



Senegal SKIPPERS WORKSHOPS ROUND 8.7 REPORT

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.

Location & Date:

Dakar (Senegal) 11th June 2018

N° Participants: 18 (Table in Appendix II)

Presenting Scientists: GALA MORENO & JEFFERSON MURUA, assisted by Papa Kebe

SKIPPERS WORKSHOPS COMMENTS + NEW IDEAS

COLOR CODES FOR MEASURE ACCEPTANCE LEVEL

HIGH

MID-HIGH

MID

MID-LOW

LOW

INTRODUCTION

1. Tuna fleets in Dakar

- Dakar is probably the second most utilized port in Western Africa to unload tuna by large-scale purse seiners (PS), Abidjan in Ivory Coast being the first. Most PS visiting Dakar are EU vessels and a few Korean.
- In 2017 the Senegalese Pole and Line (PL) vessels and WWF, together with Thai Union and Princes Ltd signed a memorandum of understanding to launch a FIP with aims to meet MSC certification standards.
- Dakar based fleet consists of about a dozen PL vessels, half being Senegalese-flagged, the other half Spanish. While crew are all Senegalese, most skippers and chief engineers are European. Annual catches in the early 2010s were around 14,000 mt.

With Support From:





SHARKS	
2. Fishing sharks in the net	<ul style="list-style-type: none"> - Senegalese PL crew fishing on FADs recounted how they sometimes fish sharks with their hooks. It appears that Senegalese fishers would be experienced in catching sharks with fishing lines if necessary on purse seiners. - Korean purse seine fishers were not totally convinced by the activity of fishing sharks in the net as it would require more crew to do so. They were curious about the results that will emerge from the next two research cruises where this activity will be further tested.
3. Best release practices	<ul style="list-style-type: none"> - A captain from a PL vessel commented that they try to scare sharks away from the FAD, as otherwise it is more difficult to fish the tuna as they will disperse more trying to avoid the sharks or will not eat the bait so readily. A technique to move the shark away is to change the velocity of the vessel until sharks are gone. - According to fleet representatives, PL fishers are informed that the companies have a no shark retention and no shark finning policy. However, some PL crew commented that sharks captured during fishing are consumed onboard as this meat is highly appreciated by Senegalese fishers. A port visit to PL vessels after the workshop confirmed this information, as shark meat was sun drying on the deck. - Fishers from the PS informed they release sharks, but again during the port visit some sharks on the side of the wells could be observed during unloading. These were most likely stored accidentally as no sign of finning was visible and spotting all small sharks in a large brail (e.g. 7-9 t) without a hopper can be difficult.
4. Non-entangling FADs	<ul style="list-style-type: none"> - Some of the Senegalese PL vessels said they use about 20 FADs at time. However, during port visits some captains talked about using over 150 FADs per year. PL fishers at the workshop complained about how PS fleets use too many FADs and how this reduces the amount of free-school tuna for them to fish.

With Support From:





- All FADs used by both PL and PS in Dakar are of the lower entanglement risk type (LERFAD) as they use small mesh netting, mostly in an open panel configuration but some also tied in “sausages” for the FAD tail.
- While some of the smaller PS boats said to be using FADs of 15-20 m depth, most PL and all PS in the meeting said they utilized FADs between 25-40 m depth. Note that this depth refers to the depth of the netting under the water, but some will add an extra 20-40 m of rope with a weight hanging underneath it for the open net panel FADs. The Korean skipper said that including the rope and weight the total depth can reach 80 m.
- A Korean PS skipper thought that coiled “sausage” tied net FADs work better in areas of high tuna abundance and small-mesh open net tail for those regions in zones where tunas are sparser.
- The FAD tails from PL and PS vessels in the Atlantic have a similar configuration with an open panel of small mesh net (i.e. approximately 3 cm mesh size), with half a bamboo cane tied across every 2-5 m to keep the panel open. A central synthetic rope of 20 mm diameter runs from the raft structure, across the center of the net panel, extending some meters below in a knot that holds a weight of 15-25 kg (e.g. usually a piece of metallic cable). Numerous strips of different colors (e.g. orange, yellow, green, blue, white) made with salt sacs, plastic ribbons or rope ribbons are tied all over the net structure.
- After the day of the workshop, port visits to vessels in Dakar but also other African ports (e.g. Abidjan, Tema, Takoradi) sponsored by the FAO Common Oceans Project were conducted to learn more about FADs being currently used in the Atlantic Ocean by the principal tuna fleets. A special report with detailed FAD characteristics and high-quality photographs to illustrate them is in preparation.

MARINE POLLUTION

5. Biodegradable FADs

- Korean and French PS are using bamboo rafts for their DFADs, with 2 corklines cut in half (one half in each corner) for added floatability, and synthetic nylon small-mesh net in the tail.

With Support From:





	<ul style="list-style-type: none"> - Some artisanal boats fishing off Senegal's coast will encounter DFADs and fish on them. These fishers will cut off the tethered buoy for sale at port or to use elements like the solar panels. However, they will abandon the DFAD structure as it is too large to take on their small vessels, which will eventually end up in the seafloor or stranded in coastal environments. - Biodegradable materials such as bamboo are widely available in Senegal and other Western African continents. - The PL vessels are copying the structure and synthetic materials of PS DFADs they encounter at sea. Many are using plastic-built rafts and deep tails made of synthetic fiber netting. These PS vessels which have traditionally used a very small number of DFADs are also increasing the numbers used, thus increasing the rise in non-biodegradable material deployed at sea. - Due to the DFAD number limit, the supply vessels have started to recollect more of their DFADs if they are going to leave an area to reuse in other zones. For example, once the Mauritanian fishing season is finished, supply vessels will try to embark as many DFADs as possible to reutilize in other zones. Before the DFAD limit, they would have left these floating objects with an active buoy in that area just in case some tuna aggregated in the offseason.
SMALL TUNA	
6. Echo-sounder buoy selectivity	<ul style="list-style-type: none"> - All fishers, both PL and PS use echo-sounders in all buoys. The most commonly utilized buoy brand is Zunibal. Fishers thought that the sounder information of this brand might not be the most accurate, but like the features of the software which make it very user friendly. The price of Zunibal is also lower than that of the other competing brands. - Most fishers were unable to distinguish species composition with the echo-sounder buoys. Large presence of bycatch bonyfish (e.g. blue runner, trigger fish, etc.) could lead to error and waste trips to unproductive FADs. Fishers would welcome echo-sounder buoys which could provide size and species selective information. - The PL fishers at the meeting said that they will stop fishing on a FAD if they start seeing that the size of tuna is small. They also complained that PS vessels will frequently set on

With Support From:





	FADs with small sized tuna (e.g. <1.5 kg skipjack) and that once in the net this fish cannot be discarded and will be loaded onboard.
7. YFT/BET ID	<ul style="list-style-type: none"> - When asked to identify photos of small size yellowfin and bigeye tuna during the presentation, participants were unable to distinguish correctly each species. Scientist informed fishers about available detailed ID guides downloadable from the ISSF Guidebooks website.
8. Short tail FADs	<ul style="list-style-type: none"> - Fishers in the Atlantic are not inclined to adopt short tail DFADs as in this ocean shallow DFADs drift too fast westward and rapidly get out of the good fishing zones. It is well established that the deepest DFADs are usually encountered in the Atlantic and it would be hard to convince fishers to use short tail FADs (e.g. less than 30 m).
OTHER ECOSYSTEM IMPACTS	
9. Tuna behavior	<ul style="list-style-type: none"> - The PL fishers complain that the large amount of DFAD being used in the Atlantic has changed tuna behavior. They comment that most of the tuna is now aggregated under DFADs and not in free schools. Large free roaming schools of tuna are difficult to get by these days and are much smaller in volume than decades ago. For this reason, PL fishers are opting to use DFADs as well. - To retain and catch both free school or DFAD tuna, the PL vessels need to carry onboard live bait. The bait is usually small sardine or anchovy, which is caught by artisanal hand netting just next to the port of Dakar.
FISHING TECHNOLOGY AND STRATEGIES	
10. Fishing technology and observer information	<ul style="list-style-type: none"> - The PL vessels seen at port were well equipped with acoustic instrumentation in the wheelhouse, including high-spec sounders, sonars, bird radars and oceanographic prediction software (e.g. CATSAT).

With Support From:





	<p>- All the EU PS vessels have observers, either person or electronic, onboard. Meanwhile, many of the PL vessels also carry person observers during fishing trips.</p> <p>- Whereas in the past each vessel would operate individually (e.g. use their own DFADs only, not share information with others), it is becoming increasingly common for both PS and PL vessels within the same company to cooperate by sharing DFAD locations, seeding DFADs for other company boats, etc. This is probably a tactic driven by ship-owners to maximize company catches within an increasingly competitive environment.</p>
--	--

With Support From:





Appendix I Provisional Agenda

ISSF Skippers Workshop Dakar (Senegal) 2018

Date: June 2018

Agenda

09:00-10:30

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

10:30-11:00

Coffee break

11:00-13:00

4- Discussion on:

- Non-entangling and biodegradable FADs
- Shark fishing in the net
- Proactive Vessel Register

5 – Final questions and answers

With Support From:





Appendix II– Participant Lists ISSF Dakar Workshop 2018

Name	Profession	Vessel	Company
Serigne Modou Guege	Crew	Comandant Birame Thiaw	Dakar Thon
Siaka Mané	Officer	Comandant Birame Thiaw	Dakar Thon
Moussa Sall	Skipper	Comandant Birame Thiaw	Dakar Thon
DS Diattara	Fleet Facilitator		CMMP
Joseph Tomé	Fleet Representant		Dakar M
Elizbeth Guerra	Fleet Representant		San Juan de Dios & Kermantxo
Bassiron Diarra	Planification Manager		Senegal Fisheries Ministry
Connaba Hdooffemedioof	Manager		Direction des Peches Maritimes
Kwabeno Adams	Operations Manager		Capsen SA
Sedyung Kim	Communications Manager		Donwong
Hioan Chul Lim	Skipper	Xixili	Donwong
Dong Mun Kim	Skipper	Granada	Donwong
El Hadji Nodm Sarr	Officer	Lio 1	Tunasen
El Hadji Hadan Sierf	Skipper	Lio 1	Tunasen
Ibra Moad	Manager		Sert DG Thon
Soulegmanc Mammadou	Administrative		DPM
Mammadou Faye	Biologist		DPM
Papa Kebe	Scientist		ISSF
Gala Moreno	Scientist		ISSF
Jefferson Murua	Scientist		AZTI/ISSF

With Support From:

