20	199.13	47 990	0.48	< 40%	null	2
		3	2.59	41.88	24 969	0.81	1.07	null	2
	FPO	2	3.44	60.43	23 751	0.71	< 40%	null	3
		3	6.40	65.07	34 271	0.69	< 40%	null	2
	DRB	1	1.96	12.69	18 523	0.54	< 40%	null	2
		2	2.69	27.85	11 953	0.47	< 40%	null	2
		3	2.24	18.30	16 688	0.47	< 40%	null	2
MBS	DTS	2	1.85	41.88	30 099	0.60	< 40%	null	2
		3	2.57	64.12	29 691	0.85	< 40%	null	3
		4	1.91	38.86	29 889	0.91	4.08	null	3
		5	1.32	15.79	28 519	0.91	4.25	null	3
	PS	2	30.89	194.05	16 895	0.68	< 40%	null	2
		3	3.25	62.72	19 334	1.00	1.54	null	2
		4	2.26	42.97	23 599	1.04	1.55	null	2
		5	2.78	115.34	73 282	0.55	0.83	null	2
	DFN	2	1.28	10.57	18 933	0.68	< 40%	null	2
		3	1.55	27.85	15 294	0.77	< 40%	null	3
	HOK	2	-0.49	-57.99	11 857	0.44	< 40%	null	1

		Length	CR/BER	RoFTA (%)	NVA/FTE	TECHNICAL 220 INDICATOR	SHI	SAR	OVERALL INDICATOR
		3	3.80	40.66	27 985	0.57	2.09	null	2
	PGO	3	1.88	41.44	24 386	0.66	1.60	SWO-37	2
		4	1.99	45.31	43 045	0.80	1.54	SWO-37	2
	PMP	1	15.51	267.14	11 131	0.34	< 40%	null	2
		2	1.32	15.29	22 970	0.50	< 40%	null	2
		3	1.77	11.59	19 456	0.80	3.57	null	2
	FPO	3	1.55	26.17	26 151	0.98	< 40%	null	3
	DRB	2	1.16	7.66	14 563	0.44	< 40%	null	2
		3	1.11	1.74	15 593	0.77	< 40%	null	2
OFR	DTS	5	1.01	0.76	14 088	1.24	< 40%	null	3
		6	2.30	198.13	47 646	1.30	< 40%	null	3
	PS	6	2.32	100.37	119 866	1.36	0.98	null	3
	HOK	5	4.78	170.63	30 736	1.01	1.01	null	3
	PGO	5	2.16	62.74	28 493	1.45	< 40%	null	3
		6	2.53	65.50	39 144	1.41	< 40%	null	3
IC	PS	3	2.61	156.85	46 640	0.60	< 40%	null	2
	HOK	2	7.24	173.10	46 397	0.29	0.71	null	2
		3	6.60	136.16	32 291	0.60	0.83	null	2
		5	0.36	-30.42	19 480	0.90	1.02	null	2
	PMP	1	0.91	-4.50	26 698	0.35	< 40%	null	1
		2	0.13	-89.62	10 310	0.46	1.00	null	1
	FPO	2	0.45	-39.56	5 744	0.45	< 40%	null	1
MA	HOK	3	4.06	29.18	24 035	0.88	< 40%	null	3

2018

Stratum	Gear	Length	CR/BER	RoFTA (%)	NVA/FTE	TECHNICAL 220 INDICATOR	SHI	SAR	OVERALL INDICATOR
DTS	Bottom trawl nets	3	2.61	53.74	26 712	0.81	< 40%		3
		4	4.49	92.36	31 044	0.84	< 40%		3
		5	1.14	6.95	43 388	1.18	1.32		2
		6	1.53	28.16	78 354	0.81	1.54	COD-27	2
PS	Purse seines	2	1.08	1.85	33 557	0.39	< 40%		2
		3	2.42	58.50	27 898	0.60	< 40%		2
		4	1.64	16.35	23 981	0.73	< 40%		3
		5	4.07	86.00	43 680	0.74	0.73		3
DFN	Gillnets	2	3.23	78.90	37 044	0.63	< 40%		2
		3	1.10	2.74	16 204	0.80	1.28		2
		4	1.26	9.86	20 802	0.94	1.48		2
HOK	Hooks	2	5.60	138.14	20 858	0.44	1.37		2
		3	2.46	38.79	21 133	0.63	1.36		2
		4	-0.23	-33.24	12 851	0.74	0.97		1
		5	2.86	25.63	19 607	0.58	0.76		3
HOK-LLD	Surface longlines	4	1.79	27.34	26 073	0.94	0.84		3
		5	2.54	38.78	27 331	1.39	< 40%		3
PGP	Polyvalent passive gear	5	1.56	34.76	46 767	1.29	0.81		3
PMP	Polyvalent active and passive gear	1	3.48	88.99	19 854	0.44	< 40%		2
		2	7.26	62.01	28 169	0.46	< 40%		2
		3	1.38	13.99	29 532	0.61	1.05		2
FPO	Pots	2	2.31	44.43	16 950	0.69	< 40%		2
		3	0.86	-5.78	13 768	0.74	< 40%		1
DRB	Dredges	1	5.41	46.35	24 666	0.52	< 40%		2
		2	4.52	17.50	29 264	0.26	< 40%		2
		3	2.69	18.05	27 490	0.27	< 40%		2

Stratum	Gear		Length	CR/BER	RoFTA (%)	NVA/FTE	TECHNICAL INDICATOR	SHI	Stock	OVERALL INDICATOR
MBS	DTS	Bottom trawl nets	2	2.51	49.23	24 998	0.60	< 40%		2
			3	3.27	84.98	31 713	0.86	< 40%		3
			4	1.96	47.33	31 127	0.92	3.57		2
			5	1.21	9.88	29 928	0.93	3.26		2
	PS	Purse seines	2	0.46	-29.40	27 322	0.61	1.35		1
			3	1.83	42.00	21 272	0.97	1.47		2
			4	2.90	64.80	31 652	1.02	1.47		2
			5	5.15	175.47	112 960	0.51	0.77		2
	DFN	Gillnets	2	1.47	7.55	13 335	0.61	< 40%		2
			3	0.83	-7.06	16 908	0.75	< 40%		1
	HOK	Hooks	2	2.08	33.94	19 298	0.37	< 40%		2
			3	1.46	22.45	23 315	0.43	0.83		3
	HOK-LLD	Surface longlines	3	1.79	58.20	34 831	0.67	1.71	SWO-37	2
			4	2.94	68.49	34 374	0.82	1.72	SWO-37	2
	PMP	Polyvalent active and passive gear	1	-36.60	-73.11	12 005	0.34	< 40%		1
			2	1.40	24.50	19 789	0.43	< 40%		2
			3	1.26	5.90	22 279	0.53	< 40%		2
	FPO	Pots	2	0.20	-39.85	9 957	0.59	< 40%		1
			3	1.42	26.89	26 042	1.14	< 40%		3
	DRB	Dredges	2	-9.33	-69.54	9 592	0.35	< 40%		1
			3	-1.68	-61.67	16 245	0.80	< 40%		1
OFR	DTS	Bottom trawl nets	5	-0.39	-124.48	-1 511	1.23	< 40%		2
			6	3.39	177.53	65 516	1.15	< 40%		3
	PS	Purse seines	6	1.51	50.52	67 348	1.33	1.07	YFT	2
	HOK	Hooks	5	3.92	162.57	34 476	1.19	< 40%		3
	HOK-LLD	Surface longlines	5	0.74	-17.95	14 725	1.41	< 40%		2
			6	2.11	47.06	27 064	1.53	< 40%		3
IC	PS	Purse seines	3	4.78	78.27	23 281	0.58	< 40%		2
	HOK	Hooks	2	3.19	81.72	38 606	0.30	0.58		3
			3	1.77	21.95	31 495	0.52	1.08		2
			5	-0.77	-53.25	10 741	0.92	1.42		1
	PMP	Polyvalent active and passive gear	1	-2.96	-87.20	19 484	0.35	< 40%		1
	FPO	Pots	2	2.12	35.30	31 609	0.34	< 40%		2
MA	HOK	Hooks	3	-5.04	-56.15	24 805	0.41	< 40%		1

WEIGHTED AVERAGE OVER 2016-2018

Stratum	Gear		Length	CR/BER	RoFTA (%)	NVA/FTE	TECHNICAL INDICATOR	SHI	OVERALL INDICATOR
NAO	DTS	Bottom trawl nets	3	3.03	65.76	26 739	0.81	< 40%	3
			4	3.93	119.36	33 378	0.84	< 40%	3
			5	1.82	35.32	51 078	1.18	1.29	2
			6	2.26	192.91	97 298	0.91	1.28	2
	PS	Purse seines	2	0.93	-4.63	25 687	0.41	< 40%	1
			3	3.27	76.74	26 951	0.63	< 40%	2
			4	2.27	34.83	25 732	0.77	< 40%	3
			5	4.89	93.59	44 094	0.78	0.93	3
	DFN	Gillnets	2	4.32	65.84	27 526	0.66	< 40%	2
			3	2.42	35.97	19 654	0.81	1.28	2
			4	1.35	10.17	21 172	0.97	1.49	2
	HOK	Hooks	2	4.04	100.42	18 446	0.46	1.38	2
			3	3.01	51.21	23 681	0.67	1.33	2

			4	0.70	-4.30	17 357	0.80	1.01	2

Region	Code	Gear	#						
			4	0.70	-4.30	17 357	0.80	1.01	2
			5	7.90	94.38	27 875	0.67	0.76	2
	HOK-LLD	Surface longlines	4	5.21	135.20	37 648	0.96	0.86	3
			5	2.86	46.33	32 309	1.38	< 40%	3
	FPO	Pots	2	3.35	50.00	19 108	0.70	< 40%	3
			3	3.09	19.02	20 089	0.73	< 40%	3
	DRB	Dredges	1	5.30	43.44	21 217	0.52	< 40%	2
			2	5.41	30.79	26 008	0.36	< 40%	2
			3	2.76	21.67	22 974	0.37	< 40%	2
		Polyvalent gear	1	3.23	67.35	18 110	0.46	< 40%	2
			2	6.20	94.98	31 646	0.48	< 40%	2
			3	2.45	27.30	27 114	0.70	1.06	2
			5	1.99	69.81	53 955	1.29	0.83	3
MBS	DTS	Bottom trawl nets	2	3.27	49.05	27 394	0.62	< 40%	2
			3	3.37	77.33	31 547	0.85	< 40%	3
			4	2.20	44.98	30 479	0.92	3.77	2
			5	1.53	16.63	30 788	0.93	3.67	2
	PS	Purse seines	2	10.39	54.02	22 603	0.65	1.35	2
			3	2.50	52.02	20 375	0.98	1.53	2
			4	2.87	56.31	27 590	1.03	1.52	2
			5	4.10	147.54	95 147	0.52	0.81	2
	DFN	Gillnets	2	1.71	16.51	16 382	0.64	< 40%	2
			3	1.12	6.95	16 452	0.76	< 40%	3
	HOK	Hooks	2	2.93	34.42	20 007	0.42	< 40%	2
			3	2.42	26.27	25 410	0.49	1.25	2
	HOK-LLD	Surface longlines	3	2.31	57.64	30 314	0.67	1.66	2
			4	2.63	58.10	35 578	0.81	1.66	2
	FPO	Pots	2	0.20	-39.85	9 957	0.59	< 40%	1
			3	2.13	68.33	28 073	1.09	< 40%	3
	DRB	Dredges	2	-4.84	-37.09	12 809	0.39	< 40%	1
			3	-0.21	-31.47	17 897	0.80	< 40%	1
		Polyvalent gear	1	-16.01	39.21	12 765	0.34	< 40%	2
			2	2.42	36.47	21 064	0.46	< 40%	2
			3	1.68	14.18	22 984	0.65	3.45	2
OFR	DTS	Bottom trawl nets	5	0.47	-54.86	6 181	1.24	< 40%	2
			6	2.87	181.05	57 201	1.21	< 40%	3
	PS	Purse seines	6	1.85	66.37	86 204	1.36	1.03	3
	HOK	Hooks	5	4.04	153.06	34 742	1.13	0.98	3
	HOK-LLD	Surface longlines	5	1.44	21.48	21 090	1.42	< 40%	3
			6	2.20	58.47	30 442	1.49	< 40%	3
IC	PS	Purse seines	3	4.05	104.46	31 068	0.59	< 40%	2
	HOK	Hooks	2	4.54	112.18	41 203	0.30	0.62	3
			3	3.38	60.02	31 760	0.55	1.00	2
			5	-0.40	-45.64	13 654	0.91	1.29	1
	PMP	Polyvalent active and passive gear	1	-1.67	-59.63	21 889	0.35	< 40%	1
	FPO	Pots	2	1.56	10.35	22 987	0.37	< 40%	2
MA	HOK	Hooks	3	-2.01	-27.70	24 548	0.56	< 40%	1