



ORFISH - Development of innovative, low-impact offshore  
fishing practices for small-scale vessels in outermost regions -  
MARE/2015/06



## WP2 Creating alternative fishing opportunities

Task 4.1 Strategies, challenges and shortcomings for the  
marketing of SSF products

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### The ORFISH project

The ORFISH project aims at providing a platform for exchange of knowledge on low-impact offshore fishing techniques among fishers for the outermost regions with a view to developing and optimizing these techniques and with the principal objective of alleviating fishing pressure on coastal fish resources. The specific objectives of the project are the following:

- Raising awareness of the opportunities to develop innovative fishing techniques allowing to divert fishing effort away from coastal resources;
- Developing and testing low impact fishing techniques adapted to the bio-geographical conditions of each outermost region;
- Creating alternative fishing opportunities that will help to consolidate jobs in the fishing industry and ensure a steady supply of fisheries products to local markets;
- Exchanging of best practice on low-impact offshore fishing techniques between ORs, which will also do good to overseas countries and territories and third countries;
- Improving communication among outermost regions' fishing sectors as part of the good functioning of the Advisory Council on Outermost Regions.

ORFISH website:

<http://orfish.eu>

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### I. Introduction<sup>1</sup>

This task 4.1 is focused in adding value to the actual catches by better differentiating them in the market, but also in ways to enhance the market value of off-shore species through innovative strategies like branding. This may alleviate fishing pressure on coastal resources by increasing the value of catches by local fishers, so that they can make a living with less pressure on resources.

Consequently, the global objective of this task was to analyse current marketing strategies adopted by SS fishers in order to sell their fish, to understand their challenges and shortcomings, and to explore the possibilities for improving the current situation.

The focus of this task will be place in the most relevant fishery in a selection of OR, trying to analyse the actual challenges and compare with the experiences from other areas in order to learn collectively. This task will analyse the feasibility of introducing labelling schemes for SSF, the need for preserving the quality of the fish for adding market value and traceability options.

The specific objectives of the task are:

- Analyse the marketing channel and strategy for SSF products and their outcomes including labelling schemes
- Indicate how technological innovations may help to improve market shares and benefits to SSF people
- Devise strategies to better differentiate SSF products from the catches coming from world markets, large-scale fisheries or aquaculture
- Examine the role of women & SSF organisations in fish marketing and ways to enhance their involvement and success
- Make appropriate policy recommendations

This report includes the two main deliverables of the task 4.1:

- The synthesis report based on the analysis of the marketing of SSF products in ORs: Analysis of the marketing channels and strategies for SSF products, examination of the role of women when appropriate, indicate how technological innovations may help to improve market shares disseminated through the website of the project
- Synthesis report based on an identification of devise strategies to better differentiate SSF products and policy recommendations based on these findings

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<sup>1</sup> La pesca en las Islas Canarias. Departamento Temático B: Políticas Estructurales y de Cohesión. Dirección General de Políticas Interiores de la U.E. Irina POPESCU, Juan José ORTEGA GRAS.

## II. Analysis of the marketing channels and strategies for SSF products

A comparative characterisation of the productions in ORs, in values and quantities, associated to an analysis of the fishing production, will permit us to underline the main tendencies and differences of the marketing channels in the ORs.

### 2.1 Structures and evolution of catches landed by ORs fleets

#### 2.1.1 Structure of the fishing production

Four main categories can be clearly distinguished for the fishery sector of Madeira, namely the tuna fishing, the deepwater fishing, the small pelagic fishing (locally known as “ruama”) and other types of fisheries<sup>2 3</sup>. In 2017, Madeira had a total fishing production of 7987 tons, with a value of 21.636,4 million euros. The SSF in Madeira represents 15% of the total production, with 710,5 tons landed for a total value of 2 260 000 euros.

The three main fishing activities which take place in the Canary Islands are small-scale coastal fishing (for small pelagic species, benthic species and tuna), cephalopod fishing near the African coast through a fleet of freezer trawlers and tuna fishing in the high seas. In 2017, Canarian total fishing production was almost 3 times higher than in Madeira, with 21,827.04 tons, valuing 74 million euros. The SSF production represents 63% of the total production and quantity but 42% of the total production in value: 13 837, 79 tons for 31 million euros, which is considerably higher than in Madeira.

In 2017, the Azorean commercial fishing caught about 7 000 tons, representing an estimated total of 30 million euros. Independently of the size of the boats, the Azorean fishing is, majorly, craft and sustainable. The SSF production was of 4 800 tons in 2017, for a value of 29 million euros. It represented 70% of the total production. Small-scale fishing use mainly the handline methods, like longline, lift nets and tangle nets. In 2017, it was responsible for about 25M€ of revenues.

Globally, the importance of SSF is the highest in the Azores and the lowest in Madeira.

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<sup>2</sup> Delgado, 2007

<sup>3</sup> SRA, 2014

### 2.1.2 Global Evolution of landings

#### Azores

In the Azores, the fishing considered as large scale (>12m) is essentially for the tuna fish capture and uses the pole and line method. The variations of total volume and revenues from the landings between 2008 and 2018 are presented below (fig. 1).

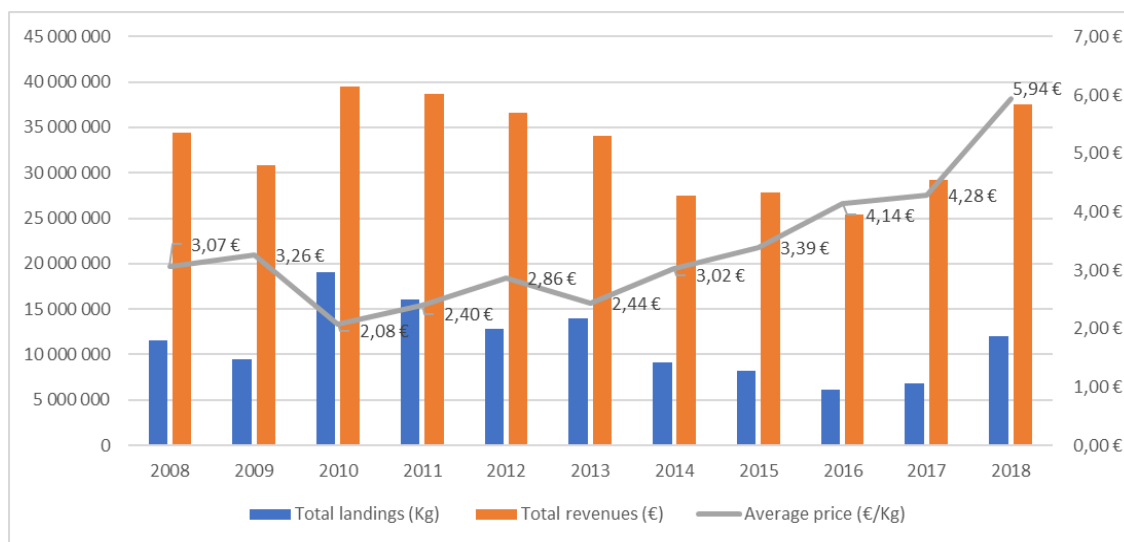
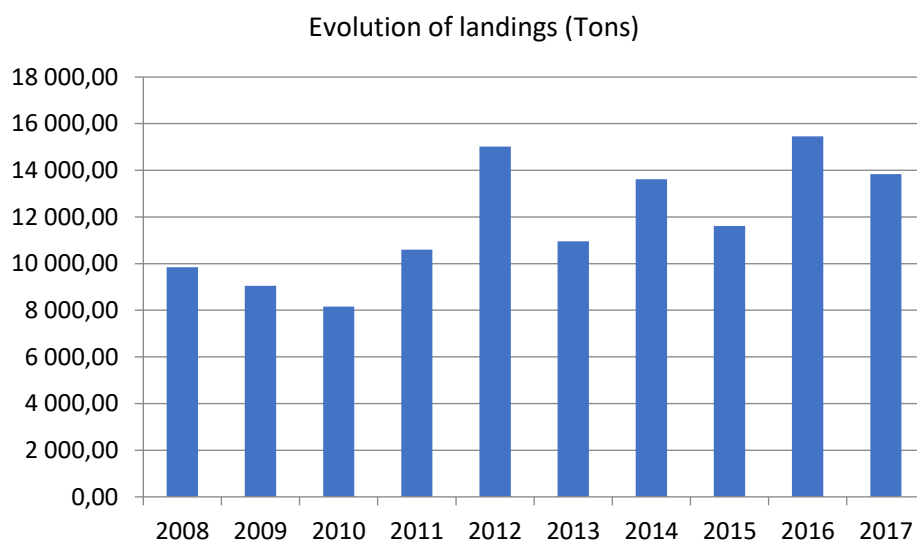


Figure 1 - Total Landings (kg) and Values (€) from 2008 to 2018 in the Azores

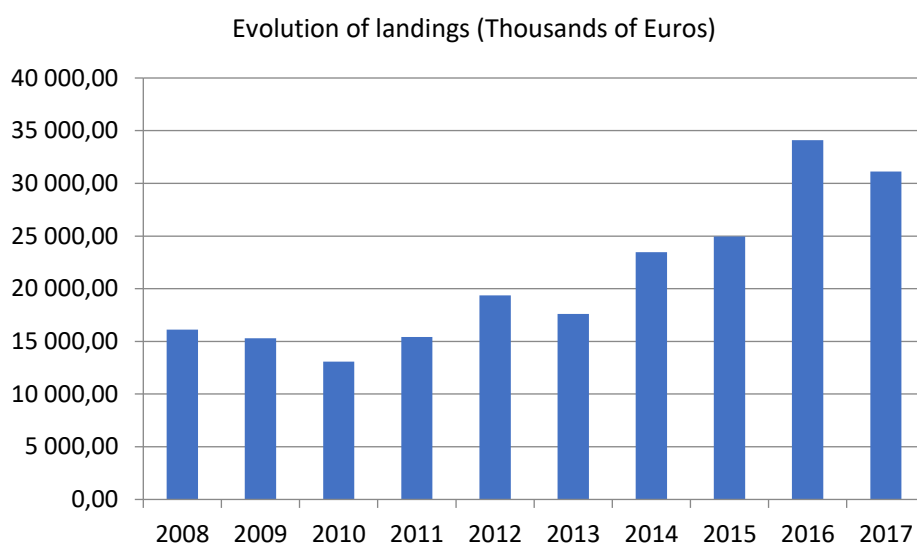
The increase of the average price on the first sale, in 2018, was essentially related with the valorization of the landed fish, which had an improvement in its quality, owing to the greater care in the handling and conservation, by the Azorean fishermen.

#### Canaries

In Canaries, tons of landed fishes have been increasing from 2008, but from 2012 this data have had up and downs depending on the year. Although this ups and downs, landing value has been increasing in general.



**Chart 1:** Evolution of landings (2008-2017). Net Weight expressed in Tons

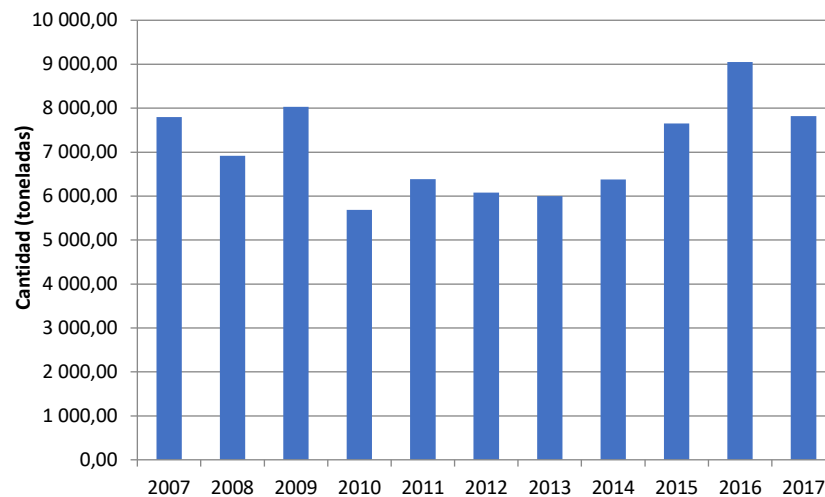


**Chart 2:** Evolution of landings (2008-2017). In thousands of Euros.

The aquaculture sector has also developed considerably in the Canary Islands. In 1992, production barely reached 150 tons, but in 2009 it increased to over 8,000 tons. In 2016, aquaculture production reached 9,046.06 tons, placing the Canary Islands as the fourth Spanish region in terms of production (Chart 5). In 2017, production fell back to 7,818.48 tons, a cipher in line with the average since 2007<sup>4</sup>.

<sup>4</sup> Informe: La acuicultura en España 2017. Asociación Empresarial de Acuicultura de España (APROMAR).





**Chart 15: Aquaculture production in Canary Islands (2007-2017)<sup>5</sup>.**

Source: Canarian Government.

The most important aquaculture species in Canary Islands are *Sparus aurata* (Gilt-head (sea) bream) and *Dicentrarchus labrax* (European bass), which in 2017 represent more than 99% of the aquaculture production of the islands and 22% of the total production of these species in Spain. Sea bream has long been the main species of aquaculture in the Canary Islands (chart6). It exceeded 60% of the total production of the islands, but in recent years its production has decreased, as in the rest of Spain, and has been overtaken by European bass.

## Madeira

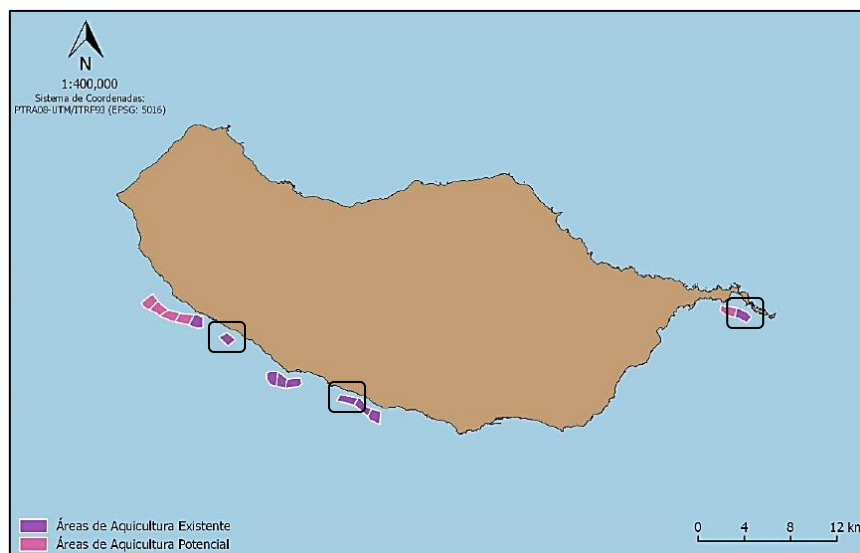
In Madeira, the fishing activity has always been important, since the early settlers arrived in the 15<sup>th</sup> century. As such, the historical socio-economic relation which the population has with this activity is very much an intrinsic part of the historical roots of the archipelago. Over the last ten years, Madeira's fish landings has fluctuated significantly, varying from roughly 4 000 tons in 2013 to almost 8 000 tons in 2017. Alongside the landings, the economic output has also varied, from about 11 million euros in 2010, 2011 and 2013 to over 21 million euros in 2017.

Madeira possesses a solid aquaculture industry, which dates back decades ago when, to feed a growing population, especially in isolated locations, settlers started to populate local streams with trouts and eels. Nowadays, aquaculture in Madeira is represented not only by fish farms on land, which focus in the reproduction and dispersal of freshwater species into streams, but also by offshore fish farms along its southern coast. Madeira has an enormous potential for the development of aquiculture, derived from excellent physical conditions such as the average sea temperature higher than in Continental Europe (above 16 °C), adequate salinity (varies between 36.6 ‰ and 36.8 ‰) and wave action on the south coast of the island weak to moderate.

<sup>5</sup>Canarian Government. Aquaculture data.

Therefore, aquiculture emerges as an expanding sector, constituting an alternative to traditional forms of fish supply and protecting wild stocks<sup>6</sup>.

Aquiculture started in Madeira in 1996 through a pilot project of gilthead seabream (*Sparus aurata*) production in Baía d'Abra, Caniçal, eastern coast of Madeira. First initiated by public investment of Madeira Government, it expanded to Ribeira Brava and Calheta municipalities, along Madeira's southern coast a few years later, through concessions attributed to private companies trying to consolidate their position in the local economy (Fig. 2).



**Figure 2: Concessions for current and potential fish farm areas off Madeira Island. The current areas occupied are signaled inside the dark square<sup>7</sup>.**

In 2016, amongst the increasing interest of the private sector in investing in offshore cages, the Madeiran government published new legislation (Resolution N.º 1054/2016 of 28<sup>th</sup> of December) to regulate the sector. The Program POAMAR (Plano de Ordenamento para a Aquicultura Marinha da RAM or 'Marine Aquaculture Development Plan of Madeira') was created to introduce the framework upon which the current and future concessions of areas available for offshore cages was going to be regulated.

Currently, aquiculture in Madeira is carried out by two companies, both operating very similar systems. One operates in the initial location where the government started its pilot project, in Baía d'Abra, Caniçal, and also off Ribeira Brava municipality. The other company operates off Calheta municipality. Production is carried out under an intensive regime in offshore cages, differing in diameter according to the size of fishes. The smaller cages, designated pre-fattening cages, are used to allocate fish that comes directly from the maternity. Once a certain weight is

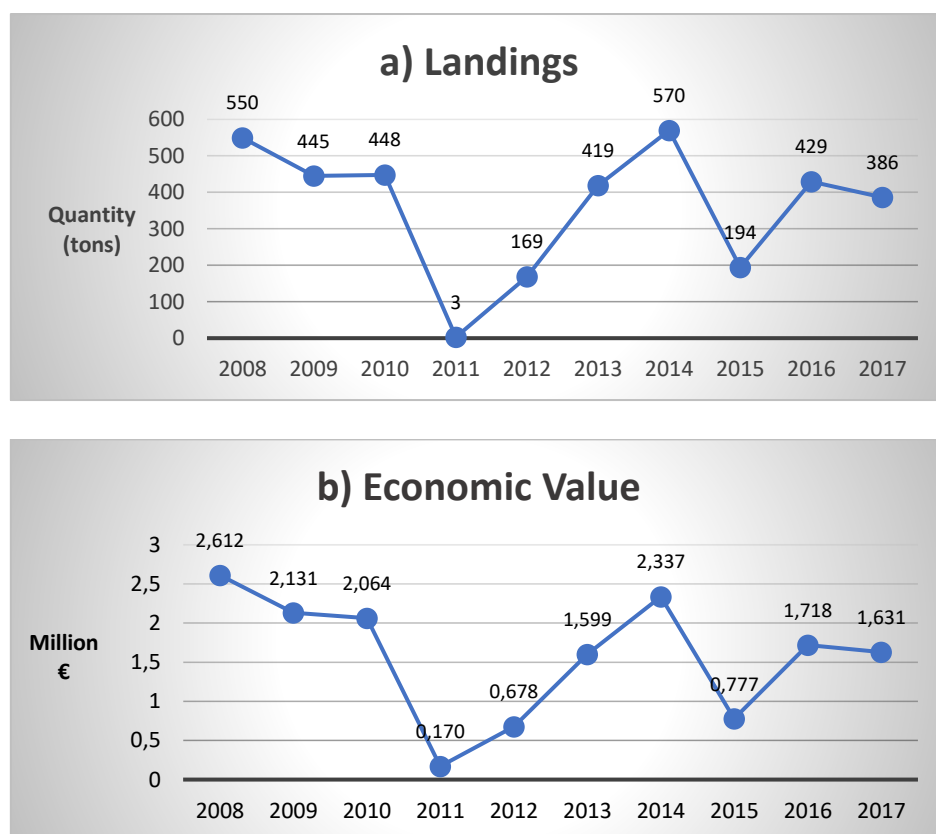
<sup>6</sup> SRA, 2014

<sup>7</sup> SRARN, 2018

attained, the fish is transferred to larger cages, designated fattening cages. Generally, production cycles last between 12 to 15 months, depending on water temperature and the health condition of the population throughout the cycle.

Although other species have been the target of fish farm production, namely amberjack (*Seriola dumerili*) and the white seabream (*Diplodus sargus*), production is centred in one species, the gilthead seabream (*S. aurata*). Production is currently in an expanding stage, since not only the company operating the longest increased the number of cages, but also a new company started to operate in 2017, which will cause a significant increase in the overall fish-farm production in Madeira.

From 2008 to 2017, the performance of the industry fluctuated greatly (Fig. 3). Peaking at 570 tons in 2014, with a total market value of 2.337 million euros, it attained a record low of only 3 tons in 2011 and 170 thousand euros<sup>8</sup>. These occurred most likely due to weather conditions, cage expansion programs and low demand periods.



**Figure 3:** Evolution of fish farm production in Madeira, in terms of landings (a) and economic revenues (b), from 2008 to 2017<sup>75 76 77 78 79 80 81 82 83 84</sup>.

<sup>8</sup> INE, 2008, 2009, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017

Production is expected to rise significantly over the next years, not only since new cages were constructed and deployed in 2017, totalling the overall production to 38 cages considering both companies operating in Madeira, but also due to other companies being formed and starting their activity, which is the case of a new company winning the concession of the maritime space off Ponta do Sol municipality. Concessions are available to be granted if a solid project arises, increasing the overall output of aquaculture products in Madeira. In addition, the production of additional species may be on the horizon, especially since *S. aurata* offers low profits due to the high competition from the Greek and Turkish aquaculture producers that export their product to Madeira supermarket chains at lower prices than the local seabream cost production.

## 2.1.3 Catches structure per groups of species, in value and quantity

### Azores

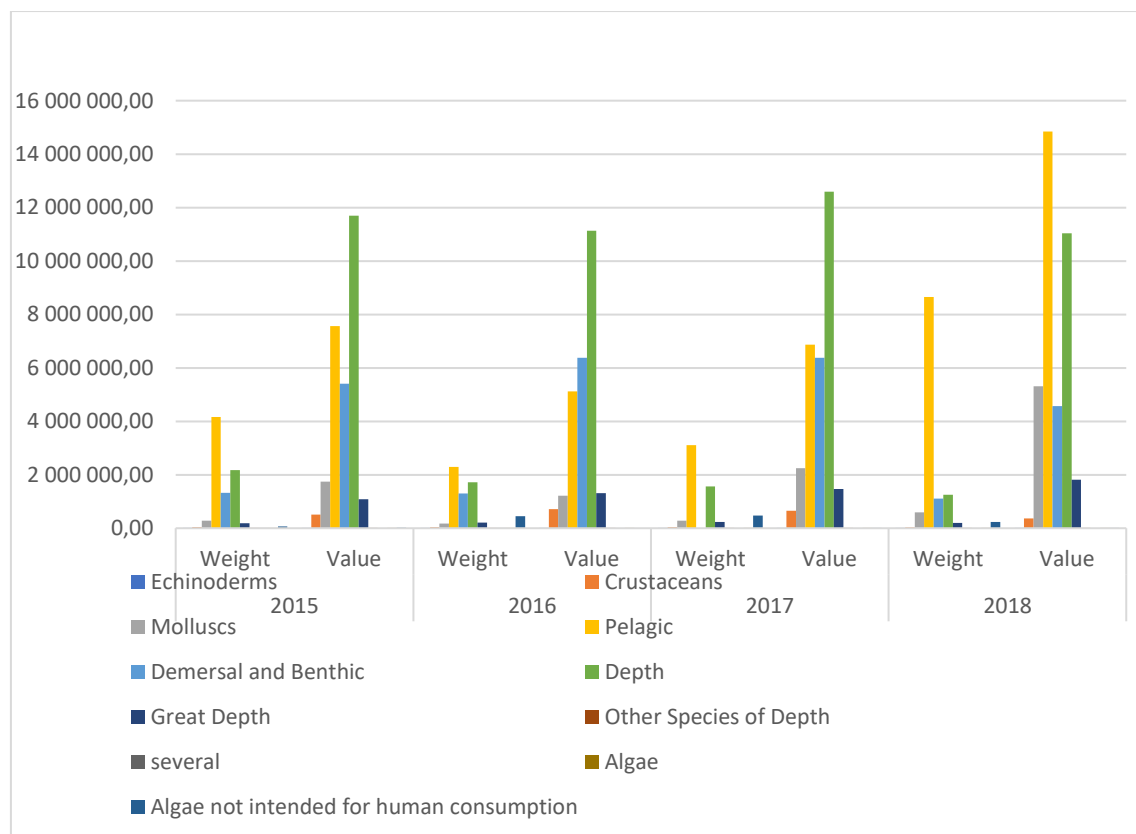


Figure 4 - Evolution of the landings by group species in the Azores (2015-18)

The highest volume of landings is pelagic, depth and demersal species (fig. 4). In 2018 we noticed an increase in the landed volume of pelagic species, mainly because of the increase in tuna landings.

In the Azores, like in the 2 previous ORs, tuna fishing represents a really high part of the fishing activity. In 2017, the tuna fish catches were about 2.000 tons and total value in first sale, generated revenues about 4M€.

The most important demersal and depth fishes, for the economy of the fisheries sector, are the Wreckfish (*Polyprion americanus*), the Blackspot seabream (*Pagellus bogaraveo*), the Splendid alfonsino (*Beryx splendens*) and the Alfonsino (*Beryx decadactylus*). In the pelagic fishing are captured, mainly, the tuna fish: Bigeye tuna (*Thunnus obesus*), Skipjack tuna (*Katsuwonus pelamis*), Bluefin tuna (*Thunnus thynnus*) and Albacore (*Thunnus alalunga*).

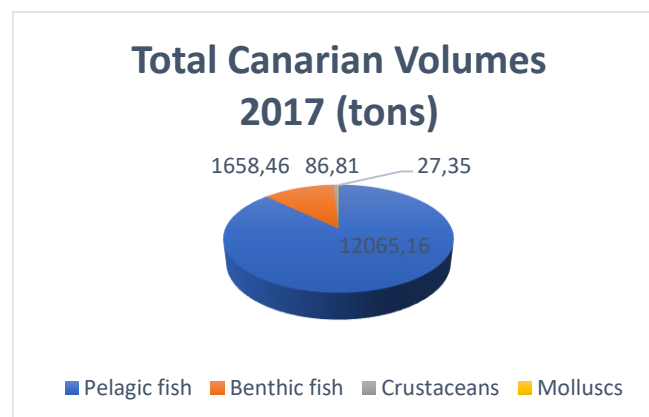
The main captured molluscs are the Veined squid (*Loligo forbesi*) and the Common octopus (*Octopus vulgaris*).

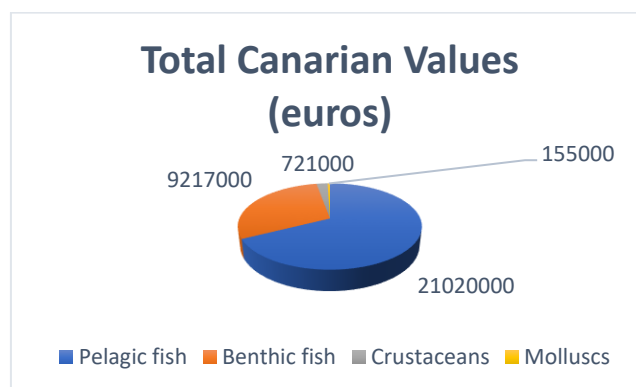
In the small pelagic fishing are captured, mainly, the Blue jack mackerel (*Trachurus picturatus*) and the Chub mackerel (*Scomber japonicus*).

The Swordfish (*Xiphias gladius*) and the Parrotfish captures (*Sparisoma cretense*) are also relevant to the sector.

### Canaries

In the Canaries, most of the production consists on fresh fishery products (63.4%), while aquaculture products represent 35.8%. However, aquaculture products account for most of the total value (57.8%) and fresh fish represents 41.8%. The main fishing activities in the Canary Islands are small-scale coastal fishing (for small pelagic species, benthic species and tuna), cephalopod fishing near the African coast through a fleet of freezer trawlers and tuna fishing in the high seas. The catches are downloaded at authorized ports as first-sale markets.





In 2017, the volume of fresh fishery products consisted of pelagic fish (87.19% of the amount and 67.56% of the value). Benthic fishes also represented a significant proportion (11.99% of the amount and 29.62% of the value). Other categories contributed less: crustaceans (amount 0.63%, value 2.32%) and molluscs (amount 0.23%, value 0.5%).

For the Canaries, as it can be seen in the next figure, almost all group species catches have increased, but molluscs. The year of 2017 has been weaker in terms of both quantities and value.

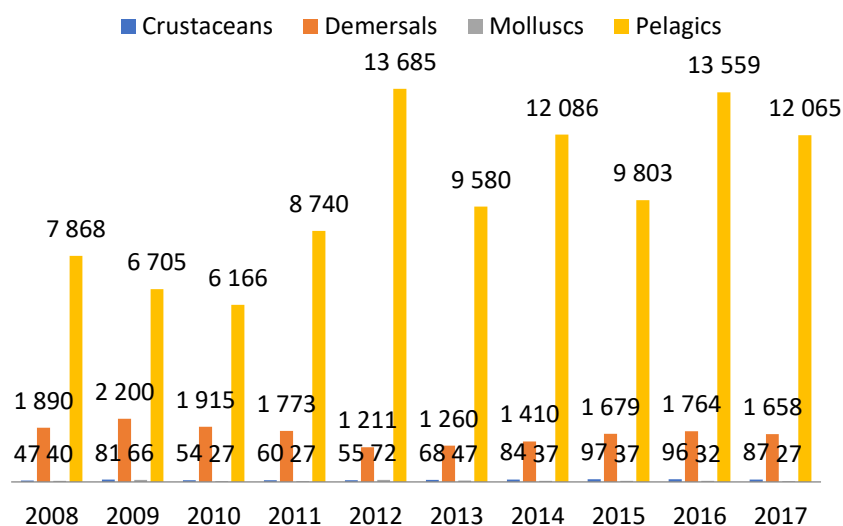


Figure 5: Evolution of landings (per group of species). Net weight expressed in tons.

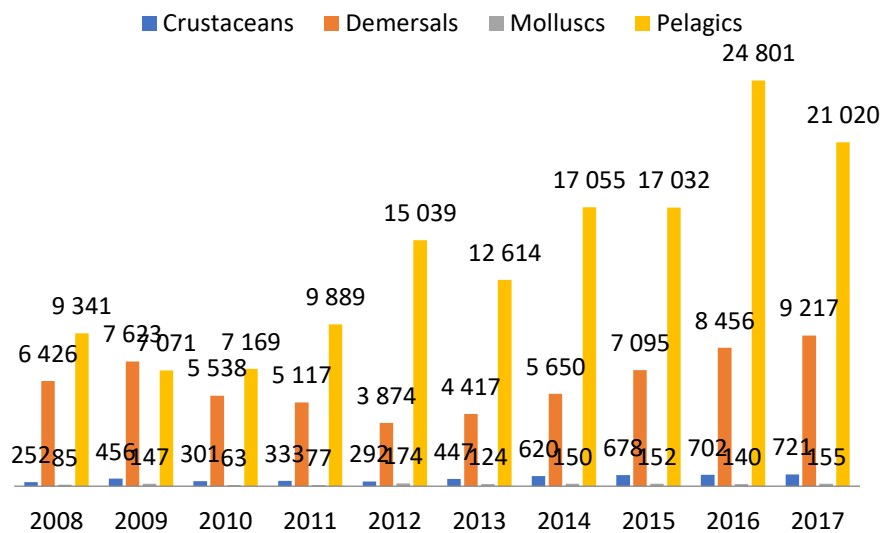


Figure 6: Evolution of landings (per group of species). In thousands of euros

2017 seafood imports (fish, crustaceans, molluscs and other marine invertebrates) reached 73,265 tons, with a total value of 332,43 million euros, representing around 4% of total seafood imports to Spain (4.4% of the total amount and 3.8% of the value).

In previous years (from 2009 to 2011) much higher ciphers were registered and imports were around 110,000 tons, with a maximum value that amounted to 270.19 million euros in 2010. The significant decrease of 2012 is, in part, due to the lower activity of the pelagic fleets, as the main fishing areas for this type of vessel had been changed in the agreement with Mauritania. This change made it less attractive and led to abandonment of waters in the second half of the year, and partly, thanks to the reinforcement of controls after the regulation on IUU fishing 1005/2008 came into force in January 2010.<sup>9</sup>

Sea products exports amounted to 36,973.5 tons in 2012, with a 50.24 million EUR total value, while in the previous figures ranged between 90,000 and 100,000 tons and 70 or 80 million EUR. In 2017, exports were 53,068.35 tons. These numbers reflect the same evolution as imports, since a part of them is re-exported, explaining that production and first sale obtained data, do not agree at all with exports data. Most of the products that appear as "Exports" are re-exported imports, it is not Canarian fish production.

Consequently, it is currently too complicated knowing the exact amount of Canarian production that is exported and that which is traded internally. Indeed, some foreign catches come as

<sup>9</sup> La pesca en las Islas Canarias. Departamento Temático B: Políticas Estructurales y de Cohesión. Dirección General de Políticas Interiores de la U.E. Irina POPESCU, Juan José ORTEGA GRAS.

importation to Canary Islands and then are exported to other lands. In this case, Canary ports are only pass ports, so it is very difficult to know the real Canarian exported catches.

In 2017, the volume of fresh fishery products consisted of pelagic fish (87.19% of the amount and 67.56% of the value). Benthic fishes also represented a significant proportion (11.99% of the amount and 29.62% of the value). Other categories contributed less: crustaceans (amount 0.63%, value 2.32%) and molluscs (amount 0.23%, value 0.5%).

Historical data show that small pelagics provided most of the catches until about 1996, when they fell considerably (Chart 13). This decrease seems to be related to agreement technical problems with Morocco, such as the closure of the main fishing areas for small pelagic species. More recently, tunas have consistently accounted for the vast majority of catches (Chart 4). *Thunnus alalunga* was the most common species in 2017 and represented 32.17% of the total amount. *Katsuwonus pelamis* constituted 18.62% of the production. *Thunnus obesus* (18.14%) also constitutes an important species in terms of quantity and value.

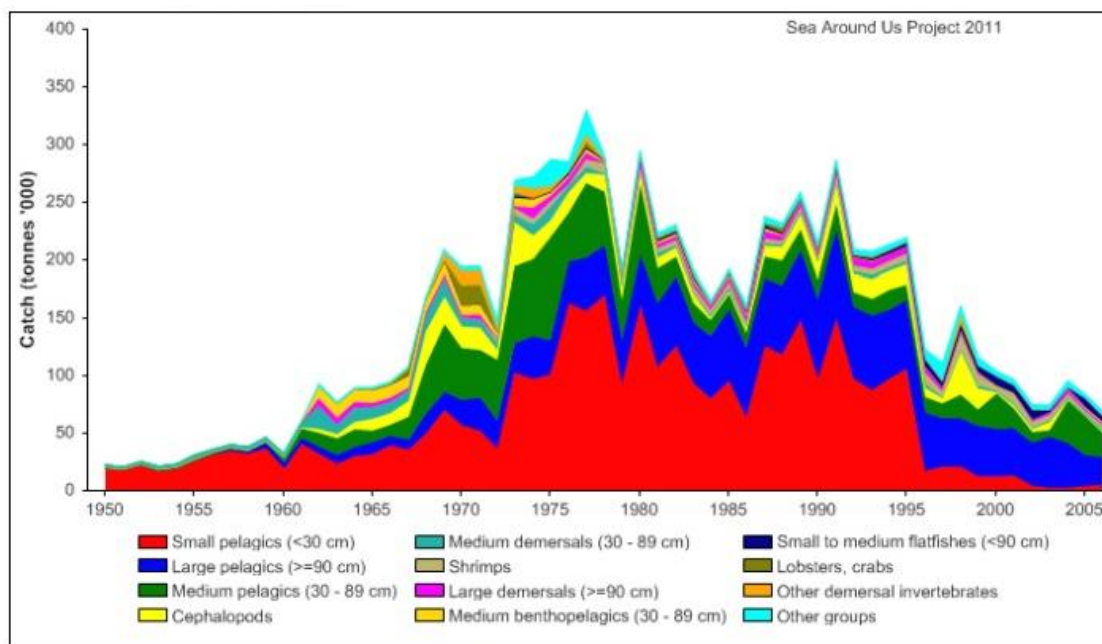


Chart 13: Catches according to functional groups. Quantity in thousands of tons (1950-2006)<sup>10</sup>.

Source: Sea Around Us Project.

### Madeira

The fishing sector in Madeira is subdivided in several categories, varying according to the type of fishing resource exploited, fishing vessels and methods. Hence, four categories can be clearly

<sup>10</sup>Sea Around Us Project.



distinguished, namely the tuna fishing, the deepwater fishing, the small pelagic fishing (locally known as “ruama”) and other types of fisheries<sup>11 12</sup>.

In Madeira, the fishery sector is very concentrated. The production of tuna and similar (mostly *Thunnus obesus*, *Thunnus alalunga* and *Katsuwonus pelamis*), is the most important in tonnage and in value, with 5153 tons representing 12 642 euros. Then come black scabbardfish production (*Aphanopus* spp.). They represent roughly 80% to 85% of catches. Tuna is particularly important as it represents around 50% of total catches and black scabbardfish roughly 30% to 40%<sup>7</sup>.

The black scabbardfish fishery dates back centuries ago, being an emblematic species. It is the target of an artisanal fleet of longliners, relying on drifting mid-water longlines, placed horizontally hundreds of metres deep. It is regarded as highly selective since it targets specifically adult black scabbardfish, diminishing the possibility of bycatch<sup>13 14 15 16 17</sup>.

The small pelagics segment targets blue jack mackerel (*Trachurus picturatus*) and Atlantic chub mackerel (*Scomber colias*). Its importance relies on the tradition that the local population has with these resources, being deeply rooted in the local gastronomy and socio-cultural heritage.

Other species are fished along the EEZ of Madeira. The most important resources exploited are several demersal species, such as the red porgy (*Pagrus pagrus*), the forkbeard (*Phycis phycis*), the splendid alfonsino (*Beryx splendens*) and the blacktail comber (*Serranus atricauda*).

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<sup>11</sup> Delgado, 2007

<sup>12</sup> SRA, 2014

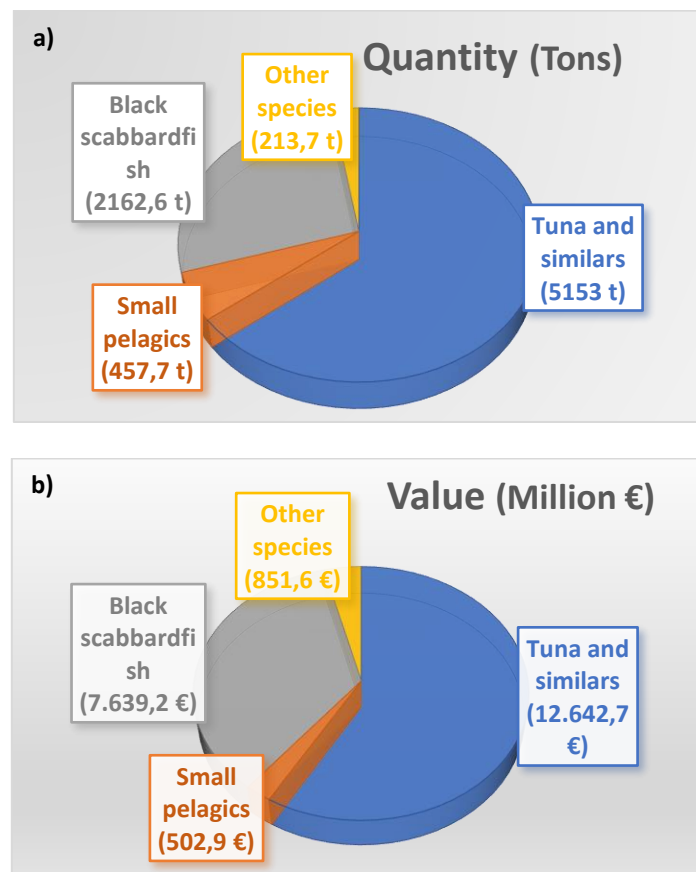
<sup>13</sup> Bordalo-Machado *et al.*, 2009

<sup>14</sup> Gordo, 2009

<sup>15</sup> Gordo *et al.*, 2009

<sup>16</sup> Farias *et al.*, 2013

<sup>17</sup> Santos *et al.*, 2013



The fishing sector of Madeira is heavily reliant on tuna and black scabbardfish. The weight that tuna has on the overall performance of the sector fluctuates, being more if it is a good 'tuna year' or not. Mostly influenced by the migratory nature of these species, the amount caught each year can vary substantially, changing the local fish market landscape, in terms of landings and economic gains. Specifically, catches of tuna vary mostly in terms of the availability of longfin tuna (*T. alalunga*) and skipjack tuna (*K. pelamis*). A good year means plenty of catches of these two species, in accumulation with catches of bigeye tuna (*T. obesus*), fundamental to the fishery. The deepwater segment, characterized by the fishery of black scabbardfish, is much more stable, averaging 6 and 7 million euros annum.

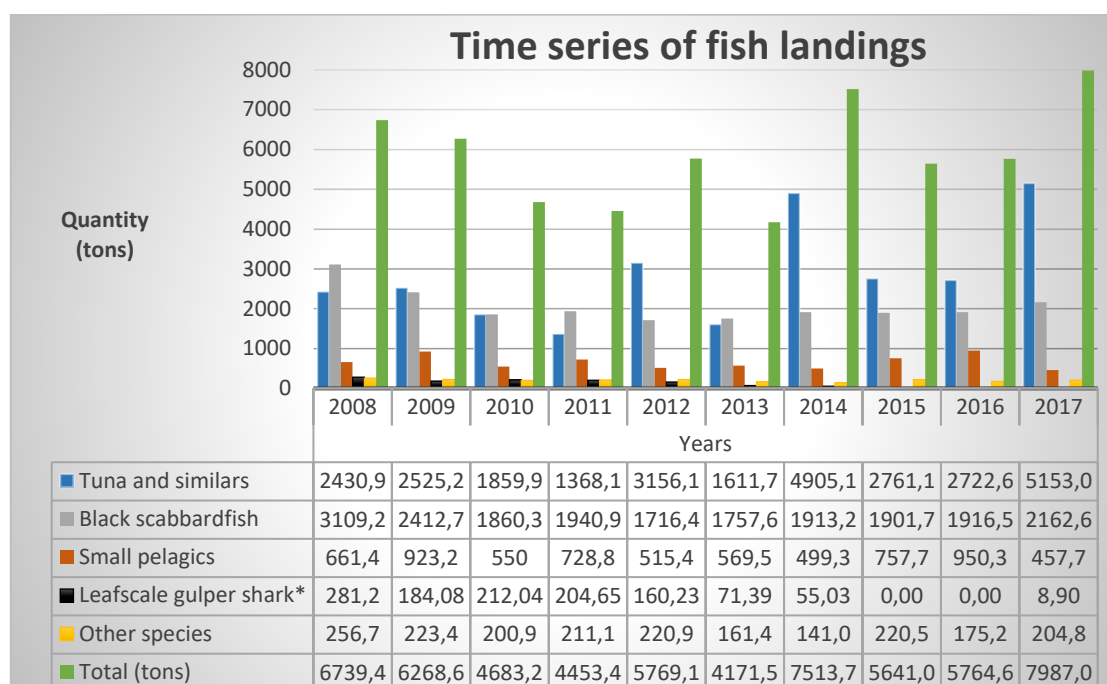


Figure 7: Time series of fish landings, in terms of quantities unloaded, from 2008 to 2017 in Madeira<sup>19 20</sup> (\*locally known as 'gata').

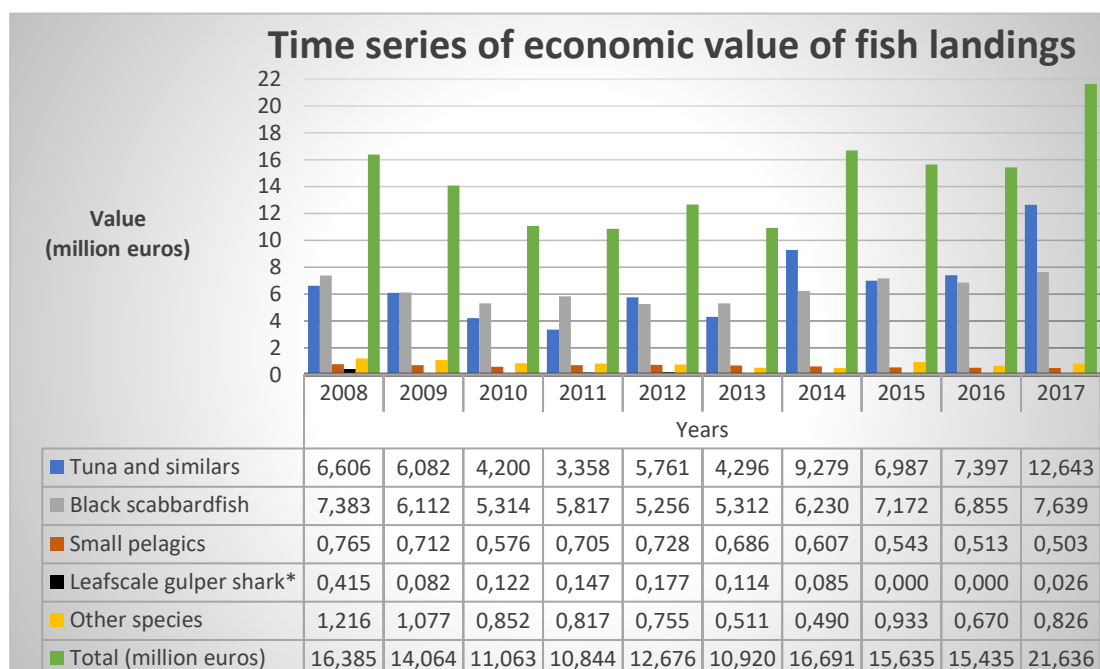


Figure 8: Time series of fish landings, in terms of economic revenues) from 2008 to 2017 in Madeira<sup>18 19</sup> (\*locally known as 'gata').

<sup>18</sup> Direção Regional de Estatística da Madeira

<sup>19</sup> Direção Regional de Pescas da Madeira

## 2.1.4 First sale average price

In Madeira, landing prices have increased over time (fig. 9), alongside the overall economic return, being especially true for years where landings are high. This increasing trend has been very healthy for the sector, to try accompanying the increasingly high costs of operating fishing vessels, particularly factual for OR vessels. The average annual price of landed fish species in 2017 was 2,71 € in the first sale. Most of the amount of fish products in Madeira derives from wild populations. Accordingly, in 2017 fresh fish products accounted for roughly 96,5% and aquaculture products for only 3,5%.

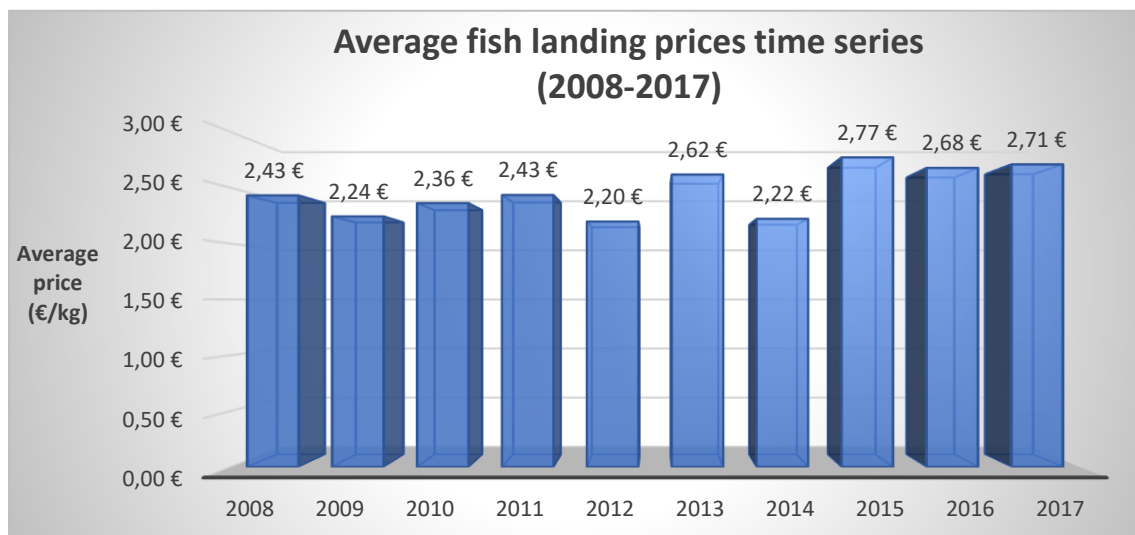


Figure 9: Average fish prices from 2008 to 2017 in Madeira<sup>20 21</sup>.

Analysing each group separately, several conclusions can be drawn. Tuna prices do not vary significantly, and black scabbardfish prices have risen consistently over the last 10 years, although catches have dwindled. The tendency was the increase in prices with lower availability, which is common with standard market rules of low offer but high demand.

The small pelagic segment is the definition of fluctuation. Prices have varied immensely, sometimes doubling from one year to another. This acclivity suggests a result of low demand and high offer. The above-mentioned reasons can affect the healthiness of populations, which in turn inserts variability to catch performance. The deepwater shark prices have increased significantly after a steep decline. This behaviour is in line with the performance of catches, regulated by EU decrees regulating deepwater shark catches.

<sup>20</sup> Direção Regional de Estatística da Madeira

<sup>21</sup> Direção Regional de Pescas das Madeira

Lastly, the other species segment entails the highest prices per kilo of fish. This behaviour goes hand-to-hand with the distinct nature of this segment, different from the others due to its scale and species targeted. The price of limpets has remained stable in recent years, in parallel with the tighter regulations that were imposed to mitigate illegal and undeclared fishing, and demersal species have maintained the interest of restaurants, in sync with the touristic sector in the archipelago.

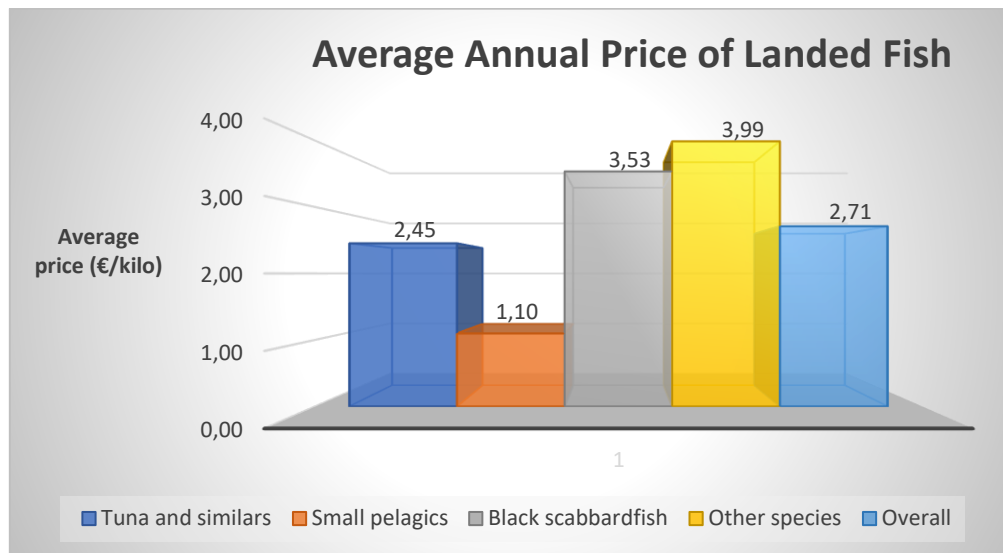


Figure 10: Average Annual Price of Landed fish in Madeira

The segment other species had the highest average price, mainly due to species that although landed quantities were low, their price per kg is fairly high (3,99 €). In addition, black scabbardfish had the highest price for a single fish resource (3,53 €), while small pelagics had the lowest price (1,10 €) (fig. 10).

In its globality, the average price of fishing products has not oscillated significantly. Prices remain stable, attaining its lowest figure of 2,20€/kg in 2012 and its highest of 2,77€/kg in 2015.

In the Canaries, the fishing products are sold higher than in Madeira, especially thanks to the fishing of whitefish.

Product	Medium selling price (€/Kg)
Whitefish	8 – 12
Tunas	1 - 7
Coastal pelagics	2 - 4

In the Azores, Statistically, variations in weight, value and average price increased over the last 10 years, due essentially to the large annual variation of tuna landings. These numbers also result from the upgrading and modernization that Lotaçor has made in recent years in their auctions through the implementation of HACCP (hygiene and security plan), train of the

employees, increase of the supply capacity, the quality of the ice, the fish storage and refrigeration, and also, the increase of a careful handling by the fishermen.

The certification with the label "Azores Brand - Certified by Nature" in some species and the promotional effort of our fish in regional, national and international events, helped to reach the goals, above mentioned.

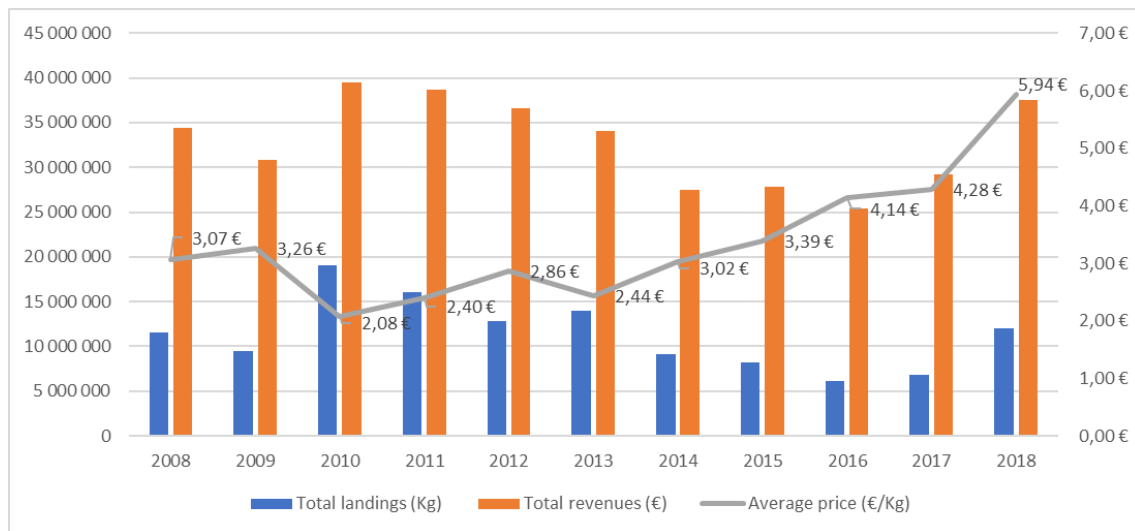


Figure 11 - Total Landings (kg) and Values (€) – 2008/18

The increase of the average price on the first sale, in 2018, was essentially related with the valorization of the landed fish, which had an improvement in its quality, owing to the greater care in the handling and conservation, by the Azorean fishermen.

### 2.1.5 Spatial distribution of landings

#### *French ORs*

We note that the territorial dimension is a subject in its own right: the French ORs have many landing points, which leads to an atomisation of production. Problems in adapting port infrastructure to production can also be highlighted.

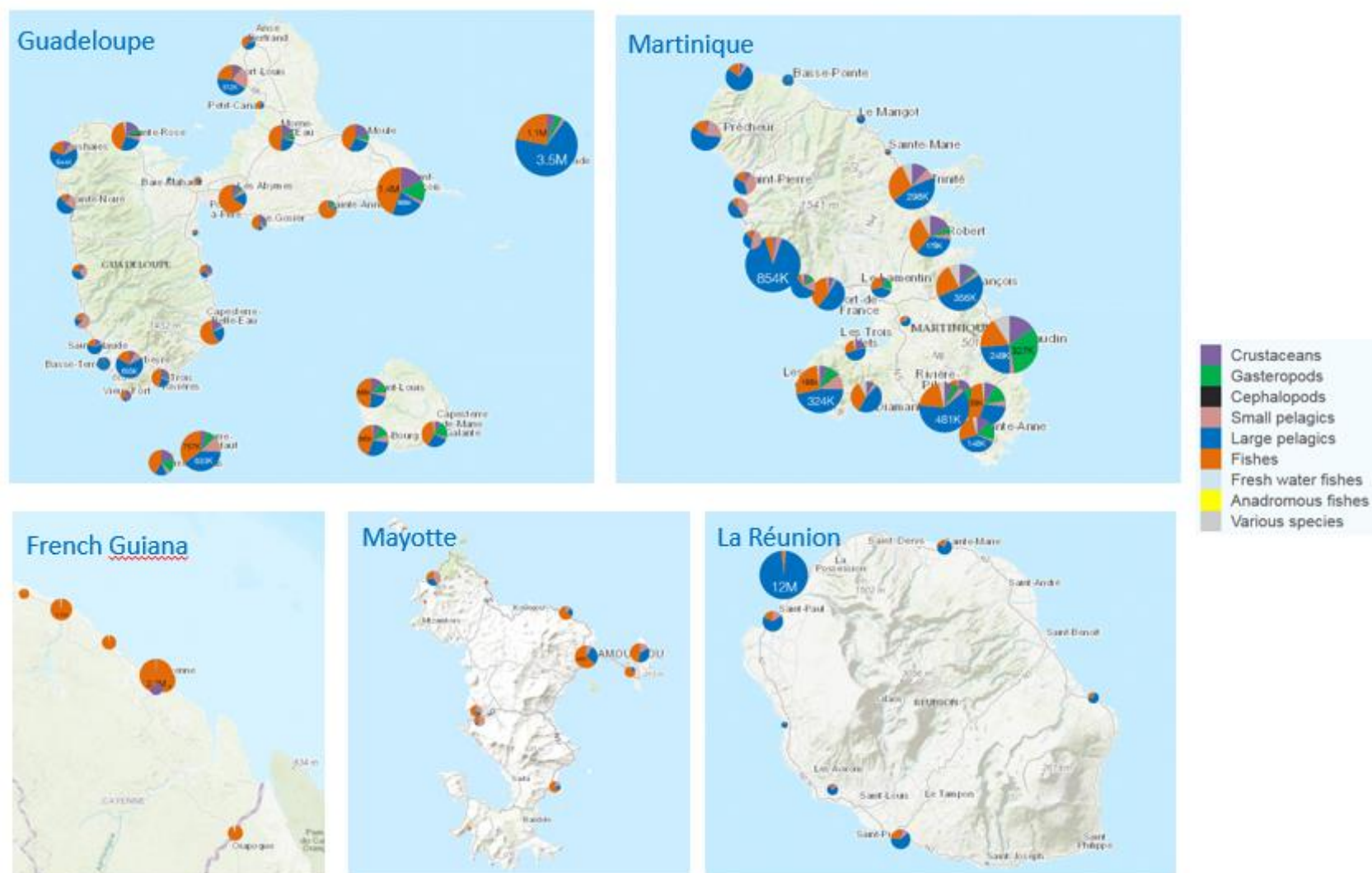


Figure 12: Territorial dimension of the French ORs production (average 2015-2017)

Açores

The Azorean smaller islands have higher costs, and more difficulties, with the fish transportation abroad, which reduces the average price on the first sale of the fish in these islands (fig. 14).

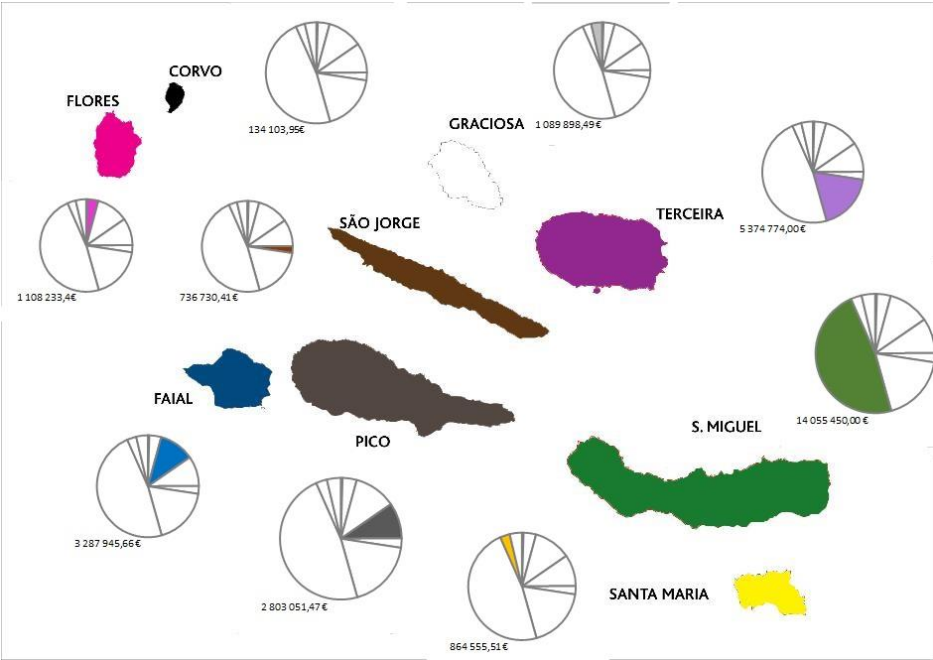


Figure 13- Total value of landed fish by island (€) – 2017

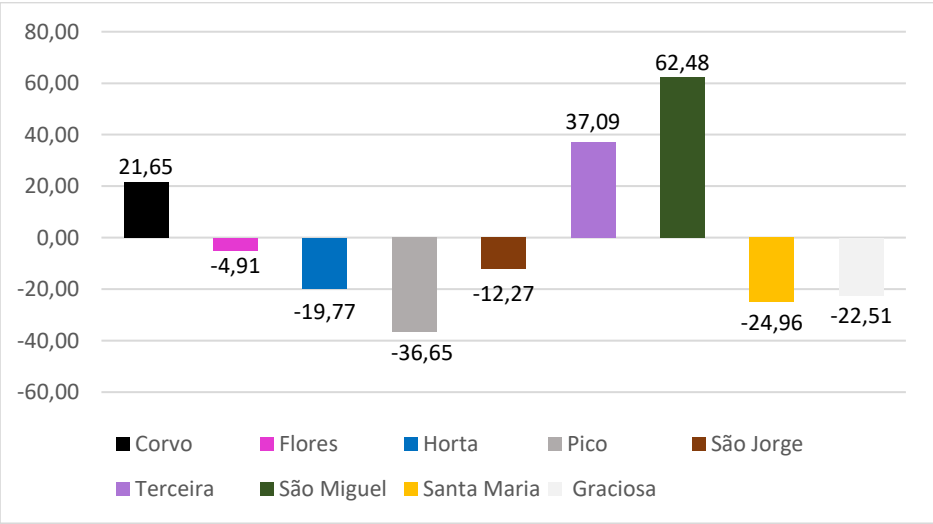


Figure 14 - Proportion of average price on the first sale, in comparison with the medium value for this sale (by island) – 2017



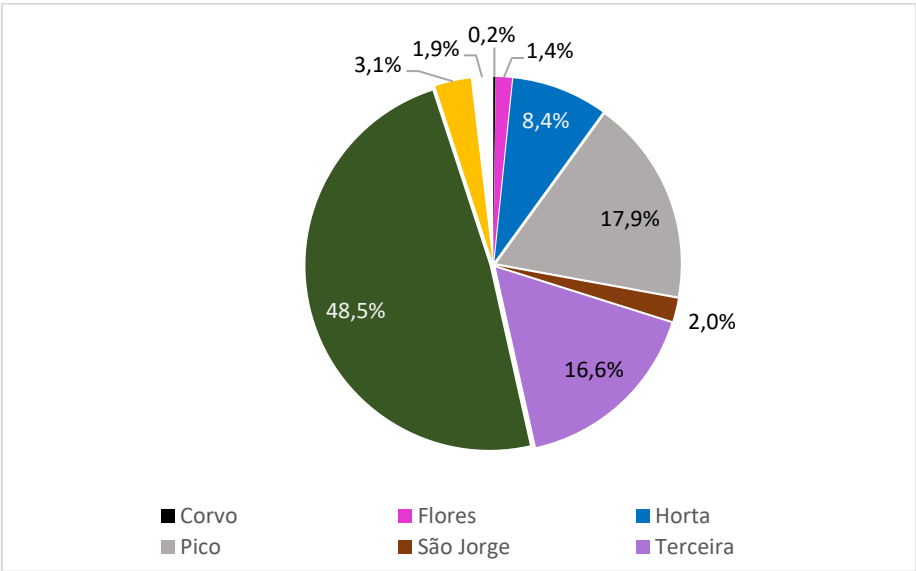


Figure 15 - Proportion of volume of landed fish by island (kg) – 2017

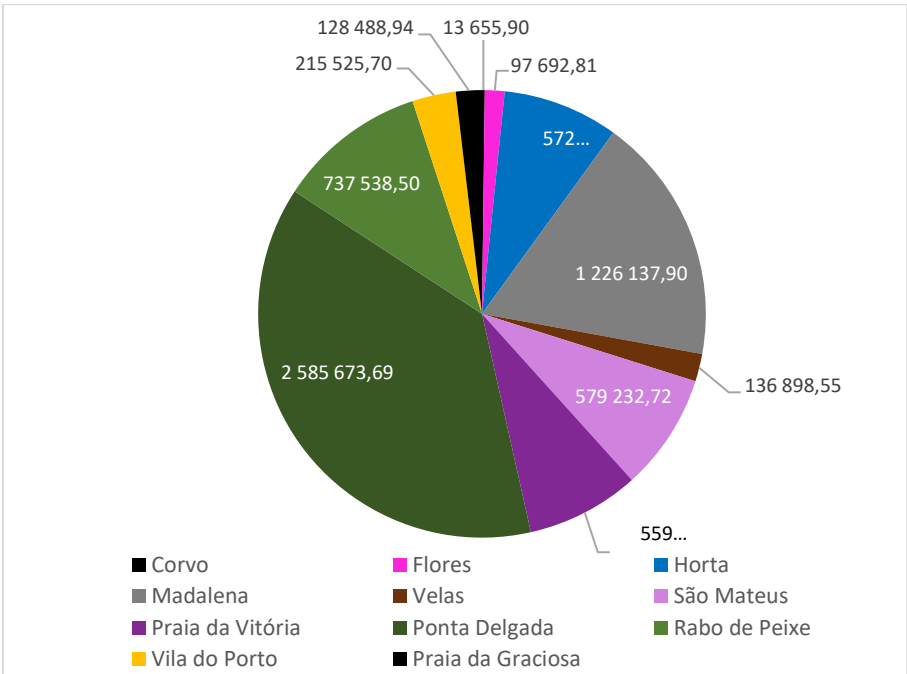


Figure 16 - Proportion of volume of landed fish by island (kg) - 2017

The island of São Miguel is the one that has the higher number of vessels and also the highest volume of landings. Besides, the number of vessels in Terceira is similar to Pico, however the volume of landings in Pico island is higher due to the higher volume of tuna landings registered in this port (fig. 15 and 16).

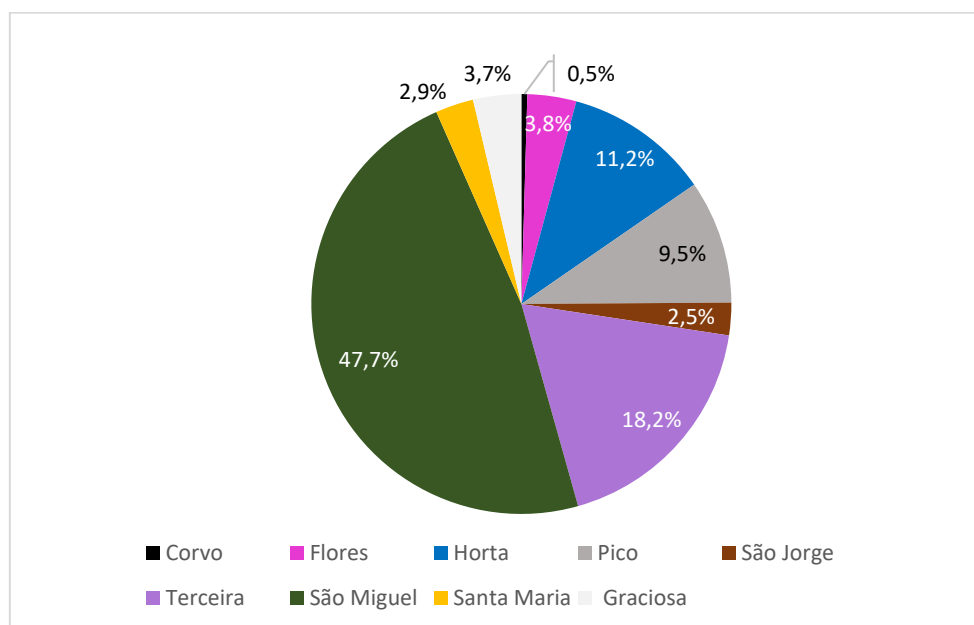


Figure 17 - Proportion of revenues between islands (€) – 2017

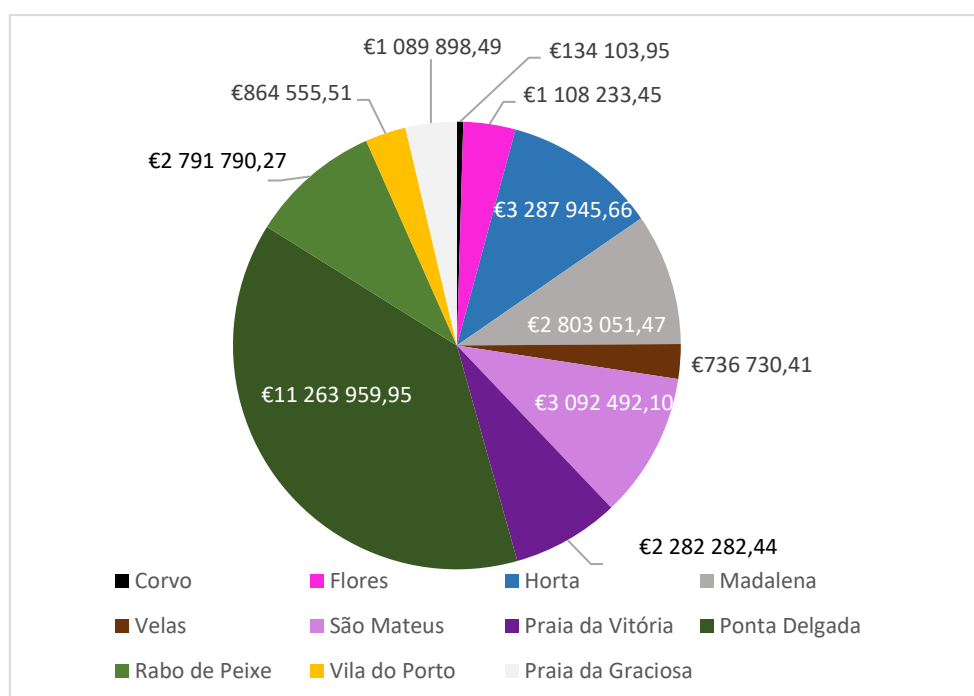


Figure 18 - Proportion of revenues between ports (€) – 2017

Since São Miguel island is the one with higher landings volume it's also the one with higher revenues. Despite Pico has higher landings volume, when compared with Terceira, this island has higher revenues because the landed fish has higher value (fig. 17 and 18).

### Canaries

More than half of the total production of fresh fishery products is unloaded in Tenerife (52.39% of the amount and 47.53% of the value), especially pelagic fish (57.61% and 61.01% respectively) and crustaceans (42.73% and 44.38% respectively, tables 1 and 2).

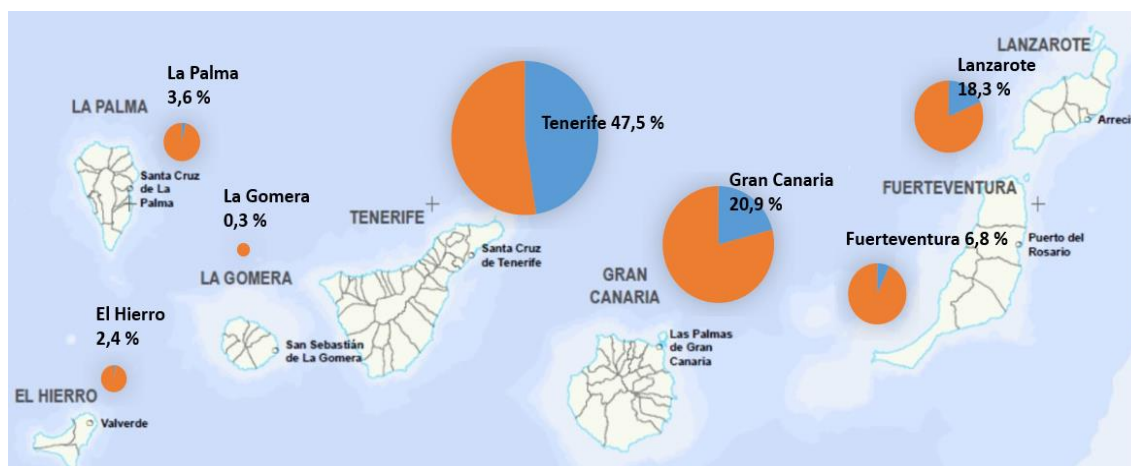


Figure 19: First sale ports of fishery products: (A) Fresh, (B) Frozen<sup>22</sup>.

Source: Canarian Government.

ISLAND	Crustaceans	Demersal	Molluscs	Pelagic	Total
Lanzarote	15.651,70	310.392,86	3.653,04	1.822.988,95	2.152.686,55
	18,03%	18,72%	13,35%	15,11%	15,56%
Fuerteventura	699,30	191.663,84	1.805,00	681.516,50	875.684,64
	0,81%	11,56%	6,60%	5,65%	6,33%
Gran Canaria	7.800,63	719.168,26	10.348,25	1.755.146,08	2.492.463,22
	8,99%	43,36%	37,83%	14,55%	18,01%
Tenerife	37.091,45	252.510,85	8.396,55	6.950.962,55	7.248.969,40
	42,73%	15,23%	30,70%	57,61%	52,39%
La Gomera	963,00	14.107,66	57,50	14.232,00	29.360,16

<sup>22</sup>La pesca en las Islas Canarias. Departamento Temático B: Políticas Estructurales y de Cohesión. Dirección General de Políticas Interiores de la U.E. Irina POPESCU, Juan José ORTEGA GRAS.

## Task 2.1 Strategies, challenges and shortcomings for the marketing of SSF products

Deliverable #49

	<b>1,11%</b>	<b>0,85%</b>	<b>0,21%</b>	<b>0,12%</b>	<b>0,21%</b>
<b>La Palma</b>	16.209,50	107.780,33	2.880,28	670.346,01	<b>797.216,12</b>
	<b>18,67%</b>	<b>6,50%</b>	<b>10,53%</b>	<b>5,56%</b>	<b>5,76%</b>
<b>El Hierro</b>	8.392,03	62.838,24	213,55	169.966,98	<b>241.410,80</b>
	<b>9,67%</b>	<b>3,79%</b>	<b>0,78%</b>	<b>1,41%</b>	<b>1,74%</b>
<b>Total by category</b>	86.807,61	1.658.462,04	27.354,17	12.065.159,07	<b>13.837.790,89</b>
	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>

**Table 1: Fresh fishery products by islands: amount in kg (2017)<sup>23</sup>.**

Source: Canarian Government.

ISLA	Crustaceans	Demersal	Molluscs	Pelagic	Total
<b>Lanzarote</b>	179.488,45	1.921.889,92	29.006,65	3.570.172,58	<b>5.700.557,59</b>
	<b>24,89%</b>	<b>20,85%</b>	<b>18,72%</b>	<b>16,98%</b>	<b>18,32%</b>
<b>Fuerteventura</b>	4.424,16	1.158.730,19	13.562,98	950.000,93	<b>2.126.718,26</b>
	<b>0,61%</b>	<b>12,57%</b>	<b>8,75%</b>	<b>4,52%</b>	<b>6,84%</b>
<b>Gran Canaria</b>	67.147,01	3.630.800,71	50.240,21	2.755.389,37	<b>6.503.577,29</b>
	<b>9,31%</b>	<b>39,39%</b>	<b>32,42%</b>	<b>13,11%</b>	<b>20,90%</b>
<b>Tenerife</b>	320.048,58	1.592.042,59	50.082,68	12.824.903,92	<b>14.787.101,77</b>
	<b>44,38%</b>	<b>17,27%</b>	<b>32,31%</b>	<b>61,01%</b>	<b>47,53%</b>
<b>La Gomera</b>	6.653,00	73.351,95	343,50	22.558,00	<b>102.906,45</b>
	<b>0,92%</b>	<b>0,80%</b>	<b>0,22%</b>	<b>0,11%</b>	<b>0,33%</b>
<b>La Palma</b>	81.375,27	433.815,08	10.482,14	611.069,17	<b>1.136.741,65</b>
	<b>11,28%</b>	<b>4,71%</b>	<b>6,76%</b>	<b>2,91%</b>	<b>3,65%</b>

<sup>23</sup>Canarian Government. First sale data.

<b>El Hierro</b>	62.019,95	406.073,81	1.271,83	286.055,05	<b>755.420,63</b>
	<b>8,60%</b>	<b>4,41%</b>	<b>0,82%</b>	<b>1,36%</b>	<b>2,43%</b>
<b>Total by category</b>	721.156,42	9.216.704,25	154.989,99	21.020.149,02	<b>31.113.023,64</b>
	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>	<b>100,00%</b>

**Table 2:** Fresh fishery products by islands: amount in kg (2017)<sup>24</sup>.

Source: Canarian Government.

Gran Canaria (18.01% of the total amount and 20.9% of the value of production) is a very significant point of discharge of benthic fish (43.36% of the volume and 39.39% of the value) and of molluscs (37.83% and 32.42% respectively).

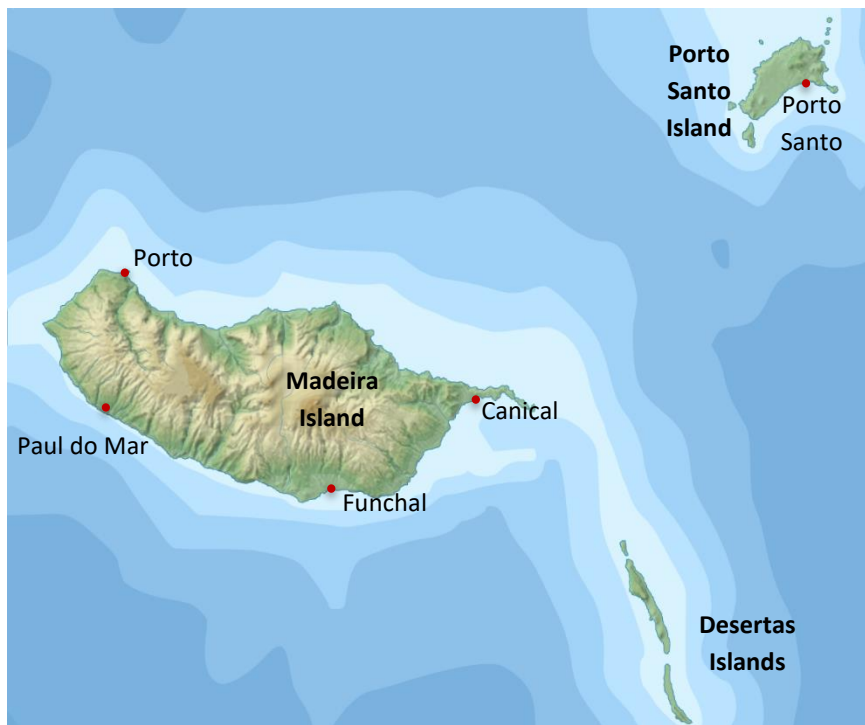
In Lanzarote (15.56% of the total amount of production of fresh products and 18.32% of the value) the discharges of benthic species predominate (18.72% of the total amount of benthic species), while La Palma and El Hierro recorded significant proportions of crustacean discharges (18.67% and 9.67% respectively in terms of quantity).

In general, there is a need to improve the marketing of products by a grouping, equipment and animation of the landing/sale points, and adaptation of boats to increase their economic efficiency and improve the conservation of products on board.

Main fishing activities in Canary Islands are small-scale coastal fishing (for small pelagic species, benthic species and tuna), cephalopod fishing near the African coast through a fleet of freezer trawlers and tuna fishing in the high seas. The catches are downloaded at authorized ports as first-sale markets. Currently, there are 31 authorized entities as points of first sale of fresh fishery products and 17 for frozen fishery products.

<sup>24</sup>Canarian Government. First sale data.

## Madeira



**Figure 20:** Main fishing harbours of Madeira Archipelago.

The main harbours where fish is landed are identified in the map above (Fig. 20). The main harbour is located in Funchal, the capital city of the archipelago, where most catches are disembarked<sup>25</sup>. It is the main harbour where the deep-water fleet unloads black scabbardfish, due to its central location and proximity to services and potential clients. Tuna is also landed in Funchal harbour but since the fleet is based in Caniçal, there are considerable volumes of fish that are unloaded at that port. Not only that but since most crews are from that fishing town, it is convenient to disembark the cargo in Caniçal.

Funchal and Caniçal harbours are the two largest ports in Madeira. The first is one of the national leaders in terms of cruise ship stopovers, and essential for commercial fishing purposes, since most catches are landed at this location. The second one is the main commercial harbour commodities and goods on and off the island<sup>35</sup>. This harbour, located in the southeast tip of Madeira, is completely new, which resulted from a relocation from Funchal to Caniçal to divert the huge volumes of cargo from the city centre.

Porto Moniz harbour is important for the north coast of Madeira. It is the main safe haven for fishing vessels operating north of Madeira and an important site to unload fish, specially limpets, a regional delicacy. It possesses, as Funchal and Caniçal harbours, a proper facility to store fish<sup>36</sup>. Paul do Mar harbour is a small port in the southwest coast. It is historically important for the

<sup>25</sup> Direção Regional de Pescas da Madeira

local population, which is heavily reliant on fishing. Nowadays, it possesses facilities to process fish upon landing, which also include an auction area ('lota')<sup>26</sup>.

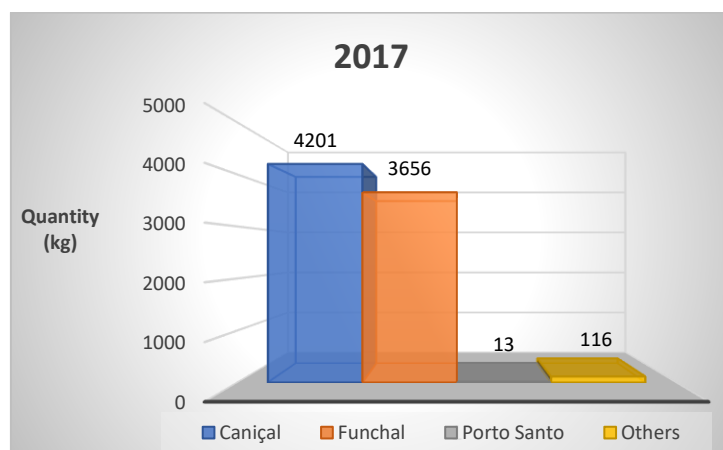
Porto Santo Island has a single harbour, in the southeast coast. Due to its double insularity, it is fundamental for the unloading of essential goods into the island. Also, it remains the only port capable of receiving ferry boats and other similar ships. In terms of unloading and storing fish, it has a small capacity, ideal for the number of vessels that use this port for that purpose<sup>36</sup>.

In terms of quantities landed within the time series analysed (2008-2017), the landscape has not changed throughout the years. Funchal is the leading port, being only surpassed by Caniçal in 2017 (fig. 21). Funchal leads due to, as explained above, to its central location, which combined with its better and larger facilities to land, process, store and dispatch fish elsewhere, makes it ideal for sellers and buyers to operate. The harbour is the target of all sorts of species, from black scabbardfish (almost the entirely) to tuna, small pelagics and demersal species. Caniçal owes its significance due to tuna landings. The harbour is almost exclusively used by the tuna fleet (large vessels mostly), being also used by other vessels but on a much smaller scale than Funchal harbour. Also, the harbour possesses shipyards and length long enough to dock ships where, in addition, is located close to the main highway, connecting all urban centres of the island of Madeira. Porto Santo harbour has a minute importance due to the small number of vessels operating on the island. The harbour is mainly used by local vessels to land tuna almost entirely, and as a shelter when the weather doesn't allow to proceed elsewhere. Considering other ports, it can be mentioned Porto Moniz and Paul do Mar. The first is the main harbour where limpets are landed in the archipelago, mostly due to the presence of many small-scale vessels based in that harbour, operating on that coastline, from Seixal village to Achadas da Cruz, in Porto Moniz municipality. The second is mostly used by the local population to land a miscellaneous species, such as demersal species, black scabbardfish, tuna, and others

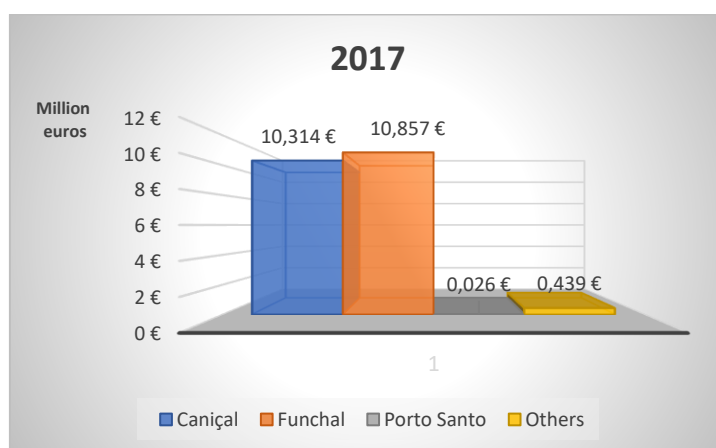
In terms of economic revenues, Funchal has always been the primary port, assuming most of the revenues (Fig. 22). The fluctuations regarding the revenues in Caniçal harbour are related to catch oscillations of tuna throughout the years. Since that harbour deals almost entirely with tuna, the oscillations are connected to that fishery.

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<sup>26</sup> Direção Regional de Pescas da Madeira



**Figure 21:** Fish landings, in terms of quantities unloaded, per group of species in Madeira's commercial harbours (2017). Source: INE, 2017



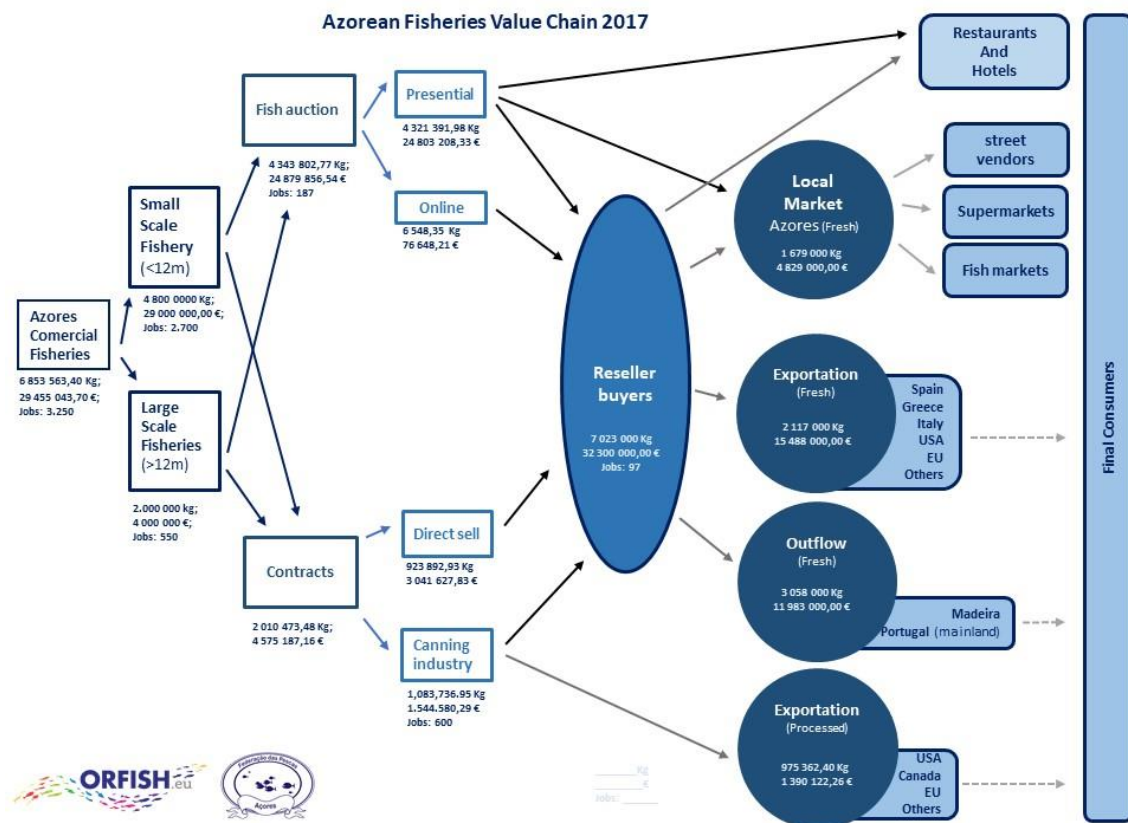
**Figure 22:** Fish landings in terms of economic revenues, per group of species, in Madeira's commercial harbours (2017). Source: INE, 2017

## 2.2 Presentation and comparison of the marketing channels

### 2.2.1 Azores

In the Azores, the fishing considered as large scale (>12m) is essentially for the tuna fish capture and uses the pole and line method. This subsector employed in 2017 approximately 550 people.





In 2017, the Azorean commercial fishing landed was about 7 000 tons of fish, in an estimated amount of 30 M€<sup>27</sup>. We estimated that in this year, the fisheries sector employed, directly, about 3 250 persons.

Considering the dimension of the Azorean fishery vessels, we divide the small-scale fisheries in two: fisheries with vessels that have less than 12m and fisheries with vessels that have more than 12m. Independently of the size of the vessels, the Azorean fisheries are, mainly, artisanal and sustainable. The fisheries with vessels >12m (fig. 23) are essentially for the tuna fish capture and uses the pole and line gear, so we consider it as a small-scale fishery also. This subsector employed, in 2017, approximately 550 persons. The tuna fish landings in 2017 were about 2 000 tons with a total value in first sale, that generated revenues of about 4M€.

<sup>27</sup> M€ - Millions euros



Figure 23 - Tuna fishing vessels (>12m)

On vessels less than 12m, are mainly used the handline gears, like longline, lift nets and tangle nets (fig. 24). In 2017, these fleet employed about 2 700 persons and it was responsible for about 25M€ of revenues coming from the 29 000 tons of landings.



Figure 24 - Small-scale local fishing vessels (<=12m)

The captured seafood is sold through fish auctions or by established contracts with canning industry, restaurants, wholesalers or to export. These fish auctions employed in 2017, 187 persons and traded about 4.340 tons of catches with a total value of 29M€. The seafood that goes through these fish auctions are sold either presentially or online.

The 4320 tons of acquired fish, presentially, were distributed to resellers (the majority), restaurants, hotels and local market.

The online market traded 6.5 tons of fish which were in total, acquired by resellers.

Another way of seafood commercialization, at the first sale, is through the establishment of contract between shipowners and the buyers. These contracts represent about 1/3 of the traded catches in fish auctions and can be directed to resellers – through direct sale – or to the tuna fish transforming industry, who will commercialize it, with their canned, to the Azorean resellers or export to USA, Canada, EU, and others.

The Azorean resellers traded about 7 tons of seafood in 2017, with a total value of 32M€. These commercial agents are responsible for the sale of the seafood to restaurants, hotels and local market (street vendors, supermarkets and fish markets), by the fresh fish export to countries like Spain, Greece, Italy, USA, EU and others. By the sale of our fresh fish to other regions of our country (Portugal mainland and RA Madeira).

Therefore, we know that the fishery sector contributes with more than 20% for the Azores exports and guarantees the territorial cohesion of dozens of small fishing communities, distributed on the nine islands of Azores.

### Fish auctions

The Lotaçor – service of fish auctions from Azores, belongs to the business public sector of the Azores and their mission is to carry out all the operations on the first sale of fish, as well as provide support for the fisheries sector and respective ports on the nine islands of the archipelago, being doubly supervised by the Regional Secretariat of the Sea, Science and Technology and the Vice-Presidency of the Government, Employment and Business Competitiveness.

Lotaçor is responsible for managing the 11 fish auctions, the 21 fresh fish collection points and the entire cold chain and ice production, serving the regional fishing fleet. The fish auction of **Corvo** Island, trades exclusively fish caught by local fishing vessels. It has 2 ice making machines for vessels and local merchants with capacity to produce up to 4 tons / day (total). In 2017, the total volume of landed fish in this port was 13 tons, which generated a total revenue of 134 103,95 €. The average price of the landed fish was 8,43 €.

The fish auction of the Old Port in **Santa Cruz (Flores)** trades exclusively fish caught by local fishing vessels. This fish auction has a refrigerated chamber with capacity for half a tons and 3 ice making machines for vessels and local merchants that produce up to 2 tons/ day (total). It also has a fish selection zone. In 2017, the total volume of landed fish in this port was 98 tons, which generated a total revenue of 1 108 233,45€. The average price of the landed fish was 6,59€.

The fish auction at the port of Santa Cruz in **Horta (Faial)** (fig. 25), trades fish caught by local and coastal fishing vessels. Provides ice to local vessels and merchants. It has a 3 Tons refrigerated storage chamber. In 2017, the total volume of landed fish in this port was 573 tons, which generated a total revenue of 3 287 945,66 €. The average price of the landed fish was 5,56 €.

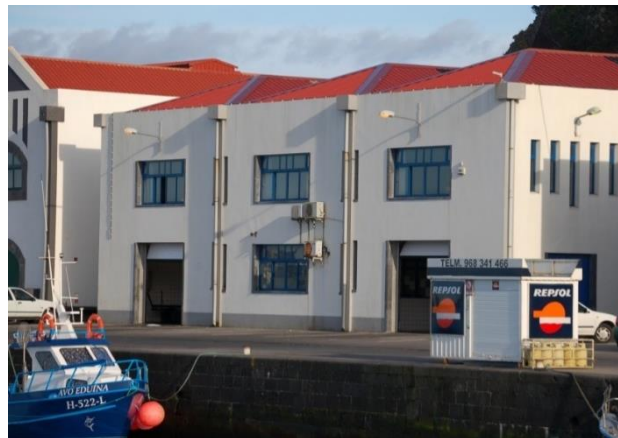


Figure 25 - Fish auction in Horta (Faial island)

The fish auction of the port of **Madalena** (Pico) trades fish caught by local and coastal fishing vessels. The fish auction has 1 refrigerated chamber with storage capacity of 5 tons and 2 machines of manufacture of ice destined to the boats and local merchants that can produce until 4.5 tons/ day (total). In 2017, the total volume of landed fish in this port was 1 226 tons, which generated a total revenue of 2 803 051,47 €. The average price of the landed fish was 4,39€.

The fish auction of the port of **Velas** (São Jorge) trades exclusively fish caught by local fishing vessels. It has a refrigeration storage chamber with capacity for 1.5 tons and 1 ice machine for local vessels and merchants that produces up to 2.4 tons/ day. In 2017, the total volume of landed fish in this port was 137 tons, which generated a total revenue of 736 730,41 €. The average price of the landed fish was 6,08 €.

The port of **Graciosa** trades fish caught by local and coastal fishing vessels. It has 1 frozen storage chamber with 8 tons capacity, 1 refrigerated storage chamber with 7 T capacity and 3 ice making machines for vessels and merchants that produces up to 11 tons/ day. In 2017, the total volume of landed fish in this port was 129 tons, which generated a total revenue of 1 089 898,49 €. The average price of the landed fish was 5,37 €.

The fish auction of the port of **São Mateus da Calheta** (Terceira) trades fish caught by local and coastal fishing vessels. It has a conservation of refrigerated fish chamber with a capacity for 3 tons and 1 machine of production of ice to the boats and to the local merchants that produces until 8 Tons per day. In 2017, the total volume of landed fish in this port was 579 tons, which generated a total revenue of 3 092 492,1 €. The average price of the landed fish was 4,71 €.

The fish auction of the port of **Praia da Vitória** (Terceira) trades fish caught by local and coastal fishing vessels. It has two ice making machines for vessels and local merchants with capacity for 16 Tons per day. In 2017, the total volume of landed fish in this port was 560 tons, which generated a total revenue of 2 282 282,44 €. The average price of the landed fish was 4,79 €.



The fish auction in the port of **Rabo de Peixe** (São Miguel) (fig. 26), trades fish caught by local and coastal fishing vessels. The fish auction has a refrigeration storage chamber with a capacity of 4 tons and an ice making machine for vessels and local merchants that produces up to 9 Tons per day. In 2017, the total volume of landed fish in this port was 738 tons, which generated a total revenue of 2 791 790,27 €. The average price of the landed fish was 6,88 €.



Figure 26 - Fish auction of Rabo de Peixe

The fish auction of **Ponta Delgada** port (island of São Miguel) (fig. 27), trades fish caught by local and coastal fishing vessels. It has 4 ice making machines for vessels and local merchants, with a daily production capacity of 40Tons and has a fish selection zone. In 2017, the total volume of landed fish in this port was 2 586 tons, which generated a total revenue of 11 263 959,95 €. The average price of the landed fish was 4,38€.



Figure 27 - Fish auction in Ponta Delgada

At the fish auction in the port of **Vila do Porto** (Santa Maria Island), in a building adjacent to the cold store, fish are traded by local and coastal fishing vessels. The fish auction has two ice making machines for vessels and local merchants, with a daily production capacity of 8 tons (total). In 2017, the total volume of landed fish in this port was 216 tons, which generated a total revenue of 864 555,51 €. The average price of the landed fish was 5,20 €.

### Contracts

The contract is a mechanism that exists in fisheries sector that allows a buyer (reseller buyers or canning industry) to make a direct contract with a shipowner, where they establish the value to be practiced on the fish and the quantity. All the contracts established must have the authorization for sale by a Producers Organization and by Lotaçor. These entities confirm that the price established is in accordance with the rules of the Common Organization of the Markets and its above the average of the retail value in the last 15 days. These contracts are celebrated online.

### Online selling

The online sales/auction, promoted by Lotaçor, requires prior registration by the buyer in the Lotaçor database. Then buyers must access to [www.mercapesca.net](http://www.mercapesca.net) and apply for registration on the online sales portal through the contact form page, where they must select the auction of interest. After entering in the auction, they can pay for their purchases with the *Paypal system* or through a deposit (never less than the amount of purchases). After the trial period, you can enter into a credit agreement, where the value can never be less than the amount of the total purchases for 30 days. This service has a cost of 60,00€/month, plus a percentage payable to Mercapesca and Lotaçor. Invoices will be mailed daily to buyers. The online auction starts every day of the week, at 6 a.m., local time.

### Canning Industry

The Portuguese Industry of Canned Fish has over 160 years of existence and was created with an eye on the future exportation. In fact, with the Paris universal exhibition in 1885 (where canned sardine from Setúbal was sent) was given the great "kick-off" to the development of an activity, that today is so traditional. In the Azores, the canning industry was developed in the second half of the 20th century, based on tuna fishing.

The history of the canning industry is born in the south of Portugal (mainland), in Vila Real de Santo António, at the end of the 19th century, where the first canning factory was built and dedicated to the production of canned tuna.

Tuna fishing has been, for more than a century, the economic engine of the Algarve region, bringing this fish to the table to thousands of people around the world. With the growth of exports in the course of the 20th century, thanks to the quality of the fish caught on the Portuguese coast, the tuna gained a privileged place in world's gastronomy.

However, the increased demand for this fish has led to an over-exploitation of the Algarve coast, and it had been necessary to find alternative locations for tuna fishing. In this way, and also taking advantage of the alteration of the migratory route of this species, the canning industry arrived in the Azores (fig. 28).



Figure 28 - Tuna canning industry in Azores

In 1962, Bom Petisco brand (fig. 29) settled in the islands of São Miguel and Pico, taking advantage of the best in the region.



Figure 29 - Tuna cans from Bom Petisco, Cofaco company

The truth is that, apart from being a privileged point of passage on the migratory route of many marine animals, the Azores present the ideal conditions, due to the temperature of the waters and its volcanic origin, for the reproduction of the tuna.

Among the various species of tuna that inhabit the Atlantic Ocean, the highlight is Skipjack tuna (*Katsuwonus pelamis*). The way this specie is fished is another of the peculiarities that contributes to the appreciation of this industry that has as its motto: the sustainability of fisheries. Tuna fishing in the Azores archipelago, which is governed by strict criteria for the protection of the marine ecosystem, is referred to as 'pole-and-line' fishing or 'live bait fishing', using small live pelagics as bait. This activity is carried out with the collaboration of the POPA - Program of Observation for Fisheries in the Azores (fig. 30) -, a project of monitoring and control of the fisheries, with the objective of guaranteeing the marine preservation.



Figure 30 - Program of Observation for Fisheries in the Azores

Once caught, the fish is carefully handled so it can withstand as much time as possible. Arriving at the factories, is cut and worked by hand to be cooked. After that is preserved in oil, olive oil or water, and then subjected to a sterilization process. Without the use of artificial preservatives, is given quality assurance of a 100% natural product, that keeps its nutritional properties.

Currently, the canning industry in the Azores has four companies: Cofaco in São Miguel, Santa Catarina in São Jorge (fig. 31), Pescatum in Terceira (fig. 32) and the Corretora (fig. 33), installed at the beginning of the 20th century in São Miguel.



Figure 31 - Tuna cans and logo, from Santa Catarina tuna company



Figure 32 - Logos from Azorean tuna companies (Cofaco and Pescatum)





Figure 33 - Tuna cans and logo from Correctora company

### Infrastructures for the commercial channels

The infrastructures used to export and outflow the Azorean fish, are essentially ports and airports. The choice of the transportation way depends on the time needed for the fish to reach its destination.

In relation to the maritime way, the Azores has 14 commercial ports and 42 fishing ports (fig. 34 and 35) on the 9 islands of the Azores. The fishing ports are managed by the Regional Fisheries Directorate. This port allows the loading and unloading of the vessels and are equipped with infrastructures to assist the fishing activity. The regional government, in partnership with local and national entities, is re-evaluating the maritime transport model, to make the existing port infrastructures more profitable and improve the exit and entry of goods into the Region. In the specific case of the fisheries, this means transport is used to outflow/export fresh, frozen or processed fish in appropriate containers.

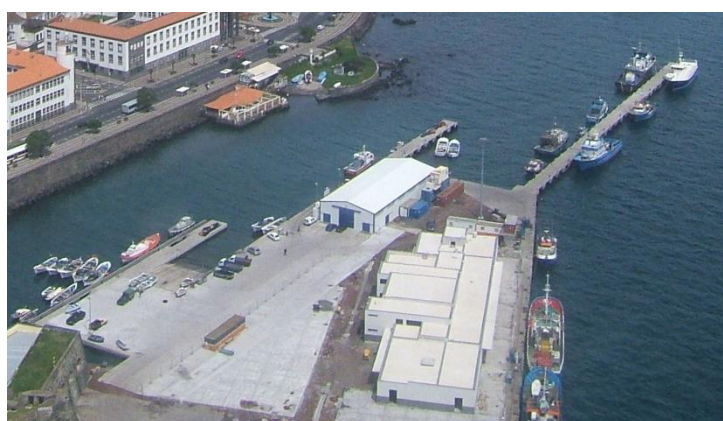


Figure 34- Port of São Mateus (Terceira)



Figure 35 – Port of Ponta Delgada

Considering the air transportation way, the Region has nine airports that serve each of the Azores islands which, in the case of fisheries allows fresh fish to be sent to the final destination in a shorter period of time and in better conditions. However, the Azores is located in a region where commercial airplanes are the main air transport, the volume that can be transported by this way is not enough. Regarding air transport, Azores have other limitations, such as the lack of cold storage at airports for fish, which causes great logistical constraints and also the fact that the small and old X-ray airports equipment are not prepared to evaluate large volumes of cargo, making this transportation more difficult to inspect and to transport fish outside our region.

### 2.2.2 Canaries

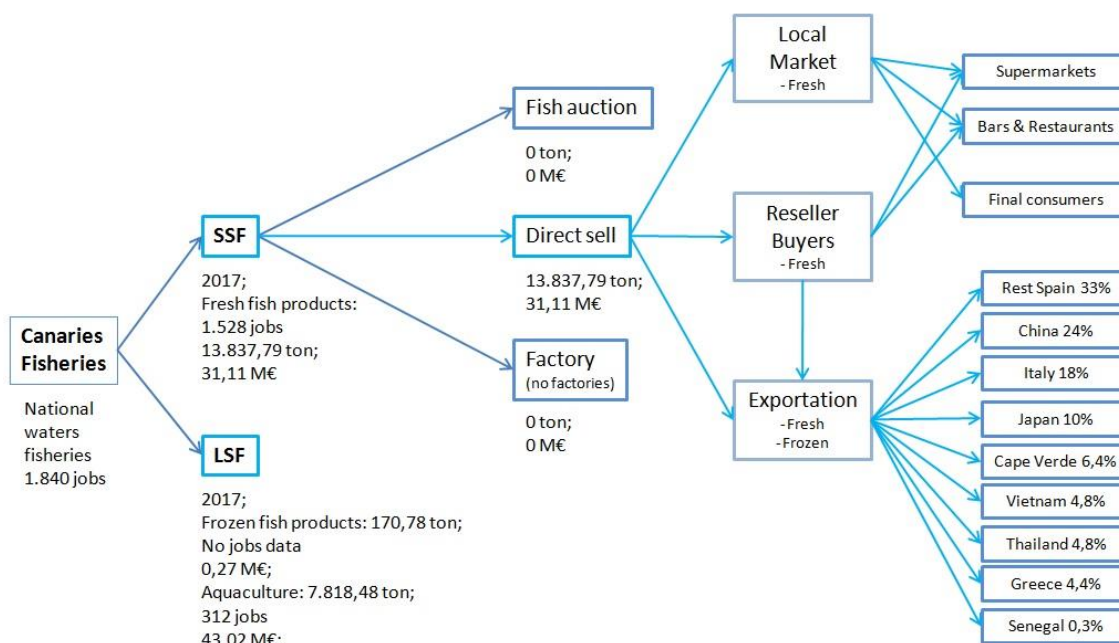
SSF value chain in the Canary Islands is quite simple, since there is no longer local industry that manufactures fish, nor fish auctions, production follows other marketing channels.

Main and preferred by fishermen sale channels are bars, restaurants and also direct sales to the final consumers. Part of the catches (depending on the season and species) is sold to reseller buyers who in turn sell it to supermarkets or export to companies in the peninsula for processing and canning. For example, in bluefin tuna period, most of the catches are sold through ISLATUNA (in Tenerife), which is responsible for exporting them to the rest of Spain, Europe and Japan.

Minor tunas are sold directly to supermarkets and restaurants.

## Task 2.1 Strategies, challenges and shortcomings for the marketing of SSF products

Deliverable #49



As we will see in following parts of the document, sales channels are quite simple in Canary Islands. Most of fish landing comes from small scale fisheries, and it is almost totally sold directly to final seller or consumer. A part of this landings go to reseller buyers, that sells in the islands and export to the rest of Spain, Europe and Asia mostly.

Landings tonnage per marketing channels. 2017 (In Tons)		SSF Landings tonnage per marketing channels. 2017 (In Tons)	
SSF: Freshfishproducts	13.837,79	Fish auction	0
LSF: Frozen fishproducts	170,78	Direct sell	13.837,79
LSF: Aquaculture	7.818,48	Factory	0

Table 3: Landings tonnage per marketing channels. 2017 (In Tons).

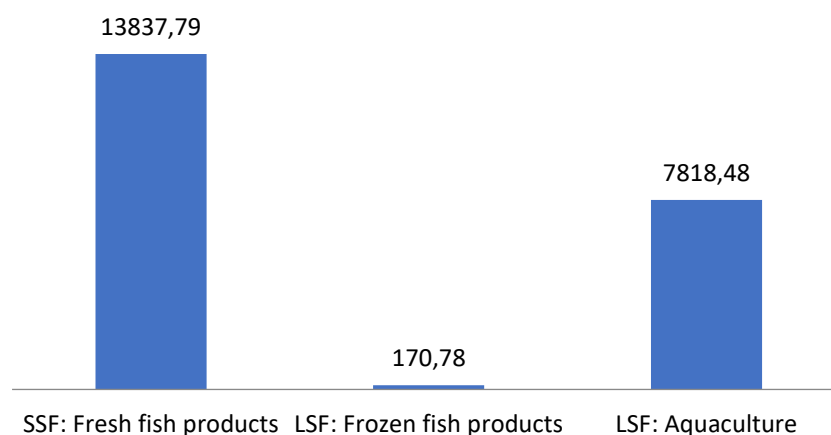


Chart 5: Landings tonnage per marketing channels. 2017 (In Tons)

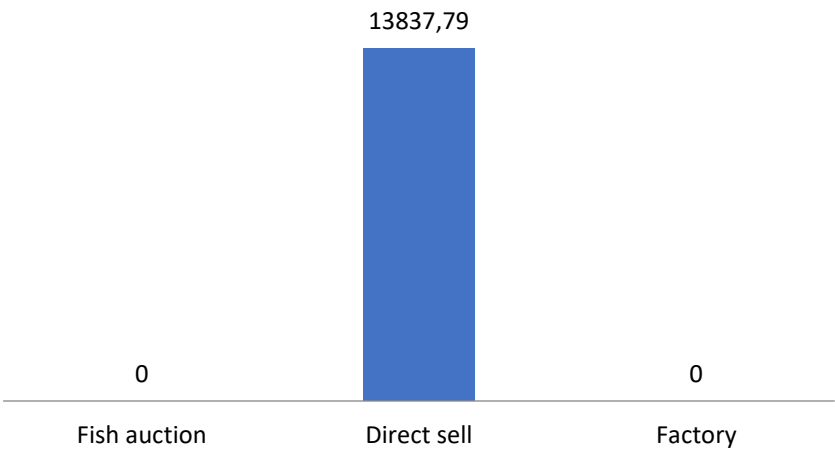


Chart 6:SSF Landings tonnage per marketing channels. 2017 (In Tons)

Landings value per marketing channels. 2017 (In millions of Euros)		SSF Landings value per marketing channels. 2017 (In millions of Euros)	
SSF: Fresh fish products	31,11	Fish auction	0
LSF: Frozen fish products	0,27	Direct sell	31,11
LSF: Aquaculture	43,02	Factory	0

Table 4: Landings value per marketing channels. 2017 (In millions of Euros).

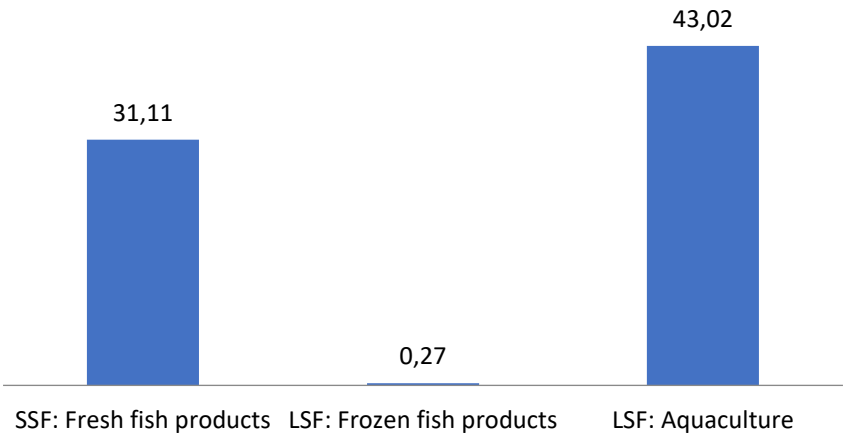


Chart 7:Landings value per marketing channels. 2017 (In millions of Euros).

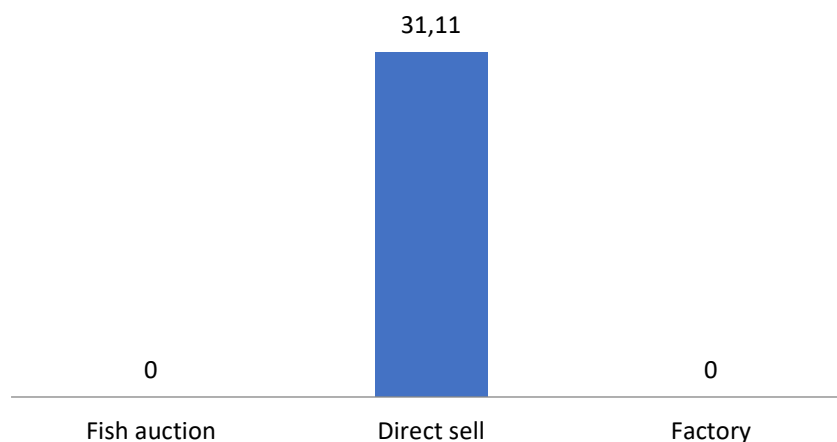


Chart 8:SSF Landings value per marketing channels. 2017 (In millions of Euros).

## In-house trade

In-house trade data is obtained from an investigation with surveys made specifically to Tenerife's fishermen. Although there may be slight differences, we estimate that the commercialization channels found can be extrapolated to Gran Canaria Island.

Perhaps fish type is the most important characteristic that determines the intensity with which a species is caught and the commercial route with which its sale is established. Not all marine species are fished with same intensity. Actually, very appreciated and fished species in other places can be ignored or less valued in our environment.

Four fishery products grouped according to their fishing method, freshness period and demand can be differentiated in Canaries. These groups usually mark the fishing strategies, characterize the different fishing nuclei Island and generate diverse commercial routes that pursue the maximum economic benefit. These groups are shrimp, whitefish, coastal pelagics and tunas.

Product	Medium selling price	Estimated maximum days to first sale	Estimated maximum days to consumption	Marketing channels
Chrimp	10 – 12€/Kg.	1	1	Bars/Restaurants Direct sale
Whitefish	8 – 12 €/Kg.	2	9	Direct sale Restaurants Small fish stores
Tunas	1 - 7€/Kg.	7	10	ISLATUNA (Resellerbuyer) Pescados Ramón (Resellerbuyer) Mercadona (Supermarket) Small fish stores

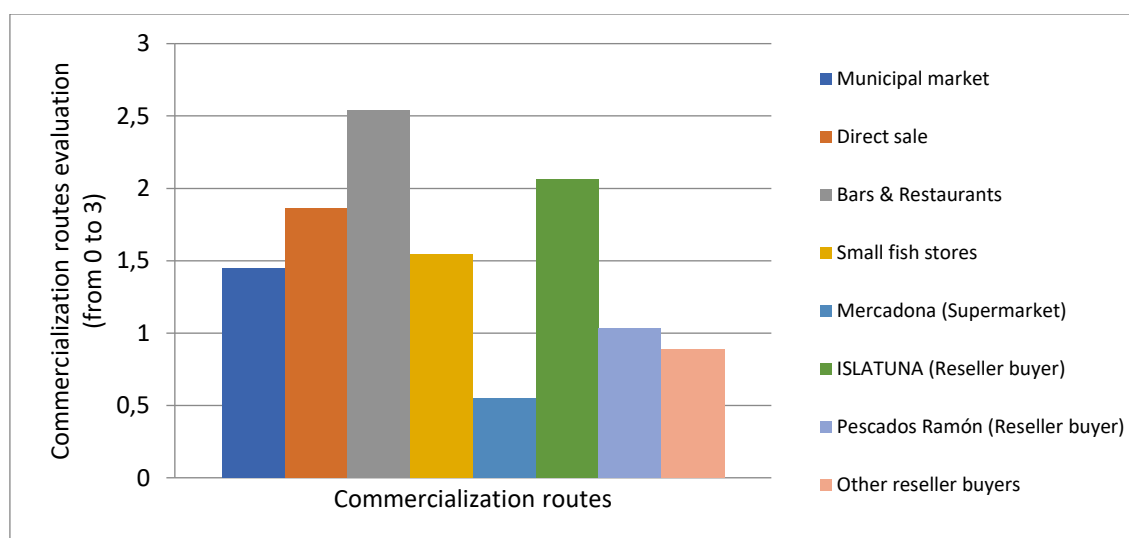
				Direct sale
<b>Coastal pelagics</b>	2 - 4€/Kg.	1	2	Mercadona(Supermarket) Big fish markets ISLATUNA (Reseller buyer)

**Table 5: Commerce by fishing interest group.**

Source: Pascual. J.J. et al.

With data taken from these surveys, the most valued commercial routes can be shown. Direct sale to Bars and Restaurants is the most valued commercial route, followed by sale to ISLATUNA (Reseller buyer). The second most valued routes are individual sale, small fish stores and direct sale in municipal stalls. These most valued marketing channels data can be extrapolated: Direct sales to bars and restaurants and direct sales to individuals. Meaning that fishermen and fisherwomen sells their catches to restaurants and fish stores (form their mobile phone, while going to the port) and the rest of their catches are sold municipal stalls.

Finally, least valued routes are the rest of intermediaries and final sellers, such as Mercadona (Supermarket).



**Chart 19: Preference and evaluation summary of commercialization routes made by fishermen.**

Source: Pascual. J.J. et al.

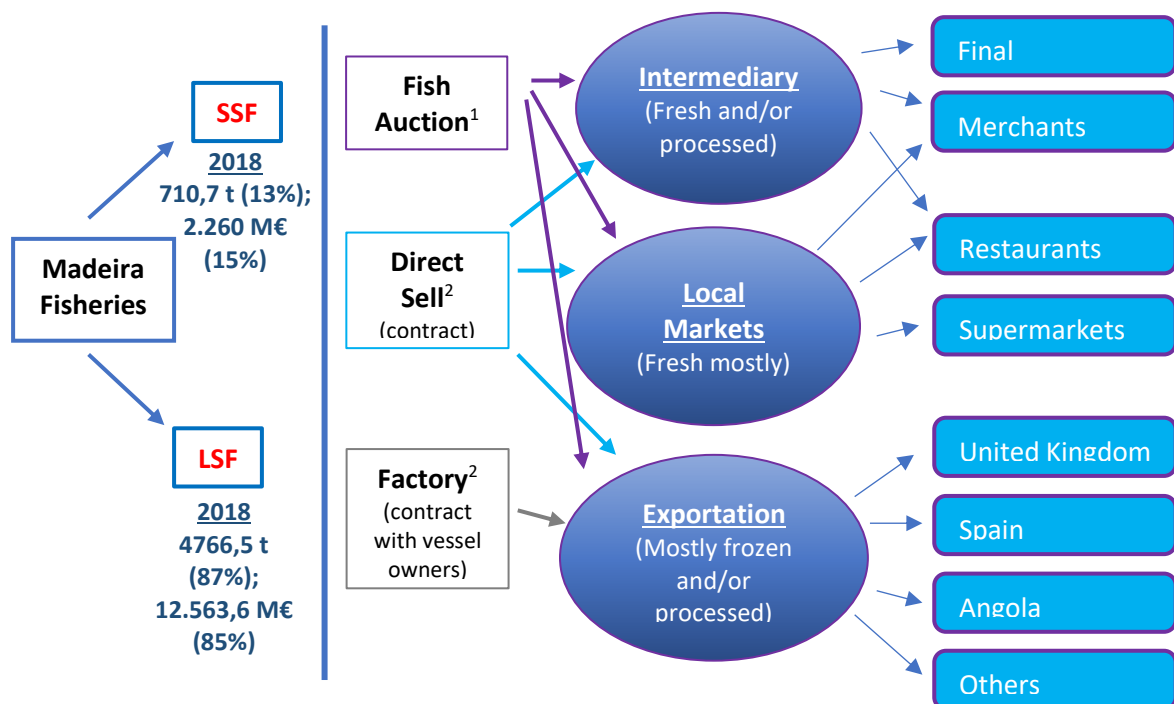
Comparing shown so far data, we can summarize that there is a difference between island consumption products and those that are exported to the rest of Spain and other countries. Vast majority of tuna catches are exported and usually return canned to islands.

Of the rest of production, crustaceans mainly, molluscs and demersal are destined to the island consumption and part of the pelagic production is also exported.

Exports data are taken from the Foreign Trade Statistics of the State Agency of the Tax Administration (AEAT), which has as sources of information the Single Administrative Document (DUA) and the system of collection of statistical data of exchanges of goods between countries of the European Union (INTRASTAT).

Consequently, it is currently too complicated knowing the exact amount of Canarian production that is exported and that which is traded internally.

### 2.2.3 Madeira



The Madeira fisheries sector is a very concentrated industry. Four categories consist the bulk of the sector in the archipelago, namely the tuna fishing, the black scabbard fishing, the small pelagic fishing (locally known as “ruama”) and other types of fisheries, which include the demersal species and limpets. The industry is internally regulated by the Directorate of Fisheries of Madeira Government (DRP-Madeira). In addition, a fishermen’s association exists, namely Coopescamadeira – Cooperativa de Pesca do Arquipélago da Madeira, CRL., which also summons upon itself the role of a Producers Organization (PO), the only one in Madeira. The latter has a role in the sector by defending the shipowners and fishermen rights internally and abroad, through the participation on the South West Waters Advisory Council (SWWAC), keeping the sector within regulated boundaries, and provides technical support to its members.

The sector relies on landing ports to transfer their catches from the vessels to appropriate facilities. The fish passes mandatorily through a registered landing site (in Portuguese “lota”), whether if it’s in Funchal, or Caniçal, or any other commercial harbour, with DRP staff ready at



port to handle the fish, register and weight the fish. Subsequently, the fish is sold according to the type of method that the shipowner chooses.

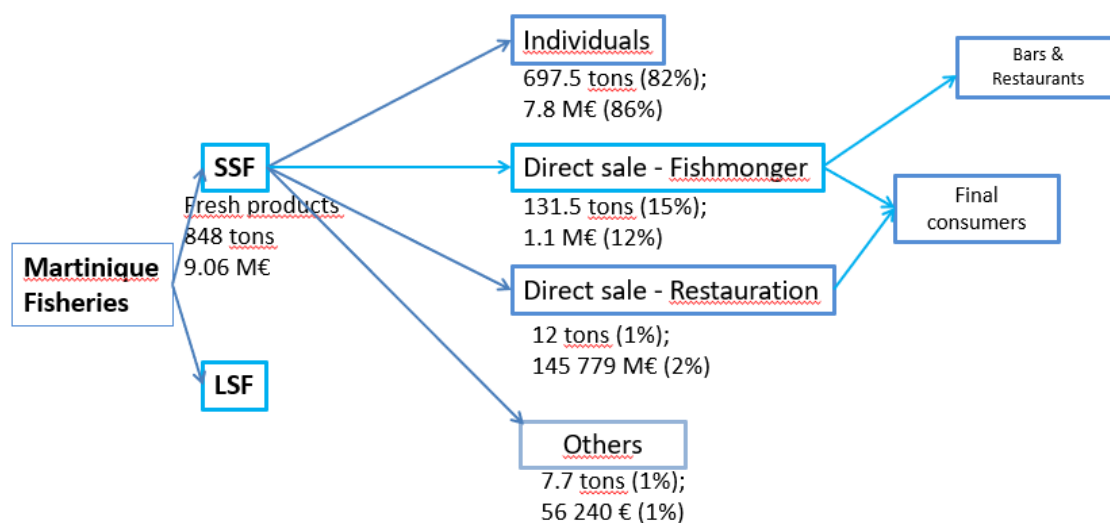
The value chain in Madeira undergoes a fairly simple process. Fish products are processed through: 1) at the **fish auction**, in Funchal or Caniçal harbours, in which the fish is exhibited for all the potential buyers. Each buyer has a specific licence and number, prerequisites to bid. This method is mainly made for fish caught by the SSF fleet; 2) **direct sell** via contracts, in which the fish is landed at port and goes directly to the client. A prearranged contract enables the transaction at fixed and agreed prices. This method is mainly done to supply restaurants and small intermediaries that sell fish to other individual buyers and/or final consumers. It is mostly a process which is undertaken by SSF vessels, although larger vessels channel through their fish within this *modus operandi*; 3) **contracts** with factories and large buyers. The fish is landed at port, being processed at appropriate facilities to handle and transform fish. This method is mainly done by the larger vessels of the fleet, mostly tuna vessels and the black scabbardfish vessels, that catch significant quantities of fish. Factories usually sell their products to larger supermarket chains, at the island, in the mainland and abroad.

Another aspect to be mentioned is the role that the producer's organization (OP) in Madeira has within the process of landing fish at port. As legislated by European law (Regulation (EU) N.º 1379/2013 from the European Parliament), producers organizations have an important role in the management of resources, commercialization chain and quality control of its members products. It is on this regard that Coopescamadeira – Cooperativa de Pesca do Arquipélago da Madeira, CRL., acts in Madeira fisheries. The OP not only enables the technical support to its members, but also maintains fishermen and regulating body in sync by conveying information and keeping the sector up-to-date and running as smooth as possible. In addition, the OP is present in the evaluation of the products freshness and quality, according to the Regulation (EU) N.º 2406/96.

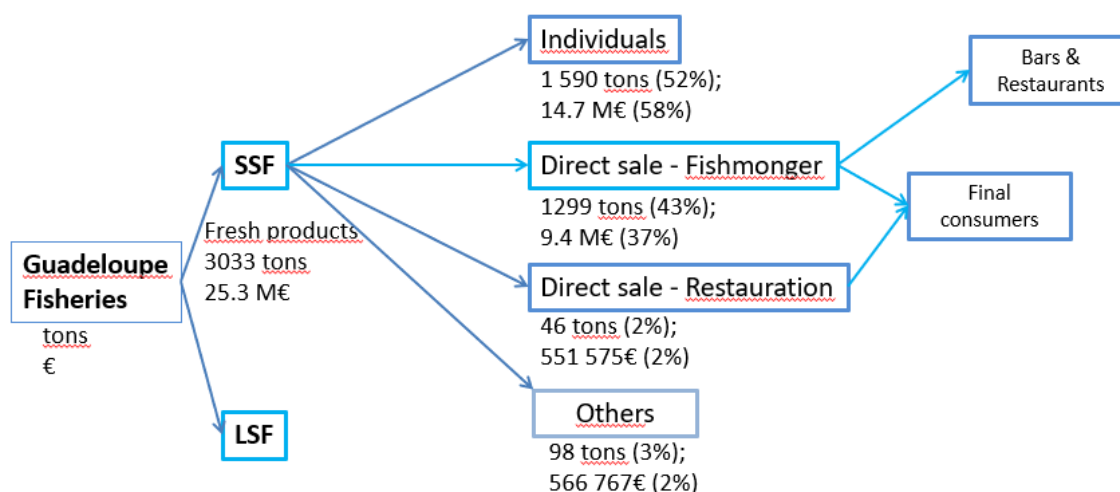
### 2.2.4 French RUPs



### The marketing channels of Martinique (average 2015-2017)



### The marketing channels of Guadeloupe (average 2015-2017)



In the French ORs, everything is sold locally, meanwhile the importations are very high, to permit answering the increasing demand on fish products.

### 2.3 Labelling schemes strategies

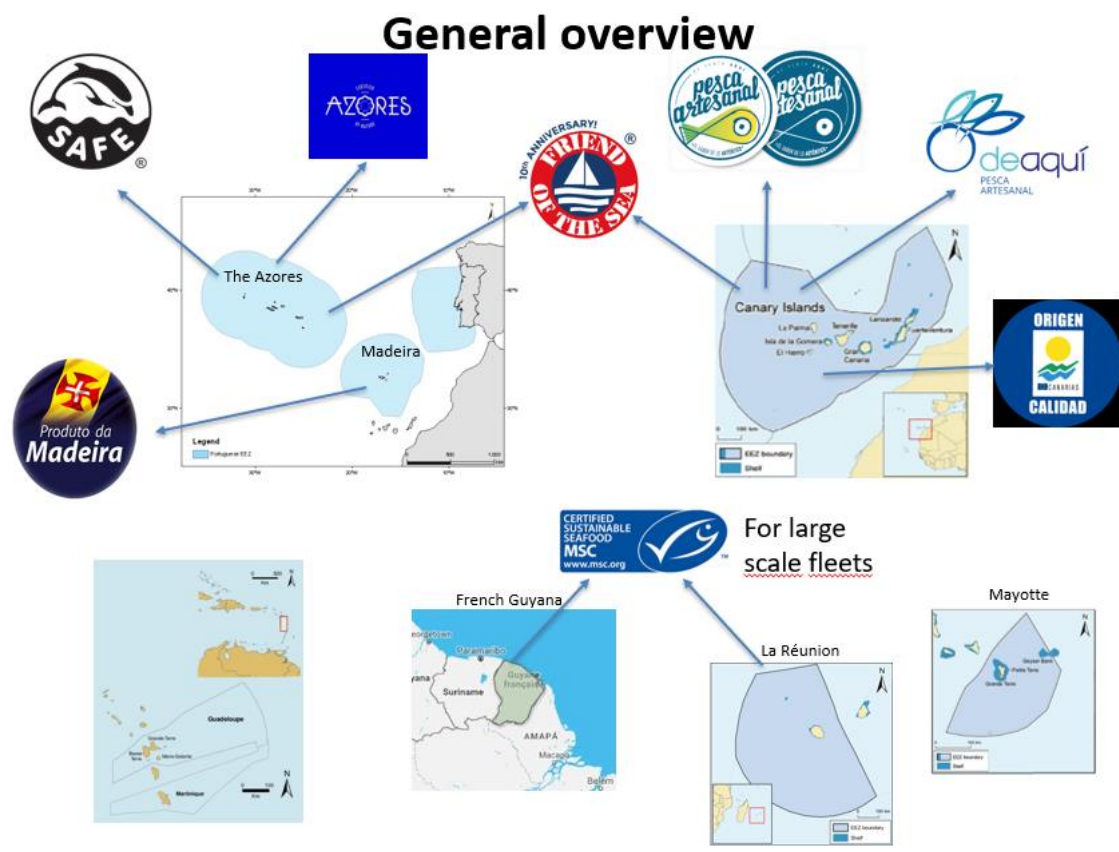
In front of these diverse situations, it seemed very interesting to talk about the subject of labelling, which could permit a real product valorisation and differentiation.

First, it is important to define the concept of labelling. It can be defined by:

- Its level of application (SSF, LSF, fishery, species, raw products (fishery & agriculture), Area or region)
- If it is certificated or not
- If it is the case, who is the third-party certification (dependant, independent and transparent or not, monitoring)
- Its objectives & criteria (differentiation, quality, fisheries sustainability, ...).

The situation in labelling for the different ORs is here as well, pretty different among them.

This following general overview permits to show this diversity. SSF label is for example absent in the French ORs.



ORs	Status		Labelling objectives & criteria							Scope		Certification		
	Label name	Status	Level of application	Products differentiation	Promotion-information-knowledge	Traceability	Local economy	Sustainability	With other primary sector products	SSF	LSF	Type fisheries or gear	Certification or not	Third party certification
Madeira	Producto da Madeira	Established	Regional	✓	✓		✓		✓	✓	✓	Only the fish itself	✓	Regional Secretary of Agriculture & Fisheries
	Pesca Artesanal	Established	Local	✓	✓	✓	✓	✓		✓			✓	Tenerife Government
	de aqui	Established	Local	✓		✓		✓		✓		Fish traps/hooks (lines and longlines)	✓	Gran Canaria Calidad
Canaries	Símbolo RUP	Established	Europe	✓	✓			✓	✓	✓	✓		✓	Canaries government
	Libre de ciguatoxinas	Established	Regional			✓				✓				Canaries government
	Friend of the Sea	Established	World		✓			✓		✓	✓	Tuna fishing: Only OPTUNA certified	✓	Accredited independant certification bodies
Açores	Marca Açores	Established	Regional	✓	✓	✓	✓		✓	✓	✓	Only the fish itself	✓	Regional Directorate for Investment and Competitiveness
	Dolphin Safe Certification	Established	World		✓			✓		✓	✓	Pole & line Tuna fishing	✓	Earth Island Institute
	Friend of the Sea	Established	World		✓			✓				3 certified entities in the Azores	✓	Yearly audits onsite by independent international certification bodies
La Réunion*	MSC	Established		✓	✓	✓	(✓)	✓			*Outside ORFISH scope		✓	
Guyane*	MSC	In assessment		✓	✓	✓	(✓)	✓			*Outside ORFISH scope		✓	

After reading this previous table, we can see that the label “Producto da Madeira” is not a sustainable fishing label.

### 2.3.1 Case study on the Azores

#### Marca Açores (Azores Brand)

The label Marca Açores is an initiative of the Azores Government, it is implemented, and its cost is 25 euros per year and per product, paid to the Azores Government, which in return, provides the necessary support. The Government of the Azores assumed the construction of an Azores brand (fig. 36) as one of the pillars that will drive the internal and external promotion of the Region.



Figure 36 - Azores brand logo (PT)

The identification of the Region with a brand of quality that differentiates the product from the most distinctive attributes of the Azores - nature, high environmental value, diversity and natural exclusivity - proves to be of undeniable importance in the success of a strategy access and market loyalty, with the purpose to value the azorean products and services and fostering the economic base of exports.

Azores Brand aims to become a global reference brand, that identifies the Azores offer, both in terms of tourism promotion and dissemination of its products and services. One of the main objectives of the Azores brand is the intensification of applications of regional products for the certification of Protected Designation of Origin (PDO), Protected Geographical Indication (PGI), Traditional Specialty Guaranteed (TSG), as well as the increase of its consumption. At the same time, the Azores brand seeks to ensure that the place of origin of the products and services is the Autonomous Region of the Azores, stimulating the existing preference in the consumption of Azorean products and thus contributing to the growth of its production, ensuring the conditions structuring, so that regional companies progress in the value chain increase their competitiveness and promote the creation of employment and wealth.

It is now intended to define a consistent path for the Azores brand through the creation of a visual identity and brand signature, which can be used by all entities that contribute to the valorisation of the territory, to attract investment and promote economic base of export, with a brand architecture that allows the distinction of the different areas of action without losing coherence and visibility.

The visual identity of the Azores Brand has three versions of naming: AÇORES, AZORES (fig. 37) and AZOREN.



Figure 37 – Azores Brand stamp (EN)

The Azores Brand will have a transversal application, serving as a guarantee of the heritage of the Azorean values and the promotion of endogenous resources, allowing the identification of products and services of origin and the tourist offer. In this context, may use the Azores Brand in their products, services and communication:

- The Regional Government of the Azores;
- The Public Business Sector of the Autonomous Region of the Azores;
- The Azores Tourism Association, business associations and other organizations to disseminate and promote the services and Azorean products;
- Companies, cooperatives and private entities that carry out activities in the prevailing areas for regional economic development and promotion of the economic base of exports, namely in the areas of territory promotion, handicrafts, agriculture, livestock, food, fish, wine, wood processing, tourism, services and transport.

The Azores Brand stamp is available for food products, non-food products, handicrafts, services and establishments (fig. 38).



Figure 38 – Azores Brand stamp symbols

Individual entrepreneurs, individual limited liability companies, commercial companies under any legal form, cooperatives and non-profit associations can apply for the Azores Brand stamp.

Marca Açores	
Origine	Açores government
Status	Implemented – 25 euros/year/species to the Azorean government
Date of implementation	2015
Characteristics	One of the pillar driving the internal and external promotion of the Region

Strengths	Weaknesses	Perspectives of development/improvement
Collective action and willingness	Does not certify the origin of the raw material	Certify the raw material
Stakeholders taken into account		
Innovative characteristics		
High demand and good prices – help for the promotion of the Azores (good marketing)		

### Other labelling schemes used for the Azorean fisheries

#### Dolphin Safe Certification

Due to the unique association between tuna and dolphins found in the eastern Pacific Ocean, and because of the purse seine fishery that this area supports, protecting dolphin stocks became a priority for the United States. As a result, the Dolphin Protection Consumer Information was passed in 1990. One of its mandates was the establishment of a national tuna tracking program.

In 1999, the United States signed on as a Party to the Agreement on the International Dolphin Conservation Program. Among other things, the Agreement mandates the establishment of an international tracking program for tuna caught in the eastern Pacific Ocean.



Figure 39 - Logo of the Dolphin Safe Certification

The International Dolphin Conservation Program Act (fig. 39), amended the Marine Mammal Protection Act to make the objectives and requirements of the Agreement legally effective in the United States.

National Oceanic and Atmospheric Administration (NOAA) Fisheries' Tuna Tracking and Verification Program is the only program recognized by the U.S. Government that legally satisfies all applicable federal regulations regarding dolphin-safe certification. Under this program, they monitor the domestic production and importation of all frozen and processed tuna products to ensure compliance with federal regulations regarding dolphin-safe certification.

NOAA Fisheries is responsible for the stewardship of the nation's ocean resources and their habitat. We provide vital services for the nation: productive and sustainable fisheries, safe sources of seafood, the recovery and conservation of protected resources, and healthy ecosystems—all backed by sound science and an ecosystem-based approach to management.

The Tuna Tracking and Verification Program (TTVP), established under the Dolphin Protection Consumer Information Act, is how NOAA Fisheries monitors compliance with dolphin-safe tuna labelling.

### Friend of the Sea certification

Friend of the Sea (fig. 40) was founded by Dr Paolo Bray - European Director of the Earth Island Institute's Dolphin-Safe Project. The Dolphin-Safe Project saved millions of dolphins from death in the tuna nets and started the sustainable seafood movement. This label is now a leading international certification project for products originated from both sustainable fisheries and aquaculture. Certified products from all continents include most of the traded species, fishmeal and omega-3 fish oil.



Figure 40 - Logo Friend of the Sea

Products and their origins are audited onsite by independent international certification bodies, against strict Friend of the Sea sustainability criteria.

Friend of the Sea certification requirements follow the FAO - Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries. In particular, only products from stocks which are not overexploited can be certified (Art. 30 FAO Guidelines). In line with the FAO, Friend of the Sea pricing model is affordable also to artisanal fisheries and small-scale producers, representing over 50% of the Friend of the Sea certifications.

### International Pole & Line Foundation

The International Pole & Line Foundation (IPNLF) (fig. 41) works to develop, support and promote socially and environmentally a responsible pole-and-line and handline tuna fisheries around the world. IPNLF's ambition is to contribute to thriving coastal fisheries, including the people, communities, businesses and seas connected with them. They are an international charity working across science, policy and the seafood sector. They use the influence of the market to develop and demonstrate the value of one-by-one caught tuna thriving coastal fisheries, people and seas, that they connect. IPNLF officially registered as a charity in the UK in early 2012.



Figure 41 - Logo International Pole & Line Foundation

Their team includes international staff and special advisors, located in the United Kingdom, Indonesia, Maldives, South Africa and the United States. Together, they work to make the ambitions of IPNLF a reality, through applying their expertise and enthusiasm. IPNLF values describe what they believe in, and act as guiding principles in the interaction between colleagues internally and externally and the approach in their work.

### Cooperativa de Pesca Açoriana (Cooperative of the Azorean Fisheries)

On the initiative of the Azores Fisheries Federation, was established in May 2018, the CPA - Cooperative of the Azorean Fishing, OP, CRL (fig. 42). CPA, through the cooperation and assistance of its 10 cooperators, aims to meet the needs of members, particularly in areas related to the valuation of fishery products, marketing and markets and, in particular, to promote the principles and practices of cooperativism.



This cooperative, which will have the status of a Producers of Fisheries Organization, intends to participate proactively in the day-to-day management of fisheries and play a key role in the implementation of the common fisheries policy and in the common organization of the markets. The CPA also intends to guide producers towards sustainable fishing, in particular through collective management of the activities of their members, matching supply to demand and creating added value for the fish.

Carry out promotional campaigns, participation in fairs and national and international events in the promotion and appreciation of the fish of the Azores are some of the planned activities.



Figure 42 - Logo of Cooperative of the Azorean Fisheries

### 2.3.2 Case study on Canaries

The label Pesca artesanal is originated from the Council of the Tenerife Island Government, currently used and free of charge. It is a collective label specific to Tenerife.



#### • Pesca Artesanal, Canaries



	Pesca artesanal
<b>Origine</b>	Insular Government Council of the Island Council of Tenerife
<b>Status</b>	Created and used – Free
<b>Date of implementation</b>	
<b>Characteristics</b>	Collective and only in Tenerife

Strengths	Weakness	Perspectives of development/improvement
Collective action and willingness	Long time to be recognised	Increase the strength of fisher organizations order to improve the control of all SSF catches in the Canaries
Stakeholders taken into account	Few controls	
Innovative characteristics	Lots of paperwork	
High demand and good prices		



## 2.3.3 Potential of a common labelling scheme

	Context	Pros	Cons
Guadeloupe/ Martinique	Local sales and imports (no exports)	Differentiation from imports (frozen and fresh from French Guiana). Objective of Chlordecone free & Safe products	Traceability of products (--) informal channels Quality (-) Fisheries Sustainability (?)
French Guiana	Local sales and imports (exports from LSF)	Differentiation from imports (frozen and fresh from French Guiana)	Traceability of products (--) informal channels Quality (-) Fisheries Sustainability (?)
La Réunion	Exports from LSF		Traceability of products (--) informal channels Quality (-) Fisheries Sustainability (?)
Madeira	Local sales and exportations	Differentiation from imports, objective of ciguatera free	Traceability, sustainability, ciguatera,
Açores	Local sales and exportations	Differentiation from import and export	Traceability (fishing area, gears), sustainability

Study of a potential of a labelling scheme common to all the ORs

PROS	CONS
Assurances of transparency and sustainability: consumer information. Answer the need to differentiate local SSF products from fresh fish imports and poachers'	Increase of pervasive form of market governance: control over producers of primary products in order to secure some commercial and institutional interests
Promote cooperation and collective action: encourage different actors targeting the same stock to cooperate and seek certification together	Privatization of fisheries governance by creating new institutions with property rights
Promotion of good practices, quality of the product and local production	Possible creation of new conflicts in the contexts of common-pool resources
Provide better incomes for the SSF fishers	Developing countries' fisheries, and small-scale fisheries in particular, have been marginalized by ecolabels

### III. Strategies to better differentiate SSF products

To face the challenges of the SSF and to support their products in the best possible way, strategies to better differentiate SSF from the catches coming from world markets, large-scale fisheries or aquaculture appear to be necessary.

#### 3.1 Access to FEAMP funds and plans of costs compensation

##### 3.1.1 Azores

The large remoteness of the archipelago from the mainland, the high dispersion of the islands, and the small scale of the regional markets imply that the cost of the various goods and services consumed locally, as well as the costs associated with shipments abroad, are strongly aggravated by the costs of air and sea transportation.

Azorean fishermen have access to funding through the Regulation of the Compensation Scheme for Supplementary Costs for Fishery Products of the Autonomous Region of the Azores, the Regulation of the Support System for the Marketing of Fishery and Aquaculture Products, the Regime to Support Investments on Board in the fields of Health and Safety and the European Maritime and Fisheries Fund (EMFF).

In general, for the elaboration of the Compensation Plan for the outermost regions, only the costs that could be compared with the ones from Portugal (mainland) are considered, including costs related to the transportation between mainland and the Azores of raw materials, materials and other goods essential for fishing activity, and related costs such as transport between the Azores and the mainland of locally produced fishery products.

The Regulation of the Compensation Scheme for Supplementary Costs for Fishery Products of the Autonomous Region of the Azores is a regional funding, to compensate the fishermen from the additional costs supported by the operations in their fishing activities and in the transformation and commercialization processes of the inherent products.

The regional Regulation of the Support System for the Marketing of Fishery and Aquaculture Products, supports the following operations: new markets and who improves the conditions for the commercialization of fishery and aquaculture products, who promotes the quality and value added products, who carries out market studies and studies on the European Union's dependence on imports, who contributes to the traceability of fishery or aquaculture products, who carries out regional, national or transnational communication and promotion campaigns to raise public awareness of sustainable fisheries and aquaculture products, including: information and awareness-raising to encourage awareness and a critical perspective on public health,

quality, environmental and sustainability aspects of fisheries resources; organization and participation in fairs, salons and exhibitions promoting fishery and aquaculture products; conferences, seminars or colloquia, aimed at improving the image and dissemination of fishery and aquaculture products and, in general, the fisheries sector.

The objective of the regional Regime to Support Investments on Board in the fields of Health and Safety is limiting the impacts of fishing, energy efficiency and the value added and the quality of products. The purpose of the aid provided under this regime is to: improve the health, safety and working conditions of fishermen, reduce the impact of fishing on the marine environment, adapting fisheries to species protection, mitigate the effects of climate change, optimizing the energy consumption of fishing vessels, improve the value added and quality of fishery products.

European Maritime and Fisheries Fund is one of the five complementary European Structural and Investment Funds, which are intended to promote the recovery of the European economy through growth and job creation. The fund assists fishermen in the transition to sustainable fisheries, helps coastal communities to diversify their economies, finances projects that create new jobs and improve the quality of life of coastal populations and simplify access to finance.

### 3.1.2 Canaries

In a structural way, the ORs, among others, have the following handicaps: insularity, double insularity, great distance and isolation, natural resources scarcity, reduced surface and environmental fragility.

Territory has an enormous value in the Canary Islands, both because it is a scarce resource and because of its importance for the tourism sector as a natural claim. The singularities of its natural environment, volcanic relief, biodiversity and climate, have led to protect 40% of its surface and cause high risks of natural catastrophes or ecosystem fragility.<sup>28</sup>

In accordance with the above-mentioned reality, the European Parliament created legislative approaches and financial tools to support regions where the cost of being physically apart from the European continent is much higher: it is the plan of costs compensation.

The outermost region of the Canary Islands, due to its characteristics, has a specific additional allocation to compensate for the additional costs that hinder its development. For this, it is contemplated, in the scope of the interventions financed with the ERDF in the Autonomous

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<sup>28</sup>Región ultraperiférica: Canarias. Análisis del eje RUP (2014). Elementos para la Elaboración del Acuerdo de Asociación de España 2014-2020. Dirección General de Fondos Comunitarios. Ministerio de Hacienda y Administraciones Públicas.

Community of the Canary Islands, the incorporation of a specific axis, called: *RUP Axis. Reduction of additional costs that hinder the development of the outermost regions.*

The study commissioned by the EU entitled "Growth factors in the outermost regions" recognizes the structural limitations of the ORs and concludes, apart from the support to the emerging sectors based on the advantages of the ORs, the need to reinforce the fundamental traditional sectors such as agriculture, fishing and tourism and therefore are considered priorities in R+D+I policies.

Canary Islands are located just over 1,000 kilometers from the Iberian Peninsula and about 100 kilometers from the African continent.

In a structural way, Canarias has, among others, the following handicaps:

- **Insularity.** It is the first and main disadvantage of the Canary Islands. From this most effects are derived, giving rise to problems of accessibility and dependence on two modes of transport: air and sea.
- **Double insularity.** This fact is produced by being an archipelago of seven islands, with two capital islands which concentrate most of the population, economic and administrative activity.
- **Great distance and isolation.** It is produced by the double insularity and the distance between the Islands and the European continent, the main market supplying materials, goods and services, as well as the exportation of the Archipelago.
- **Natural resources scarcity.** There is a low presence of certain natural resources, which have a strategic importance for any population: water, possibilities for obtaining and generating energy and, above all, the availability of land.
- **Reduced surface.** These islands have a reduced dimension, especially in relation to the population that supports and that also translates into scarce economies of scale.
- **Environmental fragility.** Territory has an enormous value in the Canary Islands, both because it is a scarce resource and because of its importance for the tourism sector as a natural claim. The singularities of its natural environment, volcanic relief, biodiversity and climate, have led to protect 40% of its surface and cause high risks of natural catastrophes or ecosystem fragility.<sup>29</sup>

The outermost region of the Canary Islands, due to its characteristics, has a specific additional allocation to compensate for the additional costs that hinder its development. For this, it is contemplated, in the scope of the interventions financed with the ERDF in the Autonomous Community of the Canary Islands, the incorporation of a specific axis, called: *RUP Axis. Reduction of additional costs that hinder the development of the outermost regions.*

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<sup>29</sup>Región ultraperiférica: Canarias. Análisis del eje RUP (2014). Elementos para la Elaboración del Acuerdo de Asociación de España 2014-2020. Dirección General de Fondos Comunitarios. Ministerio de Hacienda y Administraciones Públicas.

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In this table, identification of eligible products or categories of fishery and aquaculture products can be seen, as well as the compensation plan maximum annual amounts for each of the planned actions between 2014 and 2020<sup>30</sup>. Annually, each modality has a total amount given from UE to different categories. For example, talking about artisanal fisheries, Canary Islands has calculated RUP grant for the production of 12.000 tons. Considering that a subsidy of 75Euros is calculated for each ton, the annual total that will be given for this production will be 900.000 Euros:

CATEGORY	MODALITY	AMOUNT (TM)	EUR per TON	TOTAL (€)
AQUACULTURE	PRODUCTION	3.512	400	1.404.800
	SEAWAY COMMERCE	3.800	240	912.000
	AIRWAY COMMERCE	800	870	696.000
ALGACULTURE	ALGACULTURE	1	3.100	3.100
ARTISANAL	PRODUCTION	12.000	75	900.000
	INTERINSULAR COMMERCE	700	144	100.800
	FRESH SEAWAY COMMERCE	400	240	96.000
	FROZEN SEAWAY COMMERCE	2.100	145	304.500
	AIRWAY COMMERCE	2.400	870	2.088.000
INDUSTRIAL	PRODUCTION	5.750	210	1.207.500
	COMMERCE	5.750	145	833.750
TRANSFORMATION	PRODUCTION	370	270	99.900
	COMMERCE	370	145	53.650
TOTAL ANNUAL AMOUNT OF THE CANARY ISLANDS COMPENSATION PLAN				8.700.000

**Table 6: Costs compensation.**

Source: Ministerio de Hacienda y Administraciones Públicas.

It is taking a lot to receive asked funds for any of these actions. Average it is taking three years that an action received asked aid. 2014 actions are being paid in 2017 and 2015 actions are solved in 2018.

In this table identification of eligible products or categories of fishery and aquaculture products as well as the given amounts for each action in 2014 can be seen<sup>31</sup>:

2014 CAMPAIGN (payed in 2017)
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<sup>30</sup> Plan de Compensación de Canarias. Anexo 9 del Programa Operativo para España 2014-2020.

<sup>31</sup> Consejería de Agricultura, Ganadería, Pesca y Aguas del Gobierno de Canarias. BOC-a-2017-228-5609

CATEGORY	MODALITY	AMOUNT (TM)	EUR per TON	TOTAL (€)
AQUACULTURE	PRODUCTION	3.512	400	1.404.800
	SEAWAY COMMERCE	3.800	240	912.000
	AIRWAY COMMERCE	800	870	696.000
ALGACULTURE	ALGACULTURE	1	3.100	3.100
ARTISANAL	PRODUCTION	12.000	75	900.000
	INTERINSULAR COMMERCE	700	144	100.800
	FRESH SEAWAY COMMERCE	400	240	96.000
	FROZEN SEAWAY COMMERCE	2.100	145	304.500
	AIRWAY COMMERCE	2.400	870	2.088.000
INDUSTRIAL	PRODUCTION	5.750	210	1.207.500
	COMMERCE	5.750	145	833.750
TRANSFORMATION	PRODUCTION	370	270	99.900
	COMMERCE	370	145	53.650
TOTAL AMOUNT OF THE CANARY ISLANDS COMPENSATION PLAN (PCC)				8.700.000

**Table 7: 2014 Campaigncostscompensation.**

Source: Consejería de Agricultura, Ganadería, Pesca y Aguas.

In this table identification of eligible products or categories of fishery and aquaculture products as well as the given amounts for each action in 2015 can be seen<sup>32</sup>:

2015 CAMPAIGN (payed in 2018)				
CATEGORY	MODALITY	AMOUNT (TM)	EUR per TON	TOTAL (€)
AQUACULTURE	PRODUCTION	0	0	0
	SEAWAY COMMERCE	3.800	240	912.000
	AIRWAY COMMERCE	800	870	696.000
ALGACULTURE	ALGACULTURE	1	3.100	3.100
ARTISANAL	PRODUCTION	12.000	75	900.000
	INTERINSULAR COMMERCE	700	144	100.800
	FRESH SEAWAY COMMERCE	400	240	96.000
	FROZEN SEAWAY COMMERCE	2.100	145	304.500
	AIRWAY COMMERCE	2.400	870	2.088.000
TOTAL AMOUNT OF THE CANARY ISLANDS COMPENSATION PLAN (PCC)				5.100.400

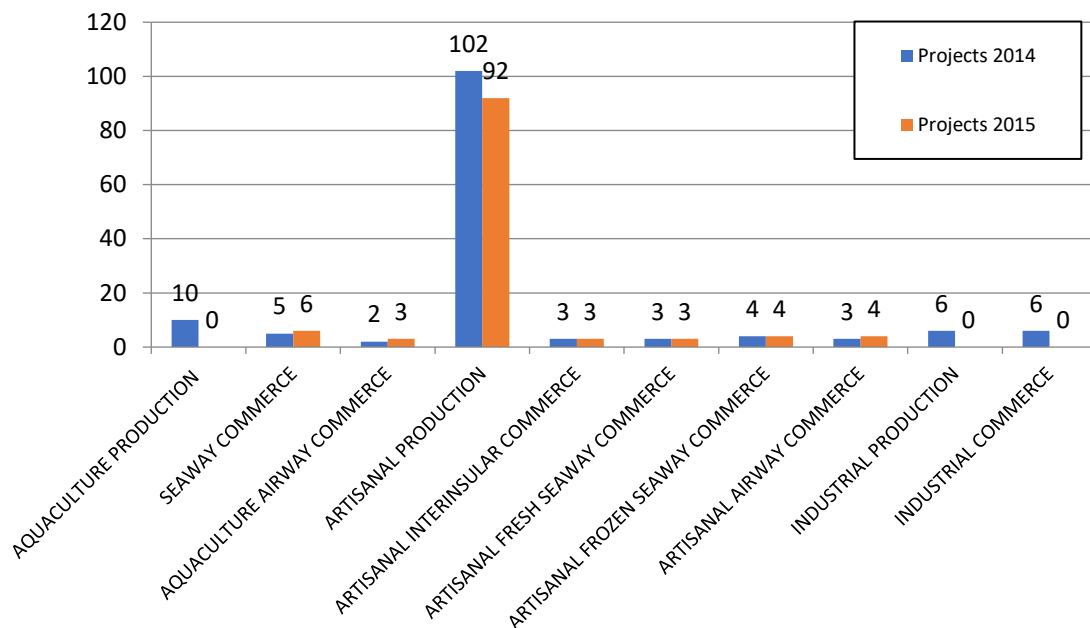
**Table 8: 2015 Campaigncostscompensation.**

Source: Consejería de Agricultura, Ganadería, Pesca y Aguas.

In chart 20 difference between projects approved in 2014 and 2015 can be seen, years in which the RUP has been resolved and paid in the Canary Islands. The amount approved for each year is the same, but the projects that are approved vary a bit<sup>33</sup>:

<sup>32</sup> Consejería de Agricultura, Ganadería, Pesca y Aguas del Gobierno de Canarias. BOC-a-2018-161-3918

<sup>33</sup> Consejería de Agricultura, Ganadería, Pesca y Aguas del Gobierno de Canarias. BOC-a-2017-228-5609 y BOC-a-2018-161-3918



**Chart 20:** Difference in number of subsidized projects for the 2014-15 campaign costs compensation.

Source: Consejería de Agricultura, Ganadería, Pesca y Aguas.

In Spain, in 2017, FEAMP aids were summoned in the amount of 108,210,726 €. Of this amount was granted: € 71,091,417 - 65.7%.<sup>34</sup>

According to FEAMP Ministry's Monitoring Committee, this lack of concessions has two main causes:<sup>35</sup>

- Demand from the sector but the requirements of the Regulations are not met:
  - Art.31 Initial aid for first acquisition
  - Art.32 Investments on board health and safety hygiene
  - Art.34 Ultimate stop: problem with the crew. Activity on the same ship that is scrapped and abandon the activity fishing at the time of application
  - Art.41.3 Replacing motors
  - Art.68 Marketing measures Material investments;
- Lack of interest of the Sector.

Talking with local fishermen and fisherwomen we find different proposals of causes to this lack of concessions:

- Lack of general information and deadlines;
- Lack of information on how aid affects the taxes to be paid if the grant is granted;
- Excess of paperwork and bureaucracy;
- Difficulties to understand all the paperwork and do it properly;

<sup>34</sup> Plan de Compensación de Canarias. Anexo 9 del Programa Operativo para España 2014-2020. Consejería de Agricultura, Ganadería, Pesca y Aguas del Gobierno de Canarias.

<sup>35</sup> Informe Anual de Ejecución FEMP 2017

- Difficulty to meet requirements that, in many cases, seem illogical to fishermen;
- Some fishermen still carry out undeclared work, which makes the benefits results show that the fleet is not profitable and there are more difficulties in accessing subsidies and aid.

In general, CIMA thinks that there is a strange dichotomy in time and in terms of the aid proposed to the outermost regions. On the one hand, European Union subsidized the dismantling of artisanal fishing boats few years ago and, on the other hand, nowadays the same artisanal fishing receives a lot of subsidies for production and commercialization.

New information from the end of 2018 report that new measures are being prepared to increase jobs in these regions. Within these new proposals we find the option of using State aid to support the renewal of the small-vessel fishing fleet, whilst fishing sustainably. The Commission has amended the guidelines for State aid in the fisheries and aquaculture sectors so that new vessels can be bought in these regions, with higher aid rates for small and medium-sized vessels. This decision, which links State aid to respect for the sustainability of fish stocks, is good news for local communities.

It seems that depending on the political air that blows at UE, they think differently about artisanal fisheries. It is proved that this type of fisheries is much more sustainable than industrial ones, but usually UE support more this second kind of fisheries. From some years to now, sustainability seems to really matter in UE, so it seems that real aids will come to artisanal fisheries, but it must be accompanied with improvement in research, communication and marketing education.

### *Proposed recommendations*

- Design of a detailed guide that helps fishermen to ask for such funds.
- Reduction of incometaxes (20% of the benefits have to be paid to the State), that generate the granted aids or good information about how it will affect. Or, maybe more realistic, show fishermen how these aids can affect their taxes as money earnings and what they have to do to low it (for example: showing losses as purchases, investment in materials, etc.).
- Fishermen and fisherwomen ask to simplify bureaucracy and paperwork necessary to funds access. Maybe having specialized professionals that could help them to apply this FEAMP fund and making the paperwork easier.

### 3.1.3 Madeira

Madeira is located roughly at 900 kilometres from mainland Portugal and the cost of producing and attributing value to something is greater than in the mainland, where raw materials and other structural items are much easier to find and affordable to acquire. Therefore, Madeira is characterized by the following features:



- **Insularity** – One of the biggest disadvantages of being an outermost region. Since Madeira lacks in natural resources to sustain its current population, it relies heavily on the importation of goods. Also, the goods produced in the archipelago are either sold internally or exported to the mainland and other countries. This reality makes the cost of goods higher than elsewhere.
- **Isolation** – Physical isolation is the geographical separation from the main land body. Its consequences are felt economically on the cost of products that the population must bear. Also, and as a consequence of that isolation, Madeira is home to a high degree of endemic species.
- **Scarcity of Natural Resources** – Size and geological origin have limited the amount of natural resources available. Once rich in timber in the medieval period (Madeira means wood in Portuguese), forest were cleared to fuel the naval industry in the discovery age. Apart from that, hydroelectric power derived from storing and channelling water can be referenced as supplying a portion of the island's energy through.
- **Reduced Dimensions** – The archipelago is small, especially in relation to the population that sustains and that also translates into scarce economies of scale.
- **Environmental Fragility** – Due to its size, the territory has an enormous value, not only since it is slowly dwindling due to the increase of urban areas, but also due to the importance of tourism, which is claiming its share in occupying large portions of land. Since Madeira is referenced as having high degree of endemisms, a natural park was constituted to protect the ancient forest Laurissilva, being an UNESCO World Heritage since 1999. As a result, a delicate balance exists between population and nature.

In accordance with the above-mentioned reality, the European Parliament created legislative approaches and financial tools to support regions where the cost of being physically apart from the European continent is much higher. Hence, the Compensation Regime for the Supplementary Costs of Fishing and Aquaculture Products, commonly known as POSEI - Pescas, was created, being regulated in Madeira by Ordinance N.º 249/2016 of June 30<sup>th</sup>, suffering the latest update by Ordinance N.º 156/2018 of May 9<sup>th</sup>, and falling within the scope of the Portuguese Operational Program MAR 2020 (Fig. 43). The subsidies are available for the period 2014-2020.

Operators are compensated by filling an application form, presenting valid invoices of sold products, in the case of shipowners, and bought products in the case of industrials that transform products, and delivery notes comproving the shipment.

Listed below are the fishery products susceptible to compensation. They are:

- a) Tunids
  - i. Albacore (*Thunnus albacares*)
  - ii. Skipjack (*Katsuwonus pelamis*)
  - iii. Longfin (*Thunnus alalunga*)
  - iv. Bigeye (*Thunnus obesus*)
  - v. Blue Fin (*Thunnus thynnus*)
- b) Black scabbardfish (*Aphanopus carbo*)
- c) Small pelagics
  - i. Atlantic Chub Mackerel (*Scomber colias*)
  - ii. Blue Jack Mackerel (*Trachurus picturatus*)
- d) Limpets (*Patella* spp.)

Listed below are the aquiculture products susceptible to compensation. They are:

- a) Gilthead Seabream (*Sparus aurata*)
- b) Red Porgy (*Pagrus pagrus*)
- c) White Seabream (*Diplodus sargus*)

In addition, the supplementary costs of transforming fish products and their commercialization are listed as shown below:

- a) Tunids, fresh or refrigerated
- b) Tunids, frozen or transformed
- c) Black scabbardfish, fresh or refrigerated
- d) Black scabbardfish, frozen or transformed
- e) Gilthead Seabream, Red Porgy and White Seabream, frozen or transformed

To legally apply for such subsidy, operators need to be one of the following conditions. They are:

- (a) Natural or legal persons domiciled or based in the Autonomous Region of Madeira, who in that State carry out their activities and use the means of production to obtain fishery or aquaculture products with a view of placing on the market;
- (b) The owners or operators of ships registered in the ports of the Autonomous Region of Madeira, in which they carry on their activities, or their associations;

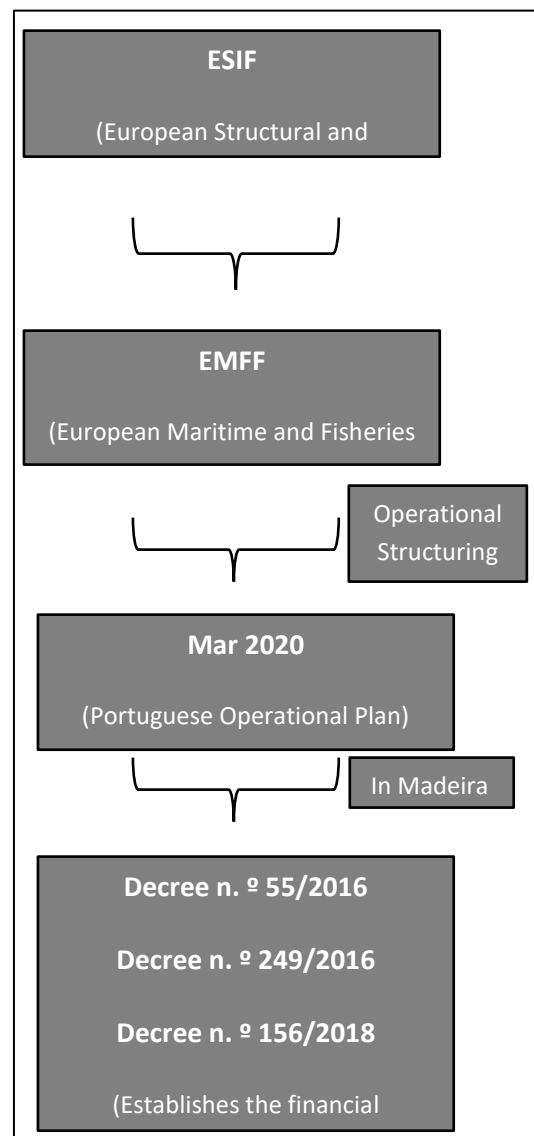


Figure 43: Framework of the cost compensation plan in Madeira (POSEI Pesca).

- (c) Operators in the processing and marketing sector in the Autonomous Region of Madeira, or their associations.

The amounts involved vary according to group of species, as mentioned previously, and also on the quantities of landed fish on an annual basis. This subsidy is granted in the form of a non-reimbursable funding (Table 9). The subsidies are granted as follows:

**Table 9:** Monetary compensation for Madeira fishing sector and operators according to the type of fish product and annual quantity unloaded (Source: Ordinance N.º 156/2018, of May 9th).

Category	Species	EURO per Ton (€)	Maximum Annual Quantity (Tons)
<b>Fishing</b>	Tunids	175	2870
	Black scabbardfish	219	2200
	Small pelagics	54	553,8
	Limpets	121	90
<b>Aquiculture</b>	All	365	600
<b>Fishing (Transformed products)</b>	Tunids (Fresh/Refrigerated)	274	700
	Tunids (Transformed/Frozen)	124	1900
	Black scabbardfish (Fresh/Refrigerated)	282	145
	Black scabbardfish (Transformed/Frozen)	277	345
<b>Aquiculture (Transformed products)</b>	All (Fresh/Transformed/Frozen)	580	450

For the period in question, Madeira had available 14,5 million euros from the EMFF to compensate fishermen and operators for the supplementary costs of fishing and aquaculture products, being granted an average of roughly 2 million euros annually.

Overall, the program is a success amongst the fishing community. Fishermen rely on this fund and manage their investments and/or costs accordingly. The process is straightforward, made within the scope of the DRP-Madeira, which helps fishermen with their application, making sure all necessary steps are done properly. Since the program exists for quite some time, the sector is used to the application's deadline and characteristics. If any clarification is needed the staff at the regional secretariat are available, upon request, to help with the application.

In terms of recommendations, the most common issue relates to the fastness of the subsidy being allocated to the operator. Since the cost of operations is becoming higher on a yearly basis, especially on the ORs, the support could be granted sooner to mitigate these higher production costs. In addition, if any unforeseen event occurs amidst the fishing season which could jeopardise it, a fund given slightly earlier could mitigate such unexpected costs.

## IV. Main challenges, priorities for action

### 4.1 Artisanal fishing problems

#### 4.1.1 Canaries

Artisanal fishing faces great socio-environmental problems, from the difficulty in reaching a sustainable use of resources, to the limited knowledge and low activity social support.

As if it were part of a SWOT analysis, these problems can be divided into "internal problems" (Weaknesses) and "external problems" (Threats).

#### *Ecological scope weaknesses*

Difficulties to reach a regulation adjusted to ecosystem resources, absence of an adequate behavior to the norm (laws), lack of fishing activities surveillance, conflict between users' groups, etc. obstruct resources sustainable use.

#### *Social and economic scope weaknesses:*

- Low social recognition of fishing activity.
- Access is usually through family networks but requires years of formal training.
- Importance loss as a main activity in many family units.
- Artisanal fishermen training is not very academic and is scarcely recognized in the labor market, having a difficult fit in other economic sectors and professional areas of the Island: when they leave the sector, they occupy low qualification activities, in construction or similar.
- Traditionally carried out work by other members of fishing families, such as fishermen's women (have been essential in products marketing, for example), lacks recognition.
- There are difficulties in identifying the fish caught on Islands coasts, in a regulated way and with artisanal means, and in differentiating them from the non-regulated manner caught fishes, as well as from the coming from outside the Island.
- Fish markets or retail outlets absence controlled by fishermen's organizations adds difficulties to internal marketing, subtracting additional value from local fish.
- Transformation of fishery products activity that exists in the Island does not respond to all demands of the local market and has not developed an adequate niche in global markets.

#### *Institutional scope weaknesses*

- Canarian fishing sector is divided into 25 guilds, some of them with a relatively small volume activity, and even in many traditional fishing centers it is losing economic weight

against services sector (diving, restoration, lodging...), which may alter making decisions about the coastal space. Guilds implantation and organizational capacity is very variable.

- Fishermen's guilds funding sources on the island are very poor; there is a great dependence on institutional aid.
- Security forces permanent control over the professional fishing activity, in front of the increase of recreational users, generates a differential perception between these two groups, creating an environment of rejection or discredit towards certain government administrations.

### *Ecological scope threats*

- Human pressure on a large part of the coastline has altered the ecosystem.
- Marine environment pollution by waste and not adequately purified water, threatens many areas of the coast.

### *Social and economic scope threats*

- Economic crisis may dissuade fresh fish consumption from the general population, as well as the demand in restaurants. Likewise, it can reduce average tourist stay, although the conjunctural situation of conflict in North Africa avoided a significant impact until now.
- Progressive unknowledge of consumer about local fishing products and their quality.
- Foreign fishery products "free" entry in insular market (meaning that local production is poorly protected from cheap outer fish imports as pointed before with Mauritanian cephalopods) in a continuous manner and with a lower price, hinders local product commercialization and detracts from extra value since artisanal fisheries are undifferentiated in the market.
- Poaching seriously threatens marine resources, decrease product prices and makes traceability impossible.
- Aquaculture inputs increase and reduced market prices compromise the viability of artisanal fishing.

#### 4.1.2 Madeira

Overall in Madeira, fishing is a fading activity. Less and less people are involved with it, and the lack of interest is a tendency evident since the 90's. Although it was a decade of large investments in the construction of vessels, many being subsidized by European funds, the tendency started to appear in those years. This came in time of the social shift Portugal suffered, in which the universities and education broadly was the main end for people to invest their future. From those years onwards, a new class of educated workers came to rise, in which paved the way for the complete change in young people's choices and careers. From this, primary sector activities such as fishing came on the losing end. The activity, which was the livelihood of thousands of families, with much more prevalence in Madeira's economy, lost its importance and today is a shadow of what it once was. Fewer and fewer people are interest in the hardships

of fishing. A regime shift that slowly but surely happened in Madeira's society, which is commonly seen in many developed economies.

Artisanal fishing, as is the case of SSF, faces similar problems as large-scale fisheries. Degrading stocks, shortage of skilled labour, hard life, amongst others, consist the life of a fisherman. SSF have the additional hardship of unstable and low incomes, more vulnerability to the fluctuation of prices and operating costs, and others. As such, these issues can be described more thoroughly, as follows:

### *Unregulated operations*

Artisanal fishing is mostly performed close to shore, within territorial waters. Since fishing boats of this size are not obligated to carry a tracking device, as vessels > 12m are, their activity runs out of sight from the authorities unless physical control is done during fishing or upon entering/leaving port. As surveillance may lack, illegal activities may occur, from catching species without proper licence, to fishing in MPA's, to fishing species during closed season, and others. Hence, closer surveillance and firmer penalties may be implemented to mitigate these situations.

### *Low social recognisance*

Alongside being a fisherman comes a low social recognisance. In a country where university stands as the most usual career path, being a fisherman may be seen as below standard, holding back people from going into fishing. In addition, skilled fishermen take years and years to perfect their trade. To learn the customs of fishing, knowing the idiosyncrasies of each species while fishing, knowing how to deal with being apart from home, how to deal with the hardships of the trade, knowing about the winds and tides, influence of full moons on the catchability, amongst others. It takes time, effort. And it asks more than what people are willing to give.

To worsen things up it gives low social recognition. Nowadays, people are diverting from fishing for various reasons and this is within the most important ones. In an increasingly developed world, it is not easy to promote this activity, although some steps can be taken to change direction. Integrating people within the local market chain, establishing contracts with local supply chains to supply fresh fish caught with artisanal methods, are just some measures to enhance interest in the activity.

### *Low associative power*

Artisanal fishing gathers low interest, since it is not the activity that collects for itself greater sums of money. With less money involved comes less interest in defending its position in various cases.

### *Ecological threat*

Since SSF runs most entirely within the 6 nm zone from the coast, it is influenced deeply by low stock numbers of certain populations. Unregulated or unchecked fishing, in time, can lower the healthiness of populations and individual fishermen can suffer the most of these consequences. In addition, human pressure at the coastline is considerable, which lowers the integrity of ecosystems and endangers the sustainability of the sector.

## 4.2 The role of women in ORs SSF

### 4.2.1 Azores

The Fisheries Associations of the Azores have women in all their sectors and have interest in involving more in future projects.

The association “Ilhas em Rede” has a women as president and they are part of a Local Representation Group, namely the Eastern Azores Sea (Mar Açores Oriental), which we can find several organizations and initiatives about women in fisheries. The “Ilhas em Rede” association encourages women to be aware of legislation through working meetings. At this moment, the role and visibility of women in the fishing sector is becoming more recognized due to the work that this association is doing.

The Maritime Association of Fisheries and Aquaculture of Terceira island (AMPA) supports the women in fisheries and their families, through several formations like: workshops of handcrafts, donation of clothing and footwear, school supplies and toys, children's school support program and workshops (figs. 30-52) that teach the women how to harvest edible seaweed from the coast, conserve it and use it for day-to-day cooking. In 2019 they will promote a fish and seaweed festival.



Figure 44: Workshop for cooking with algae



Figure 45 : Edible algae





Figure 46 : Ulva Linnaeus



Figure 47 : Osmundea pinnatifida



Figure 48 : Fucus spiralis



Figure 49 : Collecting Osmundea pinnatifida



Figure 50 : Algae wash with seawater



Figure 51 - Cookies with algae



Figure 52 - Pie with algae and seafood

AMPA association would like to involve more women in several projects that are under development for submission to applications for financial support. Perhaps, the most relevant project that will be submitted for financial support is called “A Casa d’Elas” (Women’s own house). This project will be developed in a building with several spaces, such as a teaching room, a medical office, an industrial kitchen, a fish shop and a take-away for traditional fish meals. The main goal of this project is to give alternative income to families in the fishing community, by employing, in a part-time or full-time system, the wife’s and daughters of the fishermen.

### 4.2.2 Canaries

In general terms, women role in fishing has not been recognized and it’s going largely unnoticed can be affirmed. In the Green Book about Future of the Common Fisheries Policy (CFP),



published in March 2001, the European Commission recognized the need for the EU to contribute to recognition and promotion of the important role that women had played in fishing scope.

Despite political guidelines and the fact that women participate and have been doing it since immemorial time, at all levels of the fishing production chain (industry (60%), aquaculture (30%), catches, mainly shellfish (6%)), the idea that the fishing sector is a "men's thing" still persists in many areas, not appreciating sufficiently the work of women in fisheries, rather than as an additional aid to the husband. Here at Canary Islands is not different: most of women in the fishing sector, work as secretaries and administrative jobs at guilds or selling captures.

In "El papel de la mujer en el sector pesquero. Potencialidades en el ámbito del turismo pesquero (The role of women in the fisheries sector. Potentialities in the field of fishing tourism)"<sup>36</sup>, we can read: "A study published in 2002, explained that, despite cultural and economic diversity, women in the small European sector share many problems, including lack of recognition, training and resources, as well as restricted access to information".

Regarding the presence of women in Spanish fisheries, as shown by the Economic Survey of Marine Fisheries (2015), the largest number of women registered in national waters (where the artisanal and inshore fishing fleet operates) occur in the North Atlantic area, mainly in the area of Northwest Cantabric Sea, and in small boats (up to 10 meters length) in polyvalent arts modalities.

It is necessary to clarify that this survey data represent both employment on board fishing vessels and employment on land; so the total number of women on board would be even smaller. In the following table "Other National Waters Regions" data is showed, where "Other National Waters Regions" is a technical administrator sentence that means Canary Islands (specifically: FAO 34.1.2 (Canary Islands)).

FEMALE EMPLOYMENT IN MARITIME FISHING 2015				
STRATA		ON SHIPBOARD	ON LAND	TOTAL
OtherNational Waters Regions				
SEINERS	12-18	0	0	0
HOOKS	10-12	0	0	0

<sup>36</sup> El papel de la mujer en el sector pesquero. Potencialidades en el ámbito del turismo pesquero. Proyecto Sagital. Villa Cascoc, M.J. et al. 2007.

<b>HOOKS</b>	<b>12-18</b>	0	1	1
<b>HOOKS</b>	<b>24-40</b>	0	3	3
<b>FISH TRAPS</b>	<b>10-12</b>	0	0	0
<b>FISH TRAPS</b>	<b>12-18</b>	0	0	0
<b>POLYVALENT ARTS</b>	<b>00-10</b>	0	0	0
<b>POLYVALENT ARTS</b>	<b>10-12</b>	0	0	0
<b>POLYVALENT ARTS</b>	<b>12-18</b>	0	9	9
<b>POLYVALENT ARTS</b>	<b>18-24</b>	2	3	5
<b>POLYVALENT ARTS</b>	<b>24-40</b>	0	2	2
<b>TOTAL</b>		<b>2</b>	<b>18</b>	<b>20</b>

**Table 10: Female employment in maritime fishing 2015.**

Source: Social Marine Institute, December 2016.

On the other hand, the Canary Islands is the region with the most registered women in the Special Regime of the Sea (817 of 5,817) after Galicia and the Valencian Community<sup>37</sup>.

Nowadays in general terms, it has been possible improving training and financing opportunities for women who want to enter and/or innovate in artisanal fishing scope.

As already explained, fishing ambit, in addition to including people who work on shipboard, also includes other workers who do not need to embark and who are part of several groups, as part of the assisting fishing industry in activities linked to extractive work carried out by vessels, or performing other functions that are necessary for the proper fleet operation, such as fish unloading, processing and marketing it, repairing and manufacturing nets or the guilds management; as well as those groups that engage in shell fishing or aquaculture activities.

Previous professional groups, unlike those that are carried out on board, have in common the fact that they are constituted mainly by women, who tend to be mostly self-employed workers. In addition, same tasks division, that traditionally took place based on gender, is maintained (women worked on land while men went to sea), this functioning has not changed despite the progressive labor regularization of women situation.

<sup>37</sup> La igualdad en cifras. Diagnóstico sobre la situación de la mujer en el sector pesquero y acuícola. Actualización: Junio 2017.

Latest European working conditions surveys show that women, in a greater proportion than men, carry out monotonous tasks, obtain a lower salary, have fewer opportunities to participate in the planning of their own work and have less professional promotion expectations than men.

As established by the Fisheries Law, fishing industry is a closely related activities conglomerate that, based on living marine resources exploitation, covers activities such as extractive fishing, commercialization, transformation, shipbuilding, auxiliary industry and related services, which form an inseparable economic and social group. According to the study “The equality in ciphers. Diagnosis on the situation of women in the fishing and aquaculture sector”<sup>38</sup>, we can define the following activity areas or sub-sectors within fishing scope where there is female presence, in greater or lesser extent:

- Extractive fishing:
  - Artisanal and coastal fishing.
  - Distant water fishing.
- Fishing auxiliary industry:
  - Artisan fishing gear manufacture and maintenance.
  - Supplying operations, fish unloading, packaging, classification, transfer to fish market, etc.
- Shellfish: extraction of general and specific shellfish resources on foot and afloat.
- Marine and continental aquaculture.
- Fishery and aquaculture products processing.
- Fishery and aquaculture products commerce.
- Activities of an administrative, technical or management nature: fishermen's associations, producer organizations and equivalents, fishing companies, GALP (local coastal action groups), etc.

From an interview with Carmen (fisherwoman from Candelaria's Guild) through an informal conversation, in which several aspects about their training and professional experience were mentioned, as well as their future projects in the world of artisanal fishing, we obtain the following information about fisherwomen of the Canary Islands: In 2018, six women worked on shipboard in Canary Islands, but now we don't really know very much about them. The following data is from Tenerife fisherwomen:

- Carmen Soto Barrera, 31 years old, she fishes in a 12m length boat named “Vidal”.
- Cathaisa, under 40 years old, boat “El Islote”.
- Katherine, under 40 years old, boat “El Macizo”.

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<sup>38</sup> La igualdad en cifras. Diagnóstico sobre la situación de la mujer en el sector pesquero y acuícola. Actualización: Junio 2017.

On the other hand, the Canary Islands is the region with the most registered women in the Special Regime of the Sea (817 of 5,817) after Galicia and the Valencian Community.

Special projects about fishing, women and their professionalization in Canary Islands are being prepared at this moment to begin with next year probably. CIMA knows about these projects because of conversations with local fisherwomen, but by now it is only ideas and will have to wait to know more about.

It is a slow process, but women are getting more involved in aboard fish works. Four or five years ago, there were only two women aboard, now six can be found. Therefore, small actions and the example of these women is attracting more of them to this kind of work. Anyway, we must recall that Canary Island is the third region with the most registered women in the Special Regime of the Sea. This does not mean that they all are in fishing work, much of them are aboard transport vessels between islands, but it is a promising number. Besides, nowadays women work is essential for the operation of the fishing sector, wherever they are.

### 4.2.3 Madeira

The study of the role of women in the organization of work has received attention in the context of social movements and stems from the analysis of the economic transformations associated with industrialization as a crucial moment in the emergence of and in the changing of the social status of women.

Although the concept about the role of women has improved immensely, the conception around women in fishing has always been one of hesitation. It was always perceived as a man's work. Going to sea and spending hundreds and thousands of hours away from the family was always seen as a sacrifice endured solely by men. Since then, socio-economic revolutions of the early and mid-XX century has turned society into a more equal system, in which both men and women contribute alike.

But several areas of today's economy remained unchanged. That is the case of the fishing sector in Madeira. Currently, within the industry, the role of women is still residual. Women are absent from fishing vessels, and within the industry, women are found mostly employed in the transformation and manufacture of fish products at factories, and/or selling fish at fish markets and supermarkets.

Probably related to conservatism and old traditions, the fact remains that women are not involved directly with fishing. They exert an important role in the factories, being involved in more detailed work at processing units.



## 4.3 Contribution to SSF coastal communities

### 4.3.1 Canaries

SSF coastal communities' contribution can have three different perspectives: Economical, Social and Environmental. All three are related, but they can be named separately.

#### *Economical*

- Almost 1.600 people live directly from Canarian SSF fisheries. To this amount we have to add reseller buyers and small fish stores that above all, sell artisanal local fishes.
- Fresh local and artisanal fish sells generate more than 31 Million EUR each year in Canary Islands.

#### *Social*

- Lot of Canarian families live because small scale fisheries. A total network of family members get together around fish capture and commerce, fishing gear manufacture, boats reparation, guild administration, etc.
- New branding labels are used in order to show and teach local citizens the social, economical and environmental importance of Canarian SSF.
- SSF gives local citizens direct access to polyunsaturated fatty acids, very important in our nutrition and impossible to get from other kind of meals.

#### *Environmental (direct and indirect contributions)*

- SSF are in direct contact with different fish species and can help in scientific researches about their life cycles, sustainable amount of captures or change or redesign fishing gear.
- Its known that several coastal fish species stocks are overexploited. Younger fishermen and fisherwomen are more sensitized with this fact and work in their own future, not only taking care about what species and when they catch, but removing plastics and different trash types from the sea.
- SFF species vision and knowledge is very important to achieve new and better goals in marine environmental researches.
- SFF carbon footprint is very small.
- Used fishing gears and practice allow fishermen to give back living non-commercial species (bycatches) to the sea and most of them continue living without any problem.

## V. Improvement proposals

### 5.1 Azores

One of the major shortcomings of the EMFF 2014-2020 was the slow adoption and the late implementation of the operational programs, due essentially to the late adoption of the legislative framework.

Regarding the support to the fishing fleets, the Azores Fisheries Federation (FPA) disagrees with the EMFF ineligibility for the renewal and improvement of the fishing fleet, because we consider that the Azores has an old fleet and needs these financial supports for its rejuvenation, which will improve the working conditions and the safety of this sector. FPA also disagrees that the support for the "acquisition of a second-hand vessel and the replacement or modernization of a ship's engine" is reserved only for small-scale vessels under 12 meters, because all our fleet, even above 12 meters, is needing modernization, due to safety reasons.

FPA defends that the EMFF should support the purchase and installation on vessels of the necessary components for vessel tracking and electronic data transmission systems used for control purposes, not only for commercial small-scale vessels but also for the non-commercial ones, to facilitate the identification of illegal fishing, promoting the sustainability of the oceans and the safety of crews.

FPA defends the eligibility of costs related with investments to improve the cooling systems, freezing or insulation in vessels up to 30 meters. FPA defends that there is too much bureaucracy in the applications for EMFF support to the Outermost Regions and it should be more flexible in the delivery of three budgets for the purchase of equipment or services, because they are very hard to get in such a small territory.

In order to strengthen the international governance of the oceans and to ensure safe, clean and sustained management of oceans and seas, FPA agrees that the European Union must continue to fund the activities of the Regional Fisheries Management Organizations, enabling them to establish regional, national and international partnerships, facilitating cooperation agreements and their implementation locally.

For the landing obligation, FPA considers that the Azores should benefit from an exception regime, since we mainly use selective and sustainable fishing gears, which results in small amounts of by-catches, high survival rates of the specimens released and the lack of capacity for fish processing/storage. For those reasons, the Azores has encouraged, through awareness-raising campaigns, its fishermen and shipowners "to return to the sea, smaller specimens or specimens from species with low commercial value, which can be returned alive to the sea at the time of capture". FPA warns that if this exception does not occur, our Region will have many difficulties in the conservation of this by-caught fish, since we have a low capacity for conservation and storage.

Due to the high unpredictability of the fishing activities, extraordinary circumstances can cause significant economic losses for fishermen. To mitigate these consequences, the EMFF should keep compensation for the permanent cessation of fishing activities, but also support the extraordinary cessation of fishing activities, due to the application of certain conservation measures.

FPA agrees that the EMFF should compensate the Outermost Regions for additional costs caused by their location and insularity. Whereas the development of a sustainable blue economy depends heavily on partnerships between local stakeholders, FPA agrees that the EMFF should provide instruments to promote such partnerships, in particular, to support local development projects, such as promoting job creation in coastal regions and improving the social conditions of these communities. However, FPA disagrees with the decrease in support from 85% (2014-2020) to 75% (2021-2027).

FPA agrees that the EMFF must support the first acquisition of a fishing vessel by a young fisherman as well as the replacement or modernization of an engine, encouraging the rejuvenation of the sector. However, FPA disagrees that this support gets limited to small coastal vessels, namely in the purchase of used vessels and the support rate of only 30%.

FPA agrees that the EMFF should support actions of protection and restoration of biodiversity, marine and coastal ecosystems by compensating fishermen for lost fishing gear and marine litter at sea. EMFF should also support investment in ports to create the appropriate facilities and where to put the lost fishing gear and the marine garbage collected from the sea.

FPA agrees that the EMFF should support the implementation of the Common Fisheries Policy (CFP) by providing scientific advice and expertise to promote rigorous and efficient fisheries management decisions under the CFP, including through the participation of experts in scientific bodies, the development and implementation of the Union's fisheries control system, the functioning of the advisory councils set up pursuant to Article 43 of Regulation (EU) No 1380/2013, whose have an objective which falls within the framework of the CFP and supports it , as well as voluntary contributions to the activities of international organizations involved in fisheries in accordance with Articles 29 and 30 of Regulation (EU) No 1380/2013.

FPA agrees that it should be given to the fisheries in the outermost regions, a "more targeted and adapted financial support with the maintenance of a higher support rate and the possibility of an advanced payment".



### 5.2 Canaries

- Realization of projects that provide more information to the consumer on artisanal fishing and its benefits in terms of consumption of fresh fish, employment on the islands and the local artisan production sustainability.
- Specific training in social media marketing and other kinds of marketing for guilds and/or individual fishermen. It is a direct way to reach final consumer.
- Renewal of the image of the artisanal fisherman, fisherwoman and their profession. Through greater and better information on artisanal fishing in the islands, its greater sustainability, the safety of its products, etc.
- Upgrade of artisanal fishing brands as a distinguishing quality mark when buying fresh fish.
- Strengthen in Canaries two labeling and branding projects that are carried out from each government to inform consumers about local artisanal fishing and its benefits for the population, for the islands' economy and for fisheries and coast sustainability in the region.
- Another improvement is adding a QR code to these labels, so consumer could easily see basic fish and catch information: zone and date of capture, fish scientific and local names, etc. even recipes proposals.
- Internal and social education to remove male chauvinist thinking between fishermen and fisherwomen.
- Break the actual "role workthinking", in order to easy women involvement in every fisheries jobs. For example naming more working fisherwomen and empowering their activities. Or making special projects to empower the figure of the woman in artisanal fisheries.
- Improve communication projects about women in fisheries showing women doing different fish works.
- Enhance women naval education by making the work of other fisherwomen visible and encouraging them to participate in the courses for this purpose.
- Improve artisanal fishing image and brand, in order to make its products more requested by society. The more attractive is the sector, the more people are needed.

### 5.3 Madeira

Although the fishing sector includes a small portion of Madeira's workforce, and only contributes to a small percentage of Madeira's GDP, it is still fundamental to many families and is a part of our social and cultural heritage.

Considering the former, and within the ORFISH framework, it is important to recognize that the fishing sector is in constant evolution, and that bigger and more may not mean better. The involvement of ORFISH has always been on the small-scale. Small-scale fisheries can contribute

to several answers within the sector. The following ideas can be useful for a better understanding the situation of Madeira. They are:

### 5.3.1 Fishing quotas for SSF

This topic is of importance for small vessels that operate around the island's archipelago. Since small vessels have a lower impact on the depletion of stocks but are important for many families that rely on that sole fisherman to go fishing, separating quotas per vessel size could be an important answer to immediate problems these people face. This is the case of vessels > 12 m (the situation of tuna mostly), in which deplete most of the quota for a certain resource. Leaving a small portion for small vessels would mean more social and economic balance for fishermen and their families, without harming the larger vessels catches.

### 5.3.2 Vessel upgrade

The upgrade of vessels is another issue that deserves close attention, as referred previously. Since Madeiran vessels are old, compared with their European counterparts, the renovation of the fleet would mean better working conditions for everyone on board, and also for the conservation of fish.

### 5.3.3 Create showcooking events

In order to add value to products, showcooking events and expositions are important to reveal the latest development of food products. In accordance, to differentiate SSF products from others, several events can be of importance to reveal their unique identity. The freshness of the products. The packaging specifics that can be different from the mass production. Such details can be very useful in promoting this area of the fishing sector, illustrating that smaller can be excellent and equally sellable.

### 5.3.4 Increase consumer awareness

Madeira has a unique brand that concedes value and identity, important traits for any product. The Madeira Product brand is therefore important in today's economy. Consumers feel assured they're buying something they know, that they're sure it's well produced. And sellers are reassured that to carry that certification on their products is a good practice and equally good for business.

In order to make up the most of this tool, fishermen, intermediary buyers, restaurants, factories, and others, should continue to use such certification, and expand to uncertified products. Identity means business, and this should continue its healthy expansion towards more fish-related products.

### 5.3.5 Campaigns to increase consumer awareness and product value

Implemented in 2011 (Regional Decree nº. 6/2011/M), the "Madeira Product" brand is a System of Certification of Guaranteed Origin of Products of the Autonomous Region of Madeira.

The purpose is to grant certifications to agri-food products and others (craftmanship products, retail, etc.), from Madeira archipelago, distinguishing the local products from others. It is regarding the former that the Product of Madeira label aims, to differentiate and distinguish the

regional productions, catalysing the will and the pride of those who produce and those who consume, and contributing to establish a relationship of trust and complicity between them, generating multiplier effects, both at the level of production and marketing, benefiting everyone involved.



The label is a success. A survey was carried out in 2014 to evaluate the degree of consumer awareness and adhesion to the brand. The results showed that "(...) 97% of Madeiran consumers consider the existence of the 'Madeira product' brand to be important and 92% of the respondents know the 'Madeira product' brand, since 89% have already bought such products." Currently, it is present in an array of products, from agri-food products and handicraft products to transformed goods such as hygiene and cosmetic products, fish and others.

Although the label has reached numerous products, fresh fish related products represent still an area that possesses several gaps. This reality is even more true when we approach the fishing industry and specifically fresh fish, in which fishermen sell their fish directly to supermarkets, factories or other buyers. Considering this issue, it is, therefore, a necessary step that the evolution of the brand needs to embrace.

For future reference, this label is of huge importance for local products in almost all branches of Madeira economy. It is a part of many products of reference and with the increase of consumer awareness, it will tend to become even more relevant.

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