

PIFSC Report on the Logbook Program for the American Samoa Longline Fishery July – September 2013¹

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Pacific Islands Fisheries Science Center

The American Samoa longline fishery continues to experience challenging conditions. Catch of its primary target species, albacore tuna, has remained at a fairly low level in comparison with long term averages. Catches for many other marketable species have also remained relatively low during the third quarter of 2013, as they were throughout the previous year. However, increasing catches of low-volume, higher-priced species, such as mahimahi, wahoo and yellowfin tuna, may indicate an effort by the fishery to target these fish in order to sell them in higher value local fresh-fish markets rather than to the cannery in Pago Pago.

A summary of the fishery's catch and effort statistics for the third quarter of 2013, based on date of haul, is provided in Table 1. This table was derived from all logbook data submitted to the American Samoa Department of Marine and Wildlife Resources by January 7th, 2014, which reflects more than 99% of sets made during the quarter. . Only large (>50ft in length) vessels participated in the fishery.

The American Samoa longline fleet reported less fishing effort during the third quarter of 2013 than in the same quarter of 2012. There were only 21 active vessels, 12.5% less than during the third quarter of 2012 (Fig. 1). These 21 vessels made 1,103 sets and deployed 3,271,743 hooks, representing a 13.4% decrease in sets (Fig. 2) and 10.5% decrease in hooks (Fig. 3) in comparison to the same quarter of 2012. However-the number of hooks per set increased by nearly 3.3%, from an average 2,872 hooks/set in 2012, to 2,966 hooks/set in 2013. Increasing the number of hooks per set is common in longline fisheries attempting to improve catch per day of operation.

With the exception of significant increases in catches of yellowfin tuna and mahimahi, the number of fish caught greatly decreased for all species individually and as a whole in comparison with the third quarter of 2012. A total of 64,414 fish were caught (all species combined), which was 36% less than during the third quarter of 2012 (Fig. 4). Although the main target species, albacore tuna, dominated the catch as usual (65.6%), the 42,282 fish caught during the third quarter of 2013 represents a 40.2% reduction from the 70,665 albacore caught during the same quarter of 2012 (Fig. 5). Other species and groups showing decreased catch in the third quarter of 2013 include: skipjack tuna (down 59.8%, Fig. 7), bigeye tuna (50.7%, Fig. 6), wahoo (20.5%, Fig. 10), and billfishes (6.7%, Fig. 11). Positive trends for this fishery during the third quarter of 2013 included increased catches of yellowfin tuna (up 93.7%, Fig. 8) and mahimahi (up by 110.9%, Fig. 9). The decrease in shark catch (down by 17.5%, Fig. 12) is appreciated by fishermen, since shark are not targeted or retained, and shark bycatch is discouraged by NMFS .

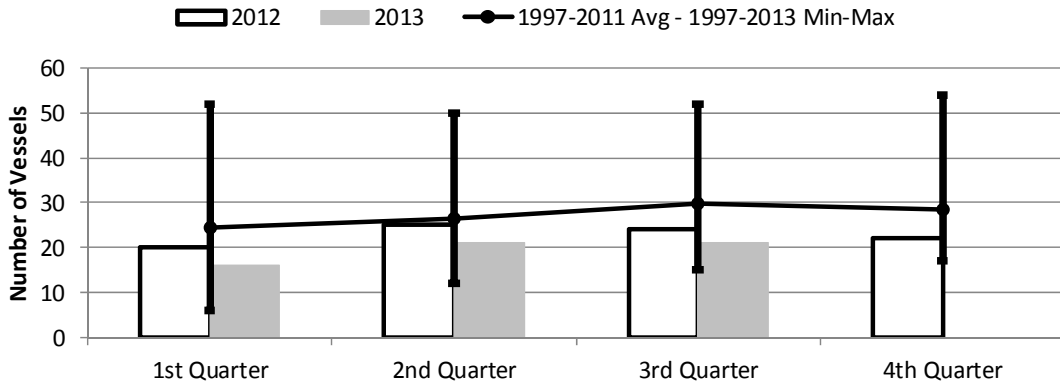
The overall catch per unit of effort (CPUE, number of fish of all species per 1000 hooks) decreased appreciably (28.5%) during the third quarter of 2013, compared with the same quarter of 2012. The fishery caught an average of just 19.7 fish/1000 hooks, as opposed to 27.5 fish/1000 hooks the previous year (Fig. 13). CPUE for yellowfin tuna, mahimahi, and billfishes increased, while CPUE for the most targeted species, albacore, decreased by 33.2% (Fig. 14) and CPUE for the second most targeted species, skipjack tuna, decreased by 55% (Fig. 16). Bigeye tuna CPUE decreased 44.4% (Fig. 15) and wahoo CPUE decreased by 11.8% (Fig. 19), although both of these species are a minor component of the catch. CPUE of yellowfin tuna, being increasingly sold in the local fresh-fish market, increased by 116.7% (Fig. 17), mahimahi CPUE increased by 134.8% (Fig. 18) and CPUE of billfishes increased by 4% (Fig. 20). Shark CPUE decreased by 8.5% (Fig. 21).

¹ PIFSC Data Report DR-14-004
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Table 1. Summary of fish catch and nominal fishing effort by American Samoa Longline vessels during the third quarter of 2013 based on longline logbooks processed as January 7th, 2014.

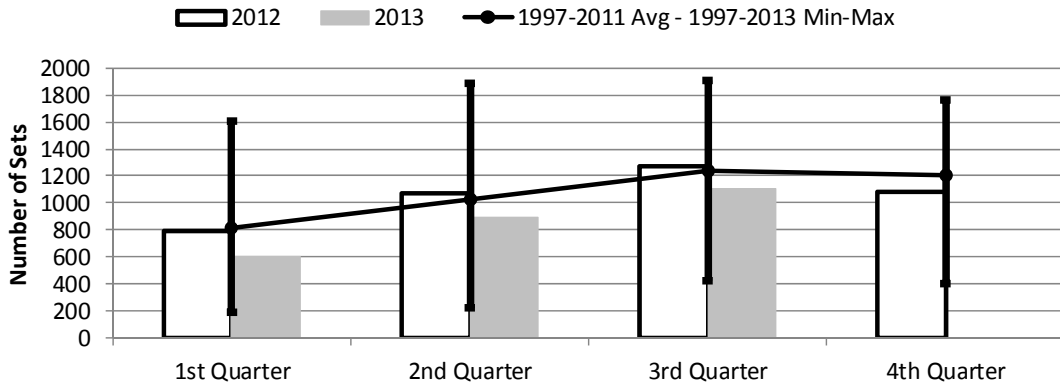
TRIP INFORMATION				
	Number of Vessels:		21	
	Number of Trips:		41	
	Number of Sets:		1,103	
	1000's of Hooks Set:		3,271	
	Number of Light Sticks Used:		2,010	
CATCH INFORMATION				
Species	Number Caught	Number Kept	Number Released	Number Caught per 1000 Hooks
BILLFISH				
Blue marlin	340	88	252	0.10
Striped marlin	59	26	33	0.02
Sailfish	94	17	77	0.03
Spearfish	278	38	240	0.09
Swordfish	90	64	26	0.03
TOTAL BILLFISH	861	233	628	0.26
SHARKS				
Blue shark	847	7	840	0.26
Shortfin mako shark	93	0	93	0.03
Thresher shark	43	0	43	0.01
White tip oceanic shark	216	11	205	0.07
Sharks (unknown)	222	3	219	0.07
TOTAL SHARKS	1,421	21	1,400	0.43
TUNA				
Albacore tuna	42,282	42,158	124	12.92
Bigeye tuna	1,463	1,398	65	0.45
Bluefin tuna	2	2	0	0.00
Skipjack tuna	5,187	4,904	283	1.59
Yellowfin tuna	6,391	6,235	156	1.95
TOTAL TUNA	55,325	54,697	628	16.91
OTHER PELAGICS				
Mahimahi	1,767	1,264	503	0.54
Moonfish	107	33	74	0.03
Oilfish	2,349	16	2,333	0.72
Pomfret	245	32	213	0.07
Wahoo	2,201	1,781	420	0.67
TOTAL OTHER PELAGICS	6,669	3,126	3,543	2.04
NON-PMUS				
Pelagic fishes (unknown)	138	1	137	0.04
TOTAL NON-PMUS	138	1	137	0.04
TOTAL ALL SPECIES	64,414	58,078	6,336	19.69

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



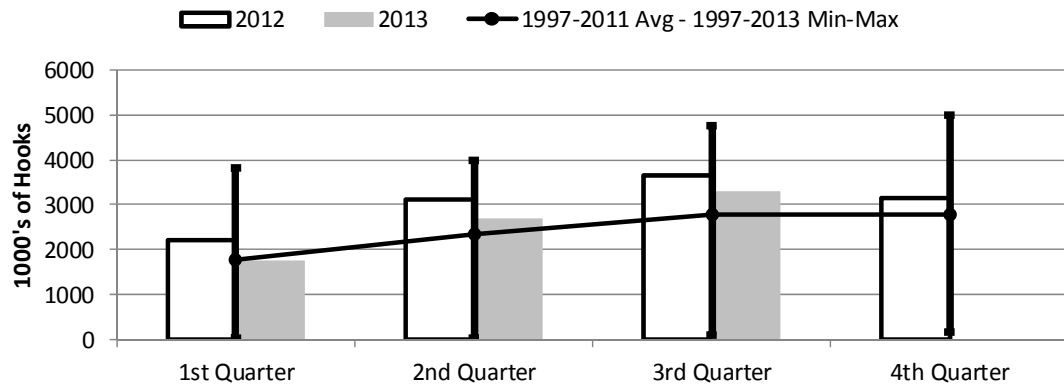
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	16	21	21	0
2012	20	25	24	22
1997-2013 Max	52	50	52	54
1997-2011 Avg	24	26	29	28
1997-2013 Min	6	12	15	17

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



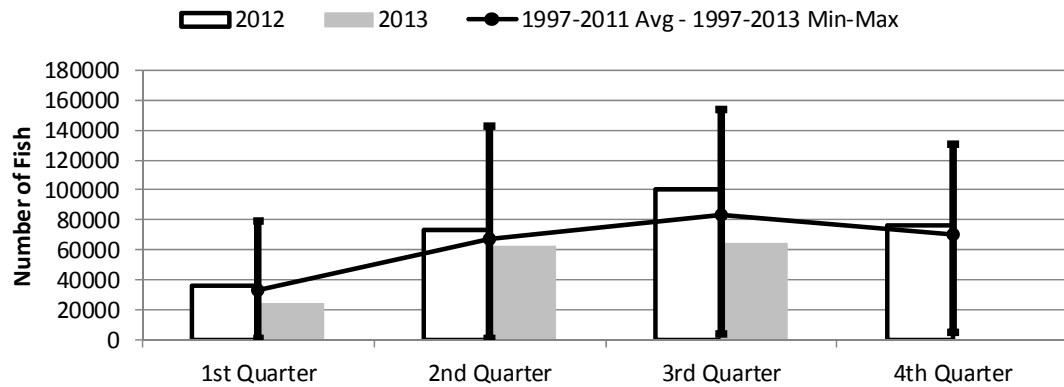
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	598	895	1,103	0
2012	788	1,069	1,273	1,078
1997-2013 Max	1,602	1,886	1,904	1,759
1997-2011 Avg	814	1,030	1,237	1,209
1997-2013 Min	192	223	424	401

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



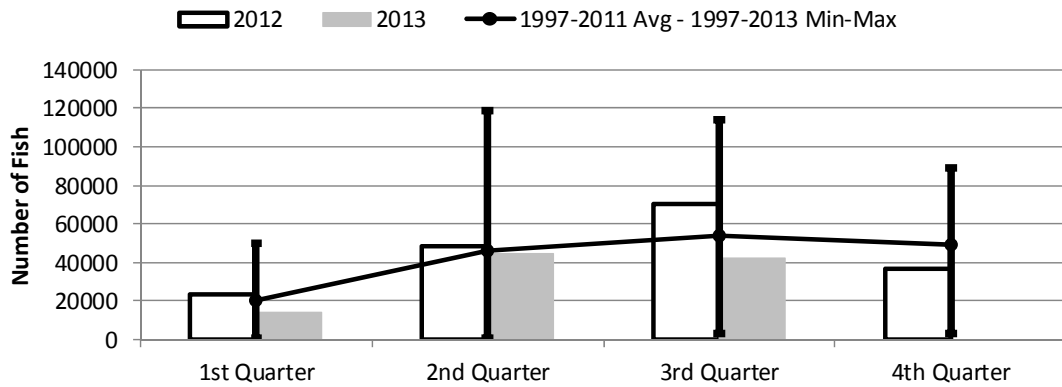
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	1,753	2,663	3,271	0
2012	2,194	3,101	3,656	3,156
1997-2013 Max	3,805	3,995	4,769	4,985
1997-2011 Avg	1,789	2,331	2,766	2,770
1997-2013 Min	41	50	101	175

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



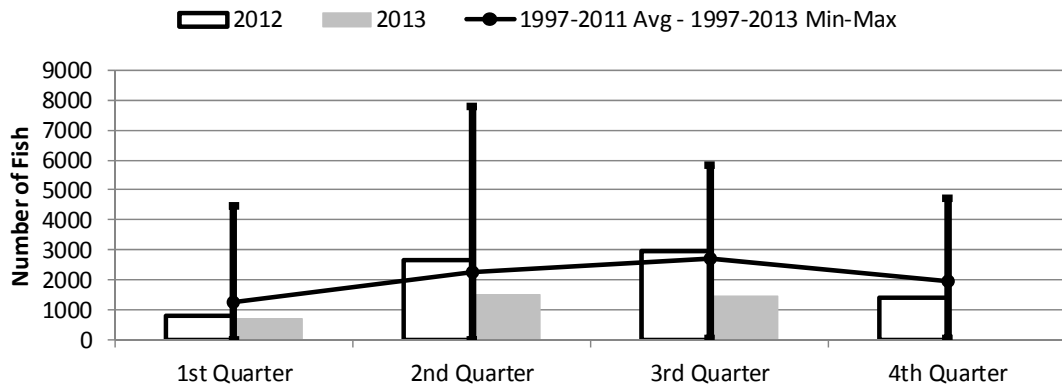
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	24,195	61,813	64,414	0
2012	35,897	73,742	100,599	76,135
1997-2013 Max	79,588	142,603	153,301	130,238
1997-2011 Avg	33,018	66,896	83,147	70,771
1997-2013 Min	1,315	1,416	4,127	5,201

Figure 5. American Samoa Longline Albacore Catch by Quarter for



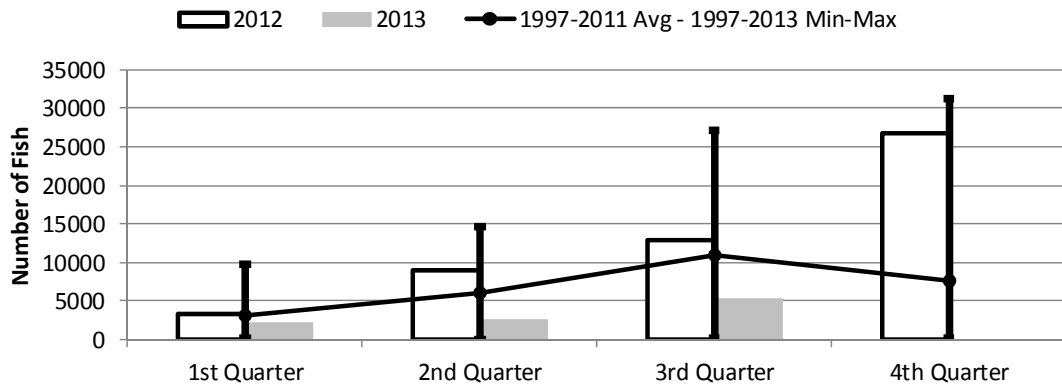
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	14,122	44,706	42,282	0
2012	23,443	48,162	70,665	37,012
1997-2013 Max	50,382	118,994	113,831	89,389
1997-2011 Avg	20,518	46,175	54,038	49,501
1997-2013 Min	940	851	3,182	3,465

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



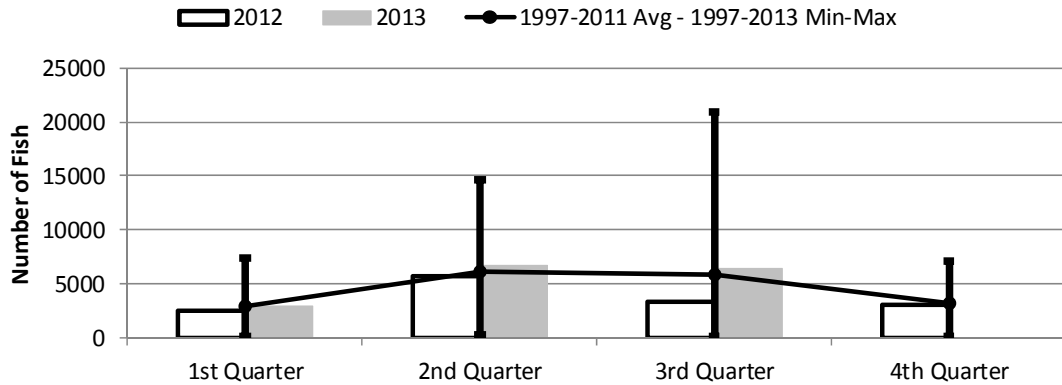
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	690	1,513	1,463	0
2012	800	2,651	2,965	1,410
1997-2013 Max	4,470	7,785	5,824	4,728
1997-2011 Avg	1,267	2,240	2,719	1,956
1997-2013 Min	6	26	55	55

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



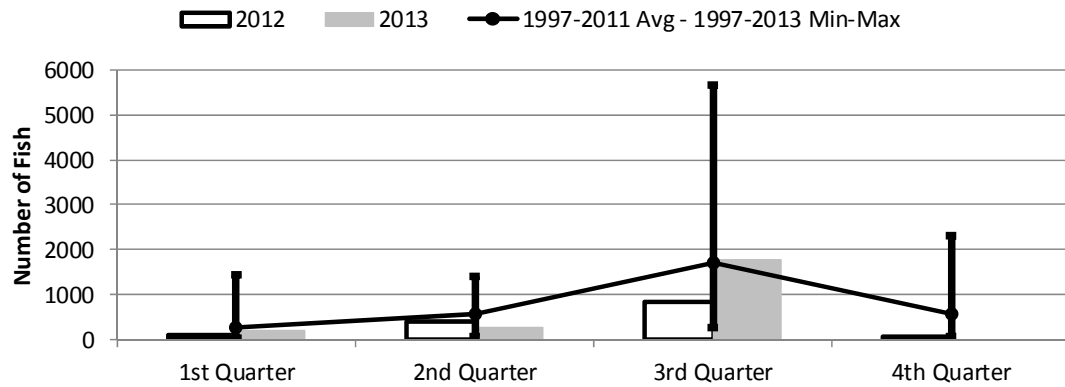
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	2,179	2,459	5,187	0
2012	3,307	9,040	12,894	26,753
1997-2013 Max	9,801	14,606	27,234	31,191
1997-2011 Avg	3,224	6,118	10,978	7,625
1997-2013 Min	116	6	244	178

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



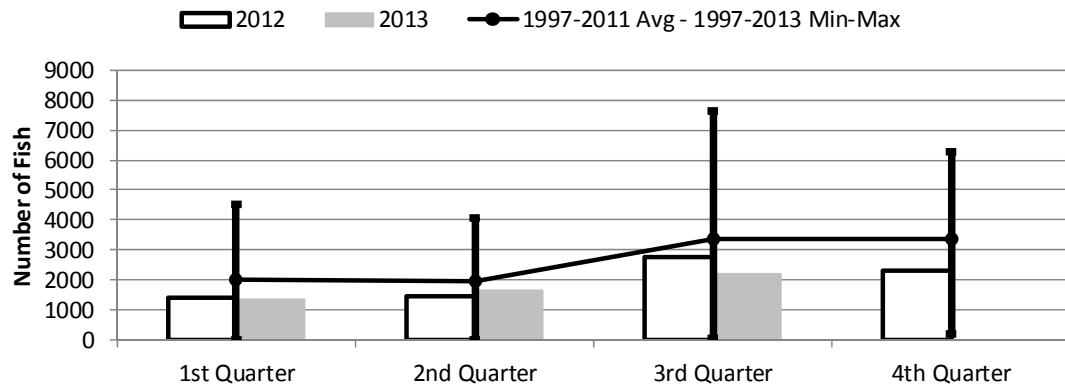
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	2,995	6,688	6,391	0
2012	2,530	5,705	3,300	3,056
1997-2013 Max	7,426	14,681	20,993	7,104
1997-2011 Avg	3,000	6,093	5,922	3,205
1997-2013 Min	213	356	84	177

Figure 9. American Samoa Mahimahi Catch by Quarter for



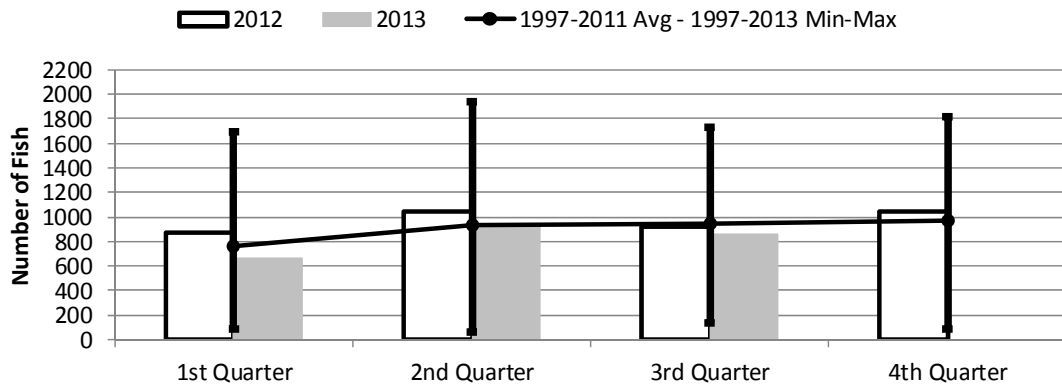
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	188	280	1,767	0
2012	93	417	838	77
1997-2013 Max	1,454	1,392	5,642	2,297
1997-2011 Avg	280	578	1,706	563
1997-2013 Min	30	59	280	77

Figure 10. American Samoa Wahoo Catch by Quarter for



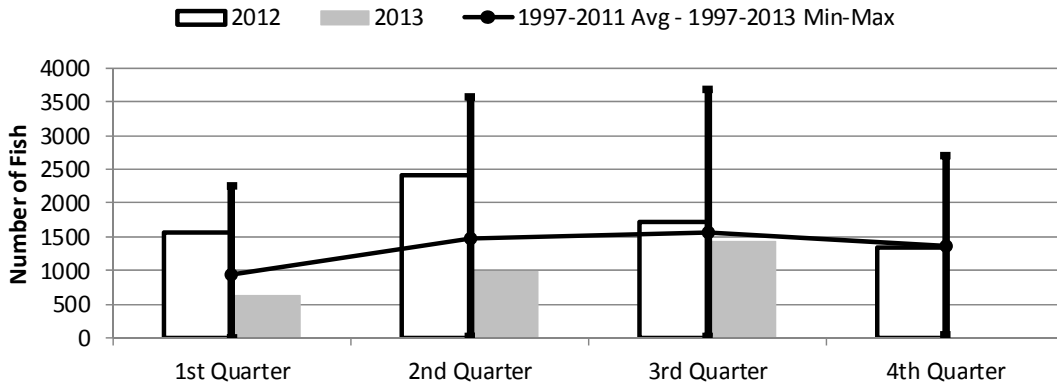
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	1,347	1,671	2,201	0
2012	1,413	1,472	2,768	2,290
1997-2011 Avg	2,018	1,951	3,352	3,349
1997-2013 Max	4,524	4,076	7,629	6,281
1997-2013 Min	27	20	68	210

Figure 11. American Samoa Billfish Catch by Quarter for



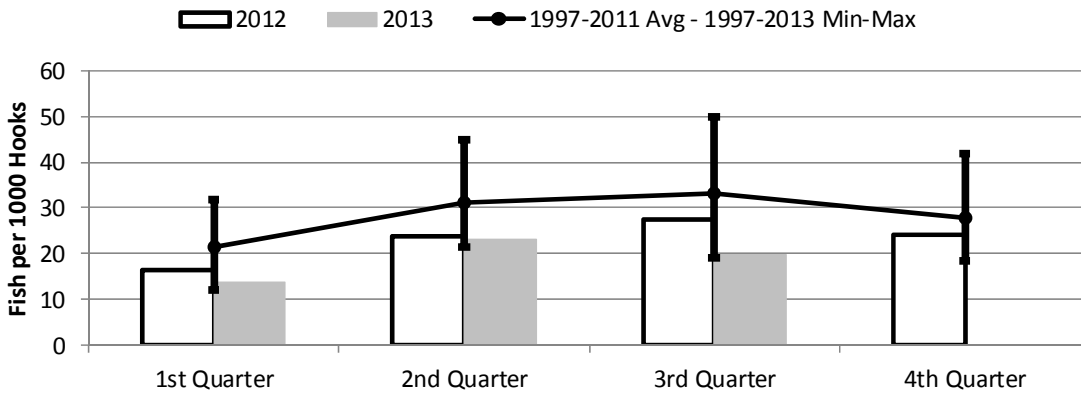
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	669	950	861	0
2012	875	1,045	923	1,043
1997-2013 Max	1,692	1,934	1,729	1,819
1997-2011 Avg	766	931	939	974
1997-2013 Min	83	58	132	84

Figure 12. American Samoa Shark Catch by Quarter for



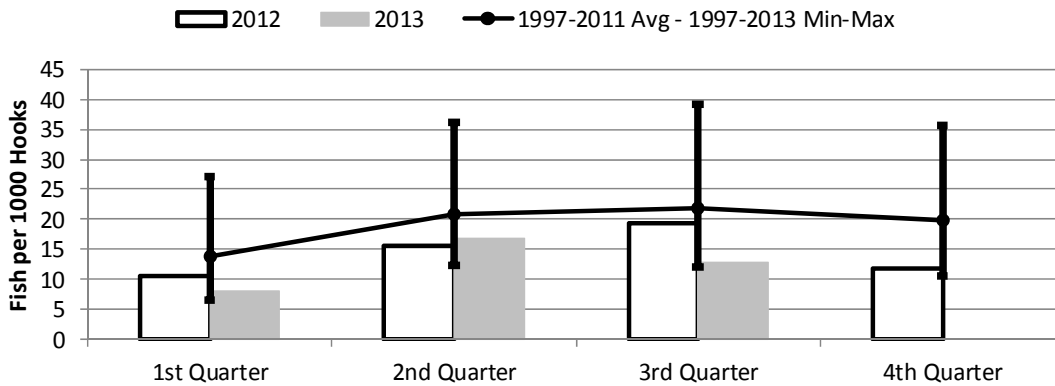
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	635	990	1,421	0
2012	1,565	2,405	1,723	1,349
1997-2013 Max	2,260	3,562	3,686	2,697
1997-2011 Avg	941	1,473	1,562	1,366
1997-2013 Min	5	16	26	49

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



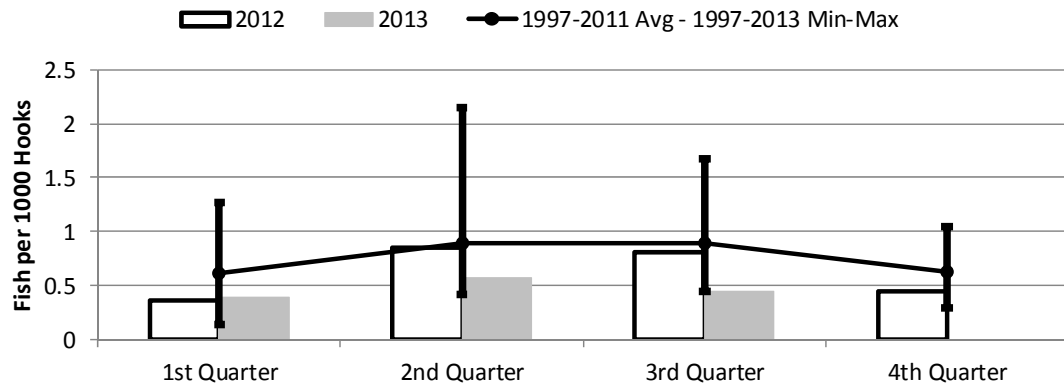
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	13.80	23.21	19.69	0.00
2012	16.36	23.78	27.52	24.12
1997-2013 Max	31.98	44.76	49.87	41.86
1997-2011 Avg	21.38	31.12	33.04	27.85
1997-2013 Min	12.02	21.57	19.20	18.55

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



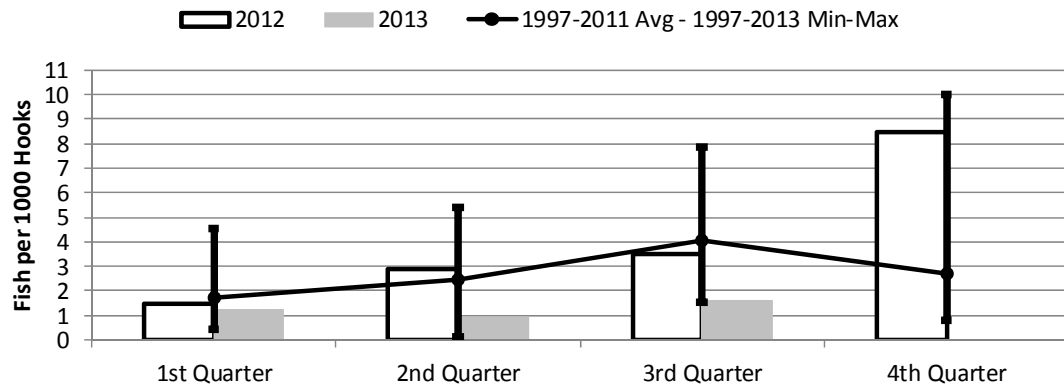
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	8.06	16.79	12.92	0.00
2012	10.68	15.53	19.33	11.72
1997-2013 Max	27.01	36.18	39.13	35.75
1997-2011 Avg	13.71	20.82	21.96	19.96
1997-2013 Min	6.58	12.21	12.14	10.54

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



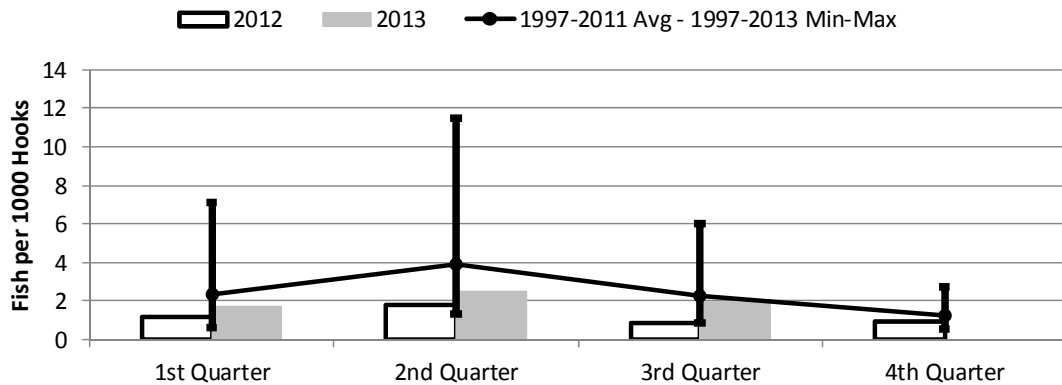
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	0.39	0.57	0.45	0.00
2012	0.36	0.85	0.81	0.45
1997-2013 Max	1.27	2.15	1.68	1.05
1997-2011 Avg	0.62	0.90	0.89	0.63
1997-2013 Min	0.15	0.41	0.45	0.29

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



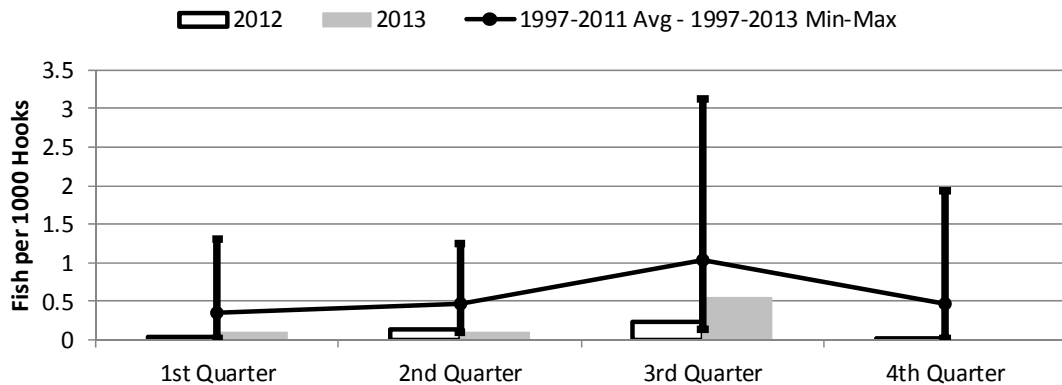
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	1.24	0.92	1.59	0.00
2012	1.51	2.92	3.53	8.47
1997-2013 Max	4.56	5.39	7.84	9.98
1997-2011 Avg	1.71	2.47	4.08	2.72
1997-2013 Min	0.44	0.12	1.56	0.79

Figure 17. American Samoa Yellowfin Tuna Catch per 1000 Hooks by Quarter for



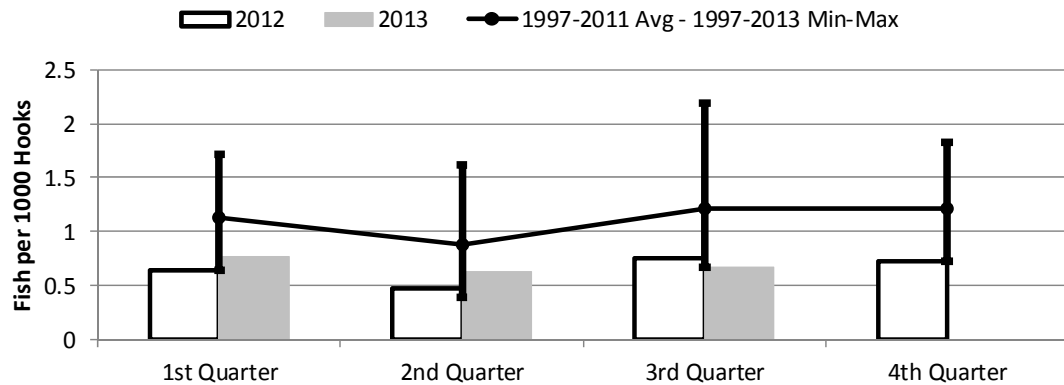
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	1.71	2.51	1.95	0.00
2012	1.15	1.84	0.90	0.97
1997-2013 Max	7.11	11.51	6.04	2.76
1997-2011 Avg	2.31	3.90	2.27	1.24
1997-2013 Min	0.66	1.34	0.83	0.55

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



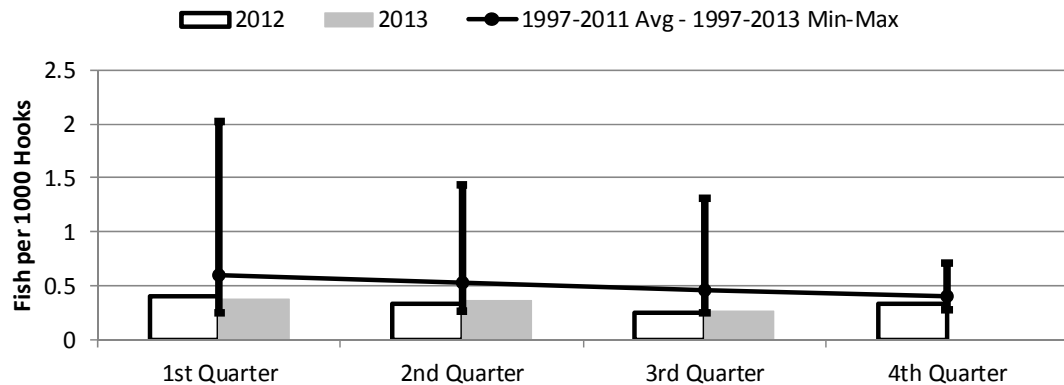
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	0.11	0.11	0.54	0.00
2012	0.04	0.13	0.23	0.02
1997-2013 Max	1.30	1.25	3.13	1.93
1997-2011 Avg	0.35	0.47	1.04	0.47
1997-2013 Min	0.02	0.10	0.14	0.02

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



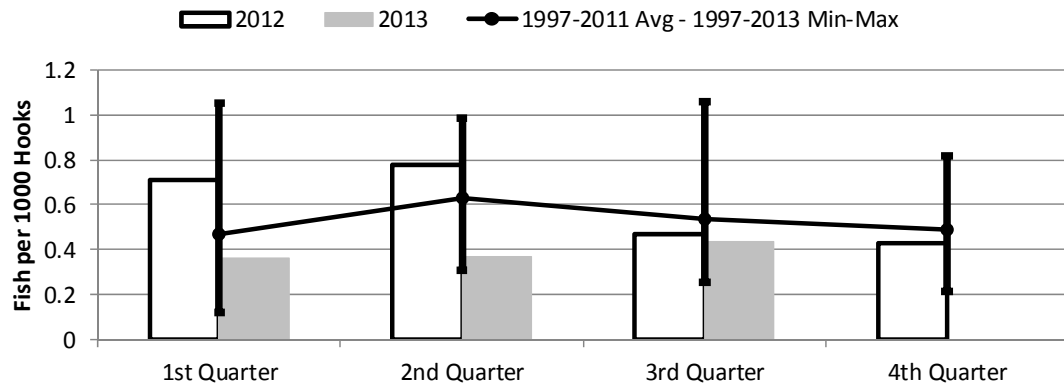
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	0.77	0.63	0.67	0.00
2012	0.64	0.47	0.76	0.73
1997-2013 Max	1.71	1.62	2.20	1.83
1997-2011 Avg	1.13	0.88	1.22	1.22
1997-2013 Min	0.64	0.39	0.67	0.73

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



	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	0.38	0.36	0.26	0.00
2012	0.40	0.34	0.25	0.33
1997-2013 Max	2.02	1.44	1.31	0.71
1997-2011 Avg	0.60	0.53	0.46	0.41
1997-2013 Min	0.25	0.26	0.25	0.28

Figure 21. American Samoa Shark Catch per 1000 Hooks by Quarter for



	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	0.36	0.37	0.43	0.00
2012	0.71	0.78	0.47	0.43
1997-2013 Max	1.05	0.99	1.06	0.82
1997-2011 Avg	0.47	0.63	0.53	0.49
1997-2013 Min	0.12	0.31	0.26	0.22