

PIFSC Report on the Logbook Program for the American Samoa Longline Fishery October-December 2010¹

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Pacific Islands Fisheries Science Center

Summary statistics of American Samoa longline catch and effort for the fourth quarter of 2010, based on date of haul, are shown in Table 1. This table is derived from all federal logbook data submitted by American Samoa-based longline vessels as of March 9, 2011. The table entries reflect the vast majority of 2010 longline fishing effort for both large and small longline vessels, but exclude data for one known trip for which log sheets were not submitted. There were 25 active vessels in the fourth quarter of 2010, the same number as in the fourth quarter of 2009 (Fig. 1).

The 25 vessels that were active during the fourth quarter of 2010 made 1,203 sets and deployed 3,609,332 hooks. Compared with results for the fourth quarter of 2009, the number of sets decreased by 6% (Fig. 2) and the number of hooks used decreased by 10% (Fig. 3). The average number of hooks used per set decreased by 4%, from 3,120 to 3,000.

The total catch for all species combined was 81,343 fish, a decrease of 2% compared to the fourth quarter of 2009 (Fig. 4). Catches of both tuna and non-tuna species decreased, with the exception of yellowfin tuna, which increased by 40% (Fig. 8) and skipjack, which increased by 4% (Fig. 7). Albacore continued to dominate the catch with 55,282 fish caught in the fourth quarter of 2010. Albacore catch decreased by 1% (Fig. 5), while bigeye tuna catch declined by 52% from the fourth quarter of 2009 (Fig. 6). Catches of mahimahi decreased by 50% (Fig. 9), wahoo decreased by 17% (Fig. 10), billfish decreased by 29% (Fig. 11), and shark catch declined by 22% (Fig. 12).

Since the total fish catch decreased by 2%, while the number of hooks used decreased by 10%, the overall catch per unit of effort (CPUE), measured in catch per 1000 hooks, increased. Compared to the fourth quarter of 2009, the CPUE for yellowfin, skipjack, and albacore tuna increased, while CPUE for bigeye tuna and all non-tuna species declined. Yellowfin tuna CPUE increased by 54% (Fig. 16), skipjack CPUE increased by 15% (Fig. 15), and albacore CPUE increased by 10% (Fig. 13). Decreases in CPUE occurred in bigeye tuna by 47% (Fig. 14), mahimahi by 43% (Fig. 17), billfish by 20% (Fig. 19), shark by 14% (Fig. 20), and wahoo by 8% (Fig. 18).

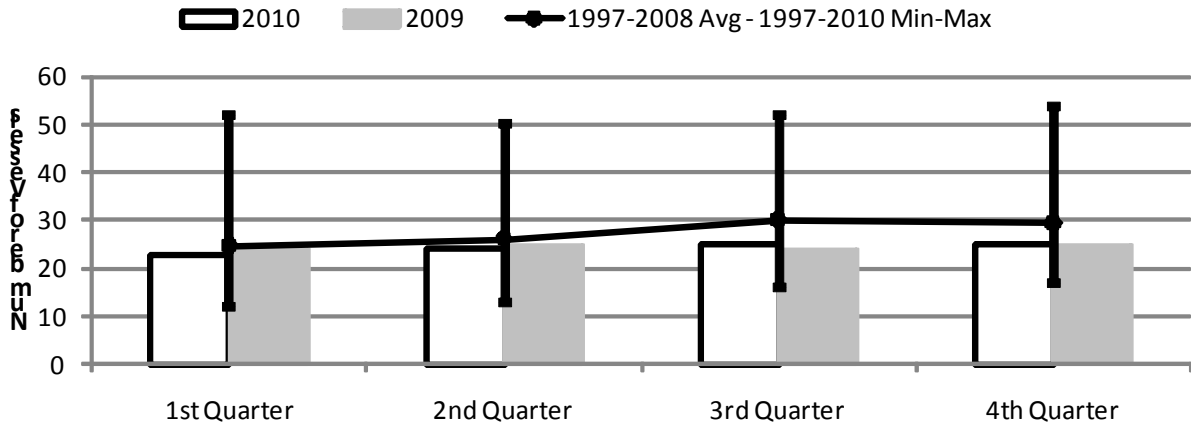
¹ PIFSC Data Report DR-11-004.

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Table 1. Summary of fish catch and nominal fishing effort by American Samoa Longline vessels during the fourth quarter of 2010 based on longline logbooks submitted before March 9, 2011.

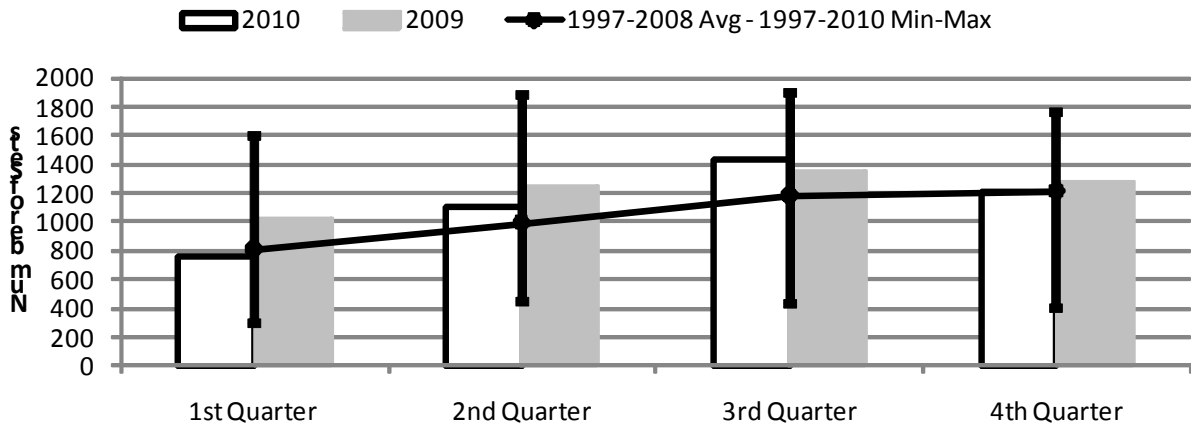
TRIP INFORMATION				
	Number of Vessels:		25	
	Number of Trips:		73	
	Number of Sets:		1,203	
	1000's of Hooks Set:		3,609	
	Number of Light Sticks Used:		236	
CATCH INFORMATION				
Species	Number Caught	Number Kept	Number Released	Number Caught per 1000 Hooks
BILLFISH				
Black marlin	6	2	4	0.00
Blue marlin	672	191	481	0.19
Striped marlin	104	12	92	0.03
Sailfish	61	14	47	0.02
Spearfish	80	8	72	0.02
Swordfish	87	51	36	0.02
TOTAL BILLFISH	1,010	278	732	0.28
SHARKS				
Blue shark	738	8	730	0.20
Shortfin mako shark	118	2	116	0.03
Thresher shark	63	0	63	0.02
White tip oceanic shark	117	0	117	0.03
Sharks (unknown)	74	0	74	0.02
TOTAL SHARKS	1,110	10	1,100	0.31
TUNA				
Albacore tuna	55,282	54,972	310	15.32
Bigeye tuna	1,345	1,125	220	0.37
Bluefin tuna	32	19	13	0.01
Skipjack tuna	10,598	7,325	3,273	2.94
Yellowfin tuna	4,745	4,345	400	1.31
TOTAL TUNA	72,002	67,786	4,216	19.95
OTHER PELAGICS				
Mahimahi	146	84	62	0.04
Moonfish	96	22	74	0.03
Oilfish	2,649	13	2,636	0.73
Pomfret	122	47	75	0.03
Wahoo	3,935	2,897	1,038	1.09
TOTAL OTHER PELAGICS	6,948	3,063	3,885	1.93
NON-PMUS				
Pelagic fishes (unknown)	273	4	269	0.08
TOTAL NON-PMUS	273	4	269	0.08
TOTAL ALL SPECIES	81,343	71,141	10,202	22.54

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



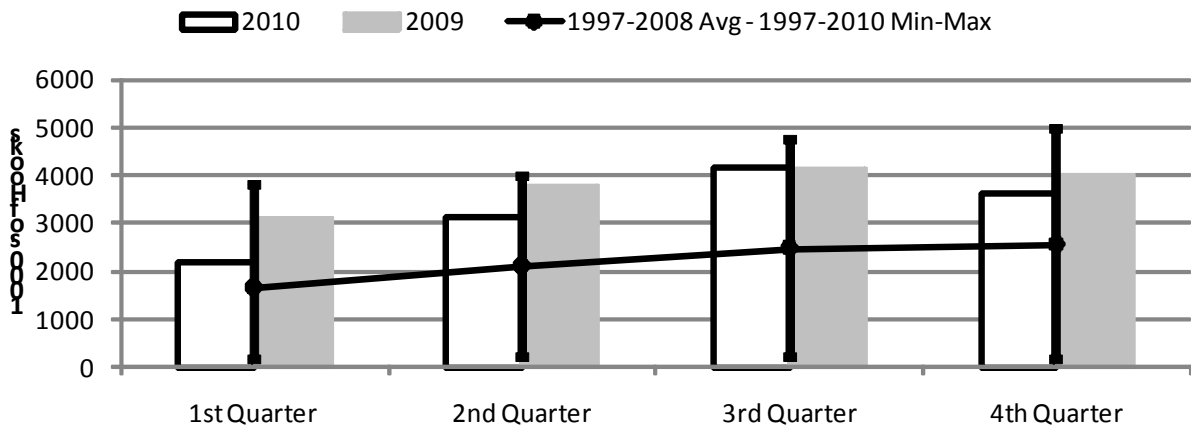
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	23	24	25	25
2009	24	25	24	25
1997-2010 Max	52	50	52	54
1997-2008 Avg	25	26	30	29
1997-2010 Min	12	13	16	17

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



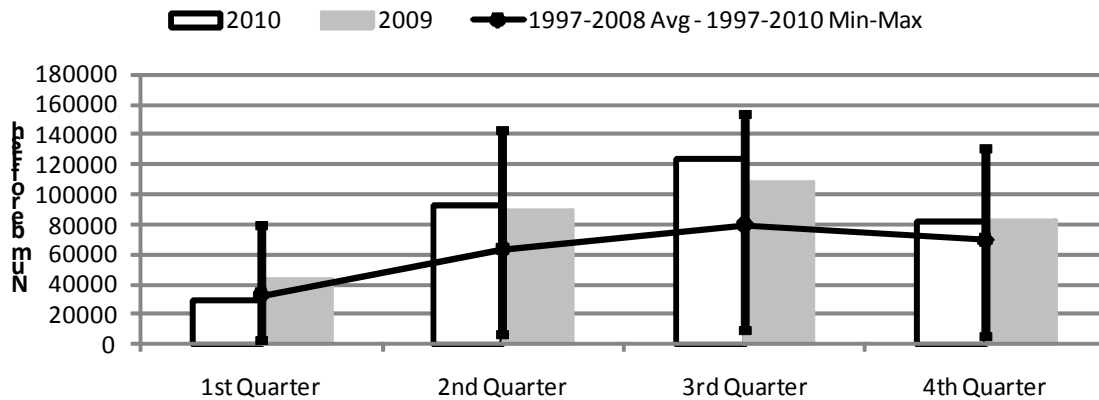
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	756	1,098	1,439	1,203
2009	1,024	1,252	1,353	1,282
1997-2010 Max	1,602	1,886	1,904	1,758
1997-2008 Avg	804	991	1,179	1,209
1997-2010 Min	297	439	424	402

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



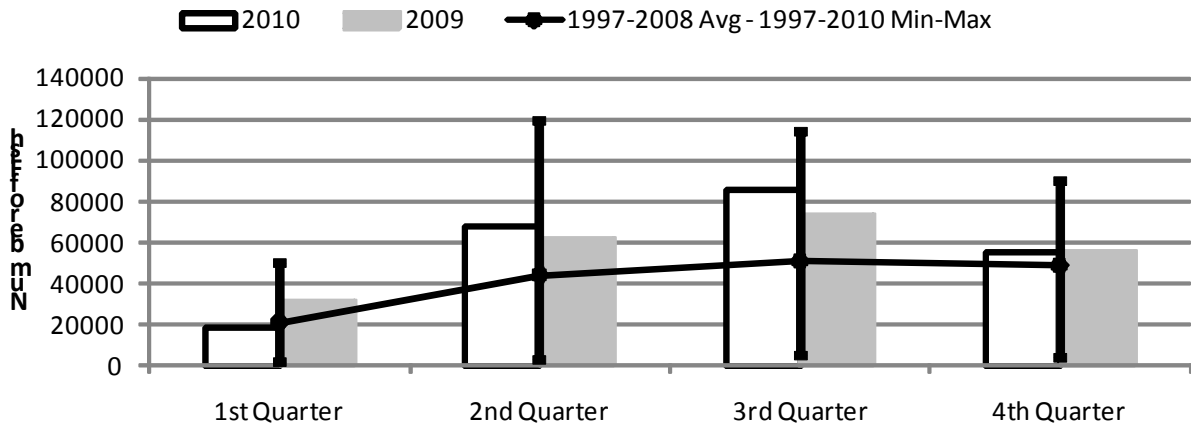
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	2,187	3,113	4,158	3,609
2009	3,125	3,788	4,162	4,001
1997-2010 Max	3,805	3,993	4,769	4,985
1997-2008 Avg	1,649	2,100	2,480	2,558
1997-2010 Min	147	192	198	175

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



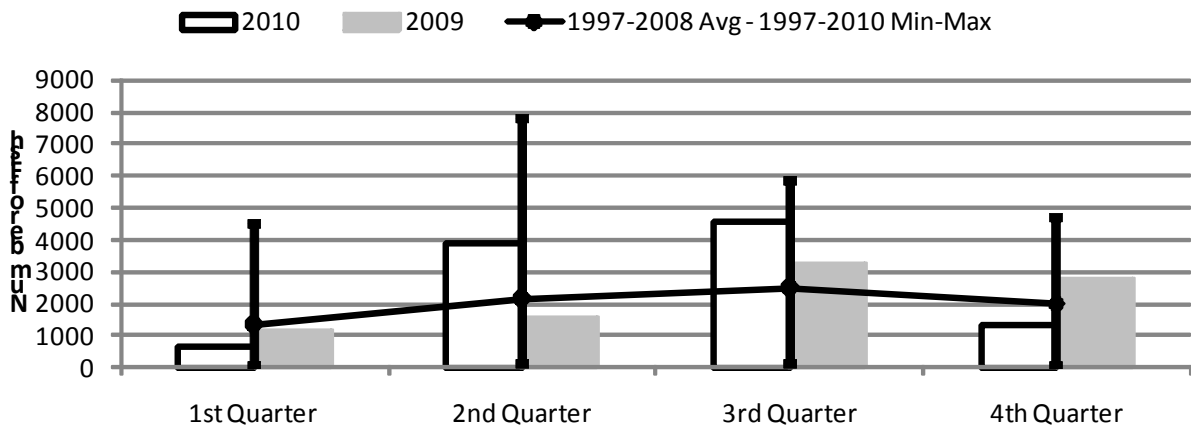
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	29,416	92,191	124,233	81,343
2009	43,026	88,705	108,384	82,846
1997-2010 Max	79,567	142,603	153,301	130,238
1997-2008 Avg	32,673	63,367	78,892	69,270
1997-2010 Min	2,950	7,050	8,816	5,204

Figure 5. American Samoa Longline Albacore Catch by Quarter for



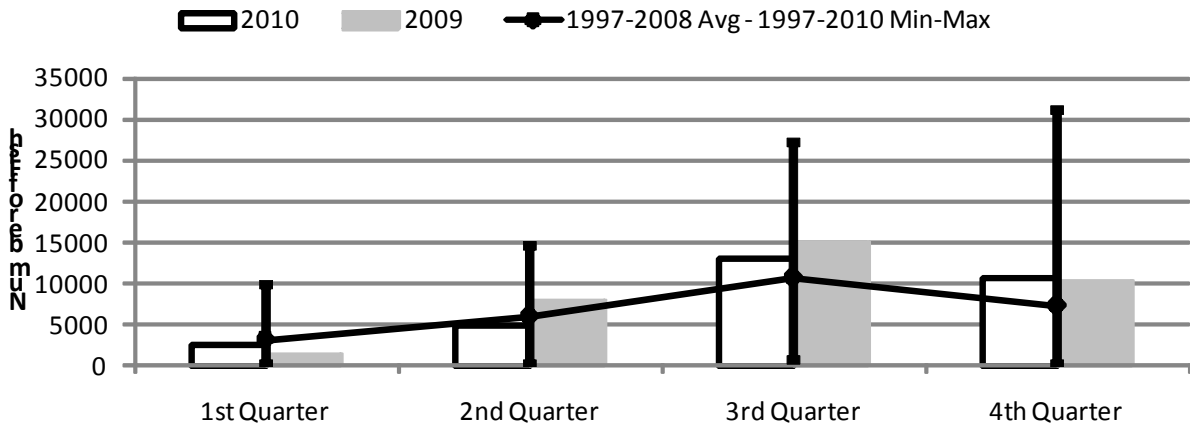
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	18,828	68,028	85,638	55,282
2009	31,680	62,186	73,400	55,833
1997-2010 Max	50,382	118,994	113,831	89,389
1997-2008 Avg	20,372	43,933	50,670	48,635
1997-2010 Min	1,732	3,382	4,838	3,466

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



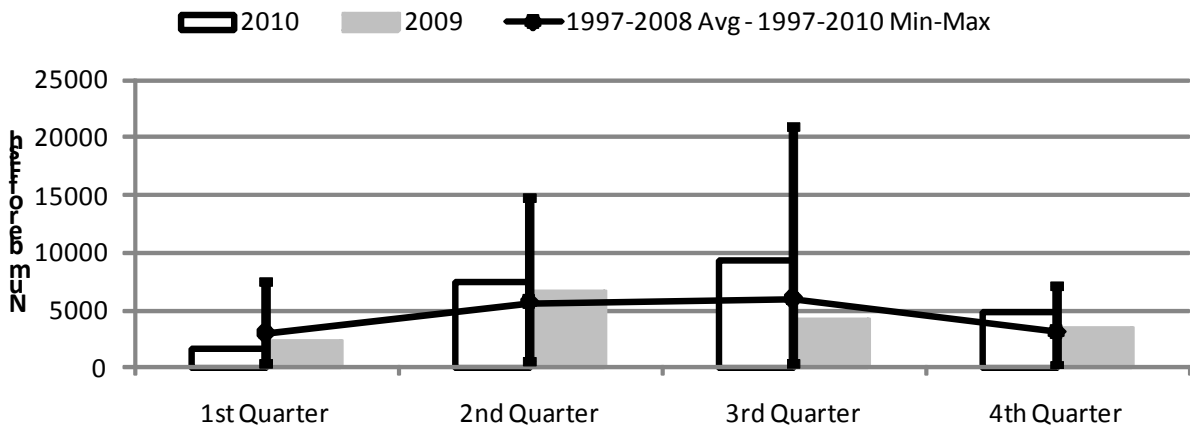
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	633	3,875	4,566	1,345
2009	1,154	1,565	3,233	2,791
1997-2010 Max	4,466	7,785	5,824	4,728
1997-2008 Avg	1,347	2,153	2,498	1,979
1997-2010 Min	48	97	123	55

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



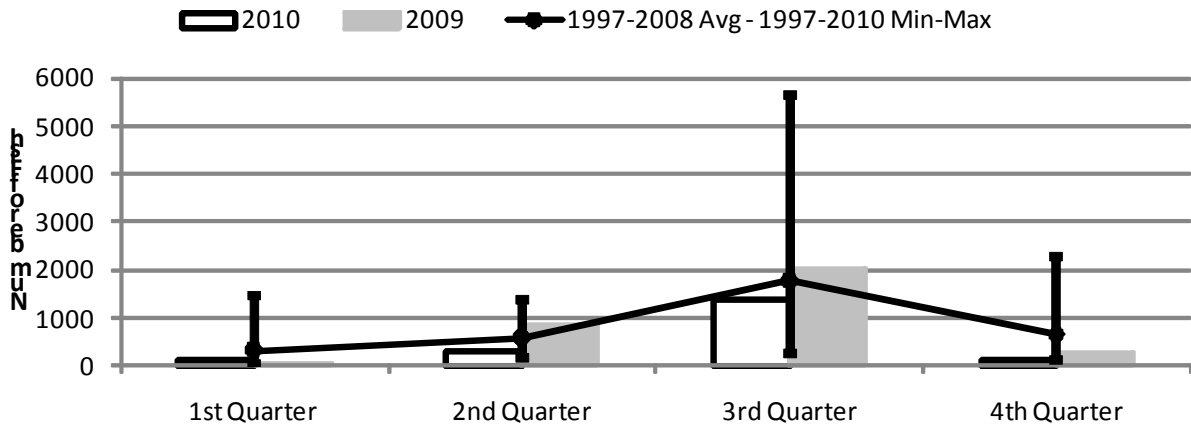
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	2,506	4,936	12,919	10,598
2009	1,383	7,882	15,081	10,188
1997-2010 Max	9,809	14,606	27,234	31,191
1997-2008 Avg	3,170	5,957	10,643	7,357
1997-2010 Min	115	273	801	178

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



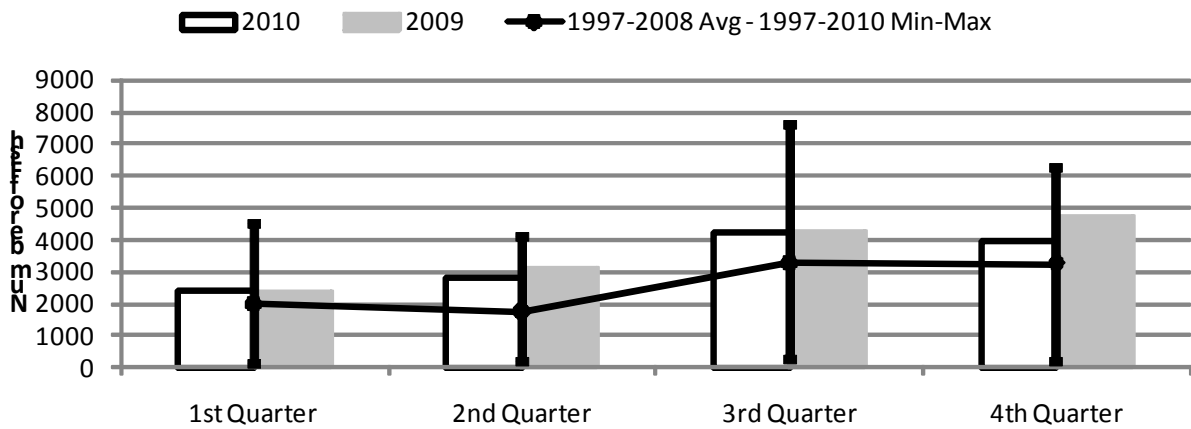
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	1,547	7,376	9,295	4,745
2009	2,357	6,666	4,111	3,407
1997-2010 Max	7,428	14,681	20,993	7,104
1997-2008 Avg	2,938	5,650	5,955	3,052
1997-2010 Min	322	480	389	177

Figure 9. American Samoa Mahimahi Catch by Quarter for



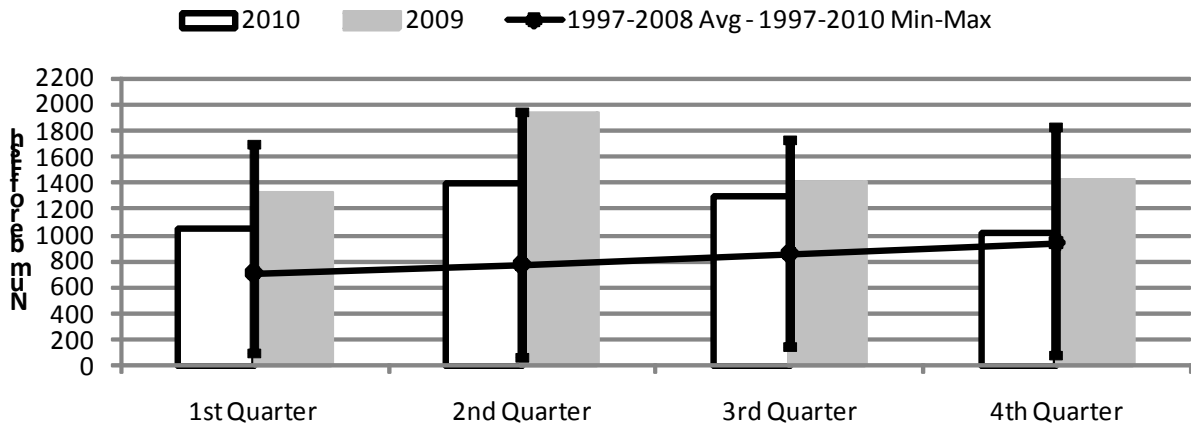
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	131	311	1,367	146
2009	65	862	2,027	291
1997-2010 Max	1,455	1,391	5,642	2,297
1997-2008 Avg	325	586	1,766	647
1997-2010 Min	55	183	280	146

Figure 10. American Samoa Wahoo Catch by Quarter for



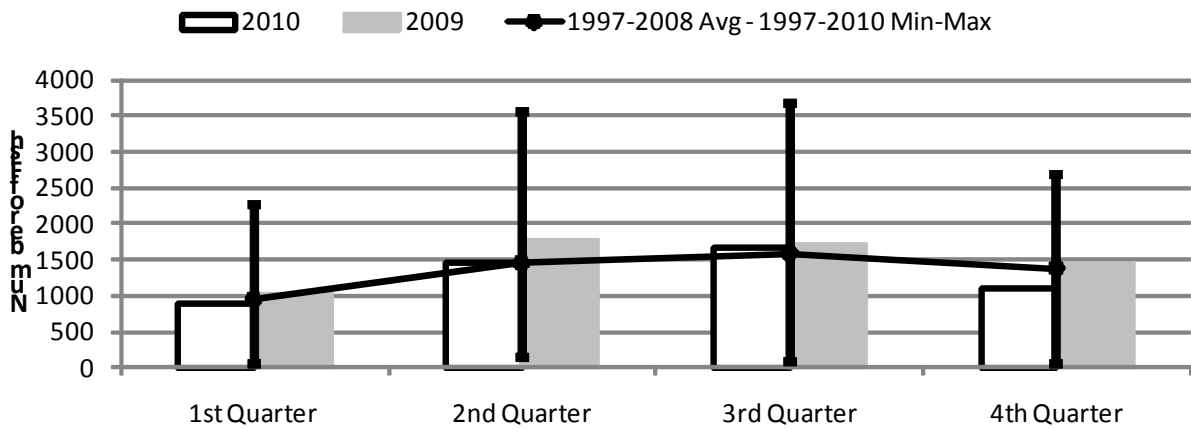
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	2,441	2,810	4,220	3,935
2009	2,388	3,106	4,265	4,760
1997-2010 Max	4,524	4,076	7,629	6,281
1997-2008 Avg	1,978	1,737	3,253	3,242
1997-2010 Min	123	215	255	210

Figure 11. American Samoa Billfish Catch by Quarter for



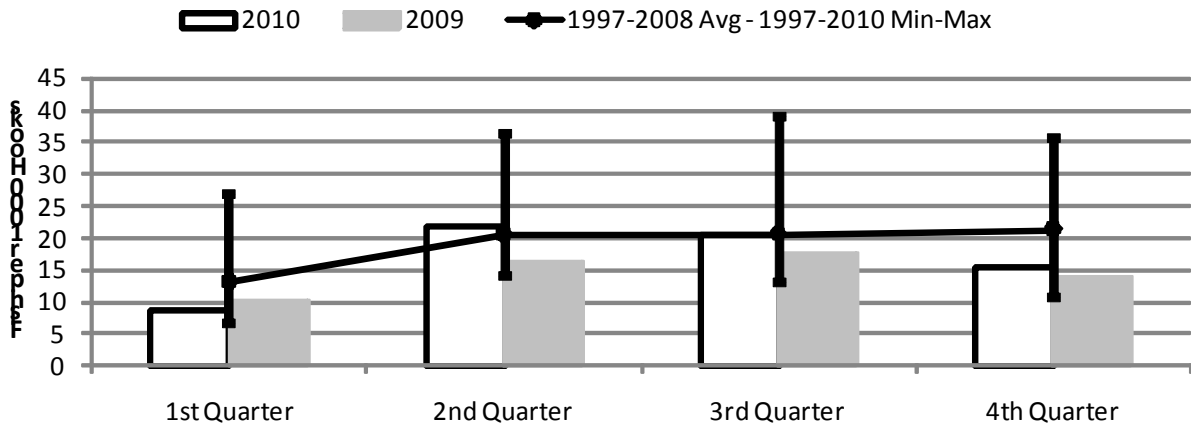
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	1,043	1,404	1,297	1,010
2009	1,326	1,934	1,409	1,417
1997-2010 Max	1,692	1,934	1,729	1,819
1997-2008 Avg	703	765	850	932
1997-2010 Min	101	58	141	84

Figure 12. American Samoa Shark Catch by Quarter for



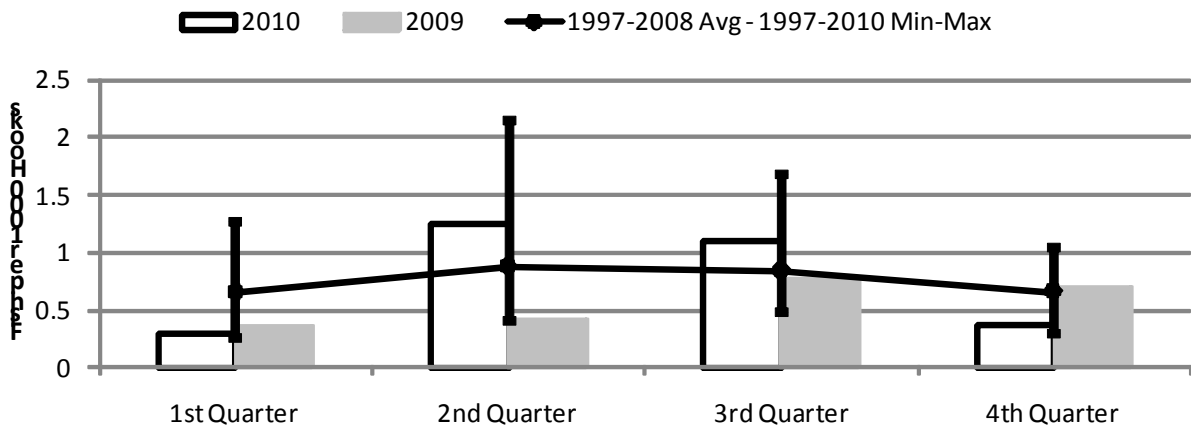
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	887	1,449	1,682	1,110
2009	1,039	1,777	1,721	1,431
1997-2010 Max	2,262	3,562	3,686	2,695
1997-2008 Avg	941	1,448	1,574	1,375
1997-2010 Min	42	147	75	49

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



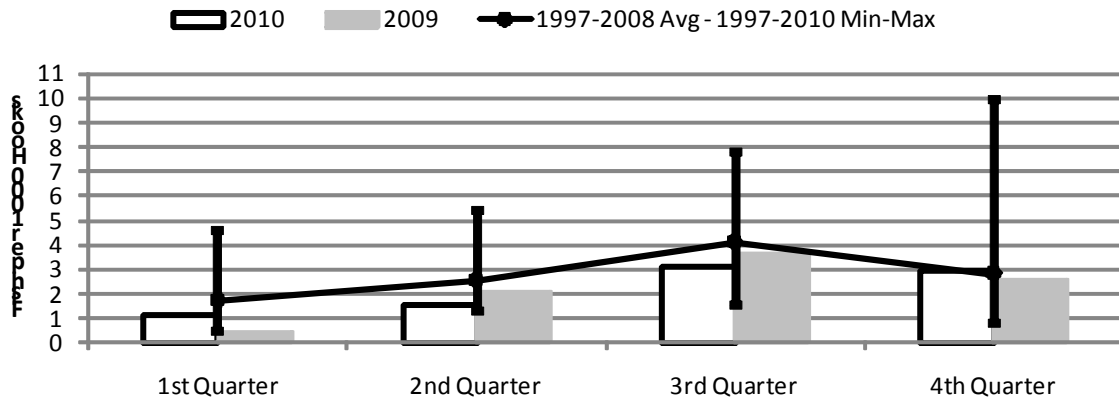
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	8.61	21.85	20.60	15.32
2009	10.14	16.41	17.63	13.95
1997-2010 Max	27.01	36.18	39.13	35.75
1997-2008 Avg	13.09	20.43	20.63	21.29
1997-2010 Min	6.58	14.09	12.96	10.54

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



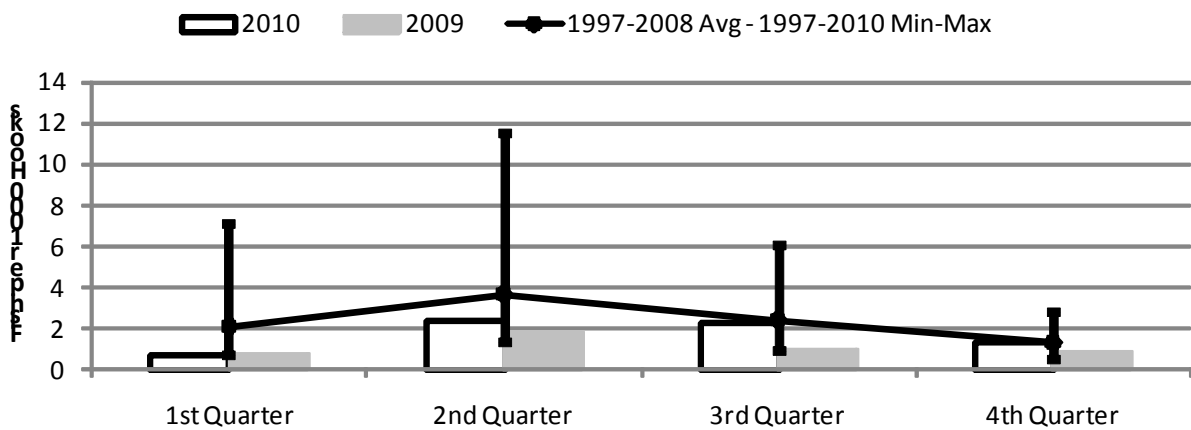
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	0.29	1.24	1.10	0.37
2009	0.37	0.41	0.78	0.70
1997-2010 Max	1.27	2.15	1.68	1.05
1997-2008 Avg	0.65	0.87	0.84	0.66
1997-2010 Min	0.26	0.41	0.48	0.29

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



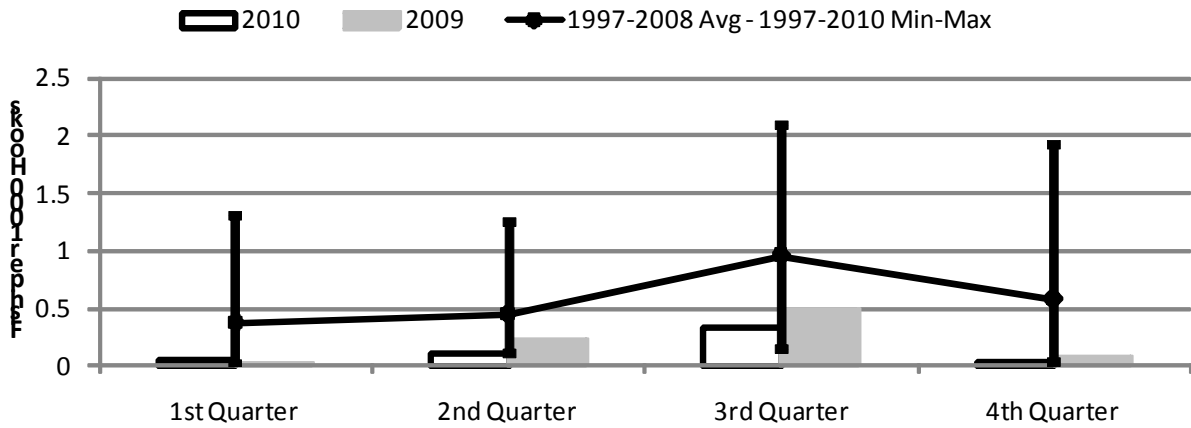
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	1.15	1.59	3.11	2.94
2009	0.44	2.08	3.62	2.55
1997-2010 Max	4.56	5.39	7.84	9.98
1997-2008 Avg	1.69	2.55	4.12	2.82
1997-2010 Min	0.44	1.26	1.56	0.79

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



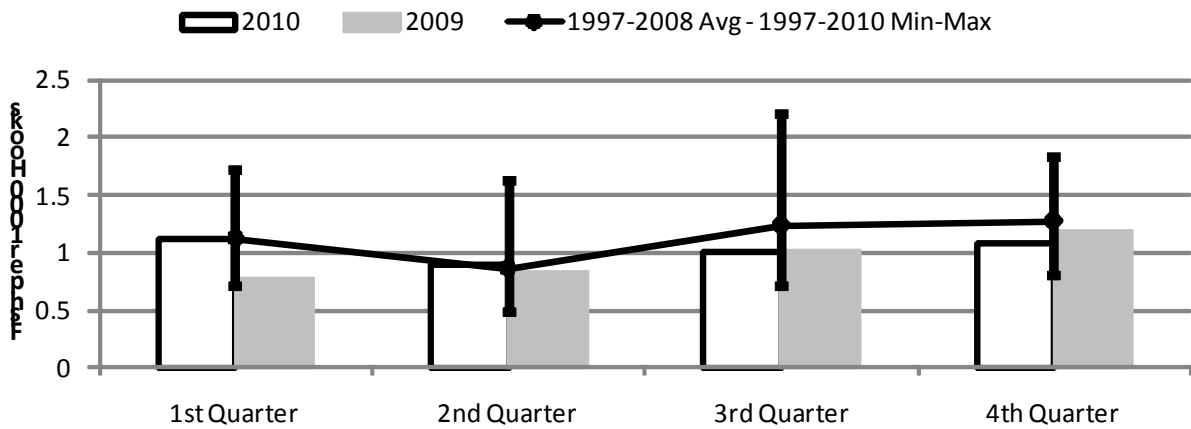
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	0.71	2.37	2.24	1.31
2009	0.75	1.76	0.99	0.85
1997-2010 Max	7.12	11.51	6.04	2.76
1997-2008 Avg	2.06	3.67	2.41	1.28
1997-2010 Min	0.66	1.34	0.92	0.55

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



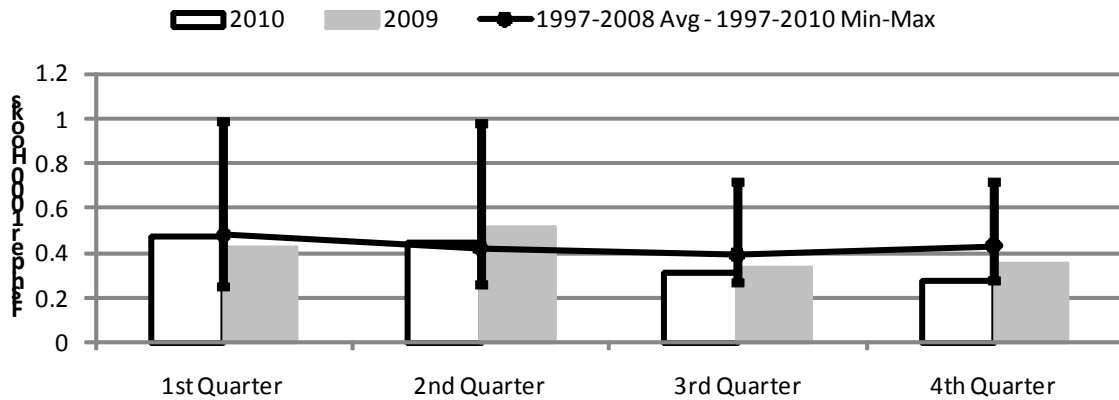
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	0.06	0.10	0.33	0.04
2009	0.02	0.23	0.49	0.07
1997-2010 Max	1.30	1.25	2.08	1.93
1997-2008 Avg	0.37	0.45	0.96	0.57
1997-2010 Min	0.02	0.10	0.14	0.04

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



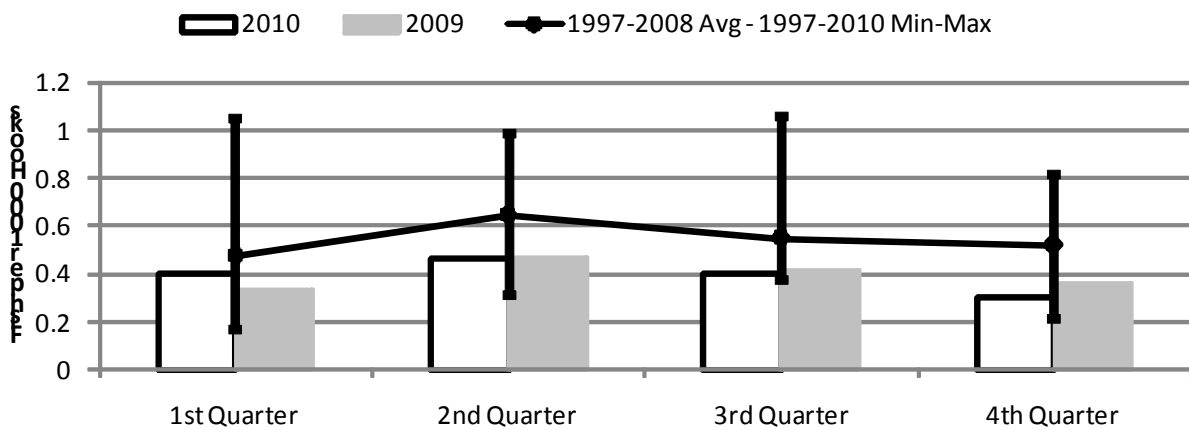
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	1.12	0.90	1.02	1.09
2009	0.76	0.82	1.02	1.19
1997-2010 Max	1.71	1.62	2.20	1.83
1997-2008 Avg	1.12	0.85	1.23	1.27
1997-2010 Min	0.70	0.48	0.70	0.80

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



	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	0.48	0.45	0.31	0.28
2009	0.42	0.51	0.34	0.35
1997-2010 Max	0.99	0.98	0.71	0.71
1997-2008 Avg	0.48	0.42	0.39	0.43
1997-2010 Min	0.25	0.26	0.27	0.28

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



	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2010	0.41	0.47	0.40	0.31
2009	0.33	0.47	0.41	0.36
1997-2010 Max	1.05	0.99	1.06	0.82
1997-2008 Avg	0.47	0.64	0.55	0.52
1997-2010 Min	0.16	0.31	0.38	0.22