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THE FISHERY FOR TUNAS AND BILLFISHES IN THE EASTERN PACIFIC OCEAN IN 2009

INTRODUCTION

This report provides a summary of the fishery for tunas in the eastern Pacific Ocean (EPO) in 2009. It is based on data available to the IATTC staff in June 2010.

All weights of catches and discards are in metric tons (t). In the tables, 0 means no effort or catch <0.5 t; - means no data collected; * means data missing or not available. The following acronyms are used:

Species:	
ALB	Albacore tuna (*Thunnus alalunga*)
BET	Bigeye tuna (*Thunnus obesus*)
BIL	Unidentified istiophorid billfishes
BKJ	Black skipjack (*Euthynnus lineatus*)
BLM	Black marlin (*Makaira indica*)
BUM	Blue marlin (*Makaira nigricans*)
BZX	Bonito (*Sarda* spp.)
CAR	Chondrichthyes, cartilaginous fishes nei[1]
CGX	Carangids (Carangidae)
DOX	Dorado (*Coryphaena* spp.)
MLS	Striped marlin (*Tetrapturus audax*)
MZZ	Osteichthyes, marine fishes nei
PBF	Pacific bluefin tuna (*Thunnus orientalis*)
SFA	Indo-Pacific sailfish (*Istiophorus platypterus)*
SKJ	Skipjack tuna (*Katsuwonus pelamis*)
SKX	Unidentified elasmobranchs
SSP	Shortbill spearfish (*Tetrapturus angustirostris*)
SWO	Swordfish (*Xiphias gladius*)
TUN	Unidentified tunas
YFT	Yellowfin tuna (*Thunnus albacares*)

Fishing gears:	
FPN	Trap
GN	Gillnet
HAR	Harpoon
LL	Longline
LP	Pole and line
LTL	Troll
LX	Hook and line
OTR	Other[2]
NK	Unknown
PS	Purse seine
RG	Recreational
TX	Trawl
Ocean areas:	
EPO	Eastern Pacific Ocean
WCPO	Western and Central Pacific Ocean
Set types:	
DEL	Dolphin
NOA	Unassociated school
OBJ	Floating object
	FLT: Flotsam
	FAD: Fish-aggregating device

[1] not elsewhere included

[2] Used to group known gear types

Flags:	
	IATTC CPCs[3]
BLZ	Belize
CAN	Canada
CHN	China
COK	Cook Islands
COL	Colombia
CRI	Costa Rica
ECU	Ecuador
ESP	Spain
GTM	Guatemala
HND	Honduras
JPN	Japan
KOR	Republic of Korea
MEX	Mexico
NIC	Nicaragua
PAN	Panama
PER	Peru
PYF	French Polynesia
SLV	El Salvador
TWN	Chinese Taipei
USA	United States of America
VEN	Venezuela
VUT	Vanuatu
	Other flags
BMU	Bermuda
BOL	Bolivia
CHL	Chile
COG	Congo
CYM	Cayman Islands
CYP	Cyprus
FSM	Federated States of Micronesia
LBR	Liberia
NLD	Netherlands
NZL	New Zealand
PRT	Portugal
RUS	Russia
SEN	Senegal
VCT	St. Vincent and the Grenadines
UNK	Unknown

[3] IATTC Parties, Cooperating non-Parties, and Cooperating Fishing Entities

CONTENTS

This document summarizes the fisheries for species covered by the IATTC Convention (tunas and other fishes caught by tuna-fishing vessels) in the eastern Pacific Ocean (EPO). The most important of these are the scombrids (Family Scombridae), which include tunas, bonitos, seerfishes, and mackerels. The principal species of tunas caught are yellowfin, skipjack, bigeye, and albacore, with lesser catches of Pacific bluefin, black skipjack, and frigate and bullet tunas; other scombrids, such as bonitos and wahoo, are also caught.

This report also covers other species caught by tuna-fishing vessels in the EPO: billfishes (swordfish, marlins, shortbill spearfish, and sailfish) carangids (yellowtail, rainbow runner, and jack mackerel), dorado, elasmobranchs (sharks, rays, and skates), and other fishes.

Most of the catches are made by the purse-seine and longline fleets; the pole-and-line fleet and various artisanal and recreational fisheries account for a small percentage of the total catches.

Detailed data are available for the purse-seine and pole-and-line fisheries; the data for the longline, artisanal, and recreational fisheries are incomplete.

The IATTC Regional Vessel Register contains details of vessels authorized to fish for tunas in the EPO. The IATTC has detailed records of most of the purse-seine and pole-and-line vessels that fish for yellowfin, skipjack, bigeye, and/or Pacific bluefin tuna in the EPO. The Register is incomplete for small vessels. It contains records for most large (overall length >24 m) longline vessels that fish in the EPO and in other areas.

The data in this report are derived from various sources, including vessel logbooks, observer data, unloading records provided by canners and other processors, export and import records, reports from governments and other entities, and estimates derived from the species and size composition sampling program.

1. CATCHES AND LANDINGS OF TUNAS, BILLFISHES, AND ASSOCIATED SPECIES

Estimating the total catch of a species of fish is difficult, for various reasons. Some fish are discarded at sea, and the data for some gear types are incomplete. Data for fish discarded at sea by purse-seine vessels with carrying capacities greater than 363 metric tons (t) have been collected by observers since 1993, which allows for better estimation of the total amounts of fish caught by the purse-seine fleet. Estimates of the total amount of the catch that is landed (hereafter referred to as the retained catch) are based principally on data from unloadings. Beginning with Fishery Status Report 3, which reports on the fishery in 2004, the unloading data for purse-seine and pole-and-line vessels have been adjusted, based on the species composition estimates for yellowfin, skipjack, and bigeye tunas. The current species composition sampling program, described in Section 1.3.1, began in 2000, so the catch data for 2000-2009 are adjusted, based on estimates by flag for each year. The catch data for the previous years were adjusted by applying the average ratio by species from the 2000-2004 estimates, by flag, and summing

over all flags. This has tended to increase the estimated catches of bigeye and decrease those of yellowfin and/or skipjack. These adjustments are all preliminary, and may be improved in the future. All of the purse-seine and pole-and-line data for 2009 are preliminary.

Data on the retained catches of most of the larger longline vessels are obtained from the governments of the nations that fish for tunas in the EPO. Longline vessels, particularly the larger ones, direct their effort primarily at bigeye, yellowfin, albacore, or swordfish. Data from smaller longliners, artisanal vessels, and other vessels that fish for tunas, billfishes, dorado, and sharks in the EPO were gathered either directly from the governments, from logbooks, or from reports published by the governments. Data for the western and central Pacific Ocean (WCPO) were provided by the Ocean Fisheries Programme of the Secretariat of the Pacific Community (SPC). All data for catches in the EPO by longlines and other gears for 2008 and 2009 are preliminary.

The data from all of the above sources are compiled in a database by the IATTC staff and summarized in this report. In recent years, the IATTC staff has increased its effort toward compiling data on the catches of tunas, billfishes, and other species caught by other gear types, such as trollers, harpooners, gillnetters, and recreational vessels. The estimated total catches from all sources mentioned above of yellowfin, skipjack, and bigeye in the entire Pacific Ocean are shown in Table A-1, and are discussed further in the sections below.

Estimates of the annual retained and discarded catches of tunas and other species taken by tuna-fishing vessels in the EPO during 1980-2009 are shown in Table A-2. The catches of yellowfin, bigeye, and skipjack tunas, by gear and flag, during 1980-2009 are shown in Tables A-3a-e, and the purse-seine and pole-and-line catches of tunas and bonitos during 2008-2009 are summarized by flag in Table A-4. There were no restrictions on fishing for tunas in the EPO during 1988-1997, but the catches of most species have been affected by restrictions on fishing during some or all of the last six months of 1998-2009. Furthermore, regulations placed on purse-seine vessels directing their effort at tunas associated with dolphins have affected the way these vessels operate, especially since the late 1980s, as discussed in Section 3.

The catches have also been affected by climate perturbations, such as the major El Niño events that occurred during 1982-1983 and 1997-1998. These events made the fish less vulnerable to capture by purse seiners due to the greater depth of the thermocline, but had no apparent effect on the longline catches. Yellowfin recruitment tends to be greater after an El Niño event.

1.1. Catches by species

1.1.1. Yellowfin tuna

The annual catches of yellowfin during 1980-2009 are shown in Table A-1. Overall, the catches in both the EPO and WCPO have increased during this period. In the EPO, the El Niño event of 1982-1983 led to a reduction in the catches in those years, whereas the catches in the WCPO were apparently not affected. Although the El Niño episode of 1997-1998 was greater in scope, it did not have the same effect on the yellowfin catches in the EPO. The catch of yellowfin in the EPO, in 2002, 444 thousand t, was the greatest on record, but in 2004, 2005, 2006 and 2007 it decreased substantially, and the catch during 2009, 243 thousand t, was greater than the catches during 2005-2008, but less than the catches during 1986-2005. In the WCPO, the catches of yellowfin reached 341 thousand t in 1990, peaked at 425 thousand t in 1998, and remained high through 2003; they fell to 384 thousand t in 2004, increased to 546 thousand t in 2008, and fell again in 2009, to 430 thousand t.

The annual retained catches of yellowfin in the EPO by purse-seine and pole-and-line vessels during 1980-2009 are shown in Table A-2a. The average annual retained catch during 1994-2008 was 264 thousand t (range: 167 to 413 thousand t). The preliminary estimate of the retained catch in 2009, 237 thousand t, was 26% greater than that of 2008, but 10% less than the average for 1994-2008. The average amount of yellowfin discarded at sea during 1994-2008 was about 2% of the total purse-seine catch

(retained catch plus discards) of yellowfin (range: 1 to 3%) (Table A-2a).

The annual retained catches of yellowfin in the EPO by longliners during 1980-2009 are shown in Table A-2a. During 1994-2008 they remained relatively stable, averaging about 18 thousand t (range: 7 to 30 thousand t), or about 6% of the total retained catches of yellowfin. Yellowfin are also caught by recreational vessels, as incidental catch in gillnets, and by artisanal fisheries. Estimates of these catches are shown in Table A-2a, under "Other gears" (OTR); during 1994-2008 they averaged about 1 thousand t.

1.1.2. Skipjack tuna

The annual catches of skipjack during 1980-2009 are shown in Table A-1. Most of the skipjack catch in the Pacific Ocean is taken in the WCPO. The greatest reported catch in the WCPO, about 1.8 million t, occurred in 2009, and the greatest total catch in the EPO, 311 thousand t, occurred in 2006.

The annual retained catches of skipjack in the EPO by purse-seine and pole-and-line vessels during 1980-2009 are shown in Table A-2a. During 1994-2008 the annual retained catch averaged 195 thousand t (range 73 to 298 thousand t). The preliminary estimate of the retained catch in 2009, 230 thousand t, is 18% greater than the average for 1994-2008, and 23% less than the previous record-high retained catch of 2006. The average amount of skipjack discarded at sea during 1994-2008 was about 9% of the total catch of skipjack (range: 3 to 19%) (Table A-2a).

Small amounts of skipjack are caught with longlines and other gears (Table A-2a).

1.1.3. Bigeye tuna

The annual catches of bigeye during 1980-2009 are shown in Table A-1. Overall, the catches in both the EPO and WCPO have increased, but with considerable fluctuation. The catches in the EPO reached 105 thousand t in 1986, and have fluctuated between about 73 and 148 thousand t since then, with the greatest catch in 2000. In the WCPO the catches of bigeye increased to more than 77 thousand t during the late 1970s, decreased during the 1980s, and then increased, with lesser fluctuations, until 1999, when the catches reached more than 114 thousand t. Catches of bigeye in the WCPO increased significantly in 2006 to 125 thousand t. In 2007, 2008 and 2009 the catches of bigeye in the WCPO were 119, 118, and 111 thousand t, respectively.

Prior to 1994, the average annual retained catch of bigeye taken by purse-seine vessels in the EPO was about 8 thousand t (range 1 to 22 thousand t) (Table A-2a). Following the development of fish-aggregating devices (FADs), placed in the water by fishermen to aggregate tunas, the annual retained catches of bigeye increased from 35 thousand t in 1994 to between 44 and 95 thousand t during 1995-2008. A preliminary estimate of the retained catch in the EPO in 2009 is 77 thousand t. The average amount of bigeye discarded at sea during 1994-2008 was about 5% of the purse-seine catch of the species (range: 2 to 9%). Small amounts of bigeye have been caught in some years by pole-and-line vessels, as shown in Table A-2a.

During 1980-1993, prior to the increased use of FADs and the resulting greater catches of bigeye by purse-seine vessels, the longline catches of bigeye in the EPO ranged from 46 to 104 thousand t (average: 75 thousand t) about 91%, on average, of the retained catches of this species from the EPO. During 1994-2008 the annual retained catches of bigeye by the longline fisheries ranged from about 26 to 74 thousand t (average: 49 thousand t), an average of 43% of the total catch of bigeye in the EPO (Table A-2a). The preliminary estimate of the longline catch in the EPO in 2009 is 28 thousand t (Table A-2a).

Small amounts of bigeye are caught by other gears, as shown in Table A-2a.

1.1.4. Bluefin tuna

The catches of Pacific bluefin in the entire Pacific Ocean, by flag and gear, are shown in Table A-5. The data, which were obtained from the International Scientific Committee for Tuna and Tuna-like Species in

the North Pacific Ocean (ISC), are reported by fishing nation or entity, regardless of the area of the Pacific Ocean in which the fish were caught.

The catches of Pacific bluefin in the EPO during 1980-2009, by gear, are shown in Table A-2. During 1994-2008 the annual retained catch of bluefin from the EPO by purse-seine and pole-and-line vessels averaged 3,900 t (range 600 t to 10 thousand t). The preliminary estimate of the retained catch of bluefin in 2009, 3,400 t, is 500 t less than the average for 1994-2008. Small amounts of bluefin are discarded at sea by purse-seine vessels (Table A-2a).

1.1.5. Albacore tuna

The catches of albacore in the entire Pacific Ocean, by gear and area (north and south of the equator) are shown in Table A-6. The catches of albacore in the EPO, by gear, are shown in Table A-2a. A significant portion of the albacore catch is taken by troll gear, included under "Other gears" (OTR) in Table A-2a. The catch data were obtained from IATTC data for the EPO and from data compiled by the SPC for the WCPO.

1.1.6. Other tunas and tuna-like species

While yellowfin, skipjack, and bigeye tunas comprise the most significant portion of the retained catches of the purse-seine and pole-and-line fleets in the EPO, other tunas and tuna-like species, such as black skipjack, bonito, wahoo, and frigate and bullet tunas, contribute to the overall harvest in this area. The estimated annual retained and discarded catches of these species during 1980-2009 are presented in Table A-2a. The catches reported in the unidentified tunas category (TUN) in Table A-2a contain some catches reported by species (frigate or bullet tunas) along with the unidentified tunas. The total retained catch of these other species by these fisheries was about 14 thousand t in 2009, which is greater than the 1994-2008 annual average retained catch of about 8 thousand t (range: 3 thousand t to 22 thousand t).

Black skipjack are also caught by other gears in the EPO, mostly by coastal artisanal fisheries. Bonitos are also caught by artisanal fisheries, and have been reported as catch by longline vessels in some years.

1.1.7. Billfishes

Catch data for billfishes (swordfish, blue marlin, black marlin, striped marlin, shortbill spearfish, and sailfish) are shown in Table A-2b.

In general, dolphins, sea turtles, whale sharks, and small fish are the only animals captured in the purse-seine fishery that are released alive. In previous versions of this report, all billfishes caught in that fishery were classified as discarded dead. When most of the individuals of species caught incidentally are discarded, the difference between catches and discards is not significant for those species, but as the rate of retention of species formerly discarded increases, part of the bycatch becomes catch, and the distinction becomes important. As a result of a review in 2010, this has been clarified in Table A-2b with the addition of a column for retained catch next to the column for discards.

Swordfish are caught in the EPO with large-scale and artisanal longline gear, gillnets, harpoons, and occasionally with recreational gear. The average annual longline catch of swordfish during 1994-2008 was 12 thousand t, but during 2001-2004 was about 18 thousand t. It is not clear whether this is due to increased abundance of swordfish or increased effort directed toward that species.

Other billfishes are caught with large-scale and artisanal longline gear and recreational gear. The average annual longline catches of blue marlin and striped marlin during 1994-2008 were about 4 thousand and 2 thousand t, respectively. Smaller amounts of other billfishes are taken by longline.

Unfortunately, little information is available on the recreational catches of billfishes, but they are believed to be substantially less than the commercial catches for all species.

Small amounts of billfishes are caught by purse seiners, some are retained, and others are considered to be discarded although some may be landed but not reported. These data are also included in Table A-2b.

1.1.8. Other species

Data on the catches and discards of carangids (yellowtail, rainbow runner, and jack mackerel), dorado, elasmobranchs (sharks, rays, and skates), and other fishes caught in the EPO are shown in Table A-2c.

Bycatches of other species in the purse-seine fishery are reported in Table A-2c as either retained or discarded. A revision was made to the allocation of catches into those categories as a result of a review in 2010.

Dorado are unloaded mainly in ports in South and Central America. Although the catches are greater than 10 thousand t in some years, the gear types used are often not reported.

1.2. Distributions of the catches of tunas

1.2.1. Purse-seine catches

The average annual distributions of the purse-seine catches of yellowfin, skipjack, and bigeye, by set type, in the EPO during 2004-2008, are shown in Figures A-1a, A-2a, and A-3a, and preliminary estimates for 2009 are shown in Figures A-1b, A-2b, and A-3b. The catches of yellowfin in 2009 showed an increase in effort on dolphins in the northern area compared to the average annual distributions for 2004-2008. Catches of yellowfin on dolphins were greater in the inshore area between 5°N and 15°N, and somewhat greater in the offshore areas from about 5°S to 10°N in sets on dolphins and floating objects. Yellowfin catches were smaller in the inshore areas off southern Ecuador and Peru. Catches of skipjack were somewhat smaller in the areas north of 10°N, and in the inshore areas off Ecuador, compared to the average annual distributions for 2004-2005. Greater catches of skipjack were observed in the areas between 5°S and 5°N and from 85°W to 100°W, and also in the far offshore equatorial area from about 125°W to 150°W. Catches were slightly higher in the south from about 15°S to 20°S. The catches of bigeye in 2009 were very similar to the average annual distribution of catches during 2004-2008, with slightly higher catches observed in the inshore areas off Peru from about 15°S to 25°S.

Bigeye are not often caught north of about 7°N, and the catches of bigeye have decreased in the inshore areas off South America for several years. With the development of the fishery for tunas associated with FADs, the relative importance of the inshore areas has decreased, while that of the offshore areas has increased. Most of the bigeye catches are taken in sets on FADs between 5°N and 5°S.

1.2.2. Longline catches

Data on the spatial and temporal distributions of the catches in the EPO by the distant-water longline fleets of China, Chinese Taipei, French Polynesia, Japan, the Republic of Korea, Spain, the United States, and Vanuatu are maintained in databases of the IATTC. Bigeye and yellowfin tunas make up the majority of the catches by most of these vessels. The distributions of the catches of bigeye and yellowfin tunas in the Pacific Ocean by Japanese, Korean, and Chinese Taipei longline vessels during 2004-2008 are shown in Figure A-4. Data for the Japanese longline fishery in the EPO during 1956-2003 are available in IATTC Bulletins describing that fishery.

1.3. Size compositions of the catches of tunas

1.3.1. Purse-seine, pole-and-line, and recreational fisheries

Length-frequency samples are the basic source of data used for estimating the size and age compositions of the various species of fish in the landings. This information is necessary to obtain age-structured estimates of the populations for various purposes, including the integrated modeling that the staff has employed during the last several years. The results of such studies have been described in several IATTC Bulletins, in its Annual Reports for 1954-2002, and in its Stock Assessment Reports.

Length-frequency samples of yellowfin, skipjack, bigeye, Pacific bluefin, and, occasionally, black skipjack from the catches of purse-seine, pole-and-line, and recreational vessels in the EPO are collected by IATTC personnel at ports of landing in Ecuador, Mexico, Panama, the USA, and Venezuela. The

catches of yellowfin and skipjack were first sampled in 1954, bluefin in 1973, and bigeye in 1975. Sampling has continued to the present.

The methods for sampling the catches of tunas are described in the IATTC Annual Report for 2000 and in IATTC Stock Assessment Reports 2 and 4. Briefly, the fish in a well of a purse-seine or pole-and-line vessel are selected for sampling only if all the fish in the well were caught during the same calendar month, in the same type of set (floating-object, unassociated school, or dolphin), and in the same sampling area. These data are then categorized by fishery (Figure A-5), based on the staff's most recent stock assessments.

Data for fish caught during the 2004-2009 period are presented in this report. Two sets of length-frequency histograms are presented for each species, except bluefin and black skipjack; the first shows the data by stratum (gear type, set type, and area) for 2009, and the second shows the combined data for each year of the 2004-2009 period. For bluefin, the histograms show the 2004-2009 catches by commercial and recreational gear combined. For black skipjack, the histograms show the 2004-2009 catches by commercial gear. Only a small amount of catch was taken by pole-and-line vessels in 2009, and no samples were obtained from these vessels.

For stock assessments of yellowfin, nine purse-seine fisheries (four associated with floating objects, three associated with dolphins, and two unassociated) and one pole-and-line fishery are defined (Figure A-5). The last fishery includes all 13 sampling areas. Of the 854 wells sampled, 573 contained yellowfin. The estimated size compositions of the fish caught during 2009 are shown in Figure A-6a. The majority of the yellowfin catch was taken in sets associated with dolphins and in unassociated sets. Most of the larger yellowfin (>100 cm) were caught throughout the year in the Inshore dolphin fishery, and during the second, third, and fourth quarters in the Northern and Southern dolphin-associated fisheries. Larger yellowfin were also caught during the fourth quarter in the Southern unassociated fishery. A small amount of large yellowfin was taken in the Southern floating-object fishery in the second and third quarters. Yellowfin, ranging from 40 to 60 cm in length, were evident in North and Equatorial floating-object fisheries primarily in the third and fourth quarters.

The estimated size compositions of the yellowfin caught by all fisheries combined during 2004-2009 are shown in Figure A-6b. The average weights of the yellowfin caught in 2009 (15.0 kg) were considerably greater than those of the previous five years.

For stock assessments of skipjack, seven purse-seine fisheries (four associated with floating objects, two unassociated, one associated with dolphins) and one pole-and-line fishery are defined (Figure A-5). The last two fisheries include all 13 sampling areas. Of the 854 wells sampled, 547 contained skipjack. The estimated size compositions of the fish caught during 2009 are shown in Figure A-7a. Large amounts of skipjack in the 40- to 50-cm size range were caught in the Northern, Equatorial, and Southern floating-object fisheries in the second, third, and fourth quarters, and in the Inshore floating-object fishery during the first and second quarters. Larger skipjack in the 60- to 70-cm size range were caught primarily in the Southern unassociated fishery during the first and third quarters, and in the Equatorial floating-object fishery during the first and second quarters.

The estimated size compositions of the skipjack caught by all fisheries combined during 2004-2009 are shown in Figure A-7b. The average weight of skipjack in 2009, 2.0 kg, was less than the average weights for the previous five years.

For stock assessments of bigeye, six purse-seine fisheries (four associated with floating objects, one unassociated, one associated with dolphins) and one pole-and-line fishery are defined (Figure A-5). The last three fisheries include all 13 sampling areas. Of the 854 wells sampled, 227 contained bigeye. The estimated size compositions of the fish caught during 2009 are shown in Figure A-8a. In 2000 the majority of the catch was taken in floating-object sets in the Equatorial area, whereas from 2001 to 2003 the majority of the bigeye catch was taken in sets on floating objects in the Southern area. In 2009, as in

2004-2008, nearly equal amounts of bigeye were taken in the Northern, Equatorial, and Southern floating-object fisheries throughout the year, and in the Inshore floating-object fishery during the first and second quarters. Smaller bigeye in the 40- to 80-cm size range were caught throughout the year in the Northern, Equatorial and Southern floating-object fishery. Larger bigeye (>100 cm.) were caught throughout the year in the Equatorial floating-object fishery, in the second and third quarters in the Southern floating-object fishery, in the second quarter in the Inshore floating-object fishery, and in the fourth quarter in the Northern floating-object fishery.

The estimated size compositions of the bigeye caught by all fisheries combined during 2004-2009 are shown in Figure A-8b. The average weight of bigeye in 2009 (6.0 kg) was considerably lower than in 2008 (7.4 kg).

Pacific bluefin are caught by purse-seine and recreational gear off California and Baja California from about 23°N to 35°N, with most of the catch being taken during May through October. During 2009 bluefin were caught between 26°N and 32°N from June through August. The majority of the catches of bluefin by both commercial and recreational vessels were taken during June and July. Prior to 2004, the sizes of the fish in the commercial and recreational catches have been reported separately. During 2004-2009, however, small sample sizes made it infeasible to estimate the size compositions separately. Therefore, the sizes of the fish in the commercial and recreational catches of bluefin were combined for each year of the 2004-2009 period. The average weight of the fish caught during 2009 was considerably greater than that of 2008. The estimated size compositions are shown in Figure A-9.

Black skipjack are caught incidentally by fishermen who direct their effort toward yellowfin, skipjack, and bigeye tuna. The demand for this species is low, so most of the catches are discarded at sea, but small amounts, mixed with the more desirable species, are sometimes retained. Twenty-one samples of black skipjack were taken in 2009. The estimated size compositions for each year of the 2004-2009 period are shown in Figure A-10.

1.3.2. Longline fishery

The estimated size compositions of the catches of yellowfin and bigeye by the Japanese longline fishery in the EPO during 2004-2008 are shown in Figures A-11 and A-12. The average weights of both yellowfin and bigeye taken by that fishery have remained about the same throughout its existence. Information on the size compositions of fish caught by the Japanese longline fishery in the EPO during 1958-2003 is available in IATTC Bulletins describing that fishery.

1.4. Catches of tunas and bonitos, by flag and gear

The annual retained catches of tunas and bonitos in the EPO during 1980-2009, by flag and gear, are shown in Tables A-3a-e. These tables include all of the known catches of tunas and bonitos compiled from various sources, including vessel logbooks, observer data, unloading records provided by canners and other processors, export and import records, estimates derived from the species and size composition sampling program, reports from governments and other entities, and estimates derived from the species- and size-composition sampling program. Similar information on tunas and bonitos prior to 2001, and historic data for tunas, billfishes, sharks, carangids, dorado, and miscellaneous fishes are available on the IATTC web site. The purse-seine and pole-and-line catches of tunas and bonitos in 2008 and 2009, by flag, are summarized in Table A-4. Of the 561 thousand t of tunas and bonitos caught in 2009, 33% was caught by Ecuadorian vessels, and 21% by Mexican vessels. Other countries with significant catches of tunas and bonitos in the EPO included Panama (14%), Venezuela (9%), and Nicaragua (2%).

2. FISHING EFFORT

2.1. Purse seine

Estimates of the numbers of purse-seine sets of each type (associated with dolphins, associated with floating objects, and unassociated) in the EPO during the 1994-2009 period, and the retained catches of these sets, are shown in Table A-7 and in Figure 1. The estimates for vessels ≤363 t carrying capacity were calculated from logbook data in the IATTC statistical data base, and those for vessels >363 t carrying capacity were calculated from the observer data bases of the IATTC, Colombia, Ecuador, the European Union, Mexico, Nicaragua, Panama, the United States, and Venezuela. The greatest numbers of sets associated with floating objects and unassociated sets were made from the mid-1970s to the early 1980s. Despite opposition to fishing for tunas associated with dolphins and the refusal of U.S. canners to accept tunas caught during trips during which sets were made on dolphin-associated fish, the numbers of sets associated with dolphins decreased only moderately during the mid-1990s, and in 2003 were the greatest recorded.

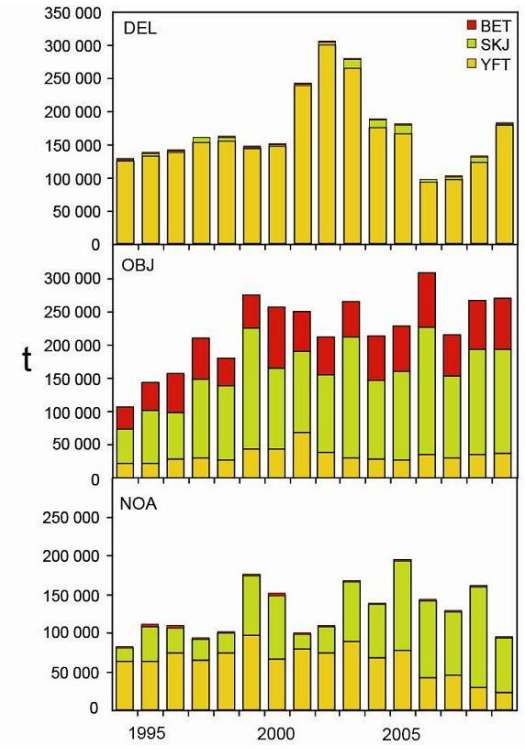

Figure 1. Purse-seine catches of tunas, by species and set type, 1994-2009

There are two types of floating objects, flotsam and FADs. The occurrence of the former is unplanned from the point of view of the fishermen, whereas the latter are constructed by fishermen specifically for the purpose of attracting fish. FADs have been widely used for about 15 years, and their relative importance has increased during this period, while that of flotsam has decreased, as shown by the data in Table A-8.

2.2. Longline

The reported nominal fishing effort (in thousands of hooks) by longline vessels in the EPO, and their catches of the predominant tuna species, are shown in Table A-9.

3. THE FLEETS

3.1. The purse-seine and pole-and-line fleets

The IATTC staff maintains detailed records of gear, flag, and fish-carrying capacity for most of the vessels that fish with purse-seine or pole-and-line gear for yellowfin, skipjack, bigeye, and/or Pacific bluefin tuna in the EPO. The fleet described here includes purse-seine and pole-and-line vessels that have fished all or part of the year in the EPO for any of these four species.

Historically, the owner's or builder's estimates of carrying capacities of individual vessels, in tons of fish, were used until landing records indicated that revision of these estimates was required.

Since 2000, the IATTC has used well volume, in cubic meters (m^3), instead of weight, in metric tons (t), to measure the carrying capacities of the vessels. Since a well can be loaded with different densities of fish, measuring carrying capacity in weight is subjective, as a load of fish packed into a well at a higher density weighs more than a load of fish packed at a lower density. Using volume as a measure of capacity eliminates this problem.

The IATTC staff began collecting capacity data by volume in 1999, but has not yet obtained this information for all vessels. For vessels for which reliable information on well volume is not available, the estimated capacity in metric tons was converted to cubic meters.

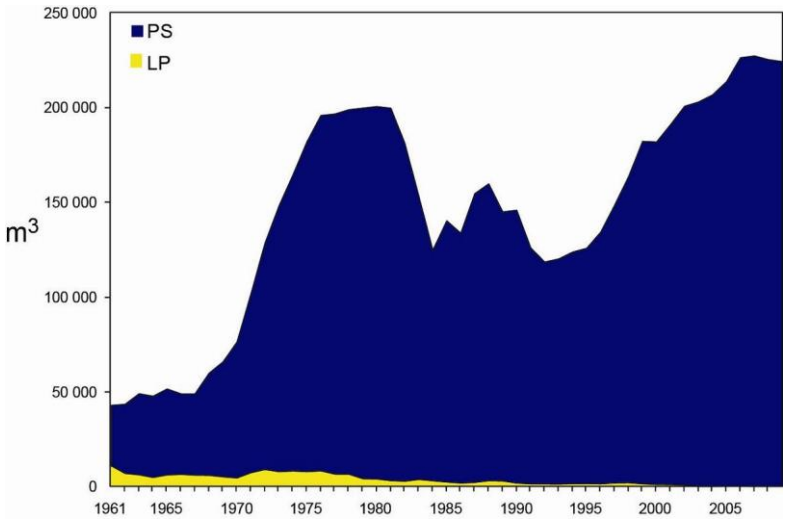

Figure 2. Carrying capacity, in cubic meters of well volume, of the purse-seine and pole-and-line fleets in the EPO, 1961-2009

Until about 1960, fishing for tunas in the EPO was dominated by pole-and-line vessels operating in coastal regions and in the vicinity of offshore islands and banks. During the late 1950s and early 1960s most of the larger pole-and-line vessels were converted to purse seiners, and by 1961 the EPO fishery was dominated by these vessels. From 1961 to 2009 the number of pole-and-line vessels decreased from 93 to 4, and their total well volume from about 11 thousand to about 380 m^3. During the same period the number of purse-seine vessels increased from 125 to 220, and their total well volume from about 32 thousand to about 225 thousand m^3, an average of about 1,000 m^3 per vessel. An earlier peak in numbers and total well volume of purse seiners occurred from the mid-1970s to the early 1980s, when the number of vessels reached 282 and the total well volume about 195 thousand m^3, an average of about 700 m^3 per vessel (Table A-10; Figure 2).

The catch rates in the EPO were low during 1978-1981, due to concentration of fishing effort on small fish, and the situation was exacerbated by a major El Niño event, which began in mid-1982 and persisted until late 1983 and made the fish less vulnerable to capture. The total well volume of purse-seine and pole-and-line vessels then declined as vessels were deactivated or left the EPO to fish in other areas, primarily the western Pacific Ocean, and in 1984 it reached its lowest level since 1971, about 122 thousand m^3. In early 1990 the U.S. tuna-canning industry adopted a policy of not purchasing tunas caught during trips during which sets on tunas associated with dolphins were made. This caused many U.S.-flag vessels to leave the EPO, with a consequent reduction in the fleet to about 117 thousand m^3 in 1992. With increases in participation of vessels of other nations in the fishery, the total well volume has increased steadily since 1992, and in 2009 was 224 thousand m^3.

The 2008 and preliminary 2009 data for numbers and total well volumes of purse-seine and pole-and-line vessels that fished for tunas in the EPO are shown in Tables A-11a and A-11b. During 2009, the fleet was dominated by vessels operating under the Ecuadorian and Mexican flags, with about 27% and 22%, respectively, of the total well volume; they were followed by Panama (14%), Venezuela (13%), Colombia (7%), Spain (4%), El Salvador and Nicaragua (3% each), and Guatemala, United States, and Vanuatu (2%).

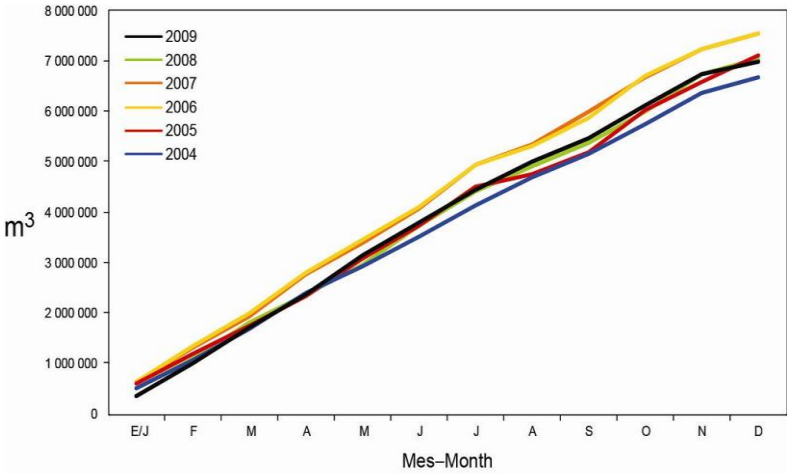

Figure 3. Cumulative capacity of the purse-seine and pole-and-line fleet at sea, by month, 2004-2009

The cumulative capacity at sea

during 2009 is compared to those of the previous five years in Figure 3.

The monthly average, minimum, and maximum total well volumes at sea (VAS), in thousands of cubic meters, of purse-seine and pole-and-line vessels that fished for tunas in the EPO during 1999-2008, and the 2009 values, are shown in Table A-12. The monthly values are averages of the VAS estimated at weekly intervals by the IATTC staff. The fishery was regulated during some or all of the last four months of 1998-2009, so the VAS values for September-December 2009 are not comparable to the average VAS values for those months of 1998-2008. The average VAS values for 1999-2008 and 2009 were 125 thousand m^3 (61% of total capacity) and 137 thousand m^3 (61% of total capacity), respectively.

3.2. Other fleets of the EPO

Information on other types of vessels that fish for tunas in the EPO is available on the IATTC's Regional Vessel Register, on the IATTC web site. The Register is incomplete for small vessels. In some cases, particularly for large longline vessels, the Register contains information for vessels authorized to fish not only in the EPO, but also in other oceans, and which may not have fished in the EPO during 2009, or ever.

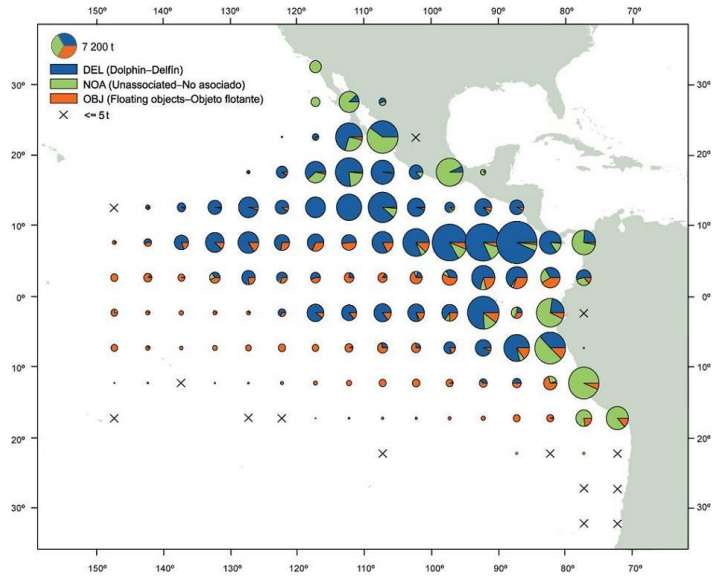

FIGURE A-1a. Average annual distributions of the purse-seine catches of yellowfin, by set type, 2004-2008. The sizes of the circles are proportional to the amounts of yellowfin caught in those 5° by 5° areas.
FIGURA A-1a. Distribución media anual de las capturas cerqueras de aleta amarilla, por tipo de lance, 2004-2008. El tamaño de cada círculo es proporcional a la cantidad de aleta amarilla capturado en la cuadrícula de 5° x 5° correspondiente.

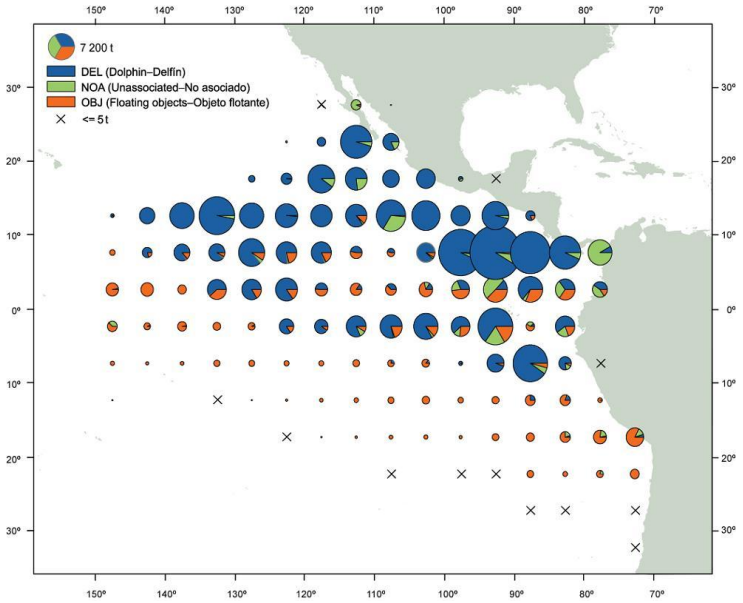

FIGURE A-1b. Annual distributions of the purse-seine catches of yellowfin, by set type, 2009. The sizes of the circles are proportional to the amounts of yellowfin caught in those 5° by 5° areas.
FIGURA A-1b. Distribución anual de las capturas cerqueras de aleta amarilla, por tipo de lance, 2009. El tamaño de cada círculo es proporcional a la cantidad de aleta amarilla capturado en la cuadrícula de 5° x 5° correspondiente.

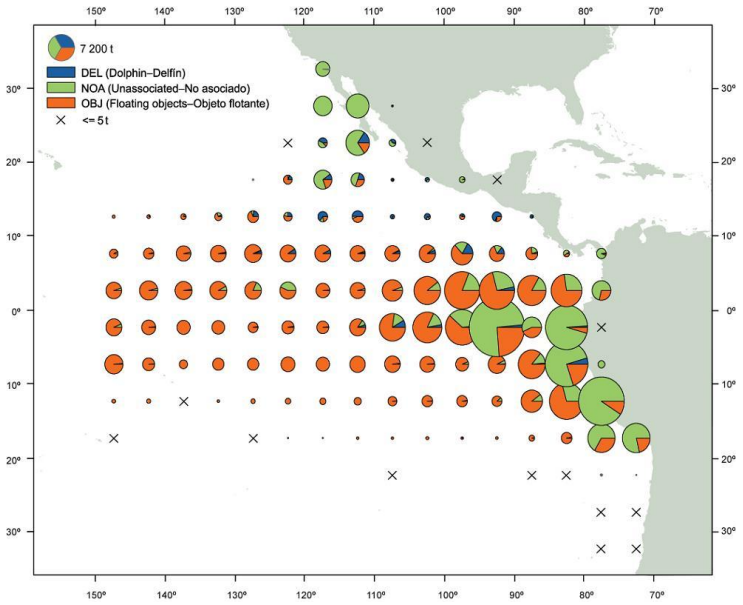

FIGURE A-2a. Average annual distributions of the purse-seine catches of skipjack, by set type, 2004-2008. The sizes of the circles are proportional to the amounts of skipjack caught in those 5° by 5° areas.
FIGURA A-2a. Distribución media anual de las capturas cerqueras de barrilete, por tipo de lance, 2004-2008. El tamaño de cada círculo es proporcional a la cantidad de barrilete capturado en la cuadrícula de 5° x 5° correspondiente.

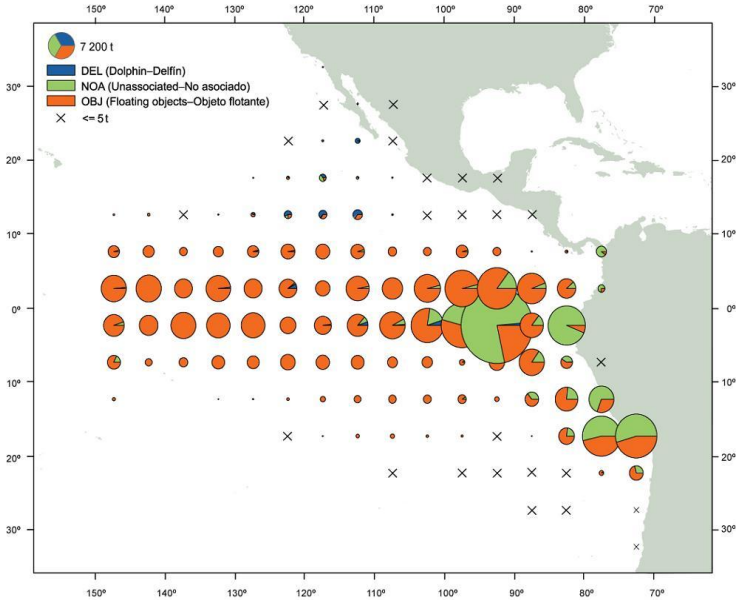

FIGURE A-2b. Annual distributions of the purse-seine catches of skipjack, by set type, 2009. The sizes of the circles are proportional to the amounts of skipjack caught in those 5° by 5° areas.
FIGURA A-2b. Distribución anual de las capturas cerqueras de barrilete, por tipo de lance, 2009. El tamaño de cada círculo es proporcional a la cantidad de barrilete capturado en la cuadrícula de 5° x 5° correspondiente.

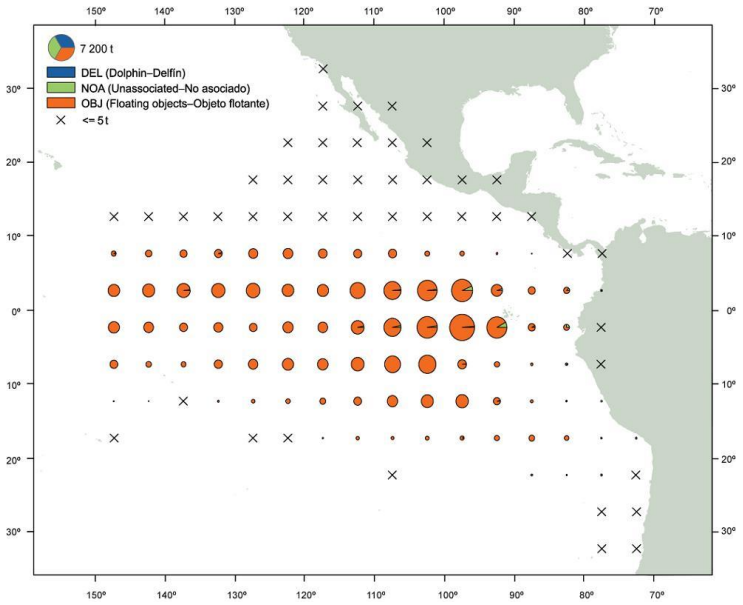

FIGURE A-3a. Average annual distributions of the purse-seine catches of bigeye, by set type, 2004-2008. The sizes of the circles are proportional to the amounts of bigeye caught in those 5° by 5° areas.
FIGURA A-3a. Distribución media anual de las capturas cerqueras de patudo, por tipo de lance, 2004-2008. El tamaño de cada círculo es proporcional a la cantidad de patudo capturado en la cuadrícula de 5° x 5° correspondiente.

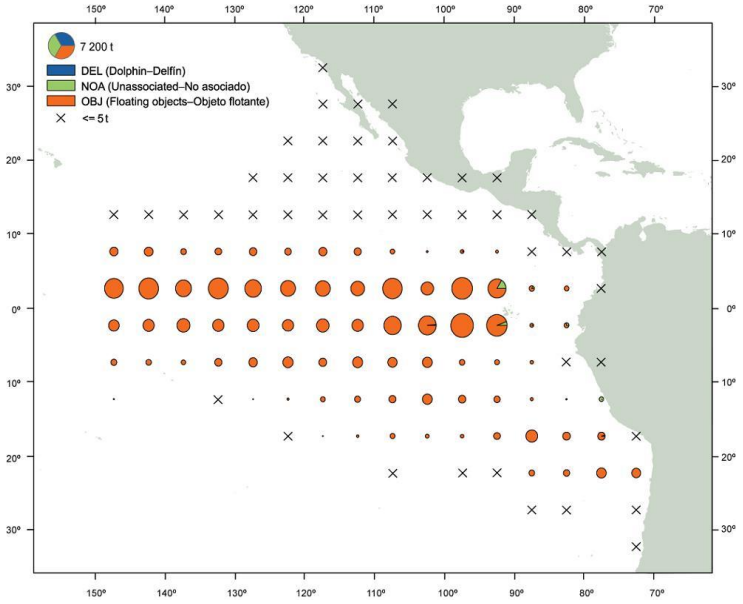

FIGURE A-3b. Annual distributions of the purse-seine catches of bigeye, by set type, 2009. The sizes of the circles are proportional to the amounts of bigeye caught in those 5° by 5° areas.
FIGURA A-3b. Distribución anual de las capturas cerqueras de patudo, por tipo de lance, 2009. El tamaño de cada círculo es proporcional a la cantidad de patudo capturado en la cuadrícula de 5° x 5° correspondiente.

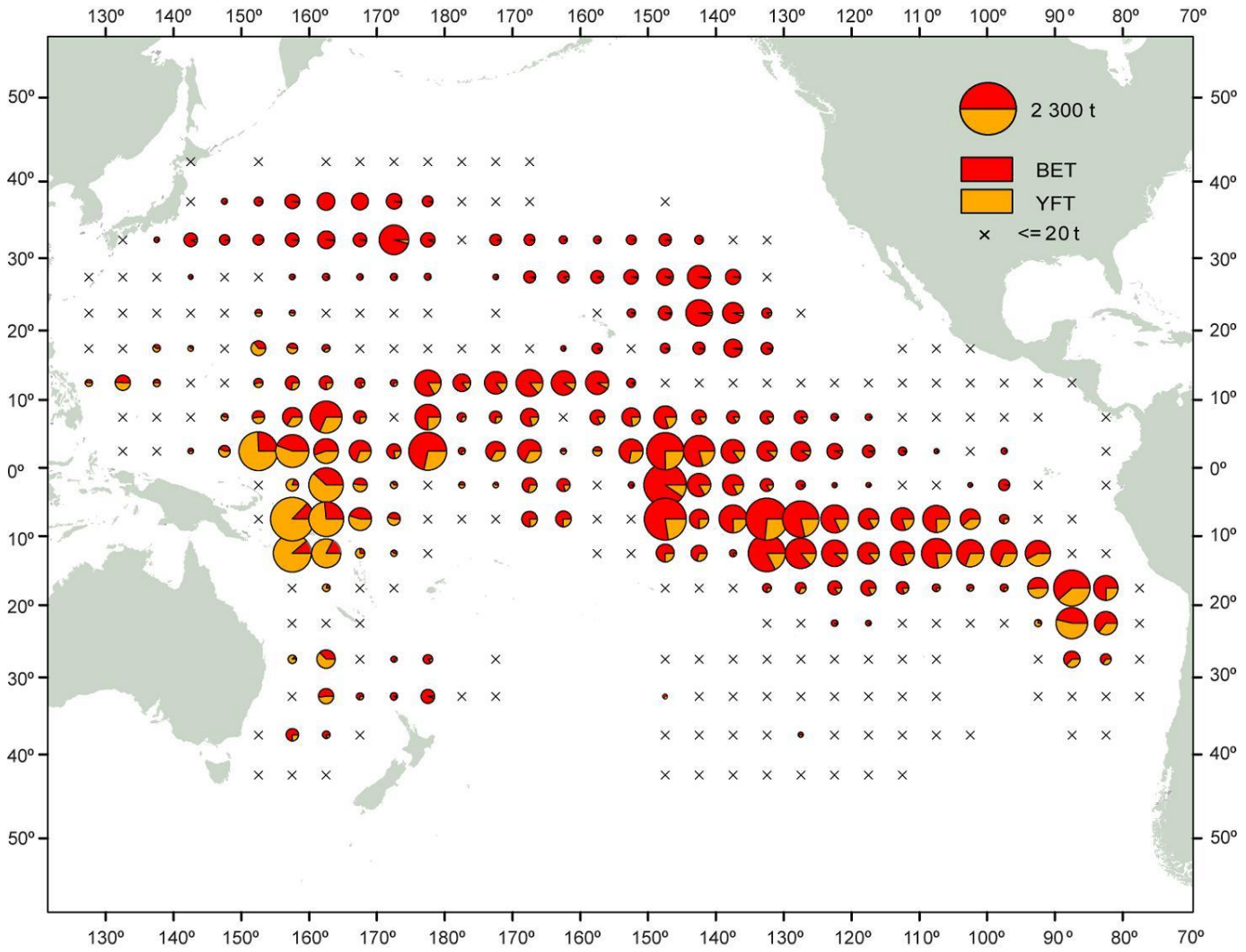

FIGURE A-4. Distributions of the average annual catches of bigeye and yellowfin tunas in the Pacific Ocean, in metric tons, by Chinese Taipei, Japanese and Korean longline vessels, 2004-2008. The sizes of the circles are proportional to the amounts of bigeye and yellowfin caught in those 5° by 5° areas.

FIGURA A-4. Distribución de las capturas anuales medias de atunes patudo y aleta amarilla en el Océano Pacifico, en toneladas métricas, por buques palangreros de Corea, Japón y Taipei Chino 2004-2008. El tamaño de cada círculo es proporcional a la cantidad de patudo y aleta amarilla capturado en la cuadrícula de 5° x 5° correspondiente.

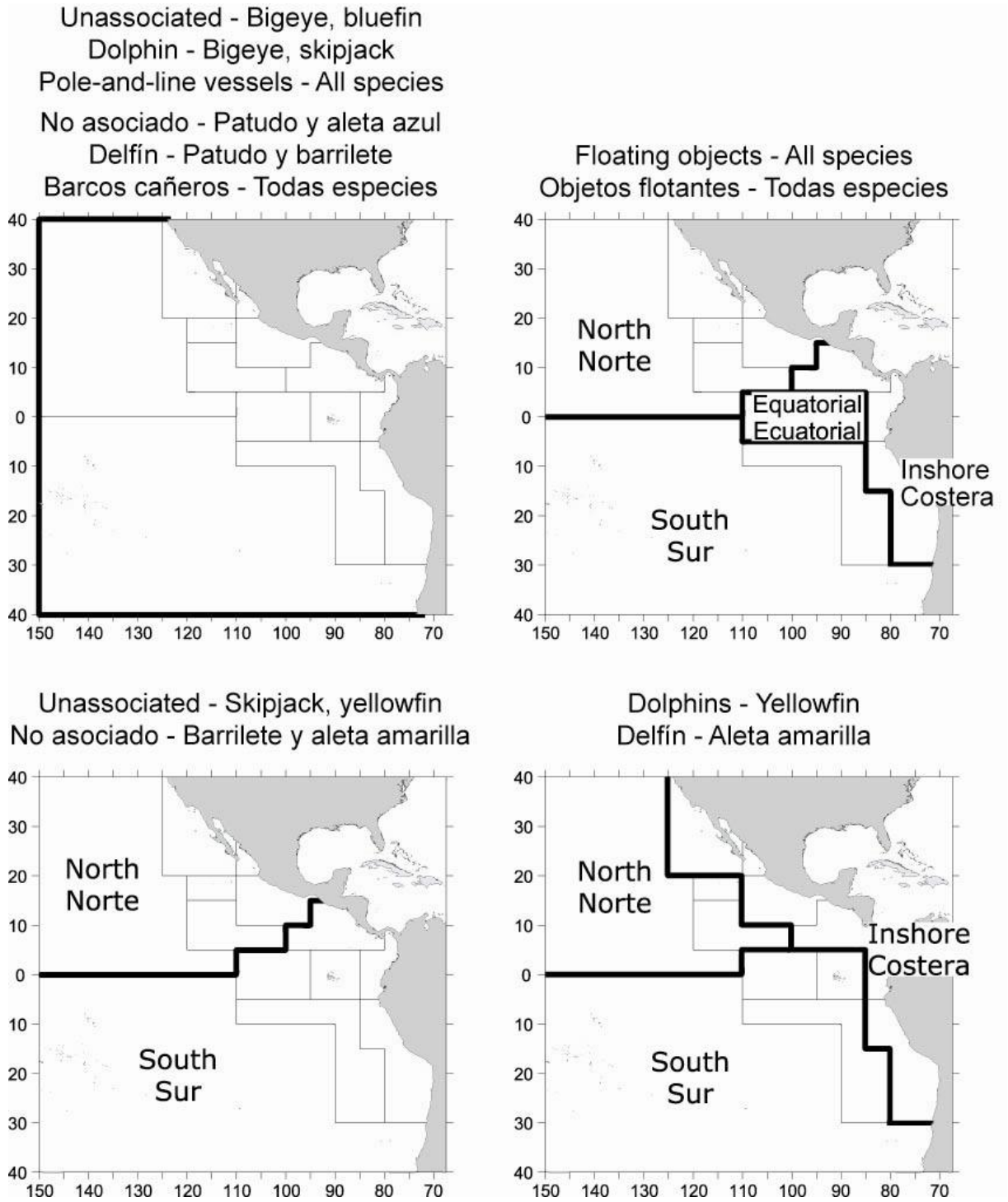

FIGURE A-5. The fisheries defined by the IATTC staff for stock assessment of yellowfin, skipjack, and bigeye in the EPO. The thin lines indicate the boundaries of the 13 length-frequency sampling areas, and the bold lines the boundaries of the fisheries.

FIGURA A-5. Las pesquerías definidas por el personal de la CIAT para la evaluación de las poblaciones de atún aleta amarilla, barrilete, y patudo en el OPO. Las líneas delgadas indican los límites de las 13 zonas de muestreo de frecuencia de tallas, y las líneas gruesas los límites de las pesquerías.

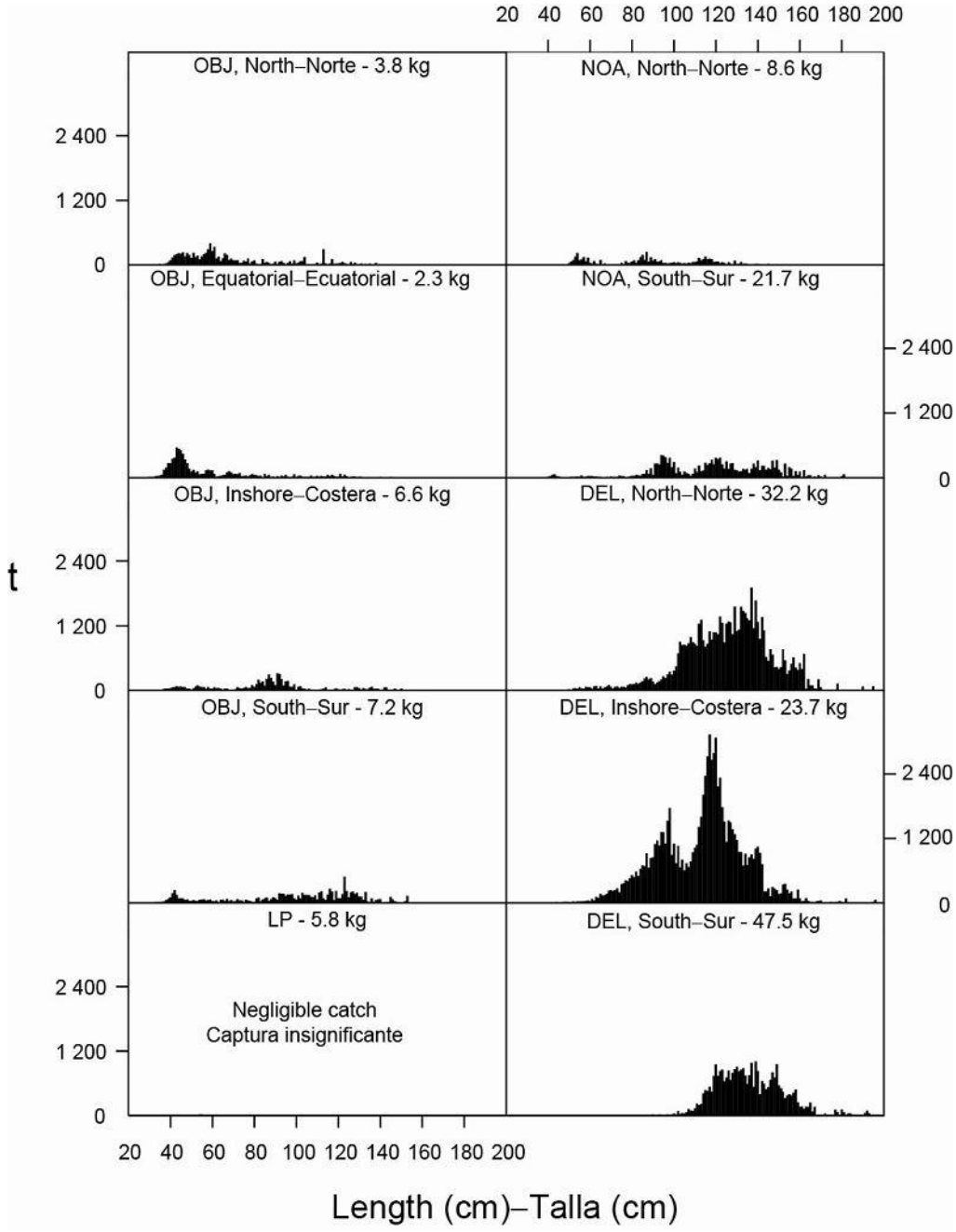

FIGURE A-6a. Estimated size compositions of the yellowfin caught in the EPO during 2009 for each fishery designated in Figure A-5. The average weights of the fish in the samples are given at the tops of the panels.

FIGURA A-6a. Composición por tallas estimada del aleta amarilla capturado en el OPO durante 2009 en cada pesquería ilustrada en la Figura A-5. En cada recuadro se detalla el peso promedio de los peces en las muestras.

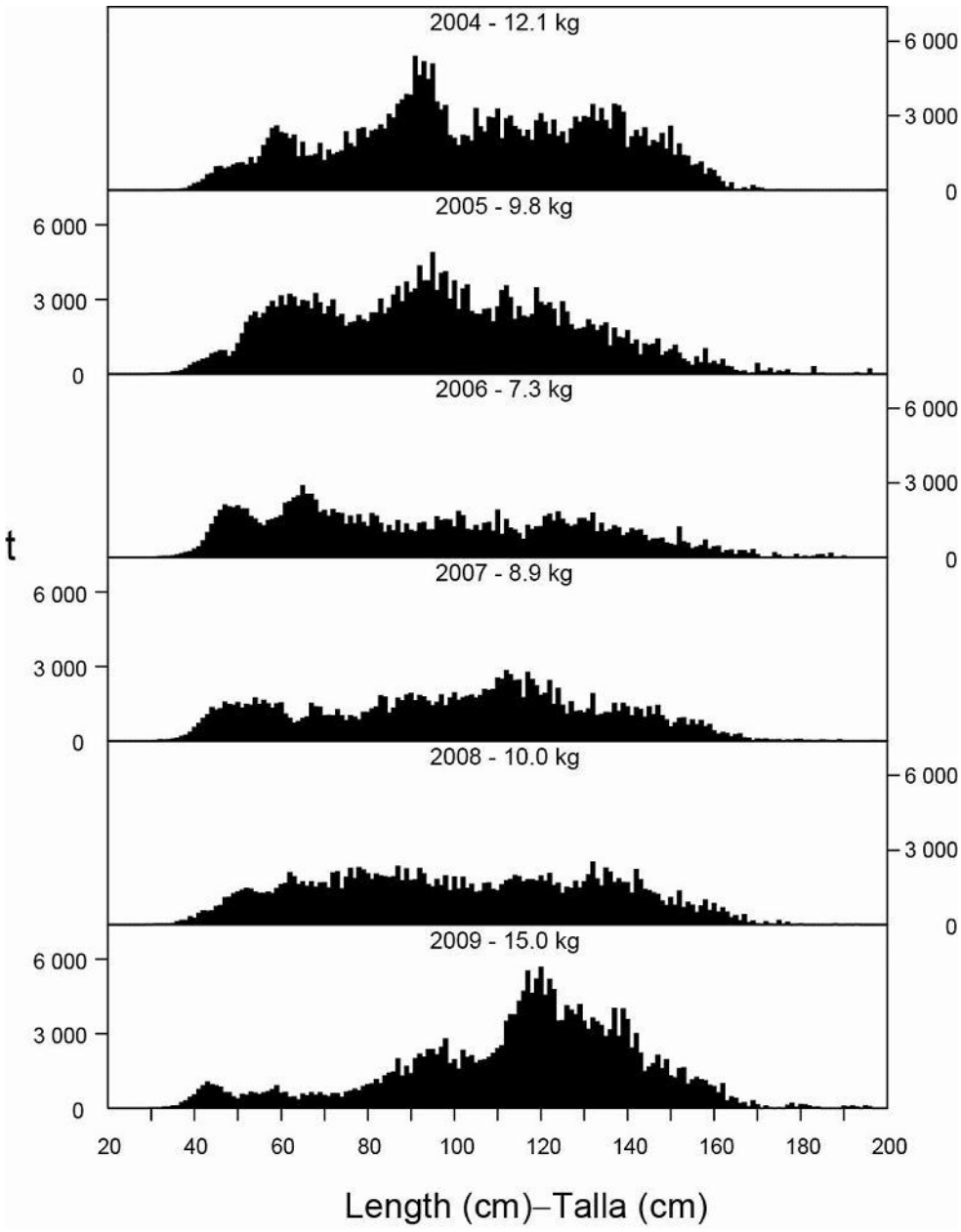

FIGURE A-6b. Estimated size compositions of the yellowfin caught by purse-seine and pole-and-line vessels in the EPO during 2004-2009. The average weights of the fish in the samples are given at the tops of the panels.

FIGURA A-6b. Composición por tallas estimada del aleta amarilla capturado por buques cerqueros y cañeros en el OPO durante 2004-2009. En cada recuadro se detalla el peso promedio de los peces en las muestras.

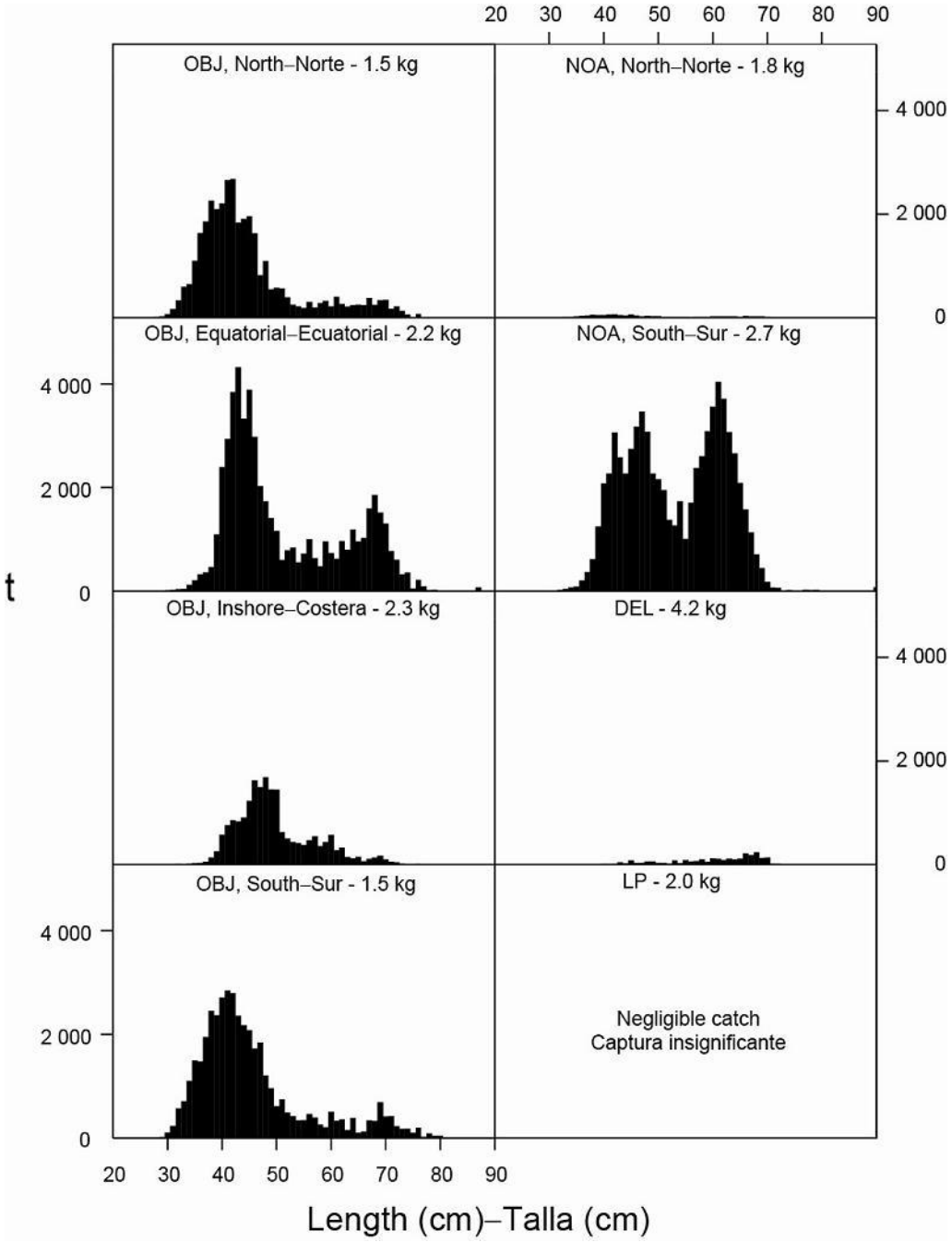

FIGURE A-7a. Estimated size compositions of the skipjack caught in the EPO during 2009 for each fishery designated in Figure A-5. The average weights of the fish in the samples are given at the tops of the panels.

FIGURA A-7a. Composición por tallas estimada del barrilete capturado en el OPO durante 2009 en cada pesquería ilustrada en la Figura A-5. En cada recuadro se detalla el peso promedio de los peces en las muestras.

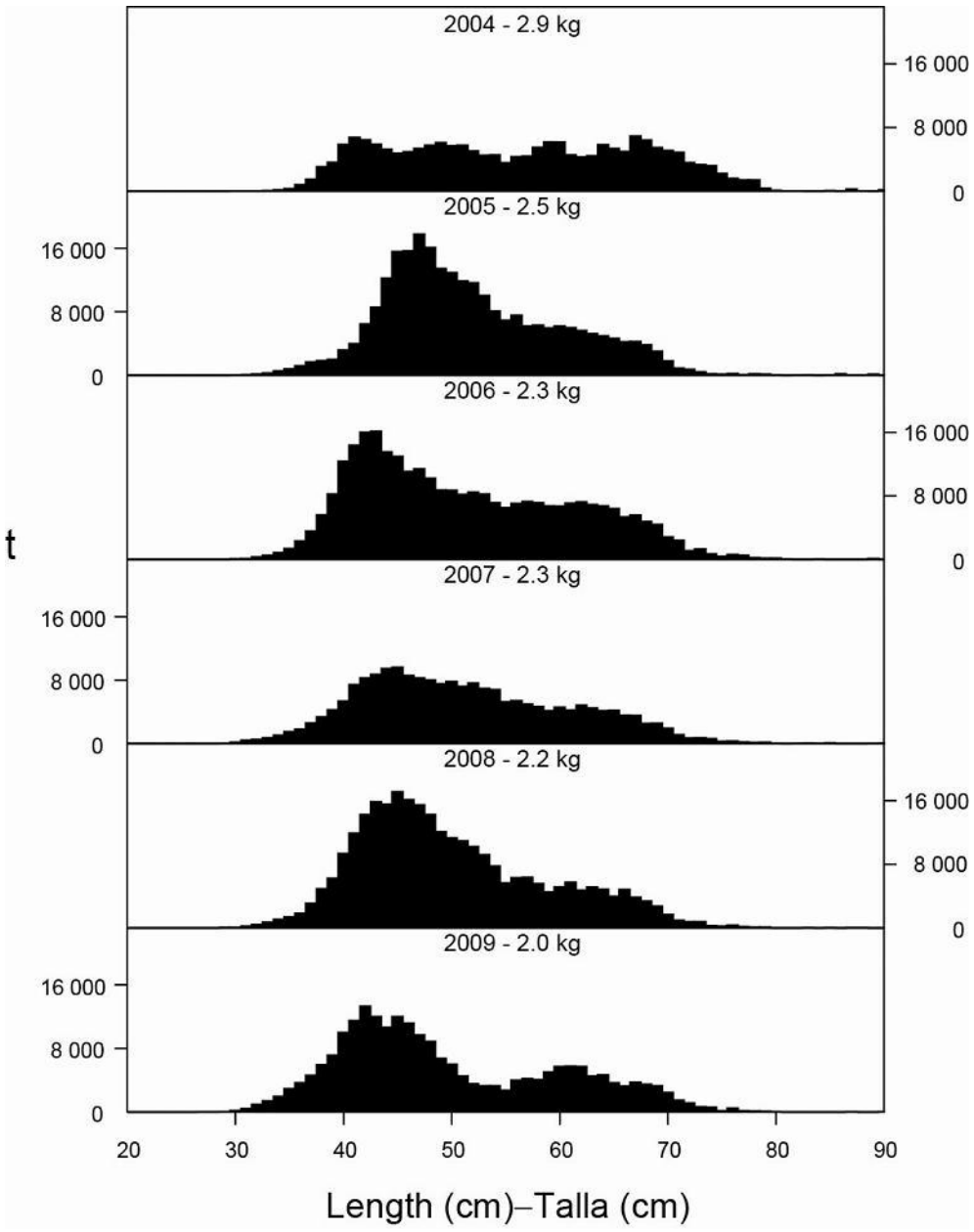

FIGURE A-7b. Estimated size compositions of the skipjack caught by purse-seine and pole-and-line vessels in the EPO during 2004-2009. The average weights of the fish in the samples are given at the tops of the panels.

FIGURA A-7b. Composición por tallas estimada del barrilete capturado por buques cerqueros y cañeros en el OPO durante 2004-2009. En cada recuadro se detalla el peso promedio de los peces en las muestras.

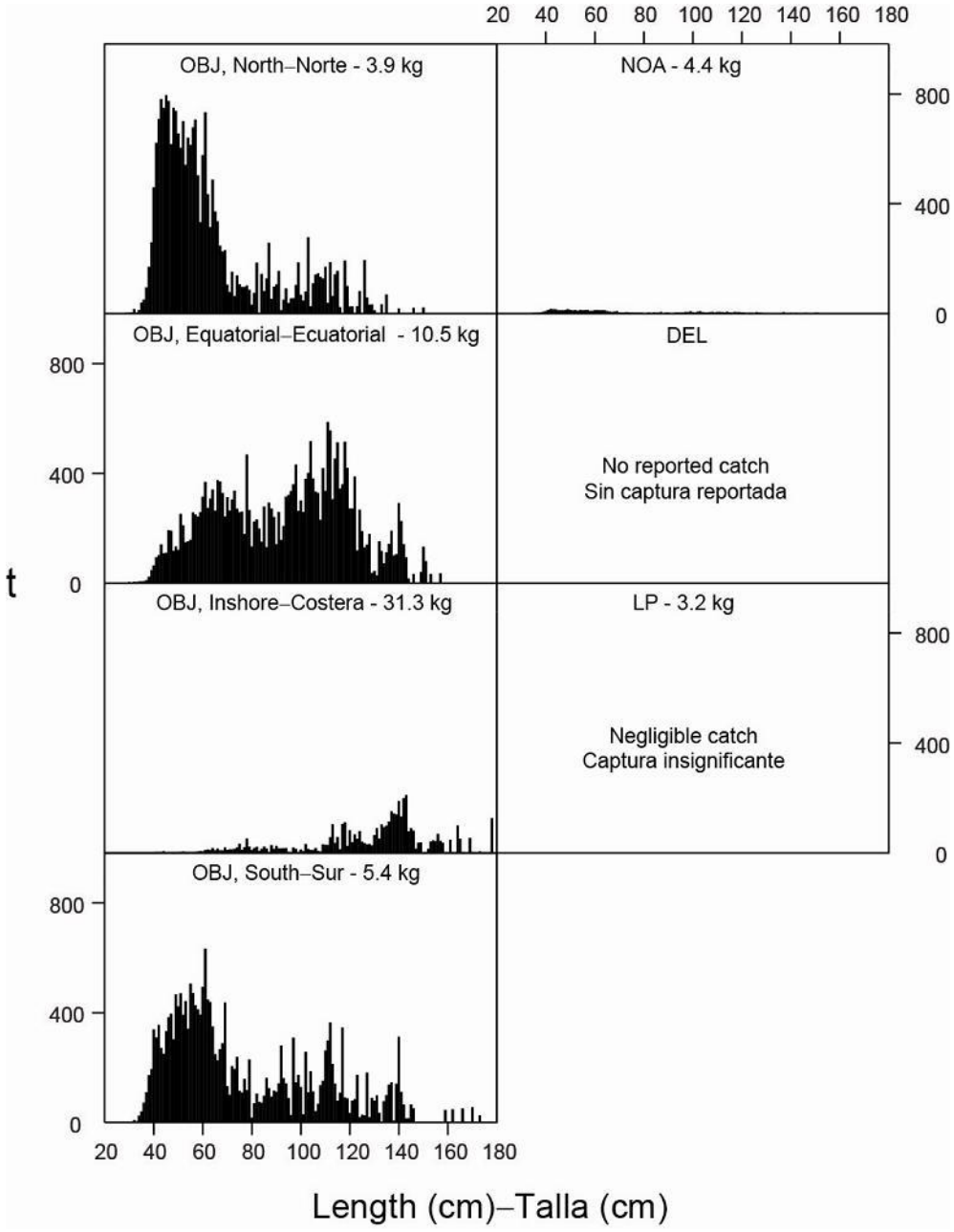

FIGURE A-8a. Estimated size compositions of the bigeye caught in the EPO during 2009 for each fishery designated in Figure A-5. The average weights of the fish in the samples are given at the tops of the panels.

FIGURA A-8a. Composición por tallas estimada del patudo capturado e en el OPO durante 2009 en cada pesquería ilustrada en la Figura A-5. En cada recuadro se detalla el peso promedio de los peces en las muestras.

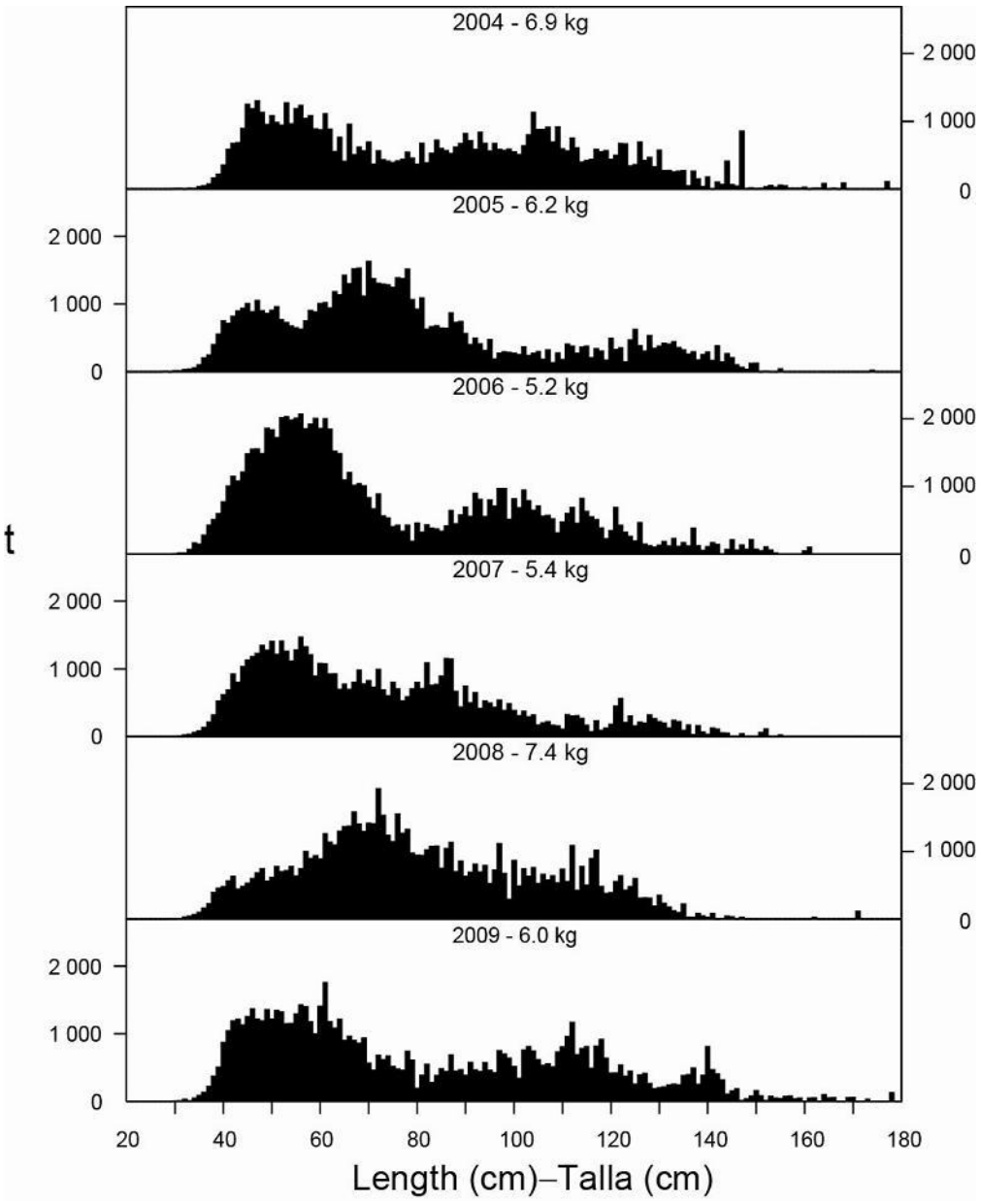

FIGURE A-8b. Estimated size compositions of the bigeye caught by purse-seine vessels in the EPO during 2004-2009. The average weights of the fish in the samples are given at the tops of the panels.
FIGURA A-8b. Composición por tallas estimada del patudo capturado por buques cerqueros en el OPO durante 2004-2009. En cada recuadro se detalla el peso promedio de los peces en las muestras.

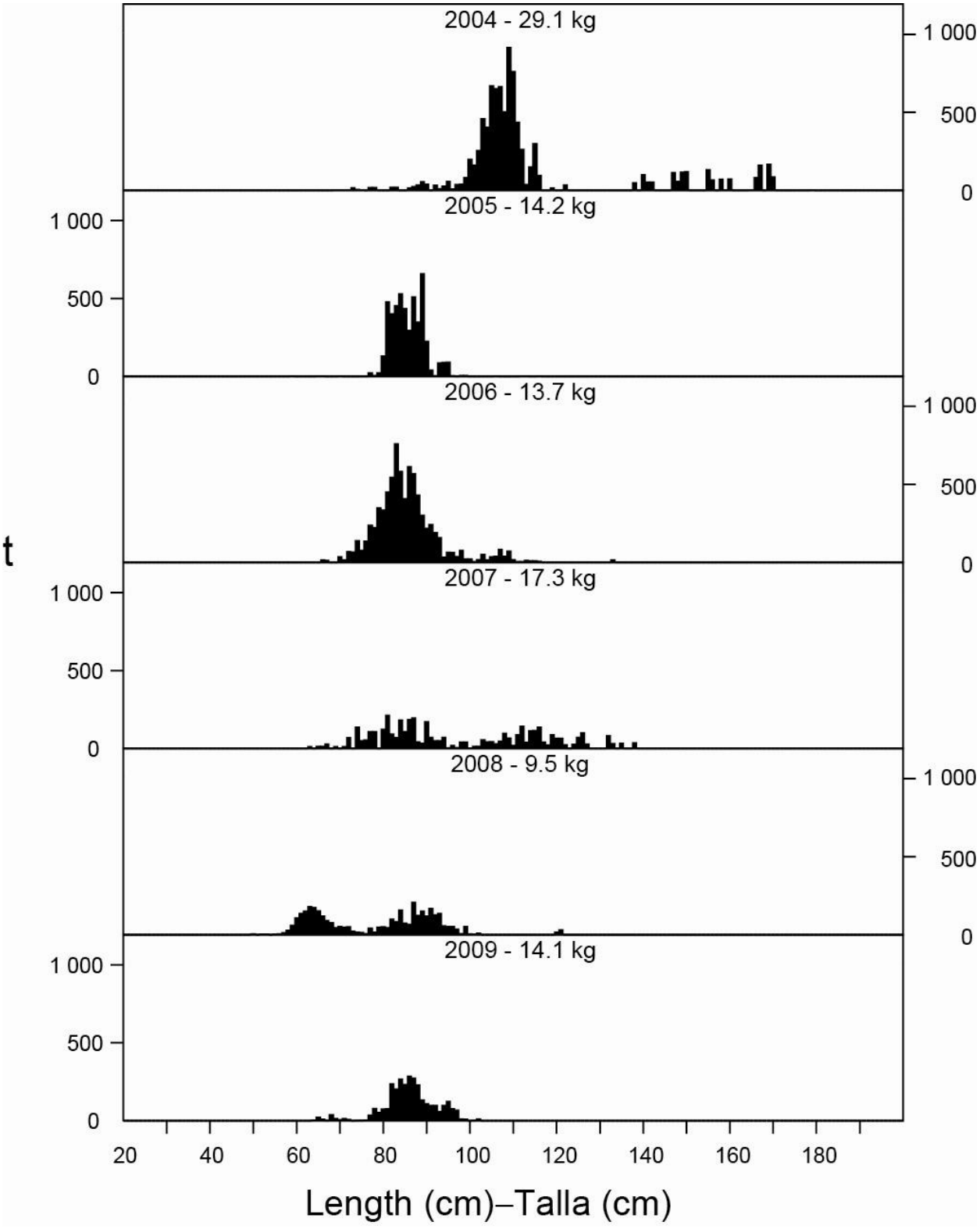

FIGURE A-9. Estimated catches of Pacific bluefin by purse-seine and recreational gear in the EPO during 2004-2009. The values at the tops of the panels are the average weights.
FIGURA A-9. Captura estimada de aleta azul del Pacífico con arte de cerco y deportiva en el OPO durante 2004-2009. El valor en cada recuadro representa el peso promedio.

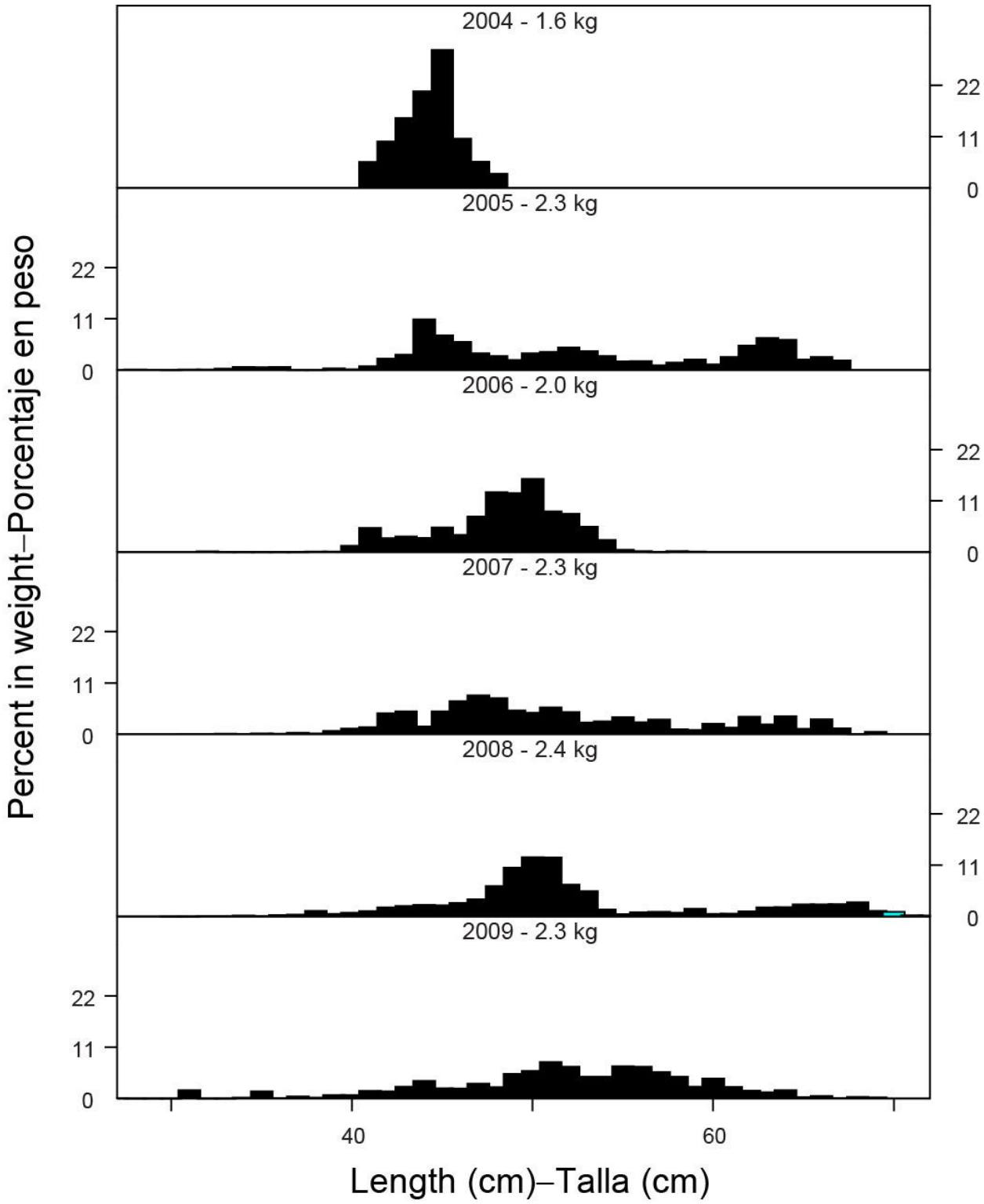

FIGURE A-10. Estimated size compositions of the catches of black skipjack by purse-seine vessels in the EPO during 2004-2009. The values at the tops of the panels are the average weights.
FIGURA A-10. Composición por tallas estimada del barrilete negro capturado por buques cerqueros en el OPO durante 2004-2009. El valor en cada recuadro representa el peso promedio.

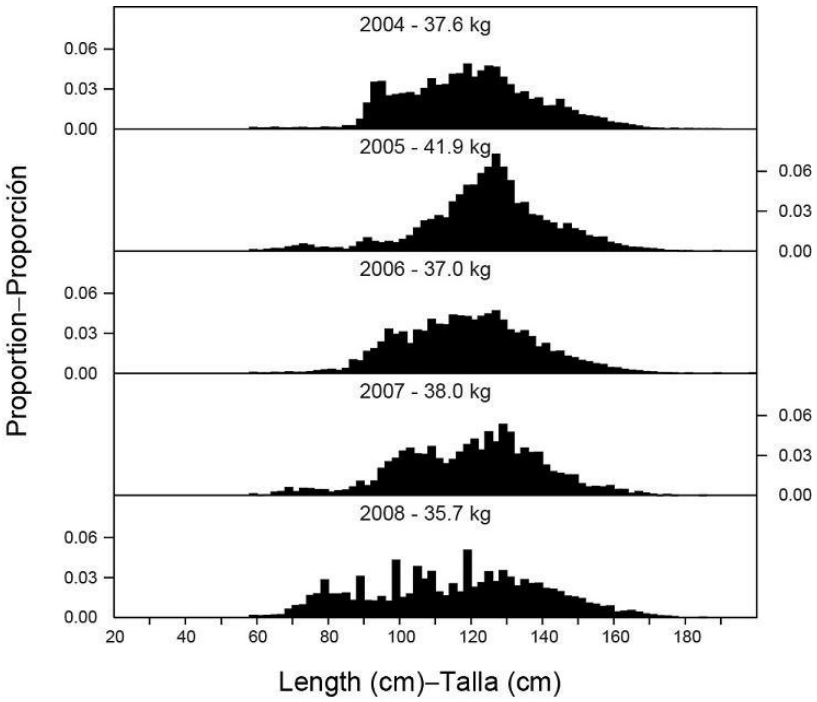

FIGURE A-11. Estimated size compositions of the catches of yellowfin tuna by the Japanese longline fishery in the EPO, 2004-2008.
FIGURA A-11. Composición por tallas estimada de las capturas de atún aleta amarilla por la pesquería palangrera japonesa en el OPO, 2004-2008.

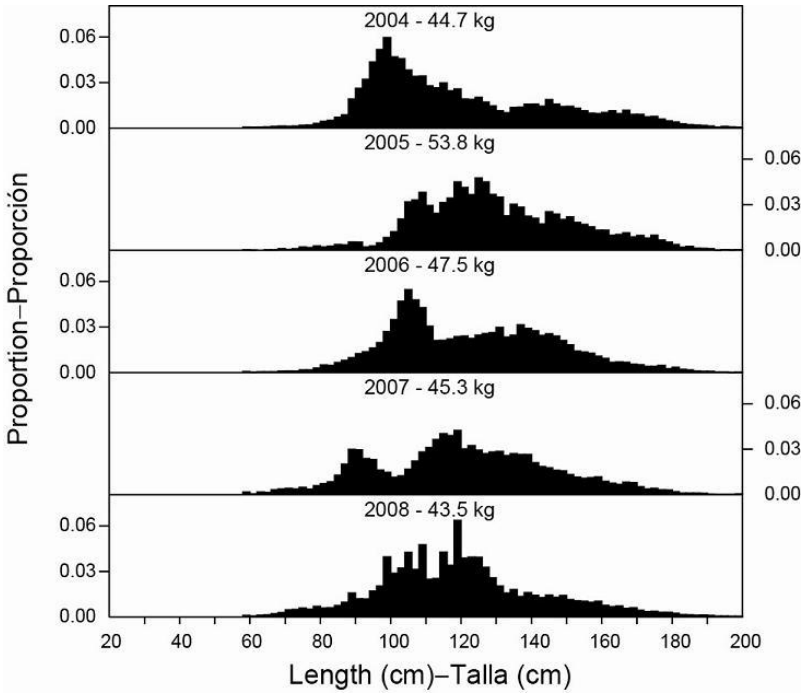

FIGURE A-12. Estimated size compositions of the catches of bigeye tuna by the Japanese longline fishery in the EPO, 2004-2008.
FIGURA A-12. Composición por tallas estimada de las capturas de atún patudo por la pesquería palangrera japonesa en el OPO, 2004-2008.

TABLE A-1. Annual catches of yellowfin, skipjack, and bigeye, by all types of gear combined, in the Pacific Ocean, 1980-2009. The EPO totals for 1993-2009 include discards from purse-seine vessels with carrying capacities greater than 363 t.

TABLA A-1. Capturas anuales de aleta amarilla, barrilete, y patudo, por todas las artes combinadas, en el Océano Pacífico, 1980-2009. Los totales del OPO de 1993-2009 incluyen los descartes de buques cerqueros de más de 363 t de capacidad de acarreo.

	YFT			SKJ			BET			Total		
	EPO	**WCPO**	**Total**	**EPO**	**WCPO**	**Total**	**EPO**	**WCPO**	**Total**	**EPO**	**WCPO**	**Total**
1980	158,862	213,148	372,010	138,102	459,606	597,708	86,403	65,133	151,536	383,367	737,887	1,121,254
1981	178,510	225,939	404,449	126,001	438,259	564,260	68,344	53,346	121,690	372,855	717,544	1,090,399
1982	127,534	221,064	348,598	104,669	490,242	594,911	60,349	59,301	119,650	292,552	770,607	1,063,159
1983	99,680	257,160	356,840	61,975	683,684	745,659	64,694	59,896	124,590	226,349	1,000,740	1,227,089
1984	149,465	256,314	405,779	63,611	762,090	825,701	55,268	64,680	119,948	268,344	1,083,084	1,351,428
1985	225,939	259,544	485,483	52,002	603,624	655,626	72,398	68,706	141,104	350,339	931,874	1,282,213
1986	286,071	250,723	536,794	67,745	755,402	823,147	105,185	63,777	168,962	459,001	1,069,902	1,528,903
1987	286,164	303,613	589,777	66,466	687,880	754,346	101,347	79,269	180,616	453,977	1,070,762	1,524,739
1988	296,428	263,108	559,536	92,127	849,154	941,281	74,313	68,447	142,760	462,868	1,180,709	1,643,577
1989	299,436	313,866	613,302	98,921	823,468	922,389	72,994	77,237	150,231	471,351	1,214,571	1,685,922
1990	301,522	340,987	642,509	77,107	901,482	978,589	104,851	89,060	193,911	483,480	1,331,529	1,815,009
1991	265,970	372,123	638,093	65,890	1,140,243	1,206,133	109,121	71,297	180,418	440,981	1,583,663	2,024,644
1992	252,514	376,684	629,198	87,294	1,040,180	1,127,474	92,000	88,384	180,384	431,808	1,505,248	1,937,056
1993	256,244	367,076	623,320	100,517	937,322	1,037,839	82,843	77,506	160,349	439,604	1,381,904	1,821,508
1994	248,073	371,038	619,111	84,671	1,043,691	1,128,362	109,331	86,943	196,274	442,075	1,501,672	1,943,747
1995	244,639	355,378	600,017	150,661	1,077,501	1,228,162	108,210	79,941	188,151	503,510	1,512,820	2,016,330
1996	266,928	287,055	553,983	132,344	1,053,416	1,185,760	114,706	80,314	195,020	513,978	1,420,785	1,934,763
1997	277,575	411,454	689,029	188,285	990,520	1,178,805	122,274	110,402	232,676	588,134	1,512,376	2,100,510
1998	280,607	425,077	705,684	165,490	1,342,615	1,508,105	93,954	109,980	203,934	540,051	1,877,672	2,417,723
1999	304,638	366,154	670,792	291,249	1,209,508	1,500,757	93,078	112,076	205,154	688,965	1,687,738	2,376,703
2000	288,833	405,046	693,879	229,181	1,244,528	1,473,709	147,915	113,528	261,443	665,929	1,763,102	2,429,031
2001	423,774	405,303	829,077	158,072	1,140,384	1,298,456	131,184	104,828	236,012	713,030	1,650,515	2,363,545
2002	443,679	383,105	826,784	166,805	1,316,791	1,483,596	132,825	120,432	253,257	743,309	1,820,328	2,563,637
2003	413,846	416,604	830,450	301,031	1,305,537	1,606,568	116,297	110,752	227,049	831,174	1,832,893	2,664,067
2004	293,896	383,775	677,671	218,192	1,402,253	1,620,445	113,018	124,763	237,781	625,106	1,910,791	2,535,897
2005	286,096	463,936	750,032	282,319	1,490,739	1,773,058	113,235	115,863	229,098	681,650	2,070,538	2,752,188
2006	179,256	419,276	598,532	311,456	1,559,417	1,870,873	120,111	125,140	245,251	610,823	2,103,833	2,714,656
2007	181,996	446,993	628,989	216,619	1,671,746	1,888,365	94,085	118,550	212,635	492,700	2,237,289	2,729,989
2008	194,551	546,369	740,920	307,531	1,620,261	1,927,792	102,979	117,765	220,744	605,061	2,284,395	2,889,456
2009	243,300	429,844	673,144	236,802	1,784,956	2,021,758	105,540	111,468	217,008	585,642	2,326,268	2,911,910

TABLE A-2a. Estimated retained catches (Ret.), by gear type, and estimated discards (Dis.), by purse-seine vessels with carrying capacities greater than 363 t only, of tunas and bonitos, in metric tons, in the EPO, 1980-2009 The purse-seine and pole-and-line data for yellowfin, skipjack, and bigeye tunas have been adjusted to the species composition estimate and are preliminary. The data for 2008-2009 are preliminary.
TABLA A-2a. Estimaciones de las capturas retenidas (Ret.), por arte de pesca, y de los descartes (Dis.), por buques cerqueros de más de 363 t de capacidad de acarreo únicamente, de atunes y bonitos, en toneladas métricas, en el OPO, 1980-2009. Los datos de los atunes aleta amarilla, barrilete, y patudo de las pesquerías cerquera y cañera fueron ajustados a la estimación de composición por especie, y son preliminares. Los datos de 2008-2009 son preliminares.

	Yellowfin—Aleta amarilla						Skipjack—Barrilete						Bigeye—Patudo					
	PS		LP	LL	OTR + NK	Total	PS		LP	LL	OTR + NK	Total	PS		LP	LL	OTR + NK	Total
	Ret.	Dis.					Ret.	Dis.					Ret.	Dis.				
1980	143,042	-	1,481	13,477	862	158,862	130,912	-	5,225	26	1,939	138,102	21,938	-	-	64,335	130	86,403
1981	168,234	-	1,477	7,999	800	178,510	119,165	-	5,906	20	910	126,001	14,921	-	-	53,416	7	68,344
1982	114,755	-	1,538	10,961	280	127,534	100,499	-	3,760	28	382	104,669	6,939	-	42	53,365	3	60,349
1983	83,929	-	4,007	10,895	849	99,680	56,851	-	4,387	28	709	61,975	4,575	-	39	60,043	37	64,694
1984	135,785	-	2,991	10,345	344	149,465	59,859	-	2,884	32	836	63,611	8,861	-	2	46,394	11	55,268
1985	211,459	-	1,070	13,198	212	225,939	50,829	-	946	44	183	52,002	6,056	-	2	66,325	15	72,398
1986	260,512	-	2,537	22,808	214	286,071	65,634	-	1,921	58	132	67,745	2,686	-	-	102,425	74	105,185
1987	262,008	-	5,107	18,911	138	286,164	64,019	-	2,233	37	177	66,466	1,177	-	-	100,121	49	101,347
1988	277,293	-	3,723	14,660	752	296,428	87,113	-	4,325	26	663	92,127	1,535	-	5	72,758	15	74,313
1989	277,996	-	4,145	17,032	263	299,436	94,934	-	2,940	28	1,019	98,921	2,030	-	-	70,963	1	72,994
1990	263,253	-	2,676	34,633	960	301,522	74,369	-	823	41	1,874	77,107	5,921	-	-	98,871	59	104,851
1991	231,257	-	2,856	30,899	958	265,970	62,228	-	1,717	36	1,909	65,890	4,870	-	31	104,195	25	109,121
1992	228,121	-	3,789	18,646	1,958	252,514	84,283	-	1,957	24	1,030	87,294	7,179	-	-	84,808	13	92,000
1993	219,492	4,758	4,951	24,009	3,034	256,244	83,830	10,598	3,772	61	2,256	100,517	9,657	653	-	72,498	35	82,843
1994	208,408	4,527	3,625	30,026	1,487	248,073	70,126	10,501	3,240	73	731	84,671	34,899	2,266	-	71,360	806	109,331
1995	215,434	5,275	1,268	20,596	2,066	244,639	127,047	16,373	5,253	77	1,911	150,661	45,321	3,251	-	58,269	1,369	108,210
1996	238,607	6,312	3,762	16,608	1,639	266,928	103,973	24,503	2,555	52	1,261	132,344	61,311	5,689	-	46,958	748	114,706
1997	244,878	5,516	4,418	22,163	600	277,575	153,456	31,338	3,260	135	96	188,285	64,272	5,402	-	52,580	20	122,274
1998	253,959	4,698	5,085	15,336	1,529	280,607	140,631	22,644	1,684	294	237	165,490	44,129	2,822	-	46,375	628	93,954
1999	281,920	6,547	1,783	11,682	2,706	304,638	261,565	26,046	2,044	201	1,393	291,249	51,158	4,932	-	36,450	538	93,078
2000	255,231	6,207	2,431	23,855	1,109	288,833	204,307	24,508	231	68	67	229,181	94,640	5,417	-	47,605	253	147,915
2001	382,702	7,028	3,916	29,608	520	423,774	143,561	12,815	448	1,214	34	158,072	61,156	1,254	-	68,755	19	131,184
2002	412,507	4,140	950	25,531	551	443,679	153,303	12,506	616	261	119	166,805	57,440	949	-	74,424	12	132,825
2003	381,107	5,950	470	25,174	1,145	413,846	274,529	22,453	638	634	2,777	301,031	54,174	2,326	-	59,776	21	116,297
2004	269,597	3,009	1,884	18,779	627	293,896	198,664	17,182	528	713	1,105	218,192	67,592	1,749	-	43,483	194	113,018
2005	267,599	2,929	1,821	11,895	1,852	286,096	261,780	17,228	1,300	231	1,780	282,319	69,826	1,952	-	41,432	25	113,235
2006	166,330	1,665	686	9,117	1,458	179,256	297,408	12,403	435	224	986	311,456	83,978	2,385	-	33,708	40	120,111
2007	170,264	1,946	894	7,625	1,267	181,996	208,290	7,159	276	107	787	216,619	63,074	1,039	-	29,928	44	94,085
2008	185,087	1,019	812	6,722	911	194,551	296,648	9,166	499	55	1,163	307,531	75,040	2,287	-	25,624	28	102,979
2009	235,890	1,478	709	4,863	360	243,300	229,668	6,826	151	133	24	236,802	76,513	1,092	-	27,935	*	105,540

TABLE A-2a. (continued)
TABLA A-2a. (continuación)

	Pacific bluefin—Aleta azul del Pacífico						Albacore—Albacora						Black skipjack—Barrilete negro					
	PS		LP	LL	OTR + NK	Total	PS		LP	LL	OTR + NK	Total	PS		LP	LL	OTR + NK	Total
	Ret.	Dis.					Ret.	Dis.					Ret.	Dis.				
1980	2,909	-	-	-	32	2,941	194	-	407	5,319	5,649	11,569	3,653	-	27	-	-	3,680
1981	1,085	-	-	4	7	1,096	99	-	608	7,275	12,301	20,283	1,908	-	3	-	-	1,911
1982	3,145	-	-	7	6	3,158	355	-	198	8,407	3,562	12,522	1,338	-	-	-	-	1,338
1983	836	-	-	2	38	876	7	-	449	7,433	7,840	15,729	1,222	-	-	-	13	1,235
1984	839	-	-	3	51	893	3,910	-	1,441	6,712	9,794	21,857	662	-	-	-	3	665
1985	3,996	-	-	1	77	4,074	42	-	877	7,268	6,654	14,841	288	-	-	-	7	295
1986	5,040	-	-	1	64	5,105	47	-	86	6,450	4,701	11,284	569	-	-	-	18	587
1987	980	-	-	3	88	1,071	1	-	320	9,994	2,662	12,977	571	-	-	-	2	573
1988	1,379	-	-	2	52	1,433	17	-	271	9,934	5,549	15,771	956	-	-	-	311	1,267
1989	1,103	-	5	4	91	1,203	1	-	21	6,784	2,695	9,501	801	-	-	-	-	801
1990	1,430	-	61	12	103	1,606	39	-	170	6,536	4,105	10,850	787	-	-	-	4	791
1991	419	-	-	5	55	479	0	-	834	7,893	2,754	11,481	421	-	-	-	25	446
1992	1,928	-	-	21	147	2,096	0	-	255	17,080	5,740	23,075	105	-	-	3	-	108
1993	580	-	-	11	325	916	0	-	1	11,194	4,410	15,605	104	4,144	-	31	-	4,279
1994	969	-	-	12	111	1,092	0	-	85	10,390	10,154	20,629	188	854	-	40	-	1,082
1995	629	-	-	25	300	954	0	-	465	6,185	7,427	14,077	203	1,448	-	-	-	1,651
1996	8,223	-	-	19	84	8,326	11	-	72	7,631	8,398	16,112	704	2,304	-	12	-	3,020
1997	2,607	3	2	14	245	2,871	1	-	59	9,678	7,540	17,278	100	2,512	-	11	-	2,623
1998	1,772	-	-	94	525	2,391	42	-	81	12,635	13,158	25,916	489	1,876	39	-	-	2,404
1999	2,553	54	5	152	564	3,328	47	-	227	11,633	14,510	26,417	171	3,412	-	-	-	3,583
2000	3,712	0	61	46	378	4,197	71	-	86	9,663	13,453	23,273	293	1,995	-	-	-	2,288
2001	1,155	3	1	148	401	1,708	3	-	157	19,410	13,727	33,297	2,258	1,019	-	-	-	3,277
2002	1,758	6	3	71	653	2,491	31	-	381	15,289	14,433	30,134	1,459	2,283	8	-	-	3,750
2003	3,233	-	3	87	404	3,727	34	-	59	24,901	20,397	45,391	433	1,535	6	13	117	2,104
2004	8,880	19	-	16	62	8,977	105	-	126	18,444	22,011	40,686	884	387	-	27	862	2,160
2005	4,743	15	-	-	85	4,843	2	-	66	8,861	15,649	24,578	1,472	2,124	-	-	22	3,618
2006	9,806	-	-	-	101	9,907	109	-	1	10,612	18,966	29,688	1,999	1,977	-	-	-	3,976
2007	4,270	-	-	-	16	4,286	187	-	21	8,934	19,296	28,438	2,307	1,625	-	-	48	3,980
2008	4,392	14	15	-	103	4,524	10	-	6	5,998	16,274	22,288	3,624	2,424	-	-	8	6,056
2009	3,378	24	20	*	183	3,605	51	2	8	4,008	5,685	9,754	3,992	1,241	-	-	*	5,233

TABLE A-2a. (continued)
TABLA A-2a. (continuación)

	Bonitos						Unidentified tunas—Atunes no identificados						Total					
	PS		LP	LL	OTR + NK	Total	PS		LP	LL	OTR + NK	Total	PS		LP	LL	OTR + NK	Total
	Ret.	Dis.					Ret.	Dis.					Ret.	Dis.				
1980	6,089	-	36	-	2,727	8,852	442	-	-	-	836	1,278	309,179	-	7,176	83,157	12,175	411,687
1981	5,690	-	27	-	4,609	10,326	213	-	3	-	1,109	1,325	311,315	-	8,024	68,714	19,743	407,796
1982	2,122	-	0	-	6,776	8,898	47	-	-	-	382	429	229,200	-	5,538	72,768	11,391	318,897
1983	3,827	-	2	-	7,291	11,120	60	-	-	-	4,711	4,771	151,307	-	8,884	78,401	21,488	260,080
1984	3,514	-	0	-	7,291	10,805	6	-	-	-	2,524	2,530	213,436	-	7,318	63,486	20,854	305,094
1985	3,599	-	5	-	7,869	11,473	19	-	-	-	678	697	276,288	-	2,900	86,836	15,695	381,719
1986	232	-	258	-	1,889	2,379	177	-	4	-	986	1,167	334,897	-	4,806	131,742	8,078	479,523
1987	3,195	-	121	-	1,782	5,098	481	-	-	-	2,043	2,524	332,432	-	7,781	129,066	6,941	476,220
1988	8,811	-	739	-	947	10,497	79	-	-	-	2,939	3,018	377,183	-	9,063	97,380	11,228	494,854
1989	11,278	-	818	-	465	12,561	36	-	-	-	626	662	388,179	-	7,929	94,811	5,160	496,079
1990	13,641	-	215	-	371	14,227	200	-	-	3	692	895	359,640	-	3,945	140,096	8,168	511,849
1991	1,207	-	82	-	242	1,531	4	-	-	29	192	225	300,406	-	5,520	143,057	6,160	455,143
1992	977	-	-	-	318	1,295	24	-	-	27	1,071	1,122	322,617	-	6,001	120,609	10,277	459,504
1993	599	12	1	-	436	1,048	9	2,013	-	10	4,082	6,114	314,271	22,178	8,725	107,814	14,578	467,566
1994	8,331	147	362	-	185	9,025	9	497	-	1	464	971	322,930	18,792	7,312	111,902	13,938	474,874
1995	7,929	55	81	-	54	8,119	11	626	-	-	1,004	1,641	396,574	27,028	7,067	85,152	14,131	529,952
1996	647	1	7	-	16	671	37	1,028	-	-	1,038	2,103	413,513	39,837	6,396	71,280	13,184	544,210
1997	1,097	4	8	-	34	1,143	71	3,383	-	7	1,437	4,898	466,482	48,158	7,747	84,588	9,972	616,947
1998	1,330	4	7	-	588	1,929	13	1,233	-	24	18,158	19,428	442,365	33,277	6,896	74,758	34,823	592,119
1999	1,719	0	-	24	369	2,112	27	3,092	-	2,113	4,279	9,511	599,160	44,083	4,059	62,255	24,359	733,916
2000	636	-	-	75	56	767	190	1,410	-	1,992	1,468	5,060	559,080	39,537	2,809	83,304	16,784	701,514
2001	17	-	0	34	19	70	191	679	-	2,448	55	3,373	591,043	22,798	4,522	121,617	14,775	754,755
2002	-	-	-	-	1	1	576	1,863	-	482	1,422	4,343	627,074	21,747	1,958	116,058	17,191	784,028
2003	-	-	1	-	25	26	80	1,238	-	215	750	2,283	713,590	33,502	1,177	110,800	25,636	884,705
2004	15	35	1	8	3	62	256	973	-	349	258	1,836	545,993	23,354	2,539	81,819	25,122	678,827
2005	313	18	0	-	11	342	190	1,922	-	363	427	2,902	605,925	26,188	3,187	62,782	19,851	717,933
2006	3,507	80	12	-	3	3,602	49	1,910	-	21	193	2,173	563,186	20,420	1,134	53,682	21,747	660,169
2007	15,906	628	107	-	-	16,641	600	1,221	-	2,196	189	4,206	464,898	13,618	1,298	48,790	21,647	550,251
2008	7,386	38	9	-	10	7,443	136	1,850	-	727	876	3,589	572,323	16,798	1,341	39,126	19,373	648,961
2009	9,561	15	246	0	220	10,042	158	482	-	1,933	*	2,573	559,211	11,160	1,134	38,872	6,472	616,849

TABLE A-2b. Estimated retained catches, by gear type, and estimated discards, by purse-seine vessels with carrying capacities greater than 363 t only, of billfishes, in metric tons, in the EPO, 1980-2009. Data for 2008-2009 are preliminary. PS dis. = discards by purse-seine vessels.
TABLA A-2b. Estimaciones de las capturas retenidas, por arte de pesca, y de los descartes, por buques cerqueros de más de 363 t de capacidad de acarreo únicamente, de peces picudos, en toneladas métricas, en el OPO, 1980-2009. Los datos de 2008-2009 son preliminares. PS dis. = descartes por buques cerqueros.

	Swordfish—Pez espada					**Blue marlin—Marlín azul**					**Black marlin—Marlín negro**					**Striped marlin—Marlín rayado**				
	PS		**LL**	**OTR**	**Total**	**PS**		**LL**	**OTR**	**Total**	**PS**		**LL**	**OTR**	**Total**	**PS**		**LL**	**OTR**	**Total**
	Ret.	**Dis.**				**Ret.**	**Dis.**				**Ret.**	**Dis.**				**Ret.**	**Dis.**			
1980	-	-	3,746	1,107	4,853	-	-	4,016	-	4,016	-	-	335	-	335	-	-	4,827	-	4,827
1981	-	-	3,070	1,134	4,204	-	-	4,476	-	4,476	-	-	247	-	247	-	-	4,876	-	4,876
1982	-	-	2,604	1,551	4,155	-	-	4,745	-	4,745	-	-	213	-	213	-	-	4,711	-	4,711
1983	-	-	3,341	2,338	5,679	-	-	4,459	-	4,459	-	-	240	-	240	-	-	4,472	-	4,472
1984	-	-	2,752	3,336	6,088	-	-	5,197	-	5,197	-	-	248	-	248	-	-	2,662	-	2,662
1985	-	-	1,885	3,768	5,653	-	-	3,588	-	3,588	-	-	180	-	180	-	-	1,599	-	1,599
1986	-	-	3,286	3,294	6,580	-	-	5,278	-	5,278	-	-	297	-	297	-	-	3,540	-	3,540
1987	-	-	4,676	3,740	8,416	-	-	7,282	-	7,282	-	-	358	-	358	-	-	7,647	-	7,647
1988	-	-	4,916	5,642	10,558	-	-	5,662	-	5,662	-	-	288	-	288	-	-	5,283	-	5,283
1989	-	-	5,202	6,072	11,274	-	-	5,392	-	5,392	-	-	193	-	193	-	-	3,473	-	3,473
1990	-	-	5,807	5,066	10,873	-	-	5,540	-	5,540	-	-	223	-	223	-	-	3,260	-	3,260
1991	-	17	10,671	4,307	14,995	-	69	6,719	-	6,788	-	58	246	-	304	-	76	2,993	-	3,069
1992	-	4	9,820	4,267	14,091	-	52	6,627	-	6,679	-	95	228	-	323	-	69	3,054	-	3,123
1993	3	1	6,187	4,414	10,605	84	20	6,571	-	6,675	57	31	217	-	305	47	20	3,575	-	3,643
1994	1	0	4,990	3,822	8,814	69	15	9,027	-	9,111	38	23	256	-	317	20	9	3,396	-	3,424
1995	3	1	4,495	2,974	7,473	70	16	7,288	-	7,375	43	23	158	-	225	18	8	3,249	-	3,275
1996	1	0	7,071	2,486	9,558	62	15	3,596	-	3,672	46	24	99	-	169	20	9	3,218	-	3,247
1997	2	1	10,580	1,781	12,365	126	15	5,808	-	5,949	71	22	153	-	246	28	3	4,473	-	4,503
1998	3	0	9,800	3,246	13,049	130	20	5,057	-	5,208	72	28	168	-	268	20	3	3,558	-	3,581
1999	2	0	7,569	1,965	9,536	181	38	3,690	-	3,909	83	42	94	-	219	26	11	2,621	-	2,658
2000	3	0	8,930	2,383	11,316	120	23	3,634	-	3,777	67	21	105	-	192	17	3	1,889	-	1,908
2001	3	1	16,007	1,964	17,975	119	40	4,197	-	4,356	67	48	123	-	238	13	8	1,961	-	1,982
2002	1	0	17,598	2,119	19,718	188	33	3,481	-	3,703	86	30	78	-	194	69	5	2,159	1	2,234
2003	3	1	18,161	354	18,519	185	21	4,016	-	4,222	121	26	72	-	218	31	4	1,906	6	1,948
2004	2	0	15,372	309	15,683	134	21	3,782	-	3,937	67	5	41	-	113	23	1	1,548	-	1,572
2005	2	0	8,910	4,304	13,217	207	14	3,328	-	3,549	96	9	37	-	142	37	4	1,521	-	1,563
2006	7	0	9,050	3,800	12,857	163	21	2,357	105	2,647	125	21	32	-	177	54	3	1,570	-	1,627
2007	4	0	4,218	4,377	8,599	124	13	2,349	106	2,592	75	8	35	-	118	32	4	1,349	6	1,391
2008	6	0	4,216	3,005	7,228	129	8	1,549	114	1,800	76	8	101	-	185	31	2	815	7	855
2009	3	0	2,915	*	2,918	164	15	970	*	1,149	72	7	29	-	108	23	2	503	*-	528

TABLE A-2b. (continued)
TABLA A-2b. (continuación)

	Shortbill spearfish—Marlín trompa corta					Sailfish—Pez vela					Unidentified istiophorid billfishes—Picudos istiofóridos no identificados					Total billfishes—Total de peces picudos				
	PS		LL	OTR	Total	PS		LL	OTR	Total	PS		LL	OTR	Total	PS		LL	OTR	Total
	Ret.	Dis.				Ret.	Dis.				Ret.	Dis.				Ret..	Dis.			
1980	-	-	-	-	-	-	-	244	-	244	-	-	-	-	-	-	-	13,168	1,107	14,275
1981	-	-	-	-	-	-	-	379	-	379	-	-	9	-	9	-	-	13,057	1,134	14,191
1982	-	-	-	-	-	-	-	1084	-	1,084	-	-	3	-	3	-	-	13,360	1,551	14,911
1983	-	-	-	-	-	-	-	890	-	890	-	-	2	-	2	-	-	13,404	2,338	15,742
1984	-	-	-	-	-	-	-	345	-	345	-	-	-	-	-	-	-	11,204	3,336	14,540
1985	-	-	-	-	-	-	-	395	-	395	-	-	1	-	1	-	-	7,648	3,768	11,416
1986	-	-	5	-	5	-	-	583	-	583	-	-	1	-	1	-	-	12,990	3,294	16,284
1987	-	-	15	-	15	-	-	649	-	649	-	-	398	-	398	-	-	21,025	3,740	24,765
1988	-	-	13	-	13	-	-	649	-	649	-	-	368	-	368	-	-	17,179	5,642	22,821
1989	-	-	-	-	-	-	-	192	-	192	-	-	51	-	51	-	-	14,503	6,072	20,575
1990	-	-	-	-	-	-	-	6	-	6	-	-	125	-	125	-	-	14,961	5,066	20,027
1991	-	-	1	-	1	-	-	717	-	717	-	-	112	-	112	69	220	21,459	4,307	26,055
1992	-	1	1	-	2	-	-	1351	-	1,351	-	-	1,123	-	1,123	52	221	22,204	4,267	26,744
1993	0	0	1	-	1	26	32	2266	-	2,323	29	68	1,650	-	1,746	246	171	20,467	4,414	25,298
1994	0	0	144	-	144	18	21	1682	-	1,722	7	16	1,028	-	1,050	154	83	20,523	3,822	24,583
1995	1	0	155	-	156	12	15	1351	-	1,379	4	9	232	-	244	151	72	16,928	2,974	20,125
1996	1	0	126	-	127	10	12	738	-	760	6	13	308	-	327	145	73	15,156	2,486	17,860
1997	1	0	141	-	142	12	11	1217	-	1,241	3	5	1,324	-	1,332	243	57	23,696	1,781	25,777
1998	0	0	200	-	200	28	31	1382	-	1,441	5	8	575	54	642	259	89	20,740	3,300	24,388
1999	1	0	278	-	279	33	8	1216	-	1,258	6	12	1,136	-	1,153	332	111	16,604	1,965	19,012
2000	1	0	285	-	286	33	17	1380	-	1,429	3	6	879	136	1,024	242	69	17,102	2,519	19,932
2001	0	0	304	-	305	18	45	1539	325	1,927	2	5	1,742	204	1,952	223	146	25,873	2,493	28,735
2002	1	0	273	-	274	19	15	1792	17	1,843	4	5	1,862	14	1,885	369	88	27,243	2,151	29,851
2003	1	4	290	-	294	38	49	1174	0	1,260	6	5	1,389	-	1,400	384	109	27,008	360	27,861
2004	1	0	207	-	208	19	13	1400	17	1,449	4	4	1,384	-	1,392	250	44	23,734	326	24,354
2005	1	0	229	-	230	32	11	805	15	863	5	3	900	-	908	381	41	15,730	4,319	20,472
2006	1	0	231	-	233	30	13	1007	35	1,085	23	4	491	1	518	403	62	14,738	3,941	19,144
2007	1	0	239	-	240	41	8	930	32	1,011	13	4	104	15	136	289	38	9,224	4,536	14,088
2008	1	0	264	-	265	31	7	245	68	352	17	5	58	4	84	291	31	7,248	3,198	10,769
2009	1	0	449	-	450	20	10	6	*	37	11	1	*	*	12	294	36	4,872	*	5,202

TABLE A-2c. Estimated retained catches (Ret.), by gear type, and estimated discards (Dis.), by purse-seine vessels of more than 363 t carrying capacity only, of other species, in metric tons, in the EPO, 1980-2009 The data for 2008-2009 are preliminary.

TABLA A-2c. Estimaciones de las capturas retenidas (Ret.), por arte de pesca, y de los descartes (Dis.), por buques cerqueros de más de 363 t de capacidad de acarreo únicamente, de otras especies, en toneladas métricas, en el OPO, 1980-2009. Los datos de 2008-2009 son preliminares.

	Carangids—Carángidos					Dorado (*Coryphaena* spp.)					Elasmobranchs—Elasmobranquios					Other fishes—Otros peces				
	PS		LL	OTR	Total	PS		LL	OTR	Total	PS		LL	OTR	Total	PS		LL	OTR	Total
	Ret.	Dis.				Ret.	Dis.				Ret.	Dis.				Ret.	Dis.			
1980	224	-	-	2	226	124	-	-	1,001	1,125	16	-	7	858	881	301	-	-	-	301
1981	111	-	-	17	128	410	-	-	628	1,038	49	-	120	1,211	1,380	201	-	51	-	252
1982	122	-	-	-	122	274	-	-	980	1,254	22	-	215	864	1,101	288	-	59	-	347
1983	1,240	-	-	-	1,240	88	-	-	3,374	3,462	34	-	85	695	814	288	-	-	-	288
1984	414	-	-	-	414	103	-	-	202	305	47	-	6	1,039	1,092	415	-	-	3	418
1985	317	-	-	4	321	93	-	-	108	201	27	-	13	481	521	77	-	7	-	84
1986	188	-	-	19	207	632	-	-	1,828	2,460	29	-	1	1,979	2,009	94	-	-	-	94
1987	566	-	-	5	571	271	-	-	4,272	4,543	96	-	87	1,020	1,203	210	-	535	-	745
1988	825	-	-	1	826	69	-	-	1,560	1,629	1	-	23	1,041	1,065	321	-	360	-	681
1989	60	-	-	2	62	210	-	-	1,680	1,890	29	-	66	1,025	1,120	670	-	152	-	822
1990	234	-	-	1	235	63	-	-	1,491	1,554	-	-	280	1,095	1,375	433	-	260	14	707
1991	116	-	-	-	116	57	-	7	613	677	1	-	1,112	1,346	2,459	462	-	457	1	920
1992	116	-	-	-	116	69	-	37	708	814	-	-	2,293	1,190	3,483	555	-	182	-	737
1993	31	43	-	2	76	267	477	17	724	1,485	272	1,064	1,026	916	3,279	394	888	184	2	1,468
1994	19	28	-	16	63	687	826	46	3,459	5,018	366	967	1,234	1,314	3,881	398	862	251	-	1,512
1995	26	32	-	9	67	466	729	39	2,127	3,361	275	1,055	922	1,075	3,326	330	1,004	210	-	1,544
1996	136	135	-	57	328	548	885	43	183	1,660	237	938	1,121	2,151	4,446	302	671	456	-	1,428
1997	38	111	-	39	188	569	703	6866	3,109	11,246	406	1,194	956	2,328	4,885	505	859	848	-	2,212
1998	83	149	-	4	236	424	426	2528	9,167	12,545	277	1,359	2,099	4,393	8,128	563	1,324	1,340	-	3,226
1999	109	136	-	1	247	567	751	6284	1,160	8,762	255	762	5,995	2,088	9,100	579	936	975	-	2,490
2000	97	66	4	4	171	812	785	3537	1,041	6,176	260	722	8,621	405	10,008	392	569	1,490	-	2,450
2001	16	145	18	26	205	1,028	1275	15941	2,825	21,069	184	602	12,551	107	13,444	615	1,395	1,726	1	3,737
2002	20	111	15	20	166	932	938	9464	4,137	15,470	136	705	12,398	99	13,337	725	886	1,914	-	3,526
2003	13	141	54	-	208	582	346	5301	288	6,517	116	752	14,881	372	16,120	664	597	4,681	-	5,942
2004	41	103	1	-	145	810	317	3986	4,645	9,758	155	575	11,295	164	12,188	580	860	671	-	2,111
2005	82	79	-	-	161	864	295	3854	8,667	13,680	197	416	12,105	220	12,938	821	374	558	-	1,753
2006	380	146	-	-	526	1,001	385	3404	13,112	17,903	236	483	6,511	252	7,483	899	496	262	100	1,757
2007	184	183	6	17	391	1,266	350	2978	4,831	9,425	345	345	8,726	414	9,829	1,104	452	2,001	120	3,678
2008	102	55	2	4	163	916	327	440	5,160	6,843	504	279	6,090	253	7,126	805	358	561	75	1,800
2009	60	39	*	*	99	1,953	468	396	*	2,817	287	272	614	*	1,173	1,229	349	414	*	1,993

TABLE A-3a. Catches of yellowfin tuna by purse-seine vessels in the EPO, by vessel flag, 1980-2009. The data have been adjusted to the species composition estimate, and are preliminary. *: data missing or not available; -: no data collected; C: data combined with those of other flags; this category is used to avoid revealing the operations of individual vessels or companies.

TABLA A-3a. Capturas de atún aleta amarilla por buques de cerco en el OPO, por bandera del buque, 1980-2009. Los datos están ajustados a la estimación de composición por especie, y son preliminares. *: datos faltantes o no disponibles; -: datos no tomados; C: datos combinados con aquéllos de otras banderas; se usa esta categoría para no revelar información sobre las actividades de buques o empresas individuales.

	COL	CRI	ECU	ESP	MEX	NIC	PAN	PER	SLV	USA	VEN	VUT	C + OTR[1]	Total
1980	-	1,941	5,760	C	19,753	-	4,784	443	-	91,081	6,450	-	12,830	143,042
1981	-	2,632	7,004	6,651	41,147	-	7,202	C	C	91,611	6,269	-	5,718	168,234
1982	-	122	5,511	934	18,785	-	8,487	C	C	72,082	4,057	-	4,777	114,755
1983	-	C	7,579	-	18,576	-	2,444	943	-	43,780	7,840	-	2,767	83,929
1984	-	2,702	10,526	C	53,697	-	C	C	-	57,162	9,268	-	2,430	135,785
1985	-	2,785	8,794	C	80,422	-	10,887	C	-	84,364	20,696	C	3,511	211,459
1986	-	C	16,561	C	103,644	-	9,073	C	C	88,617	28,462	C	14,155	260,512
1987	-	-	15,046	C	96,182	-	C	C	C	95,506	34,237	C	21,037	262,008
1988	-	-	23,947	C	104,565	-	7,364	1,430	C	82,231	38,257	C	19,499	277,293
1989	-	C	17,588	C	116,928	-	10,557	1,724	C	73,688	42,944	C	14,567	277,996
1990	C	C	16,279	C	115,898	-	6,391	C	-	50,790	47,490	22,208	4,197	263,253
1991	C	-	15,011	C	115,107	-	1,731	C	-	18,751	45,345	29,687	5,625	231,257
1992	C	-	12,119	C	118,455	-	3,380	45	-	16,961	44,336	27,406	5,419	228,121
1993	3,863	-	18,094	C	101,792	-	5,671	-	-	14,055	43,522	24,936	7,559	219,492
1994	7,533	-	18,365	C	99,618	-	3,259	-	-	8,080	41,500	25,729	4,324	208,408
1995	8,829	C	17,044	C	108,749	-	1,714	-	-	5,069	47,804	22,220	4,005	215,434
1996	9,855	C	17,125	C	119,878	-	3,084	-	-	6,948	62,846	10,549	8,322	238,607
1997	9,402	-	18,697	C	120,761	-	4,807	-	-	5,826	57,881	20,701	6,803	244,878
1998	15,592	-	36,201	5,449	106,840	-	3,330	-	C	2,776	61,425	17,342	5,004	253,959
1999	13,267	-	53,683	8,322	114,545	C	5,782	-	C	3,400	55,443	16,476	11,002	281,920
2000	13,174	-	35,814	4,842	99,208	C	4,414	-	-	3,341	70,108	11,588	12,742	255,231
2001	21,793	-	55,191	9,580	129,381	C	10,577	-	C	4,836	111,030	9,678	30,636	382,702
2002	29,683	-	30,965	4,965	153,172	C	19,961	C	3,095	8,404	122,821	5,466	33,975	412,507
2003	17,638	-	33,027	3,737	172,164	-	24,888	C	C	906	95,168	2,925	30,654	381,107
2004	C	-	40,839	C	90,902	C	31,236	-	C	2,523	54,095	1,621	48,381	269,597
2005	C	-	40,754	C	111,458	6,912	29,897	-	6,905	C	41,604	C	30,069	267,599
2006	C	-	25,544	C	67,958	7,201	23,516	-	C	C	17,916	C	24,195	166,330
2007	C	-	19,741	C	64,940	5,449	28,853	-	C	C	23,992	C	27,289	170,264
2008	C	-	18,472	C	84,456	5,723	26,853	C	C	C	21,704	C	27,879	185,087
2009	C	-	18,095	C	101,276	8,305	36,402	C	C	C	29,797	C	42,015	235,890

[1] Includes—Incluye: BLZ, BMU, BOL, CAN, CHN, COG, CYM, CYP, GTM, HND, KOR, LBR, NLD, NZL, PRT, RUS, SEN, VCT, UNK

TABLE A-3b. Annual catches of yellowfin tuna by longline vessels, and totals for all gears, in the EPO, by vessel flag, 1980-2009. The data for 2008-2009 are preliminary. *: data missing or not available; -: no data collected; C: data combined with those of other flags; this category is used to avoid revealing the operations of individual vessels or companies.

TABLA A-3b. Capturas anuales de atún aleta amarilla por buques de palangre en el OPO, y totales de todas las artes, por bandera del buque, 1980-2009. Los datos de 2008-2009 son preliminares. *: datos faltantes o no disponibles; -: datos no tomados; C: datos combinados con aquéllos de otras banderas; se usa esta categoría para no revelar información sobre las actividades de buques o empresas individuales.

	CHN	CRI	FRA-PYF	JPN	KOR	MEX	PAN	TWN	USA	VUT	C + OTR[1]	Total LL	Total PS+LL	OTR[2]
1980	-	-	-	11,549	1,892	-	-	36	-	-	*	13,477	156,519	2,343
1981	-	-	-	7,090	753	-	-	156	-	-	*	7,999	176,233	2,277
1982	-	-	-	9,826	1,054	-	-	81	-	-	*	10,961	125,716	1,818
1983	-	-	-	9,404	1,382	49	-	60	-	-	*	10,895	94,824	4,856
1984	-	-	-	9,134	1,155	-	-	56	-	-	*	10,345	146,130	3,335
1985	-	-	-	10,633	2,505	2	-	58	-	-	*	13,198	224,657	1,282
1986	-	-	-	17,770	4,850	68	-	120	-	-	*	22,808	283,320	2,751
1987	-	-	-	13,484	5,048	272	-	107	-	-	*	18,911	280,919	5,245
1988	-	-	-	12,481	1,893	232	-	54	-	-	*	14,660	291,953	4,475
1989	-	-	-	15,335	1,162	9	-	526	-	-	*	17,032	295,028	4,408
1990	-	-	-	29,255	4,844	-	-	534	-	-	*	34,633	297,886	3,636
1991	-	169	-	23,721	5,688	-	-	1,319	2	-	*	30,899	262,156	3,814
1992	-	119	57	15,296	2,865	-	-	306	3	-	*	18,646	246,767	5,747
1993	-	200	39	20,339	3,257	C	-	155	17	-	2	24,009	243,501	7,985
1994	-	481	214	25,983	3,069	41	-	236	2	-	*	30,026	238,434	5,112
1995	-	542	198	17,042	2,748	7	-	28	31	-	*	20,596	236,030	3,334
1996	-	183	253	12,631	3,491	0	-	37	13	-	*	16,608	255,215	5,401
1997	-	715	307	16,218	4,753	-	-	131	11	-	28	22,163	267,041	5,018
1998	-	1,124	388	10,048	3,624	16	-	113	15	-	8	15,336	269,295	6,614
1999	-	1,031	206	7,186	3,030	10	-	186	7	-	26	11,682	293,602	4,489
2000	-	1,084	1,052	15,265	5,134	153	359	742	10	5	51	23,855	279,086	3,540
2001	942	1,133	846	14,808	5,230	29	732	3,928	29	13	1,918	29,608	412,310	4,436
2002	1,457	1,563	278	8,513	3,626	4	907	7,360	5	290	1,528	25,531	438,038	1,501
2003	2,739	1,418	462	9,125	4,911	365	C	3,477	5	699	1,973	25,174	406,281	1,615
2004	798	1,701	767	7,338	2,997	32	2,802	1,824	6	171	343	18,779	288,376	2,511
2005	682	1,791	530	3,966	532	1	1,782	2,422	7	-	182	11,895	279,494	3,673
2006	246	1,402	537	2,968	-	0	2,164	1,671	21	-	108	9,117	175,447	2,144
2007	224	1,204	408	4,582	353	8	-	745	11	-	90	7,625	177,889	2,161
2008	469	154	335	5,312	129	2	-	247	31	-	43	6,722	191,809	1,723
2009	*	*	*	4,227	*	*	*	636	*	*	*	4,863	240,753	1,069

[1] Includes—Incluye: BLZ, CHL, ECU, GTM, HND, NIC, SLV

[2] Includes gillnets, pole-and-line, recreational, and unknown gears—Incluye red de transmalle, caña, artes deportivas, y desconocidas

TABLE A-3c. Catches of skipjack tuna by purse-seine and longline vessels in the EPO, by vessel flag, 1980-2009. The data have been adjusted to the species composition estimate, and are preliminary. *: data missing or not available; -: no data collected; C: data combined with those of other flags; this category is used to avoid revealing the operations of individual vessels or companies.

TABLA A-3c. Capturas de atún barrilete por buques de cerco y de palangre en el OPO, por bandera del buque, 1980-2009. Los datos están ajustados a la estimación de composición por especie, y son preliminares. *: datos faltantes o no disponibles; -: datos no tomados; C: datos combinados con aquéllos de otras banderas; se usa esta categoría para no revelar información sobre las actividades de buques o empresas individuales.

	PS														LL+
	COL	CRI	ECU	ESP	MEX	NIC	PAN	PER	SLV	USA	VEN	VUT	C+OTR[1]	Total	OTR[2]
1980	-	2,142	5,085	C	11,451	-	3,773	172	-	92,408	3,471	-	12,410	130,912	7,190
1981	-	1,047	8,213	2,642	24,081	-	4,230	C	C	71,237	3,562	-	4,153	119,165	6,836
1982	-	226	13,590	1,609	14,598	-	5,814	C	C	58,647	2,382	-	3,633	100,499	4,170
1983	-	C	12,590	-	6,277	-	764	170	-	32,009	3,352	-	1,689	56,851	5,124
1984	-	31	18,085	-	8,550	-	C	-	-	23,966	7,797	-	1,430	59,859	3,752
1985	-	87	22,806	C	5,334	-	1,197	-	-	9,907	8,184	C	3,314	50,829	1,173
1986	-	C	23,836	C	6,061	-	1,134	C	C	12,978	11,797	C	9,828	65,634	2,111
1987	-	-	20,473	C	4,786	-	C	C	C	13,578	11,761	C	13,421	64,019	2,447
1988	-	-	11,743	C	15,195	-	1,863	714	C	36,792	12,312	C	8,494	87,113	5,014
1989	-	C	22,922	C	14,960	-	4,361	276	-	21,115	16,847	C	14,453	94,934	3,987
1990	C	C	24,071	C	6,696	-	3,425	C	-	13,188	11,362	11,920	3,707	74,369	2,738
1991	C	-	18,438	C	10,916	-	1,720	C	-	13,162	5,217	9,051	3,724	62,228	3,662
1992	C	-	25,408	C	9,188	-	3,724	352	-	14,108	10,226	13,315	7,962	84,283	3,011
1993	3,292	-	21,227	C	13,037	-	1,062	-	-	17,853	7,270	10,908	9,181	83,830	6,089
1994	7,348	-	15,083	C	11,783	-	2,197	-	-	8,947	6,356	9,541	8,871	70,126	4,044
1995	13,081	C	31,934	C	29,406	-	4,084	-	-	14,032	5,508	13,910	15,092	127,047	7,241
1996	13,230	C	32,433	C	14,501	-	3,619	-	-	12,012	4,104	10,873	13,201	103,973	3,868
1997	12,332	-	51,826	C	23,416	-	4,277	-	-	13,687	8,617	14,246	25,055	153,456	3,491
1998	4,698	-	67,074	20,012	15,969	-	1,136	-	C	6,898	6,795	11,284	6,765	140,631	2,215
1999	11,210	-	124,393	34,923	16,767	C	5,286	-	C	13,491	16,344	21,287	17,864	261,565	3,638
2000	6,380	-	103,348	16,541	16,309	C	12,402	-	-	10,777	4,697	11,191	22,662	204,307	366
2001	2,623	-	65,579	22,598	8,850	C	6,141	-	C	4,355	1,161	8,110	24,144	143,561	1,696
2002	2,324	-	81,144	20,365	6,309	C	7,092	C	5,954	3,372	2,665	6,271	17,807	153,303	996
2003	5,862	-	139,232	28,778	8,793	-	13,554	C	C	8,242	7,883	21,182	41,003	274,529	4,049
2004	C	-	89,120	C	24,968	C	20,184	-	C	5,071	12,942	8,313	38,066	198,664	2,346
2005	C	-	138,609	C	31,685	2,469	28,055	-	5,258	C	14,015	C	41,689	261,780	3,311
2006	C	-	140,610	C	18,220	4,886	44,013	-	C	C	23,804	C	65,875	297,408	1,645
2007	C	-	93,510	C	21,694	2,964	23,052	-	C	C	21,604	C	45,466	208,290	1,170
2008	C	-	143,501	C	21,636	6,081	42,930	C	C	C	27,055	C	55,445	296,648	1,717
2009	C	-	130,850	C	6,528	3,980	24,581	C	C	C	17,732	C	45,997	229,668	308

[1] Includes—Incluye: BLZ, BMU, BOL, CAN, CHN, COG, CYM, CYP, ECU, GTM, HND, KOR, LBR, NLD, NZL, PRT, RUS, SEN, VCT, UNK

[2] Includes gillnets, pole-and-line, troll, recreational, and unknown gears—Incluye red de transmalle, caña, curricán, artes deportivas y desconocidas

TABLE A-3d. Catches of bigeye tuna by purse-seine vessels in the EPO, by vessel flag, 1980-2009. The data have been adjusted to the species composition estimate, and are preliminary. *: data missing or not available; -: no data collected; C: data combined with those of other flags; this category is used to avoid revealing the operations of individual vessels or companies.

TABLA A-3d. Capturas de atún patudo por buques de cerco en el OPO, por bandera del buque, 1980-2009. Los datos están ajustados a la estimación de composición por especie, y son preliminares. *: datos faltantes o no disponibles; -: datos no tomados; C: datos combinados con aquéllos de otras banderas; se usa esta categoría para no revelar información sobre las actividades de buques o empresas individuales.

	COL	CRI	ECU	ESP	MEX	NIC	PAN	PER	SLV	USA	VEN	VUT	C + OTR[1]	Total
1980	-	-	3,191	C	59	-	2,000	*	-	11,291	1,715	-	3,682	21,938
1981	-	119	1,268	805	52	-	1,113	-	C	8,267	2,766	-	531	14,921
1982	-	-	105	41	16	-	1,039	*	*	4,548	1,190	-	*	6,939
1983	-	*	457	-	16	-	663	*	-	1,801	1,319	-	319	4,575
1984	-	3	1,164	*	40	-	*	*	-	5,335	2,181	-	138	8,861
1985	-	17	2,970	C	19	-	-	-	-	1,806	939	C	305	6,056
1986	-	-	653	C	1	-	-	-	-	266	1,466	C	300	2,686
1987	-	-	319	C	2	-	*	-	C	224	453	C	179	1,177
1988	-	-	385	C	-	-	431	*	C	256	202	C	261	1,535
1989	-	-	854	C	-	-	-	*	-	172	294	C	710	2,030
1990	-	-	1,619	C	29	-	196	-	-	209	1,405	2,082	381	5,921
1991	-	-	2,224	C	5	-	-	-	-	50	591	1,839	161	4,870
1992	-	-	1,647	C	61	-	38	*	-	3,002	184	1,397	850	7,179
1993	686	-	2,166	C	120	-	10	*	-	3,324	253	1,848	1,250	9,657
1994	5,636	-	5,112	C	171	-	-	*	-	7,042	637	8,829	7,472	34,899
1995	5,815	C	8,304	C	91	-	839	*	-	11,042	706	12,072	6,452	45,321
1996	7,692	C	20,279	C	82	-	1,445	*	-	8,380	619	12,374	10,440	61,311
1997	3,506	-	30,092	C	38	-	1,811	*	-	8,312	348	6,818	13,347	64,272
1998	596	-	25,113	5,747	12	-	12	*	C	5,309	348	4,746	2,246	44,129
1999	1,511	-	24,355	11,703	33	C	1,220	*	C	2,997	10	5,318	4,011	51,158
2000	1,279	-	37,264	21,815	222	C	5,795	*	-	2,598	51	7,974	17,642	94,640
2001	235	-	25,142	9,203	20	C	3,246	*	C	3,242	0	5,483	14,585	61,156
2002	299	-	27,035	8,080	2	C	2,457	C	6,819	2,610	0	2,851	7,287	57,440
2003	258	-	24,711	7,895	8	-	4,621	C	C	2,779	438	6,510	6,954	54,174
2004	C	-	31,368	C	0	C	11,261	*	C	3,689	1,040	5,096	15,138	67,592
2005	C	-	32,680	C	0	33	13,026	*	989	C	116	C	22,982	69,826
2006	C	-	38,597	C	59	2,486	13,247	*	C	C	3,729	C	25,860	83,978
2007	C	-	40,424	C	0	503	8,855	*	C	C	1,193	C	12,099	63,074
2008	C	-	41,197	C	328	855	11,723	C	C	C	2,196	C	18,741	75,040
2009	C	-	35,652	C	1,262	1,615	13,404	C	C	C	3,554	C	21,026	76,513

[1] Includes—Incluye: BLZ, BMU, BOL, CAN, CHN, CYM, CYP, GTM, HND, KOR, LBR, NLD, NZL, PRT, SEN, VCT, UNK

TABLE A-3e. Annual catches of bigeye tuna by longline vessels, and totals for all gears, in the EPO, by vessel flag, 1980-2009. The data for 2008-2009 are preliminary. *: data missing or not available; -: no data collected; C: data combined with those of other flags; this category is used to avoid revealing the operations of individual vessels or companies.

TABLA A-3e. Capturas anuales de atún patudo por buques de palangre en el OPO, y totales de todas las artes, por bandera del buque, 1980-2009. Los datos de 2008-2009 son preliminares. *: datos faltantes o no disponibles; -: datos no tomados; C: datos combinados con aquéllos de otras banderas; se usa esta categoría para no revelar información sobre las actividades de buques o empresas individuales.

	CHN	CRI	FRA-PYF	JPN	KOR	MEX	PAN	TWN	USA	VUT	C + OTR[1]	Total LL	Total PS + LL	OTR[2]
1980	-	-	-	61,951	2,189	-	-	195	-	-	*	64,335	86,273	130
1981	-	-	-	49,970	2,966	-	-	480	-	-	*	53,416	68,337	7
1982	-	-	-	50,199	2,969	-	-	197	-	-	*	53,365	60,304	45
1983	-	-	-	57,185	2,614	-	-	244	-	-	*	60,043	64,618	76
1984	-	-	-	44,587	1,613	-	-	194	-	-	*	46,394	55,255	13
1985	-	-	-	61,627	4,510	0	-	188	-	-	*	66,325	72,381	17
1986	-	-	-	91,981	10,187	0	-	257	-	-	*	102,425	105,111	74
1987	-	-	-	87,913	11,681	1	-	526	-	-	*	100,121	101,298	49
1988	-	-	-	66,015	6,151	1	-	591	-	-	*	72,758	74,293	20
1989	-	-	-	67,514	3,138	-	-	311	-	-	*	70,963	72,993	1
1990	-	-	-	86,148	12,127	-	-	596	-	-	*	98,871	104,792	59
1991	-	1	-	85,011	17,883	-	-	1,291	9	-	*	104,195	109,065	56
1992	-	9	7	74,466	9,202	-	-	1,032	92	-	*	84,808	91,987	13
1993	-	25	7	63,190	8,924	*	-	297	55	-	*	72,498	82,155	35
1994	-	1	102	61,471	9,522	-	-	255	9	-	*	71,360	106,259	806
1995	-	13	97	49,016	8,992	-	-	77	74	-	*	58,269	103,590	1,369
1996	-	1	113	36,685	9,983	-	-	95	81	-	*	46,958	108,269	748
1997	-	9	250	40,571	11,376	-	-	256	118	-	*	52,580	116,852	20
1998	-	28	359	35,752	9,731	-	-	314	191	-	*	46,375	90,504	628
1999	-	25	3,652	22,224	9,431	-	-	890	228	-	*	36,450	87,608	538
2000	-	27	653	28,746	13,280	42	14	1,916	162	2,754	11	47,605	142,245	253
2001	2,639	28	684	38,048	12,576	1	80	9,285	147	3,277	1,990	68,755	129,911	19
2002	7,614	19	388	34,193	10,358	-	6	17,253	132	2,995	1,466	74,424	131,864	12
2003	10,066	18	346	24,888	10,272	-	C	12,016	232	1,258	680	59,776	113,950	21
2004	2,645	21	405	21,236	10,729	-	48	7,384	149	407	459	43,483	111,075	194
2005	2,104	23	398	19,113	11,580	-	30	6,441	536	1,056	151	41,432	111,258	25
2006	709	18	388	16,235	8,694	-	37	6,412	85	935	195	33,708	117,686	40
2007	2,324	15	361	13,977	5,611	-	-	6,057	417	1,073	93	29,928	93,002	44
2008	2,379	2	367	14,785	4,150	-	-	1,852	1,253	747	89	25,624	100,664	28
2009	2,481	*	*	14,911	6,034	-	-	3,396	*	1,113	*	27,395	104,448	*

[1] Includes—Incluye: BLZ, CHL, ECU, ESP, HND, SLV

[2] Includes gillnets, pole-and-line, troll, recreational, and unknown gears—Incluye red de transmalle, caña, curricán, artes deportivas, y desconocidas

TABLE A-4. Preliminary estimates of the retained catches in metric tons, of tunas and bonitos caught by purse-seine, pole-and-line, and recreational vessels in the EPO in 2008 and 2009, by species and vessel flag. The data for yellowfin, skipjack, and bigeye tunas have been adjusted to the species composition estimates, and are preliminary.

TABLA A-4. Estimaciones preliminares de las capturas retenidas, en toneladas métricas, de atunes y bonitos por buques cerqueros, cañeros, y recreacionales en el OPO en 2008 y 2009, por especie y bandera del buque. Los datos de los atunes aleta amarilla, barrilete, y patudo fueron ajustados a las estimaciones de composición por especie, y son preliminares.

	YFT	SKJ	BET	PBF	ALB	BKJ	BZX	TUN	Total	%
2008	**Retained catches–Capturas retenidas**									
ECU	18,472	143,501	41,197	*	*	154	23	89	203,436	35.4
MEX	85,268	22,135	328	4,407	10	3,366	6,969	40	122,523	21.3
NIC	5,723	6,081	855	*	*	3	*	*	12,662	2.2
PAN	26,853	42,930	11,723	*	*	47	66	4	81,623	14.2
VEN	21,704	27,055	2,196	*	*	52	9	3	51,019	8.9
OTR[1]	28,092	55,458	18,741	103	387	2	328	*	103,111	18.0
Total	186,112	297,160	75,040	4,510	397	3,624	7,395	136	574,374	
2009	**Retained catches–Capturas retenidas**									
ECU	18,095	130,850	35,652	*	3	109	*	146	184,855	33.0
MEX	101,985	6,679	1,262	3,019	17	3,742	7,885	2	124,591	22.2
NIC	8,305	3,980	1,615	*	*	*	*	*	13,900	2.5
PAN	36,402	24,581	13,404	*	*	133	*	*	74,520	13.3
VEN	29,797	17,732	3,554	*	*	8	*	1	51,092	9.1
OTR[1]	42,375	46,021	21,026	530	39	*	1,922	9	111,922	20.0
Total	236,959	229,843	76,513	3,549	59	3,992	9,807	158	560,880	

[1] Includes Bolivia, Colombia, El Salvador, Guatemala, Honduras, Peru, Spain, United States, and Vanuatu This category is used to avoid revealing the operations of individual vessels or companies.

[1] Incluye Bolivia, Colombia, El Salvador, España, Estados Unidos, Guatemala, Honduras, Perú, y Vanuatú Se usa esta categoría para no revelar información sobre las actividades de buques o empresas individuales.

TABLE A-5. Annual retained catches of Pacific bluefin tuna, by gear type and flag, in metric tons. The data for 2008 and 2009 are preliminary.
TABLA A-5. Capturas retenidas anuales de atún aleta azul del Pacífico, por arte de pesca y bandera, en toneladas métricas. Los datos de 2008 y 2009 son preliminares.

PBF	Western Pacific flags—Banderas del Pacífico occidental[1]										Eastern Pacific flags—Banderas del Pacífico oriental						Total
	JPN				KOR[1]		TWN			Sub-total	MEX		USA		Sub-total	OTR	
	PS	LP	LL	OTR	PS	OTR	PS	LL	OTR		PS	OTR	PS	OTR			
1980	11,327	1,392	851	6,005	-	-	-	114	5	19,693	582	-	2,327	31	2,940	-	22,634
1981	25,422	754	619	6,559	-	-	-	179	-	33,532	218	-	867	23	1,109	-	34,641
1982	19,234	1,777	738	4,240	31	-	-	207	2	26,228	506	-	2,639	13	3,159	-	29,387
1983	14,774	356	225	4,117	13	-	9	175	2	19,670	214	-	629	44	887	-	20,557
1984	4,433	587	164	4,976	4	-	5	477	8	10,655	166	-	673	78	917	-	11,573
1985	4,154	1,817	114	5,587	1	-	80	210	11	11,975	676	-	3,320	117	4,113	-	16,089
1986	7,412	1,086	116	5,100	344	-	16	70	13	14,157	189	-	4,851	69	5,109	-	19,266
1987	8,653	1,565	244	3,523	89	-	21	365	14	14,474	119	-	861	54	1,033	-	15,507
1988	3,605	907	187	2,465	32	-	197	108	62	7,562	447	1	923	56	1,427	-	8,989
1989	6,190	754	241	1,934	71	-	259	205	54	9,707	57	-	1,046	133	1,236	-	10,943
1990	2,989	536	336	2,421	132	-	149	189	315	7,067	50	-	1,380	157	1,587	2	8,653
1991	9,808	286	238	4,204	265	-	-	342	119	15,262	9	-	410	98	517	-	15,781
1992	7,162	166	529	3,204	288	-	73	464	8	11,896	-	-	1,928	171	2,099	6	13,995
1993	6,600	129	822	1,759	40	-	1	471	3	9,825	-	-	580	401	981	2	10,811
1994	8,131	162	1,226	5,667	50	-	-	559	-	15,795	63	2	906	148	1,118	2	16,916
1995	18,909	270	688	7,223	821	-	-	335	2	28,248	11	-	657	307	975	4	29,225
1996	7,644	94	910	5,359	102	-	-	956	-	15,066	3,700	-	4,639	110	8,449	14	23,519
1997	13,152	34	1,312	4,354	1,054	-	-	1,814	-	21,720	367	-	2,240	289	2,897	20	24,632
1998	5,391	85	1,265	4,439	188	-	-	1,910	-	13,277	1	-	1,771	694	2,466	21	15,763
1999	16,173	35	1,174	5,193	256	-	-	3,089	-	25,919	2,369	35	184	625	3,213	21	29,153
2000	16,486	102	960	6,935	1,976	-	-	2,780	2	29,240	3,019	99	693	403	4,214	50	33,475
2001	7,620	180	797	5,477	968	10	-	1,839	4	16,895	863	-	292	404	1,559	65	18,504
2002	9,273	99	846	4,158	767	1	-	1,523	4	16,672	1,708	2	50	666	2,427	60	19,164
2003	6,432	44	1,249	3,124	2,141	-	-	1,863	21	14,874	3,211	43	22	412	3,689	77	18,622
2004	7,421	132	1,856	3,592	636	-	-	1,714	3	15,353	8,880	14	-	60	8,954	27	24,384
2005	11,451	549	1,939	6,136	1,085	-	-	1,368	-	22,527	4,542	-	201	86	4,830	24	27,384
2006	7,234	108	1,132	3,742	949	-	-	1,149	-	14,314	9,806	-	-	98	9,904	24	24,242
2007	5,899	236	2,317	5,097	1,054	-	-	1,401	-	16,004	4,147	-	42	16	4,205	24	20,233
2008	9,253	64	1,503	6,317	1,536	-	-	979	-	19,652	4,392	15	-	94	4,501	24	24,177
2009	7,424	50	1,052	4,795	794	-	-	892	-	15,008	3,019	-	410	156	3,585	*	18,617

[1] Source: International Scientific Committee, 10th Plenary Meeting,PBFWG workshop report onPacific Bluefin Tuna, July 2010—Fuente: Comité Científico Internacional, 10ª Reunión Plenaria, Taller PBFWG sobre Atún Aleta Azul del Pacífico, julio de 2010

TABLE A-6a. Annual retained catches of North Pacific albacore by region and gear, in metric tons, compiled from IATTC data (EPO) and SPC data (WCPO). The data for 2008 and 2009 are preliminary.
TABLA A-6a. Capturas retenidas anuales de atún albacora del Pacífico Norte por región, en toneladas métricas, compiladas de datos de la CIAT (OPO) y la SPC (WCPO). Los datos de 2008 y 2009 son preliminares.

ALB (N)	Eastern Pacific Ocean Océano Pacífico oriental						Western and central Pacific Ocean Océano Pacífico occidental y central					Total
	LL	LP	LTL	PS	OTR	Subtotal	LL	LP	LTL	OTR	Subtotal	
1980	1,268	407	5,421	194	168	7,458	14,367	46,717	2,347	4,345	67,776	75,234
1981	2,040	608	12,039	99	227	15,013	16,849	27,566	798	11,200	56,413	71,426
1982	1,971	198	3,303	355	257	6,084	16,398	29,841	3,410	13,351	63,000	69,084
1983	1,572	449	7,751	7	87	9,866	15,020	21,256	1,833	7,582	45,691	55,557
1984	2,592	1,441	8,343	3,910	1,427	17,713	13,543	25,602	1,011	13,333	53,489	71,202
1985	1,313	877	5,308	42	1,176	8,716	13,468	21,335	1,163	13,729	49,695	58,411
1986	698	86	4,282	47	196	5,309	12,442	16,442	456	10,695	40,035	45,344
1987	1,114	320	2,300	1	171	3,906	14,433	18,920	570	11,337	45,260	49,166
1988	899	271	4,202	17	64	5,453	15,020	6,543	165	18,887	40,615	46,068
1989	952	21	1,852	1	160	2,986	13,856	8,662	148	19,825	42,491	45,477
1990	1,143	170	2,440	39	24	3,816	15,647	8,477	465	26,096	50,685	54,501
1991	1,514	834	1,783	-	6	4,137	16,848	6,269	201	10,792	34,110	38,247
1992	1,635	255	4,515	-	2	6,407	18,688	13,633	419	16,578	49,318	55,725
1993	1,772	1	4,331	-	25	6,129	29,812	12,796	2,417	4,087	49,112	55,241
1994	2,356	85	9,581	-	106	12,128	29,016	26,304	3,553	3,380	62,253	74,381
1995	1,380	465	7,308	-	102	9,255	32,456	20,596	3,450	1,623	58,125	67,380
1996	1,675	72	8,195	11	88	10,041	38,896	20,224	13,654	971	73,745	83,786
1997	1,365	59	6,056	1	1,018	8,499	48,645	32,252	12,618	1,717	95,232	103,731
1998	1,730	81	11,938	42	1,208	14,999	47,442	22,924	8,136	1,987	80,489	95,488
1999	2,701	227	10,801	47	3,621	17,397	45,607	50,202	3,052	7,487	106,348	123,745
2000	1,880	86	10,874	71	1,798	14,709	41,027	21,533	4,371	3,116	70,047	84,756
2001	1,822	157	11,570	3	1,635	15,187	36,596	29,412	5,168	1,364	72,540	87,727
2002	1,227	381	11,905	31	2,357	15,901	32,657	48,451	4,418	3,831	89,357	105,258
2003	1,126	59	17,749	32	2,228	21,194	31,874	36,114	4,137	924	73,049	94,243
2004	854	126	20,162	105	1,518	22,765	28,786	32,254	2,093	7,354	70,487	93,252
2005	582	66	13,722	2	1,739	16,111	32,146	16,133	345	1,442	50,066	66,177
2006	3,797	1	18,500	109	299	22,706	29,720	15,422	431	729	46,302	69,008
2007	2,979	21	17,962	187	1,229	22,378	29,091	37,768	708	5,022	72,589	94,967
2008	916	6	15,732	10	383	17,047	27,149	19,060	1,112	2,532	49,853	66,900
2009	532	8	5,685	48	*	6,273	22,918	32,419	11,401	2,877	69,615	75,888

TABLE A-6b. Annual retained catches of South Pacific albacore by region, in metric tons, compiled from IATTC data (EPO) and SPC data (WCPO). The data for 2008and 2009 are preliminary.
TABLA A-6b. Capturas retenidas anuales de atún albacora del Pacífico Sur por región, en toneladas métricas, compiladas de datos de la CIAT (OPO) y la SPC (WCPO). Los datos de 2008 y 2009 son preliminares.

ALB (S)	Eastern Pacific Ocean Océano Pacífico oriental				Western and central Pacific Ocean Océano Pacífico occidental y central					Total
	LL	LTL	OTR	Subtotal	LL	LP	LTL	OTR	Subtotal	
1980	4,051	-	60	4,111	26,921	101	1,468	-	28,490	32,601
1981	5,235	-	35	5,270	27,459	-	2,085	-	29,544	34,814
1982	6,436	-	2	6,438	21,911	1	2,434	4	24,350	30,788
1983	5,861	-	2	5,863	18,448	-	744	37	19,229	25,092
1984	4,120	-	24	4,144	16,220	2	2,773	1,565	20,560	24,704
1985	5,955	-	170	6,125	21,183	-	3,253	1,767	26,203	32,328
1986	5,752	74	149	5,975	26,889	-	1,929	1,797	30,615	36,590
1987	8,880	188	3	9,071	13,099	9	1,946	927	15,981	25,052
1988	9,035	1,282	-	10,317	19,253	-	3,014	5,283	27,550	37,867
1989	5,832	593	90	6,515	12,906	-	7,777	21,878	42,561	49,076
1990	5,393	1,336	306	7,035	13,975	245	5,639	7,232	27,091	34,126
1991	6,379	795	170	7,344	17,006	14	7,010	1,319	25,349	32,693
1992	15,445	1,205	18	16,668	15,147	11	5,373	47	20,578	37,246
1993	9,422	35	19	9,476	20,807	74	4,261	51	25,193	34,669
1994	8,034	446	22	8,502	26,084	67	6,718	67	32,936	41,438
1995	4,805	2	15	4,822	24,527	139	7,714	89	32,469	37,291
1996	5,956	94	21	6,071	17,860	30	7,285	135	25,310	31,381
1997	8,313	466	-	8,779	18,790	21	4,213	133	23,157	31,936
1998	10,905	12	-	10,917	26,886	36	6,268	85	33,275	44,192
1999	8,932	81	7	9,020	22,977	138	3,338	67	26,520	35,540
2000	7,783	778	3	8,564	26,185	102	5,491	136	31,914	40,478
2001	17,588	516	5	18,109	31,050	37	4,626	194	35,907	54,016
2002	14,062	131	40	14,233	46,528	18	4,443	110	51,099	65,332
2003	23,775	419	3	24,197	32,994	12	5,193	127	38,326	62,523
2004	17,590	331	-	17,921	40,197	110	4,200	116	44,623	62,544
2005	8,279	181	7	8,467	49,318	28	3,270	122	52,738	61,205
2006	6,815	48	119	6,982	55,883	29	2,835	69	58,816	65,798
2007	5,955	19	87	6,061	50,830	20	2,063	50	52,963	59,024
2008	5,082	*	159	5,241	41,224	20	3,502	*	44,746	49,987
2009	3,476	*	*	3,476	55,772	*	2,027	*	57,799	61,275

TABLE A-7. Estimated numbers of sets, by set type and vessel capacity category, and estimated retained catches, in metric tons, of yellowfin, skipjack, and bigeye tuna in the EPO, by purse-seine vessels. The data for 2009 are preliminary. The data for yellowfin, skipjack, and bigeye tunas have been adjusted to the species composition estimate and are preliminary.

TABLA A-7. Números estimados de lances, por tipo de lance y categoría de capacidad de buque, y capturas retenidas estimadas, en toneladas métricas, de atunes aleta amarilla, barrilete, y patudo en el OPO. Los datos de 2009 son preliminares. Los datos de los atunes aleta amarilla, barrilete, y patudo fueron ajustados a la estimación de composición por especie, y son preliminares.

	Number of sets—Número de lances			Retained catch—Captura retenida		
	Vessel capacity—Capacidad del buque		Total	YFT	SKJ	BET
	≤363 t	>363 t				
DEL	**Sets on fish associated with dolphins Lances sobre peces asociados con delfines**					
1994	5	7,804	7,809	125,000	1,105	1
1995	0	7,185	7,185	132,561	2,546	1
1996	14	7,472	7,486	138,295	1,760	57
1997	43	8,977	9,020	152,052	8,149	0
1998	0	10,645	10,645	154,200	4,992	6
1999	0	8,648	8,648	143,128	1,705	5
2000	0	9,235	9,235	147,671	537	15
2001	0	9,876	9,876	237,862	1,807	6
2002	0	12,290	12,290	301,260	3,175	2
2003	0	13,760	13,760	264,007	13,359	1
2004	0	11,783	11,783	175,533	10,775	3
2005	0	12,173	12,173	165,900	12,060	2
2006	0	8,923	8,923	91,812	4,805	0
2007	0	8,871	8,871	97,174	3,277	7
2008	0	9,246	9,246	122,125	8,390	5
2009	0	10,910	10,910	178,284	2,758	1
OBJ	**Sets on fish associated with floating objects Lances sobre peces asociados con objetos flotantes**					
1994	668	2,770	3,438	21,389	51,145	33,965
1995	707	3,519	4,226	21,364	80,052	41,875
1996	1,230	3,965	5,195	28,102	69,637	58,376
1997	1,699	5,610	7,309	30,255	116,802	62,704
1998	1,198	5,465	6,663	26,769	110,335	41,919
1999	630	4,483	5,113	43,341	181,636	49,330
2000	508	3,713	4,221	42,853	120,929	92,339
2001	827	5,674	6,501	66,984	122,702	60,378
2002	867	5,771	6,638	38,077	116,608	55,919
2003	706	5,457	6,163	30,136	181,585	52,381
2004	615	4,986	5,601	28,032	117,710	66,079
2005	639	4,992	5,631	26,077	132,774	68,141
2006	1,158	6,862	8,020	34,251	191,829	82,273
2007	1,383	5,857	7,240	29,662	122,283	61,821
2008	1,815	6,655	8,470	34,825	157,226	73,867
2009	1,723	7,077	8,800	36,147	156,879	75,392

TABLE A-7. (continued)
TABLA A-7 (continuación)

	Number of sets—Número de lances			Retained catch—Captura retenida		
	Vessel capacity—Capacidad del buque		Total	YFT	SKJ	BET
	≤363 t	>363 t				
NOA	**Sets on unassociated schools Lances sobre cardúmenes no asociados**					
1994	5,440	4,835	10,275	62,019	17,876	933
1995	6,120	4,782	10,902	61,509	44,449	3,445
1996	5,807	5,118	10,925	72,210	32,576	2,878
1997	5,334	4,680	10,014	62,571	28,505	1,568
1998	5,700	4,607	10,307	72,990	25,304	2,204
1999	5,632	6,139	11,771	95,451	78,224	1,823
2000	5,497	5,472	10,969	64,707	82,841	2,286
2001	4,022	3,024	7,046	77,856	19,052	772
2002	4,938	3,442	8,380	73,170	33,520	1,519
2003	7,274	5,131	12,405	86,964	79,585	1,792
2004	4,969	5,696	10,665	66,032	70,179	1,510
2005	6,109	7,816	13,925	75,622	116,946	1,683
2006	6,189	8,443	14,632	40,267	100,774	1,705
2007	4,842	7,211	12,053	43,428	82,730	1,246
2008	4,769	6,210	10,979	28,137	131,032	1,168
2009	3,169	4,109	7,278	21,459	70,031	1,120
ALL	**Sets on all types of schools Lances sobre todos tipos de cardumen**					
1994	6,113	15,409	21,522	208,408	70,126	34,899
1995	6,827	15,486	22,313	215,434	127,047	45,321
1996	7,051	16,555	23,606	238,607	103,973	61,311
1997	7,076	19,267	26,343	244,878	153,456	64,272
1998	6,898	20,717	27,615	253,959	140,631	44,129
1999	6,262	19,270	25,532	281,920	261,565	51,158
2000	6,005	18,420	24,425	255,231	204,307	94,640
2001	4,849	18,574	23,423	382,702	143,561	61,156
2002	5,805	21,503	27,308	412,507	153,303	57,440
2003	7,980	24,348	32,328	381,107	274,529	54,174
2004	5,584	22,465	28,049	269,597	198,664	67,592
2005	6,748	24,981	31,729	267,599	261,780	69,826
2006	7,347	24,228	31,575	166,330	297,408	83,978
2007	6,225	21,939	28,164	170,264	208,290	63,074
2008	6,584	22,111	28,695	185,087	296,648	75,040
2009	4,892	22,096	26,988	235,890	229,668	76,513

TABLE A-8. Types of floating objects on which sets were made. The 2009 data are preliminary.
TABLA A-8. Tipos de objetos flotantes sobre los que se hicieron lances. Los datos de 2009 son preliminares.

OBJ	Flotsam Naturales		FADs Plantados		Unknown Desconocido		Total
	No.	%	No.	%	No.	%	
1994	773	27.9	1,899	68.6	98	3.5	2,770
1995	728	20.7	2,714	77.1	77	2.2	3,519
1996	538	13.6	3,405	85.9	22	0.6	3,965
1997	829	14.8	4,728	84.3	53	0.9	5,610
1998	751	13.7	4,612	84.4	102	1.9	5,465
1999	831	18.5	3,632	81.0	20	0.4	4,483
2000	488	13.1	3,187	85.8	38	1.0	3,713
2001	592	10.4	5,058	89.1	24	0.4	5,674
2002	778	13.5	4,966	86.1	27	0.5	5,771
2003	715	13.1	4,722	86.5	20	0.4	5,457
2004	586	11.8	4,370	87.6	30	0.6	4,986
2005	603	12.1	4,281	85.8	108	2.2	4,992
2006	697	10.2	6,123	89.2	42	0.6	6,862
2007	597	10.2	5,188	88.6	72	1.2	5,857
2008	560	8.4	6,070	91.2	25	0.4	6,655
2009	320	4.5	6,750	95.4	7	0.1	7,077

TABLE A-9. Reported nominal longline fishing effort (E; 1000 hooks), and catch (C; metric tons) of yellowfin, skipjack, bigeye, Pacific bluefin, and albacore tunas only, by flag, in the EPO.

TABLA A-9. Esfuerzo de pesca palangrero nominal reportado (E; 1000 anzuelos), y captura (C; toneladas métricas) de atunes aleta amarilla, barrilete, patudo, aleta azul del Pacífico, y albacora solamente, por bandera, en el OPO.

LL	CHN		JPN		KOR		PYF		TWN		USA		OTR[1]
	E	C	E	C	E	C	E	C	E	C	E	C	C
1980	-	-	138,143	75,639	11,787	5,907	-	-	3000	1611	-	-	-
1981	-	-	131,254	59,226	19,727	6,540	-	-	5952	2948	-	-	-
1982	-	-	116,210	61,369	18,608	7,489	-	-	8117	3910	-	-	-
1983	-	-	127,177	69,563	14,680	6,478	-	-	4850	2311	-	-	49
1984	-	-	119,628	57,262	11,770	4,490	-	-	3730	1734	-	-	-
1985	-	-	106,761	74,347	19,799	10,508	-	-	3126	1979	-	-	2
1986	-	-	160,572	111,673	30,778	17,432	-	-	4874	2569	-	-	68
1987	-	-	188,386	104,053	36,436	19,405	-	-	12267	5335	-	-	273
1988	-	-	182,709	82,384	43,056	10,172	-	-	9567	4590	-	-	234
1989	-	-	170,370	84,961	43,365	4,879	-	-	16360	4962	-	-	9
1990	-	-	178,414	117,923	47,167	17,415	-	-	12543	4755	-	-	-
1991	-	-	200,374	112,337	65,024	24,644	-	-	17969	5862	42	12	173
1992	-	-	191,300	93,011	45,634	13,104	199	88	33,025	14,142	325	106	128
1993	-	-	159,956	87,976	46,375	12,843	153	80	18,064	6,566	415	81	227
1994	-	-	163,999	92,606	44,788	13,249	1,373	574	12,588	4,883	303	26	523
1995	-	-	129,599	69,435	54,979	12,778	1,776	559	2,910	1,639	828	179	562
1996	-	-	103,649	52,298	40,290	14,120	2,087	931	5,830	3,554	510	181	184
1997	-	-	96,385	59,325	30,493	16,663	3,464	1,941	8,720	5,673	464	216	752
1998	-	-	106,568	50,167	51,817	15,089	4,724	2,858	10,586	5,039	1,008	405	1,176
1999	-	-	80,950	32,886	54,269	13,295	5,512	4,446	23,247	7,865	1,756	470	1,156
2000	-	-	79,327	45,216	33,585	18,758	8,090	4,382	18,152	7,809	736	204	4,868
2001	13,054	5,162	102,220	54,775	72,261	18,200	7,445	5,086	41,926	20,060	1,438	238	15,614
2002	34,894	10,398	103,912	45,401	96,273	14,370	943	3,238	78,024	31,773	611	138	10,258
2003	43,290	14,548	101,236	36,187	71,006	15,551	11,098	4,101	74,456	28,328	1,313	262	11,595
2004	15,886	4,033	76,828	30,937	55,861	14,540	13,757	3,030	49,981	19,535	1,047	166	9,194
2005	16,895	3,681	65,085	25,712	15,798	12,284	13,356	2,514	38,542	12,229	2,579	557	5,442
2006	*	969	56,525	21,432	*	8,752	11,786	3,220	38,139	12,375	234	121	6,792
2007	12,229	2,624	45,970	20,515	10,548	6,037	9,672	3,753	22,243	9,498	2,686	436	3,731
2008	11,519	2,984	44,534	21,182	4,394	4,302	10,255	3,017	13,319	4,198	6,314	1,347	1,369

[1] Includes the catches of—Incluye las capturas de: Belize, Chile, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, México, Nicaragua, Panamá, Vanuatú

TABLE A-10. Numbers and well volumes, in cubic meters, of purse-seine and pole-and line vessels of the EPO tuna fleet, 1977-2009. The data for 2009 are preliminary.
TABLA A-10. Número y volumen de bodega, en metros cúbicos, de buques cerqueros y cañeros de la flota atunera del OPO, 1977-2009. Los datos de 2009 son preliminares.

	PS		LP		Total	
	No.	**Vol. (m^3)**	**No.**	**Vol. (m^3)**	**No.**	**Vol. (m^3)**
1977	253	189,967	116	6,780	369	196,746
1978	271	192,259	118	6,736	389	198,995
1979	282	195,494	50	4,341	332	199,835
1980	270	196,476	50	4,186	320	200,662
1981	251	196,484	41	3,308	292	199,792
1982	223	178,234	40	3,016	263	181,250
1983	215	149,404	60	3,940	275	153,344
1984	175	121,650	40	3,245	215	124,895
1985	178	137,814	25	2,574	203	140,387
1986	166	131,806	17	2,060	183	133,867
1987	177	152,351	29	2,376	206	154,727
1988	189	156,636	36	3,274	225	159,910
1989	178	141,956	30	3,135	208	145,091
1990	172	143,946	23	2,044	195	145,990
1991	155	124,501	19	1,629	174	126,131
1992	160	117,017	19	1,612	179	118,629
1993	152	118,730	15	1,543	167	120,272
1994	167	122,214	20	1,725	187	123,939
1995	175	124,096	20	1,784	195	125,880
1996	183	132,731	17	1,639	200	134,370
1997	194	146,533	23	2,105	217	148,637
1998	203	161,560	22	2,217	225	163,777
1999	208	180,652	14	1,656	222	182,308
2000	205	180,679	13	1,310	218	181,989
2001	205	189,897	10	1,259	215	191,156
2002	218	199,870	6	921	224	200,791
2003	215	202,755	3	338	218	203,093
2004	218	206,473	3	338	221	206,811
2005	222	213,286	4	498	226	213,784
2006	226	225,950	4	498	230	226,448
2007	229	226,985	4	380	233	227,365
2008	220	225,030	4	380	224	225,410
2009	214	223,995	4	380	218	224,375

TABLE A-11a. Estimates of the numbers and well volume (cubic meters) of purse-seine (PS) and pole-and-line (LP) vessels that fished in the EPO in 2008, by flag and gear. Each vessel is included in the total for each flag under which it fished during the year, but is included only once in the "Grand total"; therefore the grand total may not equal the sums of the individual flags.

TABLA A-11a. Estimaciones del número y volumen de bodega (metros cúbicos) de buques cerqueros (PS) y cañeros (LP) que pescaron en el OPO en 2008, por bandera y arte de pesca. Se incluye cada buque en los totales de cada bandera bajo la cual pescó durante el año, pero solamente una vez en el "Total general"; por consiguiente, los totales generales no equivalen necesariamente a las sumas de las banderas individuales.

Flag Bandera	Gear Arte	Well volume —Volumen de bodega (m^3)					Total	
		<401	401-800	801-1300	1301-1800	>1800	No.	Vol. (m^3)
		Number—Número						
BOL	PS	1	-	-	-	-	1	222
COL	PS	3	2	7	3	-	15	15,110
ECU	PS	35	20	16	4	9	84	60,519
ESP	PS	-	-	-	-	4	4	10,116
GTM	PS	-	-	-	2	-	2	3,056
HND	PS	-	1	1	-	-	2	1,559
MEX	PS	7	7	21	16	-	51	52,920
	LP	4	-	-	-	-	4	380
NIC	PS	-	-	5	-	-	5	6,023
PAN	PS	-	4	9	10	4	27	36,711
PER	PS	-	2	-	-	-	2	1,000
SLV	PS	-	-	1	-	3	4	7,415
USA	PS	2	-	-	-	-	2	292
VEN	PS	-	-	10	8	2	20	28,309
VUT	PS	-	-	1	2	-	3	3,609
Grand total— Total general	PS	47	36	71	44	22	220	
	LP	4	-	-	-	-	4	
	PS + LP	51	36	71	44	22	224	
		Well volume—Volumen de bodega (m^3)						
Grand total— Total general	PS	12,102	20,556	79,357	64,580	48,435		225,030
	LP	380	-	-	-	-		380
	PS + LP	12,482	20,556	79,357	64,580	48,435		225,410

- : none—ninguno

TABLE A-11b. Estimates of the numbers and well volumes (cubic meters) of purse-seine (PS) and pole-and-line (LP) vessels that fished in the EPO in 2009 by flag and gear. Each vessel is included in the total for each flag under which it fished during the year, but is included only once in the "Grand total"; therefore the grand total may not equal the sums of the individual flags.

TABLA A-11b. Estimaciones del número y volumen de bodega (metros cúbicos) de buques cerqueros (PS) y cañeros (LP) que pescaron en el OPO en 2009, por bandera y arte de pesca. Se incluye cada buque en los totales de cada bandera bajo la cual pescó durante el año, pero solamente una vez en el "Total general"; por consiguiente, los totales generales no equivalen necesariamente a las sumas de las banderas individuales.

Flag Bandera	Gear Arte	Well volume —Volumen de bodega (m^3)					Total	
		<401	401-800	801-1300	1301-1800	>1800	No.	Vol. (m^3)
		Number—Número						
BOL	PS	1	-	-	-	-	1	222
COL	PS	2	2	7	3	-	14	14,860
ECU	PS	36	23	13	4	9	85	60,096
ESP	PS	-	-	-	-	4	4	10,116
GTM	PS	-	-	-	1	1	2	3,575
HND	PS	-	1	1	-	-	2	1,559
MEX	PS	5	5	20	16	-	46	50,254
	LP	4	-	-	-	-	4	380
NIC	PS	-	-	4	1	-	5	6,353
PAN	PS	-	4	8	10	2	24	31,225
PER	PS	-	2	-	-	-	2	1,000
SLV	PS	-	-	1	-	3	4	7,415
USA	PS	-	-	1	-	2	3	5,315
VEN	PS	-	-	11	8	2	21	29,403
VUT	PS	-	-	1	2	-	3	3,609
Grand total— Total general	PS	44	35	67	45	23	214	
	LP	4	-	-	-	-	4	
	PS + LP	48	35	67	45	23	218	
		Well volume—Volumen de bodega (m^3)						
Grand total— Total general	PS	11,591	20,517	75,251	66,101	50,535		223,995
	LP	380	-	-	-	-		380
	PS + LP	11,971	20,517	75,251	66,101	50,535		224,375

- : none—ninguno

TABLE A-12. Minimum, maximum, and average capacity, in thousands of cubic meters, of purse-seine and pole-and-line vessels at sea in the EPO during l999-2008 and in 2009, by month.
TABLA A-12. Capacidad mínima, máxima, y media, en miles de metros cúbicos, de los buques cerqueros y cañeros en el mar en el OPO durante 1999-2008 y en 2009 por mes.

Month / Mes	1999-2008			2009
	Min	Max	Ave.-Prom.	
1	125.6	100.9	157.7	117.7
2	137.5	104.3	175.3	156.7
3	131.1	101.2	159.9	142.2
4	134.6	108.9	164.2	165.0
5	131.7	95.2	164.4	159.3
6	135.6	106.2	175.0	160.9
7	139.7	87.6	170.4	164.7
8	107.5	62.2	140.2	108.4
9	119.1	92.9	137.7	114.8
10	140.8	93.6	172.2	165.5
11	125.2	77.3	150.8	124.0
12	71.9	33.1	116.4	64.6
Ave.-Prom.	125.0	88.6	157.0	137.0