EUROPEAN UNION

2015 Annual Review of SBT Fisheries for the Extended Scientific Committee

(From the Report of the Fourth Scientific Committee Meeting. Changes since then are footnoted below.)

1. **Introduction**

- **Background**

The EU fleet does not target SBT. Any incidental catches of SBT by EU vessels are the result of by-catches of long-liners harvesting swordfish (notably in the IOTC Convention Area). EU Purse Seiners do not harvest SBT as they fish in tropical tunas fishing grounds.

No SBT catches are to be reported by the EU at this stage for 2014 or 2015[1]. On average, since 2000 the level of catches has been maintained below the 10 tonnes allocated to the EU under the CCSBT SBT TAC for this purpose. Since 2011 the level of SBT by-catches by the EU fleet is scant or close to zero.

EU CATCHES CCSBT*

Indian Ocean	2000	0
Indian Ocean	2001	0
Indian Ocean	2002	0
Indian Ocean	2003	3
Indian Ocean	2004	22
Indian Ocean	2005	0
Indian Ocean	2006	3
Indian Ocean	2007	18
Indian Ocean	2008	14
Indian Ocean	2009	2
Indian Ocean	2010	11
Indian Ocean	2011	3
Indian Ocean	2012	4
All	2013	0
All	2014	0
All	2015	0

- **Summary of historical developments in the fishery**

There are currently 22 long-liners fishing for swordfish in RFMOs in which interaction with SBT has taken place in the past (notably IOTC). The average of size of the long-liners is roughly 35 meters, ranging from 21 to 46 meters. The fishing activities of the long-liners depend on which ocean they fish in. Different RFMOs are involved.

[1] Figures for 2015 are still subject to final validation.

The trend of the EU long-line fleet targeting swordfish and operating in various oceans is as follows:

Year	Number of vessels
2008	19
2009	15
2010	12
2011	14
2012	18
2013	22
2014	22

- **Overview of the most recent fishing season**

No catches of SBT reported for 2014 or 2015 at this stage. Figures for 2015 are still subject to final validation.

2. **Catch and Effort**
   - **Trends by gear type (surface and longline)**
   - **Trends by area and season**

   (Table should include: catch & effort for above strata as well as totals for the entire history of the fishery)

No SBT catches are to be reported for 2014 and 2015. Figures for 2015 are still subject to final validation.

As far as swordfish is concerned, the table below shows the total yearly catches of swordfish in number of fish and weight (kg round weight) and nominal fishing effort (thousands of hooks) for the 2008-2013 period. All the species caught are dressed, frozen and stowed on board.

	TOTAL CATCH SWO		NOMINAL FISHING EFFORT
YEAR	**Number of fish**	**Kg RW**	**hooks*1000**
2008	76882	3924743	4885
2009	66000	3306663	3634
2010	61100	3116458	3174
2011	63165	3191553	3758
2012	85472	4396670	4674
2013	92909	4766588	6263

Catch in number of fish and in kg (round weight) of swordfish obtained by the Spanish surface longline fishery and total number of hooks (in thousands) set in the Indian Ocean during the period 2008-2013.

Since 2001, the monofilament units or the so-called ‘American style’ gear became the only type of gear used. The 22 longliners deployed a total of 6,263 thousand hooks during 2013.

The figure in point 3 below shows the spatial distribution for the nominal effort in number of thousand hooks and nominal yield in kg of round weight of swordfish per thousand hooks set in the Indian Ocean by the Spanish surface longline fleet during the year 2013.

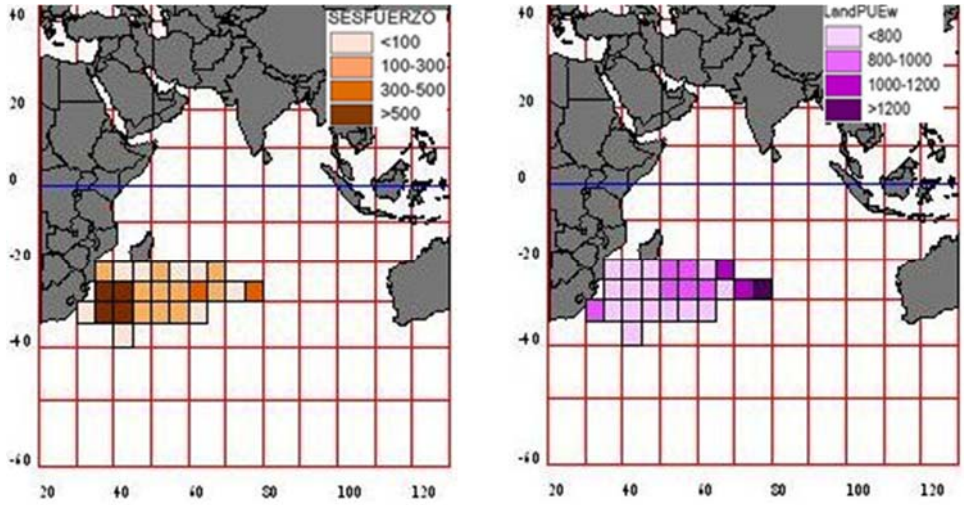
A total of 4,766 t of swordfish (round weight) were caught during 2013. The overall nominal catch rate was 761 kg (round weight) per thousand hooks set. Standardized catch rates in weight were also updated using General Linear Modeling from scientific records of the Spanish surface longline targeting swordfish in the Indian Ocean over the period 2001-2012.

3. **Nominal CPUE where appropriate:**
   - **Trends by gear type (surface and longline)**
   - **Trends by area and season**

   (Table should include: nominal CPUE for above strata as well as totals for the entire history of the fishery)

There are no catches of SBT for 2014 or 2015 to be reported at this stage. Figures for 2015 are still subject to final validation.

The following data is provided in relation with swordfish fisheries:



Distribution of the nominal fishing effort (thousands hooks) (left) and nominal CPUEw in kg (round weight) of swordfish landed per thousand hooks set (right) by 5ºx5º degrees, carried out by the Spanish surface longline fleet in the Indian Ocean during the year 2013.

4. **Size composition**
   - **Trends by gear type (surface and longline)**
   - **Trends by area and season**

   (Figures should include: average size frequency distributions by gear type for each 10 year period, as well as individually for each of the last 5 years)

The average characteristics of the long-liners operating in the Indian Ocean targeting swordfish were 195 TRB, 33.9 m in length and 638.1 HP. Two types of longline styles were operating in previous periods: the traditional multifilament gear and the monofilament and the 'American style' gear. However over the last decade, the fleet replaced the traditional Spanish type longline by the 'American' type which used an average of 1,100 hooks per set –a smaller number than in the traditional longline, although slightly higher than in the 'Florida style' longline gear.

5. **Fleet size and distribution**
    - **Trends by season**
    - **Trends by area**

    (Maps should include: historical catch and effort by gear type for the entire history of the fishery, as well as individually for each of the last 5 years)

See point 1 above.

6. **Development and implementation of scientific observer programs**[2]
    - Provide a report containing the information specified in Annex 1 on the sampling scheme and arrangements for collecting data from the Member's/CNM's observer program.

The research of the Spanish Institute of Oceanography for the study of the surface longline fleet in the Indian Ocean commenced in 1993 and provided the basic data which entails the implementation of an Information and Sampling Network (ISN) for scientific purposes, making it possible to gather data on each trip sampled and landings. With the basic scientific data it has been possible to calculate the pertinent annual statistics for swordfish by 5ºx5º degrees during 2013. Piracy also affects this program.

In 2012 a total of 7,451 hooks (0.16% of effort coverage) were observed. The observations were affected and restricted to areas with regular commercial activity. A total of 12,479 swordfish specimens were size sampled and obtained some size-sex variables during 2013.

Biological information on sharks continues being collecting as well as rates of interaction with turtles and seabirds, etc. Traditional opportunistic tagging is still being carried out tentatively on both swordfish and by-catch species with a total of 34 fishes tagged during 2013 by the voluntary tagging program done by the commercial fleet and by the scientific observers on board.

7. **Other relevant information**

Notes:

- *Data on catches should be presented by both calendar year and fishing year.*
- *Weight data should be reported as whole weight, conversion factors used should be specified.*
- *Nominal CPUE, particularly for longline fisheries, should be expressed in standard units (eg, number of SBT per 1000 hooks).*
- *State where estimates are scaled from sample data.*
- *Where appropriate measures can be calculated.*

[2] Section 11 and Attachment 2 of the CCSBT Scientific Observer Program Standards.

Annex 1

EUROPEAN UNION

REPORT SECTIONS ON DEVELOPMENT AND IMPLEMENTATION OF SCIENTIFIC OBSERVER PROGRAMS

(from the CCSBT Scientific Observer Program Standards)

REPORT COMPONENTS

The observer program implementation report should form a component of the annual National Reports submitted by members to the Scientific Committee. This report should provide a brief overview of observer programs for SBT fisheries, and is not intended to replace submitted papers containing proper analyses of collected observer data. This observer program report should include the following sections:

A. Observer Training

An overview of observer training conducted, including:

- Overview of training program provided to scientific observers.
- Number of observers trained.
- Summary of qualifications / training and years of experience of the observers deployed in SBT fisheries during the past year.
- A copy of the latest version of relevant manuals in their original language for reference

No observer program for SBT fisheries.

B. Scientific Observer Program Design and Coverage

Details of the design of the observer program, including:

- Which fleets, fleet components or fishery components were covered by the program.
- How vessels were selected to carry observers within the above fleets or components.
- How was observer coverage stratified: By fleets, fisheries components, vessel types, vessel sizes, vessel ages, fishing areas and seasons.

Details of observer coverage of the above fleets, including:

- Components, areas, seasons and proportion of total SBT catch, specifying units used to determine coverage.
- Total number of observer employment days, and number of actual days deployed on observation work.

No observer program for SBT fisheries.

C. Observer Data Collected

List of observer data collected against the agreed range of data set out in Attachment 1. In broad structure this would include:-

- Effort data: Amount of effort observed (vessel days, sets, hooks, etc), by area and season and % observed out of total by area and seasons
- Catch data: Amount of catch observed of SBT and other species (if collected), by area and season, and % observed out of total estimated SBT catch by area and seasons
- Length frequency data: Number of fish measured per species, by area and season.
- Biological data: Type and quantity of other biological data or samples (otoliths, sex, maturity, Gonosomatic index, etc) collected per species.
- The size of sub-samples relative to unobserved quantities.

In IOTC observers covered 0,16% of the hooks in 2012.

D. Tag Return Monitoring

Number of tags returns observed, by fish size class and area.

N/A

E. Problems Experienced

- Summary of problems encountered by observers and observer managers that could affect the CCSBT Observer Program Standards and/or each member's national observer program developed in the light of the Standards.