SKIPPERS WORKSHOPS ROUND 9 - REPORT 3-4 1 ISSF Skippers Workshops bring tuna fishers together with marine scientists for participatory sessions — at key fishing ports worldwide — to share ideas and information on best practices to reduce bycatch. Skippers workshops are an important component of ISSF's mission. Held throughout the year at major ports in the Atlantic, Pacific, and Indian Oceans, ISSF workshops have welcomed crew members from vessels fishing under more than 25 national flags. In 2019, we have embarked on our 9th round of Skipper Workshops. The information below summarizes results obtained during the noted Round 9 workshop.

Dates & Locations:
3th May 2019 Jakarta (Java, Indonesia)
6th May 2019 Sibolga (Sumatra, Indonesia)

Nº Participants: 61

Presenting Scientists: ANUNG WIDODO, IGNATIUSTRI HARGIYATNOMR, JEFFERSON MURUA

SKIPPERS WORKSHOPSCOMMENTS + NEW IDEAS

COLOR CODES FOR MEASURE ACCEPTANCE LEVEL

HIGH	MID-HIGH	MID	MID-LOW	LOW

SHARKS

Release practices from deck	- Skippers based at Jakarta informed that sometimes they catch sharks of sizes under 10 kg, but they could not identify well which species. The number of sharks caught is very low, estimating 4 or 5 sharks per vessel per trip in about 40-60 sets (e.g. 0.1 sharks per set). Jakarta fishers said that June and August are generally the months in which sharks may be more likely found. - Fishers in Sibolga commented that sometimes a few small silky sharks may be present in drifting floating objects both natural (e.g. logs, seaweed) or lost dFADs they find, but rarely in the anchored FADs (aFADs) in which most of their catches take place. Possibly as aFADs are fished on a regular basis (e.g. fishers make set only a few days apart in one aFAD), there is less time for colonization by new sharks. Also, shark populations in Indonesian coastal zones are generally in a very depleted state due to intensive fishing by many vessels from multiple gears over the years. - Skippers stopped landing sharks for sale after the Indonesian Government issued a regulation prohibiting the catch and landing of sharks by PS. Skippers risk losing their fishing license and fishing permit if they are caught landing sharks. Jakarta skippers explained that most sharks are returned to sea alive, but at times sharks may be consumed by crew onboard. - An average of 3 or 4 turtles are encountered annually by a vessel according to Sibolga skippers. Fishers identified turtles as mostly being olive ridley turtles (*Lepidochelys olivacea*). They are all released alive, some fishers saying that many turtles escape even before the net is set.

	- Whale sharks are rarely encountered, but when caught in a set they are liberated alive by lowering the corkline. Fishers use long bamboo poles to push down the net corks. They explained how the maneuver can take time, as whale sharks move slowly. In some instances, crew might jump to the water to assist with release but said they must be careful as the whale sharks' skin is very coarse, like sandpaper, and can cause injuries if accidentally rubbed against it. - Marlin and swordfish are rarely caught, about 1-2 per year. Note that these are not fished in the net during sets but rather by handlining. During daytime between sets (usually PS only do one set at dawn per day at most), many crew continue to fish with handlines, catching usually larger tuna that are at 100 m depth or more. - Few manta rays are caught accidentally. If brought onboard they will be released manually, they do not have cranes to do release with canvas or other specifically designed equipment. Mantas are always released as otherwise if caught fishers will risk strong fines. Sharks and other bycatches arriving onboard are also released manually. - Skippers in Jakarta explained that they very rarely catch dolphins, estimating a maximum of 2-5 dolphins accidentally netted in a year. Fishers try to release them alive before brailing using manual methods. Mainly by pushing the net down so dolphins can escape over the corkline. - About 500 posters on best bycatch release practices were printed out in 2015 and distributed in different Indonesian ports. About 100 of these posters were distributed for PS fishers based at Nizam Zachman Port in Jakarta in 2016. Many participants at the workshop said they did not get hold of one of those posters at the time and others said that they had seen the poster on display in other PS boats. More reprints of the best release practice posters would be advisable given the large number of vessels in each Indonesian port.
Non-entangling DFADs	- The Indonesian fleet does not deploy drifting FADs (dFADs) and work primarily with anchored FADs (aFADs) which consist of a raft built out of bamboo (traditional rafts), or more commonly these days with polystyrene foam encased in fiber glass (e.g. pontoon) or a plastic case. The underwater structure consists of a 30-60 m rope with palm leave attractors hanging from the raft and a longer 1-inch diameter raffia rope (1000-5000 m length) with weights at the bottom to hold the FAD in place. The length of the rope is usually 1.3 to 1.5 times that of the total sea surface to seabed depth. Thus, allowing some slack to reduce tension exerted by strong currents or tides on the whole structure. No netting material is utilized in the construction of aFADs, therefore they are totally non-entangling FADs. Fishers from Jakarta and Sibolga reported they have never observed turtles or sharks tangled up in their aFADs. - Fiberglass cylindrical pantoon rafts are gradually being replaced by others made with Styrofoam boxes wrapped in plastic, which are very cheap and light. Apparently, the fiberglass pantoons can have cracks and gain water, eventually sinking. Both types of raft are net free.

Bio-degradable FADS and FAD retrieval	- Indonesian aFADs are partially made with biodegradable materials including the raft if it is constructed with bamboo, and nypa or coconut palm leave attractors hanging from the subsurface structure. The palm leaves are replaced regularly, about once a month, because they degrade quickly. The cement concrete blocks used as anchorage to keep the whole aFAD structure stationary may also be considered biodegradable. About 10 to 15 cement blocks (see photo Appendix II), amounting to a total of 2-3 tons of concrete are used per aFAD. Non-biodegradable materials polystyrene foam and its casing (e.g. plastic or fiber glass cover) in rafts and the anchorage rope of synthetic components (see ISSF Technical Report 2018-06 for more detailed information). - Most Sibolga PS vessels operate within the Indonesian EEZ, but some skippers informed that sometimes they fish in the high seas and in the Sri Lankan waters, where they even keep aFADs in open waters. Fishers working outside the EEZ commented they lose their aFADs at a much faste rate, up to 2-3 aFADs per month (compared to coastal ones, being lost at a rate of 1-2 aFADs per semester). This is because many competing vessels from multiple gears operate in these areas and likely sabotage the aFADs by cutting the raft off from its anchorage. Lost aFADs are not retrieved as they are not fitted with GPS buoys to know their exact location. Only floating rafts might be recovered by PS vessels that accidentally encounter and reutilize them. Thus, a higher loss rate of aFADs in open waters may lead to higher marine pollution. - Fishers in Sibolga described how they sometimes find lost drifting FADs, especially in the months of February and March during the local monsoon which is characterized by currents coming from the east into Sumatran waters. In some specific cases they might find up to 20 dFADs in a small area. Captains estimated that each PS finds about 3 dFADs per year. Considering there were about 134 registered PS in Sibolga it would amount to around 400 lost dFADs encountered per year in this area. Meanwhile, Jakarta skippers said that in their fishing grounds dFADs are most likely found in October and November. When dFADs are found fishers will set on them and after they will not retrieve them, just letting them continue to drift. A few fishers said to have taken the dFADs buoys with them (see photo appendix II). However, buoys are not of much use to skippers without access to their satellite information. Fishers explained that for years they have found these abandoned dFADs. Years ago, they used to encounter the bamboo raft ones but now find mostly metallic frame rafts. These dFADs most likely come from the EU purse seiners, which will abandon dFADs that move to far away from their normal fishing grounds in the Western Indian Ocean.
SMALL TUNA	
Echo-sounder buoys and catch pre-estimation	- Indonesian fishers do not use any kind of radio or satellite buoys (with or without echo-sounder) as there is no need to track the position of FADs, as they are fixed in a permanent known location. Fishers would benefit from using buoys with echo-sounder to inform of fish biomass in their floating objects, saving them unproductive trips to inspect still empty aFADs. However, the price of these buoys (e.g. over 1000 $ plus satellite transmission costs) is to expensive for this fleet. In addition, buoys could be easily stolen or sabotaged given that many fishers know the positions of other vessels' aFADs. - Some fishers in Sibolga reported finding lost dFADs with buoys attached to them and enquired if they had

	some commercial value, with the intention of maybe selling them on. It was explained to fishers that without access to satellite information from the buoy providers, the buoys have no utility and therefore little value. - Most PS carry a basic echo-sounder (e.g. similar to fish-finders used by recreational fishing boats in Western countries), which they use to estimate fish quantities in the aFAD. Echo-sounders are especially useful prior to the set in the dark (e.g. 4:30 am) when species cannot be observed visually. Some skippers use lights under the aFADs before setting. These lights are intended to enhance attraction of fish to the FAD rather than aid visual observation of species present. - Sibolgan fishers do not use divers in the net, as observed in other ports like Bitung in previous workshops. However, once the net has been set and closed and the sun rises, Sibolgan fishers will wear googles to immerse their heads in the water and have a quick check of what they have caught.
Small tuna ID and seasonality	- The West Pacific East Asian Seas (WPEA) project sponsored the United Nations Development Programme (UNDP) and monitored by the WCPFC has recently got an extension for another three years until 2022. Among the objectives of this project to conserve highly migratory tuna stocks are strengthening the national and regional monitoring, regulation and control of nations involved (e.g. Vietnam, Philippines, Indonesia). Also improving Ecosystem Approach to Fisheries Management (EAFM) through sustainable harvest of tuna stocks and reduce bycatch of sea turtles, sharks and seabirds. Some of the actions undertaken in Indonesia with the WPEA project has been an increase in enumerators and observers at different ports to improve catch data. - Some of the catch reports collected from fishers by the Indonesian fisheries department (DDGF) are improving regarding tuna species identification. Gradually tuna species are being reported more often separately by fishers instead of clumped together under general descriptions as “baby tuna”. In 2016, following a recommendation from a previous Skippers workshop, with the help of Dave Itano and Anung Widodo a poster was produced with the principal identification characteristics for tuna species in the fishery. Fishing authorities have distributed this poster and most vessels now carry it onboard. - Fishers in Sibolga call the yellowfin “sisic” whith in Indonesian means “scale”. This name is given because unlike skipjack which has not visible scales, yellowfin do. - The Sibolga fishers find tongol or longtail (*Thunnus tonggol*) mostly between the Island of Sumatra and the Mentawais in the Mentawais straight. - In Sibolga there are two marked fishing seasons. During the months of April to July catches are characterized by very small sizes of tuna (0.8 to 1 kg individuals). This was clearly observed during the unloading process at port (see appendix 2 photo). In fact, skippers say that the principal species caught during this season are scads (*Trachurus* spp.) rather than tuna. However, during the rest of months (August to March) catches are completely different, and most sets are composed principally of skipjack, with tunas averaging 4-5 kg. Fishers estimated that about 70 % of the catch in this second season reaches those larger sizes. - PS fishers in Jakarta mentioned that catch rate per set is about 3-6 tons. Fishing grounds are both inshore and offshore of the Indian Ocean. Catch composition consists of about 60-70% SKJ, 8-10 % mix YFT-BET and the rest were neritic tuna and small pelagic fishes.

	- Fishers are paid by tuna tons captured, rather than by individual species. When fishers were asked if they are paid more for larger individuals (e.g. large BET/YFT) they answered that only by a small margin. If small tuna is paid at 2.00 USD per ton, for the larger tuna may be paid at 2.20 USD (e.g. 10% more). Therefore, there is not a marked economic incentive for fishers to target larger tuna and avoid smaller individuals. - Fishers preferred to catch juvenile YFT rather than BET of the same size. This is because juvenile BET goes softer and the meat loses quality faster. Given the limited freezing capabilities of many of these vessels, BET goes faster to waste.
FAD management options	- A small part of the fishers in Jakarta and Sibolga said had 3-4 aFADs at a time, while most declared having about 7-9 aFADs per vessel. The distance between aFADs was about 8 miles. However, fishers with more than 4 aFADs, usually distributed them in two distinct areas. For example, 4 aFADs in one zone, and another batch of 4 aFADs sometimes up to 150 miles away. Skippers selected two distinct zones with different oceanographic conditions and currents. This is because if one area is experiencing poor oceanographic conditions for tuna abundance, they hope to have better chances of encountering tuna in the other area. - Although by law the maximum number of aFADs permitted per vessel is 3 units, many vessels have up to a dozen. There is little law enforcement regarding aFAD limitations. The fisheries department has very limited resources and does not have surveillance vessels to check for non-registered aFADs in coastal and open waters. As most sets are done on aFADs, identifying the positions of sets with the e-logbooks can help to provide a better estimate of the real number of aFADs in Indonesia. - Fishers within the Indonesian EEZ regularly inform each other of where they keep their aFADs. While this seems like a bad idea, as it would enable other PS from rival companies to easily find and fish on those aFADs, it works the other way around. Fishers have a “code of conduct” by which they agree to respect the aFADs from others. If they encounter aFADs belonging to other PS fishers, as they have been given the position previously, they cannot fish on it and claim they did not know to whom it belonged. However, fishers are more reluctant to inform about the number of aFADs and their position to the fishing authorities, as they fear fines for using a higher number of floating objects than permitted by law.
BONY FISH AND OTHERS	
Utilization	- Other than accidentally caught species like whale sharks, dolphins or turtles, and some sharks which are mostly released alive the rest of the catch is regarded as target and retained. Species that in super-seiner fleets may be considered bycatch such as small tuna species (e.g. bullet tuna, frigate tuna, etc.), scads, mahi-mahi, rainbow runners, trigger fish, etc. are kept onboard for sale in Indonesian markets. Thus, there is very little discards, if any in this fishery.

	- Catch allocated to crew for on-board consumption or to take home after the trip is usually not recorded in the logbooks.
CPUE AND FISHING EFICIENCY	
Fishing technology, observers and FADs	- Indonesian tuna fishers in addition to traditional paper logbooks now have started using since late 2018 electronic logbooks that they fill in through a mobile phone application (see photo appendix 2). The data they can input through the e-logbook is total catch, catch position and catch composition by species including tunas and other bycatch species. The data goes directly to the central fisheries department in Jakarta. Some benefits from e-logbooks are the speed at which data is processed, with no need for manual data input of hard copies from port authorities which can lead multiple data entry errors. Fishers in Jakarta preferred to use the e-logbook and acknowledged that often they would not fill in all the information required in the paper logbook. - There are 134 PS over 30 GT in the port of Sibolga and several hundred smaller PS that operate in this North Sumatran port. In the last year about 50-60 of the larger Sibolga PS (> 80 GT) have modified their well storage from ice to refrigeration systems. This gives the vessels more autonomy and can stay 2-3 months at sea without the need to return to port earlier. Unlike in other ports where fishing vessels have carrier vessels to take the fish to port so the catcher vessel can remain fishing at sea, in Sibolga there are no carrier vessels. In Sibolga in about 2 months a vessel will make 20 sets which will amount to a full boat of 80-100 tons and then return to unload. - According to a fishing port officer the number of PS vessels based at Nizam Zachman Fishing Port in Jakarta are about 500 wooden-hull boats ranging between 30-200 GT and registered in the national register (DGCF) but not yet in the IOTC. Generally, these boats are not equiped with power-blocks for hauling the net, which is brought onboard manually by crew members. Net length is about 500-1000 m and depth 40-80 m. - Although many PS in Jakarta fish without carrier vessel assistance some still do. Nizam Zachman Fishing Port statistics for 2018 showed that an average fishing trip lasts 60-90 days during which vessels catch 40-70 tons. A few years ago, there were more carriers but fisheries minister Susi Pudjiastuti temporarily prohibited them. Nowadays, there are a smaller number of carrier vessels allowed to operate, the catcher vessel must have a license from the fisheries department for unloading the catch with carriers. The PS vessels are still required to go to port at least once every three months. Minister Susi is known for her hardline approach against IUU fishing. In recent years many foreign and national vessels without appropriate documentation or licenses have been confiscated and sunk. - There is a team of 80 observers in to cover the whole of the Indonesian fisheries (i.e. all gears operating in the EEZ). Clearly this number is very small in relation to the thousands of Indonesian vessels operating in the archipelago; however, the number of observers has increased in the last decade in part thank you to aid from projects like WPEA.
NEXT SKIPPERS WORKSHOPS: GENERAL SANTOS (PHILIPPINES) JUNE 2019	

Appendix I – ISSF Skipper Workshop photos Indonesia 2019

1. Participants at the ISSF Skippers Workshop in Sibolga.

2. (a) Skipper showing mobile e-logbook application, and (b) buoy from retrieved FAD

3. Purse seiners unloading catch at Sibolga port

4. Indonesian scientist presenting the ISSF Skippers Workshop in Jakarta

5. Anchoring rope and cement blocks for aFAD construction on Jakarta port vessel

6. ISSF produced posters for the Indonesian PS fleet: (a) best bycatch release practices and (b) tuna species identification

Appendix II- ISSF Skipper Workshop Participants since 2010 by stakeholder group

WS	LOCATION	DATE	SKIPPERS	CREW	SHIP-OWNERS	FLEET MANAGERS	FLEET REP.	GOV. OFFICIALS	SCIENTISTS	TOTAL
1.0	SUKARRIETA (SPAIN)	27/11/2009	15	1	1	1	6	1	0	25
1.1	MANTA (ECUADOR)	18/09/2010	56	18	1	0	1	0	0	76
1.2	PANAMA CITY (PANAMA)	22/09/2010	6	6	1	0	0	3	6	22
1.3	ACCRA (GHANA)	10/11/2010	2	0	0	2	21	6	1	32
1.4	SUKARRIETA (SPAIN)	13-17/12/2010	32	0	0	0	6	0	5	43
1.5/1.6	MAHE (SEYCHELLES) / PORT LOUIS (MAURITIUS)	1-19/02/2011	11	5	0	0	1	0	0	17
1.7	PAGO PAGO (AMERICAN SAMOA)	05/03/2011	2	0	2	1	4	3	2	14
1.8	MAJURO (MARSHALL ISLANDS)	22/06/2011	2	1	0	0	1	1	0	5
1.9	POHNPEI (MICRONESIA)	24/06/2011	3	1	0	0	4	0	0	8
2.1	ACCRA (GHANA)	14/03/2012	2	0	0	2	18	6	0	28
2.2	MAHE (SEYCHELLES)	21-18/05/12	5	2	0	0	1	0	0	8
2.3	PAGO PAGO (AMERICAN SAMOA)	11/06/2012	3	2	0	0	3	0	2	10
2.4	GENERAL SANTOS (PHILIPPINES)	08/09/2012	26	4	0	1	3	0	21	55
2.5	BINTUNG (INDONESIA)	11/09/2012	20	0	0	0	0	25	3	48
2.6	JAKARTA (INDONESIA)	13/09/2012	13	1	0	0	0	10	3	27
2.7	MANTA (ECUADOR)	26-27/09/2012	17	4	4	0	1	0	1	27
2.8	SUKARRIETA (SPAIN)	09/10;27/11- 5/12/2012	87	3	2	2	9	0	6	109
3.1	ACCRA (GHANA)	08/05/2013	13	0	2	1	18	7	0	41
3.2	LIMA (PERU)	05/08/2013	0	0	2	2	16	2	15	37
3.3	MANTA (ECUADOR)	08/08/2013	37	5	0	3	4	1	0	50
3.4	PANAMA CITY (PANAMA)	12/08/2013	2	0	2	1	7	0	7	19
3.5	SUKARRIETA (SPAIN)	07/11-10/12/2013	44	6	2	2	5	0	0	59
4.1	BUSAN (KOREA)	14/02/2014	8	9	0	1	10	3	12	43
4.2	KAOHSIUNG (TAIWAN)	18/02/2014	1	0	0	6	12	0	0	19
4.3	CANGAS (SPAIN)	28-29/05/2014	20	10	0	0	0	0	0	30
4.4	ACCRA (GHANA)	15/07/2014	7	6	10	9	11	4	1	48
4.5	MANTA (ECUADOR)	12/08/2014	35	1	0	0	1	0	3	40
4.6	JAKARTA (INDONESIA)	19/08/2014	21	2	0	0	1	1	3	28
4.7	GENERAL SANTOS (PHILIPPINES)	05/09/2014	24	6	0	0	2	0	2	34
4.8.	SUKARRIETA (SPAIN)	18/09-14/10/2014	52	5	0	1	3	1	1	63
4.9.	PAGO PAGO (AMERICAN SAMOA)	15-20/10/2014	8	1	0	0	4	0	1	14
5.1	MANZANILLO (MEXICO)	12/01/2015	34	20	1	1	2	4	0	62
5.2	MAZATLAN (MEXICO)	14/01/2015	65	46	0	1	1	4	1	118
5.3	SAN DIEGO (USA)	12/02/2015	5	0	0	1	3	0	0	9
5.4	TEMA (GHANA)	08/05/2015	10	5	2	9	18	0	1	45
5.5.	JAKARTA (INDONESIA)	19/06/2015	8	14	1	0	5	0	4	32
5.6	BINTUNG (INDONESIA)	22/06/2015	21	13	0	0	1	1	2	38
5.7	SIBOLGA (INDONESIA)	25/06/2015	22	15	0	0	0	1	1	39
5.8	LIMA (PERU)	11/08/2015	10	5	1	1	16	3	6	42
5.9	MANTA (ECUADOR)	14/08/2015	83	8	3	8	6	0	0	108
5.10	BUSAN (KOREA)	15/09/2015	8	0	0	1	8	2	25	44
5.11	CONCARNEAU (FRANCE)	13/10/2015	14	6	0	2	2	0	2	26
5.12	SUKARRIETA (SPAIN)	8,26-30/10/2015	49	5	4	1	2	0	0	61
6.1	SHANGHAI (CHINA)	06/04/2016	10	0	0	6	5	0	6	27
6.2	TEMA (GHANA)	04/05/2016	8	6	2	5	20	4	2	47
6.3	VIGO (SPAIN)	20/07/2016	51	23	0	1	0	0	0	75
6.4	MANTA (ECUADOR)	03/08/2016	33	17	0	2	3	0	1	56
6.5	POSORJA (ECUADOR)	05/08/2016	8	5	0	1	0	0	0	14
6.6	JAKARTA (INDONESIA)	05/09/2016	27	0	0	1	3	0	0	31
6.7	BINTUNG (INDONESIA)	07/09/2016	27	1	1	0	0	1	10	40
6.8	KENDARI (INDONESIA)	09/09/2016	32	0	1	3	1	3	10	50
6.9	BENOA (INDONESIA)	10/09/2016	21	0	0	0	6	0	0	27
6.10	SIBOLGA (INDONESIA)	14/09/2016	15	0	0	7	1	2	0	25
6.11	BANDA ACEH (INDONESIA)	16/09/2016	23	0	0	0	8	0	0	31
6.12	QUY NHON (VIETNAM)	17/09/2016	42	0	0	0	13	0	3	58
6.13	SUKARRIETA (SPAIN)	24-28/10/2016	42	5	1	0	3	0	1	52
6.14	MADEIRA (PORTUGAL)	01/11/2016	4	19	0	0	2	0	1	26
7.1	MANTA (ECUADOR)	10-11/01/2017	95	16	0	1	3	0	2	117
7.2	TEMA (GHANA)	21/02/2017	22	20	1	5	6	1	1	56
7.3	SAN DIEGO (USA)	27/03/2017	7	1	2	4	3	1	1	19
7.4	MAJURO (MARSHALL ISLANDS)	03/04/2017	5	4	0	0	2	0	0	11
7.5	POHNPEI (MICRONESIA)	06/04/2017	8	6	1	0	2	0	2	19
7.6	KENDARI (INDONESIA)	03/04/2017	23	9	0	0	0	4	0	36
7.7	PAOTERE-MAKASSAR (INDONESIA)	05/04/2017	20	8	0	0	0	3	0	31
7.8	TUMUMPA-MANADO (INDONESIA)	07/04/2017	35	6	0	0	0	1	0	42
7.9	AMBON (INDONESIA)	11/04/2017	22	1	0	0	0	4	0	27
7.10	ZHOUSHAN (CHINA)	01/08/2017	8	1	0	4	8	0	3	24
7.11	VIGO (SPAIN)	10/08/2017	24	68	0	0	0	0	0	92
7.12	SIBOLGA (INDONESIA)	04/09/2017	16	19	0	3	0	0	0	38
7.13	LAMPULO (INDONESIA)	07/09/2017	23	4	1	1	0	2	0	31
7.14	JAKARTA (INDONESIA)	19/09/2017	33	3	0	0	0	0	0	36
7.15	LIMA (PERU)	29/"9/2017	14	8	0	1	8	3	4	38
7.16	MANTA (ECUADOR)	04/10/2017	29	41	0	0	0	1	1	72
7.17	CONCARNEAU (FRANCE)	09/10/2017	27	7	0	1	1	0	2	38
7.18	SUKARRIETA (SPAIN)	16-20/10/2017	46	16	0	3	1	0	1	67
8.1	TEMA (GHANA)	26-27/02/2018	22	30	4	4	10	5	2	77
8.2	MAJURO (MARSHALL ISLANDS)	12/04/2018	15	6	0	1	4	1	0	27
8.3	POHNPEI (MICRONESIA)	17/04/2018	7	4	1	0	0	0	0	12
8.4	BINTUNG (INDONESIA)	07/05/2018	32	7	0	0	1	9	2	51
8.5	PRIGI (INDONESIA)	09/05/2018	19	1	0	0	3	8	0	31
8.6	PEKALONGAN (INDONESIA)	11/05/2018	18	21	0	0	0	4	2	45
8.7	DAKAR (SENEGAL)	11/06/2018	4	3	0	3	3	3	2	18
8.8	VIGO (SPAIN)	16/07/2018	29	60	0	0	0	0	0	89
8.9	MANTA (ECUADOR)	14/08/2018	65	58	1	3	6	0	2	135
8.10	PANAMA CITY (PANAMA)	16/08/2018	6	0	0	0	2	3	1	12
8.11	SAN DIEGO (USA)	20/08/2018	9	0	3	0	3	0	0	15
8.12	YAIZU (JAPAN)	29/08/2018	1	0	0	0	17	0	11	29
8.13	LIMA (PERU)	01/10/2018	17	5	0	1	9	7	15	54
8.14	CONCARNEAU (FRANCE)	15/10/2018	17	2	0	3	2	0	0	24
8.15	SUKARRIETA (SPAIN)	15-21/11/2018	41	23	0	2	7	0	2	75
9.1	TEMA (GHANA)	26/02/2019	22	22	22	22	22	22	22	22
9.2	MANTA (ECUADOR)	09/04/2019	18	23	1	5	11	2	4	64
9.3	JAKARTA (INDONESIA)	03/05/2019	7	16	0	3	0	4	0	30
9.4	SIBOLGA (INDONESIA)	06/05/2019	14	4	0	2	0	9	2	31
TOTAL			2066	835	83	158	436	196	255	3897