

THE ECHEBASTAR GROUP
BUILDING THE FUTURE TOGETHER

STRATEGY 2019 -2023

6-MONTHLY REPORT
&
2020 WORK PLAN

February 2020

ACRONYMS

BET	Big Eye Tuna
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMM	Conservation and Management Measures
CMS	Conservation of Migratory Species
CoP	Conference of the Parties
CR	Certification Requirements
dFAD	Drifting Fish Aggregating Device
EBFM	Ecosystem-based fisheries management
EEZ	Exclusive Economic Zone
ETP	Endangered Threatened and Protected Species
EU	European Union
F	Fishing Mortality
FIP	Fishery Improvement Project
FMP	Fisheries Management Plan
HCR	Harvest Control Rules
HS	Harvest Strategy
IO	Indian Ocean
IOTC	Indian Ocean Tuna Commission
IUU	Illegal, Unreported and Unregulated (Fishing)
LDAC	Long Distance Fleet Advisory Council
MCS	Monitoring, Control and Surveillance
MSC	Marine Stewardship Council
mt	Metric Tons
NGO	Non-Governmental Organisation
OPAGAC	Organización Productores Asociados Grandes Atuneros Congeladores
P	Principle (MSC)
P&L	Pole and Line
PI	Performance Indicator (MSC)
PS	Purse seine
ROS	Regional Observer Scheme
SC	Scientific Committee
SFA	Seychelles Fisheries Authority
SFPA	Sustainable Fisheries Partnership Agreements
SG	Scoring Guideline
SI	Scoring Issue
SIDS	Small Island Developing States
SIOTI	Sustainable Indian Ocean Tuna Initiative
SKJ	Skipjack Tuna
TOR	Terms of Reference
TTI	Tuna Transparency Initiative
UoA	Unit of Assessment
UoC	Unit of Certification
VME	Vulnerable Marine Ecosystem
VMS	Vessel Monitoring System
WPDCS	Working Party on Data Collection and Statistics
WPEB	Working Party on Ecosystems and Bycatch
WWF	World Wildlife Fund
YFT	Yellowfin Tuna

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1. Introduction

Publication of this first six-monthly report was postponed from the original timetable to allow inclusion of 2019 data and ensure for the MSC First Annual Surveillance Report to be published.

The report covers:

- Data on Echebatar fishing operations and landings;
- A description of Echebatar work activities to date; summary of the First Annual MSC Surveillance Report (FASA);
- The outcome of FASA on conditions;
- An up-date on the status of recommendations contained in the certification report;
- The Echebatar work plan until November, 2020 related to meeting the MSC conditions; and
- The Echebatar work plans until February, 2021 related to SIOTI and specific Echebatar activities.

An up-date on the status of the tuna stocks in the Indian Ocean and other parameters considered in the MSC certification are contained in the FASA report (<https://fisheries.msc.org/en/fisheries/echebatar-indian-ocean-purse-seine-skipjack-tuna/@assessments>).

2. Echebatar Statistics (Appendix 1)

Annual Catch of Tunas by Species 2006 – 19 (Table 1)

In 2019, as verified by landing data, the breakdown of the total catch of 49,483 mt by the three main species was skipjack – 62 %; yellowfin 29.6 %; and bigeye 7.7 %.

In 2017 – 19, the skipjack proportion was higher than historic levels due to: (i) restrictions on yellowfin catch from 2016; with (ii) the resultant shift from FSC to FAD sets. Additionally, there may have been an increase in the abundance of skipjack due to environmental factors.

We complied with the IOTC requirement (as applied by the flag states of Spain and Seychelles) to reduce the yellowfin catch by 15 % from the quantity recorded in 2014 (i.e. in our case, from 17,534 mt to lower than 14,900 mt).

In 2019, our catch of skipjack reduced from the previous record year. It is anticipated that the 2020 catch will be regulated to respond to IOTC regulation 16/01 that requires allocations as in 2018 the total quota of about 470,000 mt was overfished by 20%. At the time of writing, the catch regulations have not been clarified.

It is important to note that the status of the current of the skipjack stock will not be known until later in 2020 when the results of the new assessment will be available.

Total and Observed Tuna Sets 2017 – 19 (Table 2)

There has been a significant reduction in the annual number of FAD sets comparing 2017 – 19 (annual average 1,123) to 2016 (1,512). This is despite the shift away from FSC to FAD due to the limit on yellowfin catch (yellowfin are less abundant around FADs).

The annual number of FSC sets in 2017–19 (130) compares to 2016 with 160, which in turn was lower than the previous two years.

Over the three years 2017 – 19, the proportion of FSC sets for which observed data are available averaged 77 %. This is a significant increase compared to 2016. For the same period, the respective figure for FAD sets was 84 %. Again, this is a significant increase compared to 2016.

Tuna Sets 2019 by Vessel (Table 3)

Six of our vessels operated in 2019, with Aterpe Alai entering the fleet in September 2019. Excluding Aterpe Alai, the FSC sets of the remaining vessels ranged from 11 to 47, with the respective figures for FADs being 178 to 321.

Due to our yellowfin quota proving a limit on vessel operations, there was reduced fishing activity in November (84 sets) and December (62 sets). The peak months for activity were September (202 sets) and October (229 sets).

Tuna Sets 2014 - 2019 by Vessel (Table 4)

The number of our active vessels varied between 4 in 2014 to 6 in 2015 and 2019, with 5 in the remaining years during the 6-year period.

In 2015, the average number of sets per vessel was 226 (32 FSC and 194 FAD); respective figures for 2018 were 280, 6 and 274. The most notable data is the reduction in number of FSC sets.

FSC Sets: Catch per Species 2017 – 2019 (Table 5)

In 2019, more than 99 % of the total catch of our vessels comprised tuna with more than half of that being skipjack, one-quarter yellowfin and one-fifth bigeye. In contrast, 2017 saw seven-tenths of the catch comprising yellowfin and two-tenths skipjack.

An estimated 18 silky sharks were taken, or about 1 every 9 sets. This is a reduction compared to the estimated average of the previous two years.

The only other species of note by number (although extremely limited) were maho mahi (*C. hippurus*) and rough triggerfish (*Canthidermis maculata*).

FAD Sets; Catch 2017 – 2019: Tuna (Table 6)

In 2019, the estimated catch of tunas (based on observer data) was 41,162 mt i.e. a reduction of about 8,700 mt compared to the previous year due to the decline in the quantity of skipjack taken. From 2017 to 2019, there was a notable increase in the average yellowfin per set from 5.36 mt to 8.68 mt; respective figures for skipjack were 19.49 mt and 17.85 mt, with 20.85 recorded in 2018.

FAD Sets; Catch 2017 – 2019: Billfish (Table 7)

Just 23.42 mt of billfish were taken in our FAD sets in 2019; one for every 5 sets. In 2019, the two species recorded were black marlin (*M. indica*) and blue marlin (*M. nigricans*). This outcome reflects the previous two years.

FAD Sets; Catch 2017 – 2019: Other Bony Fish (Table 8)

A substantial number of species comprise the total by-catch of other bony fishes in our tuna fishery which over the three year period averaged about 250 mt with between 43 and 92 individuals per set. In 2019, the four species with the highest catch were: wahoo (*A. solandri*) - 40.9 mt; rough triggerfish (*C. maculata*) – 17 mt; Mahi mahi (*C. hippurus*) – 93 mt; and rainbow runner (*E. bipinnulata*) – 52 mt. This reflects the situation in 2017 and 2018.

FAD Sets: Catch 2017 – 2019: Sharks (Table 9)

In 2019, an average of 3.1 sharks were taken in a FAD set; this is lower than in the two previous years. In 2019, 85 mt of silky sharks (*C. falciformis*) were caught which was about the same as 2017 but one-third less than 2018. It is estimated that in 2019 70 % of this catch was released alive, but we do not have data on post release mortality.

FAD Sets: Catch 2017 – 2019: Rays (Table 10)

The by-catch of rays in our FAD fishery is negligible; the equivalent of a single individual per 80 sets.

FAD Sets: Catch 2017 – 2019: Turtles (Table 11)

In 2019, 10 turtles comprising three species were taken as a by-catch in our FAD fishery. While these were released we have no data on post release mortality.

3. Echebatar Activities 2019

Our Strategy is based on meeting the MSC conditions to certification while working with our colleagues in SIOTI and the fishery improvement programme and strengthening our sustainability credentials by going beyond MSC requirements.

Appendix 2 details the various activities.

4. Echebatar: MSC First Annual Surveillance Audit November 2019 - Conditions

The FASA (<https://fisheries.msc.org/en/fisheries/echebatar-indian-ocean-purse-seine-skipjack-tuna/@assessments>) concluded that:

The MSC Certificate for the Echebatar fishery shall remain active, subject to the agreed annual surveillance schedule and progress on the current conditions

The main findings were (our emphases):

- ***“The client has constituted a working group (Echebatar Sustainability Working Group, ESWG) to deal with needs derived from maintaining the MSC certificate. Besides, a website (<https://echebatar.com/echebatar-certificada-por-msc/msc-up-to-date/>) was created to provide updated information related the different sustainability activities where the company is involved. Analysed catch data for 2017 and 2018 based on data recorded by observers on board the Echebatar fleet can be downloaded from this site, together with semi-annual landing reports and active fishing licences from each of the certified vessels.***
- ***Based on the actions triggered as part of the different sustainability activities where the company is involved (SIOTI, Echebatar Strategy & Operational Plan, Echebatar FAD Management Plan...) and the new Policies and Plans developed by the Government of Seychelles (the ‘Seychelles Fisheries Sector Policy And Strategy 2019’ and the ‘Fisheries Comprehensive Plan’), progress on all conditions set during initial assessment was found to be ‘ON TARGET’, but for Condition 8 which was found to be ‘AHEAD OF TARGET’.***
- ***New information on Indian Ocean skipjack catches in 2018 raises concerns at scoring issues 1.2.1a and especially 1.2.2c. These scoring issues have both been rescored from 80 to 60 and conditions have been raised for PI 1.2.1 and PI 1.2.2. We note that while the motivating factor for rescoring the two PIs is the same, the rationales differ with respect to the different scoring guidelines. The rescoring does not reduce the overall Principle 1 score to below 80, largely because the skipjack stock is at a level above (the implicit) Bmsy and at the target level of 40%B0, with the score of 100 at PI1.1 remaining unchanged.***
- ***A number of fisheries in the Indian Ocean will reach the ACDR stage in 2020 and will become overlapping fisheries to be considered under harmonization. Currently, only the Maldives Pole and Line fishery for skipjack tuna needs formally to be considered under harmonization. That fishery underwent a first surveillance early in 2019 when the 2018 Indian Ocean skipjack tuna catches were not yet published. Given there are (at least) two fisheries for which ACDRs are being prepared, a wider harmonization exercise may be warranted in 2020.***
- ***New information on yellowfin and bigeye tuna became available through IOTC processes after the site visit. An expected new stock assessment for yellowfin tuna did not eventuate and information is limited. The yellowfin stock remains overfished and subject to overfishing but no rescoring has taken place at this surveillance at PI 2.1.1 nor at 2.1.2 which considers UoA strategy; while overall catches of yellowfin have increased in the IOTC Area of Competence,***

catches by purse seiners against the Seychelles catch limits have been constrained. A new stock assessment on bigeye tuna estimates the stock to be subject to overfishing but the status of the stock for MSC scoring at PI 2.1.1 is not affected.

- **The new Order regulating the Spanish purse seiners targeting yellowfin tuna in the IO in 2020** (Order APA/93/2020, de 4 de febrero, por la que se regula el ejercicio de la pesca de rabil y túnidos tropicales en el Océano Índico en la campaña 2020) **establishes a double limitation system operating together**. On the one hand, a limitation of individual yellowfin tuna (sic) according to GT (as in 2018 and 2019) and, on the other, a limitation in relation to the total volume of catches of the 3 main tropical tuna species: yellowfin tuna, bigeye and skipjack.
- A delay ratifying the Fisheries Partnership Agreement between Seychelles and the EU forced 40 EU tuna purse seiners (French and Spanish purse seiners) and 8 longliners to stop fishing and leave the Seychelles EEZ as of January 18, 2020. This is expected to be solved quickly, but at the time of preparing this report the official ratification has not yet been concluded.¹
- **According to the SFA no infringements were detected during the inspections performed in 2017 and 2018 to the certified fleet**. However, **the SGP detected infringements among the Spanish purse seine fleet targeting tropical tunas in the IOTC area in 2017 and 2018. Some of these infringements also affected the Echebstar vessels flying the Spanish flag. Since these results are part of a monitoring and control process still being implemented by the SGP (see section 4.2.4.2 for more details), the team decided not to re-score until the sanctioning procedure started in 2018, and also the specific inspection plan for the Spanish purse seine fleet operating at the IOTC implemented in 2019 are completed**.
- UoA observed catch composition and total estimated catches in 2017 and 2018 were shared with the team. Results show **a clear improvement in the % of observed sets in recent years, with observed sets raising up to 87% and 90% of the total FAD and FSC sets respectively in 2018 (compared to 27% and 56% respectively in 2014)**.
- **Species composition of the UoA catches are consistent with the data assessed during the initial evaluation: FSC sets are dominated by skipjack tuna, while FAD sets are dominated by yellowfin tuna. However, a change in trend is observed in 2018 regarding FAD sets, with a decrease in the percentage of yellowfin tuna. This issue will be closely monitored in subsequent surveillance audits. The remaining primary species (mainly albacore and several species of billfishes) are all 'minor'. Based on the information shown above, it is not considered necessary to update the evaluation of the impact of UoA on minor primary species.**
- As found during the initial assessment, **no main secondary species are impacted by the UoA, while there is a number of minor secondary species (some small tunas and mainly small bony, pelagic or neritic finfish) accounting less than 2% of the total catches. Data presented in tables above lead the team to consider that there is no need to revise the impact of the UoA on these species**
- **ETP species identified in the UoA catches between 2017 and 2018 matches with those identified during the initial assessment (i.e. several species of rays, sharks and sea turtles). Only the whale shark is a new species compared to the PCR. However, a single interaction with 1 individual was recorded between 2017 and 2018, and this individual could be released alive to the sea. The team considers that the information for PI scores has not changed significantly.**
- At client's request, and after performing some checks and a traceability exercise the team considers that **Port Louis (Mauritius) can be added as an authorised landing port within the existing MSC-Fishery Certificate. Since the current certificate does not detail the landing ports**

¹ The FPA has been signed.

covered by the certificate, there is no need to amend the existing MSC-Fishery certificate.

5. MSC First Annual Surveillance Audit November 2019 – Recommendations (Appendix 3)

The FASA reviewed the three recommendations made in the MSC certification report.

- **Recommendation 1.** 1.2.1. Observers estimate and report on discarded catch (of skipjack) and reasons for discarding. FASA closed this recommendation.
- **Recommendation 2.** 2.3.3. A higher percentage of observer data is available for review each year at annual surveillance audits to better assess impacts on ETP species. As this issue is covered by Condition 1, FASA closed this recommendation.
- **Recommendation 3.** 2.4.3. Echebatar maintains a database of the number of lost FADs by area and date. As this issue is covered by Condition 4, FASA closed this recommendation.

6. Work Plan 2020: MSC Conditions 1 – 8, March – November 2020

Appendix 4 presents detail on: (i) the Condition; (ii) the FASA finding and (iii) the defined milestone for the Second Annual Surveillance Audit (SASA). Further the previously defined Echebatar Strategy and Operational Plan are presented and the 2020 work plan are detailed. The client action plans for Conditions 7 & 8 were modified following the FASA due to the issues that were identified.

7. Work Plan 2020: MSC Conditions 9 & 10, March – November 2020

Appendix 5 presents the two new conditions to certification that resulted from the 2018 catch of skipjack being substantially above the quota adopted by IOTC. We prepared a client action plan that was included in the FASA report. This forms the Strategy and Operational Plan related to the new conditions.

8. Work Plan 2020: SIOTI March 2020 – February 2021

Appendix 6 shows our commitments in relation to SIOTI.

9. Work Plan 2020: Sustainability Working Group March 2020 – February 2021

Our policy is to go above and beyond MSC requirements. Appendix 7 shows our planned activities.

Appendix 1: Echebatar Fishing Activity: Statistics

Table 1: Echebatar: Annual Catch of Tuna by Species 2006 - 2019

	2006	%	2007	%	2008	%	2009	%
YELLOWFIN	19,277	39.3	12,289	38.5	16,006	39.5	16,240	32.9
BIGEYE	1,952	4.0	1,814	5.7	3,192	7.9	5,110	10.4
SKIPJACK	27,178	55.4	17,406	54.5	20,787	51.3	27,525	55.8
Others	665	1.4	427	1.3	498	1.2	483	1.0
TOTAL	49,072	100.0	31,936	100.0	40,483	100.0	49,357	100.0
	2010	%	2011	%	2012	%	2013	%
YELLOWFIN	22,116	39.3	26,470	53.4	24,862	61.3	24,906	56.1
BIGEYE	3,837	6.8	3,193	6.4	3,383	8.3	4,107	9.3
SKIPJACK	29,919	53.1	19,493	39.3	11,544	28.5	14,854	33.5
Others	441	0.8	414	0.8	759	1.9	516	1.2
TOTAL	56,313	100.0	49,569	100.0	40,547	100.0	44,383	100.0
	2014	%	2015	%	2016	%	2017	%
YELLOWFIN	17,534	50.8	17,542	49.4	17,653	43.1	15,121	32.8
BIGEYE	2,736	7.9	2,314	6.5	2,894	7.1	3,230	7.0
SKIPJACK	13,903	40.2	15,263	43.0	19,980	48.8	27,308	59.3
Others	375	1.1	402	1.1	384	0.9	417	0.9
TOTAL	34,547	100.0	35,521	100.0	40,911	100.0	46,075	100.0
	2018	%	2019	%	TOTAL 06/19	%	MT/YR06/19	
YELLOWFIN	14,800	28.1	14,668	29.6	259,481.6	42%	18,534	
BIGEYE	3,603	6.8	3,827	7.7	45,189.6	7%	3,228	
SKIPJACK	33,866	64.2	30,682	62.0	309,708.6	50%	22,122	
Others	460	0.9	306	0.6	6,547.1	1%	468	
TOTAL	52,729	100.0	49,483	100.0	620,927.0	100.0		

Table 2: Echebatar: Total & Observed Tuna Sets**2014 - 16****Table 21: Echebatar: Number of sets by set type (2014-2016)**

YEAR	SET TYPE	NUMBER of SETS	TOTAL SETS
2014	FAD	567	804
	FSC	237	
2015	FAD	1158	1393
	FSC	235	
2016	FAD	1510	1700
	FSC	190	

Source: AZTI

Free School 2017 – 19

Year	2019	2018	2017
Set type	FSC	FSC	FSC
Number of observed sets	116	26	133
Total number of sets	147	29	213
Observed sets (%)	78.91%	90%	62%

Note: 2019 provisional.

FADs 2017 – 19

Year	2019	2018	2017
Set type	FAD	FAD	FAD
Number of observed sets	1,098	1,197	1,074
Total number of sets	1,384	1,369	1,250
Observed sets (%)	79%	87%	86%

Note: 2019 provisional.

Table 3: Echebatar: Sets by Vessel, Type & Month 2019

Vessel	J		F		M		A		M		J	
	FAD	FSC	FAD	FSC	FAD	FSC	FAD	FSC	FAD	FSC	FAD	FSC
Alakrana			32	-	26	-	28	-	25	12	29	-
C Alai												
El Alai	13	-	26	2	15	-	18	-	14	8	-	-
EU Alai	-	-	38	1	38	6	37	1	35	1	10	8
Izaro	18	-	-	-	17	1	-	-	21	15	7	31
J Alai	-	-	32	2	33	1	40	2	42	16	-	-
A Alai	-	-	-	-	-	-	-	-	-	-	-	-
Total	31	-	128	5	129	8	123	3	137	52	46	39

Vessel	J		A		S		O		N		D	
	FAD	FSC	FAD	FSC	FAD	FSC	FAD	FSC	FAD	FSC	FAD	FSC
Alakrana	23	15	46	1	39	-	46	-	27	-		
C Alai												
El Alai	-	-	22	-	36	1	37	-	26	-	34	-
EU Alai	24	6	33	1	37	-	36	3				
Izaro	-	-	25	-	28	-	62	-				
J Alai	5	11	40	1	32	-						
A Alai	-	-	-	-	28	1	45	-	31	-	28	-
Total	52	32	166	3	200	2	226	3	84	0	62	0

Vessel	TOTAL		2019 TOTAL
	FAD	FSC	
Alakrana	321	28	349
C Alai	-	-	-
El Alai	241	11	252
EU Alai	288	27	315
Izaro	178	47	225
J Alai	224	33	257
A Alai	132	1	133
Total	1,384	147	1,531
Observed Sets	1,098	116	1,214
	79.3%	78.9%	79.3%

Table 4: Echebatar: Number of Sets (FSC, FAD, Total, Observed) by Vessel 2014 -19

Vessel	PROVISIONAL								
	TOTAL		2019	TOTAL		2018	TOTAL		2017
	FSC	FAD	TOTAL	FSC	FAD	TOTAL	FSC	FAD	TOTAL
Alakrana	28	321	349	4	333	337	54	306	360
C Alai	-	-	-			-			
El Alai	11	241	252	9	291	300	38	178	216
EU Alai	27	288	315	9	247	256	26	287	313
Izaro	47	178	225	1	237	238	30	223	253
J Alai	33	224	257	6	261	267	65	256	321
A Alai	1	132	133						
Total	147	1,384	1,531	29	1,369	1,398	213	1,250	1,463
% per set type	9.60%	90.40%	100.00%	2.07%	97.93%	100.00%	14.56%	85.44%	100.00%
Av sets per Vessel	25	231	255	6	274	280	43	250	293
Observed Sets	116	1,098	1,214	26	1,197	1,223	133	1,074	1,207
	78.91%	79.34%	79.29%	89.66%	87.44%	87.48%	62.44%	85.92%	82.50%
Vessel	2016			2015			2014		
	TOTAL		TOTAL	TOTAL		TOTAL	TOTAL		TOTAL
	FSC	FAD	TOTAL	FSC	FAD	TOTAL	FSC	FAD	TOTAL
Alakrana	25	279	304	60	290	350	65	255	320
C Alai				25	156	181	63	236	299
El Alai	23	334	357	24	173	197	19	185	204
EU Alai	38	363	401	11	111	122			
Izaro	24	251	275	29	247	276	80	155	235
J Alai	50	285	335	43	184	227			
A Alai									
Total	160	1,512	1,672	192	1,161	1,353	227	831	1,058
% per set type	9.57%	90.43%	100.00%	14.19%	85.81%	100.00%	21.46%	78.54%	100.00%
Av sets per Vessel	32	302	334	32	194	226	57	208	265
Observed Sets	71	613	684	159	672	831	126	221	347
	44.38%	40.54%	40.91%	82.81%	57.88%	61.42%	55.51%	26.59%	32.80%

Table 5: Echebatar: FSC Fishery - Catch per Species 2017 - 2019

2019 PROVISIONAL						
Species / Species group	Observed Catch		% Total MT	Estimated Total Catch		
	MT	Individuals (non-tuna)		MT	No. non-tuna	No. per set
BF: M. nigricans	0.03	1	0.00%	0.03	1	0.007
Rays : Mobula sp,	0.60	4	0.03%	0.76	5	0.034
Sharks: C. falciformis	0.77	14	0.04%	0.97	18	0.122
Sharks: C. longimanus	0.10	2	0.00%	0.12	3	0.020
Auxis sp	8.00		0.38%	10.14		0.069
A. thazard	3.00		0.14%	3.80		0.026
K. pelamis	1,140.00		54.27%	1,444.66		9.828
T. albacares	532.00		25.33%	674.17		4.586
T. obesus	416.00		19.80%	527.17		3.586
				2,661.83	27	18.108
2018						
Species / Species group	Observed Catch		% Total MT	Estimated Total Catch		
	MT	Individuals (non-tuna)		MT	No. non-tuna	No. per set (tuna mt/set)
BF: M. nigricans	0.05	2	0.02%	0.06	2	0.069
OBF: C. maculata	0.05	80	0.02%	0.06	89	3.069
Rays : Mobula sp,	0.15	1	0.05%	0.17	1	0.034
Rays : Rhinoptera sp,	0.00	1	0.00%	0.00	1	0.034
Sharks: C. falciformis	0.17	4	0.06%	0.19	4	0.138
K. pelamis	115.00		40.43%	128.27		4.423
T. albacares	104.00		36.56%	116.00		4.000
T. obesus	65.00		22.85%	72.50		2.500
				317.25	97	14.2679
2017						
Species / Species group	Observed Catch		% Total MT	Estimated Total Catch		
	MT	Individuals (non-tuna)		MT	No. non-tuna	No. per set (tuna mt/set)
BF: M. nigricans	1.45	10	0.04%	2.32	16	0.075
OBF: A. solandri	0.09	27	0.00%	0.14	43	0.202
OBF: C. maculata	0.17	255	0.01%	0.27	408	1.915
OBF: C. sexfasciatus	0.01	10	0.00%	0.02	16	0.075
OBF: C. hippurus	4.7	317	0.14%	7.53	508	2.385
OBF: D. macarellus	0.02	45	0.00%	0.03	72	0.338
OBF: E. bipinnulata	0.18	60	0.01%	0.29	96	0.451
OBF: K. Cinerascens	0.01	10	0.00%	0.02	16	0.075
OBF: L. surinamensis	0.01	13	0.00%	0.02	21	0.099
OBF: P. teira	0.01	12	0.00%	0.02	19	0.089
OBF: S. barracuda	0.01	2	0.00%	0.02	3	0.014
OBF: U. secunda	0	7	0.00%	0.00	11	0.052
Rays : Mobula sp,	0.45	3	0.01%	0.72	5	0.023
Sharks: C. falciformis	0.65	39	0.02%	1.04	62	0.291
Sharks: C. longimanus	0.51	3	0.02%	0.82	5	0.023
A. thazard	2	0	0.06%	3.2	0	0.015
K. pelamis	667	0	19.97%	1,068.20	0	5.015
T. alalunga	95	0	2.84%	152.14	0	0.714
T. albacares	2,402.00	0	71.93%	3,846.81	0	18.060
T. obesus	165	0	4.94%	264.25	0	1.241
Turtles: D. coriacea	0.25	1	0.01%	0.39	2	0.002
				5,348.23	1,303	31.15

Table 6: Echebatar: FAD Fishery - Observed & Estimated Total Catch 2017 – 19. Tunas

Species / Species group	2019 PROVISIONAL							2018							2017						
	Observed Catch		% Total MT	Estimated Total Catch				Observed Catch		% Total	Estimated Total Catch				Observed Catch		% Total	Estimated Total Catch			
	MT	Individuals (non-tuna)		MT	No. non-tuna	% Non-tuna Wt	No. per set	MT	Individuals (non-tuna)		MT	No. non-tuna	% Non-tuna Wt	No. per set	MT	Individuals (non-tuna)		MT	No. non-tuna	% Non-tuna Wt	No. per set
Tunas nei : A. rochei	2.05		0.01%	2.58			0.00								0.10		0.00%	0.12	0	0.00%	0
Tunas nei : Auxis sp,	72.00		0.22%	90.75			0.07														
Tunas nei : A. thazard	62.20		0.19%	78.40			0.06	112.16	0	0.26%	128.27			0.08	74.39		0.21%	86.58			0.06
Tunas nei : E. affinis	10.80		0.03%	13.61			0.01	211.23	0	0.48%	241.58			0.15	26.44		0.07%	30.77			0.02
Tunas nei : K. pelamis	19,599.24		59.55%	24,704.32			17.85	28,540.56	0	64.93%	32,641.62			20.85	24,360.00		68.67%	28,351.96			19.49
Tunas nei : T. alalunga	70.00		0.21%	88.23			0.06	1,335.76	0	3.04%	1,527.70			0.98	855.00		2.41%	995.11			0.68
Tunas nei : T. albacares	9,533.90		28.97%	12,017.23			8.68	9,329.10	0	21.22%	10,669.62			6.81	6,696.38		18.88%	7,793.74			5.36
Tunas nei : T. obesus	3,306.17		10.04%	4,167.34			3.01	4,051.04	0	9.22%	4,633.14			2.96	2,997.30		8.45%	3,488.48	40,629.29		2.40
TOTAL TUNAS				41,162.46			29.74				49,841.93			31.83				40,746.76			28.01

Table 7: Echebatar: FAD Fishery - Observed & Estimated Total Catch 2017 – 19. Billfish

Species / Species group	2019 PROVISIONAL							2018							2017						
	Observed Catch		% Total MT	Estimated Total Catch				Observed Catch		% Total	Estimated Total Catch				Observed Catch		% Total	Estimated Total Catch			
	MT	Individuals (non-tuna)		MT	No. non-tuna	% Non-tuna Wt	No. per set	MT	Individuals (non-tuna)		MT	No. non-tuna	% Non-tuna Wt	No. per set	MT	Individuals (non-tuna)		MT	No. non-tuna	% Non-tuna Wt	No. per set
BF: Istiophoridae								0.39	6	0.00%	0.44	7	0.01%	0.005	0.04	2	0.00%	0.05	2	0.00%	0.0016
BF: I. platypterus								0.06	4	0.00%	0.07	5	0.01%	0.004							
BF: M. indica	7.51	121	0.02%	9.47	153	0.24%	0.111	10.45	167	0.02%	11.95	191	0.22%	0.140	24.40	264	0.07%	28.4	307	0.32%	0.2456
BF: M. nigricans	11.06	105	0.03%	13.94	132	0.20%	0.095	12.47	105	0.03%	14.26	120	0.14%	0.088	7.26	53	0.02%	8.45	62	0.06%	0.0496
BF: T. angustirostris								0.01	2	0.00%	0.01	2	0.00%	0.001							
BF: T. audax								0.58	3	0.00%	0.66	3	0.00%	0.002							
BF: X. gladius								1.22	3	0.00%	1.4	3	0.00%	0.002	0.12	1	0.00%	0.14	1	0.00%	0.0008
TOTAL BILLFISH				23.41	285	0.44%	0.206				28.28	319	0.36%	0.233				36.99	370	0.38%	0.296

Table 9: Echebatar: FAD Fishery - Observed & Estimated Total Catch 2017 – 19. Sharks

Species / Species group	2019 PROVISIONAL							2018							2017						
	Observed Catch		% Total MT	Estimated Total Catch				Observed Catch		% Total	Estimated Total Catch				Observed Catch		% Total	Estimated Total Catch			
	MT	Individuals (non-tuna)		MT	No. non-tuna	% Non-tuna Wt	No. per set	MT	Individuals (non-tuna)		MT	No. non-tuna	% Non-tuna Wt	No. per set	MT	Individuals (non-tuna)		MT	No. non-tuna	% Non-tuna Wt	No. per set
Sharks: Carcharhiniformes	0.20	4	0.00%	0.25	5	0.01%	0.004														
Sharks : C. falciformis	67.06	3,319	0.20%	84.52	4,184	6.48%	3.023	104.73	5,528	0.24%	119.78	6,322	7.13%	4.618	74.31	4,188	0.21%	86.49	4,874	5.01%	3.899
Sharks: C. longimanus	4.92	80	0.01%	6.21	101	0.16%	0.073	5.26	117	0.01%	6.01	134	0.15%	0.098	7.05	108	0.02%	8.21	126	0.13%	0.101
Sharks : Prionace glauca								0.63	2	0.00%	0.73	2	0.00%	0.001							
W. shark: Rhincodon typus								5.393	1	0.01%	6.17	1	0.00%	0.001							
TOTAL SHARKS				90.98	4,290	0.07	3.100				132.69	6,459	0.07	4.718				94.70	5,000	0.05	4.000

Table 10: Echebatar: FAD Fishery - Observed & Estimated Total Catch 2017 – 19. Rays.

Species / Species group	2019 PROVISIONAL							2018							2017						
	Observed Catch		% Total MT	Estimated Total Catch				Observed Catch		% Total	Estimated Total Catch				Observed Catch		% Total	Estimated Total Catch			
	MT	Individuals (non-tuna)		MT	No. non-tuna	% Non-tuna Wt	No. per set	MT	Individuals (non-tuna)		MT	No. non-tuna	% Non-tuna Wt	No. per set	MT	Individuals (non-tuna)		MT	No. non-tuna	% Non-tuna Wt	No. per set
Rays: Dasyatidae															0.01	3	0.00%	0.01	3	0.00%	0.0024
Rays : Dasyatys violacea	0.02	6	0.00%	0.02	8	0.01%	0.006	0.02	6	0.00%	0.02	7	0.01%	0.005113	0.01	2	0.00%	0.01	2	0.00%	0.0016
Rays : Manta birostris	0.04	2	0.00%	0.05	3	0.00%	0.002	0.05	1	0.00%	0.06	1	0.00%	0.00073	0.19	2	0.00%	0.22	2	0.00%	0.0016
Rays : Manta sp,								0.48	2	0.00%	0.55	2	0.00%	0.001461							
Rays: M. japanica								0.9	6	0.00%	1.03	7	0.01%	0.005113	0.60	4	0.00%	0.7	5	0.01%	0.004
Rays: M. mobular	0.15	1	0.00%	0.19	1	0.00%	0.001							1.20	8	0.00%	1.4	9	0.01%	0.0072	
Rays : Mobula sp,	0.60	4	0.00%	0.76	5	0.01%	0.004	1.36	9	0.00%	1.55	10	0.01%	0.007305	1.05	7	0.00%	1.22	8	0.01%	0.0064
TOTAL RAYS				1.02	17	0.00	0.012				3.21	27	0.00	0.020				3.56	29	0.00	0.023

Table 11: Echebatar: FAD Fishery - Observed & Estimated Total Catch 2017 – 19. Turtles

Species / Species group	2019 PROVISIONAL							2018							2017							
	Observed Catch		% Total MT	Estimated Total Catch				Observed Catch		% Total	Estimated Total Catch				Observed Catch		% Total	Estimated Total Catch				
	MT	Individuals (non-tuna)		MT	No. non-tuna	% Non-tuna Wt	No. per set	MT	Individuals (non-tuna)		MT	MT	No. non-tuna	% Non-tuna Wt	No. per set	MT		Individuals (non-tuna)	MT	MT	No. non-tuna	% Non-tuna Wt
Turtles : C. caretta	0.10	5	0.00%	0.13	6	0.01%	0.004	0.0216	1	0.00%	0.02	1	0.00%	0.001								0
Turtles : E. imbricata	0.01	1	0.00%	0.01	1	0.00%	0.001	0.0131	2	0.00%	0.01	2	0.00%	0.001	0.09	2	0.00%	0.11	2	0.00%	0.0016	0.0016
Turtles : L. olivacea	0.03	2	0.00%	0.03	3	0.00%	0.002	0.3064	12	0.00%	0.35	14	0.02%	0.010	0.03	2	0.00%	0.04	2	0.00%	0.0016	0.0016
Turtles : C. mydas				0.17	10.00	0.02%	0.007	0.1514	2	0.00%	0.17	2	0.00%	0.001								
TOTAL TURTLES				0.34	20	0.03%	0.014				0.55	19	0.00	0.014								

Appendix 2: MSC Conditions: Echebatar Activities 2019

CONDITION	YEAR 1 OUTCOME
<p>CONDITION 1: 2.3.3 ETP species information. By the fourth annual surveillance audit, the client must demonstrate that information is adequate to measure trends and support a strategy to manage impacts on ETP species</p>	<p>ECHEBASTAR</p> <ul style="list-style-type: none"> • The ETP species of interest are Silky shark, Shortfin mako shark, Manta and devil rays and sea turtles. • Data on observed catch are now available on a quarterly basis with a delay of one quarter. • The data is provided in a separate section of this report. • Given the low % of observed sets in 2014 -2016, 3 more years of data are required to confirm trends and support a strategy. • Vessel skippers were instructed to collect information from observers for back up prior to disembarkation https://echebatar.com/wp-content/uploads/2019/10/Certificate-of-Echebatar-AZTI-Sustainable-Fishing-Meetings-October-2019.pdf. • All vessel crew are trained on the protocol and importance of data collection in the context of the protocols of good practices used on vessels and the related training courses given by AZTI. <p>SIOTI</p> <ul style="list-style-type: none"> • IPG 11 covers 2.3.3 ETP species information. • The Year 1 (2017) target required a scientific report on the post release mortality of ETP species, and an analysis of the likely impact of such mortality on Indian Ocean populations. • The Year 2 (2018) target required a study on the impact of purse seine gear on ETP species and likely consequence for Indian Ocean populations and improved vessel-level reporting of ETP interactions. • The year 2 SIOTI report² concluded that the FIP was on target. <p>An OPAGAC FIP supported study in 2018 (IOTC-2018-WPDCS14-26)³ found that ETP interactions are lower for purse seine than other gear.</p> <p>However, levels of post-release mortality were not directly estimated; existing estimates were used in the analysis and these were not available for all gears.</p>

² <https://echebatar.com/wp-content/uploads/2019/09/SIOTI-Action-Plan-Review-Year-2-v6.3-02-09-19.pdf>

³ https://www.iotc.org/sites/default/files/documents/2018/11/IOTC-2018-WPDCS14-26_Rev1.pdf

CONDITION 2: 2.4.1 Habitat

outcome By the fourth annual surveillance audit, the client must demonstrate that FADs are highly unlikely to reduce structure and function of coral reefs to a point where there would be serious or irreversible harm.

The FAD Management Plan required by the Echebatar strategy was published.⁴

Number of FADs and instrumented buoys

- All FADs should be deployed and tracked by instrumented buoys that are made operational on-board.
- Until 31 December 2020, Echebatar will apply IOTC Res 19/02 by operating a maximum of 300 buoys per purse seiner at any one time, with a maximum annual purchase per purse seiner of 500 buoys.
- From 1st January 2021, Echebatar will voluntarily reduce the number of operational buoys per purse seiner to 275 with a maximum annual purchase per purse seiner of 475.
- From 1st January 2022, Echebatar will voluntarily reduce the number of operational buoys per purse seiner to 250 with a maximum annual purchase per purse seiner of 450.

Bio-degradable FADs.

- Echebatar works closely with AZTI to develop biodegradable FADs (<https://iotc.org/sites/default/files/documents/2019/08/IOTC-2019-WPEB15-34.pdf/>).
- Echebatar fully cooperates with the project testing designs and identifying options to mitigate impacts of drifting FADs on the Ecosystem –EASME/EMFF/2017/1.3.2.6 - FWC EASME/EMFF/2016/008 and IOTC-2018-SC21-13 that assesses specific biodegradable materials and designs for the construction of drifting FADs in natural environmental conditions.
- As required by IOTC resolution 19/02, by 2022 all deployed FADs will be biodegradable.

Lost FADs

- Echebatar has contracted AZTI to develop a data base on the FADs purchased and activated by the company to account for lost FADs and reduce the uncertainty about their actual number.
- By early 2020, all 2019 FAD purchases, activation, status and recovery will be fully documented and available for inspection.
- Seguimiento y Verificación del Código De Buenas Prácticas en Barcos Atuneros Cerqueros de ANABAC-OPTUC. <http://opagac.org/wp-content/uploads/2017/04/Buenas-Pr%C3%A1cticas-OPAGAC-ANABAC-feb-2017-FIRMADO.pdf>

SIOTI

⁴ https://echebatar.com/wp-content/uploads/2019/11/Echebatar-FAD-management-plan_updated25nov.pdf.

	<ul style="list-style-type: none"> • The SIOTI action plan Year 3 is: All FADs operated by FIP participants are tracked, losses are registered and best practical efforts made for their location and recovery. • Year 4 is: A review of the FAD reporting system indicates that the loss of FADs is minimised and they are highly unlikely to impact on VMEs; FAD management study results are published <p>FAD Watch & Derelict FADs</p> <ul style="list-style-type: none"> • Echebatar is working closely with stakeholders and local projects to recover derelict FADs. • FAD Watch is a collaborative initiative to minimize the impact of FADs in coastal ecosystems. IOTC-2018-WPEB14-12. • The SIOTI 2019 review reports that FAD Watch had been expanded to 42 vessels amongst 5 islands. • An agreement between stakeholders was signed in November, 2019. https://echebatar.com/wp-content/uploads/2019/11/SIOTI-FAD-WATCH-MOA-FINAL-DOCUMENT.pdf • Echebatar has started planning a project that seeks to work with local stakeholders in other countries similar to FAD Watch. <p>Echebatar has contracted AZTI to complete research programmes to determine deployment areas that are highly likely to result in stranding of derelict FADs on coral reefs.</p>
<p>CONDITION 3: 2.4.2 Habitats management strategy. By the third annual surveillance audit, the client must provide evidence that a partial strategy is in place that is expected to result in it being highly unlikely that derelict FADs could reduce structure and function of the coral reefs to a point where there would be serious or irreversible harm.</p>	<p>See condition 2.</p>
<p>CONDITION 4: 2.4.3 Habitats information By the</p>	<p>The following activities related to Conditions 2 & 3 respond to Condition 4.</p> <ul style="list-style-type: none"> • Echebatar only deploys FADs with satellite tracking buoys.

<p>fourth annual surveillance audit, the client must provide evidence that information is adequate to allow for identification of the main impacts of derelict FADs on coral reefs, and there is reliable information on the spatial extent of interaction and on the timing and location of use of the fishing gear.</p>	<ul style="list-style-type: none"> • Echebatar is working with AZTI so that by early 2020, all 2019 FAD purchases, activation, status and recovery will be fully documented and available for inspection. • This system will account for lost FADs and reduce the uncertainty about their actual number. • This meets with the SIOTI approach. • The SIOTI action plan Year 3 is that all FADs operated by FIP participants are tracked, losses are registered and best practical efforts made for their location and recovery. • For Year 4: A review of the FAD reporting system indicates that the loss of FADs is minimised and they are highly unlikely to impact on VMEs; FAD management study results are published <p>Echebatar has contracted AZTI to complete research programmes to determine deployment areas that are highly likely to result in stranding of derelict FADs on coral reefs.</p>
<p>CONDITION 5: 2.5.3 Ecosystem information.</p> <p>S1a. By the fourth annual surveillance audit, the client must provide evidence that the main impacts of the FADs used in the UoC on these key ecosystem elements can be inferred from existing information, and some have been investigated in detail.</p> <p>S1d. By the fourth annual surveillance audit, the client must provide evidence that there is adequate information on the impacts of the UoA on these components to allow some of the main consequences for the</p>	<p>After considering</p> <ul style="list-style-type: none"> • The scale of our fishery; • The limited potential for it to impact the ecosystem; and • The resources required to complete comprehensive research that would extend beyond the potential impact of our own fishery. <p>We identified 3 options to investigate the potential impact of our FADs on the ecosystem:</p> <ul style="list-style-type: none"> • Internal research including cooperative work with our strategic partners AZTI; • Contracting independent consultants; or • Integrating our work plan with the Action Plan defined by SIOTI in the implementation of its FIP. <p>The third option was selected as:</p> <ul style="list-style-type: none"> • The SIOTI UoA responds as our UoC; • Echebatar is a member of SIOTI; and • SIOTI contracts consultants for specific activities; <p>SIOTI</p> <ul style="list-style-type: none"> • The SIOTI FIP identified activities related to PI 2.5.3 within a time-bound work plan that meets our Condition 5.

ecosystem to be inferred.	<ul style="list-style-type: none"> • One of the conclusions of the pre-assessment⁵ of the SIOTI fishery was “<i>Whilst there has not been a major impact on oceanic productivity detected to date, the continued and increasing pressure of tuna fisheries is of concern and this suggests a greater approach to ecosystem-based management by IOTC is required. There is also a need to progress ecosystem modelling in the Indian Ocean and to assess the trophic implications of both tuna fishing and other factors such as climate change. Whilst there is some information on the key elements of the ecosystem, the main impacts the UoA on these key ecosystem elements can be inferred from existing information, but have not been investigated in detail.</i>” • The subsequent FIP scoping document⁶ required “<i>adequate knowledge of the impacts of the UoA on the ecosystem. Additional data and information gathering initiatives, if necessary, formally agreed and in place by the end of Year 4</i>” (i.e. end 2021). <p>SIOTI ACTIONS</p> <ul style="list-style-type: none"> • Action 1: Risk assessment of the use of FADs and their possible impact on target species stock structure and the key elements underlying ecosystem structure and function. • Action 2: Development of an ecosystem-based strategic approach to tuna fisheries management in the Indian Ocean. • Action 3: Ecosystem based strategic approach to tuna fisheries management is independently evaluated. • Action 4: Ecosystem based strategic approach to tuna fisheries management in the Indian Ocean is being successfully implemented. • Action 5: Information gaps analysis on the main impacts the UoA on key ecosystem elements evaluated and addressed, where necessary <p>TIMETABLE</p> <ul style="list-style-type: none"> • Y1: Working Paper on EAFM to IOTC’s WP on Ecosystems and Bycatch (WPEB). Preparation of an Intersessional Working Paper on the core elements of EAFM needs and requirements resulting from the ecosystem impacts of purse seine fishing for tuna in the Indian Ocean. • Y2: EAFM Information Gaps Analysis • Y4: Independent evaluation of IOTC's EAFM approach. Scientific evaluation to determine the level of objective
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⁵ MSC Pre-Assessment of the Seychelles flagged tuna purse seine fishery - 2016) https://fisheryprogress.org/system/files/documents_assessment/Seychelles%20pre-assessment%20report%2007-12-15%20%28002%29_0.pdf

⁶Scoping Document for a Tuna Fisheries Improvement Project in the Indian Ocean 2016 https://fisheryprogress.org/system/files/documents_scoping/TUE%20WIO%20Tuna%20FIP%20Scoping%20Report%20-%20Final%2020161005_edit_0.pdf

evidence that an ecosystem-based management strategy is being implemented successfully.

SIOTI FIP Action Plan Review (Year 2)

- Options to investigate the potential impact of the FADs used in the UoA/UoC on the ecosystem were considered in 2018.
- Implementation of the preferred option, to produce a Working Paper on EAFM to IOTC's WP on Ecosystems and Bycatch (WPEB), was delayed until after liaison with scientists at the WPEB in September 2018.
- In April 2019, SIOTI commissioned a consultant (Dr Maria José Juan-Jordá) to produce a working paper on EAFM. This was presented in October 2019.⁷
- The objective of the consultancy was to examine the core requirements of an ecosystem approach to fisheries management resulting from the ecosystem impacts of tuna purse seine fishing in the Indian Ocean.
- The paper identifies the key information gaps in enabling an ecosystems approach to tuna fisheries management in the Indian Ocean, reviews the key risk areas associated with the ecological impact of FAD use, and identifies potential management improvements.

Jorda

- It reviews the key risk areas associated with the impact of purse seine fisheries on the marine ecosystems (including impacts on non-targeted species, habitats and the structure and function of ecosystems).
- The ecological impacts of fisheries on marine ecosystems can be broadly categorized in four types of impacts:
- *The identified* Options to investigate were: to test whether FADs may affect the behaviour and large-scale movements and habitat utilization of tunas, the large-scale movements would need to be compared before and after the period of the large-scale deployment of FADs. The current data and available research are not suitable to test this.
- IOTC has adopted measures for the use of non-entangling FADs and promotes the use of sustainable materials to construct them such as biodegradable FADs.⁸
- There are also private actions, for example the **FAD Watch program**. *'Mitigating the impacts of lost drifting FADs and lost buoys may be possible by avoiding deployment zones and time periods that increases the probability of losing leading to an increase in beaching events (Maufroy et al. 2015)'*.⁹

⁷ <https://echebstar.com/wp-content/uploads/2019/11/Support-for-the-development-of-an-ecosystem-approach-to-fisheries-management-for-Indian-Ocean-fisheries.pdf>

⁸ Note: Since 2016, Echebstar has exclusively used non-entangling FADs. See <https://www.echebstar.com/assets/pesca/NON-ENTANGLING-FADS.pdf>. *Con estos datos se analizará em impacto de los mismos en el ecosistema.*

⁹ In <https://www.iotc.org/documents/WPEB/14/12> there is a paper available 'FAD Watch: a collaborative initiative to minimize the impact of FADs in coastal ecosystems' Here be can see some data to analyse the ecosystem impact of the FADs, as an example Figure 3. Monthly number of entries/exits of buoys to/from the EEZ of Seychelles in 2016 (left) and 2017 (right). Entries to the EEZ are shown in blue and exist in red.

	<ul style="list-style-type: none"> • ‘Table 4. A summary of ecosystem indicators to capture and describe changes in multiple attributes of open ocean ecosystems derived from the impacts of tuna fishing’. • ‘To test whether FADs may affect the behaviour and large-scale movements and habitat <p>Research in process</p> <ul style="list-style-type: none"> • BIOFADs projects: Echebatar will construct FADs from bio-degradable materials to reduce the potential risk to corals. Echebatar is working closely with AZTI to develop biodegradable FADs.¹⁰ • Echebatar fully cooperates with the project SC07 “Testing designs and identify options to mitigate impacts of drifting FADs on the Ecosystem –EASME/EMFF/2017/1.3.2.6 - FWC EASME/EMFF/2016/008 Provision of SAF Beyond EU waters”. <p>Echebatar has contracted AZTI to complete research programmes to determine deployment areas that are highly likely to result in stranding of derelict FADs on coral reefs.</p>
<p>CONDITION 6: 3.1.2 Consultation, roles and responsibilities. By the third annual surveillance audit, the management system in the Seychelles includes consultation processes that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of the information obtained</p>	<p>The Government of Seychelles published SEYCHELLES FISHERIES SECTOR POLICY AND STRATEGY 2019 A major part of the process used to define the Strategy was in-depth stakeholder consultation.</p> <p>One of the challenges identified by the Strategy is:</p> <ul style="list-style-type: none"> • Participatory approach to management of fisheries: Despite a growth in the number of fishery-related associations, there is a lack of collective bargaining, coordination and cohesion to effect change that will directly benefit fishers, improve sustainability and business growth. <p>One of the defined objectives is:</p> <ul style="list-style-type: none"> • Promote the principles of visibility, transparency, participation and inclusivity in decision-making processes which will enable the industry to develop to its full potential within a supportive regulatory framework. <p>Two of the defined elements of Policy 1 (Good governance and institutional strengthening) are:</p> <ul style="list-style-type: none"> • Engage with formal and informal resource groups at the government and community level to foster stakeholder engagement in the policy making and implementation; • Consult with non-governmental organisations and the fishing industry on new management measures and developments and support the development of associations, cooperatives and federations;

¹⁰ <https://iotc.org/sites/default/files/documents/2019/08/IOTC-2019-WPEB15-34.pdf>

Three of the defined elements of Policy 2 (Sustainable management of fisheries and climate resilience) are:

- Encourage fisheries sector stakeholders to better represent themselves and participate meaningfully in co-management through stronger associations, cooperatives and federation into an apex national organization;
- Mainstream effective fisheries licensing and limited-entry within management plans in a progressive manner with close consultation and agreement of the relevant stakeholders;
- Establish mechanisms that encourage fisheries statisticians, researchers, and managers to publicly engage with fishers and other stakeholders to explain their findings and advice.

Arising from the strategy, Seychelles has prepared a FISHERIES COMPREHENSIVE PLAN. <https://echebatar.com/wp-content/uploads/2019/11/Seychelles-Fisheries-Comprehensive-Plan-Nov-2019.pdf>. One of the four guiding principles for the plan is:

- A shared partnership approach that will create smart partnerships at all levels (national and organisational), where Government still provides policy leadership. This partnership should encompass individuals, groups, communities, civil society, the private sector, local and central Government, as part of an overall participatory approach;

The Plan is a detailed presentation of many actions that are programmed to take place in order to meet the Strategic objectives. The only specific reference to stakeholders is under 8. Fishery Association.

- Encourage the establishment a national structure to increase unity and cooperation in the fisheries sector among the associations that will play an active role in advancing the interests of the industry at national and international level. The structure should also aim to preserve and promote the collective interests of the different associations in Seychelles.

While there are no other specific references to stakeholders involvement; it should be understood that the Plan is an outcome of comprehensive Stakeholder consultation rather than an exercise to promote stakeholder consultation.

Following confirmation of the Plan the next step that will be taken is the passing of a new Fisheries Law. The drafting is a work in process which includes:

- 5l the interests of artisanal fishers shall be taken into account, including their participation in management of their respective fisheries;
- 5n an understanding of and broad and accountable participation by stakeholders in the conservation, management, development and sustainable use of fisheries resources shall be promoted to the extent practicable, including the principles of visibility, transparency, participation and inclusivity in the decision-making process; and

	<p>8 (2) The CEO may cause to be prepared Fisheries Management Plans at national or local levels for any fishery or fisheries within the scope of this Act, and shall do so for any fishery designated as a priority in accordance with subsection (1), and in doing so shall ensure that consultations with stakeholders are undertaken.</p>
<p>CONDITION 7: 3.2.1 Fishery-specific objectives. By the second annual surveillance audit, short and long-term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 & 2, are explicit within the fishery-specific management system</p>	<p>The Government of Seychelles published SEYCHELLES FISHERIES SECTOR POLICY AND STRATEGY 2019 (Section 12 Annex 1).</p> <p>The Policy defines a number of objectives including:</p> <ul style="list-style-type: none"> • Manage fisheries resources through ecosystem-based approaches and ensure that policies, legislations and infrastructure development are aligned towards achieving sustainability, taking into account climate change, international commitments and global developments; • Foster optimum utilisation of fisheries and aquaculture resources to ensure ecological and socioeconomic sustainability in resource-use and domestic developments, while recognising traditional norms; <p>Policy 1: Good governance and institutional strengthening includes</p> <ul style="list-style-type: none"> • Promote fisheries management and aquaculture development based on the Ecosystems Approach to Fisheries, the Ecosystems Approach to Aquaculture, the FAO Code of Conduct on Responsible Fishing, the FAO voluntary instrument for Securing Sustainable Small-Scale Fisheries and the guidelines laid down therein, as well as the FAO Technical Guidelines for Aquaculture Development, as well as the relevant provisions of the SADC/IOC Protocol on Fisheries; • Promote and support the adoption of global BMPs so that the industry is ecologically sustainable and becomes internationally competitive; <p>Policy 2: Sustainable management of fisheries and climate resilience includes</p> <ul style="list-style-type: none"> • Manage all fisheries subsectors with a view to incorporate eco-labelling and certification so as to ensure stock sustainability and subsector economic viability; • Consider national and international climate-change research findings within resource assessments and incorporate appropriate adaptation measures within fisheries and aquaculture regulation to increase resilience to climate change; • Undertake an assessment of the vulnerability of the fisheries sector to climate change and adaptation measures that may be possible; • Encourage the development of a select set of long-term indicators that would monitor the climate change impacts within the fisheries sector; <p>Policy 6: Seychellois stake holding in the industrial fisheries sector includes:</p> <ul style="list-style-type: none"> • The industrial fisheries sector is to be developed in a gradual, cooperative and collaborative manner to increase local partnership for the increasing good of all Seychellois, and partners. Opportunities throughout the industrial

	<p>fishing sector value-chain shall be equitably accessed and provisions made to encourage more local participation and greater local stake holding. The Government will promote an enabling environment to increase stake holding and pave the way for interventions that will achieve fully inclusive Seychellois participation. To address Seychellois stake holding in the sector, the Government will undertake the following strategies:</p> <ul style="list-style-type: none"> • Prioritize the issue of tuna industrial fishing licences to those operations incorporating joint venture approaches; • Evaluate the possibility to allocate industrial fisheries rights to Seychellois nationals in a bid to promote resource ownership and participation in the industry; • Fix minimum levels of local participation for different segments of the fisheries value-chain; • Establish funding sources to support local entrepreneurs within the industrial sector; • Review the responsibilities of Seychelles-flagged vessels and encourage flagging with greater national benefits; • Encourage shore-based facilities by Seychellois; • Establish an appropriate legal framework for joint venture partnership with local companies; • Undertake a review of the access of foreign fishing vessels to Seychelles waters in collaboration with operating partners so as to increase both the national and operating partners' benefits;
<p>CONDITION 8: 3.2.2 Decision making processes By the third annual surveillance audit: Sid. Information on the fishery's performance and management action relevant to the Seychelles fishery and private agreements is available on request, and explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation & review activity</p>	<p>The issue of private agreements is covered in the ECHEBASTAR STRATEGY & OPERATIONAL PLAN FOR A SUSTAINABLE PURSE SEINE TUNA FISHERY IN THE INDIAN OCEAN 2019 -2023 that was made available to stakeholders with publication on the Echebatar web site.</p> <p>Specifically, in relation to fishery agreements, the Strategy states,</p> <ul style="list-style-type: none"> • To provide stakeholders with comprehensive information on Echebatar activities under private fishing agreements. • To promote greater transparency in the private agreements at an international and regional level. <p>We have published the licenses that allow our vessels to operate in the fishery waters of coastal nations and SIDs</p> <p>Through the 6-monthly reports, we inform stakeholders of the activities of our vessels in the fishery waters of coastal nations and SIDs.</p> <p>We have advocated full implementation of the Tuna Transparency Initiative (TTI) in the Long Distance Fleet Advisory Council (LDAC) of the EU.</p> <p>The separate agreements with coastal states are provided in the original MSC certification report.</p> <p>https://fisheries.msc.org/en/fisheries/echebatar-indian-ocean-purse-seine-skipjack-tuna/@assessments</p>

Appendix 3: MSC Recommendations

MSC RECOMMENDATIONS

RECOMMENDATION 1. 1.2.1. Observers estimate and report on discarded catch and reasons for discarding

FINDING FIRST ANNUAL SURVEILLANCE AUDIT: Discarding any of the tropical tuna species targeted by the industrial purse seine fleet operating in the IO TC area is ban since the adoption of the IOTC Res 19/05. This Resolution states that Contracting Parties and Cooperating Non-Contracting Parties shall require all purse seine vessels to retain on board and then land all bigeye tuna, skipjack tuna, and yellowfin tuna caught, except fish considered 'unfit for human consumption' (see below for a detailed description of this term). Further, Contracting Parties and Cooperating Non-Contracting Parties shall require all purse seine vessels to retain on board and then land, to the extent practicable, the following non-targeted species or species group; other tunas, rainbow runner, dolphinfish, triggerfish, billfish, wahoo, and barracuda, except fish considered 'unfit for human consumption', and/or species which are prohibited from retention, consumption, or trade through domestic legislations and international obligations.

The Resolution also establishes the following procedures for the implementation of full retention requirements:

- a) No bigeye tuna, skipjack tuna, yellowfin tuna and non-targeted species referred to in paragraph 2 caught by purse seine vessels may be discarded after the point in the set when the net is fully pursed and more than one half of the net has been retrieved. If equipment malfunctions affect the process of pursing and retrieving the net in such a way that this rule cannot be complied with, the crew must make efforts to release the tunas and the non-targeted species as soon as possible.
- b) The following two exceptions to the above rule shall apply:
 - i. Where it is determined by the captain of the vessel that tuna (bigeye tuna, skipjack tuna or yellowfin tuna) and the non-targeted species as listed in Para 2 caught are unfit for human consumption, the following definitions shall be applied:
 - "unfit for human consumption" are fish that:
 - is meshed or crushed in the purse seine; or
 - is damaged due to depredation; or
 - has died and spoiled in the net where a gear failure has prevented both the normal retrieval of the net and catch, and efforts to release the fish alive;
 - "unfit for human consumption" does not include fish that:
 - is considered undesirable in terms of size, marketability, or species composition; or
 - is spoiled or contaminated as the result of an act or omission of the crew of the fishing vessel.
 - ii. Where the captain of a vessel determines that tuna (bigeye tuna, skipjack tuna or yellowfin tuna) and the non-targeted species as listed in Para 2 were caught during the final set of a trip and there is insufficient storage capacity to accommodate all tuna (bigeye tuna, skipjack tuna or yellowfin tuna)

and the non-targeted species caught in that set. This fish may only be discarded if:

- the captain and crew attempt to release the tuna (bigeye tuna, skipjack tuna or yellowfin tuna) and the non-targeted species alive as soon as possible; and
- no further fishing is undertaken after the discard until the tuna (bigeye tuna, skipjack tuna, and/or yellowfin tuna) and the non-targeted species on board the vessel has been landed or transhipped.

The Resolution also determines that where the captain of the vessel determines that fish should not be retained on board in accordance with Clauses (i) and (ii) above, the captain shall record the event in the relevant logbook including estimated tonnage and species composition of discarded fish; and estimated tonnage and species composition of retained fish from that set.

Therefore, since 2019 discarding skipjack is totally prohibited, and in the case of non-retention the event shall be recorded by the captain. Further, the certified fleet has 100% observer coverage and observers do report all individuals' discarded (mainly silky sharks), detailing fate (alive/dead). The client confirmed during the site visit that no skipjacks are discarded, even before the IOTC Resolution 19/05 on discards ban, as stated in the rationale given to SI(f) of PI 1.2.1 (see section 5.4, PI 1.2.1)

CONCLUSION: Closed

RECOMMENDATION 2. 2.3.3. A higher percentage of observer data is available for review each year at annual surveillance audits to better assess impacts on ETP species

FINDING FIRST ANNUAL SURVEILLANCE AUDIT: See Condition 1.

CONCLUSION: Closed. This recommendation was created prior to final assessment scoring and the creation of Condition 1. The recommendation is no longer required.

RECOMMENDATION 3. 2.4.3. Echebatar maintains a database of the number of lost FADs by area and date.

FINDING FIRST ANNUAL SURVEILLANCE AUDIT: See Condition 4.

CONCLUSION: Closed. This recommendation was created prior to final assessment scoring and the creation of Condition 1. The recommendation is no longer required.

Appendix 4: Work Plan: MSC Conditions 1 to 8. March – November 2020

CONDITIONS		
CONDITION / FINDING: FIRST ANNUAL SURVEILLANCE AUDIT / MILESTONE YEAR 2	ECHEBASTAR STRATEGY / OPERATIONAL PLAN	OBJECTIVES YEAR 2
<p>Condition 1: 2.3.3 ETP species information. By the fourth annual surveillance audit, the client must demonstrate that information is adequate to measure trends and support a strategy to manage impacts on ETP species.</p> <p>FINDING FASA: The team found the progress on this condition to be 'ON TARGET'.</p> <p>MSY2. Echebatar must provide evidence that the amount of processed data available has been significantly improved and that protocols for data processing have been established to assure the provision of the data required in future years.</p>	<p>Strategy. Robust data is available and up-dated at least on a 6 monthly basis. Fish skippers record in their log books any sightings of ETP species. Any practices that may affect ETP species are prohibited</p> <p>Operational Plan. Robust data on by-catch that is recorded by on-board observers will be available for at least 80% of the purse seine sets. The data will be reviewed as it becomes available to identify if there has been any increase in risk to ETP species. If there is increased interaction, there will be an analysis of the potential causes. Data available to stakeholders on our web site will be updated at least on a 6-monthly basis, with analysis to support stakeholder understanding of the situation.</p>	<p>Objectives</p> <ol style="list-style-type: none"> 1. To maintain the current activities that provide data on an on-going basis on the breakdown of the total catch in our FSC and FAD sets. 2. To present the data to stakeholders in the 6-monthly reports. 3. To identify any changes that would require a review of the strategy and management actions. <p>Approach</p> <ol style="list-style-type: none"> 1. There appears to have been limited change to the interaction of our fishery with ETP species. 2. However, we are mindful that 5-years of data are needed to clearly show trends and identify issues. Accordingly, we will maintain the activities of the first year. 3. We are also aware that should other purse seine fisheries in IO are certified under PI 2.3.1 we will need to take account of cumulative effects. We will maintain a watching brief on any fisheries under

		<p>assessment to ensure the compatibility of information available and identify any difference between the data sets.</p> <ol style="list-style-type: none"> 4. In completing the work we will cooperate fully with SIOTI while also maintaining ourselves informed of activities and outcomes under the OPAGAC FIP. 5. Not only will emphasis be on improving the quality and quantity of the data, but also developing a better understanding of that data. 6. As previously reported we are reviewing three possible activities: tagging of released sharks; Mapping of the differences in the proportion of silky sharks caught by set; and Correlation of the silky shark by-catch with the total catch per set
<p>Condition 2: 2.4.1 Habitat outcome By the fourth annual surveillance audit, the client must demonstrate that FADs are highly unlikely to reduce structure and function of coral reefs to a point where there would be serious or irreversible harm.</p> <p>FINDING FASA</p> <p>The team found the progress on this condition to be 'ON TARGET'.</p> <p>MSY2.</p> <p>Echebatar must provide evidence that the plan has been fully implemented with a description of the actions undertaken.</p>	<p>Strategy.</p> <p>We will review the number of dFADs that we operate (see below) in the expectation that this will reduce the number lost.</p> <p>We will construct dFADs from bio-degradable materials to reduce the potential risk to corals.</p> <p>We will establish a system to account for lost FADs and reduce the uncertainty about their actual number.</p> <p>We will work closely with stakeholders and local projects to recover derelict FADs.</p> <p>Operational Plan.</p> <p>We consider corals in generic terms assuming the worst-case scenario that all potential interactions are with the</p>	<p>Objectives</p> <ol style="list-style-type: none"> 1. Working closely with AZTI and SIOTI as required, to implement the work plan established in Year 1. <p>Approach</p> <ol style="list-style-type: none"> 1. Reduce the number of FADs; 2. Continue the development of BioFads. 3. Improve FAD traceability and accounting for lost FADs 4. Reduce the risk of FADs damaging corals FAD recovery program (including FAD Watch)

	<p>most vulnerable species.</p> <p>Recalling that under the MSC, elements of a partial strategy need not have been introduced for that specific issue, our strategic response to concerns about the outcome, management strategy and information related to the potential impact of our fishery on corals in the IO comprises a number of elements.</p>	
<p>Condition 3: 2.4.2 Habitats management strategy.By the third annual surveillance audit, the client must provide evidence that a partial strategy in place that is expected to result that it will be highly unlikely that derelict FADs could reduce structure and function of the coral reefs to a point where there would be serious or irreversible harm</p> <p>FINDING FASA</p> <p>The team found the progress on this condition to be 'ON TARGET'.</p> <p>MSY2. Echebatar must provide evidence that the partial strategy has been fully implemented with a description of the actions undertaken</p>	<p>Linked to Condition 2.</p>	<p>Objectives</p> <p>1. Working closely with AZTI and SIOTI as required, to implement the work plan and provide evidence to the SASA that the partial strategy has been fully implemented</p> <p>Approach</p> <p>See condition 2.</p>
<p>Condition 4. 2.4.3 Habitats information By the fourth annual surveillance audit, the client must provide evidence that information is adequate to allow for identification of the main impacts of derelict FADs on coral reefs, and there is reliable information on the spatial extent of interaction and on the timing and location of use of the fishing gear.</p> <p>FINDING FASA</p>	<p>Linked to Condition 2.</p>	<p>Objectives</p> <p>1.Working closely with AZTI and SIOTI as required, to implement the work plan and provide evidence to the SASA that information is being collected.</p> <p>Approach</p> <p>Apart from information on the elements identified under condition 2, Echebatar will</p>

<p>The team found the progress on this condition to be 'ON TARGET'.</p> <p>MSY2. Echebatar must provide evidence that information is being collected.</p>		<p>plan and start to implement a Project designed to identify the nature and extent of damage occasioned to coral reefs from a derelict FAD differentiating between the structure and the beacon.</p>
<p>Condition 5. 2.5.3 Ecosystem information.</p> <p>Sla. By the fourth annual surveillance audit, the client must provide evidence that the main impacts of the FADs used in the UoC on these key ecosystem elements can be inferred from existing information, and some have been investigated in detail.</p> <p>Sld. By the fourth annual surveillance audit, the client must provide evidence that there is adequate information on the impacts of the UoA on these components to allow some of the main consequences for the ecosystem to be inferred.</p> <p>FINDING FASA</p> <p>The team found the progress on this condition to be 'ON TARGET'.</p> <p>This is a difficult and contentious issue area with progress towards resolution unlikely by a single fishery client. Echebatar has sensibly chosen to work with SIOTI to make progress and with additional UoA under assessment progress might be enhanced. There will be need for coordination across future overlapping fisheries & a consequent need potentially to reschedule this condition</p>	<p>Strategy</p> <p>We will support implementation of the SIOTI FIP.</p> <p>Operational Plan</p> <p>FAD Management Plan.</p>	<p>Objectives</p> <ol style="list-style-type: none"> 1. Working closely with AZTI and SIOTI as required, to implement the work plan and provide evidence to the SASA that the selected approach has been implemented. <p>Approach</p> <ol style="list-style-type: none"> 1. We will work with SIOTI. 2. We will maintain a watching brief on fisheries under assessment.

<p>MSY2. Echebatar must provide evidence that the preferred option for investigation continues to be implemented</p>		
<p>Condition 6. 3.1.2 Consultation, roles and responsibilities. By the third annual surveillance audit, the management system in the Seychelles includes consultation processes that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of the information obtained</p> <p>FINDING FASA</p> <p>The team found the progress on this condition to be 'ON TARGET'.</p> <p>MSY2. Echebatar will provide evidence that the consultation process for tuna management in the Seychelles has met regularly with stakeholders and a formal record of those meetings as made available to all stakeholders is provided to the team.</p>	<p>Strategy</p> <p>Maintain regular contact & dialogue with the Seychelles fishery authorities to better understand their policy and its implementation.</p> <p>Maintain close contact with all Seychelles stakeholders and work with them in making submissions to Government.</p> <p>Facilitate stakeholder participation in the decision-making process.</p> <p>Operational Plan</p> <p>Establish effective lines of communication with the Government of Seychelles and relevant stakeholders, with regular minuted meetings.</p> <p>Fully participate in any Government sponsored stakeholder consultations.</p> <p>Review and comment on Government reports to assess the degree of stakeholder consultation and the response to stakeholder concerns.</p>	<p>Objectives</p> <p>1. To monitor the Government of Seychelles implementing its recently published plans.</p> <p>Approach</p> <p>1. In about June 2020, the Echebatar sustainability team will conduct a brief study on the consultation process in the Seychelles.</p>
<p>Condition 7. 3.2.1 Fishery-specific objectives. By the third annual surveillance audit, short and long-term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery-specific management system.</p> <p>FINDING FASA</p> <p>The team found the progress on this</p>	<p>Strategy.</p> <p>NEW. To monitor developments in the Seychelles and make representations to the Government of Seychelles as appropriate.</p> <p>Operational Plan.</p> <p>NEW. We will maintain a watching brief on the situation in Seychelles and maintain stakeholders informed.</p>	<p>Up-dated Client Action Plan</p> <p>As noted in the certification report The Fisheries Act (2014) introduces the concept of Fishery Management Plans, which are based on stakeholder participation. SFA is committed to the preparation of an FMP for the tuna fishery.</p> <p>Echebatar will work with SFA and other key stakeholders to progress the planning for the drafting and subsequent implementation of</p>

<p>condition to be 'ON TARGET'.</p> <p>MSY2. (Revised) Echebatar will provide evidence to the audit team in the second annual surveillance audit on the progress of the establishment of explicit short and long-term</p>		<p>an FMP that will follow international best practice with the identification and definition of short and long-term objectives.</p> <p><u>Activities Year 2 (2020)</u></p> <p>Echebatar will meet on a regular basis with SFA and other key stakeholders to promote the concept of a specific fisheries management plan for tuna fisheries.</p> <p><u>Deliverables Year 2</u></p> <p>Echebatar will present the auditors a list of the meetings completed together with signed minutes that provide evidence that the concept of a tuna FMP has been fully discussed</p> <p><u>Activities Year 3 (2021)</u></p> <p>It is anticipated that an FMP for tuna fisheries will be applied in the third year of certification. This will include defined short and long-term objectives.</p> <p><u>Deliverables Year 3</u></p> <p>Echebatar will present the auditors with a copy of the approved FMP.</p> <p><u>Action Owner</u></p> <p>ECHEBASTAR</p> <p><u>Action Partners</u></p> <p>ECHEBASTAR, SEYCHELLES MINISTRY OF FISHERIES. SFA. AZTI</p> <p><u>Stakeholders</u></p> <p>IOTC</p>
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<p>Condition 8. 3.2.2 Decision-making processes By the third annual surveillance audit: Sid. Information on the fishery’s performance and management action relevant to the Seychelles fishery and private agreements is available on request, and explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity</p> <p>FINDING FASA</p> <p>The team found the progress on this condition to be ‘AHEAD OF TARGET’, since Echebatar has provided evidence to the audit team that information on private agreements and fishing licences is available to stakeholders, together with other relevant documents on actions adopted ESWG meetings held.</p> <p>MSY2 (Revised).</p> <p>Echebatar will provide evidence to the audit team in the second annual surveillance audit that information on private agreements is available to stakeholders</p>	<p>Strategy.</p> <p>We will work with stakeholders to provide the transparency required on private agreements.</p> <p>Operational Plan.</p> <p>We will publish on our web site the texts of all the agreements that have been made to allow our vessels to operate in the fishery waters of coastal nations and SIDs.</p> <p>We will inform stakeholders of the activities of our vessels in the fishery waters of coastal nations and SIDs by date and catch, with up-dates in the 6-monthly report.</p> <p>We will advocate full implementation of the Tuna Transparency Initiative (TTI) in the Long Distance Fleet Advisory Council (LDAC) of the EU.</p>	<p>Up-dated Client Action Plan</p> <p>The Echebatar fishing agreements are made with coastal states that are Contracting Parties of IOTC.</p> <p>Accordingly, these follow IOTC requirements. However, we recognise that details on private agreements have led to some concern being expressed by stakeholders.</p> <p>The certification report correctly identifies several issues that may impact the approach to SFPAs and private agreements, while in relation to the latter it notes that they are approved by the Spanish Government, and the fisheries administration of the coastal state and are submitted to the IOTC.</p> <p><u>Activities Year 2 & 3 (2020/21)</u></p> <p>Echebatar will meet with other Spanish fishing companies that benefit from private agreements in the context of their representative organisations, OPAGAC and ANABAC, to consider the approach to meeting the condition.</p> <p>In that sense, OPAGAC and ANABAC are participants of the FIP, and as such, they will ensure to meet the highest standards of MSC.</p> <p>Echebatar will ensure that the issue is raised within the LDAC to ensure a wide consideration of the options to respond to the condition. This will be relevant, if, as anticipated, other segments of the EU distant water tuna fishing fleet aspire to MSC certification</p>
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Appendix 5: Work Plan: MSC Conditions 9 & 10. March – November 2020

<p>AUDITORS: For both new conditions set during the first surveillance audit (on PI 1.2.1 and 1.2.2), evidence for scoring at SG80 will take time to accrue, slightly beyond the period of certification. FCP 7.18.1.5 is therefore invoked with the conditions drafted to result in improved performance to the 80 level at the first surveillance following re-assessment.</p> <p>For the condition at PI 1.2.2, evidence of the effectiveness of tools in use to manage catches consistent with the agreed HCR will be required. Given the timing of catch limit setting by the IOTC in response to application of the HCR, and the delay in availability of information on annual catches, it will take a number of years for sufficient evidence to become available. If judgment is delayed until after the 2023 stock assessment, consistent with accruing evidence to score the condition related to PI 1.2.1, three or perhaps 4 years of evidence should be available to re-score at PI 1.2.2. This is a reasonable timeframe upon which to review evidence.</p>	
<p>Condition 9: NEW 1.2.1: By the first annual surveillance audit following re-certification (anticipated to be in 2024), the client must demonstrate that the harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1 SG80 (i.e., it is highly likely that the stock is above the PRI and is at or fluctuating around a level consistent with MSY).</p> <p>FINDING FAA.</p> <p>Scoring Table.</p> <p>MSC defines a harvest strategy as a combination of monitoring (PI1.2.3), stock assessment (PI1.2.4), a harvest control rule (PI1.2.2a,b) and management tools (PI1.2.2c). Monitoring and a stock assessment process are in place. A harvest control rule and reference points for Indian Ocean skipjack are defined by IOTC Res. 16/02. Discussions over catch allocations and/or other tools to restrict catch, effort or fishing capacity have been underway at IOTC for several years, but so far agreement has not been possible (e.g. see IOTC-2019-S23-PropA and PropM, presented at IOTC plenary 2019 but not accepted). Nevertheless, some tools not specifically aimed at skipjack are in place which may act to restrict skipjack catch somewhat. Tools currently in place which indirectly affect skipjack catches include the Interim Rebuilding Plan for yellowfin, Res. 18/01; FAD use restrictions under Res. 18/08; and the large, permanent closed area in the central Indian Ocean (EEZ of BIOT)</p> <p>The stock assessment suggests that the skipjack tuna stock is near to the target level of 40%B0 adopted in Res 16/02, while the exploitation rate is at or below the target level (see section</p>	<p>Client Action Plan (FASA):</p> <p><u>Year 2 (first certification cycle) to Year 1 (recertification)</u></p> <ol style="list-style-type: none"> 1. The management authorities relevant to the Echebatar fishery are IOTC and the two cooperating parties: EU/Spain and Seychelles. The relevant ones for the other MSC certified tuna fishery (Maldives P&L) is the IOTC with the Maldives as the cooperating party. 2. It is likely that in the near future an MSC assessment process will be announced for a Reunion-based fishery (IOTC/France/EU). 3. In addition, it is likely that within the next two years, new MSC assessments will start for other IO purse seine fisheries. 4. Given that each of the fisheries will be required to respond to the same conditions related to Principle 1, Echebatar will: <p>Work directly with SIOTI to define and implement a Strategy approved by SIOTI members (producers and</p>

4.2.6 and PI1.2.2c scoring below). The stock is therefore estimated to be achieving stock management objectives as of the most recent assessment (2017: final year of the assessment 2016). Since the assessment, skipjack catch has increased and in 2018, at 607,701 t, was the second highest on record, just below the 615 732 t caught in 2006. It is now at the top end of the catch range estimated in 2017 to be compatible with the internal HCR parameters and grid of assessments (see Section 4.2.6). Given the variability in recruitment and the responsiveness of the stock to environmental conditions, it is not possible to infer the exploitation rate in 2018 relative to the target level.

There are some tools in place, although not aimed at skipjack directly, which can be expected to constrain catches to some extent. It is important to bear in mind that the results of the 2017 stock assessment were different to the previous assessment which estimated that skipjack biomass was well above target levels, and also that 2018 was the first year in which the HCR was triggered. Further, 2018 catches were not known by the IOTC at its annual meeting in 2018. Even at its 2019 annual meeting, only interim 2018 catch statistics may have been available. IOTC has therefore arguably not had time as yet to react to the issues raised by the catch overshoot of the HCR catch limit. On this basis, given the MSE testing of the HCR and expectation of catch limitation, SG60 is met.

The 2018 catch is the second highest on record and estimated to have been 129% of the catch limit set by application of IOTC Res 16/02. Management tools in place are not directly linked to the skipjack catch, and to date have not shown that they constrain skipjack catch sufficient to comply with the catch limit set by Res 16/02. While it is arguable that the IOTC has not yet had the opportunity to consider and put in place tools to limit skipjack catches in line with triggered catch limits (see above), SG80 scoring requires that the harvest strategy not just the HCR be responsive to the state of the stock and the lack of both pre-agreed tools and slow reaction by the IOTC, at least in 2019, suggests the elements of the harvest strategy are not working effectively. SG80 is not met.

Audit Finding

SIOTI FIP is already working as a common ground for launching multi-stakeholder initiatives for the Indian Ocean tuna industrial purse seine fishery. Most of the participants mentioned at the client's action plan (see section 5.3.1) are already engaged in the SIOTI work plan.

On the other hand, the IOTC Res 16/02 on HCRs for skipjack in the IOTC area of competence acknowledged that the IOTC Scientific Committee has initiated a Commission requested

processors) covering adoption of an appropriate harvest strategy by the IOTC and its effective implementation.

Work closely with ANABAC to present the SIOTI Strategy for dialogue with the Government of Spain and its effective implementation by ANABAC Spanish flagged vessels.

Will present the SIOTI Strategy to the Government of the Seychelles and request its effective implementation by Seychellois flagged vessels.

Through SIOTI and directly, fully engage with IPNLF to define a common strategic approach for MSC certified tuna fisheries in driving IOTC policy.

Both independently and through SIOTI and ANABAC, be proactive in working with aspirant MSC certified Indian Ocean tuna fisheries to gain their support for the SIOTI approved Strategy.

Through its web site and reporting schedule, inform and consult with stakeholders on the SIOTI Strategy and its implementation.

Attend all meetings where it is able to participate that are related to the definition and implementation of a Harvest Strategy.

Prepare briefing papers on the harvest strategy for distribution as appropriate.

Monitor all fleet segments to inform stakeholders on the implementation of the strategy.

Deliverables Year 2 – Year 4

Echebaster will present all annual audits with evidence that it has fully implemented its client action plan, with a list of relevant meetings together with minutes, and copies of

<p>process leading to a management strategy evaluation (MSE) process to improve upon the provision of scientific advice on HCRs. Article 11 of this Resolution states that: “catch limit shall by default, be implemented in accordance with the allocation scheme agreed for skipjack tuna by the Commission” and establishes an allocation scheme in the absence of an allocation scheme. To date the Commission has not agreed on an allocation system, although the text of the resolution makes it clear that the IOTC roadmap goes through incorporating mechanisms (eg quota allocation ...) to the harvest strategy that allow a coordinated response of its different elements (TAC, HCRs, quota allocation) given changes in the status of the stock. However, it is not yet evident that the IOTC has responded to catch limits triggered by Res 166/02 by agreeing measures to ensure those limits are not exceeded (leading to the new condition at PI1.2.1) and the limited evidence on catches in 2018 of the triggered limit suggests the limit itself as a tool may not be effective (leading to the new condition at PI1.2.2</p> <p>MSY2: Echebatar must provide evidence at the Year 2 surveillance that, independently or jointly with industry groups, it has worked with relevant management authorities to press for IOTC action on ensuring adoption of appropriate measures consistent with scientific advice and responsive to the state of the stock such that management objectives reflected at PI1.1.1 are met. Expected score 75.</p>	<p>relevant reports and submissions.</p> <p><u>Deliverables Year 1 (re-certified fishery)</u></p> <p>Echebatar will provide evidence at the Year 1 of re-certification surveillance that the harvest strategy for skipjack tuna in the Indian ocean is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1 SG80.</p> <p><u>Action Owner</u></p> <p>ECHEBASTAR</p> <p><u>Action Participants</u></p> <p>ANABAC, SIOTI. IPNLF. AZTI</p>
<p>Condition 10: NEW 1.2.2: By the first annual surveillance audit following re-certification (anticipated to be in 2024), the client must demonstrate that available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.</p> <p>FINDING FAA.</p> <p>Scoring Table.</p> <p>It is possible to score tools as available under the condition that Stock biomass has not previously been reduced below the MSY level or has been maintained at that level for a recent period of time that is at least longer than 2 generation times of the species, and is not predicted to be reduced below BMSY within the next 5 years (SA5.2.5). Taking the target reference point adopted in IOTC Res 16/02(40%B0) as the proxy for BMSY (consistent also with the MSC default level), this is not the case, because the stock assessment time series of SB/TRP estimates that the biomass dipped below the TRP before recovering to its current level. Given that the biomass is estimated currently to be more or less exactly at the MSY proxy level, catches are at the upper level of those associated with application of the HCR adopted in Res</p>	<p>Client Action Plan (FASA):</p> <p><u>Year 2 (first certification cycle) to Year 1 (recertification)</u></p> <p>Two issues are related to the HCR established by IOTC 16/02; firstly Echebatar compliance and secondly the compliance of other fishers.</p> <p>Echebatar will continue to ensure fully compliance with the allocated catch quota of its vessels (both as a group and individually).</p> <p>Echebatar will report its catch and remaining quota (for the year) on a regular basis.</p> <p>Echebatar will support these reports with observer data and approved landing reports.</p>

16/02 and no forward projections are available, it is also not possible to say whether the biomass might be reduced below this level over the next 5 years. Scoring therefore needs consideration of the tools that are used/in use.

There is only one year where there was both a catch limit in place and a catch estimate. In this year, 2018, the catch was 129% of the catch limit computed under 16/02. However, the catch limit was only adopted by the IOTC at its annual meeting in June 2018, so it is questionable whether this is a reasonable comparison to assess the effectiveness of tools. Catch data for 2019 were not available at time of writing though there is no indication that the IOTC considered how to limit skipjack catches at its annual meeting in 2019, at which time interim 2018 catch data would have been available.

MSC FCRG SA2.5.6 requires that teams examine the current exploitation levels in the fishery, as part of the evidence that the HCRs are working and states Evidence that current F is equal to or less than FMSY should usually be taken as evidence that the HCR is effective. The SS3 stock assessment report (IOTC, 2017) provides estimates of F2016/FMSY for a range of model runs (n=30) including the reference case model. These estimate that F2016/FMSY is in the range 0.13-0.53 (ref. case: 0.30, median 0.32) – i.e., the current (or recent) estimated F is well below FMSY. On this technical scoring basis, there is some evidence that the tools are effective in controlling exploitation and SG60 is met.

The overall exploitation rate is appropriate, but the available evidence suggests that skipjack-specific tools to constrain catches to the catch limit set using the triggered HCR have are not yet in use. SG80 is not met.

Audit Finding

SIOTI FIP is already working as a common ground for launching multi-stakeholder initiatives for the Indian Ocean tuna industrial purse seine fishery. Most of the participants mentioned at the client's action plan (see section 5.3.1) are already engaged in the SIOTI work plan. The republic of Seychelles is also included among the participants of the SIOTI.

On the other hand, the IOTC Res 16/02 on HCRs for skipjack in the IOTC area of competence acknowledged that the IOTC Scientific Committee has initiated a Commission requested process leading to a management strategy evaluation (MSE) process to improve upon the provision of scientific advice on HCRs. Article 11 of this Resolution states that: "catch limit shall by default, be implemented in accordance with the allocation scheme agreed for skipjack tuna

Echebatar will continue to work with SIOTI to establish the procedures for the setting and allocation of quotas by IOTC and the Governments of the Seychelles and Spain.

Echebatar will continue to work with SIOTI to establish the procedures for the allocation of quotas among its producer members and robust monitoring of catches by individual vessels.

Echebatar will continue to work with SIOTI to establish the procedures for processor members in monitoring purchases by individual vessels in all fleet segments. Echebatar will consider independent 3rd party audits of landings as per agreements reached at SIOTI and how this may be applied by all purse seine vessels.

Echebatar will continue to work both independently and within the ambit of SIOTI to review and comment on proposals by other fleet segments e.g. IPNLF and OPAGAC.

Echebatar will monitor all fleet segments and inform stakeholders on the implementation of the harvest control tool.

As well as publishing the reports on its web page, all reports will be sent to SIOTI, IPNLF, WWF, the Government of Spain and the Government of the Seychelles.

Deliverables Year 2 – Year 4

Echebatar will present all annual audits with evidence that it has fully implemented its client action plan, with a list of relevant meetings together with minutes and copies of relevant reports and submissions.

Deliverables Year 1 (re-certified fishery)

Echebatar will provide evidence at the Year 1 of re-

<p>by the Commission” and establishes an allocation scheme in the absence of an allocation scheme. To date the Commission has not agreed on an allocation system, although the text of the resolution makes it clear that the IOTC roadmap goes through incorporating mechanisms (eg quota allocation ...) to the harvest strategy that allow a coordinated response of its different elements (TAC, HCRs, quota allocation) given changes in the status of the stock. However, it is not yet evident that the IOTC has responded to catch limits triggered by Res 166/02 by agreeing measures to ensure those limits are not exceeded (leading to the new condition at PI1.2.1) and the limited evidence on catches in 2018 of the triggered limit suggests the limit itself as a tool may not be effective (leading to the new condition at PI1.2.2).</p> <p>MSY2. Echebatar must provide evidence at the Year 2 surveillance that, independently or jointly with industry groups, it has worked with relevant management authorities to press for IOTC action on implementing measures that are effective in ensuring catch limits for skipjack tuna set using the HCR adopted in IOTC Res16/02 (or any successor) are not exceeded. Expected score 70.</p>	<p>certification surveillance to demonstrate that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.</p> <p><u>Action Owner</u></p> <p>ECHEBASTAR</p> <p><u>Action Participants</u></p> <p>ANABAC, SIOTI, IPNLF, AZTI</p>
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Appendix 6: Work Plan: SIOTI March 2020 – February 2021

SIOTI	
SIOTI ACTION PLAN	WORK PLAN MARCH 2020 to FEBRUARY 2021
1.1.1 Yellowfin Tuna	We will work with SIOTI to establish a consensus on the most appropriate harvest strategy and related harvest control rules that support the recovery of the IO YFT stock.
1.1.1 Skipjack tuna	We will work with SIOTI to establish a consensus on the most appropriate harvest strategy and related harvest control rules that support the recovery of the IO SKJ stock.
PI 1.1.2 YFT	We will support SIOTI to establish a consensus on the most appropriate rebuilding strategy to be applied to the purse seine fishery, following the SIOTI strategy i.e. Y3: (i) IOTC has adopted the above rebuilding strategy. (ii) Fishing mortality F is $<FMSY$; Y4: Stock rebuilding strategy implemented Y5: Stock assessment or other incontrovertible evidence shows that stocks are able to rebuild the stock within the specified timeframe.
PI 1.2.1. YFT, BET and SKJ	We will continue to work with SIOTI to establish meaningful and effective harvest strategies; We will review the position on the HS for skipjack at annual surveillance audits.
PI 1.2.2 YFT, BET and SKJ	We will support SIOTI to establish appropriate HCRs for the three tuna species following the SIOTI strategy i.e. Y3: HCR options considered and discussed between sessions and formally through IOTC meeting processes. IOTC record reflect discussions and progress. The main uncertainties are considered and discussed between sessions and formally through IOTC meeting processes. IOTC record reflect discussions and progress. Y4: HCRs for all three species discussed and agreed within IOTC and formally adopted as part of the harvest strategy implementation approach. Y5: Formal evidence is provided to demonstrate the HCR tools are appropriate and effective in reducing exploitation levels where necessary.
PI 1.2.3 YFT, BET and SKJ	We will support SIOTI's work with IOTC to improve the data base for non-purse seine fisheries.
PI 2.1.3 / PI 2.2.3	<p>We will ensure that reliable and robust data on the catch of our vessels is available for analysis and subsequent distribution to stakeholders to enable identification of any trends that may indicate an increased risk to individual species from our fishery.</p> <p>The on-going work programme with AZTI and SRP will be fully supported, with continuous training and verification of the data sets.</p> <p>The data will be provided to stakeholders in the proposed 3-monthly reports with analysis of any identified changes e.g. where the global data indicates a variation, we will assess the data from individual vessels and individual fishing trips to gain an understanding of potential reasons.</p>
PI 2.2.1	<p>We will closely monitor our by-catch to identify major and minor secondary species.</p> <p>Should the data indicate that a previously categorised minor species should be considered as major, we will review our fishing operations.</p> <p>We will input as appropriate to any SIOTO review of the situation</p>

PI 2.2.2	While none of our by-catch is of major secondary species, we monitor our catches to identify if there is any change in the position. We will be proactive in adopting any management measures that may be introduced to lower the catch of major secondary species.
PI 2.3.2	The defined SIOTI activity for Y3 relates to the adoption of specific management measures to address the bycatch of silky shark by all fisheries in the UoA, including a vessel-based CoP. We will work with SIOTI to identify and Implement measures to reduce the mortality of silky shark in the IO purse seine tuna fishery
PI 2.3.3	We fully support the SIOTI Action Plan i.e. Y4: Fleet operators and where necessary IOTC, put into place management measures, as necessary, to reduce the mortality of ETP species.
PI 2.4.1, PI 2.4.2 & PI 2.4.3	We fully support the SIOTI Action Plan i.e. Y3: All FADs operated by FIP participants are tracked, losses are registered and best practical efforts made for their location and recovery. Y4: A review of the FAD reporting system indicates that the loss of FADs is minimised and they are highly unlikely to impact on VMEs; FAD management study results are published
PI 2.5.1, PI 2.5.2, PI 2.5.3	We fully support the SIOTI Action Plan i.e. Year 3: Any agreed management measures to address identified risks, if any, are being implemented; IOTC puts into place management measures, as necessary, to implement an ecosystem approach to fisheries management; Additional data and information gathering initiatives, if necessary, are formally agreed and in place. Year 4: An independent evaluation provides objective evidence that the ecosystembased management strategy is working; An internal evaluation provides objective evidence that the ecosystem-based management strategy is being implemented successfully
PI 3.1.1	We will monitor any changes in the legal and customary framework relevant to the IOTC, Seychelles and EU.
PI 3.2.3	Component 3.2 is fishery specific. Echebatar fully complies with all regulations

Appendix 7: Work Plan: Echebatar Activities March 2020 – February 2021

Strategic Area	WORK PLAN MARCH 2020 to FEBRUARY 2021
Fish aggregating devices (FADs)	<ol style="list-style-type: none"> 1. By April, 2020 we will up-date the Echebatar FAD management plan to take account of comments received and any changed understanding of the various issues. 2. Once IOTC policy is defined at the 2020 IOTC meeting, we will confirm the number of FADs we will use and buy in 2020 (current proposal 300/ 500). 3. We will continue to advocate within SIOT that from 2022 there is a further reduction in the number of support vessels operating with the purse seine fishery in Indian Ocean. 4. We will continue to work on activities to ensure that all FADS deployed by Echebatar are constructed from bio-degradable materials from 2022. 5. We will continue to work with AZTI so that in 2020 all FAD purchases, activation, status and recovery are fully documented and available for inspection. 6. We will continue to work with other tuna catching companies and stakeholders in the FAD Watch programme, and seek to work with local stakeholders in other countries to replicate the experience. 7. Our sustainability working group will define activities and monitor progress.
Labour Standards	<ol style="list-style-type: none"> 1. We will continue to meet all international standards in our employment policy. 2. We will respond immediately to any new requirements and requests for information.
Stakeholders	<ol style="list-style-type: none"> 1. We will fully incorporate stakeholders into our planning and activities and maintain them informed of the progress we are making. 2. A 6-monthly report will be published in October 2020 and February 2021 to maintain all stakeholders informed of our activities and progress.
Small Projects Fund	<ol style="list-style-type: none"> 1. Planned projects: (i) extensión of FAD watch to another country; (ii) examine post reléase survival of released silky shark; and (iii) examine the correlation between the by-catch of sily shark and fishing area; (iv) Correlation of the silky shark by catch with the total catch per set. 2. We will consult to identify potential projects from 2021.