

A close-up photograph of a Mediterranean swordfish's head, showing its large, prominent eye and the texture of its scales. The fish is entangled in yellowish-brown fishing ropes and a white strap. The background is a clear blue water surface.

# ICCAT Mediterranean swordfish: Recover it or lose it

November 2016



# OCEANA Report

## Mediterranean Swordfish Recovery Plan

November 2016

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# Summary

According to the most recent International Commission for the Conservation of Atlantic Tunas (ICCAT) stock assessment (2016), the Mediterranean swordfish (*Xiphias gladius*) **stock is overfished and suffering overfishing**.

To reverse this situation a **substantial reduction in catches** is required within the form of a recovery plan. Whenever a stock is overfished and subjected to overfishing, **ICCAT's principles of decision-making require a recovery plan** be put in place immediately, so as to ensure its recovery [1].

So far, **Mediterranean swordfish is in the worst condition out of all the stocks under ICCAT's purview** and the Mediterranean swordfish (SWO-MED) fishery is managed by a series of measures that have failed to even address the overexploitation of this stock and come far below ICCAT's management criteria and mandate for sustainable fishing.

## What is urgently needed at the ICCAT 20th Special Meeting of the Commission?

ICCAT Contracting Parties have the responsibility to act without any further delay to implement a recovery plan as to ensure the recovery of this stock, in line with ICCAT's Convention objective and its management principles.

ICCAT Contracting Parties must see the urgent need to adopt a Mediterranean swordfish recovery plan in line with the scientific advice to allow the stock to rebuild in the quickest time possible to meet ICCAT Convention objectives.

It is critical that the recovery plan for Mediterranean swordfish includes the establishment of catch limits, as the simplest and most effective way to regulate and enforce management of the fishery, thus allowing the stock to recover.

The Eastern bluefin tuna recovery plan is often touted as a success story; but it is now the time to ensure the recovery of other highly migratory stocks in the Mediterranean, starting with Mediterranean swordfish.

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# Mediterranean swordfish: inaction is not an option

Swordfish is an iconic, highly migratory species in the Mediterranean Sea and its fishery constitutes one of the most spatially extensive economic activities in this region [2]. However, despite being of such high commercial value - reaching prices up to € 24 per kilo when sold fresh [3], and socio-economic importance - the fishery remains poorly managed.

## Perpetuating overfishing in ICCAT

Since 1995, scientists have been raising the alarm on the status of Mediterranean swordfish and recommending management measures to remedy the situation. And, since 2003 onwards, as a consequence of perpetual overfishing, the Standing Committee on Research and Statistics (SCRS) of the International Commission for the Conservation of Atlantic Tunas (ICCAT) has repeatedly called for the adoption of a Mediterranean swordfish fishery management plan to provide the stock with a chance to rebuild and to maintain the stock at Maximum Sustainable Yield (MSY), in line with the ICCAT Convention objective [4]. Despite these clear calls for proper management to rebuild the stock, ICCAT has limited its intervention to adopt a fishery closure, aimed at reducing the catch of juveniles, as well as a full ban on the use of large-scale driftnets for the capture of this species in the Mediterranean [5; 6] –management measures which have

been repeatedly ignored. Furthermore, although illegal, unregulated and unreported (IUU) fishing rates on this fishery have never been assessed, illegal fishing rates of Mediterranean swordfish and misreporting of catches are estimated to be high [7]. Once again, this year Mediterranean swordfish has been reported to be overfished and suffering from overfishing [8] (Fig. 1). **It is clear that the measures in place so far are still inadequate and have neither delivered a major sign of recovery nor a substantial reduction of fishing mortality of juveniles.** Scientists clearly advise that the *stock has to be rebuilt through a substantial reduction of fishing mortality*.

According to decision making principles at ICCAT [1], a **plan to rebuild the stock and end overfishing in the short term** should be adopted **immediately** for all stocks reported as **overfished and subjected to overfishing**, as is the case for **Mediterranean swordfish**.

**After three decades of overfishing and a maze of technical measures, Mediterranean swordfish remains poorly managed, overfished and subjected to unlimited catches.**



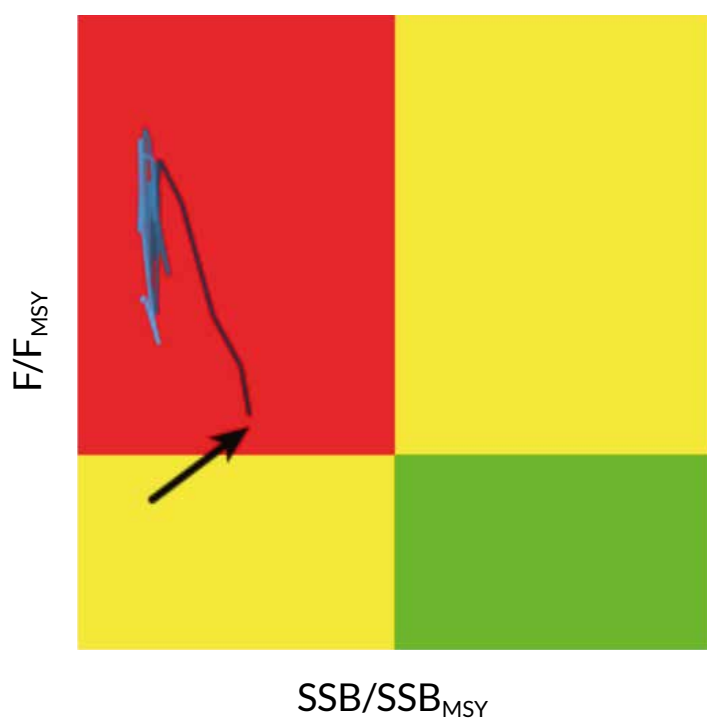
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### ICCAT obligation to recover the Mediterranean swordfish stock

Mediterranean swordfish is the stock in the worst condition out of the 30 stocks under ICCAT's purview. While concrete recovery plans have been set up for stocks in the red quadrant of the Kobe plot, Mediterranean swordfish (Fig. 1) has been left out and mismanaged. This could open a bad precedent in ICCAT while harming its international image for good fisheries management.



ICCAT is bound by its own Convention objectives and its principles of decision-making to adopt a plan to rebuild these stocks in the shortest time possible.

Fig. 1: Kobe plot for Mediterranean swordfish Source: 2016 ICCAT SCRS Report

# Why a recovery plan and what elements should it include?

In the past, ICCAT's failure to adopt timely management measures for North-Atlantic swordfish stock delivered high overfishing. At the point of almost no-return, a recovery plan was adopted [11].

Today, the recovery of North Atlantic stock is a success story (Fig. 2), and as is the case with the Eastern bluefin tuna stock, it highlights the fact that **a recovery plan with catch limits aligned with scientific advice is the way forward to recovering overfished stocks.**

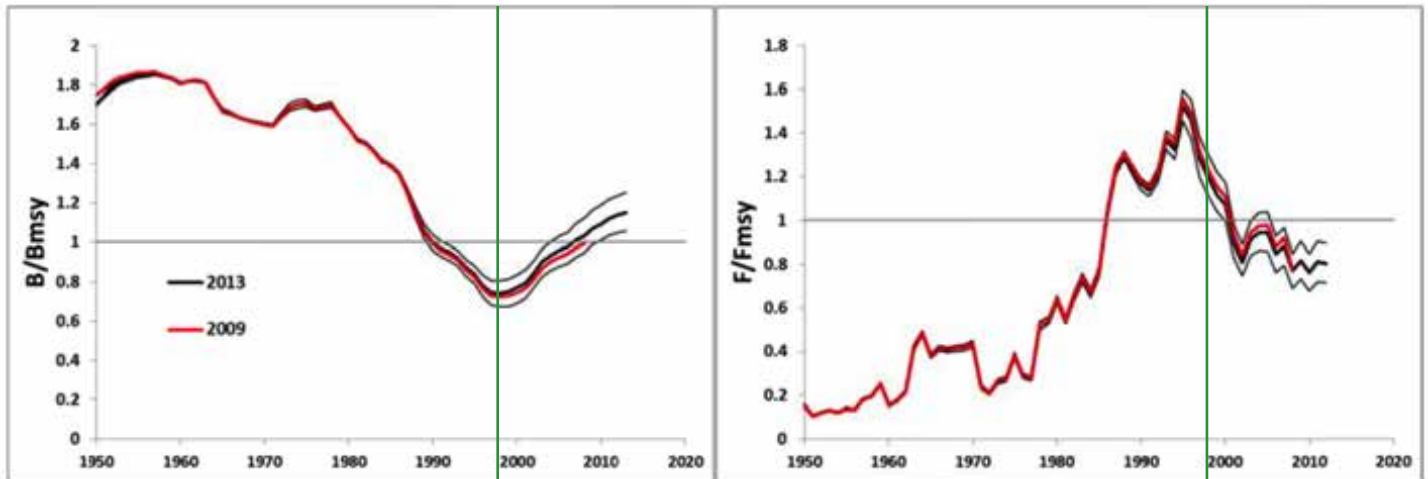


Fig. 2: Estimated North Atlantic swordfish relative biomass (left) and fishing mortality (right) from the 2009 and 2013 stock assessments. The green vertical line marks 1997, when the recovery plan for this stock was established. Source: 2015 ICCAT SCRS Report



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# 1. Cap catches of a dwindling stock

## Background facts:

- » The current fishing mortality is double that of the mortality level that would support a sustainable management of the stock ( $F_{MSY}$ );
- » The Mediterranean swordfish stock is overfished and has been subject to overfishing since 1985 [4; 8; 12;13];
- » Its biomass has decreased by 2/3 from levels in the mid-1980s. The current spawning stock biomass is around 88% lower than the required sustainable biomass ( $B_{MSY}$ ) levels [8];
- » Mediterranean swordfish catches reached their lowest historical levels in 2012-2014 [12];
- » The fishery has historically been focused on juveniles, which made up 93% and 72% of the catches in 2009 and 2012 respectively [12];
- » Recruitment of Mediterranean swordfish stock has shown a declining trend in the last decade [8];
- » In the past 10 years (2007; 2010; 2016 ), the SCRS has repeatedly advised the ICCAT Commission to adopt a recovery plan that could rebuild the stock at MSY levels [4; 8; 13].

## OCEANA Recommendation #1

### THE FOLLOWING MEASURES SHOULD BE INCLUDED WITHIN THE FRAMEWORK OF THE MEDITERRANEAN SWORDFISH RECOVERY PLAN:

- Adopt Total Allowable Catches (TACs) – not transferable – and catch limits to ensure the recovery of the stock's biomass to sustainable levels in the shortest time possible with a 100% probability it will be effective;
- Adopt a by-catch limit of no more than 5% of the TAC agreed upon each year, for vessels authorised to catch Mediterranean swordfish as by-catch and thus included in the ICCAT authorised list of special fishing permits for each pelagic longliner fishery;
- Request that the ICCAT SCRS conduct an assessment on the balance between fishing capacity and fishing opportunities on a yearly basis. Adopt capacity reduction plans accordingly. If deemed necessary, Contracting Parties active in this fishery may be requested to submit annual capacity plans to the ICCAT-Compliance Committee for adoption.



## Box 1 | Why catch limits are necessary:

Oceana considers the setting of **Total Allowable Catches (TACs)** to be essential to the recovery of **Mediterranean swordfish** by:

- I. **Reducing illegal fishing**
- II. **Improving traceability**

A recovery plan based on TACs will:

- **Improve catch data and knowledge about the status of the stock: the systematic underreporting of swordfish catches has occurred and may occur in different Mediterranean states.**

Illegal fishing of Mediterranean swordfish has been estimated to account for 15% of the entire Mediterranean swordfish catches from 1992 to 2010 [14], corresponding to 40,778t of unreported catches for the same period.

- **Boost the declaration of Mediterranean swordfish catches by all riparian states providing a stock situation closer to reality.**

It should be noted that all contracting parties and non-contracting parties, entities or fishing entities (CPSs) that fail to report ICCAT Task 1 and 2 data within the required deadlines are not allowed to carry out active fisheries for Mediterranean swordfish in the following year.

- **Close the current loophole that enables certain fleets to misreport catches of Atlantic swordfish as Mediterranean swordfish.** While the Atlantic swordfish population is subject to a recovery management plan that regulates its catches, **Mediterranean swordfish catches are left unregulated thus allowing for misreporting and lack of proper traceability in stock-boundary areas;**

So far this loophole allows Morocco to misreport Atlantic catches as Mediterranean ones, a questionable practice not addressed within the current management [12; 15].

From 1990 to 2012, reported Moroccan average catches as Mediterranean swordfish were seven times higher than those of Atlantic stock (respectively an average of 2,419t/year vs 329t/year).

Moreover, since the Atlantic swordfish management plan entered into force (1997), the reported amount swordfish for Morocco has tripled under Mediterranean catches.

All these catches are indeed occurring in Atlantic and should then be reported as Atlantic. However, Morocco continues to report these catches as Mediterranean (Fig. 3), differently from Spain - the other trans-boundary country.



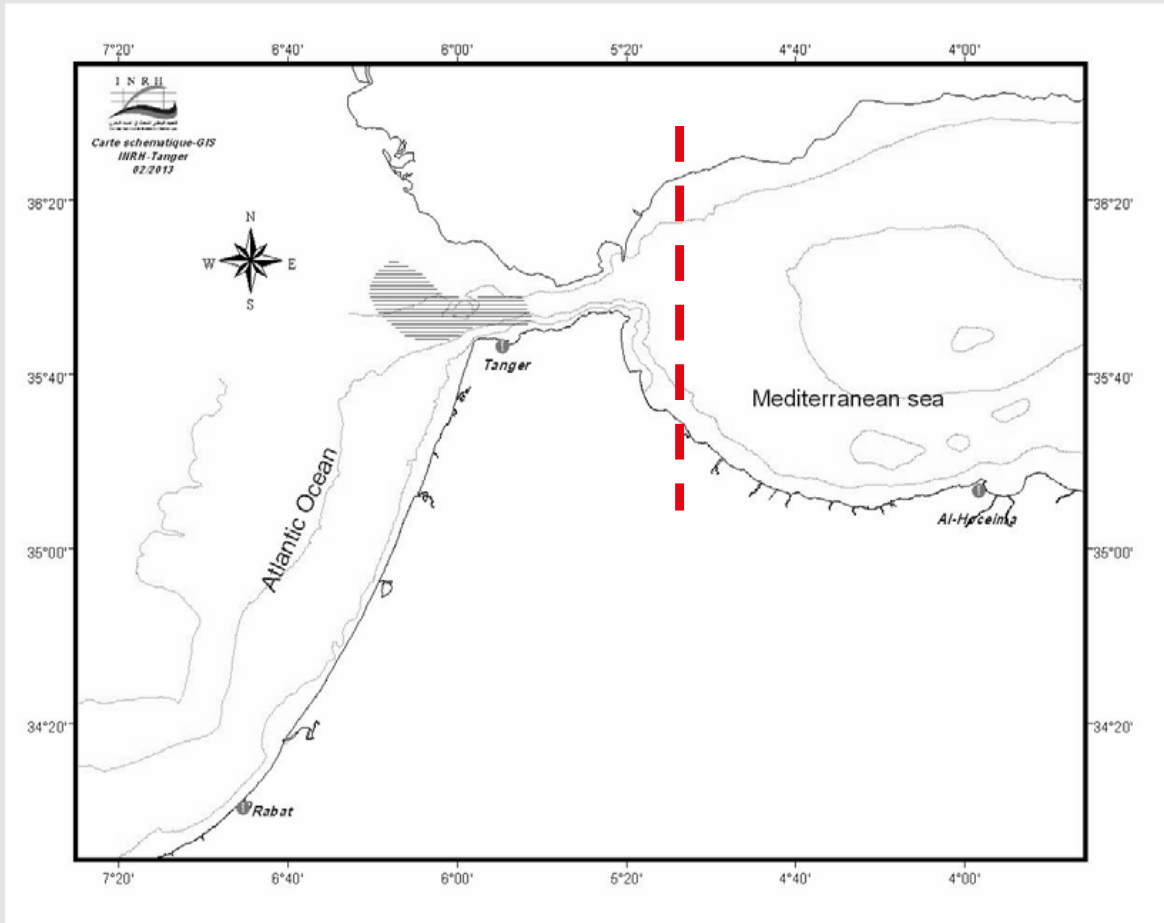


Fig. 3: Moroccan fishing ground (shaded area) for swordfish reported by Morocco as Mediterranean. ICCAT Mediterranean/Atlantic boundary is set at 5°W longitude (red dashed line). Source: ICCAT SCRS/2016/119

## 2. Implement and enforce proper Monitoring, Control and Surveillance measures (MCS)

### Background facts:

- » From 1992 to 2010 illegal catches of Mediterranean swordfish are estimated to amount to 40,778t, which accounts for 15% of the entire Mediterranean swordfish catches for the same period (see Box 1);
- » The use of illegal driftnets to catch highly migratory species still continues in the Mediterranean Sea and Strait of Gibraltar despite the ban on the use of gillnets of any kind for the capture of this species [16]. However, no measures have been adopted so far to prohibit the trade and marketing of Mediterranean swordfish showing evidence of being caught with this gear;
- » While North and South Atlantic swordfish have been for many years under an export certificate scheme, or Eastern bluefin tuna under a catch certificate, Mediterranean swordfish continue to be landed, traded and marketed in absolute absence of any sort of traceability scheme, leaving the doors open to laundering of illegal catches;
- » An important number of fishing vessels participating in this fishery do not have any tracking device, for example Vessel Monitoring System (VMS) or Automatic Identification System (AIS), installed on board or have proper identification details such as International Maritime Organization (IMO) numbers;
- » It is not possible to properly control and enforce the seasonal closures that are in place to prevent and reduce catches of juvenile swordfish as 87% of fishing vessels authorised to catch swordfish in the Mediterranean Sea are below 15mt Length Over All (LOA) and possibly not equipped with VMS.

## OCEANA Recommendation #2

**WITHIN THE FRAMEWORK OF MEDITERRANEAN SWORDFISH RECOVERY PLAN, CATCHES SHOULD BE FULLY TRACEABLE SO AS TO DETER ANY ILLEGAL TRADE AND ENSURE THE RECOVERY OF THE STOCK. TO THIS AIM:**

- A catch certification scheme should be adopted to control and trace Mediterranean swordfish catches and trade;
- All vessels accessing the fishery should be equipped with a working active VMS which transmits position data at regular intervals;
- Landings of Mediterranean swordfish should only be authorised in **designated ports**;
- The only authorised gear to catch Mediterranean swordfish should be through either longliners or harpoons. Any loopholes and tricks to avoid this should also be addressed accordingly.



OCEANA | Carlos Suárez



### 3. Reduce fishing pressure and by-catch of Mediterranean swordfish juveniles

#### Background facts:

##### a) A fishery targeting juveniles:

- » For the past 30 years, catches have been focused on individuals that have not yet reached maturity size. However, management action has been delayed and no proper measure to minimise juvenile catches has been put in place (Fig. 4);
- » Catches of immature Mediterranean swordfish amount to 75% of total catches [12];
- » In 2011, ICCAT set the actual minimum landing size [6] that is lower than the size adopted at national level by ICCAT Contracting Parties prior to 2011 (Tab. 1);
- » According to scientific literature, female maturity size falls between 140cm [17; 18] and 149cm LJFL (lower jaw fork length) [19]. Only around 20% of females are considered to be mature at 125cm LJFL [17];
- » The ICCAT manual for Mediterranean swordfish, where the international reference parameters for this stock are set, refers to **142cm LJFL as the size at which half of the stock reaches its reproductive maturity** [20].

The actual ICCAT minimum landing size of 90cm LJFL is neither in line with the best available scientific advice nor with the ICCAT manual and does not allow females to reach the reproductive size.

ICCAT Contracting Party	Minimum Landing Size (MLS) before the Adoption of ICCAT Rec. 11-03 setting MLS at 90cm LJFL
Algeria <sup>a</sup>	120cm LJFL
Egypt	n/a
EU.Cyprus	n/a
EU.Spain <sup>b</sup>	120cm LJFL; 90cm LJFL*
EU.France <sup>b</sup>	120cm LJFL
EU.Greece <sup>b</sup>	120cm LJFL
EU.Italy <sup>b</sup>	120cm LJFL; 140cm UJFL <sup>o</sup>
EU.Malta	n/a
EU.Portugal <sup>b</sup>	120cm LJFL
Morocco <sup>c</sup>	125cm LJFL
Tunisia <sup>d</sup>	100cm LJFL
Turkey	125cm LJFL

Tab. 1: In 2011, ICCAT set MLS at 90cm LJFL, which is significantly lower than the size adopted at national level by ICCAT Contracting Parties prior to 2011 (<sup>a</sup> Journal Officiel de la Republique Algerienne N° 18 3 Safar 1425 24 Mars 2004; <sup>b</sup> Council Regulation (EC) No 1626/94 of 27 June 1994 repealed in 2001 and substituted with national regulations; <sup>c</sup> Report of the 2014 ICCAT Mediterranean Swordfish Stock Assessment Meeting; <sup>d</sup> Arrêté du Ministre de l'agriculture du 28 septembre 1995); \* «BOE» núm. 183, de 2 de agosto de 2006, páginas 28896 a 28901; <sup>o</sup> DPR 02/10/1968 n.1639

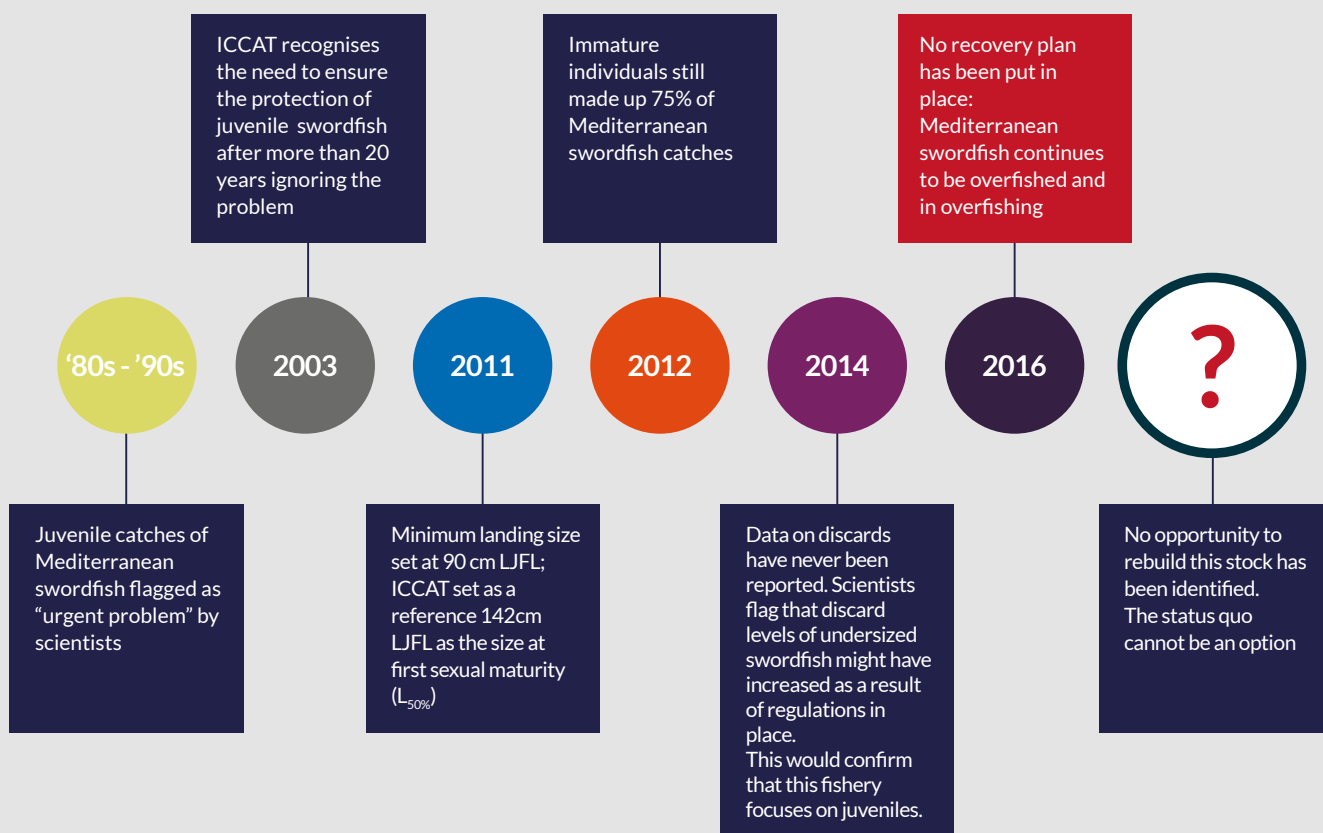
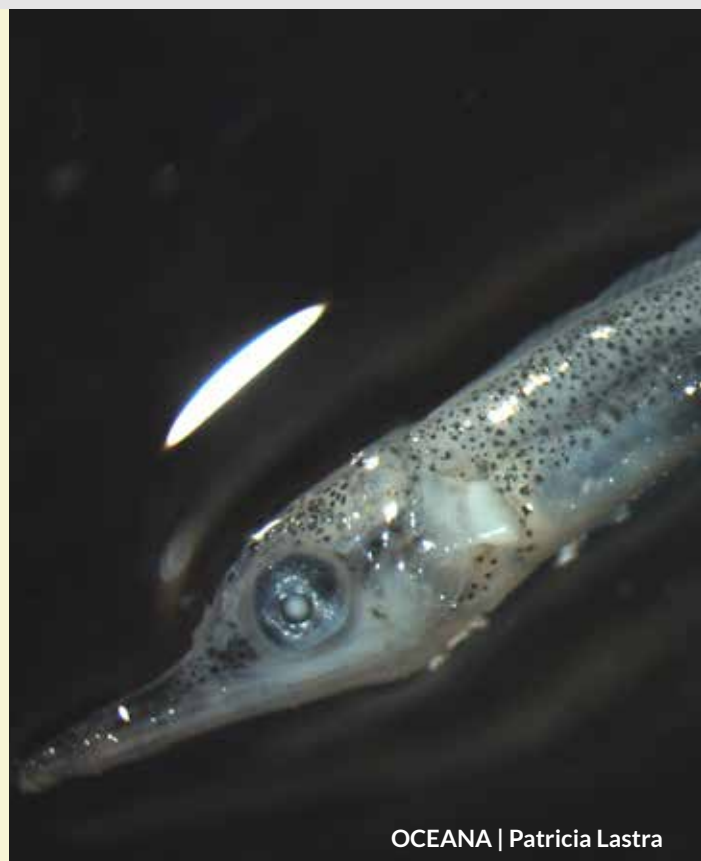


Fig. 4: Over 30 years spent failing to set management measures to avoid pressure on the juvenile fraction of the stock

#### b) Juveniles of swordfish as by-catch of albacore fishery:

- » Since the beginning of the 1980s, scientists have been reporting high levels of Mediterranean swordfish by-catch in the long-line fishery for Mediterranean albacore (*Thunnus alalunga*);
- » The albacore fishery season runs from August-September up to February [21], thus overlapping with the peak of abundance of swordfish juveniles (beginning of September to December) [23] both in the reproduction and adjoining areas [24];
- » Juveniles of swordfish are caught as by-catch of the albacore long-line fishery reaching 50% of the catches (Fig. 5), especially in the Ionian Sea [24], a reproduction ground for the Mediterranean swordfish [24], and by the Spanish fleet [12];
- » Discards seems to occur on 86% of fishing trips [24] and though they remain unreported, ICCAT scientists consider that discard levels of undersized swordfish might have increased over the years [12].



OCEANA | Patricia Lastra



## Albacore fisheries - Catches observations

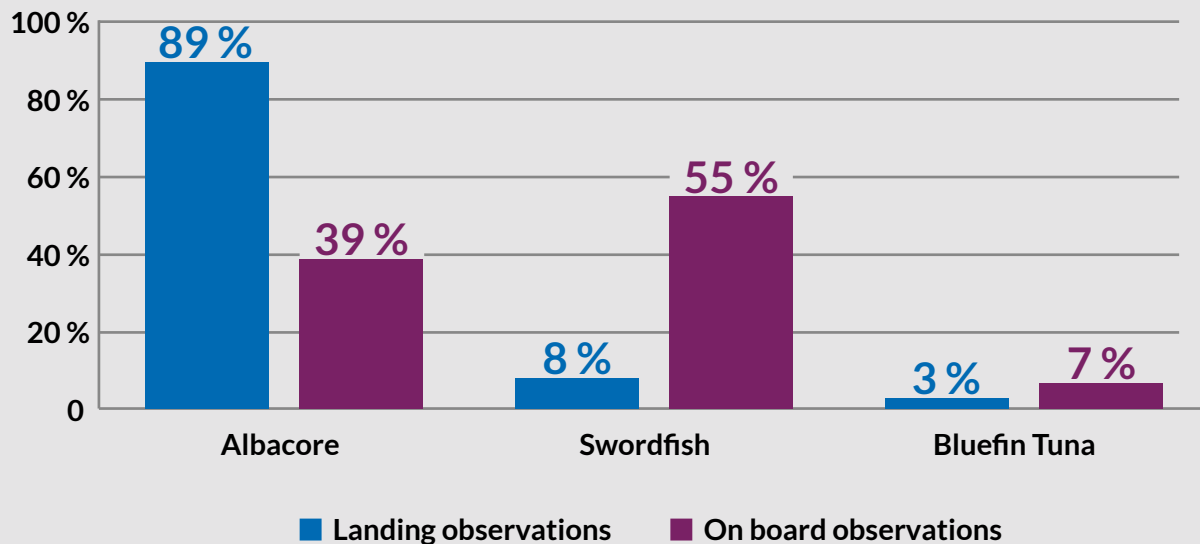


Fig. 5: On-board catches observed in albacore fisheries show that 55% of catches are Mediterranean swordfish of which 99.5% are juveniles, i.e. lower than 70cm LJFL (source: De Metrio et al. 1997)

## OCEANA Recommendation #3

WITHIN THE AIM OF THE MEDITERRANEAN SWORDFISH RECOVERY PLAN, PRESSURE ON AND BY-CATCH OF MEDITERRANEAN SWORDFISH JUVENILES SHOULD BE REDUCED BY:

- Establishing a minimum landing size (MLS) at 142cm LJFL in line with the biological characteristics of this species; no exemptions for any fleet nor tolerance margins should be authorised;
- Establishing temporal fishing closures for all pelagic long-line fisheries in the region during the peak of abundance of swordfish juveniles: from 1 September to 31 December;
- Establishing a specific census of vessels authorised to catch and land albacore in the Mediterranean Sea;
- Setting a by-catch limit of no more than 5% of the TAC agreed upon each year (see Oceana Recommendation #1);
- Banning Mediterranean swordfish discards and establishing a reporting system for the landing of previously discarded fish;
- Improving fishery closures by time/area of the most critical stages of spawning and recruitment periods, in order to effectively reduce fishing efforts in those Essential Fish Habitats identified for Mediterranean swordfish.

## 4. Regulate and manage fleets capacity

### Background facts:

- » In 2011, ICCAT established a list of vessels authorised to catch Mediterranean swordfish [6], as part of other measures. This move was originally aimed at setting the basis for a comprehensive management plan for Mediterranean swordfish. Since then, all Contracting Parties are required to annually report all fishing vessels authorized to catch swordfish in the Mediterranean Sea;
- » The list turned into a political bargaining tool and led to a massive over-reporting of vessels. Over the years, **while the catches of Mediterranean swordfish have been reported as decreasing, the number of vessels authorised to catch this stock has doubled since 2010**, leading to an overinflated fleet of 15,812 vessels in 2015. These figures appeared to be in high contrast with the overall number of active vessels reported by the SCRS [12], which amounts to a total of 2,990, indicating that the list of vessels being 5 times larger (Fig. 6);
- » These numbers are highly disproportionate considering that Mediterranean swordfish represents between 1% and 2% of total ICCAT catches;
- » In 2016 the ICCAT list of Mediterranean swordfish vessels has been reduced to a total of 5,441 active fishing vessels (Fig. 6);
- » However, 45% of the authorised vessels (i.e. 2,466 vessels) reported fishing for Mediterranean swordfish with fishing gears different from those authorised by ICCAT Recommendation 13-04 [26] i.e. longliners and harpoons.

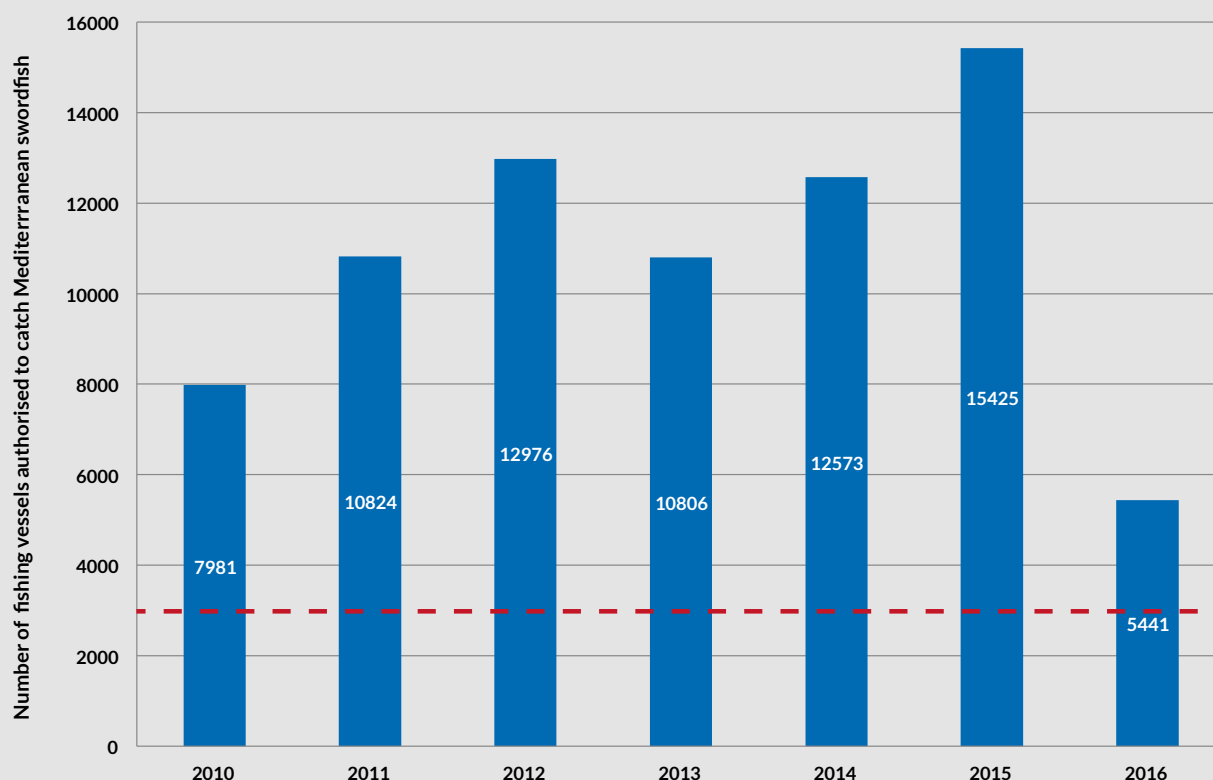


Fig. 6: Number of fishing vessels authorised from 2010 to 2016 to catch swordfish in the Mediterranean Sea as of ICCAT Record of SWO-MED Vessels, established under Rec. 13-04. Total SWO-MED vessels authorised (blue bars) and number of active vessels reported by SCRS to actively fish in 2013 (tot 2990 vessels, red dotted line) Sources: ICCAT Record of SWO-MED Vessels; Report of the 2014 ICCAT Mediterranean swordfish stock assessment meeting



## OCEANA Recommendation #4

WITHIN THE AIM OF THE MEDITERRANEAN SWORDFISH RECOVERY PLAN, FLEET CAPACITY SHOULD BE MANAGED WITH THE FISHING OPPORTUNITIES ESTABLISHED WITHIN THE SCRS. THE FOLLOWING MEASURES SHOULD ALSO BE INCLUDED:

- Only vessels with a demonstrated record of Mediterranean swordfish catches in the preceding three years should be included in the ICCAT record of Mediterranean swordfish vessels;
- The capture of Mediterranean swordfish should be authorised only with longlines and harpoons. The use of any other gear (trawling, gillnet or purse seiner) should be prohibited;
- The ICCAT record of Mediterranean swordfish vessels should include only those participating in direct fisheries for Mediterranean swordfish using solely longlines and harpoons. Fisheries for other highly-migratory pelagic stocks in the Mediterranean should have a special fishing permit for each authorised fishery, by target species and area (see also Oceana Recommendation #1);
- The ICCAT record of vessels should clearly distinguish between the vessels authorized to fish actively for swordfish and vessels authorized for swordfish sport and recreational fisheries;
- A capacity reduction plan should be introduced that is balanced with the fishing opportunities on a yearly basis (see also Recommendation #1).

OCEANA | Carlos Pérez



## 5. Ensure protection of vulnerable species unintentionally caught as by-catch

### Background facts:

- » Several species of Mediterranean sharks and rays are strictly protected and listed under Annex II (List of Endangered and Threatened Species) of the Protocol concerning Specially Protected Areas and Biological Diversity (SPA/BD) of the Barcelona Convention [26];
- » These species – including hammerhead sharks and shortfin mako – have undergone severe population declines (> 99%) mainly due to by-catch [27].

## OCEANA Recommendation #5

**WITHIN THE AIM OF THE MEDITERRANEAN SWORDFISH RECOVERY PLAN, THE FOLLOWING MEASURE SHOULD BE ADOPTED:**

- **Full ban of catching, storing, landing, trans-shipping, and selling of those species covered by the Barcelona Convention, which are under ICCAT's purview, in line with Recommendation GFCM/36/2012/3 [28] on fisheries management measures for the conservation of sharks and rays in the GFCM area; in particular: *Carcharodon carcharias*; *Cetorhinus maximus*; *Isurus oxyrinchus*; *Lamna nasus*; *Mobula mobular*; *Sphyrna lewini*; *Sphyrna makorran*; *Sphyrna zygaena*.**





**#SOSSWORDFISH**  
[www.oceana.org/swordfish](http://www.oceana.org/swordfish)





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