

ANNUAL REPORT PORTUGUESE FISHING FLEET – 2017

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 for all segments. In segments which display some vulnerability, measures have been taken to adjust fleet capacity based on an Action Plan set out in this report with a view to improving the fleet/available resources ratio. Continuous monitoring of the situation has allowed a number of shortcomings identified in 2017 to be overcome. Suitable measures were implemented for the purpose based on scientific assessments more specifically with respect to sardine resources.

❖ *Fleet capacity*

At 31 December 2017 the Portuguese fishing fleet consisted of 7 922 vessels with a total gross tonnage of 87 752 GT and total engine power of 345 665 kW.

❖ *Characterisation of the most important segments*

In terms of fresh and chilled landed fishing, the purse seine and trawling segments represented approximately 59% of total volume of catches. Common mackerel, sardines and horse mackerel are the main species caught by purse seine fishing, representing 83.48% of all catches in this segment. Common mackerel is of note with around 43.55% (23 202 tonnes) of total purse seine catches. In the trawling segment, the three main species of fresh and chilled catches represent 73.29% of total volume of landed fish. Of note was horse mackerel, standing at around 59.73% (11 949 tonnes).

❖ *Entries to and exits from the fleet during 2017*

In 2017, 49 vessels joined the domestic fishing fleet (totalling 197 GT and 2 137 kW) while 86 exited the fleet (totalling 3 506 GT and 7 128 kW). Fleet entry registrations occurred mainly in the polyvalent fishing segment (PGP).

With regard to exits, it should be noted that the overwhelming majority of vessels leaving the fishing fleet were inactive vessels, followed by polyvalent fishing vessels (PGP), which mostly offset the entry of new vessels.

❖ *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 have been seen with respect to abundance and availability of species which are important for fishing in Portugal and for other species where importance has grown. An important example of the latter is anchovies, the abundance of which has increased, reaching historic maximums, particularly on the western Portuguese coast to the detriment of the southern Spanish coast. The availability of this species for the Portuguese sector has thus improved, which instead of providing quota to the Spanish sector, has needed to request quota in order to overcome limitations imposed by the principle of relative stability.

Included in this group of species where abundance has been recovering are ray, Norway lobster and megrim. Also of note is the stability of other species which have reached levels of sustainable exploitation, such is the case with horse mackerel and anglerfish. Pollock, sole and plaice show a stable trajectory, without any significant changes in recent years.

The case of sardines for 2017 is uncertain in light of ICES findings that the species is in a period of decline in abundance due to apparently natural causes. To monitor fishing, relevant management measures have been implemented mostly based on commitments between the sector and administrative authorities, also involving scientific and national entities.

With respect to the national fleet operating in external fishing grounds in 2017, and with regard to activity under Fishing Agreements, of note is activity under the EU/Cape Verde Fishing Agreement where two licences were issued.

With regard to Regional Fisheries Management Organisations (RFMO), activity by national vessels in 2017 was mainly within the scope of the International Commission for the Conservation of Atlantic Tunas (ICCAT), the North East Atlantic Fishery Commission (NEAFC) and the Northwest Atlantic Fisheries Organisation (NAFO). The national fleet also registered activity under other RFMOs, although at lower levels, more specifically with respect to the Indian Ocean Tuna Commission (IOTC), the General Fisheries Commission of the Mediterranean (GFCM) and the Inter-American Tropical Tuna Commission (IATTC).

❖ **Effort reduction and adjustment of capacity**

In 2017, the following fishing effort recovery/adjustment plans or capacity control regimes were in force:

Hake and Norway Lobster 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 bluefin tuna population to recover, at its annual meeting of 2006, ICCAT provisionally implemented a 15-year plan. It was necessary to transpose the provisions of Recommendation 06-05 into European Union law, which took place through Regulation (EC) No 1559/2007 of 17 December 2007. At the 16th extraordinary session of ICCAT held in 2008, recommendation 08-05 was adopted introducing changes to recommendation 06-05, once again requiring the respective provisions to be transposed to European Union law. This transposition took place through Council Regulation (EC) No 302/2009 of 6 April which sets out a multiannual recovery plan for bluefin tuna in the eastern Atlantic and Mediterranean, amending Council Regulation (EC) No 43/2009 of 16 January and repealing Regulation (EC) No 1559/2007. As a result of subsequent changes, it was necessary to align the ICCAT legal framework with the legal acquis of the European Union. This alignment was carried out through Regulation (EU) No 2016/1627 of the European Union and the Council of 14 September 2016, and which resulted in the repeal of the abovementioned Regulation (EC) No 302/2009.

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 2017.

Sardine Fishing Management Plan 2012-2015 which was extended to 2016/2017 and which sets out catchable amounts as well as measures for activity management and control of vessels which catch sardines using purse seine fishing methods. In 2017, a new Iberian sardine recovery and management plan was drawn up for the 2018-2023 period so as to reinforce fishing recovery capacity.

❖ **Compliance with the entry/exit regime**

The adjustment in fishing capacity set out in Regulation (EC) No 2371/2002 of 20 December was repealed by Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy (CFP). As a result, the rules laid down in Commission Implementing Regulation (EU) No 1013/2010 of 10 November 2010 were repealed via the application of Commission Implementing Regulation (EU) No 2017/1756 of 26 September 2017, with effects as of 1 January 2014. In 2017, Portugal complied with the maximum fishing capacity limits laid down in Annex II to the CFP, both with regard to the mainland fleet (MFL) and the fleets registered in the Outermost Regions. With regard to the capacity entry and exit regime, the provisions of Articles 22(5) and (6) and 23(1) of the CFP were also complied with.

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

In 2017, 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 2017, the policy for sustainable exploitation of resources was continued, seeking to reconcile 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 on-board safety and living conditions for crews.

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, has allowed the purse seine segment to maintain good economic performance in 2017. 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 for Portugal and Spain to be implemented from 2018 to 2023 with the commitment to recover biomass.

With regard to the fleets of outermost regions, two segments of the Madeira fleet have slight negative economic performance as well as negative biological indicators. In light of this situation, a structural imbalance is considered to exist in HOK vessels, from 24m to 40m, which operate exclusively in tuna fishing with pole-and-line and in the MGP segment which includes vessels from 18m to 24m.

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

Description of the fleet

At 31 December 2017, the Portuguese fishing fleet consisted of 7 922 vessels with total gross tonnage of 87 752 GT and total engine power of 345 665 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 92.2% of registered vessels have overall lengths of less than 12 metres and low gross tonnage, which together represent only 13.84% of total national tonnage. The average age of the registered fleet is approximately 33 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 2017 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 2017 they still represented 63% of the total ARA fleet (Figure 1).

Most vessels in the regional 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 seines / lift nets to catch small pelagic species.

Figure 1 – Breakdown of ARA fleet into length classes.

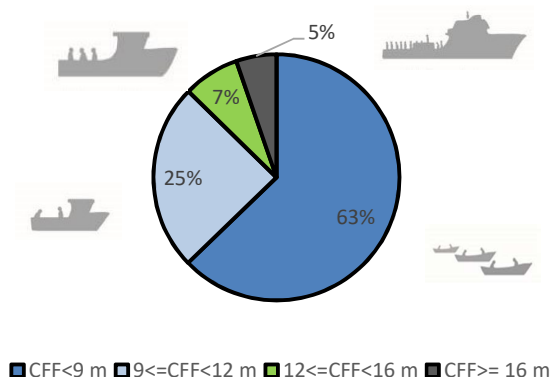
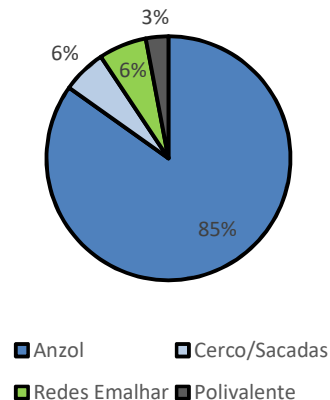


Figure 2 – Breakdown of ARA fleet into segments.



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

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 2017 to the situation on 1 January 2014, a reduction of 3.37% can be seen in terms of vessel numbers, 11.81% in terms of gross tonnage and 5.32% 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 (2013-2017), per region, length class and fleet segment. It can be seen that there was a reduction of 5.86 % in terms of licensed vessels, corresponding to a decrease of 9.57 % in gross tonnage and 4.82 % in propulsion capacity.

Table 1

REGION	FLEET AT 1/1/2014			FLEET AT 31/12/2017			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	6 995	85 428	294 689	6 733	73 684	274 991	-262	-11744	-19698	-3.75	-13.75	-6.68
ARA	765	10 136	54 183	758	10 084	54 116	-7	-52	-67	-0.92	-0.51	-0.12
ARM	438	3 938	16 220	431	3 983	16 558	-7	46	338	-1.60	1.17	2.08
TOTAL PORTUGAL	8 198	99 501	365 092	7 922	87 752	345 665	-276	-11750	-19427	-3.37	-11.81	-5.32

Evolution in 2017 - Entries and Exits

In 2017, 49 vessels entered the national fleet, representing a capacity of 197 GT and 2 137 kW. This is a fall of around 8% in units entering when compared to 2016. Table 2 shows the number of vessels registered by fleet segment and Table 3 the respective origin. It can be seen that 67.3% came from new construction (CST) and 32.6% refers to vessels from different activities (CHA). These values demonstrate the effort to renew the fishing fleet with new units.

ENTRIES PER FLEET SEGMENT

Table 2

SEGMENT/REGION	DFN	FPO	HOK	PGP	PMP	PS	TBB	AND TOTAL
MFL	12	4	5	17	7	1	1	47
ARA	0	0	1	0	0	0	0	1
ARM	0	0	1	0	0	0	0	1
GRAND TOTAL	12	4	7	17	7	1	1	49

ENTRIES BY TYPE OF EVENT

Table 3

REGION	TYPE OF ENTRY		GRAND TOTAL
	CHA	CST	
MFL	15	32	47
ARA	0	1	1
ARM	1	0	1
GRAND TOTAL	16	33	49

During 2017, 86 vessels left the national fleet with total gross tonnage of 3 506 GT and propulsion capacity of 7 128 kW. Table 4 shows the number of vessels immobilised by fleet segment. It should be noted that 74.4% of those vessels did not work in 2017. Table 5 shows the number of departures from the fleet by type of event. It can be seen that 69.7% were destroyed (DES) and 24.41% registered for an activity other than fishing (RET).

EXITS PER FLEET SEGMENT

Table 4

SEGMENT/REGION	DFN	DRB	DTS	FPO	HOK	PGP	PMP	INACTIVE	GRAND TOTAL
MFL	4	2	1	2	4	8	1	61	83
ARM	0	0	0	0	0	0	0	3	3
GRAND TOTAL	4	2	1	2	4	8	1	64	86

EXITS BY TYPE OF EVENT

Table 5

REGION	TYPE OF EXIT			GRAND TOTAL
	DES	EXP	RET	
MFL	58	5	20	83
ARM	2	0	1	3
GRAND TOTAL	60	5	21	86

Table 6 shows fleet movement by region during 2017 for entries, exits and changes in capacity (GT and kW). A trend towards overall reduction can be seen.

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 1.1.2017	7 959	91 053	350 446	6 768	76 810	279 245	758	10 238	54 557	433	4 005	16 645
ENTRIES IN 2017	49	197	2 137	47	187	2 051	1	8	72	1	1	15
CHANGES IN 2017	0	7	653		3	214		5	439		0	0
EXITS IN 2017	86	3 506	7 128	82	3 316	6 519	1	167	459	3	23	150
CAPACITY OF FLEET AT 31.12.2017	7 922	87 751	345 665	6 733	73 684	274 991	758	10 084	54 116	431	3 983	16 558
DIFFERENCE IN ABSOLUTE VALUES	-37	-3 302	-4 781	-35	-3 126	-4 254	0	-154	-441	-2	-22	-87
PERCENTAGE DIFFERENCE	-0.46	-3.63	-1.36	-0.52	-4.07	-1.52	0.00	-1.51	-0.81	-0.46	-0.54	-0.52

4. FISHING EFFORT
Regimes for the Reduction of Fishing Effort and Reduction of Fishing Capacity

(Statement of effort reduction schemes and capacity reduction)

In 2017, the plans set out in Table 7 were in effect.

Recovery/Adjustment Plans to Fishing Effort/Capacity Reduction

Table 7

In effect in 2017	Intended for	Objectives
Hake and Norway Lobster Recovery Plan/Adjustment Plan	Vessels with a special fishing licence included in the Southern and Norway Lobster 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 Norway lobster.

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 _{MSY}) 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. During the 2017 annual meeting, and under an MSE conducted on this population unit by the NAFO Scientific Council, a new exploitation rule has been adopted for this stock.
Sardine Fishing Management Plan 2012-2015	Vessels licensed for purse seine	Limiting of catches for the recovery of spawning biomass to levels above Blim.

Impact of fishing capacity reduction schemes

Sardine Fishing Management Plan

Due to successive poor recruitments, resource biomass continues at levels below those considered sustainable, compromising MSC certification, which was cancelled.

During 2017, benchmarking took place in Portugal to assess the Iberian Sardine Management Plan, and the International Council for the Exploration of the Sea (ICES) concluded that this plan was not sustainable. A ban on sardine fishing was therefore initially determined. However, it was then decided to draw up a new Management Plan with more efficient measures with the aim of allowing spawning biomass to recover by a minimum of 10% annually.

Adjustment plan for vessels for the Hake and Norway Lobster Recovery Plan

The same vessels that had been included in 2016 were also initially included in the Southern Hake and Norway Lobster Recovery Plan in 2017, although with restrictions on activity (with some adjustments). There were 118 vessels in total which had hake landings greater than 5 tonnes or Norway lobster landings of more than 2.5 tonnes. This approach was based on the reference period (2013-2014), in anticipation of the Recovery Plan being replaced by a Multiannual Management Plan. According to European legislation, vessels with catches that reached five tonnes during the management period entered the group of vessels with restricted activity, with a number of fishing days proportional to the time when they entered the Plan. In 2017, only a small number of vessels entered. Activity authorised under Council Regulation (EU) No 2017/127 of 20 January 2017 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 individual quotas of hake, for a total of 82%, while 14.6 % was reserved for the vessels not included in the Plan and not subject to activity restrictions and the remaining quantity of hake available (119.2 tonnes) was reserved for the landing obligation. These measures were effective in terms of restriction of catches, as the adjusted national quota was not used up.

Within the scope of the Fishing Effort Adjustment Plan for White Hake and Norway Lobster, a temporary fleet immobilisation measure was also adopted in 2017 to ban lobster fishing (*Nephrops norvegicus*), in the period from 00:00 on 15 September 2017 to 24:00 on 14 October 2017 (Ministerial Implementing Order No 272-B/2017 of 13 September 2017).

For vessels included in the Southern Hake and Norway Lobster Recovery Plan, a measure for permanent cessation of fishing activities was also implemented for vessels catching hake (Ministerial Implementing Order No 381-A/2017 of 19 December 2017). Cancellation of fleet registration was also approved for six vessels, the total capacity of which was 456.87 GT and 1963.73 kW.

Overall fishing effort in 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 2017, it can be seen that there has been an overall reduction in fishing effort (kW/day) of around 32.5%.

YEAR	2010	2011	2012	2013	2014	2015	2016	2017
kW/DAY	10 085 558	11 252 378	11 300 390	6 353 343	6 426 705	6 695 818	6 813 350	6 806 010

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 to Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013. In 2017, 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 2017, in accordance with 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		Demersal and pelagic species – overall length > 12 m		Pelagic species - Seine nets - Overall length > 12 m		Demersal species – Overall length < 12 m		Demersal and pelagic species – Overall length > 12 m			
	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	85 428	294 689	469	3 862	3 333	11 581	136	777	2 267	29 549	7 869	24 634	99 501	365 092
CAPACITY WITHDRAWN WITH PUBLIC AID (GT AND KW)	1 785	3 694	0	0	0	0	0	0	0	0	0	0	1 785	3 694
FISHING CAPACITY CEILING AS AT 31.12.2017	92 269	309 774	604	3 969	4 114	12 734	181	777	2 617	29 870	12 979	25 721	112 764	382 845
FISHING CAPACITY AS AT 31.12.2017	73 684	274 991	465	3 755	3 383	12 025	136	777	2 293	29 555	7 791	24 561	87 752	345 665

6. MANAGEMENT OF FISHING FLEETS

Strengths and weaknesses in the fleet management scheme

Strengths:

- 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

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 fishing gear is severely limited to avoid increases in fishing effort in different species, favouring the continuation of the existing balance.

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 sardine.

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. Furthermore, in 2017, the review of the Electronic Fishing Log (DPE) system was started, together with improvement of the respective technological support tools.

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 2017 were to target species subject to TACs and recovery plans. Priority was given to inspections of vessels which had auction sales and which operated in RFMO, NAFO and NEAFC. 2 106 vessels were inspected, corresponding to 5 958 monitoring actions. Alleged offenders included 311 vessels and 388 alleged breaches, corresponding to approximately 14.8% of vessels and 6.5% of all monitoring actions, respectively. It is also important to note that inspections in 2017 of vessels falling within the abovementioned aims were undertaken on: 55% of vessels making sales at auctions; 96% of vessels with high levels of catches and landings of pelagic species; 87% of vessels covered by the Hake and Norway Lobster Recovery Plan. The most common alleged breaches relate to: prohibited or non-compliant gear, absence or incorrect records (DPElectronic and DPapel messages) and/or VMS; fishing in prohibited areas or during prohibited periods; prohibited catch or smaller than legal minimum; non-compliance with scheme for 1st sale at auction; incorrect identification and/or signage of gear; under-declaration or exceeding of catch or quota limits, operating without licence/authorisation.

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, the Integrated Fisheries Information System (SI2P) continues to facilitate licensing procedures for vessels in the Portuguese fishing fleet. This system is accessible electronically both from the mainland as well as from the Azores and Madeira.

With a view to compliance with the aims of the Common Fisheries Policy (CFP), established by Regulation (EU) No 1380/2013 of 11 December of the European Parliament and of the Council, with regard to the gradual requirement to land all species which are subject to catch limits (CATs) in the Atlantic, and through the Integrated Fisheries Information System (SI2P), the necessary administrative procedures have been developed.

The following changes to administrative procedures should also be noted which came about through the establishing of fishery management measures and technical measures:

- The definition of management measures for sardine, through the banning of sardine catches in certain periods of the year and the setting of limits on sardine landing when caught with purse seine, and the setting of maximum sardine catch quantities per day and per vessel (Official Order No 1847-A/2017 of 3 March 2017 and Official Order No 6649/DG_A/2017 of 1 August 2017);
- The setting of a fishing ban period for vessels licensed to operate with purse seine in Zone IX as defined by the International Council for the Exploration of the Sea (ICES) - Ministerial Implementing Order No 363/2017 of 28 November 2017;
- The allocation of fishing quotas, per vessel, to the vessels covered by the Hake and Norway Lobster Recovery Plan, Official Order No 21/2017 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 setting of a fishing ban for Norway lobster (*Nephrops norvegicus*) from mid October 2017, in Zones IX and X as defined by the International Council for the Exploration of the Sea (ICES) and division 34.1.1 as defined by the Fishery Committee for the Eastern Central Atlantic (CECAF), in accordance with Ministerial Implementing Order No 272-B/2017 of 13 September 2017.
- The definition of the management model for mackerel (*Scomber scombrus*) breaking down the available quota among the different fleets which traditionally catch this species, through Official Order No 12/2017 issued by the Director-General of DGRM;

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 2017, 4 227 vessels had no fishing activity. These vessels correspond to around 53% of the total registered fleet, but which in terms of capacity account for approximately 23% of gross tonnage (GT) and propulsion power (kW). In Annex V, broken down by length class and region, the proportion of inactive vessels is shown in number and capacity (GT and kW) for the total of vessels registered in each region. In 2015, the withdrawal of these vessels from the fishing fleet was started, however, as

this is a process requiring specific administrative procedures, it is expected that the removal of vessels covered by this type of inactivity will take place up to the end of 2018.

8.2 Vessel use 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 six years for the 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 2017, in all segments of the MFL, the ratios show percentages of use which vary between 0.24 and 0.97. Analysis of the 2012 to 2017 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 2017 shows that 65.7% of segments/length classes in the mainland fleet have ratios with unsatisfactory values (red), 28.6% are mid-level (yellow) and 5.7% 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.

In light of the figures obtained for the national fleet in general, it can be seen 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. With regard to the influence of weather conditions on activity, vessels which operate in the north of the country have to endure much harsher weather than vessels operating in other areas of the country, especially the south, which are normally able to operate without great restrictions.

Although this indicator does not allow conclusions to be drawn on fleet over-capacity, it is information which when complemented by other relevant information, can help introduce the necessary measures.

ARA Fleet

With regard to fleet activity in the Azores, it can be seen that, between 2008 and 2017, 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

		2008			2009			2010			2011			2012			2013			2014			2015			2016			2017			
		Med	Max	Ind	Med	Max	Ind	Med	Max	Ind	Med	Max	Ind	Med	Max	Ind	Med	Max	Ind	Med	Max	Ind	Med	Max	Ind	Med	Max	Ind				
Acores AREA 27	DFN	VL0010	69	146	0,47	71	136	0,52	60	127	0,47	69	130	0,53	76	130	0,59	70	116	0,60	68	99	0,68	76	140	0,54	87	157	0,55	74	142	0,52
	HOK	VL0010	78	247	0,32	71	225	0,32	63	229	0,28	70	237	0,30	68	213	0,32	72	219	0,33	77	176	0,44	66	191	0,35	63	195	0,32	59	250	0,23
		VL1012	166	323	0,51	141	267	0,53	122	243	0,50	106	223	0,48	95	204	0,47	116	244	0,48	135	230	0,59	120	204	0,59	90	194	0,46	90	244	0,37
		VL1218	276	470	0,59	232	388	0,60	153	292	0,52	156	325	0,48	131	288	0,46	125	247	0,50	146	326	0,45	114	192	0,59	82	185	0,44	63	198	0,32
		VL2440	122	301	0,41	119	171	0,70	146	215	0,68	155	212	0,73	138	203	0,68	131	183	0,71	110	130	0,84	129	181	0,71	83	176	0,47	12	49	0,25
	PGP	VL0010	95	168	0,57	76	163	0,46	84	152	0,55	81	151	0,54	65	132	0,49	61	154	0,39	48	78	0,62	78	138	0,57	89	134	0,66	83	162	0,51
	pS	VL0010	83	139	0,59	88	144	0,61	79	131	0,60	74	137	0,54	53	130	0,41	69	96	0,72	90	122	0,74	88	143	0,62	83	155	0,54	74	134	0,55
		VL1012	198	245	0,81	168	221	0,76	192	240	0,80	174	232	0,75	151	213	0,71	133	195	0,68	170	177	0,96	187	213	0,88	126	168	0,75	118	185	0,64

Key

Acores AREA 27

Azores AREA 27

ARM Fleet

With respect to the fleet registered in the Autonomous Region of Madeira, it can be seen that during the period considered, ratios improved over figures for 2016.

Vessels in the VL24-40 segment fell slightly due to variations in the seasonal nature of tuna fishing.

Table 11

	ARTEDCF	CLASSE_CFF	2013			2014			2015			2016			2017		
			Med	Max	Ind	Med	Max	Ind	Med	Max	Ind	Med	Max	Ind	Med	Max	Ind
Madeira OFR	HOK	VL0010	43	134	0,32	62	157	0,39	153	210	0,73	186	235	0,79	187	212	0,88
		VL1218	187	235	0,80	219	263	0,83	276	323	0,85	263	312	0,84	262	296	0,89
		VL1824	198	296	0,67	186	273	0,68	177	274	0,65						
		VL2440	151	185	0,82	154	200	0,77	130	158	0,82	120	149	0,81	184	259	0,71
	MGP	VL0010	105	125	0,84	65	93	0,70	107	178	0,60	94	138	0,68	97	108	0,90
		VL1824	186	196	0,95	167	177	0,94	193	214	0,90	200	219	0,91	184	189	0,97

Key

ARTEDCF

DCF GEAR

CLASSE_CFF

OVERALL LENGTH CLASS

8.3 Biological Sustainability Indicators**MFL**

43 segments of the fleet in Portugal were identified which consist of vessels grouped in accordance with gear used and size. This number has varied over the years, and in 2017 was close to the minimum (42), determined in 2014. A maximum of 15 populations were identified subject to scientific assessment, which is 40% higher than the number calculated in the previous period. Of the 43 fleet segments, 40 work with these populations to a greater or lesser extent. On average, each of the fleet segments identified now exploits 36% of the units subject to assessment, a reduction which results from the increase in the number of populations assessed and the diversity of those which are exploited by each segment.

As in previous years, almost 400 populations are exploited. This means that the proportion of units which are scientifically assessed is very low, largely due to the fact that there are not many which have transversal interest for EU states. Human and financial resources for investigation are only allocated to those of interest.

Of the units subject to scientific assessment, a maximum of eight are exploited above FMSY. On average, each of the 32 fleet segments identified exploits 36% of the units considered to be over-exploited, at varying levels. This percentage also fell due to the increase in the number of units subject to assessment, also demonstrating the low dependence that these segments have with respect to the total number of units exploited.

Indicator for populations at risk

Most units at risk are caught by relatively few fleet segments. Of the 40 fleet segments analysed, 11 exploit vulnerable populations at significant levels, in comparison with the number of units with scientific assessment which are exploited by the same segments. However, in relation to the total of species with scientific assessment, on average, only 21% of units are exploited by each fleet segment. There are only three cases exploiting more than 33% of over exploited populations, and are all deep dredgers (DFN VL1218, DFN VL1824, and DTS VL2440). Of the fleet segments identified, only seven exploit biologically vulnerable populations, and only one (PGP VL0010) exploits more than one unit in such circumstances.

Sustainable harvest indicator

The sustainable harvest indicator shows that in only two cases was it possible to demonstrate a significant dependence by fleet units on a low number of populations subject to assessment, HOK VL2440 and DFN VL1824, with the indicator being calculated at 1.17 and 1.61, respectively.

ARA Fleet

Within the scope of the Marine Strategy Framework Directive for the Azores subdivision, 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 was confirmed that, in general, and in accordance with the analytical procedures employed, all the species had a final assessment of 'good environmental status'. However, 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 2017, shows that despite there being some inter-annual variation, the volume of landings remained relatively stable. The average annual figure was 3 455 tonnes (Table 12).

Table 12 – Landings of deep and very deep water Demersal species in the ARA, in the period from 2011 to 2017.

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
Average	3 455

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 615 tonnes, conger (*Conger conger*) with 493 tonnes, rosefish (*Helicolenus dactylopterus*) with 250 tonnes, silver scabbard fish (*Lepidopus caudatus*) with 301 tonnes, wreckfish (*Polyprion americanus*) with 166 tonnes, Alfonsinos (*Beryx sp.*) with 170 tonnes, forkbeard (*Physis physis*) with 259 tonnes, parrotfish (*Sparisoma cretense*) with 184 tonnes and Red porgy (*Pagrus pagrus*) with 102 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 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 2017, shows that there is high inter-annual variation in the volume of landings and no discernible trend exists. The average annual figure was 1 140 tonnes (Table 13).

Table 13 – Small pelagic landings in the Azores from 2011 to 2017.

Year	Landings by Weight (t)
2011	1 395
2012	945
2013	1 022
2014	1 307
2015	1 282
2016	887
2017	831
Average	1 095

Three species of small pelagics are caught in the ARA: horse mackerel (*Trachurus picturatus*) with annual landings of 750 tonnes, common mackerel (*Scomber japonicus*) with 326 tonnes and sardines (*Sardina pilchardus*) with 19 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.

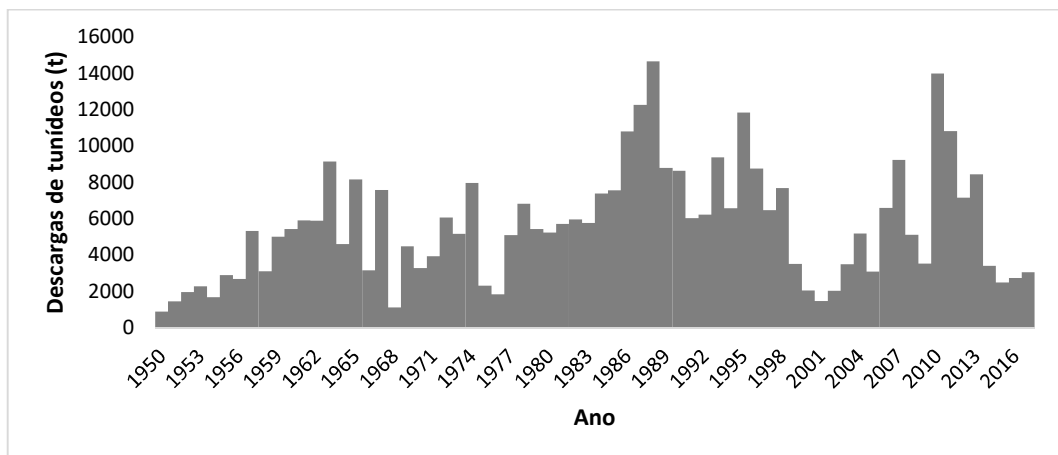
Tunas

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 over the season moves to the Azores. From 2011-2016, 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 2016 (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
Average	6 822

Historically, catches of these species show significant fluctuations caused by natural variations in abundance and changes to migratory routes. Therefore, the reduction in catches seen in recent years 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 region (Figure 3).



Key	
Descargas de tunídeos (t)	Landings of tuna (t)
Ano	Year

Figure 3 – Tuna landings in the Azores from 1950 to 2017.

In the period from 2000 to 2017, skipjack and bigeye tuna represented 63% and 33% of total catches in the Azores, respectively. These population units are managed on an Atlantic level 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 and skipjack carried out by the ICCAT in 2015.

Species	MSY	Landings (2016)	Relative biomass	Mortality per fishery
Bigeye tuna	78 824 t (67 725-85 009t)	72 375t	$B_{2014}/B_{MSY}: 0.67 (0.48-1.20)$	$F_{2014}/F_{MSY}: 1.28 (0.62-1.85)$
Skipjack tuna	Probably greater than the previous figure (143 000 - 170 000t)	245 933t	$B_{2013}/B_{MSY}: >1$	$F_{2013}/F_{MSY}: <1$

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. COM(2014) 545 final. 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 (big-eye, yellowfin, flying and 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 2017 are summarised in the table on Biological Indicators for Madeira (Table 16).

Table 16

	ARTEDCF	CLASSE_CFF	ICS (Valor dos Desembarques)					IUPR					Acompanhamento dos Desembarques				
			2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
Madeira OFR	HOK	VL0010	0,89	0,95	1,27	1,19	1,11	0	0	1	1	1					
		VL1218	0,95	0,96	1,17	1,11	1,11	0	0	0	1	1					
		VL1824	0,95	0,96	1,17			0	0	1							
		VL2440	0,96	0,96	1,14	1,08	1,05	0	0	1	1	1					
	MGP	VL0010	0,62	0,87	0,94	0,81	0,80	0	0	1	0	0					
		VL1824	0,81	0,77	2,24	4,04	3,24	0	0	2	2	2					

Key	
ARTEDCF	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 big eye (*Thunnus obesus*), albacore (*Thunnus alalunga*) and skipjack (*Katsuwonus pelamis*), yellow fin (*Thunnus albacares*) 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 and 2016, 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, F2014/FMSY =1.28 (mean, 0.62-1.85 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 (F2017/Fmax>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, 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 9.3% 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 in recent years on the catch of big eye and dwindling catches of skipjack. However, the value of SHI has shown a trend towards improvement in the period under analysis coming close to 1. In this case, we consider the indicators as representative as they were calculated on the basis species which represented 99.9% 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 on the basis species which represented 99.9% 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 97% of landings.

Considering the biological indicators and analysing the negative economic indicators, while also considering that under an action plan proposed last year, the need to reduce fleet capacity in this segment was seen via the permanent immobilisation of one vessel in accordance with Ministerial Implementing Order No 392/2017 of 9 October 2017, approving the Regulations for the Support Scheme for the Permanent Termination of Fishing Activities using purse seine gear - small pelagics. Further considering that no vessel has applied for this possibility, we suggest that the Madeira Regional Directorate of Fisheries should find the means to regulate activity in this segment, reducing fishing effort in proportion to that which would be achieved with the withdrawal of one vessel. This could be achieved for example by limiting the total number of fishing days permitted for each vessel in this segment.

8.4 Economic indicators

In the same way as in previous years, Portugal has sought to improve its methodology and data processing so as to achieve more reliable analyses. In addition to the information available in the questionnaires, real data on fuel use is also used along with the respective costs on a high number of fishing fleet vessels.

Over the last two years, a number of changes have been made to the model used to calculate most costs, and the overall reformulation of cost parameters has since been concluded. This report now includes the new methodology employed, and error and divergence verification tools are also being developed with regard to economic parameters so as to improve this model. Based on error situations since identified, vessels in other fleet segments were reclassified, including larger vessels which had been classified in the traps segment (FPO) which are now classified as being in the gillnets and trammel nets segment (DFN).

With regard to depreciation costs, data on 2016 already include 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 new values used in the PIM method. It can be seen that, with the exception of the fleet with overall length of less than 12 m, annual depreciations are lower. This also tends to contribute to a reduction in the value of assets and the cost of opportunity, impacting on ROI or ROFTA Based on:

Table 17 - Working life considered based on vessel length class

Length Class	Cask		Engine		Electronic		Other	
	Previous	New	Previous	New	Previous	New	Previous	New
VL0012	25	20	10	10	5	5	7	7
VL1218	25	30	10	18	5	5	7	7
VL18XX	25	30	10	24	5	5	7	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 2017 is not yet available, the economic indicators for the year under analysis were estimated using a projection based on data from 2015 and 2016.

MFL

With regard to the MFL, and as can be seen in Annexes VII, VII-a and VII-b, of the 35 fleet segments, 33 had a positive economic situation in 2016. With regard to the values estimated for 2017, an increase in negative values can be seen.

However, if we compare the ratios of previous years with the estimates for the same years, the existence of significant divergences can also be seen. This reveals the need to improve the model used in estimating the economic indicators.

Based on results for 2008 to 2016 (Annex VII-b), no MFL segments are in a situation of imbalance. However, the dredge segment in the 0 to 10m overall length class showed slightly negative ratios with greater regularity. This is a situation which requires more careful monitoring with respect to medium-term analysis, as it is a segment which should have good performance.

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

REGION	Fishes Thec	Vessel Length	2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
			ROFTA	RATIO CR/BER	ROFTA	RATIO CR/BER	ROFTA	RATIO CR/BER	ROFTA	RATIO CR/BER	ROFTA	RATIO CR/BER	ROFTA	RATIO CR/BER	ROFTA	RATIO CR/BER	ROFTA	RATIO CR/BER	ROFTA	RATIO CR/BER	ROFTA	RATIO CR/BER
RAA	DFN	VL0010	0,61	3,35	0,36	2,38	0,22	1,75	0,22	1,88	0,13	1,51	0,19	1,74	0,44	3,14	0,38	3,30	3,06	5,84	0,33	2,36
		VL0010	0,24	2,00	0,14	1,58	0,18	1,64	0,14	1,53	0,13	1,52	0,13	1,52	0,21	1,95	0,25	2,70	1,26	3,61	0,17	1,72
	HOK	VL1012	0,17	1,76	0,06	1,28	0,11	1,42	0,04	1,18	0,10	1,42	0,10	1,41	0,22	2,00	0,28	2,83	0,19	1,86	0,13	1,58
		VL1218	0,24	1,77	0,10	1,34	0,09	1,28	0,11	1,46	0,16	1,64	0,10	1,38	0,13	1,44	0,39	3,17	0,09	1,39	0,14	1,51
		VL2440	-0,07	0,73	-0,04	0,86	0,09	1,34	0,03	1,11	-0,03	0,90	-0,14	0,51	-0,03	0,89	-0,01	0,96	-0,11	0,40	-0,05	0,81
		VL0010	0,24	1,82	0,11	1,40	0,01	1,05	0,14	1,55	-0,15	0,45	0,00	0,99	-0,01	0,97	0,03	1,17	0,67	3,39	0,18	1,72
	PS	VL0010	0,24	1,97	0,09	1,36	0,11	1,39	-0,07	0,73	-0,02	0,90	-0,17	0,33	0,34	4,46	0,14	2,01	1,14	4,82	0,06	1,25
		VL1012	0,31	2,21	0,10	1,40	0,34	2,26	0,02	1,07	0,14	1,62	-0,02	0,89	0,37	2,66	0,16	1,81	0,35	2,45	0,14	1,60

ARM Fleet

Indicators for analysing fishing capacity against fishing opportunities – Article 22 of Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 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 2017, and taking into account the fact that economic indicators are not available, the criterion of the average of the last seven years was used.

Table 19 – ROFTA

Madeira OFR	ARTEDCF	CLASSE_CFF	ROFTA							
			2010	2011	2012	2013	2014	2015	2016	2017
HOK	VL0010	VL0010	0,06	0,31	0,08	0,4	0,11	0,19	0,19	0,19
		VL1218	0,43	0,6	0,4	0,59	0,39	0,97	1,02	0,63
		VL1824	-0,13	-0,1	-0,05	0,15	-0,11			
		VL2440	-0,02	0,04	0,06	-0,04	0,01	-0,21	0,18	0,00
MGP	VL0010	VL0010	1,15	0,92	1,8	1,88	0,54	0,92	1,18	1,20
		VL1824	-0,01	0,03	-0,17	0,02	0,05	0,03	-0,04	-0,01

Key	
ARTEDCF	DCF GEAR
CLASSE_CFF	OVERALL LENGTH CLASS

Table 20 – RATIO

	ARTEDCF	CLASSE_CFF	RATIO							
			2010	2011	2012	2013	2014	2015	2016	2017
Madeira OFR	HOK	VL0010	1,27	2,54	1,37	2,8	1,46	3,72	2,25	2,20
		VL1218	2,92	3,42	2,36	3,67	3,32	6,42	3,81	3,70
		VL1824	0,38	0,55	0,77	1,57	0,57			
		VL2440	0,91	1,21	1,32	0,83	1,08	-0,08	1,22	0,93
	MGP	VL0010	4,86	4,89	7,91	6,1	3,76	4,4	2,5	4,92
		VL1824	0,97	1,12	0,33	1,11	1,38	0,04	1,12	0,87

Key	
ARTE DCF	DCF GEAR
CLASSE CFF	OVERALL LENGTH CLASS

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, are the only segments with negative results in recent years.

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 acceptably over the last two years (indicators for 2017 are indicative, resulting from an average of the last seven years). It is hoped that last year will see a reversal of the negative trend caused by the reasons explained above

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 stressed that, in overall terms, 2017 saw a dramatic drop in catches (- 52 %), which was offset by a substantial increase in the average price of these species. This will undoubtedly be confirmed by the final economic data for 2017.

9 Action Plans

The analysis of the economic and biological indicators pointed to the need to consider limiting the fishing effort of the Madeira fleet which includes the HOK VL 2440 segment operating exclusively in pole and line tuna fishing and the MGP VL 1824 segment made up of three PS vessels. This led to the decision to draw up an action plan for the implementation of measure to stop activity temporarily together with the implementation of technical measures to correct the operating pattern of seine fishing vessels. (Annex VII).