### SKIPPERS WORKSHOPS ROUND 9 - REPORT № 6

Workshop Date: 27th June 2019

Nº Participants: 32 (Appendix I)

**Presenting Scientists: GALA MORENO & JEFFERSON MURUA** 

### **SKIPPERS WORKSHOPS COMMENTS + NEW IDEAS**

### **COLOR CODES FOR MEASURE ACCEPTANCE LEVEL**

HIGH	MID-HIGH	MID	MID-LOW	LOW

#### **SHARKS**

# Fishing sharks the net

in

#### KEY POINT: LACK OF EXTRA CREW FOR FISHING IN THE NET CAN BE LIMITING

- Participants were unsure about the feasibility of fishing sharks in the net. Sometimes they lack an extra crew member required to fish from the speedboat.
- Others argued that sea conditions can be rougher and sharks larger than those showed in the presentation's videoclip, thus complicating the operation. ISSF scientists answered that on one hand, the idea is that sharks are not lifted onboard, they can be released towing them in the water and on the other hand, this activity should be done in favorable weather conditions. The shark release activity should be undertaken in those sets that allow it, first considering crew safety.
- Filipino skippers estimated that over 50% of the FADs had sharks, and that on average there were 15 to 20 sharks per FAD set. This average number of sharks is higher than those in the Atlantic and Indian Oceans (e.g. 5-10 sharks per FAD set). Some fishers commented about a possible shark hotspot in the southern waters of the Salomon Sea of Papua New Guinea (PNG), especially during the months of November to January. Some sets with 150 sharks have been encountered in this hotspot. When these sets with a very large number of sharks occurred, skippers said they opened the net and released the whole catch (e.g. slipping) to avoid lengthy and risky fish loading operations.

## Release practices

## KEY POINT: USE REGULARLY HOPPERS, WHICH ARE CONSIDERED VERY USEFUL TO RELEASE SHARKS AND OTHER BYCATCHES

- Most elasmobranchs, both sharks and manta rays, are released manually from deck. Filipino vessels are relatively small (e.g. 600-800 GT) and have little spare space on the upper deck.

Despite this, they still have room for hoppers and fishers thought of them as very useful to spot and quickly release bycatches. This is especially true for vessels without conveyor belts in the lower deck, where all the undetected bycatch goes directly into the wells.

- Filipino purse seine fishers estimated finding 2 to 4 manta rays per year, with a marked seasonal pattern where April to June is the most likely time to see them. Most mantas are released manually, however, very large specimens are difficult to handle. Fishers did not explicitly state using poor practices when large mantas arrive on deck but acknowledged that there are few practical options to lift and release quickly very large individuals overboard other than using ropes and hooks.
- Fishers and crew specified that shark finning is strictly prohibited by their fishing companies and that this practice, which might have been more common in the past, has now been discontinued.
- Fishers are interested in releasing the sharks alive, because they think that FADs with sharks present are more likely to aggregate tuna than those without them.
- A Philippines fishery representative who worked mostly with local small-sized PS vessels operating on anchored payaos talked about the problem of dolphins associating sometimes with tuna under floating objects. This seemed to be a problem particular to coastal areas, because longer distance drifting FAD operating PS did not find usually cetacean bycatches. The fishery manager asked if there are operational solutions to prevent catching the dolphins. Scientists explained practices used for dolphin sets in other fisheries like in the EPO (e.g. backdown), but these actions might be more difficult to perform for small PS (e.g. < 100 GT) which also perform the AFAD set almost in the dark before dawn. National legislation from the Philippines oblige fishers to do slipping if any dolphins are observed in the net.

### Nonentangling DFADs

## KEY POINT: STILL USING ENTANGLING FADS DESPITE WCPFC REGULATION FOR NON-ENTANGLING FADS COMING INTO EFFECT BY 2020

- All fishers working with DFADs indicated they only use one type, with a "burrito" raft (e.g. line of corks wrapped in 4-5inch mesh netting) and an open tail panel, again built with old PS 4-5inch mesh net. The underwater appendages typically reach 60 m depth, but some may go down to 100 m. These DFADs would fall under the high-risk FAD category. Companies acknowledge that the WCPFC has established a regulation for non-entangling FADs which will soon come into effect in 2020. Although most fishers have not tried alternative designs yet, some companies are starting to purchase small mesh netting (e.g. < 2.5 inch) from small pelagic fisheries to construct their FADs.

### Biodegradable FADs and FAD retrieval

## KEY POINT: A SPECIFIC ISSF WORKSHOP ON BIODEGRADABLE FADS WAS HELD WITH REPRESENTATIVES FROM PHILIPPINES, KOREA, MICRONESIA AND PNG

- On June 26<sup>th</sup>, the day prior to this report's Skippers Workshop, a special ISSF workshop on Biodegradable FADs was held with Filipino and PNG fleet stakeholders in General Santos. This workshop, sponsored by FAO, allowed ISSF scientists to present participants with the

latest results on biodegradable FAD initiatives in the Indian, Atlantic and Eastern Pacific and gather feedback from these fleets on how to best proceed with experimental work in the WCPO. ISSF will soon publish a report on the outcomes from this biodegradable FAD workshop.

- Fishers estimated that FADs should at least last for a year in working order. This would be including the option for repairs. As skippers explained in the poor oligotrophic waters of the WCPO, FADs take about 6 months to grow biofouling and start aggregating small fish fauna around them.
- Due to the east to west predominant currents in the Western Pacific many of the westward drifting floating objects, including DFADs, end up in PNG waters. Fishery authorities from PNG said they would even contemplate the ban of FADs as a measure to prevent this littering of their coastline.
- A number of natural fibers have been used traditionally in the Philippines to build AFADs. Up to not so long-ago small PS vessels have been using natural-fiber ropes for the FADs' anchoring lines. However, now all use polyethylene or polypropylene ropes.
- Meanwhile the use of bamboo in anchored payao rafts has decreased because during monsoon season many would break. Now fishers prefer to use steel or fiberglass foam-filled pontoons.

#### **SMALL TUNA**

# Buoys with echo-sounder

## KEYPOINT: ALL USE ECHO-SOUNDER BUOYS AND WOULD LIKE TO BE ABLE TO DISCRIMINATE REMOTELY TUNA SPECIES WITH ACOUSTICS

- Fishers and managers thought that the potential to distinguish between SKJ and BET with selective echo-sounder buoys was very interesting and worth pursuing.
- Captains commented how they used the acoustic equipment onboard, with the sonar being used for longer distance inspection (e.g. 100s of meters) and the vessel sounder when fish are under the boat, for example at night before a set.
- Most, if not all buoys, used by the Filipino large PS vessels are equipped with echo-sounders. A mix of Zunibal and Satlink buoy brands was used by participants at the workshop.
- Local small-scale Filipino PS working on AFADs do not use buoys.

# Short tail FADs and net depth

# KEY POINT: FISHERS THOUGHT THAT DEEP TAIL FADS WORK BETTER AT AGGREGATING TUNA BECAUSE THEY DRIFT SLOWER AND IN A MORE PREDICTABLE WAY

- The Filipino PS fleet using DFADs use designs which are very similar to other Asian fleets in the WCPO, with the tail appendage in open net panels hanging down to 60 m approximately. The reason for using the open deep tails given by fishers were that they slow

down the drift and help attract more tuna, especially the ones living in deeper layers, like BET. Fishers thought that shallower tails would drift too fast, as they would not reach countercurrents in lower depths. Therefore, FADs would be drifting east to west following the predominant surface currents at a speed too fast for tuna to follow.

- Other fishers though there are 4 or 5 different layers with different currents in the first 100 m below the surface. These various currents change regularly (e.g. every 1-2 months). Having a DFAD net appendage of 100 m covering all these layers helps DFAD drift be more predictable. Their thinking was that deep DFADs are less affected by current-induced directional changes in a given layer. Fishers pointed out that aggregated tuna are more prone to abandon a DFAD when it makes a sudden marked change in direction.
- Fishers thought that deeper PS nets helped catching BET positioned deeper than the SKJ, especially as the thermocline is deeper than in other oceans. Because in FAD sets lights are used to attract tuna upwards and the net is shot before daylight, fishers thought that rarely BET at the FAD escape. Skippers estimated size dimensions of the nets they use in their 600-800 GT vessels are around 1800-2100 m long and 28 strips deep.

# Closures and FAD numbers

## KEY POINT: MANY PARTICIPANTS AGREED THAT REDUCING FAD NUMBERS WOULD BE A POSITIVE STEP

- PNG fishing authorities representatives argued that unlike in other oceans in which most waters fall within the high seas (e.g. EPO, Atlantic, Indian Ocean), in the WCPO most tuna productive grounds are within the EEZ of a coastal nation. For this reason, coastal nations, especially if associated like in the PNA, have great power to regulate tuna fishing in a region. If these countries decide to ban or at least further limit the number of DFADs, it will be a *de facto* limitation, even if the WCPFC does not adopt it. However, there are internal disputes between PNA countries on whether to reduce or ban FADs as some of the members, such as Kiribati, have vessels that rely more on FAD fishing. Many skippers and company managers at the workshop agreed with strongly reducing the current WCPFC limit of active FADs (450 per vessel), as most vessels are not even remotely close to this number.
- Currently, the PNG tuna fishery is applying for MSC certification. They are hoping that the free school tuna will soon be certified, maybe by 2020. A significant part of PNG's annual yield, more than half the catches, derive from free school sets. PNG participants were not so sure about obtaining so quickly MSC certification for their FAD-caught tuna.
- Due to high water visibility and deep thermocline, fishers only set on FADs (both drifting and anchored) very early in the morning, often before sunlight. For example, at AFADs small-scale local fishers will set at 4 am. After this early set, fishers typically will look out for free schools feeding at the surface, which can be caught at any time of the day. So, unlike in other oceans like the Atlantic where two or three daily sets can be done on FADs, in the Western Pacific a maximum of a daily FAD set is performed, and an important part of the fishing strategy and effort is dedicated to free school sets.

### **BONY FISH AND OTHERS**

#### Utilization

## KEY POINT: THERE IS LITTLE MARKET FOR SALE OF SMALL TUNID SPECIES AND OTHER BONY FISH BYCATCHES

- While local small-scale PS Filipino vessels make full use of bony fish species caught at AFADs, for the larger-scale long distance vessels there is no defined market for bycatch species.

### **CPUE AND FISHING EFICIENCY**

### Fishing technology , observers and FADs

### KEY POINT: FILIPINO AND PNG VESSELS USE E-LOGBOOKS BUT STILL HAVE NOT TRIED ELECTRONIC MONITORING SYSTEMS

- PNG and most other coastal members of the WCPFC have in place electronic logbook systems to collect data within their waters. These e-logs with location and catches are filled in daily and relayed automatically to the competent national authorities. Managers thought that e-logbooks were very advantageous as they can have real-time information on fishing associated events and quickly act if necessary.
- A large proportion of the larger scale PS (e.g. > 400GT) from Filipino owned companies such as Frabelle, R&D Fishing, etc. are flagged under PNG. Other companies from Asian countries, such as Shilla from South Korea, also have vessels with the PNG flag. Many Asian owned vessels operate under flags from PNA countries due to the significant vessel-day scheme fee reductions when fishing in those waters.
- Although in past decades PNG was been known for having a significant number of AFADs in its waters fished by medium- and large-scale PS, their number has significantly decreased as now more DFADs are being used, especially since the introduction of echo-sounder buoys to remotely monitor tuna aggregations under them.
- Filipino PS vessels fishing outside their EEZ carry WCPFC person observers onboard. There is no electronic monitoring systems (EMS) going on in this fleet. Only vessels with CCTV cameras which are for their private use. Workshop attendants informed about EMS trials in other fleets of the WCPO like those on tuna longliners being tested. One participant pointed out that EMS have limitations compared to person observers, such as not being able to take physiological samples scientific analyses.
- A number of the Filipino vessels use helicopters to locate free school tuna but also to find FADs from other vessels.

**NEXT SKIPPERS WORKSHOPS: MAJURO (MARSHALL ISLANDS) JULY 2019** 

### Conclusions from the Round 9 ISSF Skippers Workshop in **General Santos (Philippines) 2019:**

- LACK OF EXTRA CREW FOR FISHING IN THE NET CAN BE LIMITING
- MANY VESSELS USE REGULARLY HOPPERS. WHICH ARE CONSIDERED VERY **USEFUL TO RELEASE SHARKS AND OTHER BYCATCHES**
- ARE STILL USING ENTANGLING FADS DESPITE WCPFC REGULATION FOR NON-ENTANGLING FADS COMING INTO EFFECT BY 2020
- A SPECIFIC WORKSHOP TO DISCUSS BIODEGRADABLE FAD OPTIONS IN THE **REGION WAS HELD IN GENERAL SANTOS WITH WCPO FLEETS**
- FISHERS THOUGHT THAT SHALLOW TAIL FADS DO NOT WORK AS WELL AS DEEPER ONES IN THE WCPO DUE TO MIXED CURRENTS OPERATING IN THE REGION
- MANY PARTICIPANTS WERE IN FAVOUR OF MEASURES THAT FURTHER REDUCE THE NUMBER OF FADS PER VESSEL
- USE OF ELECTRONIC LOGBOOKS IS GENERAL IN THE WCPO REGION. HOWEVER, ELECTRONIC MONITORING SYSTEMS IN PS HAVE NOT BEEN TRIED IN THE FLEETS CONSULTED, ONLY TRIMARINE HAS BEEN TRIALING THEM.

### Appendix I – Participant Lists ISSF Skipper Workshop General Santos (Philippines) 27 June 2019

Name	Profession	Vessel	Company
Johard Salamatih	Skipper	Purple Beauty	Frabelle
Gil Oltaido	Officer	Purple Beauty	Frabelle
Damilo Bacomo	Skipper	Purple Beauty	Frabelle
Wabi Basay	Dock Manager		RR Fishing
Neil Del Rosario	Manager		RR Fishing
Sergio Jr Sardoma	Radio Operator		RR Fishing
Rafael L. Lapitan	Operations Manager		RR Fishing
Michael Gumanac	Officer		RD Fishing
Ryan Banguis	Skipper		RD Fishing
Elmer J. Soner	Skipper		RD Fishing
Edward Coloso	Researcher		RD Fishing
Donald Papaol	Executive Secretary		FIA
Roy Gabinete	Executive Assistant		Frabelle
Floyd Tiu Laurel	Ship-owner		Frabelle
Alex Bernardino	Executive		MSY
Karen Joy Obero	HR Staff		MSY
Benthly Sabulo	Fisheries Officer		NFA-PNG
Rhodelyn Leysa	Operations		RD Fishing
Juanito Inocencio	Fishing Master		TPJ Fishing
Richard Remandaban	Fishing Master		TPJ Fishing
Nory O. Eleserio	Scientist		BFAR
Mark Jayson Josh	Researcher		RD Fishing
Marcel Chiu	Secretariat		WTPO
Sylvester Pokajam	Chairmam		FIA PNG
Esteban Pollescash	Skipper	D-101	RD Fishing Industry
Shalimar Abdirahman	Project Officer		SFFAII
Vincent G. Ma	Skipper		MSVC
Evan Luis Alaban	Skipper		MSVC
Jose Ronald Jumikaren	Officer		MSVC
Marko Kamber	Ship-owner		CFC
Lawrence Org	Manager		Hoch
Siseno Pagalan	Manager		TPS

### Appendix II - ISSF Skipper Workshop General Santos 2019 group photo



### Appendix III- ISSF Skipper Workshop Participants since 2010 by stakeholder group

MS	SQUARIESTS   TOTO	
1.1   MANTA (ELEMONIS)   18/09/2019   556   18   1   0   1   0   1   0   1   1   2   1   2   1   2   2   2   2	0 7 6 2 1 3 3 5 4 4 5 5 6 1 1 5 6 1 1 5 6 1 1 1 6 1 1 1 6 1	
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1.7   PAGO PAGO JAMERICAN SAMOA  0,05(1)(2013)   2   0   2   1   4   3   3   1   1   1   1   1   1   1   1	2 1 0 5 0 8 0 2 0 8 2 1 1 21 1 3 4 3 2 2 1 2 6 11(5 3 3 0 5 7 1 1 0 5 12 4 0 1 1 4 1 3 1 4 3 4 3 4 3 4 3 4 4 5 6 7 7 1 7 1 8 7	
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2.2   MANTE REPORTEES  2.3-38/05/32   5   2   0   0   1   0	0 8 2 1 21 5 3 4 3 2 2 6 11 20 6 11 0 5 11 0 5 12 4 0 3 1 4 3 4 3 4 3 4	
2.2   MAMI (ENCHALES)   2:1-80(6)/12   5   2   0   0   1   0	2 1 21 5 3 4 3 2 6 10 0 4 15 3 0 5 7 1 10 5 12 4 0 3 1 1 2 6 3 15 3 0 5 7 1 10 5 11 0 12 4 13 4 14 1 15 4 16 1 17 1 18 1 18 1 18 1 18 1 18 1 18 1 18	
2.3   PAGO PAGO (AMERICAN SAMOA)   17/08/2012   2.5   4   0.0   0   3   0.0	2 1 21 5 3 4 3 2 6 10 0 4 15 3 0 5 7 1 10 5 12 4 0 3 1 1 2 6 3 15 3 0 5 7 1 10 5 11 0 12 4 13 4 14 1 15 4 16 1 17 1 18 1 18 1 18 1 18 1 18 1 18 1 18	
2.5   GENTRAL SANTOS (PRILUPPRISS)   06,009/2013   2.6   4   0   1   3   0	21 5 3 4 3 2 1 2 6 11 0 4 15 3 0 5 7 1 0 5 12 4 0 1 0 3 1 4 3 4	
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2.8   SULRIANTA (ELEMONI)   26-27/09/0012   17	1 2 6 11 0 4 15 3 0 5 7 1 1 0 5 12 4 0 1 1 0 3 1 1 4 3 4 4 3 4 4	
2.8   SUMAPRICE (SPAME)   00002711-51/20203   87   3   2   2   9   0   0   1   1   1   1   1   1   1   1	6 10 0 4 15 3 0 5 7 1 0 5 12 4 0 1 0 3 1 4 3 4	
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4.2   KACHSUNG (TAMMAN)	0 1 0 3 1 4 3 4	
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4.6   JAMANTA (PROMESSA)   19/08/2014   21   2   0   0   1   1   1   1   1   1   1   1		$\dashv$
43   GENERAL SANTOS (PHEUPPRIES)   05/09/2014   24   6   0   0   2   0		$\top$
4.8   SUARRETE ISPAIN    \$1009-4402/0014   \$52   \$5   \$0   \$1   \$3   \$1   \$4.9   \$PAGO PAGO JAMENICAN SAMOAD  \$15-20/00104   \$8   \$1   \$0   \$0   \$4   \$0   \$0   \$4   \$0   \$1.0	2 3	$\top$
4.9   PAGO PAGO (AMERICAN SANDA)   15-20/10/2014   8   1   0   0   4   0	1 6	$\top$
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5.5. JAKARTA (INDONESIA) 19/06/2015 8 14 1 0 5 0	4 3	+
5.6 BINTUNG (INDONESIA) 22/06/2015 21 13 0 0 1 1 1	2 3	+
5.7 SIBOLGA (INDONESIA) 25/06/2015 22 15 0 0 0 1	1 3	+
5.8 LIMA (PERU) 11/08/2015 10 5 1 1 16 3	6 4	_
5.9 MANTA (ECUADOR) 14/08/2015 83 8 3 8 6 0	0 10	_
5.10 BUSAN (KOREA) 15/09/2015 8 0 0 1 8 2	25 4	
5.11 CONCARNEAU (FRANCE) 13/10/2015 14 6 0 2 2 0	2 2	
5.12 SUKARRIETA (SPAIN) 8,26-30/10/2015 49 5 4 1 2 0	0 6	
6.1 SHANGHAI (CHINA) 06/04/2016 10 0 0 6 5 0	6 2	
6.2 TEMA (GHANA) 04/05/2016 8 6 2 5 20 4	2 4	
6.3 VIGO (SPAIN) 20/07/2016 51 23 0 1 0 0	0 7	
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6.6 JAKARTA (INDONESIA) 05/09/2016 27 0 0 1 3 0	0 3	
6.7 BINTUNG (NDONESIA) 07/09/2016 27 1 1 0 0 1 1	10 4	$^{+}$
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6.12 QUY NHON (VETNAM) 17/09/2016 42 0 0 0 13 0	3 5	+
6.13 SUKARRIETA (SPAIN) 24-28/10/2016 42 5 1 0 3 0	1 5	+
6.14 MADEIRA (PORTUGAL) 01/11/2016 4 19 0 0 2 0	1 2	-
7.1 MANTA (ECUADOR) 10-11/01/2017 95 16 0 1 3 0	2 11	_
7.2 TEMA (GHANA) 21/02/2017 22 20 1 5 6 1	1 5	4
7.3 SAN DIEGO (USA) 27/03/2017 7 1 2 4 3 1	1 1	$\perp$
7.4 MAJURO (MARSHALL ISLANDS) 03/04/2017 5 4 0 0 2 0	0 1	
7.5 POHNPEI (MICRONESIA) 06/04/2017 8 6 1 0 2 0	2 1	
7.6 KENDARI (INDONESIA) 03/04/2017 23 9 0 0 0 4	0 3	4
7.7 PAOTERE-MAKASSAR (INDONESIA) 05/04/2017 20 8 0 0 0 3	0 3	_[
7.8 TUMUMPA-MANADO (INDONESIA) 07/04/2017 35 6 0 0 0 1	0 4	╝
7.9 AMBON (NDONESIA) 11/04/2017 22 1 0 0 0 4	0 2	⅃
7.10 ZHOUSHAN (CHINA) 01/08/2017 8 1 0 4 8 0	3 2	Τ
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7.14 JAKARTA (INDONESIA) 19/09/2017 33 3 0 0 0 0 0	0 3	
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7.16 MANTA (ECUADOR) 04/10/2017 29 41 0 0 0 1	1 7	$\top$
7.17 CONCARNEAU (FRANCE) 09/10/2017 27 7 0 1 1 0	2 3	$\top$
7.18 SUKARRETA (SPAIN) 16-20/10/2017 46 16 0 3 1 0	1 6	$\dashv$
8.1 TEMA(GHANA) 26-27/02/2018 22 30 4 4 10 5	2 7	$\top$
8.2 MAJURG (MASSHALL SLANDS) 12/04/2018 15 6 0 1 4 1	0 2	$\dashv$
8.3 POHNPEI (MICRONESIA) 17/04/2018 7 4 1 0 0 0	0 1	+
8.4 BINTUNG (INDONESIA) 07/05/2018 32 7 0 0 1 9	2 5	+
8.5 PRIG INDONESIA) 09/05/2018 12 0 0 0 3 8	0 3	+
8.6 PEKALONGAN (INDONESIA) 11/05/2018 18 21 0 0 0 4	2 4	+
8.6 PEKALONGAN (INDONESIA) 11/05/2018 18 21 0 0 4 4 8.7 DAKAR (SENEGAL) 11/05/2018 4 3 0 3 3 3	2 1	+
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8.8 VIGO (SPAIN) 16/07/2018 29 60 0 0 0 0 0		+
8.9 MANTA (ECUADOR) 14/08/2018 65 58 1 3 6 0	2 13	+
8.10 PANAMA CITY (PANAMA) 16/08/2018 6 0 0 0 2 3	1 1	+
8.11 SAN DIEGO (USA) 20/08/2018 9 0 3 0 3 0	0 1	+
8.12 YAIZU (JAPAN) 29/08/2018 1 0 0 0 17 0	11 2	+
8.13 LIMA (PERU) 01/10/2018 17 5 0 1 9 7	15 5	
8.14 CONCARNEAU (FRANCE) 15/10/2018 17 2 0 3 2 0	0 2	
8.15 SUKARRIETA (SPAIN) 15-21/11/2018 41 23 0 2 7 0	2 7	Щ
9.1 TEMA (GHANA) 26/02/2019 22 22 22 22 22 22 22 22	22 2	$\perp$
9.2 MANTA (ECUADOR) 09/04/2019 18 23 1 5 11 2	4 6	_[
9.3 JAKARTA (INDONESIA) 03/05/2019 7 16 0 3 0 4	0 3	$\top$
9.4 SIBOLGA (INDONESIA) 06/05/2019 14 4 0 2 0 9	2 3	$\top$
9.5 MAZATLAN (MEXICO) 10/06/2019 11 5 0 1 2 0	1 2	$\top$
9.6 GENERAL SANTOS (PHILIPPINES) 27/06/2019 8 3 2 4 110 4	1 3	$\top$
TOTAL 2085 843 85 163 448 200		
10102 000 000 100 100 200	257 38	$\neg$