#### The Hawaii - California Longline Limited-entry Fishery Annual Report for 1 January - 31 December, 2017<sup>1</sup>

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This annual report for the period 1 January - 31 December, 2017, contains summary data summaries of fishing effort and catch statistics as reported on longline log sheets for the Hawaii - California longline limited-entry fishery. Data in this report originate from the PIFSC Information Management System (Oracle) table LLDS\_REPORT\_STATS\_RFMO\_HC, representing preliminary data received as of 15 March 2018. Catch and effort statistics are based on date of longline haul. When a statistic (number of vessels, trips) involves dates of haul in two summary periods (i.e., years, semi-annual, quarters), the item is counted in both summary periods. Thus, a trip total is for "partial and completed" trips. As such, these statistics are not additive (i.e., sum of four quarters is not the total for the year, etc.).

The following tables show fishery statistics for the stated time period, area, and set type, and includes effort (number of vessels, trips, sets, and hooks set), and for each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE), measured as the number of fish caught per 1,000 hooks.

Additional figures graph catch numbers and effort for important species for the stated time period, area, and set type, for years 2000-2017.

<sup>&</sup>lt;sup>1</sup>PIFSC Data Report DR-19-026. Issued 06 March 2019 https://doi.org/10.25923/wrg3-7413

Table 1.For the period 1 January - 31 December, 2017, Hawaii and California longline limited-entry fishery annual<br/>statistics for all fishing areas and all fishing categories (set types), including effort (number of vessels, trips,<br/>sets, and hooks set), and for each listed species, organized by pelagic management unit species (PMUS)<br/>groups of billfish, shark, tuna, and other, along with the number of fish caught, kept, and released, and the<br/>catch per unit effort (CPUE, number per 1,000 hooks, calculated as the sum of fish caught divided by the sum<br/>of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

	4,091	450	3,641	0.07
	,	,	,	
	696,099	574,525	121,574	12.74
Total	184,961	181,482	3,479	3.39
	67,775	67,420	355	1.24
	19,014	16,571	2,443	0.35
	25,500	25,372	128	0.47
	25,225	25,057	168	0.46
	47,447	47,062	385	0.87
Total	338,167	331,575	6,592	6.19
				0.00
		,		0.49
				0.00
a				1.49
				4.14
	4,395	4,342	53	0.08
rotar	110,000	909	109,007	2.02
Total				0.01 <b>2.02</b>
				0.00
sup shark				0.01
				0.13
rke				0.10 0.13
				1.76
	06.288	0	06 799	1 76
Total	62,405	60,559	1,846	1.14
S	567	561	6	0.01
	19,504	18,080	1,424	0.36
rfish	20,828	20,655	173	0.38
n	13,430	13,223	207	0.25
	8,076	8,040	36	0.15
	Caught	Kept	Released	Number Caught per 1000 hooks
: Unit	Number	Number	Number	CPUE
				· ·
				20,668 54,630,336
-	or December, 2017			20,668
Report Coverage Time Period 1 January - 31			145 1,609	
	All sets All Areas	All Areas Unit Number Caught  Unit Number Caught  All Areas  Unit Number Caught  All Areas  All Are	1 January - 31 December, 2017 All sets All Areas       Number of Number of Number of Number         SUnit       Number Caught       Number Kept         SUnit       Number Caught       Number Kept         Sumber of Number of Number of Number of Number of         Sumber of Number of Number of         Sumber of Number of         Sumber of Caught       Number Kept         Sumber of Caught       Number Kept         Sumber of Caught       Number Kept         Sumber of Caught       Number Kept         Sumber of Caught       Number of Kept         Sumber of Caught       Number of Sumber of Kept         Sumber of Caught       Number of Kept         Sumber of Caught       Number of Sumber of Kept         Sumber of Sumber of	All sets All Areas         Number of sets Number of hooks set           Number Caught         Number Kept         Number Released           10 int         Number Caught         Number Kept         Number Released           11 int         Number Caught         Number Kept         Number Released           12 int         13,430         13,223         207           rish         20,828         20,655         173           19,504         18,080         1,424           is         567         561         6           Total         62,405         60,559         1,846           96,288         0         96,288         4,672           rks         7,204         41         7,163           stip shark         559         0         559           250         1         249           728         2         726           Total         110,566         909         109,657           4         4,395         4,342         53           225,921         221,690         4,231           11         14         12         2           28,664         26,069         595           0         0

Table 2.For the period 1 January - 31 December, 2017, Hawaii longline limited-entry fishery annual statistics for fishing<br/>within the U.S. EEZ (Main Hawaiian Islands , Northwest Hawaiian Islands, or the Pacific Remote Islands, and<br/>with all fishing categories (set types), including effort (number of vessels, trips, sets, and hooks set), and for<br/>each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna,<br/>and other, along with the number of fish caught, kept, and released, and the catch per unit effort (CPUE,<br/>number per 1,000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source:<br/>PIFSC Information Management System, Longline Logbook Data.

Species (PMUS)       Ca         PMUS       Blue marlin       1         Blue marlin       1       1         Shortbill spearfish       1       1         Shortbill spearfish       1       1         Shark PMUS       Total       1         Shark PMUS       1       1         Shark PMUS       Blue shark       2         Mako sharks       1       1         Shark PMUS       Blue shark       2         Mako sharks       1       1         Shark PMUS       Blue shark       2         Mako sharks       1       1         Oceanic whitetip shark       2       1         Other Sharks       1       2         Tuna PMUS       Albacore       2         Bigeye tuna       5       1         Yellowfin tuna       2       2         Skipjack tuna       0       1         Other tunas       1       1	mber ught 2,330 4,402 5,544 1,612 199 <b>4,087</b> 5,861 972 1,119 234 97 320 <b>8,603</b>	Number Kept 2,322 4,378 5,526 1,494 199 <b>13,919</b> 0 155 16 0 0 155 16 0 0 171	Number Released 8 24 18 118 0 <b>168</b> 25,861 817 1,103 234 97 320	CPUE Number Caught per 1000 hooks 0.18 0.34 0.42 0.12 0.02 1.07 1.97 0.07 0.09 0.02 0.01 0.02
Billfish PMUS         Blue marlin         Striped marlin         Shortbill spearfish         Swordfish         Other billfishes         Total         Shark PMUS         Blue shark         Blue shark         Mako sharks         Thresher sharks         Oceanic whitetip shark         Silky shark         Other Sharks         Total         Z         Tuna PMUS         Albacore         Bigeye tuna         Skipjack tuna         Other tunas	4,402 5,544 1,612 199 <b>4,087</b> 5,861 972 1,119 234 97 320	4,378 5,526 1,494 199 <b>13,919</b> 0 155 16 0 0 0	24 18 118 0 <b>168</b> 25,861 817 1,103 234 97 320	0.34 0.42 0.12 0.02 <b>1.07</b> 1.97 0.07 0.09 0.02 0.01
Blue marlin:Striped marlin:Shortbill spearfish:Swordfish:Other billfishes:Total1:Shark PMUS:Blue shark:Mako sharks:Thresher sharks:Oceanic whitetip shark:Silky shark:Other Sharks:Total2Tuna PMUS:Albacore:Bigeye tuna:Skipjack tuna:Other tunas:Skipjack tuna:Other tunas:	4,402 5,544 1,612 199 <b>4,087</b> 5,861 972 1,119 234 97 320	4,378 5,526 1,494 199 <b>13,919</b> 0 155 16 0 0 0	24 18 118 0 <b>168</b> 25,861 817 1,103 234 97 320	0.34 0.42 0.12 0.02 <b>1.07</b> 1.97 0.07 0.09 0.02 0.01
Striped marlinAShortbill spearfishSSwordfishTotalOther billfishesTotalShark PMUSBlue sharkBlue shark22Mako sharksThresher sharksOceanic whitetip sharkSilky sharkOther SharksTotalZTuna PMUSAlbacoreBigeye tunaBigeye tunaSYellowfin tunaSSkipjack tunaOther tunasOther tunasTotal	4,402 5,544 1,612 199 <b>4,087</b> 5,861 972 1,119 234 97 320	4,378 5,526 1,494 199 <b>13,919</b> 0 155 16 0 0 0	24 18 118 0 <b>168</b> 25,861 817 1,103 234 97 320	0.34 0.42 0.12 0.02 <b>1.07</b> 1.97 0.07 0.09 0.02 0.01
Shortbill spearfish Swordfish Other billfishes Total 1 Shark PMUS Blue shark Blue shark Shark PMUS Thresher sharks Oceanic whitetip shark Silky shark Other Sharks Total 2 Tuna PMUS Albacore Bigeye tuna Skipjack tuna Other tunas Total 8	5,544 1,612 199 <b>4,087</b> 5,861 972 1,119 234 97 320	5,526 1,494 199 <b>13,919</b> 0 155 16 0 0 0	18 118 0 <b>168</b> 25,861 817 1,103 234 97 320	0.42 0.12 0.02 <b>1.07</b> 1.97 0.07 0.09 0.02 0.01
Swordfish Other billfishes Total 14 Shark PMUS Blue shark 24 Mako sharks Thresher sharks Oceanic whitetip shark Silky shark Other Sharks Total 2 Tuna PMUS Albacore Bigeye tuna 55 Yellowfin tuna 24 Bluefin tuna Skipjack tuna 60 Other tunas	1,612 199 <b>4,087</b> 5,861 972 1,119 234 97 320	1,494 199 <b>13,919</b> 0 155 16 0 0 0	118 0 <b>168</b> 25,861 817 1,103 234 97 320	0.12 0.02 <b>1.07</b> 1.97 0.07 0.09 0.02 0.01
Other billfishesTotal1Shark PMUSBlue shark24Blue shark24Mako sharks1Thresher sharks1Oceanic whitetip shark3Oceanic whitetip shark3Other Sharks1Other Sharks1Total2Tuna PMUS1Albacore5Bigeye tuna5Yellowfin tuna2Bluefin tuna3Skipjack tuna0Other tunas8	199 <b>4,087</b> 5,861 972 1,119 234 97 320	199 <b>13,919</b> 0 155 16 0 0 0	0 <b>168</b> 25,861 817 1,103 234 97 320	0.02 <b>1.07</b> 1.97 0.07 0.09 0.02 0.01
Total1Shark PMUS24Blue shark24Mako sharks25Thresher sharks25Oceanic whitetip shark26Other Sharks27Total2Tuna PMUS26Albacore26Bigeye tuna52Yellowfin tuna26Bluefin tuna26Skipjack tuna60Other tunas7Total8	<b>4,087</b> 5,861 972 1,119 234 97 320	<b>13,919</b> 0 155 16 0 0 0	<b>168</b> 25,861 817 1,103 234 97 320	<b>1.07</b> 1.97 0.07 0.09 0.02 0.01
Shark PMUSBlue shark24Mako sharks24Mako sharks1Thresher sharks1Oceanic whitetip shark1Silky shark0Other Sharks2Total2Tuna PMUS1Albacore3Bigeye tuna3Yellowfin tuna2Bluefin tuna3Skipjack tuna0Other tunas8	5,861 972 1,119 234 97 320	0 155 16 0 0 0	25,861 817 1,103 234 97 320	1.97 0.07 0.09 0.02 0.01
Blue shark24Mako sharks1Mako sharks1Thresher sharks0Oceanic whitetip shark3Silky shark0Other Sharks2Total2Tuna PMUS1Albacore5Bigeye tuna5Yellowfin tuna2Bluefin tuna3Skipjack tuna0Other tunas8	972 1,119 234 97 320	155 16 0 0 0	817 1,103 234 97 320	0.07 0.09 0.02 0.01
Mako sharks Thresher sharks Oceanic whitetip shark Silky shark Other Sharks Total 2 Tuna PMUS Albacore Bigeye tuna 5 Yellowfin tuna 2 Bluefin tuna Skipjack tuna Other tunas Total 8	972 1,119 234 97 320	155 16 0 0 0	817 1,103 234 97 320	0.07 0.09 0.02 0.01
Thresher sharks Oceanic whitetip shark Silky shark Other Sharks Total 2 Tuna PMUS Albacore Bigeye tuna 5 Yellowfin tuna 2 Bluefin tuna Skipjack tuna 0 Other tunas	1,119 234 97 320	16 0 0 0	1,103 234 97 320	0.09 0.02 0.01
Oceanic whitetip shark Silky shark Other Sharks <b>Total 2</b> <b>Tuna PMUS</b> Albacore Bigeye tuna 5: Yellowfin tuna 2: Bluefin tuna Skipjack tuna 0 Other tunas	234 97 320	0 0 0	234 97 320	0.02 0.01
Silky shark Other Sharks Total 2 Tuna PMUS Albacore Bigeye tuna 5 Yellowfin tuna 2 Bluefin tuna Skipjack tuna 0 Other tunas Total 8	97 320	0 0	97 320	0.01
Other Sharks Total 2 Tuna PMUS Albacore Bigeye tuna 52 Yellowfin tuna 22 Bluefin tuna Skipjack tuna Other tunas Total 8	320	0	320	
Total2Tuna PMUSAlbacoreAlbacore52Bigeye tuna52Yellowfin tuna24Bluefin tuna24Skipjack tuna6Other tunas7Total8				0.02
Tuna PMUSAlbacoreBigeye tunaYellowfin tunaYellowfin tunaBluefin tunaSkipjack tunaOther tunasTotal8	8,603	171		
Albacore Bigeye tuna 57 Yellowfin tuna 24 Bluefin tuna Skipjack tuna 0 Other tunas <b>Total 8</b>			28,432	2.18
Bigeye tuna 5 Yellowfin tuna 2 Bluefin tuna Skipjack tuna 0 Other tunas <b>Total 8</b>				
Yellowfin tuna 2 Bluefin tuna Skipjack tuna 0 Other tunas <b>Total 8</b>	277	277	0	0.02
Bluefin tuna Skipjack tuna d Other tunas <b>Total 8</b>	2,350	51,447	903	3.99
Skipjack tuna o Other tunas <b>Total 8</b>	4,351	23,799	552	1.86
Other tunas Total 8	0	0	0	0.00
Total 8	6,950	6,849	101	0.53
	0	0	0	0.00
	3,928	82,372	1,556	6.40
Other PMUS				
Mahimahi	8,887	8,808	79	0.68
Moonfish	1,795	1,790	5	0.14
Wahoo	5,157	5,142	15	0.39
Oilfish	4,307	3,749	558	0.33
Pomfret 1:	2,733	12,677	56	0.97
Total 3	2,879	32,166	713	2.51
Total PMUS 15	9,497	128,628	30,869	12.16
Total Non-PMUS	460	256	204	0.04
Total All Species 15	9,957	128,884	31,073	12.20

**Table 3.** For the period 1 January - 31 December, 2017, Hawaii and California longline limited-entry fisheries annual statistics for fishing outside the U.S. EEZ and with all fishing categories (set types), including effort (number of vessels, trips, sets, and hooks set), and for each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, along with the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1,000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report CoverageTime Period1 JanuarySet TypesAll setsFishing AreaOutside U.		December, 2017 EEZ	Number of vessels active Number of trips (partial or completed) Number of sets Number of hooks set		145 1,379 15,743 41,517,439
Pelagic Management Unit Species (PMUS)		Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 hooks
PMUS					
Billfish PMUS					
Blue marlin		5,746	5,718	28	0.14
Striped marlin		9,028	8,845	183	0.22
Shortbill spearfish		15,284	15,129	155	0.37
Swordfish		17,892	16,586	1,306	0.43
Other billfishes		368	362	6	0.01
	Total	48,318	46,640	1,678	1.16
Shark PMUS					
Blue shark		70,427	0	70,427	1.70
Mako sharks		4,565	710	3,855	0.11
Thresher sharks		6,085	25	6,060	0.15
Oceanic whitetip sh	nark	325	0	325	0.01
Silky shark		153	1	152	0.00
Other Sharks		408	2	406	0.01
	Total	81,963	738	81,225	1.97
Tuna PMUS					
Albacore		4,118	4,065	53	0.10
Bigeye tuna		173,571	170,243	3,328	4.18
Yellowfin tuna		56,822	55,663	1,159	1.37
Bluefin tuna		14	12	2	0.00
Skipjack tuna		19,714	19,220	494	0.47
Other tunas		0	0	0	0.00
	Total	254,239	249,203	5,036	6.12
Other PMUS					
Mahimahi		38,560	38,254	306	0.93
Moonfish		23,430	23,267	163	0.56
Wahoo		20,343	20,230	113	0.49
Oilfish		14,707	12,822	1,885	0.35
Pomfret		55,042	54,743	299	1.33
	Total	152,082	149,316	2,766	3.66
Total PMUS		536,602	445,897	90,705	12.92
Total Non-PMUS		3,631	194	3,437	0.09
Total All Species		540,233	446,091	94,142	13.01
			4		

Table 4.For the period 1 January - 31 December, 2017, Hawaii and California longline limited-entry fisheries annual<br/>statistics for all fishing areas and with shallow set type, including effort (number of vessels, trips, sets, and<br/>hooks set), and for each listed species, organized by pelagic management unit species (PMUS) groups of<br/>billfish, shark, tuna, and other, along with the number of fish caught, kept, and released, and the catch per unit<br/>effort (CPUE, number per 1,000 hooks, calculated as the sum of fish caught divided by the sum of hooks set).<br/>Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage		Number of	20	
Time Period 1 Janu	uary - 31 December, 2017		Number of trips (partial or completed)	
Set Types Shallo	w sets	Number of		994 1,076,290
Fishing Area All Areas	eas	Number of	Number of hooks set	
Pelagic Management Unit	Number	Number	Number	CPUE
Species (PMUS)	Caught	Kept	Released	Number Caught
				per 1000 hooks
PMUS				
Billfish PMUS	50	54	Λ	0.05
Blue marlin	58	54	4	0.05
Striped marlin	411	338	73	0.38
Shortbill spearfish	160	149	11	0.15
Swordfish	13,928	12,819	1,109	12.94
Other billfishes	19	17	2	0.02
Тс	otal 14,576	13,377	1,199	13.54
Shark PMUS				
Blue shark	9,638	0	9,638	8.95
Mako sharks	1,112	269	843	1.03
Thresher sharks	73	2	71	0.07
Oceanic whitetip shar	rk 22	0	22	0.02
Silky shark	7	0	7	0.01
Other Sharks	5	0	5	0.00
То	otal 10,857	271	10,586	10.09
Tuna PMUS				
Albacore	287	255	32	0.27
Bigeye tuna	1,530	1,315	215	1.42
Yellowfin tuna	1,553	1,455	98	1.44
Bluefin tuna	1	1	0	0.00
Skipjack tuna	79	79	0	0.07
Other tunas	0	0	0	0.00
То	otal 3,450	3,105	345	3.21
Other PMUS				
Mahimahi	1,301	1,260	41	1.21
Moonfish	, 431	384	47	0.40
Wahoo	74	74	0	0.07
Oilfish	762	418	344	0.71
Pomfret	39	30	9	0.04
	otal 2,607	2,166	441	2.42
Total PMUS	31,490	18,919	12,571	29.26
Total Non-PMUS	15	8	7	0.01
Total All Species	31,505	18,927	12,578	29.27

Table 5.For the period 1 January - 31 December, 2017, Hawaii and California longline limited-entry fisheries annual<br/>statistics for all fishing areas and with deep set type, including effort (number of vessels, trips, sets, and hooks<br/>set), and for each listed species, organized by pelagic management unit species (PMUS) groups of billfish,<br/>shark, tuna, and other, along with the number of fish caught, kept, and released, and the catch per unit effort<br/>(CPUE, number per 1,000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data<br/>Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage		Number of	145	
Time Period 1 January - 3 Set Types Deep sets Fishing Area All Areas	31 December, 2017	Number of trips (partial or completed) Number of sets Number of hooks set		1,539 19,674 53,554,046
Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 hooks
PMUS				
Billfish PMUS				
Blue marlin	8,018	7,986	32	0.15
Striped marlin	13,019	12,885	134	0.24
Shortbill spearfish	20,668	20,506	162	0.39
Swordfish	5,576	5,261	315	0.10
Other billfishes	548	544	4	0.01
Total	47,829	47,182	647	0.89
Shark PMUS				
Blue shark	86,650	0	86,650	1.62
Mako sharks	4,425	596	3,829	0.08
Thresher sharks	7,131	39	7,092	0.13
Oceanic whitetip shark	537	0	537	0.01
Silky shark	243	1	242	0.00
Other Sharks	723	2	721	0.01
Total	99,709	638	99,071	1.86
Tuna PMUS				
Albacore	4,108	4,087	21	0.08
Bigeye tuna	224,391	220,375	4,016	4.19
Yellowfin tuna	79,620	78,007	1,613	1.49
Bluefin tuna	13	11	2	0.00
Skipjack tuna	26,585	25,990	595	0.50
Other tunas	0	0	0	0.00
Total	334,717	328,470	6,247	6.25
Other PMUS				
Mahimahi	46,146	45,802	344	0.86
Moonfish	24,794	24,673	121	0.46
Wahoo	25,426	25,298	128	0.47
Oilfish	18,252	16,153	2,099	0.34
Pomfret	67,736	67,390	346	1.26
Total	182,354	179,316	3,038	3.41
Total PMUS	664,609	555,606	109,003	12.41
Total Non-PMUS	4,076	442	3,634	0.08
Total All Species	668,685	556,048	112,637	12.49

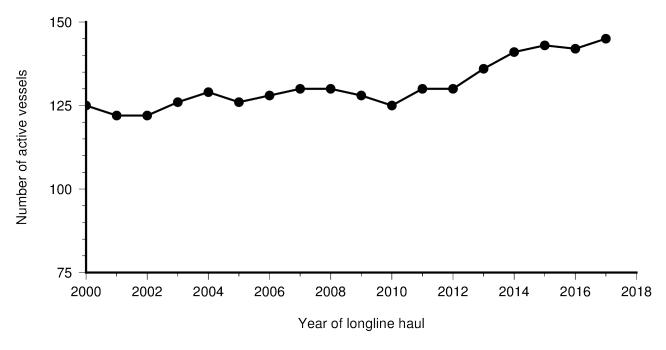


Figure 1: Number of active longline vessels based in Hawaii and California, by year, 2000-2017.

Trips

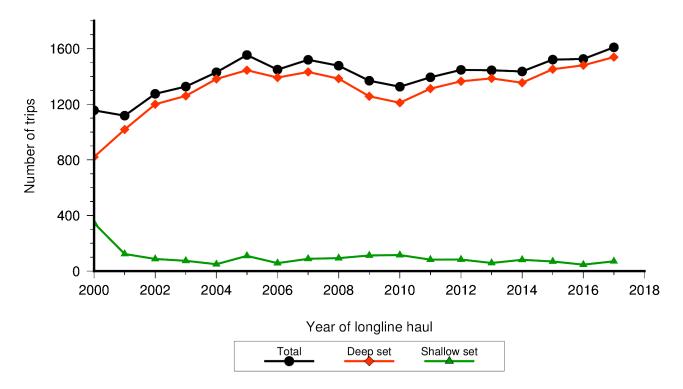


Figure 2: Number of active longline vessels based in Hawaii and California, by year, 2000-2017.

Sets

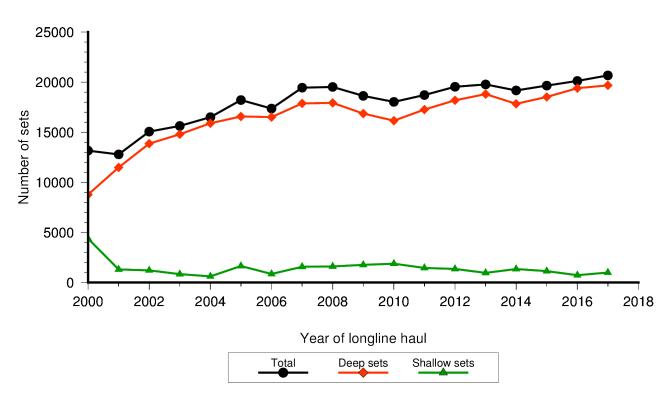
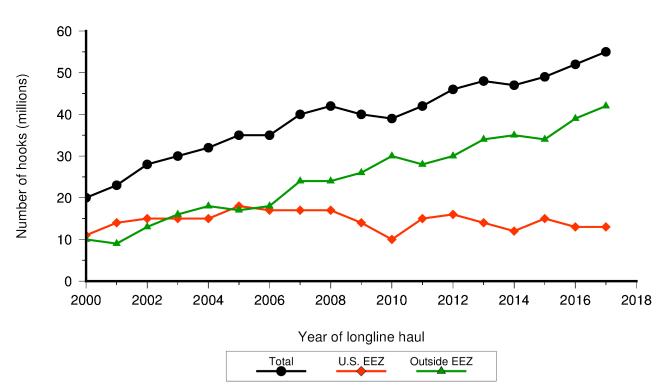


Figure 3: Number of fishing sets by vessels based in Hawaii and California, by year, 2000-2017.



Hooks Set

Figure 4: Number of hooks in millions, set by vessels based in Hawaii and California, by year, 2000-2017.

## Tuna Catch

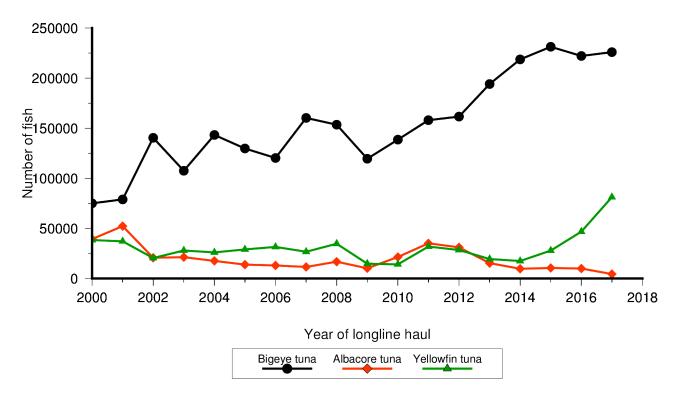
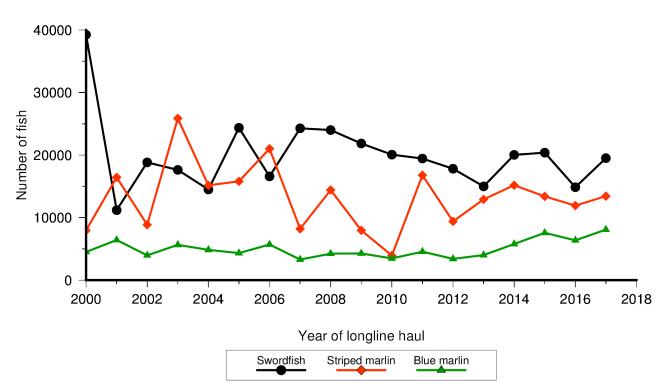


Figure 5: Annual catch (kept + released) of albacore tuna, bigeye tuna, and yellowfin tuna by longline vessels based in Hawaii and California, by year, 2000-2017.



# Billfish Catch

Figure 6: Annual catch (kept + released) of swordfish, striped marlin, and blue marlin by longline vessels based in Hawaii and California, by year, 2000-2017.

**Shark Catch** 

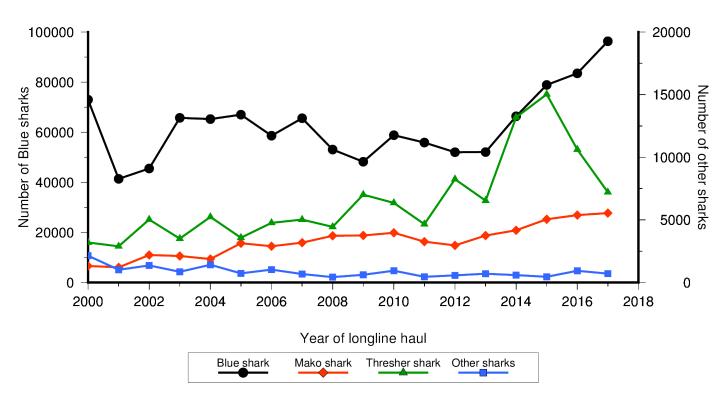
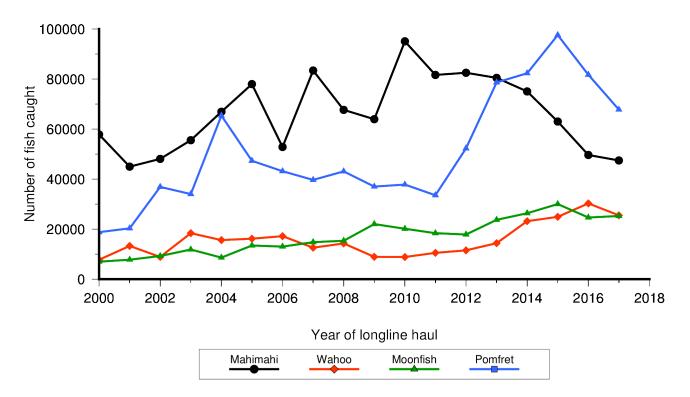


Figure 7: Annual catch (kept + released) of blue shark, mako shark, thresher shark, and other sharks by longline vessels based in Hawaii and California, by year, 2000-2017.



## Other PMUS Catch

Figure 8: Annual catch (kept + released) of mahimahi, wahoo, moonfish, and pomfret by longline vessels based in Hawaii and California, by year, 2000-2017.