

The Hawaii-based Longline Logbook Summary Report April–June 2008¹

Pacific Islands Fisheries Science Center
Fisheries Monitoring and Analysis Program

This report summarizes data on fish catch and fishing effort by Hawaii-based longline vessels during the second quarter of 2008 (Q2-2008). Results are based on the date gear was hauled, as reported by vessel operators to the National Marine Fisheries Service in Federal logbooks of daily fishing activity. The report covers longline operations for fishing trips completed in the second quarter of 2008 and most, but not all, Q2-2008 data from trips that began late in the second quarter and continued into the third quarter of 2008. Therefore, the Q2-2008 summary statistics reported here are preliminary. When data for all second quarter longline operations are available, tables and graphs of summary statistics will be updated and published in the online version of this report at <http://www.pifsc.noaa.gov/fmsd/reports.php>.

During Q2-2008, 123 vessels were active in the Hawaii-based fleet, 1 less than in the Q2-2007 (Table 1, Fig. 1). They made 394 longline trips (4 less than in Q2-2007), including 362 using deep-set gear to target tuna (1 less than in Q2-2007) and 32 using shallow-set gear to target swordfish (3 less than in Q2 2007; Fig. 2). A record 10.2 million hooks were deployed in Q2-2008, 1.2 million more than in Q2-2007 (Fig. 3). The fleet fished mainly outside the U.S. Exclusive Economic Zone (EEZ) (72% of the total hooks set), followed by waters within the EEZ of the Main Hawaiian Islands (MHI) (15%), the EEZ of the Northwestern Hawaiian Islands (NWHI) (9%) and the EEZ of U.S. Pacific Remote Islands Areas (PRIA, consisting of U.S. possessions Wake Island, Jarvis Island, Howland Island, Baker Island, Kingman Reef, Palmyra Atoll, and Johnston Atoll) (4%) .

In Q2-2008, the Hawaii longline fleet caught a record 35,543 bigeye tuna (Fig. 4); 81% were caught outside the U.S. EEZ, 7% in the MHI EEZ, 7% in the NWHI EEZ, and 5% in the PRIA EEZ. The bigeye tuna catch-per-unit-of-effort (CPUE) on tuna-targeted trips was 3.6 fish per 1000 hooks, slightly less than last year's CPUE of 3.8 fish per 1000 hooks (Fig. 5). The albacore catch and CPUE on tuna-targeted trips in Q2-2008 were 3,513 fish and 0.4 fish per 1000 hooks, respectively (Figs. 6–7). The yellowfin tuna catch and CPUE (6,718 fish and 0.7 fish per 1000 hooks, respectively) were higher in Q2-2008 than in Q2-2007 (Figs. 8–9).

The Q2-2008 swordfish catch was 6,794 fish, 6% lower than in Q2-2007 (Fig. 10). The smaller second quarter swordfish catch is attributed to fewer shallow sets and lower CPUE than last year. In Q2-2008, swordfish CPUE on shallow-set swordfish-targeted trips was 13.0 fish per 1000 hooks, 10% lower than in Q2-2007 (Fig. 11).

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The Q2-2008 striped marlin catch (5,258 fish) and CPUE on tuna-targeted trips (0.47 fish per 1000 hooks) were higher than in Q2-2007 by 100% and 68%, respectively (Figs. 12–13). The Q2-2008 blue marlin catch (1,591 fish) was higher than in Q2-2007 by 39% while CPUE on tuna-targeted trips (0.13 fish per 1000 hooks) was the same (Figs. 14–15).

The fleet caught 12,311 sharks in Q2-2008, of which 656 (5%) were kept. Blue shark comprised 80% of the total shark catch (9,823 fish) (Fig. 16). Blue shark CPUE on shallow-set swordfish-targeted trips was 3.2 fish per 1000 hooks (Fig. 17).

In Q2-2008, the Hawaii longline catch of other key pelagic species included 17,714 mahimahi (Fig. 18) with a CPUE of 1.5 fish per 1000 hooks on tuna-targeted trips (Fig. 19); 3,812 moonfish (Fig. 20) with a CPUE of 0.39 fish per 1000 hooks on tuna-targeted trips (Fig. 21); 11,901 pomfret (Fig. 22) with a CPUE of 1.2 fish per 1000 hooks on tuna-targeted trips (Fig. 23); and 5,628 wahoo (Fig. 24) with a CPUE of 0.57 fish per 1000 hooks on tuna-targeted trips (Fig. 25). A high percentage of the catch of these species was kept.

The summary statistics in Table 1 are based on logbook records from all fishing areas combined and all types of longline trips—those targeting swordfish and those aimed at catching tuna. Hence, the CPUE figures in Table 1 differ from those reported above, which were calculated using data exclusively from tuna-targeted trips or swordfish-targeted trips, depending on the species of interest.

The longline logbook statistics reported above refer to all fishing areas combined. Q2-2008 summary catch and effort were also compiled by several geographical sub-areas including: the MHI EEZ; the NWHI EEZ; the PRIA EEZ; the combined EEZ of MHI, NWHI and PRIA; and waters outside the U.S. EEZ. These statistics are presented in Tables 2–6. Q2-2008 summary statistics for the entire fishing area are presented for each distinct trip type: shallow-set swordfish-targeted trips (Table 7) and deep-set tuna-targeted trips (Table 8).

To supplement the summary longline fishery statistics for Q2-2008, graphs of annual Hawaii longline fishing effort and catch by species for the years 1991-2007 are presented in Figs. A1–A7.

All tables and graphs provided in this report are available on the PIFSC Web site at <http://www.pifsc.noaa.gov/fmsd/reports.php>. The Web site also has an archive of quarterly and annual summary tables of fish catch and fishing effort from 1991 to present. The statistics in the online graphs and archived tables are updated periodically as new records are added to the database and corrections are made.

Table 1. Quarterly summary report of fishing effort and catch statistics for U.S. longline vessels landing in Hawaii as derived for NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC Information Management System, Longline Logbook Data, 9/4/200810:40:52AM]

Report Coverage		Number of vessels active	123
Time Period	2nd Quarter 2008	Number of trips	394
Fishing Area	All Areas	Number of sets	4,784
Trip Types	All Trip Types	Number of hooks set	10,154,854

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	1,591	1,576	15	0.16
Striped marlin	5,258	5,205	53	0.52
Shortbill spearfish	3,924	3,858	66	0.39
Swordfish	6,794	6,079	715	0.67
Other billfishes	88	85	3	0.01
Total	17,655	16,803	852	1.74
Sharks				
Blue shark	9,823	33	9,790	0.97
Mako sharks	1,037	508	529	0.10
Thresher sharks	1,088	100	988	0.11
Oceanic whitetip shark	246	11	235	0.02
Silky shark	4		4	0.00
Other sharks	113	4	109	0.01
Total	12,311	656	11,655	1.21
Tunas				
Albacore	3,513	3,508	5	0.35
Bigeye tuna	35,543	35,144	399	3.50
Yellowfin	6,718	6,546	172	0.66
Skipjack tuna	3,171	2,907	264	0.31
Other tunas	22	22		0.00
Total	48,967	48,127	840	4.82
Other PMUS				
Mahimahi	17,714	17,321	393	1.74
Moonfish	3,812	3,795	17	0.38
Wahoo	5,628	5,607	21	0.55
Oilfish	7,334	7,267	67	0.72
Pomfret	11,901	11,834	67	1.17
Total	46,389	45,824	565	4.57
Total PMUS	125,322	111,410	13,912	12.34
Total Non-PMUS	1,268	882	386	0.12
Total All Species	126,590	112,292	14,298	12.47

Table 2. Quarterly summary report of fishing effort and catch statistics for U.S. longline vessels landing in Hawaii as derived for NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC Information Management System, Longline Logbook Data, 9/4/2008 10:40:52AM]

Report Coverage

Time Period 2nd Quarter 2008
 Fishing Area Main Hawaiian Islands EEZ
 Trip Types All Trip Types

Number of vessels active	84
Number of trips	145
Number of sets	745
Number of hooks set	1,479,354

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	314	310	4	0.21
Striped marlin	628	626	2	0.42
Shortbill spearfish	1,152	1,138	14	0.78
Swordfish	837	725	112	0.57
Other billfishes	24	24		0.02
Total	2,955	2,823	132	2.00
Sharks				
Blue shark	1,482	5	1,477	1.00
Mako sharks	150	104	46	0.10
Thresher sharks	185	50	135	0.13
Oceanic whitetip shark	41	4	37	0.03
Silky shark	2		2	0.00
Other sharks	25	3	22	0.02
Total	1,885	166	1,719	1.27
Tunas				
Albacore	355	353	2	0.24
Bigeye tuna	2,366	2,341	25	1.60
Yellowfin	2,459	2,415	44	1.66
Skipjack tuna	942	890	52	0.64
Total	6,122	5,999	123	4.14
Other PMUS				
Mahimahi	1,765	1,753	12	1.19
Moonfish	408	404	4	0.28
Wahoo	867	863	4	0.59
Oilfish	1,238	1,227	11	0.84
Pomfret	1,353	1,344	9	0.91
Total	5,631	5,591	40	3.81
Total PMUS	16,593	14,579	2,014	11.22
Total Non-PMUS	751	678	73	0.51
Total All Species	17,344	15,257	2,087	11.72

Table 3. Quarterly summary report of fishing effort and catch statistics for U.S. longline vessels landing in Hawaii as derived for NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC Information Management System, Longline Logbook Data, 9/4/2008 10:40:52AM]

Report Coverage

Time Period 2nd Quarter 2008
 Fishing Area Northwestern Hawaiian Islands EEZ
 Trip Types All Trip Types

Number of vessels active	56
Number of trips	65
Number of sets	472
Number of hooks set	881,645

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	438	434	4	0.50
Striped marlin	1,213	1,192	21	1.38
Shortbill spearfish	515	489	26	0.58
Swordfish	2,521	2,136	385	2.86
Other billfishes	19	17	2	0.02
Total	4,706	4,268	438	5.34
Sharks				
Blue shark	1,214	5	1,209	1.38
Mako sharks	163	76	87	0.18
Thresher sharks	63	2	61	0.07
Oceanic whitetip shark	32	2	30	0.04
Silky shark	1		1	0.00
Other sharks	15		15	0.02
Total	1,488	85	1,403	1.69
Tunas				
Albacore	343	343		0.39
Bigeye tuna	2,521	2,505	16	2.86
Yellowfin	944	940	4	1.07
Skipjack tuna	309	304	5	0.35
Total	4,117	4,092	25	4.67
Other PMUS				
Mahimahi	2,648	2,617	31	3.00
Moonfish	402	401	1	0.46
Wahoo	558	555	3	0.63
Oilfish	864	848	16	0.98
Pomfret	1,194	1,189	5	1.35
Total	5,666	5,610	56	6.43
Total PMUS	15,977	14,055	1,922	18.12
Total Non-PMUS	43	43		0.05
Total All Species	16,020	14,098	1,922	18.17

Table 4. Quarterly summary report of fishing effort and catch statistics for U.S. longline vessels landing in Hawaii as derived for NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC Information Management System, Longline Logbook Data, 9/4/200810:40:52AM]

Report Coverage

Time Period 2nd Quarter 2008
 Fishing Area Pacific Remote Island Areas (PRIA) EEZ
 Trip Types All Trip Types

Number of vessels active	26
Number of trips	29
Number of sets	196
Number of hooks set	448,646

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	109	109		0.24
Striped marlin	57	56	1	0.13
Shortbill spearfish	103	103		0.23
Swordfish	50	50		0.11
Other billfishes	10	10		0.02
Total	329	328	1	0.73
Sharks				
Blue shark	421	5	416	0.94
Mako sharks	25	15	10	0.06
Thresher sharks	314	4	310	0.70
Oceanic whitetip shark	139	1	138	0.31
Total	899	25	874	2.00
Tunas				
Albacore	447	447		1.00
Bigeye tuna	1,692	1,683	9	3.77
Yellowfin	863	780	83	1.92
Skipjack tuna	290	263	27	0.65
Other tunas	1	1		0.00
Total	3,293	3,174	119	7.34
Other PMUS				
Mahimahi	122	122		0.27
Moonfish	16	16		0.04
Wahoo	384	384		0.86
Oilfish	131	131		0.29
Pomfret	278	278		0.62
Total	931	931		2.08
Total PMUS	5,452	4,458	994	12.15
Total Non-PMUS	4	4		0.01
Total All Species	5,456	4,462	994	12.16

Table 5. Quarterly summary report of fishing effort and catch statistics for U.S. longline vessels landing in Hawaii as derived for NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC Information Management System, Longline Logbook Data, 9/4/200810:40:52AM]

Report Coverage

Time Period 2nd Quarter 2008
 Fishing Area Hawaiian Islands EEZ + PRIA EEZ
 Trip Types All Trip Types

Number of vessels active	111
Number of trips	199
Number of sets	1,413
Number of hooks set	2,809,645

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	861	853	8	0.31
Striped marlin	1,898	1,874	24	0.68
Shortbill spearfish	1,770	1,730	40	0.63
Swordfish	3,408	2,911	497	1.21
Other billfishes	53	51	2	0.02
Total	7,990	7,419	571	2.84
Sharks				
Blue shark	3,117	15	3,102	1.11
Mako sharks	338	195	143	0.12
Thresher sharks	562	56	506	0.20
Oceanic whitetip shark	212	7	205	0.08
Silky shark	3		3	0.00
Other sharks	40	3	37	0.01
Total	4,272	276	3,996	1.52
Tunas				
Albacore	1,145	1,143	2	0.41
Bigeye tuna	6,579	6,529	50	2.34
Yellowfin	4,266	4,135	131	1.52
Skipjack tuna	1,541	1,457	84	0.55
Other tunas	1	1		0.00
Total	13,532	13,265	267	4.82
Other PMUS				
Mahimahi	4,535	4,492	43	1.61
Moonfish	826	821	5	0.29
Wahoo	1,809	1,802	7	0.64
Oilfish	2,233	2,206	27	0.79
Pomfret	2,825	2,811	14	1.01
Total	12,228	12,132	96	4.35
Total PMUS	38,022	33,092	4,930	13.53
Total Non-PMUS	798	725	73	0.28
Total All Species	38,820	33,817	5,003	13.82

Table 6. Quarterly summary report of fishing effort and catch statistics for U.S. longline vessels landing in Hawaii as derived for NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC Information Management System, Longline Logbook Data, 9/4/2008 10:40:52AM]

Report Coverage

Time Period 2nd Quarter 2008
 Fishing Area Outside U.S. EEZ
 Trip Types All Trip Types

Number of vessels active	122
Number of trips	339
Number of sets	3,371
Number of hooks set	7,345,209

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	730	723	7	0.10
Striped marlin	3,360	3,331	29	0.46
Shortbill spearfish	2,154	2,128	26	0.29
Swordfish	3,386	3,168	218	0.46
Other billfishes	35	34	1	0.00
Total	9,665	9,384	281	1.32
Sharks				
Blue shark	6,706	18	6,688	0.91
Mako sharks	699	313	386	0.10
Thresher sharks	526	44	482	0.07
Oceanic whitetip shark	34	4	30	0.00
Silky shark	1		1	0.00
Other sharks	73	1	72	0.01
Total	8,039	380	7,659	1.09
Tunas				
Albacore	2,368	2,365	3	0.32
Bigeye tuna	28,964	28,615	349	3.94
Yellowfin	2,452	2,411	41	0.33
Skipjack tuna	1,630	1,450	180	0.22
Other tunas	21	21		0.00
Total	35,435	34,862	573	4.82
Other PMUS				
Mahimahi	13,179	12,829	350	1.79
Moonfish	2,986	2,974	12	0.41
Wahoo	3,819	3,805	14	0.52
Oilfish	5,101	5,061	40	0.69
Pomfret	9,076	9,023	53	1.24
Total	34,161	33,692	469	4.65
Total PMUS	87,300	78,318	8,982	11.89
Total Non-PMUS	470	157	313	0.06
Total All Species	87,770	78,475	9,295	11.95

Table 7. Quarterly summary report of fishing effort and catch statistics for U.S. longline vessels landing in Hawaii as derived for NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC Information Management System, Longline Logbook Data, 9/4/2008 10:40:52AM]

Report Coverage

Time Period 2nd Quarter 2008
 Fishing Area All Areas
 Trip Types Swordfish Targeted Trips

Number of vessels active	15
Number of trips	32
Number of sets	381
Number of hooks set	369,624

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	294	287	7	0.80
Striped marlin	671	650	21	1.82
Shortbill spearfish	110	96	14	0.30
Swordfish	4,787	4,225	562	12.95
Other billfishes	4	4		0.01
Total	5,866	5,262	604	15.87
Sharks				
Blue shark	1,185	7	1,178	3.21
Mako sharks	108	32	76	0.29
Thresher sharks	29	6	23	0.08
Oceanic whitetip shark	20	3	17	0.05
Silky shark	2		2	0.01
Other sharks	12		12	0.03
Total	1,356	48	1,308	3.67
Tunas				
Albacore	16	16		0.04
Bigeye tuna	586	565	21	1.59
Yellowfin	336	335	1	0.91
Skipjack tuna	33	33		0.09
Total	971	949	22	2.63
Other PMUS				
Mahimahi	2,810	2,713	97	7.60
Moonfish	11	10	1	0.03
Wahoo	78	77	1	0.21
Oilfish	755	733	22	2.04
Pomfret	6	6		0.02
Total	3,660	3,539	121	9.90
Total PMUS	11,853	9,798	2,055	32.07
Total Non-PMUS	6	5	1	0.02
Total All Species	11,859	9,803	2,056	32.08

Table 8. Quarterly summary report of fishing effort and catch statistics for U.S. longline vessels landing in Hawaii as derived for NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC Information Management System, Longline Logbook Data, 9/4/200810:40:52AM]

Report Coverage

Time Period 2nd Quarter 2008
 Fishing Area All Areas
 Trip Types Tuna Targeted Trips

Number of vessels active	119
Number of trips	362
Number of sets	4,403
Number of hooks set	9,785,230

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	1,297	1,289	8	0.13
Striped marlin	4,587	4,555	32	0.47
Shortbill spearfish	3,814	3,762	52	0.39
Swordfish	2,007	1,854	153	0.21
Other billfishes	84	81	3	0.01
Total	11,789	11,541	248	1.20
Sharks				
Blue shark	8,638	26	8,612	0.88
Mako sharks	929	476	453	0.09
Thresher sharks	1,059	94	965	0.11
Oceanic whitetip shark	226	8	218	0.02
Silky shark	2		2	0.00
Other sharks	101	4	97	0.01
Total	10,955	608	10,347	1.12
Tunas				
Albacore	3,497	3,492	5	0.36
Bigeye tuna	34,957	34,579	378	3.57
Yellowfin	6,382	6,211	171	0.65
Skipjack tuna	3,138	2,874	264	0.32
Other tunas	22	22		0.00
Total	47,996	47,178	818	4.90
Other PMUS				
Mahimahi	14,904	14,608	296	1.52
Moonfish	3,801	3,785	16	0.39
Wahoo	5,550	5,530	20	0.57
Oilfish	6,579	6,534	45	0.67
Pomfret	11,895	11,828	67	1.22
Total	42,729	42,285	444	4.37
Total PMUS	113,469	101,612	11,857	11.60
Total Non-PMUS	1,262	877	385	0.13
Total All Species	114,731	102,489	12,242	11.72

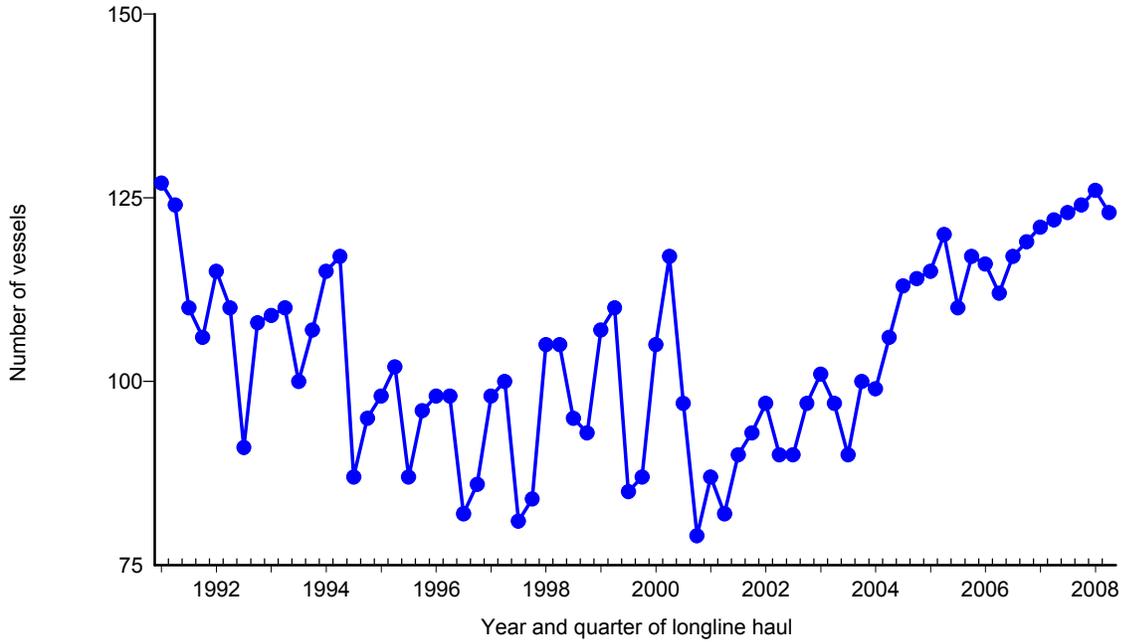


Figure 1. Number of active longline vessels based and landing in Hawaii, by quarter, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:42:11AM]

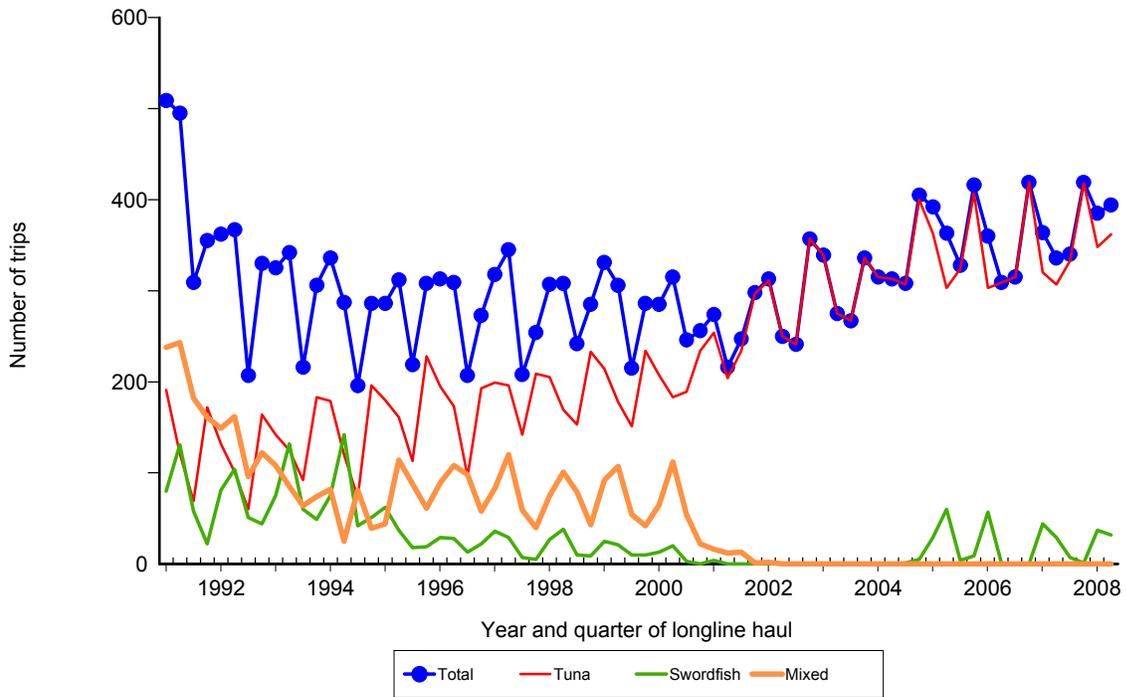


Figure 2. Number of fishing trips by longline vessels based and landing in Hawaii, by quarter and trip type, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:42:11AM]

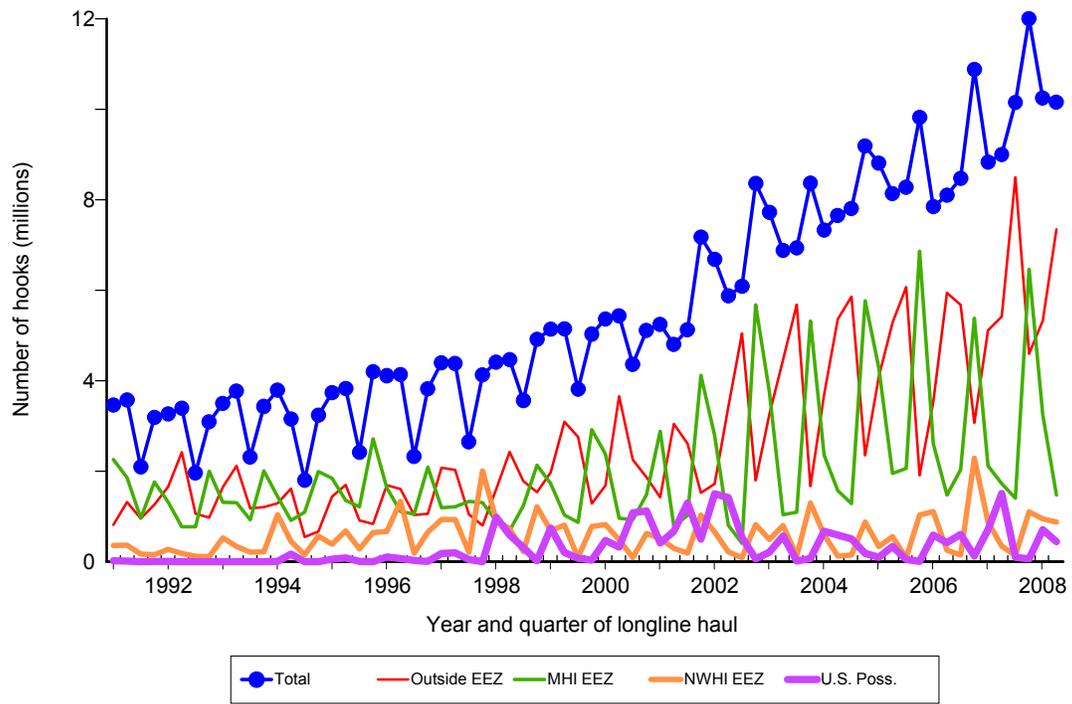


Figure 3. Number of hooks set by longline vessels based and landing in Hawaii, by quarter and fishing area, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:42:15AM]

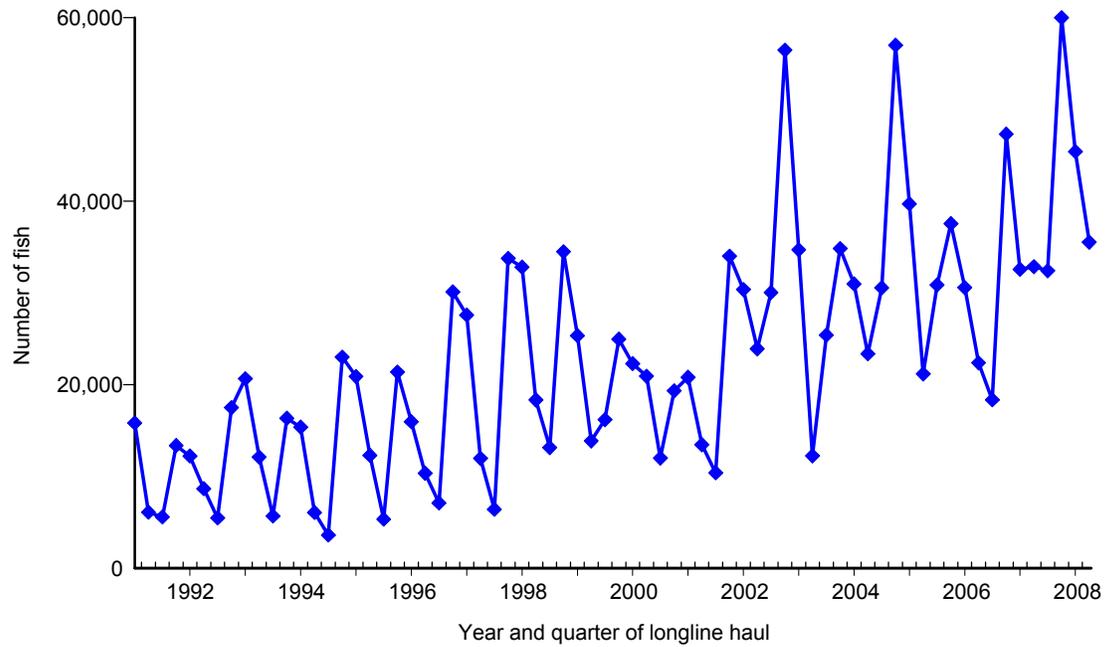


Figure 4. Quarterly catch of bigeye tuna by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:42:52AM]

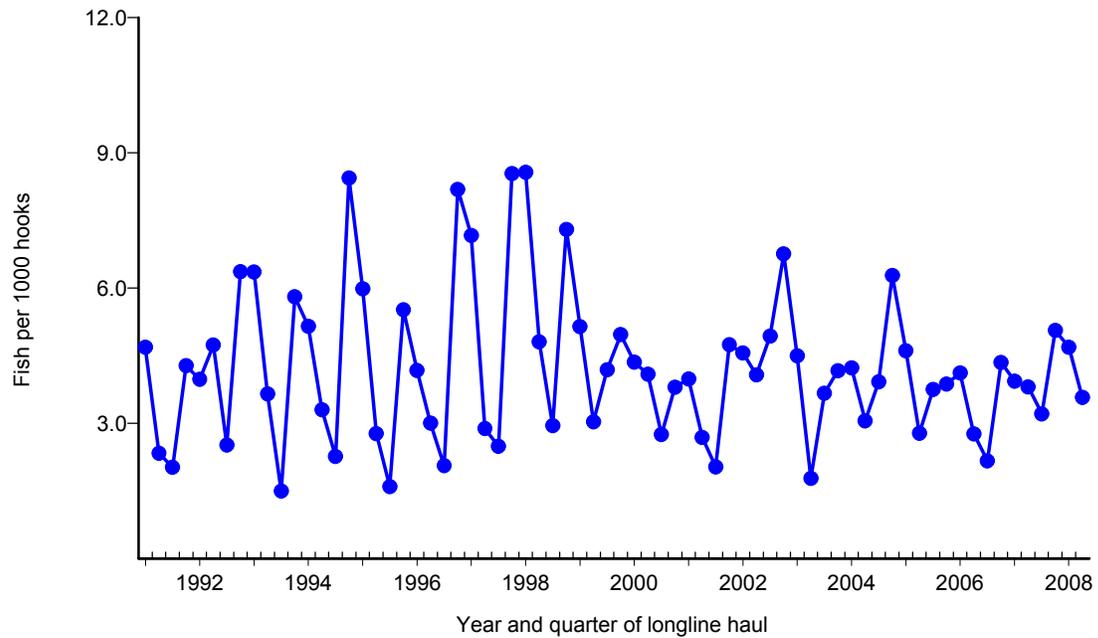


Figure 5. Quarterly CPUE of bigeye tuna (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:42:52AM]

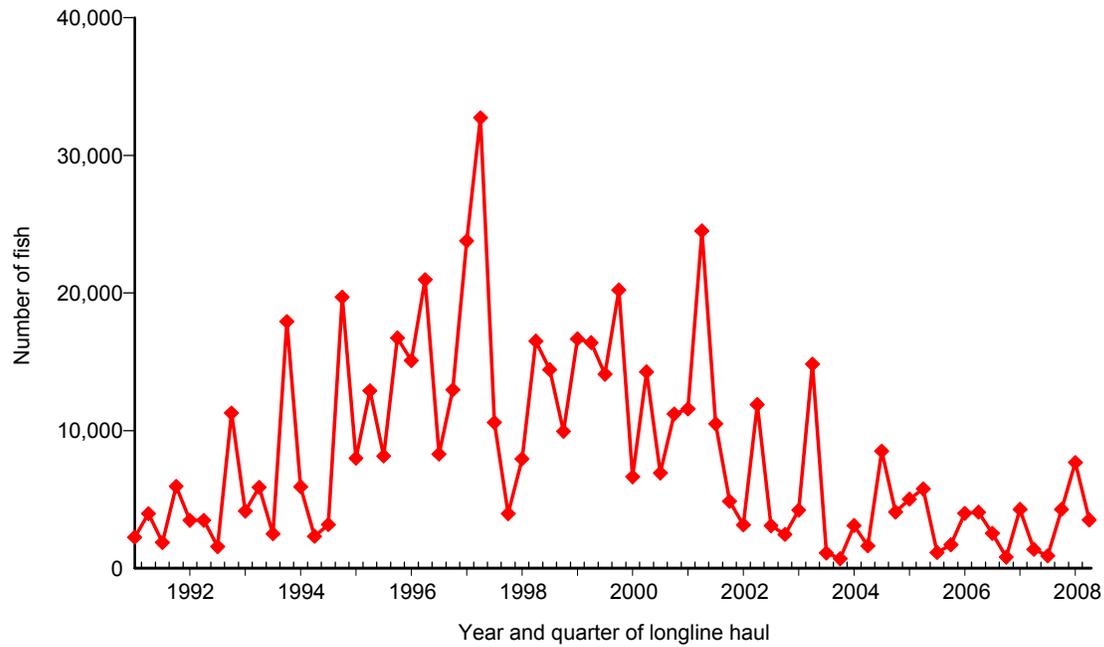


Figure 6. Quarterly catch of albacore by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:43:32AM]

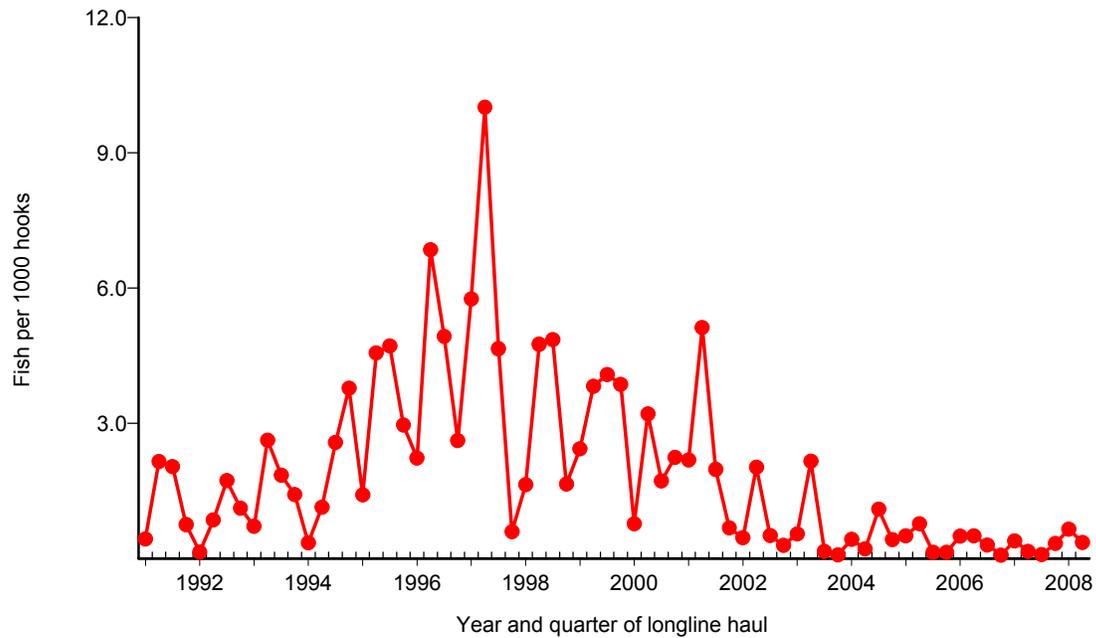


Figure 7. Quarterly CPUE of albacore (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:43:32AM]

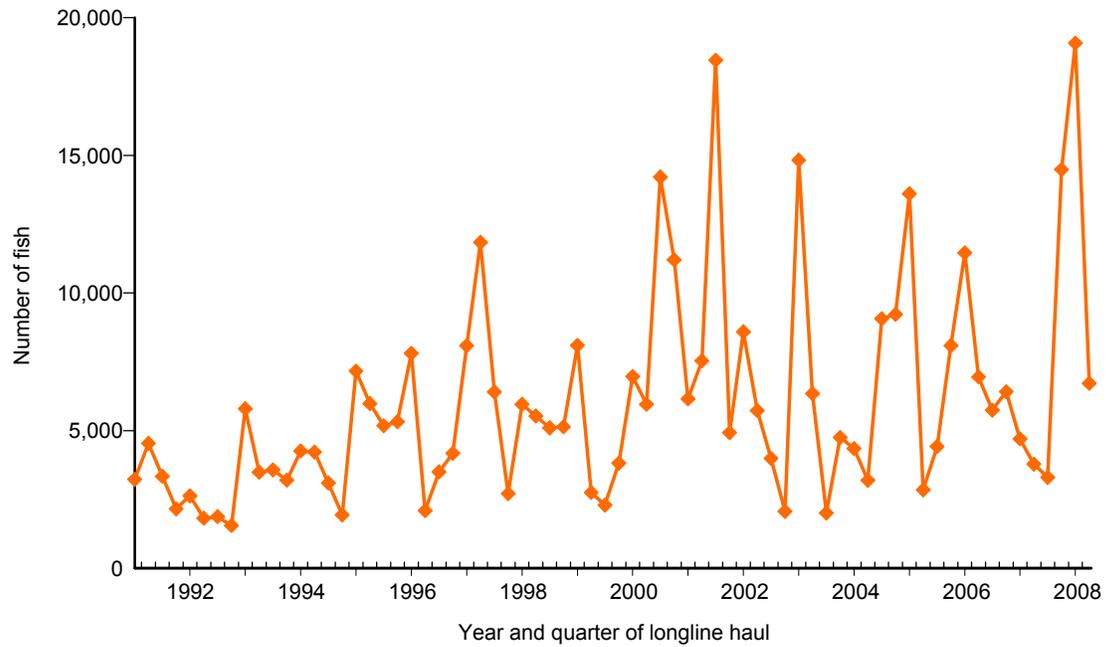


Figure 8. Quarterly catch of yellowfin tuna by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:44:11AM]

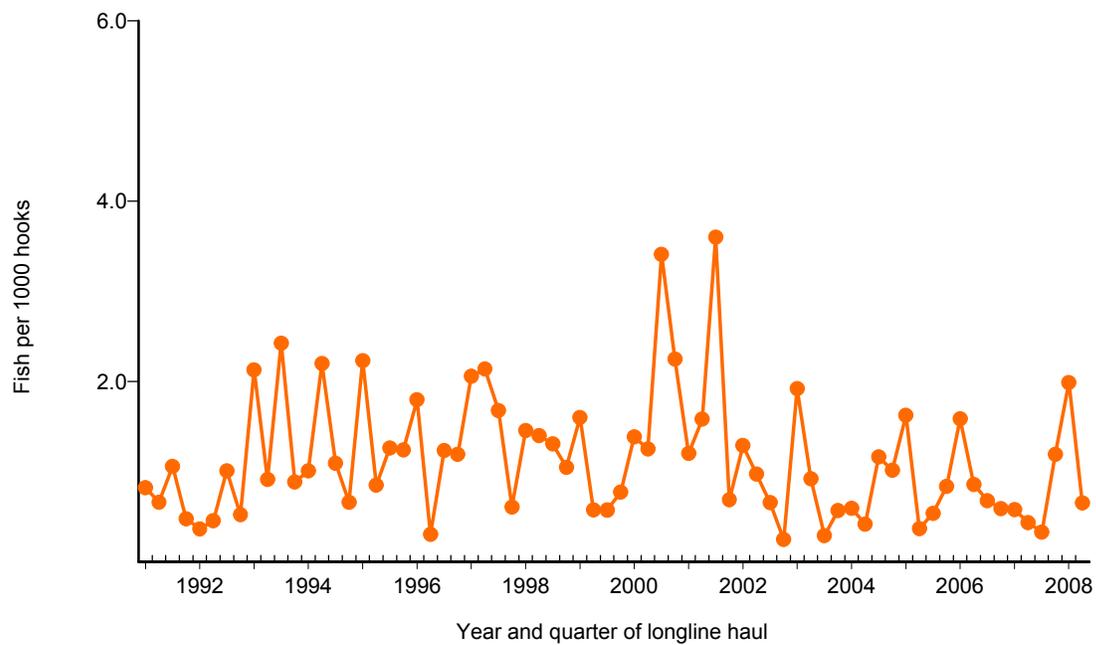


Figure 9. Quarterly CPUE of yellowfin tuna (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:44:11AM]

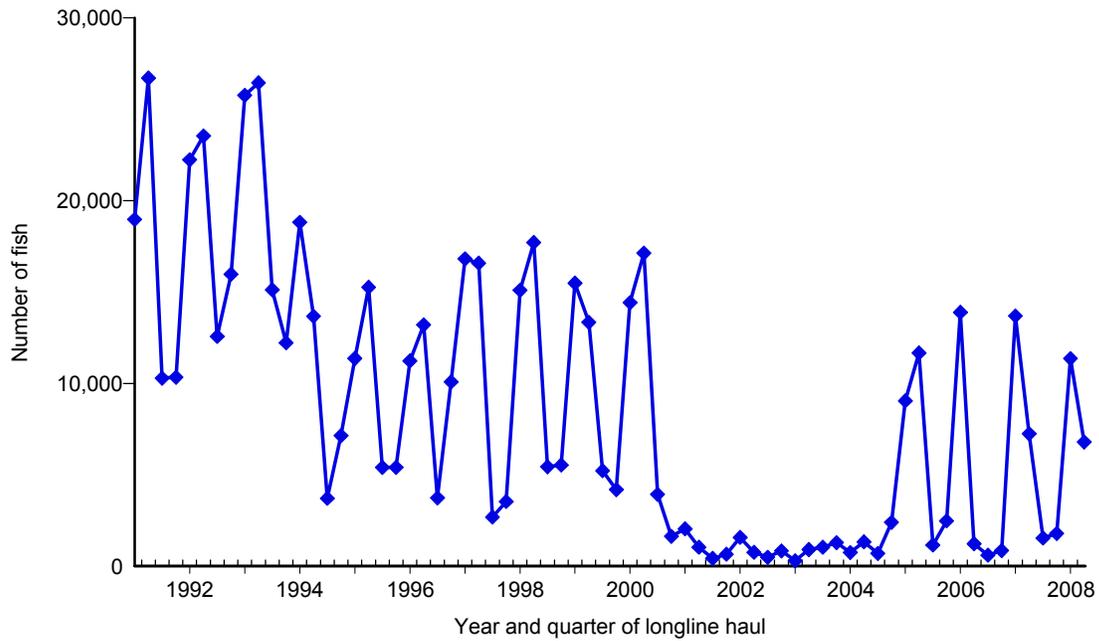


Figure 10. Quarterly catch of swordfish by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:44:49AM]

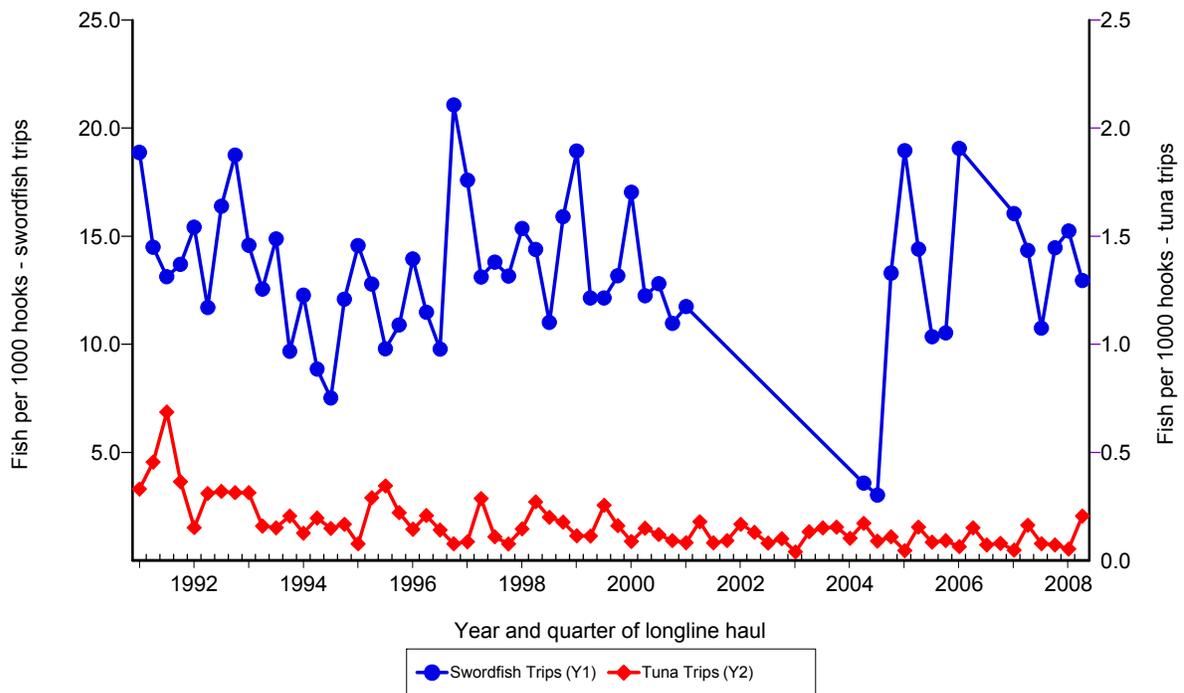


Figure 11. Quarterly CPUE of swordfish (fish per 1000 hooks) on swordfish trips and tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:44:49AM]

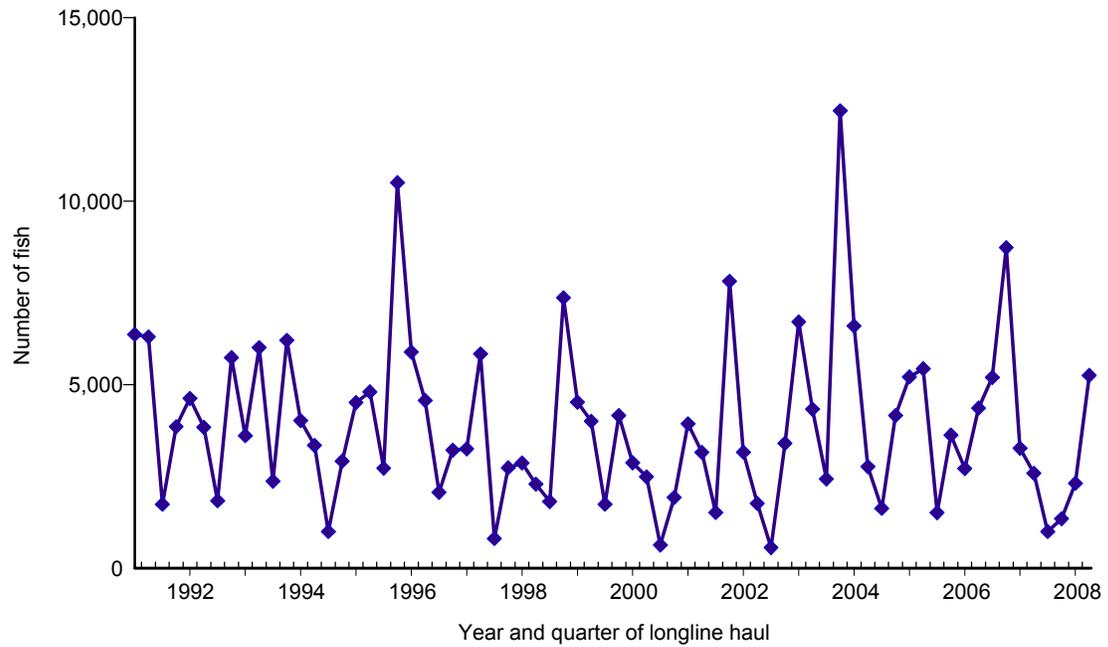


Figure 12. Quarterly catch of striped marlin by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:45:28AM]

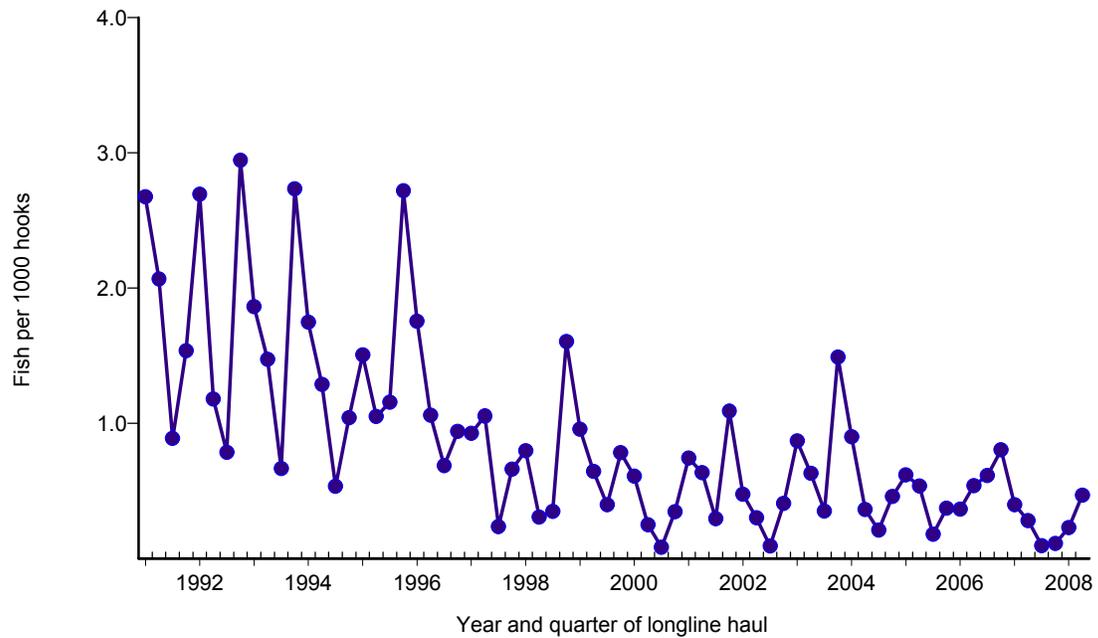


Figure 13. Quarterly CPUE of striped marlin (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:45:28AM]

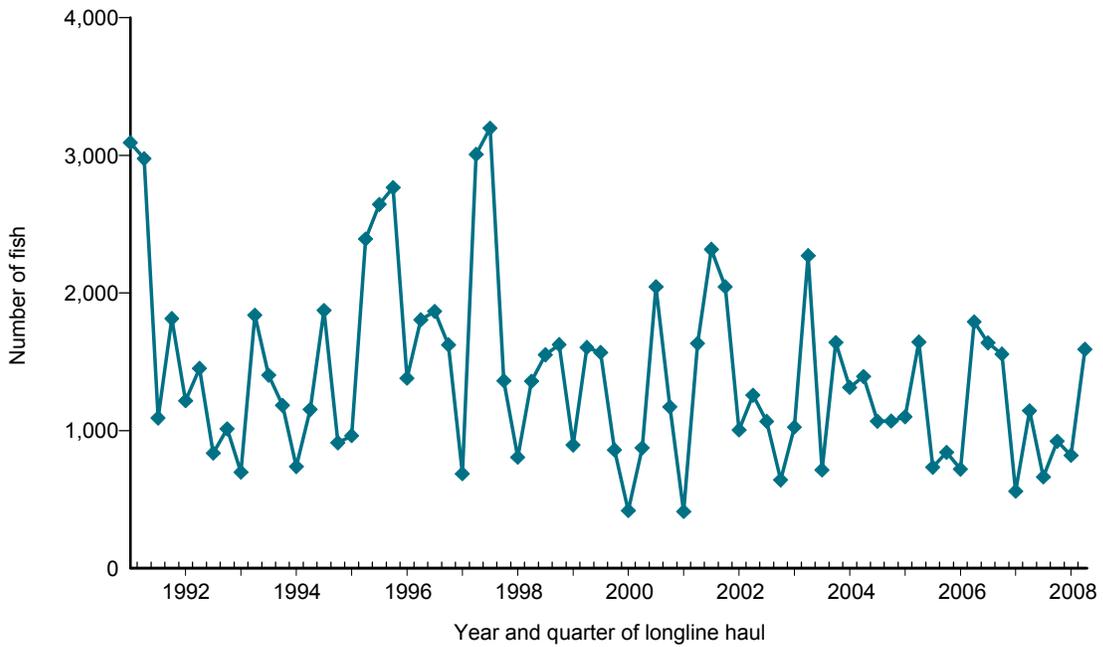


Figure 14. Quarterly catch of blue marlin by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:46:07AM]

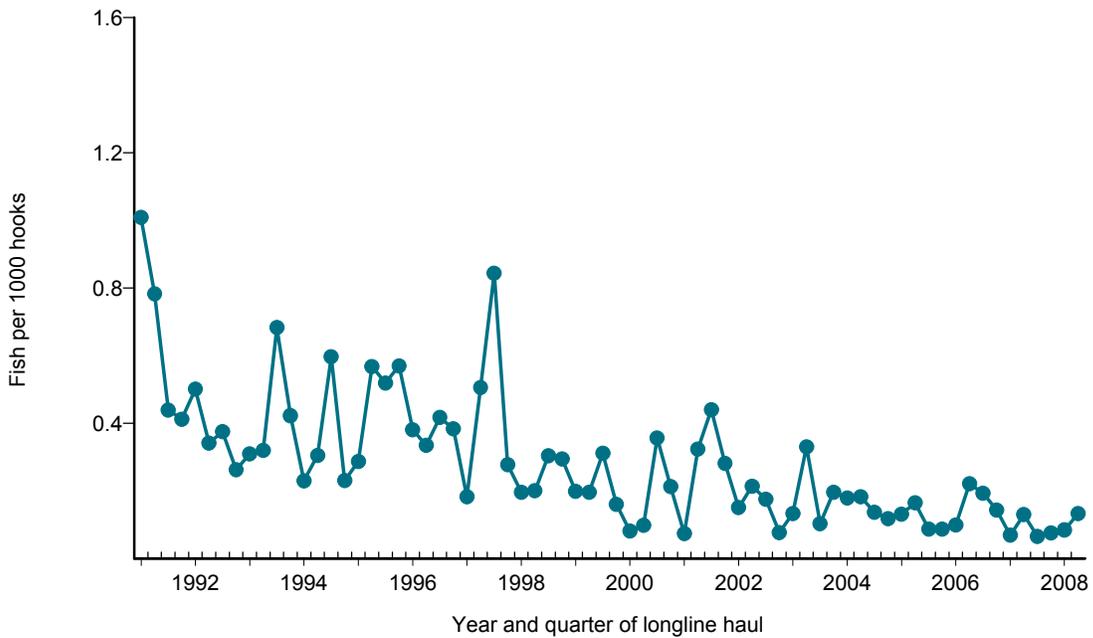


Figure 15. Quarterly CPUE of blue marlin (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:46:07AM]

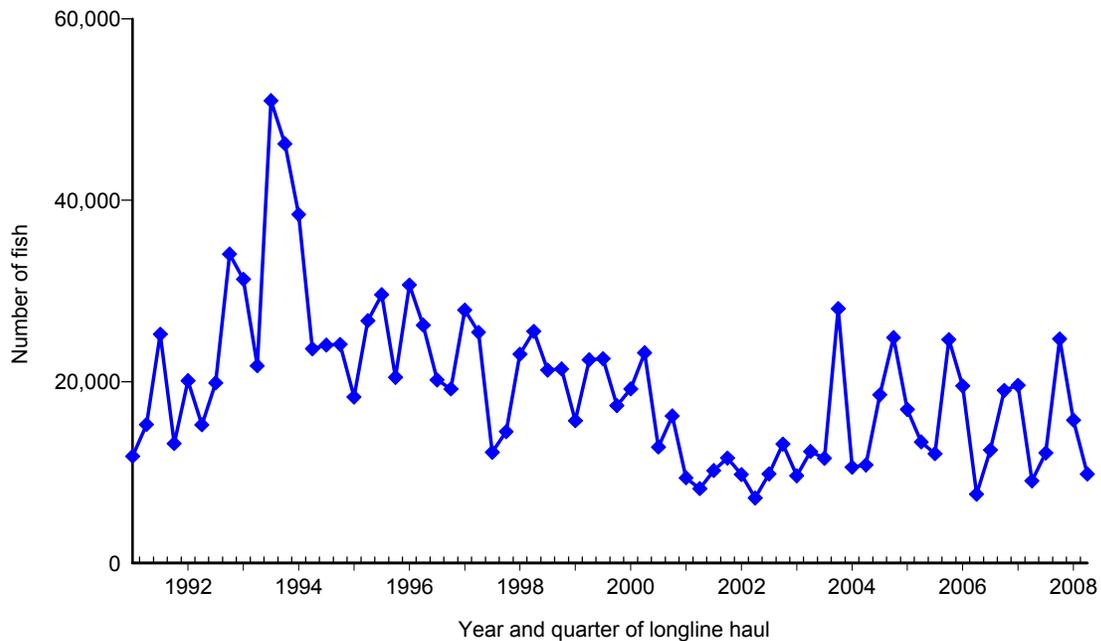


Figure 16. Quarterly catch of blue shark by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:46:47AM]

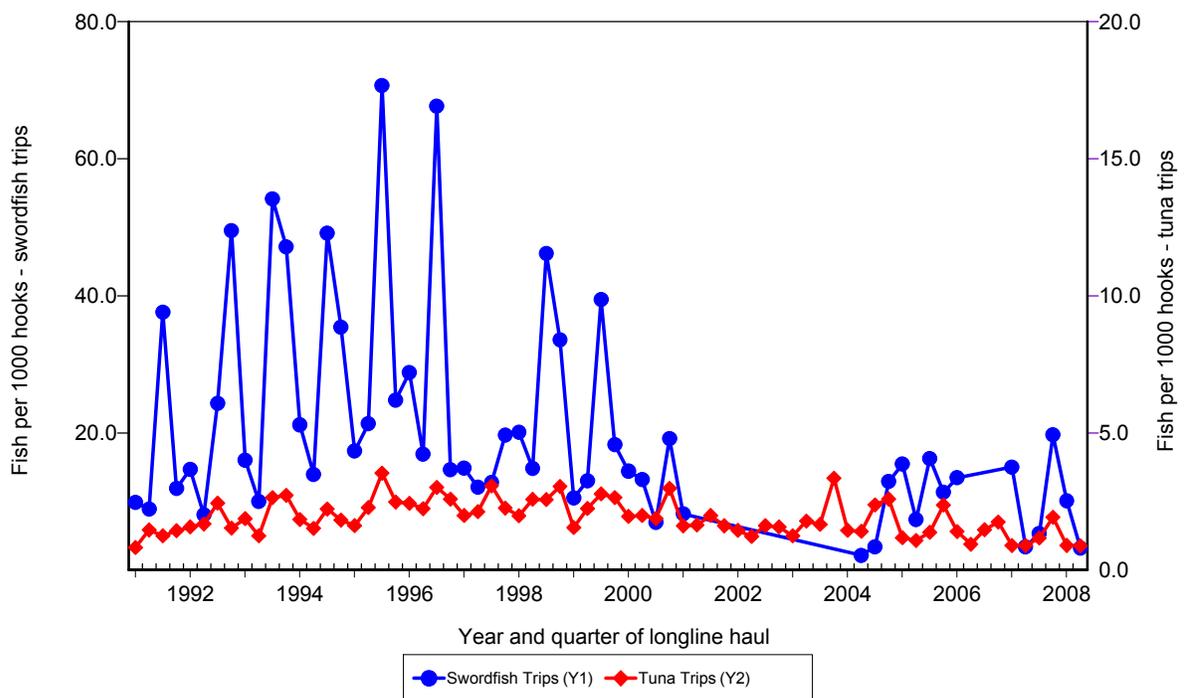


Figure 17. Quarterly CPUE of blue shark (fish per 1000 hooks) on swordfish trips and tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:46:47AM]

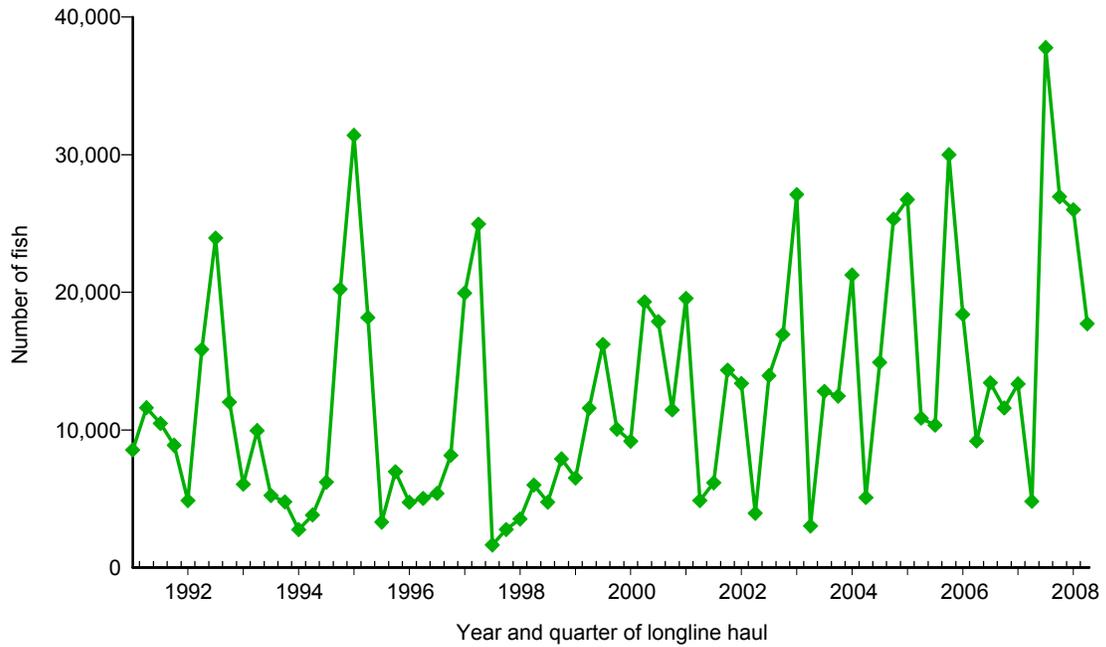


Figure 18. Quarterly catch of mahimahi by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:47:27AM]

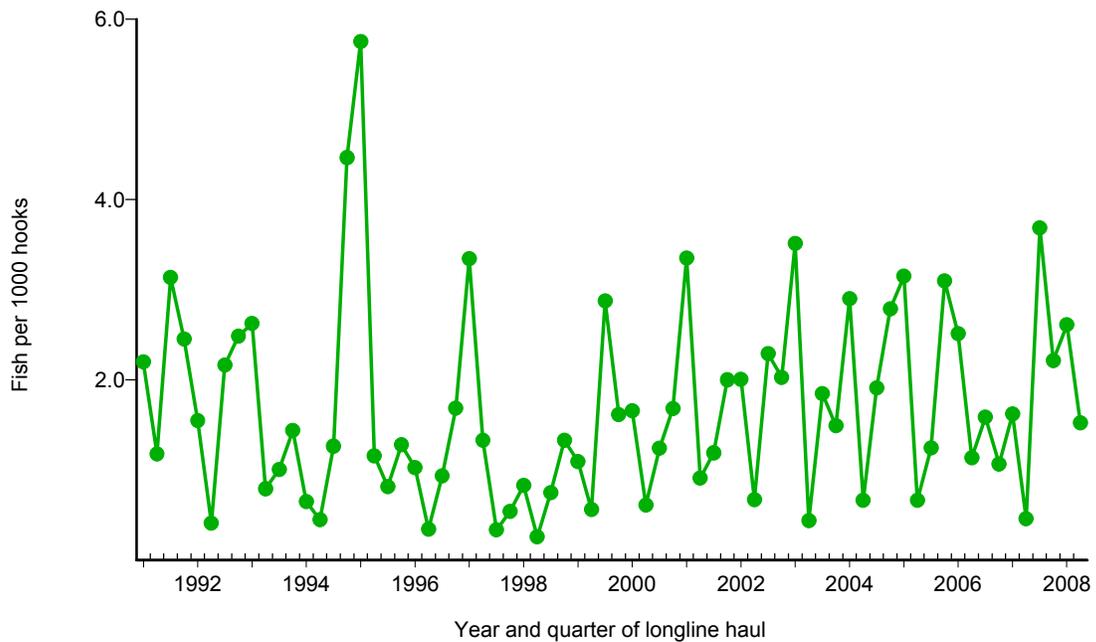


Figure 19. Quarterly CPUE of mahimahi (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:47:27AM]

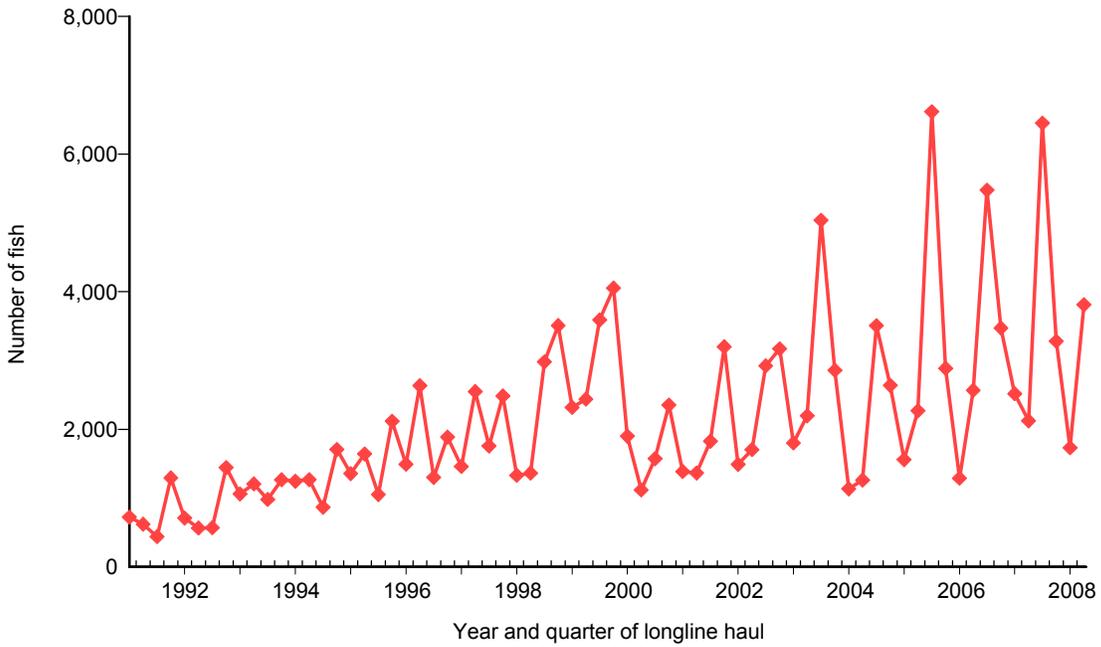


Figure 20. Quarterly catch of moonfish by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:48:06AM]

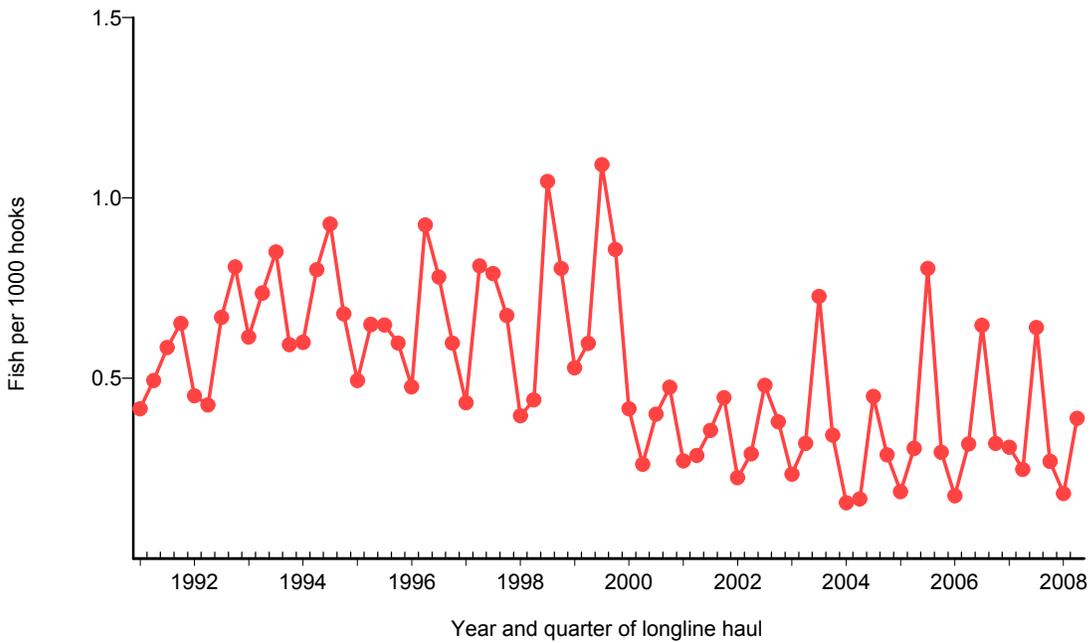


Figure 21. Quarterly CPUE of moonfish (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:48:06AM]

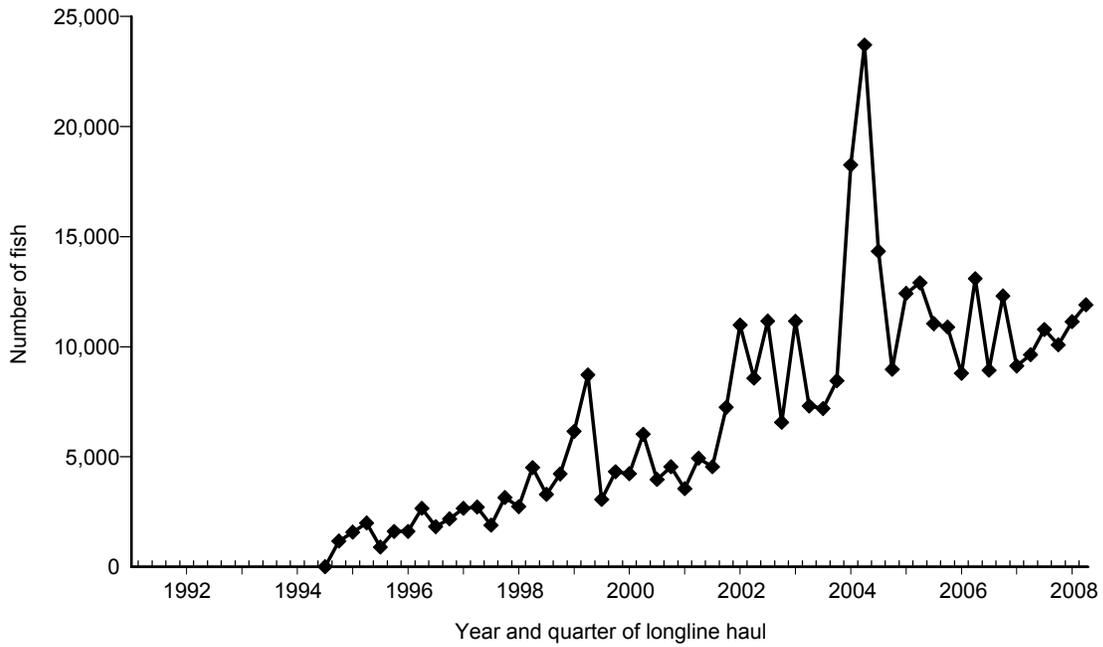


Figure 22. Quarterly catch of pomfret by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:48:45AM]

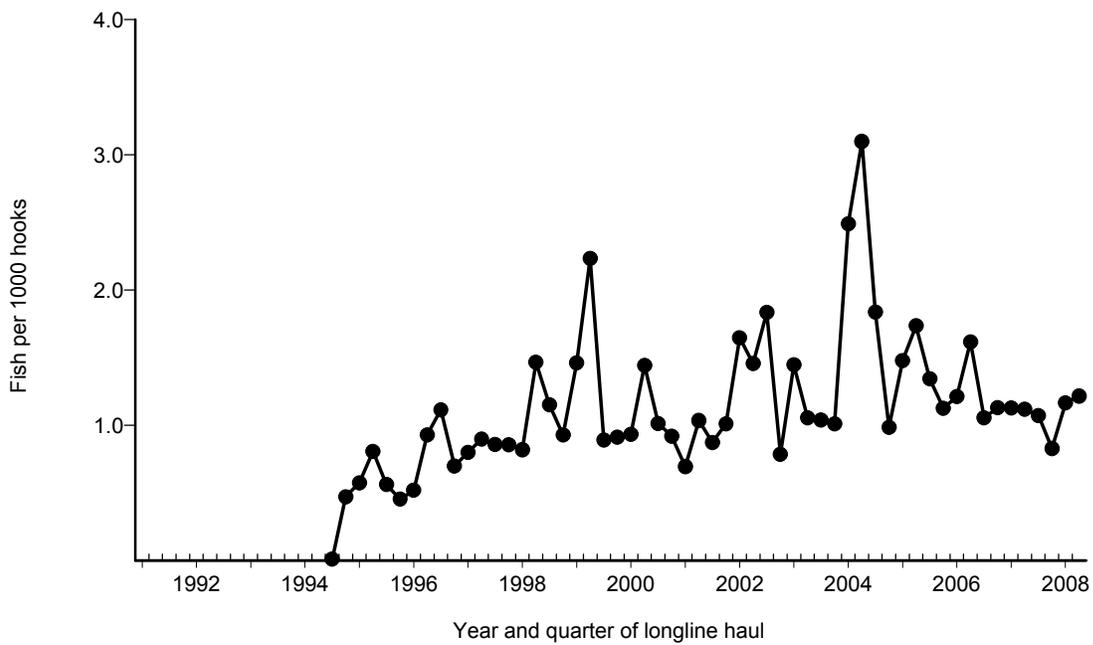


Figure 23. Quarterly CPUE of pomfret (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:48:45AM]

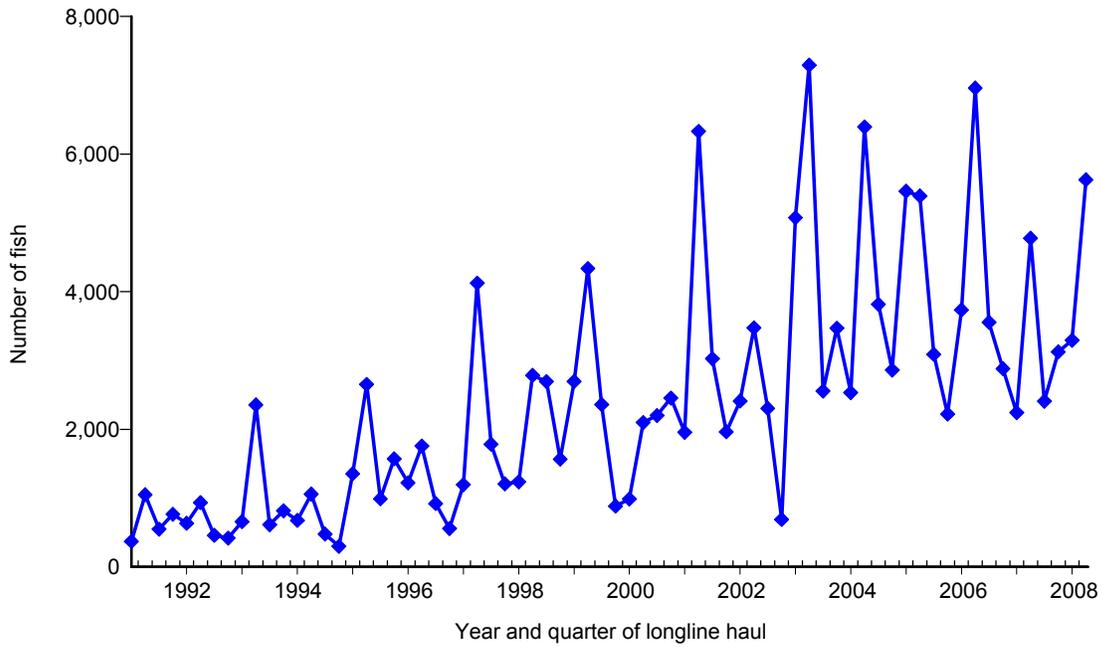


Figure 24. Quarterly catch of wahoo by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:49:24AM]

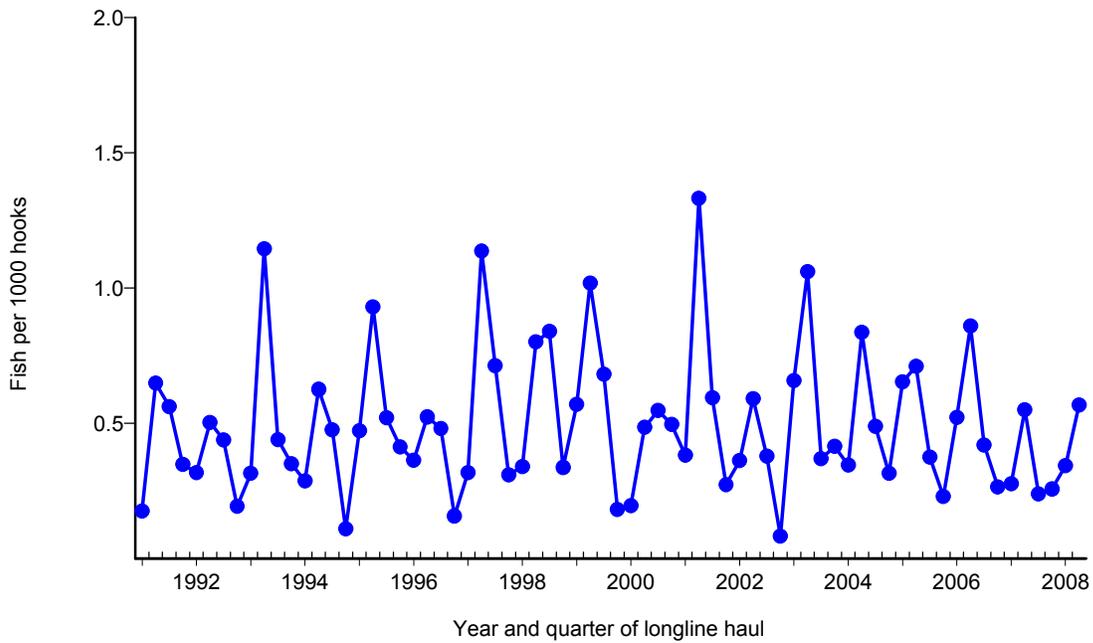


Figure 25. Quarterly CPUE of wahoo (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:49:24AM]

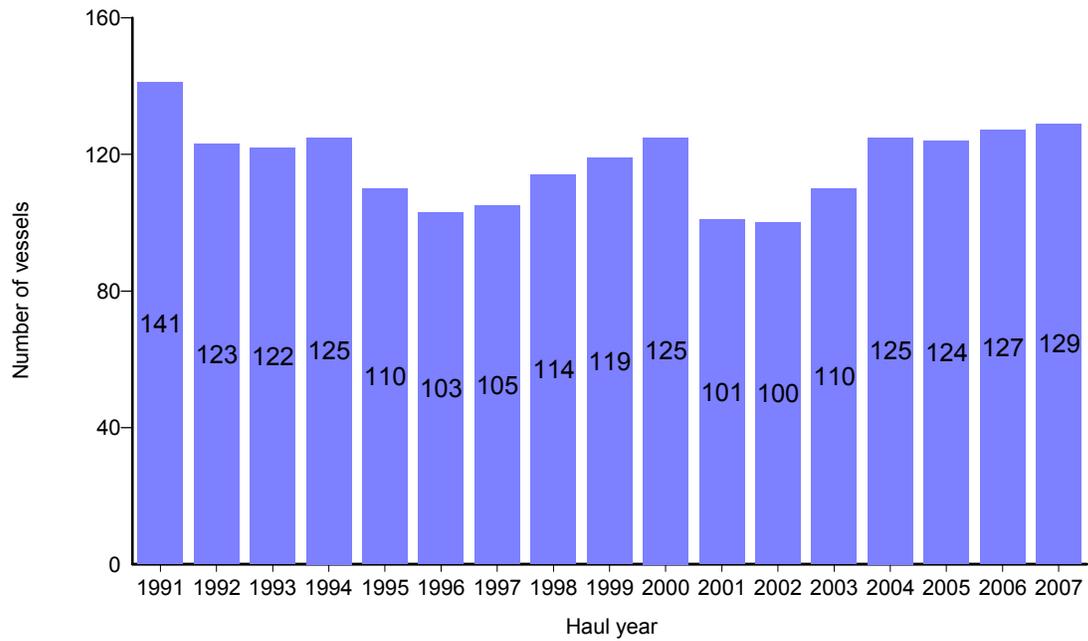


Figure A1. Number of active longline vessels based and landing in Hawaii, by year, 1991-2007. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:50:03AM]

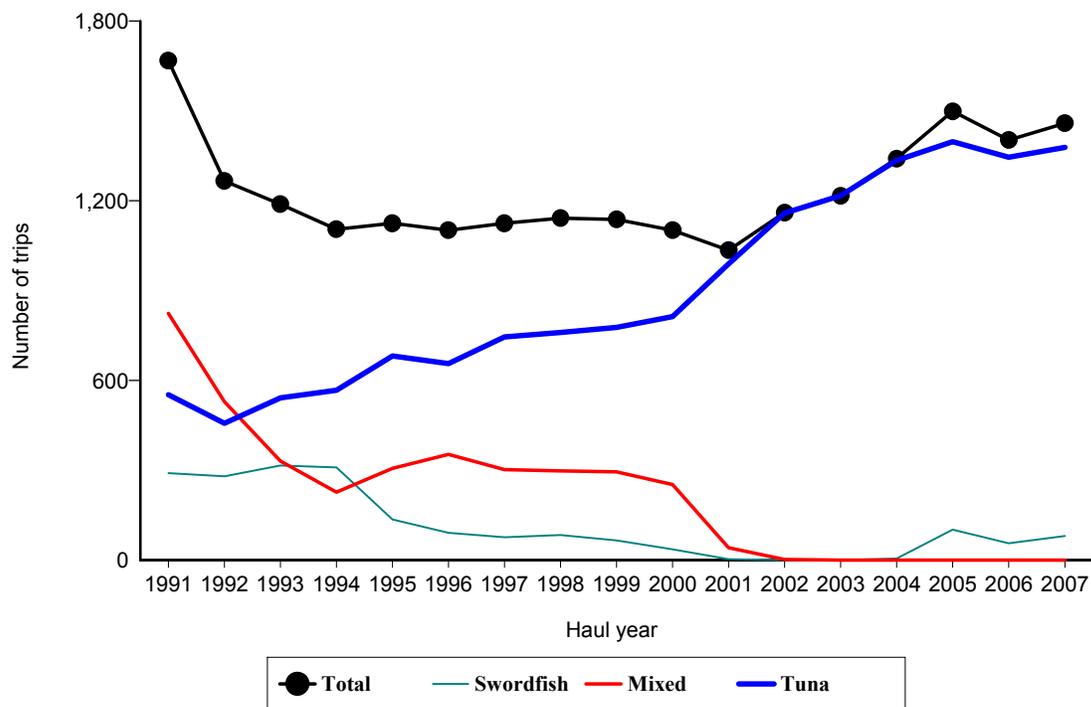


Figure A2. Number of fishing trips by longline vessels based and landing in Hawaii, by year and trip type, 1991-2007. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:50:03AM]

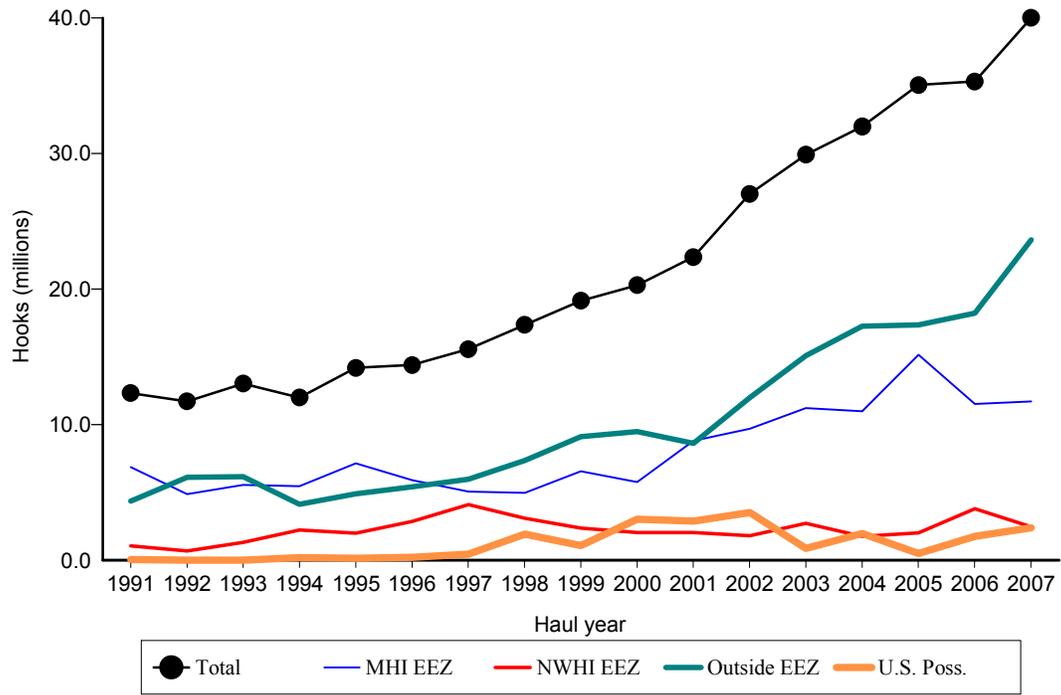


Figure A3. Number of hooks set by longline vessels based and landing in Hawaii, by year and fishing area, 1991-2007. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:50:07AM]

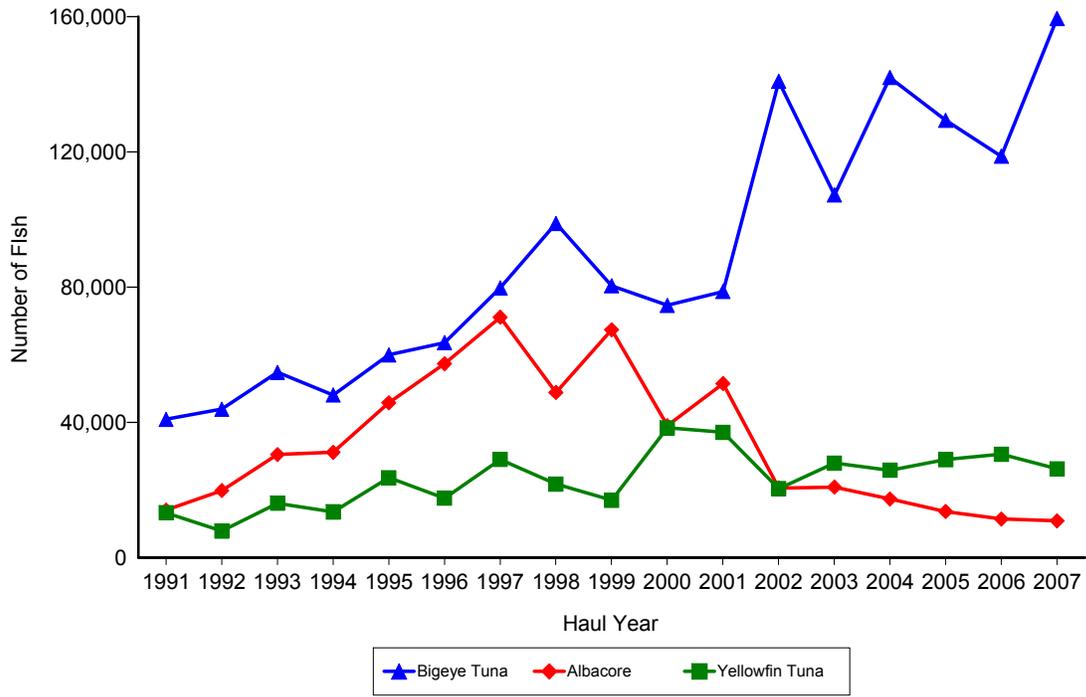


Figure A4. Annual catch of albacore, bigeye tuna, and yellowfin tuna by longline vessels based and landing in Hawaii, 1991-2007. [9/3/2008 8:50:46AM]

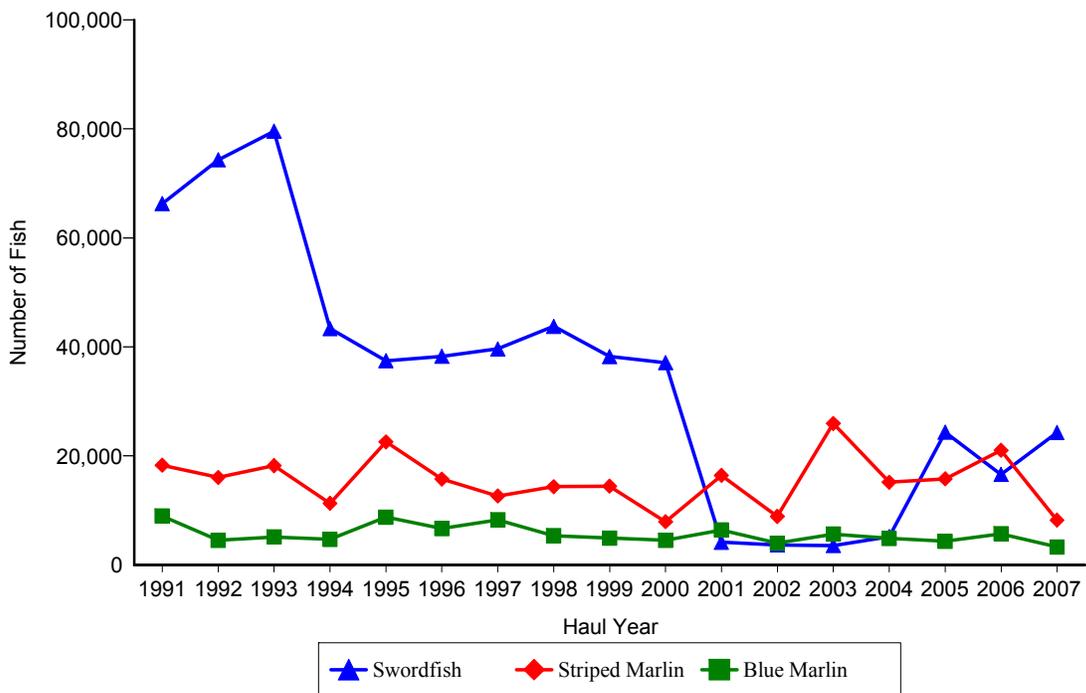


Figure A5. Annual catch of blue marlin, striped marlin, and swordfish by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:50:46AM]

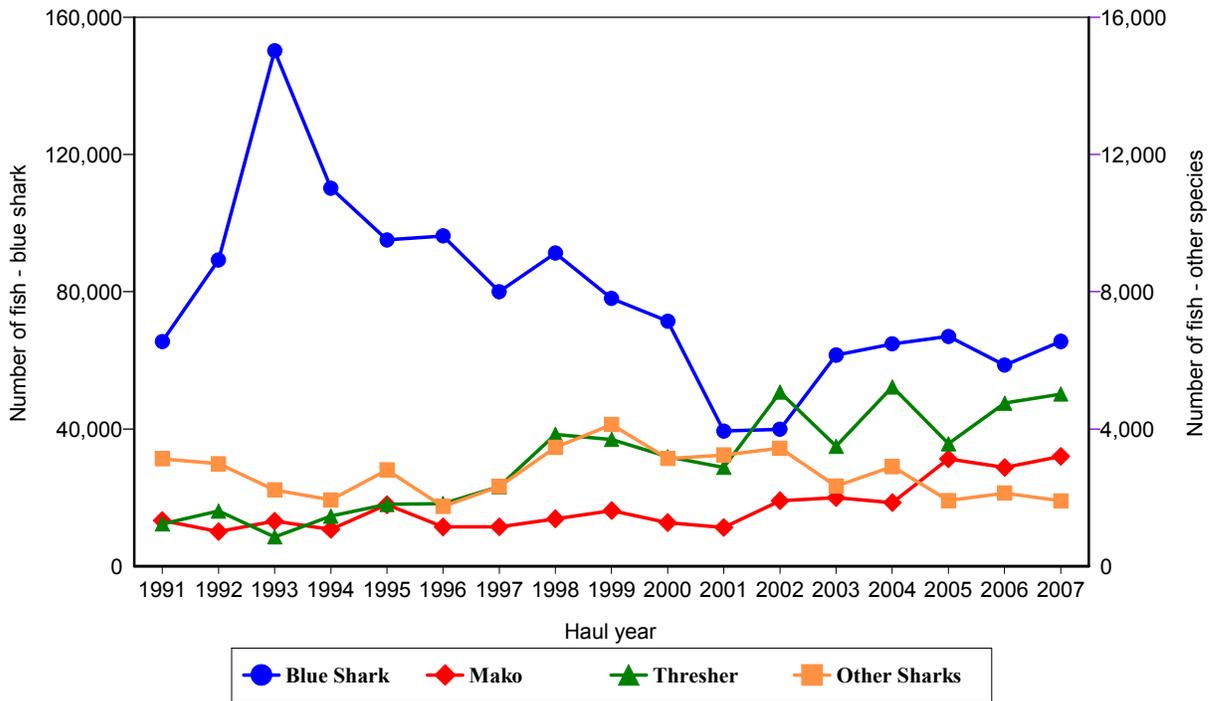


Figure A6. Annual catch of blue shark, mako shark, thresher shark, and other sharks by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:50:46AM]

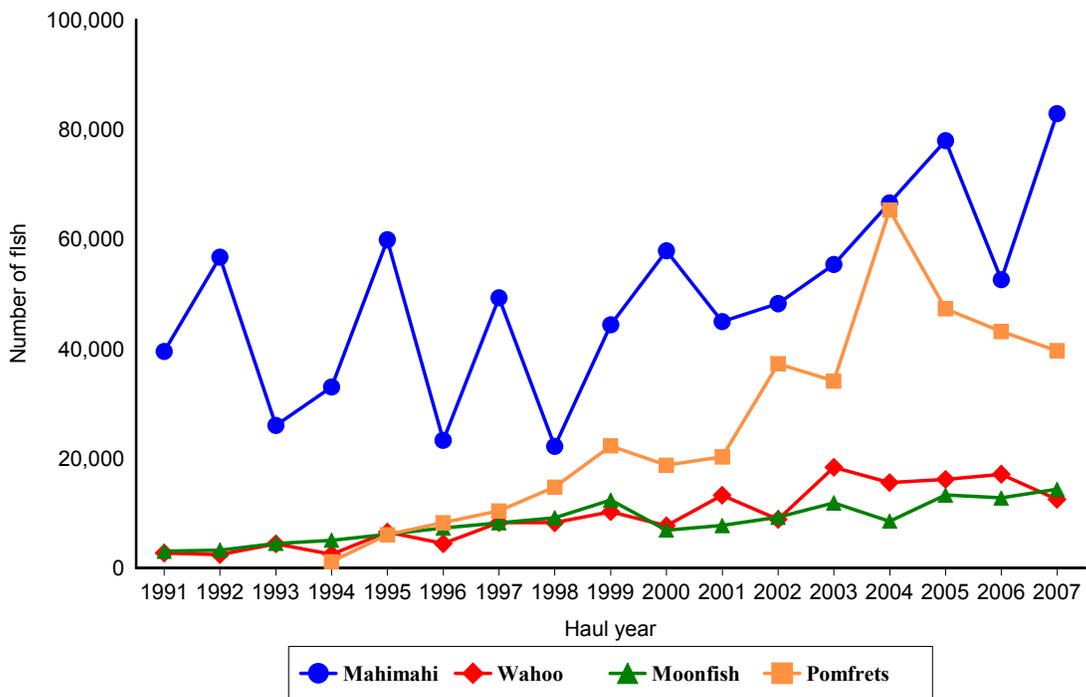


Figure A7. Annual catch of mahimahi, moonfish, pomfret, and wahoo by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 9/3/2008 8:50:46AM]