

# **PIFSC Report on the Logbook Program for the American Samoa Longline Fishery July-September 2007<sup>1</sup>**

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Summary statistics of American Samoa longline catch and effort for the third quarter of 2007, based on date of haul, are shown in Table 1. The table is derived from all logbook data submitted as of January 14, 2008. As of this date, the documented delinquency rate according to the Department of Marine and Wildlife Resources (DMWR) Daily Effort Census and Delinquency Reporting System for the third quarter of 2007 was 4.27%.

According to the longline logbook data, 27 vessels turned in some or all of their longline logs for sets made during the third quarter of 2007 (Fig 1). These 27 vessels made 1,593 sets (Fig 2) and deployed 4,762,666 hooks (Fig 3) which is an all-time record high for the number of hooks set in a quarter. This is the third quarter in a row to establish a new record high number of hooks set. The third quarter has always been the highest quarter of the year for the American Samoa longline fishery in terms of catch and effort, and the third quarter of 2007 continued this trend and also showed increases in both effort and catch over the third quarter of last year. Compared to the third quarter of 2006, the number of vessels turning in logs this quarter decreased by one vessel from 28 to 27 but the number of sets increased by 13% and the number of hooks used increased by 22%. The average number of hooks used per set also increased by about 7%, from 2788 to 2990, reflecting the continuing trend toward a fishing fleet of larger vessels deploying more hooks per set.

The total catch for all species combined was 148,440 fish (Fig. 4) which is an increase of 10% compared to the third quarter of last year and close to the record high of 153,300 fish set back in 2003. Albacore continued to dominate the catch with 113,735 fish caught in the third quarter of 2007 (Fig. 5), a 37% increase over the 82,720 albacore caught in the third quarter of last year. Yellowfin tuna (Fig. 8) also showed an increase of 15% over its quarterly catch of last year, however, all other species showed decreases in catch compared to the third quarter of 2006. The catches of bigeye tuna were down by 32% (Fig. 6), skipjack tuna was down by 53% (Fig. 7), and mahimahi was down by 79% (Fig. 9) and only about one third of the average catch for mahimahi. Reported catches were also down for wahoo (Fig. 10) by 30%, billfish (Fig. 11) by 16%, and sharks (Fig. 12) by 3%.

Albacore CPUE (catch per 1000 hooks) was up by 12% from the third quarter of 2006 (Fig. 13), which likely influenced fishing behavior that resulted in the 22% increase in the number of hooks deployed and was reflected in the 37% increase in albacore catch. However, because of the increase in effort in the third quarter of 2007, the reported catch rates for all incidental species declined when compared to the third quarter of 2006, even for yellowfin tuna (Fig. 16) which was the only incidental species which recorded a third quarter increase in number of fish caught. Individual species recorded CPUE decreases, including 6% for yellowfin tuna, 49% for bigeye tuna (Fig. 14), 62% for skipjack tuna (Fig. 15), 83% for mahimahi (Fig 17., setting a new record low CPUE for mahimahi), 42% for wahoo (Fig. 18), 31% for billfish (Fig. 19), and 20% for sharks (Fig. 20). Caution is advised when interpreting these declines 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.

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<sup>1</sup> PIFSC Data Report DR-08-001  
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**Table 1. Summary of fish catch and nominal fishing effort by American Samoa Longline vessels during 3<sup>rd</sup> Quarter 2007 based on longline logbooks submitted through January 12, 2008**

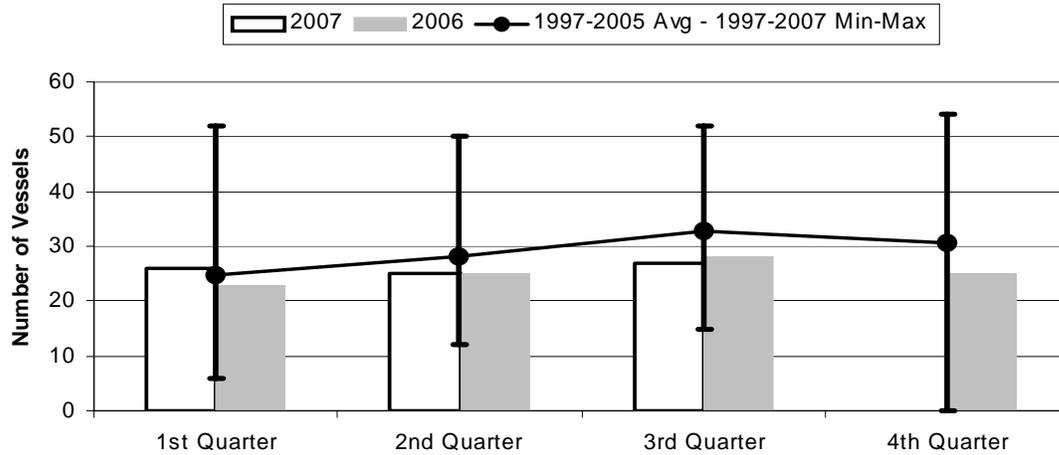
**TRIP INFORMATION**

Number of Vessels:	27
Number of Trips:	122
Number of Sets:	1593
1000's of Hooks Set:	4763
Number of Lightsticks Used:	27

**CATCH INFORMATION**

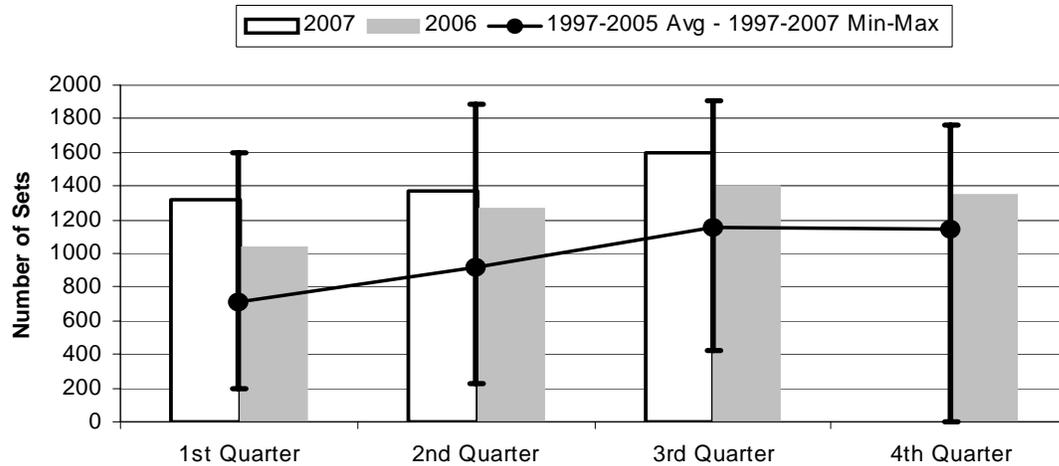
<b>Species</b>	<b># Caught</b>	<b># Kept</b>	<b># Finned</b>	<b># Caught/ 1000 Hooks</b>
<b>BILLFISH</b>				
Black marlin	1	0		0.00
Blue marlin	829	82		0.17
Striped marlin	109	5		0.02
Sailfish	141	6		0.03
Spearfish	304	11		0.06
Swordfish	66	31		0.01
<b>TOTALS</b>	<b>1450</b>	<b>135</b>		<b>0.30</b>
<b>SHARKS</b>				
Blue shark	1214	17		0.25
Shortfin mako shark	64	2		0.01
Thresher shark	85	1		0.02
White tip oceanic shark	430	5		0.09
Sharks (misc)	157	0		0.03
<b>TOTALS</b>	<b>1950</b>	<b>25</b>		<b>0.41</b>
<b>TUNA</b>				
Albacore	113735	113570		23.88
Bigeye tuna	2846	2640		0.60
Bluefin tuna	21	0		0.00
Skipjack tuna	11318	8225		2.38
Yellowfin tuna	8132	7555		1.71
<b>TOTALS</b>	<b>136052</b>	<b>131990</b>		<b>28.57</b>
<b>OTHER PELAGICS</b>				
Mahimahi	655	334		0.14
Moonfish	221	31		0.05
Oilfish	2294	1		0.48
Pomfret	452	42		0.09
Wahoo	5121	3967		1.08
<b>TOTALS</b>	<b>8743</b>	<b>4375</b>		<b>1.84</b>
<b>NON-PMUS</b>				
Pelagic fish (misc)	241	2		0.05
<b>TOTALS</b>	<b>241</b>	<b>2</b>		<b>0.05</b>

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



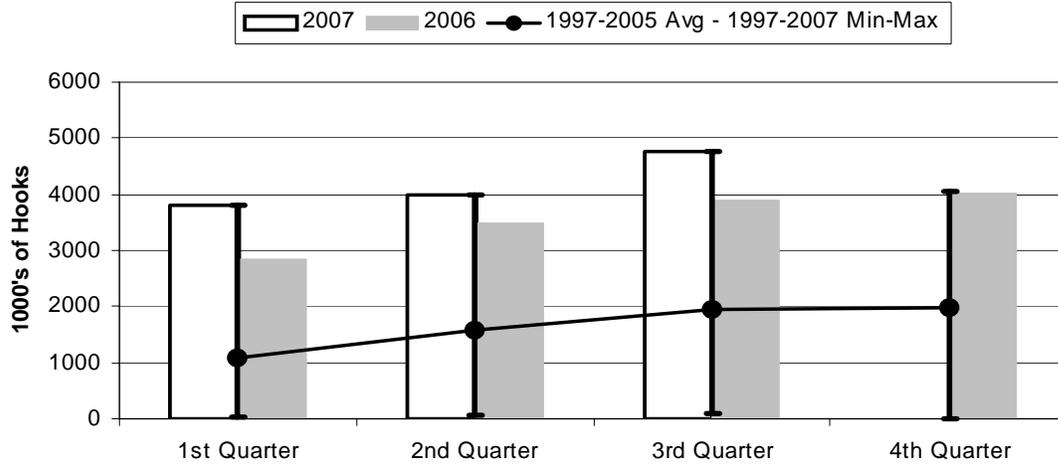
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	26	25	27	0
2006	23	25	28	25
1997-2007 Max	52	50	52	54
1997-2005 Avg	24.9	28.0	32.9	30.6
1997-2007 Min	6	12	15	0

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



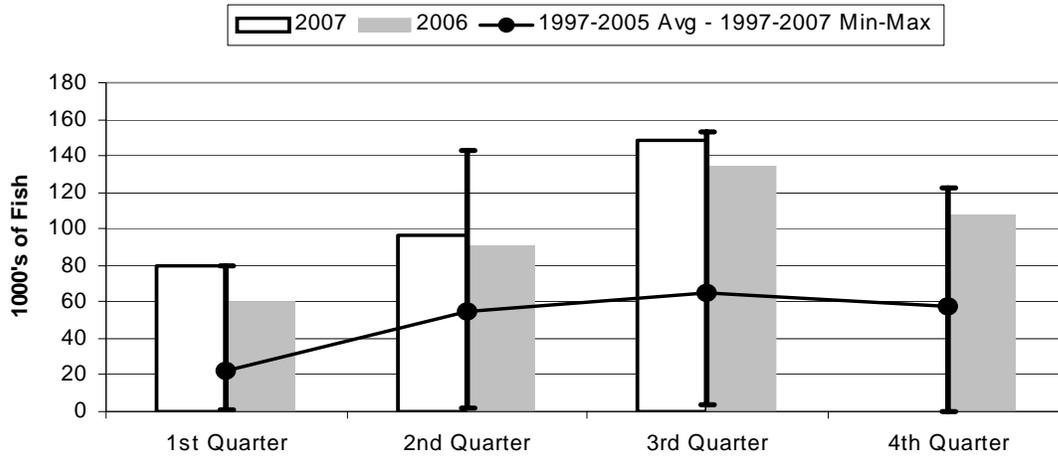
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	1316	1366	1593	0
2006	1041	1273	1402	1354
1997-2005 Avg	708	918	1158	1141
1997-2007 Max	1602	1886	1903	1758
1997-2007 Min	192	223	424	0

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



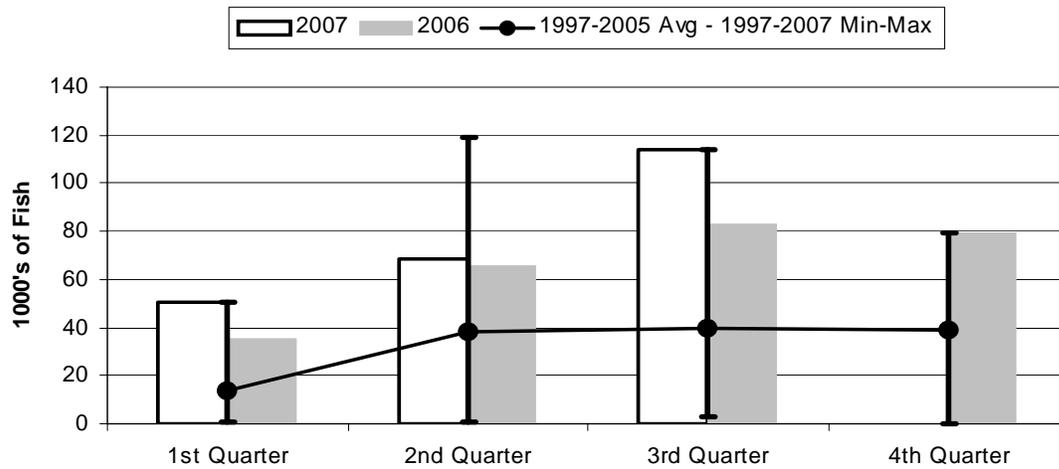
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	3805	3993	4763	0
2006	2840	3503	3910	4013
1997-2007 Max	3805	3993	4763	4044
1997-2005 Avg	1087	1566	1957	1986
1997-2007 Min	41	51	101	0

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



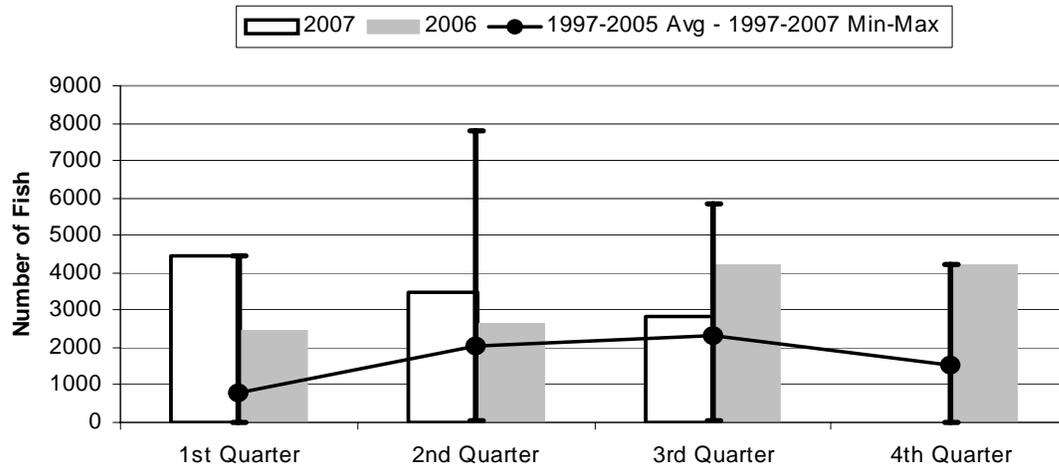
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	79.57	96.95	148.44	0.00
2006	60.74	90.82	134.74	107.66
1997-2007 Max	79.57	142.60	153.30	122.34
1997-2005 Avg	22.28	54.88	65.03	57.22
1997-2007 Min	1.32	1.42	4.13	0.00

**Figure 5. American Samoa Longline Albacore Catch by Quarter**



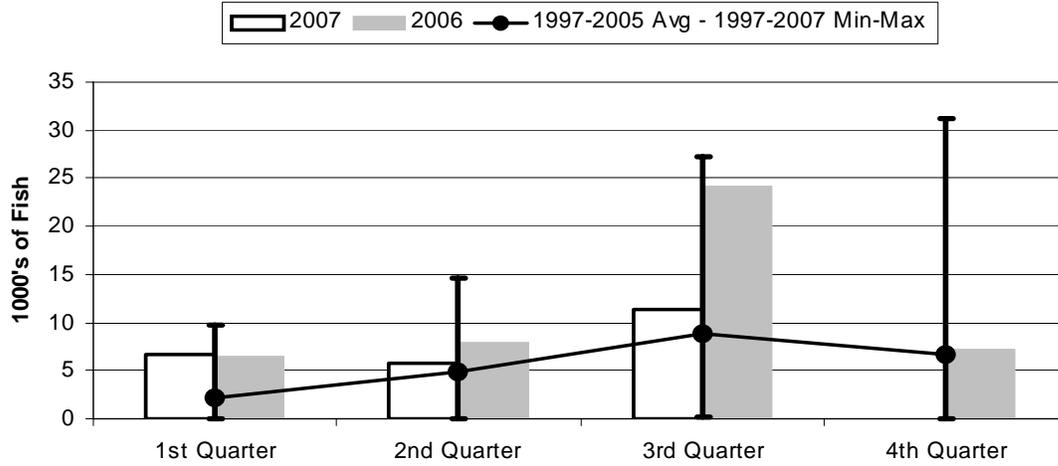
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	50.38	68.29	113.74	0.00
2006	35.21	65.81	82.72	79.36
1997-2007 Max	50.38	118.99	113.74	79.36
1997-2005 Avg	13.85	38.04	39.76	39.20
1997-2007 Min	0.94	0.85	3.18	0.00

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



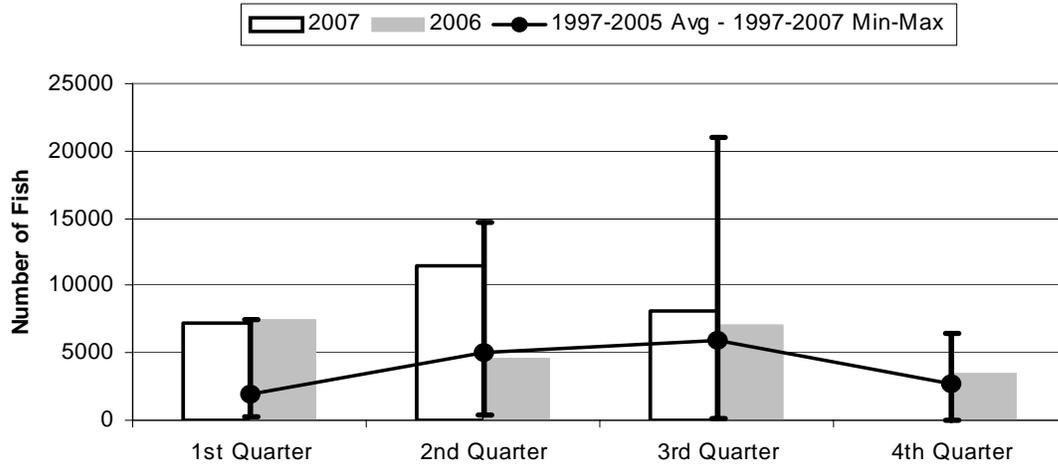
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	4466	3485	2846	0
2006	2448	2647	4211	4217
1997-2007 Max	4466	7785	5824	4217
1997-2005 Avg	781	2019	2314	1521
1997-2007 Min	6	26	55	0

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



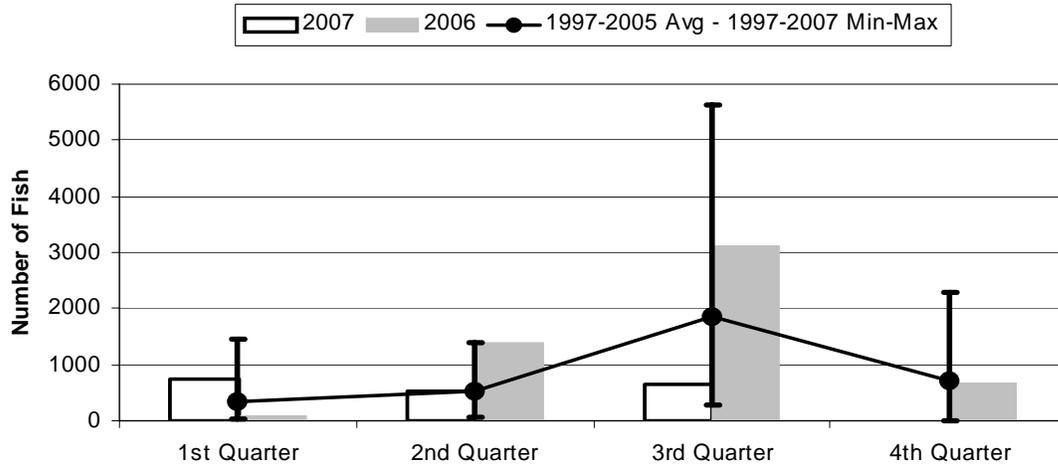
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	6.74	5.71	11.32	0.00
2006	6.58	7.85	24.20	7.23
1997-2007 Max	9.81	14.61	27.23	31.19
1997-2005 Avg	2.20	4.92	8.91	6.67
1997-2007 Min	0.00	0.01	0.24	0.00

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



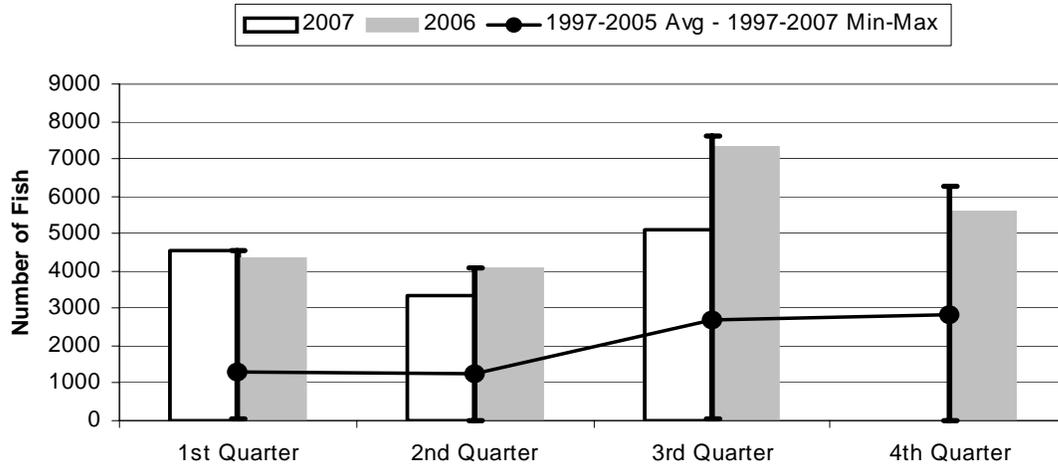
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	7174	11488	8132	0
2006	7428	4678	7066	3459
1997-2007 Max	7428	14681	20993	6503
1997-2005 Avg	1961	5063	5896	2665
1997-2007 Min	213	356	84	0

**Figure 9. American Samoa Mahimahi Catch by Quarter**



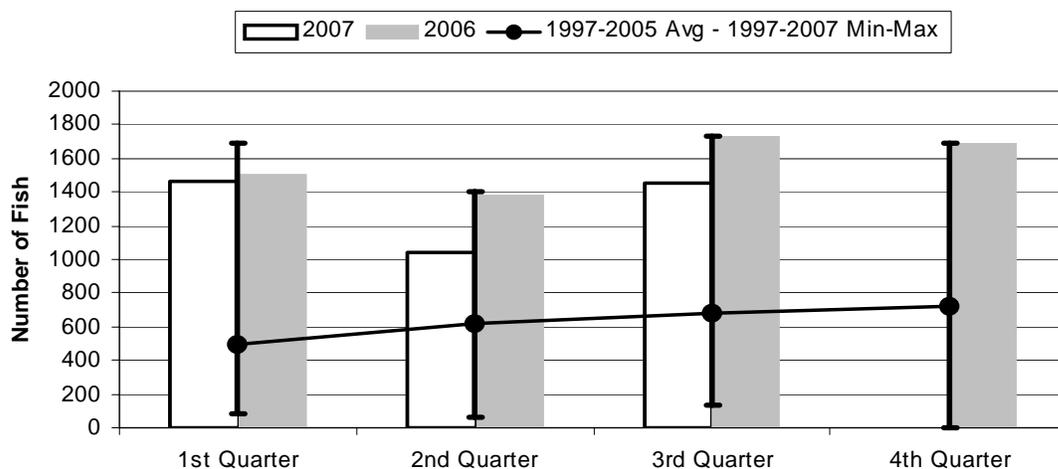
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	729	535	655	0
2006	101	1391	3126	691
1997-2007 Max	1455	1391	5642	2297
1997-2005 Avg	338	517	1857	711
1997-2007 Min	30	59	280	0

**Figure 10. American Samoa Wahoo Catch by Quarter**



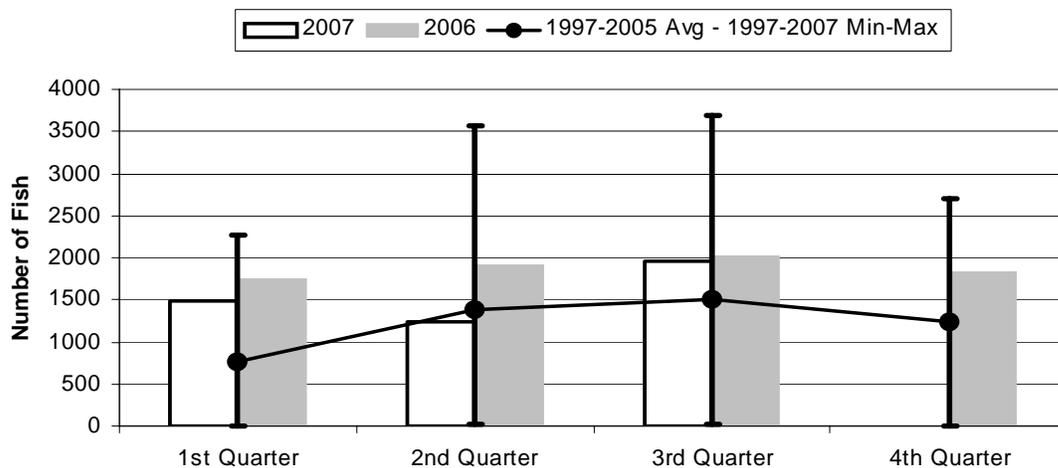
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	4524	3336	5121	0
2006	4376	4076	7342	5634
1997-2007 Max	4524	4076	7629	6281
1997-2005 Avg	1308	1275	2683	2835
1997-2007 Min	27	20	68	0

**Figure 11. American Samoa Billfish Catch by Quarter**



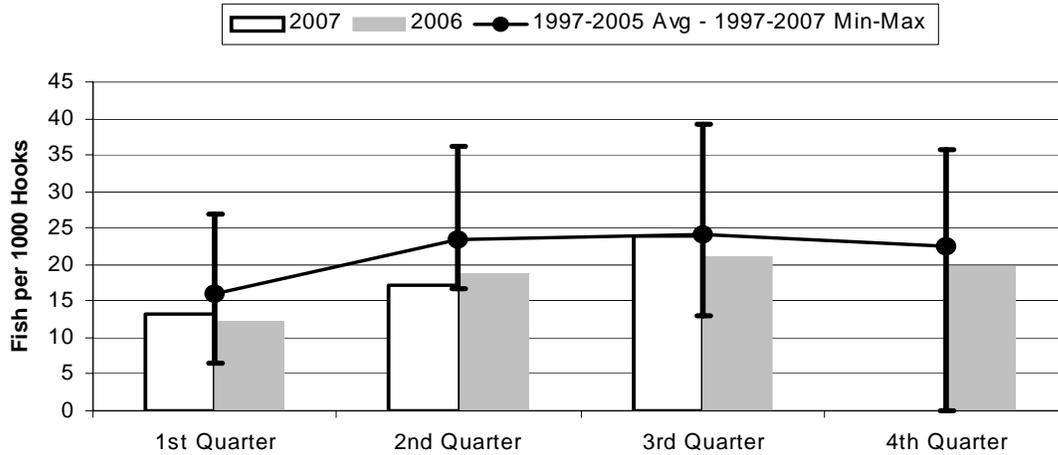
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	1468	1045	1450	0
2006	1509	1386	1729	1690
1997-2007 Max	1692	1404	1729	1690
1997-2005 Avg	492	621	680	725
1997-2007 Min	83	58	132	0

**Figure 12. American Samoa Shark Catch by Quarter**



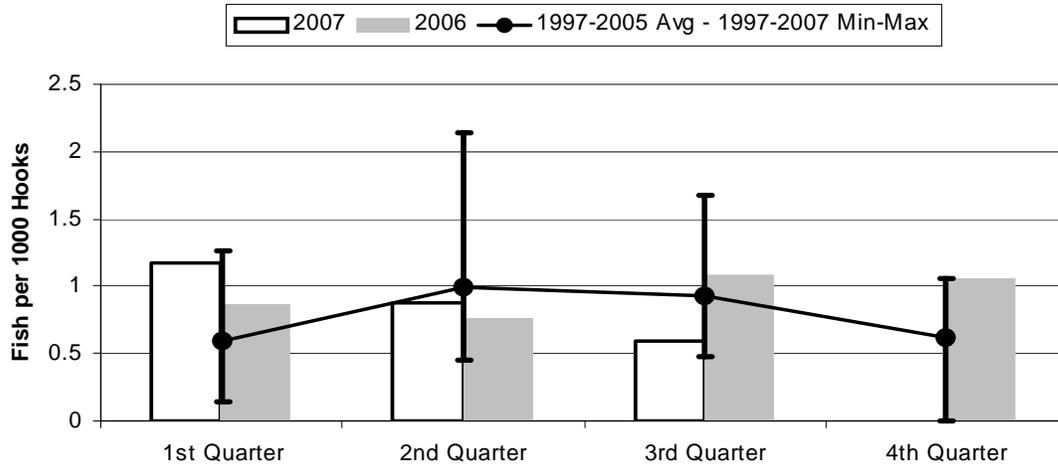
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	1480	1242	1950	0
2006	1757	1909	2012	1845
1997-2007 Max	2262	3562	3686	2695
1997-2005 Avg	764	1379	1502	1243
1997-2007 Min	5	16	26	0

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



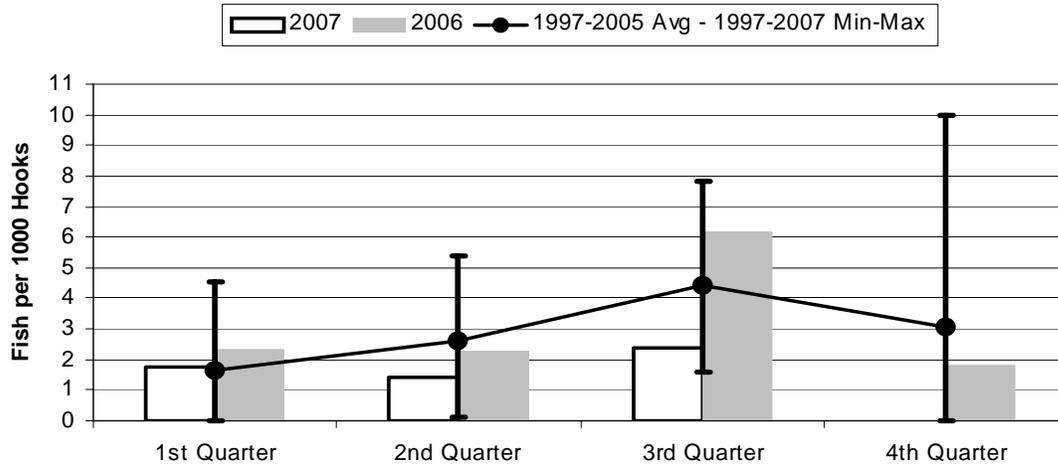
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	13.24	17.10	23.88	0.00
2006	12.40	18.79	21.16	19.77
1997-2007 Max	27.01	36.18	39.13	35.75
1997-2005 Avg	16.00	23.54	24.22	22.39
1997-2007 Min	6.58	16.77	12.96	0.00

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



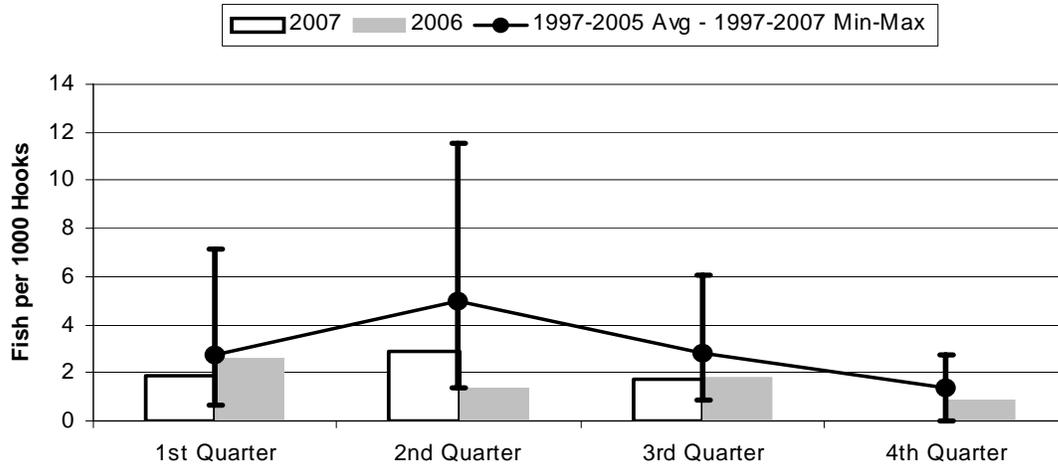
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	1.174	0.873	0.598	0.000
2006	0.862	0.756	1.077	1.051
1997-2007 Max	1.267	2.145	1.676	1.051
1997-2005 Avg	0.586	0.988	0.928	0.622
1997-2007 Min	0.146	0.452	0.478	0.000

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



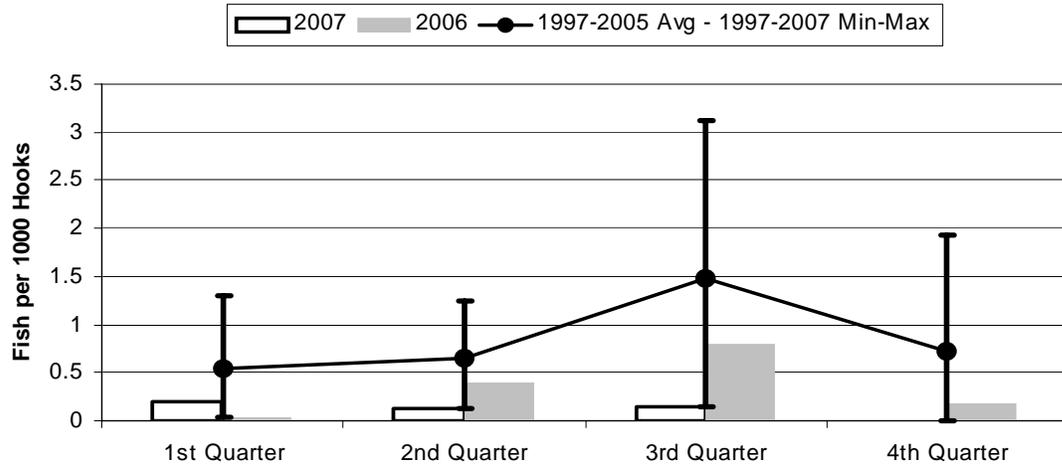
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	1.770	1.430	2.376	0.000
2006	2.317	2.241	6.190	1.801
1997-2007 Max	4.556	5.388	7.837	9.975
1997-2005 Avg	1.642	2.596	4.430	3.059
1997-2007 Min	0.000	0.118	1.564	0.000

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



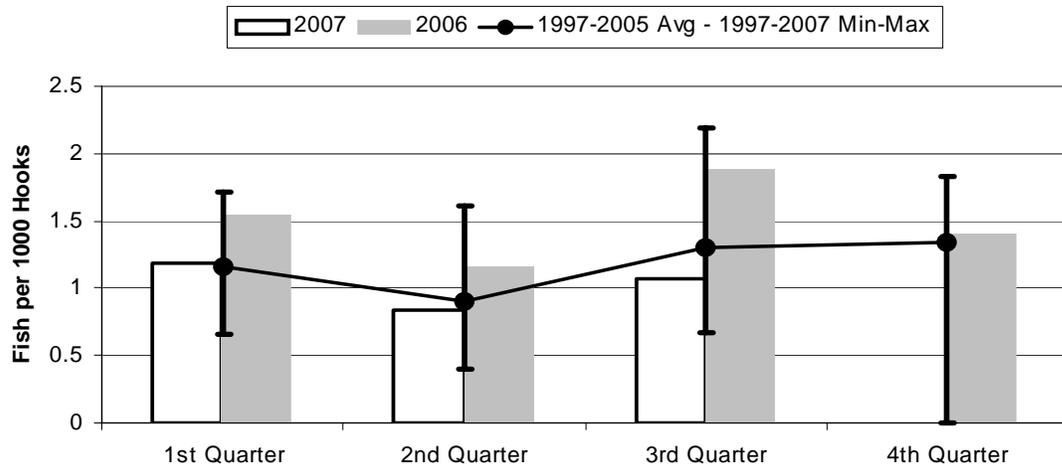
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	1.886	2.877	1.707	0.000
2006	2.616	1.336	1.807	0.862
1997-2007 Max	7.120	11.51	6.041	2.757
1997-2005 Avg	2.717	5.015	2.807	1.398
1997-2007 Min	0.663	1.336	0.831	0.000

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



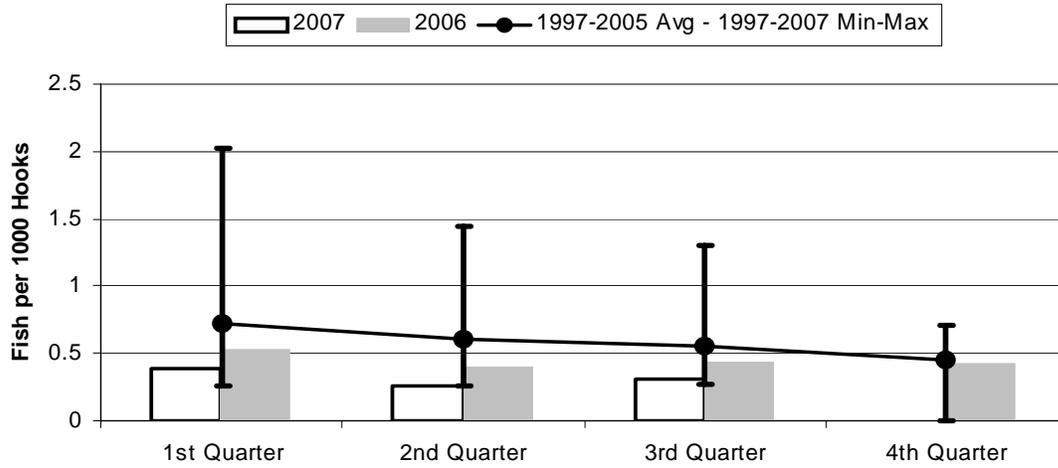
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	0.192	0.134	0.138	0.000
2006	0.036	0.397	0.800	0.172
1997-2007 Max	1.304	1.248	3.125	1.932
1997-2005 Avg	0.549	0.649	1.488	0.723
1997-2007 Min	0.036	0.123	0.138	0.000

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



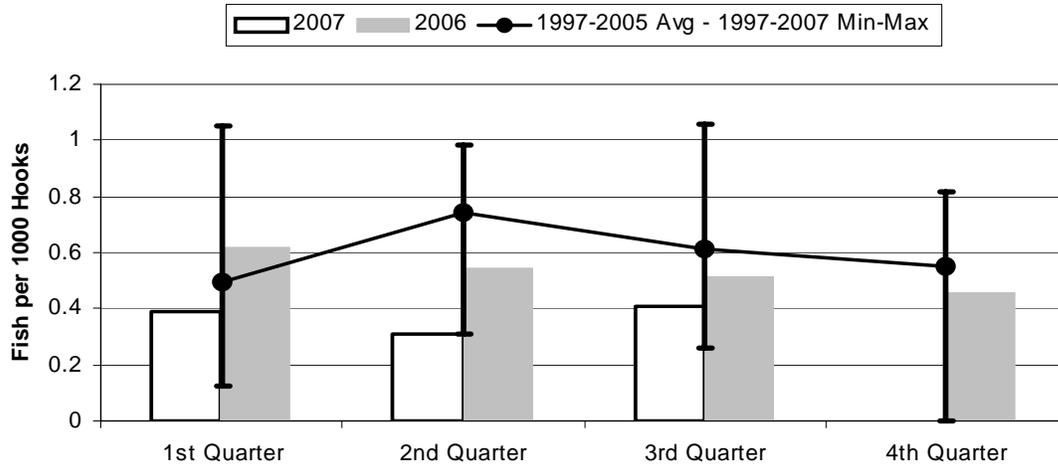
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	1.189	0.836	1.075	0.000
2006	1.541	1.164	1.878	1.404
1997-2007 Max	1.710	1.617	2.195	1.832
1997-2005 Avg	1.161	0.896	1.303	1.340
1997-2007 Min	0.657	0.394	0.673	0.000

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



	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	0.386	0.262	0.305	0.000
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	0.000

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



	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2007	0.389	0.311	0.409	0.000
2006	0.619	0.545	0.515	0.460
1997-2005 Avg	0.494	0.741	0.615	0.553
1997-2007 Max	1.051	0.986	1.061	0.819
1997-2007 Min	0.122	0.311	0.257	0.000