

**INTER-AMERICAN TROPICAL TUNA COMMISSION**  
**PERMANENT WORKING GROUP ON FLEET CAPACITY**  
**20<sup>TH</sup> MEETING**  
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**DOCUMENT CAP-20-01**

**UTILIZATION OF VESSEL CAPACITY UNDER  
RESOLUTIONS C-02-03, C-12-06, C-12-08 AND C-15 -02  
(UPDATED AS OF 30 JUNE 2018)**

This document contains updated data on the capacity of the purse-seine fleet in the eastern Pacific Ocean, and pending issues that should be addressed<sup>1</sup>.

It also includes information pertinent to the implementation of Resolutions [C-12-06](#) and [C-12-08](#) on capacity loans or concessions and chartering of vessels with temporary transfers of capacity and on the sealing of wells, respectively.

## **1. INTRODUCTION**

Resolution [C-02-03](#) on the capacity of the fleet operating in the eastern Pacific Ocean (EPO) has been in force for sixteen years. The capacity management system created by the Resolution establishes limitations essentially determined by the IATTC Regional Vessel Register. Therefore, the key elements of the Resolution address how vessels may be added to or removed from the Regional Register.

The Secretariat has made available to each Member and Cooperating Non-Member (CPC) a document that shows the history of each CPC's flag vessels with regard to the Regional Register, and how that has affected, historically, the changes in the well volume available to each CPC since the Resolution entered into force. A monthly report of the movements made in the Regional Register relating to Resolutions [C-02-03](#), [C-12-06](#), [C-12-08](#), [C-14-01](#) and [C-15-02](#) is also sent.

It should be recalled that, in June 2005, the Commission adopted a [Plan for Regional Management of Fishing Capacity](#). The principal objective of the Plan is to establish a comprehensive program for managing the capacity of all fishing fleets operating in the eastern Pacific Ocean (EPO), to ensure the long-term sustainability of the fisheries covered by the IATTC. For the purse-seine fishery, this will mean a reduction in the current level of fishing capacity. According to section 3 of the Plan, which establishes its objectives and principles: "*CPCs and all participants in these fisheries should limit the total fleet capacity to the present level and to reduce it, as appropriate, in accordance with an agreed program. After any targets for the fleet capacity have been achieved, CPCs and all participants in these fisheries should exercise caution to avoid growth in fleet capacity.*"

## **2. UTILIZATION OF WELL VOLUME TO DATE**

The active purse-seine capacity on the Regional Register on 30 June 2018 is 285,474 m<sup>3</sup>. The capacity of inactive or sunk vessels is 5,532 m<sup>3</sup>, and the capacity available as a result of movements of vessels on the

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<sup>1</sup> See document [SAC-06 INF-B Capacity scenarios](#), prepared for the 6th meeting of the Scientific Advisory Committee in May 2015. It contains 11 scenarios of the impact on the tuna resources in the EPO of various increases in fleet capacity that would result from different resolutions of the currently pending capacity requests or capacity disputes.

Regional Register is 11,355 m<sup>3</sup>, for a potential total of 302,361 m<sup>3</sup>. In June 2002, when the Resolution entered into force, the active capacity was 218,482 m<sup>3</sup>, while the sum total of the active and inactive capacity, plus that included in paragraph 10 of the resolution, was 273,467 m<sup>3</sup>; although the current operative capacity is below that level (Figure 1), this represents an increase in the potential total capacity of 28,894 m<sup>3</sup>. It should be further noted that these numbers do not take fully into account the capacity requests in the footnote to the Resolution, which two of the three countries mentioned, Peru and Colombia, have utilized partially, with the approval of the Commission.

The following are the main reasons for this increase in the potential total capacity.

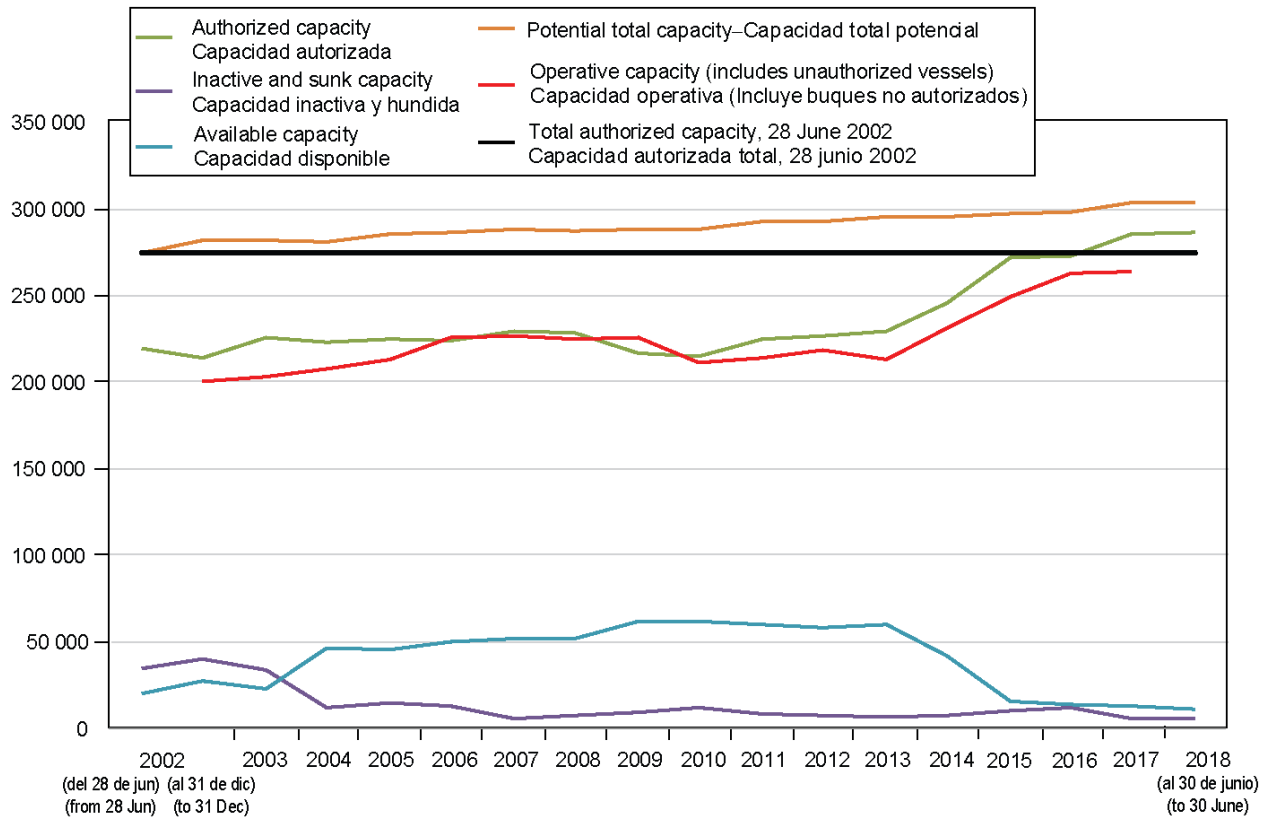
First, in the months following the adoption of Resolution C-02-03 and subsequently, the Commission agreed to add several vessels to the Regional Register, to correct omissions by several delegations at the meeting at which the resolution was adopted. In addition, the measurement of vessel capacity has to be taken into account. In 2002, the capacity of the great majority of vessels was merely estimated; currently, almost all vessels have been measured, with an overall result of greater total capacity of the fleet. It is important to mention, that during its 89<sup>th</sup> IATTC Meeting held in Guayaquil, Ecuador, the Commission adopted Resolution C-15-02, which establishes a deadline for confirming capacity through such measurement, as follows:

*“For the purposes of interpretation of paragraph 6 of Resolution C-02-03 with regard to the deadlines for confirming capacity, as of 1 January 2017 the well volume reflected on the Regional Vessel Register will be considered confirmed for vessels currently included in the Register. In the case of new vessels, the well volume notified at the time the vessel is added to the Register will be considered confirmed”.*

Second, consistent with the provisions of the Resolution, the Commission adopted several decisions that led to an increase of the potential total capacity. Pursuant to paragraph 10 of the Resolution, 5,000 m<sup>3</sup> of well volume were granted to Peru in June 2011 to be used only by Peruvian-flag vessels operating only in waters under the jurisdiction of Peru, a restriction that was removed by the Commission in July 2014; the situation of some Colombian and Ecuadorian vessels was regularized in June 2013, and a number of capacity requests or disputes were resolved by the Commission in 2014, as described in the [minutes of its 88th meeting](#).

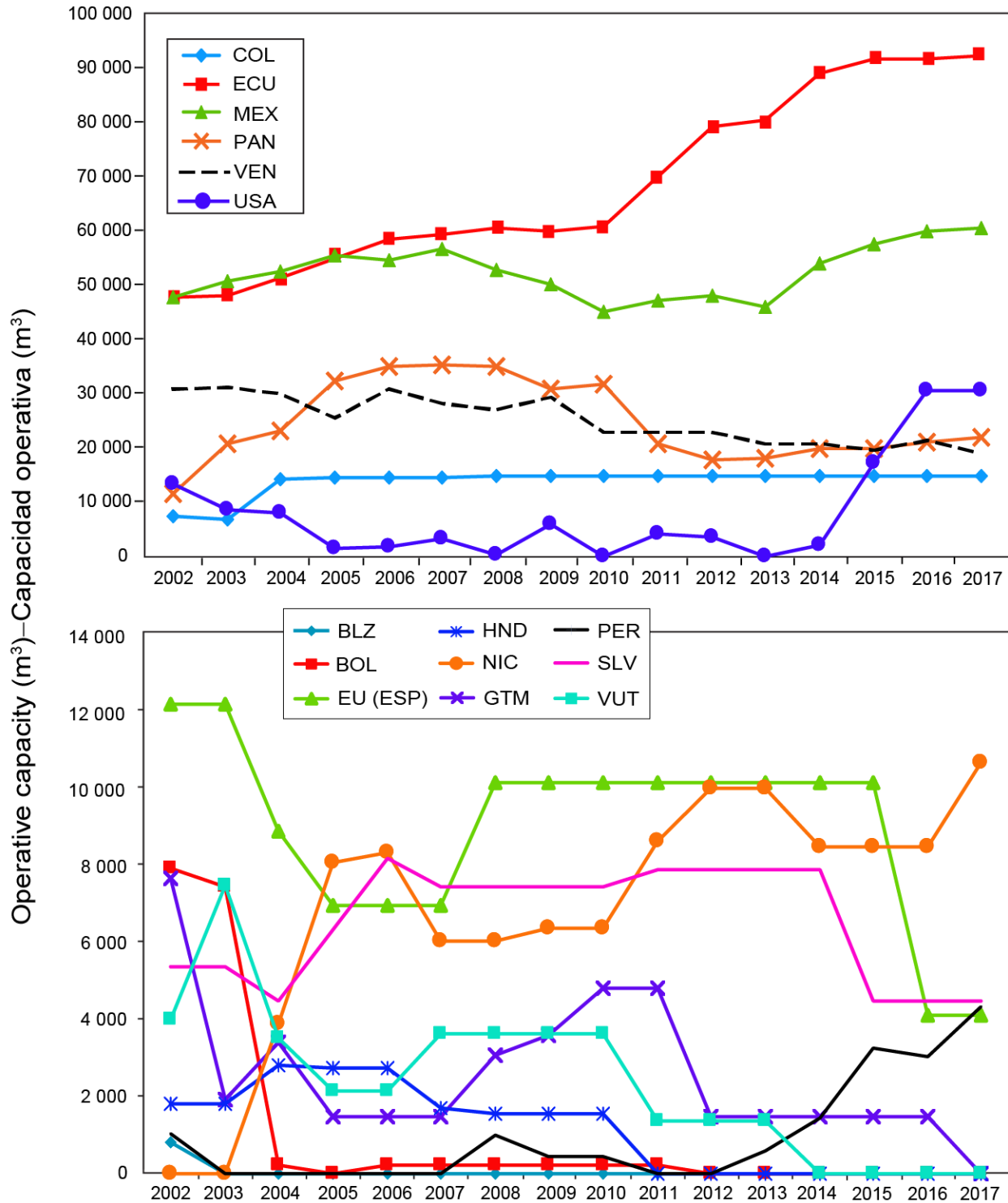
At its 91<sup>th</sup> Meeting (Extraordinary), the Commission approved the activation of the capacity of Guatemala (3,762 m<sup>3</sup>) and Venezuela (1,688 m<sup>3</sup>) that had been restored to them by the Commission at its 88<sup>th</sup> Meeting (Extraordinary).

In the past, there have been several requests for changes in the capacity of vessels on the Regional Register that have sunk or been scrapped, with well volumes greater than those originally recorded in the Regional Register by the respective flag CPC and with which the vessels operated until they sank or were scrapped. This type of situation cannot arise any longer since Resolution C-15-02 stipulates that “as of 1 January 2017 the well volume reflected on the Regional Vessel Register will be considered confirmed for vessels currently included in the Register”.



**FIGURE 1.** Active, inactive, available, potential total, and operative capacity, in cubic meters (m<sup>3</sup>) of well volume, 2002-2018 ([see glossary in the Appendix](#)).

Figure 2 illustrates the evolution of the operative capacity of the fleets during 2002-2017.



**FIGURE 2.** Operative capacity of purse-seine fleets that fished in the EPO during 2002-2017 with current capacities (a) greater than and (b) less than 14,000 cubic meters of well volume.

### 3. EXCEPTIONS FOR ADDING NEW VESSELS TO THE REGIONAL REGISTER

Although the current system is not based on national capacity limits, paragraph 10 of Resolution C-02-03 and Resolution C-11-12 allow certain countries to add to their fleet new vessels that are not on the Register. The current situation regarding these exceptions is:

	Limit (m <sup>3</sup> )	
	Provided	Remaining
Costa Rica	9,364	3,302
El Salvador	861	0
Guatemala	1,700	0
Nicaragua	5,300	0
Peru	8,195	454
<b>TOTAL</b>	<b>25,420</b>	<b>3,756</b>

### 4. VESSELS THAT INCREASED THEIR CAPACITY

According to information available to the Commission staff, the following vessel increased its capacity contrary to Resolution C-02-03. The Director has written to the flag CPC regarding this increase, but the situation has not yet been corrected.

Vessel	Flag	Well volume (m <sup>3</sup> )		Notes
		On Register	True vol.	
<i>Ricky A</i>	ECU	818	1,208	Pending since November 2009

Ecuador stated that the increase in capacity of this vessel was made with capacity from the vessel *Victoria A*, which operated in the EPO but sank in October 1995, and which was inadvertently omitted from the list of vessels supplied by Ecuador for inclusion in the Regional Register.

### 5. CAPACITY LOANS OR CONCESSIONS AND CHARTERS

Resolution C-12-06, approved in June 2012, establishes the rules of procedure regarding loans or concessions of capacity and chartering vessels with temporary transfer of capacity. The table details the agreements of this type recorded as of 30 June 2018.

Capacity loans or concessions and chartering of vessels with temporary transfer of capacity carried out in accordance with Resolution C-12-06				
Year started	Loaning/conceding CPC	Receiving CPC	Vessel	Well volume (m <sup>3</sup> )
<b>CAPACITY CONCESSIONS</b>				
2010	CRI	PAN	<i>Txopituna</i>	1,881
2013	CRI	ECU	<i>Monteneme</i>	908
2014	CRI	ECU	<i>Cap. Danny B</i>	356
	CRI	ECU	<i>PS-1</i>	300
	CRI	PAN	<i>Txopituna Dos</i>	1,881
2015	CRI	ECU	<i>Marujita</i>	385
2017	CRI	ECU	<i>Andrea I</i>	351
<b>CAPACITY LOANS</b>				
2013	BLZ	ECU	<i>Florentino</i>	220
2015	GTM	ECU	<i>Emilio</i>	1,488
2016	BOL	ECU	<i>Vicente</i>	222
	GTM	ECU	<i>Vicente</i>	496
	NIC	ECU	<i>Vicente</i>	986
	SLV	ECU	<i>Ugavi Dos</i>	1,881
2017	ECU	PAN	<i>Juan Pablo II</i>	442

	GTM	PAN	<i>Diva Maria</i>	1,633
	GTM	PAN	<i>Ljubica</i>	2,000
2018	PAN	ECU	<i>Lucas</i>	110
<b>VESSEL CHARTERS WITH TEMPORARY CAPACITY TRANSFERS</b>				
2011	PAN	ECU	<i>Esmeralda C</i>	1,358
2012	GTM	PAN	<i>Reina de la Paz</i>	2,100
	PAN	ECU	<i>María Del Mar A</i>	2,304
	PAN	ECU	<i>Milena A</i>	996
2013	PAN	ECU	<i>Delia</i>	995
	PAN	ECU	<i>Tunamar</i>	1,402
2014	PAN	ECU	<i>Julie L</i>	2,056
2016	NIC	ECU	<i>Florentino</i>	1,484
	PAN	NIC	<i>Andrea I</i>	2,170 <sup>2</sup>
2017	GTM	PAN	<i>La Peña</i>	1,475
	PAN	ECU	<i>Connie Jean Two</i>	742

## 6. PERMANENT TRANSFERS OF CAPACITY

The following permanent transfers of capacity between CPCs, were recorded from 31 May 2017 through 30 June 2018:

Permanent transfers of capacity between CPCs				
Date recorded	Donor CPC	Receiving CPC	Vessel	Well volume (m <sup>3</sup> )
29 Sep 2017	NIC	ECU	<i>Jorge Mario</i>	84

## 7. SEALED WELLS

Resolution C-12-08, approved in June 2012, contains a protocol for sealing fish wells on purse-seine vessels. The following cases were recorded as of 30 June 2018:

Vessel	Flag	Capacity (m <sup>3</sup> )		Well volume sealed or disabled (m <sup>3</sup> )
		Total	On Register	
<i>Florentino</i>	ECU	2,439	1,704	735
<i>Lizanny Z</i>	ECU	529	168	361
<i>Lucas</i>	ECU	150	111	39
<i>María de Gracia</i>	ECU	328	277	51
<i>Vicente</i>	ECU	2,439	1,704	735

Paragraph 5 of the resolution states that: “Any vessel with one or more of its wells sealed to reduce its well volume recorded on the Regional Vessel Register shall be required to carry an observer from the International Dolphin Conservation Program (IDCP) on board”.

Furthermore, these vessels must pay their assessment for the AIDCP on-board observer program based on their total capacity, including sealed wells. It is also important to bear in mind that the reduction of the operative capacity of a vessel as a result of sealing wells does not change the vessel’s capacity class, which is based on from the total capacity of its wells, sealed or unsealed. Thus, a Class-6 vessel, regardless of whether any of its wells are sealed, must continue to comply with all the requirements to which a Class-6 vessel is subject, in particular with regard to carrying an observer on board and observing the established closure periods.

<sup>2</sup> This vessel is operating under a charter agreement between Panama (the “chartering CPC”) and Nicaragua (the “charterer CPC”) under the Nicaragua flag and using Nicaragua capacity.

Likewise, it should be noted that a vessel smaller than size class 6 that seals wells must carry on an observer on board in accordance with Resolution C-12-08 and make contributions to the observer program considering the capacity of the smallest size class 6 vessel of 364 t of carrying capacity and 510 cubic meters of well volume.

Another requirement of Resolution C-12-08 is that "*The well must be physically sealed in a tamper-proof manner, and in such a way that it does not communicate with any other space on the vessel and that its use for any other storage is prevented. The inspection and verification of the vessel's sealed wells for the first time shall be carried out by vessel's flag government*".

## 8. PENDING CASES OF CAPACITY REQUESTS, CLAIMS, AND DISPUTES

During the 88<sup>th</sup> IATTC meeting (extraordinary) in October 2014, a number of cases of capacity requests, claims, and disputes were identified and discussed, some of which have been resolved. Discussion on the pending cases continued during the 89<sup>th</sup> IATTC meeting in June-July 2015.

The pending cases are classified in the following four categories :

- a. Requests by coastal Members based on the footnote to Resolution C-02-03;
- b. Claims arising from disputes resulting from capacity transfers and/or differences in the implementation of Resolution C-02-03;
- c. Requests for new increases in capacity by EPO coastal and non-coastal countries.
- d. Other cases, including cases such as new vessel measurements, national administrative errors, etc.

The pending cases in each of these four categories are currently:

Country	Cubic meters	Details
<b>a. Requests based on footnote in Resolution C-02-03</b>		
Peru	5,851	Part of 14,046 m <sup>3</sup> in footnote to Resolution C-02-03. Already granted 5,000 m <sup>3</sup> in 2014.
Costa Rica	7,058	Part of 16,422 m <sup>3</sup> in footnote to Resolution C-02-03.
Colombia	4,772	Part of 14,046 m <sup>3</sup> in footnote to Resolution C-02-03. Already granted 2,024 m <sup>3</sup> in 2013.
<b>SUBTOTAL</b>	<b>17,681</b>	
<b>b. Claims arising from disputes</b>		
Bolivia	5,830	Capacity which was allegedly transferred to Colombia without Bolivia's approval.
Vanuatu	1,358	For the vessel <i>Esmeralda C</i> , which was allegedly transferred to Panama without Vanuatu's approval.
Venezuela	3,805	From vessels Jane IV (1,250 m <sup>3</sup> ), Baraka (1,287 m <sup>3</sup> ) and Templario I (1,268 m <sup>3</sup> ) request still pending for the future if the status of the tuna stocks allows it. All these vessels are on Regional Register under Panamanian flag.
<b>SUBTOTAL</b>	<b>10,993</b>	
<b>c. New requests</b>		
El Salvador	2,105	Special needs and requirements of developing coastal countries
Nicaragua	4,200	“ “ “ “ “ “
Honduras	3,000	“ “ “ “ “ “
Guatemala	9,000	“ “ “ “ “ “
Mexico	2,000	“ “ “ “ “ “
<b>SUBTOTAL</b>	<b>20,305</b>	
<b>d. Other cases</b>		
Ecuador	220	<i>Eli</i>
	176	<i>Ljubica M.</i>

	908	<i>Monteneme</i>
	1,534	<i>Isabel IV</i> (never on the Regional Register)
	281	<i>María del Mar</i> (never on the Regional Register)
	850	<i>Victoria A.</i> (never on the Regional Register)
<b>SUBTOTAL</b>	<b>3,969</b>	
<b>TOTAL</b>	<b>52,948</b>	

The current status of the discussion of these pending cases is reflected in the minutes of the 88<sup>th</sup> (extraordinary) and 89<sup>th</sup> meetings of the IATTC.



## Appendix 1

### GLOSSARY OF TERMS

1. **Active capacity.** See Resolution [C-02-03](#). The total well volume, in cubic meters, of vessels that are on the IATTC Regional Register and are authorized to fish in the EPO. May change status to inactive at any time during the year.
2. **Available capacity.** The total well volume, in cubic meters, that a Member or Cooperating Non-Member (CPC) has available for allocation to vessels as the result of: (a) vessels being removed from the Regional Register; (b) changes of flag, considering that a CPC may choose to retain for future use the right to the capacity of a vessel that is transferred to another flag; (c) non-allocated residuals from transfers and movements of vessels on the Regional Register; (d) the national capacity allocations specified in paragraph 10 of Resolution [C-02-03](#).
3. **Inactive/sunk capacity.** See Resolution [C-02-03](#). The total well volume, in cubic meters, of (a) vessels that are on the IATTC Regional Register and have declared that they will not fish during a given year, but retain the right to become active provided they remain on the Regional Register, or (b) vessels that have sunk. May change status to active only at the beginning of the year.
4. **Operative capacity.** Operative capacity of purse seine vessels for a completed year is the total cubic meter well volume of all vessels which fished for tuna in the EPO in that year<sup>3</sup>. The following criteria apply in the selection of operative capacity for a completed year:
  - Vessels include those that made at least one EPO set with catch during that year.
  - Only one quarter of the capacity of vessels operating under the special allowance in paragraph 12 of resolution C-02-03 is added to the total, since these vessels will have effectively fished for approximately one quarter of the fishing year only.
  - If a vessel's capacity changes during the completed year, then the capacity at the end of the year is used.The calculation of operative capacity for a year that has not yet been completed is the same as that for a completed year, except it is based on the vessels that are expected to fish, which include vessels that made at least one EPO set with catch during that year or during the previous year.
5. **Potential total capacity.** The sum of active capacity, inactive/sunk capacity, and available capacity. The total well volume, in cubic meters, that would be operating in the EPO if all CPCs activated all their vessels and used all their available capacity (including inactive/sunk capacity) to bring new vessels into the fishery.
6. **Capacity disputes.** Disputes that arise when a vessel changes flag, and both the vessel's previous flag CPC and its new flag CPC claim the vessel's capacity as their own.
7. **Vessels authorized to fish.** The vessels currently listed on the Regional Vessel Register as active pursuant to Resolution C-14-01.
8. **Total capacity of vessel.** The total well volume of a vessel, including the volume of any sealed wells.
9. **Sealed well.** Any space aboard a vessel, intended for freezing, maintenance, or storage of fish, access to which has been blocked to prevent its use for these purposes.
10. **Capacity loans or concessions.** Temporary loan or concession by a CPC of an available well volume capacity for use by a vessel of another CPC's flag.
11. **Vessel charters with temporary capacity transfer.** Vessel charters which include the temporary transfer of the capacity of the chartered vessel from the CPC granting the charter ("chartering CPC") to the receiving CPC ("charterer CPC").

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<sup>3</sup> See tables 1 and 2ab in Appendix 3

## Appendix 2

### Utilization of capacity in the calculation of the number of days of closure

The tropical tunas are managed following a harvest strategy based on fishing at the level that corresponds to maximum sustainable yield ( $F_{MSY}$ ). The stock assessments calculate the  $F$  multiplier, which is the fishing mortality corresponding to  $F_{MSY}$  relative to the average fishing mortality over the last three years in the stock assessment, which is usually the three years prior to the year in which management is being decided for the following year (i.e. there is a two-year lag). The  $F$  multiplier is the amount that fishing mortality needs to be adjusted to achieve MSY. The three-year average is used because fishing mortality can fluctuate from year to year due to factors unrelated to fishing effort and the estimates of fishing mortality for the final year in the assessment are uncertain.

The  $F$  multiplier is adjusted for increases in capacity. Since the  $F$  multiplier is based on the average of the last three years in the assessment, the increase in capacity is calculated based on the average capacity for the same three years. The current capacity is based on the most recent estimate of capacity for the current year. For these calculations, the operative capacity as described above is used.

Adjusted  $F$  multiplier =  $F$  multiplier / (current capacity / average capacity)

The number of days of closure is calculated based on multiplying the current days open by the adjusted  $F$  multiplier with appropriate adjustments for the *corralito*.

### Appendix 3

**TABLE 1.** Numbers and well volumes, in cubic meters, of purse-seine and pole-and line vessels of the EPO tuna fleet. The data for 2017 are preliminary.<sup>4</sup>

**TABLA 1.** Número y volumen de bodega, en metros cúbicos, de buques cerqueros y cañeros de la flota atunera del OPO. Los datos de 2017 son preliminares.<sup>4</sup>

	PS		LP		Total	
	No.	Vol. (m <sup>3</sup> )	No.	Vol. (m <sup>3</sup> )	No.	Vol. (m <sup>3</sup> )
<b>1988</b>	185	154,845	39	3,352	224	158,197
<b>1989</b>	176	141,956	32	3,181	208	145,137
<b>1990</b>	172	143,877	23	1,975	195	145,852
<b>1991</b>	152	124,062	22	1,997	174	126,059
<b>1992</b>	158	116,619	20	1,807	178	118,426
<b>1993</b>	151	117,593	15	1,550	166	119,143
<b>1994</b>	166	120,726	20	1,726	186	122,452
<b>1995</b>	175	123,798	20	1,784	195	125,582
<b>1996</b>	180	130,774	17	1,646	197	132,420
<b>1997</b>	194	147,926	23	2,127	217	150,053
<b>1998</b>	202	164,956	22	2,216	224	167,172
<b>1999</b>	208	178,724	14	1,642	222	180,366
<b>2000</b>	205	180,679	12	1,220	217	181,899
<b>2001</b>	204	189,088	10	1,259	214	190,347
<b>2002</b>	218	199,870	6	921	224	200,791
<b>2003</b>	214	202,381	3	338	217	202,719
<b>2004</b>	218	206,473	3	338	221	206,811
<b>2005</b>	220	212,419	4	498	224	212,917
<b>2006</b>	225	225,166	4	498	229	225,664
<b>2007</b>	227	225,359	4	380	231	225,739
<b>2008</b>	219	223,804	4	380	223	224,184
<b>2009</b>	221	224,632	4	380	225	225,012
<b>2010</b>	202	210,025	3	255	205	210,280
<b>2011</b>	208	213,237	3	339	211	213,576
<b>2012</b>	209	217,687	4	464	213	218,151
<b>2013</b>	203	212,087	3	268	206	212,355
<b>2014</b>	226	230,379	2	226	228	230,605
<b>2015</b>	244	248,428	1	125	245	248,553
<b>2016</b>	250	261,474	0	0	250	261,474
<b>2017</b>	254	263,018	0	0	254	263,018

<sup>4</sup> Numbers and well volumes were adjusted in 2012 for all the years to account for well volume changes and vessels that fished in a given year but had zero catch for that year were removed.

<sup>4</sup> Los números y volúmenes de bodegas se ajustaron en 2012 para todos los años para tener en cuenta los cambios en el volumen de bodegas y se eliminaron los buques que pescaron en un año determinado, pero tuvieron una captura igual a cero para ese año.

**TABLE 2a.** Well volume (cubic meters) of purse-seine (PS) vessels that fished in the EPO, by year and flag.<sup>5</sup>

**TABLA 2a.** Volumen de bodega (metros cúbicos) de buques cerqueros (PS) que pescaron en el OPO, por año y bandera.<sup>5</sup>

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Belize</b>																	
<b>Belize</b>	PS	1,018	486	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Bolivia</b>	PS	7,910	7,910	4,742	0	222	222	222	222	222	222	0	0	0	0	0	0
<b>Colombia</b>	PS	7,397	7,259	14,148	14,439	14,439	14,689	15,110	14,860	14,860	14,860	14,860	14,860	14,860	14,860	14,860	14,860
<b>Ecuador</b>	PS	47,880	47,991	51,784	55,075	58,580	59,517	60,519	60,096	60,840	70,014	79,391	80,611	88,957	91,651	92,832	92,391
<b>UE (España)</b>																	
<b>EU (Spain)</b>	PS	12,177	12,177	8,859	6,955	6,955	6,955	10,116	10,116	10,116	10,116	10,116	10,116	10,116	10,116	4,120	4,120
<b>Guatemala</b>	PS	7,640	3,820	3,415	1,475	1,475	1,475	3,056	3,575	4,819	4,819	3,575	1,475	1,475	1,475	1,475	0
<b>Honduras</b>	PS	1,798	1,798	2,810	2,729	2,729	2,870	1,559	1,559	1,559	547	0	0	0	0	0	0
<b>México</b>	PS	47,832	50,745	52,503	55,536	55,046	57,859	52,920	50,254	45,224	47,274	48,054	46,062	54,206	57,502	60,146	60,551
<b>Nicaragua</b>	PS	1,229	2,018	3,895	8,060	8,308	6,023	6,023	6,353	6,353	9,685	9,966	9,966	8,478	8,478	8,478	10,648
<b>Panamá</b>	PS	11,706	20,754	25,531	33,595	35,007	40,046	36,711	31,225	32,599	25,443	17,976	19,251	19,865	19,794	21,174	22,649
<b>Perú</b>	PS	1,022	0	0	0	0	0	1,000	1,000	458	0	0	599	1,437	3,268	3,019	4,325
<b>El Salvador</b>	PS	5,377	5,377	5,377	6,324	8,184	7,415	7,415	7,415	7,415	7,892	7,892	7,892	7,892	4,473	4,473	4,473
<b>Desconocida</b>																	
<b>Unknown</b>	PS	695	2,073	0	222	0	494	0	0	0	0	0	0	0	0	0	0
<b>Estados Unidos</b>																	
<b>United States</b>	PS	13,318	8,665	9,653	1,487	1,763	3,395	292	5,952	0	4,275	3,735	0	2,203	17,219	30,619	30,677
<b>Venezuela</b>	PS	30,784	32,699	29,961	33,839	30,788	29,684	27,083	29,403	22,747	24,007	22,862	20,890	20,890	19,592	21,448	19,066
<b>Vanuatú</b>	PS	5,213	7,467	5,082	2,163	2,163	3,609	3,609	3,609	3,609	3,609	1,360	1,360	0	0	0	0
<b>Total general - Grand Total</b>		<b>199,870</b>	<b>202,381</b>	<b>206,473</b>	<b>212,419</b>	<b>225,166</b>	<b>225,359</b>	<b>223,804</b>	<b>224,632</b>	<b>210,025</b>	<b>213,237</b>	<b>217,687</b>	<b>212,087</b>	<b>230,379</b>	<b>248,428</b>	<b>261,474</b>	<b>263,018</b>

<sup>5</sup> The amount and numbers provided are estimates. Moreover, 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 this grand total may not equal the sums of the individual flags.

<sup>5</sup> Los montos y números indicados son estimaciones. Además, 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 suma de las banderas individuales.

**TABLE 2b.** Numbers of purse-seine (PS) vessels that fished in the EPO, by year and flag.<sup>6</sup>

**TABLA 2b.** Número de buques cerqueros (PS) que pescaron en el OPO, por año y bandera.<sup>6</sup>

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Belice – Belize</b>	PS	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Bolivia</b>	PS	10	10	7	0	1	1	1	1	1	1	0	0	0	0	0	0
<b>Colombia</b>	PS	10	9	13	13	13	14	15	14	14	14	14	14	14	14	14	14
<b>Ecuador</b>	PS	76	74	80	81	85	83	84	85	86	96	103	102	111	112	114	114
<b>EU (España) - EU (Spain)</b>	PS	5	5	4	3	3	3	4	4	4	4	4	4	4	4	2	2
<b>Guatemala</b>	PS	4	2	2	1	1	1	2	2	3	3	2	1	1	1	1	0
<b>Honduras</b>	PS	2	2	3	3	3	4	2	2	2	1	0	0	0	0	0	0
<b>México</b>	PS	56	58	59	58	56	58	51	46	39	41	42	40	45	47	49	51
<b>Nicaragua</b>	PS	1	2	3	6	7	5	5	5	5	7	7	7	6	6	6	7
<b>Panamá</b>	PS	10	16	21	26	26	29	27	24	24	19	13	14	14	14	15	16
<b>Perú</b>	PS	1	0	0	0	0	0	2	2	1	0	0	2	3	7	6	9
<b>El Salvador</b>	PS	3	3	3	4	5	4	4	4	4	4	4	4	4	2	2	2
<b>Desconocida - Unknown</b>	PS	2	2	0	1	0	2	0	0	0	0	0	0	0	0	0	0
<b>Estados Unidos - United States</b>	PS	11	8	8	3	2	4	2	10	0	5	3	0	9	23	27	27
<b>Venezuela</b>	PS	24	25	23	26	22	22	19	21	17	18	17	15	15	14	15	13
<b>Vanuatú</b>	PS	5	6	4	2	2	3	3	3	3	3	1	1	0	0	0	0
<b>Total general - Grand Total</b>		<b>218</b>	<b>214</b>	<b>218</b>	<b>220</b>	<b>225</b>	<b>227</b>	<b>219</b>	<b>221</b>	<b>202</b>	<b>208</b>	<b>209</b>	<b>203</b>	<b>226</b>	<b>244</b>	<b>250</b>	<b>254</b>

<sup>6</sup> The amount and numbers provided are estimates. Moreover, 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 this grand total may not equal the sums of the individual flags.

<sup>6</sup> Los montos y números indicados son estimaciones. Además, 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.

#### Appendix 4

Comparison of estimated operating capacity to actual operating capacity (as determined when the data for the whole year is available).

Year	Date	Report	Estimated capacity (m <sup>3</sup> )	Actual capacity (m <sup>3</sup> )	Estimation error (Estimated/Actual)
2012	8 May	IATTC-83-05c	214,422	217,687	0.99
2013	7 April	IATTC-85-03d	214,979	212,087	1.01
2014	2 May	IATTC-87-03d	215,608	230,379	0.94
2015	19 April	IATTC-89-04d	236,089	248,428	0.95
2016	17 April	IATTC-90-04d (REV)	255,972	261,474	0.98
2017	30 April	SAC-08-11	263,283	263,018	1.00
2018	25 March	SAC-09-15	260,289	NA	