FISHERIES IN REUNION

IN-DEPTH-ANALYSIS

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DIRECTORATE-GENERAL FOR INTERNAL POLICIES
POLICY DEPARTMENT B: STRUCTURAL AND COHESION POLICIES

FISHERIES

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IN-DEPTH ANALYSIS
Abstract

European outermost regions including Reunion are important providers of seafood to the Europeans. Adversely, fisheries play an important role in the economy of insular regions. These remote territories experience specific hardships in relation to their economic development, due to their location, limited range of activities in which they can sustain a competitive advantage. The recent EU fisheries policy change and the expected national compensation scheme for the outermost regions are to remedy these difficulties and promote further integration to the single market. Whether these respond the islanders' needs is the question to ask.
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1. INTRODUCTION

Historically this is the second visit of the Parliament's Fisheries Committee to the island. Previous visit by a delegation\(^1\) took place almost fifteen years ago from 25 to 30 April 2001. Both of these visits can be seen as the confirmation of the EU commitment towards its outermost regions\(^2\) (OR).

The Reunion island's economic framework depend on two major components, the EU policy on Outermost Territories and its relationship with its neighbours in the South-West Indian Ocean.

Map 1: Geographical Distances from Reunion to its Regional Partners

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\(^1\) The previous delegation included Mr Varela, Chairman, Mrs Langenhagen, Member of the Committee, Mr Kinderman, Member of the Committee, Mr Busk, Member of the Committee, Mr Gallagher, Member of the Committee and Mrs Sudre, Member for Réunion and Substitute Member of the Committee. Two officials from the Secretariat, Mr Rodas and Mr Topping accompanied the delegation.

\(^2\) The EU's Outermost Regions (ORS) are:
- the Canary Islands (an autonomous community belonging to Spain)
- Madeira and the Azores (autonomous regions of Portugal)
- Mayotte, Martinique, Guadeloupe, French Guiana, Reunion, Saint-Martin and Saint-Barthélemy (overseas departments of France).
The briefing note aims to provide a wider geographical scope on fisheries in the West-Indian Ocean rather than on the local consumption. This note is a refocused extract from an external study - “Pelagic Fisheries and the Canning Industry in Outermost Regions” European Parliament (June 2015) to explain the geographical integration of the fishing industry around ports and processing facilities.

The economic setting for the Reunion fisheries in the West-Indian Ocean includes other islands around Madagascar (notably Mayotte and Seychelles), but also some impediments for development from the east coast of Africa (notably pirates from Somalia). Each port has its specialization in the area. Reunion for example has an important share in fresh and first processing of swordfish.

The ports and processing facilities of the area benefit also from the deep-sea species mainly Dissostichus originating from the distant Southern Ocean. The Ocean is regulated by the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR). The EU and France are members of this Convention. The IUU regulation on fishing in the Antarctic prohibits illegal vessels to access and use port facilities.

The lucrative large pelagic species are targeted by large purse seiners. In addition to third country vessels about 42 continental EU registered (Spanish and French) purse seiners, one Reunion, five Mayotte and eight Seychelles (UK Commonwealth Country) registered vessels prey for fish in the area.

The biggest tuna canning industry which is heavily dependent on EU market is located in Victoria, Seychelles. The canning industry in turn is competing for EU markets with canners from Papua New-Guinea in the Pacific (see Chapter 4.1.). The economic fortunes up- and downstream affect directly the livelihoods of many islanders of the West-Indian Ocean tuna fishing area.

In regards of the community policy for the outermost regions the island of Reunion is looking forward to take advantage of its extensive Exclusive Economic Zone (EEZ). It represents 318 300 km2 and Mayotte EEZ is up to 68 000 km2. The EEZ extension of both islands is 150 % superior to EEZ of continental France. Meanwhile, the Reunion catches amounts only to 0.16 % of the total catches of the South Indian Ocean (IOTC, 2012).

Art.5(3) of Reg. (EU) No 1380/2013 of the European Parliament and of the Council of 11.Dec, 2013 on the Common Fisheries Policy authorises France to reserve the waters up to 100 nautical miles from the baselines to vessels registered in the ports of Reunion and the EU vessels that traditionally fish in those waters.

Two Regional Fisheries management Organisations have competence in the South-Indian Ocean, the Indian Ocean Tuna Commission (IOTC) and the South-Indian Fisheries Agreement (SIOFA). The EU is member of both organisations. France is also a member of both organisations representing its other outermost territories with different status.
1.1. The Indian Ocean Tuna Commission (IOTC)

Institutionally it is the **Indian Ocean Tuna Commission (IOTC)** that plays a central role in managing the most economically important species in these waters. The IOTC has been operating since 1997 and is based in Mahé. It is an intergovernmental organisation with the power to administer stocks of 16 species of tuna and other highly migratory species in the Indian Ocean and adjacent areas. Its aims are to promote cooperation between its members in order to ensure, through appropriate management, the optimum conservation and use of resources, and the sustainable development of their exploitation.
1.2. South Indian Ocean Fisheries Agreement (SIOFA)

In the past, the FAO Advisory body of the Indian Ocean Fishery Commission (IOFC) could not meet the request of the UN General Assembly from 2004 to manage deep-seas fisheries in the high seas. The deep-sea mountains of the Indian Ocean suffered a lot of damage from the fishing of orange roughy and other deep-sea species conducted by distant south eastern fleets. Therefore a new process to create a new organisation was launched.

After the fifth Intergovernmental Consultations attended by eastern and Western Indian Ocean coastal states and high seas fishing countries, in 2006 they came to a consensus. In 2007, the Agreement was open for signature, and a resolution on interim arrangements concerning the high seas was adopted.

SIOFA entered into force in 2014, and for now the Parties are: Australia, Cook Islands, European Union, France, Japan, Republic of Korea, Mauritius and Seychelles.

The Agreement is aimed at ensuring the long-term conservation and sustainable use of the fishery resources other than tuna in areas that fall outside national jurisdictions.

In March 2015, la Réunion was elected as headquarters of SIOFA, with the strong support of the EU, in spite of Mauritius’ interests. During the meeting a resolution was adopted prohibiting the use of gillnets and promising to conduct inspections on ships visiting the ports. The parties to the Agreement are to impose compliance with SIOFA regulations and not authorise landing and the use of port facilities to illegal vessels (IUU).

The importance of the island in the international scenario of the new Regional Fisheries Organisation established in the South-Indian Ocean (SIOFA), to govern the high-seas fishing is growing, and is expected to play an important role in promoting EU CFP.
Map 4: Scope of the South Indian Ocean Fisheries Agreement (SIOFA)
2. **THE REUNION ISLAND**

2.1. **General description**

Reunion is an overseas department of France located in the Indian Ocean, east of Madagascar and about 200 kilometres southwest of Mauritius, the nearest island. It has a mountainous terrain rising to more than 3,069 meters, and an area of 2,520 square kilometres. The island hosts a 3,500 ha nature reserve created in 2007 on the west coast.

The population of Reunion was estimated to be 833,500 in 2010. The rate of increase of the population of the island remains high, 1.5% per year compared with 0.7% in metropolitan France. GDP was estimated at EUR 15.2 billion in 2010 with GDP per capita standing at EUR 18,284, about 60% of the national level for France. The economy is dominated by the tertiary sector which represents nearly 70% of value added. The combined contribution to GDP in the primary sector (agriculture and fisheries) is estimated at 1.3% of GDP.

For further reading The French Institute for Publications on its Overseas Territories, *(L’Institut d’Émission des Départements d’Outre-mer (IEDOM))* publishes regularly on Reunion.

2.2. **Oceanography**

The origins of Reunion Island are volcanic. Although the EEZ (exclusive economic zone) is relatively large, (351,000 square kilometres), the continental shelf is limited to a narrow band around the island with a total estimated area of 182 square kilometres. Reunion is in the path of the South Equatorial Current, a surface current that flows southwest in the waters around the island. These waters are characterised by being relatively warm but nutrient-poor.

2.3. **Fishery resources and aquaculture**

Fishery resources in Reunion Island are dominated by pelagic species, including tunas, swordfish, various billfish, mahi mahi (*Coryphaena hippurus*), as well as some pelagic sharks. A variety of bottom-dwelling or coastal species are also caught, but in relatively small amounts. There have been some attempts to initiate aquaculture in the Island, but this appears to have had limited success. FAO aquaculture statistics estimate that there is a production of 50 tonnes Laban wrasse (*Labrus bergylta*). The island has established an aquaculture competence pole called ARDA (*Hydro Reunion*). It was established in 1991 and reformed in 2007 into a technology development centre.

Aquaculture is an expanding sector worldwide and could possibly be developed in Reunion. Currently, there are eight enterprises of continental aquaculture with 30 direct jobs. Fish farming is based only on exogenous species and not native ones. The adaptation of the species poses an additional difficulty and an extra cost.

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4 [http://www.reservemarinereunion.fr](http://www.reservemarinereunion.fr)
7 [http://www.arda.fr](http://www.arda.fr)
2.4. Main fishing activities and fleet structure

- Over the last five years, the Reunion based fleet (other than distant water trawlers operating in southern oceans) recorded catches in the region of 2,500 to 3,000 tonnes per annum; large pelagic fish account for 87% of the production, tuna catches represent 46%, swordfish 36% and sharks 6%.
- Three vertically integrated operators process products from the longline fishery, mostly for export. A further two smaller fish processing operations supply the local market.
- Exports are undertaken by two of the operators; transfers to the continental EU totalled EUR 58 million in 2010.
- The fishery sector accounts for about 1,200 jobs, about 0.5% of the total number employed. About 42 of these are in processing.
- The Reunion fishing fleet is divided into three major segments; longliners targeting large pelagics, small artisanal inshore fishing vessels, and large distant water vessels operating in southern ocean fisheries.

The longline fleet is comprised of two distinct groups; coastal vessels, less than 10 metres in length (about 12 or 13 units landing fish for the local market), and offshore (mostly freezer) vessels (33 units operating in 2010, down to 28 in 2012, producing for local and export markets). The smaller vessels operate a day fishery. Offshore vessels remain at sea for longer times, 4 to 10 days. These vessels target a range of species of tunas and billfish using surface longlines. The estimated production from this segment was reported to be 2,053 tonnes in 2012. The sector provides employment for approximately 250 persons.

The offshore vessels fish in the whole of the French exclusive economic zone around the Island of Reunion and in the Malagasy exclusive economic zone, in the context of the bilateral fishing agreement between Madagascar and the European Union. They are operated by three fleet operators, each linked to fish processing interests in Reunion. Two operating bases have been installed in Tulear and Fort Dauphin ports in southern Madagascar to allow these vessels to work longer in Malagasy waters. Catches are transhipped from these ports to the island of Reunion. At least one of the operators was reported to be experiencing financial difficulties in 2011 and 2012.

At the end of 2010 there were about 240 small scale vessels (less than 12m) registered, of which some 170 to 190 were active. These vessels target demersal species as well as large pelagic fish (mostly tuna and swordfish caught by handlines), with a small production, reported to be 73 tonnes in 2012. According to local estimates, this fleet employs about 500 fishers, but not all can be linked directly to large pelagic catches.

The third and most lucrative segment of the fleet comprises eight vessels over 50 meters which operate in the Southern Oceans, with almost the entirety of their catches made off the coast of the Islands of Kerguelen, Crozet, Saint-Paul and Amsterdam. Only one of these vessels is registered to Reunion, the rest of the fleet being registered to either Mayotte.

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9 The IOTC positive vessel list includes a total 220 longline vessels registered to Reunion with authorisation to fish in 2013. It appears however that most of these vessels are not active in the swordfish and tuna fishery.
(see Chapter 3.4.), or Terres Australes and the French Antarctic Territory. These ships target demersal species (skate, grenadier, toothfish, crayfish) frozen and transhipped mainly to the Asian and American markets.

2.5. Catches and landings

Over the five years 2008 to 2012, the Reunion fleet recorded catches in the region of 2 500 to 3 000 tonnes per annum. Table 1 (which excludes the distant water trawl segment) shows that the main catches were large pelagic fishes, which accounted for some 87 % of the production. Tuna catches averaged about 1 300 tonnes/year, representing 46 % of catches (14 % yellowfin, 16 % bigeye and 20 % albacore). Swordfish accounted for a further 36 % of the total catches. Catches of shark accounted for 6 % of total catches.

Table 1: Fish catches in Reunion

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>COMMON NAME</th>
<th>CATCH (tonnes)</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xiphias gladius</td>
<td>Swordfish</td>
<td></td>
<td>942</td>
<td>780</td>
<td>1 031</td>
<td>1 092</td>
<td>1 092</td>
</tr>
<tr>
<td>Thunnus alalunga</td>
<td>Albacore tuna</td>
<td></td>
<td>560</td>
<td>571</td>
<td>425</td>
<td>333</td>
<td>333</td>
</tr>
<tr>
<td>Thunnus albacares</td>
<td>Yellowfin tuna</td>
<td></td>
<td>473</td>
<td>411</td>
<td>350</td>
<td>465</td>
<td>465</td>
</tr>
<tr>
<td>Thunnus obesus</td>
<td>Bigeye tuna</td>
<td></td>
<td>503</td>
<td>351</td>
<td>320</td>
<td>389</td>
<td>389</td>
</tr>
<tr>
<td>Istiophorus platypterus</td>
<td>Sailfish</td>
<td></td>
<td>28</td>
<td>18</td>
<td>15</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Istiophoridae</td>
<td>Other sailfish, marlin</td>
<td></td>
<td>128</td>
<td>83</td>
<td>122</td>
<td>112</td>
<td>112</td>
</tr>
<tr>
<td>Lutjanus spp</td>
<td>Snappers</td>
<td></td>
<td>2</td>
<td>21</td>
<td>12</td>
<td>42</td>
<td>36</td>
</tr>
<tr>
<td>Priacanthus spp</td>
<td>Bigeye</td>
<td></td>
<td>6</td>
<td>38</td>
<td>24</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Coryphaena hippurus</td>
<td>Mahi mahi</td>
<td></td>
<td>60</td>
<td>37</td>
<td>43</td>
<td>324</td>
<td>91</td>
</tr>
<tr>
<td>Elasmobranchii</td>
<td>Sharks, rays</td>
<td></td>
<td>64</td>
<td>53</td>
<td>56</td>
<td>50</td>
<td>49</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td>212</td>
<td>227</td>
<td>177</td>
<td>119</td>
<td>105</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>2 978</td>
<td>2 590</td>
<td>2 575</td>
<td>2 948</td>
<td>2 693</td>
</tr>
</tbody>
</table>

Source: FAO FishStatJ 2014

2.6. Fish processing

After several reorganizations and bankruptcies in the period 2010-2012, there are now three main vertically integrated companies engaged in the primary processing of products from the longline fishery, of which two supply the export market. A fourth enterprise specialises in high value added products for the local market.
Located at Pointe des Galets, Reunipeche is closely linked with fleet operators Enez, which manages a dozen longline vessels targeting large pelagic fish (either its own or on behalf of other owners). The products are sold to local and the export market (mainland France, Spain, and South East Asia). Marketed products are tuna and swordfish in the form of fresh gutted whole fish or loins, although peak catches are also frozen. The company employs 22 people ashore and in 2010 realized a turnover of EUR 7.1 million, of which almost 65% was for export. Reunipeche is the only entity presently capable of supplying fresh export markets, and has become the de facto channel for all fishery producers of the island seeking to export part of their production.

The main competitor in export of fresh tuna and swordfish used to be Petrel, linked to the fleet operator SOPESUD. It is a much smaller operation with a 2010 turnover of EUR 1.2 million, of which about half was linked to export activity. It was placed into receivership in November 2011 and since then has been mainly supplying fresh fish to the local market, with only limited quantities for export.

The other two firms deal exclusively with fresh fish, including some tuna and swordfish for the local market (restaurants and fishmongers). Together they generate an annual turnover of approximately EUR 2-3 million and employ about 20 people.

2.7. Trade

Exports (transfers from Reunion) of fishery products to continental EU and third country markets totalled EUR 58 million in 2010. Fishery products represent more than 20% of the exports of the island. Exports comprise some tuna and swordfish caught by local fleets, but more than 90% are the high value products caught by the offshore fleets operating in the waters of Antarctica. Even so the balance of trade in fishery products is negative, due to the importation of significant quantities of products for local consumption (worth EUR 62 million in 2010). In the outermost regions an average of 40% of the local consumption is supplied by imports of fish products.
2.8. Employment in fisheries

For Reunion, employment in the fishery sector accounts for approximately 1,200 jobs, a relative contribution of 0.5% to the total employment of 240,000. Total employment in processing (all of which can be said to be linked to the large pelagic fishing sector, mostly swordfish) is estimated to be about 42 persons.

The level of unemployment in the French outermost regions is high, an average of 25%, and 60% among the young people. Therefore, fishing sector development is a key issue to achieve economic cohesion, social stability and progress.
3. **FISHERIES IN MAYOTTE**

- Mayotte became an overseas department of France on 31 March 2011 and an Outermost Region of the European Union on 1 January 2014.

- There are currently five large purse seiners registered to Mayotte, which operate as part of the EU Indian Ocean fleet in EU, international waters and, under Fisheries Partnership Agreements, in third country waters. The Mayotte registered purse seiners do not visit the Island.

- The purse seine vessels target tunas for cannery supply. Annual catches in all zones were nearly 32,000 tonnes in 2012. The catch is mostly landed or transhipped in the Seychelles.

- Other EU purse seine vessels and up to 8 Seychelles registered purse seiners also exploit tuna seasonally in the Mayotte zone.

- In addition, four small longliners operate from Mayotte, targeting tunas and swordfish, reporting annual catches of 67 tonnes in 2012.

- There is no formal fish processing on Mayotte and only out-dated estimates on employment in fisheries (858 artisanal fishermen in 1987). Most of the tuna is landed or transhipped in the Seychelles.

- The Mayotte registered purse seiners do not visit the Island and crews are not recruited locally.

### 3.1. General description

Mayotte comprises one larger island and various smaller ones located at the southern end of the Comoros Archipelago, in the SW Indian Ocean. On the creation of the State of the Comoros in 1975 (known today as the Union of the Comoros) Mayotte chose to remain attached to France. Mayotte became an overseas department of France on 31 March 2011 and became an outermost region of the European Union on 1 January 2014. The local economy is mainly based on agriculture and small scale fisheries. The population was 212,600 persons in 2012 with a rate of increase of 2.7%.

### 3.2. Oceanography

The continental shelf around Mayotte has an area of approximately 1,800 square kilometres, including coral reef ecosystems. The island is in the path of the Agulhas Current, the main current in the Mozambique Channel.

### 3.3. Fishery resources

Other than small scale exploitation of coral reef fisheries, the resources in Mayotte are dominated by pelagic species, including all of major tuna species and small catches of billfish that migrate through the Mayotte zone on their passage through the Mozambique Channel.
3.4. Main fishing activities and fleet structure

Five large purse seiners which fish throughout the Indian Ocean are registered\(^\text{10}\) to Mayotte and only one to Reunion, but up to eight Seychelles-flagged vessels are also permitted to fish in the Mayotte zone, under the terms of a Fishery Access Agreement between the EU and the Government of Seychelles (2014 to 2020). Other EU vessels (up to 42 Spanish and French purse seiners, as well as about 20 surface longliners) also exploit the Mayotte zone (as well as the adjacent waters of the Comoros islands).

### Table 2: Characteristics of purse seine vessels registered to Mayotte

<table>
<thead>
<tr>
<th>SHIP NAME</th>
<th>IOTC No.</th>
<th>VESSEL TYPE</th>
<th>LOA /LHT</th>
<th>GT/UMS</th>
<th>PORT OF REGISTRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernica</td>
<td>IOTC009828</td>
<td>Purse seiner</td>
<td>89.4</td>
<td>2 666</td>
<td>Dzaoudzi</td>
</tr>
<tr>
<td>Drennec</td>
<td>IOTC003874</td>
<td>Purse seiner</td>
<td>84.12</td>
<td>2 319</td>
<td>Dzaoudzi</td>
</tr>
<tr>
<td>Franche Terre</td>
<td>IOTC008743</td>
<td>Purse seiner</td>
<td>89.4</td>
<td>2 664</td>
<td>Dzaoudzi</td>
</tr>
<tr>
<td>Manapany</td>
<td>IOTC009131</td>
<td>Purse seiner</td>
<td>89.4</td>
<td>2 666</td>
<td>Dzaoudzi</td>
</tr>
<tr>
<td>Trevignon</td>
<td>IOTC003810</td>
<td>Purse seiner</td>
<td>84.12</td>
<td>2 319</td>
<td>Dzaoudzi</td>
</tr>
</tbody>
</table>

Source: IOTC Vessel Register

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\(^{10}\) These are listed in Table 4. These vessels changed their status to French-flagged vessels on 1 January 2014, as a result of the change in status of Mayotte.
3.5. Catches and landings

Catches in the Mayotte zone are dominated by the catches of the EU, Seychelles and Mayotte purse seiners, which primarily target skipjack and yellowfin tuna, and EU longliners which target swordfish and sharks. Table 3 shows catches reported by Mayotte registered vessels in all zones of the Indian Ocean. The table also includes the catches of the small-scale fisheries in Mayotte including small longliners (see below). No tuna from the industrial fleets is landed in Mayotte so the economic linkages to the region are tenuous. Most of the tuna is landed or transhipped in the Seychelles (see Chapter 4.1.).

The four small longliners target swordfish, although catches appear not to be reported to FAO. According to IOTC statistics, catches of swordfish were about 28 tonnes in 2012 (out of a total of 67 tonnes caught by these longliners in 2012). The rest probably consists of major tuna species and a few billfish, assuming that catch composition is similar to Reunion longliners.

3.6. Fish processing, trade and employment

There is no formal fish processing on Mayotte, nor fish exports. Currently an estimated 1.4% of the working population are engaged in agriculture and fisheries. A 1987 study reported by FAO produced an estimate of 858 artisanal fishermen. The Mayotte registered purse seiners do not visit the Island and it is therefore unlikely that crews are recruited locally.

Table 3: Large pelagic catch by Mayotte registered vessels

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>CATCH (tonnes)</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellowfin tuna</td>
<td></td>
<td>4 895</td>
<td>5 496</td>
<td>8 541</td>
<td>13 562</td>
<td>19 727</td>
</tr>
<tr>
<td>Bigeye tuna</td>
<td></td>
<td>867</td>
<td>1 150</td>
<td>1 437</td>
<td>2 071</td>
<td>2 499</td>
</tr>
<tr>
<td>Longfin tuna</td>
<td></td>
<td>28</td>
<td>...</td>
<td>34</td>
<td>338</td>
<td>330</td>
</tr>
<tr>
<td>Skipjack tuna</td>
<td></td>
<td>5 112</td>
<td>6 709</td>
<td>9 131</td>
<td>11 424</td>
<td>7 245</td>
</tr>
<tr>
<td>Swordfish</td>
<td></td>
<td>24</td>
<td>25</td>
<td>21</td>
<td>22</td>
<td>28</td>
</tr>
<tr>
<td>Sailfish and marlins</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Other bony fish</td>
<td></td>
<td>1 750</td>
<td>1 750</td>
<td>1 750</td>
<td>2 000</td>
<td>2 000</td>
</tr>
<tr>
<td>Sharks</td>
<td></td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>12 701</td>
<td>15 155</td>
<td>20 939</td>
<td>29 442</td>
<td>31 854</td>
</tr>
</tbody>
</table>

Source: FAO FishStatJ 2014 and IOTC statistics (for swordfish catches)
4. **FISHERIES IN SEYCHELLES**

Plankton productivity in the Indian Ocean is low, due to high temperatures. There are exceptions along the northern edges and at some other isolated points. As a result, marine life is relatively scarce. Fishing is limited to subsistence levels, apart from highly migratory species whose variable presence depends, among other factors, on the abundance of small pelagic species, which are their prey.

Commercial fishing in the Indian Ocean is focused on a small number of highly migratory species, mainly tunas. These are caught by fleets flying around a dozen different flags. There are Asian vessels (from Taiwan, Japan, South Korea, the Philippines and China), vessels that are foreign owned but Seychelles-registered, vessels from EU Member States, and vessels that fly flags of convenience. In general they use longlines and purse seines.

The fisheries sector in Seychelles waters consists of the following: the small-scale fleet, which uses small motorised vessels that fish for demersal and semi-pelagic species in the local area; the semi-industrial fleet, which uses longliners that are between 14 and 22 metres in length and that catch large pelagic species (mainly tuna and swordfish); and the industrial fleet, which uses large purse seiners and longliners that are generally foreign owned and concentrate on fishing for tunas (skipjack tuna, yellowfin tuna and bigeye tuna). Currently, 69% of the catch is taken using purse seines, 17% with longlines and 11% using pole-lines.

As highly migratory species, the movements of the tunas tend to vary considerably. As a result, their catch in a given area is always subject to large variations. In addition, Somali pirate attacks have led to a reduction in fishing effort, particularly since 2008.

There is some concern within the IOTC about the purse seining of juvenile yellowfin tuna using Fish Aggregating Devices (FADs), despite these appearing to be on the decline. Bigeye stocks are affected by illegal, unreported and unregulated (IUU) catches. In order to tackle this situation, the IOTC only authorises fishing by Contracting Party vessels that have been declared and registered in a public list. It has also decided to freeze the fishing effort at 2003 levels. In addition, during 2011 and 2012 there is a moratorium off the Somali coast (0°-10° North / 40°-60° East) from 1 February to 1 March for longliners and from 1 November to 1 December for purse seiners.

4.1. **Seychelles fisheries sector**

Fishing-related activities form a pillar of the Seychelles economy. Their contribution to GDP and foreign exchange exceed that of tourism. Exports of fishery products account for over 90% of all exports.

The Seychelles Exclusive Economic Zone is at the centre of the south-west Indian Ocean tuna fishing area. Victoria is the closest point to 90% of the region’s tuna fishing areas, it is less than two days’ sailing from the region’s fishing grounds, and it is outside the area affected by cyclones.

Around 80% of the tuna catch in the south-west Indian Ocean is landed or trans-shipped in the port of Victoria. There is a large tuna cannery operated by Indian Ocean Tuna (IOT),

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which is one of the largest canneries in the world and the main employer in the Seychelles. The Seychelles economy is heavily dependent on IOT’s operations, which are in turn highly dependent on the European Union market.

Given its relatively high cost, any erosion of the preference for importing Seychelles tuna into the EU could have wide-ranging economic repercussions. This should be seen in the context of the tariff concessions granted to certain countries, such as the derogation from rules of origin applicable to Papua New Guinea.

The fisheries sector in the Seychelles requires significant investment and has high operating costs in relation to its limited productivity. It is also facing a shortage of workers with adequate professional training and shortcomings in its infrastructure.

There are only two aquaculture production facilities, one producing black-lip oysters (Pinctada margaritifera) and the other producing maxima clams (Tridacna maxima), both of which are located on Praslin. A shrimp production facility closed in 2008.
5. POLICY SUPPORT MEASURES

- The special importance of tuna fisheries in the Outermost Regions has been clearly recognised and addressed by the EU.

- A price support mechanism directed exclusively at operators supplying tuna for processing was provided under Council Regulation (EC) 104/2000 on the common organisation of the markets in fishery and aquaculture products and compensation for additional operating costs under Council Regulation (EC) No 791/2007 of 21 May 2007 were repealed with the 2014 reform of the Common Fisheries Policy, and replaced by measures under Regulation (EU) No 1379/2013 on the common organisation of the markets in fishery and aquaculture products.

- Storage aid is the only direct price support now available to tuna operators under the European Maritime and Fisheries Fund, and is due to be phased out on 1 January 2019.

- Member States may design new more flexible specific measures to compensate for the additional costs of fishery operators in the Outermost Regions.

5.1. Market intervention support for tunas

The EU recognises the special role played by tuna fisheries in fishery dependent areas, as well as the role of fisheries in the Outermost Regions. Tuna fishing provides inputs for the canning industry, with high employment impacts in some of the EU’s fisheries dependent regions, including some ORs. To ensure regular supplies of raw material to its fish processing sector, the EU has introduced an autonomous suspension of import duties on much raw material. It has also provided tariff quotas for some third countries exporting canned tuna to the EU.

Under Council Regulation (EC) 104/2000 of 17 December 1999 on the common organisation of the markets in fishery and aquaculture products, tuna producers could receive a compensatory allowance to offset the disadvantage caused to them by these measures, to be paid when market prices for tuna dropped below 90% of an annually predetermined Community producer price. There is no published data on the amounts paid under this scheme, but a press report indicated that the Commission set aside EUR 1.7 million for 2005. This scheme was however repealed by the 2014 reform of the Common Fisheries Policy (CFP) and is replaced by new measures set out in Regulation (EU) No 1379/2013 of the European Parliament and of the Council of 11 December 2013 “on the common organisation of the markets in fishery and aquaculture products”.

Any community measures that could be associated to subsidies were eliminated to meet the request of the International community in different fora, e.g. the OECD, WTO, the UN.

The new arrangements, which entered into force on 1 January 2014, bring the support mechanism for tuna into line with that for other species. Now the tuna POs are required to propose production and marketing plans and may recommend a price level to their Member State below which a single subsidy (storage aid) may be granted from the EMFF. All of the main tuna species caught by the ORs are eligible for storage aid. Storage aid is the only support available (compared to a suite of six subsidies previously), and this itself is due to be phased out on 1 January 2019 (see Commission Implementing Regulation (EU) No 1419/2013).

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5.2. EU investment support to economic development

The outermost regions benefit from community financing since 1992. Since 2009, the construction of new vessels does not fall under the EU funding. Therefore modernization and the substitution of engines remains a crucial opportunity for the fishing sector to improve its performance in Reunion waters.

Not surprisingly most popular European Fisheries Fund (EFF) supported projects relate to fleet modernization, support to young fishermen and fish transformation. Due to adverse economic conditions marked by economic and financial crises, the Reunion experiences difficulties in making full use of the EU funding. Many ambitious project promoters could not realize their investments due to the recessionary economic environment. The island did not use in full its EFF allocation and lost funds several times in the programming period 2007-2013 (so called “decommitments”).

On a structural level the islands’ fisheries and aquaculture sector needs to adapt to the new Common Fisheries Policy, this concern would certainly be addressed during the 2014-2020 EU funding period.

5.3. Implementation of the Outermost Region's compensation scheme

The large pelagic sector has qualified for subsidies awarded by the European Union to fishery sector operators in the Outermost Regions who are considered to operate at a competitive disadvantage due to their remoteness from the European continental market and special climatic conditions. During the period 2007 to 2013 the scheme was governed by Council Regulation (EC) No 791/2007 of 21 May 2007 “introducing a scheme to compensate for the additional costs incurred in the marketing of certain fishery products from the outermost regions the Azores, Madeira, the Canary Islands, French Guiana and Reunion”. This was evaluated in 2012 by DG MARE. The scheme was replaced by measures under the European Maritime and Fisheries Fund.

The annual support available to large pelagic fishery business operators during the period 2007 to 2010 in these regions averaged some EUR5.6 million/year (39% out of an average of EUR 14.5 million/year for all products). Tunas (and other large pelagic fishes) accounted for the largest element (42%) of the financial envelope foreseen under Regulation (CE) N° 791/2007. In Reunion it accounted for 100% of the compensation, overall the compensation was well utilised by tuna sector operators (which included swordfish in Reunion), with 98.5% of the financial envelope being utilised over the period 2007 to 2010. Overall, the scheme delivered compensation equivalent to an estimated 7.7% of the ORs raw material costs.

There are also high rates of utilisation in respect of tunas and swordfish in fresh form by Reunion. These products are destined for high value fresh markets in the EU and elsewhere, and are not linked to the cannery sector. The total support paid in Reunion was 5,836,483 EUR out of the available 6,260,800 EUR which results in the uptake of 93.2%.

13 The regional website http://www.reunioneurope.org/UE_realisations_PECHE.asp, lists some examples of the FIFG supported projects, even though somewhat outdated (carried out in 2000-2006).
5.4. Impacts and dependency of Outermost Regions on large pelagic fish resources

There are no economic data on the sector which allow a direct assessment of the contribution of the tuna sector to the regional economies of the ORs, but it is possible to estimate the contribution to employment in the regions. However, this may slightly overestimate the impact of employment in fishing, since the Mayotte vessels (with an estimated 100 crew members) are not linked to the territory. The data does however demonstrate the high on-shore employment generated by the tuna sector, in the activities related to loining and canning (with a high proportion of female workers).

In term of species, the catches in the Indian Ocean where 62 % of catches are comprised of yellowfin tuna, and 22 % skipjack tunas (shown in Table 5), catches are relatively stable, and where the ORs do not have a canning sector. The processors in Reunion represent the only shore-based OR dependency in the Indian Ocean (on the single species, swordfish).

Table 4: Summary of Outermost Region Fleets targeting large pelagic fisheries

<table>
<thead>
<tr>
<th>REGION</th>
<th>EMPLOYMENT IN FISHING</th>
<th>TOTAL EMPLOYMENT</th>
<th>TUNA FLEET</th>
<th>AVERAGE LANDINGS 2008-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Segment No.</td>
<td>GRT/</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(c)</td>
<td>GRT/</td>
</tr>
<tr>
<td>Reunion (b),(d)</td>
<td>1 200</td>
<td>240 000</td>
<td>Longliner</td>
<td>(larger)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Longliner</td>
<td>(smaller)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>40</td>
<td>1 267</td>
</tr>
<tr>
<td>Mayotte (b),(d)</td>
<td>(f) 858</td>
<td>n/a</td>
<td>Purse seine</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Longliner</td>
<td>(smaller)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>12 642</td>
<td>(e)100</td>
<td>Total</td>
</tr>
</tbody>
</table>

Notes and sources:
- a. ICCAT data on catch by species was used for species breakdown of landings data
- b. FAO capture data was assumed to be equal to landings
- c. Number and capacity of larger vessels is based on tuna RFMO data; smaller vessels is based on EU Fleet Register data
- d. Catches by small vessels (handline) are considered negligible
- e. Not linked to Mayotte
- f. 1987 data (FAO)
- g. EU Fleet register
- h. Consultants estimates based on 2012 average prices (Oceanic Développement and Megapesca (ibid).
Table 5: Average species composition of OR tuna catches in Indian Ocean

<table>
<thead>
<tr>
<th>TUNA SPECIES</th>
<th>INDIAN OCEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skipjack</td>
<td>22 %</td>
</tr>
<tr>
<td>Yellowfin</td>
<td>62 %</td>
</tr>
<tr>
<td>Albacore</td>
<td>1 %</td>
</tr>
<tr>
<td>Bigeye</td>
<td>1 %</td>
</tr>
<tr>
<td>Others</td>
<td>13 %</td>
</tr>
</tbody>
</table>

Source: ICCAT and IOTC catch databases

5.5. Impacts of status of the fish stocks

The Indian Ocean stocks, (the OR tuna fishing activities excluding swordfish) are dependent on the yellowfin tuna stocks, which account for 62 % of the catches. There is a need for the Scientific Committee of IOTC to update the stock assessment (occasionally fish mortality can exceed the recommendations based on scientific calculations although stock biomass remains at a healthy level) and take into account the recent levels of catches above the Maximum Sustainable Yield (MSY), in order to guarantee the sustainability of the fishery. There is an urgent need for IOTC members to reach agreement on the allocation of quotas for major tuna species, thus ensuring that exploitation remains within sustainable limits.

In spite of this urgent requirement, the impact of the current unsustainable fishing for tuna species on the EU’s Outermost Regions in the Indian Ocean is considered to be rather limited, since there are few direct linkages from this fishery to their economies. For skipjack tuna and bigeye, the catches remain well below the estimated MSY, thus indicating a sustainable fishery. On the other hand, for swordfish, upon which the Reunion fishing and processing sectors are fully dependent, there are concerns regarding localised depletion of the southwest component of the stock, which remains below the level that would produce MSY. There is a risk that maintaining the current levels of exploitation will result in further depletion. Whilst not of immediate biological concern, this reduces efficiency, thus impacting on the sector, which in any case suffers from low profitability.

5.6. Importance of access to imported raw material

It is also important to recognise that even with stocks that are sustainably exploited, the ORs tuna fleets are not able to fully supply the needs of their processing establishments. Although at first sight this should be the case (since total tuna catches are approximately double the processing requirements), the spatial distribution of catches does not match directly with processing capacity (with the demand from canneries being in the Atlantic, whilst most of the catches are in the Indian Ocean). The skewing of catches is attributable to the significant production by the five modern purse seiners registered to Mayotte, which land into the Seychelles.
5.7. Potential for extensions to the EEZ

France has lodged a claim\textsuperscript{16} under the UN Convention on the Law of the Sea for the extension of the EEZ for Reunion Island and Saint-Paul and Amsterdam Islands on 8 May 2009 based on the principle of the continental shelf extension. These claims present improved opportunities for the tuna sectors of the EU’s ORs.

To the extent that these claims for the extension of the EEZs (based on the continental shelf extension) become recognised, (and in some cases they are disputed), this will inevitably affect in a positive manner the access of EU fishery operators to the tuna resources in the Indian Ocean. Vessels from third countries will be excluded from some international waters in which they currently fish (unless of course access arrangements are negotiated). The extent of potential benefit in the Indian Ocean may be estimated by a comparison of the claims against the spatial distribution of catches in the Atlantic (as set out in ICCAT reports\textsuperscript{17}).

\textsuperscript{16} UNCLOS http://www.un.org/depts/los/clcs_new/commission_submissions.htm
6. **PIRACY IN THE INDIAN OCEAN**

Piracy off the coast of Somalia has posed a threat to maritime activities since the start of the civil war at the beginning of the 1990s.

Over time the Somali pirates have extended their area of operations, moving ever further away from the Somali coastline by using mother ships. Their weapons, equipment and methods, economic intelligence resources and bargaining processes are becoming increasingly sophisticated.

This Somali-based piracy is significantly affecting fishing activities in the Indian Ocean, including the Seychelles EEZ. In fact, use of the fisheries agreement with the Seychelles by Community purse seiners has declined considerably since 2009. This piracy has not only led to a reduction in the number of vessels, but has also restricted their activities and pushed the fishing areas further east. However, the pirates have likewise extended their area of operations.

Tuna purse seiners are more vulnerable than merchant vessels because they follow more predictable routes in search of catches, they travel more slowly, their deck height is much lower, making it easier to board, and when their nets are cast, they struggle to carry out evasive manoeuvres. Private or military armed protection teams seem to have been effective in reducing the number of hijacks, but operating costs have increased considerably.

Since August 2009, French purse seiners have carried military personnel for their protection, and since November 2009 it has been permitted to have private armed teams on board. The threat of piracy is reduced by the EU NAVFOR (Naval Force) Somalia operation the ATALANTA\(^\text{18}\), fishing effort may start to increase as vessels re-enter the Indian Ocean fishery.

These pirate attacks are also hindering the proper development of scientific observation programmes and are making it difficult to monitor fishing activities, as the coastguards have to focus their attention on the pirates. This piracy has also had negative effects on activities in the port of Victoria. The number of vessels handled, volume of fish trans-shipped, catches destined for the IOT cannery and services provided to vessels have all declined. This situation has led to some trans-shipments being moved to Port Louis in Mauritius. Although activities at the port of Victoria have been negatively affected by the piracy, it is also true that this has taken competing ports out of circulation, by, for example, limiting processing activity at the port of Mombasa in Kenya.

A number of vessels traditionally fishing in the South-Indian Ocean have moved to the Atlantic and it is expected that the fishing pressure on the resources in the Indian Ocean will increase while the treat of piracy reduces.

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\(^{18}\) Operation ATALANTA is a military operation undertaken by the European Union. It involves 23 EU Member States and another four countries and its aim is to combat piracy in the Horn of Africa. It commenced operations on 8 December 2008 and these are scheduled to continue until December 2012. On 21 November 2014 the Council of the EU extended the Mandate of Operation ATALANTA until December 2016.
7. **SUMMARY**

In the Indian Ocean, exploitation of yellowfin tuna exceeds recommended levels, and there is a need for agreement on allocation of fishing opportunities within the limits established by the scientific advice. Further, an increased fishing effort (as the threat of piracy recedes) and the fisheries management weaknesses present a risk of localised depletion of the SW Indian Ocean swordfish stock. Note that in the case of the SW Indian Ocean swordfish, exploitation is at maximum level, implying that there is no room for increasing catches and these should preferably be brought further down as part of a precautionary approach. This has direct bearing on the EU longline fisheries including those based in ORs. To ensure the future economic and environmental sustainability of the large pelagic sectors of the OR-s Reunion and Mayotte in the Indian Ocean it is recommendable to:

1. Ensure that the IOTC monitors closely changes in fishing effort and catches, and takes appropriate steps to improve its operational effectiveness, by implementing in full the recommendations of the 2009 Review;

2. Work towards an agreement on the allocation of quotas for the major tuna species in the Indian Ocean, including yellowfin tuna, thus avoiding situations in future where exploitation levels exceed the scientific advice.

3. Take all necessary actions to ensure that contracting and cooperating non-contracting parties to IOTC meet their obligations under the rules, using available tools under Council Regulation (EC) No 1005/2008 of 29 September 2008 that established a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing (the EU’s IUU Regulation).

4. Investigate in more detail the potential fishery impacts of possible continental shelf extensions to the EEZs of EU Member States

The following Table 6 provides an overview of the main stocks in the Indian Ocean, with some additional stocks considering the range of species taken by EU fleets. This concerns various billfish species and pelagic sharks that are taken by longline fisheries targeting swordfish.

The major tuna species and swordfish are being exploited sustainably in the Indian Ocean, based on the assessments of IOTC. This is however not the case with Striped Marlin; furthermore the situation regarding large pelagic sharks caught in association with swordfish is not known. In the case of yellowfin tuna, there is a need to update stock assessment to take into account recent increases in catches. It is interesting to note that the latest assessment of skipjack (in 2014) revised the MSY to much higher levels than previous estimates.

The UN General Assembly, through the Resolution on Sustainable Fisheries called upon countries and RFMOs to tackle the impact of Fishing Aggregating Devices (FADs) in the environment. Following this request in March 2015, IOTC adopted a Resolution on the management of FADs. It establishes the need to collect the necessary data in order to evaluate and monitor the use of all types of anchored and drifting FADs and their effects on tuna resources and tuna behaviour and associated and dependent species. It includes the improvement of management procedures to monitor the number, type and use of such devices and finally to mitigate possible negative effects on the target species and ecosystem.
**Table 6: Overview of tuna stock status in the Indian Ocean**

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>RECENT CATCH (1 000 t)</th>
<th>5-YR CATCH (1 000 t)</th>
<th>MSY (1 000 t)</th>
<th>FC/FMSY</th>
<th>BC/BMSY</th>
<th>TAC (1 000 t)</th>
<th>STATUS AND COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bigeye</td>
<td>109</td>
<td>106</td>
<td>132</td>
<td>0.42</td>
<td>1.44</td>
<td>N/A</td>
<td><strong>Sustainable;</strong> not overfished (44 % above optimum) and not subject to overfishing (58 % below target level). The tropical longline fishery was displaced by piracy but was returning by 2012.</td>
</tr>
<tr>
<td>Yellowfin</td>
<td>402</td>
<td>339</td>
<td>344</td>
<td>0.69</td>
<td>1.24</td>
<td>N/A</td>
<td><strong>Sustainable but this needs to be confirmed by new assessment;</strong> as catches exceed MSY it is likely that the stock is being subject to overfishing. Risk of increased fishing effort as a result of reduced piracy threat.</td>
</tr>
<tr>
<td>Skipjack</td>
<td>425</td>
<td>401</td>
<td>684</td>
<td>--</td>
<td>1.59</td>
<td>N/A</td>
<td><strong>Sustainable;</strong> not overfished (59 % above optimum) and apparently not subject to overfishing. Catches are below MSY.</td>
</tr>
<tr>
<td>Albacore</td>
<td>38</td>
<td>37.5</td>
<td>47.6</td>
<td>0.69</td>
<td>1.09</td>
<td>N/A</td>
<td><strong>Sustainable;</strong> not overfished (9 % above optimum) and not subject to overfishing (31 below MSY level).</td>
</tr>
<tr>
<td>Swordfish (IO)</td>
<td>32</td>
<td>27</td>
<td>39</td>
<td>0.34</td>
<td>3.10</td>
<td>N/A</td>
<td><strong>Sustainable;</strong> not overfished (310 % above optimum) and not subject to overfishing (66 % below target level).</td>
</tr>
<tr>
<td>Swordfish (SWIO)</td>
<td>7.3</td>
<td>7.3</td>
<td>9.9</td>
<td>0.89</td>
<td>0.94</td>
<td>N/A</td>
<td>**Sustainable but fishing mortality should remain below Fmsy. Although not a separate genetic stock, swordfish has been subject to localized depletion in the SWIO and biomass remains below the level that would produce MSY. Fishing mortality has recently decreased to below the Fmsy level and should be maintained. The recommended maximum catch is 6 678t.</td>
</tr>
<tr>
<td>Species</td>
<td>Index 1</td>
<td>Index 2</td>
<td>Index 3</td>
<td>Index 4</td>
<td>Index 5</td>
<td>Status</td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
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<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>----------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Black marlin</td>
<td>14.4</td>
<td>12.0</td>
<td>10</td>
<td>1.06</td>
<td>1.13</td>
<td><strong>Sustainable</strong> although stock assessment results are uncertain.</td>
<td></td>
</tr>
<tr>
<td>Blue marlin</td>
<td>13.8</td>
<td>11.5</td>
<td>11.7</td>
<td>0.85</td>
<td>0.98</td>
<td><strong>Sustainable</strong>; not overfished (at optimum) and not subject to overfishing (15 % below target level).</td>
<td></td>
</tr>
<tr>
<td>Striped marlin</td>
<td>4.4</td>
<td>3.7</td>
<td>4.4</td>
<td>1.28</td>
<td>0.42</td>
<td><strong>Not sustainable</strong>; stock is overfished (58 % below optimum) and is also subject to overfishing (28 % above target level).</td>
<td></td>
</tr>
<tr>
<td>Blue shark</td>
<td>69.9</td>
<td>73.7</td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
<td><strong>Unknown</strong>. There is a paucity of information available for these species (as well as other pelagic sharks). There is no stock assessment and limited basic fishery indicators currently available. Therefore the stock status of these species is highly uncertain, but the available evidence indicates considerable risk to stock status at current effort levels.</td>
<td></td>
</tr>
<tr>
<td>Shortfin mako</td>
<td>48.2</td>
<td>50.7</td>
<td>Unknown</td>
<td></td>
<td></td>
<td><strong>Unknown</strong>. There is a paucity of information available for these species (as well as other pelagic sharks). There is no stock assessment and limited basic fishery indicators currently available. Therefore the stock status of these species is highly uncertain, but the available evidence indicates considerable risk to stock status at current effort levels.</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Compiled based on the summary stock status from the latest IOTC (2014), Scientific Committee Report (SC17)
DIRECTORATE-GENERAL FOR INTERNAL POLICIES

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