

**ANNUAL REPORT  
PORTUGUESE FISHING FLEET – 2018****1.SUMMARY****❖ Findings on the balance between fleet capacity and fishing opportunities.**

A combined analysis of the results of indicators for use of vessels and biological and economic sustainability, show that the Portuguese fleet capacity is in balance with fishing opportunities. In a number of segments where some vulnerability was seen, management measures have been taken to limit the activity of vessels, thus providing greater balance between fleet capacity and available resources.

The sardine management and monitoring model, which involves the scientific community, has proved to be beneficial as a result of the strict limitations imposed on capture. For many years, this species represented around 40% of all fresh landed catches.

**❖ Fleet capacity**

At 31 December 2018, the Portuguese fishing fleet consisted of 7 855 vessels with total gross tonnage of 84 436 GT and total engine power of 341 230 kW.

**❖ Characterisation of the most important segments**

In terms of fresh and chilled landed fishing, the purse seine and trawling segments represented approximately 64% of total volume of catches. Common mackerel, sardines and anchovy are the main species caught by purse seine fishing, representing 82.5% of all catches in this segment. Common mackerel is of note with around 50.44% (27 156 tonnes) of total purse seine catches. In the trawling segment, the three main species of fresh and chilled catches represent 71.22% of total volume of landed fish. Of note was horse mackerel, standing at 59.26% (9 854 tonnes).

**❖ Entries to and exits from the fleet during 2018**

In 2018, 49 vessels joined the domestic fishing fleet (totalling 746 GT and 3 423 kW) while 110 exited the fleet (totalling 3 554 GT and 7 515 kW). Fleet entry and exit occurred mainly in the polyvalent fishing segment (PGP), which mainly involved fishing fleet renovation.

**❖ Changes in the status of the resources and/or in fishing possibilities**

With regard to the status of the resources exploited by the Portuguese fleet and subject to Total Allowable Catches (TAC), significant changes continue to be seen with respect to abundance and availability of species that are important for fishing in Portugal, as emphasised in Regulation (EU) 2018/2025. Furthermore, assessment methodologies have also undergone frequent review, with direct consequences on the perception of resource status and impact on fishing opportunities. This work has been carried out by EU scientific institutions represented in the ICES.

Horse mackerel is an example of species with relevant changes in abundance and which, despite the oscillations, is at its highest ever levels, with a corresponding change in fishing opportunities of more than 69%, and megrim with more than 35%.

Abundance of anchovies has continued at historic maximums, with repercussions on the availability of the species for the Portuguese sector, which instead of providing a quota for the Spanish sector, has felt the need to take advantage of this abundance on the western coast.

Also among the species where abundance has recovered are Norway Lobster and anglerfish. Pollock, sole and plaice have a stable trajectory, as do skates, although some species stand out for positive reasons, as is the case with Thornback ray and others which continue to be relatively unknown, such as the undulate ray.

The sardine situation continues to be unclear as indications for some local recovery have started to appear, and where the impact on total biomass is still not known. Fishing opportunities continue to be almost residual with respect to historic levels

of exploitation. Relevant management measures continue to be implemented mostly based on compromises between the sector and administration, to limit daily catches and closing of fishing days.

It is important to add that the Commission no longer sets TACs for stocks exploited in European waters covered by CECAF, but delegates the determination of the exploitation levels to be requested to the Member States (MS) with fishing opportunities in these waters, based on the scientific advice of national institutions or of the ICES.

With respect to the activity of the national fleet operating in external fishing grounds, in general in 2018, external fishing opportunities have remained relatively stable. In 2018, no significant changes in available fishing possibilities were seen for the Portuguese fleet. However, with regard to fishing grounds of greater relevance for the national fleet, the most significant changes related to activity in NAFO, where a decrease of 20% was seen in the cod quota in NAFO 3M and an increase of 11% in the Greenland halibut quota while in ICCAT, there was a rise of 20% in the Northern Albacore quota and a rise of 18% in the bluefin tuna quota.

#### ❖ **Effort reduction and adjustment of capacity**

In 2018, the following fishing effort recovery/adjustment plans or capacity control regimes were in force:

Hake and Nephrops Recovery Plan / Adjustment Plan covering vessels with a special fishing licence included in the Southern White Hake and Norway Lobster Recovery Plan.

Fishing Capacity Control Regime which includes licensing management based on the aim of reducing fishing capacity by limiting the number of licences issued, particularly with regard to gear with greater environmental impact, such as sweep nets and bottom trawlers, dredgers and purse seine (the latter under a new Sardine Fishing Management Plan), but also for different types of trawling and more recently, cage traps.

Recovery plan for East-Atlantic and Mediterranean bluefin tuna (Thon rouge; Atún rojo - Thunnus thynnus) - To enable the this population to recover, at its annual meeting of 2006, ICCAT provisionally implemented a 15-year plan.

Greenland Halibut Recovery plan (Reinhardtius hippoglossoides) - Council Regulation (EC) No 2115/2005 of 20 December establishing a recovery plan for Greenland halibut in the framework of the Northwest Atlantic Fisheries Organisation. Implemented in 2010 and in effect until 2018.

Sardine Fishing Recovery and Management Plan (2018-2023), underway since 2018 at the joint initiative of the Portuguese and Spanish governments, which sets out catch amounts and specifies management and control measures for the activity of sardine capture vessels. This plan was drawn up in response to the ICES Special Request Advice, Bay of Biscay and the Iberian Coast Ecoregion, sr.2017.15 of 14 July 2017), which established that the previous plan was not precautionary.

European Eel Management Plan, underway since mid-2009, with measures to control fishing efforts and catch limits on juveniles (elvers) and adults (silver eels), restrictions on leisure fishing and closed fishing season. In 2018, the new periodic reporting plan came into effect with an increased closed fishing season for all EU countries (/ \* COM/2012/0413 final - 2012/0201 (COD) \*/ and (EU) 2018/120 of 23 January).

#### ❖ **Compliance with the entry/exit scheme**

The fleet entry and exit scheme is implemented in accordance with Article 22(5) and (6) and Article 23(1) of Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy (CFP). Only entries or re-entries of vessels are authorised in line with the exit from the fleet of equal or greater gross tonnage (GT) and engine power (kW).

In 2018, Portugal complied with the maximum fishing capacity limits laid down in Annex II of the CFP, both with regard to the mainland fleet (MFL) and the fleets registered in the Outermost Regions.

#### ❖ **Plans to improve the fleet management system**

In 2018, with the aim of improving the fleet management system, restrictions were maintained on licensing for the use of certain fishing gear in order to regulate fishing effort and protect the most vulnerable species or at less sustainable levels of exploitation. This was also the case for certain hydrographic basins and with regard to the setting up of biodiversity marine reserves. Limitations continue on the issue of new licences to avoid increases in fishing effort on the different resources caught and favour the maintaining of existing balances. A further measure which has been used in fleet management is the withdrawal

of vessels and the transfer of the respective gear to other vessels which remain active. This provides improved profitability without increasing the fishing effort.

#### ❖ *Use of equilibrium indicators*

Usage indicators for vessels and economic indicators were calculated in all segments and biological sustainability indicators were used for species with greater relevance in Portuguese catches and for which assessment exists. This information was provided by the International Council for the Exploration of the Sea (ICES).

## **2. BALANCE BETWEEN FLEET CAPACITY AND FISHING OPPORTUNITIES**

*(Balance between capacity and fisheries opportunities)*

In 2018, the policy for sustainable exploitation of resources was continued, seeking to conciliate this policy with the balanced management of the capacity of the national fishing fleet. In parallel, measures have been implemented to improve conditions and practices in terms of onboard safety and working conditions for crews. However, in overall terms, in light of the gradual ageing of the fishing fleet, these measures have been insufficient.

Regarding the balance between fleet capacity and fishing opportunities, and based on the joint application of biological, economic and activity indicators, it can be seen that in the mainland fleet, no fleet segments exist which are structurally imbalanced and improvement can be seen in the economic performance in some segments. The purse seine segment is the most significant in the coastal fleet in terms of catch volume, and is mainly responsible for sardine catches. Despite the limitations applied to this species, the abundance of anchovies on the Portuguese coast and the swaps made with Spain for this species, allowed the purse seine segment to maintain good economic performance in 2018. With regard to biological indicators, most segments are biologically balanced. However, in light of ICES assessments on the Iberian stock of sardines, a Multiannual Iberian Sardine Recovery and Management Plan has been drawn up by Portugal and Spain to be implemented from 2018 to 2023 with the commitment to recover biomass.

## **3. GENERAL DESCRIPTION OF THE FLEET IN RELATION TO THE FISHERIES**

### **Description of the fleet**

At 31 December 2018, the Portuguese fishing fleet consisted of 7 855 vessels with total gross tonnage of 84 436 GT and total engine power of 341 230 kW. Vessels are distributed over the mainland (MFL), the Autonomous Region of the Azores (ARA) and the Autonomous Region of Madeira (ARM).

The national fleet has a prevalence of small fishing boats, where around 90.93% of registered vessels have overall lengths of less than 12 metres and low gross tonnage, which together represent only 15% of total national tonnage. The average age of the registered fleet is approximately 35 years and the average age of the active fleet is around 24 years. Annex I shows additional information providing a more detailed description of the Portuguese fishing fleet.

### **Fishing grounds used** (Link with fisheries)

The national fishing fleet consists of the mainland fleet and the fleets of the outermost regions of Madeira (ARM) and the Azores (ARA), and works according to the operating areas and gear assigned to it. They are grouped as follows: Gillnets and trammel nets (DFN); Dredgers (DRB); Trawlers (DTS); Traps (FPO); Lines and Hooks (HOK); Beach Seines (MGO); Seine Nets (PS); Beam Trawls (TBB); Polyvalent vessels (MGP, PGP and PMP). In Annex II, a description can be found of fisheries with information on the main species landed, zones of operation and the proportion of activity of each group with regard to the total for the active fleet. In Annex III, the Portuguese fleet situation at 31 December 2018 can be seen, broken down into regions and licensed gear, in accordance with the segmentation set out in the National Fish Data Collection Programme (PNRD).

The fishing fleet registered in ARM operates essentially in sub-area 2 of the Madeira-EEZ with vessels working in specific seasons of the year in the waters of the Azores and Canary Islands, under Reciprocity Agreements and in CECAF international waters. This mostly multi-purpose fleet, is licensed mainly for pole-and-line, deep longline and purse seine. The most representative species are tuna, black scabbard fish and small pelagics (common mackerel and blue jack mackerel) which represent around 91% of landed catches. Coastal demersal species and molluscs constitute around 9% of total catches in the region, caught essentially by bottom set lines, hand lines, traps and catching devices in the case of molluscs (limpets).

The fishing fleet of the Azores (ARA) is traditional and consists mostly of vessels with lengths of less than nine metres. Although numbers of such smaller vessels have fallen over the years, in 2018 they still represented 63% of the total ARA fleet (Figure 1).

In the ARA, most vessels in the fishing fleet work with line and hook and represent 85% of the total of the active fleet (Figure 2). The remaining vessels work essentially with gillnets and purse seine / lift nets to catch small pelagic species.

Figure 1 – Breakdown of ARA fleet by length classes.

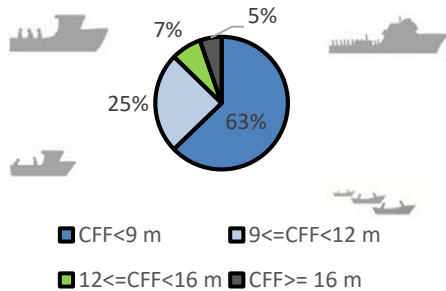
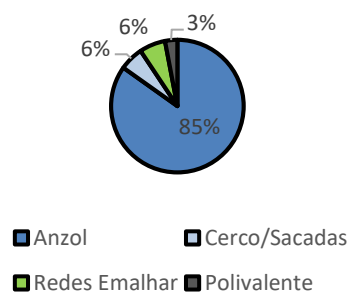


Figure 2 – Breakdown of ARA fleet by segments.



Key	
CFF	Overall length
Anzol	Hooked gears
Redes Emalhar	Gill nets
Cerco/Sacadas	Purse seines / lift nets
Polivalente	Multi-purpose

It is important to mention that with respect to the activity of the national fleet operating in external fishing grounds, during 2018, the only activity was under EU/Madagascar and EU/Morocco Sustainable Fisheries Partnership Agreements (SFPA), with one fishing authorisation issued for each. In order to use fishing possibilities under the EU/Cape Verde SFPA, which has seen regular participation in recent years, no fishing possibility was issued for 2018. The reduced use of fishing possibilities under SFPA, among other factors, led to agreements being renegotiated in 2018 with a reduction in fishing possibilities in the surface longliner segment in Cape Verde and the Ivory Coast.

With regard to the EU/Norway fishing agreement, including the waters around Svalbard, the Portuguese fleet maintained its pattern of activity seen in recent years with the regular presence of two fishing vessels, primarily in cod fishing.

With respect to Regional Fisheries Management Organisations (RFMO), activity by national vessels in 2018 related mainly to the International Commission for the Conservation of Atlantic Tunas (ICCAT), the North-East Atlantic Fisheries Commission (NEAFC) and the Northwest Atlantic Fisheries Organisation (NAFO), despite activity being conducted in other RFMOs, but of a more peripheral nature. This was the case with the Indian Ocean Tuna Commission, which saw six national vessels involved in the capture of tuna and similar species, the General Fisheries Commission for the Mediterranean (GFCM), with one vessel operating with traps to catch shrimp and the Inter-American Tropical Tuna Commission (IATTC), with three vessels involved in catching tuna and similar species.

It should be noted that the national tuna fleet operating in external fishing grounds works exclusively with surface longline and the respective catches consist mainly of swordfish and other migratory species.

### Development of the fleet

The national fishing fleet continues to decrease due to the process implemented in recent years to adapt capacity to available resources. Comparing the situation on 31 December 2018 to the situation on 1 January 2014, a reduction of 4.18% can be seen in terms of vessel numbers, 15.14% in terms of gross tonnage and 6.52% in terms of propulsion capacity (Table 1). With regard to the active fleet, Annexes IV and IV-A show the evolution seen during the last five years (2014-

2018), per region, length class and fleet segment. It can be seen that there was a reduction of around 5% in terms of licensed vessels, corresponding to a decrease of 10.9% in gross tonnage (GT) and 4.59% in propulsion capacity (kW).

Table 1

REGION	FLEET AT 1/1/2014			FLEET AT 31/12/2018			DIFFERENCE IN ABSOLUTE VALUES			DIFFERENCE IN PERCENTAGE VALUES		
	No	GT	POW(kw)	No	GT	POW(kw)	No	GT	POW(kw)	No	GT	POW(kw)
MFL	6 996	85 453	294 683	6 678	70 575	271 359	-318	-14 878	-23 323	4.55	17.41	-7.91
ARA	764	10 112	54 124	753	10 056	54 063	-11	-56	-61	1.44	0.56	-0.11
ARM	438	3 938	16 222	424	3 805	15 808	-14	-133	-415	3.20	3.37	-2.56
<b>TOTAL PORTUGAL</b>	<b>8 198</b>	<b>99 503</b>	<b>365 029</b>	<b>7 855</b>	<b>84 436</b>	<b>341 230</b>	<b>-343</b>	<b>-15 067</b>	<b>-23 799</b>	<b>4.18</b>	<b>15.14</b>	<b>-6.52</b>

### Evolution in 2018 - Entries and Exits

In 2018, 49 vessels entered the national fleet, representing a capacity of 746 GT and 3 423 kW. Vessel renewal was mostly in the mainland fleet (98%). Table 2 shows the number of vessels registered by fleet segment and Table 3 the respective origin. It can be seen that 75.5% came from new construction (CST), 18.4% refers to vessels from different activities (CHA) and 6% to vessels imported from other Member States (IMP). These values demonstrate the effort to renew the fishing fleet with new units.

ENTRIES PER FLEET SEGMENT

Table 2

SEGMENT/REGION	DFN	DRB	DTS	FPO	HOK	PGP	PMP	PS	TOTAL
MFL	7	1	4	4	3	26	1	2	48
ARA	0	0	0	0	0	0	0	0	0
ARM	0	0	0	0	1	0	0	0	1
<b>TOTAL</b>	<b>7</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>26</b>	<b>1</b>	<b>2</b>	<b>49</b>

ENTRIES BY TYPE OF EVENT

Table 3

REGION	TYPE OF ENTRY			TOTAL
	CHA	CST	IMP	
MFL	8	37	3	48
ARA	0	0	0	0
ARM	1	0	0	1
<b>TOTAL</b>	<b>9</b>	<b>37</b>	<b>3</b>	<b>49</b>

During 2018, 110 vessels left the national fleet with total gross tonnage of 3 554 GT and propulsion capacity of 7 514.5 kW. Table 4 shows the number of vessels immobilised per fleet segment and Table 5 the number of vessels departures from the fleet by type of event. It can be seen that 71% were destroyed (DES), 28% registered for an activity other than fishing (RET) and 1% withdrawn due to registration in a different country (EXP).

EXITS PER FLEET SEGMENT

Table 4

SEGMENT/REGION	DFN	DRB	DTS	FPO	HOK	PGP	PS	INACTIVE	TOTAL
MFL	13	1	2	3	3	23	2	52	99
ARA	0	0	0	0	3	0	0	1	4
ARM	0	0	0	0	0	0	0	7	7
<b>TOTAL</b>	<b>13</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>6</b>	<b>23</b>	<b>2</b>	<b>60</b>	<b>110</b>

EXITS BY TYPE OF EVENT

Table 5

REGION	TYPE OF EXIT			TOTAL
	DES	EXP	RET	
MFL	73	1	25	99
ARM	3	0	4	7
ARA	2	0	2	4
<b>TOTAL</b>	<b>78</b>	<b>1</b>	<b>31</b>	<b>110</b>

Table 6 shows fleet movement by region during 2018 for entries, exits and changes in capacity (GT and kW). A trend towards overall reduction continues for both mainland and Outermost Region fleets.

Table 6

EVOLUTION OF FLEET IN 2017	PORTUGAL			MAINLAND - MFL			THE AZORES - ARA			MADEIRA - ARM		
	No	GT	KW	Number	GT	KW	Number	GT	KW	Number	GT	KW
CAPACITY OF FLEET AT 1.1.2018	7 916	87 214	343 709	6 729	73 174	273 101	757	10 060	54 077	430	3 979	16 531
ENTRIES IN 2018	49	746	3 423	48	741	3 348	0	0	0	1	5	75
CHANGES IN 2018	0	30.14	1 612.5	0	17.32	1 556.41	0	2.44	77.38	0	10.38	-21.29
EXITS IN 2018	110	3 553	7 515	99	3 357	6 647	4	7	91	7	189	777
CAPACITY OF FLEET AT 31.12.2018	7 855	84 436	341 230	6 678	70 575	271 359	753	10 056	54 063	424	3 805	15 808
DIFFERENCE IN ABSOLUTE VALUES	-61	-2 778	-2 479	-51	-2 599	-1 742	4	-4	-14	-6	-174	-723
PERCENTAGE DIFFERENCE	-0.77	-3.19	-0.72	-0.76	-3.55	-0.64	-0.53	-0.04	-0.03	-1.40	-4.38	-4.37

#### 4. FISHING EFFORT

##### Regimes for the Reduction of Fishing Effort and Reduction of Fishing Capacity (Statement of effort reduction schemes and capacity reduction)

In 2018, the plans set out in Table 7 were in effect.

##### Recovery/Adjustment Plans to Fishing Effort/Capacity Reduction

Table 7

In effect in 2018 or established in 2018	Intended for	Objectives
Recovery Plan for Hake and Nephrops / Adjustment Plan	Vessels with a special fishing licence included in the Southern White Hake and Nephrops Recovery Plan	Limiting the fish mortality rate which has been achieved by maintaining fleet activity after around 10 years of reduction, for vessels with overall length > 10 metres, which have landings of more than five tonnes of hake or 2.5 tonnes of Nephrops.
System for controlling fishing capacity	Vessels licensed for a wide range of fishing gears.	Limitation of fishing capacity through the number of licences.
Recovery Plan for Blue-Fin Tuna	Traps Vessels licensed for surface longline or pole-and-line (by-catches)	With a duration of 15 years, from 2007 to 2022, and the aim of achieving a level of biomass consistent with the Maximum Sustainable Yield (B <sub>MSY</sub> ) with at least 60% likelihood.
Greenland Halibut Recovery Plan	NAFO licensed vessels	Ensure the long-term sustainable exploitation of halibut, with planned annual adjustment of TAC, in accordance with a harvest control rule
Sardine Fishing Recovery and Management Plan (2018-2023)	All sardine catches, particularly for vessels licensed for purse and beach seines.	Limiting of catches for the recovery of spawning biomass at a minimum rate of 10%/year.
European Eel Management Plan (Underway since 2009)	All vessels/commercial and leisure fishermen	Recover biomass of silver eel to pristine levels.
North Atlantic salmon implementation plan	Vessels licensed to operate in the zones between the River Lima and the River Minho to the border with Galicia	Underway since 2007 with the aim of managing the fishing of salmonids.

##### Impact of fishing capacity reduction schemes

##### Sardine Fishing Recovery Plan

In 2018, at the joint initiative of the Portuguese and Spanish governments, a plan was implemented which sets out catch amounts and specifies management and control measures for the activity of sardine capture vessels. This plan was drawn up in response to the ICES Special Request Advice, Bay of Biscay and the Iberian Coast Ecoregion, sr.2017.15 of 14 July 2017), which established that the previous plan was not precautionary.

##### Adjustment plan for vessels for the Hake and Nephrops Recovery Plan

In 2018, the Recovery Plan implementation conditions were maintained, with the reference period (2016-2017) having been updated. The Multiannual Management Plan was only published at the beginning of 2019, and as such, throughout 2018 the obligation was in effect for vessels whose catches reached five tonnes during the management period to enter the group of vessels with restricted activity, with a number of fishing days proportional to the time in which they formed part of the plan. Activity authorised under Council Regulation (EU) No 2018/2025 of 17 December 2018 was maintained at 113 days per vessel, regardless of the type of gear used. Days corresponding to journeys in which hake catches did not

exceed 8% of total catches were not included in this limit. Based on landing history, the vessels included in the Recovery Plan were allocated with individual quotas of hake. A small percentage was reserved for vessels not included in the plan without activity restrictions. Restrictions on the number of fishing days have led to under use of quota. In 2018, some of the quota was used for swaps with Spain, where the sector has benefited generally by extending the exploitation of other species beyond the initially available quota.

Also with regard to the vessels included in the Southern Hake and Nephrops Recovery Plan, capacity of 160.25 GT and 625.06 kW was permanently withdrawn from the fishing fleet, corresponding to three vessels landing hake. The permanent termination of fishing by these vessels took place under Ministerial Implementing Order No 381-A/2017 of 19 December 2017.

Recovery Plan for Eastern Atlantic and Mediterranean Bluefin Tuna

To allow the reconstitution of the population of this species, at the 2006 Annual Meeting, ICCAT provisionally implemented a 15-year recovery plan. Further to provisions relating to capacity limit, and in light of the absence of historical data on activity by the national fleet during the reference period, fishing for bluefin tuna was limited to traps on a domestic level.

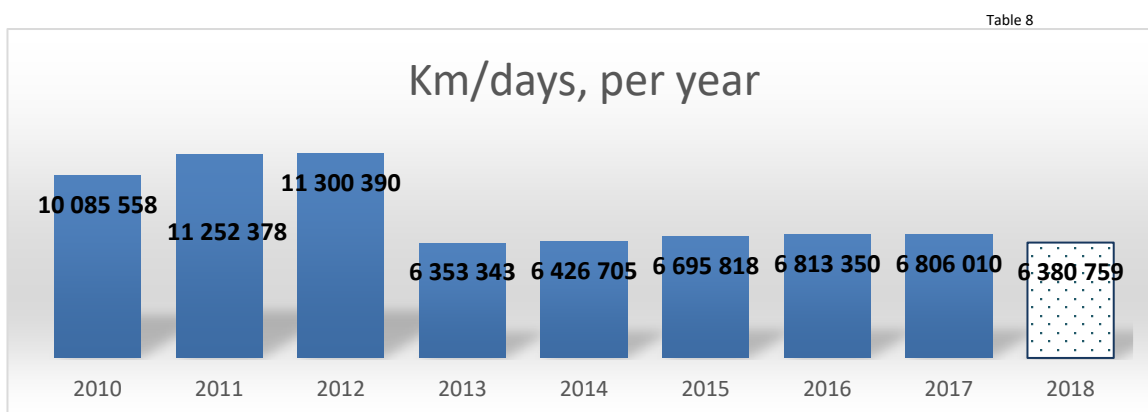
In 2018, Recommendation 18-02 was implemented for a ‘Multiannual Management Plan’ for this stock, a direct consequence of the recovery achieved in *Thunnus thynnus* biomass. This recommendation will enter into force on 21 June 2019.

The provisions implemented under ICCAT have been reflected in Union law through Regulation 2016/1627 of the European Parliament and of the Council of 14 September 2016 - resulting in the repeal of Council Regulation (EC) 302/2009. However, given the new provisions introduced by Recommendation 18-02, which are in general more flexible, it has become necessary to reflect such changes in the Union’s legislative acquis, a situation which will require the repeal of Regulation 2016/1627 and the implementation of a new Regulation substituting provisions in force on an EU level, with rules suitable for the Management Plan arising from Recommendation 18-02.

Greenland halibut Recovery plan (*Reinhardtius hippoglossoides*) - Council Regulation (EU) No 2115/2005 of 20 December establishes a recovery plan for Greenland halibut in the framework of the Northwest Atlantic Fisheries Organisation (NAFO). This plan was in force until 2018 and required a freeze on the number of vessels operating in NAFO.

Overall fishing effort in southern western waters

The overall fishing effort by the Portuguese fleet in western waters under Council Regulation (EC) No 1954/2003 of 4 November 2003 can be found in Table 8. From 2010 to 2018, it can be seen that there was an overall reduction in fishing effort (kW/day) of around 36.7%.



**5. SYSTEM OF ENTRIES AND EXITS AND MAXIMUM CAPACITY LIMITS** (*Statement of compliance with entry/exit regime*)

In relation to the capacities of the EU fleet, each Member State has its segmentation defined. In Portugal’s case, capacity management (GT and kW) is carried out per region (mainland, Azores and Madeira). The mainland fleet (MFL) is managed

as a whole while the fleets of Portugal's outermost regions of the Azores and Madeira are managed in accordance with the segmentation set out in Annex II of Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 for Portugal's outermost region fleets. In 2018, Portugal complied with the applicable standards for the system of entries and exits and it respected the maximum fishing capacity limits established for the mainland and outermost region fleets.

Table 9 shows the tonnage and power of the national fishing fleet per region at 1 January 2014 and 31 December 2018, in accordance with that set out in Articles 22 and 23 of Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013.

Table 9

CALCULATION OF COMPLIANCE WITH THE FISHING CAPACITY CEILINGS IN ACCORDANCE WITH ARTICLE 22(6) AND (7) OF REGULATION (EU) NO 1380/2013 OF 11 DECEMBER 2013	MFL		ARM						ARA				TOTAL PT	
			Demersal species – overall length <12 m (4K6)		Demersal and pelagic species – overall length > 12 m (4K7)		Pelagic species - Seine nets - Overall length > 12 m (4K8)		Demersal species – Overall length < 12 m (4K9)		Demersal and pelagic species – Overall length > 12 m (4KA)			
	GT	KW	GT	KW	GT	KW	GT	KW	GT	KW	GT	KW	GT	KW
FISHING CAPACITY CEILINGS LAID DOWN IN ANNEX II TO REGULATION (EU) NO 1380/2013 OF 11 DECEMBER 2013	94 054	313 468	604	3 969	4 114	12 734	181	777	2 617	29 870	12 979	25 721	114 549	386 539
CAPACITY AS AT 1.1.2014	85 453	294 863	469	3 864	3 333	11 581	136	777	2 267	29 549	7 845	24 575	99 503	365 092
CAPACITY WITHDRAWN WITH PUBLIC AID (GT AND KW)	160	625	0	0	0	0	0	0	0	0	0	0	160	625
FISHING CAPACITY CEILING AS AT 31.12.2018	93 894	312 843	604	3 969	4 114	12 734	181	777	2 617	29 870	12 979	25 721	114 389	385 914
FISHING CAPACITY AS AT 31.12.2018	70 575	271 359	453	3 641	3 216	11 389	136	777	2 288	29 532	7 767	24 531	84 436	341 230

## 6. MANAGEMENT OF FISHING FLEETS

### Strengths and weaknesses in the fleet management scheme

#### Strong points:

- Existence of an efficient Integrated Fishing Information System (SI2P) which, in addition to recording all movements of fishing vessels including entries, changes and exits, allows the good management of national fleet capacities. It further ensures the control and management of fishing licences and the control of catches;
- Existence of a vessel monitoring system (MONICAP), allowing the surveillance and control of fishing activities;
- The requirement that the first sale takes place at a fish auction, allowing greater control over catches actually made;
- Operation of the Control and Surveillance Centre 24 hours a day, seven days a week, allowing permanent monitoring of fleet activity;
- Indexing of licensing to proof of activity by sale at auction so as to minimise the tendency to under declare.

#### Weaknesses:

- In relation to multi-specific fishing, the difficulty in implementing systems to control fishing efforts by species, due to difficulty in identifying a target species;
- The high number of vessels that use different types of fishing gear throughout the year makes the process of analysing the fishing effort impacted by each type of gear more difficult.
- High number of small or medium-sized vessels which do not have monitoring equipment making controlling them difficult while also hindering cross-referencing.



### **Plans for improvements in the fleet management system**

Licensing limits have been in place for several years for the use of certain types of fishing gear in the capture of more vulnerable species or at less sustainable levels of exploitation. This is also the case for certain hydrographic basins and with regard to the setting up of biodiversity marine reserves. In specific situations, so as to avoid wasting resources which could be used profitably, the authorities have allowed transfers of fishing gear between vessels. In cases where the viability of activity is at stake, the transfer of gear with withdrawal of vessels that lose some fishing gear provides vessels that remain active with better economic profitability without increasing fishing effort. The issue of new fishing licences to use specific fishing gear is limited to avoid increases in fishing effort in different species, favouring the continuation of existing balances.

The involvement of the sector in the management of resources showing weaknesses is of particular importance. More Monitoring Commission meetings have been held for certain types of fishing, as is the case with sardines and beach seine gear. Of note is the setting up of a Co-management Commission for Berlenga goose barnacles with the aim of replicating the model for other species.

### **Information on the general level of compliance with fleet policy instruments**

In relation to Community regulation on fleets, we would like to highlight the following areas:

#### Controlling fishing fleet capacity

Capacities of the national fleet in terms of gross tonnage (GT) and propulsion capacity (kW) are managed through strict control of entering capacities against exiting capacities in accordance with the Common Fisheries Policy - Regulation (EU) 1380/2013 of the European Parliament and of the Council of 11 December 2013. The Directorate-General of Natural Resources, Security and Maritime Services (DGRM) may authorise the entry of new capacities into the mainland fleet and increase registered fleet capacity. In the case of outermost region fleets, this competence is the responsibility of regional entities. Fleet capacity is inspected on a case-by-case basis for all situations requiring new entries or increases in capacity and is carried out on a quarterly basis by means of periodic updates of the EU file (Fleet Register).

#### Control and inspection of fishing activity

Fishing activity as set out in Council Regulation (EC) No 1224/2009 of 20 November 2009, implemented through Commission Implementing Regulation (EU) No 404/2011 of 8 April 2011 in its current wording, is controlled by verifying compliance with the technical measures adopted and in accordance with monitoring routines and equipment and the cross referencing of information from different sources. Of note in this regard is the information from electronic fishing logs and the continuous satellite monitoring system (VMS), which provides information in real time on the location, route and speed of vessels fitted with this equipment, (vessels with overall length greater than 12 metres) allowing the detailed accompaniment of activity. Data transmitted are compared to the data on catches/landings, making more thorough control possible while also obtaining information that is used for compliance with Community obligations in matters relating to fishing activity, more specifically control of fishing effort, monitoring the use of quotas and closure of fishing grounds, if applicable. In 2018, the testing stage was started on vessels for the new DPE system, as well as for the respective underlying technology.

The control and inspection of fishing and related activities under the Common Fisheries Policy as well as the combat of IUU fishing are carried out by the competent authorities of the autonomous regions and the DGRM which has competence for coordinating the activity of the different entities with control and inspection responsibilities. In addition to the DGRM, also contributing to control, inspection and surveillance actions are the Regional Inspectorate of Fisheries for the Azores, the Regional Directorate of Fisheries for Madeira, the National Republican Guard, the Air Force and the Directorate-General of the Maritime Authority, which form part of the Information, Monitoring, Inspection and Control of Fishing Activities System (SIFICAP).

The main aims of inspection activities in 2018 were to target species subject to TACs and recovery plans. Priority was given to inspections of vessels operating in RFMO, NAFO and NEAFC. 2 009 vessels were inspected, corresponding to 5 397 inspections. In this universe, 296 vessels were identified as breaching regulations, corresponding to 16% and 445 presumed infringements. It is also important to note that inspections of vessels under the abovementioned aims, more specifically, for vessels catching and landing pelagics stood at 79%, and 69% for vessels with a mackerel quota. 70% of vessels with NAFO authorisation making landings in Portugal were inspected while for vessels with NEAFC authorisation, inspection stood at 65%.

In Madeira, there is a Regional Control Centre operating in identical terms to the National Fisheries Surveillance and Control Centre. The system allows the daily monitoring of fishing vessels. This information cross-referenced with data from landings and from fishing logs. In the event of any breaches, alerts are triggered leading to the issue of notifications.

Another system, the Information, Inspection and Control of Fishing Activity System (SIFICAP), allows the different entities operating in this system to liaise. It also provides access to data on the fleet, licensing, records and other information relevant to the control process. Using this information, a risk analysis is carried out allowing priorities to be established with regard to control and inspection. These priorities are then distributed among the entities responsible for monitoring fishing activities. The Navy, National Republican Guard (GNR), the Air Force and the National Fisheries Authority, DGRM.

Inspections in the Madeira area are coordinated on a monthly basis with other entities at a Programming and Planning Committee, under the control of the DGRM.

## **7. INFORMATION ON CHANGES TO FLEET MANAGEMENT ADMINISTRATIVE PROCEDURES**

With regard to fleet management, further to the entry into force of Commission Implementing Regulation (EU) 2017/218 of 6 February 2017, new functionalities were developed and implemented in the Integrated Fisheries Information System (SI2P), more specifically with respect to the recording of data in the national fishing fleet file and the transmission of data to the EU file via the FLUX platform. These changes allow daily control of national fishing fleet capacity with respect to entries/exits set out in the Common Fisheries Policy (CFP).

In 2018, as a result of management measures on fishing activity and technical measures, also implemented were the changes to administrative procedures impacting on fleet management:

- The definition of management measures for sardines through Official Order No 532-A/2018 of 29 December 2017, setting out a ban on the catching using any type of gear, keeping onboard and landing of sardines (*Sardina pilchardus*), up to 30 April 2018, in ICES zone 9, followed by Official Orders Nos 4334-A/2018 of 30 April 2018, 7279-A/2018 of 31 July and 9193-B/2018 of 28 September 2018, banning the catching, keeping onboard and landing of sardines (*Sardina pilchardus*), up to 15 May 2019.
- The allocation of fishing quotas, per vessel, to the vessels covered by the Hake and Nephrops Recovery Plan, via Official Order No 47/DG/2018 issued by the Director-General of the DGRM, in accordance with Ministerial Implementing Order No 187/2009 of 20 February 2009, republished by Ministerial Implementing Order No 186/2013 of 21 May 2013;
- The definition of the management model for mackerel (*Scomber scombrus*) breaking down the available quota among the different fleets which traditionally catch this species, (vessels authorised to operate with trawl gear with mesh size of 65-69 mm and/or 70 mm in ICES zone 8c under the Luso-Spanish agreement), through Official Order No 17/DG/2018 issued by the Director-General of DGRM;
- The allocation of individual swordfish quotas by Ministerial Implementing Order No 271-A/2018 of 1 October 2018, and Official Order No 57/DG/2018 of 2 October 2018, based on the definition of the management model, which includes a quota breakdown for the fishing of swordfish with surface longline in the Atlantic Ocean and Mediterranean Sea;
- The banning of fishing with dredging gear, for biological reasons, in the period from 1 to 31 May 2018, in accordance with Official Order No 28/DG/2018 of 2 May 2018;
- The banning of fishing with beam trawl gear in the month of June (mesh class 32-54mm) and from April to September (mesh class 20-31 mm). Limit on propulsion power (maximum of 56 kW) for vessels employing beam trawl;
- Periodic/zone/mesh class bans on vessels with bottom otter trawl;
- Ban and/or limit on the use of gillnets and trammel nets and hooks (periods/zones), particularly for diadromous species with the intervention of local and national interest groups;
- Limits on the capture and landing of anchovies (*Engraulis encrasicolus*), through Ministerial Implementing Order No 16/2018 of 12 January 2018.

## 8. BALANCE INDICATORS

The application of the indicators for analysis of the balance in the Portuguese fleet between fishing capacity and fishing possibilities was carried out in accordance with the European Commission guidelines of 2 September 2014 (COM-545 final). Data is presented separately for the mainland, Madeira and Azores fleets and for the fleet which operates exclusively outside European Union waters.

### 8.1 Inactive Fleet Indicator

In 2018, 4 147 vessels had no fishing activity. Although this is a significant number of inactive units, in terms of fleet capacity, it only represents around 22% of gross tonnage (GT) and 23% of engine power (kW) of the total registered fleet. Most of the inactive fleet (around 94%) has overall length of up to 10 metres. Annex V shows the number and capacities (GT and kW) of inactive vessels by length class and region.

### 8.2 Vessel usage Indicator - Fleet segment utilisation ratio Average Days at Sea / Maximum Days at Sea

In order to assess the activity levels of the national fleet, the number of days at sea, per vessel, in each fleet segment was used. Data to calculate the indicator were obtained from both traditional and electronic fishing logs (DP e DPE) and landings made at auction, applying the ratio between the average number of days at sea per vessel and the maximum number of days at sea observed. The assessment of Portuguese fleet activity was calculated per region (MFL, ARA and ARM). Also shown separately is data on the fleet which operates exclusively outside European Union waters.

#### MFL

Annex VI presents figures for the last five years for MFL and for vessels which operate exclusively outside European Union waters. Trawl (DTS and TBB) and dredge (DRB) segments include vessels which use only one type of gear. The seine segment includes mostly vessels which operate exclusively with purse seine (PS). However, this segment also includes smaller vessels which, despite using mainly seine gear, are also licensed for other gear. The remaining segments include vessels which use two or more types of gear.

In 2018, in all segments of the MFL, the ratios show percentages of use which vary between 0.26 and 1.00. Analysis of the 2014 to 2018 period shows lower ratios of use for vessels in the segments of Dredges (DRB); Traps (FPO); Beach Seines (MGO); Purse Seine (PS) and Beam Trawls (TBB). Most of these segments use gear with periodic restrictions on activity. In an analysis of segments which have shown continued unsatisfactory ratios, of note is the purse seine segment which is subject to activity restrictions under management plans and measures implemented to assist in the recovery of sardines, and the segments which include vessels up to 10m in length. This is essentially due to situations relating to adverse weather conditions which stop smaller vessels from operating on a regular basis in the winter. The use of a traffic light system for 2018 shows that 63% of segments/length classes in the mainland fleet have ratios with unsatisfactory values (red), 34% are mid-level (yellow) and 3% have satisfactory ratios.

With regard to the fleet operating exclusively outside European Union waters, no great variations can be seen in relation to previous years. However, as this is a fleet which has continuous activity throughout the year, it is considered that the ratios obtained suggest that the indicator used is not the most suitable to gauge vessel activity.

As has been mentioned in the reports on previous years, it is considered that the indicator, as it is defined, is not the most suitable for measuring the real activity of vessels. It does not allow reliable conclusions to be drawn on possible fleet over-capacity. The variability between the maximum number observed and the average number of days at sea is mostly due to the specificities inherent to the vessels classified in these segments. It has little to do with structural under-activity. Although this finding applies to most fleet segments, in the case of small vessels, this unsuitability becomes more evident, as these are segments where there is great diversity in the fishing they undertake. Of note among the factors which contribute to these differences is the high variability of weather and sea conditions in the different mainland zones/regions, part-time work by a high number of vessels - seasonal activity - and compliance with specific seasonal closures for certain zones or types of gear.

### ARA Fleet

With regard to fleet activity in the Azores, it can be seen that, between 2014 and 2018, usage ratios are relatively low and without any discernible trend. The relative diversity of the different segments in the Azores fleet is closely related to the technical characteristics of the vessels and their pattern of use. Factors contributing to this diversity include weather conditions which significantly affect vessels' ability to operate, especially smaller vessels. Weather conditions also vary considerably from island to island (e.g.: Western group vs. Eastern group; North coast vs. South coast). It is also necessary to take into account the fact that a small but significant proportion of vessel owners have more than one professional activity or only work on a seasonal basis on board other vessels (e.g., during the tuna catch).

Given the characteristics of the Azores fleet, the application of the proposed usage indicator does not allow conclusions to be drawn on any possible technical capacity imbalances.

Table 10. Usage indicators of the vessel in the Azores fleet in the 2014-2018 period

			2014			2015			2016			2017			2018		
			Med	Max	Ind	Med	Max	Ind	Med	Max	Ind	Med	Max	Ind	Med	Max	Ind
Azores AREA 27	DFN	VL0010	68	99	0,68	76	140	0,54	87	157	0,55	74	142	0,52	80	153	0,52
		VL0010	77	176	0,44	66	191	0,35	63	195	0,32	59	250	0,23	69	203	0,34
	HOK	VL1012	135	230	0,59	120	204	0,59	90	194	0,46	90	244	0,37	110	134	0,82
		VL1218	146	326	0,45	114	192	0,59	82	185	0,44	63	198	0,32	71	186	0,38
		VL2440	110	130	0,84	129	181	0,71	83	176	0,47	12	49	0,25	89	165	0,54
	PGP	VL0010	48	78	0,62	78	138	0,57	89	134	0,66	83	162	0,51	91	153	0,59
	PS	VL0010	90	122	0,74	88	143	0,62	83	155	0,54	74	134	0,55	71	123	0,58
		VL1012	170	177	0,96	187	213	0,88	126	168	0,75	118	185	0,64	136	194	0,70
Key																	
Acores AREA 27									Azores AREA 27								

### ARM Fleet

With respect to the activity of the fleet registered in Madeira, it can be seen that during the period considered, ratios showed some changes with regard to figures for 2017.

In the VL0010 HOK segment, an improvement can be seen in line with that of previous years, achieving balance in the current year. In the VL0010 MGP segment, a fall in the indicator can be seen without, however, placing the segment in a situation of imbalance. The remaining segments have no significant changes.

Table 11

		OVERALL LENGTH CLASS	2014			2015			2016			2017			2018		
			Med	Max	Ind	Med	Max	Ind	Med	Max	Ind	Med	Max	Ind	Med	Max	Ind
Madeira OFR	HOK	VL0010	62	157	0,39	153	210	0,73	186	235	0,79	187	212	0,88	170	188	0,91
		VL1218	219	263	0,83	276	323	0,85	263	312	0,84	262	296	0,89	244	276	0,88
		VL1824	186	273	0,68	177	274	0,65									
		VL2440	154	200	0,77	130	158	0,82	120	149	0,81	184	259	0,71	180	208	0,86
	MGP	VL0010	65	93	0,70	107	178	0,60	94	138	0,68	97	108	0,90	80	105	0,76
		VL1824	167	177	0,94	193	214	0,90	200	219	0,91	184	189	0,97	180	193	0,93

### 8.3 Biological Sustainability Indicators

#### MFL

The fleet was grouped into segments as identified in previous years. In 2018, 22 populations were identified subject to scientific assessment, which is 47% higher than the number calculated in the previous period. All fleet segments work with these populations to a greater or lesser extent. On average, each of the fleet segments identified now exploits 91% of the units subject to assessment, to a greater or lesser degree, despite the increase in the number of populations assessed and the diversity of those which are exploited by each segment.

As in previous years, the number of stocks exploited is high. This means that the proportion of units which are scientifically assessed is always very low, even taking into account the growth seen, largely due to the fact that there are not many which have transversal interest for EU states, and as such, human and financial resources for investigation are only allocated to those of interest.

An increase has been seen in the number of units subject to assessment and each segment of these stocks has reduced dependence, in relation to the total number of units exploited. There has also been a reduction in the number of stocks exploited above MSY.

#### Indicator for populations at risk

Stocks currently at risk are caught by relatively few segments of the fleet. All segments analysed exploit a vulnerable population unit to the maximum. However, the situation has improved considerably with respect to previous periods as a result of the general improvement in status.

#### Sustainable harvest indicator

Taking into account that the management measures since implemented have considerably reduced the dependence of the fleet on threatened stocks, and that the number of such stocks is also significantly less, and where alternative viable stocks have appeared to more threatened species, the sustainable harvest indicator does not show any significant dependence of the fleet on stocks subject to negative assessment.

#### ARA Fleet

Within the scope of the Marine Strategy Framework Directive for the Azores subdivision, particularly point No 14 of the United Nations, an environmental assessment was undertaken on commercially exploited fish and molluscs, using the fishing pressure level, reproductive capacity and population structure as indicators. The main sources for this assessment were the research programmes and the National Fish Data Collection Programme (PNRD). It confirmed that, in general, and in accordance with the analytical procedures employed, all the species had a final assessment of 'good environmental status'. In a number of cases it should be noted that the degree of confidence attributed was medium or low.

#### Demersal, deep and very deep-water species

An analysis of landings of demersal species, in the period between 2011 and 2018, shows that despite there being some inter-annual variation, the volume of landings remained relatively stable. The average annual figure was 3 317 tonnes (Table 12).

Table 12 – Landings of deep and very deep-water demersal species in the ARA, in the period from 2011 to 2018.

Year	Landings by Weight (t)
2011	3 268
2012	3 739
2013	3 528
2014	3 797
2015	3 684
2016	3 229
2017	2 939
2018	2 553
<b>Average</b>	<b>3 317</b>

Demersal catches in the ARA include around 70 species. Nine of these species represent around 75% of all landings. The most important species in the period under analysis are red seabream (*Pagellus bogaraveo*) with annual landings of 445 tonnes, conger (*Conger conger*) with 213 tonnes, rosefish (*Helicolenus dactylopterus*) with 282 tonnes, silver scabbard fish (*Lepidopus caudatus*) with 73 tonnes, wreckfish (*Polyprion americanus*) with 89 tonnes, Alfonsinos (*Beryx* sp.) with 156 tonnes, forkbeard (*Physis physis*) with 89 tonnes, parrotfish (*Sparisoma cretense*) with 276 tonnes and Red porgy (*Pagrus pagrus*) with 83 tonnes.

Within the scope of the National Data Collection Programme (PNRD), statistical and biological information is compiled on these species. This information is regularly sent to and analysed at ICES working groups which provide annual advice on management. However, given these characteristics and the complexity of the fishing of demersal in the ARA, it has not been possible to assess the exploitation status of these species, more specifically with regard to calculating biological reference points.

In accordance with guidelines for the analysis of balance between fishing capacities and possibilities under Article 22 of Regulation (EU) No 1380/2013 of the European Parliament and of the Council on the Common Fisheries Policy, and given that more than 60% of catch values consist of stocks for which F and Fmsy do not exist, it is considered that this indicator is not available for this set of species.

#### Small pelagics

An analysis of landings of small pelagic species, in the period between 2011 and 2018, shows that there is high inter-annual variation in the volume of landings and no discernible trend exists. The average annual figure was 1 093 tonnes (Table 13).

Table 13 – Small pelagic landings in the Azores from 2011 to 2018.

<b>Year</b>	<b>Landings by Weight (t)</b>
2011	1 395
2012	945
2013	1 022
2014	1 307
2015	1 282
2016	887
2017	831
2018	1 074
<b>Average</b>	<b>1 093</b>

Three species of small pelagics are caught in the ARA: horse mackerel (*Trachurus picturatus*) with annual landings of 847 tonnes, common mackerel (*Scomber japonicus*) with 202 tonnes and sardines (*Sardina pilchardus*) with 24 tonnes.

Within the scope of PNRD, statistical and biological information is compiled on these species. This information is regularly sent to and analysed at ICES working groups which provide annual advice on management. However, given the complexity of the fishing involved, it has not been possible to assess the exploitation status of these species, more specifically with regard to calculating biological reference points.

In accordance with guidelines for the analysis of balance between fishing capacities and possibilities under Article 22 of Regulation (EU) No 1380/2013 of the European Parliament and of the Council on the Common Fisheries Policy, and given that more than 60% of catch values consist of stocks for which F and Fmsy do not exist, it is considered that this indicator is not available for this set of species.

#### Tunas

These resources are exploited mainly by the pole and line tuna fleet (included in the HOK-VL2440 segment) which traditionally starts the catch in the Madeira region and during the season moves to the Azores. From 2011-2018, tuna landings were on average 6 822 tonnes (Table 14), corresponding to approximately 55% of total landings by the Azores fleet.

Table 14 – Tuna landings by the Azores fleet from 2011 to 2018 (landings in Madeira and the Azores).

Year	Landings by Weight (t)
2011	10 606
2012	7 951
2013	9 035
2014	6 303
2015	4 285
2016	2 748
2017	3 077
2018	9 330
<b>Average</b>	<b>6 666</b>

Historically, catches of these species show significant fluctuations caused by natural variations in abundance and changes to migratory routes. Therefore, the reversal seen in 2018 in the trend in recent years for a reduction in catches, is part of this cyclical phenomenon, which more recently, at the start of the 2000s, also significantly affected catches of this species in the Azores.

In the period from 2000 to 2018, skipjack and bigeye tuna represented 63% and 33% of total catches in the Azores, respectively. These stocks are managed by the ICCAT and in accordance with assessments carried out in 2015, bigeye tuna is being overfished while skipjack shows no indication of exploitation above biological safety limits (Table 15).

Table 15 – Summary of the assessment of exploitation status of stocks of bigeye carried out by the ICCAT in 2018 and skipjack in 2014.

Species	MSY	Landings (2017)	Relative biomass	Mortality per fishery
<b>Bigeye tuna</b>	76 232 t (72 664-79 700 t)	78 482t	$B_{2017}/B_{MSY}: 0.59 (0.42-0.80)$	$F_{2017}/F_{MSY}: 1.63 (1.14-2.12)$
<b>Skipjack tuna</b>	Probably greater than the previous figure (143 000 - 170 000t)	206 234t	$B_{2013}/B_{MSY}: >1$	$F_{2013}/F_{MSY}: <1$

#### **ARM Fleet**

In relation to the Madeira region fleet with activity in area CECAF 34, the following biological indicators were assessed: Sustainable Harvest Indicator (SHI) and Stock at Risk Indicator (SAR).

The guidelines set out in the Commission communication COM(2014) 545 final were used to obtain the indicators. When available,  $F_{msy}$  (or approximations such as  $F_{max}$ ) and  $F_{act}$  values as published by international scientific institutions were used in the SHI calculation. This is the case with tuna and similar species (bigeye, albacore, skipjack, bluefin and swordfish) for which reference figures for the most recent assessments for each species provided by the ICCAT were used.

For some of the remaining species (e.g. common mackerel, horse mackerel and limpets) where it has been proven that they are not influenced by significant migratory movements and which are exploited only locally, although no assessments conducted by international scientific bodies are available, there is quantitative and qualitative information on the status of stocks which is based on biological and statistical information obtained from a number of sampling programmes under the National Data Collection Programme (PNRD). This has allowed the required biological parameters to be obtained, considering each population as functional units which must be managed.

The results obtained for 2011 to 2018 are summarised in the table on Biological Indicators for Madeira (Table 16).

Table 16

		Indicadores Biológicos (RAM)																								
ARTE/DCF	CLASSE_CFF	ICS (Valor dos Desembarques)								ICS Data status	IUPR								Acompanhamento dos Desembarques							
		2011	2012	2013	2014	2015	2016	2017	2018		2011	2012	2013	2014	2015	2016	2017	2018	2011	2012	2013	2014	2015	2016	2017	2018
HOK	VL0010	0,85	0,90	0,89	0,95	1,27	1,19	1,11	1,03		0	0	0	0	1	1	1	1								
	VL1218	0,95	0,98	0,95	0,96	1,17	1,11	1,11	1,19		0	0	0	0	0	1	1	1								
	VL1824	0,94	0,97	0,95	0,96	1,17					0	0	0	0	1											
	VL2440	0,95	0,96	0,96	0,96	1,14	1,08	1,05	1,28		0	0	0	0	1	1	1	1								
MGP	VL0010	0,37	0,66	0,62	0,87	0,94	0,81	0,80	0,60		0	0	0	0	1	0	0	0								
	VL1824	0,73	0,73	0,81	0,77	2,24	4,04	3,24	3,12		0	0	0	0	2	2	2	2								

Key	
Indicadores Biológicos (RAM)	Biological indicators (ARM)
ARTE DCF	DCF GEAR
CLASSE_CFF	OVERALL LENGTH CLASS
ICS (Valor dos Desembarques)	ICS (Landing value)
Acompanhamento dos Desembarques	Monitoring of landings

With regard to hook gear (HOK), the SHI was calculated by using the Fmsy and Fact mean for bigeye (*Thunnus obesus*), albacore (*Thunnus alalunga*) and skipjack (*Katsuwonus pelamis*) and swordfish (*Xiphias gladius*). In the case of bluefin tuna (*Thunnus thynnus*), SHI was calculated with a mean of F0.1 and Fact was based on the most recent assessments provided by ICCAT.

As it was impossible to obtain these figures for other species which are highly important in terms of landings and economic value (e.g. black scabbard fish, which has no published biological reference points), in some segments where landings of assessed species are less than 40%, the indicator may not be representative. These cases are highlighted in red in the table.

With respect to MGP, which includes mainly purse seine fishing by the Madeira fleet (small pelagics) and mollusc (limpets) catches, in the absence of assessments conducted by international scientific bodies on stocks exploited by these fleet segments, the SHI is obtained using assessments conducted by the Madeira Regional Directorate of Fisheries on populations of white limpet (*Patella aspera*), black limpet (*Patella candei*), common mackerel (*Scomber colias*) and horse mackerel (*Trachurus picturatus*). Fmsy proxy values were used (Fmax- obtained through the production model per resource).

As was the case in 2015, 2016 and 2017, the ICS SHI is greater than 1 in most segments. This situation is mostly due to the high weighting, in the majority of **HOK segments**, of bigeye tuna fishing opportunities, which was considered by the most recent ICCAT assessment as being overfished in the Atlantic,  $F_{2017}/F_{MSY} = 1.63$  (mean, 1.14-2.12 for the percentiles 10 and 90%).

The MGP VL1824 segment is dominated by the region's three seiner vessels, landing mainly common mackerel and blue jack mackerel. Considering the units fished locally, the most recent assessment of these two species by the recruitment production model indicates levels above MSY for both cases ( $F_{2017}/F_{max} > 1$ ). The SAR indicator shows that this fleet segment is dependent on two biologically vulnerable stocks.

In conclusion, analysing the situation by segment:

**HOK VL0010 and VL1218** - Although indicators are negative in both segments, as in previous years, it must be remembered that one of the main species caught in these segments (black scabbard fish) was not considered in the calculation of the indicators for the reason explained above. We consider that the biological indicators in these segments may not be representative, particularly in VL1218 where only 16% of landings correspond to assessed species.

**HOK VL2440** - For the third year running, this segment, which includes the biggest tuna vessels in the regional fleet, has negative biological indicators. This is a result of the dependence on the catch of big eye tuna. However, the value of SHI



has shown a trend towards improvement in the last four years coming close to 1. In this case, we consider the indicators as representative as they were calculated on the basis species which represented 99.8% of landings.

MGP VL0010 - The biological indicators for this segment are positive. Here, there is a predominance of values corresponding to landings of limpets. In this case, we consider the indicators as representative, as they were calculated based on species which represented practically 100% of landings.

MGP VL1824 - For the second year running, this segment, which includes the three seiners in the regional fleet catching small pelagic species, has negative biological indicators as a result of its dependence on common mackerel and blue jack mackerel. In this case, we consider the indicators as representative as they were calculated on the basis species which represented 98% of landings.

#### 8.4 Economic indicators

In previous years, Portugal has sought to improve its methodology and data processing so as to achieve more reliable analyses. Therefore, in addition to the information available in the data collection questionnaires, real data on fuel use is also employed along with the respective costs on a high number of fishing fleet vessels. The model used for calculating most costs has now stabilised.

Since 2016 (2017 Report) depreciation costs have included the values allocated for the working life of the different components used in the Perpetual Inventory Method (PIM), which are more realistic for the national fishing fleet. Table 17 shows the figures used in PIM.

Table 17 – Working life considered based on vessel length class

Length Class	Hull	Engine	Electronics	Other
	No of years	No of years	No of years	No of years
VL0012	20	10	5	7
VL1218	30	18	5	7
VL18XX	30	24	5	7

For the economic assessment of the domestic fleet, two indicators were used: long and short-term economic viability. To assess the return on investment (long-term viability) ROFTA was used while for the short-term, the ratio between current revenue and break-even revenue (CR/BER) was calculated, as broken down below:

- ROFTA (Return on fixed tangible assets) = Net profit/asset value
- The ration between current revenue (CR) and break-even revenue (BER), where BER corresponds to the revenue required to cover fixed costs without loss or profit and CR corresponds to total revenue for the fleet segment.

As set out in Commission guidelines (COM (2014) 545 final of 2 September 2014) and with a view to assessing the return obtained with the same capital if it had been invested in the best alternative available, ROFTA was compared to the reference interest rate.

The indicators were constructed using data from the PNRD on vessels which were active in the years under analysis. As economic data for 2018 is not yet available, the economic indicators for the year under analysis were estimated using a projection based on data from 2015 to 2017.

#### MFL

With regard to the MFL, and as can be seen in Annexes VII, VII-a and VII-b, of the 34 fleet segments, 33 had a positive economic situation in 2017, corresponding to a positive performance of 97% in the segments under analysis. With regard to the figures estimated for 2018, a slight change can be seen in three segments with a forecast of negative values. However, if we compare the ratios from previous years with estimates for the same years, it can be seen that the results ended up by being better than the estimated figures. It is therefore expectable that positive performances will be maintained in these segments. In relation to the fleet which operates exclusively in external fishing grounds, positive ratios can be seen from 2014 to 2017. It is also expected that these ratios will be maintained in 2018.

Based on results for 2014 to 2017 (Annex VII-b), no MFL segments are in a situation of imbalance. However, the dredge segment in the 0 to 10 m overall length class showed slightly negative ratios with greater regularity. This is a situation which is being monitored so as to gauge possible future intervention.

### ARA Fleet

From an analysis of economic indicators, it can be seen that, in general, all segments of the Azores fleet have positive economic performance or positive evolution over the period under analysis. The only segment with less robust economic performance is vessels with overall length between 24 and 40 metres operating with lines and hooks. This segment is dominated by vessels working exclusively in tuna catches with pole-and-line and which recorded a reduction of landings in recent years of the period under analysis. As mentioned earlier, the fluctuations in tuna catches are cyclical phenomena which significantly affect the economic performance of the respective fleets.

Table 18 Economic indicators of the Azores fleet in the 2008-2018 period

REGION	Fishing gear	Vessel Length	2014		2015		2016		2017		2018	
			ROFTA	RATIO CR/BER	ROFTA	RATIO CR/BER	ROFTA	RATIO CR/BER	ROFTA	RATIO CR/BER	ROFTA	RATIO CR/BER
ARA	DFN	VL0010	0.44	3.14	0.38	3.30	3.06	5.84	0.33	2.36	4.26	7.04
	HOK	VL0010	0.21	1.95	0.25	2.70	1.26	3.61	0.17	1.72	0.38	2.97
		VL1012	0.22	2.00	0.28	2.83	0.19	1.86	0.13	1.58	0.25	2.39
		VL1218	0.13	1.44	0.39	3.17	0.09	1.39	0.14	1.51	1.16	5.62
		VL2440	-0.03	0.89	-0.01	0.96	-0.11	0.40	-0.05	0.81	-0.13	0.44
		VL0010	-0.01	0.97	0.03	1.17	0.67	3.39	0.18	1.72	0.29	2.20
	PS	VL0010	0.34	4.46	0.14	2.01	1.14	4.82	-0.06	1.25	0.04	1.15
		VL1012	0.37	2.66	0.16	1.81	0.35	2.45	0.14	1.60	0.11	1.39

### ARM Fleet

Indicators for analysing the balance between fishing capacity and fishing opportunities – Article 22 of Regulation (EU) No 1380/2013 on the Common Fisheries Policy (CFP), must be used jointly, with a view to presenting findings on the imbalances in each fleet segment separately.

For 2018, and taking into account the fact that economic indicators are not available, the criterion of the average of the last five years was used.

Table 19 – ROFTA

Fishing gear	Vessel Length	ROFTA					
		2013	2014	2015	2016	2017	2018
HOK	VL0010	0.40	0.11	0.19	0.19	0.28	0.23
	VL1218	0.59	0.39	0.97	1.02	0.76	0.75
	VL1824	0.15	-0.11				
	VL2440	-0.04	0.01	-0.21	0.18	0.45	0.08
MGP	VL0010	1.88	0.54	0.92	1.18	0.76	1.06
	VL1824	0.02	0.05	0.03	-0.04	0.01	0.01

Table 20 – RATIO

Fishing gear	Vessel Length	RATIO					
		2013	2014	2015	2016	2017	2018
HOK	VL0010	2.80	1.46	3.72	2.25	2.37	2.52
	VL1218	3.67	3.32	6.42	3.81	4.07	4.26
	VL1824	1.57	0.57				
	VL2440	0.83	1.08	-0.08	1.22	3.10	1.23
MGP	VL0010	6.10	3.76	4.40	2.50	3.71	4.09
	VL1824	1.11	1.38	0.04	1.12	1.05	0.94

Tuna fishing vessels over 24 metres in length and vessels landing small pelagic species with encircling gear, corresponding to HOK VL2440 and MGP VL1824, respectively, which have been the only segments with negative results in recent years, are now recovering satisfactorily, particularly the 24-metre segment which has been stable in the last three years. Seiners have recorded numbers which are very close to the acceptable limit.

Fleet segment HOK VL2440 fishes exclusively for tuna using pole and line. It is known that catches of tuna fluctuate each year, partly because they are highly migratory, which explains the warning triggered by the ratios, which reflect the vessels' performance in the face of the constraints experienced.

The operating costs inherent to this type of activity are high and the cost of capital invested is also considerable, meaning that this activity has not been profitable in some years. Sales in this segment have evolved favourably in the last three years, and there is a certain stability in catches.

Segment MGP VL1824, which consists of three seiners, has been hit by a sharp drop in the average price of Atlantic chub mackerel and blue jack mackerel over the last few years, resulting in low or negative returns and insufficient revenues to cover operating and capital costs.

However, it should be noted that in overall terms, 2017 saw a radical drop in catches (-52%), offset by the substantial average price increase for these species. Final economic data for 2018 will provide better results, as a new increase in average price has been seen (+40%), despite the fall of 7.4% in landings over the previous year.

It should be emphasised that it was not possible to comply with that set out in the Action Plan for fleet segment VL1824 (MGP – Seine), more specifically with respect to the approval and publication of the regulations on activity as referred to in the Annual Fleet Report 2017 and respective follow up, due to the fact that the associated legislative process is slow and subject to public consultation. It is expected to be concluded before the end of 2019, with entry into force on 1 January 2020.

The remaining segments maintain solid positive numbers.