

The Hawaii-based Longline Logbook Summary Report July–September 2008¹

Pacific Islands Fisheries Science Center
Fisheries Monitoring and Socioeconomics Division

This report summarizes data on fish catches and fishing effort by Hawaii-based longline vessels during the third quarter of 2008 (Q3-2008). 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 catch and effort summary statistics represent a complete reporting of longline operations during Q3-2008.

During Q3-2008, 122 vessels were active in the Hawaii-based fleet, one less vessel compared to Q3-2007 (Table 1, Fig. 1). They made 360 longline trips (39 less than in Q3-2007), including 355 using deep-set gear to target tuna (36 less than in Q3-2007) and 5 using shallow-set gear to target swordfish (2 less than in Q3 2007; Fig. 2). During Q3-2008, the fleet deployed 9.6 million hooks, 0.6 million less than in Q3-2007 (Fig. 3). The fleet fished mainly outside the U.S. Exclusive Economic Zone (EEZ) (86% of the total hooks set), followed by waters within the EEZ of the Main Hawaiian Islands (MHI) (12%), the EEZ of the Northwestern Hawaiian Islands (NWHI) (1%) and the EEZ of U.S. Pacific Remote Island Areas (PRIA, consisting of U.S. possessions Wake Island, Jarvis Island, Howland Island, Baker Island, Kingman Reef, Palmyra Atoll, and Johnston Atoll) (<1%) .

In Q3-2008, the Hawaii longline fleet caught 31,031 bigeye tuna (Fig. 4); 92% were caught outside the U.S. EEZ, 7% in the MHI EEZ, and 1% in the NWHI or PRIA EEZs. The bigeye tuna catch-per-unit-of-effort (CPUE) on tuna-targeted trips was 3.3 fish per 1000 hooks, close to last year's CPUE of 3.2 fish per 1000 hooks (Fig. 5). The albacore catch and CPUE on tuna-targeted trips in Q3-2008 were 2,287 fish and 0.2 fish per 1000 hooks, respectively (Figs. 6-7). The yellowfin tuna catch and CPUE (2,972 fish and 0.3 fish per 1000 hooks, respectively) were lower in Q3-2008 than in Q3-2007 (Figs. 8-9).

The Q3-2008 swordfish catch was 1,510 fish, about the same as in Q3-2007 (Fig. 10). In Q3-2008, swordfish CPUE on shallow-set swordfish-targeted trips was 10.3 fish per 1000 hooks, close to the CPUE in Q3-2007 (Fig. 11).

The Q3-2008 striped marlin catch (1,404 fish) and CPUE on tuna-targeted trips (0.13 fish per 1000 hooks) were higher than in Q3-2007 by 40% and 44%, respectively (Figs. 12-13). The Q3-2008 blue marlin catch (766 fish) was higher than in Q3-2007 by 15% while CPUE on tuna-targeted trips (0.08 fish per 1000 hooks) was close to the CPUE in Q3-2007 (Figs. 14-15).

The fleet caught 10,442 sharks in Q3-2008, of which 508 (5%) were kept. Blue shark comprised 86% of the total shark catch (8,981 fish) (Fig. 16). Blue shark CPUE on swordfish-targeted trips was a record low 3.8 fish per 1000 hooks in Q3-2008 (Fig. 17).

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In Q3-2008, the Hawaii longline catch of other key pelagic species included 14,633 mahimahi (Fig. 18) with a CPUE of 1.5 fish per 1000 hooks on tuna-targeted trips (Fig. 19); 6,464 moonfish (Fig. 20) with a CPUE of 0.68 fish per 1000 hooks on tuna-targeted trips (Fig. 21); 10,024 pomfret (Fig. 22) with a CPUE of 1.1 fish per 1000 hooks on tuna-targeted trips (Fig. 23); and 2,780 wahoo (Fig. 24) with a CPUE of 0.29 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. Q3-2008 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. Q3-2008 summary statistics for the entire fishing area are also presented for each distinct trip type: swordfish-targeted trips using shallow-set gear (Table 7) and tuna-targeted trips deploying deep-set gear (Table 8).

To supplement the summary longline fishery statistics for Q3-2008, graphs of annual Hawaii longline fishing effort and catch by species for the years 1991-2007 are presented in Figs. A1-A7.

This report is available in PDF format on the PIFSC Web site at <http://www.pifsc.noaa.gov/fmsd/reports.php>. The Web site also provides quarterly and yearly charts and 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 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, 2/25/2009 10:56:50AM].

Report Coverage					Number of vessels active	122
Time Period	3rd Quarter 2008				Number of trips	360
Fishing Area	All Areas				Number of sets	4,281
Trip Types	All Trip Types				Number of hooks set	9,556,600

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	766	759	7	0.08
Striped marlin	1,404	1,387	17	0.15
Shortbill spearfish	1,254	1,247	7	0.13
Swordfish	1,510	1,381	129	0.16
Other billfishes	95	93	2	0.01
Total	5,029	4,867	162	0.53
Sharks				
Blue shark	8,981	30	8,951	0.94
Mako sharks	741	393	348	0.08
Thresher sharks	553	68	485	0.06
Oceanic whitetip shark	70	10	60	0.01
Silky shark	5	0	5	0.00
Other sharks	92	7	85	0.01
Total	10,442	508	9,934	1.09
Tunas				
Albacore	2,287	2,276	11	0.24
Bigeye tuna	31,031	30,743	288	3.25
Yellowfin tuna	2,972	2,943	29	0.31
Bluefin tuna	2	2	0	0.00
Skipjack tuna	1,055	1,034	21	0.11
Other tunas	0	0	0	0.00
Total	37,347	36,998	349	3.91
Other PMUS				
Mahimahi	14,633	14,471	162	1.53
Moonfish	6,464	6,449	15	0.68
Wahoo	2,780	2,771	9	0.29
Oilfish	5,591	5,551	40	0.59
Pomfret	10,024	9,993	31	1.05
Total	39,492	39,235	257	4.13
Total PMUS	92,310	81,608	10,702	9.66
Total Non-PMUS	799	280	519	0.08
Total All Species	93,109	81,888	799	9.74

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, 2/25/2009 10:56:50AM].

Report Coverage		Number of vessels active		75
Time Period	3rd Quarter 2008	Number of trips		127
Fishing Area	Main Hawaiian Islands EEZ	Number of sets		584
Trip Types	All Trip Types	Number of hooks set		1,166,745

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	191	191	0	0.16
Striped marlin	81	80	1	0.07
Shortbill spearfish	177	177	0	0.15
Swordfish	64	58	6	0.05
Other billfishes	15	13	2	0.01
Total	528	519	9	0.45
Sharks				
Blue shark	1,596	12	1,584	1.37
Mako sharks	41	24	17	0.04
Thresher sharks	41	14	27	0.04
Oceanic whitetip shark	13	5	8	0.01
Silky shark	0	0	0	0.00
Other sharks	33	2	31	0.03
Total	1,724	57	1,667	1.48
Tunas				
Albacore	97	97	0	0.08
Bigeye tuna	2,232	2,218	14	1.91
Yellowfin tuna	822	806	16	0.70
Bluefin tuna	0	0	0	0.00
Skipjack tuna	303	303	0	0.26
Other tunas	0	0	0	0.00
Total	3,454	3,424	30	2.96
Other PMUS				
Mahimahi	670	668	2	0.57
Moonfish	379	379	0	0.32
Wahoo	525	525	0	0.45
Oilfish	275	273	2	0.24
Pomfret	1,243	1,241	2	1.07
Total	3,092	3,086	6	2.65
Total PMUS	8,798	7,086	1,712	7.54
Total Non-PMUS	230	187	43	0.20
Total All Species	9,028	7,273	230	7.74

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, 2/25/2009 10:56:50AM].

Report Coverage		Number of vessels active		15
Time Period	3rd Quarter 2008	Number of trips		15
Fishing Area	Northwestern Hawaiian Islands EEZ	Number of sets		64
Trip Types	All Trip Types	Number of hooks set		145,839

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	59	58	1	0.40
Striped marlin	15	15	0	0.10
Shortbill spearfish	26	26	0	0.18
Swordfish	19	16	3	0.13
Other billfishes	6	6	0	0.04
Total	125	121	4	0.86
Sharks				
Blue shark	254	0	254	1.74
Mako sharks	8	4	4	0.05
Thresher sharks	26	5	21	0.18
Oceanic whitetip shark	8	1	7	0.05
Silky shark	0	0	0	0.00
Other sharks	5	0	5	0.03
Total	301	10	291	2.06
Tunas				
Albacore	24	24	0	0.16
Bigeye tuna	284	253	31	1.95
Yellowfin tuna	217	209	8	1.49
Bluefin tuna	0	0	0	0.00
Skipjack tuna	88	86	2	0.60
Other tunas	0	0	0	0.00
Total	613	572	41	4.20
Other PMUS				
Mahimahi	114	108	6	0.78
Moonfish	74	74	0	0.51
Wahoo	93	92	1	0.64
Oilfish	175	167	8	1.20
Pomfret	119	119	0	0.82
Total	575	560	15	3.94
Total PMUS	1,614	1,263	351	11.07
Total Non-PMUS	44	44	0	0.30
Total All Species	1,658	1,307	44	11.37

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, 2/25/2009 10:56:50AM].

Report Coverage		Number of vessels active		3
Time Period	3rd Quarter 2008	Number of trips		3
Fishing Area	Pacific Remote Island Areas (PRIA) EEZ	Number of sets		20
Trip Types	All Trip Types	Number of hooks set		45,860

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	22	22	0	0.48
Striped marlin	12	12	0	0.26
Shortbill spearfish	3	3	0	0.07
Swordfish	2	2	0	0.04
Other billfishes	0	0	0	0.00
Total	39	39	0	0.85
Sharks				
Blue shark	63	0	63	1.37
Mako sharks	2	0	2	0.04
Thresher sharks	4	0	4	0.09
Oceanic whitetip shark	28	0	28	0.61
Silky shark	4	0	4	0.09
Other sharks	0	0	0	0.00
Total	101	0	101	2.20
Tunas				
Albacore	107	107	0	2.33
Bigeye tuna	38	38	0	0.83
Yellowfin tuna	34	34	0	0.74
Bluefin tuna	0	0	0	0.00
Skipjack tuna	32	32	0	0.70
Other tunas	0	0	0	0.00
Total	211	211	0	4.60
Other PMUS				
Mahimahi	15	15	0	0.33
Moonfish	13	13	0	0.28
Wahoo	16	15	1	0.35
Oilfish	5	5	0	0.11
Pomfret	17	17	0	0.37
Total	66	65	1	1.44
Total PMUS	417	315	102	9.09
Total Non-PMUS	2	2	0	0.04
Total All Species	419	317	2	9.14

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, 2/25/2009 10:56:50AM].

Report Coverage		Number of vessels active		79
Time Period	3rd Quarter 2008	Number of trips		134
Fishing Area	Hawaiian Islands EEZ + PRIA EEZ	Number of sets		668
Trip Types	All Trip Types	Number of hooks set		1,358,444

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	272	271	1	0.20
Striped marlin	108	107	1	0.08
Shortbill spearfish	206	206	0	0.15
Swordfish	85	76	9	0.06
Other billfishes	21	19	2	0.02
Total	692	679	13	0.51
Sharks				
Blue shark	1,913	12	1,901	1.41
Mako sharks	51	28	23	0.04
Thresher sharks	71	19	52	0.05
Oceanic whitetip shark	49	6	43	0.04
Silky shark	4	0	4	0.00
Other sharks	38	2	36	0.03
Total	2,126	67	2,059	1.57
Tunas				
Albacore	228	228	0	0.17
Bigeye tuna	2,554	2,509	45	1.88
Yellowfin tuna	1,073	1,049	24	0.79
Bluefin tuna	0	0	0	0.00
Skipjack tuna	423	421	2	0.31
Other tunas	0	0	0	0.00
Total	4,278	4,207	71	3.15
Other PMUS				
Mahimahi	799	791	8	0.59
Moonfish	466	466	0	0.34
Wahoo	634	632	2	0.47
Oilfish	455	445	10	0.33
Pomfret	1,379	1,377	2	1.02
Total	3,733	3,711	22	2.75
Total PMUS	10,829	8,664	2,165	7.97
Total Non-PMUS	276	233	43	0.20
Total All Species	11,105	8,897	276	8.17

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, 2/25/2009 10:56:50AM].

Report Coverage		Number of vessels active		120	
Time Period	3rd Quarter 2008	Number of trips		316	
Fishing Area	Outside U.S. EEZ	Number of sets		3,613	
Trip Types	All Trip Types	Number of hooks set		8,198,156	

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	494	488	6	0.06
Striped marlin	1,296	1,280	16	0.16
Shortbill spearfish	1,048	1,041	7	0.13
Swordfish	1,425	1,305	120	0.17
Other billfishes	74	74	0	0.01
Total	4,337	4,188	149	0.53
Sharks				
Blue shark	7,068	18	7,050	0.86
Mako sharks	690	365	325	0.08
Thresher sharks	482	49	433	0.06
Oceanic whitetip shark	21	4	17	0.00
Silky shark	1	0	1	0.00
Other sharks	54	5	49	0.01
Total	8,316	441	7,875	1.01
Tunas				
Albacore	2,059	2,048	11	0.25
Bigeye tuna	28,477	28,234	243	3.47
Yellowfin tuna	1,899	1,894	5	0.23
Bluefin tuna	2	2	0	0.00
Skipjack tuna	632	613	19	0.08
Other tunas	0	0	0	0.00
Total	33,069	32,791	278	4.03
Other PMUS				
Mahimahi	13,834	13,680	154	1.69
Moonfish	5,998	5,983	15	0.73
Wahoo	2,146	2,139	7	0.26
Oilfish	5,136	5,106	30	0.63
Pomfret	8,645	8,616	29	1.05
Total	35,759	35,524	235	4.36
Total PMUS	81,481	72,944	8,537	9.94
Total Non-PMUS	523	47	476	0.06
Total All Species	82,004	72,991	523	10.00

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, 2/25/2009 10:56:50AM].

Report Coverage		Number of vessels active		4
Time Period	3rd Quarter 2008	Number of trips		5
Fishing Area	All Areas	Number of sets		85
Trip Types	Swordfish Targeted Trips	Number of hooks set		84,474

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	38	38	0	0.45
Striped marlin	128	116	12	1.52
Shortbill spearfish	4	4	0	0.05
Swordfish	867	814	53	10.26
Other billfishes	0	0	0	0.00
Total	1,037	972	65	12.28
Sharks				
Blue shark	318	0	318	3.76
Mako sharks	28	14	14	0.33
Thresher sharks	10	6	4	0.12
Oceanic whitetip shark	8	3	5	0.09
Silky shark	0	0	0	0.00
Other sharks	0	0	0	0.00
Total	364	23	341	4.31
Tunas				
Albacore	0	0	0	0.00
Bigeye tuna	101	101	0	1.20
Yellowfin tuna	32	32	0	0.38
Bluefin tuna	1	1	0	0.01
Skipjack tuna	0	0	0	0.00
Other tunas	0	0	0	0.00
Total	134	134	0	1.59
Other PMUS				
Mahimahi	766	743	23	9.07
Moonfish	1	1	0	0.01
Wahoo	24	24	0	0.28
Oilfish	594	572	22	7.03
Pomfret	4	2	2	0.05
Total	1,389	1,342	47	16.44
Total PMUS	2,924	2,471	453	34.61
Total Non-PMUS	0	0	0	0.00
Total All Species	2,924	2,471	0	34.61

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, 2/25/2009 10:56:50AM].

Report Coverage		Number of vessels active		120
Time Period	3rd Quarter 2008	Number of trips		355
Fishing Area	All Areas	Number of sets		4,196
Trip Types	Tuna Targeted Trips	Number of hooks set		9,472,126

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	728	721	7	0.08
Striped marlin	1,276	1,271	5	0.13
Shortbill spearfish	1,250	1,243	7	0.13
Swordfish	643	567	76	0.07
Other billfishes	95	93	2	0.01
Total	3,992	3,895	97	0.42
Sharks				
Blue shark	8,663	30	8,633	0.91
Mako sharks	713	379	334	0.08
Thresher sharks	543	62	481	0.06
Oceanic whitetip shark	62	7	55	0.01
Silky shark	5	0	5	0.00
Other sharks	92	7	85	0.01
Total	10,078	485	9,593	1.06
Tunas				
Albacore	2,287	2,276	11	0.24
Bigeye tuna	30,930	30,642	288	3.27
Yellowfin tuna	2,940	2,911	29	0.31
Bluefin tuna	1	1	0	0.00
Skipjack tuna	1,055	1,034	21	0.11
Other tunas	0	0	0	0.00
Total	37,213	36,864	349	3.93
Other PMUS				
Mahimahi	13,867	13,728	139	1.46
Moonfish	6,463	6,448	15	0.68
Wahoo	2,756	2,747	9	0.29
Oilfish	4,997	4,979	18	0.53
Pomfret	10,020	9,991	29	1.06
Total	38,103	37,893	210	4.02
Total PMUS	89,386	79,137	10,249	9.44
Total Non-PMUS	799	280	519	0.08
Total All Species	90,185	79,417	799	9.52

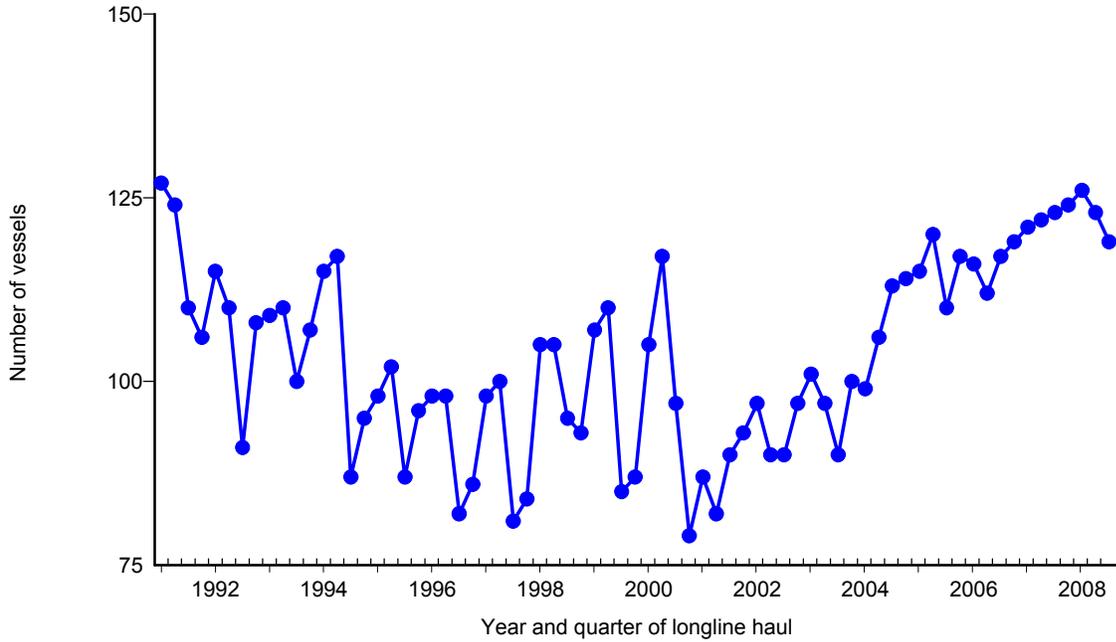


Figure 1. Number of active longline vessels based and landing in Hawaii, by quarter, . 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:39:16PM]

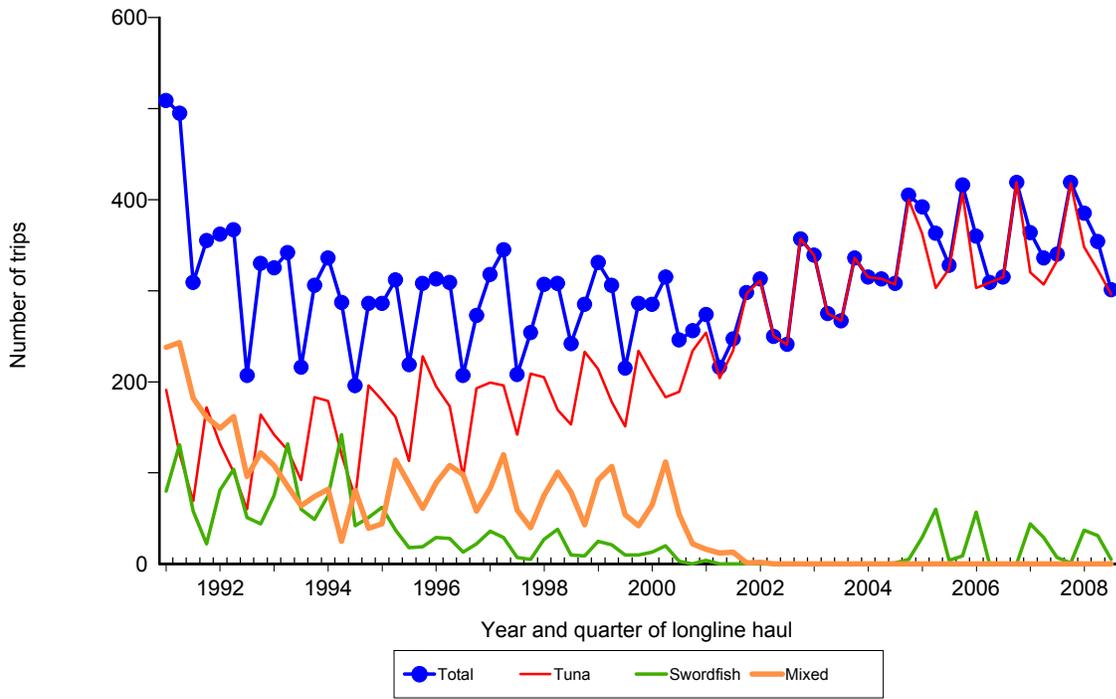


Figure 2. Number of fishing trips by longline vessels based and landing in Hawaii, by quarter and trip type, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:39:16PM]

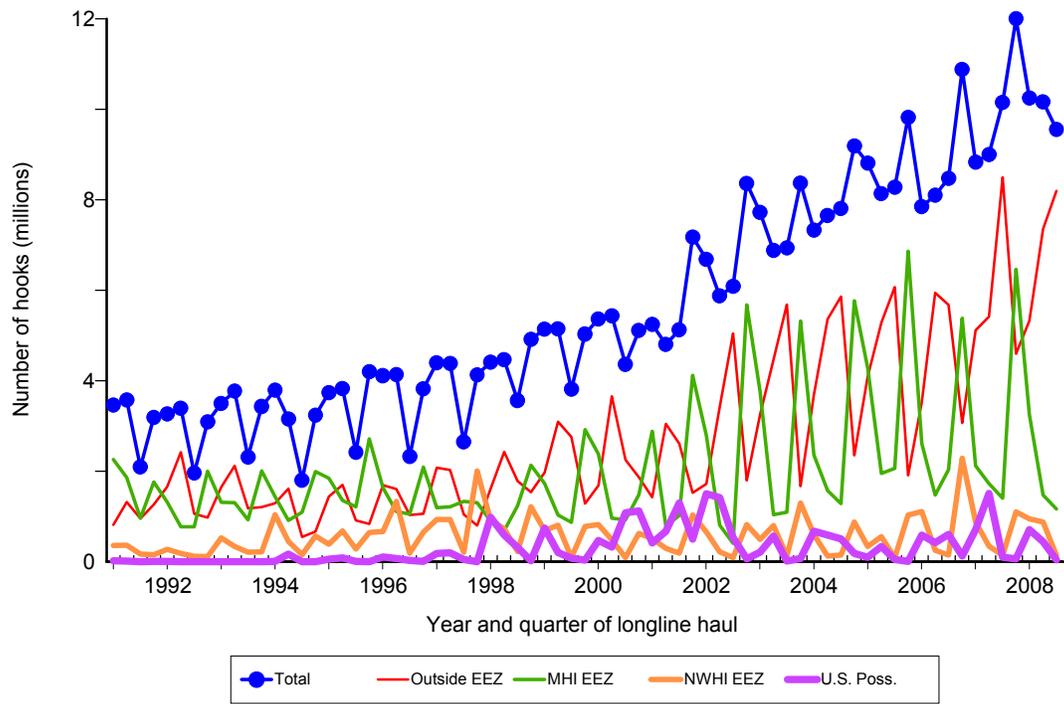


Figure 3. Number of hooks set by longline vessels based and landing in Hawaii, by quarter and fishing area, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:39:19PM]

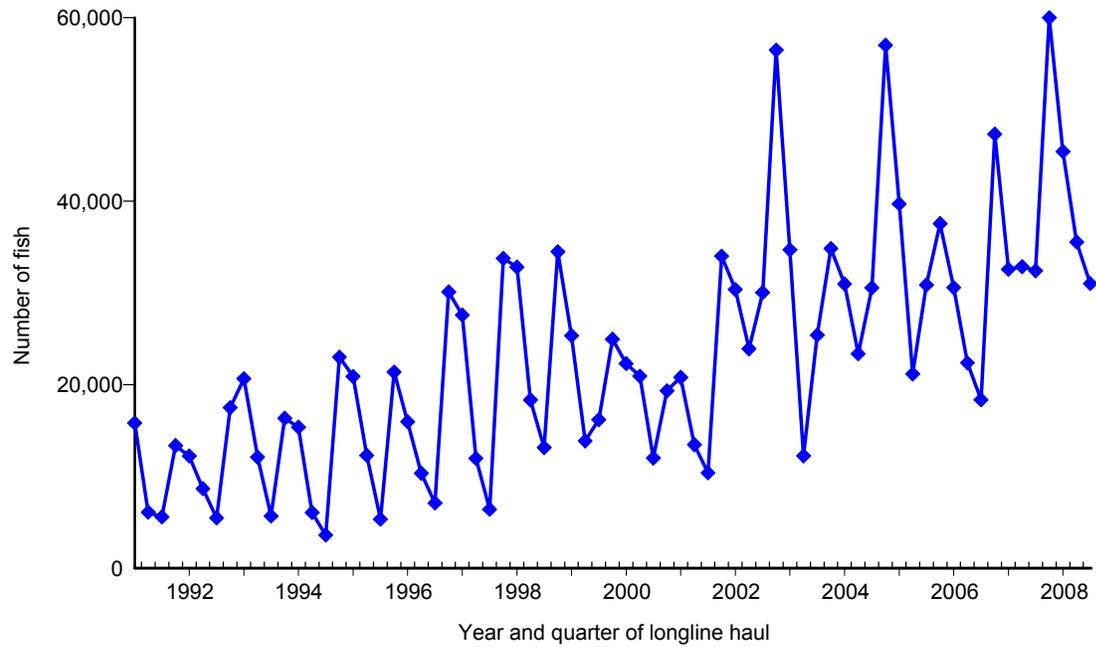


Figure 4. Quarterly catch of bigeye tuna by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:39:49PM]

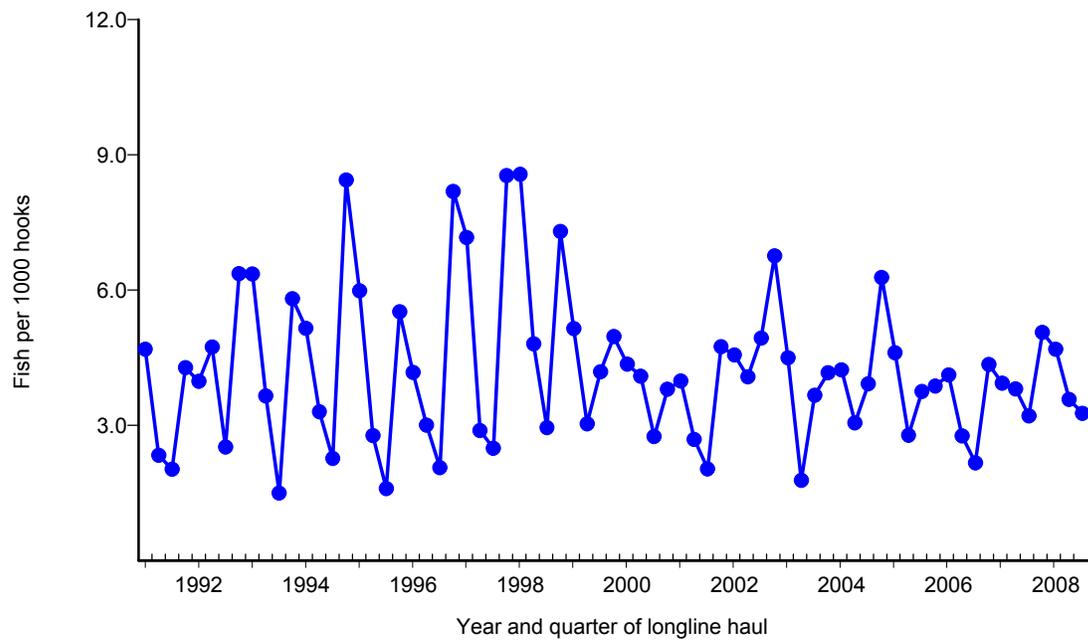


Figure 5. Quarterly CPUE of bigeye tuna (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:39:49PM]

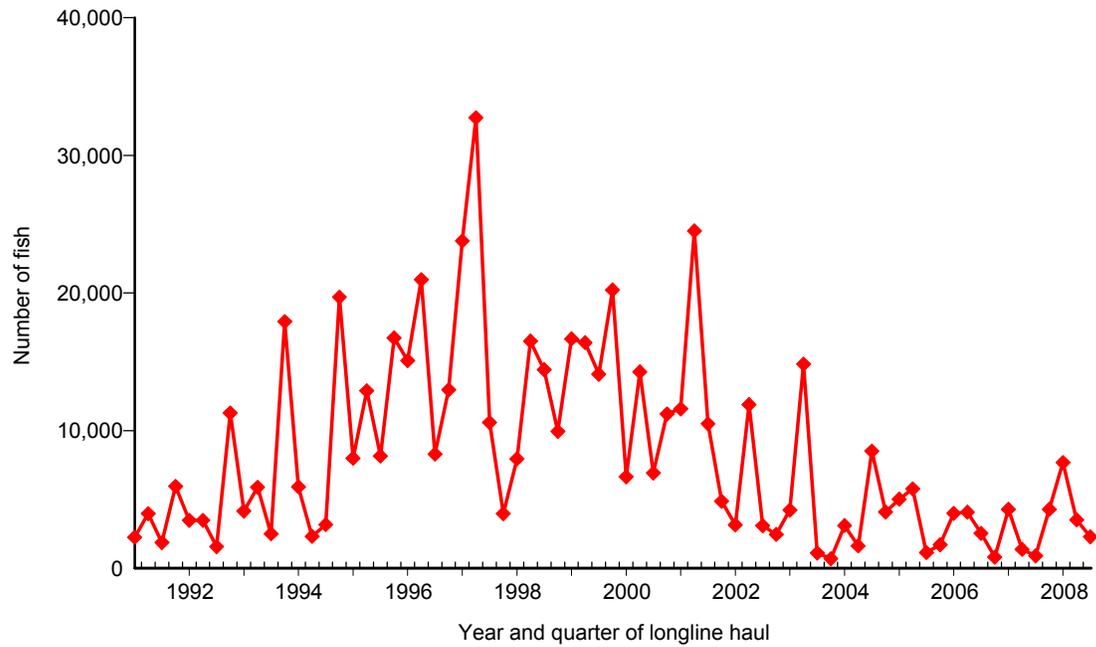


Figure 6. Quarterly catch of albacore by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:40:22PM]

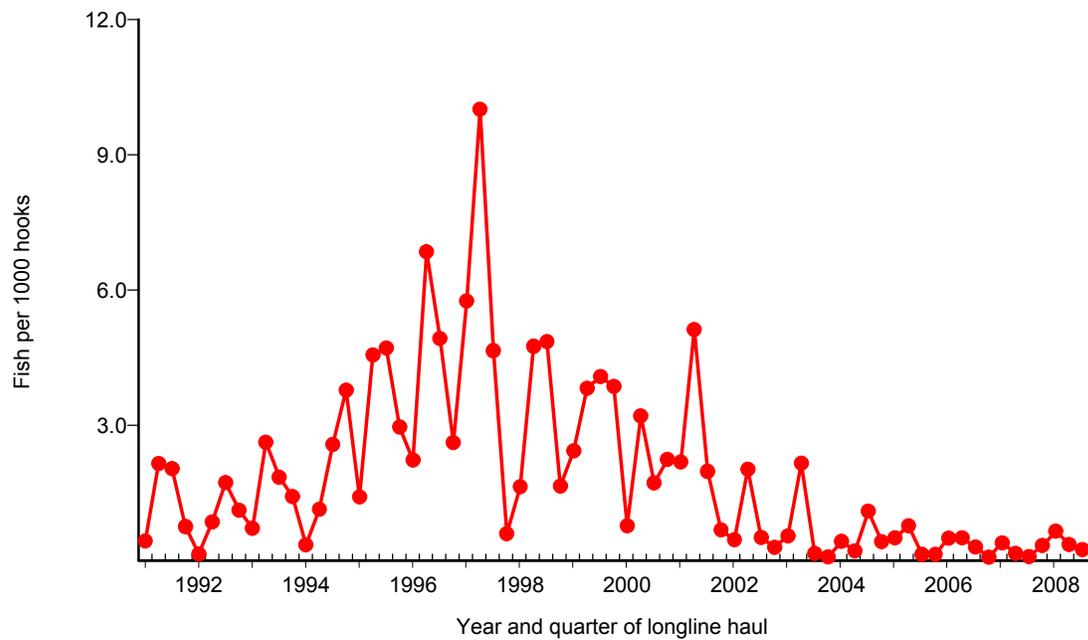


Figure 7. Quarterly CPUE of albacore (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:40:22PM]

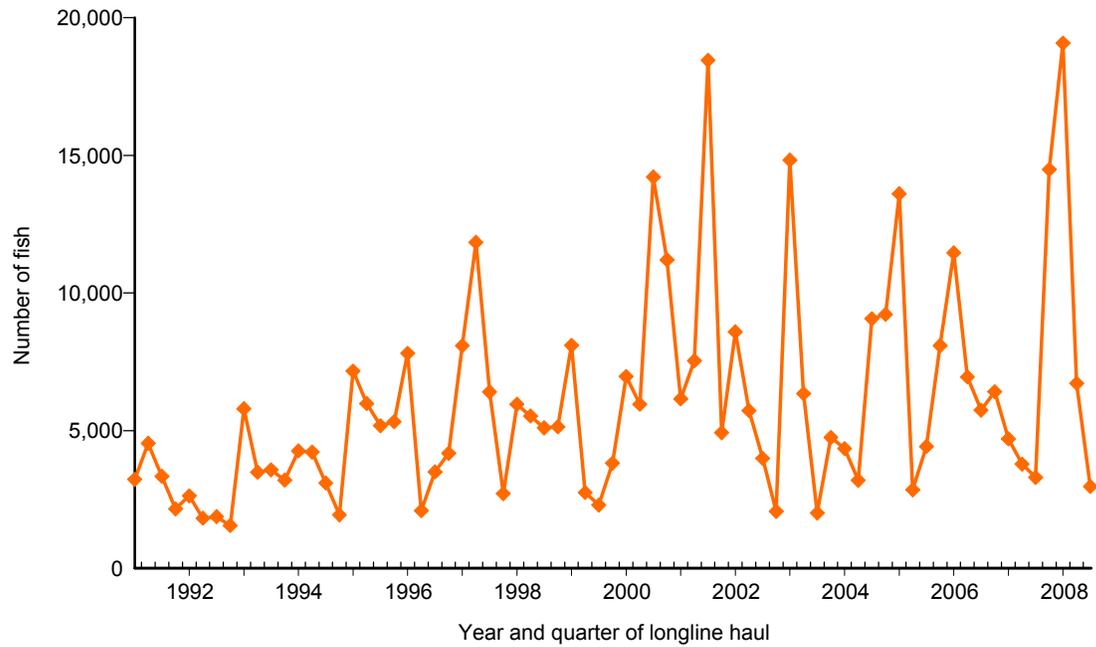


Figure 8. Quarterly catch of yellowfin tuna by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:40:54PM]

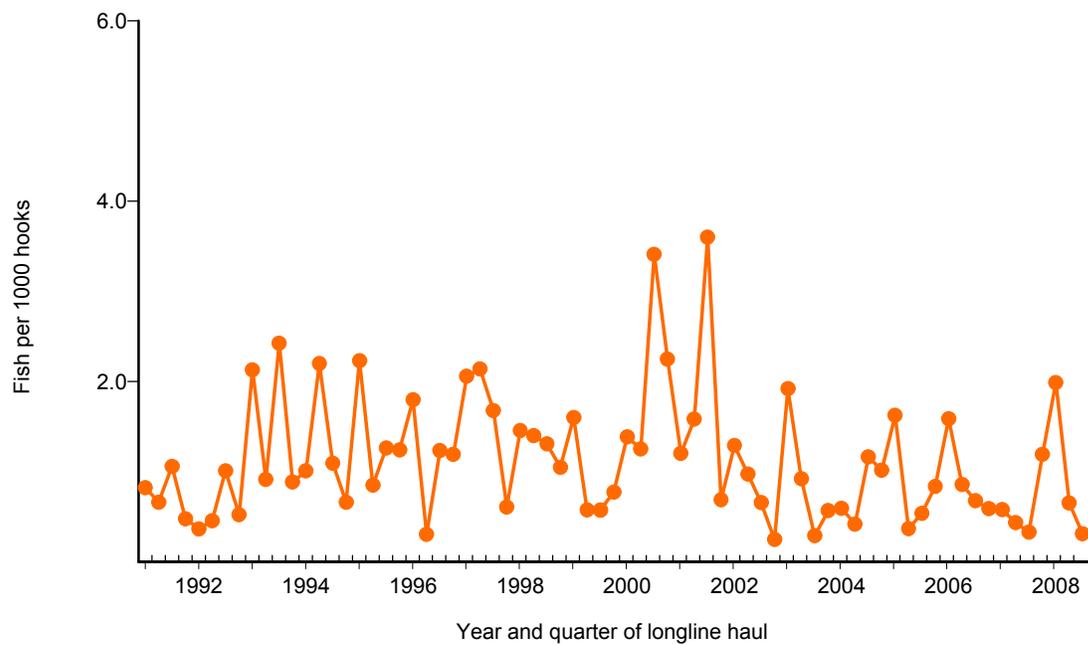


Figure 9. Quarterly CPUE of yellowfin tuna (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:40:54PM]

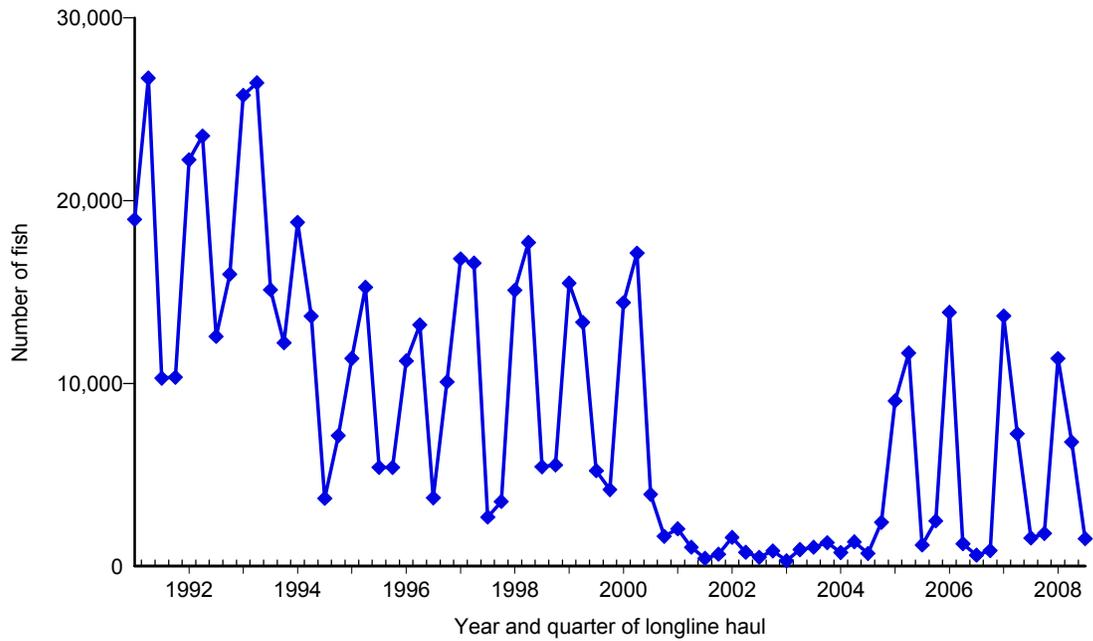


Figure 10. Quarterly catch of swordfish by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:41:27PM]

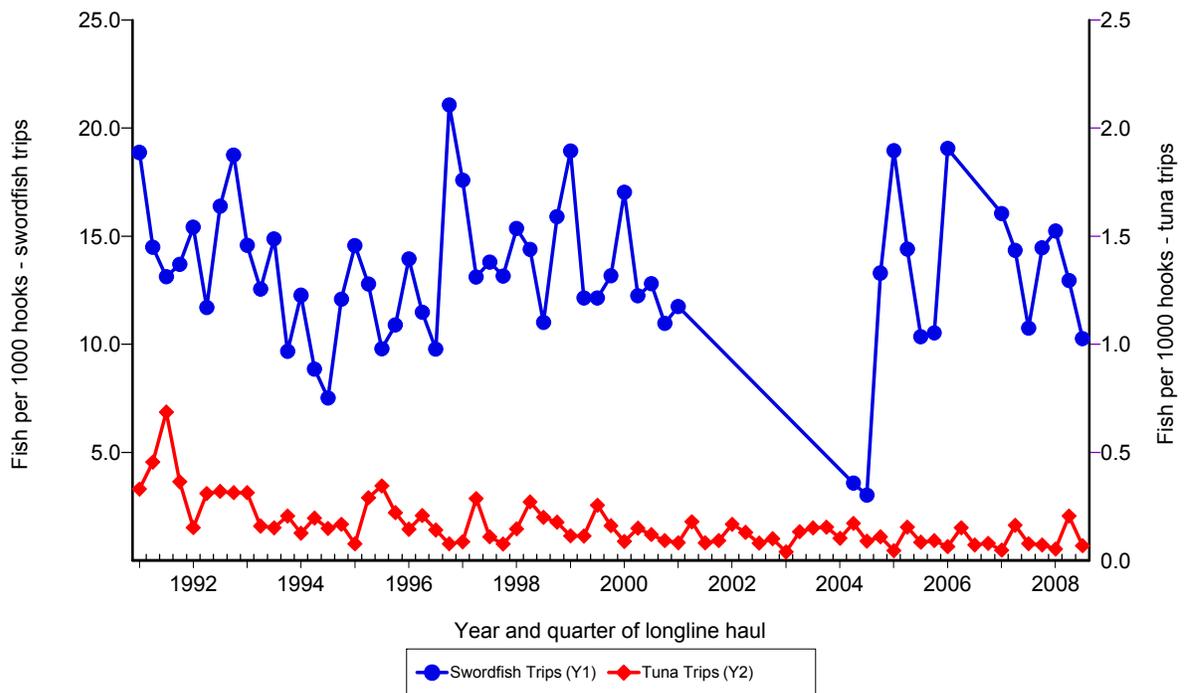


Figure 11. Quarterly CPUE of swordfish (fish per 1000 hooks) on swordfish trips and tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:41:27PM]

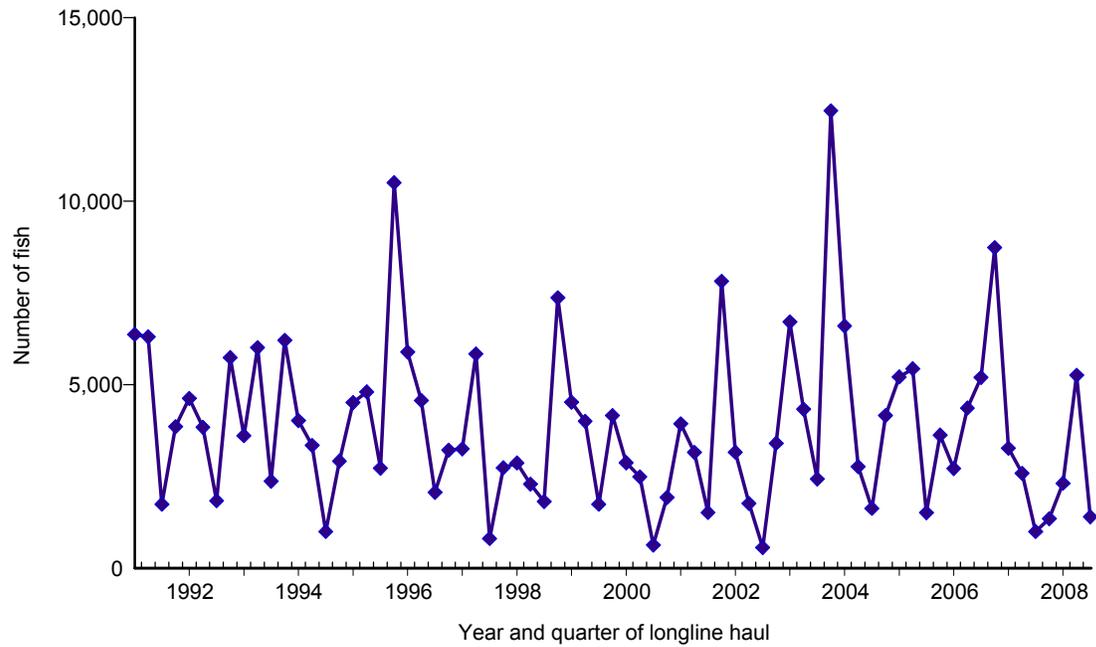


Figure 12. Quarterly catch of striped marlin by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:41:59PM]

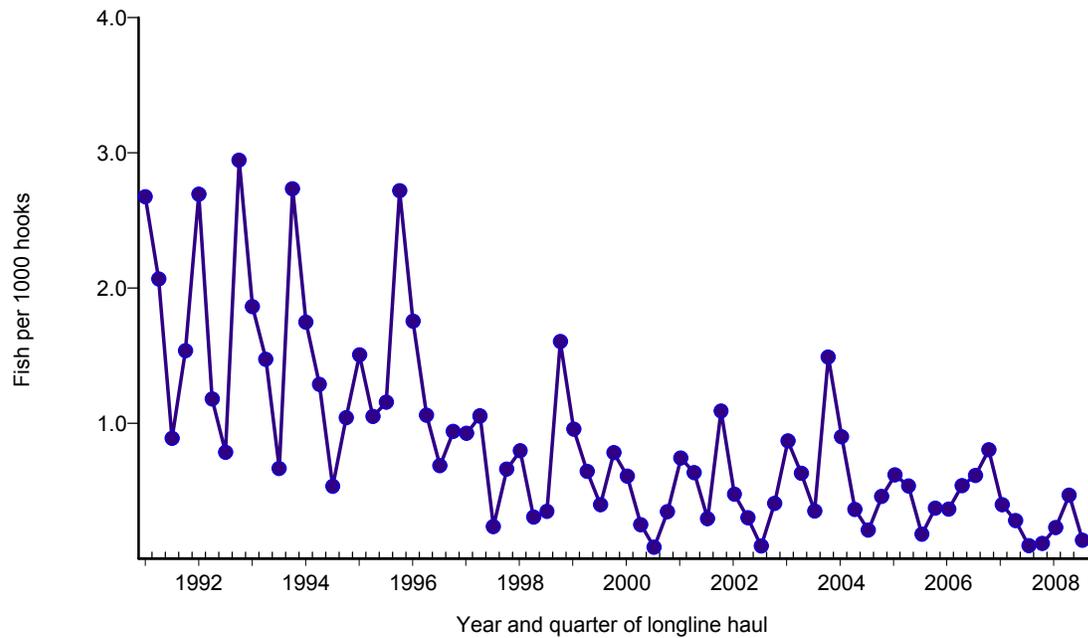


Figure 13. Quarterly CPUE of striped marlin (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:41:59PM]

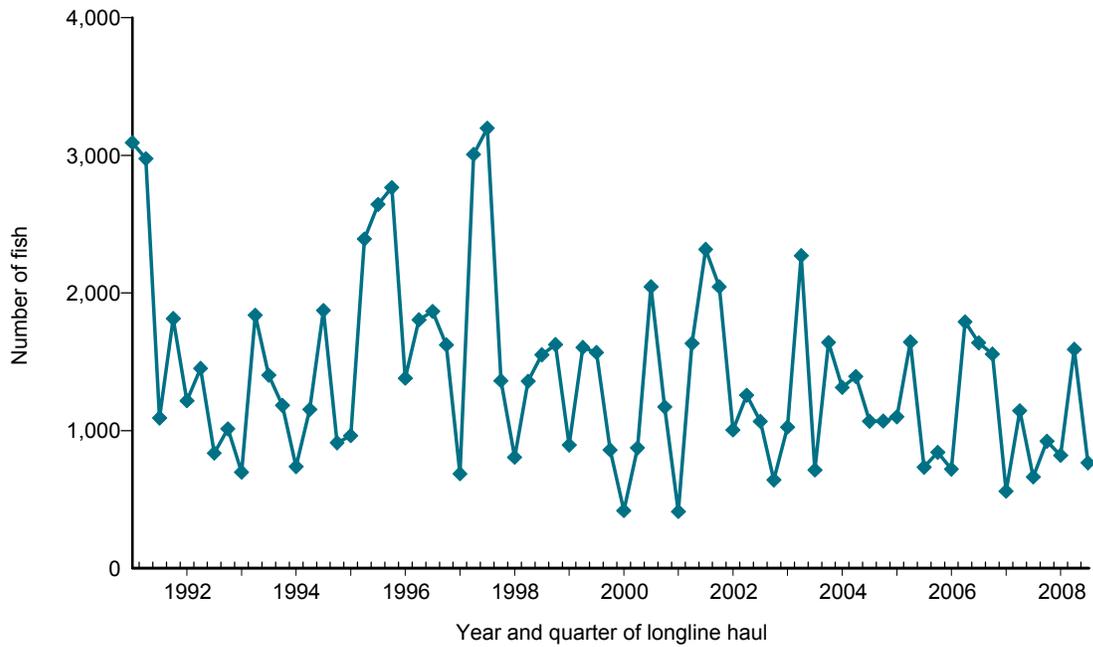


Figure 14. Quarterly catch of blue marlin by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:42:31PM]

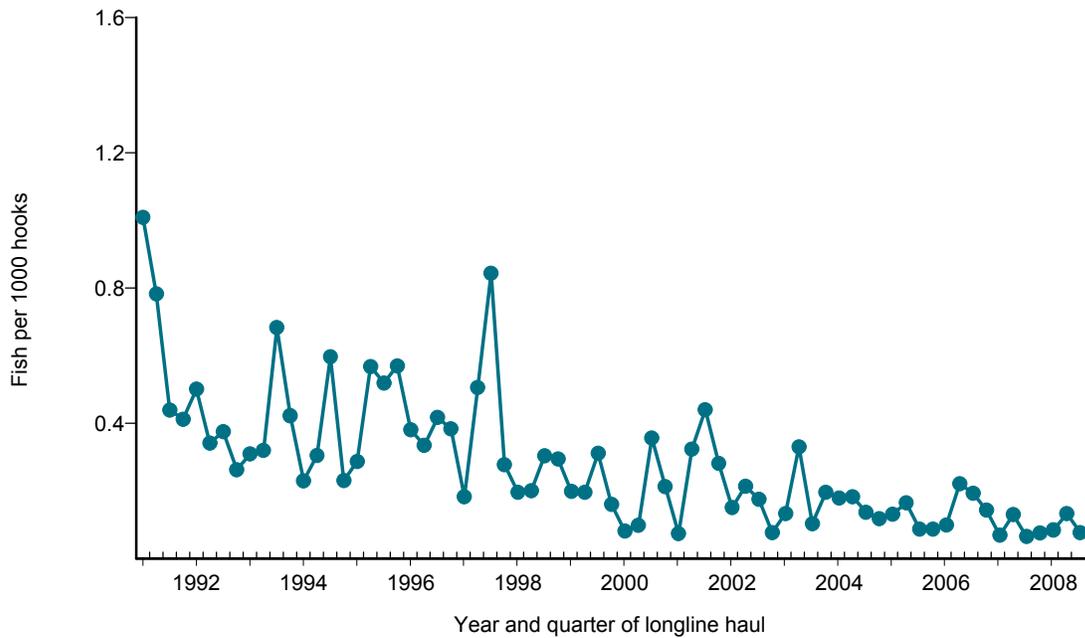


Figure 15. Quarterly CPUE of blue marlin (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:42:31PM]

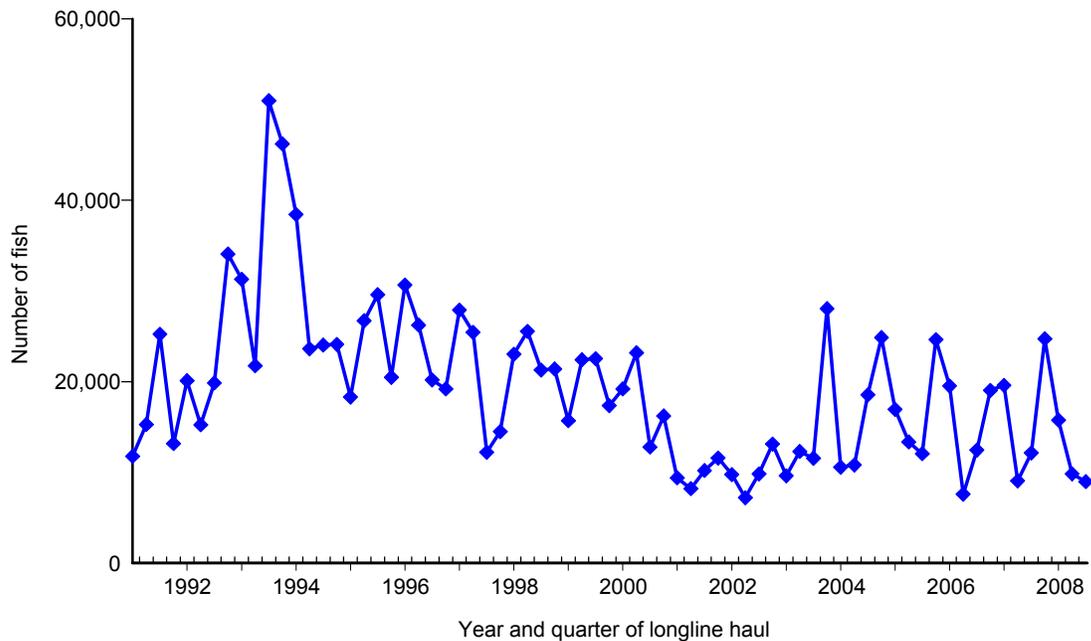


Figure 16. Quarterly catch of blue shark by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:43:03PM]

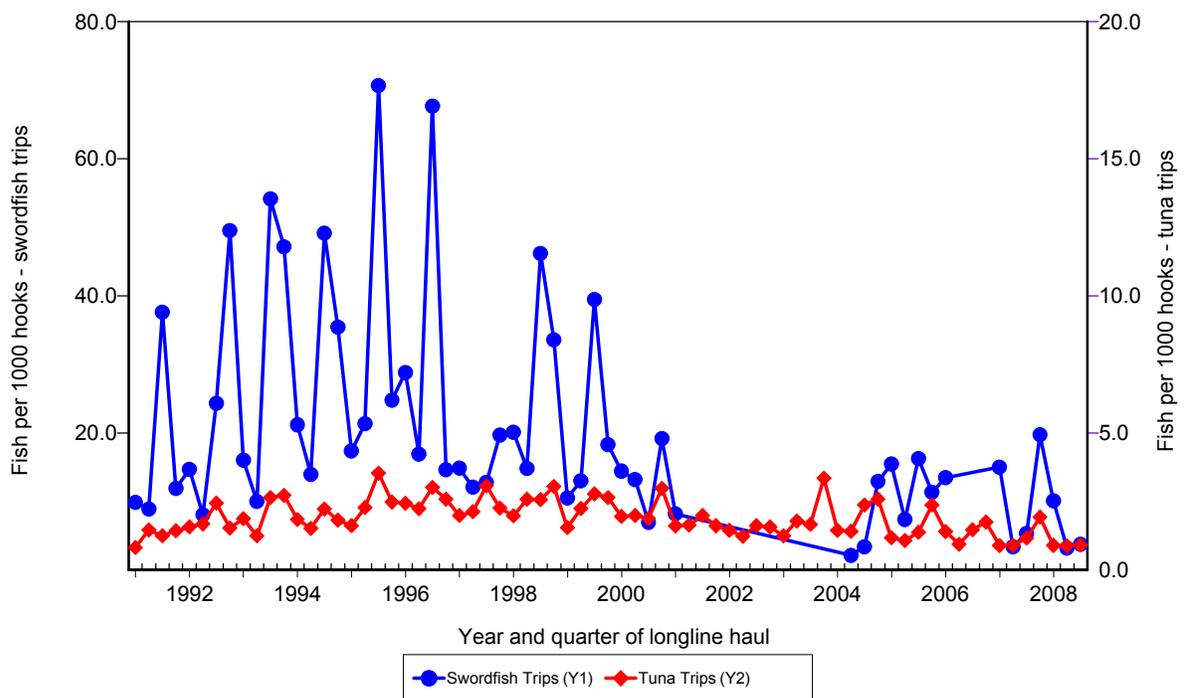


Figure 17. Quarterly CPUE of blue shark (fish per 1000 hooks) on swordfish trips and tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:43:03PM]

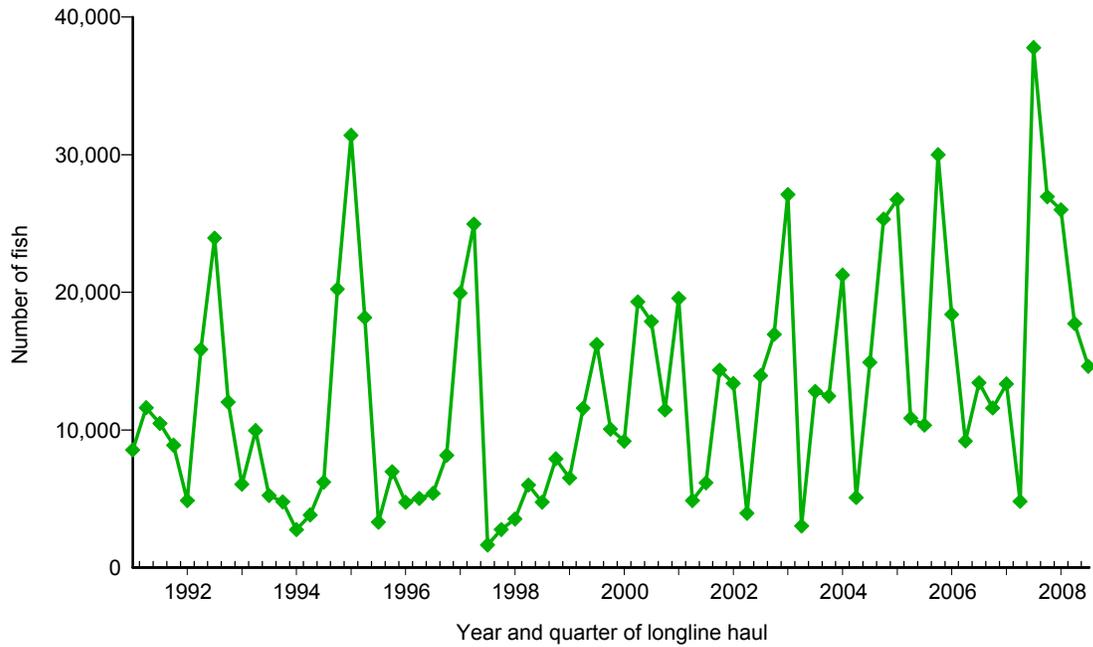


Figure 18. Quarterly catch of mahimahi by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:43:37PM]

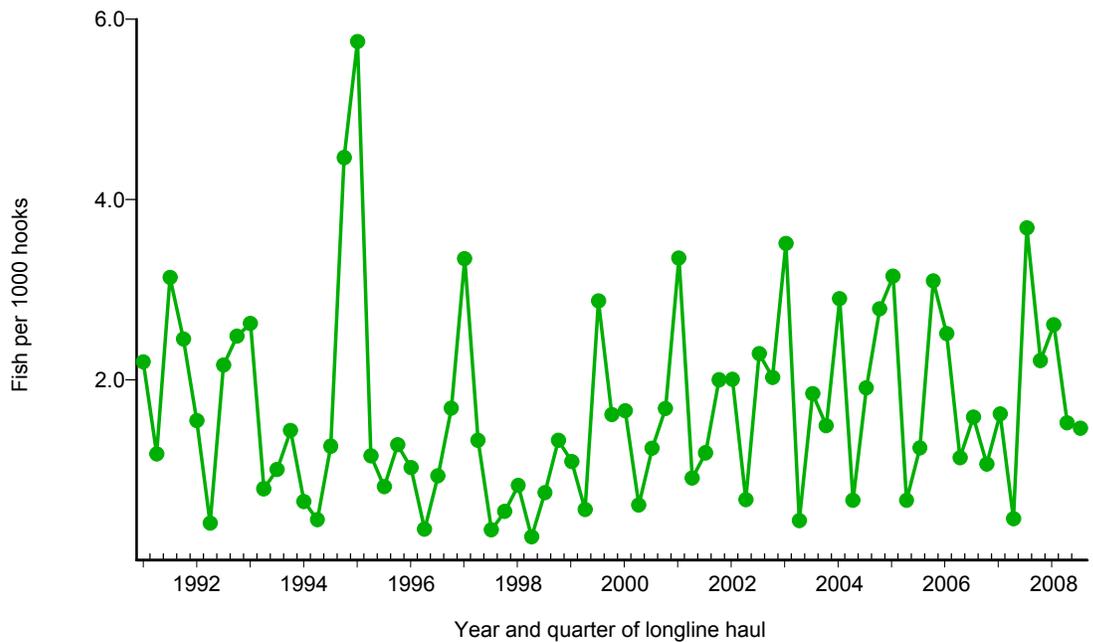


Figure 19. Quarterly CPUE of mahimahi (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:43:37PM]

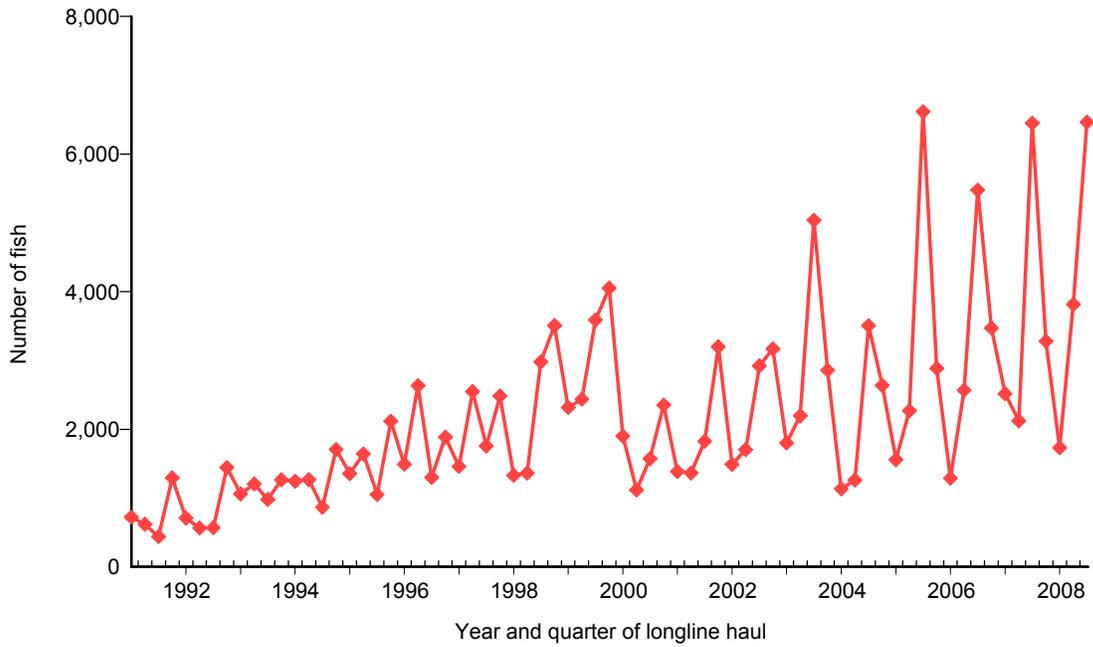


Figure 20. Quarterly catch of moonfish by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:44:10PM]

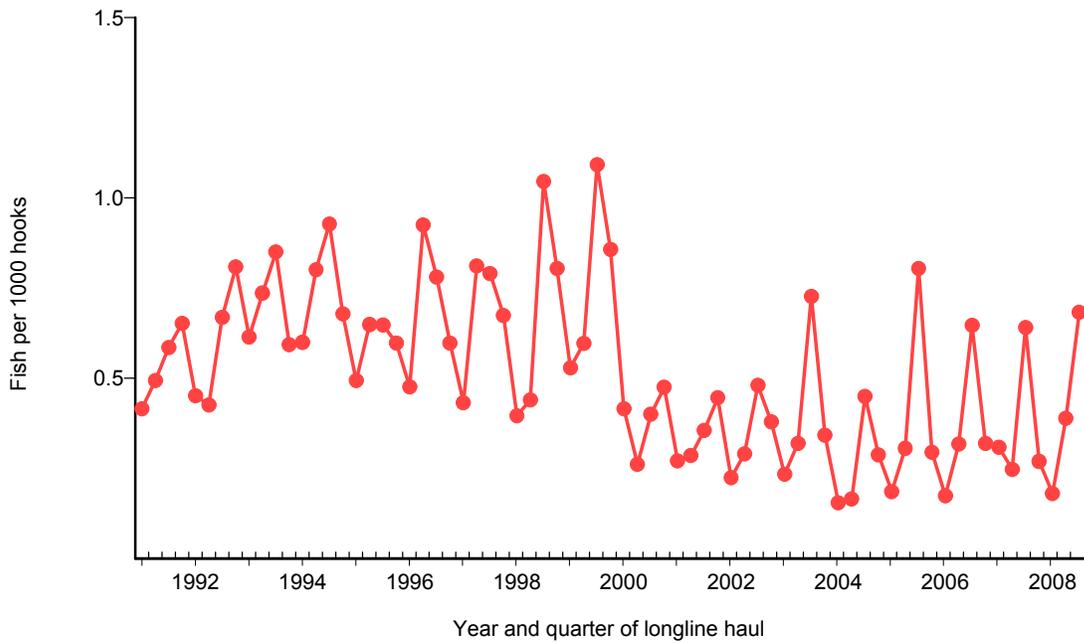


Figure 21. Quarterly CPUE of moonfish (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:44:10PM]

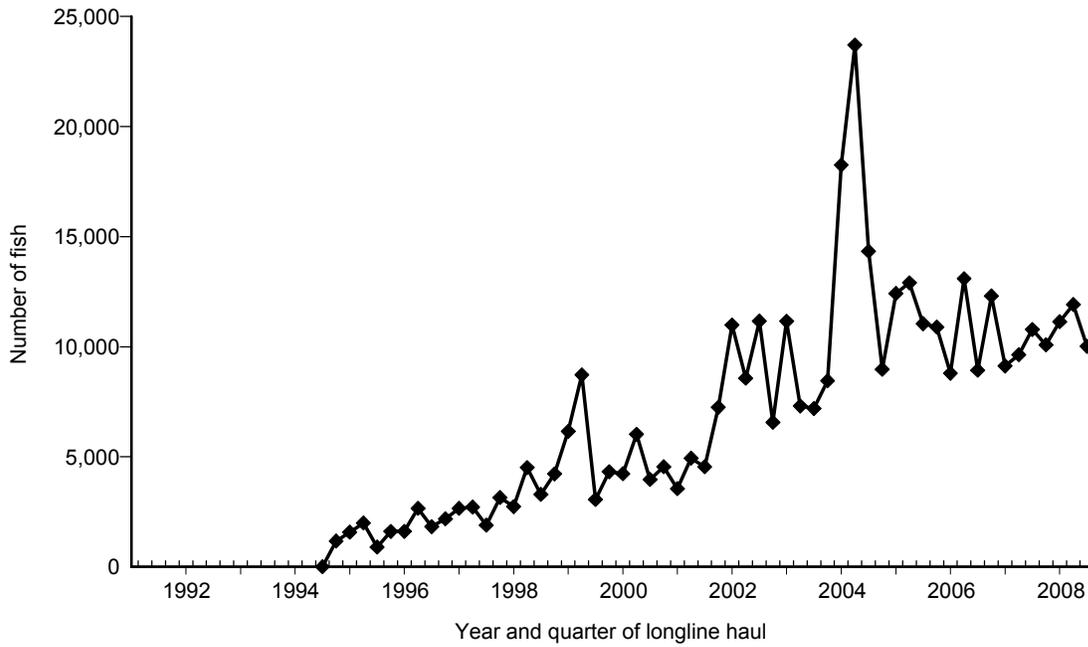


Figure 22. Quarterly catch of pomfret by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:44:42PM]

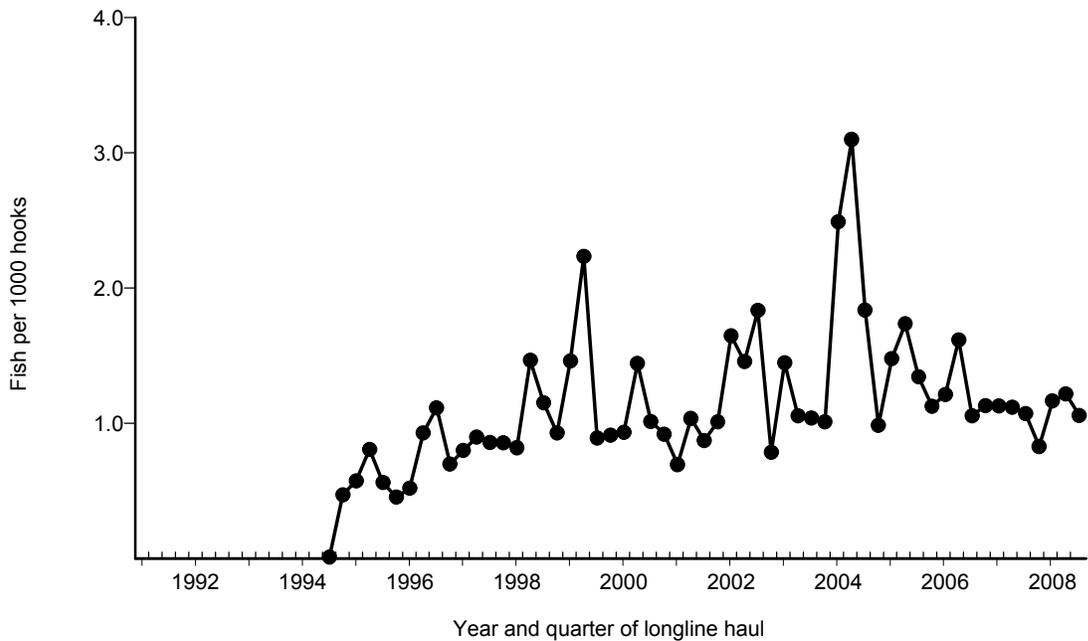


Figure 23. Quarterly CPUE of pomfret (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:44:42PM]

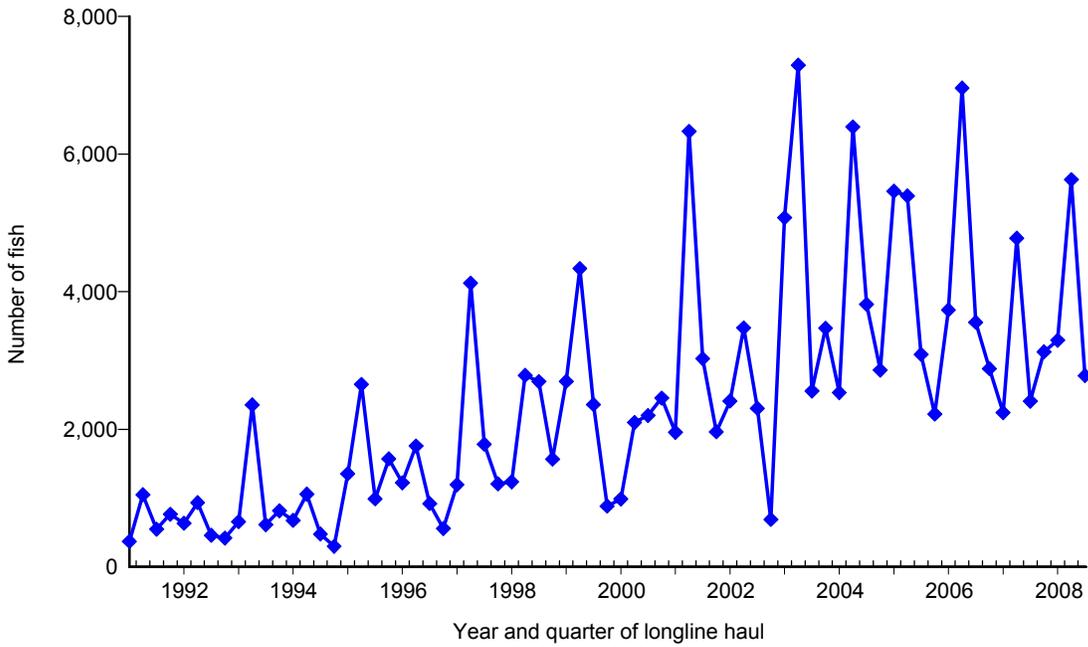


Figure 24. Quarterly catch of wahoo by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:45:15PM]

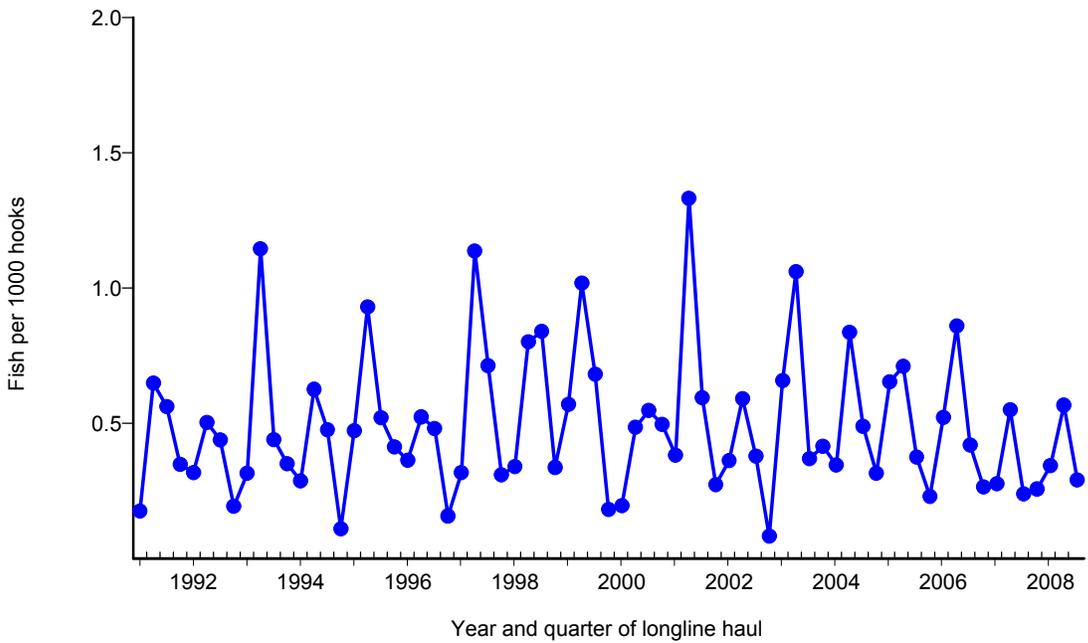


Figure 25. Quarterly CPUE of wahoo (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2008. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:45:15PM]

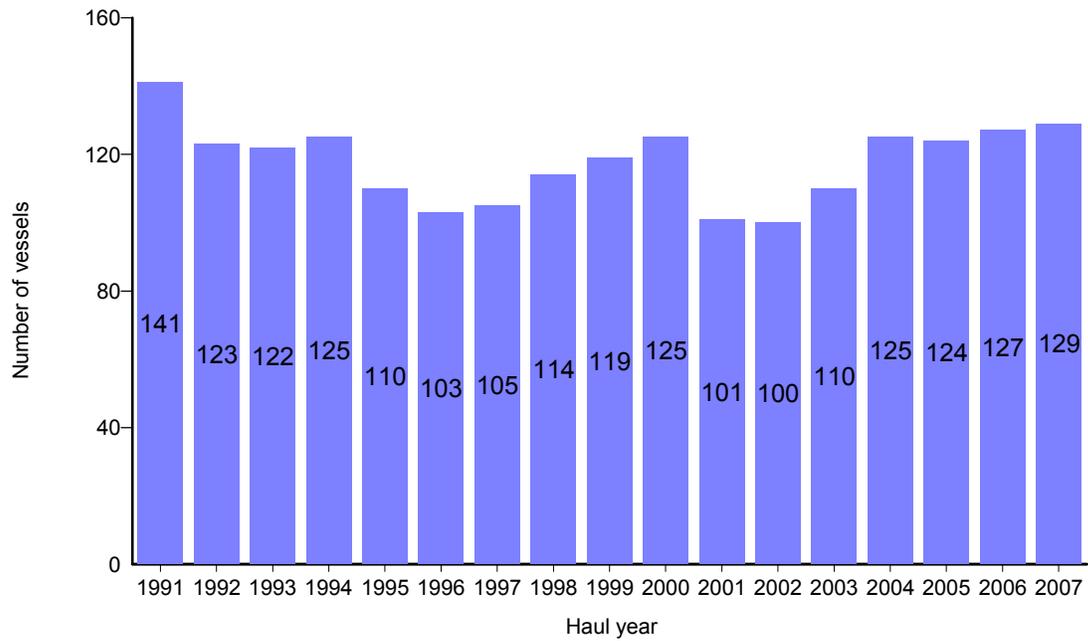


Figure A1. Number of active longline vessels based and landing in Hawaii, by year, 1991-2007. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:45:49PM]

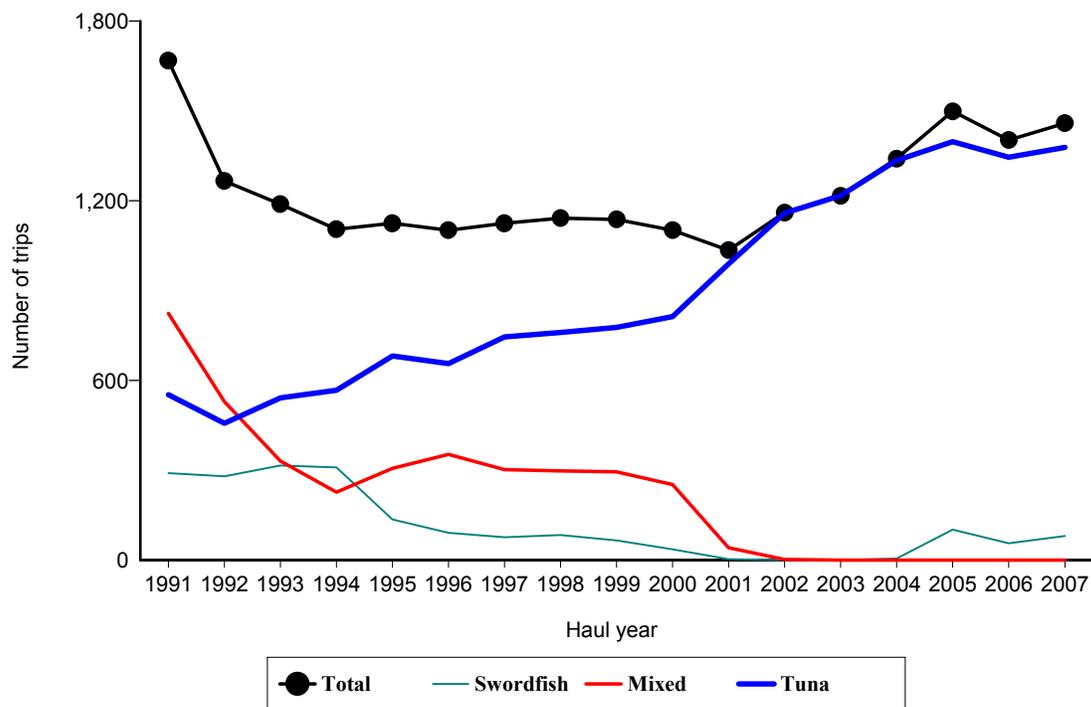


Figure A2. Number of fishing trips by longline vessels based and landing in Hawaii, by year and trip type, 1991-2007. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:45:49PM]

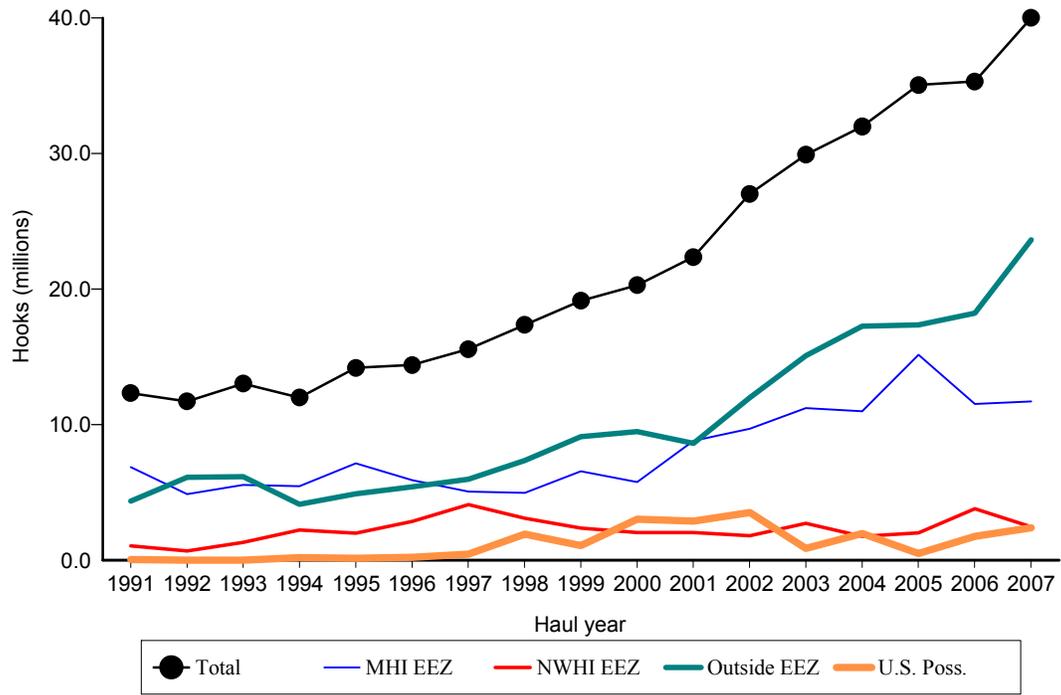


Figure A3. Number of hooks set by longline vessels based and landing in Hawaii, by year and fishing area, 1991-2007. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:45:52PM]

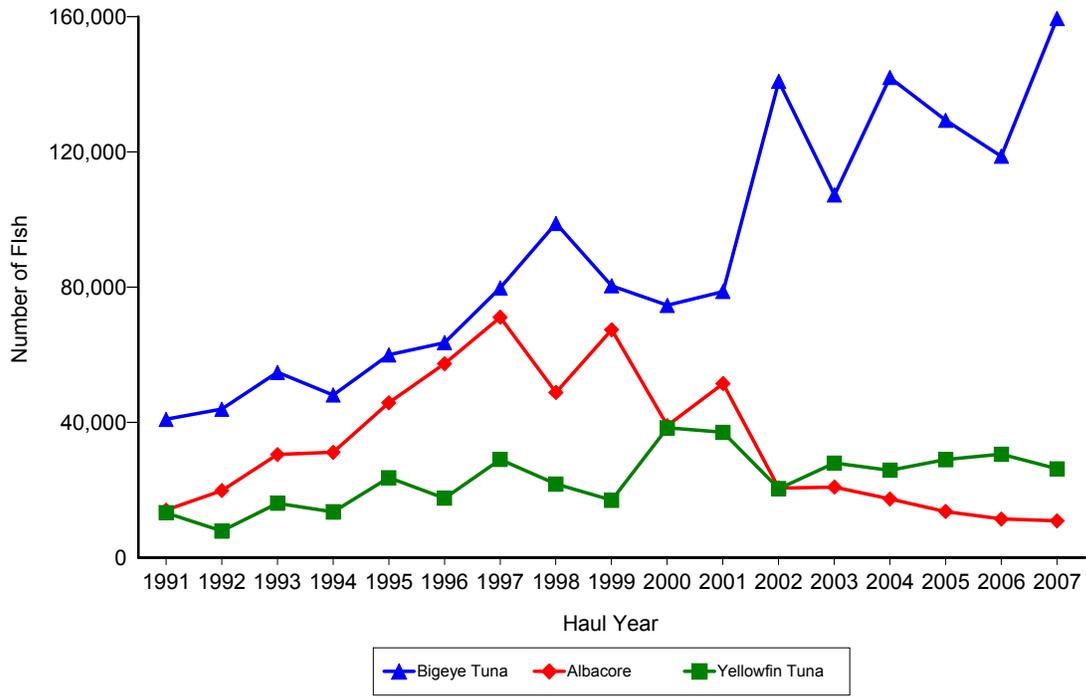


Figure A4. Annual catch of albacore, bigeye tuna, and yellowfin tuna by longline vessels based and landing in Hawaii, 1991-2007. [2/24/2009 1:46:23PM]

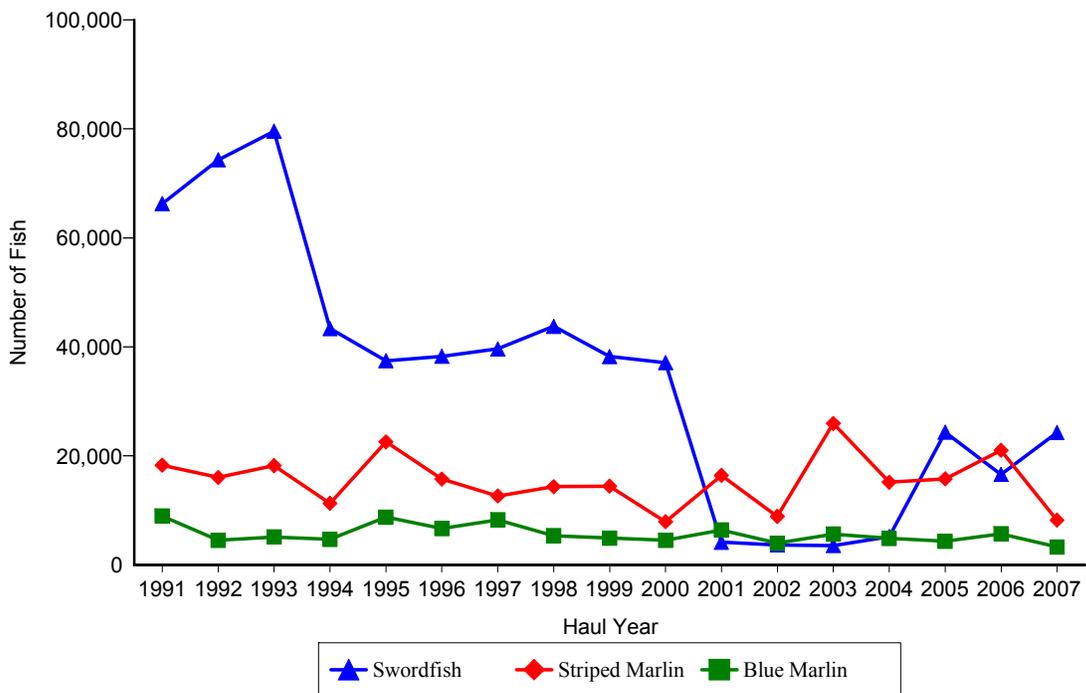


Figure A5. Annual catch of blue marlin, striped marlin, and swordfish by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:46:23PM]

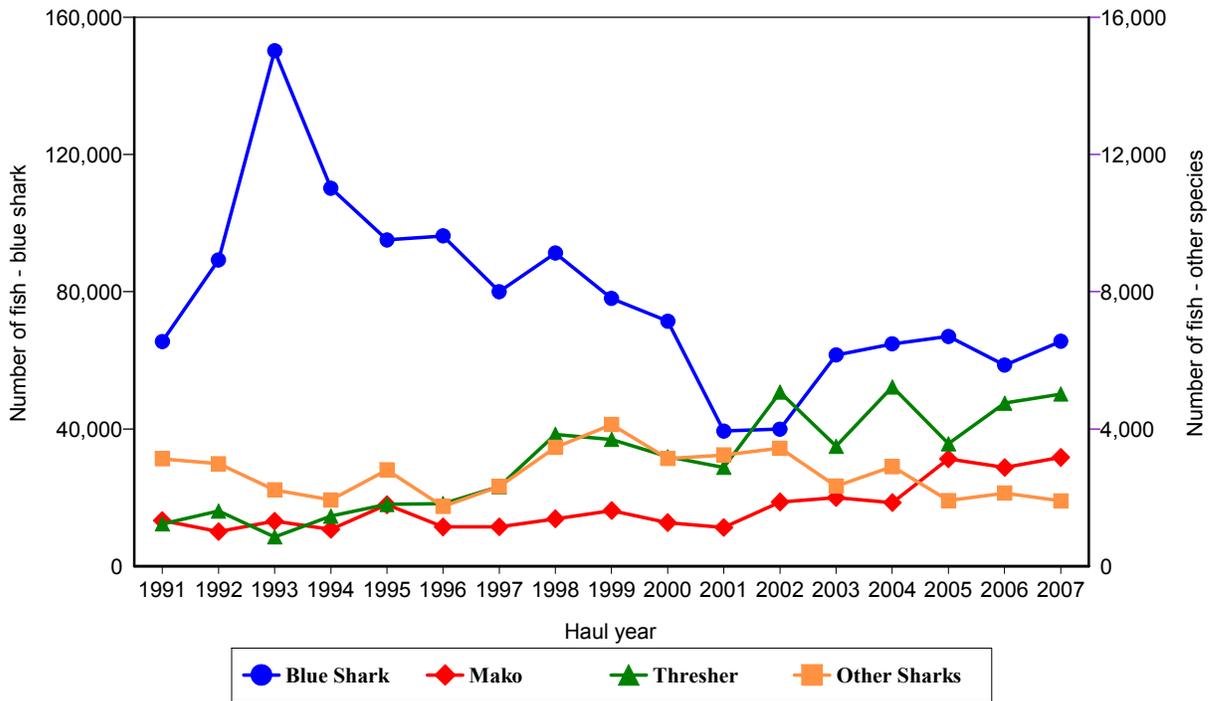


Figure A6. Annual catch of blue shark, mako shark, thresher shark, and other sharks by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:46:23PM]

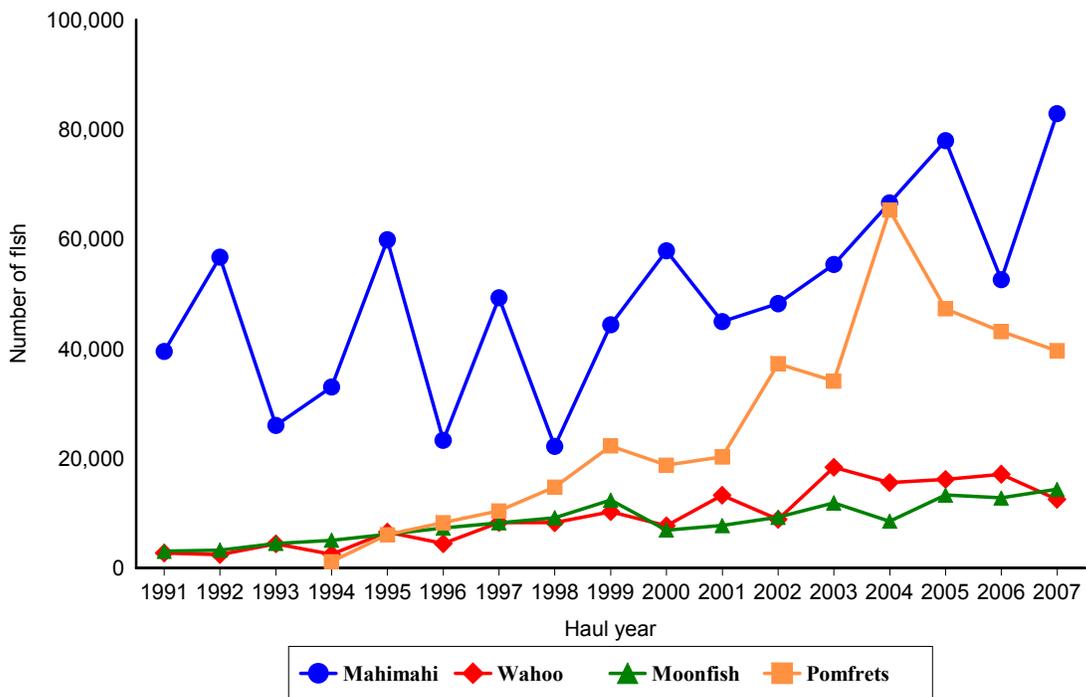


Figure A7. Annual catch of mahimahi, moonfish, pomfret, and wahoo by longline vessels based and landing in Hawaii, 1991-2007. [PIFSC IMS, Longline Logbook Data, 2/24/2009 1:46:23PM]