

# PIFSC Report on the Logbook Program for the American Samoa Longline Fishery January – March 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 levels in comparison with long term averages. Catches of many other marketable species also remained relatively low during the first quarter of 2013, as they were throughout the previous year. However, increasing catches of low-volume-higher-priced species, such as mahimahi and yellowfin tuna, may indicate an adaptation of the fishery to supply local demand through local fresh-fish markets.

A summary of the fishery's catch and effort statistics for the first 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 the first quarter posting date (June 25, 2013). We believe that Table 1 reflects data from 100% of sets made during this quarter by all longline vessels. Only large (>50ft in length) vessels participated in the fishery.

The American Samoa longline fleet reported about a fifth less fishing effort during the first quarter of 2013 than in the same quarter of 2012. There were only 16 active vessels, 20% less than during the first quarter of 2012 (Fig. 1). These 16 vessels made 598 sets and deployed 1,753,178 hooks, which was 24.1% fewer sets (Fig. 2) and 20.1% fewer hooks (Fig. 3) than recorded during the same quarter of 2012. However, the ratio of hooks per set was higher, increasing 5.3%, from an average of 2,784 hooks per set in 2012, to 2,931 hooks per set in 2013. Annual increases in hooks per set is common in longline fisheries attempting to improve catch per day of operation.

With the exception of yellowfin tuna and mahimahi, the number of fish caught decreased for all species individually and as a whole in comparison with the first quarter of 2012. A total of 24,195 fish were caught (all species combined), which was 32.6% less than during the first quarter of 2012 (Fig. 4). Although the main target species, albacore tuna, dominated the catch as usual (58.4%), the 14,122 fish caught during the first quarter of 2013 is 39.8% less than the 23,443 albacore caught during the same quarter of 2012 (Fig. 5). Other species and groups showing decreased catch during the first quarter of 2013 include skipjack tuna (34.1%, Fig. 7), bigeye tuna (13.8%, Fig. 6), wahoo (4.7%, Fig. 10), and billfishes (20.6%, Fig. 11). The shark catch also decreased (down by 59.4%, Fig. 12). Catches of yellowfin tuna (up 18.4%, Fig. 8) and mahimahi (up by 102.2%, Fig. 9) increased compared to values in the first quarter of 2012.

The overall catch per unit of effort (CPUE, total number of fish of all species per 1000 hooks) decreased (15.5%) during the first quarter of 2013, compared with the same quarter of 2012. The fishery caught an average of just 13.8 fish/1000 hooks, as opposed to 16.3 fish/1000 hooks the previous year (Fig. 13). CPUE for bigeye tuna, yellowfin tuna, mahimahi, wahoo and billfishes increased, while CPUE for the two most targeted species decreased. For albacore CPUE decreased by 24.5% (Fig. 14) and for skipjack tuna CPUE decreased by 17.9% (Fig. 16). Bigeye tuna CPUE increased 8.3% (Fig. 15), and CPUE for yellowfin tuna, which may increasingly be supplying local fresh-fish markets, increased 48.7% (Fig. 17). For another such species, mahimahi, CPUE increased by 175% (Fig. 18), but this species represents a very small component of the catch. On another positive note, CPUE for wahoo increased 20.3%, while billfish CPUE remained the same (Figures 19-20). Shark CPUE also decreased (49.3%, Fig. 21), which is appreciated by the fishermen since shark catch is a nuisance and is discouraged by NMFS.

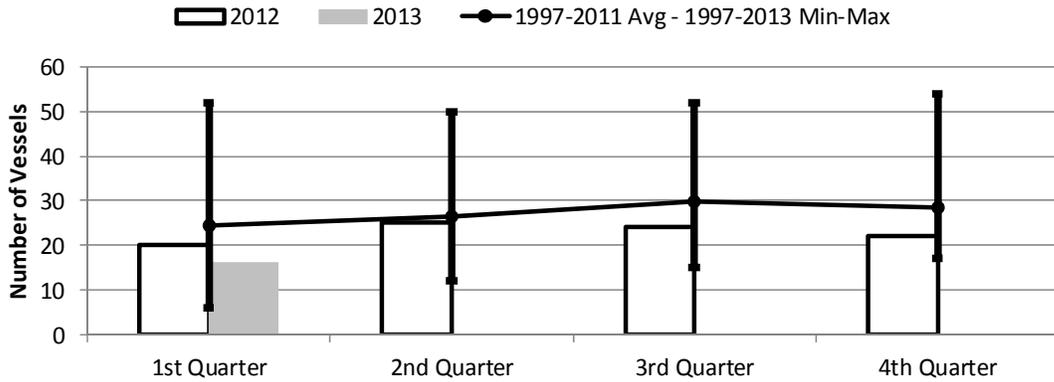
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<sup>1</sup> PIFSC Data Report DR-14-001  
Issued 11 April 2014

**Table 1. Summary of fish catch and nominal fishing effort by American Samoa Longline vessels during the first quarter of 2013 based on longline logbooks processed as of June 19, 2013.**

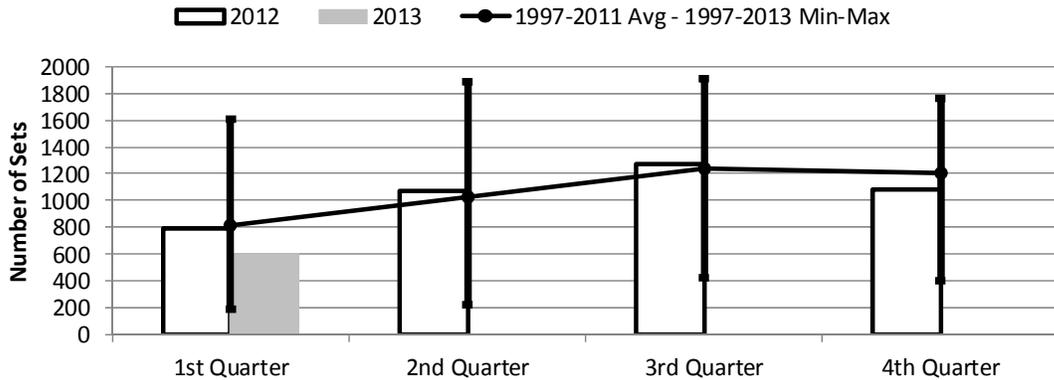
<b>TRIP INFORMATION</b>				
	Number of Vessels:		16	
	Number of Trips:		25	
	Number of Sets:		598	
	1000's of Hooks Set:		1,753	
	Number of Light Sticks Used:		2	
<b>CATCH INFORMATION</b>				
<b>Species</b>	<b>Number Caught</b>	<b>Number Kept</b>	<b>Number Released</b>	<b>Number Caught per 1000 Hooks</b>
<b>BILLFISH</b>				
Blue marlin	313	96	217	0.18
Striped marlin	43	13	30	0.02
Sailfish	49	3	46	0.03
Spearfish	210	0	210	0.12
Swordfish	54	29	25	0.03
<b>TOTAL BILLFISH</b>	<b>669</b>	<b>141</b>	<b>528</b>	<b>0.38</b>
<b>SHARKS</b>				
Blue shark	378	12	366	0.22
Shortfin mako shark	25	0	25	0.01
Thresher shark	46	0	46	0.03
White tip oceanic shark	147	1	146	0.08
Sharks (unknown)	39	0	39	0.02
<b>TOTAL SHARKS</b>	<b>635</b>	<b>13</b>	<b>622</b>	<b>0.36</b>
<b>TUNA</b>				
Albacore tuna	14,122	14,052	70	8.06
Bigeye tuna	690	676	14	0.39
Bluefin tuna	6	6	0	0.00
Skipjack tuna	2,179	2,118	61	1.24
Yellowfin tuna	2,995	2,974	21	1.71
<b>TOTAL TUNA</b>	<b>19,992</b>	<b>19,826</b>	<b>166</b>	<b>11.40</b>
<b>OTHER PELAGICS</b>				
Mahimahi	188	181	7	0.11
Moonfish	103	14	89	0.06
Oilfish	906	1	905	0.52
Pomfret	127	1	126	0.07
Wahoo	1,347	1,113	234	0.77
<b>TOTAL OTHER PELAGICS</b>	<b>2,671</b>	<b>1,310</b>	<b>1,361</b>	<b>1.52</b>
<b>NON-PMUS</b>				
Pelagic fishes (unknown)	228	2	226	0.13
<b>TOTAL NON-PMUS</b>	<b>228</b>	<b>2</b>	<b>226</b>	<b>0.13</b>
<b>TOTAL ALL SPECIES</b>	<b>24,195</b>	<b>21,292</b>	<b>2,903</b>	<b>13.80</b>

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



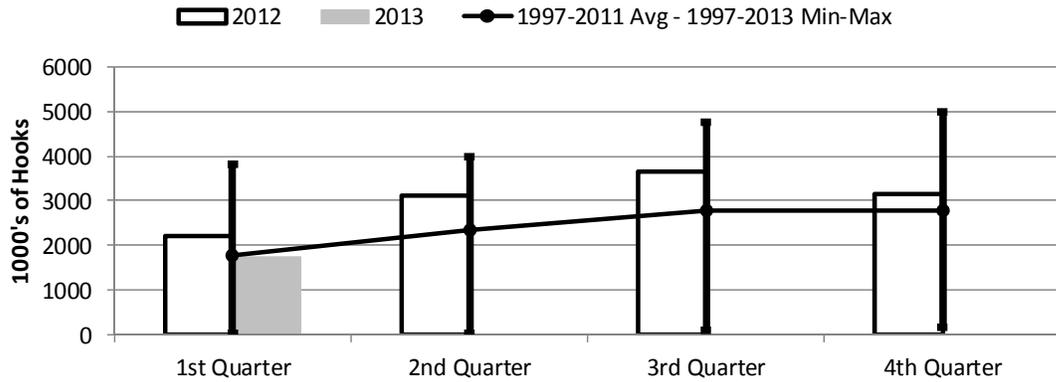
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	16	0	0	0
2012	20	25	24	22
1997-2013 Max	52	50	52	54
1997-2011 Avg	24	26	29	28
1997-2013 Min	6	12	15	17

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



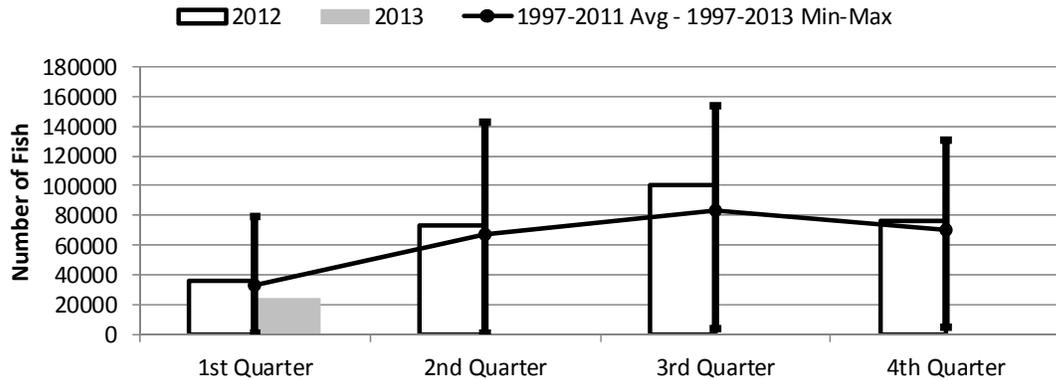
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	598	0	0	0
2012	788	1,069	1,273	1,078
1997-2013 Max	1,602	1,886	1,904	1,759
1997-2011 Avg	814	1,030	1,237	1,209
1997-2013 Min	192	223	424	401

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



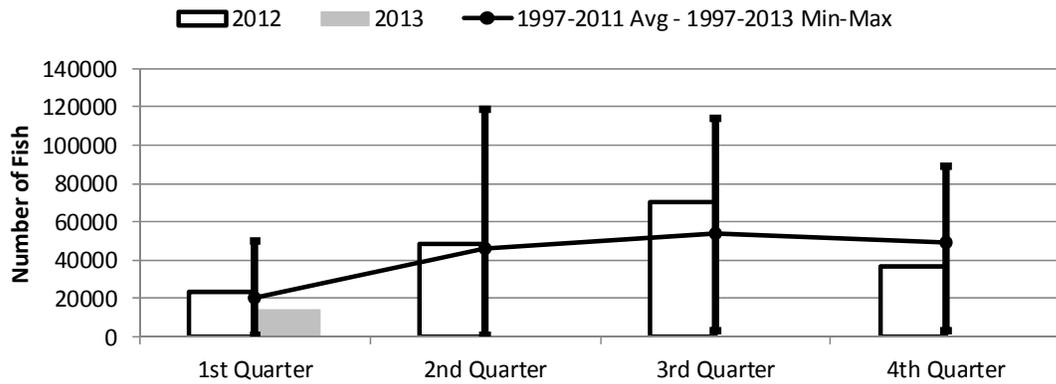
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	1,753	0	0	0
2012	2,194	3,101	3,656	3,156
1997-2013 Max	3,805	3,995	4,769	4,985
1997-2011 Avg	1,789	2,331	2,766	2,770
1997-2013 Min	41	50	101	175

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



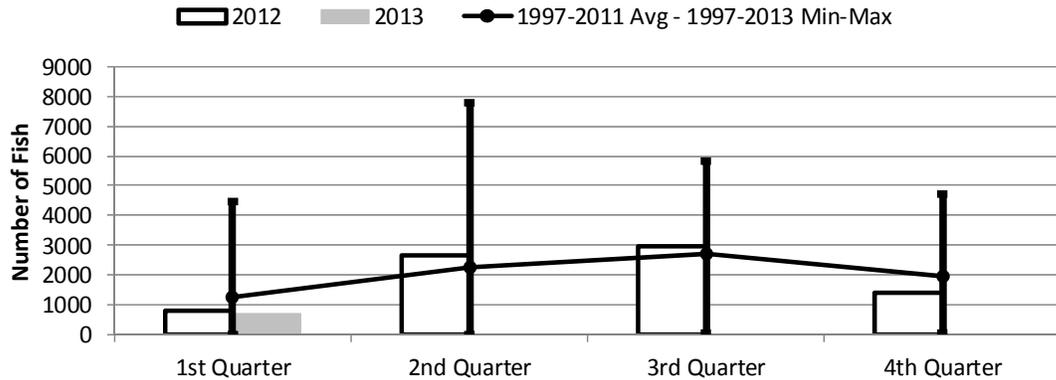
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	24,195	0	0	0
2012	35,897	73,742	100,599	76,135
1997-2013 Max	79,588	142,603	153,301	130,238
1997-2011 Avg	33,018	66,896	83,147	70,771
1997-2013 Min	1,315	1,416	4,127	5,201

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



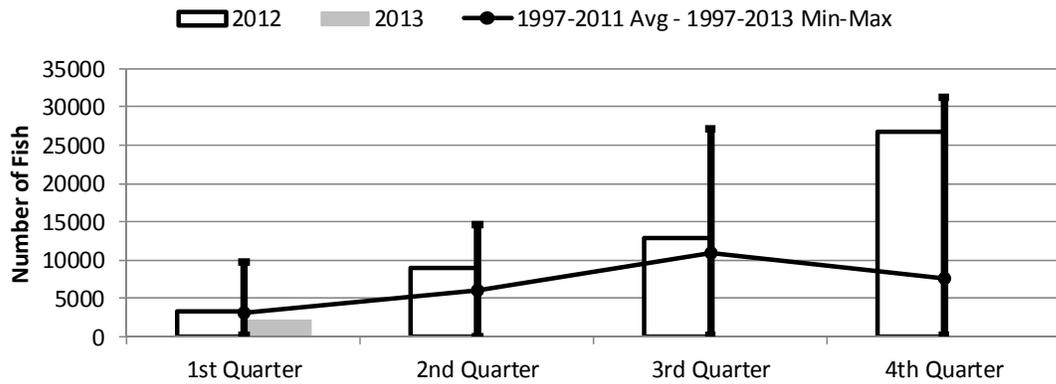
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	14,122	0	0	0
2012	23,443	48,162	70,665	37,012
1997-2013 Max	50,382	118,994	113,831	89,389
1997-2011 Avg	20,518	46,175	54,038	49,501
1997-2013 Min	940	851	3,182	3,465

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



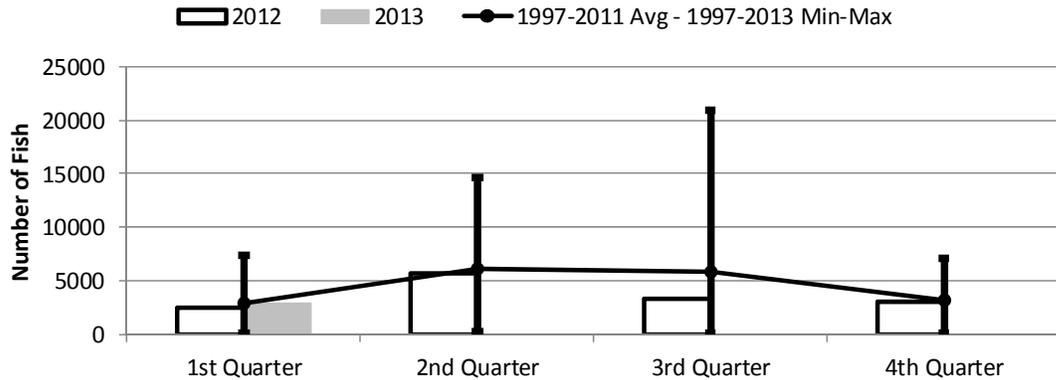
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	690	0	0	0
2012	800	2,651	2,965	1,410
1997-2013 Max	4,470	7,785	5,824	4,728
1997-2011 Avg	1,267	2,240	2,719	1,956
1997-2013 Min	6	26	55	55

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



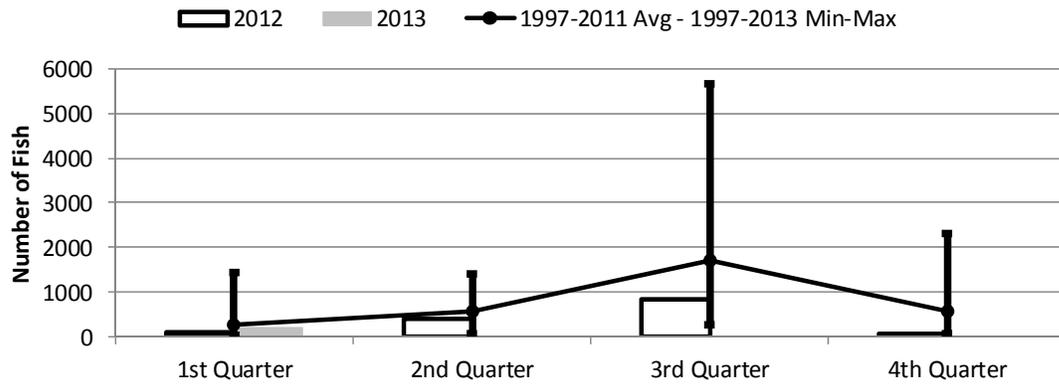
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	2,179	0	0	0
2012	3,307	9,040	12,894	26,753
1997-2013 Max	9,801	14,606	27,234	31,191
1997-2011 Avg	3,224	6,118	10,978	7,625
1997-2013 Min	116	6	244	178

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



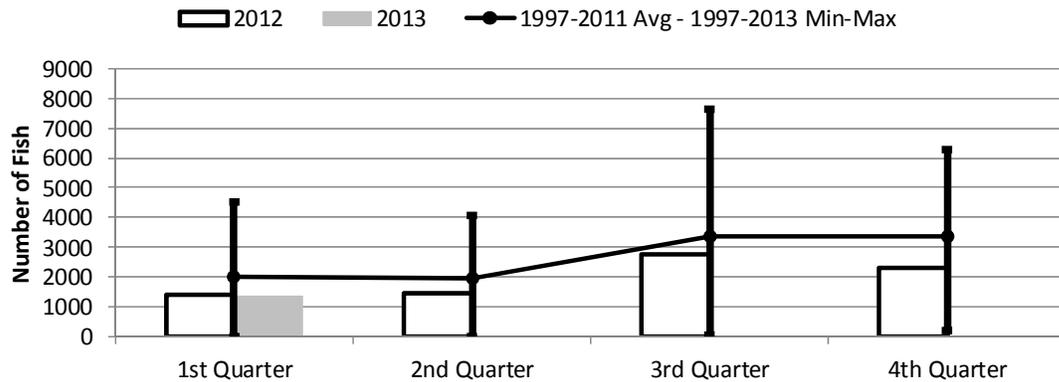
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	2,995	0	0	0
2012	2,530	5,705	3,300	3,056
1997-2013 Max	7,426	14,681	20,993	7,104
1997-2011 Avg	3,000	6,093	5,922	3,205
1997-2013 Min	213	356	84	177

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



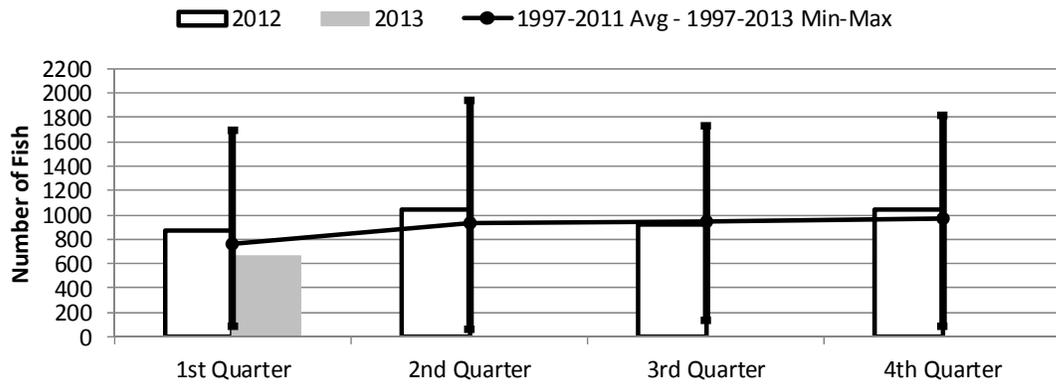
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	188	0	0	0
2012	93	417	838	77
1997-2013 Max	1,454	1,392	5,642	2,297
1997-2011 Avg	280	578	1,706	563
1997-2013 Min	30	59	280	77

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



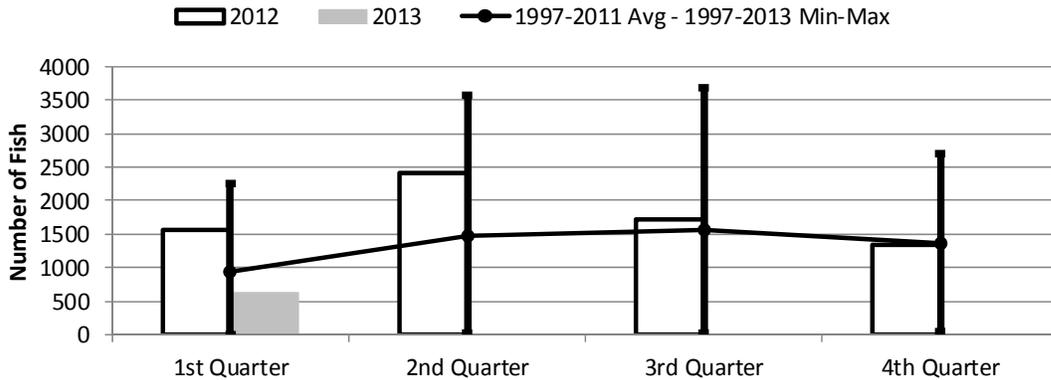
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	1,347	0	0	0
2012	1,413	1,472	2,768	2,290
1997-2013 Max	4,524	4,076	7,629	6,281
1997-2011 Avg	2,018	1,951	3,352	3,349
1997-2013 Min	27	20	68	210

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



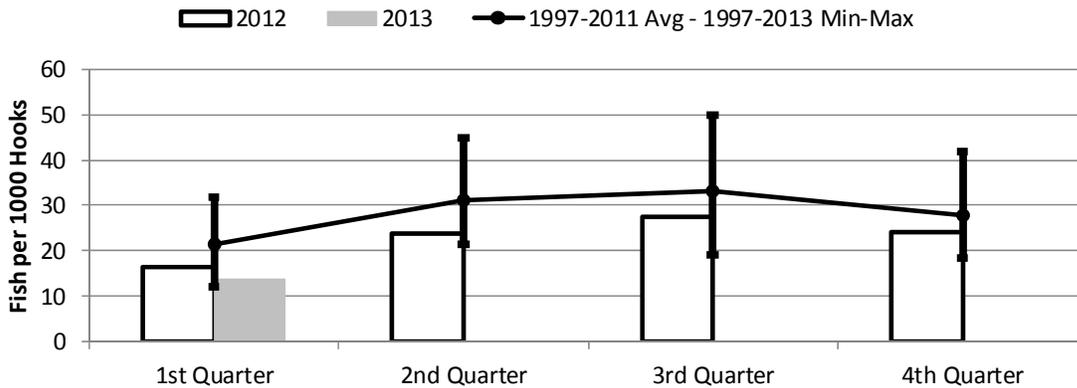
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	669	0	0	0
2012	875	1,045	923	1,043
1997-2013 Max	1,692	1,934	1,729	1,819
1997-2011 Avg	766	931	939	974
1997-2013 Min	83	58	132	84

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



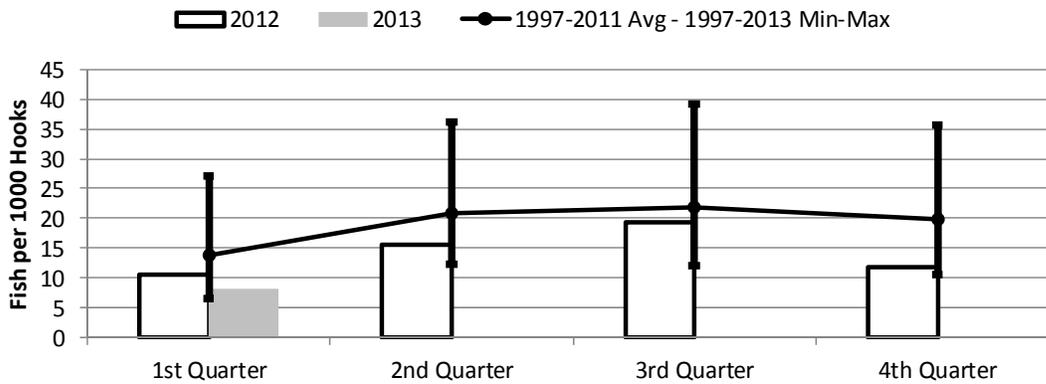
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	635	0	0	0
2012	1,565	2,405	1,723	1,349
1997-2013 Max	2,260	3,562	3,686	2,697
1997-2011 Avg	941	1,473	1,562	1,366
1997-2013 Min	5	16	26	49

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



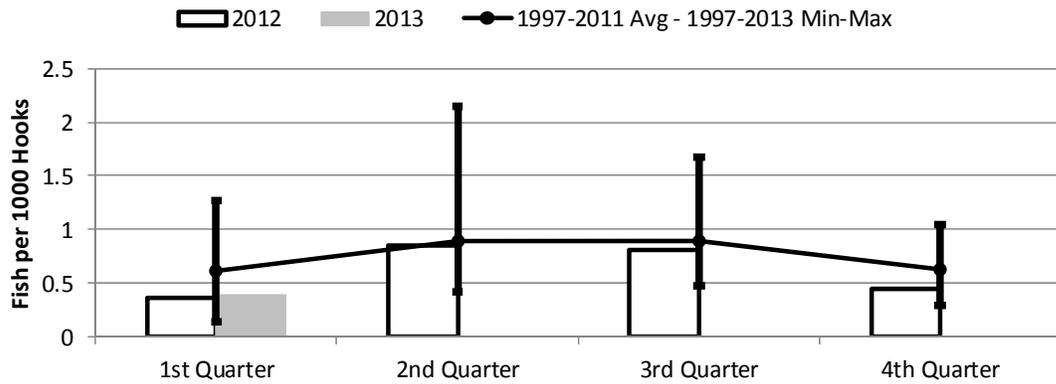
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	13.80	0.00	0.00	0.00
2012	16.36	23.78	27.52	24.12
1997-2013 Max	31.98	44.76	49.87	41.86
1997-2011 Avg	21.38	31.12	33.04	27.85
1997-2013 Min	12.02	21.57	19.20	18.55

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



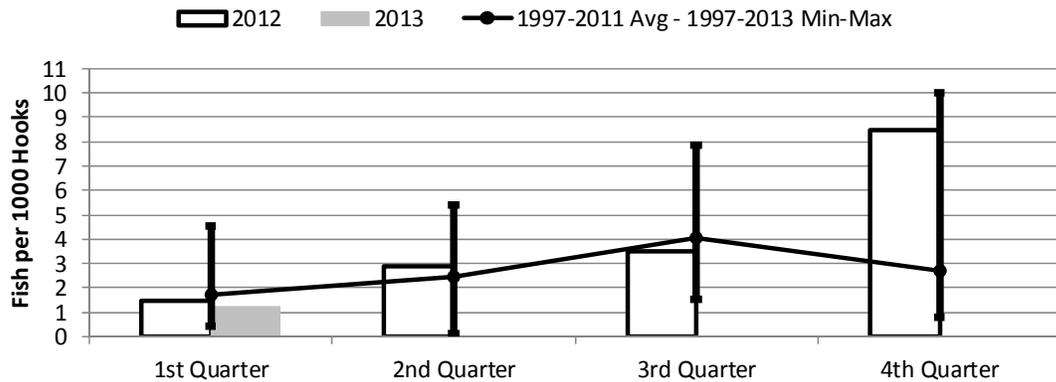
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	8.06	0.00	0.00	0.00
2012	10.68	15.53	19.33	11.72
1997-2013 Max	27.01	36.18	39.13	35.75
1997-2011 Avg	13.71	20.82	21.96	19.96
1997-2013 Min	6.58	12.21	12.14	10.54

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



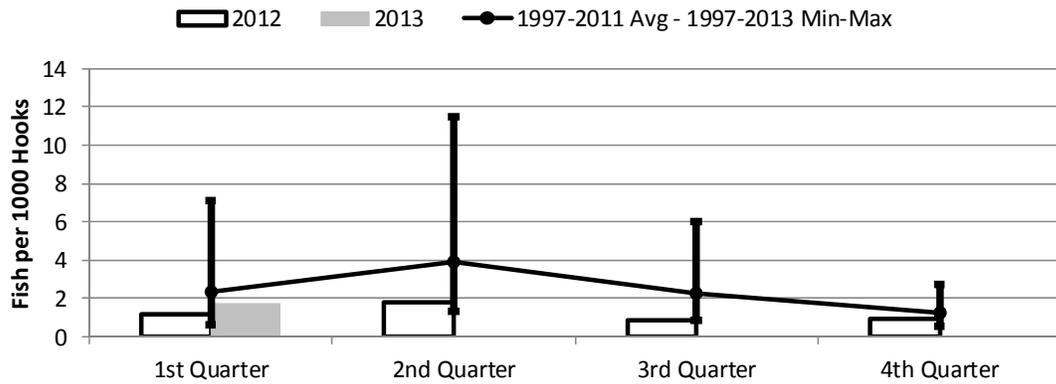
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	0.39	0.00	0.00	0.00
2012	0.36	0.85	0.81	0.45
1997-2013 Max	1.27	2.15	1.68	1.05
1997-2011 Avg	0.62	0.90	0.89	0.63
1997-2013 Min	0.15	0.41	0.48	0.29

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



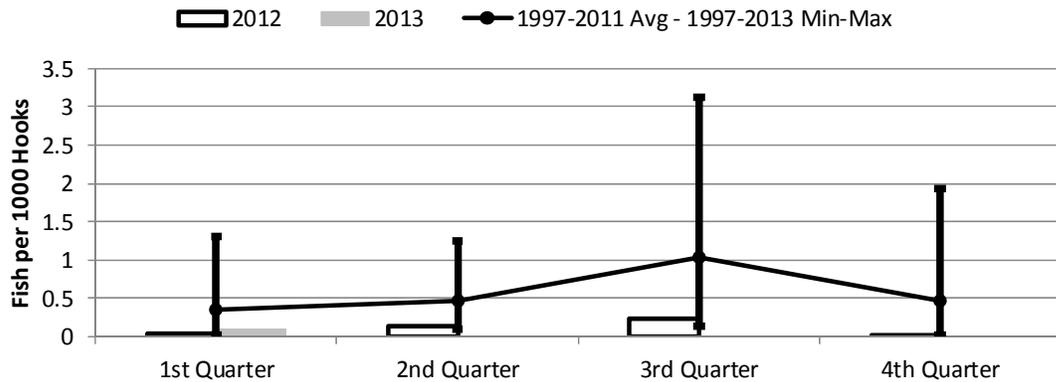
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	1.24	0.00	0.00	0.00
2012	1.51	2.92	3.53	8.47
1997-2013 Max	4.56	5.39	7.84	9.98
1997-2011 Avg	1.71	2.47	4.08	2.72
1997-2013 Min	0.44	0.12	1.56	0.79

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



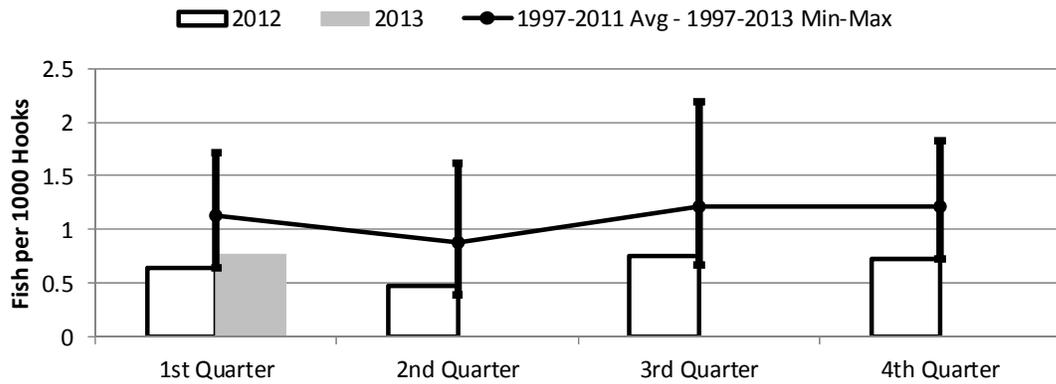
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	1.71	0.00	0.00	0.00
2012	1.15	1.84	0.90	0.97
1997-2013 Max	7.11	11.51	6.04	2.76
1997-2011 Avg	2.31	3.90	2.27	1.24
1997-2013 Min	0.66	1.34	0.83	0.55

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



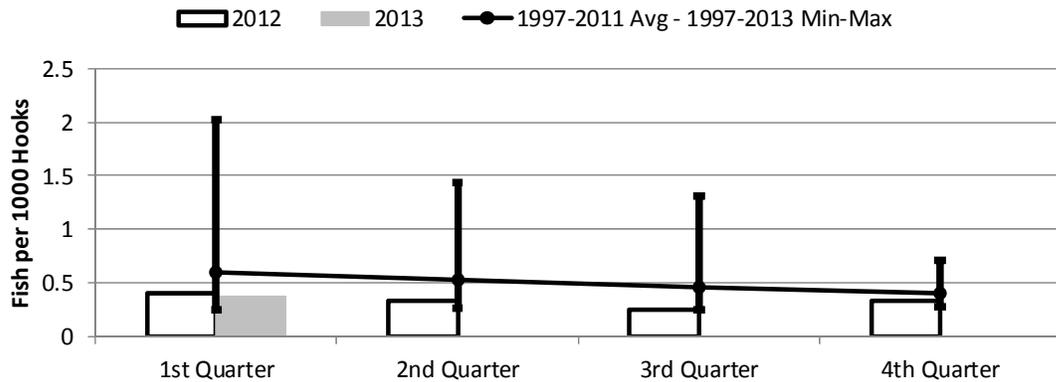
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	0.11	0.00	0.00	0.00
2012	0.04	0.13	0.23	0.02
1997-2013 Max	1.30	1.25	3.13	1.93
1997-2011 Avg	0.35	0.47	1.04	0.47
1997-2013 Min	0.02	0.10	0.14	0.02

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



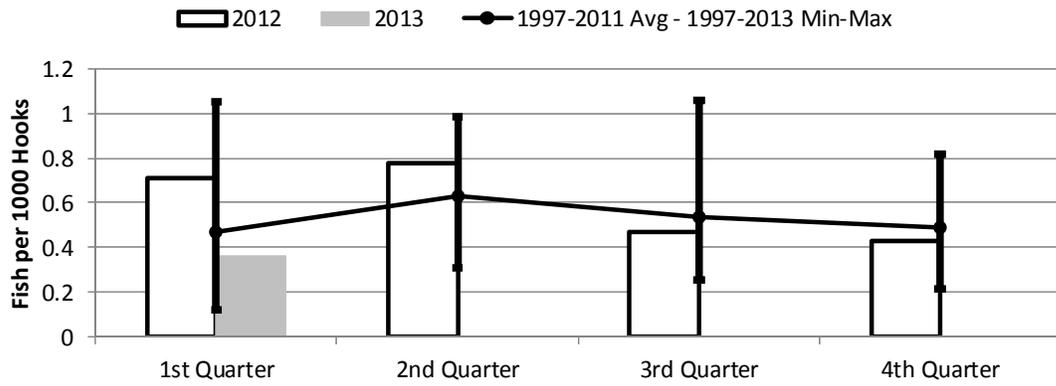
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	0.77	0.00	0.00	0.00
2012	0.64	0.47	0.76	0.73
1997-2013 Max	1.71	1.62	2.20	1.83
1997-2011 Avg	1.13	0.88	1.22	1.22
1997-2013 Min	0.64	0.39	0.67	0.73

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



	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2013	0.38	0.00	0.00	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	0.00	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	0.47	0.63	0.53	0.49
1997-2013 Min	0.12	0.31	0.26	0.22