INTER-AMERICAN TROPICAL TUNA COMMISSION

COMMITTEE ON ADMINISTRATION AND FINANCE 8TH MEETING

(by videoconference) 20 August 2021

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IMPLEMENTATION OF THE IATTC REGIONAL OBSERVER PROGRAM FOR TRANSSHIPMENTS AT SEA

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The following acronyms are used in this document:

BLZ	Belize	IDN	Indonesia	MHL	Marshall Islands	PYF	French Polynesia
CHN	China	JPN	Japan	PAN	Panama	TWN	Chinese Taipei
EUR	European Union	KOR	Korea	PER	Peru	VUT	Vanuatu
FJI	Fiji	LIB	Liberia	PHL	Philippines	WSM	Samoa
BET	Bigeye	SHK	Sharks	SWO	Swordfish	YFT	Yellowfin

1. INTRODUCTION

The IATTC observer program to monitor transshipments at sea by carrier vessels in the eastern Pacific Ocean (EPO) authorized to receive tuna and tuna-like species and sharks from large-scale tuna longline fishing vessels (LSTLFVs) is regulated by Resolution C-12-07.

In 2020 and 2021, the program was funded by the six IATTC Members that participate in it through their authorized large-scale tuna longline fishing vessels (LSTLFVs): China, Japan, Korea, Panama, Chinese Taipei, and Vanuatu.

With the approval of the participating Members, in 2019 the Secretariat signed a three-year contract with the *Marine Resources Assessment Group* (MRAG) consortium to operate the program during 2020-2022.

2. IMPLEMENTATION AND PARTICIPATION

2.1. Participation

The Secretariat maintains on the Commission website the <u>List of carrier vessels</u> authorized to receive transshipments at sea, which is continually updated with information supplied by the participants on additions or removals of carrier vessels or changes in their data. As of June 2021, the list includes 92 vessels of eight CPCs¹:

TABLE 1. Carrier vessels authorized to receive transshipments at sea, May 2021								
CPC	CHN	EUR	JPN	COR	LIB	PAN	TWN	VUT
Number of vessels	12	1	4	7	14	49	4	1

¹ IATTC Member or Cooperating non-Member

Also, each CPC with longline fishing vessels is required to define the specific carrier vessels to which its fishing vessels are allowed to transship fish at sea. That information is included in the last column of the list ("CPCs that authorize use of this carrier for transshipment from their longline vessels).

Resolution C-12-07 specifies that longline fishing vessels that transship at sea must be on the list of longline vessels authorized to fish in the IATTC Convention Area. The list includes longline vessels from the six participants.

Paragraph 19 of Resolution <u>C-12-07</u> establishes that "*Each CPC shall report annually before 15 September to the Director*:

- a) The quantities by species transshipped during the previous year.
- b) The names of its vessels on the IATTC LSTLFV [large-scale longline vessels] List which have transshipped during the previous year; and
- c) A comprehensive report assessing the content and conclusions of the reports of the observers assigned to carrier vessels which have received transshipment from its LSTLFVs."

The Secretariat received reports for 20120 from Belize², China, Japan, and Chinese Taipei, but not from Panama, Liberia and Vanuatu. In 2021, the Secretariat sent the observer reports for 2020 to each participant.

In 2020 and 2021, as a result of the COVID-19 pandemic, it was necessary to authorize three trips without an observer under the condition that the captain of the corresponding carrier vessel submit the transshipment information to MRAG and the IATTC. Also, three trips by Panamanian carrier vessels were monitored by an AIDCP observer on board, who was specially trained by MRAG to perform his work on a carrier vessel.

2.2. Safety of observers at sea

As previously reported, MRAG has provided observers with an emergency alert device, with which they can send an immediate signal to the MRAG office, and there is a protocol to follow in case of emergencies (MRAG Americas: IATTC Observer Program - Emergency Action Plan).

The reports by observers on carrier vessels include a section for recording situations or incidents that affect the performance of their functions, such as harassment or matters related to their well-being. All information recorded in this section, and any other related to possible lack of compliance with working conditions for observers, is reported to the flag CPC for its consideration.

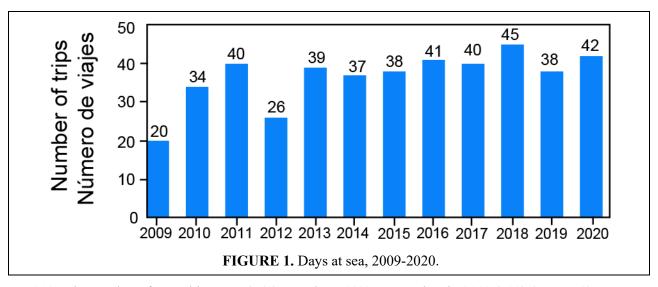
Another issue mentioned in observer reports is that the emergency drills required by the <u>International Convention</u> for the <u>Safety of Life at Sea</u> (SOLAS Convention, Chapter III Part B-1, rule 19, Points 2.2 and 2.3) are carried out only in very few cases. This requirement, a safety issue both for observers and crews, should be complied with because the Antigua Convention, Article VII (*Functions of the Commission*), paragraph n), lists as one of the functions "promote the application of any relevant provision of the Code of Conduct and of other relevant international instruments", which covers not only the SOLAS Convention, but also the <u>International Convention for the Prevention of Pollution from Ships</u> (MARPOL), which governs situations such as fuel spills at sea.

The 2020 compliance report includes cases of possible non-compliance by carrier vessels with observers onboard.

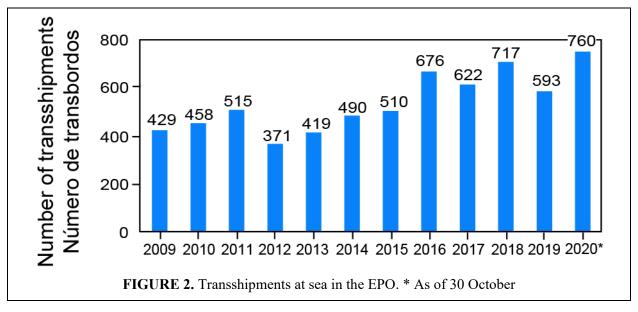
3. RESULTS TO DATE

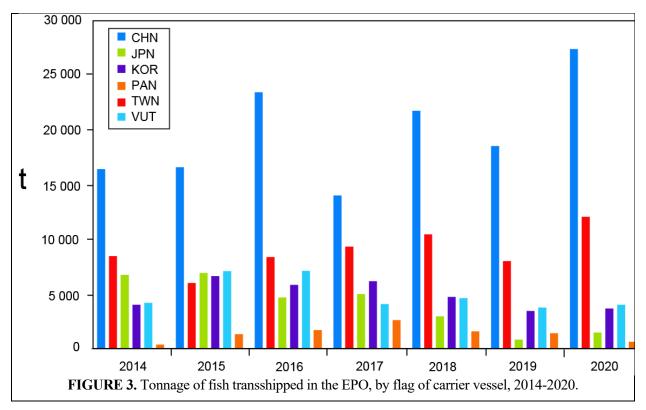
In 2020, 41 observer requests were met. In 2021, as of late June, there have been 16 trips. In 2020, the total number of days at sea (2,900) (**Figure 1**) was 10.3% higher (3,194) than in 2019 (2,627).

² Belizean longline vessels transship occasionally in the EPO and pay per transshipment. There were no transshipments by Belizean vessels in 2020 and 2021.



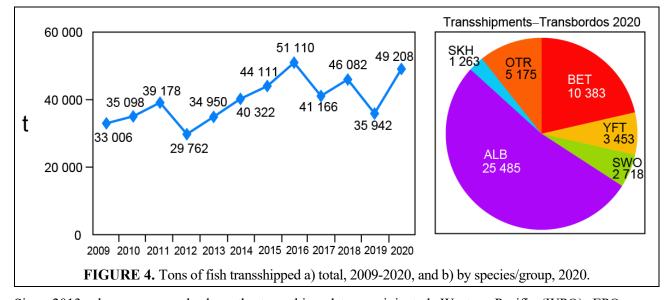
In 2020, the number of transshipments (760) was about 28% greater than in 2019 (593) (**Figure 2**). **Figure 3** shows the transshipments in the EPO from 2014 to 2020, by flag of the fishing vessel. China and Chinese Taipei are still the participants with the largest amount of fish transshipped in the EPO.





Appendix 1 contains the data from 2009-2020, broken down by species and flag of the fishing vessel. **Appendix 2** lists trips by carrier vessels and ports of boarding and disembarkation of observers in 2020.

The total tonnage of the catches transshipped under the program during 2020 (49,208 t) was 37% greater than in 2019 (35,942 t) (**Figure 4**). Pursuant to Resolution C-12-07, since 2013 transshipments of sharks (1,263 t in 2020) are itemized separately.



Since 2013, observers record where the transshipped tuna originated: Western Pacific (WPO), EPO or IATTC-WCPFC overlap area. In 2020, 67% of the transshipped tuna was caught in the EPO, including the overlap area (**Table 2**), and 32% in the WPO.

TABLE 2. Catches transshipped in the Pacific Ocean in 2020, by fishing vessel flag and area of origin

Participant		Area of catch					
r articipant	EPO	EPO Overlap area		Unknown	Total		
China	21,500	3,444	9,888	408	35,241		
Japan	1,502	0	18	0	1,519		
Korea	3,362	1,152	7,828	159	12,501		
Panama	643	0	0	0	643		
Chinese Taipei	5,580	6,690	2,904	170	15,344		
Vanuatu	1,989	1,708	2,287	92	6,076		
Total	34,576	12,993	22,925	829	71,324		

Table 3 shows the catch limits for bigeye tuna established for 2020 in Resolution <u>C-17-02</u> and the catches in the EPO recorded by the transshipment program. There were catch limit transfers to Korea and China by Japan in 2020. However, with the data from the transshipment program, it can be seen that the limits were respected.

TABLE 3 . Bigeye catch limits in Resolution <u>C-17-02</u> , and catches in the EPO recorded by the
transshipment program, in tonnes, 2020.

CDC	Catch limit	EPO ca	atches transshipped in	the EPO
CPC	(C-17-02)	EPO	Overlap area	Total
China	2,507	1,277	767	2,034
Japan	32,732	864	0	864
Korea	11,947	2,122	569	2,691
Chinese Taipei	7,555	2,193	1,581	3,774
United States	750	Dog	es not make transshipme	ents

The positions of transshipments made during 2015-2020 in the Pacific Ocean and in the EPO are shown in **Appendix 3**.

4. FINANCING

This section of the document provides information on the 2020 budget, expenses incurred in 2021 as of 30 June, and the expected budget for 2022.

4.1. 2020 Budget

Table 4 shows the status of the program budget during 2009-2020.

In 2020, the participants were asked for contributions of US\$ 1,305,000 as approved by the 94th meeting of the IATTC held in July 2019 in Bilbao, Spain, which, when added to the 2019 surplus of US\$ 372,118, results in a total of US\$ 1,677,118 available for 2020. At the end of 2020, invoices were paid to MRAG for a total of US\$ 1,421,486.18, which allowed for a surplus at the end of 2020 of US\$ 255,631.

TABLE 4. Program budget, 2009-2020, in US\$									
	Contr	ibutions	Program	Surplus/	Accumulated				
	Participants	Others	costs	(deficit)	surplus				
2009	741,346	-	698,801	42,545	42,545				
2010	800,000	4,640 ¹	792,381	12,259	54,804				
2011	946,971	$6,060^2$	999,731	(46,700)	8,105				
2012	1,006,060	$6,060^2$	674,241	331,819	339,924				
2013	1,000,000	-	771,083	228,917	568,841				
2014	500,000	$16,635^3$	760,950	(244,315)	324,526				
2015	700,000	43,905 ⁴	867,175	(123,270)	201,254				
2016	950,000	37,723 ⁴	1,056,479	(68,756)	132,498				
2017	$1,050,000^5$		1,159,644	(109,644)	22,854				

2018	$1,390,000^6$	 1,297,585	92,415	115,269
2019	1,300,000	 1,043,016	256,984	372,117
2020	1,305,000	1,421,486	(116,486)	255,631

¹Peru; ² Belize; ³ Includes Belize (US\$ 6,060), Indonesia (US\$ 1,485) and Panama (US\$ 9,090); ⁴Panama

4.2. 2021 budget

Based on 2020 expenses, during the 95th IATTC meeting in December 2020 held by videoconference, a budget of US\$ 1,440,000 was agreed to finance the program in 2021.

The costs of the program under a three-year contract signed with the MRAG Consortium and approved by the Commission during its 94th meeting are as follows (**Table 5**):

,	TABLE 5. Costs for the three-year period 2020-2022, in US\$							
Doude d	Cost per day							
Period	At sea	Travel	Training					
2017-2019	340	350	453					
2020-2022	\leq 2500 days $>$ 2500 days $=$ 380 $=$ 350	371	630					

Table 6 shows the contributions payable by each participant to finance the 2021 budget.

TABLE 6. Contributions 2021, in US\$									
Participant	Total contri- bution	First instalment (50%); due 15 January	Paid	Second instalment (50%); due 15 June	Paid				
China	660,904	330,452	✓	330,452	Pending				
Japan	15,608	7,804	✓	7,804	✓				
Korea	82,644	41,322	✓	41,322	Pending				
Panama	36,960	18,480	Pending	18,480	Pending				
Chinese Taipei	480,050	240,025	✓	240,025	✓				
Vanuatu	163,834	81,917	√	81,917	√				
TOTAL	1,440,000	720,000		720,000					

Table 7 shows the program costs in 2020 and 2021 as of 30 June, in US\$.

TABLE 7. Program costs, 2020 and 2021 as of 30 June, in US\$								
		2020			2021 (as of 30 June)			
Item	Unit cost	Units paid	Cost	U	nit cost	Units paid	Cost	
	380	2500	950,000					
Days at sea	350	685	239,750		380	1,487	565,060	
	Total wi	th two rates	1,189,750					
Travel days	371	447	165,837		371	264	97,944	
Training	630	0	00		630	20	12,600	
Equipment, materials,								
travel		65,899		-		40,425		
Total (US\$)			1,421,486				716,029	

⁵ Additional contributions totaling US\$ 100,000 were requested

⁶ Additional contributions totaling US\$ 290,000, agreed during 93rd IATTC meeting.

Table 8 summarizes the financial status of the program as of 30 June 2021.

TABLE 8. Financial situation of the program, in US\$, 2021					
Item	Amount US\$				
1 January – 30 June					
First-semester contributions received	701,520				
Second-semester contributions received	329,746				
Surplus from previous years	255,631				
Subtotal	1,286,897				
Program expenditures, as of 30 June	716,029				
Balance as of 30 June	570,868				
Pending contributions 2021	408,734				
Expected invoices for July - December	680,000				
Balance as of 30 June + pending contributions - expected invoices (6 months remaining)	299,602				

Experience shows that, in the last four months of the year, the number of observer and at-sea requests is usually higher than in the earlier months, so it is expected that the expenses for the second half of the year will be higher than those of the first semester. It is also important to note that in 2020 there were additional costs incurred as a result of the COVID-19 pandemic because observers were sometimes required to stay in hotels at the disembarkation site to quarantine after a trip and then board the vessel. While it is expected that these types of charges will decrease, it is not certain that they will no longer be made.

A projection made by MRAG for the last months of 2021 shows the following:

MRAG invoices 2021, in US\$							
Final amounts			Projected amounts				
January	138,198		July	123,614			
February	124,844		August	87,290			
March	137,209		September	90,890			
April	91,791		October	126,205			
May	117,157		November	130,360			
June	106,831		December	121,641			
			Total	680,000			

This table shows that, according to MRAG's projections, approximately US\$680,000 will be required to cover program expenses during the last six months of 2021. This amount can only be achieved if program participants pay their outstanding contributions totaling US\$408,734, as shown in Table 8. On the other hand, the payment of all these contributions will result in a surplus of about US\$ 299,000 at the end of 2021. This surplus will be used during 2022, as was the 2020 surplus in the first six months of 2021.

4.3. 2022 budget

Based on MRAG estimates, the projected budget for 2022 is the same as in 2021, i.e., US\$ 1,440,000. With this budget, it has been estimated that the circumstances caused by the COVID-19 pandemic that have impacted program costs since 2019 may persist.

5. ITEMS TO BE AGREED

In order to ensure that the Program can continue operating in an uninterrupted and integral manner, it is proposed that the Program participants approve the following:

- Adopt, for 2022, a budget of US\$ 1,440,000 with the understanding that the projections are correct and that any current surplus will be used in the following year(s);
- Remind and urge participants that have not paid their second 2021 contribution (or first in one case) to do so as soon as possible.

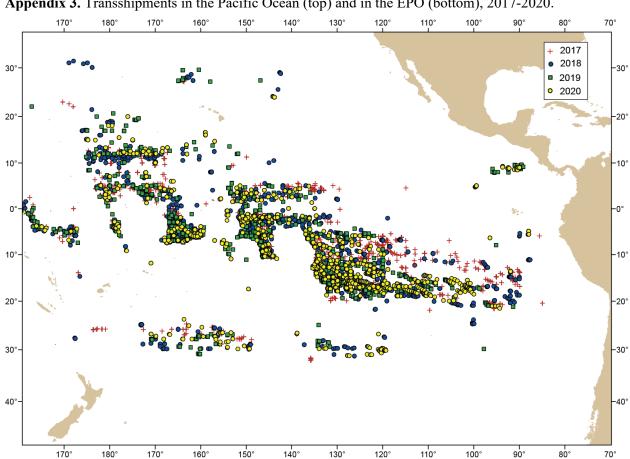
Appendix 1. Fish transshipped in the eastern Pacific Ocean, 2009-2020, by species and flag of fishing vessel, in metric tons.

2009 P T V T T B C JJ 2010 K P	PN KOR PHL TWN /UT Total BLZ CHN PN KOR	8ET 6,392 4,736 2,460 72 2,564 964 17,186 81 3,674 6,623 2,957	1,281 1,218 324 34 586 237 3,679 13 748	433 767 79 - 1,655 3,828 6,762	978 627 323 - 320 108	SKH	502 657 553 - 363 1,053	9,586 8,004 3,739 106 5,487 6,190
2009 P T V T T B C JJ 2010 K P	PN KOR PHL TWN /UT Total BLZ CHN PN KOR	4,736 2,460 72 2,564 964 17,186 81 3,674 6,623 2,957	1,218 324 34 586 237 3,679 13 748	767 79 - 1,655 3,828 6,762	627 323 - 320 108		657 553 - 363 1,053	8,004 3,739 106 5,487
2009 P T V T B C JJ Z 2010 K P	COR PHL TWN /UT Fotal BLZ CHN PN COR PER	2,460 72 2,564 964 17,186 81 3,674 6,623 2,957	324 34 586 237 3,679 13 748	79 - 1,655 3,828 6,762	323 - 320 108		553 - 363 1,053	3,739 106 5,487
2009 P T V T B C JJ 2010 K P	PHL TWN /UT Fotal BLZ CHN PN COR PER	72 2,564 964 17,186 81 3,674 6,623 2,957	34 586 237 3,679 13 748	1,655 3,828 6,762	320 108		363 1,053	106 5,487
2010 K P	CWN /UT Fotal BLZ CHN PN KOR PER	2,564 964 17,186 81 3,674 6,623 2,957	586 237 3,679 13 748	3,828 6,762	108		1,053	5,487
2010 K P	OUT Fotal BLZ CHN PN KOR PER	964 17,186 81 3,674 6,623 2,957	237 3,679 13 748	3,828 6,762	108		1,053	
2010 T B C JJ K P	VUT 964 237 3,828 108 Total 17,186 3,679 6,762 2,356 BLZ 81 13 10 3 CHN 3,674 748 429 583 JPN 6,623 1,942 819 1,049 KOR 2,957 459 102 372 PER 80 15 3 7 TWN 4,561 992 1,434 541 VUT 1,321 259 1,963 131 Total 19,297 4,428 4,759 2,685 BLZ 90 9 76 19 CHN 5,363 1,157 436 815 JPN 5,198 1,111 1,819 1,247 KOR 4,263 574 253 486		6.190					
2010 B C JJ K P	BLZ CHN PN COR PER	81 3,674 6,623 2,957	13 748	ALB SWO SKH OTR 433 978 502 767 627 657 79 323 553 - - - 1,655 320 363 3,828 108 1,053 6,762 2,356 3,128 10 3 2 429 583 470 819 1,049 1,502 102 372 891 3 7 3 1,434 541 730 1,963 131 330 4,759 2,685 3,928 76 19 17 436 815 755 1,819 1,247 1,622 253 486 1,015 3,269 271 1,123 3,609 166 366 9,463 3,004 4,899 1,340 1,185 1,162 2,9				
2010 K P	CHN PN COR PER	3,674 6,623 2,957	748	10				33,112
2010 K P	PN KOR PER	6,623 2,957		100			502 657 553 363 1,053 3,128 2 470 1,502 891 3 730 330 3,928 17 755 1,622 1,015 1,123 366 4,899 429 1,162 257 664 348 2,860 30 30 30 30 30 429 1,162 257 664 348 257 664 348 257 676 316 316 316 316 317 316 317 317 317 318 318 318 318 318 318 318 318	110
2010 K	CHN		5,902					
2010 P	PER							11,935
		90		-				4,781
1	. VV 1N			-				8,258
1.7	лт							4,005
								35,098
								212
								8,526
								10,997
								6,591
							- /	7,323
								5,529
_							502 657 553 	39,178
								6,121
J]	PN				1,185		1,162	10,938
2012 K	KOR			55			257	1,866
2012 T	CWN	2,476	395	2,015	398		664	5,949
V	/UT		160	2,996	157		348	4,888
		14,543	2,884				2,860	29,762
								404
								9,289
								138
/1113 —						-		9,571
K							-	6,026
								4,876
						-		4,285
			3,045	,				34,590
			1 1 (0					45
<u> </u>							- /	16,402
					-			62
								6,741
								4,032
		-			-			388
								8,458
_	Total:	15,098	3,569	14,373	2,833	701		4,195 40,322

		Atunes-Tunas		CIVO	CIZII	OTD	T	
		BET	YFT	ALB	SWO	SKH	OTR	Total
	CHN	5,690	1,897	6,631	888	130	393 620 4,073 1,559 671 711 309 1,118 512 4,881 1,481 488 591 444 1,343 484 4,830 2,299 360 567 157 1,295 496 5,175 2,357 97 319 129 1,331 548 4,780 2,941 164 364 8 1,993 346	16,558
	JPN	4,201	766	367	829	0	761	6,925
	KOR	4,347	525	154	545	252	813	6,636
2015	PAN	522	116	447	17	56	163	1,321
	TWN	2,414	649	1,379	546	215	393	5,595
	VUT	1,381	429	4,249	194	202	620	7,075
	Total	18,553	4,383	13,228	3,020	855	4,073	44,111
	CHN	4,572	1,898	14,064	1,169	157	1,559	23,419
JPN KOR 2015 PAN TWN VUT Total	JPN	2,395	581	285	685	61	671	4,678
	KOR	3,661	672	246	524	0	711	5,815
	PAN	463	85	346	320	164	309	1,687
	TWN	2,983	679	2,315	844	445	1,118	8,385
	VUT	1,815	357	3,756	353	334	512	7,126
	Total	15,889	4,272	21,012	3,895	1,160	4,881	51,110
	CHN	3,428	899	7,462	693	18	1,481	13,981
	JPN	2,812	546	358	790	0	488	4,993
	KOR	4,073	710	286	517	0	591	6,177
2017	PAN	640	129	921	109	381	444	2,623
	TWN	4,394	587	1,410	1,168	419	1,343	9,320
	VUT	1,801	429	725	311	322	484	4,072
	Total	17,149	3,300	11,161	3,587	1,140	4,830	41,169
	CHN	3,647	1,162	966	13,247	397	2,299	21,717
	JPN	1,531	260	477	313	29	360	2,971
	KOR	2,964	679	310	228	0		4,748
2018	PAN	251	55	133	924	70	157	1,590
		3,454	780	1,289	3,173	455	1,295	10,448
	VUT	2,237	516	547	575	237	496	4,608
		14,084	3,452	3,722	18,461	1,189	5,175	46,082
	CHN	2,327	1,118	11,984	566	160	2,357	18,512
	JPN	518	62	113	38	0	97	828
	KOR	1,941	710	325	158	0		3,453
2019	PAN	191	115	160	725	82	129	1,402
	TWN	2,555	873	2,250	591	395	1,331	7,995
	VUT	1,241	369	782	561	253	548	3,752
	Total	8,773	3,248	15,613	2,639	889	4,780	35,942
	CHN	2,031	1,063	20,648	447	234	2,941	27,364
	JPN	837	221	103	139	0	164	1,464
	KOR	2,215	691	248	171	0	364	3,689
2020	PAN	6	2	610	4	14	8	643
	TWN	3,743	1,164	3,014	1,226	845	1,993	12,025
	VUT	1,551	403	862	691	170	346	4,023
	Total	10,383	3,543	25,485	2,718	1,263	5,815	49,208

Appendix 2. Trips by carrier vessels that carried IATTC observers to monitor transshipments in the eastern Pacific Ocean, 2020.

IATTC	Comion massal	Flag	D	eparture	Arrival		
trip	Carrier vessel		Date	Port	Fecha	Puerto	
405	Tenho Maru	LIB	23-Dec-19	Kaohsiung, TWN	7-Mar-20	Busan, KOR	
406	SL Archi	KOR	11-Jan-20	Pohnpei, FSM	5-May-20	Pusan, KOR	
407	Sheng Hong	TWN	2-Jan-20	Kaohsiung, TWN	15-Mar-20	Kaohsiung, TWN	
408	Ping Tai Rong Leng 1	CHN	23-Jan-20	Papeete, Tahiti	13-Mar-20	Apia, Samoa	
409	Shin Ho Chun No.101	PAN	7-Jan-20	Kaohsiung, TWN	28-Mar-20	Kaohsiung, TWN	
410	Yu Run 3	PAN	22-Jan-20	Busan, KOR	24-Apr-20	Pohnpei, FSM	
411	SL Bogo	KOR	11-Feb-20	Busan, KOR	20-Apr-20	Pusan, KOR	
412	Rising Star	PAN	11-Feb-20	Vacamonte, PAN	24-Mar-20	Vacamonte, PAN	
413	Tuna Queen	PAN	8-Mar-20	Kaohsiung, TWN	29-May-20	Shimizu, JPN	
414	Shun Tian Fa No.168	TWN	24-Feb-20	Kaohsiung, TWN	7-May-20	Kaohsiung, TWN	
415	Lung Yuin	PAN	27-Feb-20	Papeete, Tahiti	19-May-20	Shimizu, JPN	
416	Full Kuo Shin	PAN	10-Mar-20	Majuro, RMI	6-Jun-20	Kaohsiung, TWN	
417	Hanaro	PAN	16-Mar-20	Pusan, KOR	1-Jun-20	Pusan, KOR	
418	Ping Tai Rong Leng 2	CHN	26-Apr-20	Zhoushan, CHN	3-Aug-20	Zhoushan, CHN	
419	Taiho Maru	PAN	29-Mar-20	Kaohsiung, TWN	22-Jun-20	Pusan, KOR	
420	Rising Star	PAN	25-Mar-20	Vacamonte, PAN	23-Jun-20	Vacamonte, PAN	
421	SL Bogo	KOR	13-May-20	Busan, KOR	2-Jul-20	Pusan, KOR	
422	Lung Yuin	PAN	20-May-20	Shimizu, JPN	10-Oct-20	Papeete, Tahiti	
Transfer only	Shin Ho Chun No.102	PAN	27-May-20	Kaohsiung, TWN	6-Jun-20	at-sea	
423	Shin Ho Chun No.101	PAN	7-Jun-20	at-sea	11-Dec-20	Kaohsiung, TWN	
424	Sei Shin	KOR	10-Jun-20	Busan, TWN	11-Aug-20	Busan, KOR	
Transfer only	SL Archi	KOR	6-May-20	Busan, TWN	29-Jun-20	at-sea	
425	Ping Tai Rong Leng 1	CHN	30-Jun-20	at-sea	30-Sep-20	Honiara	
426	Full Kuo Shin	PAN	7-Jun-20	Kaohsiung, TWN	9-Oct-20	Kaohsiung, TWN	
427	Rising Star	PAN	20-Jul-20	Vacamonte, PAN	2-Sep-20	Vacamonte, PAN	
428	SL Bogo	KOR	30-Jul-20	Busan, KOR	24-Sep-20	Busan, KOR	
429	Angara	PAN	4-Sep-20	Pusan, KOR	28-Dec-20	Pusan, KOR	
430	Taiho Maru	PAN	13-Sep-20	Papeete, Tahiti	11-Nov-20	Yokosuka	
431	Sei Shin	KOR	12-Aug-20	Busan, KOR	4-Nov-20	Busan, KOR	
432	Ping Tai Rong Leng 2	CHN	4-Sep-20	Busan, KOR	21-Nov-20	Papeete, Tahiti	
433	Seiyu	KOR	8-Sep-20	Busan, KOR	9-Dec-20	Busan, KOR	
434	Rising Star	PAN	3-Sep-20	Vacamonte, PAN	20-Oct-20	Vacamonte, PAN	
435	Yu Run 3	PAN	6-Oct-20	Busan, KOR	7-Feb-21	Pusan, KOR	
436	Sheng Hong	TWN	23-Oct-20	Kaohsiung, TWN	13-Jan-21	Kaohsiung, TWN	
437	Full Kuo Shin	PAN	26-Nov-20	Kaohsiung, TWN	22-Feb-21	Kaohsiung, TWN	
438	SL Archi	KOR	11-Nov-20	Busan, KOR	5-Mar-21	Pusan, KOR	
439	Ping Tai Rong Leng 1	CHN	23-Nov-20	Papeete, Tahiti	19-Feb-21	Pusan, KOR	
440	Tenho Maru	PAN	9-Nov-20	Busan, KOR	23-Jan-21	Pusan, KOR	
441	Amagi	PAN	4-Dec-20	Kaohsiung, TWN	3-Mar-21	Pago Pago	
442	Rising Star	PAN	4-Nov-20	Vacamonte, PAN	23-Dec-20	Vacamonte, PAN	
443	Tuna Queen	PAN	13-Nov-20	Setoda	10-Mar-21	Shimizu, JPN	



Appendix 3. Transshipments in the Pacific Ocean (top) and in the EPO (bottom), 2017-2020.

