

INTER-AMERICAN TROPICAL TUNA COMMISSION

SCIENTIFIC ADVISORY COMMITTEE

12<sup>TH</sup> MEETING

(by videoconference)

10-14 May 2021

DOCUMENT SAC-12-03

THE TUNA FISHERY IN THE EASTERN PACIFIC OCEAN IN 2020

Introduction..... 3

1. Catches and landings of tunas, billfishes, and associated species..... 3

2. Catches by species ..... 4

3. Catches and fishing effort ..... 6

4. Distributions of the catches of tropical tunas..... 7

5. Size compositions of the catches of tunas ..... 7

6. The fleets..... 9

This report provides a summary of the catches and effort in 2020 of the fishery for tunas in the eastern Pacific Ocean (EPO), for whose management the Inter-American Tropical Tuna Commission (IATTC) is responsible. It is based on data available to the IATTC staff in March 2021; therefore, some of the data for 2020 are incomplete, and all data for 2019 and 2020 should be considered preliminary.

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

<b>Species:</b>		<b>Fishing gears:</b>	
ALB	Albacore tuna ( <i>Thunnus alalunga</i> )	FPN	Trap
BET	Bigeye tuna ( <i>Thunnus obesus</i> )	GN	Gillnet
BIL	Unidentified istiophorid billfishes	HAR	Harpoon
BKJ	Black skipjack ( <i>Euthynnus lineatus</i> )	LL	Longline
BLM	Black marlin ( <i>Makaira indica</i> )	LP	Pole and line
BUM	Blue marlin ( <i>Makaira nigricans</i> )	LTL	Troll
BZX	Bonito ( <i>Sarda</i> spp.)	LX	Hook and line
MLS	Striped marlin ( <i>Kajikia audax</i> )	OTR	Other <sup>1</sup>
PBF	Pacific bluefin tuna ( <i>Thunnus orientalis</i> )	UNK	Unknown
SFA	Indo-Pacific sailfish ( <i>Istiophorus platypterus</i> )	PS	Purse seine
SKJ	Skipjack tuna ( <i>Katsuwonus pelamis</i> )	RG	Recreational
SSP	Shortbill spearfish ( <i>Tetrapturus angustirostris</i> )	TX	Trawl
SWO	Swordfish ( <i>Xiphias gladius</i> )	<b>Ocean areas:</b>	
TUN	Unidentified tunas	EPO	Eastern Pacific Ocean
YFT	Yellowfin tuna ( <i>Thunnus albacares</i> )	WCPO	Western and Central Pacific Ocean

<sup>1</sup> Used to group known gear types

---

<b>Set types:</b>	
DEL	Dolphin
NOA	Unassociated school
OBJ	Floating object
	LOG: Flotsam
	FAD: Fish-aggregating device

---

**Flags:**  
**IATTC Members & Cooperating Non-Members**

---

BLZ	Belize
BOL	Bolivia
CAN	Canada
CHL	Chile
CHN	China
COL	Colombia
CRI	Costa Rica
ECU	Ecuador
EUR	European Union
EU (CYP)	Cyprus
EU (ESP)	Spain
EU (PRT)	Portugal
FRA	France
FRA (PYF)	French Polynesia
GTM	Guatemala
HND	Honduras
IDN	Indonesia
JPN	Japan
KIR	Kiribati
KOR	Republic of Korea
LBR	Liberia
MEX	Mexico
NIC	Nicaragua
PAN	Panama
PER	Peru
SLV	El Salvador
TWN	Chinese Taipei
USA	United States of America
VEN	Venezuela
VUT	Vanuatu

---

**Other flag codes**

---

COK	Cook Islands
NZL	New Zealand
RUS	Russia
VCT	St. Vincent and the Grenadines
UNK	Unknown

---



---

<b>Stock assessment:</b>	
<i>B</i>	Biomass
<i>C</i>	Catch
CPUE	Catch per unit of effort
<i>F</i>	Rate of fishing mortality
MSY	Maximum sustainable yield
<i>S</i>	Index of spawning biomass
SBR	Spawning biomass ratio
SSB	Spawning stock biomass

---

## INTRODUCTION

This document summarizes the catches and effort of the fisheries for species covered by the IATTC's Antigua Convention ("*tunas and tuna-like species and other species of fish taken by vessels fishing for tunas and tuna-like species*") in the eastern Pacific Ocean (EPO) in 2020. The most important of these species are the scombrids (family Scombridae), which include tunas, bonitos, seerfishes, and some mackerels. The principal species of tunas caught are the three tropical tuna species (yellowfin, skipjack, and bigeye), followed by the temperate tunas (albacore, and lesser catches of Pacific bluefin); other scombrids, such as bonitos and wahoo, are also caught. In addition to the tunas, this document covers the billfishes (swordfish, marlins, shortbill spearfish, and sailfish).

There are important fisheries for dorado, sharks, and other species and groups that interact with the tuna fisheries in the EPO and are thus within the IATTC's remit. Information on these other species such as carangids (yellowtail, rainbow runner, and jack mackerel), dorado, elasmobranchs (sharks, rays, and skates), among others, is provided in Document SAC-12-12, *Ecosystem considerations*.

Access to the fisheries is regulated by Resolution [C-02-03](#), which allows only vessels on the IATTC [Regional Vessel Register](#) to fish for tunas in the EPO. Vessels are authorized to fish by their respective flag governments, and only duly authorized vessels are included in the Register. The Register lists, in addition to a vessel's name and flag, its fishing gear, dimensions, carrying capacity, date of construction, ownership, home port, and other characteristics. However, this requirement has not been applied to the thousands of small artisanal vessels, called *pangas*, that are known to catch tunas, among other species, in coastal waters of the EPO, but data on their numbers, effort, and catches are incomplete or unavailable. A pilot program, focused on sharks, to collect data on these fisheries in Central America is ongoing (SAC-11-14). The results of the pilot study will offer guidance in the development of a long-term sampling program in the region.

The IATTC staff has collected and compiled data on the longline fisheries since 1952, on catches of yellowfin and skipjack since 1954, bluefin since 1973, and bigeye since 1975. The data in this report, which are as accurate and complete as possible, are derived from various sources, including vessel logbooks, on-board observer data, unloading records provided by canners and other processors, export and import records, reports from governments and other entities, and the IATTC species and size composition sampling program.

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

Almost all the catches in the EPO are made by the purse-seine and longline fleets; pole-and-line vessels, and various artisanal and recreational fisheries, account for a small percentage of the total catches. The IATTC staff compiles catch data for all fishing gears, including trolls, harpoons, and gillnets.

Detailed catch data are available for the purse-seine fishery, which takes over 90% of the total reported catches; the data for the other fisheries are incomplete. Purse-seine data for 2019 and 2020, and 2018-2020 data for longlines and other gears, are preliminary.

Since 1993 all Class-6<sup>2</sup> purse-seine vessels carry observers, who collect detailed data on catches, including those discarded at sea. Estimates of the "retained" catch (the portion of the total catch that is landed) are based principally on data collected during vessel unloadings.

Longline vessels, particularly the larger ones, fish primarily for bigeye, yellowfin, albacore, and swordfish. Data on the retained catches of most of the larger longline vessels are obtained from the vessels' flag

---

<sup>2</sup> Class 6: carrying capacity greater than 363 metric tons (t)

governments; data for smaller longliners, artisanal vessels, and other vessels that fish for species covered by the Antigua Convention are incomplete or unavailable, but some are obtained from vessel logbooks, or from governments or governmental reports.

Data for the western and central Pacific Ocean (WCPO) are taken from the [Tuna Fishery Yearbook for 2019](#), published by the Western and Central Pacific Fisheries Commission (WCPFC).

This report summarizes data from all the above sources. The estimated total catches of tropical tunas (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 1991-2020 are shown in [Tables A-2a-b](#).

The catches of tropical tunas during 1991-2020, by flag, are shown in [Tables A-3a-e](#), and the purse-seine catches and landings of tunas during 2019-2020 are summarized by flag in [Tables A-4a-b](#).

## **2. CATCHES BY SPECIES**

### **2.1. Yellowfin tuna**

The total annual catches of yellowfin in the Pacific Ocean during 1991-2020 are shown in [Table A-1](#). The 2020 EPO catch of 219 thousand t is 6% less than the average of 233 thousand t for the previous 5-year period (2015-2019). In the WCPO, the catches of yellowfin reached a record high of 711 thousand t in 2017.

The annual retained catches of yellowfin in the EPO, by gear, during 1991-2020 are shown in [Table A-2a](#). Over the most recent 15-year period (2005-2019), the annual retained purse-seine and pole-and-line catches have fluctuated around an average of 221 thousand t (range: 167 to 270 thousand t). The preliminary estimate of the retained catch in 2020, 219 thousand t, is 4% less than that of 2019, but 1% less than the 2005-2019 average. On average, about 0.4% (range: 0.1 to 1.0%) of the total purse-seine catch of yellowfin was discarded at sea during 2005-2019 ([Table A-2a](#)).

During 1991-2005, annual longline catches in the EPO averaged about 22 thousand t (range: 12 to 31 thousand t), or about 7% of the total retained catches of yellowfin. They then declined sharply, to an annual average of 10 thousand t (range: 8 to 13 thousand t), or about 4% of the total retained catches, during 2006-2019. Catches by other fisheries (recreational, gillnet, troll, artisanal, *etc.*), whether incidental or targeted, are shown in [Table A-2a](#), under “Other gears” (OTR); during 2006-2019 they averaged about 2 thousand t.

### **2.2. Skipjack tuna**

The total annual catches of skipjack in the Pacific Ocean during 1991-2020 are shown in [Table A-1](#). Most of the catch is taken in the WCPO. Prior to 1998, WCPO catches averaged about 900 thousand t; subsequently, they increased steadily, from 1.1 million t to an all-time high of 2 million t in 2019. In the EPO, the greatest catches occurred between 2004 and 2020, ranging from 153 to 351 thousand t, the record catch in 2019.

The annual retained catches of skipjack in the EPO, by gear, during 1991-2020 are shown in [Table A-2a](#). During 2005-2019 the annual retained purse-seine and pole-and-line catch averaged 277 thousand t (range: 147 to 347 thousand t). The preliminary estimate of the retained catch in 2020, 297 thousand t, is 7% greater than the 15-year average for 2005-2019.

Discards of skipjack at sea decreased each year during the period, from 6% in 2005 to a low of less than 1% in 2018, averaging about 2% of the total catch of the species ([Table A-2a](#)).

Catches of skipjack in the EPO by longlines and other gears are negligible ([Table A-2a](#)).

### 2.3. Bigeye tuna

The total annual catches of bigeye in the Pacific Ocean during 1991-2020 are shown in [Table A-1](#). Overall, the catches in both the EPO and WCPO have increased, but with considerable fluctuations. In the WCPO they averaged more than 77 thousand t during the late 1970s, decreased during the early 1980s, and then increased steadily to 127 thousand t in 1992; they jumped to 146 thousand t in 1999, and reached a high of 170 thousand t in 2004, since when they have fluctuated between 122 and 159 thousand t. In the EPO, the average catch during 1991-2020 was 104 thousand t, with a low of 75 thousand t in 2020 and a high of 149 thousand t in 2000.

The annual retained catches of bigeye in the EPO by purse-seine and pole-and-line vessels during 1991-2020 are shown in [Table A-2a](#). The introduction of fish-aggregating devices (FADs), placed in the water by fishers to attract tunas, in 1993 led to a sudden and dramatic increase in the purse-seine catches. Prior to 1993, the annual retained purse-seine catch of bigeye in the EPO was about 5 thousand t ([Table A-2a](#)); by 1994 it was 35 thousand t, and in 1996 was over 60 thousand t. During 1998-2019 it has fluctuated between 44 and 95 thousand t; the preliminary estimate for 2020 is 75 thousand t.

During 2000-2020 the percentage of the purse-seine catch of bigeye discarded at sea has steadily decreased, from 5% in 2000 to less than 1% in 2014 and 2020, averaging about 1.6%.

Before the expansion of the FAD fishery, longliners caught almost all the bigeye in the EPO, averaging 88 thousand t annually during 1985-1992. Since 1993, the annual average catch has declined by 50%, to 44 thousand t, and the preliminary estimate for 2019 is less than 27 thousand t ([Table A-2a](#)).

Small amounts of bigeye are caught in the EPO by other gears ([Table A-2a](#)).

### 2.4. Pacific bluefin tuna

The catches of Pacific bluefin in the entire Pacific Ocean, by flag and gear, as reported by the vessels' flag governments to the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC), are shown in [Table A-5a](#).

The catches of Pacific bluefin in the EPO during 1991-2020, by gear, are shown in [Table A-2a](#). In recent years, purse-seine vessels accounted for over 93% of the annual catch. The 1991-2019 average EPO retained catch is 3.7 thousand t (range: 400 t to 9.9 thousand t); the preliminary estimate for 2020 is 3.4 thousand t ([Table A-2a](#)).

Catches of Pacific bluefin by recreational gear in the EPO are reported in numbers of individual fish caught, whereas all other gears report catches in weight; the data are therefore converted to weights for inclusion in the EPO catch totals. The original catch data for 1991-2020, in numbers of fish, are presented in [Table A-5b](#).

### 2.5. Albacore tuna

Data provided by the relevant CPCs on catches of albacore in the EPO, by gear and area (north and south of the equator), are shown in [Table A-6](#), and for the entire EPO in [Table A-2a](#). A portion of the albacore catch is taken by troll vessels (LTL), included under "Other gears" (OTR) in [Table A-2a](#).

### 2.6. Other tunas and tuna-like species

While yellowfin, skipjack, and bigeye tunas comprise the great majority of the retained purse-seine catches in the EPO, other tunas and tuna-like species, such as albacore, black skipjack, bonito, frigate and bullet tunas, contribute to the overall harvest. The estimated annual retained and discarded catches of these species during 1991-2020 are shown in [Table A-2a](#). The catches reported in the "unidentified tunas" (TUN) category in [Table A-2a](#) contain some catches reported by species (frigate and bullet tunas) along

with the unidentified tunas. The total retained catch of these other species by the purse-seine fishery in 2020 was 7.3 thousand t, less than the 2005-2019 average of 9.1 thousand t (range: 2 to 19 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.

## 2.7. Billfishes

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

**Swordfish** are caught in the EPO with large-scale and artisanal longlines, gillnets, harpoons, and occasionally with recreational gear. During 1999-2013 the longline catch averaged 15 thousand t, but during 2014-2016 this increased by about 50%, to over 23 thousand t, possibly due to increased abundance of swordfish, increased effort directed toward the species, increased reporting, or a combination of all of these.

**Other billfishes** are caught with large-scale and artisanal longlines and recreational gear. The average annual longline catches of blue marlin and striped marlin during 2005-2019 were about 3.2 thousand and 1.8 thousand t, respectively. Smaller amounts of other billfishes are taken by longline.

Little information is available on the recreational catches of billfishes, but, the retained catches are believed to be substantially less than the commercial catches for all species, due to catch-and-release practices.

Billfishes are caught incidentally in the purse-seine fisheries, which during 2005-2019 accounted for about 1% of the total catch of billfishes in the EPO. Prior to 2011, they were all classified as discarded dead; however, the growing rate of retention of such bycatches made it important to reflect this in the data, and since 2011 retained catch and discards are reported separately in [Table A-2b](#).

## 3. CATCHES AND FISHING EFFORT

### 3.1. Purse seine

Estimates of the numbers of purse-seine sets of each type (associated with dolphins (DEL), associated with floating objects (OBJ), and unassociated (NOA)) in the EPO during 2005-2020, and the retained catches from those sets, are shown in [Table A-7](#) and [Figure 1](#).<sup>3</sup> The estimates for Class 1-5<sup>4</sup> vessels were calculated from logbook data in the IATTC statistical data base, and those for Class-6 vessels from the observer data bases of the IATTC, Colombia, Ecuador, the European Union, Mexico, Nicaragua, Panama, the United States, and Venezuela.

---

<sup>3</sup> The catch data for 2005-2020 incorporate previously unavailable data, and are thus different from the corresponding data presented in previous publications.

<sup>4</sup> ≤363 t carrying capacity

Since the introduction of artificial fish-aggregating devices (FADs) in the mid-1990s, they have become predominant in the floating-object fishery, and now account for an estimated 98% of all floating-object sets by Class-6 vessels (Table A-8).

### 3.2. 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.

## 4. DISTRIBUTIONS OF THE CATCHES OF TROPICAL TUNAS

### 4.1. Purse-seine catches

The average annual distributions of purse-seine catches, by set type, of tropical tunas (yellowfin, skipjack, and bigeye) in the EPO during 2015-2019 are shown in Figures A-1a, A-2a, and A-3a, respectively, and preliminary estimates for 2020 are shown in Figures A-1b, A-2b, and A-3b.

**Yellowfin:** The majority of catches in 2020 were taken in sets associated with dolphins in two principal areas: north of 5°N from 105°W to 135°W, and inshore north of the equator from 100°W to the coast. Lesser amounts were taken in dolphin and floating-object sets throughout the EPO south of 10°N (Figure A-1b).

**Skipjack** is caught primarily in unassociated tuna sets and floating object sets. The majority of catches in 2020 were taken south of 10°N throughout the EPO, in sets associated with floating objects and in unassociated tuna sets east of 100°W and south along the coast. Unlike previous years, the majority of the skipjack catch far offshore near the western border of the EPO was taken in floating object sets, while more of the skipjack catch near the coast of the Americas was taken in unassociated tuna sets. (Figure A-2b).

**Bigeye** are not often caught north of about 7°N in the EPO. Almost all of the 2020 catches were taken in sets on FADs far offshore close to the equator, with a lesser concentration around 10°S between 105°W and 120°W (Figure A-3b).

### 4.2. Longline catches

Since 2009, the IATTC has received tuna catch and effort data from Belize, China, France (French Polynesia), Japan, the Republic of Korea, Panama, Chinese Taipei, the United States, and Vanuatu. Albacore, 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 in the Pacific Ocean by Chinese, Japanese, Korean, and Chinese Taipei longline vessels during 2015-2019 are shown in Figure A-4.

## 5. SIZE COMPOSITIONS OF THE CATCHES OF TUNAS

### 5.1. 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

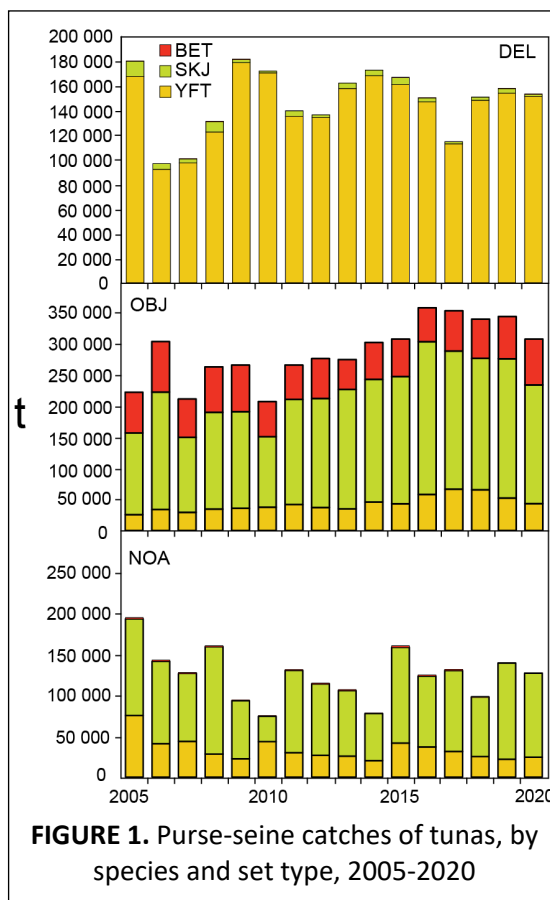


FIGURE 1. Purse-seine catches of tunas, by species and set type, 2005-2020

estimates of the populations for various purposes, primarily the integrated modeling that the staff uses to assess the status of the stocks (see [Stock Assessment Reports](#)). Length-frequency samples are obtained from the catches of purse-seine vessels in the EPO by IATTC personnel at ports of landing in Ecuador, Mexico, Panama, and Venezuela. 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](#).

Historical long-term time series of size-composition data for yellowfin and bigeye are available in the [Stock Assessment Reports](#), and average length stock status indicators (SSIs) are available for yellowfin, bigeye and skipjack ([SAC-12-05](#)). In this report, data on the size composition of the catches during 2015-2020 are presented ([Figures A-6 to A-8](#)), with two sets of length-frequency histograms for each species: the first shows the data for 2020 by stratum (gear type, set type, and area), and the second the combined data for each year of the 2015-2020 period.

**Yellowfin:** nine purse-seine fisheries (four associated with floating objects (OBJ), three associated with dolphins (DEL), and two unassociated (NOA)) and one pole-and-line (LP) fishery, which includes all 13 sampling areas) are defined ([Figure A-5](#)). Of the 448 wells sampled during 2020, 354 contained yellowfin. The estimated size compositions of the fish caught are shown in [Figure A-6a](#). Most of the yellowfin catch was taken in the DEL fisheries during the first half of the year, with smaller amounts taken in the OBJ-N fishery in the first quarter and the NOA-N fishery in the second quarter. Large yellowfin (140-160 cm) were caught in the NOA-S fishery in the second quarter, while yellowfin in the 110-150 cm range were caught in the DEL-N fishery throughout the year. Smaller yellowfin (<60 cm) were taken in the OBJ fishery primarily in the first and second quarters.

The estimated size compositions of the yellowfin caught by all fisheries combined during 2015-2020 are shown in [Figure A-6b](#). The average weight of yellowfin in 2020, 10.6 kg, was much higher than the previous 4 years (6.3-7.7 kg), and the size distribution also showed a trend toward larger fish, with the greatest quantity around the 100-150 cm range.

**Skipjack:** seven purse-seine fisheries (four OBJ, two NOA, one DEL) and one LP fishery are defined ([Figure A-5](#)); the last two include all 13 sampling areas. Of the 448 wells sampled, 243 contained skipjack. The estimated size compositions of the fish caught during 2020 are shown in [Figure A-7a](#). Most of the skipjack catch was taken in the OBJ-N, OBJ-E and OBJ-S fisheries in the second, third and fourth quarters, and in the NOA-S fishery in the first and second quarters. Larger skipjack (60-70 cm) were caught in the NOA-S fishery in the second quarter. The smallest (<40 cm) were caught primarily in the OBJ-N, OBJ-E and OBJ-S fisheries in the third quarter, and in the OBJ-S fishery in the fourth quarter.

The estimated size compositions of skipjack caught by all fisheries combined during 2015-2020 are shown in [Figure A-7b](#). The average weight of skipjack in 2020 (2.0 kg) was consistent with previous years (1.8-2.2 kg).

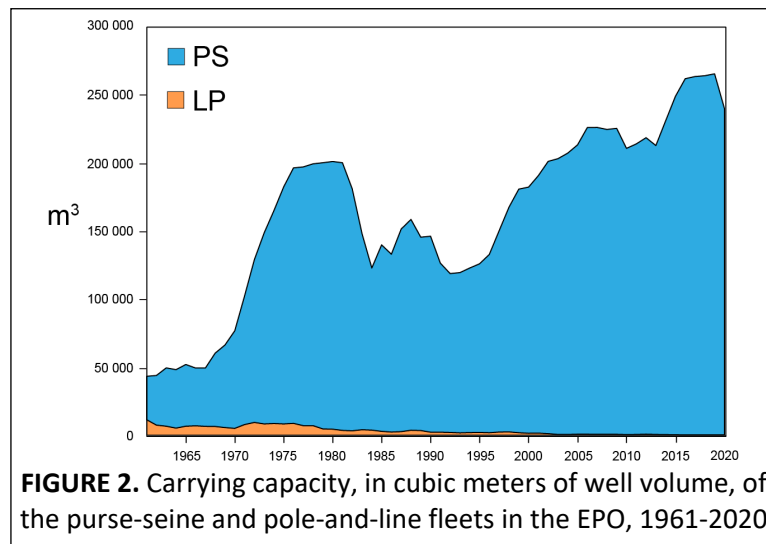
**Bigeye:** six purse-seine fisheries (four OBJ, one NOA, one DEL) and one LP fishery are defined ([Figure A-5](#)); all except the OBJ fisheries include all 13 sampling areas. Of the 448 wells sampled, 77 contained bigeye. The estimated size compositions of the fish caught during 2020 are shown in [Figure A-8a](#). Most of the bigeye catch was taken in the OBJ-N fishery in the first and second quarters, and in the OBJ-S fishery throughout the year. Lesser amounts were caught in the OBJ-E fishery in the third quarter.

The estimated size compositions of bigeye caught by all fisheries combined during 2015-2020 are shown in [Figure A-8b](#). The average weight of bigeye in 2020 (5.1 kg) was slightly higher than the previous five years (4.7-5.0 kg). More large bigeye in the 50-100 cm range was caught in 2020 than in previous years, while less of the largest bigeye (>120 cm) was caught.

**Pacific bluefin** are caught by purse-seine and recreational gears off California and Baja California, historically from about 23°N to 35°N, but only between 28°N and 32°N in recent years. The 2020 purse-



seine fishing season continued the trend of starting earlier than any previous year: in 2020, bluefin were first caught in early January, and the fishery was closed in early February, when the annual catch limit was reached. Most of the catch is transported live to grow-out pens near the coast of Mexico. Mexico's National Fisheries Institute (INAPESCA) provided length-composition data for purse-seine catches during 2014-2019 ([Figure A-9](#)). PBF length composition data from INAPESCA for 2020 was not available at the time of preparation of this report.



**FIGURE 2.** Carrying capacity, in cubic meters of well volume, of the purse-seine and pole-and-line fleets in the EPO, 1961-2020

## 5.2. Longline fishery

The size compositions of yellowfin and bigeye caught by the Japanese longline fleet (commercial and training vessels) in the EPO during 2015-2019 are shown in [Figures A-10](#) and [A-11](#). The average annual weight during that period ranged from 36.8 to 61.0 kg for yellowfin, and from 61.7 kg to 66.2 kg for bigeye.

## 5.3. Catches of tunas, by flag and gear

The annual retained catches of tunas in the EPO during 1991-2020, by flag and gear, are shown in [Tables A-3a-e](#). The purse-seine catches of tunas in 2019 and 2020, by flag and species, are summarized in [Table A-4a](#). Of the nearly 602 thousand t of tunas caught in 2020, 46% were caught by Ecuadorian vessels, and 20% by Mexican vessels. Other countries with significant catches included Panama (12%), Colombia (6%), Venezuela (5%), United States (4%), Nicaragua (3%) and Peru (1%). The purse-seine landings of tunas in 2019 and 2020, by species and country of landing, are summarized in [Table A-4b](#). Of the more than 610 thousand t of tunas landed in the EPO in 2020, 64% were landed in Ecuadorian ports, and 20% in Mexican ports. Other countries with landings of tunas in the EPO included Colombia (5%), Peru (2%) and the United States (1%).

## 6. THE FLEETS

### 6.1. Purse seine

The IATTC [Regional Vessel Register](#) contains detailed records of all purse-seine vessels that are authorized to fish for tunas in the EPO. However, only vessels that fished for yellowfin, skipjack, bigeye, and/or Pacific bluefin tuna in the EPO in 2020 are included in the following description of the purse-seine fleet.

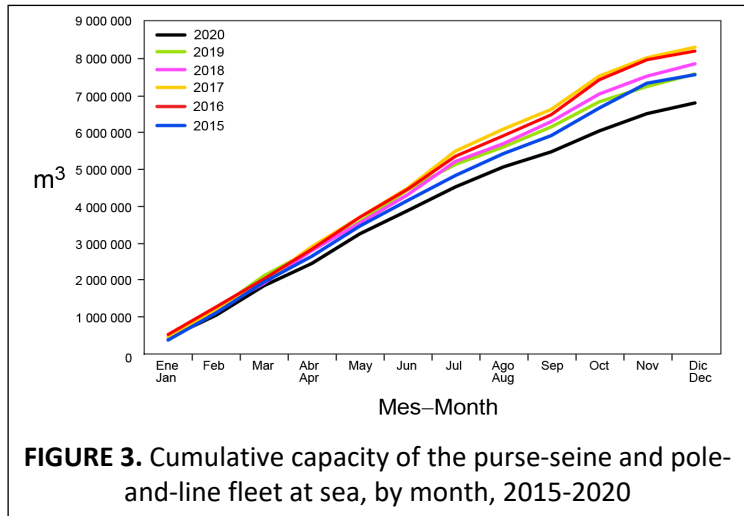
The IATTC uses well volume, in cubic meters (m<sup>3</sup>), to measure the carrying capacity of purse-seine vessels. Reliable well volume data are available for almost all purse-seine vessels; the well volume of vessels lacking such data is calculated by applying a conversion factor to their capacity in tons ([Table A-10](#); [Figure 2](#)).

The 2019 and preliminary 2020 data for numbers and total well volumes of purse-seine vessels that fished for tunas in the EPO are shown in [Tables A-11a](#) and [A-11b](#). During 2020, the fleet was dominated by Ecuadorian and Mexican vessels, with about 36% and 24%, respectively, of the total well volume; they were followed by the Panama (11%), United States (7%), Venezuela (7%), Colombia

(6%), El Salvador (3%), Nicaragua (2%), Peru (2%) and the European Union (Spain) (2%).<sup>5</sup>

The cumulative capacity at sea during 2020 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 2010-2019, and the 2020 values, are shown in [Table A-12](#). The monthly values are averages of the VAS estimated at weekly intervals by the IATTC staff. The average VAS values for 2010-2019 and 2020 were slightly over 142 thousand m<sup>3</sup> (59% of total capacity) and about 130 thousand m<sup>3</sup> (54% of total capacity), respectively.

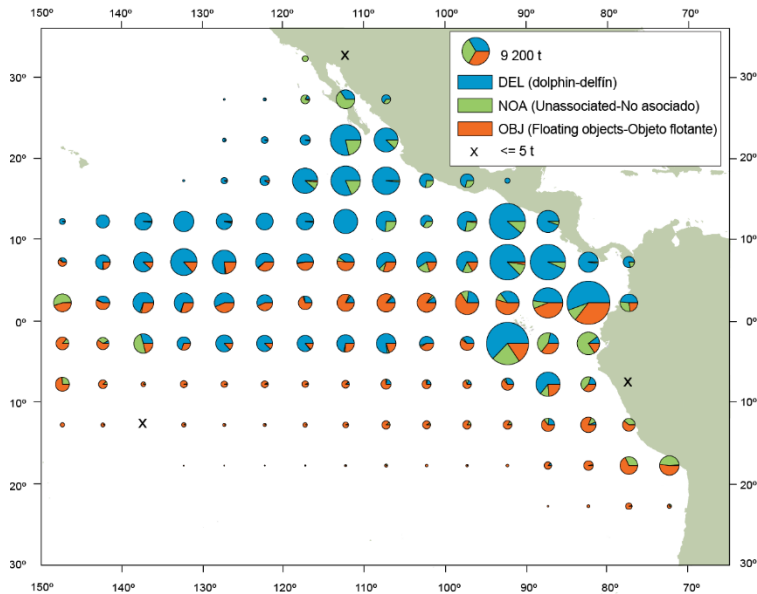


**FIGURE 3.** Cumulative capacity of the purse-seine and pole-and-line fleet at sea, by month, 2015-2020

## 6.2. Other fleets of the EPO

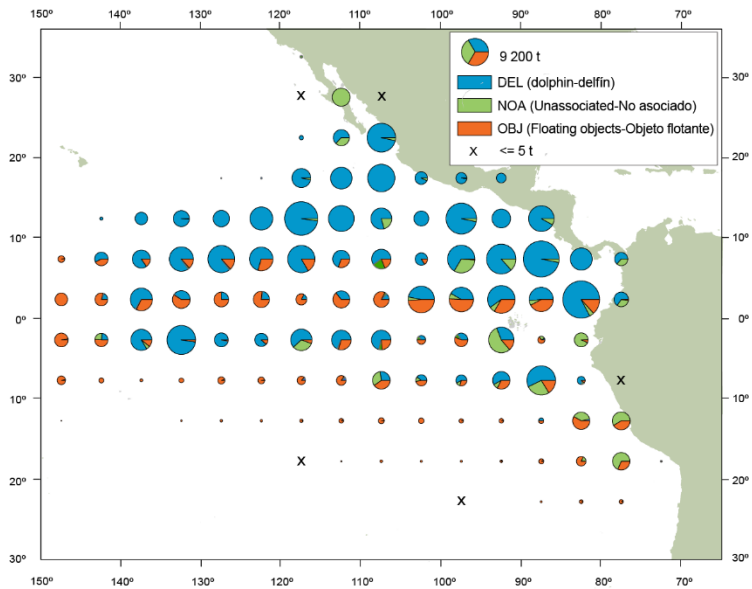
Information on other types of vessels that are authorized to fish in the EPO is available in the IATTC's [Regional Vessel Register](#). In some cases, particularly for large longline vessels, the Register contains information for vessels authorized to fish not only in the EPO, but also in other oceans, and which may not have fished in the EPO during 2020, or ever.

<sup>5</sup> The sum of the percentages may not add up to 100% due to rounding.



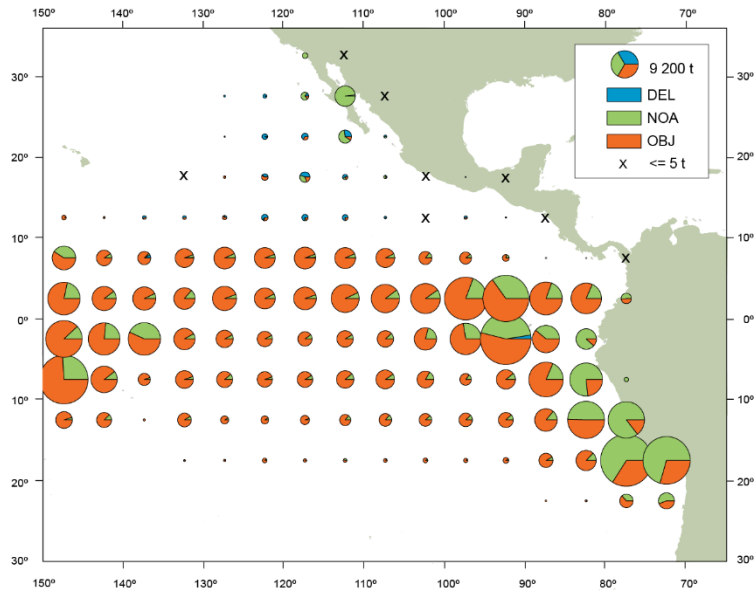
**FIGURE A-1a.** Average annual distributions of the purse-seine catches of yellowfin, by set type, 2015-2019. The sizes of the circles are proportional to the amounts of yellowfin caught in those 5° by 5° areas.

**FIGURA A-1a.** Distribución media anual de las capturas cerqueras de aleta amarilla, por tipo de lance, 2015-2019. El tamaño de cada círculo es proporcional a la cantidad de aleta amarilla capturado en la cuadrícula de 5° x 5° correspondiente.



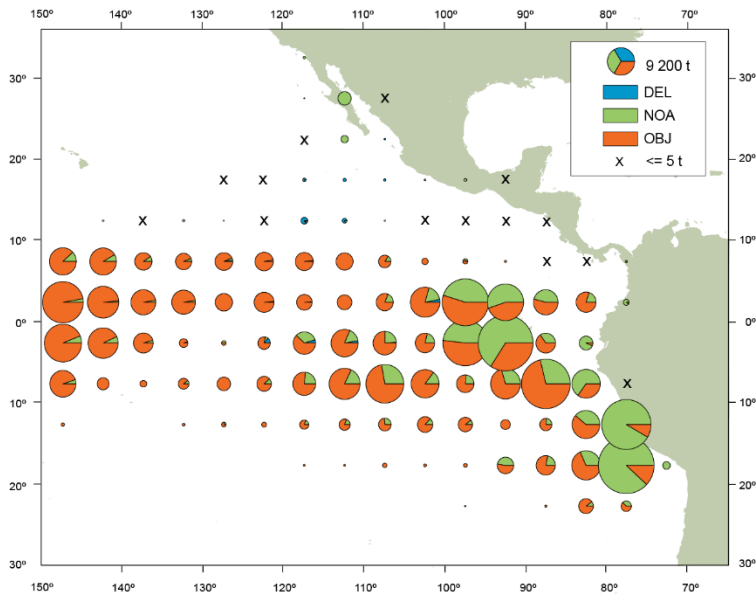
**FIGURE A-1b.** Annual distributions of the purse-seine catches of yellowfin, by set type, 2020. The sizes of the circles are proportional to the amounts of yellowfin caught in those 5° by 5° areas.

**FIGURA A-1b.** Distribución anual de las capturas cerqueras de aleta amarilla, por tipo de lance, 2020. El tamaño de cada círculo es proporcional a la cantidad de aleta amarilla capturado en la cuadrícula de 5° x 5° correspondiente.



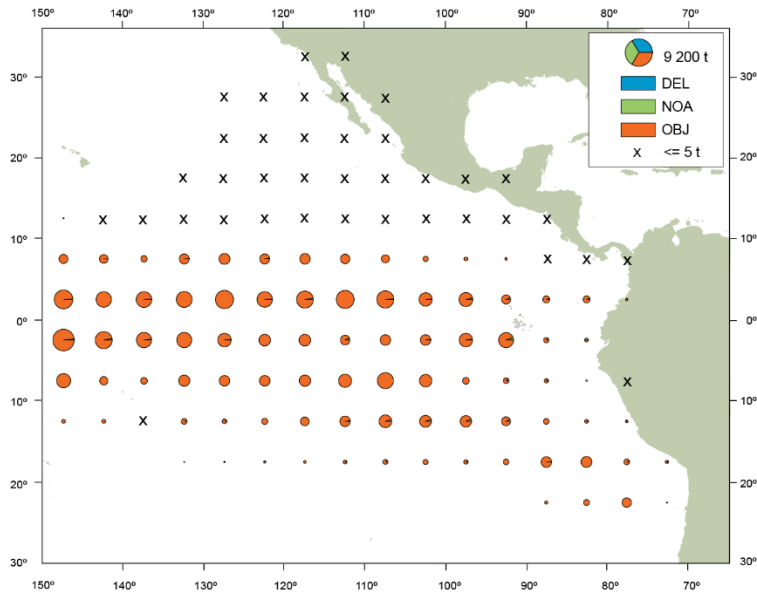
**FIGURE A-2a.** Average annual distributions of the purse-seine catches of skipjack, by set type, 2015-2019. The sizes of the circles are proportional to the amounts of skipjack caught in those 5° by 5° areas.

**FIGURA A-2a.** Distribución media anual de las capturas cerqueras de barrilete, por tipo de lance, 2015-2019. El tamaño de cada círculo es proporcional a la cantidad de barrilete capturado en la cuadrícula de 5° x 5° correspondiente.



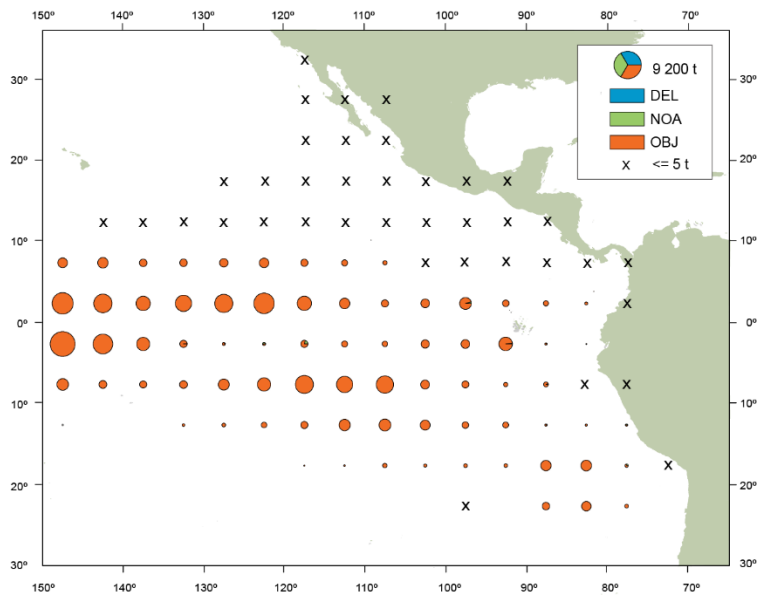
**FIGURE A-2b.** Annual distributions of the purse-seine catches of skipjack, by set type, 2020. The sizes of the circles are proportional to the amounts of skipjack caught in those 5° by 5° areas.

**FIGURA A-2b.** Distribución anual de las capturas cerqueras de barrilete, por tipo de lance, 2020. El tamaño de cada círculo es proporcional a la cantidad de barrilete capturado en la cuadrícula de 5° x 5° correspondiente.



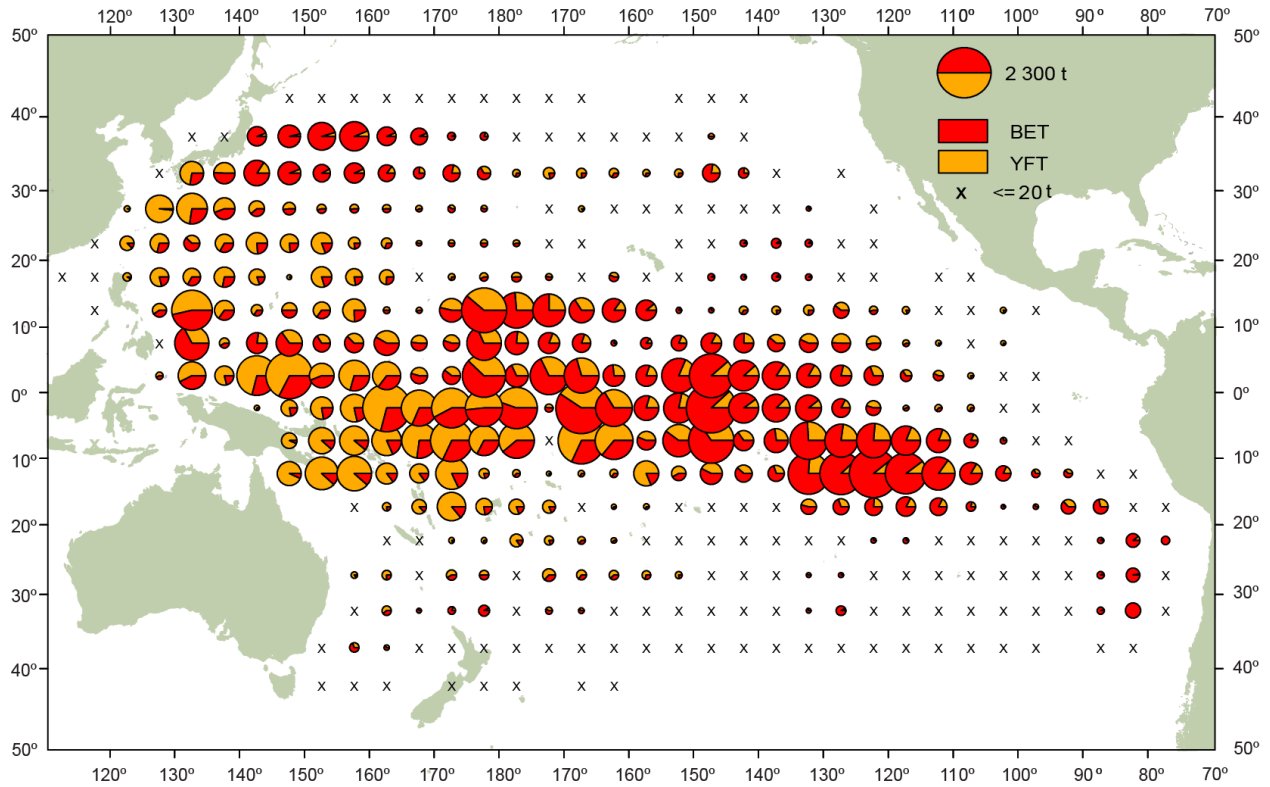
**FIGURE A-3a.** Average annual distributions of the purse-seine catches of bigeye, by set type, 2015-2019. The sizes of the circles are proportional to the amounts of bigeye caught in those 5° by 5° areas.

**FIGURA A-3a.** Distribución media anual de las capturas cerqueras de patudo, por tipo de lance, 2015-2019. El tamaño de cada círculo es proporcional a la cantidad de patudo capturado en la cuadrícula de 5° x 5° correspondiente.



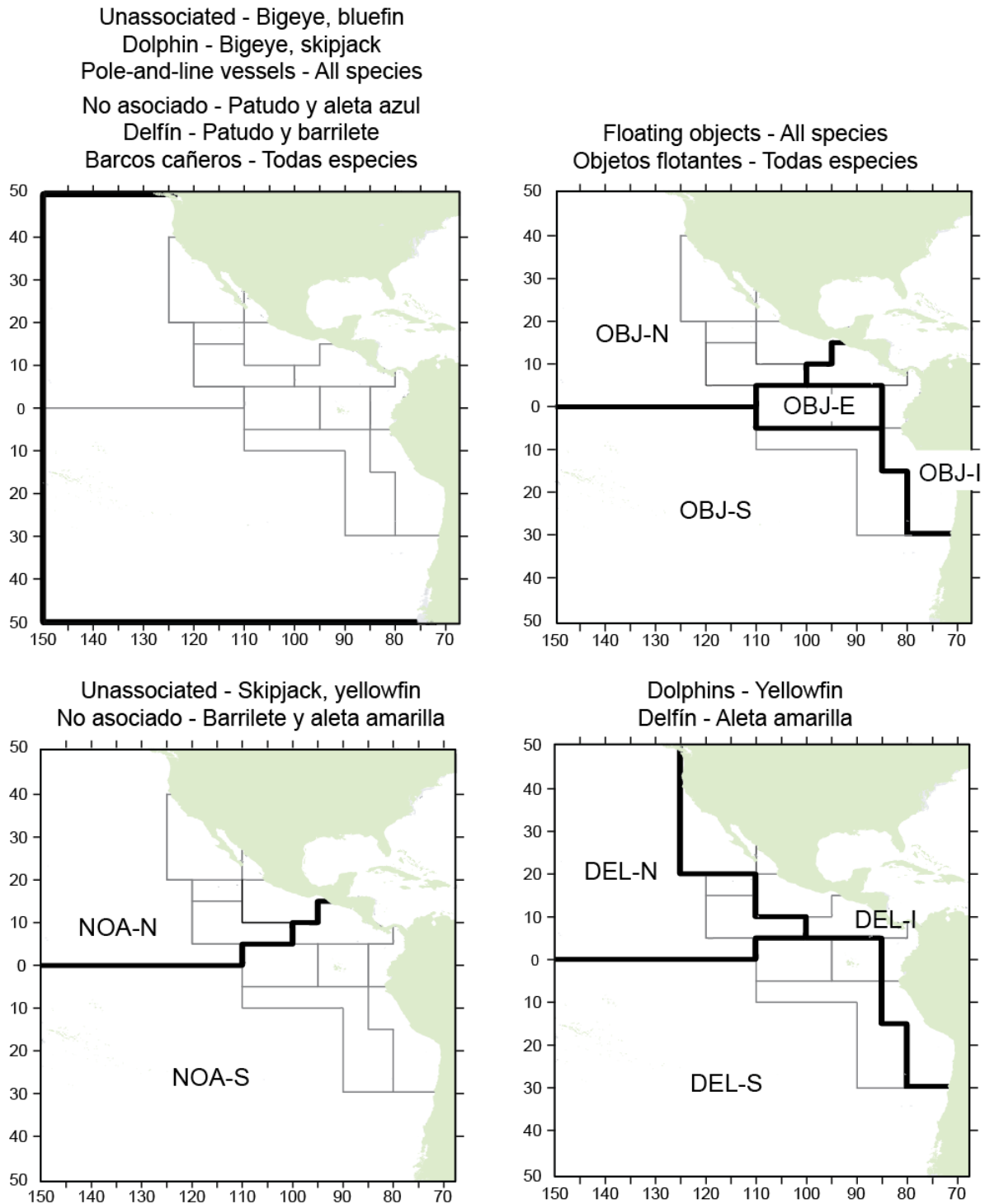
**FIGURE A-3b.** Annual distributions of the purse-seine catches of bigeye, by set type, 2020. The sizes of the circles are proportional to the amounts of bigeye caught in those 5° by 5° areas.

**FIGURA A-3b.** Distribución anual de las capturas cerqueras de patudo, por tipo de lance, 2020. El tamaño de cada círculo es proporcional a la cantidad de patudo capturado en la cuadrícula de 5° x 5° correspondiente.



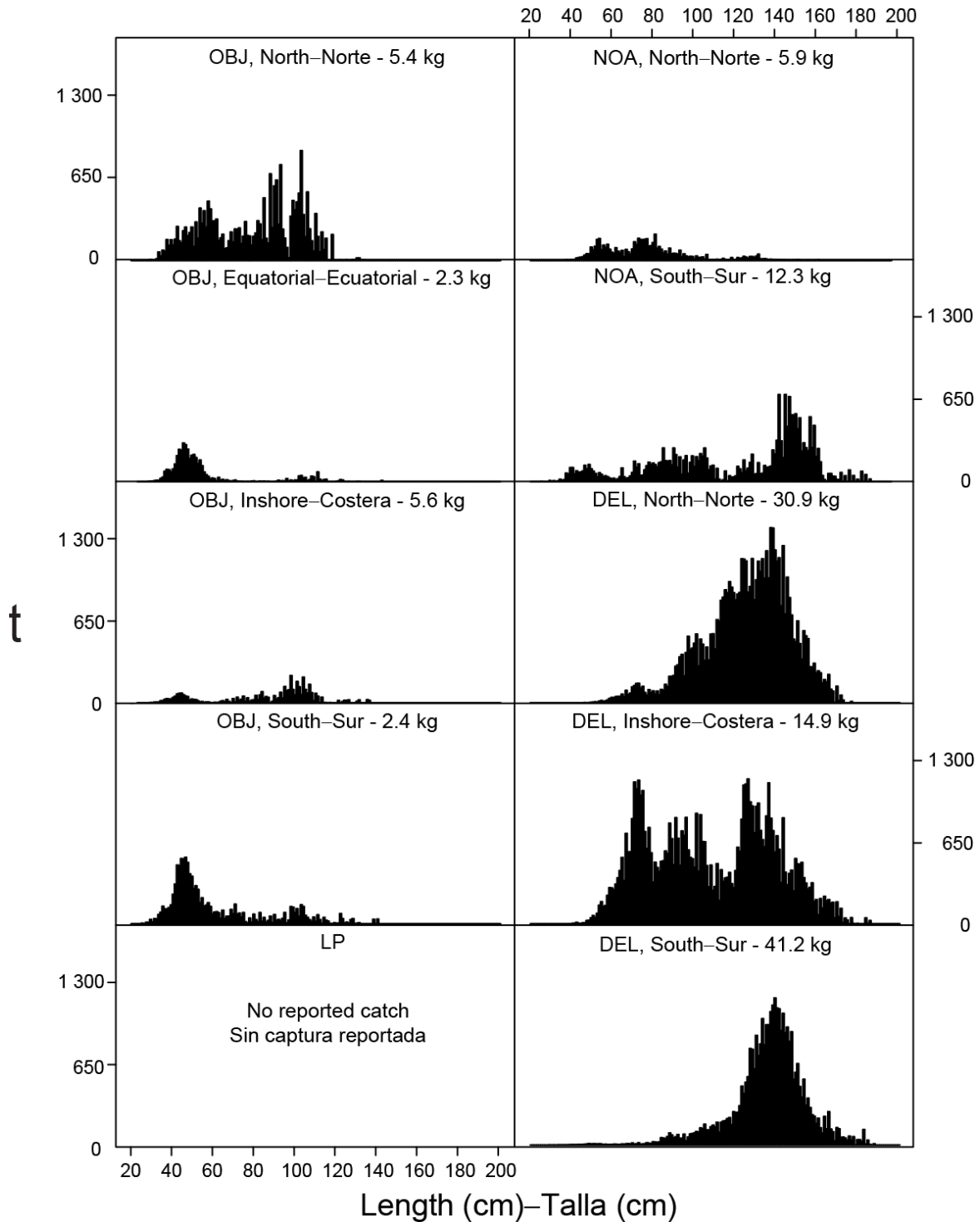
**FIGURE A-4.** Distributions of the average annual catches of bigeye and yellowfin tunas in the Pacific Ocean, in metric tons, by Chinese, Japanese, Korean, and Chinese Taipei longline vessels, 2015-2019. The sizes of the circles are proportional to the amounts of bigeye and yellowfin caught in those 5° by 5° areas.

**FIGURA A-4.** Distribución de las capturas anuales medias de atunes patudo y aleta amarilla en el Océano Pacífico, en toneladas métricas, por buques palangreros de China, Corea, Japón, y Taipei Chino, 2015-2019. El tamaño de cada círculo es proporcional a la cantidad de patudo y aleta amarilla capturado en la cuadrícula de 5° x 5° correspondiente.



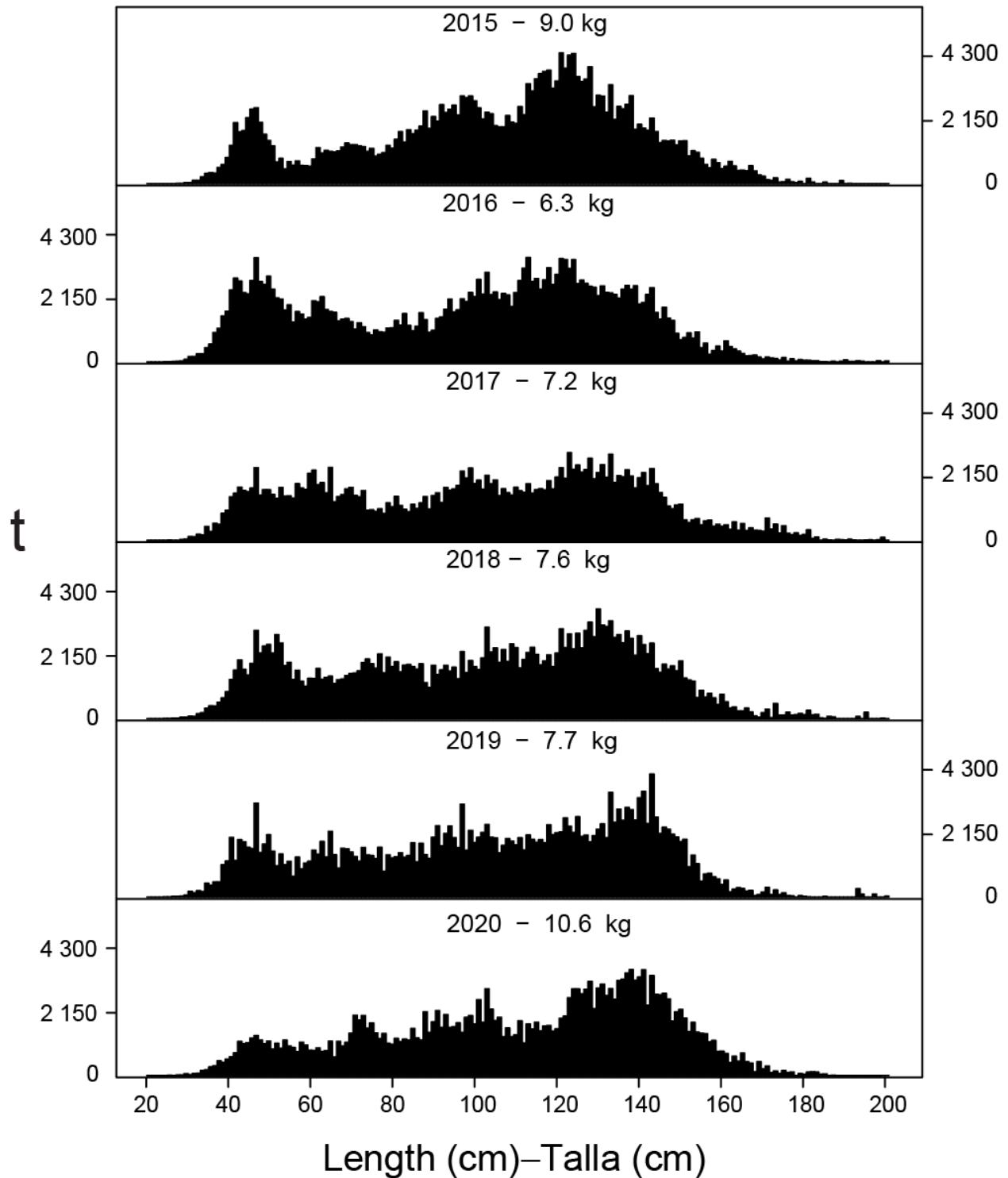
**FIGURE A-5.** The purse-seine fisheries defined by the IATTC staff for analyses of yellowfin, skipjack, and bigeye in the EPO. The thin lines indicate the boundaries of the 13 length-frequency sampling areas, and the bold lines the boundaries of the fisheries.

**FIGURA A-5.** Las pesquerías cerqueras definidas por el personal de la CIAT para los análisis de los atunes 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.



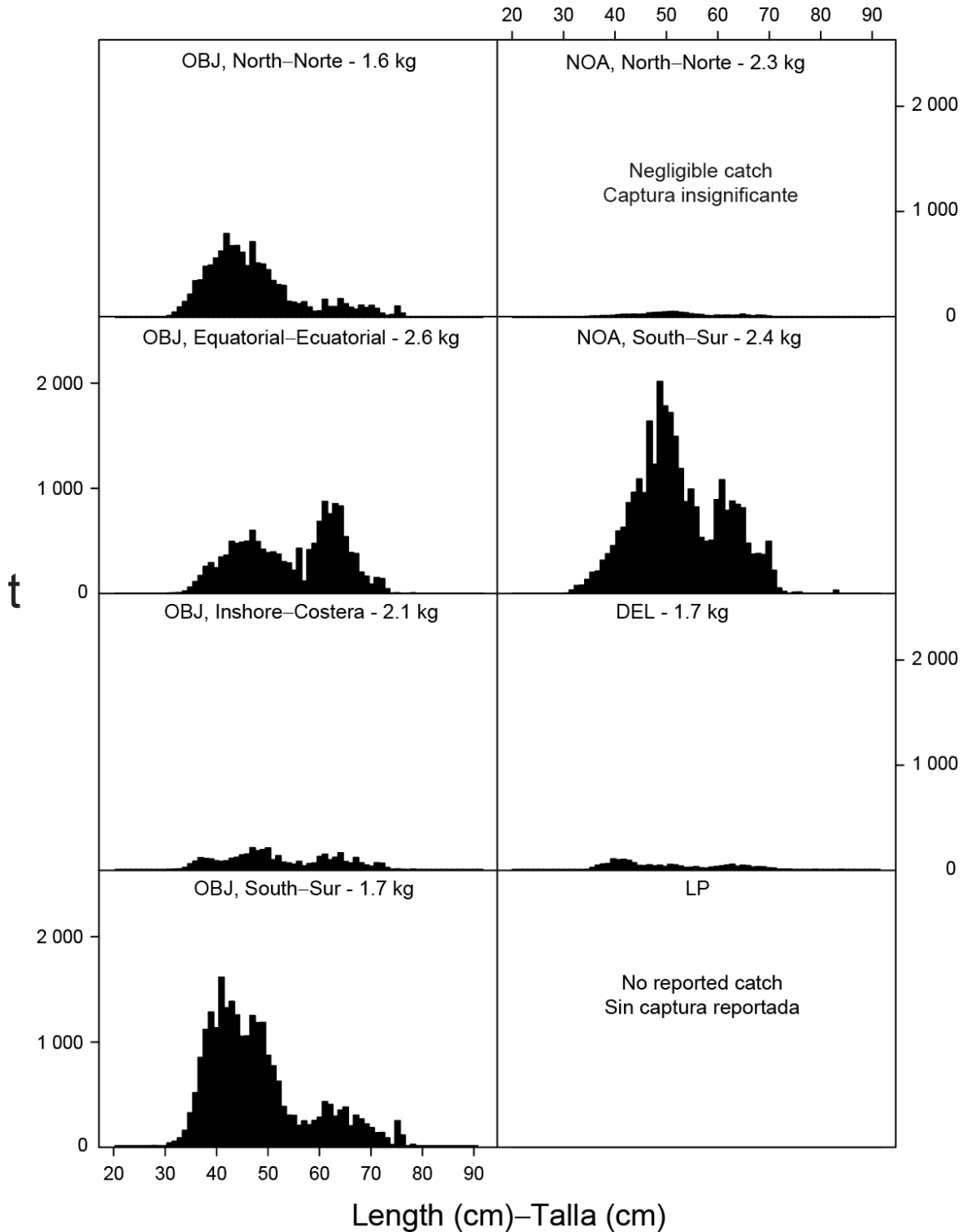
**FIGURE A-6a.** Estimated size compositions of the yellowfin caught in the EPO during 2020 for each fishery designated in Figure A-5. The value at the top of each panel is the average weight of the fish in the samples.  
**FIGURA A-6a.** Composición por tallas estimada del aleta amarilla capturado en el OPO durante 2020 en cada pesquería ilustrada en la Figura A-5. El valor en cada recuadro representa el peso promedio del pescado en las muestras.



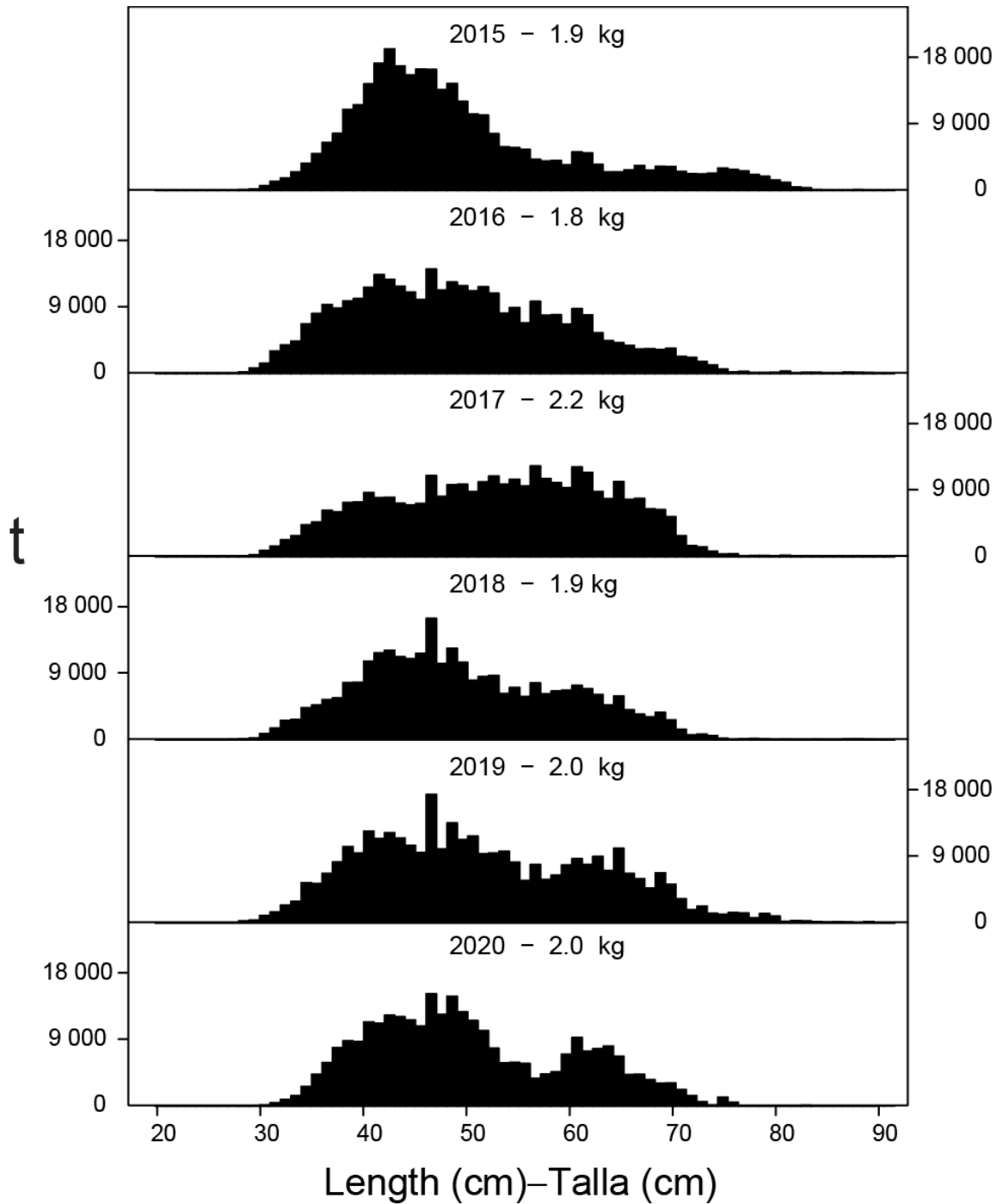


**FIGURE A-6b.** Estimated size compositions of the yellowfin caught by purse-seine and pole-and-line vessels in the EPO during 2015-2020. The value at the top of each panel is the average weight of the fish in the samples.

**FIGURA A-6b.** Composición por tallas estimada del aleta amarilla capturado por buques cerqueros y cañeros en el OPO durante 2015-2020. El valor en cada recuadro representa el peso promedio del pescado en las muestras.

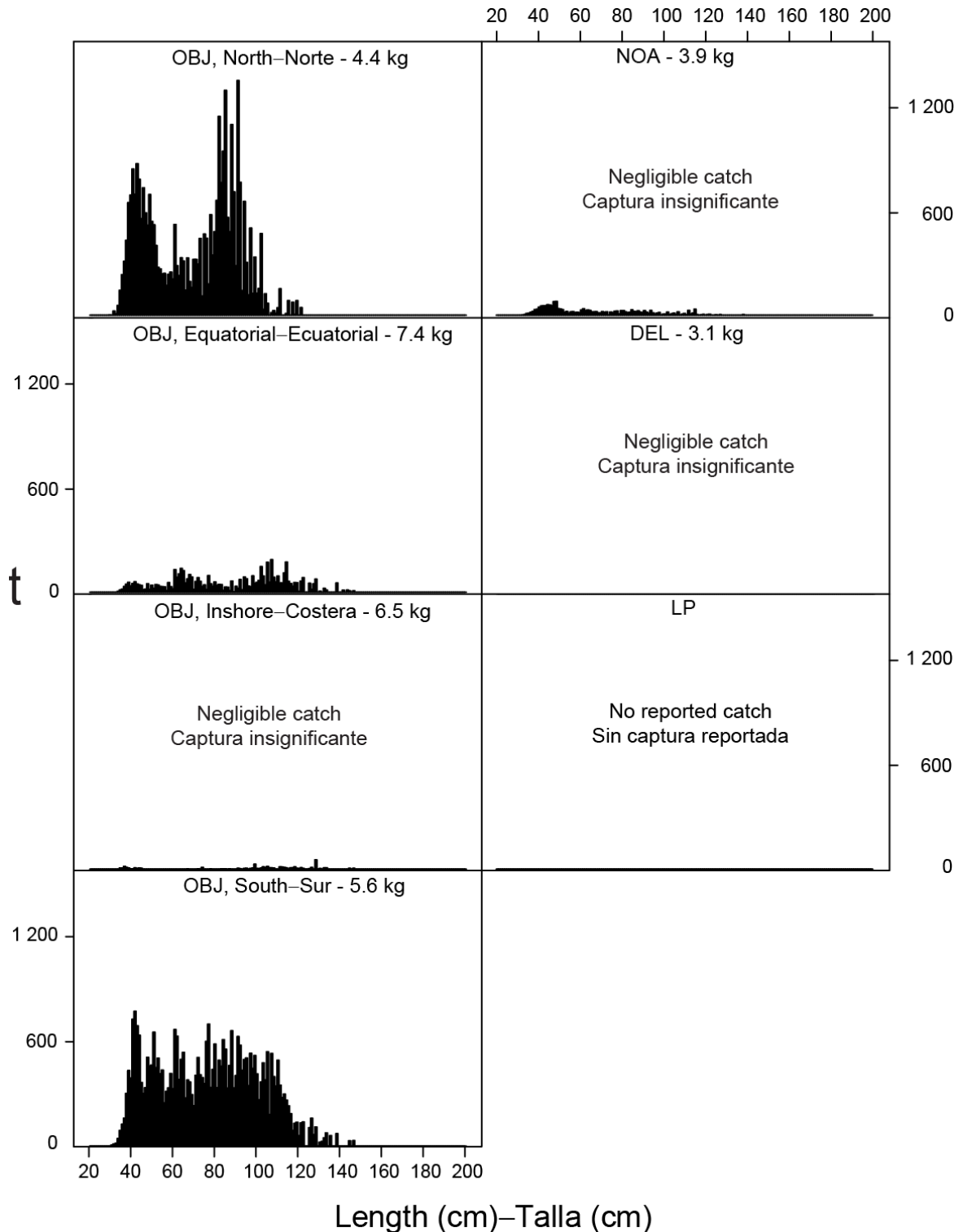


**FIGURE A-7a.** Estimated size compositions of the skipjack caught in the EPO during 2020 for each fishery designated in Figure A-5. The value at the top of each panel is the average weight of the fish in the samples.  
**FIGURA A-7a.** Composición por tallas estimada del barrilete capturado en el OPO durante 2020 en cada pesquería ilustrada en la Figura A-5. El valor en cada recuadro representa el peso promedio del pescado en las muestras.



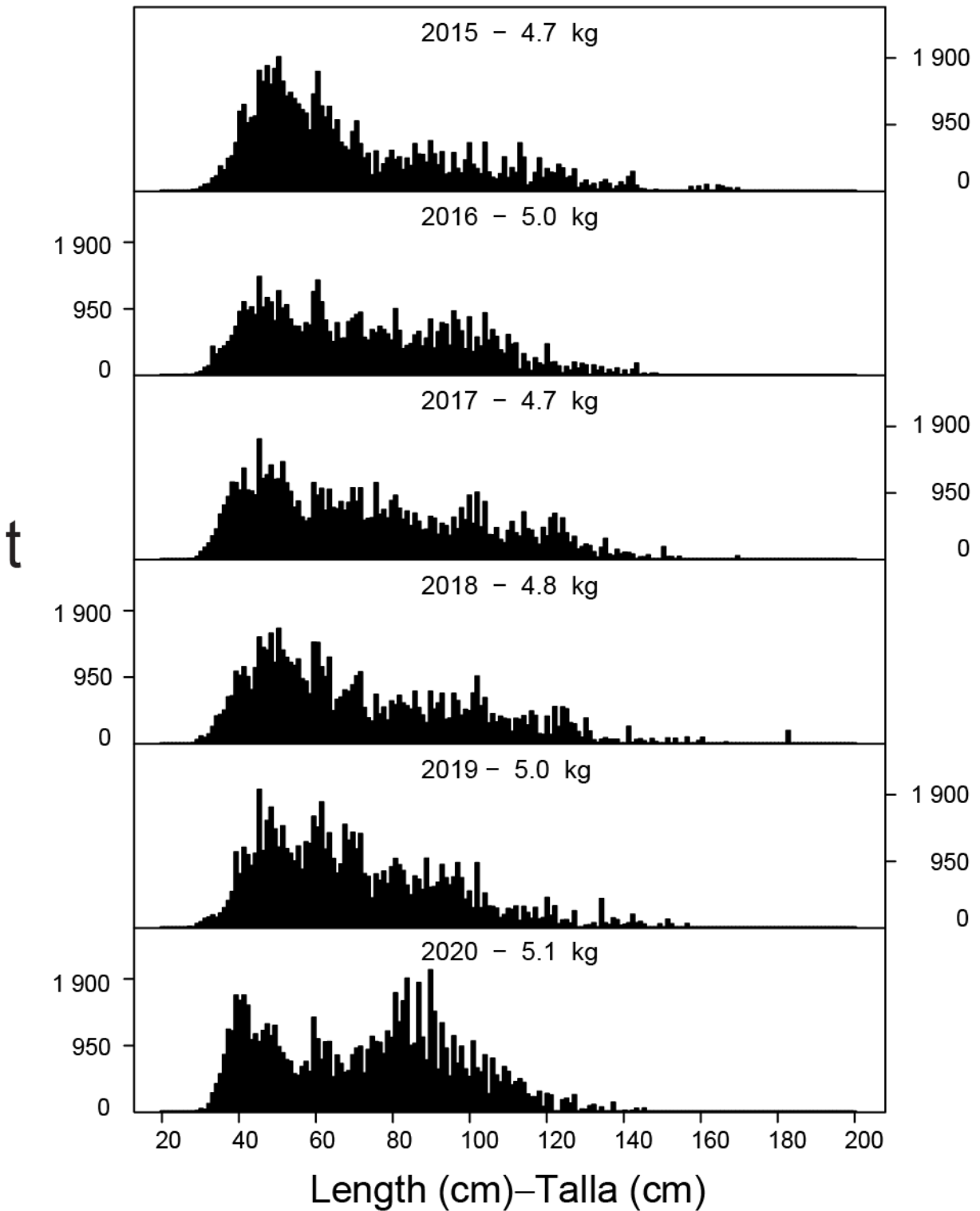
**FIGURE A-7b.** Estimated size compositions of the skipjack caught by purse-seine and pole-and-line vessels in the EPO during 2015-2020. The value at the top of each panel is the average weight of the fish in the samples.

**FIGURA A-7b.** Composición por tallas estimada del barrilete capturado por buques cerqueros y cañeros en el OPO durante 2015-2020. El valor en cada recuadro representa el peso promedio del pescado en las muestras.



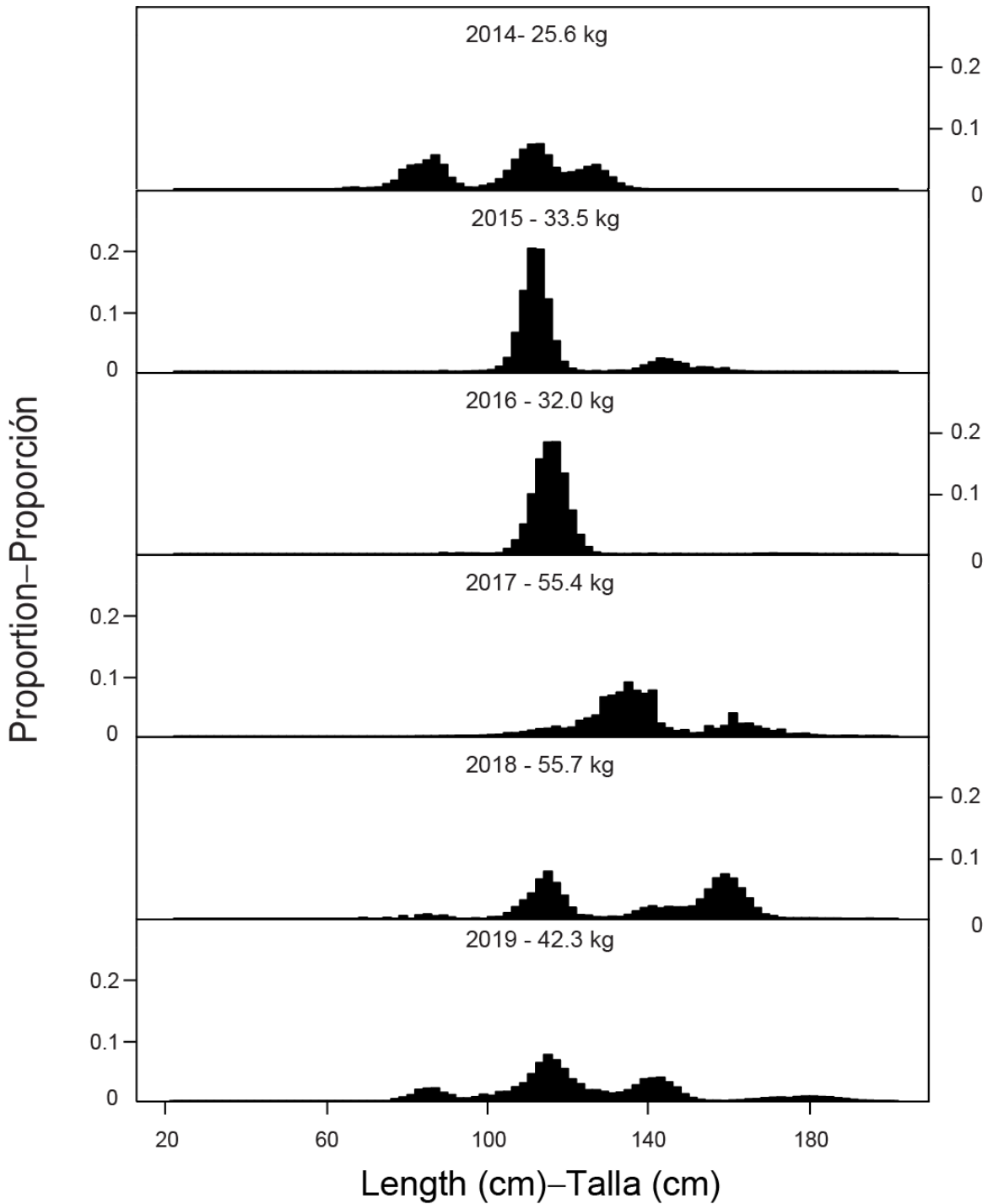
**FIGURE A-8a.** Estimated size compositions of the bigeye caught in the EPO during 2020 for each fishery designated in Figure A-5. The value at the top of each panel is the average weight.

**FIGURA A-8a.** Composición por tallas estimada del patudo capturado en el OPO durante 2020 en cada pesquería ilustrada en la Figura A-5. El valor en cada recuadro representa el peso promedio del pescado en las muestras.

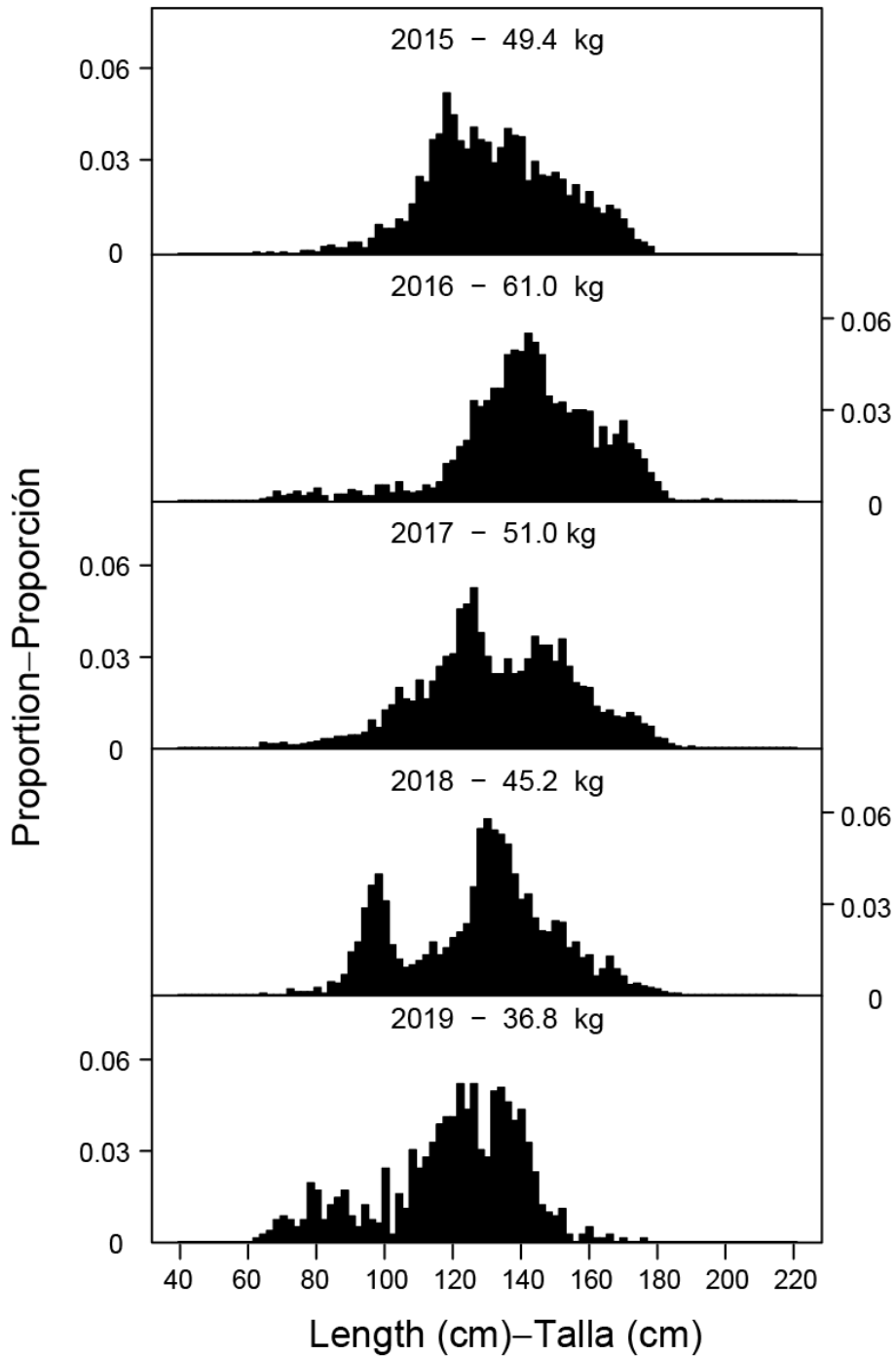


**FIGURE A-8b.** Estimated size compositions of the bigeye caught by purse-seine vessels in the EPO during 2015-2020. The value at the top of each panel is the average weight.

**FIGURA A-8b.** Composición por tallas estimada del patudo capturado por buques cerqueros en el OPO durante 2015-2020. El valor en cada recuadro representa el peso promedio del pescado en las muestras.

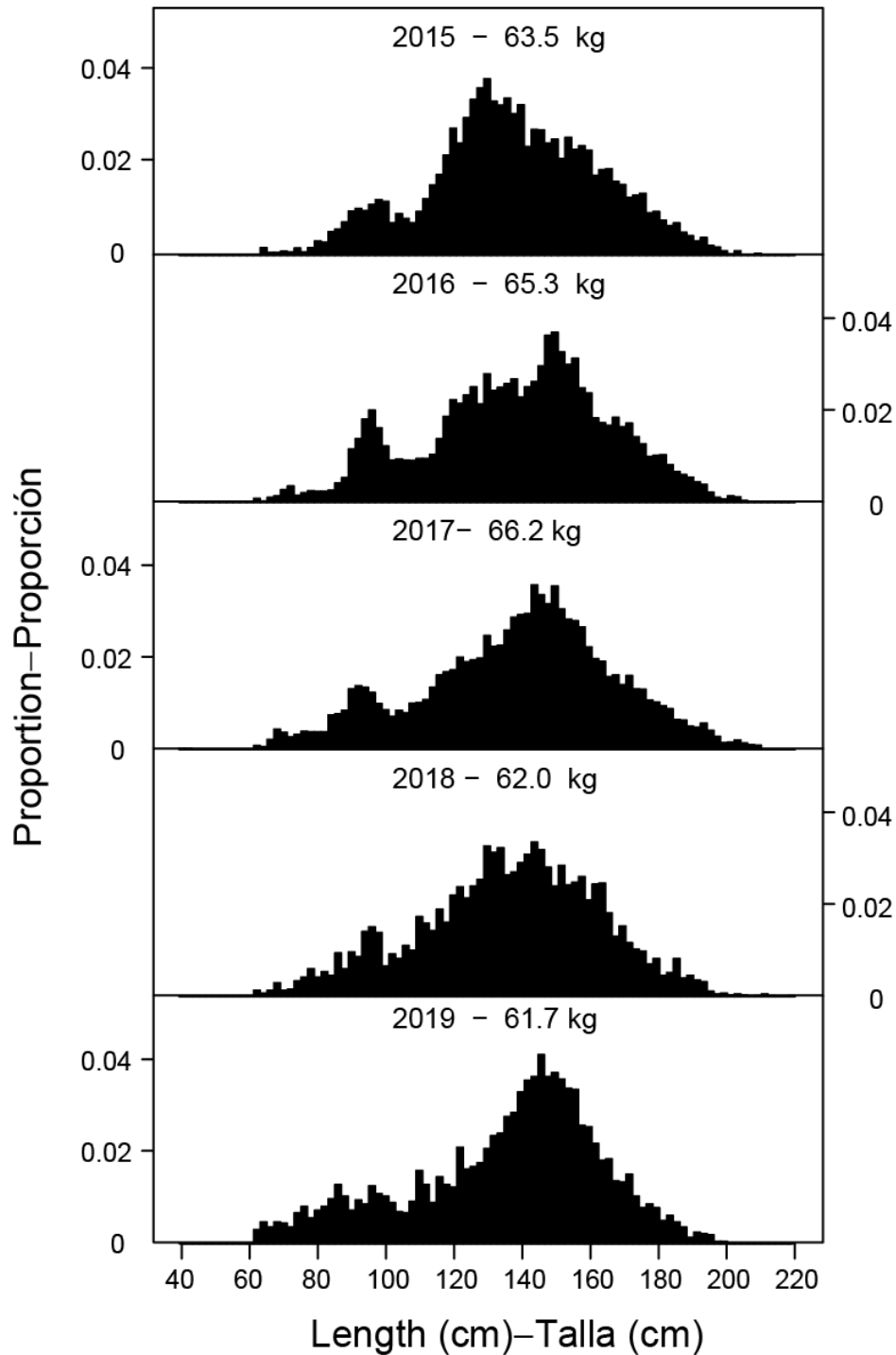


**FIGURE A-9.** Estimated length compositions of purse-seine catches of Pacific bluefin tuna, 2014-2019. The length distribution has been standardized as a proportion of the total number of measured tuna in each length interval. The value at the top of each panel is the average weight. Source: INAPESCA, Mexico.  
**FIGURA A-9.** Composición por talla estimada de las capturas cerqueras de atún aleta azul del Pacífico, 2014-2019. La distribución de las tallas ha sido estandarizada como proporción del número total de atunes medidos en cada intervalo de talla. El valor en cada recuadro representa el peso promedio. Fuente: INAPESCA, México.



**FIGURE A-10.** Estimated size compositions of the catches of yellowfin by the Japanese longline fleet in the EPO, 2015-2019. The size distribution has been standardized as a proportion of the total number of measured tuna in each size range. The value at the top of each panel is the average weight. Source: Fisheries Agency of Japan.

**FIGURA A-10.** Composición por tallas estimada de las capturas de aleta amarilla por la flota palangrera japonesa en el OPO, 2015-2019. La distribución de las tallas ha sido estandarizada como proporción del número total de atunes medidos en cada gama de tallas. El valor en cada recuadro representa el peso promedio. Fuente: Agencia Pesquera de Japón.



**FIGURE A-11.** Estimated size compositions of the catches of bigeye by the Japanese longline fleet in the EPO, 2015-2019. The size distribution has been standardized as a proportion of the total number of measured tuna in each size range. The value at the top of each panel is the average weight. Source: Fisheries Agency of Japan

**FIGURA A-11.** Composición por tallas estimada de las capturas de patudo por la flota palangrera japonesa en el OPO, 2015-2019. La distribución de las tallas ha sido estandarizada como proporción del número total de atunes medidos en cada gama de tallas. El valor en cada recuadro representa el peso promedio. Fuente: Agencia Pesquera de Japón.



**TABLE A-1.** Annual catches (t) of yellowfin, skipjack, and bigeye tunas, by all types of gear combined, in the Pacific Ocean. The EPO totals for 1993-2020 include discards from purse-seine vessels with carrying capacities greater than 363 t.

**TABLA A-1.** Capturas anuales (t) de atunes aleta amarilla, barrilete, y patudo, por todas las artes combinadas, en el Océano Pacífico. Los totales del OPO de 1993-2020 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
1991	265,970	442,281	708,251	65,890	1,047,966	1,113,856	109,121	103,115	212,236	440,981	1,593,362	2,034,343
1992	252,514	442,477	694,991	87,294	946,798	1,034,092	92,000	126,581	218,581	431,808	1,515,856	1,947,664
1993	256,199	398,741	654,940	100,434	889,308	989,742	82,843	107,932	190,775	439,476	1,395,981	1,835,457
1994	248,071	433,371	681,442	84,661	960,915	1,045,576	109,331	119,069	228,400	442,063	1,513,355	1,955,418
1995	244,639	430,200	674,839	150,661	998,693	1,149,354	108,210	101,775	209,985	503,510	1,530,668	2,034,178
1996	266,928	407,606	674,534	132,335	1,030,577	1,162,912	114,706	97,880	212,586	513,969	1,536,063	2,050,032
1997	277,575	477,186	754,761	188,285	949,413	1,137,698	122,274	131,196	253,470	588,134	1,557,795	2,145,929
1998	280,606	522,226	802,832	165,489	1,271,010	1,436,499	93,954	143,311	237,265	540,049	1,936,547	2,476,596
1999	304,638	471,613	776,251	291,249	1,093,971	1,385,220	93,078	145,663	238,741	688,965	1,711,247	2,400,212
2000	286,863	492,620	779,483	230,479	1,224,586	1,455,065	148,557	137,156	285,713	665,899	1,854,362	2,520,261
2001	425,008	490,910	915,918	157,676	1,127,596	1,285,272	130,546	127,308	257,854	713,230	1,745,814	2,459,044
2002	443,458	472,144	915,602	167,048	1,287,433	1,454,481	132,806	147,425	280,231	743,312	1,907,002	2,650,314
2003	415,933	546,871	962,804	300,470	1,269,273	1,569,743	115,175	133,506	248,681	831,578	1,949,650	2,781,228
2004	296,847	583,672	880,519	217,249	1,384,968	1,602,217	110,722	169,735	280,457	624,818	2,138,375	2,763,193
2005	286,492	540,725	827,217	283,453	1,436,508	1,719,961	110,514	144,306	254,820	680,459	2,121,539	2,801,998
2006	180,519	529,962	710,481	309,090	1,490,775	1,799,865	117,328	150,936	268,264	606,937	2,171,673	2,778,610
2007	182,141	547,524	729,665	216,324	1,662,975	1,879,299	94,260	148,757	243,017	492,725	2,359,256	2,851,981
2008	197,328	630,744	828,072	307,699	1,646,844	1,954,543	103,350	158,527	261,877	608,377	2,436,115	3,044,492
2009	250,413	555,450	805,863	239,408	1,764,539	2,003,947	109,255	153,099	262,354	599,076	2,473,088	3,072,164
2010	261,871	567,637	829,508	153,092	1,680,422	1,833,514	95,408	133,297	228,705	510,371	2,381,356	2,891,727
2011	216,720	528,848	745,568	283,509	1,526,377	1,809,886	89,460	155,510	244,970	589,689	2,210,735	2,800,424
2012	213,310	624,283	837,593	273,519	1,737,214	2,010,733	102,687	155,569	258,256	589,516	2,517,066	3,106,582
2013	231,170	568,122	799,292	284,043	1,817,060	2,101,103	86,029	142,255	228,284	601,242	2,527,437	3,128,679
2014	246,789	616,143	862,932	265,490	1,977,772	2,243,262	96,045	157,436	253,481	608,324	2,751,351	3,359,675
2015	260,265	591,729	851,994	334,050	1,775,356	2,109,406	104,635	136,477	241,112	698,950	2,503,562	3,202,512
2016	255,199	660,438	915,637	342,579	1,787,849	2,130,428	92,835	145,545	238,380	690,613	2,593,832	3,284,445
2017	224,557	710,993	935,550	327,573	1,619,548	1,947,121	102,576	122,317	224,893	654,706	2,452,858	3,107,564
2018	253,092	700,895	953,987	291,320	1,845,136	2,136,456	93,751	142,353	236,104	638,163	2,688,384	3,326,547
2019	242,209	690,291	932,500	350,916	2,045,130	2,396,046	96,639	130,363	227,002	689,764	2,865,784	3,555,548
2020	219,226	*	219,226	299,055	*	299,055	75,083	*	75,083	593,364	*	593,364

**TABLE A-2a.** Estimated catches, in metric tons, of tunas and bonitos in the EPO, by fishing gear, 1991-2020. For purse-seine (PS) vessels, retained (Ret.) catches include all vessels; discard (Dis.) data are for Class-6 vessels only. 'C' indicates that the catch has been combined with the total in the 'OTR' column. The purse-seine and pole-and-line (LP) data for yellowfin, skipjack, and bigeye tunas have been adjusted to the species composition estimate, and are preliminary. The data for 2019-2020 are preliminary.

**TABLA A-2a.** Capturas estimadas, en toneladas métricas, de atunes y bonitos en el OPO, por arte de pesca, 1991-2020. En el caso de los buques de cerco (PS), las capturas retenidas (Ret) incluyen todos los buques; los datos de descartes (Dis.) son de buques de Clase 6 únicamente. 'C' indica que la captura se ha combinado con el total en la columna 'OTR'. Los datos de los atunes aleta amarilla, barrilete, y patudo de las pesquerías de cerco y de caña (LP) fueron ajustados a la estimación de composición por especies, y son preliminares. Los datos de 2019-2020 son preliminares.

	Yellowfin—Aleta amarilla						Skipjack—Barrilete						Bigeye—Patudo					
	PS		LP	LL	OTR + UNK	Total	PS		LP	LL	OTR + UNK	Total	PS		LP	LL	OTR + UNK	Total
	Ret.	Dis. §					Ret.	Dis. §					Ret.	Dis. §				
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	4,713	4,951	24,009	3,034	256,199	83,830	10,515	3,772	61	2,256	100,434	9,657	653	-	72,498	35	82,843
1994	208,408	4,525	3,625	30,026	1,487	248,071	70,126	10,491	3,240	73	731	84,661	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	24,494	2,555	52	1,261	132,335	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	4,697	5,085	15,336	1,529	280,606	140,631	22,643	1,684	294	237	165,489	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	253,263	6,205	2,431	23,855	1,109	286,863	205,647	24,467	231	68	66	230,479	95,282	5,417	-	47,605	253	148,557
2001	383,936	7,028	3,916	29,608	520	425,008	143,165	12,815	448	1,214	34	157,676	60,518	1,254	-	68,755	19	130,546
2002	412,286	4,140	950	25,531	551	443,458	153,546	12,506	616	261	119	167,048	57,421	949	-	74,424	12	132,806
2003	383,279	5,865	470	25,174	1,145	415,933	273,968	22,453	638	634	2,777	300,470	53,052	2,326	-	59,776	21	115,175
2004	272,557	3,000	1,884	18,779	627	296,847	197,824	17,078	528	713	1,106	217,249	65,471	1,574	-	43,483	194	110,722
2005	268,101	2,771	1,822	11,946	1,852	286,492	263,229	16,915	1,299	231	1,779	283,453	67,895	1,900	-	40,694	25	110,514
2006	166,631	1,534	686	10,210	1,458	180,519	296,268	11,177	435	224	986	309,090	83,838	1,680	-	31,770	40	117,328
2007	170,016	1,725	894	8,067	1,439	182,141	208,295	6,450	276	238	1,065	216,324	63,450	890	-	29,876	44	94,260
2008	185,057	696	814	9,820	941	197,328	296,603	8,249	499	1,185	1,163	307,699	75,028	2,086	-	26,208	28	103,350
2009	236,757	1,262	709	10,444	1,241	250,413	230,523	6,064	151	1,584	1,086	239,408	76,799	1,019	-	31,422	15	109,255
2010	251,009	1,031	460	8,339	1,032	261,871	147,192	2,769	47	1,815	1,269	153,092	57,752	564	-	37,090	2	95,408
2011	206,851	415	276	8,048	1,130	216,720	276,035	5,215	24	1,384	851	283,509	56,512	631	-	32,317	-	89,460
2012	198,017	451	400	12,954	1,488	213,310	266,215	3,511	303	2,381	1,109	273,519	66,020	473	-	36,167	27	102,687
2013	218,187	207	759	10,783	1,234	231,170	278,560	2,254	164	2,024	1,041	284,043	49,487	273	-	36,170	99	86,029
2014	234,066	517	C	8,649	3,557	246,789	261,469	2,596	C	194	1,231	265,490	60,445	83	-	35,340	177	96,045
2015	245,727	334	C	10,637	3,567	260,265	328,907	3,699	C	189	1,255	334,050	62,913	177	-	41,524	21	104,635
2016	242,118	404	-	9,807	2,871	255,199	337,561	4,086	-	214	718	342,579	56,731	541	-	35,541	22	92,835
2017	210,980	412	-	10,480	2,685	224,557	324,759	1,765	-	170	879	327,573	66,973	201	-	35,360	42	102,576
2018	238,981	231	-	12,468	1,412	253,092	288,821	865	-	1,221	413	291,320	64,523	145	-	29,065	18	93,751
2019	228,313	578	-	11,920	1,398	242,209	347,405	2,851	-	252	408	350,916	69,223	117	-	27,281	18	96,639
2020	219,078	148	-	*	*	219,226	297,299	1,756	-	*	*	299,055	74,981	102	-	*	*	75,083

§ Class-6 (carrying capacity >363 t) purse-seine vessels only-Buques cerqueros de Clase 6 (capacidad de acarreo >363 t) solamente

TABLE A-2a. (continued)

TABLA A-2a. (continuación)

	Pacific bluefin—Aleta azul del Pacífico						Albacore—Albacora						Black skipjack—Barrilete negro					
	PS		LP	LL	OTR + UNK	Total	PS		LP	LL	OTR + UNK	Total	PS		LP	LL	OTR + UNK	Total
	Ret.	Dis. <sup>§</sup>					Ret.	Dis. <sup>§</sup>					Ret.	Dis. <sup>§</sup>				
1991	419	-	-	5	55	479	-	-	834	7,893	2,754	11,481	421	-	-	-	25	446
1992	1,928	-	-	21	147	2,096	-	-	255	17,080	5,740	23,075	105	-	-	3	-	108
1993	580	-	-	11	316	907	-	-	1	11,194	4,410	15,605	104	3,925	-	31	-	4,060
1994	969	-	-	12	116	1,097	-	-	85	10,390	10,154	20,629	188	857	-	40	-	1,085
1995	659	-	-	25	264	948	-	-	465	6,185	7,427	14,077	202	1,448	-	-	-	1,650
1996	8,333	-	-	19	83	8,435	11	-	72	7,631	8,398	16,112	704	2,304	-	12	-	3,020
1997	2,608	3	2	14	235	2,862	1	-	59	9,678	7,540	17,278	100	2,512	-	11	-	2,623
1998	1,772	-	-	95	516	2,383	42	-	81	12,635	13,158	25,916	489	1,876	39	-	-	2,404
1999	2,553	54	5	151	514	3,277	47	-	227	11,633	14,510	26,417	171	3,404	-	-	-	3,575
2000	3,712	-	61	46	349	4,168	71	-	86	9,663	13,453	23,273	294	1,995	-	-	-	2,289
2001	1,155	3	1	148	378	1,685	3	-	157	19,410	13,727	33,297	2,258	1,019	-	-	-	3,277
2002	1,758	1	3	71	620	2,453	31	-	381	15,289	14,433	30,134	1,459	2,283	8	-	-	3,750
2003	3,233	-	3	87	369	3,692	34	-	59	24,901	20,397	45,391	433	1,535	6	13	117	2,104
2004	8,880	19	-	15	59	8,973	105	-	126	18,444	22,011	40,686	884	387	-	27	862	2,160
2005	4,743	15	-	-	80	4,838	2	-	66	9,350	15,668	25,086	1,472	2,124	-	-	22	3,618
2006	9,928	-	-	-	93	10,021	109	-	1	13,831	18,980	32,921	1,999	1,972	-	-	-	3,971
2007	4,189	-	-	-	14	4,203	187	-	21	11,107	19,261	30,576	2,307	1,625	-	2	54	3,988
2008	4,392	14	15	-	63	4,484	49	-	1,050	9,218	16,505	26,822	3,624	2,251	-	-	8	5,883
2009	3,428	24	-	-	161	3,613	50	2	C	12,072	19,090	31,214	4,256	1,020	-	2	-	5,278
2010	7,746	-	-	3	89	7,838	25	-	C	14,256	19,363	33,644	3,425	1,079	-	8	184	4,696
2011	2,829	4	-	1	244	3,078	10	-	C	16,191	16,074	32,275	2,317	719	-	6	-	3,042
2012	6,705	-	-	1	405	7,111	-	-	C	24,198	18,100	42,298	4,504	440	-	5	7	4,956
2013	3,154	-	-	1	819	3,974	-	-	C	25,396	18,513	43,909	3,580	805	-	10	24	4,419
2014	5,263	66	-	-	427	5,756	-	-	C	29,231	19,463	48,694	4,153	486	-	11	81	4,731
2015	3,168	-	-	15	405	3,588	-	-	C	28,939	17,142	46,081	3,763	356	-	1	111	4,231
2016	3,025	-	-	31	381	3,437	2	-	-	26,777	14,567	41,346	6,606	792	-	-	178	7,576
2017	4,109	-	-	22	470	4,601	-	-	-	26,332	9,463	35,795	5,079	306	-	-	53	5,438
2018	2,852	-	-	31	527	3,410	8	-	-	25,384	11,154	36,546	3,002	732	-	-	118	3,852
2019	2,475	-	-	36	440	2,951	-	-	-	19,849	11,929	31,778	5,200	499	-	-	131	5,830
2020	3,383	19	-	*	109	3,511	-	-	-	*	*	*	3,938	687	-	-	*	4,625

<sup>§</sup> Class-6 (carrying capacity >363 t) purse-seine vessels only-Buques cerqueros de Clase 6 (capacidad de acarreo >363 t) solamente

TABLE A-2a. (continued)

TABLA A-2a. (continuación)

	Bonitos						Unidentified tunas— Atunes no identificados						Total					
	PS		LP	LL	OTR + UNK	Total	PS		LP	LL	OTR + UNK	Total	PS		LP	LL	OTR + UNK	Total
	Ret.	Dis. <sup>§</sup>					Ret.	Dis. <sup>§</sup>					Ret.	Dis. <sup>§</sup>				
1991	1,207	-	82	-	242	1,531	4	-	-	29	192	225	300,406	-	5,520	143,057	6,161	455,144
1992	977	-	-	-	318	1,295	24	-	-	27	1,071	1,122	322,617	-	6,001	120,610	10,276	459,504
1993	599	12	1	-	436	1,048	9	1,975	-	10	4,082	6,076	314,271	21,793	8,725	107,814	14,570	467,173
1994	8,331	147	362	-	185	9,025	9	498	-	1	464	972	322,930	18,781	7,311	111,901	13,943	474,867
1995	7,929	55	81	-	54	8,119	11	626	-	-	1,004	1,641	396,603	27,028	7,066	85,152	14,096	529,945
1996	647	1	7	-	16	671	37	1,028	-	-	1,038	2,103	413,623	39,827	6,395	71,283	13,183	544,311
1997	1,097	4	8	-	34	1,143	71	3,383	-	7	1,437	4,898	466,483	48,157	7,747	84,588	9,962	616,936
1998	1,330	4	7	-	588	1,929	13	1,233	-	24	18,158	19,428	442,365	33,276	6,897	74,758	34,815	592,111
1999	1,719	-	-	24	369	2,112	27	3,092	-	2,113	4,279	9,511	599,160	44,076	4,059	62,254	24,310	733,859
2000	636	-	-	75	56	767	190	1,410	-	1,992	1,468	5,060	559,095	39,494	2,809	83,305	16,756	701,459
2001	17	-	-	34	19	70	191	679	-	2,448	55	3,373	591,243	22,799	4,523	121,616	14,755	754,935
2002	-	-	-	-	1	1	576	1,863	-	482	1,422	4,343	627,077	21,741	1,958	116,057	17,158	783,992
2003	-	-	1	-	25	26	80	1,238	-	215	750	2,283	714,079	33,416	1,177	110,799	25,600	885,071
2004	15	35	1	8	3	62	256	973	-	349	258	1,836	545,992	23,066	2,539	81,818	25,120	678,536
2005	313	18	-	-	11	342	190	1,922	-	363	427	2,902	605,945	25,664	3,187	62,585	19,865	717,246
2006	3,507	80	12	-	3	3,602	50	1,910	-	29	193	2,182	562,330	18,353	1,134	56,066	21,754	659,636
2007	15,906	628	107	2	-	16,643	598	1,221	-	2,197	301	4,317	464,948	12,540	1,298	51,488	22,179	552,452
2008	7,874	37	9	6	26	7,952	136	1,380	1	727	883	3,127	572,763	14,712	2,388	47,164	19,617	656,644
2009	9,720	15	-	8	77	9,820	162	469	-	1,933	74	2,638	561,695	9,875	860	57,466	21,743	651,640
2010	2,820	19	4	2	70	2,915	136	709	-	1,770	36	2,651	470,105	6,170	511	63,279	22,045	562,111
2011	7,969	45	18	10	11	8,053	108	784	-	3,178	-	4,070	552,631	7,813	318	61,136	18,311	640,208
2012	8,191	156	-	1	64	8,412	41	354	-	196	221	812	549,693	5,385	704	75,900	21,419	653,101
2013	2,067	9	-	13	27	2,116	53	461	-	-	529	1,043	555,088	4,009	923	74,397	22,286	656,703
2014	2,821	38	-	-	154	3,013	113	328	-	269	392	1,102	568,330	4,113	-	73,695	25,482	671,620
2015	789	28	-	1	-	818	90	242	-	-	1,232	1,564	645,357	4,836	-	81,306	23,733	755,232
2016	3,806	15	-	-	1	3,822	129	212	-	-	294	635	649,978	6,050	-	72,370	19,032	747,430
2017	3,438	54	-	-	-	3,492	234	303	-	-	366	903	615,572	3,041	-	72,364	13,958	704,935
2018	2,409	58	-	-	-	2,467	75	448	-	3	227	753	600,671	2,479	-	68,172	13,869	685,191
2019	7,017	27	-	-	-	7,044	83	276	-	4	93	456	659,716	4,348	-	59,342	14,417	737,823
2020	3,169	6	-	-	-	3,175	193	481	-	*	*	674	602,041	3,199	-	*	109	605,349

<sup>§</sup> Class-6 (carrying capacity >363 t) purse-seine vessels only-Buques cerqueros de Clase 6 (capacidad de acarreo >363 t) solamente

**TABLE A-2b.** Estimated catches, in metric tons, of billfishes in the EPO, by fishing gear, 1991-2020. Purse-seine (PS) vessel data are for Class-6 vessels only. The data for 2019-2020 are preliminary.

**TABLA A-2b.** Capturas estimadas, en toneladas métricas, de peces picudos en el OPO, por arte de pesca, 1991-2020. En el caso de los buques de cerco (PS), los datos son de buques de Clase 6 únicamente. Los datos de 2019-2020 son preliminares.

	Swordfish—Pez espada					Blue marlin—Marlín azul					Black marlin—Marlín negro					Striped marlin—Marlín rayado				
	PS <sup>§</sup>		LL	OTR	Total	PS <sup>§</sup>		LL	OTR	Total	PS <sup>§</sup>		LL	OTR	Total	PS <sup>§</sup>		LL	OTR	Total
	Ret.	Dis.				Ret.	Dis.				Ret.	Dis.				Ret.	Dis.			
1991	-	17	10,671	4,307	14,995	-	69	6,719	-	6,788	-	58	246	-	304	-	76	2,993	409	3,478
1992	-	4	9,820	4,267	14,091	-	52	6,626	-	6,678	-	95	228	-	323	-	69	3,054	239	3,362
1993	3	1	6,187	4,414	10,605	84	20	6,571	-	6,675	57	31	218	-	306	47	20	3,575	259	3,901
1994	1	-	4,990	3,822	8,813	69	15	9,027	-	9,111	39	23	256	-	318	20	9	3,396	257	3,682
1995	3	-	4,495	2,974	7,472	70	16	7,288	-	7,374	43	23	158	-	224	18	8	3,249	296	3,571
1996	1	-	7,071	2,486	9,558	62	15	3,596	-	3,673	46	24	100	-	170	20	9	3,218	430	3,677
1997	2	1	10,580	1,781	12,364	126	15	5,915	-	6,056	71	22	154	-	247	28	3	4,473	329	4,833
1998	3	-	9,800	3,246	13,049	130	20	4,856	-	5,006	72	28	168	-	268	20	3	3,558	509	4,090
1999	2	-	7,569	1,965	9,536	181	38	3,691	-	3,910	83	42	94	-	219	26	11	2,621	376	3,034
2000	3	-	8,930	2,383	11,316	120	23	3,634	-	3,777	67	21	105	-	193	17	3	1,889	404	2,313
2001	3	1	16,007	1,964	17,975	119	40	4,196	-	4,355	67	48	123	-	238	13	8	1,961	342	2,324
2002	1	-	17,598	2,119	19,718	188	33	3,480	-	3,701	86	30	78	-	194	69	5	2,158	412	2,644
2003	3	1	18,161	354	18,519	185	21	4,015	-	4,221	121	26	73	-	220	31	4	1,904	417	2,356
2004	2	-	15,372	309	15,683	140	21	3,783	-	3,944	62	5	41	-	108	23	1	1,547	390	1,961
2005	2	-	8,935	4,304	13,241	209	14	3,350	-	3,573	95	9	39	-	143	37	4	1,531	553	2,125
2006	7	-	9,890	3,800	13,697	164	21	2,934	105	3,224	124	21	77	-	222	54	3	1,735	490	2,282
2007	4	-	9,639	4,390	14,033	124	13	2,393	106	2,636	74	8	47	-	129	32	4	1,656	1,024	2,716
2008	6	-	12,248	3,071	15,325	125	8	1,705	114	1,952	76	9	100	-	185	33	2	1,291	1,045	2,371
2009	4	-	15,539	3,905	19,448	159	15	2,102	131	2,407	76	8	94	-	178	23	2	1,333	7	1,365
2010	4	-	18,396	4,480	22,880	176	12	2,920	126	3,234	62	9	160	-	231	21	2	2,129	9	2,161
2011	3	-	20,400	5,101	25,504	150	6	2,025	144	2,325	59	7	187	-	253	28	1	2,640	16	2,685
2012	5	-	23,587	7,148	30,740	178	15	3,723	177	4,093	71	4	444	-	519	28	-	2,703	20	2,751
2013	2	-	22,342	5,560	27,904	172	15	4,202	168	4,557	99	4	138	-	241	21	1	2,439	19	2,480
2014	4	-	21,331	6,332	27,667	209	12	4,069	186	4,476	70	4	151	-	225	22	1	1,929	3	1,955
2015	5	1	25,803	6,080	31,889	306	11	4,120	182	4,619	117	14	240	-	371	26	-	1,268	474	1,768
2016	4	-	23,894	7,155	31,053	247	6	3,678	175	4,106	62	3	80	-	145	19	-	1,562	4	1,585
2017	1	2	21,327	6,301	27,631	151	4	3,832	191	4,178	39	1	211	-	251	10	-	1,736	4	1,750
2018	2	-	22,865	5,185	28,052	167	1	4,021	174	4,363	23	-	297	-	320	10	1	1,801	5	1,817
2019	3	-	20,073	9,248	29,324	201	4	2,402	186	2,793	45	-	161	-	206	16	-	1,716	11	1,743
2020	2	-	*	*	2	130	1	*	*	131	46	-	*	-	46	10	-	*	*	10

<sup>§</sup> Class-6 (carrying capacity >363 t) purse-seine vessels only—Buques cerqueros de Clase 6 (capacidad de acarreo >363 t) solamente

TABLE A-2b. (continued)

TABLA A-2b. (continuación)

	Shortbill spearfish— Marlín trompa corta					Sailfish— Pez vela					Unidentified istiophorid billfishes—Pículos istio- fóridos no identificados					Total billfishes— Total de peces picudos				
	PS <sup>§</sup>		LL	OTR	Total	PS <sup>§</sup>		LL	OTR	Total	PS <sup>§</sup>		LL	OTR	Total	PS <sup>§</sup>		LL	OTR	Total
	Ret.	Dis.				Ret.	Dis.				Ret.	Dis.				Ret.	Dis.			
1991	-	-	1	-	1	-	-	717	-	717	-	-	112	-	112	-	220	21,459	4,716	26,395
1992	-	1	1	-	2	-	-	1,351	-	1,351	-	-	1,123	-	1,123	-	221	22,203	4,506	26,930
1993	-	-	1	-	1	26	32	2,266	-	2,324	29	68	1,650	-	1,747	246	172	20,468	4,673	25,559
1994	-	-	144	-	144	19	21	1,682	-	1,722	7	16	1,028	-	1,051	155	84	20,523	4,079	24,841
1995	1	-	155	-	156	12	15	1,351	-	1,378	4	9	232	-	245	151	71	16,928	3,270	20,420
1996	1	-	126	-	127	10	12	738	-	760	6	13	308	-	327	146	73	15,157	2,916	18,292
1997	1	-	141	-	142	12	11	1,891	-	1,914	3	5	1,324	-	1,332	243	57	24,478	2,110	26,888
1998	-	-	200	-	200	28	31	1,382	-	1,441	5	7	575	55	642	258	89	20,539	3,810	24,696
1999	1	-	278	-	279	33	8	1,216	-	1,257	6	12	1,136	-	1,154	332	111	16,605	2,341	19,389
2000	1	-	285	-	286	33	17	1,380	-	1,430	3	6	880	136	1,025	244	70	17,103	2,923	20,340
2001	-	-	304	-	304	18	45	1,539	325	1,927	2	5	1,741	204	1,952	222	147	25,871	2,835	29,075
2002	1	-	273	-	274	19	15	1,792	17	1,843	4	5	1,862	14	1,885	368	88	27,241	2,562	30,259
2003	1	4	290	-	295	38	49	1,174	-	1,261	6	5	1,389	-	1,400	385	110	27,006	771	28,272
2004	1	-	207	-	208	19	13	1,400	17	1,449	4	4	1,385	-	1,393	251	44	23,735	716	24,746
2005	1	-	229	-	230	32	11	805	15	863	5	3	901	-	909	381	41	15,790	4,872	21,084
2006	1	-	231	-	232	30	13	1,007	35	1,085	23	4	490	1	518	403	62	16,364	4,431	21,260
2007	1	-	239	-	240	41	8	1,032	64	1,145	13	4	1,171	15	1,203	289	37	16,177	5,599	22,102
2008	1	-	266	-	267	28	7	524	72	631	16	5	1,587	8	1,616	285	31	17,721	4,310	22,347
2009	1	-	446	-	447	17	6	327	8	358	11	1	1,799	12	1,823	291	32	21,640	4,063	26,026
2010	1	-	519	-	520	27	20	655	3	705	8	2	2,604	-	2,614	299	45	27,383	4,618	32,345
2011	-	-	462	-	462	18	5	658	28	709	15	1	2,377	3	2,396	273	20	28,749	5,292	34,334
2012	1	-	551	-	552	14	2	685	15	716	10	1	2,178	-	2,189	307	22	33,871	7,360	41,560
2013	1	-	913	-	914	16	2	614	9	641	15	3	2,743	1	2,762	326	25	33,391	5,757	39,499
2014	-	-	721	-	721	16	1	481	8	506	8	2	220	3	233	329	20	28,902	6,532	35,783
2015	1	-	497	-	498	18	8	1,402	22	1,450	19	1	705	4	729	492	35	34,036	6,762	41,325
2016	1	-	416	-	417	49	9	457	19	534	112	9	732	1	854	494	27	30,818	7,353	38,692
2017	-	-	245	-	245	22	2	525	15	564	164	12	258	15	449	387	21	28,135	6,526	35,069
2018	-	-	235	-	235	13	2	467	17	499	123	6	203	10	342	338	10	29,888	5,391	35,627
2019	-	-	813	-	813	17	1	856	5	879	121	5	416	51	593	403	11	26,436	9,501	36,351
2020	-	-	*	-	*	19	1	*	*	20	72	2	*	*	74	279	5	*	*	284

<sup>§</sup> Class-6 (carrying capacity >363 t) purse-seine vessels only-Buques cerqueros de Clase 6 (capacidad de acarreo >363 t) solamente

**TABLE A-3a.** Catches (t) of yellowfin tuna by purse-seine vessels in the EPO, by vessel flag. ‘C’ indicates that the catch has been combined with the total in the ‘OTR’ column. The data have been adjusted to the species composition estimate and are preliminary.

**TABLA A-3a.** Capturas (t) de atún aleta amarilla por buques de cerco en el OPO, por bandera del buque. ‘C’ indica que la captura se ha combinado con el total en la columna ‘OTR’. Los datos están ajustados a la estimación de composición por especie, y son preliminares.

	COL	CRI	ECU	EU (ESP)	MEX	NIC	PAN	PER	SLV	USA	VEN	VUT	C + OTR <sup>1</sup>	Total
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	6,138	-	35,492	10,318	101,662	C	5,796	-	-	4,374	67,672	8,247	13,563	253,262
2001	12,950	-	55,347	18,448	130,087	C	9,552	-	C	5,670	108,974	10,729	32,180	383,937
2002	17,574	-	32,512	16,990	152,864	C	15,719	C	7,412	7,382	123,264	7,502	31,068	412,287
2003	9,770	-	34,271	12,281	172,807	-	16,591	C	C	3,601	96,914	9,334	27,710	383,279
2004	C	-	40,886	13,622	91,442	C	33,563	-	C	C	39,094	7,371	46,577	272,555
2005	C	-	40,596	11,947	110,898	4,838	33,393	-	6,470	C	28,684	C	31,276	268,102
2006	C	-	26,049	8,409	69,449	4,236	22,521	-	C	C	13,286	C	22,679	166,629
2007	C	-	19,749	2,631	65,091	3,917	26,024	-	C	C	20,097	C	32,507	170,016
2008	C	-	18,463	3,023	84,462	4,374	26,993	C	C	C	17,692	C	30,050	185,057
2009	C	-	18,167	7,864	99,785	6,686	35,228	C	C	C	25,298	C	43,729	236,757
2010	20,493	-	34,764	2,820	104,969	9,422	34,538	C	C	-	21,244	C	22,758	251,008
2011	18,643	-	32,946	1,072	99,812	7,781	18,607	-	C	C	18,712	C	9,278	206,851
2012	20,924	-	29,485	1,065	93,323	7,541	15,932	-	C	C	23,408	C	6,339	198,017
2013	16,476	-	27,655	511	114,706	8,261	18,301	C	C	-	24,896	C	7,381	218,187
2014	17,185	-	37,546	760	120,980	8,100	19,349	C	C	1,105	23,025	-	6,016	234,066
2015	17,270	-	50,153	C	106,171	6,876	26,558	783	C	3,212	30,428	-	4,276	245,727
2016	19,280	-	59,280	C	93,928	11,047	23,249	1,647	C	4,578	23,812	-	5,298	242,118
2017	15,106	-	55,705	C	80,870	9,347	19,921	3,349	C	6,500	16,809	-	3,373	210,980
2018	21,855	-	57,164	C	101,651	7,552	22,625	1,458	C	3,808	19,527	-	3,341	238,981
2019	17,177	-	46,102	C	105,426	7,114	17,826	1,782	C	6,515	22,558	-	3,814	228,313
2020	16,507	-	39,867	C	102,295	5,439	22,820	567	C	3,781	24,536	-	3,267	219,078

<sup>1</sup> Includes—Incluye: BLZ, BOL, CHN, EU(CYP), GTM, HND, LBR, NZL, RUS, UNK, VCT

**TABLE A-3b.** Annual catches (t) of yellowfin tuna by longline vessels, and totals for all gears, in the EPO, by vessel flag. 'C' indicates that the catch has been combined with the total in the 'OTR' column. The data for 2019-2020 are preliminary.

**TABLA A-3b.** Capturas anuales (t) de atún aleta amarilla por buques de palangre en el OPO, y totales de todas las artes, por bandera del buque. 'C' indica que la captura se ha combinado con el total en la columna 'OTR'. Los datos de 2019-2020 son preliminares.

	CHN	CRI	FRA (PYF)	JPN	KOR	MEX	PAN	TWN	USA	VUT	C + OTR <sup>1</sup>	Total LL	Total PS+LL	OTR <sup>2</sup>
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	277,118	3,540
2001	942	1,133	846	14,808	5,230	29	732	3,928	29	13	1,918	29,608	413,544	4,436
2002	1,457	1,563	278	8,513	3,626	4	907	7,360	5	290	1,528	25,531	437,817	1,501
2003	2,739	1,418	462	9,125	4,911	365	C	3,477	5	699	1,973	25,174	408,453	1,615
2004	798	1,701	767	7,338	2,997	32	2,802	1,824	6	171	343	18,779	291,336	2,511
2005	682	1,791	530	3,966	532	0	1,782	2,422	7	51	183	11,946	280,047	3,674
2006	246	1,402	537	2,968	928	0	2,164	1,671	21	164	109	10,210	176,841	2,144
2007	224	1,204	408	4,582	353	8	-	745	11	154	378	8,067	178,083	2,333
2008	469	1,248	335	5,383	83	5	-	247	33	175	1,842	9,820	194,877	1,755
2009	629	1,003	590	4,268	780	10	-	636	84	244	2,200	10,444	247,201	1,950
2010	459	3	301	3,639	737	6	-	872	54	269	1,999	8,339	259,348	1,492
2011	1,807	-	349	2,373	754	6	-	647	55	150	1,907	8,048	214,899	1,406
2012	2,591	1,482	538	3,600	631	7	519	749	39	155	2,643	12,954	210,971	1,888
2013	1,874	1,424	410	3,117	928	8	325	572	43	101	1,981	10,783	228,970	1,993
2014	2,120	1,072	567	2,633	704	4	249	896	61	323	20	8,649	242,715	3,557
2015	2,642	1,415	929	2,177	957	20	419	1,287	121	530	139	10,637	256,364	3,567
2016	2,398	1,010	825	1,839	1,124	29	688	1,222	253	166	253	9,807	251,925	2,871
2017	2,907	837	1,252	1,463	1,176	10	612	1,263	536	406	18	10,480	221,460	2,685
2018	5,386	1,190	1,101	1,413	1,189	-	231	1,212	427	293	26	12,468	251,449	1,412
2019	3,372	1,490	1,015	1,810	1,725	-	314	1,556	256	344	37	11,920	240,233	1,398
2020	*	*	*	*	*	*	*	*	*	*	*	*	219,078	*

<sup>1</sup> Includes—Incluye: BLZ, CHL, ECU, EU(ESP), EU(PRT), GTM, HND, NIC, SLV

<sup>2</sup> Includes gillnets, pole-and-line, recreational, troll and unknown gears—Incluye red agallera, caña, artes deportivas, y desconocidas



**TABLE A-3c.** Catches (t) of skipjack tuna by purse-seine and longline vessels in the EPO, by vessel flag, adjusted to the species composition estimate. 'C' indicates that the catch has been combined with the total in the 'OTR' column. The 2019-2020 data are preliminary.

**TABLA A-3c.** Capturas (t) de atún barrilete por buques de cerco y de palangre en el OPO, por bandera del buque, ajustadas a la estimación de composición por especie. 'C' indica que la captura se ha combinado con el total en la columna 'OTR'. Los datos de 2019-2020 son preliminares.

	PS														LL+
	COL	CRI	ECU	EU(ESP)	MEX	NIC	PAN	PER	SLV	USA	VEN	VUT	C+OTR <sup>1</sup>	Total	OTR <sup>2</sup>
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	10,138	-	104,849	17,041	14,080	C	9,573	-	-	7,224	6,720	13,620	22,399	205,644	365
2001	9,445	-	66,144	13,454	8,169	C	6,967	-	C	4,135	3,215	7,824	23,813	143,166	1,696
2002	10,908	-	80,378	10,546	6,612	C	9,757	C	4,601	4,582	2,222	4,657	19,283	153,546	996
2003	14,771	-	139,804	18,567	8,147	-	25,084	C	C	5,445	6,143	14,112	41,895	273,968	4,049
2004	C	-	89,621	8,138	24,429	C	20,051	-	C	C	23,356	4,404	27,825	197,824	2,347
2005	C	-	140,927	9,224	32,271	3,735	25,782	-	4,995	C	22,146	C	24,149	263,229	3,309
2006	C	-	138,490	16,668	16,790	8,396	44,639	-	C	C	26,334	C	44,952	296,269	1,645
2007	C	-	93,553	2,879	21,542	4,286	28,475	-	C	C	21,990	C	35,571	208,296	1,579
2008	C	-	143,431	4,841	21,638	7,005	43,230	C	C	C	28,333	C	48,125	296,603	2,847
2009	C	-	132,712	6,021	6,847	5,119	26,973	C	C	C	19,370	C	33,481	230,523	2,821
2010	11,400	-	82,280	1,569	3,010	5,242	19,213	C	C	-	11,818	C	12,660	147,192	3,132
2011	23,269	-	149,637	5,238	11,899	3,889	29,837	-	C	C	27,026	C	25,240	276,035	2,259
2012	15,760	-	151,280	15,773	18,058	3,931	25,786	-	C	C	20,829	C	14,798	266,215	3,793
2013	22,168	-	172,002	2,900	17,350	4,345	31,022	C	C	-	17,522	C	11,251	278,560	3,229
2014	22,732	-	172,239	5,581	8,783	6,300	21,776	C	C	521	13,767	-	9,770	261,469	1,425
2015	16,431	-	208,765	C	23,515	1,261	31,427	5,225	C	16,826	4,792	-	20,665	328,907	1,444
2016	20,665	-	190,577	C	13,286	1,971	32,844	6,449	C	40,036	9,067	-	22,666	337,561	932
2017	19,284	-	190,139	C	21,238	6,959	37,419	6,257	C	24,989	7,288	-	11,186	324,759	1,049
2018	15,365	-	177,456	C	17,014	7,759	36,504	4,119	C	11,869	6,679	-	12,056	288,821	1,634
2019	23,395	-	211,827	C	19,656	8,089	33,662	8,944	C	19,706	5,719	-	16,407	347,405	660
2020	15,536	-	191,038	C	7,240	9,063	39,402	2,616	C	13,972	4,555	-	13,877	297,299	*

<sup>1</sup> Includes—Incluye: BLZ, BOL, CHN, EU(CYP), GTM, HND, LBR, NZL, RUS, VCT, UNK

<sup>2</sup> Includes gillnets, pole-and-line, recreational, and unknown gears—Incluye red agallera, caña, artes deportivas y desconocidas

**TABLE A-3d.** Catches (t) of bigeye tuna by purse-seine vessels in the EPO, by vessel flag. ‘C’ indicates that the catch has been combined with the total in the ‘OTR’ column. The data have been adjusted to the species composition estimate and are preliminary for 2019 and 2020.

**TABLA A-3d.** Capturas (t) de atún patudo por buques de cerco en el OPO, por bandera del buque. ‘C’ indica que la captura se ha combinado con el total en la columna ‘OTR’. Los datos están ajustados a la estimación de composición por especie, y los de 2019 y 2020 son preliminares.

	COL	CRI	ECU	EU(ESP)	MEX	NIC	PAN	PER	SLV	USA	VEN	VUT	C + OTR <sup>1</sup>	Total
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	7,443	-	36,094	12,511	0	C	7,028	*	-	5,304	457	10,000	16,446	95,283
2001	5,230	-	24,424	7,450	0	C	3,858	*	C	2,290	0	4,333	12,933	60,518
2002	5,283	-	26,262	5,108	0	C	4,726	C	2,228	2,219	0	2,256	9,340	57,422
2003	3,664	-	22,896	4,605	0	-	6,222	C	C	1,350	424	3,500	10,390	53,051
2004	C	-	30,817	3,366	0	C	8,294	*	C	C	9,661	1,822	11,511	65,471
2005	C	-	30,507	3,831	0	1,551	10,707	*	2,074	C	9,197	C	10,028	67,895
2006	C	-	39,302	5,264	6	2,652	14,099	*	C	C	8,317	C	14,197	83,837
2007	C	-	40,445	711	0	1,058	7,029	*	C	C	5,428	C	8,780	63,451
2008	C	-	41,177	1,234	327	1,785	11,018	C	C	C	7,221	C	12,266	75,028
2009	C	-	35,646	2,636	1,334	2,241	11,807	C	C	C	8,479	C	14,657	76,800
2010	4,206	-	34,902	579	11	1,934	7,089	C	C	-	4,360	C	4,672	57,753
2011	3,210	-	31,282	4,111	133	2,256	7,953	*	C	C	301	C	7,266	56,512
2012	1,873	-	45,633	3,866	225	1,250	7,238	*	C	C	848	C	5,087	66,020
2013	1,405	-	32,444	1,672	124	2,749	6,118	-	C	-	963	C	4,012	49,487
2014	2,479	-	39,094	2,812	40	3,068	8,168	-	C	129	1,183	-	3,472	60,445
2015	2,470	-	44,063	C	156	774	10,113	-	C	2,384	100	-	2,853	62,913
2016	2,743	-	33,139	C	255	667	8,440	312	C	2,801	345	-	8,029	56,731
2017	3,656	-	38,299	C	358	1,610	10,544	0	C	6,210	1,256	-	5,040	66,973
2018	1,449	-	40,427	C	766	1,519	11,753	104	C	3,354	1,157	-	3,994	64,523
2019	4,171	-	38,757	C	962	2,630	10,868	-	C	3,304	996	-	7,536	69,223
2020	4,014	-	45,582	C	673	1,781	10,095	61	C	3,746	644	-	8,386	74,981

<sup>1</sup> Includes—Incluye: BLZ, BOL, CHN, EU(CYP), GTM, HND, LBR, NZL, UNK, VCT

**TABLE A-3e.** Annual catches (t) of bigeye tuna by longline vessels, and totals for all gears, in the EPO, by vessel flag. 'C' indicates that the catch has been combined with the total in the 'OTR' column. The data for 2019-2020 are preliminary.

**TABLA A-3e.** Capturas anuales (t) de atún patudo por buques de palangre en el OPO, y totales de todas las artes, por bandera del buque. 'C' indica que la captura se ha combinado con el total en la columna 'OTR'. Los datos de 2019-2020 son preliminares.

	CHN	CRI	FRA (PYF)	JPN	KOR	MEX	PAN	TWN	USA	VUT	C + OTR <sup>1</sup>	Total LL	Total PS + LL	OTR <sup>2</sup>
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	142,887	253
2001	2,639	28	684	38,048	12,576	1	80	9,285	147	3,277	1,990	68,755	129,273	19
2002	7,614	19	388	34,193	10,358	-	6	17,253	132	2,995	1,466	74,424	131,845	12
2003	10,066	18	346	24,888	10,272	-	C	12,016	232	1,258	680	59,776	112,828	21
2004	2,645	21	405	21,236	10,729	-	48	7,384	149	407	459	43,483	108,954	194
2005	2,104	23	398	19,113	11,580	-	30	6,441	536	318	151	40,694	108,589	25
2006	709	18	388	16,235	6,732	-	37	6,412	85	960	195	31,771	115,608	40
2007	2,324	15	361	13,977	5,611	-	-	6,057	417	1,013	101	29,876	93,326	44
2008	2,379	16	367	14,908	4,150	-	-	1,852	1,277	790	468	26,207	101,236	28
2009	2,481	13	484	15,490	6,758	-	-	3,396	730	1,032	1,038	31,422	108,221	15
2010	2,490	4	314	15,847	9,244	-	-	5,276	1,356	1,496	1,063	37,090	94,842	2
2011	5,450	-	445	13,399	6,617	-	-	3,957	1,050	694	706	32,318	88,829	-
2012	4,386	3	464	16,323	7,450	-	-	4,999	875	1,063	604	36,167	102,187	27
2013	5,199	-	527	14,258	8,822	-	-	4,162	2,054	604	544	36,170	85,657	99
2014	5,253	9	526	13,634	8,203	-	114	4,511	2,073	897	120	35,340	95,785	177
2015	8,401	8	692	13,079	8,635	-	364	5,181	2,948	1,888	328	41,524	104,437	21
2016	7,052	3	477	10,467	7,692	-	313	6,006	2,090	762	679	35,541	92,272	22
2017	7,093	16	700	8,054	8,749	-	357	6,186	2,700	1,359	147	35,360	102,333	42
2018	6,060	14	897	6,130	6,675	-	415	5,125	2,410	1,194	145	29,065	93,588	18
2019	5,372	23	800	6,024	6,137	-	325	5,868	1,732	836	163	27,281	96,504	18
2020	*	*	*	*	*	-	*	*	*	*	*	*	74,981	*

<sup>1</sup> Includes—Incluye: BLZ, CHL, ECU, EU(ESP), EU(PRT), HND, SLV

<sup>2</sup> Includes gillnets, pole-and-line, recreational, and unknown gears—Incluye red agallera, caña, artes deportivas, y desconocidas

**TABLE A-4a.** Preliminary estimates of the retained catches, in metric tons, of tunas and bonitos caught by purse-seine vessels in the EPO in 2019 and 2020, 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-4a.** Estimaciones preliminares de las capturas retenidas, en toneladas métricas, de atunes y bonitos por buques cerqueros en el OPO en 2019 y 2020, 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	%
<b>2019</b>	<b>Retained catches–Capturas retenidas</b>									
COL	17,177	23,395	4,171	-	-	12	-	1	44,756	6.8
ECU	46,102	211,827	38,757	-	-	789	928	52	298,455	45.2
MEX	105,426	19,656	962	2,249	-	4,352	6,053	21	138,719	21.0
NIC	7,114	8,089	2,630	-	-	17	-	-	17,849	2.7
PAN	17,826	33,662	10,868	-	-	9	-	1	62,366	9.5
PER	1,782	8,944	-	-	-	-	36	3	10,765	1.6
USA	6,515	19,706	3,304	226	-	1	-	-	29,752	4.5
VEN	22,558	5,719	996	-	-	20	-	5	29,298	4.4
OTR <sup>1</sup>	3,814	16,407	7,536	-	-	-	-	-	27,756	4.3
<b>Total</b>	<b>228,313</b>	<b>347,405</b>	<b>69,223</b>	<b>2,475</b>	<b>-</b>	<b>5,200</b>	<b>7,017</b>	<b>83</b>	<b>659,716</b>	
<b>2020</b>	<b>Retained catches–Capturas retenidas</b>									
COL	16,507	15,536	4,014	-	-	11	-	7	36,074	6.0
ECU	39,867	191,038	45,582	-	-	1,583	-	144	278,214	46.2
MEX	102,295	7,240	673	3,266	-	2,296	3,169	33	118,973	19.8
NIC	5,439	9,063	1,781	-	-	-	-	3	16,285	2.7
PAN	22,820	39,402	10,095	-	-	26	-	5	72,348	12.0
PER	567	2,616	61	-	-	-	-	-	3,243	0.5
USA	3,781	13,972	3,746	117	-	14	-	1	21,631	3.6
VEN	24,536	4,555	644	-	-	8	-	-	29,743	4.9
OTR <sup>2</sup>	3,267	13,877	8,386	-	-	-	-	-	25,530	4.3
<b>Total</b>	<b>219,078</b>	<b>297,299</b>	<b>74,981</b>	<b>3,383</b>	<b>-</b>	<b>3,938</b>	<b>3,169</b>	<b>193</b>	<b>602,041</b>	

<sup>1</sup> Includes El Salvador and European Union (Spain) - This category is used to avoid revealing the operations of individual vessels or companies.

<sup>1</sup> Incluye El Salvador y Unión Europea (España) - Se usa esta categoría para no revelar información sobre las actividades de buques o empresas individuales.

<sup>2</sup> Includes El Salvador and European Union (Spain) - This category is used to avoid revealing the operations of individual vessels or companies.

<sup>2</sup> Incluye El Salvador y Unión Europea (España) - Se usa esta categoría para no revelar información sobre las actividades de buques o empresas individuales.

**TABLE A-4b.** Preliminary estimates of the landings, in metric tons, of tunas and bonitos caught by purse-seine vessels in the EPO in 2019 and 2020, by year, species and country of landing. The data for yellowfin, skipjack, and bigeye tunas have not been adjusted to the species composition estimates and are preliminary.

**TABLA A-4b.** Estimaciones preliminares de las descargas, en toneladas métricas, de atunes y bonitos por buques cerqueros en el OPO en 2019 y 2020, por año, especie y país de descarga. Los datos de los atunes aleta amarilla, barrilete, y patudo no fueron ajustados a las estimaciones de composición por especie, y son preliminares.

	YFT	SKJ	BET	PBF	ALB	BKJ	BZX	TUN	Total	%
<b>2019</b>	<b>Landings-Descargas</b>									
COL	14,778	19,863	2,706	-	-	3	-	-	37,350	5.7
ECU	81,694	272,493	38,472	-	-	816	928	52	394,455	60.7
MEX	104,529	22,690	906	2,249	-	4,348	6,054	14	140,790	21.7
PER	3,758	19,821	1,072	-	-	30	36	14	24,731	3.8
USA	3,788	5,661	330	226	-	-	-	7	10,012	1.6
OTR <sup>1</sup>	19,172	16,679	6,587	-	-	3	-	-	42,441	6.5
<b>Total</b>	<b>227,719</b>	<b>357,207</b>	<b>50,073</b>	<b>2,475</b>	<b>-</b>	<b>5,200</b>	<b>7,018</b>	<b>87</b>	<b>649,779</b>	
<b>2020</b>	<b>Landings-Descargas</b>									
COL	16,674	13,969	2,645	-	-	10	-	3	33,301	5.4
ECU	71,665	276,517	38,812	-	-	1,600	-	141	388,735	63.7
MEX	100,951	10,881	1,225	3,266	-	2,297	3,169	33	121,822	20.0
PER	1,379	8,947	563	-	-	19	-	6	10,914	1.8
USA	1,794	3,550	447	117	-	-	-	-	5,908	1.0
OTR <sup>2</sup>	28,851	15,156	5,754	-	-	-	-	-	49,761	8.1
<b>Total</b>	<b>221,314</b>	<b>329,020</b>	<b>49,446</b>	<b>3,383</b>	<b>-</b>	<b>3,926</b>	<b>3,169</b>	<b>183</b>	<b>610,441</b>	

<sup>1</sup> Includes Costa Rica, El Salvador, Guatemala, Kiribati and Panama - This category is used to avoid revealing the operations of individual vessels or companies.

<sup>1</sup> Incluye Costa Rica, El Salvador, Guatemala, Kiribati y Panamá - Se usa esta categoría para no revelar información sobre las actividades de buques o empresas individuales.

<sup>2</sup> Includes Costa Rica, El Salvador, Guatemala, Kiribati and Unknown - This category is used to avoid revealing the operations of individual vessels or companies.

<sup>2</sup> Incluye Costa Rica, Desconocida, El Salvador, Guatemala y Kiribati - Se usa esta categoría para no revelar información sobre las actividades de buques o empresas individuales.

**TABLE A-5a.** Annual retained catches of Pacific bluefin tuna, by gear type and flag, in metric tons, 1991-2019. The data for 2018 and 2019 are preliminary; 2020 data are not available.

**TABLA A-5a.** Capturas retenidas anuales de atún aleta azul del Pacífico, por arte de pesca y bandera, en toneladas, 1991-2019. Los datos de 2018 y 2019 son preliminares; no se dispone de datos de 2020.

PBF	Western Pacific flags—Banderas del Pacífico occidental <sup>1</sup>										EPO flags—Banderas del OPO					Total
	JPN				KOR		TWN			Sub-total	MEX		USA		Sub-total	
	PS	LP	LL	OTR	PS	OTR	PS	LL	OTR		PS	OTR	PS	OTR		
1991	9,808	286	218	4,204	265	-	-	342	119	15,242	9	-	410	98	517	15,759
1992	7,162	166	513	3,204	288	-	73	464	8	11,878	0	-	1,928	171	2,099	13,977
1993	6,600	129	812	1,759	40	-	1	471	3	9,815	-	-	580	386	966	10,781
1994	8,131	162	1,206	5,667	50	-	-	559	-	15,775	63	2	906	145	1,116	16,891
1995	18,909	270	678	7,223	821	-	-	335	2	28,238	11	-	657	294	962	29,200
1996	7,644	94	901	5,359	102	-	-	956	-	15,056	3,700	-	4,639	110	8,449	23,505
1997	13,152	34	1,300	4,354	1,054	-	-	1,814	-	21,708	367	-	2,240	264	2,871	24,579
1998	5,391	85	1,255	4,450	188	-	-	1,910	-	13,279	1	0	1,771	703	2,475	15,754
1999	16,173	35	1,157	5,246	256	-	-	3,089	-	25,956	2,369	35	184	592	3,180	29,136
2000	16,486	102	953	7,031	2,401	-	-	2,780	2	29,755	3,019	99	693	380	4,191	33,946
2001	7,620	180	791	5,614	1,176	10	-	1,839	4	17,234	863	-	292	392	1,547	18,781
2002	8,903	99	841	4,338	932	1	-	1,523	4	16,641	1,708	2	50	625	2,385	19,026
2003	5,768	44	1,237	3,345	2,601	-	-	1,863	21	14,879	3,211	43	22	373	3,649	18,528
2004	8,257	132	1,847	3,855	773	-	-	1,714	3	16,581	8,880	14	-	61	8,955	25,536
2005	12,817	549	1,925	6,363	1,318	9	-	1,368	2	24,351	4,542	-	201	80	4,823	29,174
2006	8,880	108	1,121	4,058	1,012	3	-	1,149	1	16,332	9,806	-	-	96	9,902	26,234
2007	6,840	236	1,762	4,983	1,281	4	-	1,401	10	16,517	4,147	-	42	14	4,203	20,720
2008	10,221	64	1,390	5,505	1,866	10	-	979	2	20,037	4,407	15	-	64	4,486	24,523
2009	8,077	50	1,080	4,814	936	4	-	877	11	15,849	3,019	-	410	162	3,591	19,440
2010	3,742	83	890	3,681	1,196	16	-	373	36	10,017	7,746	-	-	89	7,835	17,852
2011	8,340	63	837	3,754	670	14	-	292	24	13,994	2,731	1	-	343	3,075	17,069
2012	2,462	113	673	2,846	1,421	2	-	210	4	7,731	6,668	1	-	442	7,111	14,842
2013	2,771	8	784	2,848	604	1	-	331	3	7,350	3,154	-	-	820	3,974	11,324
2014	5,456	5	683	3,429	1,305	6	-	483	42	11,409	4,862	-	401	427	5,690	17,099
2015	3,645	8	649	2,085	676	1	-	552	26	7,642	3,082	-	86	412	3,580	11,222
2016	5,095	44	691	2,514	1,024	5	-	454	0	9,827	2,709	-	316	412	3,437	13,264
2017	4,540	49	913	3,491	734	9	-	415	0	10,151	3,643	-	466	472	4,581	14,732
2018	4,049	8	700	1,447	523	12	-	381	3	7,123	2,482	-	12	554	3,048	10,171
2019	4,464	0	1,002	2,031	542	39	-	486	3	8,081	2,249	-	226	478	2,953	11,034

<sup>1</sup> Source: International Scientific Committee, 20th Plenary Meeting, PBFWG workshop report on Pacific Bluefin Tuna, July 2020—Fuente: Comité Científico Internacional, 20ª Reunión Plenaria, Taller PBFWG sobre Atún Aleta Azul del Pacífico, julio de 2020

**TABLE A-5b.** Reported catches of Pacific bluefin tuna in the EPO by recreational gear, in number of fish, 1991-2020.

**TABLA A-5b.** Capturas reportadas de atún aleta azul del Pacifico en el OPO por artes deportivas, en número de peces, 1991-2020.

<b>1991</b>	5,330	<b>2006</b>	7,473
<b>1992</b>	8,586	<b>2007</b>	1,028
<b>1993</b>	10,535	<b>2008</b>	10,187
<b>1994</b>	2,243	<b>2009</b>	12,138
<b>1995</b>	16,025	<b>2010</b>	8,453
<b>1996</b>	2,739	<b>2011</b>	31,494
<b>1997</b>	8,338	<b>2012</b>	40,012
<b>1998</b>	20,466	<b>2013</b>	63,158
<b>1999</b>	36,797	<b>2014</b>	27,889
<b>2000</b>	20,669	<b>2015</b>	28,661
<b>2001</b>	21,913	<b>2016</b>	12,312
<b>2002</b>	33,399	<b>2017</b>	16,493
<b>2003</b>	22,291	<b>2018</b>	13,849
<b>2004</b>	3,391	<b>2019</b>	17,984
<b>2005</b>	5,757	<b>2020</b>	30,413

**TABLE A-6.** Annual retained catches of albacore in the EPO, by gear and area (north and south of the equator), in metric tons, 1991-2019. The data for 2018 and 2019 are preliminary; 2020 data are not available.

**TABLA A-6.** Capturas retenidas anuales de atún albacora en el OPO, por arte y zona (al norte y al sur de la línea ecuatorial), en toneladas, 1991-2019. Los datos de 2018 y 2019 son preliminares; no se dispone de datos de 2020.

ALB	North—Norte				South—Sur				Total
	LL	LTL <sup>1</sup>	OTR	Subtotal	LL	LTL	OTR	Subtotal	
1991	1,514	2,617	6	4,137	6,379	795	170	7,344	11,481
1992	1,635	4,770	2	6,407	15,445	1,205	18	16,668	23,075
1993	1,772	4,332	25	6,129	9,422	35	19	9,476	15,605
1994	2,356	9,666	106	12,128	8,034	446	21	8,501	20,629
1995	1,380	7,773	102	9,255	4,805	2	15	4,822	14,077
1996	1,675	8,267	99	10,041	5,956	94	21	6,071	16,112
1997	1,365	6,115	1,019	8,499	8,313	466	0	8,779	17,278
1998	1,730	12,019	1,250	14,999	10,905	12	0	10,917	25,916
1999	2,701	11,028	3,668	17,397	8,932	81	7	9,020	26,417
2000	1,880	10,960	1,869	14,709	7,783	778	3	8,564	23,273
2001	1,822	11,727	1,638	15,187	17,588	516	6	18,110	33,297
2002	1,227	12,286	2,388	15,901	14,062	131	40	14,233	30,134
2003	1,129	17,808	2,260	21,197	23,772	419	3	24,194	45,391
2004	854	20,288	1,623	22,765	17,590	331	0	17,921	40,686
2005	405	13,807	1,741	15,953	8,945	181	7	9,133	25,086
2006	3,671	18,515	408	22,594	10,161	48	119	10,328	32,922
2007	2,708	17,948	1,415	22,071	8,399	19	87	8,505	30,576
2008	1,160	17,137	308	18,605	8,058	0	159	8,217	26,822
2009	91	17,933	996	19,020	11,981	0	213	12,194	31,214
2010	1,134	18,246	892	20,272	13,122	3	247	13,372	33,644
2011	1,833	15,437	426	17,696	14,357	0	222	14,579	32,275
2012	4,583	16,633	1,222	22,438	19,613	35	210	19,858	42,296
2013	6,193	17,398	844	24,435	19,204	0	271	19,475	43,910
2014	3,546	18,178	1,042	22,766	25,685	0	243	25,928	48,694
2015	2,067	15,986	934	18,987	26,873	0	221	27,094	46,081
2016	1,641	13,600	677	15,918	25,136	0	290	25,426	41,346
2017	2,512	8,871	386	11,769	23,820	0	206	24,026	35,795
2018	2,433	10,433	399	13,265	22,951	0	329	23,280	36,546
2019	2,980	10,199	1,368	14,547	16,869	0	362	17,231	31,778

<sup>1</sup> Includes pole-and-line—Incluye caña



**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 by purse-seine vessels in the EPO. The data for 2019 and 2020 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 por buques cerqueros en el OPO. Los datos de 2019 y 2020 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				
<b>DEL</b>	<b>Sets associated with dolphins Lances asociados a delfines</b>					
<b>2005</b>	0	12,173	12,173	167,224	12,321	1
<b>2006</b>	0	8,923	8,923	91,800	4,801	0
<b>2007</b>	0	8,871	8,871	97,075	3,272	7
<b>2008</b>	0	9,246	9,246	122,107	8,388	4
<b>2009</b>	0	10,910	10,910	178,291	2,683	1
<b>2010</b>	0	11,646	11,646	170,028	1,365	0
<b>2011</b>	0	9,604	9,604	134,926	4,387	2
<b>2012</b>	0	9,220	9,220	133,825	2,122	0
<b>2013</b>	0	10,736	10,736	157,432	4,272	0
<b>2014</b>	0	11,382	11,382	167,780	4,413	3
<b>2015</b>	0	11,020	11,020	160,595	5,608	2
<b>2016</b>	0	11,219	11,219	146,526	3,179	4
<b>2017</b>	0	8,863	8,863	112,533	1,656	1
<b>2018</b>	0	9,774	9,774	147,859	2,456	1
<b>2019</b>	0	9,680	9,680	153,649	3,696	28
<b>2020</b>	0	9,810	9,810	150,989	1,745	61
<b>OBJ</b>	<b>Sets associated with floating objects Lances asociados a objetos flotantes</b>					
<b>2005</b>	796	4,992	5,788	25,752	132,937	66,256
<b>2006</b>	1,313	6,862	8,175	34,111	191,006	82,176
<b>2007</b>	1,605	5,857	7,462	29,412	122,119	62,187
<b>2008</b>	1,958	6,655	8,613	34,763	157,324	73,851
<b>2009</b>	2,142	7,077	9,219	36,147	157,023	75,889
<b>2010</b>	2,432	6,399	8,831	37,850	114,659	57,059
<b>2011</b>	2,538	6,921	9,459	42,176	171,193	55,587
<b>2012</b>	3,067	7,610	10,677	37,487	177,055	65,035
<b>2013</b>	3,081	8,038	11,119	35,112	194,372	48,337
<b>2014</b>	3,860	8,777	12,637	46,049	199,696	59,797
<b>2015</b>	3,457	9,385	12,842	43,603	206,515	60,975
<b>2016</b>	4,214	10,377	14,591	58,673	248,190	55,269
<b>2017</b>	4,544	11,148	15,692	67,167	224,422	65,443
<b>2018</b>	4,954	11,871	16,825	66,122	213,626	63,815
<b>2019</b>	4,885	10,591	15,476	52,862	226,375	68,553
<b>2020</b>	2,812	8,726	11,538	43,788	193,013	74,529

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				
<b>NOA</b>	<b>Sets on unassociated schools</b> <b>Lances sobre cardúmenes no asociados</b>					
<b>2005</b>	6,922	7,816	14,738	75,125	117,971	1,638
<b>2006</b>	7,180	8,443	15,623	40,720	100,461	1,662
<b>2007</b>	5,480	7,211	12,691	43,529	82,904	1,256
<b>2008</b>	5,204	6,210	11,414	28,187	130,891	1,173
<b>2009</b>	3,822	4,109	7,931	22,319	70,817	909
<b>2010</b>	2,744	3,885	6,629	43,131	31,168	693
<b>2011</b>	2,840	5,182	8,022	29,749	100,455	923
<b>2012</b>	2,996	5,369	8,365	26,705	87,038	985
<b>2013</b>	3,064	4,156	7,220	25,643	79,916	1,150
<b>2014</b>	2,428	3,369	5,797	20,237	57,360	645
<b>2015</b>	3,116	6,201	9,317	41,529	116,784	1,936
<b>2016</b>	2,300	5,101	7,401	36,919	86,192	1,458
<b>2017</b>	2,016	4,960	6,976	31,280	98,681	1,529
<b>2018</b>	1,925	4,163	6,088	25,000	72,739	707
<b>2019</b>	2,064	5,948	8,012	21,802	117,334	642
<b>2020</b>	1,817	4,522	6,339	24,301	102,541	391
<b>ALL</b>	<b>Sets on all types of schools</b> <b>Lances sobre todos tipos de cardumen</b>					
<b>2005</b>	7,718	24,981	32,699	268,101	263,229	67,895
<b>2006</b>	8,493	24,228	32,721	166,631	296,268	83,838
<b>2007</b>	7,085	21,939	29,024	170,016	208,295	63,450
<b>2008</b>	7,162	22,111	29,273	185,057	296,603	75,028
<b>2009</b>	5,964	22,096	28,060	236,757	230,523	76,799
<b>2010</b>	5,176	21,930	27,106	251,009	147,192	57,752
<b>2011</b>	5,378	21,707	27,085	206,851	276,035	56,512
<b>2012</b>	6,063	22,199	28,262	198,017	266,215	66,020
<b>2013</b>	6,145	22,930	29,075	218,187	278,560	49,487
<b>2014</b>	6,288	23,528	29,816	234,066	261,469	60,445
<b>2015</b>	6,573	26,606	33,179	245,727	328,907	62,913
<b>2016</b>	6,514	26,697	33,211	242,118	337,561	56,731
<b>2017</b>	6,560	24,971	31,531	210,980	324,759	66,973
<b>2018</b>	6,879	25,808	32,687	238,981	288,821	64,523
<b>2019</b>	6,949	26,219	33,168	228,313	347,405	69,223
<b>2020</b>	4,629	23,058	27,687	219,078	297,299	74,981

**TABLE A-8.** Types of floating objects involved in sets by vessels of >363 t carrying capacity, 2005-2020. The 2020 data are preliminary.

**TABLA A-8.** Tipos de objetos flotantes sobre los que realizaron lances buques de >363 t de capacidad de acarreo, 2005-2020. Los datos de 2020 son preliminares.

OBJ	Flotsam Naturales		FADs Plantados		Unknown Desconocido		Total
	No.	%	No.	%	No.	%	
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	322	4.5	6,728	95.1	27	0.4	7,077
2010	337	5.3	6,038	94.3	24	0.4	6,399
2011	563	8.1	6,342	91.6	16	0.2	6,921
2012	286	3.8	7,321	96.2	3	< 0.1	7,610
2013	274	3.4	7,759	96.5	5	0.1	8,038
2014	283	3.2	8,490	96.7	4	< 0.1	8,777
2015	273	2.9	9,093	96.9	19	0.2	9,385
2016	278	2.7	10,070	97.0	29	0.3	10,377
2017	271	2.4	10,877	97.6	0	0	11,148
2018	322	2.7	11,549	97.3	0	0	11,871
2019	216	2.0	10,373	97.9	2	< 0.1	10,591
2020	140	1.6	8,586	98.4	0	0	8,726

**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. 2020 data are not available.

**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. No se dispone de datos de 2020.

LL	CHN		JPN		KOR		FRA(PYF)		TWN		USA		OTR <sup>1</sup>
	E	C	E	C	E	C	E	C	E	C	E	C	C
1991	-	-	200,365	112,337	65,024	24,644	-	-	17,969	5,862	42	12	173
1992	-	-	191,284	93,011	45,634	13,104	199	89	33,025	14,142	325	106	128
1993	-	-	159,955	87,977	46,375	12,843	153	79	18,064	6,566	415	81	227
1994	-	-	163,968	92,606	44,788	13,250	1,373	574	12,588	4,883	303	25	523
1995	-	-	129,598	69,435	54,979	12,778	1,776	559	2,910	1,639	828	180	562
1996	-	-	103,654	52,298	40,290	14,121	2,087	931	5,830	3,553	510	182	185
1997	-	-	96,383	59,325	30,493	16,663	3,464	1,941	8,720	5,673	464	215	752
1998	-	-	106,568	50,167	51,817	15,089	4,724	2,858	10,586	5,039	1,008	406	1,176
1999	-	-	80,958	32,886	54,269	13,294	5,512	4,446	23,247	7,865	1,756	469	1,157
2000	-	-	79,311	45,216	33,585	18,759	8,090	4,382	18,152	7,809	737	204	4,868
2001	13,056	5,162	102,219	54,775	72,261	18,201	7,445	5,086	41,920	20,060	1,438	238	15,612
2002	34,889	10,398	103,920	45,401	96,273	14,370	943	3,238	78,018	31,773	613	138	10,258
2003	43,289	14,548	101,227	36,187	71,006	15,551	11,098	4,101	74,460	28,328	1,314	262	11,595
2004	15,889	4,033	76,824	30,936	55,861	14,540	13,757	3,030	49,979	19,535	1,049	166	9,193
2005	16,896	3,681	65,081	25,712	15,798	12,284	13,356	2,515	38,536	12,229	2,397	557	5,244
2006	588	969	56,525	21,432	27,472	7,892	11,786	3,220	38,134	12,375	234	121	10,027
2007	12,226	2,624	45,972	20,514	10,548	6,037	9,672	3,753	22,244	9,498	2,689	436	6,424
2008	11,518	2,984	44,547	21,375	3,442	4,256	10,255	3,017	12,544	4,198	6,322	1,369	9,231
2009	10,536	3,435	41,517	21,492	18,364	7,615	10,686	4,032	13,904	6,366	5,141	852	11,731
2010	11,905	3,590	47,807	21,017	25,816	10,477	8,976	3,139	24,976	10,396	8,879	1,480	11,400
2011	37,384	9,983	52,194	18,682	25,323	7,814	9,514	3,192	21,065	9,422	7,359	1,233	7,616
2012	55,508	14,462	55,587	22,214	20,338	8,286	8,806	3,589	20,587	11,924	5,822	986	14,237
2013	70,411	18,128	48,825	19,097	31,702	10,248	9,847	3,303	19,198	11,722	10,765	2,127	9,754
2014	78,851	24,282	40,735	17,235	22,695	9,132	10,572	3,291	17,047	10,435	11,276	2,168	6,874
2015	99,131	25,559	35,290	16,046	22,394	9,879	13,661	4,509	15,334	11,274	13,868	3,089	10,924
2016	66,405	25,756	30,910	13,242	23,235	9,457	13,677	3,954	20,941	11,432	11,313	2,372	6,121
2017	82,461	27,341	27,930	10,617	27,540	10,525	11,641	3,425	24,164	11,811	15,266	3,266	5,357
2018	83,023	27,024	24,627	8,692	19,443	8,474	13,258	4,300	20,974	9,985	13,607	2,879	6,779
2019	65,298	18,652	18,521	8,869	17,655	8,556	12,620	4,209	21,782	12,169	11,052	2,021	4,820

<sup>1</sup> Includes the catches of—Incluye las capturas de: BLZ, CHL, COK, CRI, ECU, EU(ESP), GTM, HND, MEX, NIC, PAN, EU(PRT), SLV, VUT

**TABLE A-10.** Numbers and well volumes, in cubic meters, of purse-seine and pole-and line vessels of the EPO tuna fleet. The data for 2019 and 2020 are preliminary.

**TABLA A-10.** Número y volumen de bodega, en metros cúbicos, de buques cerqueros y cañeros de la flota atunera del OPO. Los datos de 2019 y 2020 son preliminares.

	PS		LP		Total	
	No.	Vol. (m <sup>3</sup> )	No.	Vol. (m <sup>3</sup> )	No.	Vol. (m <sup>3</sup> )
1991	152	124,062	22	1,997	174	126,059
1992	158	116,619	20	1,807	178	118,426
1993	151	117,593	15	1,550	166	119,143
1994	166	120,726	20	1,726	186	122,452
1995	175	123,798	20	1,784	195	125,582
1996	180	130,774	17	1,646	197	132,420
1997	194	147,926	23	2,127	217	150,053
1998	202	164,956	22	2,216	224	167,172
1999	208	178,724	14	1,642	222	180,366
2000	205	180,679	12	1,220	217	181,899
2001	204	189,088	10	1,259	214	190,347
2002	218	199,870	6	921	224	200,791
2003	214	202,381	3	338	217	202,719
2004	218	206,473	3	338	221	206,811
2005	220	212,419	4	498	224	212,917
2006	225	225,166	4	498	229	225,664
2007	227	225,359	4	380	231	225,739
2008	219	223,804	4	380	223	224,184
2009	221	224,632	4	380	225	225,012
2010	202	210,025	3	255	205	210,280
2011	208	213,237	3	339	211	213,576
2012	209	217,687	4	464	213	218,151
2013	203	212,087	3	268	206	212,355
2014	226	230,379	2	226	228	230,605
2015	244	248,428	1	125	245	248,553
2016	250	261,474	0	0	250	261,474
2017	254	263,018	0	0	254	263,018
2018	261	263,666	0	0	261	263,666
2019	261	265,085	0	0	261	265,085
2020	240	239,687	0	0	240	239,687

**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 2019, 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 2019 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 <sup>3</sup> )					Total	
		<401	401-800	801-1300	1301-1800	>1800	No.	Vol. (m <sup>3</sup> )
		Number—Número						
COL	PS	2	2	7	3	-	14	14,860
ECU	PS	38	33	22	9	12	114	91,057
EU(ESP)	PS	-	-	-	-	2	2	4,120
MEX	PS	5	2	21	23	-	51	61,146
NIC	PS	-	-	3	2	1	6	9,066
PAN	PS	-	2	5	6	4	17	23,719
PER	PS	6	5	-	-	-	11	4,767
SLV	PS	-	-	-	1	2	3	6,202
USA	PS	11	-	3	9	6	29	30,367
VEN	PS	-	-	7	6	1	14	19,781
Grand total— Total general	PS	62	44	68	59	28	261	
		Well volume—Volumen de bodega (m <sup>3</sup> )						
Grand total— Total general	PS	16,015	26,070	75,928	88,886	58,186		265,085

- : none—ninguno

**TABLE A-11b.** Estimates of the numbers and well volumes (cubic meters) of purse-seine (PS) vessels that fished in the EPO in 2020, 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) que pescaron en el OPO en 2020, 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 <sup>3</sup> )					Total	
		<401	401-800	801-1300	1301-1800	>1800	No.	Vol. (m <sup>3</sup> )
		Number—Número						
COL	PS	2	2	7	3	-	14	14,860
ECU	PS	35	33	22	8	11	109	87,210
EU(ESP)	PS	-	-	-	-	2	2	4,120
MEX	PS	4	2	19	23	-	48	58,854
NIC	PS	-	-	2	1	1	4	6,099
PAN	PS	-	2	7	7	3	19	25,564
PER	PS	4	6	-	-	-	10	4,818
SLV	PS	-	-	-	1	2	3	6,202
USA	PS	11	-	2	5	3	21	17,530
VEN	PS	-	-	6	5	1	12	16,986
Grand total— Total general	PS	56	45	64	52	23	240	
Well volume—Volumen de bodega (m <sup>3</sup> )								
Grand total— Total general	PS	14,372	26,632	71,519	79,231	47,933		239,687

- : 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 2010-2019 and in 2020, 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 2010-2019 y en 2020, por mes.

Month Mes	2010-2019			2020
	Min	Max	Ave.-Prom.	
1	86.9	129.6	100.2	105.3
2	150.7	192.3	171.6	154.2
3	135.4	189.7	164.1	159.3
4	145.9	200.8	167.1	151.2
5	139.8	196.9	166.5	159.3
6	154.9	198.6	171.6	157.2
7	154.1	200.4	170.5	161.4
8	108.0	148.7	122.4	107.6
9	105.5	142.2	119.3	102.2
10	150.7	188.9	172.8	141.7
11	102.8	140.8	122.5	93.9
12	45.9	68.2	57.2	72.5
<b>Ave.-Prom.</b>	123.4	166.4	142.1	130.5