

## PIFSC Report on the Logbook Program for the American Samoa Longline Fishery April – June 2013<sup>1</sup>

Fisheries Research and Monitoring Division  
Pacific Islands Fisheries Science Center

The American Samoa longline fishery continues to experience challenging conditions. Catch of the primary target species, albacore tuna has remained at a fairly low level in comparison with long term averages. Catches of many other marketable species were also relatively low during the second quarter of 2013, as they were throughout 2012. However, increasing catches of low-volume-higher-priced species, yellowfin tuna and wahoo, may indicate an adaptation of the fishery to supply local demand through local fresh-fish markets.

Table 1 provides a summary of the fishery's catch and effort statistics for the second quarter of 2013, based on date of haul. The table was derived from all logbook data submitted to the American Samoa Department of Marine and Wildlife Resources by the second quarter posting date (September 25, 2013). We believe the data in Table 1 include 100% of the sets made during the second quarter. Only large (>50 ft in length) longline vessels participated in the fishery.

The American Samoa longline fleet reported less fishing effort during the second quarter of 2013 than in the same quarter of 2012. There were only 21 active vessels, 16% less than during the second quarter of 2012 (Fig. 1). These 21 vessels made 895 sets and deployed 2,663,231 hooks, which was 16.3% fewer sets (Fig. 2) and 14.1% fewer hooks (Fig. 3) than recorded in the same quarter of 2012. However, the ratio of hooks per set was slightly higher than in the previous year, increasing 2.6%, from an average of 2,900 hooks per set in 2012 to 2,975 hooks per set in 2013.

With the exception of yellowfin tuna and wahoo, the number of fish caught decreased for all species individually and as a whole in comparison with the second quarter of 2012. A total of 61,813 fish were caught (all species combined), which was 16.2% less than during the second quarter of 2012 (Fig. 4). The main target species, albacore tuna, dominated the catch as usual (72.3%). The 44,706 fish caught during the second quarter of 2013 represents a 7.2% decrease from the 48,162 albacore caught in the second quarter of 2012 (Fig. 5). Other species and groups showing decreased catch in the second quarter of 2013 include: skipjack tuna (down 72.8%, Fig. 7), bigeye tuna (42.9%, Fig. 6), mahimahi (32.9%, Fig. 9) and billfishes (9%, Fig. 11). The decrease in shark catch (down by 58.8%, Fig. 12), is appreciated by the fishermen since shark catch is a nuisance and is discouraged by NMFS. Other positive events for this fishery during the second quarter of 2013 included increases in landings of yellowfin tuna (up 17.2%, Fig. 8), and wahoo (up 13.5%, Fig. 10).

The overall catch per unit of effort (CPUE, total number of fish of all species per 1000 hooks) decreased slightly (2.4%) during the second quarter of 2013, compared with the same quarter of 2012. The fishery caught an average of 23.2 fish/1000 hooks, as opposed to 23.8 fish/1000 hooks the previous year (Fig. 13). CPUE for albacore, yellowfin tuna, wahoo and billfishes increased, while CPUE for skipjack tuna, bigeye tuna and mahimahi decreased. CPUE of the primary target species, albacore tuna, increased 8.1% (Fig. 14); while CPUE of the secondary target, skipjack tuna, decreased significantly (68.5%, Fig. 16). Bigeye tuna CPUE also decreased 32.9% (Fig. 15). However, CPUE for yellowfin tuna preferred (higher priced) in the local fresh-fish markets, increased 36.4% (Fig. 17). CPUE for mahimahi decreased 15.4% (Fig. 18), but this species represents a very small component of the catch. CPUE for wahoo and billfishes increased 34% and 5.9%, respectively (Figures 19-20). Shark CPUE decreased (down 52.6%, Fig. 21), as the fishery sought to avoid this non-targeted catch.

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<sup>1</sup> PIFSC Data Report DR-14-002  
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**Table1. Summary of fish catch and nominal fishing effort by American Samoa Longline vessels during the second quarter of 2013 based on longline logbooks processed as October 29, 2013.**

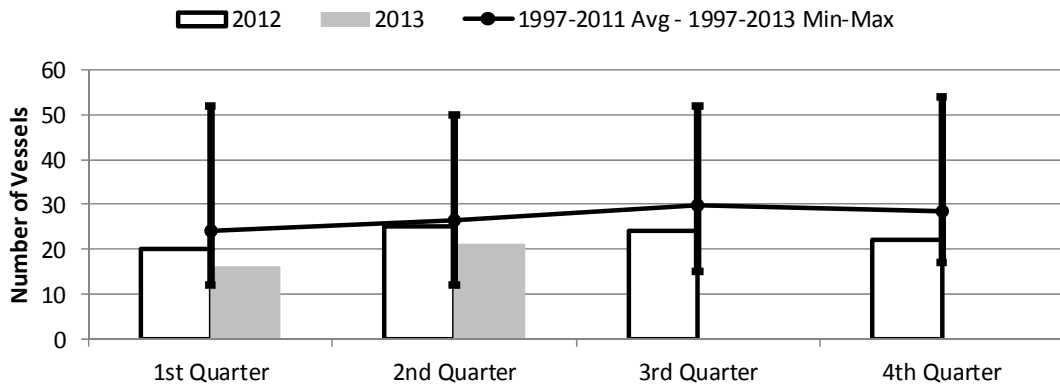
**TRIP INFORMATION**

Number of Vessels:	21
Number of Trips:	36
Number of Sets:	895
1000's of Hooks Set:	2,663
Number of Light Sticks Used:	821

**CATCH INFORMATION**

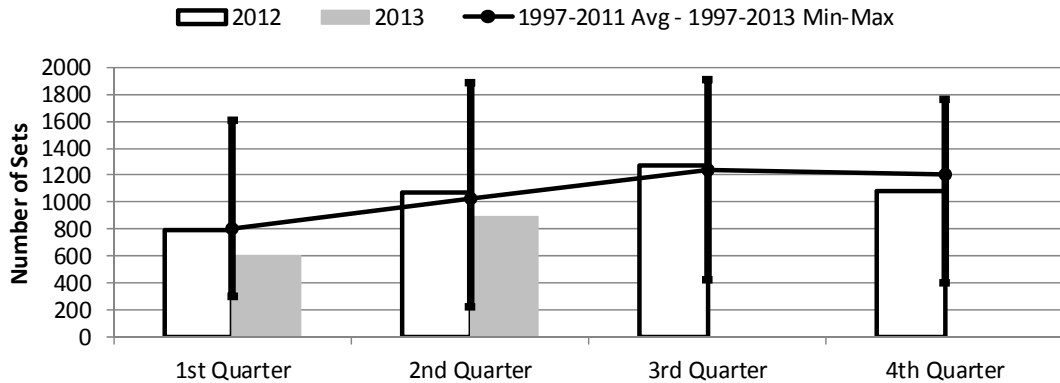
<b>Species</b>	<b>Number Caught</b>	<b>Number Kept</b>	<b>Number Released</b>	<b>Number Caught per 1000 Hooks</b>
<b>BILLFISH</b>				
Black marlin	11	3	8	0.00
Blue marlin	366	125	241	0.14
Striped marlin	113	33	80	0.04
Sailfish	110	16	94	0.04
Spearfish	291	13	278	0.11
Swordfish	59	33	26	0.02
<b>TOTAL BILLFISH</b>	<b>950</b>	<b>223</b>	<b>727</b>	<b>0.36</b>
<b>SHARKS</b>				
Blue shark	504	4	500	0.19
Shortfin mako shark	86	0	86	0.03
Thresher shark	60	0	60	0.02
White tip oceanic shark	130	0	130	0.05
Sharks (unknown)	210	1	209	0.08
<b>TOTAL SHARKS</b>	<b>990</b>	<b>5</b>	<b>985</b>	<b>0.37</b>
<b>TUNA</b>				
Albacore tuna	44,706	44,584	122	16.79
Bigeye tuna	1,513	1,467	46	0.57
Skipjack tuna	2,459	2,435	24	0.92
Yellowfin tuna	6,688	6,639	49	2.51
<b>TOTAL TUNA</b>	<b>55,366</b>	<b>55,125</b>	<b>241</b>	<b>20.79</b>
<b>OTHER PELAGICS</b>				
Mahimahi	280	206	74	0.11
Moonfish	69	20	49	0.03
Oilfish	1,623	4	1,619	0.61
Pomfret	327	28	299	0.12
Wahoo	1,671	1,130	541	0.63
<b>TOTAL OTHER PELAGICS</b>	<b>3,970</b>	<b>1,388</b>	<b>2,582</b>	<b>1.49</b>
<b>NON-PMUS</b>				
Pelagic fishes (unknown)	537	0	537	0.20
<b>TOTAL NON-PMUS</b>	<b>537</b>	<b>0</b>	<b>537</b>	<b>0.20</b>
<b>TOTAL ALL SPECIES</b>	<b>61,813</b>	<b>56,741</b>	<b>5,072</b>	<b>23.21</b>

**Figure1. American Samoa Longline Vessels Submitting Logs by Quarter for**



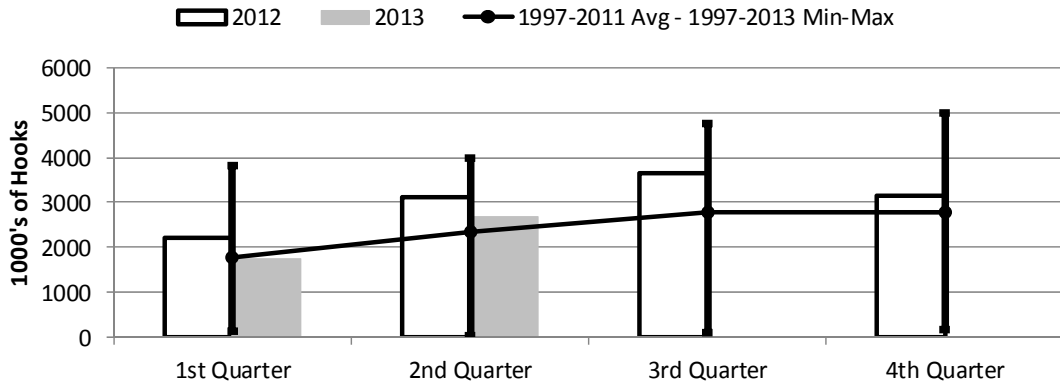
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	16	21	0	0
2012	20	25	24	22
1997-2013 Max	52	50	52	54
1997-2011 Avg	24	26	29	28
1997-2013 Min	12	12	15	17

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



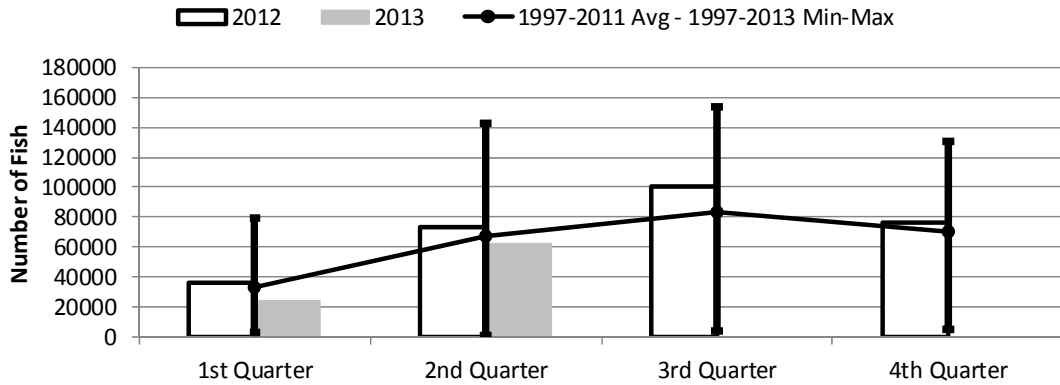
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	598	895	0	0
2012	788	1,069	1,273	1,078
1997-2013 Max	1,602	1,886	1,904	1,759
1997-2011 Avg	802	1,030	1,237	1,209
1997-2013 Min	297	223	424	401

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



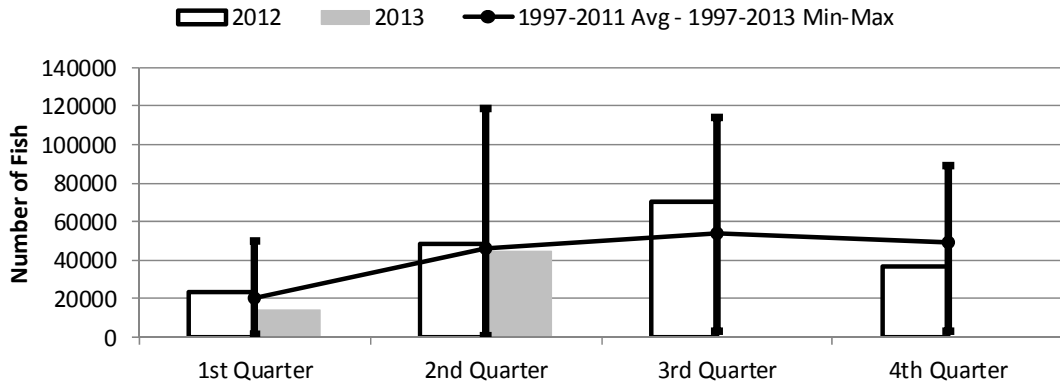
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	1,753	2,663	0	0
2012	2,194	3,101	3,656	3,156
1997-2013 Max	3,805	3,995	4,769	4,985
1997-2011 Avg	1,786	2,331	2,766	2,770
1997-2013 Min	147	50	101	175

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



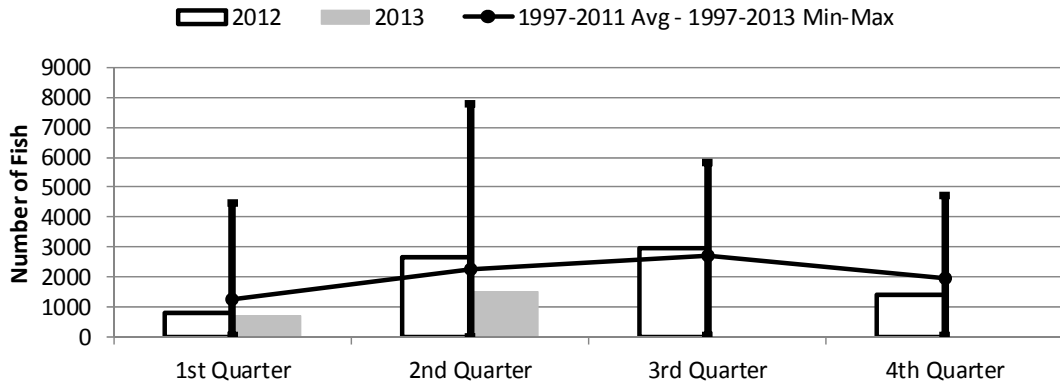
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	24,195	61,813	0	0
2012	35,897	73,742	100,599	76,135
1997-2013 Max	79,588	142,603	153,301	130,238
1997-2011 Avg	32,930	66,896	83,147	70,771
1997-2013 Min	2,950	1,416	4,127	5,201

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



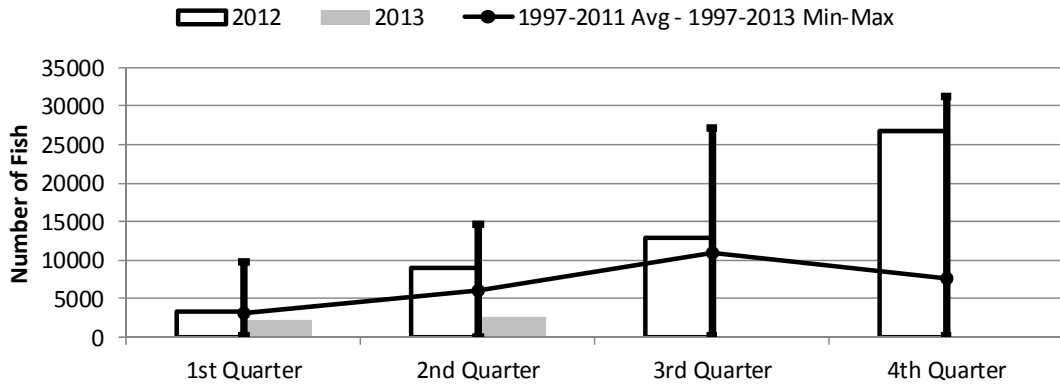
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	14,122	44,706	0	0
2012	23,443	48,162	70,665	37,012
1997-2013 Max	50,382	118,994	113,831	89,389
1997-2011 Avg	20,455	46,175	54,038	49,501
1997-2013 Min	1,732	851	3,182	3,465

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



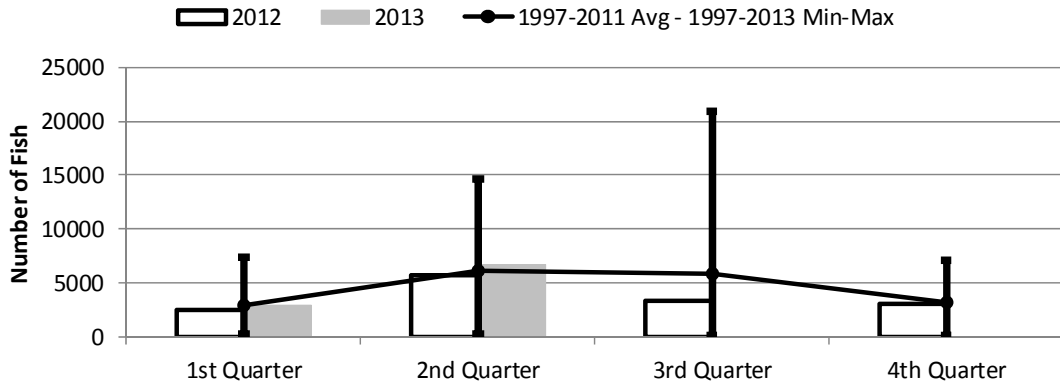
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	690	1,513	0	0
2012	800	2,651	2,965	1,410
1997-2013 Max	4,470	7,785	5,824	4,728
1997-2011 Avg	1,266	2,240	2,719	1,956
1997-2013 Min	48	26	55	55

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



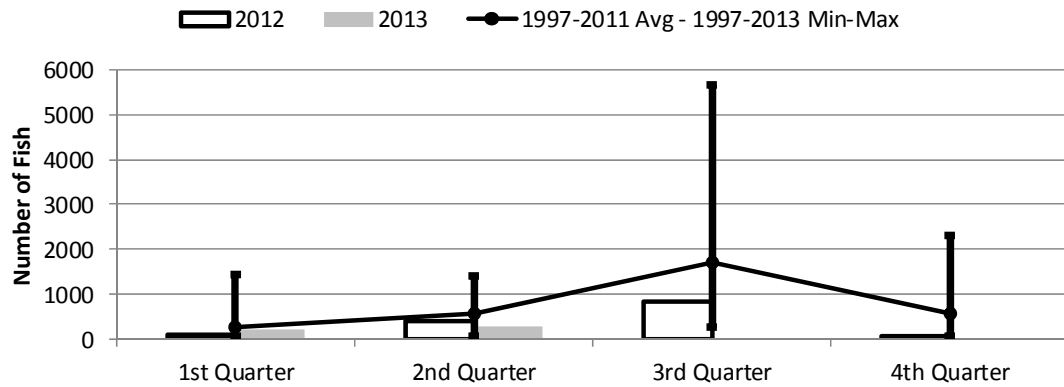
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	2,179	2,459	0	0
2012	3,307	9,040	12,894	26,753
1997-2013 Max	9,801	14,606	27,234	31,191
1997-2011 Avg	3,224	6,118	10,978	7,625
1997-2013 Min	116	6	244	178

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



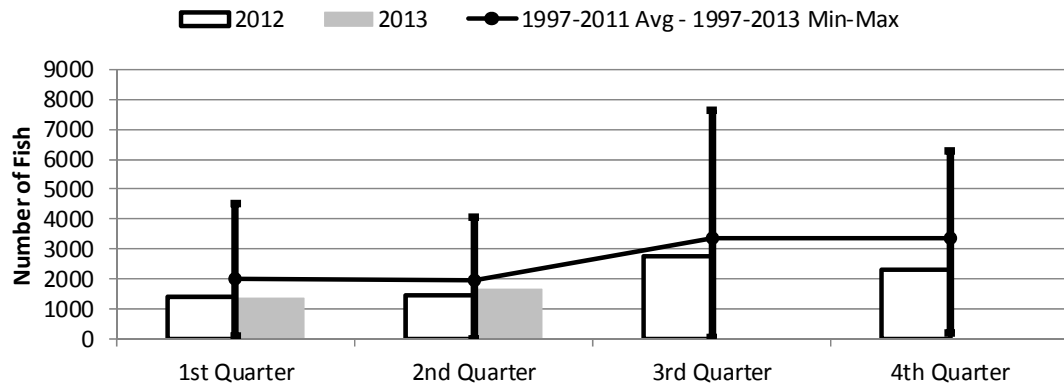
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	2,995	6,688	0	0
2012	2,530	5,705	3,300	3,056
1997-2013 Max	7,426	14,681	20,993	7,104
1997-2011 Avg	2,986	6,093	5,922	3,205
1997-2013 Min	322	356	84	177

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



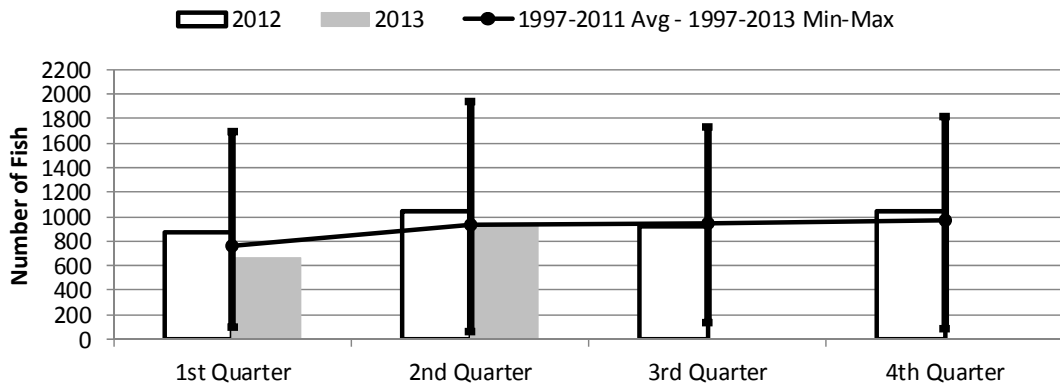
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	188	280	0	0
2012	93	417	838	77
1997-2013 Max	1,454	1,392	5,642	2,297
1997-2011 Avg	278	578	1,706	563
1997-2013 Min	55	59	280	77

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



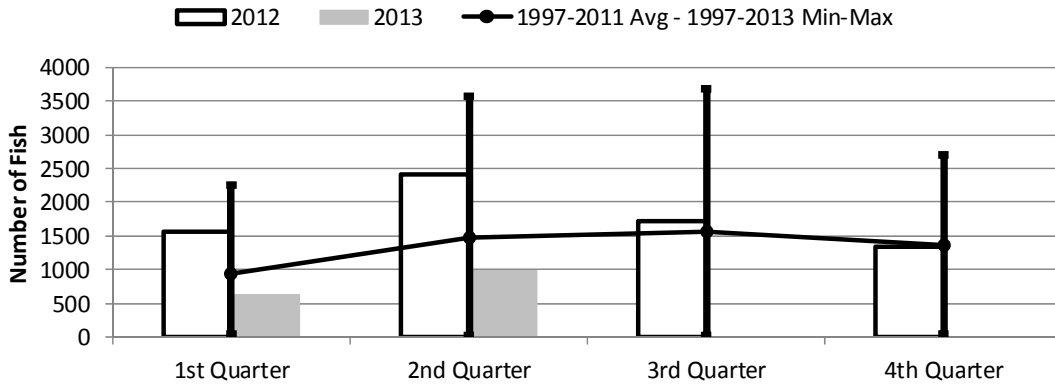
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	1,347	1,671	0	0
2012	1,413	1,472	2,768	2,290
1997-2013 Max	4,524	4,076	7,629	6,281
1997-2011 Avg	2,016	1,951	3,352	3,349
1997-2013 Min	123	20	68	210

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



	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	669	950	0	0
2012	875	1,045	923	1,043
1997-2013 Max	1,692	1,934	1,729	1,819
1997-2011 Avg	761	931	939	974
1997-2013 Min	101	58	132	84

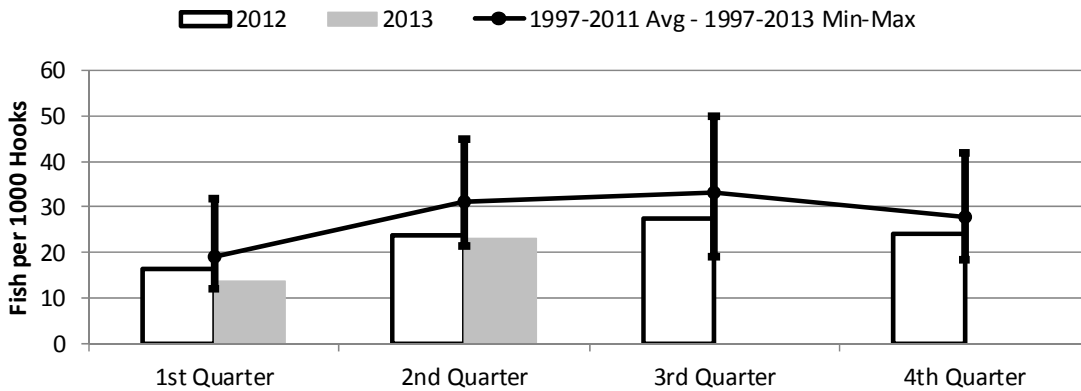
**Figure 12. American Samoa Shark Catch by Quarter for**



	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	635	990	0	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	42	16	26	49

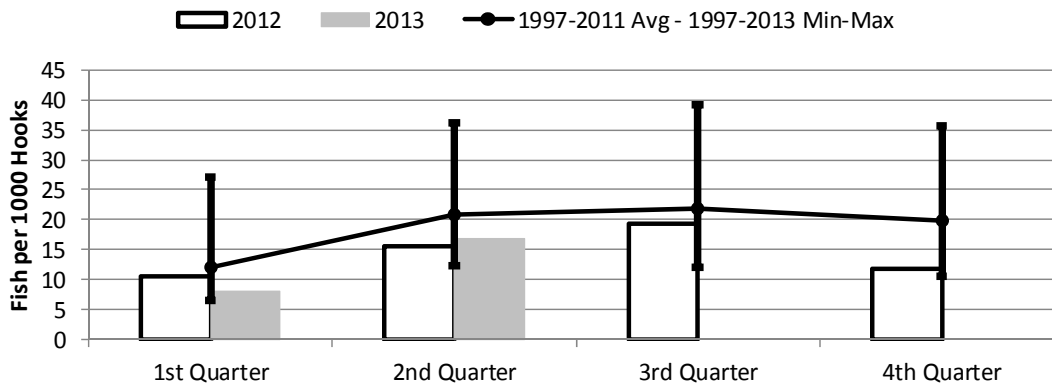


Figure 13. American Samoa Longline Total Catch per 1000 Hooks by Quarter for



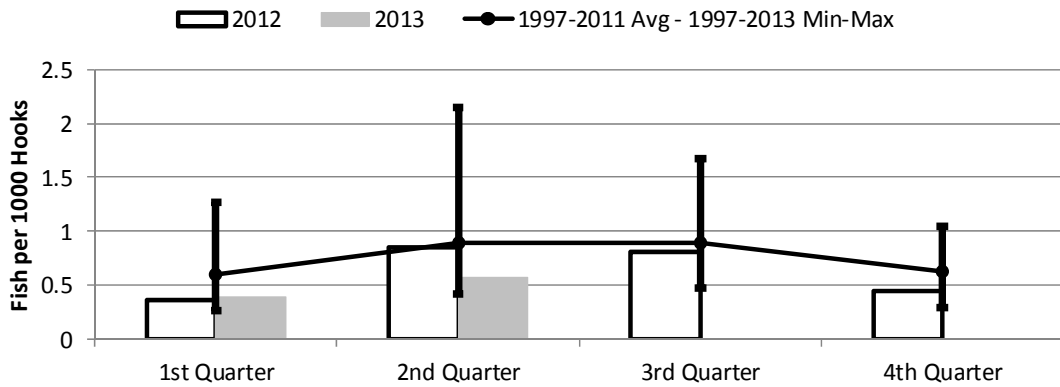
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	13.80	23.21	0.00	0.00
2012	16.36	23.78	27.52	24.12
1997-2013 Max	31.72	44.76	49.87	41.86
1997-2011 Avg	19.25	31.12	33.04	27.85
1997-2013 Min	12.02	21.57	19.20	18.55

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



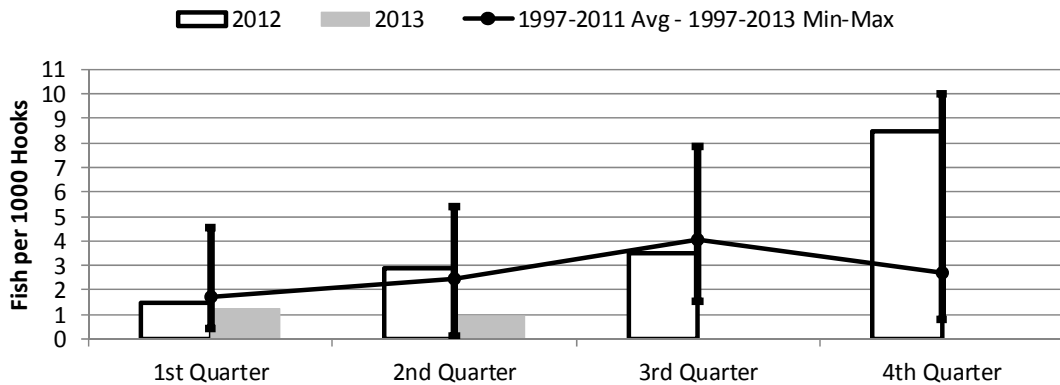
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	8.06	16.79	0.00	0.00
2012	10.68	15.53	19.33	11.72
1997-2013 Max	27.01	36.18	39.13	35.75
1997-2011 Avg	12.19	20.82	21.96	19.96
1997-2013 Min	6.58	12.21	12.14	10.54

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



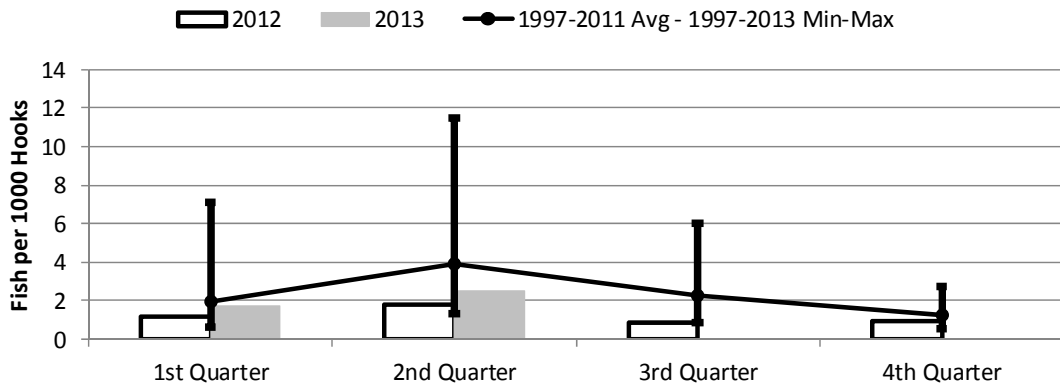
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	0.39	0.57	0.00	0.00
2012	0.36	0.85	0.81	0.45
1997-2013 Max	1.27	2.15	1.68	1.05
1997-2011 Avg	0.61	0.90	0.89	0.63
1997-2013 Min	0.26	0.41	0.48	0.29

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



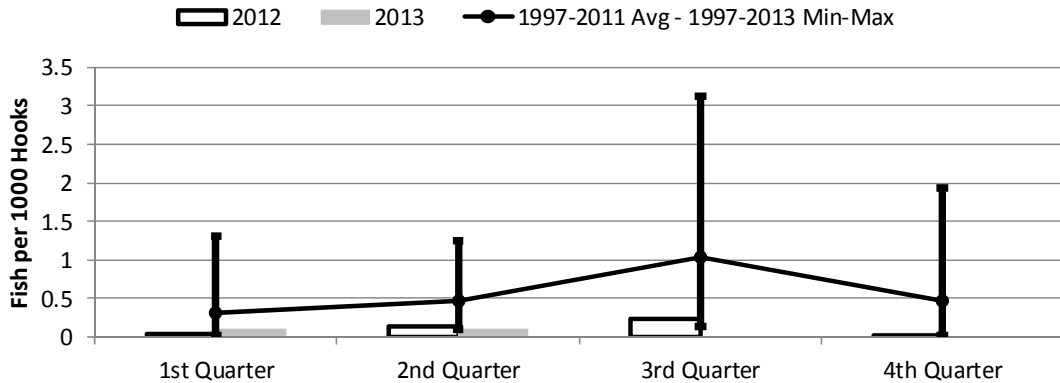
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	1.24	0.92	0.00	0.00
2012	1.51	2.92	3.53	8.47
1997-2013 Max	4.56	5.39	7.84	9.98
1997-2011 Avg	1.71	2.47	4.08	2.72
1997-2013 Min	0.44	0.12	1.56	0.79

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



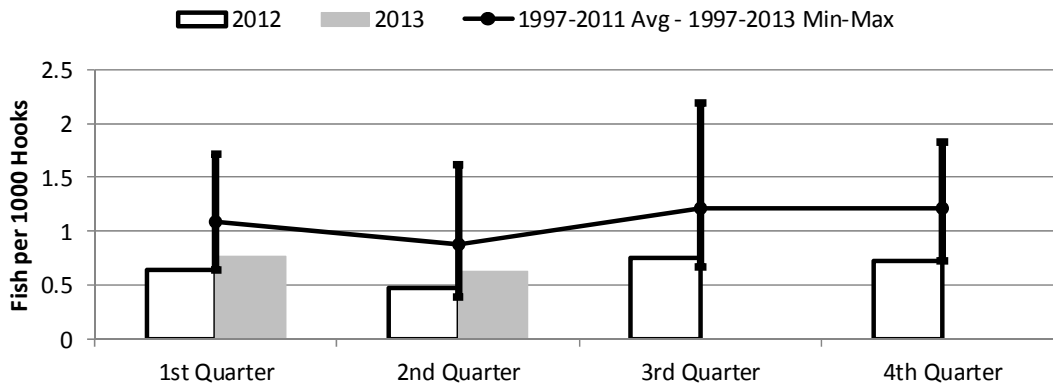
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	1.71	2.51	0.00	0.00
2012	1.15	1.84	0.90	0.97
1997-2013 Max	7.11	11.51	6.04	2.76
1997-2011 Avg	1.97	3.90	2.27	1.24
1997-2013 Min	0.66	1.34	0.83	0.55

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



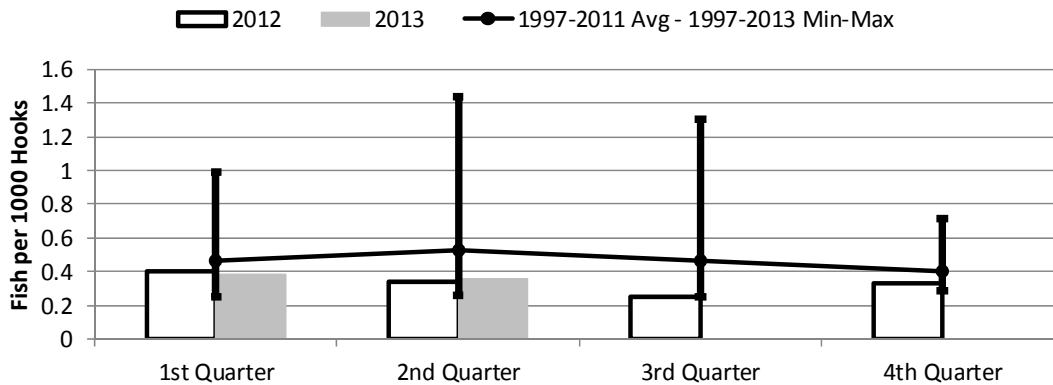
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	0.11	0.11	0.00	0.00
2012	0.04	0.13	0.23	0.02
1997-2013 Max	1.30	1.25	3.13	1.93
1997-2011 Avg	0.30	0.47	1.04	0.47
1997-2013 Min	0.02	0.10	0.14	0.02

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



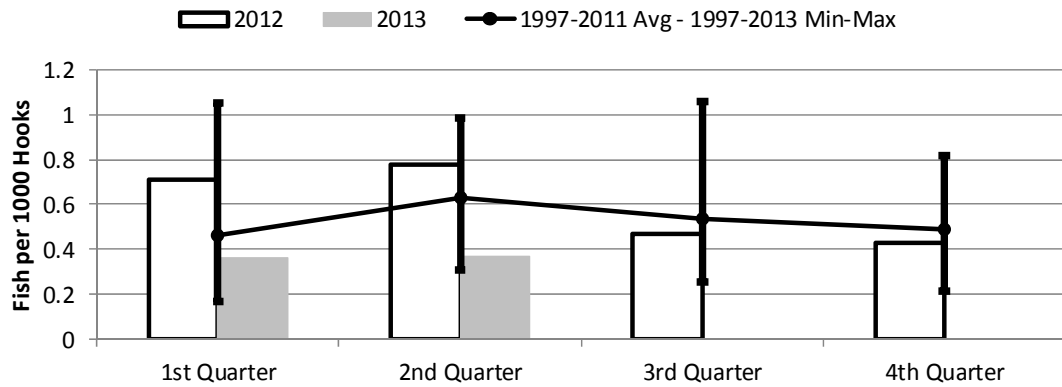
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	0.77	0.63	0.00	0.00
2012	0.64	0.47	0.76	0.73
1997-2013 Max	1.71	1.62	2.20	1.83
1997-2011 Avg	1.09	0.88	1.22	1.22
1997-2013 Min	0.64	0.39	0.67	0.73

**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	0.00	0.00
2012	0.40	0.34	0.25	0.33
1997-2013 Max	0.99	1.44	1.31	0.71
1997-2011 Avg	0.47	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	0.00	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	0.46	0.63	0.53	0.49
1997-2013 Min	0.17	0.31	0.26	0.22