INTER-AMERICAN TROPICAL TUNA COMMISSION COMMITTEE ON ADMINISTRATION AND FINANCE

7TH MEETING

Bilbao, Spain 19 July 2019

DOCUMENT CAF-07-03

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) is regulated by Resolution $\underline{C-12-07}$. It started in January 2009, and will have operated for tenand-a-half years in July 2019.

In 2018 and 2019, the program was funded by the six IATTC Members that participate fully in it: China, Japan, Korea, Panama, Chinese Taipei, and Vanuatu.

With the approval of the participating Members, in 2016 the Secretariat signed a three-year contract with the *Marine Resources Assessment Group* (MRAG) consortium to operate the program during 2017-2019. The Commission must now decide about renovating the contract for 2020 and following years.

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 May 2019, the list includes 72 vessels of eight $CPCs^1$:

TABLE 1. Carrier vessels authorized to receive transshipments at sea, May 2019								
CPC	CHN	EUR	JPN	COR	LIB	PAN	TWN	VUT
	2							
Number of vessels	7	1	4	8	25	22	4	1

¹ IATTC Member or Cooperating non-Member

² See code table on page 1.

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 2017 from Belize³, China, Japan, Korea, and Chinese Taipei, but not from Panama, and Vanuatu; all are expected to submit their reports for 2018 before 15 September 2019. On 28 March 2019, the Secretariat sent the observer reports for 2018 to each participant.

At the meetings of the Scientific Advisory Committee in 2018 and 2019, the advisability of using the transshipment observer program to collect information on shark species transshipped was noted, and this matter is included in the staff recommendations to the Commission. This means adding a field to the transshipment declaration currently used, which is completed by the captain of the carrier vessel, for recording the species of sharks transshipped.

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.

The emergency devices have already produced a good result: in 2018 an observer notified MRAG that he had been threatened aboard the vessel and faced situations that made him fear for his safety. MRAG immediately informed to the Secretariat, which notified the flag CPC, which ordered the vessel to take the observer to the nearest port.

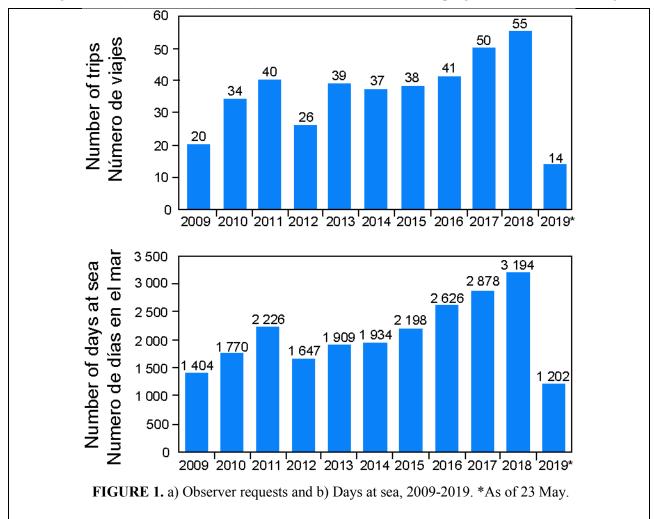
Another issue mentioned by several in observer reports is that the emergency drills required by the <u>International Convention for the Safety of Life at Sea</u> (SOLAS Convention, Chapter III Part B-1, rule 19, Points 2.2 and 2.3) are carried out only in very few cases. This requirement, a safety issue 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 including, inter alia, the International Plans of Action adopted by FAO in the framework of the Code of Conduct", which covers not only the SOLAS Convention, but also the International Convention for the Prevention of Pollution from Ships (MARPOL), which governs situations such as fuel spills at sea.

³ Belizean longline vessels transship occasionally in the EPO and pay per transshipment. There were no transshipments by Belizean vessels in 2018.

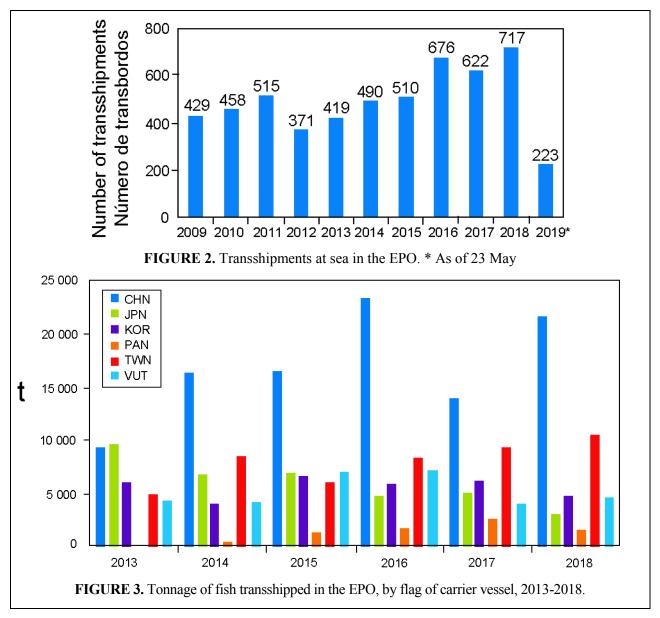
During the 10th meeting of the Committee for the Review of Implementation of Measures Adopted by the Commission (Review Committee), cases of possible non-compliance by carrier vessels with observers aboard, notified to CPCs on 1 May 2019, will be addressed.

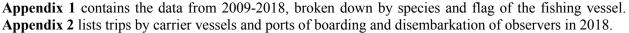
3. Results to date

In 2018, all 55 observer requests received were met; in 2019, to 23 May, there have been 14 trips (**Figure 1**, top), with a total of 1,202 days at sea. In 2018, the total number of days at sea (**Figure 1**, bottom) was 11% higher (3,194) than in 2017 (2,878); if this trend continues in 2019, program costs will also be higher.

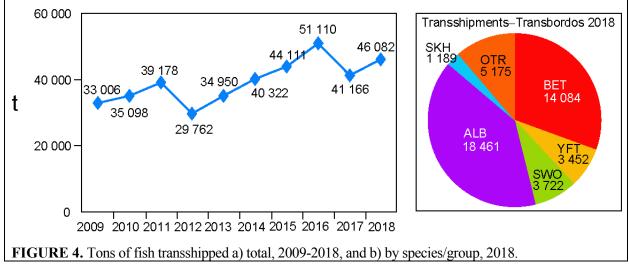


In 2018, the number of transshipments was about 15% greater than in 2017 (**Figure 2**). **Figure 3** shows the transshipments in the EPO from 2013 to 2018, by flag of the fishing vessel. China and Chinese Taipei are still the participants with the largest amount of fish transshipped in the EPO.





The total tonnage of the catches transshipped under the program during 2009-2018 was 19.5% greater in 2018 than in 2017 but still less than in 2016 (**Figure 4**). Pursuant to Resolution C-12-07, since 2013 transshipments of sharks (1,189 t in 2018) are itemized separately.



Since 2013, observers record where the transshipped tuna originated: Western Pacific (WPO), EPO or IATTC-WCPFC overlap area. In 2018, 60% of the transshipped tuna was caught in the EPO, including the overlap area (**Table 2**), and 27% in the WPO.

TABLE 2. Catches transshipped in the Pacific Ocean in 2018, by fishing vessel flag and area						
of origin						
Darticipant		Area of ca	atch		Total	
Participant	EPO	Overlap area	WPO	Unknown	Total	
China	13,330	7,277	6,520	992	28,120	
Japan	2,886	273	603	202	3,963	
Korea	2,672	816	3,450	6,880	13,819	
Panama	1,546		43		1,590	
Chinese Taipei	5,496	6,020	7,075	625	19,216	
Vanuatu	3,550	1,618	2,950	813	8,931	
Total	29,480	16,005	20,640	9,512	75,639	

Table 3 shows the catch limits for bigeye tuna established for 2018 in Resolution $\underline{C-17-02}$ and the catches in the EPO recorded in the database of the transshipment program. In the case of China, the apparent excess is covered by the transfer of part of Japan's limit to China.

TABLE 3. Bigeye	TABLE 3. Bigeye catch limits in Resolution <u>C-17-02</u> , and catches in the EPO recorded by the							
transshipment progr	transshipment program, in tonnes, 2018.							
CPC Catch limit EPO catches transshipped in the EPO								
CPC	(C-17-02)	EPO	Overlap area	Total				
China	2,507	1,813	1,822	3,635				
Japan	32,732	1,507	123	1,630				
Korea	11,947	1,721	491	2,212				
Chinese Taipei	7,555	2,209	1,915	4,124				
United States	750	Does not make transshipments						

The positions of transshipments made during 2015-2018 in the Pacific Ocean and in the EPO are shown in **Appendix 3**.

4. FINANCING

This section of the document provides information on the 2018 budget, expenses incurred in 2019 as of 30 April, and the expected budget for 2020.

4.1. 2018 Budget

Table 4 shows the status of the program budget during 2009-2018.

In September 2018 the participants were asked for an additional contribution of US\$ 290,000 to cover the expenses for the rest of the year. At the end of the year there was a surplus of US\$ 115,269, which, when added to the estimated budget of US\$ 1,300,000, results in a total of US\$ 1,415,271 available for 2019. It should be noted that US\$ 17,400 of the additional 2018 contribution of Panama was not paid until January 2019, but was accounted for as a 2018 contribution.

TABL	TABLE 4. Program budget, 2009-2018, 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	43,9054	867,175	(123,270)	201,254				
2016	950,000	37,7234	1,056,479	(68,756)	132,498				
2017	1,050,0005		1,159,644	(109,644)	22,854				
2018	1,390,0006		1,297,585	92,415	115,269				
¹ Peru ^{; 2}	Belize ^{- 3} Includes B	elize (US\$ 6.060). Ind	onesia (US\$ 1 48	5) and Panama	a (US\$ 9 090).				

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

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

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

4.2. 2019 budget

Based on 2018 expenses, during the 93rd IATTC meeting in August 2018 a budget of US\$ 1,300,000 was agreed to finance the program in 2019.

Table 5 shows the number of transshipments made and the quantity of fish transshipped during the September 2017-August 2018 period, the basis for calculating contributions for 2018.

TABLE 5. Number of transshipments and tonnage of fish trans- shipped in the EPO, 1 September 2017- 31 August 2018							
Dautiain ant	Transs	hipments					
Participant	Number	t					
China	227	20,500					
Japan	49	3,060					
Korea	28	3,421					
Panama	44	2,138					
Chinese Taipei	203	9,901					
Vanuatu	164	5,220					
TOTAL	715	44,240					

To calculate each participant's contribution, the budget is divided equally between two components (the number of transshipments made and the quantity of fish transshipped), and each participant's contribution is calculated in proportion to the activity of its fleet in each of these two components. Contributions are payable in two installments, on 15 January and 15 June.

TABLE 6. Contributions 2019, in US\$							
Participant	Total contri- bution	First instalment (50%); due 15 Janu- ary	Paid	Second instalment (50%); due 15 June	Paid		
China	507,562	253,781	\checkmark	253,781	Due 15		
Japan	89,505	44,753	\checkmark	44,752	June 2019		
Korea	75,718	37,859	\checkmark	37,859			
Panama	71,413	35,707	\checkmark	35,706			
Chinese Taipei	330,016	165,008	\checkmark	165,008			
Vanuatu	225,786	112,893	\checkmark	112,893			
TOTAL	1,300,000	650,000	✓	650,000			

Table 6 shows the contributions payable by each participant in 2019.

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Table 7 shows the program costs, FY 2018, and FY 2019 to 30 April, in US\$. In the first third of 2019 (January-April), approximately 26% of the resources available for the year have been spent.

TABLE 7. Program costs, 2018, and 2019 as of 30 April, in US\$								
		2018			2019 (as of 30 April)			
Item	Unit cost	Units paid	Cost	Unit cost	Units paid	Cost		
Days at sea	340	3,194	1,085,960	Same as	953	340,020		
Travel days	350	241	84,350	2018	50	17,500		
Training	453	20	9,060		0	00		
Equipment, materials,								
travel	-		118,215	-	-	30,317		
Total (US\$)			1,297,585			371,837		

Table 8 summarizes the financial status of the program as of 30 April 2019.

TABLE 8. Financial situation of the program, in US\$, 2019				
Item	Amount			
1 January – 30 April				
First-semester contributions received	650,000			
Second-semester contributions received	-			
Surplus from previous years	115,269			
Subtotal	765,269			
Program expenditures, as of 30 April	371,837			
Balance as of 30 April	393,431			
Second semester contributions (pending as of 30 April)	650,000			
Total (contributions received and payable, minus January-April expenses)	1,043,432			

Experience shows that, in the last four months of the year, the number of observer requests is usually higher than in the earlier months, so the estimate of the needs for the rest of 2019 is based on the average monthly costs during September-December 2018, around US\$ 110,000. On that basis, the existing funds seem sufficient to cover all costs for 2019.

4.3. 2020 budget

Based on MRAG estimates, the projected budget for 2020 is US\$ 1,305,000, almost identical to 2019. However, historically demand for observers has exceeded projections, so this may be an underestimate.

Likewise, the contract with MRAG expires at the end of 2019, and its renewal should be considered for the next years. MRAG offered to sign a new three-year contract, with higher costs than during 2017-2019 (**Table 9**), but that will not increase during the three-year period.

TABLE 9. Cost increases for 2020-2022, in US\$							
Daviad	Daily cost						
Period	At sea	Travel	Training				
2016-2019	340	350	453				
2020-2022	\leq 2500 days > 2	2500 days 371	630				
2020-2022	380	350 371	030				

Table 10 summarizes MRAG estimates of program needs in 2020.

TABLE 10. Estimated costs, 2020, in US\$			
Item	Days	Cost (US\$)	Total (US\$)
Days at sea ≤ 2500	2,500	380	950,000
Days at sea > 2500	400	350	140,000
Travel days	200	371	74,200
Training (6 observers)	30	630	18,900
Subtotal			1,183,100
Travel costs (observers)			120,000
Estimated total cost, 2020	1,303,100		

5. ITEMS TO BE AGREED

The Committee is asked to consider adopting the following recommendations to the Commission:

- 1. A budget for 2020 in an amount of US\$ 1,305,000, consistent with the MRAG estimates summarized above, to be funded by the participants in the program.
- 2. Renew the contract with MRAG for 2020-2022, with the costs detailed in Table 9.
- 3. Modify the transshipment declaration to include a column for recording the species of sharks transshipped.

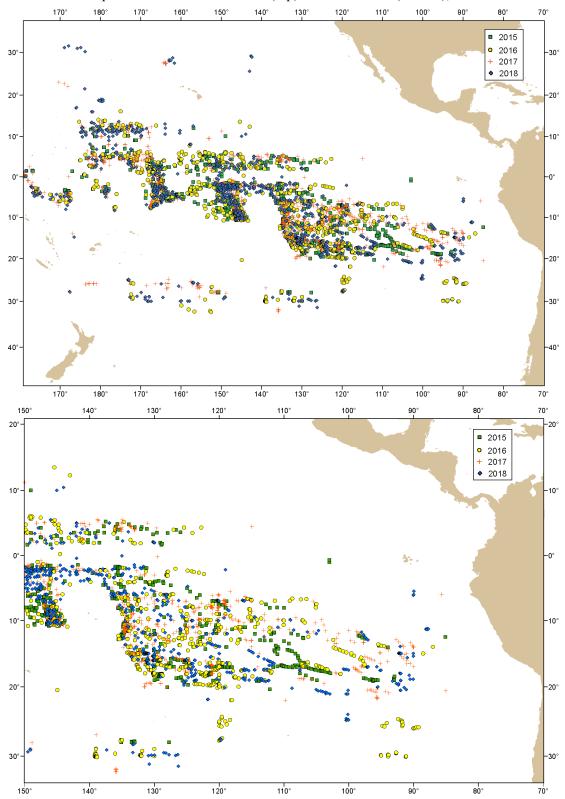
			Tunas		SWO	CI/II	ОТР	Tatal
		BET	YFT	ALB	SWO	SKH	OTR	Total
2009	CHN	6,392	1,281	433	978		502	9,586
	JPN	4,736	1,218	767	627		657	8,004
	KOR	2,460	324	79	323		553	3,739
	PHL	72	34	-	-		-	106
	TWN	2,564	586	1,655	320		363	5,487
	VUT	964	237	3,828	108		1,053	6,190
	Total	17,186	3,679	6,762	2,356		3,128	33,112
	BLZ	81	13	10	3		2	110
	CHN	3,674	748	429	583		470	5,902
	JPN	6,623	1,942	819	1,049		1,502	11,935
2010	KOR	2,957	459	102	372		891	4,781
2010	PER	80	15	3	7		3	108
	TWN	4,561	992	1,434	541		730	8,258
	VUT	1,321	259	1,963	131		330	4,005
	Total	19,297	4,428	4,759	2,685		3,928	35,098
	BLZ	90	9	76	19		17	212
	CHN	5,363	1,157	436	815		755	8,526
	JPN	5,198	1,111	1,819	1,247		1,622	10,997
2011	KOR	4,263	574	253	486		1,015	6,591
	TWN	2,246	413	3,269	271		1,123	7,323
	VUT	1,160	228	3,609	166		366	5,529
	Total	18,319	3,492	9,463	3,004		4,899	39,178
	CHN	3,690	840	389	772		429	6,121
2012	JPN	5,894	1,359	1,340	1,185		1,162	10,938
	KOR	1,257	130	55	166		257	1,866
2012	TWN	2,476	395	2,015	398		664	5,949
	VUT	1,226	160	2,996	157		348	4,888
	Total	14,543	2,884	6,796	2,678		2,860	29,762
	BLZ	246	40	20	52	16	30	404
	CHN	3,635	798	3,400	583	114	758	9,289
	IDN	102	16	2	16	0	2	138
2013	JPN	5,756	1,126	735	1,162	9	784	9,571
2015	KOR	3,947	519	199	487	294	579	6,026
	TWN	1,771	386	1,463	245	335	676	4,876
	VUT	763	160	2,853	161	34	316	4,285
	Total	16,221	3,045	8,672	2,706	801	3,144	34,590
	BLZ	38	1	1	5	0	0	45
2014	CHN	4,624	1,169	8,069	943	115	1,480	16,402
	IDN	18	7	3	1	6	28	62
	JPN	3,868	922	337	859	0	755	6,741
	KOR	2,585	481	118	287	170	391	4,032
	PAN	172	76	13	37	34	56	388
	TWN	2,975	645	3,238	560	258	782	8,458
	VUT	818	269	2,593	142	118	256	4,195
	Total:	15,098	3,569	14,373	2,833	701	3,748	40,322

Appendix 1. Fish transshipped in the eastern Pacific Ocean, 2009-2018, by species and flag of fishing vessel, in metric tons.

		Tunas		SWO	SVII	ОТР	Tatal	
		BET	YFT	ALB	SWO	SKH	OTR	Total
2015	CHN	5,690	1,897	6,631	888	130	1,323	16,558
	JPN	4,201	766	367	829	0	761	6,925
	KOR	4,347	525	154	545	252	813	6,636
	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
2016	CHN	4,572	1,898	14,064	1,169	157	1,559	23,419
	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
2017	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
	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
2018	JPN	1,531	260	477	313	29	360	2,971
	KOR	2,964	679	310	228	0	567	4,748
	PAN	251	55	133	924	70	157	1,590
	TWN	3,454	780	1,289	3,173	455	1,295	10,448
	VUT	2,237	516	547	575	237	496	4,608
	Total	14,084	3,452	3,722	18,461	1,189	5,175	46,082

Appendix 2. Trips by carrier vessels that transsnipped in the eastern Pacific Ocean, 2018.							
IATTC	Vessel	Flag	Dete	Departure	Arrival Dest		
trip	Duoma	DAN	Date	Port Kaohsiung, TWN	Date 6-Apr-18	Port Busan, KOR	
313 314	Ryoma Ping Tai Rong Leng 2	PAN CHN	10-Jan-18 20-Dec-17	Busan, KOR	21-Mar-18	Pago Pago, WSM	
314	SL Bogo	KOR	8-Dec-17	Busan, KOR	31-Jan-18	Suva, FJI	
315	Pontos	PAN	15-Dec-17	Kaohsiung, TWN	12-Mar-18	Kaohsiung, TWN	
317	Seiho	KOR	27-Nov-17	Kaohsiung, TWN	12-Mai-18	Busan, KOR	
318	Victoria 168	PAN	12-Dec-17	Vacamonte, PAN	3-Feb-18	Vacamonte, PAN	
319	Yun Run 3	KIR	22-Dec-17	Majuro, MHL	8-Feb-18	Papeete, PYF	
320	Haru	VUT	26-Dec-17	Kaohsiung, TWN	29-Mar-18	Majuro, MHL	
321	Seiwa	KIR	20 Dec-17 29-Dec-17	Busan, KOR	22-Mar-18	Busan, KOR	
323	Shun Tian Fa 168	TWN	30-Dec-17	Kaohsiung, TWN	19-Mar-18	Kaohsiung, TWN	
323	Lung Yuin	VUT	30-Jan-18	Papeete, PYF	28-Mar-18	Kaohsiung, TWN	
325	Tuna Princess	VUT	26-Jan-18	Kaohsiung, TWN	5-Apr-18	Pohnpei, FSM	
326	Full Kuo Shin	PAN	1-Feb-18	Kaohsiung, TWN	16-May-18	Kaohsiung, TWN	
327	Taiho Maru	LIB	3-Mar-18	Kaohsiung, TWN	7-May-18	Majuro, MHL	
328	SL Bogo	KOR	6-Mar-18	Busan, KOR	10-May-18	Shimizu, JPN	
329	Harima 2	PAN	13-Mar-18	Kaohsiung, TWN	30-May-18	Yokosuka, JPN	
330	Victoria 168	PAN	7-Apr-18	Vacamonte, PAN	17-May-18	Vacamonte, PAN	
331	Ping Tai Rong Leng 1	CHN	16-Apr-18	Pusan, KOR	3-Jul-18	Suva, FJI	
332	Seiyu	KOR	31-Mar-18	Kaohsiung, TWN	7-Jun-18	Busan, KOR	
333	Yun Run 3	KIR	29-Mar-18	Kaohsiung, TWN	2-Jul-18	Ningbo, CHN	
334	Shun Tian Fa 168	TWN	23-Apr-18	Kaohsiung, TWN	22-Jun-18	Suva, FJI	
335	Seiwa	KOR	2-May-18	Busan, KOR	28-Jul-18	Busan, KOR	
336	SL Bogo	KOR	2-Jun-18	Busan, KOR	12-Aug-18	Busan, KOR	
337	Ryoma	PAN	29-May-18	Kaohsiung, TWN	28-Aug-18	Busan, KOR	
338	Rising Star	PAN	1-Jun-18	Vacamonte, PAN	6-Aug-18	Vacamonte, PAN	
339	Haru	VUT	9-Jun-18	Kaohsiung, TWN	5-Sep-18	Papeete, PYF	
340	Lung Yuin	VUT	12-Jun-18	Papeete, PYF	7-Aug-18	Kaohsiung, TWN	
343	Yun Run 3	KIR	19-Jul-18	Kaohsiung, TWN	6-Oct-18	Papeete, PYF	
344	Taiho Maru	LIB	9-Aug-18	Majuro, MHL	14-Oct-18	Suva, FJI	
345	Shota Maru	VUT	1-Aug-18	Yokosuka, JPN	17-Oct-18	Majuro, MHL	
346	Full Kuo Shin	PAN	8-Aug-18	Suva, FJI	10-Oct-18	Kaohsiung, TWN	
347	Ping Tai Rong Leng 1	CHN	11-Aug-18	Busan, KOR	8-Dec-18	Busan, KOR	
348	Seiwa	KIR	28-Aug-18	Majuro, MHL	19-Oct-18	Busan, KOR	
349	SL Bogo	KOR	10-Sep-18	Busan, KOR	24-Nov-18	Kaohsiung, TWN	
350	Rising Star	PAN	27-Aug-18	Vacamonte, PAN	4-Oct-18	Vacamonte, PAN	
352	Sheng Hong	TWN	23-Sep-18	Kaohsiung, TWN	4-Dec-18	Kaohsiung, TWN	
353	Bao Win	PAN	12-Sep-18	Kaohsiung, TWN	13-Dec-18	Kaohsiung, TWN	
354	Tenho Maru	LIB	25-Sep-18	Kaohsiung, TWN	4-Dec-18	Majuro, RMI	
355	Sei Shin	KOR	7-Oct-18	Kaohsiung, TWN	22-Dec-18	Busan, KOR	
356	Rising Star	PAN	10-Oct-18	Vacamonte, PAN	21-Nov-18	Vacamonte, PAN	
357	Lung Yuin	VUT	13-Nov-18	Papeete, PYF	30-Dec-18	Kaohsiung, TWN	
358	Ryoma	PAN	30-Oct-18	Busan, KOR	31-Dec-18	Papeete, PYF	
359	Seiwa	KIR	5-Nov-18	Kaohsiung, TWN	24-Jan-19	Shimizu, JPN	
360	Ping Tai Rong Leng 2	CHN	12-Dec-18	Busan, KOR	26-Feb-19	Papeete, PYF	
361	Rising Star	PAN	29-Dec-18	Vacamonte, PAN	25-Feb-19	Vacamonte, PAN	
362	Taiho Maru	LIB	10-Dec-18	Kaohsiung, TWN	4-Mar-19	Majuro, MHL	
363	SL Bogo	KOR	27-Dec-18	Busan, KOR	13-Mar-19	Busan, KOR	
364	Yong Man Shun	TWN	7-Dec-18	Kaohsiung, TWN	22-Feb-19	Kaohsiung, TWN	
365	Full Kuo Shin	PAN	7-Dec-18	Kaohsiung, TWN	14-Mar-19	Kaohsiung, TWN	
366	Yun Run 3	KIR	21-Dec-18	Kaohsiung, TWN	23-Mar-19	Busan, KOR	
367	Shin Ho Chun 102	PAN	18-Dec-18	Papeete, PYF	21-Jan-19	Papeete, PYF	

Appendix 2. Trips by carrier vessels that transshipped in the eastern Pacific Ocean, 2018.



Appendix 3. Transshipments in the Pacific Ocean (top) and in the EPO (bottom), 2015-2018.