Study of the structure of the full-time fleet.

Indicators.

Action plan for the segments showing an imbalance between fishing capacity and fishing opportunities

GENERAL SECRETARIAT FOR FISHERIES
MINISTRY OF AGRICULTURE, FISHERIES AND FOOD

2020 ACTION PLAN

(2018 DATA)

29/06/2020

INTRODUCTION

In accordance with Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, if the assessment of the annual capacity of the national fleet clearly demonstrates that fishing capacity is not effectively balanced with fishing opportunities, the Member State shall prepare and include in its annual report an ACTION PLAN for the fleet segments with a structural overcapacity. The action plan shall set out the adjustment targets and tools to achieve a balance and a clear time-frame for its implementation (Article 22(4)). This document, establishing the action plan for the Spanish fleet for 2020, has been drawn up in accordance with that regulatory provision.

2018 POPULATION USED TO DRAW UP THE ACTION PLAN

Since only economic data for 2018 are available to date, all indicators (in addition to the economic, technical and biological indicators) are constructed using the 2018 population. In 2018, of the 9 207 registered vessels, 8 050 (87.5%) were active, while 1 157 were inactive (12.5%).

Since 2014, Spain has been developing a population, segmented in accordance with the requirements of the COM but exclusively using the active fleet fishing more than 90 days/year, and this is used to draw up the Action Plan that is sent to the COM on 31 May each year explaining this approach. The main reasons are:

- The pressure that the fleet exerts on resources is not comparable across the entire active fleet, as in the case of a vessel that fishes 20 days/year compared to one that fishes 260 days/year, and the economic data obtained from a sample may not reflect the actual economic situation of the segment; for example, if the sample were to correspond to vessels with low activity and low profitability, that circumstance would be applied to the rest of the segment, assigning that reality to the entire fleet of that segment, along with the resulting errors, or vice versa. This is very common in the Spanish fleet, as the following table shows:

			2011	2012	2013	2014	2015	2016	2017	2018
REGISTERED VESSELS			10.900	10.544	10.167	9.921	9.686	9.459	9.356	9.207
1	INACTIVE VESSELS		1.784	1.606	1.372	1.228	1.185	1.105	1.061	1.157
2	ACTIVE VESSELS		9.116	8.938	8.795	8.693	8.501	8.354	8.295	8.050
	2A	ACTIVE < 90 DAYS	3.359	3.118	3.109	2.938	2.946	2.742	2.849	2.844
	2B	ACTIVE > 90 DAYS	5.757	5.820	5.686	5.755	5.555	5.612	5.446	5.206
	1+2A	PART-TIME (%)	47,18	44,8	44,07	41,99	42,65%	40,67%	41,79%	43,46%
	2B	FULL TIME (%)	52,82	55,2	55,93	58,01	57,35%	59,33%	58,21%	56,54%

- Therefore, we carry out the fleet segmentation using vessels that fish more than 90 days/year and a new statistical sample is established for this new population, meaning that **this study does not include vessels that are active for fewer than 90 days/year**, which do not exert an effort that could negatively affect fishing resources and the fishing activity of which is considered to be part-time. Thus, of the 8 058 active vessels in 2018, those that fished for more than 90 days (5 206 vessels) form the population in the table below

- Throughout these years, the data has been improved significantly, meaning that the data have been more consistent since 2016 and can be broken down; in addition to disaggregation by fishing ground and type of gear used (including surface longlines, since 2014), the data on vessels using polyvalent gear are disaggregated into length classes 1, 2 and 3 (they were previously given for the segment as a whole)

	GROUND	GEAR	LENGTH CLASS 1	2	3	4	5	6	Total
NORTH ATLANTIC	NON-NATIONAL	DTS				8	29	12	49
		PGO				8	32		40
		PGP					58		58
	Total non-national					**16**	**119**	**12**	**147**
	CNW	DFN		87	120	29			236
		DRB	1 087						1 087
		DTS		6			71		77
		FPO		63	44				107
		HOK		35	48	25	15		123
		PMP	983	17	16				1 016
		PS			58	72	84		214
	Total CNW		**2 070**	**208**	**286**	**126**	**170**		**2 860**
	GC	DFN			33				33
		DTS			52	69			121
		PMP	84		20				104
		PS			32	24			56
	Total GC		**84**		**137**	**93**			**314**
NORTH ATLANTIC			***2 154***	***208***	***423***	***235***	***289***	***12***	***3 321***
MEDITERRANEAN	MEDITERRANEAN	DFN		71	54				125
		DRB		14	12				26
		DTS		14	144	291	123		572
		FPO			37				37

			C1	C2	C3	C4	C5	C6	Total
		HOK		15	16				31
		HOK-LLD			27	20			47
		PMP	31	409	12				452
		PS		11	70	79	20		180
	Total MED		**31**	**534**	**372**	**390**	**143**		**1 470**
	MEDITERRANEAN		*31*	*534*	*372*	*390*	*143*		*1 470*
OTHER REGIONS	CANARY ISLANDS	HOK		11	15		23		49
		PMP	160						160
		PS			11				11
	Total CANARY ISLANDS		**160**	**11**	**26**		**23**		**220**
	INTERNATIONAL	DTS					40	31	71
		HOK					16		16
		HOK-LLD					57	25	82
		PS						26	26
	Total INTERNATIONAL						**113**	**82**	**195**
	OTHER REGIONS		*160*	*11*	*26*	*0*	*136*	*82*	*415*
	Overall total		**2 345**	**753**	**821**	**625**	**568**	**94**	**5 206**

INDICATORS

67 segments are thus obtained, which are used for the calculation of the indicators established in the 2014 COM guidelines, taking into account the following in particular:

- The balance assessment should be carried out on the basis of three indicator categories (biological, economic and vessel use indicators).

- 'When the biological indicator is unavailable due to the lack of values of F and FMSY for more than 60% of the stocks that constitute the catch, the sustainable harvest indicator cannot be used meaningfully to assess the balance or imbalance of a fleet segment...

- Fleet segments with poor economic performance which are fishing healthy stocks may face low profitability related to other factors (e.g. low sales price of the fish, high production costs, consumer preferences, low demand, increase in fuel prices, high imports or substitution effects), which are not necessarily related to an imbalance between capacity and available resources.'

- 'The indicators are intended to be used in combination, to draw conclusions on imbalance for each fleet segment separately… As biological and economic parameters vary over time, it is recommended that Member States should calculate and consider time-series of at least three years when considering the balance.'

- STECF-19-13 Balance capacity, in the STECF conclusion on ToR 2 section,

establishes that assessing the technical and economic indicators for the artisanal fleet is complex, as the use of 220 as the maximum theoretical days at sea is not relevant, mainly in seasonal fishing activities. More specifically, STECF 15-15 considers that this maximum of 220 should not be applied to vessels less than 12 m in length. EWG 16-09 establishes that the technical indicator, especially in the artisanal fleet, should always be viewed with caution. STEFC 19-13 Balance capacity, in section 3.4 Indicator Issues, Problems and Caveats, establishes that, for the vessel utilisation ratio (VUR) indicator, the small-scale fleet should be treated differently due to the fact that many fishers are only working part-time or fishing is only one source of their income. This indicator measures the ratio between the maximum effort that the fleet could exert and the actual effort deployed. In Spain, this indicator is calculated every year **by calculating the theoretical maximum days at sea.** Therefore, when calculating this theoretical maximum, the recommendations provided by the Joint Research Centre (JRC) for calculating the maximum days for Data Collection are followed, which suggest obtaining the figure by taking the average of the ten vessels with the most activity. The indicator has also been obtained using 220 as the theoretical maximum days at sea, as carried out by the STECF. However, we feel that the most representative indicator is the one that uses **the average of the ten vessels with the most activity**, as considering ten vessels instead of only one partly prevents exceptional and unrealistic cases from presenting a distorted picture of the activity in a stratum.

We would like to point out that the annual fleet reports drawn up by the Member States are analysed by the Scientific, Technical and Economic Committee for Fisheries and presented in its report on the EU fishing fleet. However, the **STECF balance report does not indicate whether the segments are in balance/imbalance; the report calculates the indicators** (biological, economic and technical) and assigns a state of balance/imbalance to each indicator, but it does not assess the situation of the segment. Regulation (EU) No 1380/2013 states that to determine that a segment is in imbalance, the assessment **must clearly demonstrate the imbalance** (and, therefore, the assessment should not be based on isolated indicators, but on a set of indicators). The Commission's guidelines for analysing the balance state that the indicators should be used in a combined manner, as Spain does and as indicated in the Annex.

With this in mind, the indicators in the 2020 action plan have been created using data from the last three years (2016 to 2018) for which the information is available, as recommended by the Commission Guidelines document. The calculation of the overall indicator and the weighting of the three years of the study are presented in the ANNEX.

SUMMARY

The following table provides data on the segments where an imbalance is identified in this action plan, based on the 2016-2018 balance indicator.

	Gear	Length	Balance indicator	Vessels included in Action Plan	No vessels 2019	Observations
Cantabria and North-West (CNW)	Bottom trawl nets	10-18	1	6		Real biological and economic imbalance
		18-40	2	71	67	Biological and technical imbalance
	Gillnets	12-18	2	120	118	Biological, economic and technical imbalance
		18-40	2	29	28	Biological and technical imbalance
	Hooks	10-12	2	35	27	Biological and technical imbalance
		12-18	2	48	47	Biological and technical imbalance
		18-24	2	25	27	Economic and technical imbalance
Gulf of Cádiz	Purse seines	18-40	2	24	24	Economic, technical and SAR imbalance
Mediterranean	Bottom trawl nets	18-24	2	291	289	Biological and technical imbalance
		24-40	2	123	122	Biological and technical imbalance
	Purse seines	06-12	2	11	12	Unreal biological and economic imbalance
		12-18	2	70	69	Biological and technical imbalance
		18-24	2	79	77	Biological and technical imbalance
		24-40	2	20	18	Biological imbalance
	Surface longlines	06-18	2	27	27	Biological, SAR and technical imbalance
		18-40	2	20	17	Biological, SAR and technical imbalance
	Trawl nets/Dredges	00-12	2	14	28	Real economic imbalance
		12-18	2	12	12	Real economic imbalance
Canary Islands	Hooks	18-40	1	23	21	Real economic imbalance and biological imbalance
	Polyvalent gear	00-18	1	160	156	Real economic imbalance and technical imbalance
North Atlantic	Bottom trawl nets	> 40	2	12	12	Biological and SAR imbalance
Other regions	Bottom trawl nets	24-40	2	40	36	Economic and technical imbalance.

Of the active vessels, 5 206 fished full-time (operating for more than 90 days/year) and the action plan has been created based on these, which have been grouped into 67 segments. Overall, 1 260 vessels belonging to 22 fleet segments were found to be out of balance and 3 944 belonging to 45 segments were found to be in balance, resulting in 76% of the population being in balance.

The following bar chart shows the trend of the fleet operating in segments that are out of

balance, in accordance with the action plans drawn up since 2016.

Trend of out-of-balance fleet segments

3 91	1 85	965	1 00	1 26
A.P. 2016	A.P. 2017	A.P. 2018	A.P. 2019	A.P. 2020
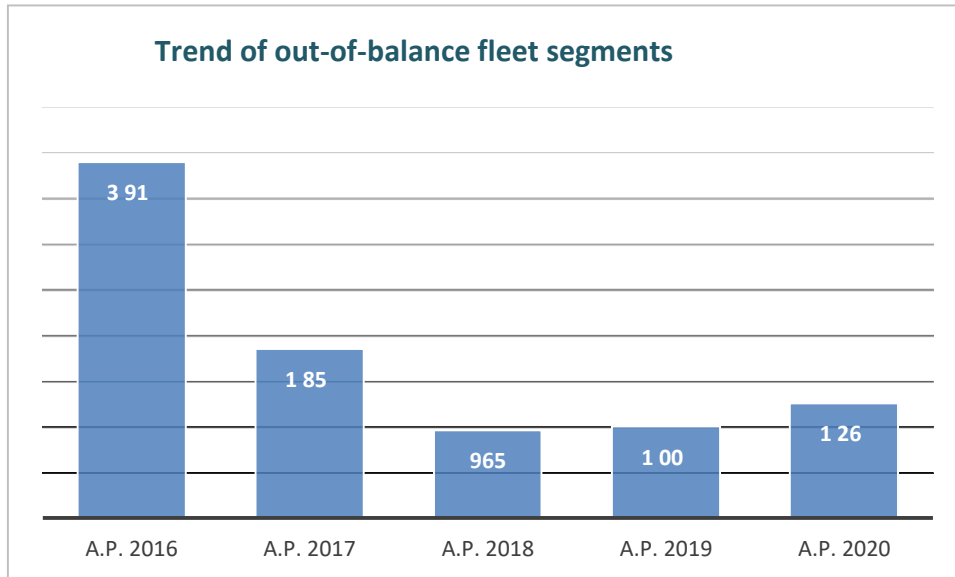
The results obtained for each indicator and their weighted trend are detailed below for each supra-region and fishing ground.

STUDY OF NATIONAL FISHING GROUNDS

CANTABRIA AND NORTH-WEST

TRAWLERS (CNW)

2018 POPULATION WITHOUT 90 CLUSTER								2018 POPULATION WITH 90 CLUSTER						
	LENGTH CLASS								LENGTH CLASS					
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
DTS		4	2	2	69		77	DTS		6			71		77

During 2018, 77 trawlers operated for more than 90 days, seven vessels fewer than in 2017. They have been grouped into two clusters:

- **10-18 m segment cluster, with four vessels 10-12 m in length and two vessels 12-18 m in length = 6**

- **18-40 m segment cluster, with two vessels 18-24 m in length and 69 vessels 24-40 m in length = 71**

The **18-40 m segment** makes up the majority of the fleet, with 71 vessels with an average length of 28 m. In contrast, **the 10-18 m segment** is made up of only six vessels with an average length of 11 m.

2018 saw a drop in the <u>economic indicators,</u> concerning both short-term and long-term profitability, with the drop being especially significant in the 10-18 m segment, as the incomes of the six vessels that make up the segment do not cover their expenses. The 18-40 m segment records zero income from non-fishing sources, compared to nine million the previous year, which may be shown by this slight imbalance in the RoFTA.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Bottom trawl nets	10-18	3.22	4.96	0.00	1.88	210.36	109.91	-127.05	-11.15	1.15	1.15	0.96	1.04
	18-40	3.42	2.82	1.05	1.90	72.24	58.40	1.77	28.02	0.90	0.88	0.87	0.88
		SHI				SAR							
	10-18	1.83	1.61	< 40%	1.68								
	18-40	1.55	1.49	1.62	1.57								
		OVERALL INDICATOR			BALANCE								
	10-18	2	2	1	1								
	18-40	2	2	2	2								

The <u>SHI biological indicator:</u> In the 10-18 m segment, the fleet has practically not caught any surveyed species (only 0.85% of the catch value), which indicates a change in the fishing focus of this segment.

In the 18-40 m segment, the indicator shows that the fleet depends on three overexploited stocks, HKE (Southern hake), WHB (blue whiting) and MAC (mackerel), it has slightly increased fishing for these species, which are more overexploited, and it has a worse F etoile value in 2018.

SAR species do not account for more than 10% of the catch of any segment.

The <u>technical indicator</u> shows a slight imbalance in fishing ground exploitation for the longest length segment.

The results obtained suggest that it is advisable that **an action plan** be created for this fleet, based mainly on the economic indicator, for the 10-18 m segment, despite a possible statistical error, and for the 18-40 m segment, due to the biological dependency and, to a lesser extent, the RoFTA and the technical indicator.

LENGTH	TOT_VAL AT-RISK STOCK	TOT_VAL STRATUM	PER CENT	AV. FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
				2016 SHI TRAWLERS CNW						
10-18	1 142 661	2 521 423	45.32%	AO-ALB-N	77	0.54	FALSE	1.83	4	3
				hke-soth	650 490	2.27	TRUE			
				mac-nea	136 387	1.31	TRUE			
				whb.27.1-91	355 707	1.21	TRUE			
18-40	36 249 296	62 909 772	57.62%	AO-BET	240	1.28	TRUE	1.54	7	4
				hke-nrtn	462	0.96	FALSE			
				hke-soth	10 818 421	2.27	TRUE			
				hom-west	20	0.97	FALSE			
				lez.27.4a6a	535	0.35	FALSE			
				mac-nea	7 169 792	1.31	TRUE			
				whb.27.1-91	18 259 826	1.21	TRUE			
				2017 SHI TRAWLERS CNW						
10-18	1 028 859	2 492 182	41.28%	AO-ALB-N	120	0.54	FALSE	1.61	6	4
				dgs.27.nea	36	0.48	FALSE			
				hke-soth	425 863	2.1	TRUE			
				mac-nea	69 208	1.31	TRUE			
				pil-27.8c9a	3 491	1.7	TRUE			
				whb.27.1-91	530 140	1.26	TRUE			
18-40	34 057 457	59 758 402	56.99%	hke-nrtn	16 741	0.79	FALSE	1.49	5	3
				hke-soth	8 811 648	2.1	TRUE			
				hom-west	1 076	0.97	FALSE			
				mac-nea	8 023 061	1.31	TRUE			
				whb.27.1-91	17 204 931	1.26	TRUE			
				2018 SHI TRAWLERS CNW						
18-40	33 833 615.77	58 598 892.92	58%	ank27.8c9a	28 813	0.24	FALSE	1.62	13	4
				bft-ea	939	0.34	FALSE			
				boc.27.6-8	90	0.61	FALSE			
				hke.27.3a46-	1 056	0.81	FALSE			
				hke.27.8c9a	9 015 429	2.38	TRUE			
				hom.27.2a4a	168 707	0.62	FALSE			
				hom.27.9a	84 496	0.26	FALSE			
				mac.27.nea	9 200 693	1.25	TRUE			
				meg.27.8c9a	4 292	0.9	FALSE			
				mon.27.8c9a	40 305	0.39	FALSE			
				nep.fu.2627	16 071	0.32	FALSE			
				reb.2127.dp	98	6.53	TRUE			
				whb.27.1-91	15 272 628	1.42	TRUE			

GILLNETTERS (CNW)

	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
DFN		87	120	25	4		236	DFN		87	120	29			236

In 2018, 236 vessels fished principally with gillnets, compared to 216 vessels in 2017.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Gillnets	10-12	16,01	0,61	2,96	4,15	169,75	-11,99	75,97	64,24	0,75	0,77	0,74	0,75
	12-14	3,89	3,79	0,75	2,06	54,88	86,90	-7,74	28,25	0,81	0,78	0,78	0,79
	18-40	2,30	1,77	1,26	1,55	22,39	20,36	10,02	14,74	0,92	0,91	0,87	0,89

	Length	SHI				SAR			
Gillnets	10-12	<40%	<40%	<40%	<40%				
	12-14	<40%	<40%	1,29	1,29				
	18-40	1,67	1,43	1,47	1,49				

	Length	OVERALL INDICATOR				BALANCE
Gillnets	10-12	3	1	3	3	
	12-14	3	3	1	2	
	18-40	2	2	2	2	

The **10-12 m gillnetter segment** is comprised of 87 full-time vessels, three more than the previous year. The economic indicators for 2018 show good profitability, both short- and long-term. However, in the 2016-2018 time series, the poor results for this indicator in 2017 stand out; they may be due to the economic statistics giving a lower value for revenue from fish sales than that given in the actual landing data. In contrast, it is not possible to analyse the SHI biological indicator because the surveyed stocks do not exceed 40% of this segment's catches. However, the catches of this fleet segment show great diversity and, although they do include at-risk species, such as Southern hake and mackerel, catches of overexploited species do not exceed 20%. This segment does not catch SAR species. Therefore, this fleet segment is considered to be **in balance,** as shown by the 2016-2018 weighted balance indicator, although its trend will need to be monitored in the coming years.

The **12-12 m segment** is comprised of 120 vessels, 11 more than in 2017. The economic indicators show a clear worsening of the situation, mainly due to a significant increase in variable costs, together with a slight decrease in revenue from fish sales. The SHI biological indicator is only available for 2018 (given that in previous years the value of the surveyed stocks was less than 40%) but it shows a significant dependency on two overexploited species, hake and mackerel. This segment does not catch SAR species. The technical indicator shows a slight imbalance. Due to the deterioration of the economic data and dependency on overexploited species, this segment is considered to be in imbalance and, therefore, must **be included in the action plan**.

The **18-40 m segment** is comprised of 29 vessels, six more than the previous year. This segment accounts for only 12% of the gillnetters, but 26% of their power. The indicators show good profitability for this segment, both short- and long-term, although it must be stressed that the analysis of the time series shows a slight trend towards a worsening of the economic results, but still within the balance.

As regards the biological indicators, the SHI confirms that dependency on overexploited stocks persists, mainly Southern hake, the dependency on which has increased by one million, and mackerel, although the stock of the latter has improved in 2018. This segment does not catch SAR species. In technical terms, fishing ground exploitation has decreased, with a slight imbalance. In accordance with the foregoing, **continuing with the action plan is recommended** for this segment, mainly due to the dependency on overexploited species.

LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
2016 SHI GILLNETS CNW										
18-40	4 763 874	8 315 542	57.29%	AO-ALB-N	1 338 219	0.54	FALSE	**1.67**	6	4
				AO-BET	37 925	1.28	TRUE			
				hke-nrtn	24 752	0.96	FALSE			
				hke-soth	2 880 654	2.27	TRUE			
				mac-nea	453 328	1.31	TRUE			
				whb.27.1-912	28 996	1.21	TRUE			
2017 SHI GILLNETS CNW										
18-40	5 703 936	8 631 203	66.09%	AO-ALB-N	2 086 986	0.54	FALSE	**1.43**	6	4
				AO-BET	43 258	1.28	TRUE			
				hke-nrtn	70 214	0.79	FALSE			
				hke-soth	2 965 819	2.1	TRUE			
				mac-nea	537 296	1.31	TRUE			
				whb.27.1-912	362	1.26	TRUE			
2018 SHI GILLNETS CNW										
12-18	8 465 108.78	17 651 516.30	48%	alb-na	2 023 265	0.54	FALSE	**1.29**	17	7
				ank27.7,8abd	206	0.73	FALSE			
				ank27.8c9a	77 101	0.24	FALSE			
				bet-atl	20 992	1.63	TRUE			
				bil-ne	15	1.59	TRUE			
				hke.27.3a46-	119	0.81	FALSE			
				hke.27.8c9a	2 807 613	2.38	TRUE			
				hom.27.2a4a	81 316	0.62	FALSE			
				hom.27.9a	115 588	0.26	FALSE			
				ldb.27.8c9a	1 781	0.47	FALSE			
				mac.27.nea	1 945 134	1.25	TRUE			
				meg.27.8c9a	926	0.9	FALSE			
				mon.27.8c9a	1 389 324	0.39	FALSE			
				pil-27.8c9a	755	1.43	TRUE			
				sol.27.8ab	219	1.13	TRUE			
				whb.27.1-912	112	1.42	TRUE			
				yft-atl	642	0.77	FALSE			
18-24	8 237 269.87	11 125 210.81	74%	alb-na	2 657 839	0.54	FALSE	**1.47**	13	5
				ank27.7,8abd	172	0.73	FALSE			
				ank27.8c9a	2 871	0.24	FALSE			
				bet-atl	13 901	1.63	TRUE			
				bss.27.8ab	241	1.03	TRUE			
				hke.27.3a46-	74 147	0.81	FALSE			
				hke.27.8c9a	3 825 341	2.38	TRUE			
				hom.27.2a4a	69 033	0.62	FALSE			
				hom.27.9a	22 528	0.26	FALSE			
				ldb.27.8c9a	370	0.47	FALSE			
				mac.27.nea	999 988	1.25	TRUE			
				mon.27.8c9a	570 317	0.39	FALSE			
				whb.27.1-912	525	1.42	TRUE			

PURSE SEINERS (CNW)

	2018 POPULATION WITHOUT 90 CLUSTER							2018 POPULATION WITH 90 CLUSTER						
	LENGTH CLASS								LENGTH CLASS					
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
PS		8	50	72	84		214	PS			58	72	84		214

In 2018, the full-time purse seiner fleet comprised 214 vessels, which is the same number as in 2017. In terms of both the number of vessels and amount of power, the 24-40 m segment is the largest, with 84 vessels and almost 60% of the power available. A cluster has been formed using eight vessels from the 10-12 m segment, with the 10-18 m cluster becoming formal.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Purse seines	10-18	7,37	5,06	2,80	4,10	133,32	136,51	90,79	109,93	0,80	0,80	0,79	0,80
	18-24	5,40	2,89	2,10	2,80	82,08	70,47	20,67	43,67	0,87	0,87	0,82	0,84
	24-40	9,75	4,19	4,15	4,96	146,08	86,05	88,95	96,28	0,89	0,87	0,81	0,84
		SHI				SAR							
	10-18	<40%	<40%	0,71	0,71								
	18-24	<40%	<40%	<40%	<40%								
	24-40	<40%	1,32	0,73	0,93	HOM.27.2A4A5B6A7A-CE-K8							
		OVERALL INDICATOR			BALANCE								
	10-18	3	3	3	3								
	18-24	3	3	3	3								
	24-40	3	2	3	3								

The CNW purse seiner fleet shows good short-term and long-term profitability results for all length segments, although with a slight trend towards the results worsening due to the increase in variable costs. In contrast, fishing ground use is very homogeneous across the different segments of the fleet, as shown by the technical indicator, although its results are slightly unfavourable.

In the 2019 action plan (2017 data), the **24-40 m segment** showed an imbalance due to dependency on overexploited species, mainly sardine and mackerel. The improvement of these two stocks and the diversification of catches have reduced this dependency, which is reflected in the improvement to the biological indicator. The SAR indicator shows no dependency on at-risk species.

This improvement, together with the good results for the economic indicators, means that this segment is considered to be in **balance** and it is not included in this year's action plan. However, it is necessary to examine the trend of this segment in case it becomes necessary to apply an action plan again in the future.

The **remaining segments** are considered to be in **balance,** in terms of both the economic

results and the available biological data.

LENGTH	TOT STOCK VAL	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
				2017 SHI PURSE SEINERS CNW						
24-40	40 849 951.82	78 113 203.02	52.30%	AO-ALB-N	23 586 440	0.54	FALSE	1.32	7	4
				AO-BET	1 283 232	1.28	TRUE			
				AO-BFT-E	3 828 309	0.34	FALSE			
				hom-west	386 741	0.97	FALSE			
				mac-nea	6 230 247	1.31	TRUE			
				pil-27.8abd	4 404 195	6.34	TRUE			
				pil-27.8c9a	1 130 787	1.7	TRUE			
				2018 SHI PURSE SEINERS CNW						
18-24	6 828 006.38	17 005 307.20	40%	alb-na	85.36	0.54	FALSE	0.71	10	5
				bil-ne	545.45	1.59	TRUE			
				hke.27.8c9a	1 557.66	2.38	TRUE			
				hom.27.2a4a	2 228 817.86	0.62	FALSE			
				hom.27.9a	2 542 354.29	0.26	FALSE			
				mac.27.nea	571 813.04	1.25	TRUE			
				mon.27.8c9a	4 669.00	0.39	FALSE			
				pil-27.8abd	3 898.80	1.52	TRUE			
				pil-27.8c9a	1 469 316.60	1.43	TRUE			
				swo-na	4 948.32	0.78	FALSE			
24-40	55 309 041.33	92 966 399.43	59%	alb-na	38 172 965.74	0.54	FALSE	0.73	10	6
				bet-atl	4 474.48	1.63	TRUE			
				bft-ea	987 271.86	0.34	FALSE			
				bil-ne	148.38	1.59	TRUE			
				bss.27.8ab	1 679.05	1.03	TRUE			
				hom.27.2a4a	2 167 237.76	0.62	FALSE			
				hom.27.9a	922 061.54	0.26	FALSE			
				mac.27.nea	6 791 161.46	1.25	TRUE			
				pil-27.8abd	5 529 507.83	1.52	TRUE			
				pil-27.8c9a	732 533.23	1.43	TRUE			

VESSELS USING HOOKS (CNW)

The fleet mainly using hooks comprises 123 vessels (employing small-scale gear, fixed and bottom-set gillnets and bottom-set longlines in this fishing ground; as well as purse seiners mainly active in coastal fishing for bonito and mackerel with hooks).

2018 POPULATION WITHOUT 90 CLUSTER								2018 POPULATION WITH 90 CLUSTER							
	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
HOK		35	48	25	15		123	HOK		35	48	25	15		123

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Hooks	10-12	3.74	1.07	5.66	4.07	145.65	2.12	144.53	104.00	0.82	0.78	0.79	0.79
	12-18	4.12	3.58	2.84	3.23	41.19	81.07	46.27	55.49	0.76	0.76	0.77	0.77
	18-24	1.71	2.06	-0.23	0.70	15.31	43.76	-33.24	-4.30	0.80	0.81	0.77	0.78
	24-40	13.14	15.38	1.35	7.04	253.80	152.18	10.19	85.56	0.87	0.91	0.91	0.90
		SHI				SAR							
	10-12	< 40%	1.53	1.47	1.49								
	12-18	1.37	1.28	1.42	1.37								
	18-24	1.11	1.03	0.97	1.01								
	24-40	0.63	0.81	0.77	0.76								
		Overall indicator			BALANCE								
	10-12	3	2	2	2								
	12-18	2	2	2	2								
	18-24	3	3	2	2								
	24-40	3	3	3	3								

10-12 m segment: This segment comprises 23 full-time vessels (12 fewer than the previous year), mostly using small-scale gear and bottom-set longlines. The <u>economic indicators</u> show a favourable trend in both short- and long-term profitability, with the economic balance being consolidated. The <u>technical indicator</u> shows a slight imbalance, which is typical of the artisanal fleet. The <u>SHI biological indicator</u> shows an imbalance, with dependency on overexploited species such as Southern hake and mackerel persisting, although the latter has an improved FMSY, meaning that the SHI value has fallen slightly. This segment does not depend on SAR species. **Continuing with the action plan is recommended.**

LENGTH	TOT STOCK VAL	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
				2017 SHI VESSELS USING HOOKS CNW						
10-12	1 435 757.04	3 435 187.13	41.80%	AO-ALB-N	160 303	0.54	FALSE	1.53	9	4
				AO-BET	24 299	1.28	TRUE			
				hke-nrtn	70 194	0.79	FALSE			
				hke-soth	602 610	2.1	TRUE			
				hom-west	71	0.97	FALSE			
				mac-nea	575 214	1.31	TRUE			
				sol.27.8ab	236	0.91	FALSE			
				swo-na	70	0.78	FALSE			
				whb.27.1-912	2 760	1.26	TRUE			
				2018 SHI VESSELS USING HOOKS CNW						
10-12	1 710 434.23	3 660 268.01	47%	alb-na	388 077	0.54	FALSE	1.47	13	5
				ank27.7,8abd	41	0.73	FALSE			
				ank27.8c9a	297	0.24	FALSE			
				bet-atl	3 728	1.63	TRUE			
				bss.27.8ab	16	1.03	TRUE			
				hke.27.3a46-	33 449	0.81	FALSE			
				hke.27.8c9a	606 737	2.38	TRUE			
				hom.27.2a4a	12 069	0.62	FALSE			
				hom.27.9a	5,218	0.26	FALSE			
				mac.27.nea	651 369	1.25	TRUE			
				mon.27.8c9a	510	0.39	FALSE			
				sol.27.8ab	46	1.13	TRUE			
				whb.27.1-912	8 879	1.42	TRUE			

12-18 m segment: This segment comprises 48 vessels, 16 fewer than in 2017, using bottom-set longlines and small-scale gear; it shows a slight decrease in both short- and long-term <u>economic</u> profitability, although these indicators remain in balance. In <u>technical</u> terms, fishing ground exploitation has remained the same, showing a slight imbalance. In 2018, the <u>biological</u> situation remains in imbalance, with increased dependency on surveyed overexploited species, meaning that the indicator has worsened; as a positive aspect, it should be emphasised that around 20% of the catch value depends on coastal fishing for bonito, a species with stocks at healthy levels. This segment does not depend on SAR species. However, **continuing with the action plan is recommended,** mainly due to economic imbalance.

				2016 SHI VESSELS USING HOOKS CNW						
12-18	6 342 359.63	10 706 313.95	59.24%	AO-ALB-N	2 420 999	0.54	FALSE	1.37	8	5
				AO-BET	193 017	1.28	TRUE			
				hke-nrtn	23 177	0.96	FALSE			
				hke-soth	2 350 116	2.27	TRUE			
				hom-west	20	0.97	FALSE			
				mac-nea	1 342 990	1.31	TRUE			
				sol.27.8ab	472	1.1	TRUE			
				whb.27.1-912	11 569	1.21	TRUE			
				2017 SHI VESSELS USING HOOKS CNW						
12-18	7 033 021.44	11 677 201.04	60.23%	AO-ALB-N	2 687 365.53	0.54	FALSE	1.28	8	4
				AO-BET	350 125.68	1.28	TRUE			
				hke-nrtn	50 896.62	0.79	FALSE			
				hke-soth	2 414 077.05	2.1	TRUE			
				hom-west	6.62	0.97	FALSE			
				mac-nea	1 519 588.30	1.31	TRUE			
				sol.27.8ab	261.48	0.91	FALSE			
				whb.27.1-912	10 700.16	1.26	TRUE			
				2018 SHI VESSELS USING HOOKS CNW						
12-18	4 284 211.94	7 820 295.48	55%	alb-na	1 399 950.41	0.54	FALSE	1.42	16	7
				ank27.7,8abd	37.38	0.73	FALSE			
				ank27.8c9a	24.42	0.24	FALSE			
				bet-atl	14 903.11	1.63	TRUE			
				bil-ne	3.57	1.59	TRUE			
				bss.27.8ab	249.73	1.03	TRUE			
				hke.27.3a46-	61 192.06	0.81	FALSE			
				hke.27.8c9a	1 597 770.36	2.38	TRUE			
				hom.27.2a4a	29 068.85	0.62	FALSE			
				hom.27.9a	213.02	0.26	FALSE			
				ldb.27.8c9a	46.79	0.47	FALSE			
				mac.27.nea	1 121 945.23	1.25	TRUE			
				meg.27.8c9a	57.63	0.9	FALSE			
				mon.27.8c9a	44 719.22	0.39	FALSE			
				sol.27.8ab	73.92	1.13	TRUE			
				whb.27.1-912	13 956.24	1.42	TRUE			

18-24 m segment: this segment comprises 25 vessels, four fewer than in 2017, mainly bottom-set longliners, and some purse seiners (4) which fish for bonito in the coastal fishery. fishing for coastal bonito. Both short- and long-term <u>economic</u> profitability have worsened, breaking the trend seen in previous years towards the recovery of the segment's economic results. The negative data for 2018 may be due to an inadequate valuation of the revenue from the sale of fish in the statistics; therefore, its trend should be monitored over the coming years to confirm this loss of profitability. In <u>technical</u> terms, fishing ground exploitation has decreased slightly compared to 2017, showing a slight imbalance. The <u>biological</u> situation improved in 2018 compared to previous years, as dependency on bigeye tuna, blue whiting, Southern hake and mackerel has decreased. In terms of dependency on non-overexploited stocks, there is increased coastal fishing for bonito, a species of which there are healthy stocks. This segment does not depend on SAR species. However, **continuing with the action plan is recommended,** due to the poor economic results in 2018.

LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
				2016 SHI VESSELS USING HOOKS CNW						
18-24	6 876 028.95	9 398 076.31	73.16%	AO-ALB-N	3 730 556	0.54	FALSE	**1.11**	8	4
				AO-BET	112 441	1.28	TRUE			
				AO-BFT-E	1 157	0.34	FALSE			
				AO-BET	1 759	0.77	FALSE			
				hke-nrtn	551	0.96	FALSE			
				hke-soth	1 560 603	2.27	TRUE			
				mac-nea	1 455 485	1.31	TRUE			
				whb.27.1-912	13 478	1.21	TRUE			
				2017 SHI VESSELS USING HOOKS CNW						
18-24	7 264 401.93	9 216 317.90	78.82%	AO-ALB-N	4 008 695.93	0.54	FALSE	**1.03**	8	5
				AO-BET	81 684.45	1.28	TRUE			
				hke-nrtn	2 625.06	0.79	FALSE			
				hke-soth	1 373 204.26	2.1	TRUE			
				mac-nea	1 782 665.64	1.31	TRUE			
				pil-27.8c9a	3 491.39	1.7	TRUE			
				swo-na	28.49	0.78	FALSE			
				whb.27.1-912	12 006.71	1.26	TRUE			
				2018 SHI VESSELS USING HOOKS CNW						
18-24	7 062 916.45	8 944 599.19	79%	alb-na	4 347 164.84	0.54	FALSE	**0.97**	12	6
				ank27.8c9a	778.09	0.24	FALSE			
				bet-atl	11 871.25	1.63	TRUE			
				hke.27.3a46-	124.32	0.81	FALSE			
				hke.27.8c9a	968 302.33	2.38	TRUE			
				hom.27.2a4a	7 709.95	0.62	FALSE			
				mac.27.nea	1 682 163.32	1.25	TRUE			
				meg.27.8c9a	57.65	0.9	FALSE			
				mon.27.8c9a	1 436.09	0.39	FALSE			
				pil-27.8abd	2 776.28	1.52	TRUE			
				pil-27.8c9a	32 817.11	1.43	TRUE			

				whb.27.1-912	7 715.22	1.42	TRUE			

24-40 m segment: this segment comprises 15 vessels using small-scale gear, bottom-set longlines, purse seines, fixed gillnets and bottom-set gillnets. The <u>economic</u> profitability of this segment is maintained, although with somewhat worse data than in 2017. The <u>technical</u> indicators show homogeneity in this fleet and an adequate use of the fishing ground, while its <u>SHI biological</u> indicator reveals a balanced segment due to its predominant dependency on ALB, a species in balance. **No action plan is required.**

LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
				2016 SHI VESSELS USING HOOKS CNW						
24-40	32 256 044.11	45 091 565.75	71.53%	AO-ALB-N	23 511 019	0.54	FALSE	0.63	7	4
				AO-BET	542 125	1.28	TRUE			
				AO-BFT-E	4 222 873	0.34	FALSE			
				hke-soth	317 365	2.27	TRUE			
				hom-west	156 972	0.97	FALSE			
				mac-nea	3 505 476	1.31	TRUE			
				whb.27.1-912	214	1.21	TRUE			
				2017 SHI VESSELS USING HOOKS CNW						
24-40	15 528 919.58	20 515 692.69	75.69%	AO-ALB-N	10 906 734.50	0.54	FALSE	0.81	8	5
				AO-BET	617 386.64	1.28	TRUE			
				AO-BFT-E	1 042 829.12	0.34	FALSE			
				hke-soth	99 097.22	2.1	TRUE			
				hom-west	9 142.09	0.97	FALSE			
				mac-nea	2 463 036.23	1.31	TRUE			
				pil-27.8abd	324 041.79	6.34	TRUE			
				pil-27.8c9a	66 651.99	1.7	TRUE			
				2018 SHI VESSELS USING HOOKS CNW						
24-40	5 975 339.54	6 788 318.42	88%	alb-na	4 318 416.80	0.54	FALSE	0.77	11	6
				ank27.8c9a	350.92	0.24	FALSE			
				bet-atl	6 312.20	1.63	TRUE			
				bft-ea	35 784.15	0.34	FALSE			
				hke.27.8c9a	166 299.08	2.38	TRUE			
				hom.27.2a4a	2 544.82	0.62	FALSE			
				mac.27.nea	1 380 389.12	1.25	TRUE			
				mon.27.8c9a	598.69	0.39	FALSE			
				pil-27.8abd	63 872.72	1.52	TRUE			
				pil-27.8c9a	573.77	1.43	TRUE			
				whb.27.1-912	197.27	1.42	TRUE			

To summarise, **an action plan is recommended for the 10-12 m and 12-18 m segments of the CNW fleet using hooks**, due to biological dependency on overexploited stocks, and for the **18-24 m segment using hooks**, due to the biological dependency on overexploited stocks and the deterioration of its economic situation, which must be examined to determine whether it is due to a statistical error.

DREDGERS (CNW)

	2018 POPULATION WITHOUT 90 CLUSTER								2018 POPULATION WITH 90 CLUSTER							
	LENGTH CLASS								LENGTH CLASS							
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total	
DRB	1 085	2						1 087	DRB	1 087							1 087

This segment comprises a total of 1 087 vessels, mainly shellfish harvesters from Galicia. Profitability continues to be balanced, with a significant improvement in economic results in 2018 compared to 2017. It is not possible to assess the biological indicator due to the lack of scientific surveys of the species caught; it also does not fish for SAR species. The imbalance in this fleet's technical indicator is maintained, due to the low exploitation of the fishing ground. Taking into account the STECF reports that have reiterated since 2015 that low exploitation of fishing grounds by the artisanal fleet cannot be directly attributed to an imbalance between capacity and opportunities, **this segment is considered to be in balance.**

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Trawl nets/Dredges	00-12	11.58	1.33	5.59	5.23	93.25	4.28	45.95	40.80	0.65	0.67	0.62	0.64
		SHI				SAR							
	00-12	< 40%	< 40%	< 40%	< 40%								
		Overall indicator			BALANCE								
	00-12	3	3	3	3								

VESSELS USING POTS (CNW)

	2018 POPULATION WITHOUT 90 CLUSTER								2018 POPULATION WITH 90 CLUSTER							
	LENGTH CLASS								LENGTH CLASS							
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total	
FPO		63	44					107	FPO		63	44					107

In total, 107 small-scale vessels, distributed in two length segments, 10-12 m (63 vessels) and 12-18 m (44 vessels), fished full-time using pots and traps.

The **10-12 m segment** remains economically balanced, although the fishing exploitation shows a slight inefficiency. Since this segment is not dependent on stocks

under survey and does not fish for SAR species, it is considered to be in **balance**, taking into account the economic results.

In the **12-18 m segment**, the 2018 results for short- and long-term profitability show an imbalance, breaking the trend of the previous two years. This imbalance may be due to a statistical error, as the actual landing value is higher than statistically estimated. In any case, the weighted average for the last three years, despite the greater weighting being given to the 2018 values, continues to show a value in balance. Fishing ground exploitation remains slightly imbalanced and, in biological terms, it does not depend on stocks under survey or SAR species. Despite the poor results presented by the economic statistics for 2018, **this segment** is considered to be **in balance**, taking into account the average profitability for the last three years and the favourable trend of the landed catch value, and the results for the coming year will be carefully studied.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Pots	10-12	7.35	3.58	2.21	3.34	51.40	62.83	39.62	47.93	0.84	0.78	0.79	0.79
	12-18	5.43	7.95	0.88	3.55	26.14	75.04	-5.23	22.19	0.83	0.78	0.84	0.82
		SHI				SAR							
	10-12	< 40%	< 40%	< 40%	< 40%								
	12-18	< 40%	< 40%	< 40%	< 40%								
		Overall indicator			BALANCE								
	10-12	3	3	3	3								
	12-18	3	3	1	3								

POLYVALENT VESSELS (CNW)

	2018 POPULATION WITHOUT 90 CLUSTER								2018 POPULATION WITH 90 CLUSTER						
	LENGTH CLASS									LENGTH CLASS					
	1	2	3	4	5	6	Overall total			1	2	3	4	5	6	Overall total
PMP	983	17	15	1			1 016	PMP		983	17	16				1 016

Of the polyvalent vessels, 1 016 vessels fish full-time and they mostly belong to the 00-10 m segment (983 vessels), while the 10-11 m and 12-24 m segments comprise 17 and 16 vessels respectively. In addition, there are 881 vessels that do not fish full-time, which reflects the high level of part-time fishermen with a very low level of exploitation in the fishing ground.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Polyvalent active and passive gear	00-10	3.98	3.08	3.55	3.48	40.43	37.50	82.04	63.37	0.64	0.62	0.62	0.62
	10-12	9.69	6.02	6.13	6.61	33.78	223.31	53.27	99.07	0.78	0.81	0.92	0.87
	12-24	6.44	2.62	1.38	2.46	51.37	49.84	15.33	30.34	0.86	0.93	0.90	0.91

	SHI				SAR			
00-10	< 40%	< 40%	< 40%	< 40%				
10-12	< 40%	< 40%	< 40%	< 40%				
12-24	1.10	1.08	1.06	1.07				

	Overall indicator			BALANCE
00-10	3	3	3	3
10-12	3	3	3	3
12-24	3	3	3	3

The three segments of this fleet have good economic profitability, with economic indicator results that are in balance.

From a biological point of view, the two smaller length segments do not depend on stocks under survey. The **12-24 m segment** shows a certain dependency on overexploited species, especially Southern hake, mackerel and bigeye tuna. The decrease in the dependency on the latter species means that the biological indicator for 2018 is close to being in balance.

The **00-10 m segment** shows a clear technical imbalance due to the low level of fishing ground exploitation. However, to assess this imbalance, it is necessary to take into account the STECF reports that stress that low fishing ground exploitation by the artisanal fleet must not be interpreted as an imbalance between capacity and opportunities.

Therefore, the **three segments** that make up this fleet are considered to be in **balance** and **do not require an action plan**, mainly due to the good economic results.

LENGTH	TOT STOCK VAL	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
				2016 SHI ACTIVE AND PASSIVE POLYVALENT VESSELS CNW						
12-24	2 551 918.02	4 812 810.68	53.02%	AO-ALB-N	1 234 805	0.54	FALSE	**1.10**	5	4
				AO-BET	115 560	1.28	TRUE			
				hke-soth	446 220	2.27	TRUE			
				mac-nea	752 736	1.31	TRUE			
				whb.27.1-912	2 598	1.21	TRUE			
				2017 SHI ACTIVE AND PASSIVE POLYVALENT VESSELS CNW						
12-24	3 732 910.98	5 405 936.01	69.05%	AO-ALB-N	1 853 153	0.54	FALSE	**1.08**	7	5
				AO-BET	161 193	1.28	TRUE			
				hke-soth	725 837	2.1	TRUE			
				mac-nea	988 739	1.31	TRUE			
				pil-27.8c9a	3 403	1.7	TRUE			
				sol.27.8ab	157	0.91	FALSE			
				whb.27.1-912	429	1.26	TRUE			
				2018 SHI ACTIVE AND PASSIVE POLYVALENT VESSELS CNW						
12-24	1 170 630.21	2 029 896.82	58%	alb-na	626 493	0.54	FALSE	**1.06**	11	5
				ank27.8c9a	2 019	0.24	FALSE			
				bet-atl	5 729	1.63	TRUE			
				bil-ne	6	1.59	TRUE			
				hke.27.8c9a	229 873	2.38	TRUE			
				hom.27.2a4a	8 012	0.62	FALSE			
				hom.27.9a	1 598	0.26	FALSE			
				ldb.27.8c9a	16	0.47	FALSE			
				mac.27.nea	259 031	1.25	TRUE			
				mon.27.8c9a	37 520	0.39	FALSE			
				pil-27.8c9a	333	1.43	TRUE			

GULF OF CÁDIZ

TRAWLERS (GC)

2018 POPULATION WITHOUT 90 CLUSTER								2018 POPULATION WITH 90 CLUSTER							
	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
DTS			52	66	3		121	DTS			52	69			121

This fleet comprises 121 full-time fishing vessels, 52 of which are in the 12-28 m segment and the other 69 are in the 18-40 m segment (this cluster extends to 40 m as there are three vessels over 24 m long).

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Bottom trawl nets	12-18	2.81	3.56	2.45	2.82	165.50	38.46	53.95	65.46	0.90	0.88	0.88	0.88
	18-40	3.97	2.75	4.86	4.13	258.20	62.41	85.58	103.62	0.86	0.84	0.83	0.84
		SHI				SAR							
	12-18	< 40%	< 40%	< 40%	< 40%								
	18-40	< 40%	< 40%	< 40%	< 40%								
		Overall indicator			BALANCE								
	12-18	3	3	3	3								
	18-40	3	3	3	3								

The two segments of this fleet have good economic results and have maintained a balanced situation during the three years of the survey. The exploitation of the fishing ground remains stable. The percentages of surveyed species in the catches of this fleet do not reach 40%, so it is not possible to assess the biological indicator, and there are no SAR species that accounts for more than 10% of this fleet's total catch.

Both segments are in balance.

PURSE SEINERS (GC)

2018 POPULATION WITHOUT 90 CLUSTER								2018 POPULATION WITH 90 CLUSTER							
	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
PS			32	21	3		56	PS			32	24			56

This fleet comprises 75 vessels, of which 56 fish full-time, of which 32 are in the 12-18 m segment and 24 are in the 18-40 m segment (as three of them are around 25 m long, the cluster extends to 40 m). Compared to 2017, there are 16 fewer full-time fishing vessels in this fleet.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Purse seines	12-18	7.25	0.79	1.03	1.85	132.53	-12.22	0.83	15.92	0.82	0.82	0.78	0.80
	18-40	6.35	0.72	0.90	1.62	97.32	-20.57	-4.56	5.42	0.89	0.86	0.87	0.87
		SHI				SAR							
	12-18	< 40%	< 40%	< 40%	< 40%	SAR-SOT	SAR-SOT	SAR-SOTH					
	18-40	< 40%	< 40%	< 40%	< 40%	SAR-SOT	SAR-SOT	SAR-SOTH					
		Overall indicator			BALANCE								
	12-18	3	1	2	3								
	18-40	3	1	1	2								

In the **12-18 m segment**, the <u>economic indicators</u> for 2017 show an imbalance due to the surprising increase in fixed costs, which represent a drastic reduction in both short- and long-term profitability. This situation, which is due to a possible statistical inconsistency, improved in 2018, although a certain imbalance remains in relation to long-term profitability. However, the weighted economic indicators for the three years under study (2016, 2017 and 2018) show a balanced situation, the trend of which is expected to continue in the coming years.

In contrast, the **18-40 m segment** has worse economic results in both 2017 and 2018.

The <u>technical indicator</u> for both segments (12-18 m and 18-40 m) shows a slight imbalance in fishing ground exploitation and, in <u>biological</u> terms, the catches of neither segment contain 40% of the surveyed species, although this fleet does suffer from high dependency on Iberian sardine stocks, which are caught in the Gulf of Cádiz, zone IXa, where the situation is classified as at risk (STECF 18-14, Balance Report), a fact that made it necessary for Spain and Portugal to approve a joint management plan.

GEAR	LENGTH	FISHSTOCK_SHAR	TOT_WEIGHT	TOT_STRATUM_WEIGHT	PER CENT
PS	3	SAR-SOTH	715 922.13	4 175 352.82	17.15%
PS	4	SAR-SOTH	727 333.07	4 641 549.94	15.67%

For this fleet, **an action plan is recommended for the 18-40 m segment** due to their poor economic results and their dependency on the Iberian sardine SAR. The 12-18 m segment 12-18 will have to be assessed in the coming year to analyse the trend of its economic results.

GILLNETTERS (GC)

2018 POPULATION WITHOUT 90 CLUSTER								2018 POPULATION WITH 90 CLUSTER							
	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
DFN		11	22				33	DFN			33				33

In 2018, this segment comprised 38 vessels, mainly using small-scale gear, of which 33 are considered full-time vessels, as they fished for more than 90 days (11 in the 10-12 m segment and 22 in the 12-18 m segment), which form a 10-18 m cluster.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Gillnets	10-18	4.84	5.15	8.33	6.92	68.10	98.50	76.61	81.65	0.86	0.85	0.86	0.86
		SHI				SAR							
	10-18	< 40%	< 40%	< 40%	< 40%								
		Overall indicator			BALANCE								
	10-18	3	3	3	3								

The <u>economic indicators</u> remain in good condition, as in the previous plans, and their weighted indicator is in balance. The <u>exploitation of the fishing ground</u> has remained stable over the three years of study, within margins that are close to being in balance. In biological terms, there is no dependency on stocks at risk that reaches the threshold for a SAR assessment. Consequently, it can be considered that this **segment maintains a balance** between capacity and fishing opportunities.

POLYVALENT VESSELS (GC)

2018 POPULATION WITHOUT 90 CLUSTER								2018 POPULATION WITH 90 CLUSTER							
	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
DRB	1	1					2								
FPO		4	4				8	PMP	84		20				104
HOK		2	4				6								
PMP	84	1	3				88								

Of the 277 registered vessels that do not predominantly make use of one method in particular, only 104 operated full-time, forming the greater part of the artisanal fleet. Compared to 2017, these are 30 fewer full-time vessels. The dredgers (two vessels), vessels using pots (eight vessels), vessels using hooks (six vessels) and polyvalent vessels (88) are grouped into two clusters, one for vessels measuring 0-10 m and the other for vessels measuring 10-18 m.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Surface longlines	00-10	3.98	3.15	3.14	3.26	40.43	69.95	171.67	123.86	0.66	0.67	0.70	0.69
	10-18	6.17	2.22	1.20	2.20	52.03	6.28	5.10	12.14	0.97	0.99	0.88	0.93
		SHI				SAR							
	00-10	< 40%	< 40%	< 40%	< 40%								
	10-18	< 40%	< 40%	< 40%	< 40%	SAR-SOTH							
		Overall indicator			BALANCE								
	00-10	3	3	3	3								
	10-18	3	3	3	3								

The results for 2018 continue to show **a balance for this fleet**, with very low exploitation of the fishing ground in the smallest grounds, but with good profitability and no dependency on overexploited stocks that would allow the evaluation of the SHI, since it is a multi-species fleet, and it does not catch SAR species.

MEDITERRANEAN

TRAWLERS (MEDITERRANEAN)

	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
DTS		14	144	291	123		572	DTS		14	144	291	123		572

The Mediterranean fleet (2018) comprises 581 vessels, 19 fewer than the previous year, 572 of which fished full-time. Therefore, it can be said that inactivity in this fleet is less than 2%.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Bottom trawl nets	16-12	9,14	1,85	1,28	2,57	62,63	41,88	18,01	31,20	0,92	0,93	0,91	0,92
	12-18	5,38	2,57	3,27	3,37	73,14	64,12	84,98	77,33	0,85	0,83	0,81	0,82
	18-24	3,75	1,91	1,96	2,20	47,81	38,86	47,33	44,98	0,78	0,76	0,74	0,75
	24-24	3,19	1,32	1,21	1,53	45,30	15,79	9,88	16,63	0,86	0,80	0,80	0,81
		SHI				SAR							
	16-12	<40%	<40%	<40%	<40%								
	12-18	<40%	<40%	<40%	<40%								
	18-24	3,96	4,08	3,57	3,77								
	24-24	4,12	4,25	3,26	3,66	HKE-37							
		OVERALL INDICATOR BALANCE											
	16-12	3	3	3	3								
	12-18	3	3	3	3								
	18-24	2	2	2	2								
	24-24	2	2	2	2								

6-12 m segment: From the perspective of economic profitability, this segment shows very good short- and long-term profitability, although a decline in economic performance has been noted. The operational capability of this segment is very homogeneous. In technical terms, of the 17 registered vessels, 14 operate full-time, and fishing ground exploitation is close to being in balance, at around 169 days/year. In biological terms, as this is a multi-species segment, it does not show a dependency on surveyed species or SAR species for more than 40% of its catches (not even 30%). Therefore, and following the indicator guidelines, this **segment** is in **balance**.

12-18 m segment: From the perspective of economic profitability, this segment has shown very good short- and long-term profitability for three years. Operational capacity is homogeneous and close to balance. In technical terms, of the 146 registered vessels, 144 operate full-time, and fishing ground exploitation is close to being in balance, at around 235 days/year. In biological terms, the segment does not show a dependency on overexploited species, as the surveyed species it fishes for do not account for 20% of its

catches and it does not fish for SAR species. Therefore, and following the indicator guidelines, this **segment** is in **balance**.

18-24 m segment: In <u>economic</u> terms, this segment is considered profitable in both the short- and long-term. <u>Operational capability</u> is slightly unbalanced, especially for a segment where the majority of vessels operate full-time (291 full-time vessels of a total of 292 active vessels). The <u>biological indicators</u> show a dependency on overexploited stocks that, while lower than in 2016 and 2017, remains very high, primarily due to catches of Aesop shrimp (less in GSA 01), deepwater rose shrimp and hake and a decrease in Norway lobster catches in GSA 06. Due to this dependency on overexploited species, it is considered that this **segment remains in imbalance.**

24-40 m segment: In <u>economic</u> terms, this segment shows some indicators of high profitability, although during these three years they have been getting worse. <u>Operational capability</u> is homogeneous and close to being in balance. Of 126 active vessels, 123 operate full-time. In <u>biological</u> terms, the segment depends on overexploited species, with increased catches of ARA and HKE in GSA 06. The indicator shows an imbalance, with a dependency on 31 overexploited stocks, as a result of the increase in catches of Aesop shrimp and deepwater rose shrimp. In relation to the SAR indicator for 2018, the STECF has not identified any species fished by trawlers, and so none has been considered for this year. Due to the high dependency on overexploited species, it is considered that this **segment remains in imbalance.**

Based on this analysis, it would be advisable **to continue with measures to restore balance** in the **18-24 m and 24-40 m** segments and to keep these two segments **in the action plan**.

LENGTH	TOT STOCK VAL	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
				2016 SHI TRAWLERS MEDITERRANEAN						
18-24	38.158.753,30	74.693.755,54	51,09%	ane-gsa06	70.820,69	0,89	FALSE	3,96	30	27
				ank-gsa05	13.254,23	7,63	TRUE			
				ank-gsa06	110.584,35	6,49	TRUE			
				ara-gsa01	3.617.246,70	1,87	TRUE			
				ara-gsa05	3.112.546,60	1,01	TRUE			
				ara-gsa06	7.785.607,64	2,43	TRUE			
				ara-gsa09	141.445,28	0,84	FALSE			
				bss-gsa07	462,08	3,94	TRUE			
				CTC-GSA05	38.751,76	1,1	TRUE			
				dps-gsa01	1.282.493,90	0,9	FALSE			
				dps-gsa06	3.844.982,85	2,29	TRUE			
				hke-gsa01	675.994,29	7,5	TRUE			
				hke-gsa05	245.541,33	8,05	TRUE			
				hke-gsa06	5.420.645,55	7,71	TRUE			
				hke-gsa07	337.833,29	11,6	TRUE			
				hke-soth	44,14	2,27	TRUE			
				mon-gsa01_0!	2.465.340,68	2,05	TRUE			
				mur-gsa05	250.332,65	3,49	TRUE			
				mut-gsa01	356.628,76	4,84	TRUE			
				mut-gsa06	2.610.528,27	1,56	TRUE			
				mut-gsa07	94.772,50	2,26	TRUE			
				nep-gsa05	309.726,32	1,69	TRUE			
				nep-gsa06	4.282.922,70	9,49	TRUE			
				occ-gsa05	459.366,11	1,5	TRUE			
				pil-gsa01	1.677,00	1,26	TRUE			
				pil-gsa06	31.481,99	3,71	TRUE			
				sbg-gsa07	10.749,03	2,37	TRUE			
				sol-gsa07	1.674,98	7,41	TRUE			
				swo-med	214,57	1,82	TRUE			
				whb-gsa06	585.093,06	7,88	TRUE			
24-40	27.311.422,39	43.374.652,17	62,97%	ane-gsa06	56.364,24	0,89	FALSE	4,12	26	24
				ank-gsa05	359,84	7,63	TRUE			
				ank-gsa06	116.067,04	6,49	TRUE			
				ara-gsa01	2.050.837,61	1,87	TRUE			
				ara-gsa05	853.179,62	1,01	TRUE			
				ara-gsa06	11.014.139,99	2,43	TRUE			
				CTC-GSA05	4.738,23	1,1	TRUE			
				dps-gsa01	191.695,05	0,9	FALSE			
				dps-gsa06	1.699.456,36	2,29	TRUE			
				hke-gsa01	188.308,48	7,5	TRUE			
				hke-gsa05	111.140,63	8,05	TRUE			
				hke-gsa06	4.510.934,68	7,71	TRUE			
				hke-gsa07	477.033,99	11,6	TRUE			
				mon-gsa01_0!	1.104.868,31	2,05	TRUE			
				mur-gsa05	50.025,94	3,49	TRUE			
				mut-gsa01	10.994,16	4,84	TRUE			
				mut-gsa06	1.526.208,69	1,56	TRUE			
				mut-gsa07	77.758,83	2,26	TRUE			
				nep-gsa05	137.616,19	1,69	TRUE			
				nep-gsa06	2.440.068,91	9,49	TRUE			
				occ-gsa05	19.778,94	1,5	TRUE			
				pil-gsa01	337,61	1,26	TRUE			
				pil-gsa06	20.238,09	3,71	TRUE			
				sbg-gsa07	144,90	2,37	TRUE			
				sol-gsa07	195,80	7,41	TRUE			
				whb-gsa06	648.929,26	7,88	TRUE			

				2017 SHI TRAWLERS MEDITERRANEAN						
18-24	42.931.560,75	92.345.461,49	46,49%	ane-gsa06	51.186,67	1,19	TRUE	4,08	30	27
				ank-gsa05	15.273,68	7,63	TRUE			
				ank-gsa06	227.155,68	6,49	TRUE			
				AO-ALB-M	3,88	0,83	FALSE			
				ara-gsa01	3.477.434,55	1,87	TRUE			
				ara-gsa05	3.545.682,15	1,48	TRUE			
				ara-gsa06	8.840.558,74	2,43	TRUE			
				ara-gsa09	41.328,83	0,84	FALSE			
				ars-gsa09_10	30.661,36	1,51	TRUE			
				bss-gsa07	106,33	3,94	TRUE			
				dps-gsa01	1.699.909,39	0,9	FALSE			
				dps-gsa05	338.195,20	1,09	TRUE			
				dps-gsa06	5.496.909,11	2,29	TRUE			
				hke-gsa01	1.223.886,29	7,95	TRUE			
				hke-gsa05	312.279,29	8,05	TRUE			
				hke-gsa06	5.924.571,55	7,8	TRUE			
				hke-gsa07	354.753,32	12,4	TRUE			
				mon-gsa01_0!	2.504.284,36	2,05	TRUE			
				mur-gsa05	435.230,27	2,57	TRUE			
				mut-gsa01	422.301,75	4,84	TRUE			
				mut-gsa06	2.607.939,85	3,05	TRUE			
				mut-gsa07	117.457,05	3	TRUE			
				nep-gsa05	322.922,27	1,69	TRUE			
				nep-gsa06	4.268.330,78	9,49	TRUE			
				pil-gsa01	3.129,36	1,26	TRUE			
				pil-gsa06	36.560,36	2,59	TRUE			
				sbg-gsa07	2.030,22	2,37	TRUE			
				sol-gsa07	1.658,21	7,41	TRUE			
				swo-med	841,36	1,85	TRUE			
				whb-gsa06	628.978,89	7,88	TRUE			
24-40	29.642.175,75	45.995.110,23	64,45%	ane-gsa06	60.813,42	1,19	TRUE	4,25	28	26
				ank-gsa05	235,99	7,63	TRUE			
				ank-gsa06	184.832,92	6,49	TRUE			
				AO-ALB-M	1,76	0,83	FALSE			
				ara-gsa01	1.600.442,43	1,87	TRUE			
				ara-gsa05	1.335.428,19	1,48	TRUE			
				ara-gsa06	11.600.657,84	2,43	TRUE			
				bss-gsa07	217,99	3,94	TRUE			
				dps-gsa01	239.159,68	0,9	FALSE			
				dps-gsa05	132.391,25	1,09	TRUE			
				dps-gsa06	2.405.962,74	2,29	TRUE			
				hke-gsa01	366.111,39	7,95	TRUE			
				hke-gsa05	66.154,82	8,05	TRUE			
				hke-gsa06	4.992.625,70	7,8	TRUE			
				hke-gsa07	470.306,78	12,4	TRUE			
				mon-gsa01_0!	1.133.770,87	2,05	TRUE			
				mur-gsa05	70.594,93	2,57	TRUE			
				mut-gsa01	26.619,42	4,84	TRUE			
				mut-gsa06	1.566.673,68	3,05	TRUE			
				mut-gsa07	78.651,16	3	TRUE			
				nep-gsa05	58.193,53	1,69	TRUE			
				nep-gsa06	2.616.033,59	9,49	TRUE			
				pil-gsa01	405,83	1,26	TRUE			
				pil-gsa06	39.778,45	2,59	TRUE			
				sbg-gsa07	2.103,27	2,37	TRUE			
				sol-gsa07	91,90	7,41	TRUE			
				swo-med	734,78	1,85	TRUE			
				whb-gsa06	593.181,44	7,88	TRUE			

18-24	48.946.006,07	52.794.728,09	53%	alb-med	29,23	1,8	TRUE	3,57	31	31
				ane-gsa06	64.413,64	1,19	TRUE			
				ara-gsa01	2.172.196,50	1,37	TRUE			
				ara-gsa02	929.859,05	2,13	TRUE			
				ara-gsa05	5.236.881,95	1,48	TRUE			
				ara-gsa06	9.073.194,44	3	TRUE			
				bss-gsa07	227,49	3,94	TRUE			
				dps-gsa01	2.609.428,95	4,86	TRUE			
				dps-gsa03	5.829,15	1,86	TRUE			
				dps-gsa05	628.000,43	1,09	TRUE			
				dps-gsa06	7.760.551,80	2,53	TRUE			
				hke-gsa01	1.342.935,37	5,65	TRUE			
				hke-gsa02	5.505,65	8,18	TRUE			
				hke-gsa03	1.973,68	7,26	TRUE			
				hke-gsa04	21.278,45	8,18	TRUE			
				hke-gsa05	385.376,75	4,96	TRUE			
				hke-gsa06	7.380.985,97	5,86	TRUE			
				hke-gsa07	313.284,69	14,33	TRUE			
				mon-gsa01_0!	2.247.484,01	2,05	TRUE			
				mur-gsa05	494.327,35	2,57	TRUE			
				mut-gsa01	346.738,77	5,67	TRUE			
				mut-gsa06	2.947.019,11	5,48	TRUE			
				mut-gsa07	184.640,06	2,03	TRUE			
				nep-gsa05	1.088.147,14	5,62	TRUE			
				nep-gsa06	3.614.062,90	3,67	TRUE			
				pil-gsa01	3.438,19	1,06	TRUE			
				pil-gsa06	53.073,44	2,27	TRUE			
				sbg-gsa07	3.243,01	2,37	TRUE			
				sbr-gsa01_03	16.435,20	1,9	TRUE			
				sol-gsa07	1.643,31	7,41	TRUE			
				swo-med	3.840,39	1,85	TRUE			
24-40	66.403.301,23	84.693.156,59	78%	alb-med	3,85	1,8	TRUE	3,26	31	31
				ane-gsa06	58.496,66	1,19	TRUE			
				ara-gsa01	1.250.662,18	1,37	TRUE			
				ara-gsa02	290.574,92	2,13	TRUE			
				ara-gsa05	2.822.045,24	1,48	TRUE			
				ara-gsa06	46.874.425,19	3	TRUE			
				bss-gsa07	145,77	3,94	TRUE			
				dps-gsa01	273.049,54	4,86	TRUE			
				dps-gsa03	25,85	1,86	TRUE			
				dps-gsa05	427.881,32	1,09	TRUE			
				dps-gsa06	2.531.518,13	2,53	TRUE			
				hke-gsa01	334.502,48	5,65	TRUE			
				hke-gsa02	2.680,67	8,18	TRUE			
				hke-gsa03	4,00	7,26	TRUE			
				hke-gsa04	13.959,37	8,18	TRUE			
				hke-gsa05	128.021,91	4,96	TRUE			
				hke-gsa06	5.131.353,08	5,86	TRUE			
				hke-gsa07	283.245,81	14,33	TRUE			
				mon-gsa01_0!	1.088.353,72	2,05	TRUE			
				mur-gse05	79.396,84	2,57	TRUE			
				mut-gsa01	7.137,19	5,67	TRUE			
				mut-gsa06	1.532.333,78	5,48	TRUE			
				mut-gsa07	47.954,80	2,03	TRUE			
				nep-gsa05	786.664,00	5,62	TRUE			
				nep-gsa06	2.375.800,55	3,67	TRUE			
				pil-gsa01	89,38	1,06	TRUE			
				pil-gsa06	48.226,80	2,27	TRUE			
				sbg-gsa07	370,62	2,37	TRUE			
				sbr-gsa01_03	12.584,08	1,9	TRUE			
				sol-gsa07	404,98	7,41	TRUE			
				swo-med	1.478,52	1,85	TRUE			

PURSE SEINERS (MEDITERRANEAN)

2018 POPULATION WITHOUT 90 CLUSTER								2018 POPULATION WITH 90 CLUSTER							
	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
PS		11	70	79	20		180	PS		11	70	79	20		180

In 2018, the Mediterranean purse seiner fleet comprised 194 vessels, of which 180 operated full-time and just 14 had a low level of activity. This figure includes the six bluefin tuna purse seiners not studied in the action plan since they operated for fewer than 90 days/year. Inactivity in this fishing method stood at 12.6%.

Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
16-12	13,43	30,89	0,46	11,01	111,96	194,05	-29,40	54,63	0,86	0,88	0,95	0,92
12-18	3,65	3,25	1,83	2,50	70,70	62,72	42,00	52,02	0,85	0,85	0,89	0,87
18-24	4,02	2,26	2,90	2,87	49,02	42,97	64,80	56,31	0,87	0,84	0,87	0,86
24-24	2,56	2,78	5,15	4,10	100,25	115,34	175,47	147,54	0,94	0,96	0,89	0,92

Length	SHI				SAR		
16-12	1,87	1,64	1,36	1,51	PIL-GSA6		
12-18	1,75	1,55	1,48	1,54	PIL-GSA6		
18-24	1,67	1,55	1,47	1,52	PIL-GSA6		
24-24	1,44	1,38	1,53	1,47	PIL-GSA6		

Length	OVERALL INDICATOR BALANCE			
16-12	2	2	1	2
12-18	2	2	2	2
18-24	2	2	2	2
24-24	2	2	2	2

6-12 m segment: from an <u>economic</u> perspective, very good economic profitability, both short- and long-term, was seen in 2016 and 2017. However, in 2018, this profitability seems to plummet. A detailed study of the economic data provided has shown a 700% increase in fixed costs, which could be due to a statistical error. Its <u>operational capability</u> is in balance, having improved since 2016. In technical terms, of the 16 registered vessels, 11 operate full-time, and fishing ground exploitation is close to being in balance, at around 180 days/year. In relation to the <u>biological indicators</u>, this segment follows the same parameters as the other segments, which will be explained below.

2016 SHI PURSE SEINERS MEDITERRANEAN										
LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
06-12	722.979	1.777.754	40,67%	ane-gsa06	65.870,62	0,89	FALSE	1,87	5	4
				mon-gsa01_05	9,67	2,05	TRUE			
				mut-gsa01	746,76	4,84	TRUE			
				pil-gsa01	466.919,64	1,26	TRUE			
				pil-gsa06	189.432,71	3,71	TRUE			

2017 SHI PURSE SEINERS MEDITERRANEAN										
LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
06-12	649.886	1.518.688	42,79%	ane-gsa06	60.410,36	1,19	TRUE	1,64	7	7
				hke-gsa01	2,30	7,95	TRUE			
				mon-gsa01_0	16,71	2,05	TRUE			
				mut-gsa01	1.106,97	4,84	TRUE			
				pil-27.8c9a	1.820,04	1,7	TRUE			
				pil-gsa01	401.628,90	1,26	TRUE			
				pil-gsa06	184.900,69	2,59	TRUE			

2018 SHI PURSE SEINERS MEDITERRANEAN										
LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
06-12	544.901	1.190.822	46%	ane-gsa06	40.085,22	1,19	TRUE	1,36	6	5
				hke-gsa01	49,76	5,65	TRUE			
				hom.27.9a	876,97	0,26	FALSE			
				mut-gsa01	691,71	5,67	TRUE			
				pil-gsa01	375.682,20	1,06	TRUE			
				pil-gsa06	127.515,10	2,27	TRUE			

In economic terms, **the rest of the segments** display good short- and long-term profitability during the whole period under examination. Its operational capability is close to being in balance and it is fairly homogeneous for all segments during the three years analysed, with fishing ground exploitation at over 220 days in the three segments studied.

In relation to biological indicators, there is a significant imbalance that should be noted, resulting from the high volumes of anchovy caught. Thus, despite the fact that catches of some of the most overexploited species, such as European hake which has an F etoile value of 5.65 and red mullet (5.48), have been reduced almost to zero, that has been insufficient to re-establish the balance, though it has allowed a slight improvement in the indicators. To this, it is necessary to add the increased catch of sardine, which has been considered a species at biological risk (SAR) during the three years analysed.

Consequently, the four length segments of this fleet remain in **imbalance** and it is therefore advisable to keep them in the action plan.

2016 SHI PURSE SEINERS MEDITERRANEAN										
LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2		Overexploited stock	INDICATOR	stock_assess	Overexploited
12-18	14.318.926	21.910.528	65,35%	ane-gsa06	6.170.054,14	0,89	FALSE	1,75	10	7
				AO-ALB-M	2.108,83	0,83	FALSE			
				AO-BFT-E	339.781,41	0,34	FALSE			
				hke-gsa01	60,90	7,5	TRUE			
				hke-gsa06	15,14	7,71	TRUE			
				mon-gsa01_0!	6.558,04	2,05	TRUE			
				mut-gsa01	544,96	4,84	TRUE			
				mut-gsa06	110,86	1,56	TRUE			
				pil-gsa01	3.850.695,57	1,26	TRUE			
				pil-gsa06	3.948.996,59	3,71	TRUE			

2017 SHI PURSE SEINERS MEDITERRANEAN										
LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2		Overexploited stock	INDICATOR	stock_assess	Overexploited
12-18	13.952.899	23.392.773	59,65%	ane-gsa06	6.271.531,05	1,19	TRUE	1,55	11	9
				AO-ALB-M	21.126,99	0,83	FALSE			
				AO-BFT-E	91.113,80	0,34	FALSE			
				hke-gsa01	1.397,81	7,95	TRUE			
				mac-nea	123,64	1,31	TRUE			
				mon-gsa01_0!	412,61	2,05	TRUE			
				mut-gsa01	987,33	4,84	TRUE			
				mut-gsa06	85,61	3,05	TRUE			
				pil-27.8c9a	10.578,49	1,7	TRUE			
				pil-gsa01	4.077.281,32	1,26	TRUE			
				pil-gsa06	3.478.260,84	2,59	TRUE			

2018 SHI PURSE SEINERS MEDITERRANEAN										
LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2		Overexploited stock	INDICATOR	stock_assess	Overexploited
12-18	544.901	1.190.822	46%	ane-gsa06	40.085,22	1,19	TRUE	1,36	6	5
				hke-gsa01	49,76	5,65	TRUE			
				hom.27.9a	876,97	0,26	FALSE			
				mut-gsa01	691,71	5,67	TRUE			
				pil-gsa01	375.682,20	1,06	TRUE			
				pil-gsa06	127.515,10	2,27	TRUE			

2016 SHI PURSE SEINERS MEDITERRANEAN									
LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
18-24	25.757.666	38.608.984	66,71%	ane-gsa06	15.755.153	0,89	FALSE	1,67	6	5
				hke-gsa06	35	7,71	TRUE			
				mac-nea	17.195	1,31	TRUE			
				pil-gsa01	3.263.364	1,26	TRUE			
				pil-gsa06	6.719.548	3,71	TRUE			
				whb-gsa06	2.370	7,88	TRUE			

2017 SHI PURSE SEINERS MEDITERRANEAN									
LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
18-24	24.494.546	38.921.284	62,93%	ane-gsa06	14.216.707	1,19	TRUE	1,55	9	8
				ank-gsa06	17	6,49	TRUE			
				AO-ALB-M	13.666	0,83	FALSE			
				hke-gsa06	6	7,8	TRUE			
				mon-gsa01_05	9	2,05	TRUE			
				pil-27.8c9a	13.988	1,7	TRUE			
				pil-gsa01	4.076.441	1,26	TRUE			
				pil-gsa06	6.173.478	2,59	TRUE			
				swo-med	234	1,85	TRUE			

2018 SHI PURSE SEINERS MEDITERRANEAN									
LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
18-24	34.073.455,30	41.033.188,73	83%	alb-med	350,06	1,8	TRUE	1,47	10	9
				ane-gsa06	22.078.695,20	1,19	TRUE			
				hke-gsa06	26,31	5,86	TRUE			
				mon-gsa01_0	50,85	2,05	TRUE			
				mut-gsa06	70,47	5,48	TRUE			
				pil-gsa01	2.815.125,66	1,06	TRUE			
				pil-gsa03	6.186,03	0,89	FALSE			
				pil-gsa06	9.151.946,03	2,27	TRUE			
				sbr-gsa01_03	1.785,38	1,9	TRUE			
				swo-med	19.219,31	1,85	TRUE			

2016 SHI PURSE SEINERS MEDITERRANEAN									
LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
24-40	7.965.895	8.360.622	95,28%	ane-gsa06	6.409.259	0,89	FALSE	1,44	2	1
				pil-gsa06	1.556.636	3,71	TRUE			

2017 SHI PURSE SEINERS MEDITERRANEAN									
LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
24-40	9.842.330	10.192.764	96,56%	pil-gsa06	1.556.636	2,59	TRUE	1,38	2	2
				ane-gsa06	8.202.578	1,19	TRUE			

2018 SHI PURSE SEINERS MEDITERRANEAN									
LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
24-40	10.784.914	11.274.619	96%	ane-gsa06	7.394.597,46	1,19	TRUE	1,53	4	4
				pil-gsa01	14.969,67	1,06	TRUE			
				pil-gsa06	3.369.162,37	2,27	TRUE			
				swo-med	6.184,87	1,85	TRUE			

VESSELS USING HOOKS (MEDITERRANEAN)

		LENGTH CLASS									LENGTH CLASS					
		1	2	3	4	5	6	Overall total			1	2	3	4	5	6	Overall total
HOK			15	15	1			31	HOK			15	16				31

This stratum comprises 31 full-time vessels out of a total of 62 vessels, the vast majority of which are under 18 m.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Hooks	06-12	13,17	-1,38	2,08	2,67	221,16	-33,00	33,94	41,56	0,75	0,81	0,92	0,86
	12-24	3,52	3,80	1,46	2,42	12,79	40,66	22,45	26,27	0,91	1,07	0,83	0,91
		SHI				SAR							
	06-12	<40%	<40%	<40%	<40%								
	12-24	<40%	3,00	0,97	1,65								
		OVERALL INDICATOR			BALANCE								
	06-12	3	1	3	3								
	12-24	3	2	3	3								

6-12 m segment: this segment shows good economic profitability for both 2016 and 2018, which suggests that the high variable costs in 2017 could be a statistical error. In technical terms, a great improvement is seen in this segment across the three-year time series, meaning that this segment is in balance in 2018, showing very homogeneous activity, as a result of the cessation of activity of part-time vessels, which fell from 36 vessels in 2016 to 22 vessels in 2017 and then to 15 vessels in 2018. In biological terms, the segment does not depend on overexploited surveyed stocks for over 40% of its catch and it does not catch SAR species. This segment is therefore considered to be in **balance**.

12-24 m segment: this segment has shown short- and long-term economic profitability during the three years of study. In technical terms, this fleet is very homogeneous, though this worsened slightly in 2018. On a biological level, the imbalance from 2017 improved greatly in 2018, moving from an overexploited stock value of 3 to a balance of 0.97. This is partly due to the fact that, aside from improving the overexploitation, this year certain species were fished for less, such as Norway lobster and blue whiting in GSA 06, but mainly because the segment has greatly increased its dependence on BFT (over €1 million), a species with extremely health stocks, which has pushed the indicator into the green.

LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
2017 SHI VESSELS USING HOOKS MEDITERRANEAN											
12-18	689.672,22	1.692.840,96	40,74%	ane-gsa06	335,40	1,19	TRUE	3,00	15	13
				AO-ALB-M	816,39	0,83	FALSE			
				AO-BFT-E	336.650,00	0,34	FALSE			
				ara-gsa06	165.199,79	2,43	TRUE			
				dps-gsa06	10.900,56	2,29	TRUE			
				hke-gsa06	72.175,58	7,8	TRUE			
				hke-gsa07	47.963,57	12,4	TRUE			
				hke-gsa09_10_	4.248,59	5,25	TRUE			
				mac-nea	3.486,53	1,31	TRUE			
				mon-gsa01_05_	9.585,08	2,05	TRUE			
				mut-gsa06	266,59	3,05	TRUE			
				nep-gsa06	15.666,56	9,49	TRUE			
				pil-gsa06	587,29	2,59	TRUE			
				swo-med	104,12	1,85	TRUE			
				whb-gsa06	21.686,17	7,88	TRUE			
2018 SHI VESSELS USING HOOKS MEDITERRANEAN											
12-18	1.222.177,80	2.036.527,24	60%	bft-ea	1.162.817,32	0,34	FALSE	0,97	11	10
				hke-gsa05	64,29	4,96	TRUE			
				hke-gsa06	3.367,01	5,86	TRUE			
				hke-gsa07	53.222,85	14,33	TRUE			
				hke-gsa09_10_	839,91	2,64	TRUE			
				hke-gsa09_10_	839,91	3,93	TRUE			
				hom-gsa09_10	3,90	2,43	TRUE			
				mon-gsa01_05_	128,93	2,05	TRUE			
				mut-gsa06	139,20	5,48	TRUE			
				sbr-gsa01_03	1.564,19	1,9	TRUE			
				swo-med	30,20	1,85	TRUE			

As the biological indicator has improved and is now in balance, no SAR species have been caught and the economic indicators are also very positive, this segment is considered to have regained **balance**.

GILLNETTERS (MEDITERRANEAN)

	LENGTH CLASS									LENGTH CLASS					
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
DFN		71	54				125	DFN		71	54				125

This segment mainly comprises vessels in the **0-18 m** length class using small-scale gear, with 125 full-time vessels out of a total of 147 vessels that make up the segment under assessment.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Gillnets	06-12	9,28	1,28	1,47	2,53	79,92	10,57	7,55	18,75	0,75	0,75	0,75	0,75
	12-18	33,06	1,81	0,83	5,71	70,51	35,08	-7,06	16,06	0,84	0,85	0,81	0,83
		SHI				SAR							
	06-12	<40%	<40%	<40%	<40%								
	12-18	<40%	<40%	<40%	<40%								
		OVERALL INDICATOR			BALANCE								
	06-12	3	3	3	3								
	12-18	3	3	1	3								

6-12 m segment: the economic profitability of this segment, both short- and long-term, is good during the three years of study. In technical terms, it is a fleet that shows good exploitation of the fishing ground and has a large number of full-time vessels. In biological terms, surveyed species account for less than 5% of catches, meaning that the fleet is not considered to depend on overexploited or at-risk species (no SAR).

12-18 m segment: the economic profitability of this segment is very good in 2016 and 2017. However, there is an economic imbalance in 2018 due to a very steep rise in fixed costs, which is way out of step with the rest of the time series. The trend must be examined over the coming years to determine whether these costs are maintained or may be due to statistical error. In technical terms, it is a fleet with a number of full-time vessels that is very close to being in balance, with a maximum exploitation level of 210 days. As with the previous segments, this segment catches very small numbers of surveyed species, reaching barely 7%, meaning that the segment is considered to be in biological balance.

Taking these data into account, both segments are considered to be in **balance** due to their good operational capability and biological indicator results. In addition, and despite the negative economic results for 2018 in the 12-18 m segment, the weighted average for the three years (which gives greater weight to 2018) remains in balance.

POLYVALENT VESSELS (MEDITERRANEAN)

	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
PMP	31	409	12				452	PMP	31	409	12				452

A varying number of vessels using small-scale gear fish in the polyvalent fleet. Numbers vary from year to year, and it is difficult to assess the level of inactivity since some small-scale vessels only ever use one method (gillnets or one-panel gillnets, trammel nets, hooks or lines, trolling lines, and so on) while others do not work with any particular method, and these are all considered to be polyvalent.

Thus, of the 943 vessels classed as polyvalent, only 452 operate full-time (more than 90 days).

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Polyvalent vessels	00-06	20,10	15,51	-4,63	4,66	44,46	267,14	-86,55	33,22	0,75	0,75	0,76	0,75
	06-12	8,69	1,32	1,40	2,42	126,67	15,29	24,50	36,47	0,64	0,64	0,63	0,64
	12-18	3,22	1,77	1,26	1,68	52,49	11,59	5,90	14,18	0,95	0,85	0,93	0,91

		SHI				SAR		
	00-06	<40%	<40%	<40%	<40%			
	06-12	<40%	<40%	<40%	<40%			
	12-18	2,24	3,57	<40%	3,13	PIL-GSA6		

		OVERALL INDICATOR			BALANCE
	00-06	3	3	1	3
	06-12	3	3	3	3
	12-18	2	2	3	3

0-6 m segment: this segment has shown good <u>economic profitability</u>, both short- and long-term, since 2016. However, this year it shows some unfavourable indicators as a result of the fall in revenue. A detailed study of these data shows that this fact is due to a possible statistical error, due to the fact that the revenue stated in the statistics do not correspond to the real value of the declared catches landed. In any event, the weighted average for the last three years (which gives greater weight to 2018) remains in balance. In <u>technical</u> terms, it is a segment with a certain imbalance, with a maximum exploitation level of 186 days. On a <u>biological</u> level, it does not depend on overexploited stocks.

This segment is therefore in **balance**.

6-12 m segment: From the perspective of underlineeconomic profitability, this segment has shown very good short- and long-term profitability for three years. In terms of its underlineoperational capability, this is a segment with a significant level of under-utilisation, which is fairly normal in the artisanal fleet, which operates part-time, supplementing its income with other activities outside the fishing industry. In underlinebiological terms, the segment does not depend on overfished or biologically vulnerable populations. Despite the low operational capability, given that according to the Guidelines this indicator is not representative of the artisanal fleet, greater importance is given to the economic and biological, meaning that this segment is in **balance**.

12-18 m segment: This segment has good short- and long-term underlineeconomic profitability. However, it is true that a worsening can be seen across the time series. In terms of underlineoperational capability, this segment is in balance, with a very homogeneous level of activity. In underlinebiological terms, this segment showed dependency on overexploited stocks in 2016 and 2017, mainly due to its dependency on stocks of Aesop shrimp and hake in GSA 06 and its catches of sardine (PIL GSA06), which is considered a SAR species and accounts for more than 10% of its total catches. This year, however, the percentage of catches of species for the calculation of the SHI is barely 15%, while that for SAR species is 0.45%.

The great improvement in the biological indicators, the economic profitability and the balanced technical indicator mean that this segment is now removed from the action plan and is this year classed as **in balance**.

LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
				2016 SHI VESSELS USING POLYVALENT GEAR MEDITERRANEAN						
12-18	801.853,86	1.894.499,42	42,33%	ane-gsa06	443.497,21	0,89	FALSE	2,24	10	7
				ank-gsa06	1.525,65	6,49	TRUE			
				AO-ALB-M	811,70	0,83	FALSE			
				AO-BFT-E	3.509,87	0,34	FALSE			
				hke-gsa06	68.299,28	7,71	TRUE			
				mon-gsa01_05	1.425,09	2,05	TRUE			
				mut-gsa06	2.725,56	1,56	TRUE			
				pil-gsa01	73.481,77	1,26	TRUE			
				pil-gsa06	206.520,66	3,71	TRUE			
				swo-med	57,07	1,82	TRUE			
				2017 SHI VESSELS USING POLYVALENT GEAR MEDITERRANEAN						
12-18	1.814.157,05	4.249.018,24	42,70%	ane-gsa06	661.014,99	1,19	TRUE	3,57	14	12
				ank-gsa06	8.633,33	6,49	TRUE			
				AO-ALB-M	842,21	0,83	FALSE			
				AO-BFT-E	48.706,66	0,34	FALSE			
				ara-gsa06	13.709,07	2,43	TRUE			
				dps-gsa06	188.578,51	2,29	TRUE			
				hke-gsa06	425.078,86	7,8	TRUE			
				mon-gsa01_05	31.868,92	2,05	TRUE			
				mut-gsa06	52.345,18	3,05	TRUE			
				nep-gsa06	55.437,02	9,49	TRUE			
				pil-gsa06	282.969,66	2,59	TRUE			
				sbg-gsa07	456,64	2,37	TRUE			
				swo-med	314,25	1,85	TRUE			
				whb-gsa06	44.201,75	7,88	TRUE			

DREDGERS

	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
DRB	1	13	12				26	DRB		14	12				26

69 vessels fish with dredges, of which only 26 do so on a full-time basis.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
DREDGES/TRAWL NETS	00-12		1,16	-2,77	-1,46		7,66	-85,47	-54,43		0,95	1,01	1,13
	12-18	4,24	1,11	-1,68	-0,04	25,62	1,74	-61,67	-31,08	0,85	0,89	0,97	0,93
		SHI				SAR							
	00-12		<40%	<40%	<40%								
	12-18	<40%	<40%	<40%	<40%								
		OVERALL INDICATOR			BALANCE								
	00-12	0	3	1	2								
	12-18	3	2	1	2								

0-12 m segment: the economic data for this year are worse than the previous year. Since

this segment did not exist in 2016, it will be necessary to wait until next year to see trend for the data. In terms of <u>operational capability</u>, this segment is in balance in both 2017 and 2018, with the fleet being very homogeneous, with a maximum exploitation level of 137 days. Finally, in terms of the <u>biological indicators,</u> this is a segment that does not depend on overexploited stocks and does not catch any species considered to be at biological risk (SAR), with species that make up the population studied for calculation of the SHI accounting for 1.69% of its catches.

Therefore and in view of the poor economic results, it is considered that this segment should be included in **this year's action plan**.

12-18 m segment: The <u>economic indicators</u> show good profitability in 2016, which worsened in 2017 (as the long-term economic indicator appears to show a certain imbalance), a trend that continues in 2018, not only in relation to the long-term indicator but also the short-term indicator. From a <u>technical</u> perspective, this segment has been improving and achieved a balance in 2018. Finally, in terms of the <u>biological indicator</u>, the segment does not depend on surveyed species, which would inform us of any dependency on overexploited or at-risk species,

Therefore and in view of the poor economic results, it is considered that this segment should be included in **this year's action plan**.

POTS

	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
FPO		18	16		3		37	FPO			37				37

44 vessels operate in this segment, of which 37 do so on a full-time basis, 12 more than the previous year.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Pots	06-40	6,16	1,55	1,25	2,04	318,41	26,38	15,62	61,95	1,26	0,96	1,05	1,06
		SHI				SAR							
	06-40	<40%	<40%	<40%	<40%								
		OVERALL INDICATOR			BALANCE								
	06-40	3	3	3	3								

The <u>economic indicators</u> show good levels of profitability in the series studied (although they have been worsening over the years). A good level of <u>operational capability</u> is also observed in the fishing ground, together with very homogeneous activity. Finally, as this fleet does not depend on overexploited species, the <u>biological</u> indicator is in balance. Therefore, the weighted balance indicators show a situation that is in **balance.**

SURFACE LONGLINERS (MEDITERRANEAN)

	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
PGO		2	25	16	4		47	PGO			27	20			47

This **stratum** comprises 52 active vessels, of which 47 operated full-time.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Surface longlines	06-18	5,26	1,88	1,79	2,31	87,83	41,44	58,20	57,64	0,78	0,80	0,83	0,81
	18-40	2,67	1,99	2,94	2,63	42,13	45,31	68,49	58,10	0,89	0,88	0,88	0,88
		SHI				SAR							
	06-18	1,53	1,58	1,71	1,65		SWO-37	SWO-37					
	18-40	1,69	1,54	1,72	1,66		SWO-37	SWO-37					
		OVERALL INDICATOR			BALANCE								
	06-18	2	2	2	2								
	18-40	2	2	2	2								

6-18 m and 18-40 m segments: both of these segments show good economic profitability, in both the short- and long-term. Operational capability is close to being in balance, with a maximum exploitation of 189 days in the 6-18 m segment and 207 days in the 18-40 m segment. In biological terms, this fleet fundamentally depends on overexploited SWO, producing an indicator that shows an imbalance for both SHI and SAR. While it is true that catches of swordfish have decreased in recent years (SWO), the indicator has not improved as the albacore mortality rate has increased from 0.83 in 2017 to 1.85 in 2018.

Therefore, both strata will be included in the **action plan**.

LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
2016 SHI SURFACE LONGLINERS (MEDITERRANEAN)										
12-18	6.253.051,77	6.498.154,47	96,23%	AO-ALB-M	193.790,92	0,83	FALSE	1,53	5	3
				AO-BET	320,17	1,28	TRUE			
				AO-BFT-E	1.075.516,71	0,34	FALSE			
				hke-gsa06	225,99	7,71	TRUE			
				swo-med	4.983.197,98	1,82	TRUE			
18-24	25.312.510,26	26.822.327,84	94,37%	AO-ALB-M	51.363,97	0,83	FALSE	1,69	6	3
				AO-ALB-N	826,85	0,54	FALSE			
				AO-BET	7.756,34	1,28	TRUE			
				AO-BFT-E	2.118.363,52	0,34	FALSE			
				pil-gsa01	223,34	1,26	TRUE			
				swo-med	23.133.976,24	1,82	TRUE			
2017 SHI SURFACE LONGLINERS (MEDITERRANEAN)										
12-18	5.984.593,25	6.283.519,33	95,24%	AO-ALB-M	572.046,77	0,83	FALSE	1,58	4	2
				AO-BFT-E	669.329,93	0,34	FALSE			
				hke-gsa06	267,89	7,8	TRUE			
				swo-med	4.742.948,66	1,85	TRUE			
18-24	7.108.077,65	7.308.422,03	97,26%	AO-ALB-M	223.223,51	0,83	FALSE	1,54	5	2
				AO-BET	1.584,28	1,28	TRUE			
				AO-BFT-E	583.264,38	0,34	FALSE			
				swo-med	5.255.646,18	1,85	TRUE			
				swo-na	1.044.359,30	0,78	FALSE			
2018 SHI SURFACE LONGLINERS (MEDITERRANEAN)										
12-18	4.929.224	5.032.782	98%	alb-med	86.537,98	1,8	TRUE	1,71	4	3
				bft-ea	457.917,15	0,34	FALSE			
				hke-gsa06	279,13	5,86	TRUE			
				swo-med	4.384.490,20	1,85	TRUE			
18-24	6.544.381,63	6.647.220,34	98%	alb-med	45.969,77	1,8	TRUE	1,72	5	3
				bet-atl	737,39	1,63	TRUE			
				bft-ea	383,18	0,34	FALSE			
				swo-med	5.713.342,79	1,85	TRUE			
				swo-na	783.948,50	0,78	FALSE			

CANARY ISLANDS

POLYVALENT VESSELS (CANARY ISLANDS)

	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
PMP	152	1	1				154	PMP	160						160
FPO		4	2				6								

This fleet segment comprises 160 full-time vessels, of which 152 are in the 0-10 m segment, one is in the 10-12 m segment and one is in the 12-18 m segment. This segment also includes six vessels that fish using pots, in the 10-18 m segment, forming a cluster for both gear and length, for reasons of statistical confidentiality.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Polyvalent active and	00-18	3.29	0.71	-2.33	-0.66	36.74	-17.15	-76.06	-43.11	0.55	0.60	0.55	0.56
		SHI				SAR							
	00-18	< 40%	< 40%	< 40%	< 40%								
		Overall indicator			BALANCE								
	00-18	3	1	1	1								

The economic indicators show a gradual worsening in the profitability of this segment, both short- and long-term. Without prejudice to the fact that the statistical data show significant variations over the last three years, especially in relation to variable costs and revenue; the results of the indicators show a clear economic imbalance in this segment.

Furthermore, the technical indicator also shows a clear imbalance in relation to the exploitation of the fishing ground, which reveals the difficulty facing the activity of this fleet. However, and as indicated by the STECF since 2015, a low level of fishing ground exploitation in the artisanal fleet cannot be directly attributed to an imbalance between capacity and fishing opportunities.

In terms of the biological indicator, there is no dependency on overexploited species or SAR species.

In view of the poor economic results, **the segment is considered to be imbalanced and an action plan is recommended.**

PURSE SEINERS (CANARY ISLANDS)

	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
PS			11				11	PS			11				11

The segment comprises 11 vessels that fish full-time, of a total of 16 vessels active in this segment.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Purse seiner	12-18	19.14	2.61	4.78	6.21	625.42	156.85	78.27	178.88	0.94	0.96	0.91	0.93
		SHI				SAR							
	12-18	< 40%	< 40%	< 40%	< 40%								
		Overall indicator			BALANCE								
	12-18	3	3	3	3								

During the three years of study (2016 to 2018), this fleet shows good sustained short- and long-term profitability levels, as well as good fishing ground exploitation. In terms of the biological indicator, there is no dependency on surveyed species and no SAR species accounts for more than 10% of its catches.

As a result of the foregoing, the weighted balance indicator shows a balanced situation and **therefore no action plan is recommended**.

VESSELS USING HOOKS (CANARY ISLANDS)

	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
HOK		11	15	7	16		49	HOK		11	15		23		49

This fleet comprises a total of 60 vessels, 49 of which fish full-time, and they are split into three segments. The 10-12 m and 12-18 m segments comprise 11 vessels and 15 vessels respectively, which fish using small-scale gear or are pole-and-line tuna-fishing vessels, targeting tuna. The 18-40 m segment (all over 24 m except for the seven used to make the cluster) comprises 23 vessels that fish full-time, of which 21 are pole-and-line tuna-fishing vessels.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Hooks	10-12	4.73	7.24	3.19	4.57	36.45	173.10	20.74	66.52	0.98	1.02	0.95	0.98
	12-18	0.28	6.60	1.77	2.94	-7.61	136.16	86.52	87.26	0.93	0.93	0.93	0.93
	18-40	3.38	0.60	-0.77	0.21	131.74	-19.04	-53.25	-17.05	0.91	0.92	0.94	0.93
		SHI				SAR							
	10-12	0.65	0.66	< 40%	0.65								
	12-18	0.67	0.87	1.17	1.01								
	18-40	0.90	1.02	1.43	1.24								
		Overall indicator			BALANCE								
	10-12	3	3	3	3								
	12-18	2	3	3	3								
	18-40	3	2	1	1								

10-12 m segment: economic profitability is observed for this fishery that, together with the good exploitation, reveals that the fleet's capacity is in balance with the fishing ground. The biological indicator cannot be assessed in 2018, although in the previous two years, it showed low dependency on overexploited species and, therefore, this segment is considered to be in balance.

12-18 m segment: an improvement in profitability is observed in the last two years compared to this fleet's poor results in 2016, with it maintaining good fishing ground exploitation. The biological indicator shows an increase in dependency on bigeye tuna, an overexploited species, to the detriment of bluefin tuna, of which there are healthier stocks. Due to the fact that this dependency is minimal and the rest of the indicators are in balance, as is the three-year weighted indicator, **it is recommended to not include this segment in the action plan** and to monitor catches of bigeye tuna.

18-40 m segment: this segment shows a significant drop in profitability, which has already been noted in previous years and which is confirmed by the poor results for 2018. In **biological** terms, this segment is imbalanced due to its higher dependency on bigeye tuna, an overexploited species that accounts for 60% of its catch value. In view of the poor economic results and the dependency on overexploited stocks, this segment is considered to be **imbalanced** and **its inclusion in the action plan is recommended**.

LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
2016 SHI VESSELS USING HOOKS CANARY ISLANDS										
10-12	843 994.06	###########	55.05%	AO-ALB-N	611 251	0.54	FALSE	0.65	4	1
				AO-BET	131 516	1.28	TRUE			
				AO-BFT-E	69 483	0.34	FALSE			
				AO-BET	31 745	0.77	FALSE			
12-18	2 907 533.59	3 282 024.24	88.59%	AO-ALB-N	2 321 871	0.54	FALSE	0.67	4	1
				AO-BET	517 867	1.28	TRUE			
				AO-BFT-E	57 458	0.34	FALSE			
				AO-BET	10 337	0.77	FALSE			
18-40	9 255 974.44	9 770 077.75	94.74%	AO-ALB-N	4 583 686	0.54	FALSE	0.90	4	1
				AO-BET	4 480 003	1.28	TRUE			
				AO-BFT-E	68 172	0.34	FALSE			
				AO-BET	124 114	0.77	FALSE			
2017 SHI VESSELS USING HOOKS CANARY ISLANDS										
10-12	390 725.12	955 925.19	40.87%	AO-ALB-N	195 517	0.54	FALSE	0.66	4	1
				AO-BET	76 588	1.28	TRUE			
				AO-BFT-E	90 694	0.34	FALSE			
				AO-BET	27 927	0.77	FALSE			
12-18	2 266 412.48	2 756 916.87	82.21%	AO-ALB-N	1 060 942	0.54	FALSE	0.87	4	1
				AO-BET	1 044 374	1.28	TRUE			
				AO-BFT-E	129 688	0.34	FALSE			
				AO-BET	31 409	0.77	FALSE			
18-40	6 932 811.07	7 964 143.65	87.05%	AO-ALB-N	2 157 108	0.54	FALSE	1.02	4	1
				AO-BET	4 501 381	1.28	TRUE			
				AO-BFT-E	112 062	0.34	FALSE			
				AO-BET	162 261	0.77	FALSE			
2018 SHI VESSELS USING HOOKS CANARY ISLANDS										
12-18	1 872 295.22	2 812 708.95	67%	alb-na	452 062	0.54	FALSE	1.17	5	2
				bet-atl	1 124 227	1.63	TRUE			
				bft-ea	286 541	0.34	FALSE			
				gpw-34.1_3	136	1.89	TRUE			
				yft-atl	9 329	0.77	FALSE			
18-40	6 270 771	8 404 631	75%	alb-na	695 736	0.54	FALSE	1.43	4	1
				bet-atl	5 185 988	1.63	TRUE			
				bft-ea	359 999	0.34	FALSE			
				yft-atl	29 047	0.77	FALSE			

DETAILED ANALYSIS OF NON-NATIONAL NORTH ATLANTIC SEGMENTS

The fleet operating in the non-national North Atlantic comprised 147 full-time vessels in 2018 (One more than the previous year), of which 49 used trawling gear, 58 used passive gear in ICES and 40 used surface longlines.

TRAWLERS

2018 POPULATION WITHOUT 90 CLUSTER								2018 POPULATION WITH 90 CLUSTER							
	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
DTS			1	4	30	14	49	DTS				8	29	12	49

The trawler fleet operating in NEAFC and NAFO waters has been restructured so that the different fishing grounds can be assessed separately and data can be obtained for each fishery.

- The <u>18-24 m segment</u> has been grouped together with the eight trawlers from Portugal operating in the waters of zone 27.9.a, and shows a balance.
- The <u>24-40 m segment</u> comprises 29 trawlers in NEAFC–EU waters (fleet of 300). This fleet shows good profitability and a good exploitation of the fishing ground, and does not depend on overexploited species, meaning that it is in balance.
- The <u>segment of vessels over 40 m</u> comprises 12 full-time vessels, particularly NAFO trawlers and NEAFC cod-fishing vessels.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Bottom trawl nets	12-24	3.62	2.14	1.57	2.03	120.60	99.08	40.50	68.68	1.02	1.02	1.02	1.02
	24-40	3.48	2.29	1.25	1.86	111.61	130.76	19.64	64.53	0.92	0.90	0.90	0.91
	> 40	3.56	3.07	1.53	2.26	625.05	306.34	28.16	192.91	0.91	0.97	0.86	0.90
		SHI				SAR							
	12-24	< 40%	< 40%	< 40%	< 40%								
	24-40	< 40%	< 40%	< 40%	< 40%								
	> 40	0.81	0.98	1.65	1.34		COD-27	COD-27.1-27.2					
		Overall indicator			BALANCE								
	12-24	3	3	3	3								
	24-40	3	3	3	3								
	> 40	3	3	2	2								

The **18-24 m and 24-40 m segments** maintain their good economic and fishing ground exploitation results, therefore **no action plan is recommended**.

The **> 40 m segment** maintains its good short- and long-term <u>profitability</u>, although there was a significant reduction in 2018. This is corroborated by the poor results for the fishing ground <u>exploitation</u> indicator and, above all, by a negative result for the <u>biological indicator</u> SHI due to the inclusion of the highly overexploited surveyed stock of beaked redfish. Also noteworthy is the worsening situation of the Atlantic cod stock, on which this segment depends for 29% of its catch value (SAR species). Therefore, this segment is considered to have become imbalanced and **an action plan is recommended.**

LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Over exploited
2016 SHI BOTTOM TRAWLERS NON-NATIONAL NORTH ATLANTIC										
> 40	39 721 026.95	88 009 308.77	45.13%	bli-5b67	48 569	0.28	FALSE	0.81	6	2
				cod.27.1-2	37 619 807	0.83	FALSE			
				ghl.27.561214	168 446	1.1	TRUE			
				had.27.1-2	556 328	0.57	FALSE			
				RNG-5B67	1 326 927	0.25	FALSE			
				whb.27.1-912	949	1.21	TRUE			
2017 SHI BOTTOM TRAWLERS NON-NATIONAL NORTH ATLANTIC										
6	40 649 839.41	82 667 769.77	49.17%	bli-5b67	52 759.35	0.28	FALSE	0.98	7	3
				cod.27.1-2	38 054 519.21	1	TRUE			
				ghl.27.561214	261 426.38	1.03	TRUE			
				had.27.1-2	399 992.19	0.57	FALSE			
				POK.27.1-2	125 346.42	0.74	FALSE			
				reg.27.1-2	167 590.16	5.8	TRUE			
				RNG-5B67	1 588 205.70	0.25	FALSE			
2018 SHI BOTTOM TRAWLERS NON-NATIONAL NORTH ATLANTIC										
6	20 243 494.23	50 188 203.97	40%	bli27.5b,6,7	10 744.20	0.25	FALSE	1.65	11	6
				cod.2127.1f1	223 332.40	0.97	FALSE			
				cod.27.1-2	14 534 667.43	1	TRUE			
				cod-3m	1 495 973.58	0.42	TRUE			
				ghl.27.561214	478 848.34	1.34	TRUE			
				had.27.1-2	71 889.95	1.12	TRUE			
				pla-3lno	357 605.29	1.05	TRUE			
				POK.27.1-2	52 234.24	0.65	FALSE			
				reb.2127.dp	2 563 179.90	6.53	TRUE			
				wit-3no	51 694.51	0.45	FALSE			
				yel-3lno	403 324.39	0.31	FALSE			

VESSELS USING PASSIVE GEAR

2018 POPULATION WITHOUT 90 CLUSTER								2018 POPULATION WITH 90 CLUSTER							
	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
PGP				4	54		58	PGP						58	58

This segment comprises 58 vessels using passive gear and bottom longliners of less than 100 GRT that fish full-time in NEAFC–EU waters, which have been grouped together in one 18-40 m cluster.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Passive Gear	18-40	3.35	2.19	1.56	1.99	164.86	92.39	34.76	69.81	0.86	0.90	0.90	0.89
		SHI				SAR							
	18-40	0.96	0.79	0.81	0.82								
		Overall indicator			BALANCE								
	18-40	3	3	3	3								

This fleet is economically profitable, with very homogeneous exploitation of the fishing ground, and is highly dependent on Northern hake, the biological status of which is very good. Therefore, this segment is considered to be in balance and **no action plan is recommended**.

LENGTH	TOT STOCK VAL	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
2016 SHI VESSELS USING PASSIVE GEAR NON-NATIONAL NORTH ATLANTIC										
18-40	100 044 206.53	107 861 969.48	92.75%	AO-ALB-N	832 961	0.54	FALSE	0.96	6	3
				AO-BET	13 970	1.28	TRUE			
				bli-5b67	50 887	0.28	FALSE			
				had-7b-k	91	1.69	TRUE			
				hke-nrtn	99 145 580	0.96	FALSE			
				sol.27.8ab	718	1.1	TRUE			
2017 SHI VESSELS USING PASSIVE GEAR NON-NATIONAL NORTH ATLANTIC										
18-40	101 528 906.53	110 277 415.19	92.07%	bli-5b67	83 075.60	0.28	FALSE	0.79	5	2
				had-7b-k	84.45	1.69	TRUE			
				hke-nrtn	101 445 610.98	0.79	FALSE			
				hke-soth	30.90	2.1	TRUE			
				sol.27.8ab	104.59	0.91	FALSE			
2018 SHI VESSELS USING PASSIVE GEAR NON-NATIONAL NORTH ATLANTIC										
18-40	71 295 217.52	80 446 969.93	88.62%	ank27.7,8abd	40	0.73	FALSE	0.81	6	1
				bli27.5b,6,7	103 932	0.25	FALSE			
				bss.27.8ab	9 530	1.03	TRUE			
				hke.27.3a46-	71 178 563	0.81	FALSE			
				mon.27.78ab	69	0.89	FALSE			
				pok.27.3a46	3 084	0.99	FALSE			

SURFACE LONGLINERS (NORTH ATLANTIC)

2018 POPULATION WITHOUT 90 CLUSTER								2018 POPULATION WITH 90 CLUSTER							
	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
PGO national fishing grounds			1	1			2					8	32		40
PGO rest of NAO			1	5	32		38								

The fleet comprises two surface longliners operating in the national fishing grounds and six operating in the non-national North Atlantic), used to make a 12-24 m length cluster (two vessels fewer than in 2017), along with 32 vessels in 24-40 m length class (two vessels fewer than in 2017, which operate in the non-national North Atlantic).

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Surface longlines	12-24	8.75	10.29	2.11	5.40	292.50	272.27	37.12	140.79	1.00	1.08	1.07	1.06
	24-40	3.95	2.97	2.54	2.86	60.58	54.31	38.78	46.33	0.88	0.92	0.93	0.92
		SHI				SAR							
	12-24	< 40%	0.91	0.84	0.87								
	24-40	< 40%	< 40%	< 40%	< 40%								
		Overall indicator			BALANCE								
	12-24	3	3	3	3								
	24-40	3	3	3	3								

The fleet shows good profitability, consolidating its economic results. Fishing ground exploitation is optimal, as reflected in the weighted indices of the three years of the study for both length classes. In terms of the biological indicator, in the 12-24 m length class, there is a slight dependency on overexploited stocks, given that its main catches concern Atlantic swordfish (SWO), a population that is currently in good biological health. However, further monitoring of this fishery will be necessary, since the F etoile value for this species rose from 0.21 to 0.78 in 2017.

Both segments are in balance. **No action plan is required.**

LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
2017 SHI SURFACE LONGLINERS NON-NATIONAL NORTH ATLANTIC										
12-24	3 267 101.00	6 124 953.65	53.34%	AO-ALB-N	484 292	0.54	FALSE	**0.91**	**4**	**2**
				AO-BET	764 543	1.28	TRUE			
				swo-med	143 023	1.85	TRUE			
				swo-na	1 875 243	0.78	FALSE			
2018 SHI SURFACE LONGLINERS NON-NATIONAL NORTH ATLANTIC										
12-24	2 259 188.68	3 818 881.60	59.16%	alb-na	403 957.30	0.54	FALSE	**0.84**	**4**	**2**
				bet-atl	73 664.32	1.63	TRUE			
				swo-med	167 036.20	1.85	TRUE			
				swo-na	1 614 530.86	0.78	FALSE			

DETAILED ANALYSIS OF SEGMENTS IN INTERNATIONAL WATERS

TRAWLERS

	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
DTS					40	31	71	DTS					40	31	71

The fleet comprises 71 full-time vessels, divided into two segments:

- The 24-40 m length segment, which has 40 vessels, mainly international and third-country trawlers, Portuguese trawlers operating in international waters and CNW trawlers operating mainly in international waters.
- The over 40 m segment, which has 31 vessels of over 40 m in length, mainly international trawlers and NAFO trawlers operating in the South Atlantic.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Bottom trawl nets	24-40	2.87	1.01	-0.39	0.47	112.40	0.76	-124.48	-54.86	0.84	0.84	0.77	0.80
	> 40	1.89	2.30	3.39	2.87	160.97	198.13	177.53	181.05	0.84	0.87	0.81	0.83
		SHI				SAR							
	24-40	< 40%	< 40%	< 40%	< 40%								
	> 40	< 40%	< 40%	< 40%	< 40%								
		Overall indicator			BALANCE								
	24-40	3	2	1	2								
	> 40	3	3	3	3								

24-40 m segment: In <u>economic</u> terms, this segment has become imbalanced due to the poor short- and long-term profitability results for 2018, due to a fall in revenue that coincides with the statistics and catches landed. On a <u>technical</u> level, fishing ground exploitation shows a slight imbalance and the segment <u>does not depend on overexploited surveyed stocks</u> or fish for SAR species. Given the current situation, **the creation of an action plan with an economic perspective** is recommended for this segment.

Segment of vessels over 40 m: In <u>economic</u> terms, this segment's short-term profitability is improved and its long-term profitability remain balanced. On a <u>technical and biological</u> level, this segment is in balance, therefore **no action plan is required.**

VESSELS USING HOOKS

2018 POPULATION WITHOUT 90 CLUSTER								2018 POPULATION WITH 90 CLUSTER							
	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
HOK		1	2	2	9	2	16	HOK					16		16

The fleet comprises 16 vessels over 18 m long, four of which fish full-time using bottom-set longlines, two use surface longlines, seven are CNW purse seiners and three are from the Gulf of Cádiz and use small-scale gear. This fleet includes four vessels using small-scale gear that operate in Moroccan waters.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Hooks	18- > 40	3.39	4.78	3.85	4.05	133.62	163.75	153.04	153.33	1.05	0.80	0.98	0.94
		SHI				SAR							
	18- > 40	0.95	1.01	< 40%	0.99								
		Overall indicator			BALANCE								
	18- > 40	3	3	3	3								

The <u>economic</u> and <u>technical indicators</u> are in balance, in terms of both fleet profitability and fishing ground exploitation. The <u>biological indicator</u> shows a certain level of dependency on bigeye tuna, an overexploited species. In 2018, the biological indicator cannot be assessed as the surveyed species do not exceed 40% of the catch. However, the weighted SHI indicator is in balance.

The weighted balance indicator shows that this segment remains in balance and, **therefore, no action plan is recommended**, although its assessment will have to be monitored, especially with regard to the dependency on overexploited species.

LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexploited stock	INDICATOR	stock_assess	Overexploited
				2016 SHI FLEET USING HOOKS OTHER FISHING REGIONS						
18-40	9 072 678	20 963 322	43.28%	AO-ALB-N	10 039	0.54	FALSE	0.95	3	1
				AO-BET	3 171 778	1.28	TRUE			
				AO-BET	5 890 862	0.77	FALSE			
				2017 SHI FLEET USING HOOKS OTHER FISHING REGIONS						
18-40	10 120 474.10	18 564 393.66	54.52%	AO-ALB-N	184 925.33	0.54	FALSE	1.01	5	3
				AO-BET	4 666 101.12	1.28	TRUE			
				AO-BET	5 217 449.46	0.77	FALSE			
				hke-soth	51 968.44	2.1	TRUE			
				whb.27.1-912	29.76	1.26	TRUE			

FREEZER TUNA SEINERS

2018 POPULATION WITHOUT 90 CLUSTER								2018 POPULATION WITH 90 CLUSTER							
	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
PS						26	26	PS						26	26

This fleet comprises 26 vessels that are highly homogeneous and in balance.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Purse seiner	> 40	2.30	2.32	1.51	1.85	61.78	100.37	50.52	66.37	0.94	0.91	0.92	0.92
		SHI				SAR							
	> 40	0.97	0.98	1.07	1.03			YFT-	INDIAN-OCEAN				
		Overall indicator			BALANCE								
	> 40	3	3	3	3								

The economic profitability of the fleet is maintained, although in 2018 profitability suffered a decline, although the segment remains in economic balance.

In 2018, the SHI biological indicator shows slightly negative results due to the dependency on yellowfin tuna or Indian Ocean yellowfin tuna (which is a SAR species and accounts for 16% of the catch) and Atlantic bigeye tuna, populations for which the biological situation has worsened in the last two years, although a significant decrease in catches of these species has been observed. The exploitation of the fishing ground is in balance.

No action plan is recommended as the weighted balance indicator is in balance, because this fleet is on the right track to achieving a biological balance, although the economic trend will have to be monitored closely.

LENGTH	TOT VAL SURVEYED STOCK	TOT_VAL STRATUM	PER CENT	FISHSTOCK	STOCK VAL	F_etoile2	Overexplo ited stock	INDICA TOR	stock _asse ss	Over explo ited
**2016 SHI PURSE SEINERS OTHER FISHING REGIONS**										
> 40	525 794 429.03	578 585 351.01	90.88%	AO-BET	25 495 734	1.28	TRUE	0.97	9	3
				AO-BET	97 934 183	0.77	FALSE			
				blm-io	6 165	2.42	TRUE			
				EPO-BET	22 469 340	0.87	FALSE			
				EPO-YFT	6 318 594	0.97	FALSE			
				IO-ALB	101 855	0.85	FALSE			
				IO-BET	53 105 483	0.76	FALSE			
				IO-SKJ	62 693 296	0.81	FALSE			
				IO-YFT	257 669 779	1.11	TRUE			
**2017 SHI PURSE SEINERS OTHER FISHING REGIONS**										
> 40	437 680 956.06	473 950 069.08	92.35%	AO-ALB-N	12 495	0.54	FALSE	0.98	8	4
				AO-BET	31 196 395	1.28	TRUE			
				AO-BET	68 489 754	0.77	FALSE			
				blm-io	19 384	2.41	TRUE			
				IO-ALB	343 979	1.11	TRUE			
				IO-BET	105 281 263	0.76	FALSE			
				IO-SKJ	8 385 301	0.81	FALSE			
				IO-YFT	223 952 386	1.11	TRUE			
**2018 SHI PURSE SEINERS OTHER FISHING REGIONS**										
6	154 719 932.28	349 969 525.96	44.21%	alb-io	1 357	1.11	TRUE	1.07	7	3
				alb-na	37 896	0.54	FALSE			
				bet-atl	10 545 204	1.63	TRUE			
				bet-io	28 880 555	0.76	FALSE			
				blm-io	3 350	0.96	FALSE			
				yft-atl	29 324 909	0.77	FALSE			
				yft-io	85 926 661	1.2	TRUE			

SURFACE LONGLINERS

2018 POPULATION WITHOUT 90 CLUSTER								2018 POPULATION WITH 90 CLUSTER							
	LENGTH CLASS								LENGTH CLASS						
	1	2	3	4	5	6	Overall total		1	2	3	4	5	6	Overall total
PGO					57	25	82	PGO					57	25	82

A total of 82 vessels belongs to this fleet (57 vessels measuring 18-40 m and 25 measuring more than 40 m) operating in the South Atlantic, Indian Ocean and Pacific Ocean.

Gear	Length	CR/BER				RoFTA (%)				TECHNICAL MAX = AV. 10 MOST ACTIVE			
		2016	2017	2018	2016-2018	2016	2017	2018	2016-2018	2016	2017	2018	2016-2018
Surface longlines	24-40	2.83	2.16	0.74	1.44	96.66	62.74	-17.95	21.48	0.86	0.90	0.91	0.90
	> 40	1.88	2.53	2.11	2.20	90.02	65.50	47.06	58.47	0.95	0.93	0.95	0.94
		SHI				SAR							
	24-40	< 40%	< 40%	< 40%	< 40%								
	> 40	< 40%	< 40%	< 40%	< 40%								
		Overall indicator			BALANCE								
	24-40	3	3	1	3								
	> 40	3	3	3	3								

The <u>economic situation</u> displays good short- and long-term profitability for the segment over 40 m long, while for the 24-40 m segment, in 2018, there was a negative economic trend, due to an increase in fixed costs. However, the weighted economic indicators remain in balance.

The <u>good exploitation</u> of the fishing ground, with no vessels with low operational capability or inactive vessels, along with the fact that the segment <u>does not depend on overexploited surveyed species</u> or SAR species, leads us to consider the fleet to be in balance and conclude that **no action plan is required**; however, the economic trend will have to be carefully observed over the coming year.

MEASURES DEFINED FOR SEGMENTS WITH AN IMBALANCE WITHIN THE SPANISH OPERATIONAL FLEET

The action plan for the fleet segments for which the assessment carried out in the previous section has clearly demonstrated that fishing capacity and fishing opportunities are not maintaining an effective balance, includes some of the following **measures**:

1. **Effort reduction measures**
   a) Allocation of fishing opportunities
   b) Temporary closures (temporary cessation) and permanent closures
   c) Stock recovery plans
   d) Other measures
2. **Biological resource recovery measures**
   a) Data collection
   b) Ecosystem improvement
   c) Surveillance and control improvements
3. **Measures aimed at improving profitability in the short-to-medium term**
   a) Sustainable fisheries
   b) Employment
   c) Marketing

The most appropriate measures have been selected for each segment on the basis of the reasons identified as determining factors in its imbalance. Where the reasons for the imbalance are similar, the measures are grouped together for several segments of the same fishery or fishing method.

The **objectives** of the plan are established for each fleet segment or grouping and are determined on the basis of the indicators that revealed an imbalance, and will be taken into account in the assessment of the effectiveness of the plan.

The **time-frame** for the implementation of this action plan will be three years. The progress of the action plan is reviewed annually. When the indicators show that the plan in place is not being effective, the measures implemented will be amended and adjusted. At the same time, the appropriateness of the additional inclusion of any fleet segment in the action plan will be assessed in light of its balance between fishing capacity and fishing opportunities. Finally, when a segment included in the action plan regains its balance, the appropriateness of removing it from the plan will be assessed.

Taking into account the structure of the Spanish state in the field of fisheries, the measures provided for in this plan will be implemented by the central government or by the Autonomous Communities in accordance with their respective competences.

1. CNW-GULF OF CADIZ

The following table shows the segments in imbalance in the Cantabria and North-West region and in the Gulf of Cádiz, together with the objectives pursued with the action plan and the measures to be implemented for each segment:

FISHING GROUND	Gear	Length	Cause of imbalance	AP objective	Measures			Stock recovery
					Effort reduction			Stock recovery
					Allocation of fishing opportunities	Permanent closures	Temporary closures	Surveillance and control
CNW	Bottom trawl nets	Length 10-18 Length 18-40	→Dependency on overexploited stocks: mainly hake and blue whiting →Economic imbalance	SHI indicator less than 1	**Individual allocation of the following TACs by vessel**: Hake (HKE), blue whiting (WHB), megrim (LEZ), Norway lobster (NEP) and monkfish (ANF)	Yes	YES	In the area of control strategies, the priorities for the Cantabria and North-West region are focused on recording catches by all vessels (over- and undersized), measuring nets using an approved mesh gauge, and checking the weighing of 100% of landed catches
CNW	Gillnets	Length 12-18 Length 18-40	→Dependency on overexploited stocks: mainly Southern hake and mackerel →Economic imbalance (Length 12-18) →Inefficient fishing ground exploitation	SHI indicator less than 1 / Indicators RoFTA, CR/BER	**Individual allocation of the following TACs by vessel**: Hake (HKE)	Yes	YES	
CNW	Hooks	Length 10-12 Length 12-18 Length 18-24	→Dependency on overexploited stocks: mainly Southern hake and mackerel →Economic imbalance →Inefficient fishing ground exploitation	SHI indicator less than 1 / Indicators RoFTA, CR/BER	**Individual allocation of the following TACs by vessel**: Hake (HKE)	Yes	YES	
Gulf of Cádiz	Purse seines	Length 18-40	→Dependency on overexploited stocks: mainly Iberian sardine →Low long-term profitability →Inefficient fishing ground exploitation	SHI indicator less than 1 / Indicator RoFTA, positive	→**Order APM/605/2018, of 1 June 2008**, establishing a management and recovery plan for the Iberian sardine, which has been implemented jointly by Spain and Portugal. This plan is based on an exploitation rule that ensures the recovery of the stock before 2023, together with a allocation of catch opportunities across fleets and a time limit for activity. →**Individual allocation of the following TACs by vessel**: Sardine (PIL) Norway lobster (NEP)	No	YES	The priorities for the Gulf of Cádiz include checking catches and landings of immature fish in compliance with the landing obligation, preventing those intended for illegal marketing channels, and respecting the closures and seabed bans in places. Work will also continue on monitoring the technical measures in force with regard to the net and mesh gauges used. Similarly, control over the octopus fishery will be prioritised, including catch monitoring, proper gear identification and compliance with minimum sizes and established closures.

Table 1: Measures of the CNW and GC action plan

As part of the **stock recovery measures** provided for in Table 1, the temporary <u>closures</u> planned are set out in Table 2 and Table 3:

FISHING GROUND	GEAR	ZONE/SPECIES	DURATION
CNW	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
Gulf of Cádiz	Purse seines		From 1 December to 31 January
		Meagre (Argryosomus regius)	During April, May and June

Table 2: Temporary closures

PERMANENT CLOSURES			
FISHING GROUND	GEAR	ZONE	DURATION
CNW	Trawl net	Fuenterrabía	All year round
		Bermeo	All year round
		Llanes	All year round
	Bottom-set gillnet	From Cabo Villano to Bidasoa	All year round
	Fixed gillnet	From Punta Saturrarán to Bidasoa	All year round
	Bottom-set gillnet and	Resueste	All year round
		From Punta de la Vaca to Cabo Vidio	All year round
		O'Canto	All year round
		From 005°071W to 004°30'W	All year round

	fixed gillnet		

Table 3: Permanent closures

As a further **stock recovery measure**, <u>data collection</u> like those carried out in 2019 will also be conducted:

CNW

- AZTI-CASELEM: Improvement of the selectivity of trawl gear in the context of the landing obligation in the CFP. Zone 8abd.
- AZTI-LOADOS: Design of medium-term actions to address and mitigate the impact of European regulations and policies in the context of the CFP. Landing obligation, ad hoc actions, governance and communication. Zone 8abd.
- TRAGSATEC: Analysis of the economic viability of unwanted catches subject to the landing obligation in south-west waters. Zones 8 and 9a.
- IEO-DESCARSEL 2019: Reduction of discarded catches and unwanted catches. Selectivity and Survival. Zone 8c.
- International Mackerel and Horse Mackerel Egg Survey (MEGS): Zones 9ª north and 8acbd.
- Acoustic Survey for Juvenile Anchovy in the Bay of Biscay (JUVENA): Zone 8.
- Sardine, Anchovy, Horse Mackerel Acoustic Survey (PELACUS): Zones 8c and 9a north.
- Sardine DEPM (SAREVA): Zones 8bc and 9a north
- Deep-water longline survey (PALPRO): Zone 8c.

GULF OF CADIZ

- Biomass of Anchovy (BIOMAN): Zones 7, 8 and 9.
- ECOCADIZ: Zone 9a south.
- Anchovy DEPM (BOCADEVA): Zone 9a south.
- Study of connectivity between sardine populations in the southern areas of the Peninsula. Zones 9a and GSA 1 and 3.

Finally, applicable to both the CNW region and the Gulf of Cádiz, Ministerial Order APA/315/2020 of 1 April 2020 has been published, unifying management measures for these fleets and increasing flexibility on transfers of allocated fishing opportunities. The order 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.

Likewise, measures to **improve short- and medium-term profitability**, financed annually by the EMFF, will be implemented. Competence for implementation of these measures is regional.

2. MEDITERRANEAN

The following table shows the segments in imbalance in the Mediterranean fishing ground, together with the objectives pursued with the action plan and the measures to be implemented for each segment:

Gear	Length	Cause of imbalance	AP objective	Effort reduction measures		
				Allocation of fishing opportunities	Permanent closures	Temporary closures
Bottom trawl nets	Length 18-24 Length 24-40	→Dependency on overexploited stocks, mainly hake, Aesop shrimp and deepwater rose shrimp →Inefficient fishing ground exploitation	SHI indicator less than 1	Order APA/423/2020, of 18 May 2020, establishing a management plan for the conservation of demersal fish resources in the Mediterranean Sea by allocating fishing effort and establishing closed areas/seasons for fleets using bottom-trawling gear, hooks or gillnets targeting the following species: European hake (Merluccius merluccius), Mediterranean white shrimp (Parapenaeus longirostris), Norway lobster (Nephrops norvegicus), red mullet (Mullus barbatus), Mediterranean red shrimp (Aristeus antennatus) and giant red shrimp (Aristaeomorpha foliacea).	Yes	YES
Purse seines	Length 06-12 Length 12-18 Length 18-24 Length 24-40	→Dependency on overexploited stocks, mainly sardine →Economic imbalance (Length 06-12) →Inefficient fishing ground exploitation	SHI indicator less than 1	-	Yes	YES
Surface longlines	Length 06-18 Length 18-40	→Dependency on overexploited stocks, mainly Swordfish →Inefficient fishing ground exploitation	SHI indicator less than 1	Individual allocation of the following TACs by vessel: Swordfish (SWO)	No	No
Trawl nets/	Length 00-12 Length 18-40	→Low short- and long-term profitability	Indicators CR/BER and RoFTA, positive	-	No	No

In addition to the closed areas/season provided for in Order APA/423/2020 for demersal species, the following closure are currently in place:

TEMPORARY CLOSURES		
GEAR	ZONE/SPECIES	DURATION
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 seines	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

In addition, the following measures common to all segments in imbalance are applied in this fishery in relation to **stock recovery**:

- Data collection

At national level, studies will be carried out on the stocks exploited by this segment, similar to those carried out in 2019:
- Pelagic and bottom trawling: Pan-Mediterranean Acoustic Survey (MEDIAS): GSA 1, 2, 5 and 6.
- Bottom trawling: International Bottom Trawl Survey in the Mediterranean (MEDITS): Zones GSA 1, 2, 5 and 6.

At regional level, the following data collection measures will be applied in Catalonia:

- Multiannual aid scheme to finance cooperation between scientists and fishermen measure (Article 28 EMFF). Amount approved for Article 28: €1 318 990.04 TOTAL (€989 242.53 EMFF + €329 747.51 CAT). A new scheme is being processed, for an amount of €1 875 000.00 to increase the measures in this line.
- Implementation of a multiannual data collection operation in the fisheries managed by the Autonomous Community (Article 77 EMFF). A monitoring and follow-up project to support the compilation of data by the Catalan fisheries authorities in relation to the management plans, scientific research surveys and other initiatives in the interest of the fishing industry that aid compliance with the CFP is being implemented. The financial plan of the intermediate managing body for this measure has been rescheduled, almost doubling the initial budget of €981 598.74. Final budget €1 747 509.38.

– The data obtained in the area of cooperation between scientists and fishermen are intended, *inter alia*, for the co-management of fisheries within the framework of various co-management committees linked to certain inland water fisheries or shellfish methods under regional competence. The main objective of these management plans is to develop adaptive management with a bio-economic and ecosystem-based approach. These local management plans, together with the multiannual plan for demersal fisheries, recently approved by the European Union, constitute the two main focuses of work aimed at eliminating the imbalance of the fleets concerned.

- <u>Ecosystem improvement through the creation and maintenance of eight Marine Reserves</u>

Marine Reserves are spaces created by the Fisheries Law that seek the recovery of fish stocks and the maintenance of traditional artisanal fisheries. They also represent excellent natural laboratories making it possible to compare the anthropogenic effects (pollution, collection, fishing, etc.) found within and outside these protected areas and study the impact of natural or man-made phenomena such as global warming on the populations of target species. The Reserves seek the recovery of fish stocks and the maintenance of traditional artisanal fisheries.

These Reserves are areas defined as having 'good environmental status', the basis for which are the areas and activities permitted, scientific monitoring and disclosure. They currently manage over 102 000 hectares in the Mediterranean Sea and the Canary Islands, affecting artisanal fleets.

- <u>Surveillance and control improvements:</u>

The use of non-regulatory equipment and the landing of undersized specimens as part of the landing obligation will be priorities for the Mediterranean fishing ground, which features certain representative species, such as bluefin tuna and swordfish, that are subject to separate control initiatives under international recommendations.

Likewise, measures to **improve short- and medium-term profitability**, financed annually by the EMFF, will be implemented. Competence for implementation of these measures is regional. In this regard, adoption of the following measures financed by the EMFF are planned is planned in the Autonomous Community of Catalonia:

– A scheme of priority 1 sustainable fishing aid to promote artisanal fishing is being introduced for trawl net and dredger segments in imbalance.
– Schemes to promote competitiveness will be published under priority 1 for all segments in imbalance, which will include the following actions:

  o Professional advisory services.
  o Investments on board.
  o Added value, product quality and use of unwanted catches.
  o Diversification

- Schemes to promote competitiveness will be published under priority 5 for all segments in imbalance, which will include the following actions:
  - o Labelling local species.
  - o Promoting species of limited commercial value.

3. CANARY ISLANDS

In the waters of the Canary Islands fishing ground there are two segments that use two different fishing methods. The objectives pursued for these segments are set out in the following table:

Gear	Length	Cause of imbalance	AP objective
Hooks	Length 18-24	→Dependency on overexploited stocks, mainly bigeye tuna →Economic imbalance	SHI indicator less than 1 Indicators CR/BER and RoFTA, positive
Polyvalent gear	Length 00-18	→Economic imbalance →Inefficient fishing ground exploitation	Indicators CR/BER and RoFTA, positive

The measures of the action plan include:

- **Stock recovery** through the creation and maintenance of marine reserves.

As indicated above, marine reserves are spaces created by the Fisheries Law that seek the recovery of fish stocks and the maintenance of traditional artisanal fisheries.

Below are recent highlights in the recovery of fish stocks related to marine reserves:

a) Palma Marine Reserve: presence of a permanent population of hammerhead sharks, an indicator of an area rich in food and environmental quality.
b) Punta de la Restinga-Mar de las Calmas Marine Reserve: this Marine Reserve has recovered from the underwater eruptions at La Restinga that took place in 2011, with restored algae cover and an exceptional presence, in 2019, of female sunsharks in shallow waters in the summer.

- **Allocation of fishing opportunities:**

The measures for allocating fishing opportunities affecting segments in imbalance in this fishing ground are set out below.

- **Bluefin tuna in the Eastern Atlantic and Mediterranean**: Royal Decree 46/2019 regulates the bluefin tuna fishery, implementing a new management plan for the bluefin tuna stock in the Eastern Atlantic and Mediterranean Sea, approved by the International Commission for the Conservation of Atlantic Tunas (ICCAT). Access to this resource for fleets that for years have been affected or excluded from the fishery by the strict requirements on capacity limits, which especially limited the number of artisanal vessels authorised to make directed catches. This rule establishes the specific register of vessels and traps authorised to actively catch this species and the system for the allocation of quotas across the various fleets affected. It also indicates the fleets that will have an individual allocation of fishing opportunities and how temporary and definitive quota transfers and joint management are processed.

  Based on this royal decree, a series of resolutions of the General Secretariat for Fisheries are published to establish specific provisions for the fishing season for fleets that have no individual allocation of fishing opportunities.

- **Bigeye tuna in the Atlantic:** Spain has seen its quota gradually reduced from 11 300 tonnes in 2017 to 9 415 tonnes in 2019. Thus, Order APA/807/2019 of 26 July 2019 establishing measures to limit the volume of catches of bigeye tuna (*Thunnus obesus*) in the Atlantic Ocean during the 2019 season, was published in the Official State Gazette on 27 July 2019. This rule met two objectives:
  o Firstly, to allocate a catch limit to the freezer tuna seiner fleet so that it can continue its activity despite the crucial nature of the bigeye tuna fishery for that fleet, minimising its catches of bigeye tuna through technical measures, such as setting gear at certain times of the day or limiting or prohibiting the number of launches per day for fish aggregation devices, so that it can continue its activity until the end of the year.
  o Secondly, it ensured a certain quota volume for other fleets that are economically dependent on this stock and have a smaller catch capacity than the purse seiner fleet.

Likewise, measures to **improve short- and medium-term profitability**, financed annually by the EMFF, will be implemented. Competence for implementation of these measures is regional. Thus:
- From the Directorate General for Fisheries, a working group has been created with the participation of various research entities to develop, throughout this plan, a dynamic working tool for fisheries management that is adapted to the characteristics of polyvalent fleets, to standardise the flow of catch and effort records for the artisanal fleet, as well as field studies to assess fishery resources.

Its intermediate objectives include determining the essential species that make it possible for fishing activity to be economically viable, their spatial distribution in the marine habitat, the effectiveness of the fishing gear used, the economic value of the species of fishing interest and their possible value, the seasonal nature of fishing and the difference in effort across species, the structure of the artisanal fishing units, the state of the fishing resources, the catch volumes for each fishing nucleus, etc.

- The Directorate General for Fisheries has scheduled a substantial amendment to the software used to monitor records of catches and the first sale and traceability of fisheries products, which will allow a more accurate assessment of the economic indicators. To that end, in the Canary Island, priority 3
of the EMFF has been reorganised, increasing the part for the collection of fisheries data.

4. NORTH ATLANTIC AND OTHER REGIONS.

In the waters of the North Atlantic and other Regions, there are two imbalanced bottom trawler segments. The objectives pursued and fishing effort reduction measures applied to these segments are set out in the following table:

FISHING GROUND Gear		Length	Cause of imbalance	AP objective	Effort reduction measures: Allocation of fishing opportunities
NORTH ATLANTIC	Bottom trawl nets	Length > 40	→Dependency on overexploited stocks, mainly beaked redfish and, to a lesser extent, cod. →Economic imbalance	SHI indicator less than 1 Indicators CR/BER and RoFTA, positive	**Individual allocation of the following TACs by vessel**: Cod, Atlantic halibut, Prawn 3m, Skate 3l3n3o, and hake 3n30
OTHER REGIONS	Bottom trawl	Length 24-40	→Economic imbalance →Inefficient fishing ground exploitation	Indicators CR/BER and RoFTA, positive	**Individual allocation of the following TACs by vessel**: Cod and associated species in the Bahrain Sea

The measures of the action plan for these segments include:

- **Stock recovery** through the collection of data for the assessment of the state of the stocks. These campaigns include actions like those carried out in 2019, which are described below.

    - **Bottom trawling:** Flemish Cap Groundfish survey (FCGS) and 3LNO Groundfish survey (PLATUXA)
    - **Campaigns in NAFO waters**

These campaigns have been carried out since 2001 using the B/O Vizconde de Eza, which belongs to the General Secretariat for Fisheries. The objective of the campaigns is not only to determine the state of the stocks of the target species, but also of associated species, as well as the oceanographic conditions in the fishing area used by the Spanish fleet in NAFO waters.

Spain conducts three annual campaigns:

- The first of these campaigns is carried out at the Grand Bank (Div. 3NO) during May.
- The second is at Flemish Cap (Div. 3M) during July.
- In 2013, a third campaign was proposed in the area of Flemish Pass (NAFO Div. 3L), thereby covering the entire area in which the Spanish fleet operates.

These campaigns are co-financed by the EU through the European Maritime and Fisheries Fund (EMFF), as part of the National Programme for the collection, management and use of data in the fisheries sector and support for scientific advice relating to the common fisheries policy.

The results of these campaigns are presented at the meetings of the Scientific Council of NAFO and they constitute one of the fundamental bases used by the Council to enable it to advise the managers both in the establishment of quotas and in the protection of ecosystems.

– **Campaigns in the waters of the *S_{VALBARD}archipelago***

This is a traditional fishing area for the Spanish cod fleet. Each year, in late summer and early autumn, Spain carries out an annual campaign to assess the Greenland halibut stock. This is an important breeding area for this species. The campaign also includes a study of the accompanying flora and fauna.

The result of this campaign is provided to the Norwegian Oceanographic Centre (with Norway being the country that regulates the Svalbard fisheries) and in the corresponding scientific forums.

In 2019, this campaign was conducted by the Basque Institute AZTI, on board a commercial fishing vessel with its home port in Galicia, and it was financed by the fishing sector. The General Secretariat for Fisheries was in charge of the administrative procedures to make this possible.

ANNEX

FLEET SEGMENT BALANCE INDICATOR (Balance/Imbalance) CALCULATION

In order to carry out the studies included in the action plan, only the fleet in each segment with a minimum annual activity of 90 days (the full-time fleet) has been taken into consideration.

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. **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   Standardisation of the results of economic, technical and biological indicators.

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 Determination of the atypical nature of the result of the partial indicators.

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:

-   $[Q_1 - 1.5*IC, Q_3 + 1.5*IC]$ The values in this interval are concentrated around the

central point of the distribution. We assigned them a value of 3.

- $(Q_3 + 1.5*IC, Q_3 + 3*IC]$ and $[Q_1 - 3*IC, Q_1 - 1.5*IC)$ 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.
- $> Q_3 + 3*IC$ and $< Q_1 - 3*IC$. 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.

This process is carried out using four partial indicators (the two economic indicators, the technical indicator and the biological indicator). However, in accordance with the Guidance provided by the European Commission, the technical indicator is given a weighting of 1.5, 1 and 0.5, instead of 3, 2 and 1 as stated above, so as to grant more importance to the economic and biological indicators over the technical indicator.

Step 3   Calculation of the annual overall indicator for each fleet segment

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 economic and biological indicators; and 1.5, 1 and 0.5 for the technical indicator), with the result being divided by the sum of the weighted values:

Final indicator =

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

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 for the action plan 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, in accordance with the Guidance document provided by the European Commission.

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.