

PIFSC Report on the American Samoa Longline Fishery October-December 2007¹

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Summary statistics of American Samoa longline catch and effort for the fourth quarter of 2007, based on date of haul, are shown in Table 1. The table is derived from all logbook data submitted as of March 27, 2008. As of this date, the documented delinquency rate for the fourth quarter of 2007 was 0.5% according to the Department of Marine and Wildlife Resources (DMWR) Daily Effort Census and Delinquency Reporting System.

According to the longline logbook data, 28 vessels turned in some or all of their longline logs for sets made during the fourth quarter of 2007 (Fig. 1). These 28 vessels made 1,633 sets (Fig. 2) and deployed 4,957,855 hooks (Fig. 3) which is an all-time record high for the number of hooks set in a quarter. The fourth quarter of 2007 showed increases in both effort and catch over the fourth quarter of last year. Compared to the fourth quarter of 2006, the number of vessels turning in logs this quarter increased by 12% from 25 vessels to 28, the number of sets increased by 20% and the number of hooks used increased by 24% setting a record high for hooks set in a quarter. However, the average number of hooks used per set increased by only 2%, from 2963 to 3036, which probably indicates that the trend in the fishery to convert to larger vessels deploying more hooks per set is nearly complete.

The total catch for all species combined was 129,870 fish (Fig. 4) which is an increase of 20% compared to the fourth quarter of 2006 and set a record for total fish catch in the 4th Quarter. Albacore continued to dominate the catch with 89,094 fish caught in the fourth quarter of 2007 (Fig. 5), a 12% increase over the 79,360 albacore caught in the fourth quarter of last year. Bigeye tuna (Fig. 6) showed a similar increase of 12% and sharks (Fig. 12) showed an increase of 10% over their 4th quarter catch of last year. Skipjack tuna (Fig. 7) and yellowfin tuna (Fig 8) showed increases of 130% and 105% respectively compared to the fourth quarter of 2006. The catches of mahimahi (Fig 9) and wahoo (Fig. 10) dropped by 52% and 19%, respectively, from their values in the 4th quarter of 2006 and the catch of billfish (Fig. 11) increased by 7%.

Although catches of most species were up in the fourth quarter of 2007, catch rates (catch per 1000 hooks) were generally down. The albacore CPUE (Fig. 13) and bigeye tuna CPUE (Fig. 14) were down by 9% from the fourth quarter of 2006. The CPUE decreases for the other species were 61% for mahimahi (Fig 17), setting a new 4th quarter record low for mahimahi, 35% for wahoo (Fig. 18), 13% for billfish (Fig. 19), and 11% for sharks (Fig. 20). Caution is advised when interpreting trends in reported catch rates for incidental species because research has shown that logbook reporting of catches of incidental species is less accurate than reporting of major target species.

¹ PIFSC Data Report DR-08-003
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Table 1. Summary of fish catch and nominal fishing effort by American Samoa Longline vessels during 4th Quarter 2007 based on longline logbooks submitted through March 27, 2008

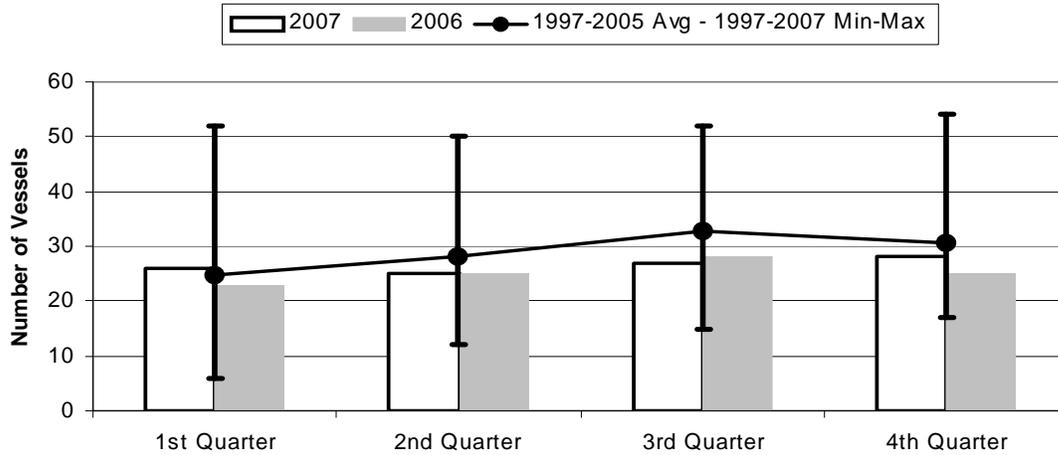
TRIP INFORMATION

Number of Vessels:	28
Number of Trips:	94
Number of Sets:	1633
1000's of Hooks Set:	4958
Number of Lightsticks Used:	19

CATCH INFORMATION

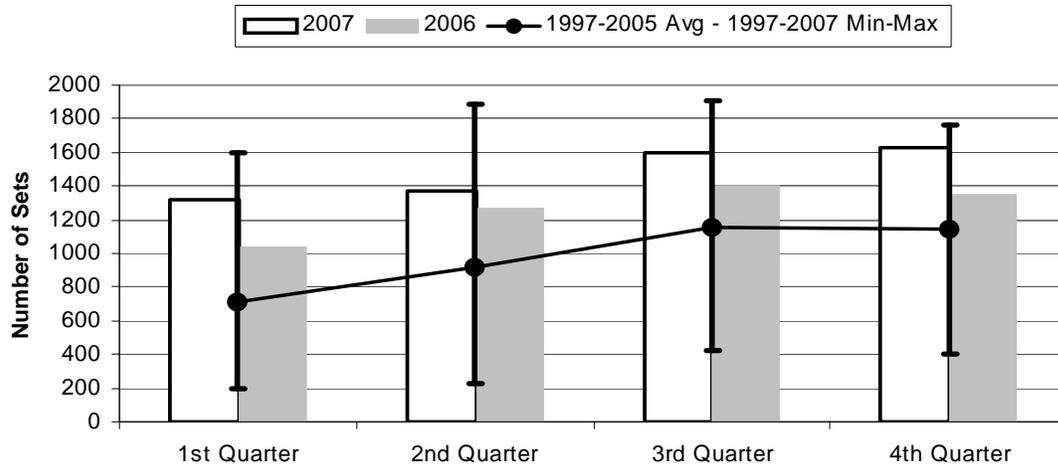
Species	# Caught	# Kept	# Finned	# Caught/ 1000 Hooks
BILLFISH				
Black marlin	5	0		0.00
Blue marlin	1192	204		0.24
Striped marlin	156	5		0.03
Sailfish	153	12		0.03
Spearfish	191	6		0.04
Swordfish	115	63		0.02
TOTALS	1812	290		0.37
SHARKS				
Blue shark	1389	1		0.28
Shortfin mako shark	98	0		0.02
Thresher shark	56	0		0.01
Oceanic white tip	406	0		0.08
Sharks (misc)	86	0		0.02
TOTALS	2035	1		0.41
TUNA				
Albacore	89094	88994		17.97
Bigeye tuna	4725	4401		0.95
Bluefin tuna	17	13		0.00
Skipjack tuna	16626	12179		3.35
Yellowfin tuna	7093	6684		1.43
TOTALS	117555	112271		23.71
OTHER PELAGICS				
Mahimahi	330	166		0.07
Moonfish	197	40		0.04
Oilfish	2998	1		0.60
Pomfret	222	21		0.04
Wahoo	4551	3345		0.92
TOTALS	8298	3573		1.67
NON-PMUS				
Pelagic fish (misc)	167	1		0.03
TOTALS	167	1		0.03

Figure 1. American Samoa Longline Vessels Submitting Logs by Quarter for



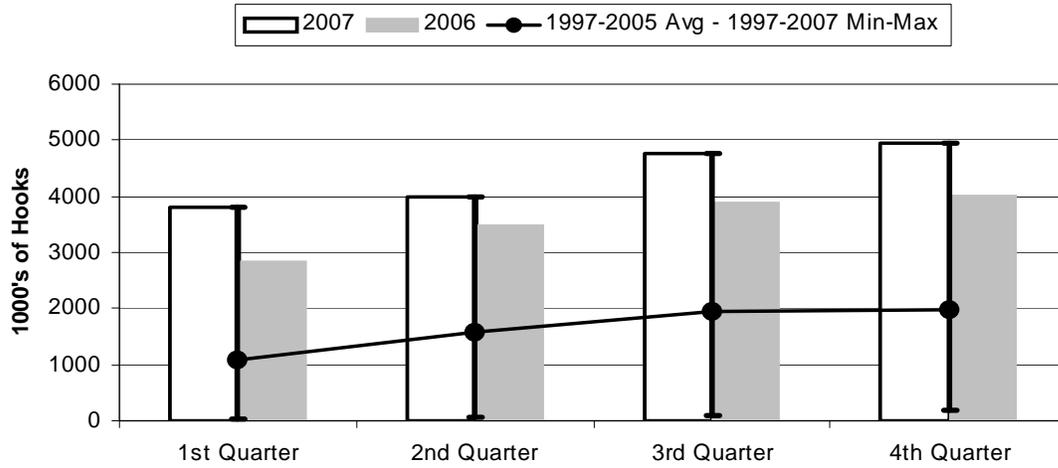
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	26	25	27	28
2006	23	25	28	25
1997-2007 Max	52	50	52	54
1997-2005 Avg	24.9	28.0	32.9	30.6
1997-2007 Min	6	12	15	17

Figure 2. Number of Sets by American Samoa Longline Vessels by Quarter for



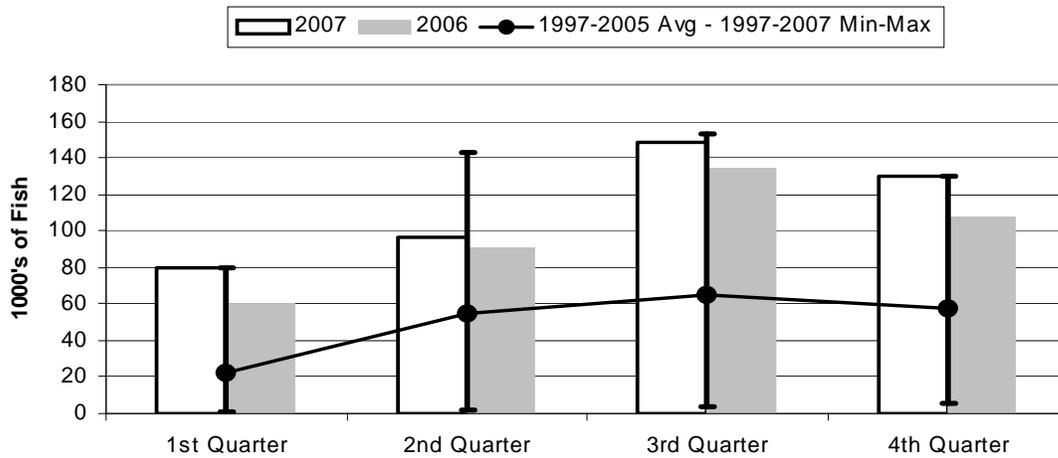
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	1316	1366	1595	1633
2006	1041	1273	1402	1354
1997-2005 Avg	708	918	1158	1141
1997-2007 Max	1602	1886	1903	1758
1997-2007 Min	192	223	424	402

Figure 3. Number of Hooks Set by the American Samoa Longline Fleet by Quarter for



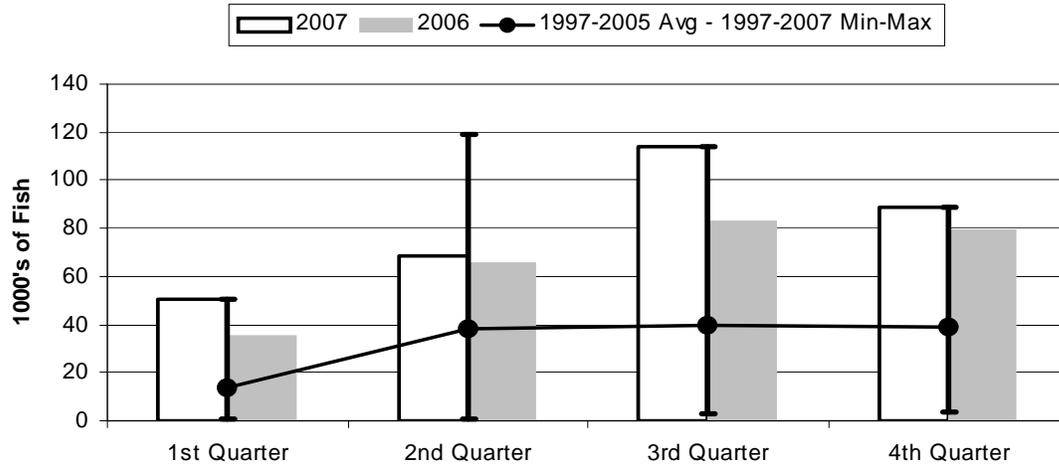
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	3805	3993	4769	4958
2006	2840	3503	3910	4013
1997-2007 Max	3805	3993	4769	4958
1997-2005 Avg	1087	1566	1957	1986
1997-2007 Min	41	51	101	175

Figure 4. American Samoa Longline Total Catch (All Species) by Quarter for



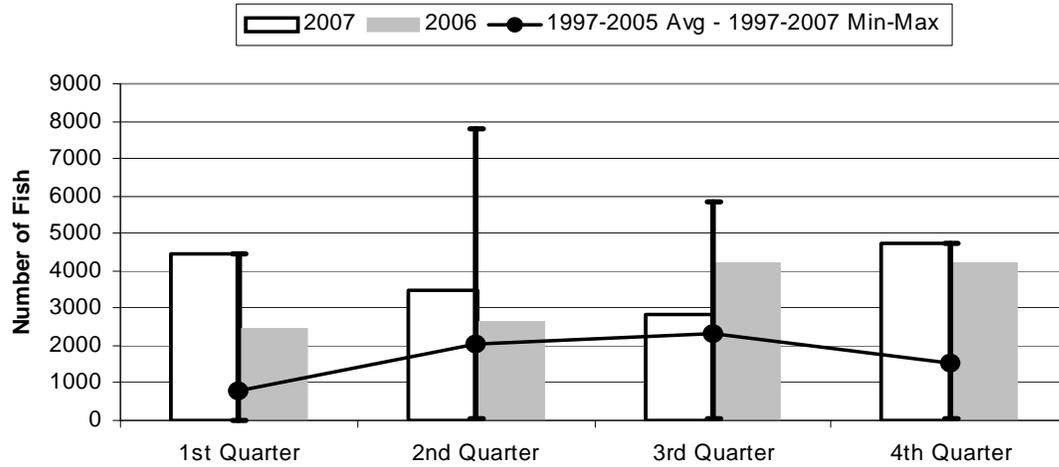
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	79.57	96.95	148.56	129.87
2006	60.74	90.82	134.74	107.66
1997-2007 Max	79.57	142.60	153.30	129.87
1997-2005 Avg	22.28	54.88	65.03	57.22
1997-2007 Min	1.32	1.42	4.13	5.20

Figure 5. American Samoa Longline Albacore Catch by Quarter for



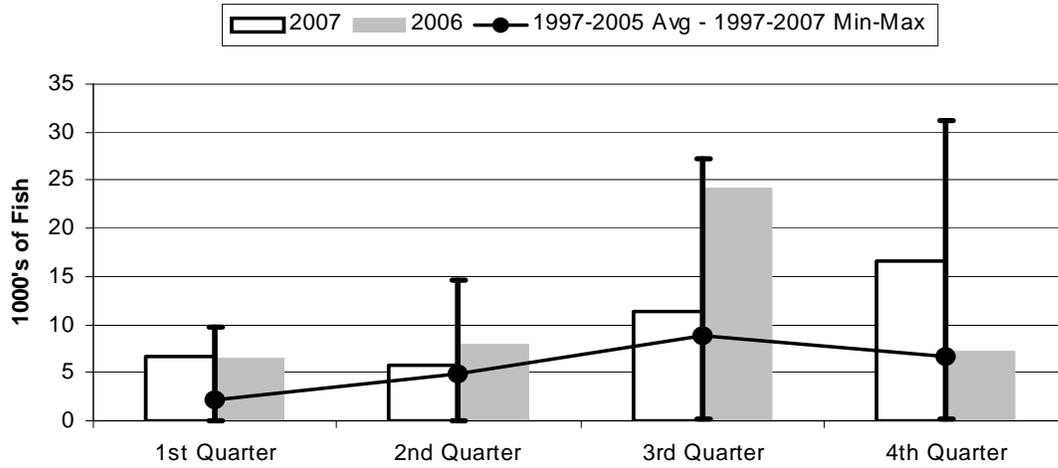
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	50.38	68.29	113.83	89.09
2006	35.21	65.81	82.72	79.36
1997-2007 Max	50.38	118.99	113.83	89.09
1997-2005 Avg	13.85	38.04	39.76	39.20
1997-2007 Min	0.94	0.85	3.18	3.47

Figure 6. American Samoa Longline Bigeye Tuna Catch by Quarter for



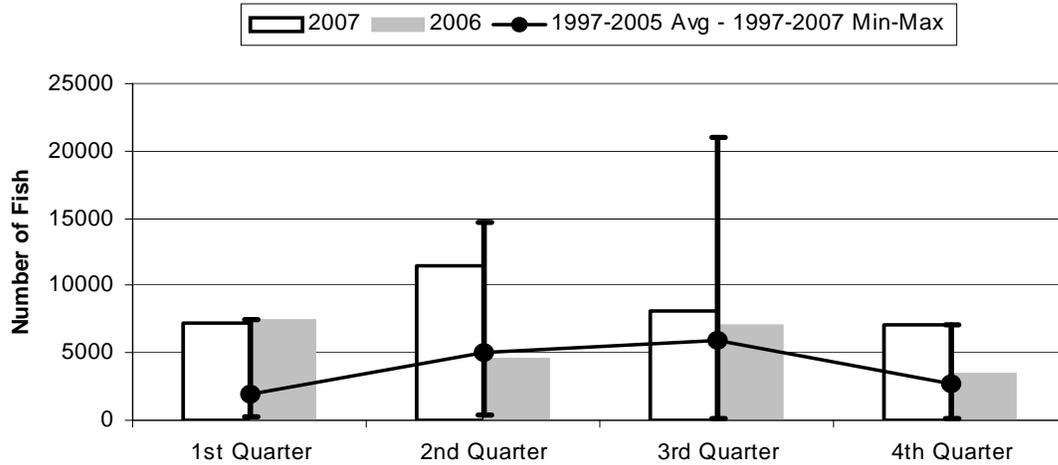
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	4466	3485	2850	4725
2006	2448	2647	4211	4217
1997-2007 Max	4466	7785	5824	4725
1997-2005 Avg	781	2019	2314	1521
1997-2007 Min	6	26	55	55

Figure 7. American Samoa Longline Skipjack Tuna Catch by Quarter for



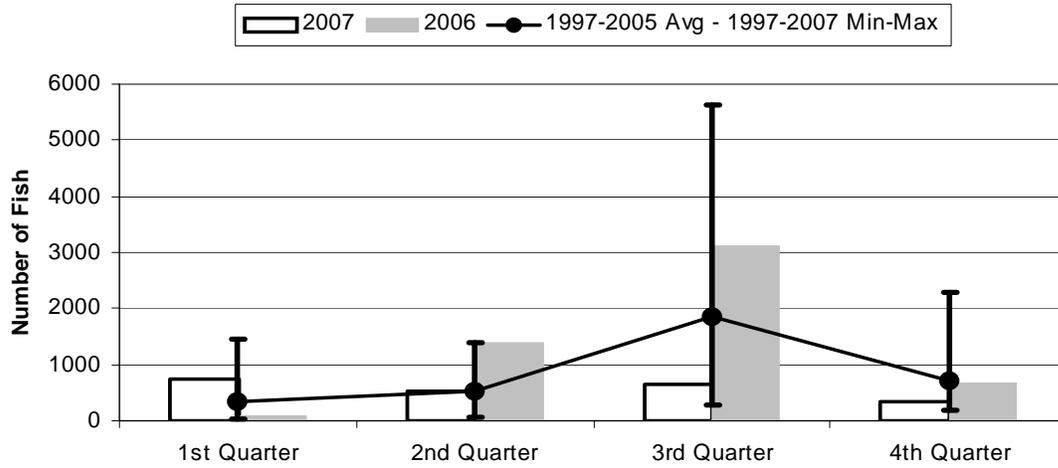
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	6.74	5.71	11.33	16.63
2006	6.58	7.85	24.20	7.23
1997-2007 Max	9.81	14.61	27.23	31.19
1997-2005 Avg	2.20	4.92	8.91	6.67
1997-2007 Min	0.00	0.01	0.24	0.18

Figure 8. American Samoa Longline Yellowfin Tuna Catch by Quarter for



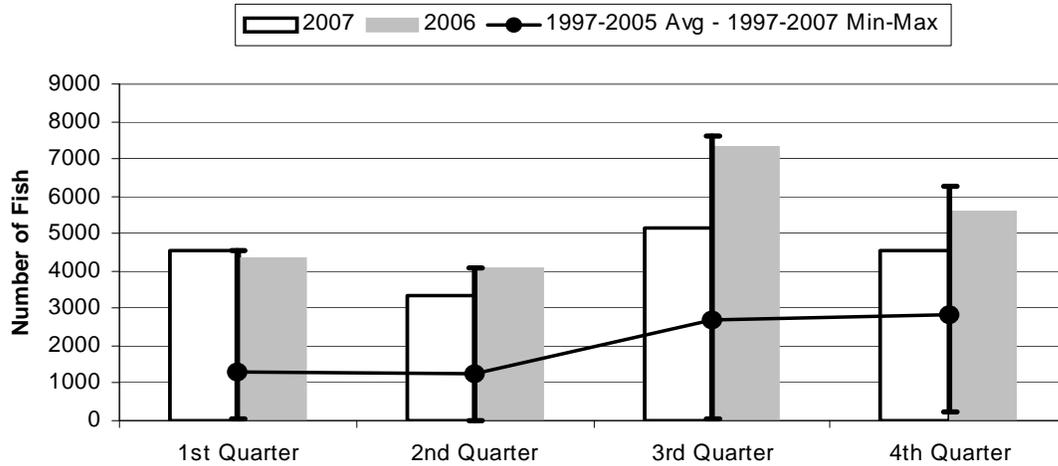
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	7174	11488	8135	7093
2006	7428	4678	7066	3459
1997-2007 Max	7428	14681	20993	7093
1997-2005 Avg	1961	5063	5896	2665
1997-2007 Min	213	356	84	177

Figure 9. American Samoa Mahimahi Catch by Quarter for



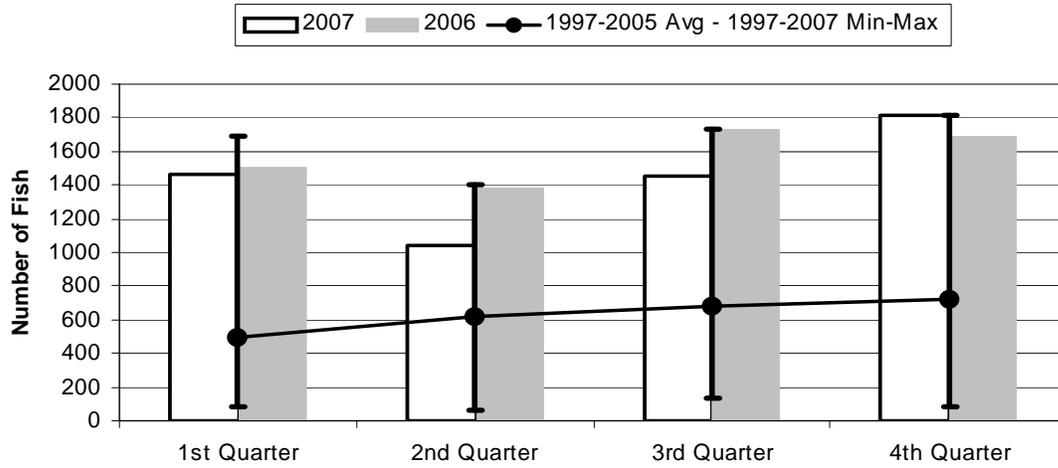
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	729	535	655	330
2006	101	1391	3126	691
1997-2007 Max	1455	1391	5642	2297
1997-2005 Avg	338	517	1857	711
1997-2007 Min	30	59	280	181

Figure 10. American Samoa Wahoo Catch by Quarter for



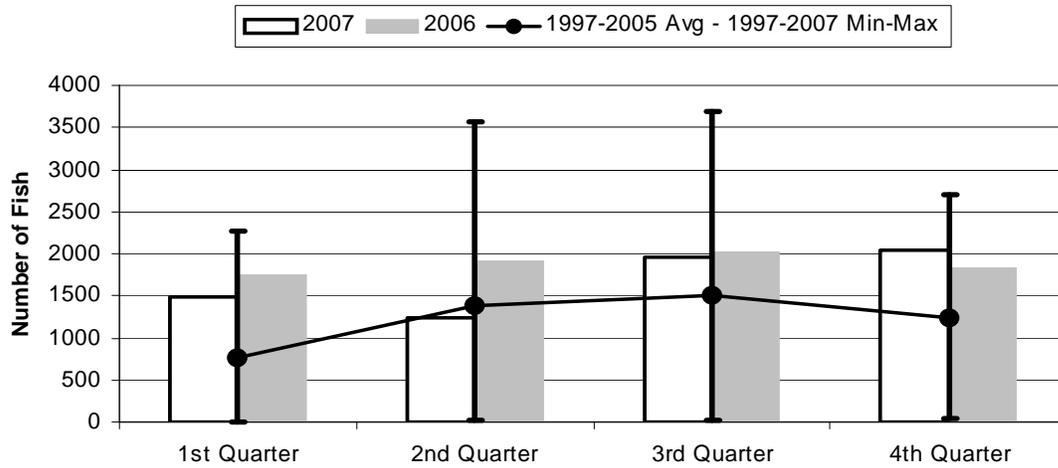
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	4524	3336	5135	4551
2006	4376	4076	7342	5634
1997-2007 Max	4524	4076	7629	6281
1997-2005 Avg	1308	1275	2683	2835
1997-2007 Min	27	20	68	209

Figure 11. American Samoa Billfish Catch by Quarter for



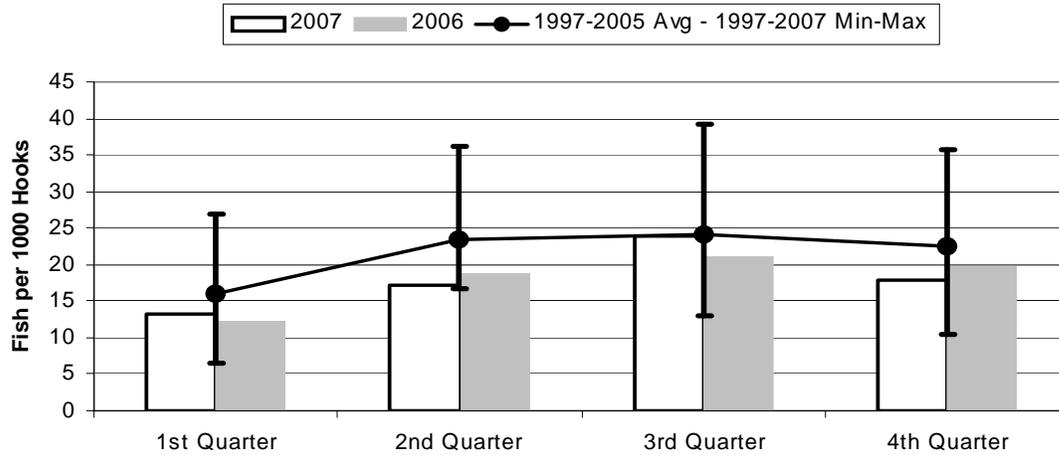
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	1468	1045	1450	1812
2006	1509	1386	1729	1690
1997-2007 Max	1692	1404	1729	1812
1997-2005 Avg	492	621	680	725
1997-2007 Min	83	58	132	84

Figure 12. American Samoa Shark Catch by Quarter for



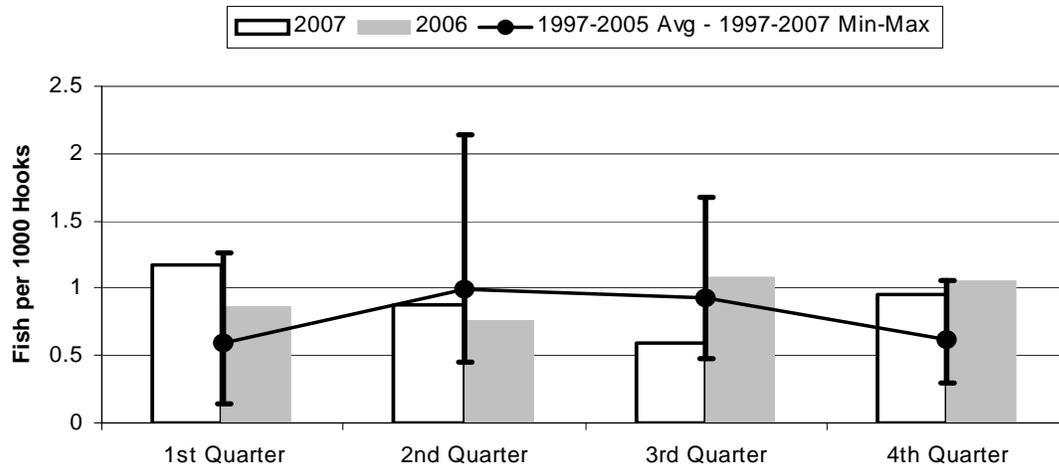
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	1480	1242	1952	2035
2006	1757	1909	2012	1845
1997-2007 Max	2262	3562	3686	2695
1997-2005 Avg	764	1379	1502	1243
1997-2007 Min	5	16	26	49

Figure 13. American Samoa Longline Albacore Catch/1000 Hooks by Quarter for



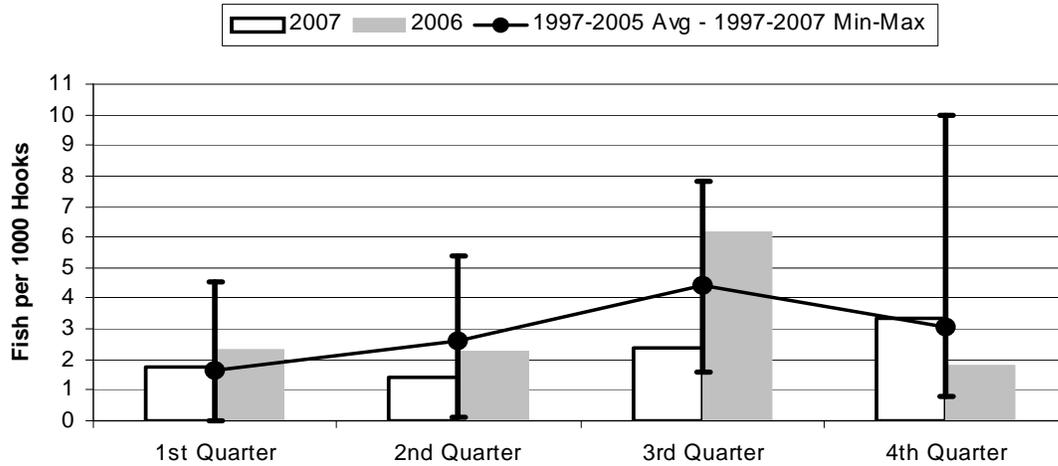
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	13.24	17.10	23.87	17.97
2006	12.40	18.79	21.16	19.77
1997-2007 Max	27.01	36.18	39.13	35.75
1997-2005 Avg	16.00	23.54	24.22	22.39
1997-2007 Min	6.58	16.77	12.96	10.54

Figure 14. American Samoa Longline Bigeye Tuna Catch/1000 Hooks by Quarter for



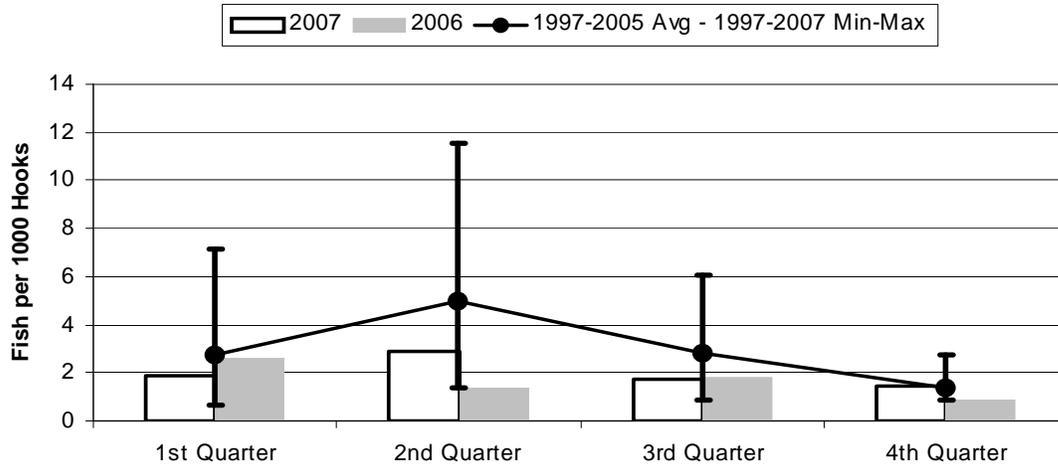
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	1.174	0.873	0.598	0.953
2006	0.862	0.756	1.077	1.051
1997-2007 Max	1.267	2.145	1.676	1.051
1997-2005 Avg	0.586	0.988	0.928	0.622
1997-2007 Min	0.146	0.452	0.478	0.296

Figure 15. American Samoa Longline Skipjack Tuna Catch/1000 Hooks by Quarter for



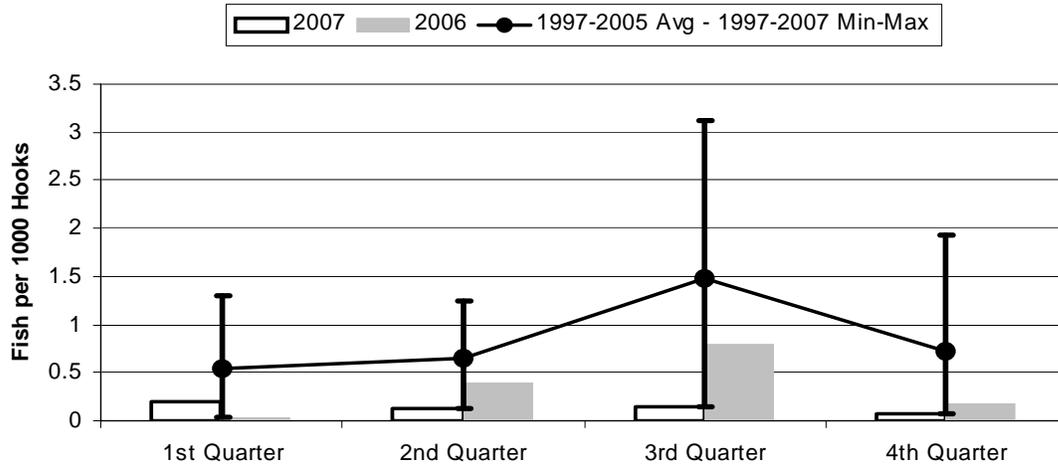
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	1.770	1.430	2.375	3.354
2006	2.317	2.241	6.190	1.801
1997-2007 Max	4.556	5.388	7.837	9.975
1997-2005 Avg	1.642	2.596	4.430	3.059
1997-2007 Min	0.000	0.118	1.564	0.785

Figure 16. American Samoa Yellowfin Tuna Catch/1000 Hooks by Quarter for



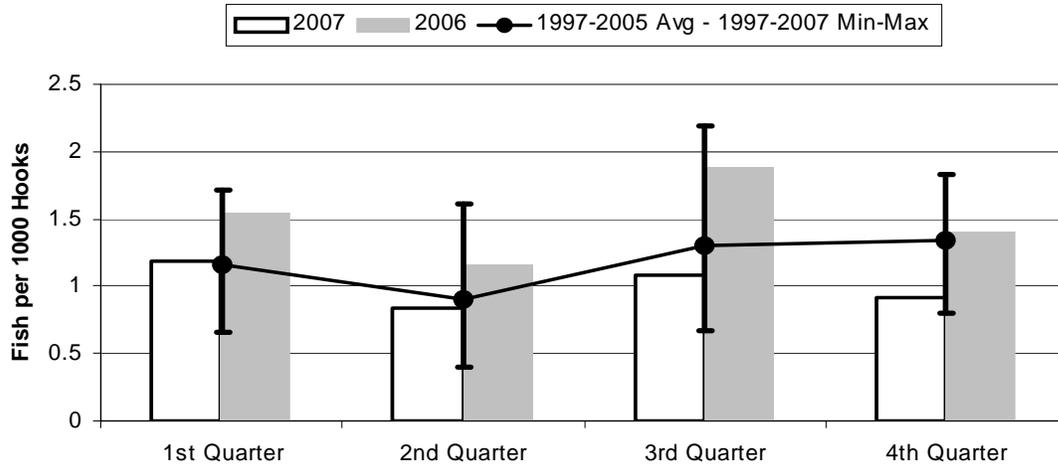
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	1.886	2.877	1.706	1.431
2006	2.616	1.336	1.807	0.862
1997-2007 Max	7.120	11.51	6.041	2.757
1997-2005 Avg	2.717	5.015	2.807	1.398
1997-2007 Min	0.663	1.336	0.831	0.862

Figure 17. American Samoa Longline Mahimahi Catch/1000 Hooks by Quarter for



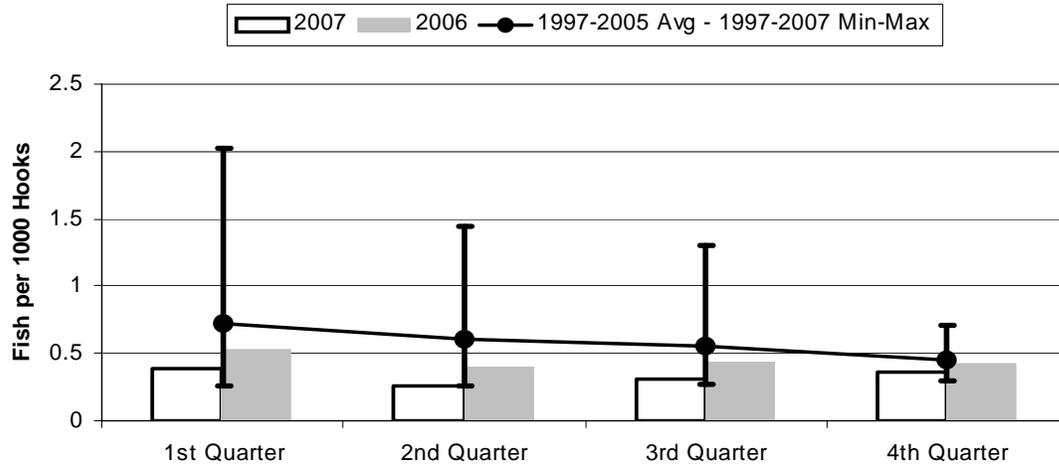
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	0.192	0.134	0.137	0.067
2006	0.036	0.397	0.800	0.172
1997-2007 Max	1.304	1.248	3.125	1.932
1997-2005 Avg	0.549	0.649	1.488	0.723
1997-2007 Min	0.036	0.123	0.137	0.067

Figure 18. American Samoa Wahoo Catch/1000 Hooks by Quarter for



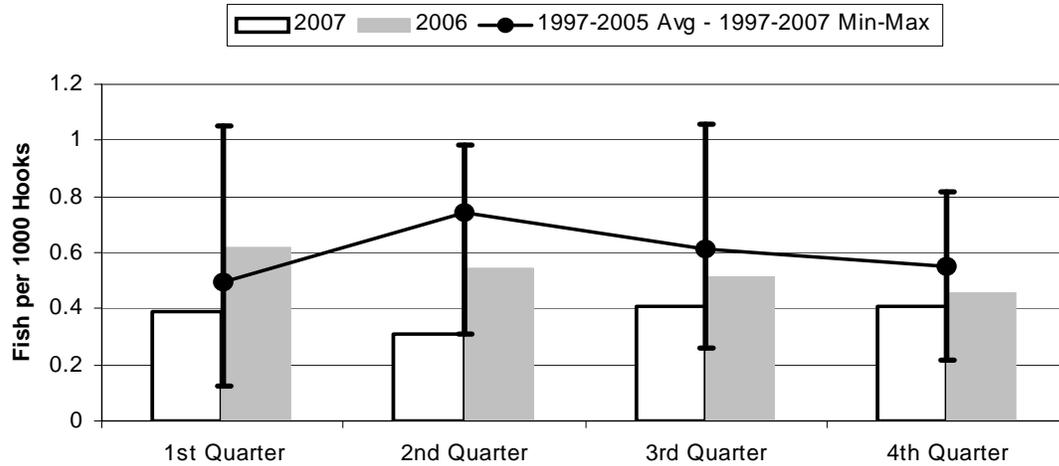
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	1.189	0.836	1.077	0.918
2006	1.541	1.164	1.878	1.404
1997-2007 Max	1.710	1.617	2.195	1.832
1997-2005 Avg	1.161	0.896	1.303	1.340
1997-2007 Min	0.657	0.394	0.673	0.803

Figure 19. American Samoa Billfish Catch/1000 Hooks by Quarter for



	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	0.386	0.262	0.304	0.366
2006	0.532	0.396	0.442	0.421
1997-2007 Max	2.019	1.439	1.306	0.712
1997-2005 Avg	0.724	0.608	0.549	0.451
1997-2007 Min	0.252	0.262	0.266	0.297

Figure 20. American Samoa Shark Catch/1000 Hooks by Quarter for



	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	0.389	0.311	0.409	0.411
2006	0.619	0.545	0.515	0.460
1997-2007 Max	1.051	0.986	1.061	0.819
1997-2005 Avg	0.494	0.741	0.615	0.553
1997-2007 Min	0.122	0.311	0.257	0.216