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**NATIONAL TUNA FISHERY REPORT  
EU-SPAIN**

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**WCPFC-SC2-2006**



## **FISHERIES REPORT OF EU-SPAIN FOR THE YEAR 2005.**

By: Program on tuna and tuna-like species of the Instituto Español de Oceanografía<sup>1</sup>.

### **Purse seine activities.**

The Spanish purse seine fleet fishing in the Pacific Ocean is carried out mainly in the EPO (IATTC areas). Since 1999 they operate sporadically in the WPO. This fleet has been made up of five large purse seine vessels, the total hold volume of these vessels is 11997 m<sup>3</sup> (ranging from 1881 to 3161 m<sup>3</sup>). Catches are held and frozen on board in salt vats.

The fishing logbooks filled out by the skippers (nominal catch per set type without making corrections for the species composition) are recorded by IATTC staff. Preliminary data for 2005 obtained from observer data suggest nominal catches of around 3431 t in total (YFT 321 t, BET 817 t and SKJ 2293 t) in areas of the WCPFC made with purse seine gear.

It still not having an EC-Spain research program aimed at this fishery. Samplings from those vessels, in order to obtain data on species composition and size distribution of the catches must be carried out by staff from either the WCPFC or IATTC at the ports where the fish are unloaded or transferred.

Those vessels have 100% coverage of on board observers in keeping with the Agreement on the International Dolphin Conservation Program (AIDCP) managed by the IATTC. During 2005 all of them belonged to the AIDCP-IATTC program.

During the last 2006 Indian Ocean Tuna Commission (IOTC) meeting, three documents of interest for this fishery have been presented. We show them with information purposes. IOTC-WPTT-2006-06; IOTC-WPBy-2006-04 and IOTC-WPBy-2006-05 (see annex I).

### **Surface longline activities.**

The Spanish surface longline fleet started their fishing activity in areas of the SE Pacific in 1990. However this fleet did not carry out fishing activity in the western and central zones of the Pacific Ocean prior to 2004. As has already been reported, experimental fishery activities were conducted during the first quarter of the year 2004 targeting the swordfish with the surface longline gear in areas located between Melanesia, New Zealand and Australia. Five Spanish longline flag vessels took part in this pilot fishery starting from the port of Djakarta (Indonesia). The activity was carried out for a period of 240 days at sea per vessel and concluded in December 2004. The average characteristics of the vessels involved in this experimental fishery in 2004 were 285 GTR, 810 HP and 40 m in length. The experimental fishing areas were located between 15°N - 40°S and 155°E - 140°W. Additionally, in the last quarter of 2004 another experimental action was also started in

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areas located in the eastern Pacific, mainly out of the WCPFC area. However, 3 of the vessels involved in this action carried out 44 sets in 3 of the 5°x5° squares within the WCPFC convention area, as already reported to the WCPFC. All Spanish flag longliners process the swordfish on board in dressed weight (eliminating the head, viscera and fins) and keep it frozen. The gear used by the 8 vessels previously cited was the monofilament surface longline 'American style' gear (Florida style modified), using an average of 1055 hooks per set. Additionally, some commercial sets were done by one regular longliner also during December of 2004. The scientific estimation of all 2004 landings (updated in June 2005) is provided (table 1). Bycatch data will undergo a further specific review in a multiyear scope for a more precise species splitting.

During the year 2005 a total of 8 Spanish flag longline vessels targeting swordfish were operating in the WCPFC convention area, all year round or temporarily. The average characteristics of the vessels involved in the fishery in 2005 were 291.8 GTR, 861.8 HP and 40.8 m in length. Preliminary estimated landings for 2005 are also provided (table 1).

Although there is no EC-Spain research project aimed at this longline fishery, the Spanish longline vessels' activity within the WCPFC areas, the sampling scheme and some research activities were included in the same scientific protocols used for other Pacific, Atlantic and Indian regions, contingent upon staff and budget availability. Catch-boat coverage was maintained at 100% of the fishing activity. The quality and quantity of the size sampling was high, reaching, in 2004, an individual sampling coverage of 95% of the number of swordfish caught, although, in the coming years, such a high coverage it is not expected to be attained. Opportunistic tagging and release activities also continued during the experimental fishing activities of 2004 and during the regular fishing activity of this fleet during 2005 under the voluntary joint program already established in all oceans, including several species. Biological observations and samples of swordfish were collected to be used in future studies on reproduction, sex ratio patterns, genetic analyses, etc.

Data on fin-body weight ratios of shark species and other biological parameters were also recorded to update previous analyses already reported.

Specific observations to evaluate the interaction of the incidental bycatch of turtles were incorporated in the protocols of the scientific observers. Although the data will be provided in future scientific works in a broader geographical scope, the preliminary overall data from the 2004 observations would indicate a reported interaction (dead and live releases) of 3 *Lepidochelys olivacea* and 32 *Dermochelys coriacea* on a total of 1,023,981 hooks set which were scientifically observed in the WCPFC areas. Most of the turtles were live released in good conditions for surviving. The data indicate overall rates of interaction of dead turtles of  $1.95E^{-03}$  and  $9.77E^{-04}$  turtles per thousand hooks set, respectively (table 2). Although the incidental rates obtained are low, a scientific experiment is planned to be started in the SE Pacific region at the beginning of 2007 to assess the impact on target and incidental bycatch species using different hook types and other elements of the gear configuration. Similar experiments are being conducted in the Atlantic, Mediterranean Sea and Indian Ocean by the IEO.

<b>Fish species /year</b>	<b>2004<sup>1</sup></b>	<b>2005<sup>2</sup></b>
swordfish	730.0	1226.4
blueshark	582.9	1299.5
porbeagle	1.7	0.7
shortfin mako	184.9	303.5
albacore (tuna)	5.1	3.6
bigeye (tuna)	42.2	17.2
yellowfin (tuna)	22.6	0.9
other tuna (indet.)	0.9	22.4
billfish	38.3	66.7
other species	117.3	67.3

1: Data updated in June 2005. 2: Preliminary data.

Table 1. Scientific landing estimations (tons of round weight) for the year 2004 and preliminary estimations for the year 2005, for the WCPFC areas.

<b>Turtle species</b>	<b>Individuals (live &amp; dead)</b>	<b>Individuals (dead)</b>	<b>% dead</b>	<b>Incidental rate<sup>1</sup> (live &amp; dead)</b>	<b>Incidental rate<sup>1</sup> (dead)</b>
<i>Lepidochelys olivacea</i>	32	2	6.25	3.13E <sup>-02</sup>	1.95E <sup>-03</sup>
<i>Dermochelys coriacea</i>	3	1	33.33	2.93E <sup>-03</sup>	9.77E <sup>-04</sup>
Total	35	3	8.57	3.41E <sup>-02</sup>	2.93E <sup>-03</sup>

Nominal fishing effort observed = 1023.981 thousand hooks.

<sup>1</sup> The incidental rates are in number of sea turtles per thousand hooks set.

Table 2. Number of sea turtle interaction (number of individuals) by reported species. Live & dead, dead and % of dead, obtained during the observation of 1023.981 thousand hooks scientifically observed during the year 2004 within the WCPFC areas (see figure 2) and incidental rates of the interaction per thousand hooks set.

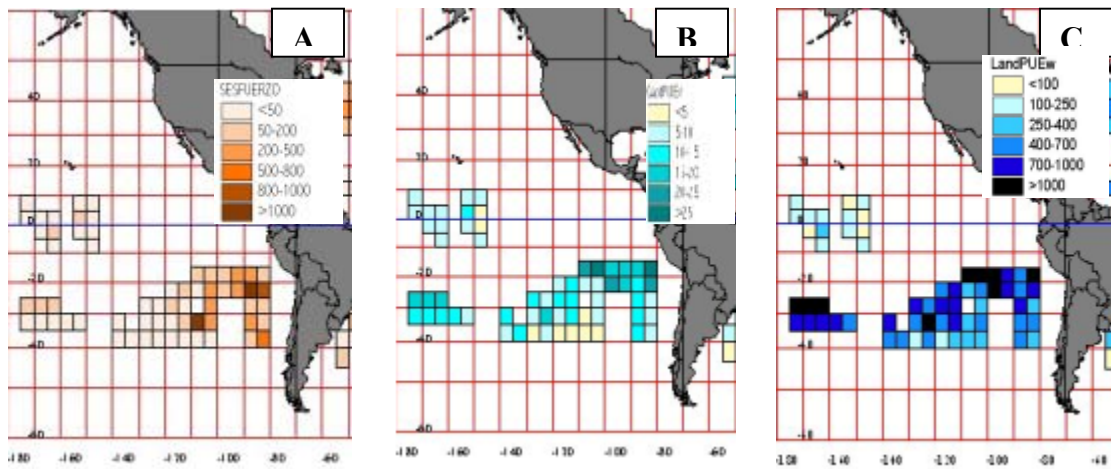


Figure 1. Nominal fishing effort in thousands of hooks set (A), nominal CPUE in number of fish landed per thousand hooks set (B) and nominal CPUE in kg of round weight of swordfish landed per thousand hooks set (C). Spanish surface longline fleet fishing during the year 2004. All Pacific fishing areas are included.

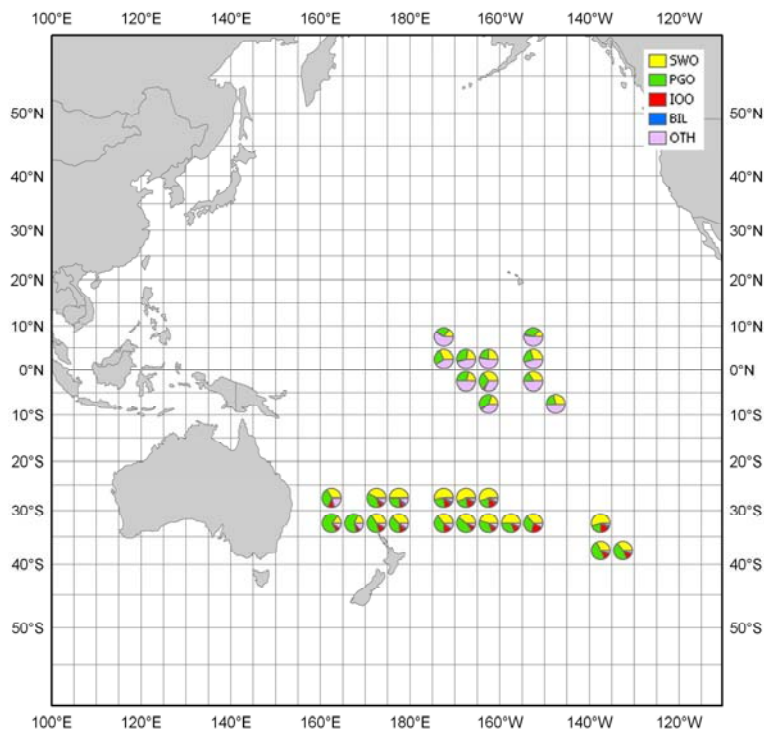


Figure 2. Fishing areas (5°x5°) of the Spanish longliners in the WCPFC convention area during the year 2004 and relative catch (prevalence) of the most important species-groups within each square. SWO= swordfish, IOO= shortfin mako, PGO= blueshark, BIL: billfishes (other than swordfish), OTH: other species.

## ANNEX 1.

### List of related documents presented at the 2006 IOTC or ICCAT meetings

Acoustic Selectivity in Tropical Tuna (Experimental Purse seine Campaign in the Indian Ocean) by J. Miquel, A. Delgado de Molina, J. Ariz, R. Delgado de Molina, S. Déniz, N. Díaz, M. Iglesias, J.C. Santana y P. Brehmer. V. IOTC-WPTT-2006-06

Check list and catch rate data by hook type and bait for Bycatch species caught by Spanish experimental long line cruises in the South-western Indian Ocean during 2005 by J. Ariz, A. Delgado de Molina, M<sup>a</sup> L. Ramos and J. C. Santana. IOTC-WPBy-2006-04

Study of Alternative Models of Artificial Floating Objects for Tuna Fishery (Experimental Purse-seine Campaign in the Indian Ocean) by Delgado de Molina, A., J. Ariz, J.C. Santana and S. Déniz. IOTC-WPBy-2006-05

An overview of research activities on swordfish (*xiphias gladius*) and the by-catch species, caught by the Spanish longline fleet in the Indian ocean. by: J. Mejuto, B. García-Cortés, A. Ramos-Cartelle. IOTC 2006-WPB-11

Preliminary approach to evaluate the importance of discards and other uses of billfish in the Spanish surface longline fishery carried out in different oceans between 1993-2005 by: J. Mejuto, B. García-Cortés and A. M. Ramos-Cartelle, SCRS 2006/060.