

The Hawaii-based Longline Logbook Summary Report July-September 2007¹

Pacific Islands Fisheries Science Center
Fishery Monitoring and Analysis Program

This report summarizes data on fish catch and fishing effort for the third quarter of 2007 (Q3-2007) as reported to the National Marine Fisheries Service in Federal logbooks of daily fishing activity submitted by Hawaii-based longline vessel operators. The report covers all longline operations for fishing trips completed in the third quarter of 2007 (based on the date gear was hauled) and most, but not all, Q3-2007 data from trips that began late in the third quarter and continued into the fourth quarter. Therefore, the Q3-2007 summary statistics reported here are preliminary. When data for all third quarter longline operations are available, tables and graphs of these summary statistics will be updated and published in the online version of this report at <http://www.pifsc.noaa.gov/fmsd/reports.php>.

In Q3-2007, the shallow-set longline fishery targeting swordfish continued to operate under annual limits on allowed interactions with loggerhead and leatherback sea turtles and the total number of sets. Similarly, the deep-set tuna fishery operated under an annual quota of 500 metric tons for U.S. longline catches of bigeye tuna east of 150° W longitude. The quota was established under Resolution C-06-02 of the Inter-American Tropical Tuna Commission as a measure to conserve bigeye tuna in the eastern Pacific Ocean. None of the limits had been reached by the end of the third quarter.

During Q3-2007, 123 vessels were active in the Hawaii-based fleet, 4 more than in Q3-2006 (Table 1, Fig. 1). They recorded 397 longline trips (24 more than in Q3-2006), including 390 using deep-set gear to target tuna and 7 using shallow-set gear to target swordfish (Fig. 2). The vessels deployed a record 10.1 million hooks in Q3-2007, 1.6 million more than in Q3-2006 (Fig. 3). They fished mainly outside the U.S. Exclusive Economic Zone (EEZ) (84% of total hooks set) followed by the EEZs of the main Hawaiian Islands (MHI) (14%), the Northwestern Hawaiian Islands (NWHI) (1%), and the Pacific Remote Island Areas (PRIAs) (1%).

In Q3-2007, the Hawaii longline fleet caught 32,361 bigeye tuna (Fig. 4); 89% were caught outside the U.S. EEZ, 9% in the EEZ of the MHI, 1% in the EEZ of the PRIAs, and 1% in the NWHI EEZ. The bigeye tuna CPUE on tuna-targeted trips was 3.2 fish per 1000 hooks; exceeding last year's CPUE of 2.2 (Fig. 5). The albacore catch and CPUE on tuna-targeted trips in Q3-2007 were record lows of 904 fish and 0.09 fish per 1000 hooks, respectively (Figs. 6-7). The yellowfin tuna catch (3,247 fish) and CPUE on tuna-targeted trips (0.32 fish per 1000 hooks) were substantially lower than in Q3-2006 (Figs. 8-9).

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The swordfish catch Q3-2007 was 1,540 fish, substantially higher than in Q3-2006 (Fig. 10). The bigger swordfish catch is attributed to the longer swordfish season this year; in 2006, the season was cut short when the limit on loggerhead turtle interactions was reached. In Q3-2007 the swordfish CPUE on shallow-set swordfish-targeted trips was 10.8 fish per 1000 hooks (Fig. 11). The Q3-2007 striped marlin catch (997 fish) and CPUE on tuna-targeted trips (0.10 fish per 1000 hooks) were lower than in Q3-2006 by 81% and 85% (Figs. 12-13), respectively. Similarly, the Q3-2007 blue marlin catch (661 fish) and CPUE on tuna-targeted trips (0.07 fish per 1000 hooks) were lower than in Q3-2006 by 60% and 68% (Figs. 14-15). The fleet caught 13,599 sharks in Q3-2007, of which only 4% were kept. Blue shark comprised 89% of the total shark catch (12,092 fish) (Fig. 16). Blue shark CPUE on shallow-set swordfish-targeted trips was 5.3 fish per 1000 hooks (Fig. 17).

In Q3-2007, the Hawaii longline catch of other key pelagic species included 37,732 mahimahi (Fig. 18) with a CPUE of 3.7 fish per 1000 hooks on tuna-targeted trips (Fig. 19); 6,445 moonfish (Fig. 20) with a CPUE of 0.64 fish per 1000 hooks on tuna-targeted trips (Fig. 21); 10,777 pomfret (Fig. 22) with a CPUE of 1.06 fish per 1000 hooks on tuna-targeted trips (Fig. 23); and 2,403 wahoo (Fig. 24) with a CPUE of 0.24 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.

In addition to longline statistics for all fishing areas combined, Q3-2007 summary catch and effort were compiled by several geographical sub-areas including the Main Hawaiian Island (MHI) Exclusive Economic Zone (EEZ); the Northwestern Hawaiian Islands (NWHI) EEZ; the EEZ of the Pacific Remote Island Areas (PRIA), consisting of the U.S. possessions Wake Island, Jarvis Island, Howland Island, Baker Island, Kingman Reef, Palmyra Atoll, and Johnston Atoll; the EEZ of the Hawaiian Islands and PRIA combined; and waters outside the U.S. EEZ. These statistics are presented in Tables 2-6. Q3-2007 summary statistics for the entire fishing area are also presented for each distinct trip type: swordfish trips (Table 7) and tuna trips (Table 8). Graphs of annual Hawaii longline catch and fishing effort for the years 1991-2006 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 the 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 fish 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, 12/3/2007 8:33:40AM]

Report Coverage		Number of vessels active	123
Time Period	3rd Quarter 2007	Number of trips	397
Fishing Area	All Areas	Number of sets	4,674
Trip Types	All Trip Types	Number of hooks set	10,129,049

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	661	653	8	0.07
Striped marlin	997	977	20	0.10
Shortbill spearfish	1,635	1,610	25	0.16
Swordfish	1,540	1,411	129	0.15
Other billfishes	224	222	2	0.02
Total	5,057	4,873	184	0.50
Sharks				
Blue shark	12,092	31	12,061	1.19
Mako sharks	699	421	278	0.07
Thresher sharks	498	70	428	0.05
Oceanic whitetip shark	167	14	153	0.02
Silky shark	3		3	0.00
Other sharks	140	7	133	0.01
Total	13,599	543	13,056	1.34
Tunas				
Albacore	904	899	5	0.09
Bigeye tuna	32,361	31,927	434	3.19
Yellowfin	3,247	3,199	48	0.32
Skipjack tuna	1,331	1,273	58	0.13
Other tunas	2	2		0.00
Total	37,845	37,300	545	3.74
Other PMUS				
Mahimahi	37,732	36,766	966	3.73
Moonfish	6,445	6,414	31	0.64
Wahoo	2,403	2,392	11	0.24
Oilfish	5,800	5,745	55	0.57
Pomfret	10,777	10,672	105	1.06
Total	63,157	61,989	1,168	6.24
Total PMUS	119,658	104,705	14,953	11.81
Total Non-PMUS	805	285	520	0.08
Total All Species	120,463	104,990	15,473	11.89

Table 2. Quarterly summary report of fish 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, 12/3/2007 8:33:40AM]

Report Coverage

Time Period 3rd Quarter 2007
 Fishing Area Main Hawaiian Islands EEZ
 Trip Types All Trip Types

Number of vessels active	71
Number of trips	133
Number of sets	692
Number of hooks set	1,387,847

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	164	160	4	0.12
Striped marlin	143	136	7	0.10
Shortbill spearfish	237	233	4	0.17
Swordfish	87	70	17	0.06
Other billfishes	47	46	1	0.03
Total	678	645	33	0.49
Sharks				
Blue shark	2,311	8	2,303	1.67
Mako sharks	45	26	19	0.03
Thresher sharks	58	10	48	0.04
Oceanic whitetip shark	35	9	26	0.03
Silky shark	2		2	0.00
Other sharks	22	4	18	0.02
Total	2,473	57	2,416	1.78
Tunas				
Albacore	366	366		0.26
Bigeye tuna	3,074	3,035	39	2.21
Yellowfin	1,339	1,321	18	0.96
Skipjack tuna	544	523	21	0.39
Other tunas	1	1		0.00
Total	5,324	5,246	78	3.84
Other PMUS				
Mahimahi	998	996	2	0.72
Moonfish	481	477	4	0.35
Wahoo	788	785	3	0.57
Oilfish	271	271		0.20
Pomfret	1,959	1,940	19	1.41
Total	4,497	4,469	28	3.24
Total PMUS	12,972	10,417	2,555	9.35
Total Non-PMUS	273	222	51	0.20
Total All Species	13,245	10,639	2,606	9.54

Table 3. Quarterly summary report of fish 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, 12/3/2007 8:33:40AM]

Report Coverage

Time Period 3rd Quarter 2007
 Fishing Area Northwestern Hawaiian Islands EEZ
 Trip Types All Trip Types

Number of vessels active	19
Number of trips	23
Number of sets	68
Number of hooks set	143,050

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	11	11		0.08
Striped marlin	32	32		0.22
Shortbill spearfish	32	32		0.22
Swordfish	5	3	2	0.03
Total	80	78	2	0.56
Sharks				
Blue shark	180		180	1.26
Mako sharks	9	6	3	0.06
Thresher sharks	4	3	1	0.03
Oceanic whitetip shark	14		14	0.10
Other sharks	1		1	0.01
Total	208	9	199	1.45
Tunas				
Albacore	52	52		0.36
Bigeye tuna	268	257	11	1.87
Yellowfin	119	106	13	0.83
Skipjack tuna	3	3		0.02
Total	442	418	24	3.09
Other PMUS				
Mahimahi	53	53		0.37
Moonfish	95	95		0.66
Wahoo	70	70		0.49
Oilfish	37	37		0.26
Pomfret	132	127	5	0.92
Total	387	382	5	2.71
Total PMUS	1,117	887	230	7.81
Total All Species	1,117	887	230	7.81

Table 4. Quarterly summary report of fish 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, 12/3/2007 8:33:40AM]

Report Coverage

Time Period 3rd Quarter 2007
 Fishing Area Pacific Remote Island Areas (PRIA) EEZ
 Trip Types All Trip Types

Number of vessels active	6
Number of trips	6
Number of sets	47
Number of hooks set	98,858

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	18	18		0.18
Striped marlin	5	5		0.05
Shortbill spearfish	18	18		0.18
Swordfish	7	5	2	0.07
Other billfishes	3	3		0.03
Total	51	49	2	0.52
Sharks				
Blue shark	274		274	2.77
Mako sharks	9	4	5	0.09
Thresher sharks	29	5	24	0.29
Oceanic whitetip shark	51		51	0.52
Other sharks	35		35	0.35
Total	398	9	389	4.03
Tunas				
Albacore	98	98		0.99
Bigeye tuna	351	338	13	3.55
Yellowfin	143	143		1.45
Skipjack tuna	176	176		1.78
Total	768	755	13	7.77
Other PMUS				
Mahimahi	5	5		0.05
Moonfish	14	14		0.14
Wahoo	50	50		0.51
Oilfish	15	15		0.15
Pomfret	41	41		0.41
Total	125	125		1.26
Total PMUS	1,342	938	404	13.58
Total All Species	1,342	938	404	13.58

Table 5. Quarterly summary report of fish 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, 12/3/2007 8:33:40AM]

Report Coverage

Time Period 3rd Quarter 2007
 Fishing Area Hawaiian Islands EEZ + PRIA EEZ
 Trip Types All Trip Types

Number of vessels active	82
Number of trips	155
Number of sets	807
Number of hooks set	1,629,755

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	193	189	4	0.12
Striped marlin	180	173	7	0.11
Shortbill spearfish	287	283	4	0.18
Swordfish	99	78	21	0.06
Other billfishes	50	49	1	0.03
Total	809	772	37	0.50
Sharks				
Blue shark	2,765	8	2,757	1.70
Mako sharks	63	36	27	0.04
Thresher sharks	91	18	73	0.06
Oceanic whitetip shark	100	9	91	0.06
Silky shark	2		2	0.00
Other sharks	58	4	54	0.04
Total	3,079	75	3,004	1.89
Tunas				
Albacore	516	516		0.32
Bigeye tuna	3,693	3,630	63	2.27
Yellowfin	1,601	1,570	31	0.98
Skipjack tuna	723	702	21	0.44
Other tunas	1	1		0.00
Total	6,534	6,419	115	4.01
Other PMUS				
Mahimahi	1,056	1,054	2	0.65
Moonfish	590	586	4	0.36
Wahoo	908	905	3	0.56
Oilfish	323	323		0.20
Pomfret	2,132	2,108	24	1.31
Total	5,009	4,976	33	3.07
Total PMUS	15,431	12,242	3,189	9.47
Total Non-PMUS	273	222	51	0.17
Total All Species	15,704	12,464	3,240	9.64

Table 6. Quarterly summary report of fish 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, 12/3/2007 8:33:40AM]

Report Coverage

Time Period 3rd Quarter 2007
 Fishing Area Outside U.S. EEZ
 Trip Types All Trip Types

Number of vessels active	122
Number of trips	348
Number of sets	3,867
Number of hooks set	8,499,294

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	468	464	4	0.06
Striped marlin	817	804	13	0.10
Shortbill spearfish	1,348	1,327	21	0.16
Swordfish	1,441	1,333	108	0.17
Other billfishes	174	173	1	0.02
Total	4,248	4,101	147	0.50
Sharks				
Blue shark	9,327	23	9,304	1.10
Mako sharks	636	385	251	0.07
Thresher sharks	407	52	355	0.05
Oceanic whitetip shark	67	5	62	0.01
Silky shark	1		1	0.00
Other sharks	82	3	79	0.01
Total	10,520	468	10,052	1.24
Tunas				
Albacore	388	383	5	0.05
Bigeye tuna	28,668	28,297	371	3.37
Yellowfin	1,646	1,629	17	0.19
Skipjack tuna	608	571	37	0.07
Other tunas	1	1		0.00
Total	31,311	30,881	430	3.68
Other PMUS				
Mahimahi	36,676	35,712	964	4.32
Moonfish	5,855	5,828	27	0.69
Wahoo	1,495	1,487	8	0.18
Oilfish	5,477	5,422	55	0.64
Pomfret	8,645	8,564	81	1.02
Total	58,148	57,013	1,135	6.84
Total PMUS	104,227	92,463	11,764	12.26
Total Non-PMUS	532	63	469	0.06
Total All Species	104,759	92,526	12,233	12.33

Table 7. Quarterly summary report of fish 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, 12/3/2007 8:33:40AM]

Report Coverage

Time Period 3rd Quarter 2007
 Fishing Area All Areas
 Trip Types Swordfish Targeted Trips

Number of vessels active	5
Number of trips	7
Number of sets	83
Number of hooks set	70,990

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	8	8		0.11
Striped marlin	44	37	7	0.62
Shortbill spearfish	5	4	1	0.07
Swordfish	763	727	36	10.75
Total	820	776	44	11.55
Sharks				
Blue shark	378		378	5.32
Mako sharks	27	5	22	0.38
Thresher sharks	10	1	9	0.14
Oceanic whitetip shark	5		5	0.07
Other sharks	2		2	0.03
Total	422	6	416	5.94
Tunas				
Albacore	1	1		0.01
Bigeye tuna	87	83	4	1.23
Yellowfin	1	1		0.01
Total	89	85	4	1.25
Other PMUS				
Mahimahi	664	610	54	9.35
Moonfish	1	1		0.01
Wahoo	6	6		0.08
Oilfish	279	275	4	3.93
Pomfret	2	1	1	0.03
Total	952	893	59	13.41
Total PMUS	2,283	1,760	523	32.16
Total Non-PMUS	1		1	0.01
Total All Species	2,284	1,760	524	32.17

Table 8. Quarterly summary report of fish 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, 12/3/2007 8:33:40AM]

Report Coverage

Time Period 3rd Quarter 2007
 Fishing Area All Areas
 Trip Types Tuna Targeted Trips

Number of vessels active	123
Number of trips	390
Number of sets	4,591
Number of hooks set	10,058,059

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	653	645	8	0.06
Striped marlin	953	940	13	0.09
Shortbill spearfish	1,630	1,606	24	0.16
Swordfish	777	684	93	0.08
Other billfishes	224	222	2	0.02
Total	4,237	4,097	140	0.42
Sharks				
Blue shark	11,714	31	11,683	1.16
Mako sharks	672	416	256	0.07
Thresher sharks	488	69	419	0.05
Oceanic whitetip shark	162	14	148	0.02
Silky shark	3		3	0.00
Other sharks	138	7	131	0.01
Total	13,177	537	12,640	1.31
Tunas				
Albacore	903	898	5	0.09
Bigeye tuna	32,274	31,844	430	3.21
Yellowfin	3,246	3,198	48	0.32
Skipjack tuna	1,331	1,273	58	0.13
Other tunas	2	2		0.00
Total	37,756	37,215	541	3.75
Other PMUS				
Mahimahi	37,068	36,156	912	3.69
Moonfish	6,444	6,413	31	0.64
Wahoo	2,397	2,386	11	0.24
Oilfish	5,521	5,470	51	0.55
Pomfret	10,775	10,671	104	1.07
Total	62,205	61,096	1,109	6.18
Total PMUS	117,375	102,945	14,430	11.67
Total Non-PMUS	804	285	519	0.08
Total All Species	118,179	103,230	14,949	11.75

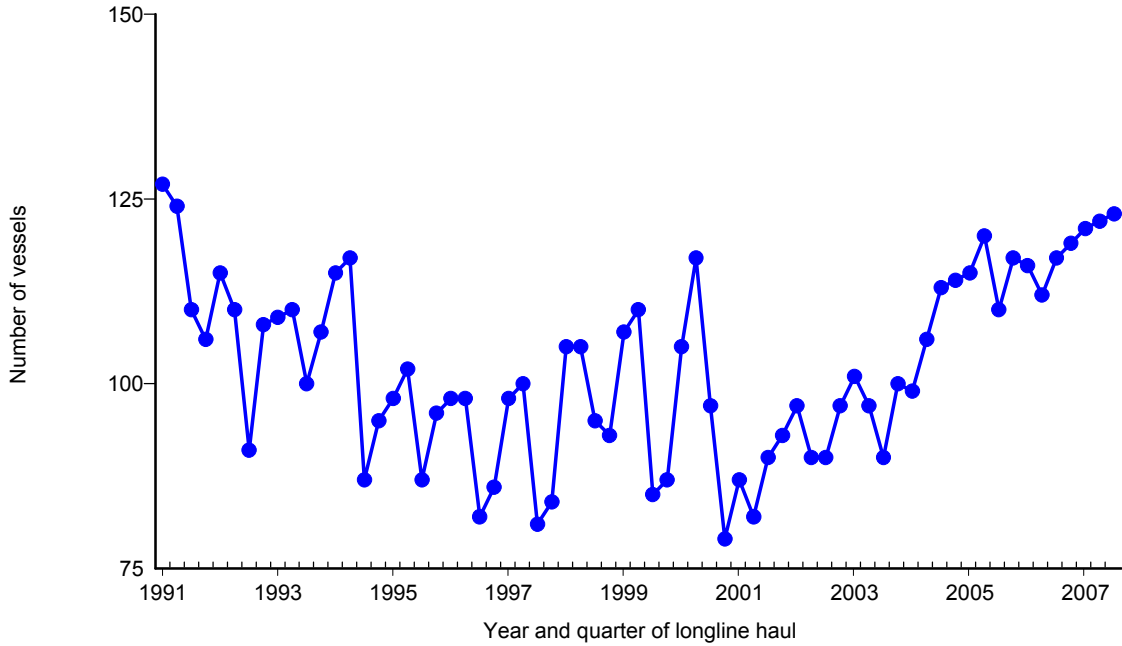


Figure 1. Number of active longline vessels based and landing in Hawaii, by quarter, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:35:10AM]

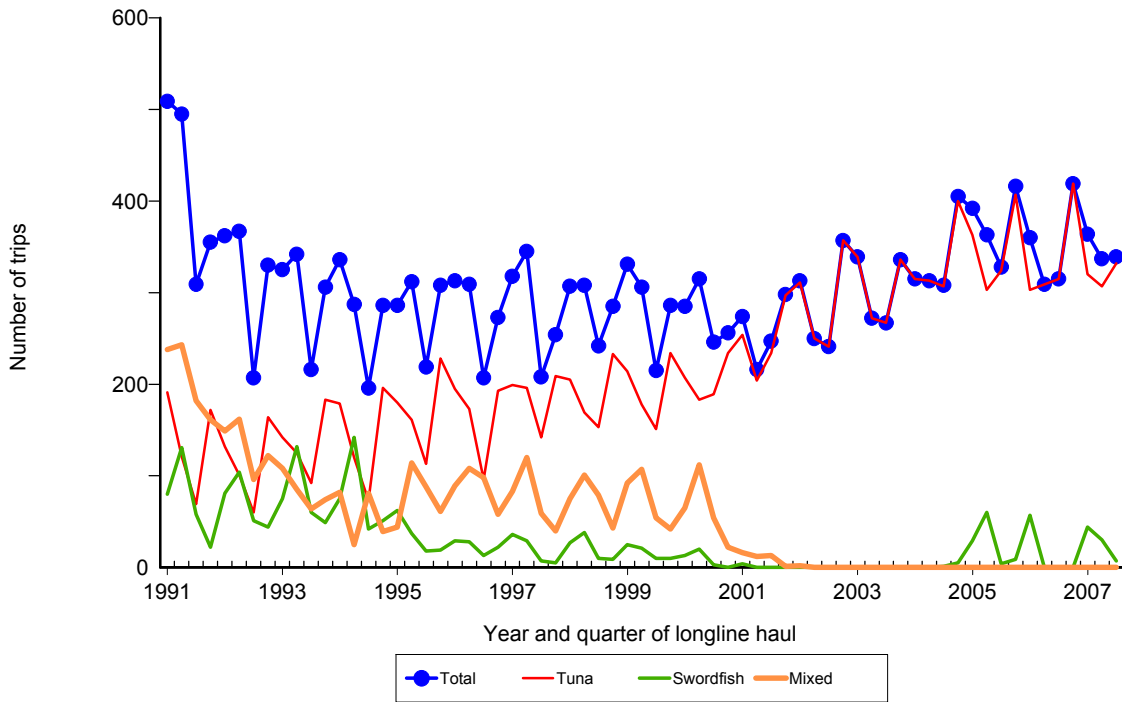


Figure 2. Number of fishing trips by longline vessels based and landing in Hawaii, by quarter and trip type, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:35:10AM]

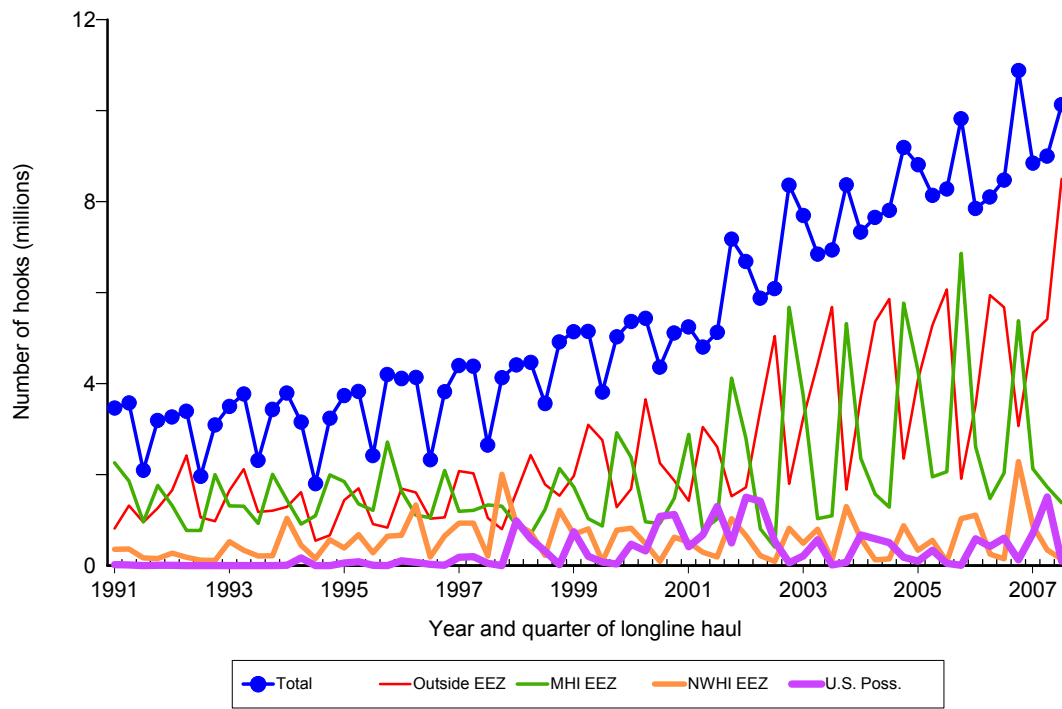


Figure 3. Number of hooks set by longline vessels based and landing in Hawaii, by quarter and fishing area, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:35:16AM]

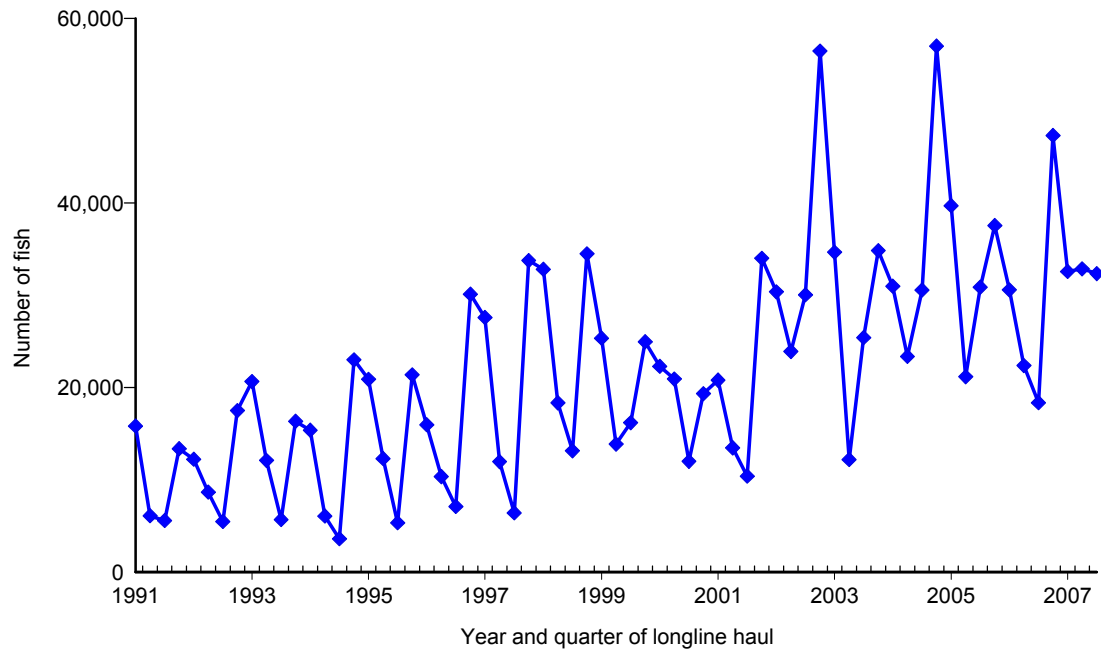


Figure 4. Quarterly catch of bigeye tuna by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:45:23AM]

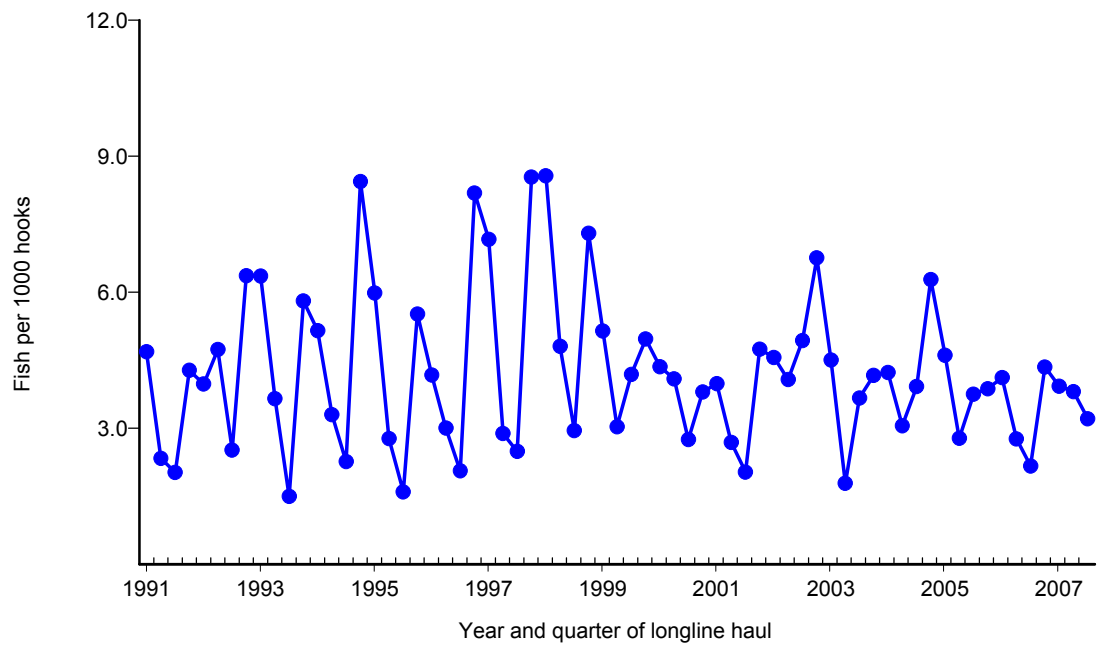


Figure 5. Quarterly CPUE of bigeye tuna (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:45:23AM]

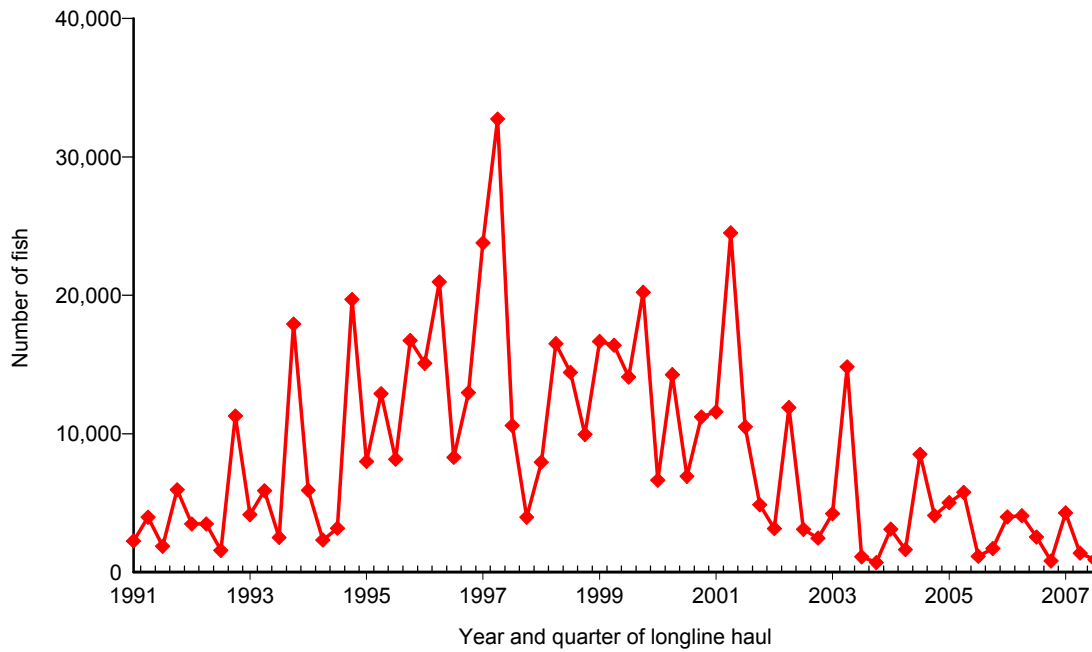


Figure 6. Quarterly catch of albacore by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:46:18AM]

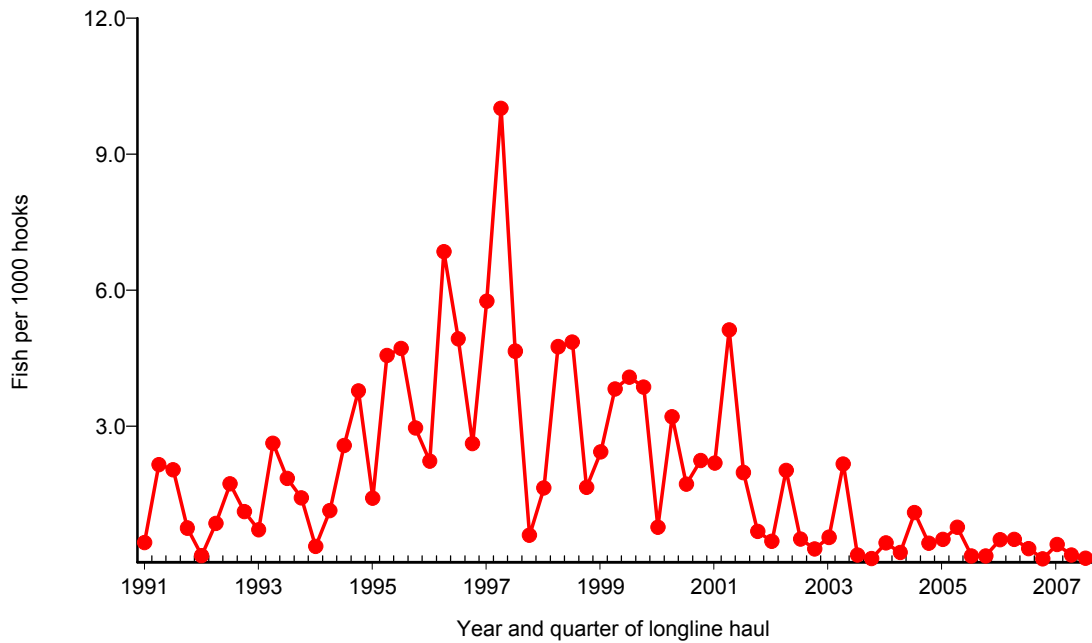


Figure 7. Quarterly CPUE of albacore (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:46:18AM]

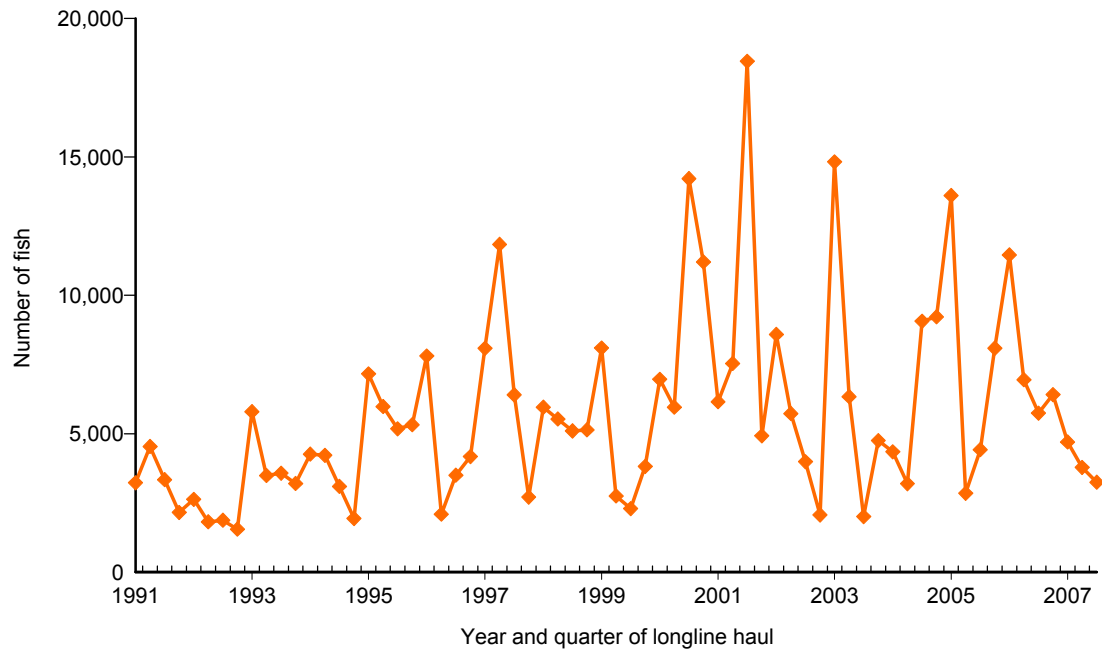


Figure 8. Quarterly catch of yellowfin tuna by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:47:11AM]

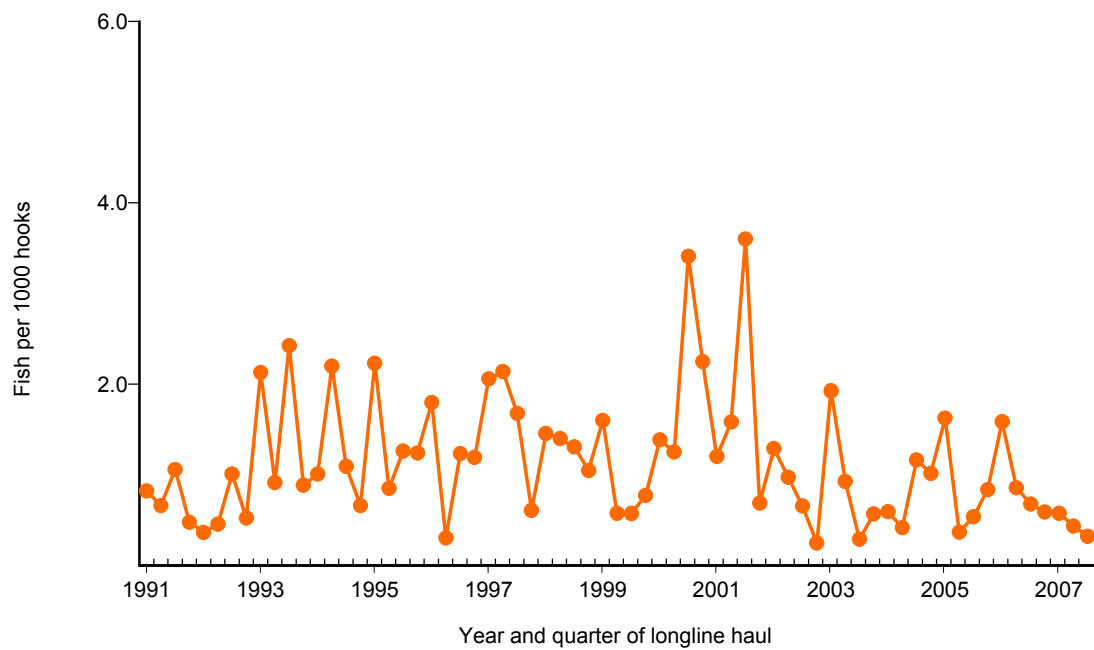


Figure 9. Quarterly CPUE of yellowfin tuna (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:47:11AM]

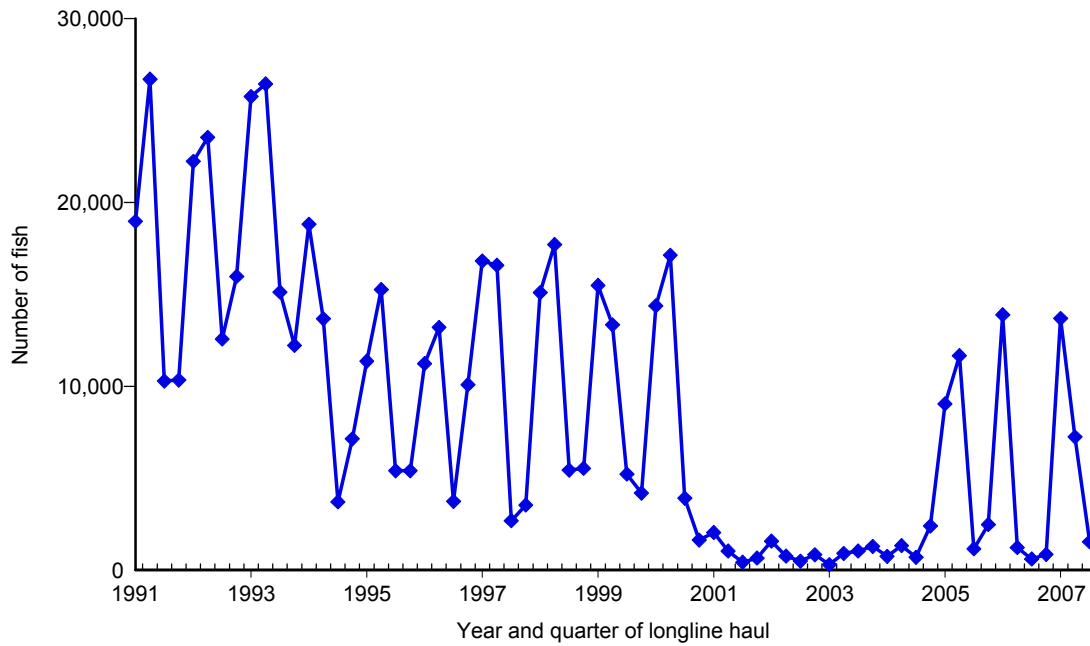


Figure 10. Quarterly catch of swordfish by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:48:02AM]

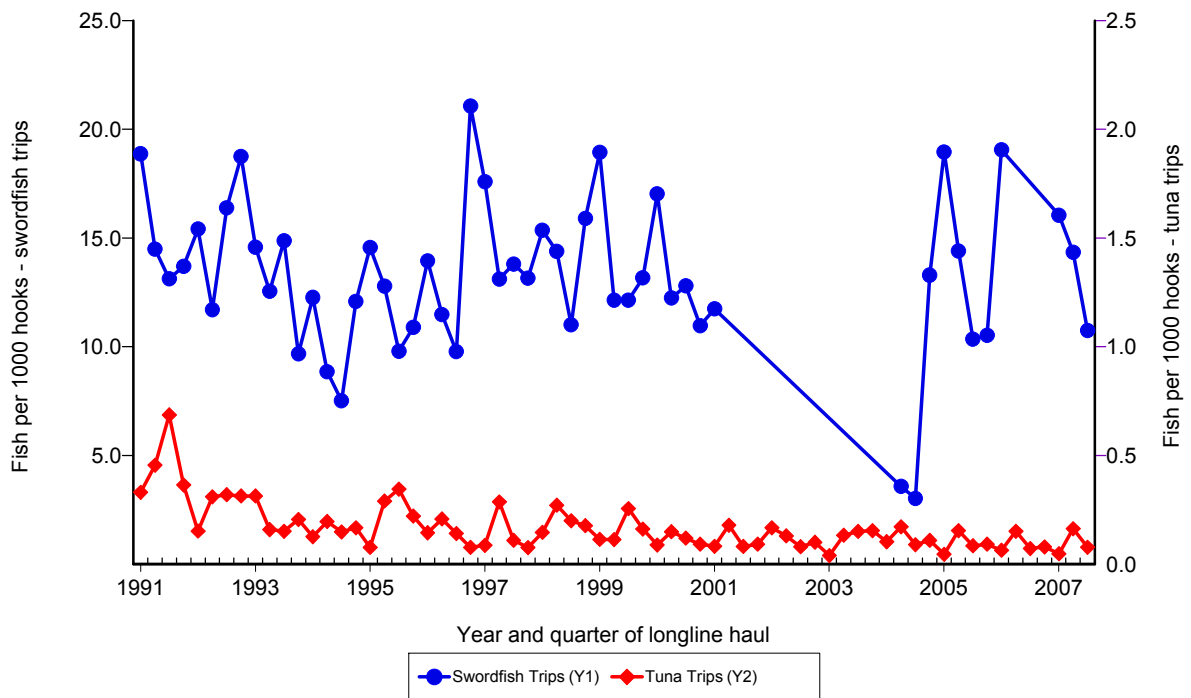


Figure 11. Quarterly CPUE of swordfish (fish per 1000 hooks) on swordfish trips and tuna trips by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:48:02AM]

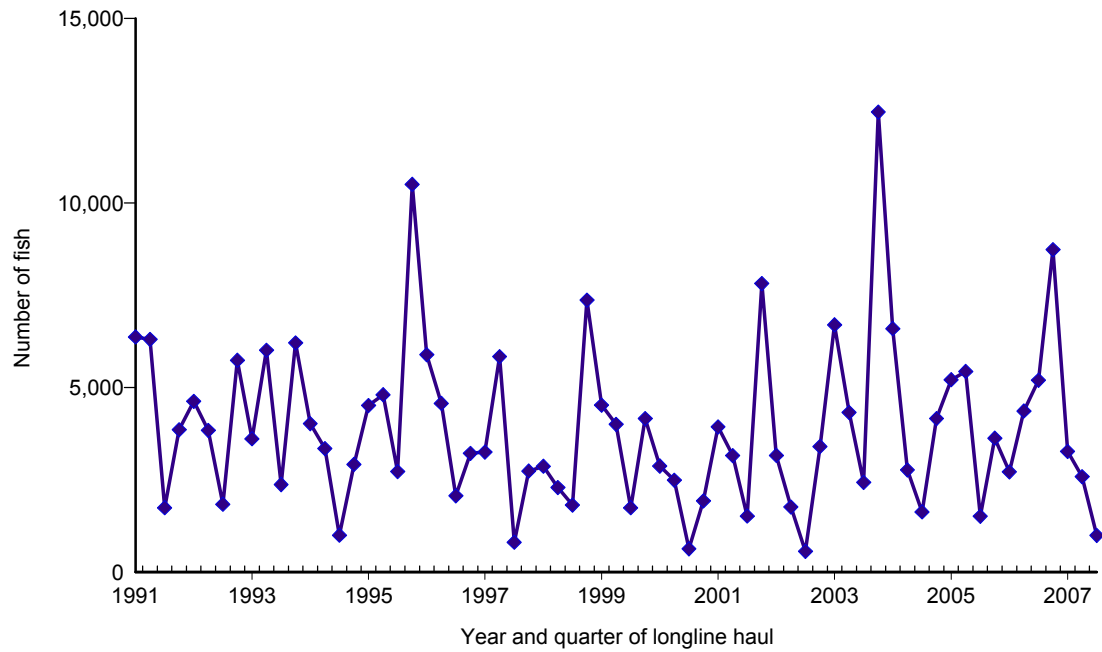


Figure 12. Quarterly catch of striped marlin by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:48:53AM]

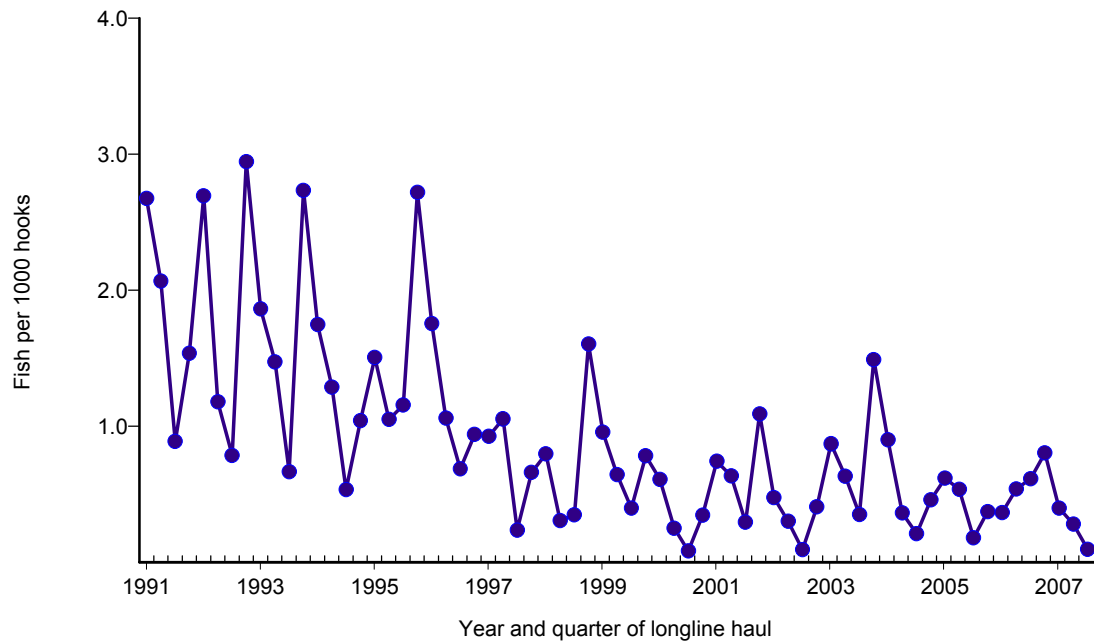


Figure 13. Quarterly CPUE of striped marlin (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:48:53AM]

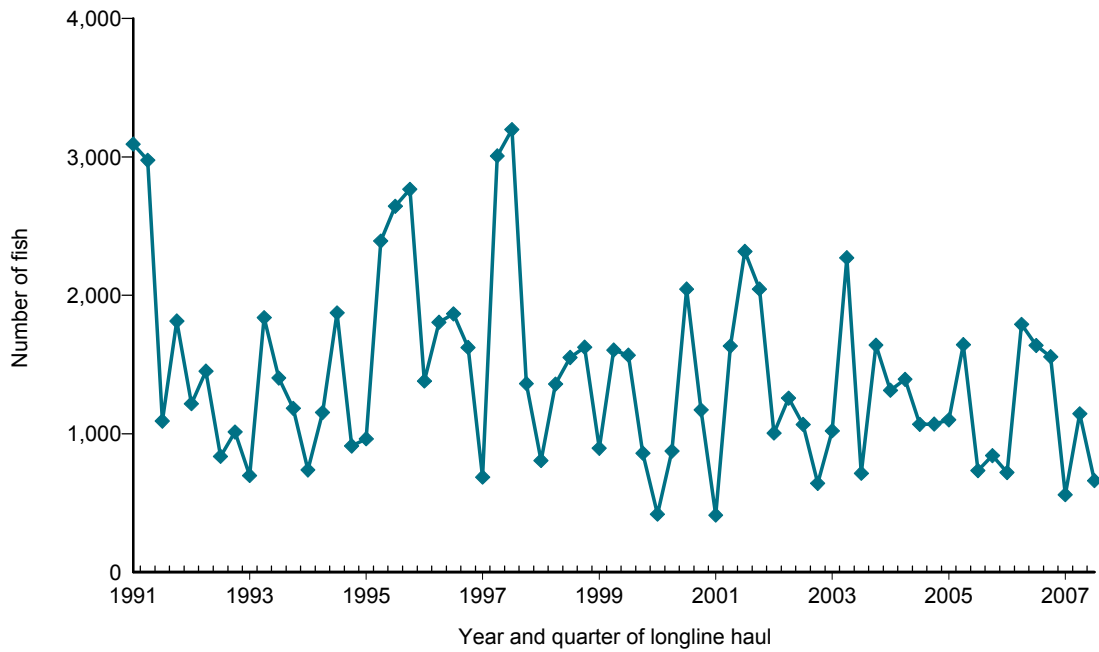


Figure 14. Quarterly catch of blue marlin by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:49:47AM]

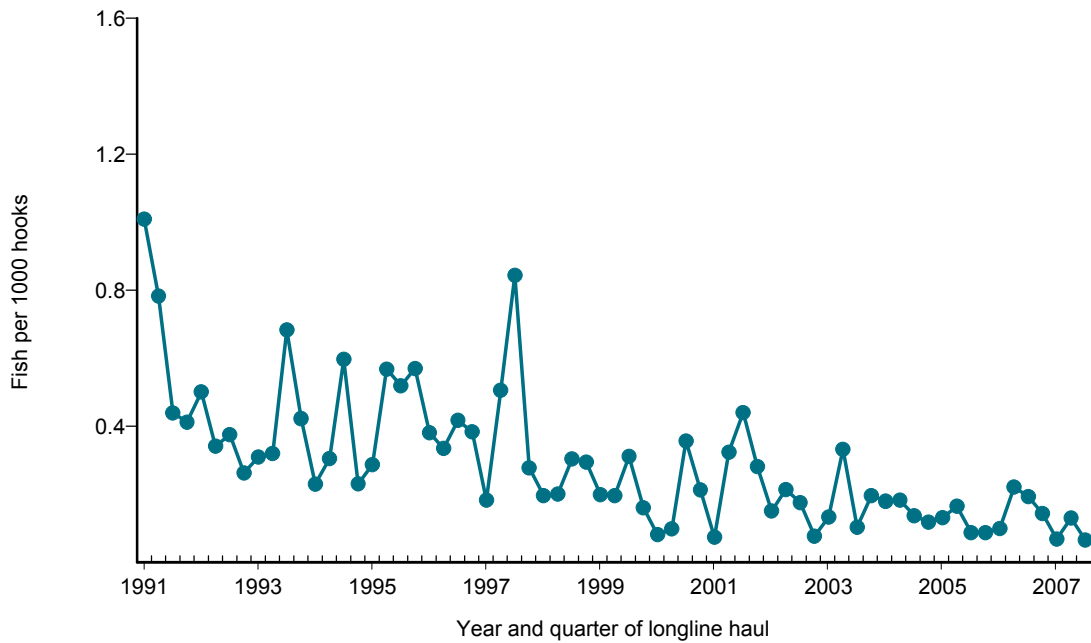


Figure 15. Quarterly CPUE of blue marlin (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:49:47AM]

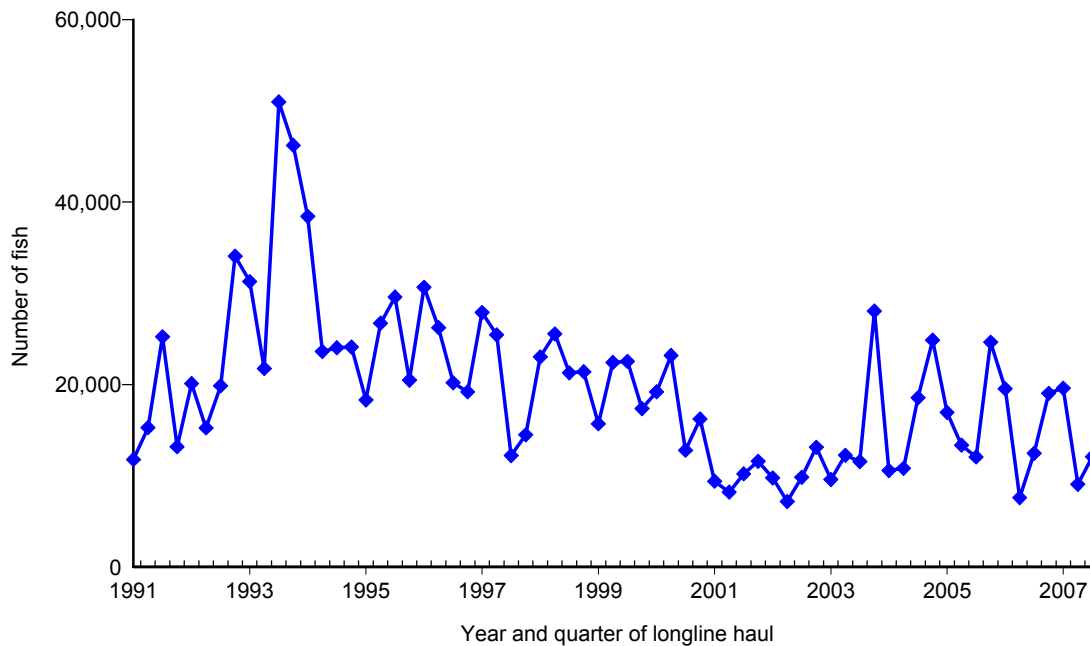


Figure 16. Quarterly catch of blue shark by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:50:41AM]

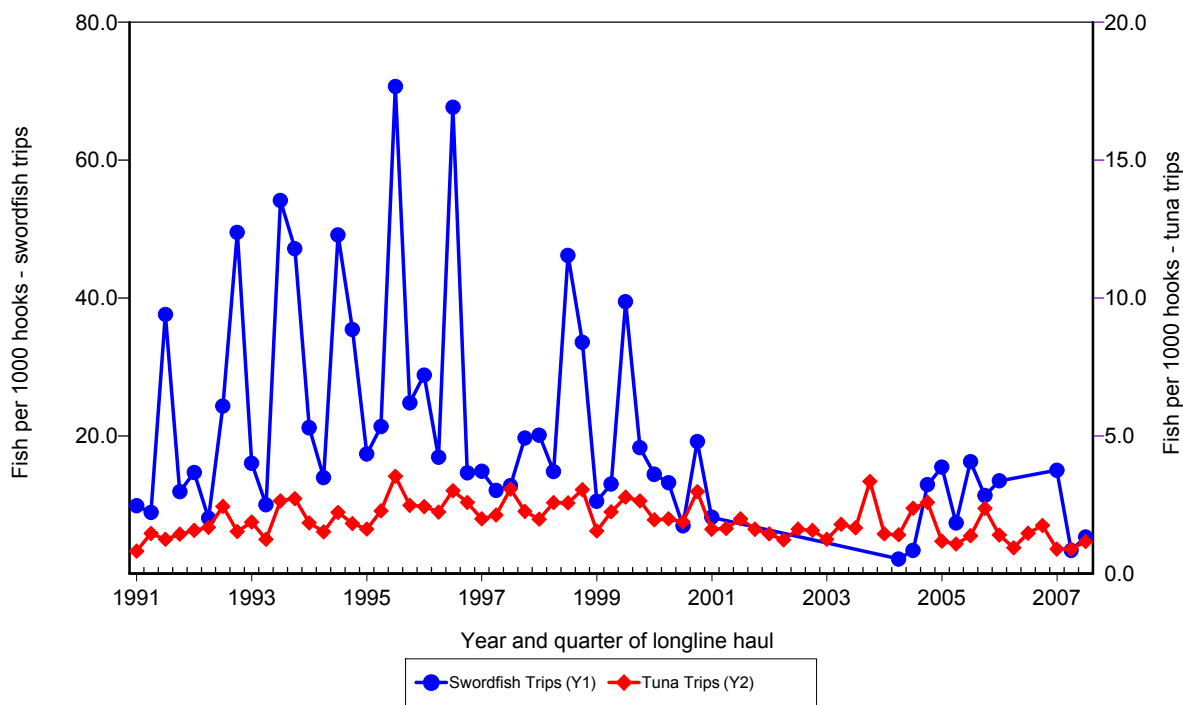


Figure 17. Quarterly CPUE of blue shark (fish per 1000 hooks) on swordfish trips and tuna trips by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:50:41AM]

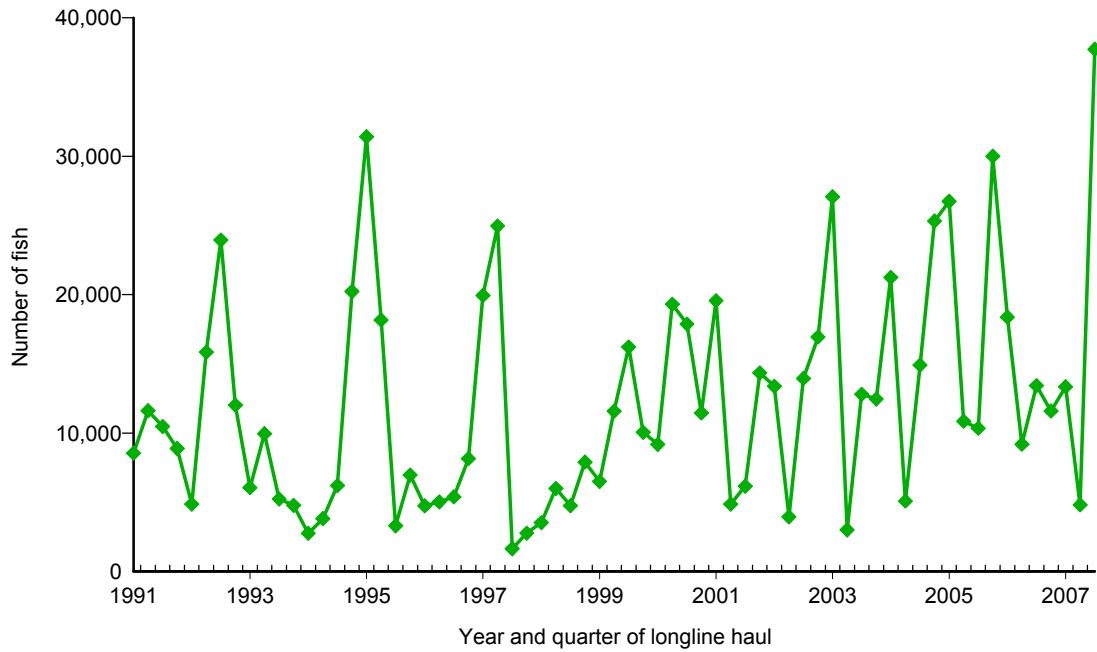


Figure 18. Quarterly catch of mahimahi by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:51:36AM]

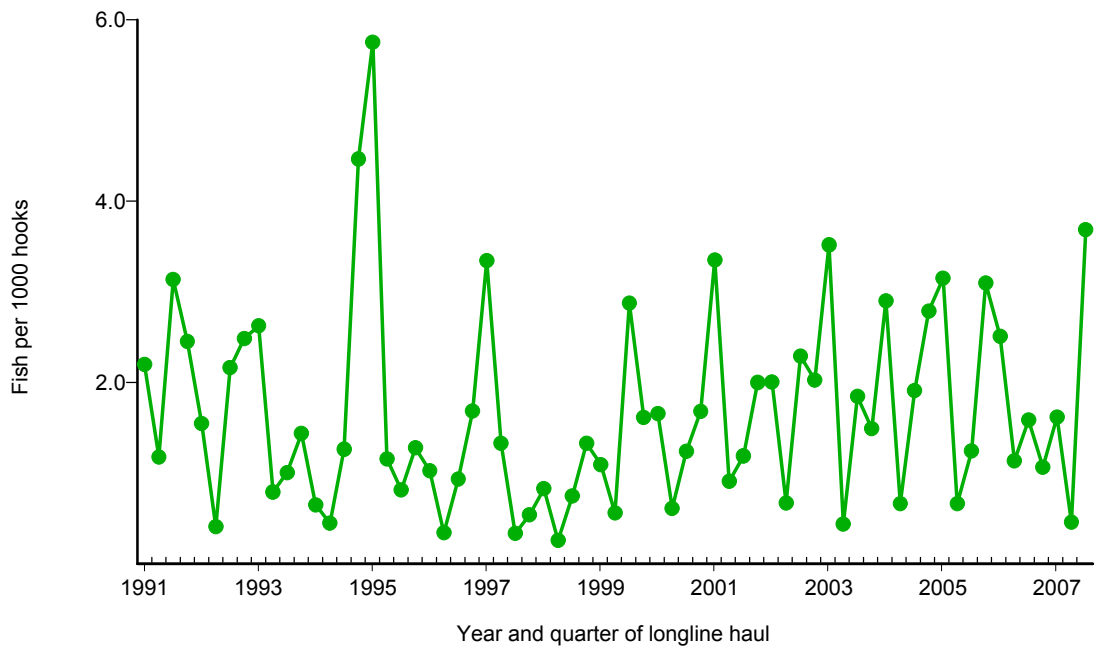


Figure 19. Quarterly CPUE of mahimahi (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:51:36AM]

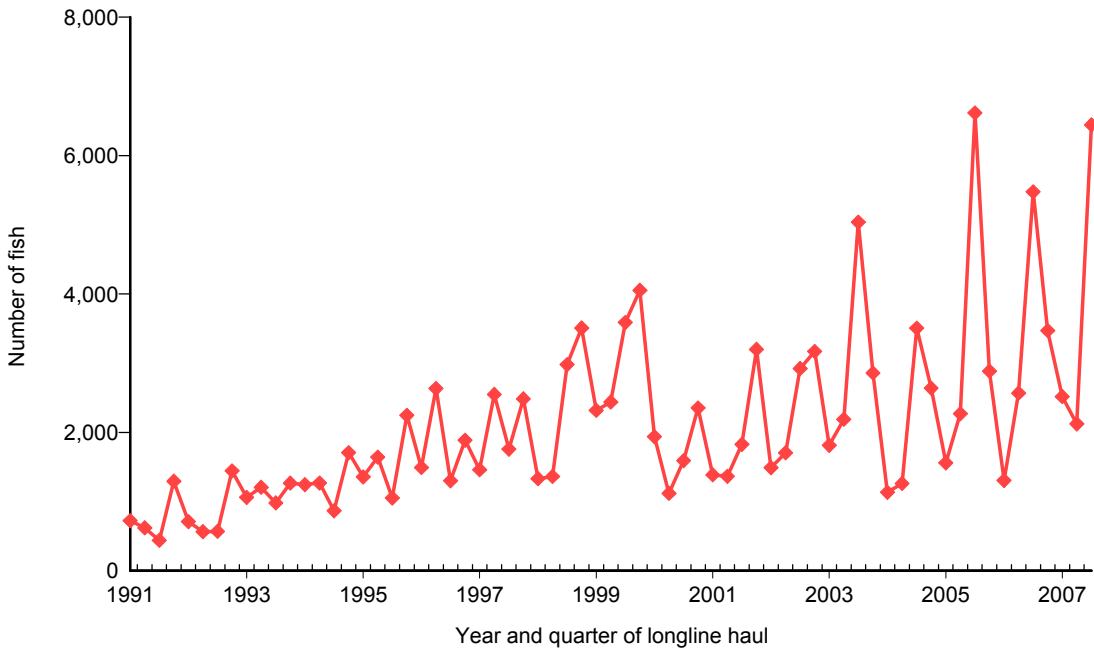


Figure 20. Quarterly catch of moonfish by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:52:30AM]

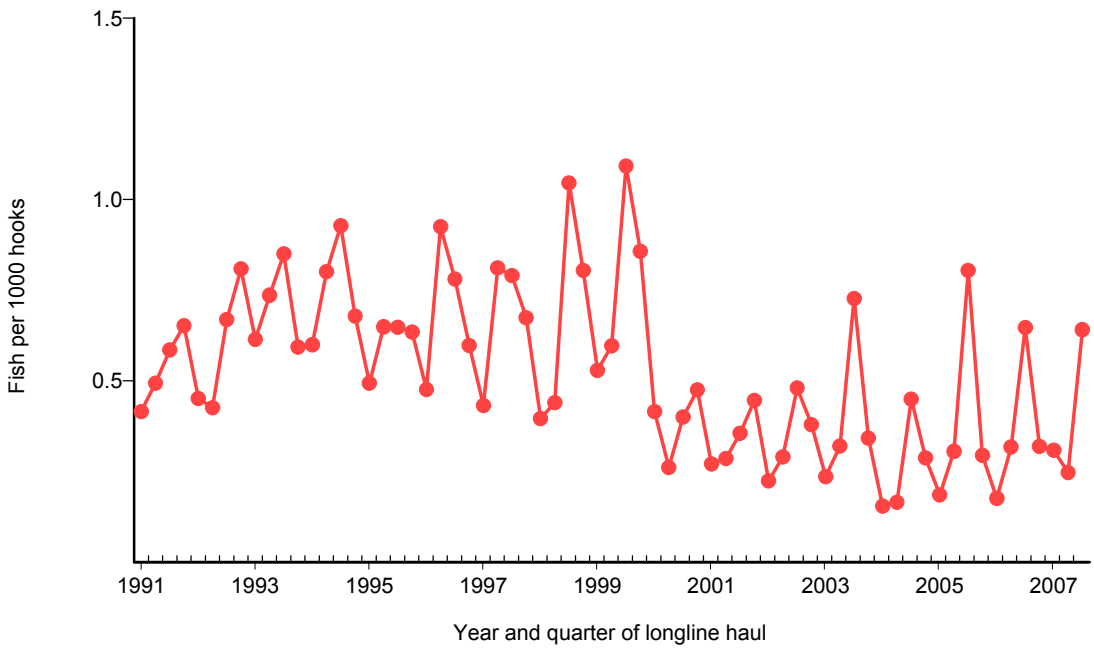


Figure 21. Quarterly CPUE of moonfish (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:52:30AM]

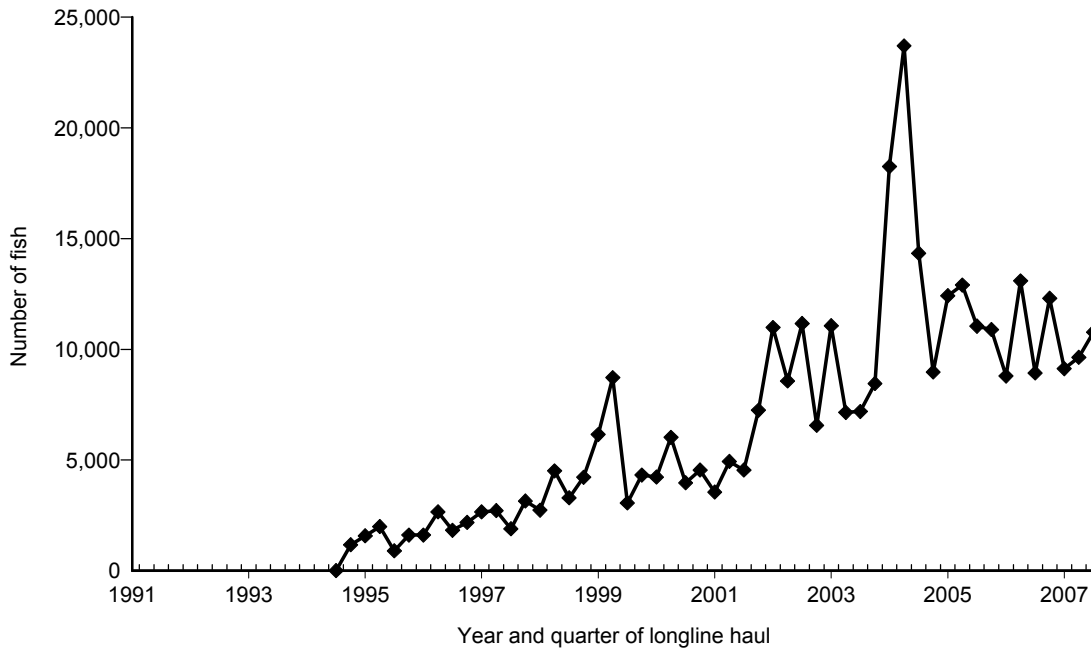


Figure 22. Quarterly catch of pomfret by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:53:22AM]

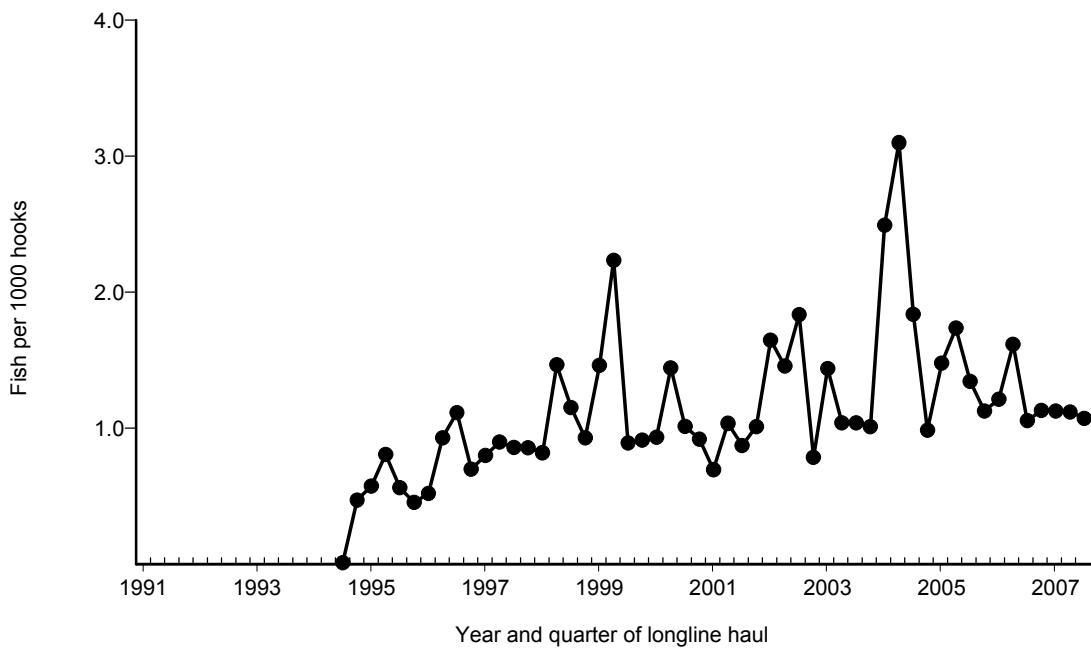


Figure 23. Quarterly CPUE of pomfret (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:53:22AM]

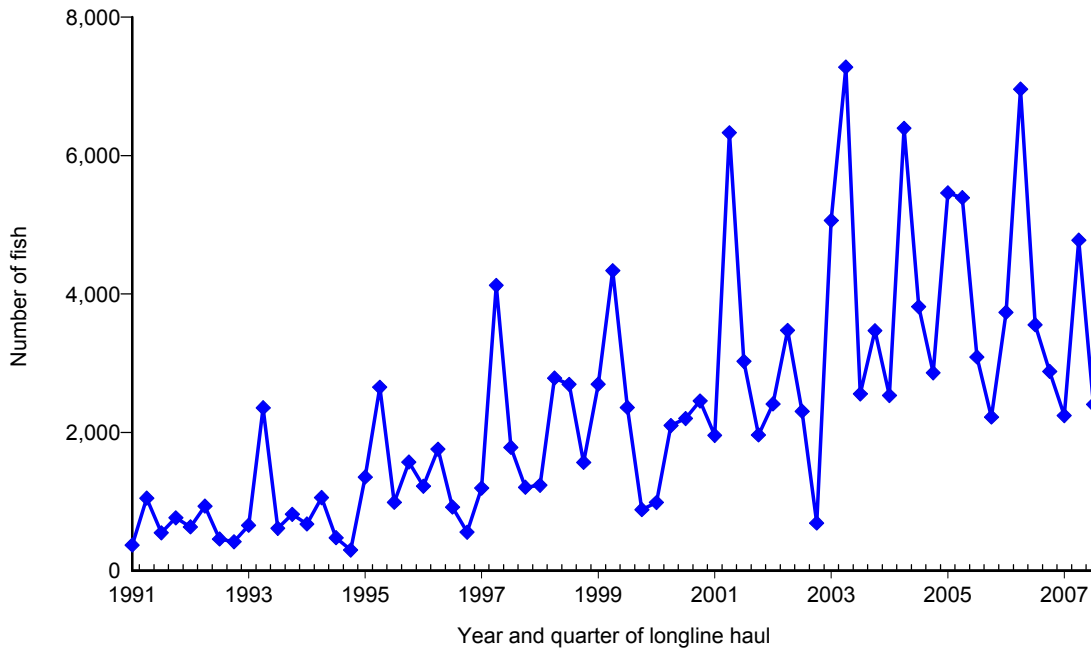


Figure 24. Quarterly catch of wahoo by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:54:15AM]

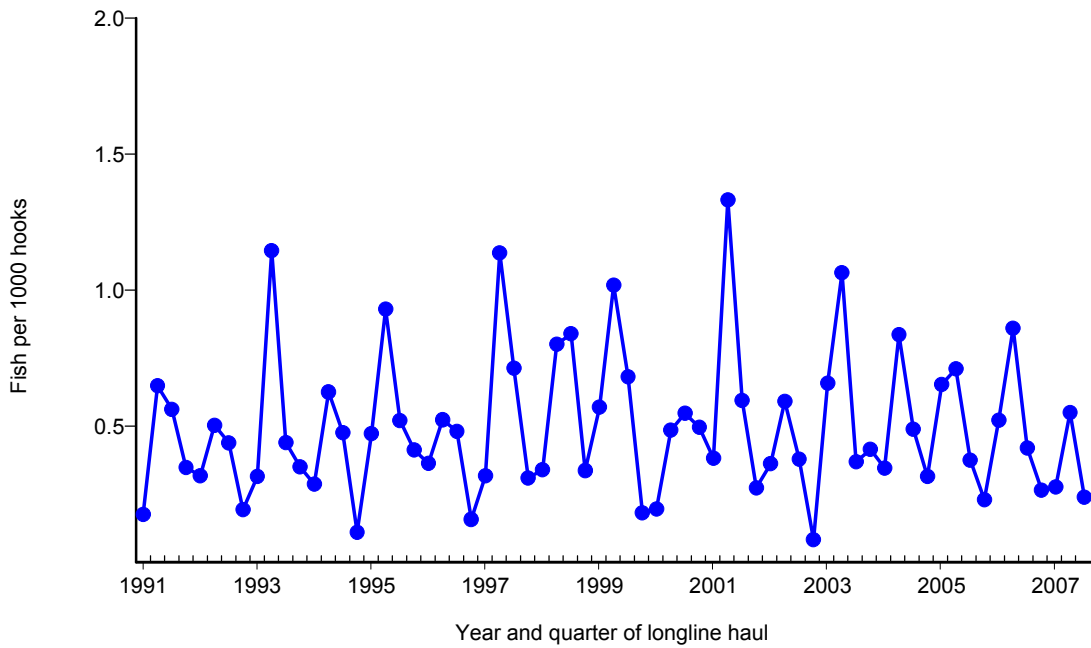


Figure 25. Quarterly CPUE of wahoo (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:54:15AM]

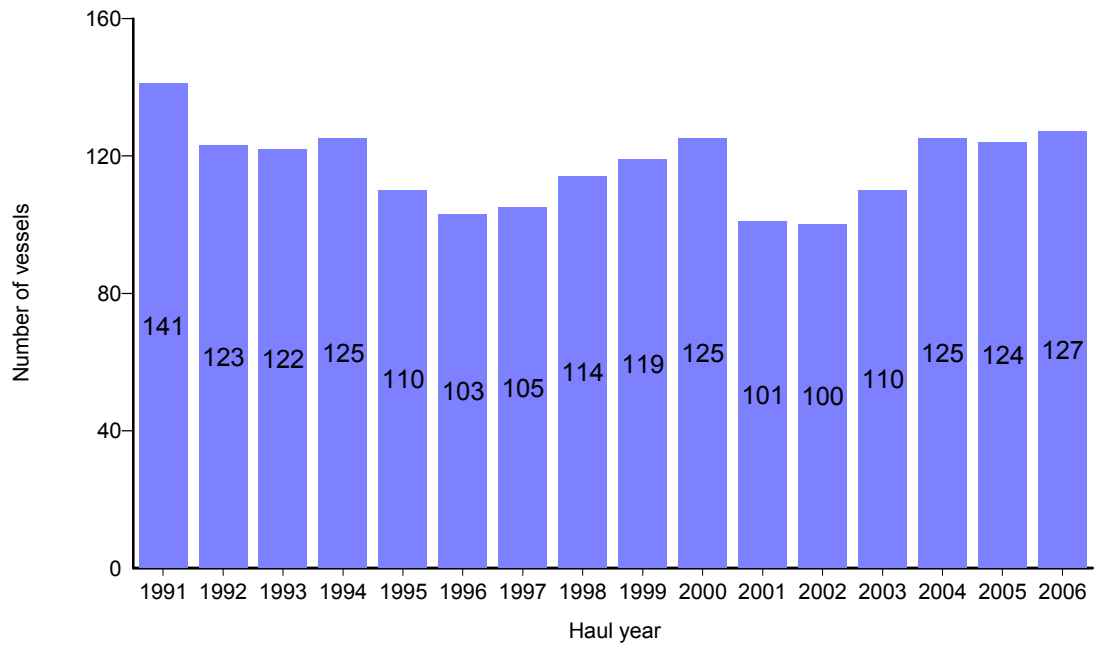


Figure A1. Number of active longline vessels based and landing in Hawaii, by year, 1991-2006. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:55:05AM]

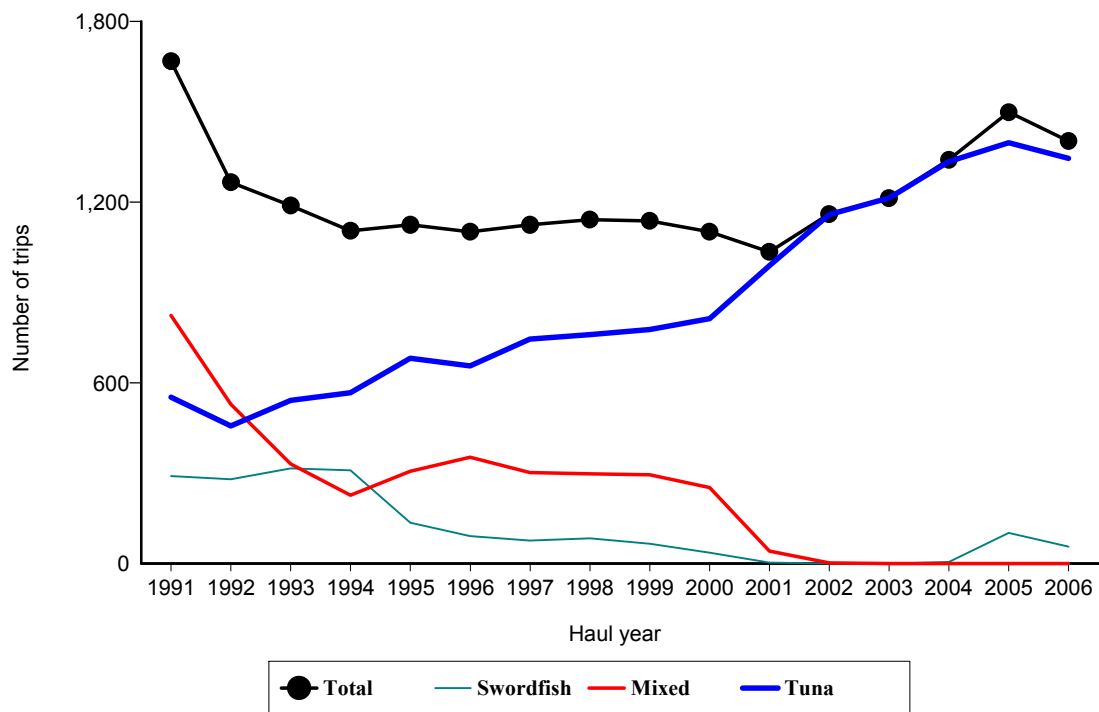


Figure A2. Number of fishing trips by longline vessels based and landing in Hawaii, by year and trip type, 1991-2006. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:55:05AM]

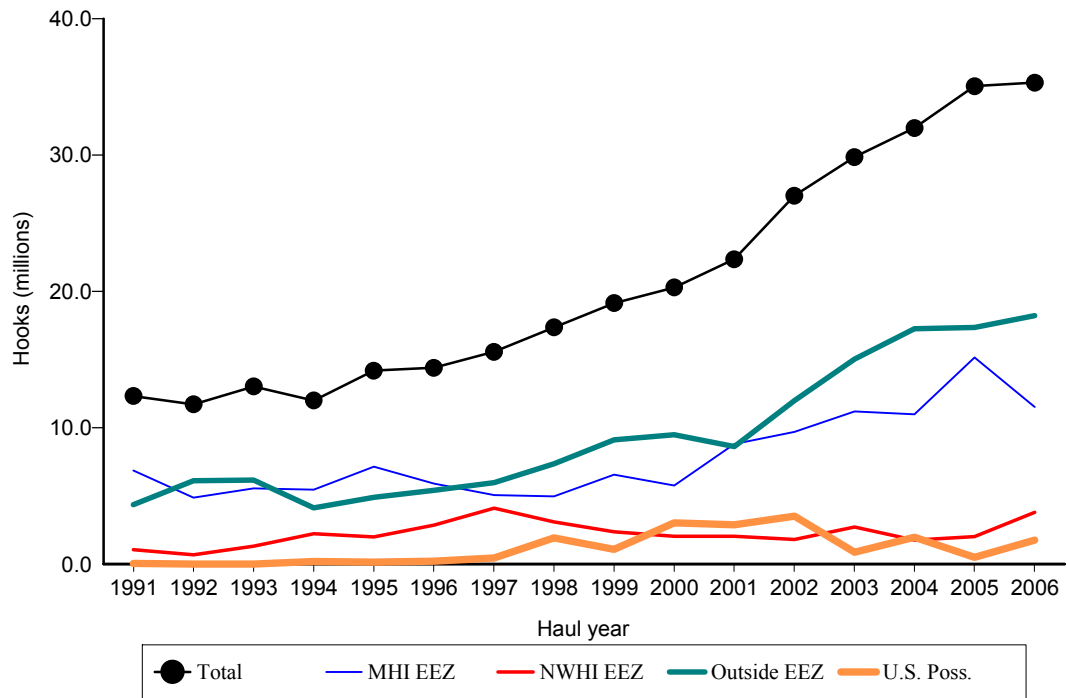


Figure A3. Number of hooks set by longline vessels based and landing in Hawaii, by year and fishing area, 1991-2006. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:55:11AM]

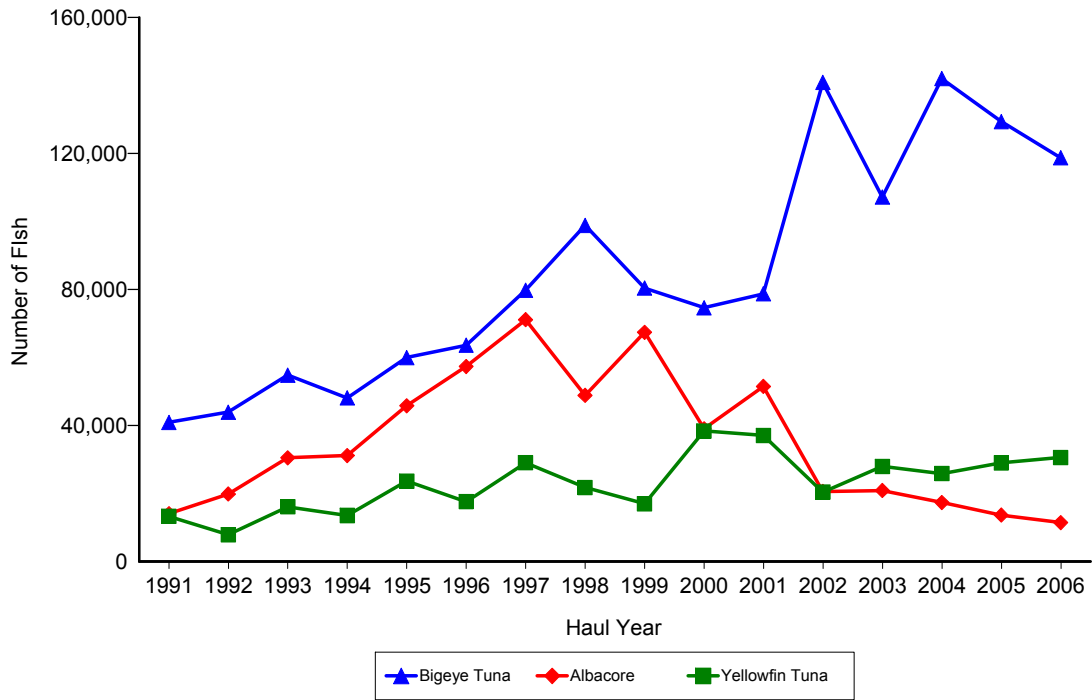


Figure A4. Annual catch of albacore, bigeye tuna, and yellowfin tuna by longline vessels based and landing in Hawaii, 1991-2006. [11/20/2007 11:56:04AM]

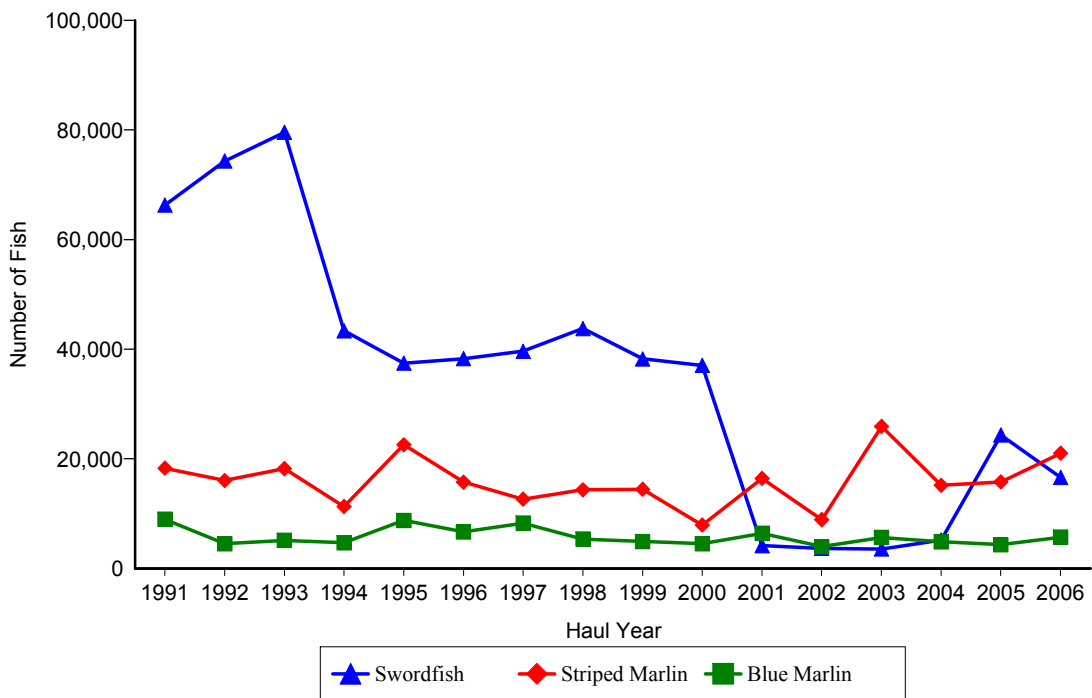


Figure A5. Annual catch of blue marlin, striped marlin, and swordfish by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:56:04AM]

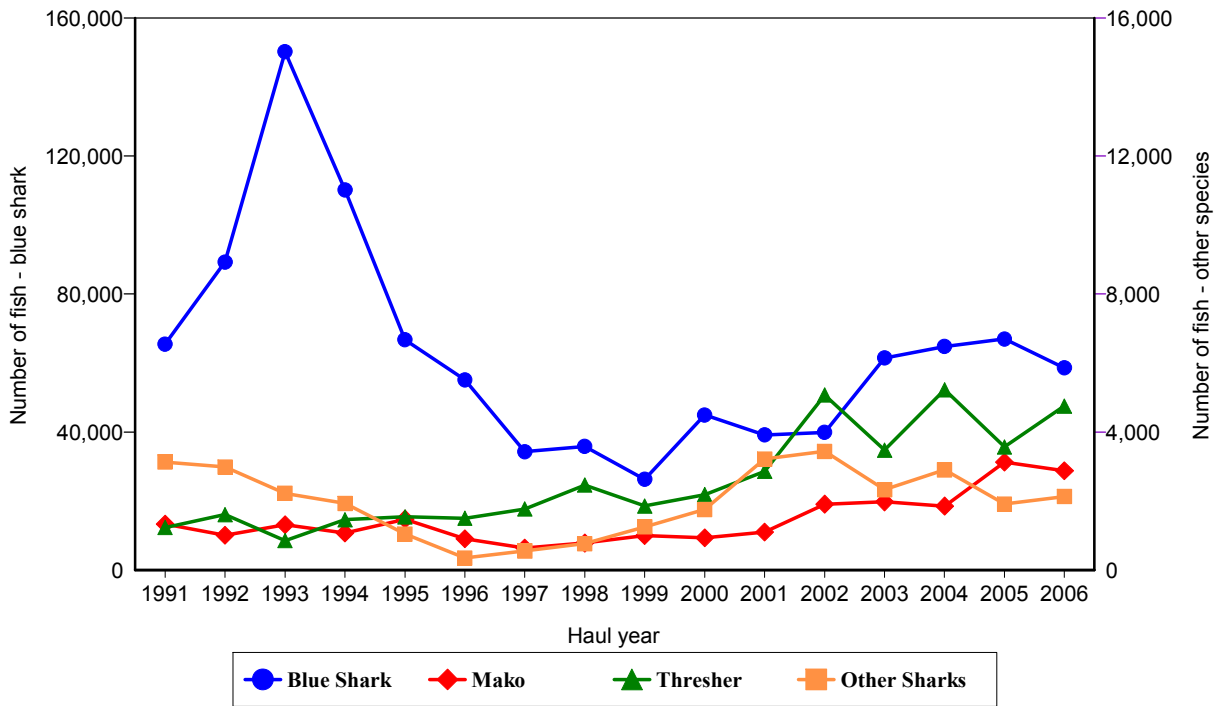


Figure A6. Annual catch of blue shark, mako shark, thresher shark, and other sharks by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:56:04AM]

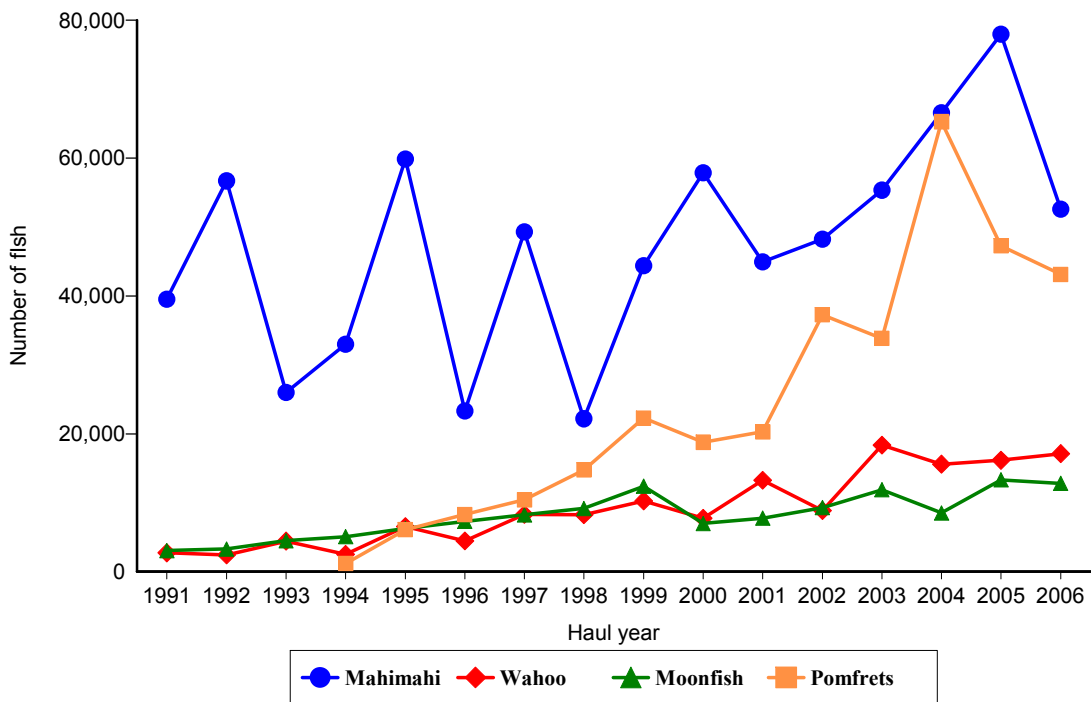


Figure A7. Annual catch of mahimahi, moonfish, pomfret, and wahoo by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 11/20/2007 11:56:04AM]