

## PIFSC Report on the American Samoa Longline Fishery Year 2012<sup>1</sup>

Fisheries Research and Monitoring Division  
Pacific Islands Fisheries Science Center

The American Samoa federal longline logbook data are summarized by date of haul, as shown in Table 1. All longline logbook data submitted by holders of federal limited entry longline permits for fishing activities during 2012 have been processed by the Department of Marine and Wildlife Resources (DMWR) and are included in this report. The data in Table 1 are derived from all federal logbook data submitted by American Samoa-based longline vessels as of April 9<sup>th</sup>, 2013. These data reflect an estimated 98.4% of the sets made by large and small longline vessels throughout calendar year 2012.

Twenty-five vessels turned in longline logbooks for 2012 (Figure 1). These indicate 11,800,893 hooks were set during the year, in a total of 4,099 sets. The number of active vessels increased by one this year (a 4.2% increase). The number of sets increased by 6.6% (Figure 2), and the number of hooks set increased by 7.6% (Figure 3). The average number of hooks per set increased slightly (1%), from 2,850 in 2011 to 2,878 in 2012.

A total of 280,574 fish were caught by American Samoa longliners in 2012 (all species combined). This represents an increase of 30.9% from 2011, but landings have been low generally since 2007. Catches of all species increased this year, with the exception of yellowfin tuna, wahoo, and billfishes. 175,841 albacore, the target species which dominates the catch, were landed in 2012. This is 34.8% more than in 2011, when only 130,471 albacore were landed (Figure 4). Summaries of historic trends in annual number caught by species are provided in Figures 5-6. The figures show increased catches of bigeye (1.9%) and skipjack tuna (85.7%), while the number of yellowfin tuna decreased by 34.7% (Figure 5). There was a slight increase in mahimahi landings (>1%) a significant increase in sharks (44.5% higher than in 2011), and decreased catches of wahoo (16.2% lower) and billfishes (3.9% lower). These statistics are presented in Figure 6.

The longline fishery in American Samoa during 2012 continued to be a challenged fishery, with catch rates of the target species, albacore tuna at low levels compared to long term averages and catch rates of many other marketable species also at low levels. The overall catch per unit of effort for all species combined (CPUE, number of fish/1000 hooks) increased by 21.6% in 2012, compared to last year (19.6 fish/1000 hooks in 2011 versus 23.8 fish/1000 hooks in 2012). However, CPUE for all species or groups except albacore, skipjack, and sharks, decreased from 2011 values. Albacore CPUE increased by 25.2% (Figure 7), from 11.9 fish/1000 hooks in 2011 to 14.9 fish/1000 hooks in 2012. CPUE for yellowfin tuna decreased 39.2% and bigeye tuna 4.4%, while CPUE for skipjack tuna increased 72.7% (Figure 8). CPUE also decreased for mahimahi (7.7%), wahoo (22.6%), and billfishes (11.1%), while shark CPUE increased 34% from 2011 (Figure 10). Overall shark CPUE was at its highest level since 2006, but has been fairly low throughout the history of this fishery.

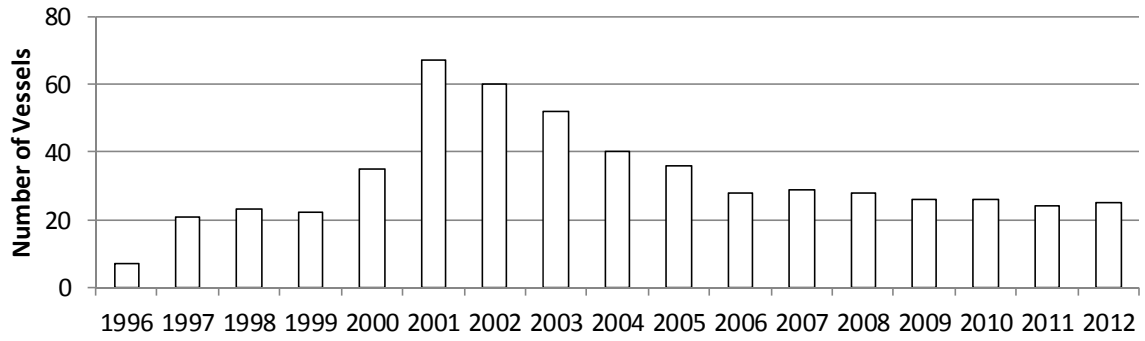
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<sup>1</sup> PIFSC Data Report DR-13-013  
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**Table 1. Summary of fish catch and nominal fishing effort by American Samoa Longline vessels during calendar year 2012 based on longline logbooks submitted before April 9, 2013.**

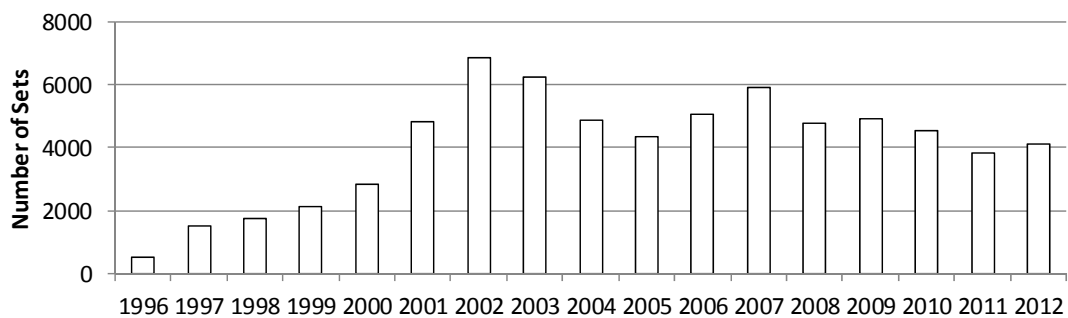
<b>TRIP INFORMATION</b>				
Number of Vessels:	25			
Number of Trips:	195			
Number of Sets:	4,099			
1000's of Hooks Set:	11,800			
Number of Light Sticks Used:	1,272			
<b>CATCH INFORMATION</b>				
<b>Species</b>	<b>Number Caught</b>	<b>Number Kept</b>	<b>Number Released</b>	<b>Number Caught per 1000 Hooks</b>
<b>BILLFISH</b>				
Black marlin	44	41	3	0.00
Blue marlin	1,750	588	1,162	0.15
Striped marlin	419	236	183	0.04
Sailfish	356	46	310	0.03
Spearfish	942	61	881	0.08
Swordfish	304	237	67	0.03
<b>TOTAL BILLFISH</b>	<b>3,815</b>	<b>1,209</b>	<b>2,606</b>	<b>0.32</b>
<b>SHARKS</b>				
Blue shark	4,959	88	4,871	0.42
Shortfin mako shark	560	9	551	0.05
Thresher shark	293	2	291	0.02
White tip oceanic shark	795	1	794	0.07
Sharks (unknown)	363	9	354	0.03
<b>TOTAL SHARKS</b>	<b>6,970</b>	<b>109</b>	<b>6,861</b>	<b>0.59</b>
<b>TUNA</b>				
Albacore tuna	175,841	175,333	508	14.90
Bigeye tuna	7,758	7,423	335	0.66
Bluefin tuna	80	63	17	0.01
Skipjack tuna	50,781	45,650	5,131	4.30
Yellowfin tuna	14,258	13,578	680	1.21
<b>TOTAL TUNA</b>	<b>248,718</b>	<b>242,047</b>	<b>6,671</b>	<b>21.08</b>
<b>OTHER PELAGICS</b>				
Mahimahi	1,418	1,040	378	0.12
Moonfish	613	151	462	0.05
Oilfish	9,561	24	9,537	0.81
Pomfret	1,001	110	891	0.08
Wahoo	7,709	6,021	1,688	0.65
<b>TOTAL OTHER PELAGICS</b>	<b>20,302</b>	<b>7,346</b>	<b>12,956</b>	<b>1.72</b>
<b>NON-PMUS</b>				
Pelagic fishes (unknown)	769	0	769	0.07
<b>TOTAL NON-PMUS</b>	<b>769</b>	<b>0</b>	<b>769</b>	<b>0.07</b>
<b>TOTAL ALL SPECIES</b>	<b>280,574</b>	<b>250,711</b>	<b>29,863</b>	<b>23.78</b>

**Figure 1. American Samoa Longline Vessels by Year**



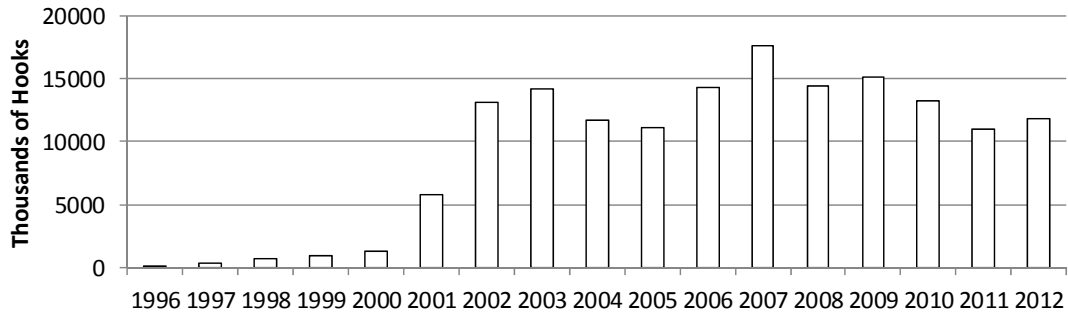
<b>Year</b>	<b>Boats</b>
1996	7
1997	21
1998	23
1999	22
2000	35
2001	67
2002	60
2003	52
2004	40
2005	36
2006	28
2007	29
2008	28
2009	26
2010	26
2011	24
2012	25

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



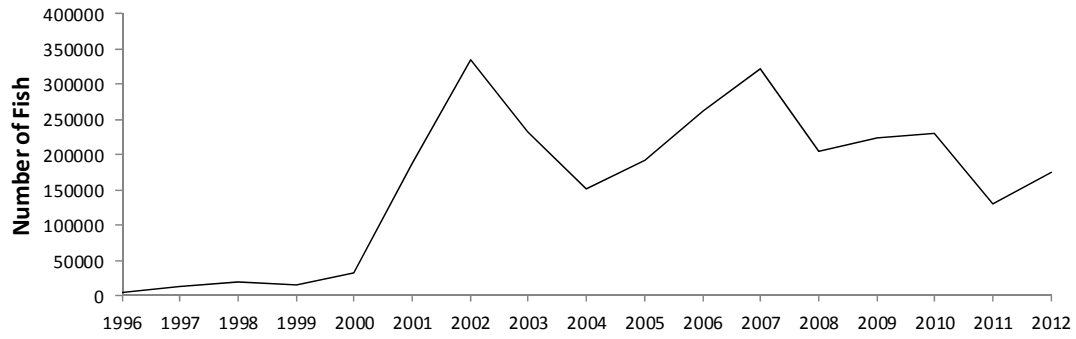
<b>Year</b>	<b>Sets</b>
1996	531
1997	1,533
1998	1,762
1999	2,112
2000	2,814
2001	4,801
2002	6,872
2003	6,221
2004	4,853
2005	4,359
2006	5,068
2007	5,920
2008	4,754
2009	4,911
2010	4,534
2011	3,846
2012	4,099

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



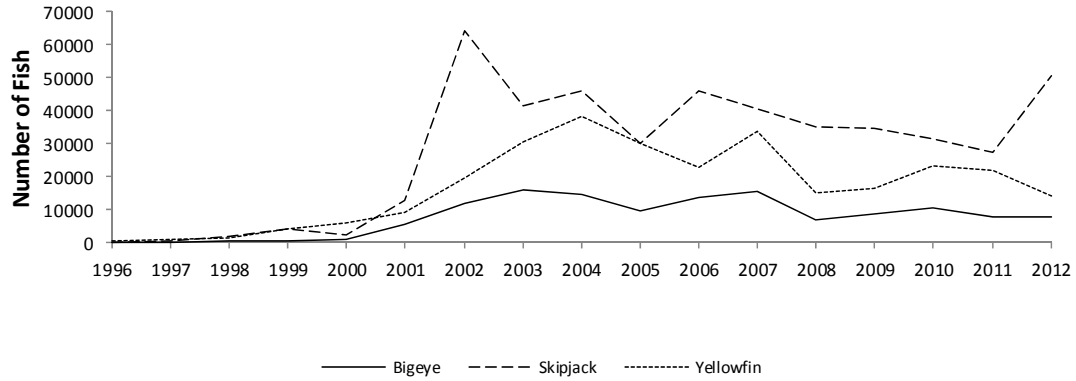
<b>Year</b>	<b>Thousands of Hooks</b>
1996	100
1997	420
1998	773
1999	916
2000	1,335
2001	5,795
2002	13,096
2003	14,165
2004	11,742
2005	11,129
2006	14,261
2007	17,553
2008	14,444
2009	15,077
2010	13,175
2011	10,963
2012	11,801

**Figure 4. American Samoa Longline Albacore Catch by Year**



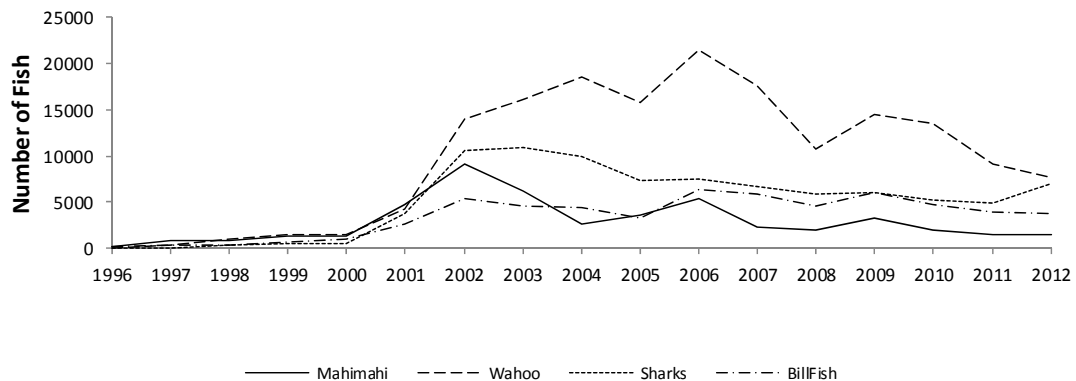
<b>Year</b>	<b>Catch</b>
1996	4,028
1997	13,077
1998	19,760
1999	15,654
2000	32,218
2001	187,141
2002	333,595
2003	232,439
2004	151,338
2005	192,637
2006	263,091
2007	321,890
2008	205,447
2009	223,099
2010	229,511
2011	130,471
2012	175,841

**Figure 5. American Samoa Longline Tuna Catch by Year**



Year	Bigeye	Skipjack	Yellowfin
1996	132	6	645
1997	154	428	945
1998	324	2,039	1,367
1999	538	4,384	4,374
2000	947	2,463	6,061
2001	5,351	13,026	9,391
2002	11,749	64,400	19,499
2003	16,131	41,522	30,421
2004	14,762	45,901	38,142
2005	9,763	30,177	30,073
2006	13,512	45,855	22,624
2007	15,533	40,405	33,901
2008	7,059	35,170	14,996
2009	8,743	34,534	16,541
2010	10,510	31,484	23,087
2011	7,614	27,346	21,828
2012	7,758	50,781	14,258

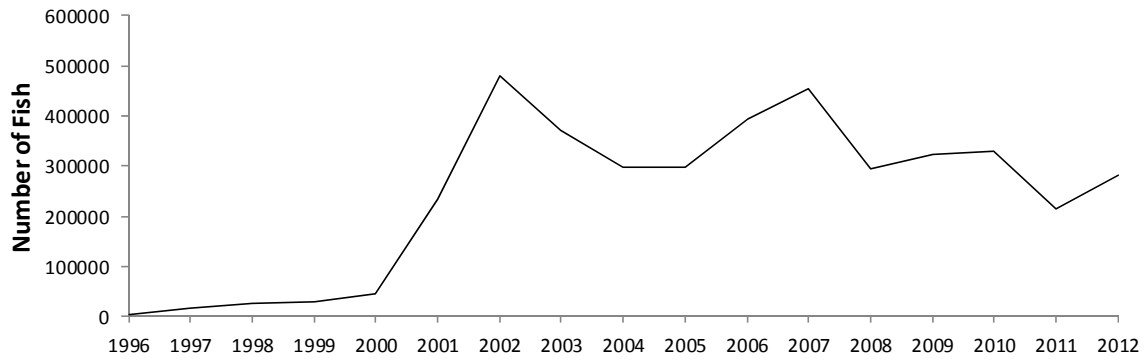
**Figure 6. American Samoa Longline Catch of Miscellaneous Pelagic Fish by Year**



<b>Year</b>	<b>Mahimahi</b>	<b>Wahoo</b>	<b>Sharks</b>	<b>Billfish</b>
1996	227	82	65	158
1997	843	347	96	372
1998	892	1,061	409	405
1999	1,313	1,539	510	641
2000	1,325	1,463	497	997
2001	4,813	4,208	3,690	2,594
2002	9,181	13,948	10,539	5,394
2003	6,265	16,051	10,968	4,543
2004	2,557	18,514	9,956	4,449
2005	3,623	15,796	7,331	3,269
2006	5,309	21,426	7,521	6,300
2007	2,249	17,568	6,720	5,796
2008	1,938	10,720	5,853	4,519
2009	3,245	14,519	5,968	6,086
2010	1,955	13,586	5,159	4,790
2011	1,407	9,198	4,824	3,970
2012	1,418	7,709	6,970	3,815

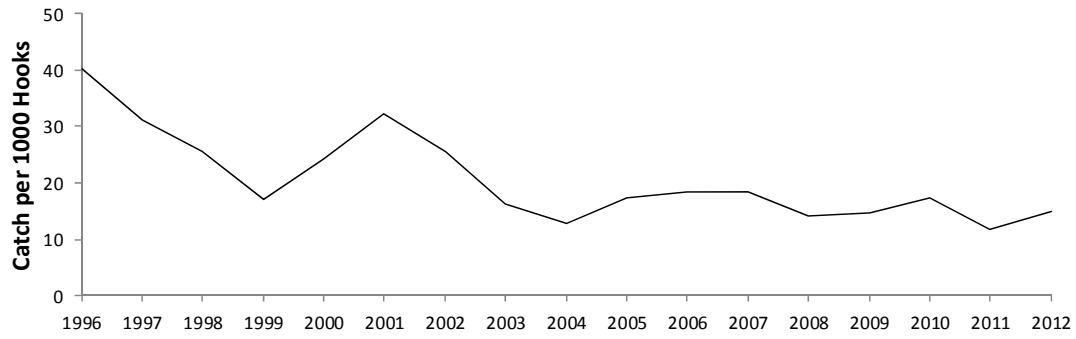


**Figure 7. American Samoa Longline Total Catch per 1000 Hooks by Year**



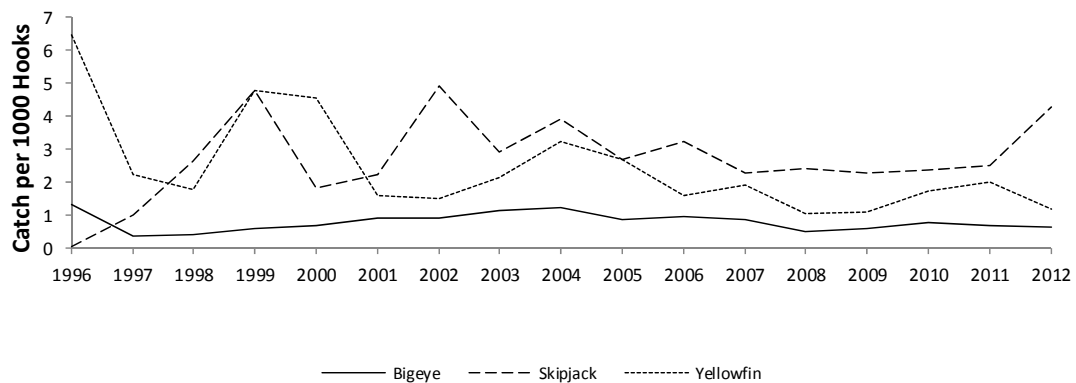
<b>Year</b>	<b>Catch per 1000 Hooks</b>
1996	53.59
1997	38.96
1998	34.21
1999	32.24
2000	34.75
2001	40.11
2002	36.61
2003	26.15
2004	25.23
2005	26.73
2006	27.62
2007	25.94
2008	20.29
2009	21.42
2010	25.04
2011	19.56
2012	23.78

**Figure 8. American Samoa Longline Albacore Catch per 1000 Hooks by Year**



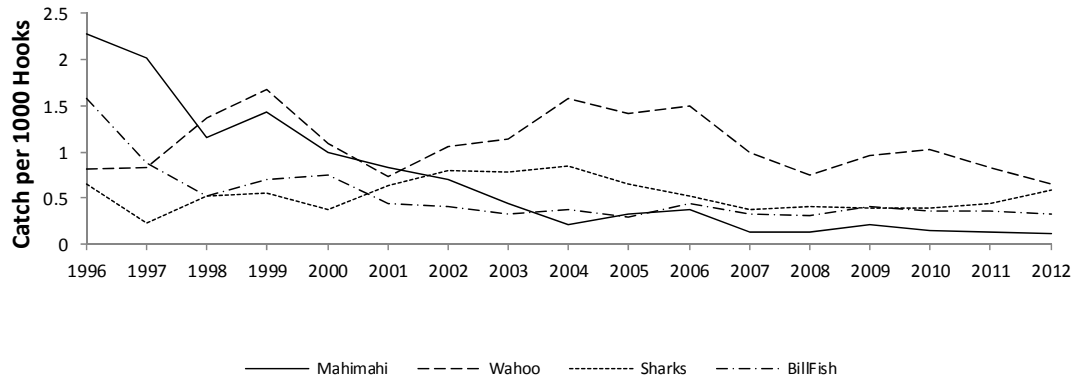
Year	Catch per 1000 Hooks
1996	40.28
1997	31.16
1998	25.55
1999	17.09
2000	24.14
2001	32.29
2002	25.47
2003	16.41
2004	12.89
2005	17.31
2006	18.45
2007	18.34
2008	14.22
2009	14.80
2010	17.42
2011	11.90
2012	14.90

**Figure 9. American Samoa Longline Tuna Catch per 1000 Hooks by Year**



Year	Bigeye	Skipjack	Yellowfin
1996	1.32	0.06	6.45
1997	0.37	1.02	2.25
1998	0.42	2.64	1.77
1999	0.59	4.79	4.77
2000	0.71	1.85	4.54
2001	0.92	2.25	1.62
2002	0.90	4.92	1.49
2003	1.14	2.93	2.15
2004	1.26	3.91	3.25
2005	0.88	2.71	2.70
2006	0.95	3.22	1.59
2007	0.88	2.30	1.93
2008	0.49	2.43	1.04
2009	0.58	2.29	1.10
2010	0.80	2.39	1.75
2011	0.69	2.49	1.99
2012	0.66	4.30	1.21

Figure 10. American Samoa Longline Catch of Other Pelagic Fish per 1000 Hooks by Year



<b>Year</b>	<b>Mahimahi</b>	<b>Wahoo</b>	<b>Sharks</b>	<b>Billfish</b>
1996	2.27	0.82	0.65	1.58
1997	2.01	0.83	0.23	0.89
1998	1.15	1.37	0.53	0.52
1999	1.43	1.68	0.56	0.70
2000	0.99	1.10	0.37	0.75
2001	0.83	0.73	0.64	0.45
2002	0.70	1.07	0.80	0.41
2003	0.44	1.13	0.77	0.32
2004	0.22	1.58	0.85	0.38
2005	0.33	1.42	0.66	0.29
2006	0.37	1.50	0.53	0.44
2007	0.13	1	0.38	0.33
2008	0.13	0.74	0.41	0.31
2009	0.22	0.96	0.40	0.40
2010	0.15	1.03	0.39	0.36
2011	0.13	0.84	0.44	0.36
2012	0.12	0.65	0.59	0.32