

SKIPPERS WORKSHOPS ROUND 8 - REPORT Nº 8

SKIPPERS WORKSHOPS: 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 2018, we have embarked on our 8th round of Skipper Workshops. The information below summarizes results obtained during the noted Round 8 workshop.

Workshop location and date:

8.8. Manta (Ecuador) August 14th 2018

Nº Participants: 134 (Appendix I)

Presenting Scientists: MARTIN HALL, JEFFERSON MURUA

SKIPPERS WORKSHOPS COMMENTS + NEW IDEAS

COLOR CODES FOR MEASURE ACCEPTANCE LEVEL

HIGH	MID-HIGH	MID	MID-LOW	LOW
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SHARKS

3. Fishing shark in the net	<p>- Skippers were not particularly fond of this practice. They think that sharks are large and dangerous and often the sea conditions are rough, so they see having crew fishing for sharks in the net as an added risk, despite scientists pointing out that the operational maneuver would not entail fishers having to be in direct contact with the sharks (i.e. only need to cut the line) and a shark released from the net means a shark less arriving on the deck.</p> <p>- Unfortunately, preliminary data from the latest research cruise in the Atlantic had few sets on FADs (3 in total). If robust release data showing the efficiency of this practices could have been gathered, maybe it would have helped to better convince Ecuadorian skippers of the value of this measure.</p>
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4. Release practices

- A few fishers say they regularly use a “stretcher bed” for sharks and smaller mantas and they confirm that this tool is very useful and are happy with its performance. However, most skippers, although have heard of this release tool in previous workshops (in fact the “stretcher bed” idea was first suggested by a skipper in the 2011 workshop in Manta), very few have one in their vessels. They continue to do manual release practices.
- Results from the pilot study conducted by the IATTC (see Manta workshop report for 2017), where observers were trained to put electronic marks on mobulids has yielded some results so far. Five mantas and mobulids (a mix of species) have been tagged and released using best practices (i.e. with a stretcher bed or with cargo net methods), 60% of the individuals survived. This is an improvement in survival rates, as previously IATTC considered all manta rays and mobulids as dead bycatch due to the poor practices used of lifting manta rays with hooks by the gills or perforation of a hole in the mantle.
- Fishers said that many still release manta rays manually, but that the procedure is not straight forward not only due to the large weight of the animals but because the skin is extremely rough (“like sand paper”) and there is no easy way of holding it. Scientists explained to fishers that in addition to the suggested best practices like cargo net or canvas lifting methods, there is an intent to develop and test more equipment for the safe and easy release from deck of these large bycatches.
- When talking about turtle species encountered, most skippers agreed that leatherback turtles (which is one of the most endangered species of turtles) are very rarely encountered.
- Skippers complained about the current IATTC regulation on turtle release, which specifies that when a turtle is spotted in the net a speedboat must be deployed to release it. Fishers said that this is often very inefficient as turtles get scared and start diving deeper when they see the fisher approaching it. Often there is rough weather and sending a crew member in the small speedboats to try get the turtle inside the net can be risky, however captains can face a strong penalty if they do not do so. Instead, skippers thought that it is much easier to stop hauling the net when the net entangled turtle reaches deck level and disentangle it from the upper deck. This suggestion by fishers has been raised in previous workshops, however scientists explained to participants that in order to change a current IATTC

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	<p>regulation, it is one of the member countries (i.e. Ecuador) who needs to present an amendment to the measure and then be approved by the RFMO commission.</p> <ul style="list-style-type: none"> - Through the Fishery Improvement Program (FIP) named Tunacons which involves five companies of the Ecuadorian fleet, fishers have been receiving additional training materials and meetings in bycatch release. These materials are very similar, possibly based, to those found in the ISSF Guidebooks. - There are plans in the near future for scientists from AZTI to work on a project to develop better tools and equipment to aid with bycatch release, especially larger individuals of sharks and manta rays. Some captains from smaller purse seiner vessels (e.g. category 4 or below) raised the point that in their upper decks there is little room for large sized release equipment. They asked that specific release tools are also developed to cater for the needs of smaller boats. - While intentional whale shark sets are prohibited by the IATTC, skippers asked if whale sets were also forbidden. To the scientist knowledge there are no measures prohibiting sets on live whales to catch tuna. - IATTC regulations prohibit the retention of sharks onboard, so they should try to avoid by all means sharks accidentally ending up stored in wells. Because if sharks are found while unloading at port or during inspections, it will be considered retention even if these bycatches entered accidentally into the wells (e.g. where not spotted while brailing and loading the wells).
<p>5. Non-entangling DFADs</p>	<p>- Most vessels are using lower risk entanglement FADs (i.e. with netting tied in coils or small mesh sized open panels). The most typical FAD is composed of a bamboo raft surrounded by small mesh netting to keep the structure together and a tail reaching 30-50 m depth. The tail is made by either tied “sausages” or open sails, or a combination of both. The most widespread type has a tail two ropes or net coils running down the sides and every 7-10 m there is a window/sail of small mesh netting (usually 2-3 windows; see photo Appendix II). Fishers want the open panels to slow down drift. Think that “sausages” only do not work so well in areas with fast currents.</p>

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- No fishers were using a FAD without any netting (i.e. a non-entangling FAD according to ISSF guidelines). There was some debate as to what regulation C-17-02, which starts on January 1st 2019, would require in terms of NEFADs. On one hand some interpreted Annex II of this recommendation as meaning it would not allow for any kind of mesh, which would mean the fleet would drastically have to change their materials, now dominated by netting. Many skippers were concerned if this was the case, as they have never tried or experimented with FADs with zero net. On the other hand, ATUNEC delegates, interpreted text as allowing for use of netting if it minimizes entanglement by being tied up or of small enough mesh-size. Annex II of the recommendation specifically says “1. If a flat raft is used as a FAD, the surface structure should not be covered, or only covered with material that attempts to minimize entanglements. 2. The subsurface component of the FAD should be constructed in a manner designed to avoid entangling marine life.” The text does not give a clear definition or specific parameters as to what constitutes a NEFAD and this ambiguous text gives rise to different interpretations. In the upcoming IATTC meeting in late August in San Diego, Commission members should clearly state what kind of NEFADs will be permitted, as currently being only 4 months away from the start of the implementation, both scientists and fishers are still not sure what will or not be allowed.

MARINE POLLUTION

1. Non-entangling biodegradable FADs and FAD retrieval

- Tunacons companies together with the fishing association OPAGAC are proposing a project in which each boat of this consortium would test about 20 biodegradable FADs over a year. The project would have two biodegradable FAD prototypes to choose from, one with ropes only and another one with ropes and canvas sails. The idea would be similar to the BIOFAD project being run in the Indian Ocean, in which an experiment with biodegradable and control traditional FADs is run over a year and companies share information with IATTC scientists to evaluate the durability and catches of these biodegradable FADs.

- Several companies from the Ecuadorian fleet have been doing their own trials with biodegradable FADs. Most of the FADs tested have been bought at the land factory of Tunacons in Manta. Companies wanted to try in their own time some of these prototypes. According to most fisher the pita fiber (cabuya in Spanish) was breaking down too quickly, within weeks. Others have tried hemp (abacá in Spanish) with mixed reports, some saying

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	<p>the material was degrading fast, while other said it lasted enough months in the water. Apparently, most were satisfied with the flotation of balsa wood and FADs were not sinking after some time.</p> <ul style="list-style-type: none"> - A few fishers thought based on their small-scale trials that biodegradable FADs did not attract as much tuna as traditional synthetic FADs, even if they were following the same drifting trajectory. Other fishers said they were using “hybrid FADs” part biodegradable (raft and some hemp tail) but also with some netting in the tail. These fishers said their FADs did have moderate catches at least. - A fisher asked if synthetic rope could be used to tie up the bamboo structure of the raft. He thought that ensuring the raft structure is held together well to sustain rough weather is key for the durability of the FAD. - A fleet manager informed that some biodegradable rafts held together with no rope or netting, but instead with “bamboo nails” (narrow and strong bamboo stems used as if they were nails) are being tested at some sea pools they have at their port facilities in Posorja. These rafts holding a 30 kg appendage beneath, still remain structurally robust after four months in the pools. Note that despite these promising results with bamboo nails as a biodegradable option to replace ropes and netting to hold together rafts, these rafts should be first trialed at sea to truly assess if they endure rough climatologic conditions. - Fishers said that currently their typical FADs constructed with synthetic materials (e.g. PVC, PS netting, etc.) last at sea in working order from 6 up to 15 months. - Some skippers liked the idea that if they see their FADs getting dangerously close to a coastal area, before beaching inform artisanal fishers about the position, so these small-vessel fishers can fish on it with the condition of retrieving the FAD out of the water and storing it appropriately on land.
SMALL TUNA	
1.Echo-sounder	- All companies currently use buoys with echo-sounder and are interested in knowing what species are under each FADs. Fishers pointed out that without a regulation like an individual total allowable catch (TAC) on bigeye, they will always go to the FAD with most tones even if

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buoy selectivity	<p>it had small juvenile bigeye. Currently in the IATTC region there is a combined yellowfin and bigeye tuna quota for the whole fleet, rather than boat.</p>
Short tail FADs and YFT/BET identification	<p>- Fishers think that short tail FADs may work to attract tuna in areas with slower currents like Peru, but not in areas near the Equator with fast moving currents. When FADs drift too fast, then the fish attracted does not keep up with it and abandons it. Deeper FADs with longer tails with sails are specifically built this was to slow down the drift.</p> <p>- Captains liked the FADs to have a proportion of bigeye in the mix. They say that FADs that have bigeye retain better the other tuna (e.g. skipjack). Their reasoning is that bigeye is a more “faithful” to a FAD (meaning it is less likely to move out) and has an anchoring effect for other aggregated species.</p>
4. FAD numbers	<p>- Most Ecuadorian flag purse seiners do not reach the 450 active buoy limits established by the IATTC in 2017 for the larger vessels. It is generally the Spanish owned vessels flagged under Ecuador which use a more FAD-intensive strategy, and which might be closer to the FAD limit established by the Commission. Note that the regulation (C-17-02) refers to activated buoys in the water, and not total number of FADs deployed in a year. If fishers are close to the limit, then they just turn off the FADs which are drifting out of the fishing area or with less chances of gathering tuna and reseed new FADs elsewhere.</p> <p>- Local IATTC staff from Ecuador pointed out that they had not received in the last two years any information on the captains’ Fishing Diaries, which contains information on FAD use. Skippers said that they had been completing them as usual and that they were being send to the SRP (Subsecretaria de Recursos Pesqueros) authorities from the Fisheries Ministry.</p>
BONY FISH AND OTHERS	
1.Utilization	<p>- There are still specialized factories in Manta buying the dolphinfish, wahoo and marlin for processing and sale to major South American supermarkets. However, many of the other bycatch fish such rainbow runner, triggerfish, etc. continue to be discarded on a regular basis. Some of these fish are released alive back to the water, and fishers are interested that these</p>

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fish return back to the FAD and leave a “signal” for other tuna to detect the FAD and aggregate sooner.

- Small tuna species (e.g. bullet tuna, frigate tuna) are not kept onboard as there is currently no good market for their sale in Ecuador.

CPUE AND FISHING EFFICIENCY

1. Fishing technology, observers and FADs

- There is a high rate of exchange of FAD ownership in the Eastern Pacific according to Ecuadorian skippers. Fishers thought that more than 50% of FADs change hands between boats. Smaller vessels with lower economic means focus their strategy on finding FADs from larger boats which seed more FADs. This high rate of stolen FADs makes more difficult tracking the life history of a particular FAD, which would be useful for stock assessment impacts or studying degradation with time in biodegradable FADs for example.
- Many larger companies are now operating as a unit, rather than as a series of individual boats. Whereas before each boat within a company had only direct information to its own FADs, now many companies share among boats the buoy information (e.g. positions and biomasses of each FAD) and coordinate between them how to best distribute their fleet to maximize catches. The fleet manager generally coordinates who goes where. Then benefits from the sold total catch is split among all the vessels. This collaborative fishing strategy is likely to increase CPUE and efficiency of these companies.
- No vessels are using electronic monitoring systems (EMS) yet. In the past there have been some claims by NGOs and a few industry stakeholders that there is certain degree of corruption by observers in the Eastern Pacific. Having EMS and person observers on board would be an efficient way to contrast if there is some truth in these claims, or at least to examine the standard of work of these person observers.

NEXT SKIPPERS WORKSHOPS: PANAMA CITY (PANAMA)

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Appendix I – Participant Lists ISSF Skipper Workshops

Manta (Ecuador) 14th August 2018

NAME	JOB TITLE	VESSEL	COMPANY
LICO PAYAN MERO ANCHUNDIA	SKIPPER	B/A GABRIELA A	NIRSA
DOMINGO JOFFRE MERO CAÑARTE	SKIPPER	B/A GABRIELA A	NIRSA
CARLOS ENRIQUE TOMALA MERO	DECK BOSS	B/P GABRIELA A	NIRSA
JUAN ALBERTO SANTANA MURILLO	DECK BOSS	B/A MILAGROS	NIRSA
LUIS ALBERTO VILLALVA CABRERA	SKIPPER	B/A MILAGROS	NIRSA
DOUGLAS FELIPE CARDENAS CHANG	CREW	B/A RICKY A	NIRSA
MANUEL CRUZ RODRIGUEZ	DECK BOSS	B/A RICKY A	NIRSA
FABIAN MARCELO FERNANDEZ DALUZ	SKIPPER	B/A RICKY A	NIRSA
WASHINGTON APOLINAR MERO MENENDEZ	SKIPPER	B/A RICKY A	NIRSA
JOEL PENA MENEZES	CREW	B/A RICKY A	NIRSA
EJORYEBUA EDJEODJI CLEMENT	SKIPPER	B/A ROBERTO A	NIRSA
VICTOR HUGO QUINDE CRUZ	DECK BOSS	B/A ROBERTO A	NIRSA
LUIS ANTONIO RIVAS MERO	SKIPPER	B/A ROBERTO A	NIRSA
JUAN CARLOS SANTOS GUILLEN	DECK BOSS	B/A ROSA F	NIRSA
LEONARDO FERMIN CEVALLOS GILER	SKIPPER	B/A GLORIA A	NIRSA
ALEX FABRIZIO MERA CAÑARTE	SKIPPER	B/A GLORIA A	NIRSA

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DANIEL ENRIQUE SOLORZANO SOLORZANO	DECK BOSS	B/A GLORIA A	NIRSA
LUIS ENRIQUE COLOMBO MALTA	SKIPPER	B/A MILENA A	NIRSA
LUIS ORLEY DELGADO RIVAS	DECK BOSS	B/A MILENA A	NIRSA
JONATHAN EDISON MENA ALENCASTRO	CREW	B/A MILENA A	NIRSA
LUIS FELIPE MERO ZAMORA	SKIPPER	B/A MILENA A	NIRSA
JORGE LUIS SANCHEZ CASTILLO	SKIPPER	B/P MA DEL MAR	NIRSA
JUAN CARLOS PONCE CORRAL	ADMINISTRATI ON		NIRSA
OSWALDO SOLORZANO RODRIGUEZ	ADMINISTRATI ON		NIRSA
COLON EDUARDO RODRIGUEZ VELEZ	SKIPPER	ESTHERCHO	TXOPITUNA
FRANCISCO JOSUE SANTANA MERO	SKIPPER	ESTHERCHO	TXOPITUNA
ANTONIO ARESTIN CAMPAÑA	SKIPPER	UGAVI DOS	UGAVI
JOSE ANTONIO CHOUCIÑO RUIZ	OFFICER	SISARGAS	UGAVI
ANTONIO SAMPEDRO DIOS	SKIPPER	UGAVI DOS	UGAVI
ANTONIO ARCOS CASAS	SKIPPER	UGAVI DOS	UGAVI
JOSE ABRAHAM MARCOS MIELES	OFFICER	UGAVI DOS	UGAVI
ALBERTO DIOS MARTINEZ	SKIPPER	JANEIV	UGAVI
JOSU ANDONI HORMAETXEA GARCIA	SKIPPER	JANEIV	UGAVI
JUAN RAMON LLEDO LLORCA	SKIPPER		UGAVI
JUAN BARREIRO MALLO	GENERAL MANAGER	JOCAY	UGAVI
DANNY RAMON QUIJIJE ESPINOZA	CREW	ALBATUN TRES	GUAYATUNA
SEGUNDO RAFAEL MEDINA DELGADO	DECK BOSS	GUAYATUNA DOS	GUAYATUNA
JULIO CESAR ESCOBAR CASTILLO	CREW	GUAYATUNA DOS	GUAYATUNA
JORGE ANTONIO RIVAS AGUILAR	CREW	GUAYATUNA UNO	GUAYATUNA
JOHON QUIRUMBAY ORMEÑO SANTOS	CREW	GUAYATUNA UNO	GUAYATUNA
NAZARIO HUMBERTO PILLASAGUA LOPEZ	CREW	GUAYATUNA UNO	GUAYATUNA

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LUIS ROGELIO CEVALLOS MERO	CREW	GUAYATUNA UNO	GUAYATUNA
JUAN MANUEL ARAUZ ZAMBRANO	CREW	GUAYATUNA UNO	GUAYATUNA
FABIAN MARCELO ALVARADO VALENCIA	CREW	GUAYATUNA UNO	GUAYATUNA
CRISTHIAN GEOVANNY MERO BENITEZ	CREW	GUAYATUNA UNO	GUAYATUNA
ELVIS ARGENIS MERO CABEZAS	SKIPPER	GUAYATUNA UNO	GUAYATUNA
HUGO ALVARO PIN SANCHEZ	DECK BOSS	PACIFIC STAR	GUAYATUNA
KLEBER ADALBERTO PALMA ANCHUNDIA	CREW	PANAMA TUNA	GUAYATUNA
PEDRO ANTONIO LOZANO ESTRADA	CREW	PANAMA TUNA	GUAYATUNA
JOSE REINALDO FLORES MERO	CREW	PANAMA TUNA	GUAYATUNA
FERNANDO VELASTEGUI	FLEET MANAGER		GUAYATUNA
ANGEL EFIGENIO MALDONADO ASPIAZU	SKIPPER	ALESSIA	TRANSMARINA
ALBINO LUIS ESTRADA ESPINOZA	SKIPPER	ALESSIA	TRANSMARINA
JACINTO ARNALDO ORRALA BAZAN	DECK BOSS	ALESSIA	TRANSMARINA
ANGEL NIXON SABANDO REINA	CREW	ALESSIA	TRANSMARINA
VÍCTOR EDUARDO VINCES CHAVEZTA	CHIEF ENGINEER	ALESSIA	TRANSMARINA
PABLO EDWIN ENRIQUE DELGADO COELLO	SKIPPER	ALINA	TRANSMARINA
JUAN ECUADOR CEDEÑO TOALA	SKIPPER	ALINA	TRANSMARINA
JOSE OVIDIO MOREIRA BRIONES	DECK BOSS	ALINA	TRANSMARINA
RAMÓN ANTONIO POSLIGUA BAZURTO	CREW	ALINA	TRANSMARINA
VÍCTOR ADRIANO BARREZUETA FERNANDEZ	CHIEF ENGINEER	ALINA	TRANSMARINA
AGUSTIN BELATEGUI JUARISTI	SKIPPER	PATRICIA	SENER S.A
ROLANDO POZO ARANEDA	SKIPPER	MARIA JOSE	SENER S.A
SERPA RUI ROGERIO	SKIPPER	DON RAMON	P&H
SEGUNDO FILIMON RENDON GONZALES	SKIPPER	DON RAMON	P&H
GARY PALADINES GARCIA	SKIPPER	DON RAMON	P&H
PEDRO ALEXI MERO LUCAS	SKIPPER	CHASCA	P&H

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JOSE LUIS CADENA MERO	SKIPPER	TUNA I	P&H
LUIS ALFREDO LUCAS FRANCO	SKIPPER	BERNARDITA B	P&H
WILTON MERO MANTUANO	CREW	TUNA I	P&H
DARWIN UBER BAQUE LAJE	DECK BOSS	TUNA II	P&H
JUAN CARLOS PICO GARCIA	SKIPPER	SOUTHER QUEEN	MANACRIPEX
JAVIER GUSTAVO REYES GARCIA	SKIPPER	EL CONDE	MANACRIPEX
ANTONIO CEFERINO MERO SANTANA	SKIPPER	SOUTHER QUEEN	MANACRIPEX
JONATHAN PALAU CEVALLOS	OFFICER	BERNARDITA B	MANACRIPEX
DANNY STEVEN BUEHS CEVALLOS	SKIPPER	BERNARDITA B	MANACRIPEX
ADRIAN LEONARDO BARTOLOME GARCIA	SKIPPER	DOMENICA L	LUMITOP
CECILIO VICENTE RAMIREZ BRIONES	SKIPPER	DOMENICA L	LUMITOP
JULIO CESAR LEON ECHEVERRIA	DECK BOSS	DOMENICA L	LUMITOP
EDZAR TONY GILCES PALMA	SKIPPER	FIGURELLA L	ANILISA S.A
JOHNNY JACKSON MAJOJO MANZABA	SKIPPER	FIGURELLA L	ANILISA S.A
HOLGER PATRICIO MERO SALTOS	DECK BOSS	FIGURELLA L	ANILISA S.A
RUDIC GOJKO	SKIPPER	ROSSANA L	DELFIPEC
ELVIS GABRIEL MERO LOPEZ	SKIPPER	ROSSANA L	DELFIPEC
LUBER HERNAN CEDEÑO CHOEZ	DECK BOSS	ROSSANA L	DELFIPEC
KLEVER JAVIER MERO DELGADO	SKIPPER	BP ADRIANA	EUROFISH S.A.
ANGEL ALEJANDRO JIMENEZ LUCAS	DECK BOSS	BP ADRIANA	EUROFISH S.A.
PEDRO DAVID ARCENTALES ANCHUNDIA	CREW	BP ADRIANA	EUROFISH S.A.
EDGAR EFREN GONZALEZ DELGADO	CREW	BP ADRIANA	EUROFISH S.A.
FREDDY MAURICIO FRANCO LUCAS	CREW	BP ADRIANA	EUROFISH S.A.
CARLOS MANUEL GARCIA ALONZO	SKIPPER	BP ROCIO	P. ATUNES DEL PACIFICO
ULBIO CIRILO QUIMIS QUIMIS	DECK BOSS	BP ROCIO	P. ATUNES DEL PACIFICO
JOSTIN JEFFERSON MERO ALAVA	CREW	BP ROCIO	P. ATUNES DEL PACIFICO

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CELIN LEUXON ORDOÑEZ CUERO	CREW	BP ROCIO	P. ATUNES DEL PACIFICO
ENRIQUE FLORENCIO MERO CAÑARTE	SKIPPER	BP DOÑA ROGE	P. ATUNES DEL PACIFICO
RUBEN ANTONIO ZAMORA PINARGOTE	SKIPPER	BP DOÑA ROGE	P. ATUNES DEL PACIFICO
HUMBERTO LORENZO SANTANA VERA	DECK BOSS	BP DOÑA ROGE	P. ATUNES DEL PACIFICO
GONZALO CRISTOBAL CAÑARTE MERO	CREW	BP DOÑA ROGE	P. ATUNES DEL PACIFICO
ROBERTO CARLOS ANCHUNDIA	SKIPPER	DOÑA MARUJA	P. ATUNES DEL PACIFICO
LEONARDO ADOLFO FARFAN TRIVIÑO	SKIPPER	BP CHIARA	ELVAYKA KYOEI S.A.
EMILIANO EDUARDO MONTALVAN PACHECO	SKIPPER	BP CHIARA	ELVAYKA KYOEI S.A.
PABLO CIRILO ANCHUNDIA SOLEDISPA	DECK BOSS	BP CHIARA	ELVAYKA KYOEI S.A.
JUAN HORACIO FRANCO ANCHUNDIA	CREW	BP CHIARA	ELVAYKA KYOEI S.A.
PEDRO LUIS PILLIGUA FRANCO	CREW	BP CHIARA	ELVAYKA KYOEI S.A.
JAIME EDUARDO RIVERA JUNQUI	SKIPPER	BP DON ANTONIO	ELVAYKA KYOEI S.A.
JOSE JAVIER RIVERA LOPEZ	SKIPPER	BP DON ANTONIO	ELVAYKA KYOEI S.A.
JUAN GABRIEL DELGADO ZAMORA	DECK BOSS	BP DON ANTONIO	ELVAYKA KYOEI S.A.
JOSE LUIS VERA CEDEÑO	CREW	BP DON ANTONIO	ELVAYKA KYOEI S.A.
BRANDON EDUARDO RIVERA ZAMBRANO	OFFICER	B/P DON ANTONIO	ELVAYKA KYOEI S.A.
JIMMY DEL JESUS MERO DELGADO	SKIPPER	JOLINDA	ELVAYKA KYOEI S.A.
VICTOR HUGO ROBLES ANCHUNDIA	OFFICER	JOLINDA	ELVAYKA KYOEI S.A.

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JAIME ROLANDO ROBLES BERMELO	SKIPPER	JOLINDA	ELVAYKA KYOEI S.A.
MOISES KYUCHUL CHOI JANG	ADMINISTRATI ON		ELVAYKA KYOEI S.A.
ANGEL WILLIANS ESPINOZA VALENCIA	SKIPPER	ALIZE	IDEAL CIA LTDA
MICHEL REINALDO MERA ESPINOZA	SKIPPER	ALIZE	IDEAL CIA LTDA
PABLO PEREZ MERA	DECK BOSS	ALIZE	IDEAL CIA LTDA
AUGUSTO RODRIGUES	SKIPPER	CAPE BRETON	TRIMARINE
JEAN CARLOS MERA SUQUILLO	CREW	CAPE BRETON	TRIMARINE
LUIS ZAMBRANO	DECK BOSS	CAPE BRETON	TRIMARINE
LUIS HUMBERTO MERA ANCHUNDIA	SKIPPER	DOÑA TULA	PACIFICTUNA
JEFFERSON ELIAS CALLE MERO	SKIPPER	DOÑA TULA	PACIFICTUNA
JOSE LUIS REYES CASTAÑO	SKIPPER	YELISAVA	PEDEL
WILSON EMILIO MERO SANTANA	SKIPPER	VICTORIA DEL MAR	BRISATUN S.A
READY GILBERTO PEREZ VELASCO	CREW	DON FRANCESCO	ATUNVENCA
JAIME RODRIGUES SANTOS	SKIPPER	CLAUDIA L	JANEC
MARIO ALBERTO DELGADO LOPEZ	SKIPPER		INDEPENDIEN TE
MANUEL ANCHUNDIA	SKIPPER		INDEPENDIEN TE
SABIN EGUIREUN	FLEET MANAGER		GARAVILLA
FRANCISO ANGEL ROSAYO VILLACIS	PORT OFFICER		CIAT
ERICK LARGACHA	OBSERVER COORDINATOR		CIAT
RICARDO BUEHS BOWEN	DIRECTOR		ATUNEC
LUIGI BENINCASA	GENERAL MANAGER		ATUNEC
AMARILIS VELEZ	ASSISTANT		ATUNEC
RAMON MONTAÑO	ASSISTANT		ATUNEC

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Appendix II – ISSF Skipper Workshop Manta (Ecuador) 2018



Fig. 1. Participants at the Manta workshop

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Fig.2. Lower risk entanglement FAD made with no netting in the raft and tied up sausages and small mesh open net with canvas in the tail.

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Appendix III – Agenda ISSF Skippers Workshop Manta (Ecuador) 2018

Date: August 14, 2018

Venue: Sail Plaza Manta Hotel, Manta, Ecuador

Provisional Agenda

10:00-11:30

1- Opening remarks and welcoming

2 – ISSF Bycatch project and Skippers Workshop background

3 – Discussion on:

Small bigeye and yellowfin tuna options (echo-sounder buoys, short tail FADs)

Best on deck bycatch release practices

Bycatch utilization

11:30-12:00

Coffee break

12:00-14:00

4- Discussion on:

Non-entangling and biodegradable FADs

Shark fishing in the net

Proactive Vessel Register

5 – Final questions and answers

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