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Original: English

**FAD DATA: SUMMARY AND REVIEW OF THE FOB/FADs DEPLOYED BASED ON ST08-FADsDEP REPORTS (ICCAT DATABASE) BETWEEN 2011-2019***(ICCAT Secretariat)*

The ICCAT FADs database contains the information submitted annually by CPCs in the ST08-FADsDep since 2014. However, due to the changes in the FOB/FADs data requirements and the degree of spatial-temporal resolution of the information to be reported adopted by each of the recommendations on tropical tunas since 2016, the Secretariat had to modify the ST08-FADsDep e-form in 2017. These changes preclude the use of a unique database structure, and currently, the database contains data submitted before 2018 and after 2018 in separate tables. Nonetheless, the summary provided includes all data submitted until 2019 by CPCs.

As intended, the FAD Management Plan of the Commission aims primarily to monitor fishing activities of tropical tunas, **Table 1** presents a summary of the reported catches of SKJ, BET, and YFT by the purse seine and baitboat fisheries that are likely associated with FOB/FADs fisheries in the 2010-2019 period. **Table 2** presents the reporting CPCs that have submitted FOB/FAD information by year using the ST08 forms. However, it is noted that some of the ST08 data submitted indicated no FOB/FADs deployment, nor fishing activity using FADs by their national fisheries, these are indicated in **Table 3** by the zero red values in each case.

The annual number of deployed FOB/FADs is presented in **Table 4**. Since 2016 it was requested that information be provided on a monthly basis, **Table 5** shows the number of FOB/FADs deployed by month and year. Based on the type of material and source of the FOB/FADs, **Table 6** presents a summary of the available information on the type of FOB deployed by year and flag. Currently, most FOB/FADs deployed have a beacon associated that allows vessels to monitor or find it, **Table 7** shows the type of beacons reported by year and flag, most of this information is only available since 2015. In 2017 it was approved a major modification of the ST08 e-form, to accommodate new requirements for better implementation of the FAD Management Plan of the Commission. Since 2018 CPCs have provided information on the vessels associated with the deployment, service, and use of FOB/FADs by each fleet, **Table 8** shows the number of different vessels reported by each flag. The requirements also provide the spatial and monthly deployment of FOB/FADs, data on location is available since 2016. **Figure 1** shows the 1x1 lat-lon grids where at least one FOB/FAD was deployed by each flag in the years 2018/19. **Figures 2 and 3** present the density of deployments for the last four years (2016/19). From the 2016/17 data also available is the number of beacons followed by the flag/fleet vessels by month and lat-lon grid (**Figure 4**). Finally, **Figure 5** shows the log-based (*e*) of the total number of lost FOB/FADs by 1x1 lat-lon grid for 2018/19 as reported by the CPCs.

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Following the PA1 request during the 2nd intersessional meeting, the following new and updated tables are provided regarding tropical tunas fisheries:

- **Table 9** was updated and presents a summary by year (2010-2020) and Flag of the reported FAD catches tropical tunas (BET, SKJ, YFT) based on Task 2 catch-and-effort (CE) data and the corresponding number of FOB/FADs deployed by year (2010-2019, data for 2020 is still being processed) as reported through ST08-FADsDep form. Note that 2020 ST08 submissions are indicated by the shade-green cells, while submissions of historic FAD data are indicated by the blue-shade cells; dark blue indicates submissions of historic data using ST08 form, light blue indicates submissions in text files and different format.
- **Table 10** shows the summary of catch and fishing effort for tropical tunas FAD fisheries by year and flag, disclosing the type of unit of fishing effort reported in each case. Highlighted cells show those reports with unit of effort as "Number of sets on FADs", noting that some CPCs only reported the number of positive sets (i.e. catch > 0).

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- **Table 11** shows the current reported Task 1 Nominal Catch (NC) by flag and year (2000 - 2020) for tropical tunas (BET, SKJ, YFT) as reported to the Secretariat as of 18 August 2021.
- **Table 12** shows the summary of FAD information as reported in Tropical tunas fishing management plans (2020), FAD management plan (2020), and Reported FAD deployments with ST08-FADsDep form.
- **Table 13** summaries the FAD Historic information received by the Secretariat in 2021 by Flag, years provided, and format reported.
- **Table 14** provides a summary of the tropical tuna vessels by CPC, Vessel and Gear Type, as in the ICCAT Record of Vessels, as of today (02/09/2021).

**Table 1.** Nominal catches reported by flag for catches of tropical tunas (SKJ, YFT, BET) by the purse seine and baitboat fisheries that can be associated with FOB fisheries in the 2010-2019 period.

Species	BET YFT SKJ	YearC									
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Sum of Qty_t											
Flag	SpcGearGrp										
Angola	Purse seine	137	7	18							3,643
Argentina	Purse seine	12									
Belize	Purse seine	5,176	11,654	22,866	13,423	19,512	21,377	14,804	17,115	30,651	28,190
Brazil	Bait boat	23,351	30,740	31,480	33,290	25,064	17,992	16,864	14,944	15,363	16,029
	Purse seine		559	10							
Cape Verde	Bait boat			77	77	77	77				
	Purse seine	11,433	14,612	9,883	23,936	22,259	26,743	16,036	8,573	12,220	8,164
Côte d'Ivoire	Purse seine		2,482	8,317	4,524	2,870					
Curaçao	Purse seine	17,738	20,369	23,180	24,123	26,025	28,501	33,890	30,289	35,841	27,955
El Salvador	Purse seine						10,828	27,067	22,856	25,280	23,169
EU-España	Bait boat	12,785	19,190	23,331	13,167	14,457	11,845	16,222	16,787	16,772	15,280
	Purse seine	66,277	73,111	73,568	75,779	63,066	64,246	66,617	64,236	54,887	56,628
EU-France	Bait boat	1,420	1,778	1,815	736	1,146	1,330	1,837	1,686	1,274	1,695
	Purse seine	37,969	39,003	35,750	39,665	41,492	42,023	48,164	44,956	50,718	41,838
EU-Italy	Purse seine									0	2
EU-Portugal	Bait boat	15,757	10,580	8,763	9,461	5,476	4,313	2,381	4,458	10,890	5,477
	Purse seine	14	14	11	1		1	1	8	1	43
Ghana	Bait boat	20,916	23,294	22,867	16,250	16,962	19,341	20,518	15,424	17,489	13,130
	Purse seine	51,094	42,916	52,335	48,764	56,298	68,349	59,777	66,719	79,873	79,704
Guatemala	Purse seine	7,273	5,979	6,966	9,183	10,684	12,619	11,220	15,207	12,727	12,250
Guinea Ecuatorial	Purse seine	2,116	1,267								
Guinée Rep	Purse seine	2,908	4,458	14,560	12,678	10,024					
Korea Rep	Purse seine	1									
Maroc	Purse seine	892	1,070	1,084	1,142	600	103	55	177	1,111	447
Mixed flags (EU tropical)	Purse seine	4,608	4,230				13,804	15,662	13,323	14,263	1,069
Namibia	Bait boat	50	310	181	100	54	95	123	92	95	38
Panama	Purse seine	18,131	21,109	18,004	22,435	21,552	13,234	17,929	15,465	14,825	19,373
S Tomé e Príncipe	Purse seine	480	520	534	548	562	1,294	1,103	1,004	19	18
Senegal	Bait boat	4,556	7,037	6,685	6,141	3,942	2,979	3,763	3,268	1,534	2,420
	Purse seine						4,364	21,005	28,223	34,145	37,914
South Africa	Bait boat	168	586	180	513	1,405	836	611	257	258	471
Syria	Purse seine			7	8						
UK-Sta Helena	Bait boat	101	724	230	79	188	228	386	300	251	342
Venezuela	Bait boat	990	1,228	914	739	440	467	1,177	583	386	300
	Purse seine	4,702	3,785	4,951	4,613	3,784	3,982	4,391	5,793	2,899	1,648
<b>Grand Total</b>		<b>311,055</b>	<b>342,613</b>	<b>368,567</b>	<b>361,376</b>	<b>347,939</b>	<b>370,969</b>	<b>401,600</b>	<b>391,744</b>	<b>433,772</b>	<b>397,239</b>

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**Table 2.** Table of the reporting Flags that submitted ST08 form "Fishing Aggregating Devices (FADs) Deployed in the Year" 2011-2019 ICCAT dBase.

FlagName	Year									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Belize						1	1			7
Bolivia								1		1
Cape Verde										1
Curaçao			1	1	1	1	1	1		2
El Salvador						1	1	1		1
EU.España					1			1		1
EU.France	1	1	1	1		1	1	1		1
FR.St Pierre et Miquelon										1
Ghana				1		1	1			1
Guatemala								1		
Mexico										1
Panama			1	1	1			1		
Sta. Lucia			1							
UK.Bermuda										1
UK.British Virgin Islands										1
UK.Sta Helena							1			1
UK.Turks and Caicos										1
<b>Grand Total</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>7</b>		<b>21</b>

**Table 3.** Table of the number of records reported by Flags in the ST08 form 2011-2019 ICCAT dBase. Zero values indicate NO report of FAD deployments or non-fishing activity on FOB/FADs.

Sum of NumRecords	Column Labels									
Row Labels	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Belize						508	36000			1116
Bolivia								0		0
Cape Verde										111
Curaçao			4	4	8	34528	29915	20119		38161
El Salvador						16031	14043	15568		16851
EU.España					25			23796		25161
EU.France	6	53	15634	16		19188	18987	4138		16856
FR.St Pierre et Miquelon										0
Ghana				4		11445	12			12
Guatemala								13915		
Mexico										0
Panama			4	4	8			13923		
Sta. Lucia			13774							
UK.Bermuda										0
UK.British Virgin Islands										0
UK.Sta Helena							8			0
UK.Turks and Caicos										0
<b>Grand Total</b>	<b>6</b>	<b>53</b>	<b>29416</b>	<b>28</b>	<b>41</b>	<b>81700</b>	<b>98965</b>	<b>91459</b>		<b>98268</b>

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**Table 4.** Number of FOBs deployed by year and Flag for submitted ST08 FAD e-forms ICCAT dBase 2011-2019.

FlagCode	2011	2012	2013	2014	2015	2016	2017	2018	2019
BLZ				1,013	466	1,291	141		4,539
CPV									110
CUW			1,696	1,693	1,379	22	25	1,958	2,485
EU.ESP			19,933	19,584	18,627			7,622	7,782
EU.FRA	2,869	3,320	3,293	1,273	1,287	668	5,672	2,486	2,139
GHA				9,100		17,600	24,825		
GTM							25	2,658	
LCA			6	10					
PAN			314	288	1,525	27		2,287	
SLV						22	22	868	980
UK.SHN					-		8		
<b>Grand Total</b>	<b>2,869</b>	<b>3,320</b>	<b>25,242</b>	<b>32,961</b>	<b>23,284</b>	<b>19,630</b>	<b>30,718</b>	<b>17,879</b>	<b>18,035</b>

**Table 5.** Number of FOBs deployed by year and month for submitted ST08 FAD e-form ICCAT dBase 2016-2019. The monthly reporting requirement starts in 2016.

Month	2016	2017	2018	2019
Jan	139	441	1,348	1,072
Feb	127	897	783	528
Mar	141	2,171	2,016	1,548
Apr	170	3,382	1,615	1,960
May	1,724	2,336	1,483	1,720
Jun	3,662	4,259	1,252	1,380
Jul	2,130	2,535	1,343	1,731
Aug	3,163	3,651	1,713	2,436
Sep	2,283	2,909	1,631	1,388
Oct	2,150	2,972	1,769	1,494
Nov	2,206	2,888	1,455	1,844
Dec	1,734	2,270	1,471	934
<b>Total</b>	<b>19,630</b>	<b>30,710</b>	<b>17,879</b>	<b>18,035</b>

**Table 6.** Number of deployed FOB/FADs by type of aggregating device and year.

Year	Anchored FAD	Drifting Artificial FAD	Artificial log Human Fishing Activity	Artificial log Human Other Activity	Natural log Animal	Natural log Plant	Mixed	Unknown
	AFAD	DFAD	FALOG	HALOG	ANLOG	VNLOG	VNLOG-DFAD	UNK
2011								2,869
2012								3,320
2013		6	21,943					3,293
2014		10	30,747			26		2,178
2015		-	20,605			52		2,627
2016			19,626			4		
2017		8	30,710					
2018			17,864	1	1		13	
2019			17,938	20	1		76	
<b>Total</b>	<b>24</b>	<b>159,432</b>	<b>21</b>	<b>2</b>	<b>-</b>	<b>171</b>	<b>9,482</b>	<b>4,805</b>

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**Table 7.** Number of deployed FOB/FADs by type of beacon instrumentation used by year.

Year	Radio direction finder	Radio direction finder and GPS	GPS	Sonar	Sonar with echo- sounder	Satellite and echo- sounder	Satellite without echo-sounder	FAD without Bouy signal	Unknown
	RDF	RDFGPS	GPS	SON	SONES	SATES	SAT	NoBouy	UNK
2011									2,869
2012									3,320
2013									25,242
2014									32,961
2015						22,428	772		84
2016		17,600				1,991	39		
2017		24,825	12			4,327	9		1,545
2018						17,857	3	-	19
2019					876	17,131	-	6	22
<b>Total</b>	-	<b>42,425</b>	<b>12</b>	-	<b>876</b>	<b>63,733</b>	<b>823</b>	<b>6</b>	<b>66,062</b>

**Table 8.** Number of different vessel IDs reported by Flag for 2018-2019.

Flag	2018	2019
BLZ	-	10
CPV	-	1
CUW	6	6
EU_ESP	11	14
EU_FRA	11	10
GTM	5	-
PAN	4	-
SLV	4	4
<b>Total</b>	<b>41</b>	<b>45</b>

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**Table 9.** Summary of the total catch (t) by flag and year from purse seine (PS) fisheries on FOB/FADs (Task 2 CE) and the corresponding total number of FOB/FADs deployed as reported in ST08-FADsDep form (yellow background lines). Column "2020" indicates those Flags that have provided ST08 FAD information for the year 2020 (green shade). Blue-shaded cells indicate the Flag CPCs and years for which the Secretariat has received historic FAD information; provided within ST08 form (dark blue) or in text documents (light blue).

Catch t per year/flag of PS on FAD as reported in Task 2 CE. Note total catch represents all Tropical tunas catches for giving fishing effort

Number of FOBs deployed by year and Flag

FishMode	Flag	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
FAD	Belize	2,310	2,117	-	3,067	6,114	4,565	7,071	7,266	-	-	-
						1,013	466	1,291	141	-	4,539	
	Cape Verde	7,140	10,202	6,333	9,866	22,122	21,946	13,255	7,392	7,680	5,728	
											110	
	Côte d'Ivoire	-	-	-	-	2,705	-	-	-	-	-	-
	Curaçao	14,830	17,574	17,564	19,292	22,340	24,332	29,154	25,648	25,889	20,218	
					1,696	1,693	1,379	22	25	1,958	2,485	
	El Salvador						7,865	23,556	17,451	20,065	20,771	
								22	22	868	980	
	EU-España	42,893	56,905	56,534	63,033	52,545	48,642	52,831	59,572	41,980	43,963	
					19,933	19,584	18,627	-	-	7,622	7,782	
	EU-France	15,932	13,305	16,677	16,989	20,998	23,222	21,905	21,702	24,307	23,391	
			2,869	3,320	3,293	1,273	1,287	2,849	5,672	2,486	2,139	
	Ghana	29,553	24,608	47,896	44,900	52,044	66,641	58,760	66,529	79,709	79,316	
						9,100	-	17,600	24,825	-	-	
	Guatemala	3,911	3,198	4,871	5,447	6,296	10,463	8,393	11,417	10,580	9,341	
									25	2,658	-	
	Guinée Rep	-	-	12,883	9,415	6,680	-	-	-	-	-	
	NEI (ETRO)	348	-	-	-	-	-	-	-	-	-	
	Panama	13,927	19,212	13,215	18,051	18,783	11,257	16,258	11,854	9,541	-	
					314	288	1,525	27	-	2,287	-	
	Senegal	-	-	-	-	-	4,568	19,830	27,616	30,131	36,899	
<b>TOTAL Catch t</b>		<b>130,844</b>	<b>147,121</b>	<b>175,973</b>	<b>190,061</b>	<b>210,628</b>	<b>223,500</b>	<b>251,012</b>	<b>256,449</b>	<b>249,880</b>	<b>239,628</b>	
<b>Total Number FOBs deployed</b>		<b>-</b>	<b>2,869</b>	<b>3,320</b>	<b>25,236</b>	<b>32,951</b>	<b>23,284</b>	<b>21,811</b>	<b>30,710</b>	<b>17,879</b>	<b>18,035</b>	

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**Table 10.** Summary of catch and fishing effort for tropical tunas FAD fisheries by year and flag, disclosing the type of unit of fishing effort reported in each case (Task 2 CE), values represent total catch (kg). Highlighted cells show those reports for number of sets on FADs, noting that some CPCs only report number of positive sets (e.g. catch > 0).

Time Period	2000 - 2020																					
GearCode	Purse Seine																					
Total catch (kg)																						
Flag	FleetCode	Eff1Type	Eff2Type	Eff3Type	Eff4Type	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
Belize	BLZ-BZ-ETRO	FISH.HOUR	HOURS.SEA	Hours.STD	Hours.FAD					1,928,770	4,215,960	3,604,730		8,312,790	9,364,920	7,512,270	9,138,790	11,538,830				
Cape Verde	CPV-CV-ETRO	FISH.HOUR	HOURS.SEA	Hours.STD	Hours.FAD	13,180,960	14,555,310	9,703,990		7,890,840	10,347,550	13,201,590	8,578,180	13,626,300	24,976,250	27,109,820	16,491,280	8,783,800	12,437,740	8,337,980		
Côte d'Ivoire	CIV-CI-ETRO	FISH.HOUR	HOURS.SEA	Hours.STD	Hours.FAD										2,707,040							
		NO.SETS	D.AT SEA											3,742,500								
Curacao	CUW-CW-ETRO	FISH.HOUR	HOURS.SEA	Hours.STD	Hours.FAD		5,547,150	2,957,690	15,992,930	18,169,490	18,112,950	20,031,570	22,723,860	23,964,580	27,435,300	29,652,820	35,028,060	31,874,590	37,267,910	28,707,910		
El Salvador	SLV-SV-ETRO	FISH.HOUR	HOURS.SEA	Hours.STD	Hours.FAD											8,384,030	26,098,520	23,750,920	26,482,770	24,240,130	26,166,580	
EU-España	EU.ESP-ES-ETRO	FISH.HOUR	HOURS.SEA	Hours.STD	Hours.FAD	32,143,460	28,334,560	33,250,540	55,889,850	68,801,840	65,339,250	74,052,170	74,053,620	75,770,230	62,211,240	66,296,460	69,545,820	66,073,570	56,056,710	57,834,940		
EU-France	EU.FRA-FR-ETRO	FISH.HOUR	NO.SETS			37,117,219	26,534,292	18,537,040	20,629,172	27,273,967	37,364,976	36,989,736	33,999,168	39,345,401	43,053,513	43,027,248	48,678,471	45,730,078	51,214,293	42,477,208		
Ghana	GHA-GH-ETRO	FISH.HOUR	HOURS.SEA	Hours.STD	Hours.FAD					2,623,030												
	GHA-GH-ETRO-A	FISH.HOUR	HOURS.SEA																			
		NO.SETS	SUC.SETS	D.FISH	HOURS.SEA	1,309,000	13,345,500	4,042,000	17,215,000	31,882,000	32,332,500	25,147,500	26,069,500	17,817,000	16,537,000	20,653,500	19,658,000	17,533,500	27,650,000	37,366,400	38,489,000	
	GHA-GH-ETRO-P	FISH.HOUR	HOURS.SEA			26,257,548		10,431,569														
		NO.SETS	SUC.SETS	D.FISH	HOURS.SEA		659,000	505,000	5,444,000	935,000	1,761,000	26,265,500	30,947,000	39,761,000	47,695,500	40,118,500	49,185,500	52,223,000	42,338,000	38,452,500		
Guatemala	GTM-GT-ETRO	FISH.HOUR	HOURS.SEA	Hours.STD	Hours.FAD	10,293,490	11,212,770	9,941,060	11,127,670	7,632,380	6,716,030	5,574,090	7,642,460	8,706,560	9,961,000	12,164,690	11,414,440	15,286,380	13,083,680	12,587,100		
Guinée Rep	GIN-GN-ETRO	FISH.HOUR	HOURS.SEA	Hours.STD	Hours.FAD								12,882,500	9,415,240	7,444,400							
Maroc	MAR-MA-ETRO	FISH.HOUR	HOURS.SEA	Hours.STD	Hours.FAD	4,969,490	421,890															
NEI (ETRO)	NEI.001	FISH.HOUR	HOURS.SEA	Hours.STD	Hours.FAD						387,980											
	NEI.001-SC	FISH.HOUR	HOURS.SEA	Hours.STD	Hours.FAD																	
Panama	PAN-PA-ETRO	FISH.HOUR	HOURS.SEA	Hours.STD	Hours.FAD		25,410,320	32,473,160	17,102,750	17,174,710	17,358,970	20,668,190	18,099,690	21,737,680	22,641,240	13,634,370	19,286,420	17,049,690	15,533,240			
						20,962,130																
Senegal	SEN-SN-ETRO	FISH.HOUR	HOURS.SEA	Hours.STD	Hours.FAD											5,465,010	21,888,390	28,701,750	34,569,130	39,692,000	32,974,830	
St Vincent and Grenadines	VCT-VC-ETRO	FISH.HOUR	HOURS.SEA	Hours.STD	Hours.FAD																	
Venezuela	VEN-VE-ETRO	FISH.HOUR	HOURS.SEA	Hours.STD	Hours.FAD																	

**Table 11.** Reported Task 1 NC for tropical tunas (BET, SKJ and YFT) catch information received by the Secretariat as of 18 August 2021.

Species	Flag	Decade																			2020		
		YearC																					
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
BET	Angola																						253
	Barbados	18	6	11	16	19	27	18	14	14	7	12	7	15	11	26	30	19	16	29	14	20	
	Belize	134	96					60	70	246	294	1,260	1,257	1,377	1,524	1,877	1,764	1,961	2,135	2,307	2,307	991	
	Brazil	2,768	2,659	2,582	2,455	1,496	1,081	1,479	1,593	958	1,189	1,173	1,841	2,120	3,623	6,456	7,750	7,660	7,258	5,096	6,249	6,284	
	Canada	327	241	279	182	143	187	196	144	130	111	103	137	166	197	218	258	171	214	237	193	102	
	Cape Verde	2	1	1	1	1,152	1,434	1,284	482	606	656	1,077	735	1,378	2,368	2,764	1,680	1,107	1,418	880	576		
	China PR	6,564	7,210	5,840	7,890	6,555	6,200	7,200	7,399	5,686	4,973	5,489	3,720	3,231	2,371	2,232	4,942	5,852	5,514	4,823	5,718	3,614	
	Chinese Taipei	16,795	16,429	18,483	21,563	17,717	11,984	2,965	12,116	10,418	13,252	13,189	13,732	10,819	10,316	13,272	16,453	13,115	11,845	11,630	11,288	9,226	
	Côte d'Ivoire	2									790	576	49	602	681	441	12	544	1,239	384	2,334	141	
	Curaçao	3,098	3,757	2,221	3,203	3,526	40	441	272	1,734	2,465	2,747	3,488	2,950	1,998	2,357	2,573	3,598	2,844	3,530	2,787	1,519	
	Dominica		5			0										0	0	0	0	0			
	El Salvador		3													992	1,450	1,826	2,634	2,464	1,518		
	EU-España	11,724	10,133	10,572	11,343	8,610	7,762	7,542	6,724	7,684	12,216	11,483	13,316	11,012	10,162	10,878	10,058	11,469	11,544	8,400	9,117	5,997	
	EU-France	6,480	5,762	4,642	4,495	3,386	3,036	3,062	1,552	1,180	2,463	3,476	3,901	3,948	3,278	3,891	2,836	4,772	4,077	4,057	5,128	2,106	
	EU-Ireland		10			0	33										0	0	0	0			
	EU-Italy																				7		
	EU-Portugal	1,498	1,605	2,590	1,655	3,204	4,146	5,071	5,505	3,422	5,605	3,682	6,920	6,128	5,345	3,869	3,135	2,187	3,146	4,405	3,146	3,069	
	Faroe Islands	8											2	3		0	0						
	FR-St Pierre et Miquelon		90	21	0	28	6		2														
	Gabon	150	121																				
	Ghana	5,632	9,864	6,480	9,061	17,888	8,860	2,307	2,559	3,372	4,515	6,253	3,541	4,468	2,963	4,175	5,918	5,194	3,838	3,636	2,917	2,933	
	Great Britain							3															
	Grenada	0	0	0					10	31	32	0						18	23	33	27	19	11
	Guatemala				736	831	1,054	977	851	1,024	922	1,029	288	273	168	1,007	340	1,103	1,602	1,488	1,623	906	
	Guinea Equatorial																						
	Guinée Rep					72			60	20	22	402	525	1,804	1,674								
	Guyana	24,605	18,087	15,306	19,572	18,509	14,026	15,735	17,993	16,684	16,395	15,205	12,306	15,390	13,397	13,603	12,390	10,365	10,994	9,881	9,340	9,596	
	Japan	43	1	87	143	629	770	2,067	2,136	2,599	2,134	2,646	2,762	1,908	1,151	1,039	677	562	432	623	540	610	
	Korea Rep	57	57	57	57																		
	Liberia	400	31	593	593			4															
	Libya	1,160	1,181	1,154	1,399	1,145	786	929	700	802	795	276	300	300	308	300	309	350	410	500	850	1,033	
	Mauritania																						
	Mexico	2	2	7	4	5	4	3	3	1	1	3	1	1	2	1	2	2	3	3	3	3	
	Mixed flags (EU tropical)	281	28	8	198	378	294	189	348	337	375	324	257	376	135	240	989	1,187	972	1,049	1,069		
	Namibia	589	640	274	215	177	307	283	41	146	108	181	289	376	135	240	465	359	141	109	79	568	
	NEI (ETRO)		362	68																			
	NEI (Flag related)	15,092	7,907	383																			
	Nigeria											3	1	0									
	Panama	952	562	211		1,521	2,461	2,521	3,057	2,360	2,490	3,085	3,531	1,736	2,853	2,341	1,289	2,337	1,664	2,067	3,052		
	Philippines	975	377	837	855	1,854	1,743	1,816	2,368	1,874	1,880	1,399	1,267	532	1,323	1,964							
	Russian Federation	91					1	1	26	73	43												
	S Tomé e Príncipe	4	4	4	4	11	6	4		92	94	97	100	103	107	110	633	421	393	2	6	11	
	Saint Kitts and Nevis																						
	Senegal	915	1,159	497	322	490	770	1,318	1,293	734	1,144	969	479	436	606	369	1,031	1,500	2,978	2,870	2,272	2,700	
	Seychelles	58		162																			
	Sierra Leone	6	2																				
	South Africa	249	239	341	113	270	221	84	171	226	159	145	153	47	435	332	193	121	257	282	432	357	
	St Vincent and Grenadines	1,921	1,143	130	103	18		114	567	171	293	396	38	25	16	30	496	622	889	428	504	220	
	St Lucia		1	2	2	0		2				0	0	0	0	6	10	24	13	13	13		
	Trinidad and Tobago	5	11	30	6	5	9	12	27	69	56	40	33	33	37	59	77	37	25	17	13	10	
	UK-Bermuda		0	0	0	1	1					0	0	0	0	0	0	0	0	0	0	1	
	UK-Sta Helena	8	5	5	4	6	18	25	18	28	17	11	190	51	19	17	44	77	70	45	4	0	
	UK-Turks and Caicos																						
	Uruguay	25	51	67	59	40	62	83	22	27	201	23	15	2	30								
	USA	574	1,085	601	482	416	484	991	527	508	515	578	866	727	903	892	1,082	568	836	921	829	816	
	Vanuatu					104	109	52	132	91	34	42	39	23	9	4							
	Venezuela	221	708	1,241	847	1,060	243	261	318	122	229	85	264	98	94	169	132	156	318	165	28	79	
<b>BET Total</b>		<b>103,434</b>	<b>91,636</b>	<b>75,802</b>	<b>87,596</b>	<b>90,043</b>	<b>67,954</b>	<b>59,192</b>	<b>69,895</b>	<b>63,172</b>	<b>76,427</b>	<b>76,074</b>	<b>76,749</b>	<b>71,317</b>	<b>66,976</b>	<b>75,307</b>	<b>79,795</b>	<b>79,338</b>	<b>78,617</b>	<b>72,971</b>	<b>75,484</b>	<b>55,249</b>	



Sum of Qty_L		Decade		YearC																		
Species	Flag	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SKJ	Algerie	89	77																			
	Angola	14	14	14	14	10					50	636	44	91	514		1	1	1			3,240
	Argentina	1				30					3	12	0									
	Barbados	3											1	2	0	1	1	1	2	1	1	0
	Belize	229	278								1,488	3,109	7,798	15,733	6,855	11,081	12,599	7,894	9,958	20,748	17,063	19,180
	Benin	2																				
	Brazil	25,164	24,146	18,338	20,416	23,037	26,388	23,270	24,191	20,846	23,307	23,456	30,571	30,863	32,438	25,195	18,133	18,231	20,068	19,687	17,925	17,432
	Canada					0					0	0	0	0	0	0	0	0	0			
	Cape Verde	789	794	398	343	1,097	7,576	4,885	5,615	4,958	5,512	5,881	8,294	5,764	16,444	16,615	17,600	10,925	7,823	7,946	5,785	6,155
	Chinese Taipei	41	25	39	40	43	38	38	16	27	6	13	16	13	13	11	25	19	36	35	31	23
	Côte d'Ivoire	1,173	259	292	143	559	1,259	1,565	1,817	2,328	2,840	2,840	6,011	11,485	8,606	2,568	254	675	1,534	22	3,241	990
	Cuba	651			624	545		514														
	Curacao	11,086	15,450	7,246	12,084	10,225	189	3,213	1,703	6,541	10,060	9,594	12,380	13,324	18,312	18,437	19,661	22,280	20,783	24,696	17,395	10,871
	Dominica	86	45	55	51	30	20	28	32	45	25		13		4	41	16	27	28			
	El Salvador																7,055	16,984	14,712	17,072	16,729	14,875
	EU-España	40,926	30,954	25,466	46,575	40,658	28,891	22,729	24,094	36,293	38,716	42,629	58,750	68,023	67,909	53,252	46,085	52,751	57,681	53,021	48,571	31,928
	EU-France	22,888	18,106	17,781	22,820	24,422	15,768	7,379	6,402	4,726	8,910	15,661	14,557	14,785	16,635	18,114	21,591	19,366	16,891	23,450	20,669	12,824
	EU-Germany																					
	EU-Greece				102	99	99													2		
	EU-Ireland					14	14	14			8	6							0	7		
	EU-Italy			4	29	34	17											47	57	91	131	3,172
	EU-Lithuania															95			6			
	EU-Malta															0				5	2	0
	EU-Netherlands								4	9			23						0	1		
	EU-Portugal	1,306	2,168	2,958	4,318	8,507	4,740	11,179	9,006	6,057	1,091	12,974	4,151	2,794	4,049	1,712	1,347	708	1,785	7,480	2,799	1,033
	Gabon	21	101																			
	Ghana	36,517	57,540	40,194	34,435	47,746	54,209	31,934	35,419	38,648	43,922	45,505	44,169	54,264	48,131	50,146	62,114	54,883	57,907	69,381	63,555	59,904
	Grenada	23	15	14	16	21	22	15	26	20							22	17	17	18	30	10
	Guatemala				2,120	4,808	6,649	5,028	5,612	6,481	4,095	3,087	2,880	3,732	4,979	5,904	7,078	7,397	9,886	8,701	7,670	6,510
	Guinea Ecuatorial										1,224	1,224	1,010			1	1	3	1	1	1	1
	Guinée Rep						387		330	118	359	2,114	3,252	10,321	9,033	7,629						
	Jamaica																			0	2	3
	Japan		1				0	1	0	1	1	1	1	5	6	3	5	1	1	3	5	2
	Korea Rep											1					0	1	0	0	1	1
	Liberia												40	61	80	49	98	21	19	29	21	6,770
	Maroc	4,091	1,737	1,303	3,403	3,843	4,666	4,032	1,592	1,309	2,580	2,343	2,151	2,267	2,045	1,068	576	258	750	3,585	1,258	
	Mexico	13	54	71	75	9	7	10	7	8	9	7	9	8	5	5	7	10	6	6	4	4
	Mixed flags (EU tropical)	2,194	218	65	1,547	2,953	1,708	1,478	3,003	2,998	2,624	3,427	2,372				10,960	12,785	11,196	11,647		
	Namibia	0	8																			
	NEI (ETRO)		760	148							71	2	2	15	1					0	0	1
	Nigeria											45	12	4					6	2		
	Panama	1,559	281	342		7,126	12,286	14,016	19,798	8,946	9,199	9,944	13,119	11,211	16,063	14,975	8,532	11,695	8,815	9,089	10,948	
	Russian Federation	374						392	1,130	313	260		20			2	1	1				6
	S Tomé e Príncipe	179	179	179	179	117	166	143		229	235	241	247	254	260	266	360	380	346	15	5	51
	Saint Kitts and Nevis																	1	0	0	0	0
	Senegal	1,357	1,284	1,178	639	1,456	5,033	3,858	4,552	3,045	4,566	2,743	5,441	4,477	4,659	3,931	5,943	17,082	25,431	28,476	30,633	21,856
	South Africa	7	1	1	2	2	1	0	0	4	4	2	6	8	2	5	2	2	1	2	2	1
	St Vincent and Grenadines	1,490	1,532	881	134	251	251	356	90	83	54	46	50	0	36	39	47	86	36	36	35	29
	Sta Lucia	216	151	106	132	137	159	120	89	168		153	143	109	171	139	87	138	142	122	78	
	Suriname																					
	Syria								38	36					15							
	Trinidad and Tobago								0	0	0	0	0	0	0	0	0	0	0	0	0	0
	UK-Bermuda	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	UK-Sta Helena	64	205	63	178	317	321	88	110	45	15	25	371	29	7	26	6	127	9	7	28	1
	USA	44	70	88	79	103	30	61	66	67	119	95	107	99	326	183	94	179	199	78	46	68
	Venezuela	2,890	6,905	4,961	4,444	3,270	1,093	2,008	921	757	2,250	2,119	1,473	1,742	1,002	1,179	2,019	2,317	2,222	1,276	927	614
<b>SKJ Total</b>		<b>155,487</b>	<b>163,360</b>	<b>122,185</b>	<b>154,941</b>	<b>181,467</b>	<b>172,499</b>	<b>138,376</b>	<b>145,662</b>	<b>145,104</b>	<b>163,604</b>	<b>189,933</b>	<b>219,484</b>	<b>251,498</b>	<b>259,155</b>	<b>232,672</b>	<b>242,322</b>	<b>257,213</b>	<b>268,523</b>	<b>306,908</b>	<b>268,856</b>	<b>214,312</b>



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**Table 12.** Summary of information submitted by Flag of Tropical tunas Fishing Management Plan, FAD Management plan, and Reported 2020 FAD data on ST08 form for 2020.

Tropical Tunas Fishing Management Plan (preliminary)	FAD Management Plan	Reported 2020 FAD Data on ST-08	Notes
Belize	Belize	Bolivia	No FAD fisheries
Brazil		Ghana	partial information
China		Mexico	No FAD fisheries
Curacao	Curacao	Great Britain	No FAD fisheries
El Salvador	El Salvador	UK-OT Bermuda	No FAD deployed 2020
EU	EU	UK-OT St Helena	No FAD deployed 2020
Ghana	Ghana	UK-OT Turks & Caicos	No FAD deployed 2020
Guatemala	Guatemala	UK-OT British Virgin Islands	No FAD deployed 2020
Japan		Belize	
Korea		Curacao	
Maroc	Maroc	EU.France	
Senegal	Senegal	Guatemala	
Chinese-Taipei		Panama	
Russia		El Salvador	
San Vincent & Grenadines		Cape Verde	partial information
United States		Maroc	partial information
UK Overseas Territories			
Canada	UK Overseas Territories		

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**Table 13.** Summary of FAD historic information submitted by Flag in 2021.

<u>Flag Provider</u>	<u>Historic Data Years</u>	<u>Format reported</u>	<u>Notes</u>
<u>EU.Spain</u>	<u>2016, 2017</u>	<u>ST08 e form</u>	
<u>Panama</u>	<u>2016, 2017</u>	<u>ST08 eform vr2017</u>	<u>No Vessel info</u>
<u>Panama</u>	<u>2019,</u>	<u>ST08 eform vr2020a</u>	
<u>Guatemala</u>	<u>2019,</u>	<u>ST08 eform vr2020a</u>	
<u>El Salvador</u>	<u>2015, 2016, 2017</u>	<u>pdf letter July 26, 2021</u>	<u>No details by 1x1, month, or vessel Indicate information in Annual</u>
<u>Belize</u>	<u>*</u>	<u>email July 29, 2021</u>	<u>Reports</u>

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**Table 14.** Summary of the tropical tuna vessels by CPC, Vessel and Gear Type, as in the ICCAT Record of Vessels, as of today (02/09/2021).

Number of Vessel registered		Flag/VesCode																				GrandTotal									
IsscfCode	IsscfCode	BLZ	BRA	CAN	CHN	CIV	CPV	CUW	EU-ESP	EU-FRA	EU-PRT	FR-SPM	GHA	GTM	JPN	KOR	LBR	MAR	MEX	NAM	PAN	SEN	SLV	TAI	TTO	UK-SHN	USA	VCT	ZAF	GrandTotal	
GNS	GO								4																					4	
LHM	LP																					1								1	
LHP	LH		6						3												3									12	
	LL								131			2	1			1					2									137	
	LP		3						77		1		16								4	6				1		1		109	
	TO									1																				1	
LL	LL		10	15	3	47	27		13	1	43				175	11		17	2	8	25	2		54	11		31	4	4	503	
LLD	LL								4																					4	
LTL	LL								2																					2	
	LT								21																					21	
	MO								1																					1	
LX	GO								1																					1	
	LH								3	2																				5	
	LL																						1							1	
	LP										28		2														63			93	
	MO								1																					1	
	UN								32																					32	
MIS	LP																											40		40	
NAP	AU								2														1							3	
	FO		1																											1	
	SV		1					3																						4	
	SVB								3																					3	
	TW								3																					3	
NK	MO								7																					7	
PS	SP		8	1		1	5	18	11				17	2			2	7				6	7	3						88	
RG	RO																											1		1	
IB	TO								1	21																				22	
TM	TO									2																				2	
UN	UN								1																					1	
<b>Grand Total</b>			<b>20</b>	<b>25</b>	<b>3</b>	<b>47</b>	<b>27</b>	<b>1</b>	<b>8</b>	<b>328</b>	<b>38</b>	<b>74</b>	<b>1</b>	<b>35</b>	<b>2</b>	<b>176</b>	<b>11</b>	<b>2</b>	<b>24</b>	<b>2</b>	<b>17</b>	<b>31</b>	<b>18</b>	<b>3</b>	<b>54</b>	<b>11</b>	<b>1</b>	<b>95</b>	<b>4</b>	<b>45</b>	<b>1103</b>

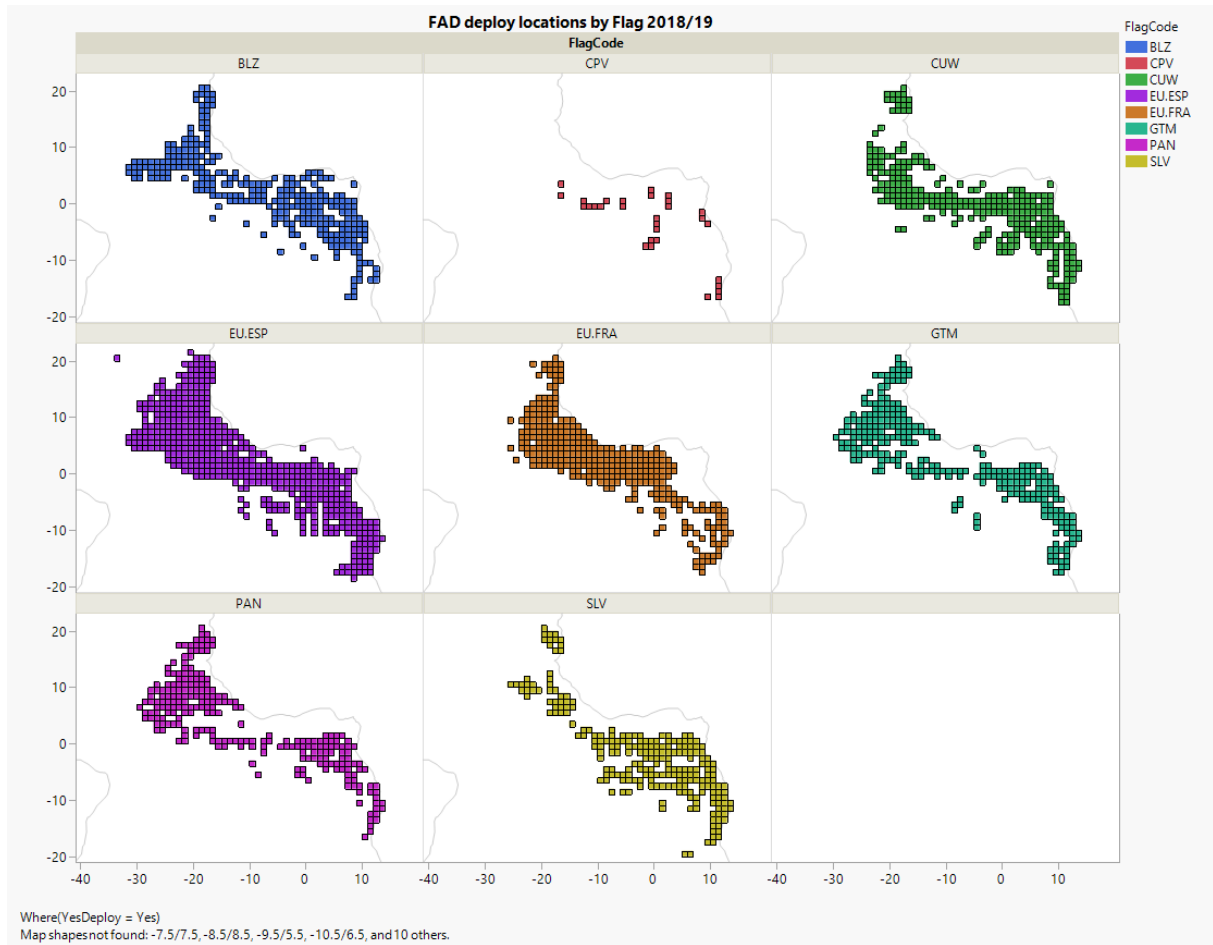
Gear and vessel type codes**Table. ISSCFV (FAO vessel types)**

IsscfvCod	IsscfvName	IsscfvGroup
UN	Unknown (no info)	UNKNOWN
TO	TRAWLER	TRAWLER
SP	Purse seiner	SEINER
SOX	Seiner nei	SEINER
DO	DREDGER	DREDGER
GO	GILLNETTER	GILLNETTER
WO	TRAP SETTER	TRAP SETTER
LH	Handliner	LINER
LL	Longliner	LINER
LP	Pole and liners	LINER
LT	Troller	LINER
MO	MULTIPURPOSE	MULTIPURPOSE
RO	RECREATIONAL	RECREATIONAL
HO	MOTHERSHIP	MOTHERSHIP
FO	CARRIER	CARRIER
FX	Fishing Vessel nei	NOT SPECIFIED (FV)
TW	TOWING VESSEL	TOWING VESSEL
AU	AUXILIARY VESSEL	AUXILIARY VESSEL
SV	SUPPORT VESSEL	SUPPORT VESSEL
SVB	SUPPORT VESSEL (BB/PS)	SUPPORT VESSEL
VOX	NON-FISHING VESSEL nei	NON-FISHING VESSEL nei

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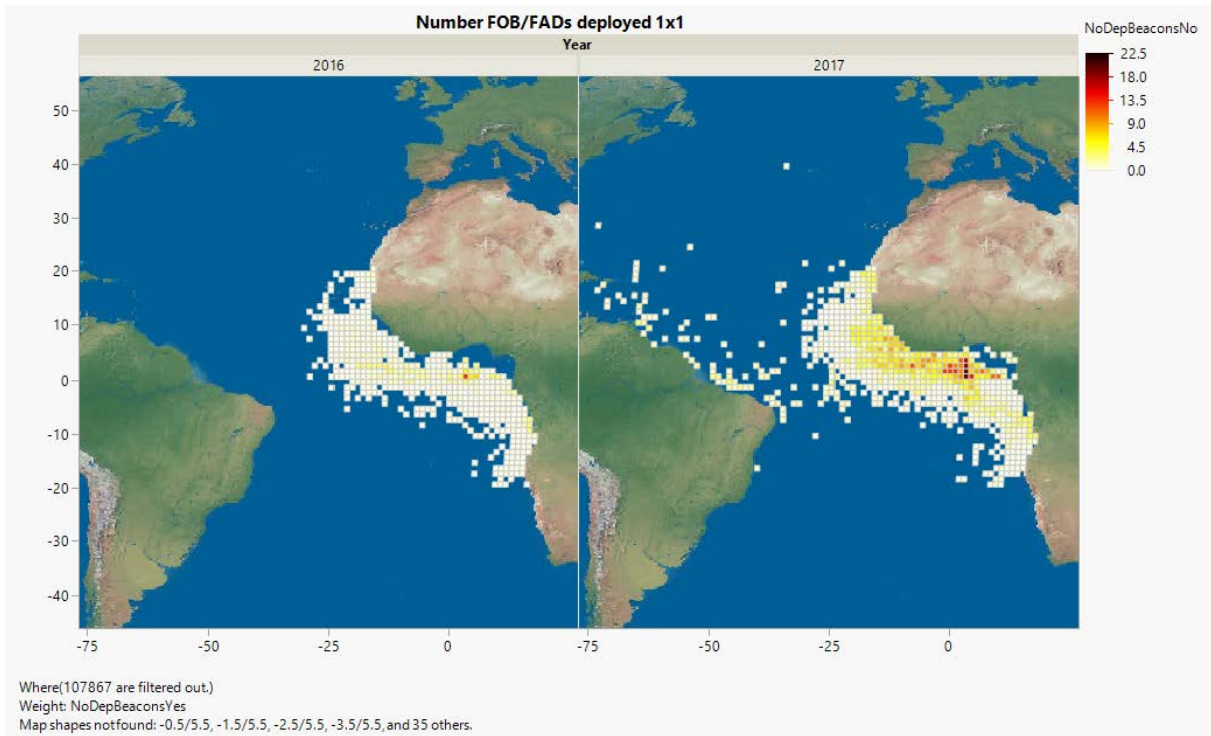
Table. ISSCFG (FAO gears)

IsscfcCod	IsscfcName	IsscfcGroup
PS	With purse lines (purse seines)	SURROUNDING NET
SB	Beach seines	SEINE NET
TB	Bottom trawls	TRAWL NET
TM	Midwater trawls	TRAWL NET
DRB	Boat dredges	DREDGE
LNP	Portable hand lift nets	LIFT NET
FCN	Cast nets	FALLING GEAR
GNS	Set Gillnets	GILLNET AND ENTANGLING NET
GND	Driftnets	GILLNET AND ENTANGLING NET
FPN	Stationary uncovered pound nets	TRAP
LHP	Handline and pole-lines (hand operated)	HOOKS AND LINES
LHM	Handline and pole-lines (mechanized)	HOOKS AND LINES
LLS	Set longlines	HOOKS AND LINES
LLD	Drifting longlines	HOOKS AND LINES
LL	Longlines (not specified)	HOOKS AND LINES (longlines)
LTL	Trolling lines	HOOKS AND LINES (trolling)
LX	Hooks and lines	HOOKS AND LINES
HAR	Harpoons	GRAPPLING AND WOUNDLING
HMX	Harvesting machines	HARVESTING MACHINE
MIS	Miscellaneous gear	MISCELLANEOUS GEAR
RG	Recreational fishing gear	RECREATIONAL FISHING GEAR
NAP	Not applicable (not a fishing vessel)	NOT APPLICABLE
NK	Gear not know or not specified	GEAR NOT KNOWN

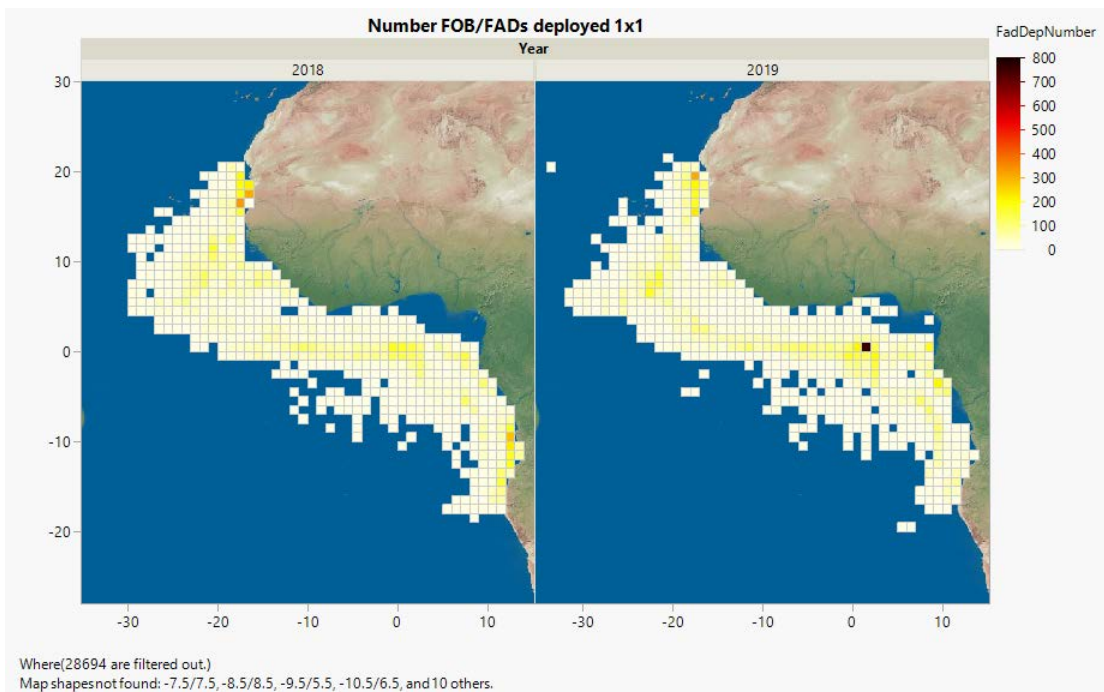


**Figure 1.** Summary 1x1 lat-lon for the deployment of FOB/FADs as reported by Flag during 2018-19. Grid cells show the location where at least one FOB/FAD was deployed.

September 2, 2021 (12:20 PM)



**Figure 2.** Deployed FOB/FADs by 1x1 lat-lon for 2016-2017. Shade colors are proportional to the total number of deploys by cell-year.



**Figure 3.** Density of deployed FOB/FADs by 1x1 lat-lon grid. Shade colors are proportional to the total number of deployments per year.



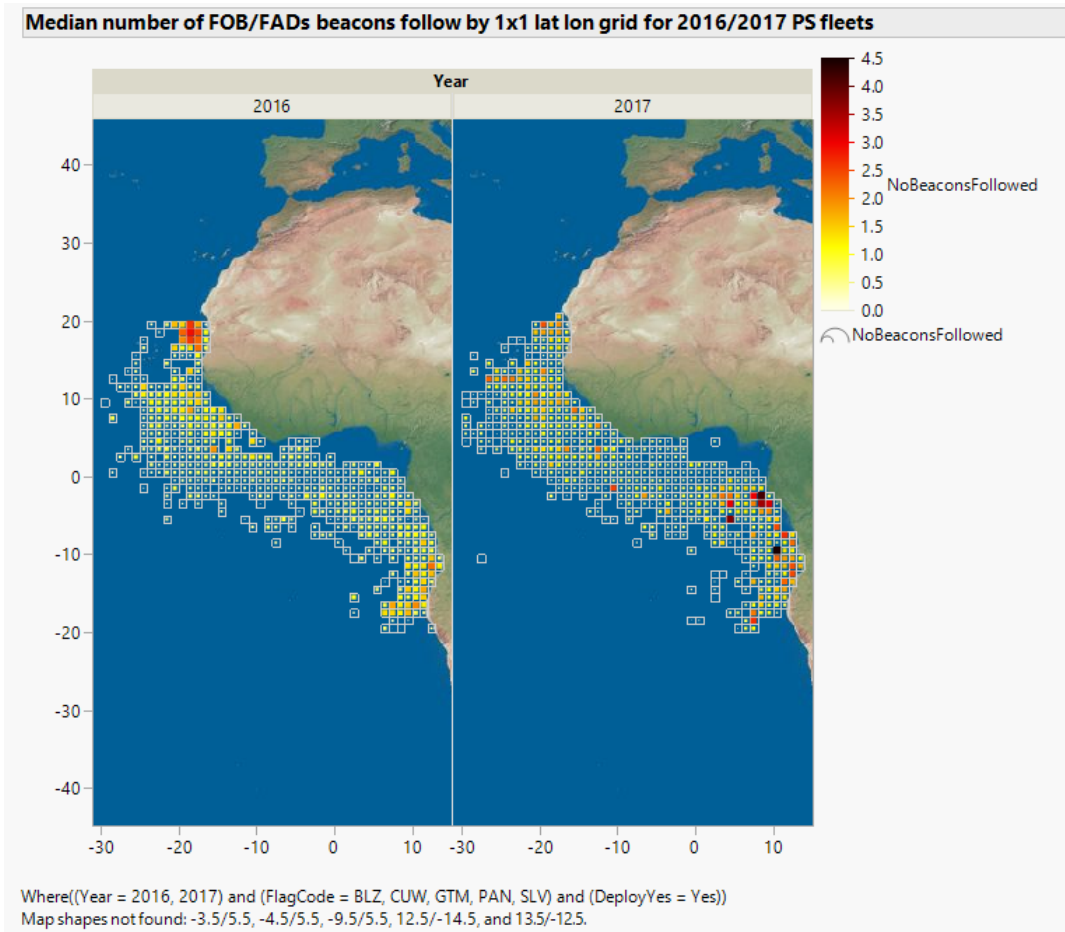
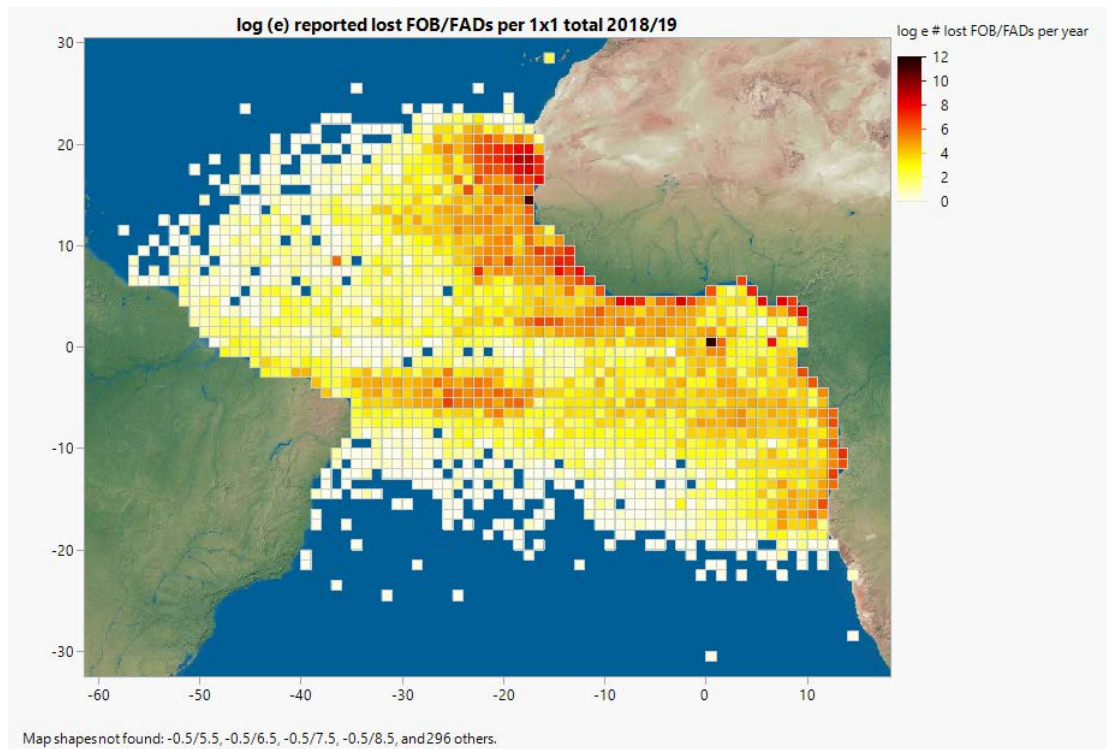


Figure 4. Median annual number of FOB/FADs beacons monitored by 1x1 lat-lon grid for PS fleets.



**Figure 5.** Reported 1x1 lat-lon grid mean number of lost FOB/FADs by year.