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# PIFSC Report on the Logbook Program for the American Samoa Longline Fishery October − December 2013[1]

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The American Samoa longline fishery continues to experience extremely challenging conditions. Catch of its primary target species, albacore tuna remains at a record low level, in comparison with long term averages. In the 4th quarter, catches of most other marketable species also continued to be lower during 2013 than during 2014, as was the case in the earlier quarters of 2013. Increasing catches of low-volume-higher-priced species, such as mahimahi and yellowfin tuna, may indicate a gradual adaptation of the fishery to target species that can be sold to local fresh fish markets where these species are preferred, and where higher prices are available than at the cannery.

A summary of the fishery's catch and effort statistics for the fourth 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 February 19, 2013. Table 1 reflects data from an estimated 100% of sets made during this quarter. Only large (>50ft in length) vessels participated in the fishery.

The American Samoa longline fleet reported about a third less fishing effort during the fourth quarter of 2013 than in the same quarter of 2012. There were only 19 active vessels, 13.6% less than during the fourth quarter of 2012 (Fig. 1). These 19 vessels made 728 sets and deployed 2,229,097 hooks, which was 32.5% fewer sets (Fig. 2) and 29.4% less hooks (Fig. 3) than recorded in the same quarter of 2012. However, the number of hooks per set increased to an average of 3,061 hooks/set (up 4.6% from 2,928 hooks per set in the fourth quarter of 2012). Increasing the number of hooks per set is common in longline fisheries attempting to improve catch per day of operation.

With the exception of mahimahi, the number of fish caught decreased for all species individually and as a whole in comparison with the fourth quarter of 2012. A total of 27,205 fish were caught (all species combined), which was 64.3% less than during the fourth quarter of 2012 (Fig. 4). The main target species, albacore tuna, dominated the catch as usual (60.5% of the total catch). The 16,445 albacore caught during the fourth quarter of 2013 represent a 55.6% reduction from the 37,012 albacore caught in the same quarter of 2012 (Fig. 5).

Other species and groups showing lower catches in the fourth quarter of 2013 include: skipjack tuna (93.6% less, Fig. 7), yellowfin tuna (1.1% less, Fig. 8), bigeye tuna (58.8% less, Fig. 6), wahoo (24.4% less, Fig. 10), and billfishes (46.4% less, Fig. 11). Only the decrease in shark catch (41.7% less, Fig. 12), is considered a positive development for this fishery, because they are a nuisance catch, not retained, and discouraged by NMFS bycatch reduction policy.

During the fourth quarter of 2013 catches of mahimahi increased significantly (up 171.4%, Fig. 9), and there was only a minor decrease in catches of yellowfin tuna (1.1%, Fig. 8). The overall catch per unit of effort (CPUE, number of fish of all species per 1000 hooks) decreased substantially (49.4%) during the fourth quarter of 2013, compared with the same quarter of 2012. The fishery caught an average of just 12.2 fish/1000 hooks, as opposed to 24.1 fish/1000 hooks the previous year (Fig. 13). CPUE increased for yellowfin, wahoo and mahimahi, all of which represent a minor component of the catch, while CPUE for the most targeted species decreased. CPUE of the primary target species, albacore, decreased by 37% (Fig. 14); and CPUE for the second most targeted species, skipjack tuna, decreased by 90.9% (Fig. 16). Bigeye tuna CPUE decreased 42.2% (Fig. 15) and billfish CPUE decreased

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24.2% (Fig. 20). Shark CPUE declined by 18.6% (Fig. 21. CPUE for the yellowfin tuna preferred by the local fresh fish market increased 40.2% (Fig. 17), wahoo CPUE increased 6.9% (Fig. 19), and mahimahi CPUE increased by 350% (Fig. 18). However, despite improvements in some minor components of the catch, the outstanding characteristic of the fishery in 2013 was the sustained decline in fishing activity and albacore landings.

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

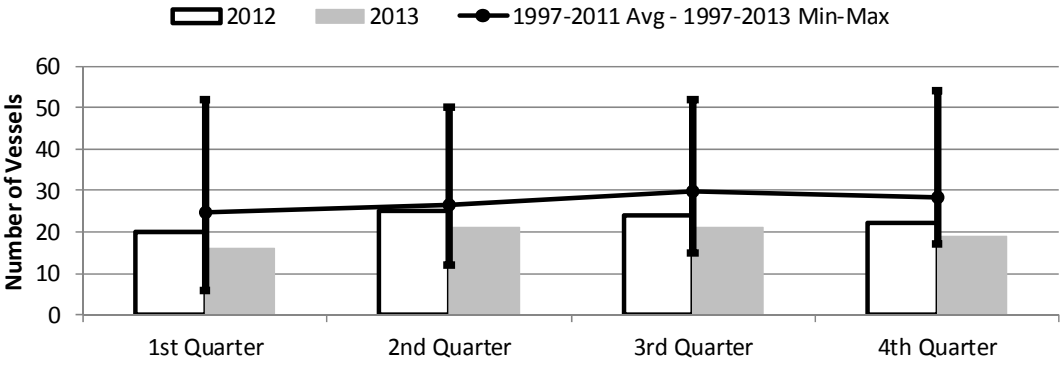
**TRIP INFORMATION**

| | |
|---|---|
| Number of Vessels: | 19 |
| Number of Trips: | 25 |
| Number of Sets: | 728 |
| 1000's of Hooks Set: | 2,229 |
| Number of Light Sticks Used: | 1,378 |

**CATCH INFORMATION**

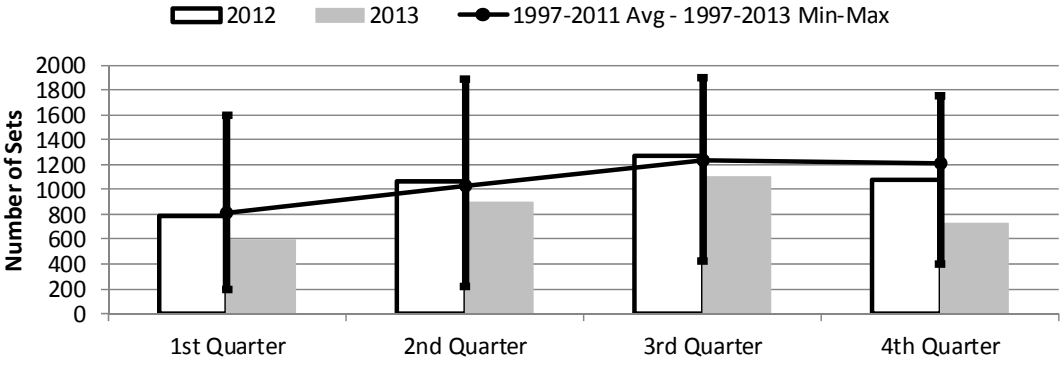
| Species | Number Caught | Number Kept | Number Released | Number Caught per 1000 Hooks |
|---|---|---|---|---|
| **BILLFISH** | | | | |
| Blue marlin | 316 | 184 | 132 | 0.14 |
| Striped marlin | 42 | 36 | 6 | 0.02 |
| Sailfish | 28 | 13 | 15 | 0.01 |
| Spearfish | 88 | 5 | 83 | 0.04 |
| Swordfish | 85 | 54 | 31 | 0.04 |
| **TOTAL BILLFISH** | **559** | **292** | **267** | **0.25** |
| **SHARKS** | | | | |
| Blue shark | 430 | 1 | 429 | 0.19 |
| Shortfin mako shark | 66 | 0 | 66 | 0.03 |
| Thresher shark | 53 | 0 | 53 | 0.02 |
| White tip oceanic shark | 170 | 0 | 170 | 0.08 |
| Sharks (unknown) | 67 | 0 | 67 | 0.03 |
| **TOTAL SHARKS** | **786** | **1** | **785** | **0.35** |
| **TUNA** | | | | |
| Albacore tuna | 16,445 | 16,426 | 19 | 7.38 |
| Bigeye tuna | 581 | 580 | 1 | 0.26 |
| Bluefin tuna | 13 | 13 | 0 | 0.01 |
| Skipjack tuna | 1,715 | 1,681 | 34 | 0.77 |
| Yellowfin tuna | 3,022 | 3,016 | 6 | 1.36 |
| **TOTAL TUNA** | **21,776** | **21,716** | **60** | **9.77** |
| **OTHER PELAGICS** | | | | |
| Mahimahi | 209 | 195 | 14 | 0.09 |
| Moonfish | 93 | 31 | 62 | 0.04 |
| Oilfish | 1,889 | 46 | 1,843 | 0.85 |
| Pomfret | 141 | 12 | 129 | 0.06 |
| Wahoo | 1,731 | 1,691 | 40 | 0.78 |
| **TOTAL OTHER PELAGICS** | **4,063** | **1,975** | **2,088** | **1.82** |
| **NON-PMUS** | | | | |
| Pelagic fishes (unknown) | 21 | 0 | 21 | 0.01 |
| **TOTAL NON-PMUS** | **21** | **0** | **21** | **0.01** |
| **TOTAL ALL SPECIES** | **27,205** | **23,984** | **3,221** | **12.20** |

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



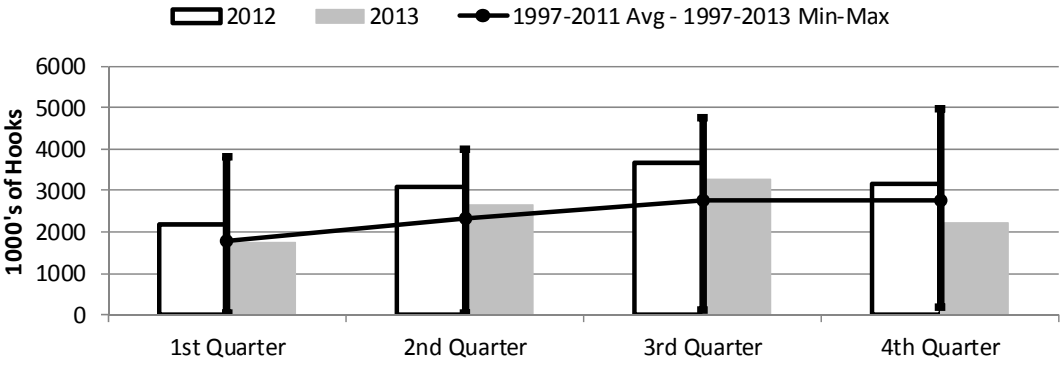

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 16 | 21 | 21 | 19 |
| 2012 | 20 | 25 | 24 | 22 |
| 1997-2013 Max | 52 | 50 | 52 | 54 |
| 1997-2011 Avg | 24 | 26 | 29 | 28 |
| 1997-2013 Min | 6 | 12 | 15 | 17 |

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



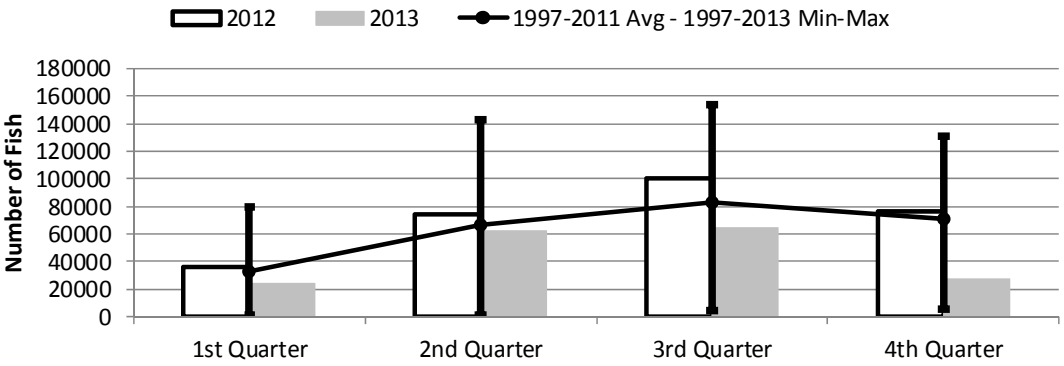

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 598 | 895 | 1,103 | 728 |
| 2012 | 788 | 1,069 | 1,273 | 1,078 |
| 1997-2013 Max | 1,602 | 1,886 | 1,904 | 1,759 |
| 1997-2011 Avg | 814 | 1,030 | 1,237 | 1,209 |
| 1997-2013 Min | 192 | 223 | 424 | 401 |

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



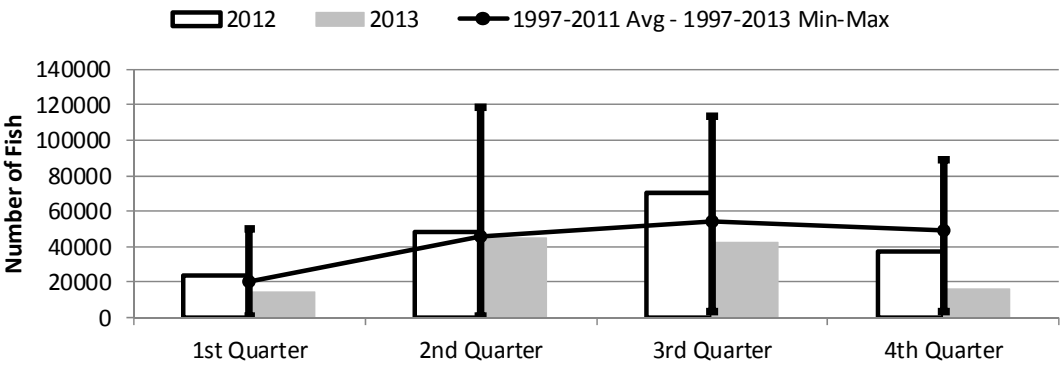

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 1,753 | 2,663 | 3,271 | 2,229 |
| 2012 | 2,194 | 3,101 | 3,656 | 3,156 |
| 1997-2013 Max | 3,805 | 3,995 | 4,769 | 4,985 |
| 1997-2011 Avg | 1,789 | 2,331 | 2,766 | 2,770 |
| 1997-2013 Min | 41 | 50 | 101 | 175 |

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



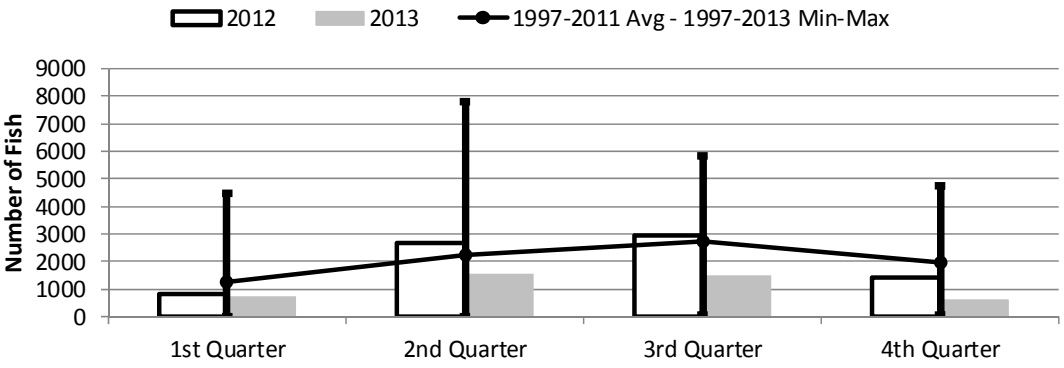

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 24,195 | 61,813 | 64,414 | 27,205 |
| 2012 | 35,897 | 73,742 | 100,599 | 76,135 |
| 1997-2013 Max | 79,588 | 142,603 | 153,301 | 130,238 |
| 1997-2011 Avg | 33,018 | 66,896 | 83,147 | 70,771 |
| 1997-2013 Min | 1,315 | 1,416 | 4,127 | 5,201 |

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



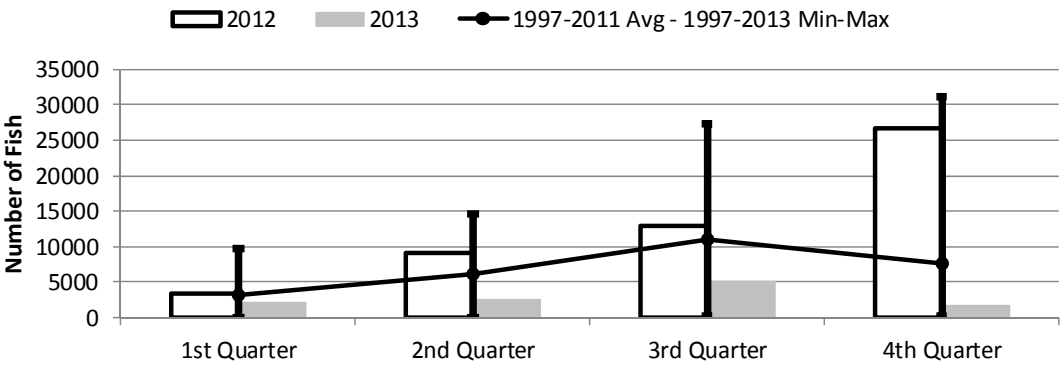

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 14,122 | 44,706 | 42,282 | 16,445 |
| 2012 | 23,443 | 48,162 | 70,665 | 37,012 |
| 1997-2013 Max | 50,382 | 118,994 | 113,831 | 89,389 |
| 1997-2011 Avg | 20,518 | 46,175 | 54,038 | 49,501 |
| 1997-2013 Min | 940 | 851 | 3,182 | 3,465 |

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



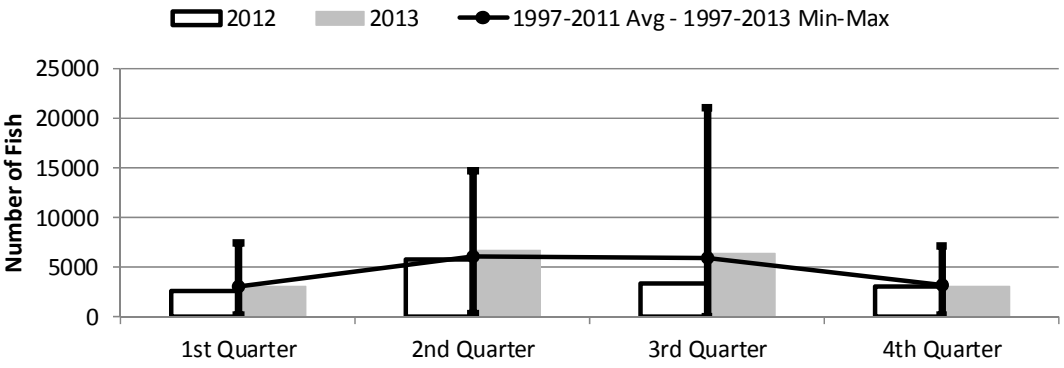

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 690 | 1,513 | 1,463 | 581 |
| 2012 | 800 | 2,651 | 2,965 | 1,410 |
| 1997-2013 Max | 4,470 | 7,785 | 5,824 | 4,728 |
| 1997-2011 Avg | 1,267 | 2,240 | 2,719 | 1,956 |
| 1997-2013 Min | 6 | 26 | 55 | 55 |

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



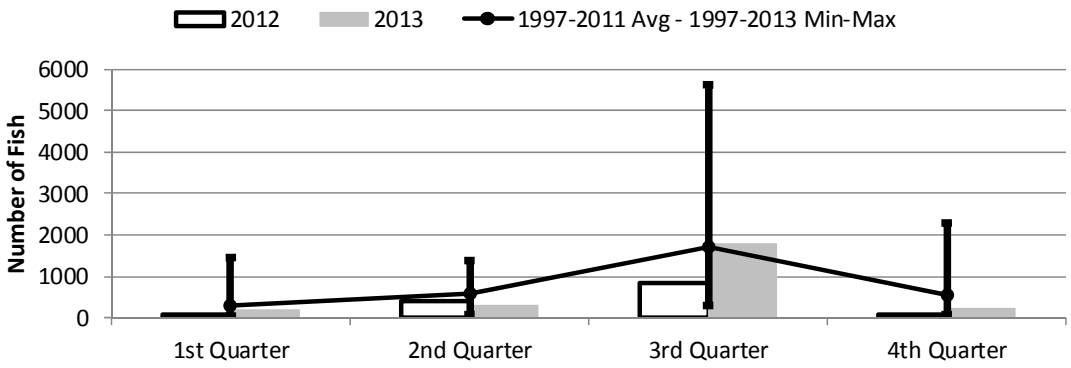

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 2,179 | 2,459 | 5,187 | 1,715 |
| 2012 | 3,307 | 9,040 | 12,894 | 26,753 |
| 1997-2013 Max | 9,801 | 14,606 | 27,234 | 31,191 |
| 1997-2011 Avg | 3,224 | 6,118 | 10,978 | 7,625 |
| 1997-2013 Min | 116 | 6 | 244 | 178 |

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



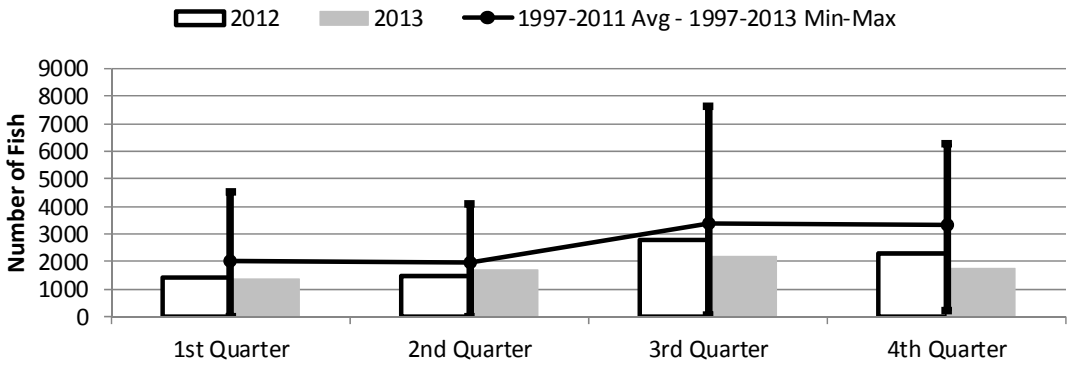

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 2,995 | 6,688 | 6,391 | 3,022 |
| 2012 | 2,530 | 5,705 | 3,300 | 3,056 |
| 1997-2013 Max | 7,426 | 14,681 | 20,993 | 7,104 |
| 1997-2011 Avg | 3,000 | 6,093 | 5,922 | 3,205 |
| 1997-2013 Min | 213 | 356 | 84 | 177 |

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



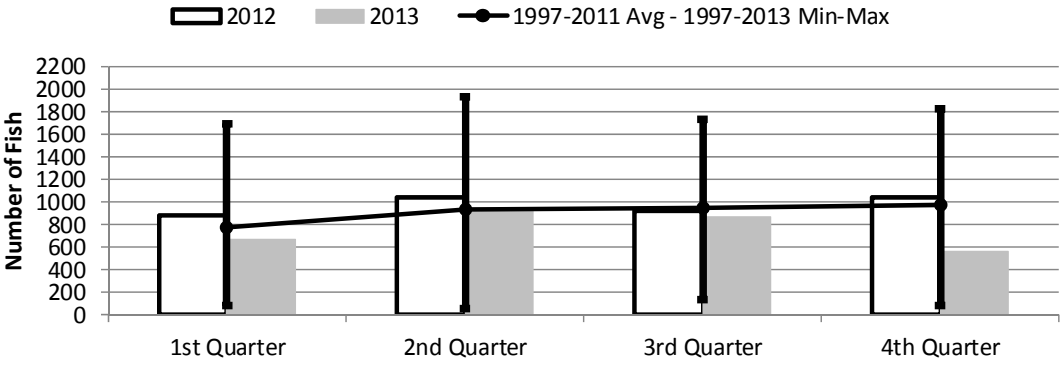

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 188 | 280 | 1,767 | 209 |
| 2012 | 93 | 417 | 838 | 77 |
| 1997-2013 Max | 1,454 | 1,392 | 5,642 | 2,297 |
| 1997-2011 Avg | 280 | 578 | 1,706 | 563 |
| 1997-2013 Min | 30 | 59 | 280 | 77 |

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



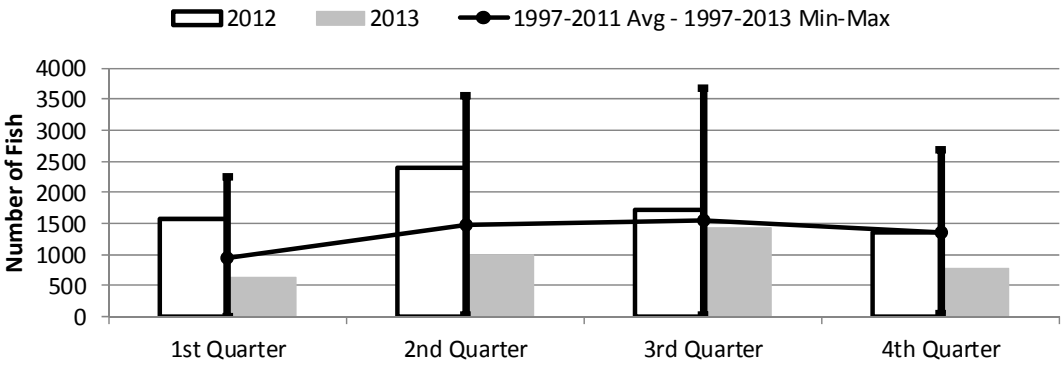

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 1,347 | 1,671 | 2,201 | 1,731 |
| 2012 | 1,413 | 1,472 | 2,768 | 2,290 |
| 1997-2013 Max | 4,524 | 4,076 | 7,629 | 6,281 |
| 1997-2011 Avg | 2,018 | 1,951 | 3,352 | 3,349 |
| 1997-2013 Min | 27 | 20 | 68 | 210 |

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



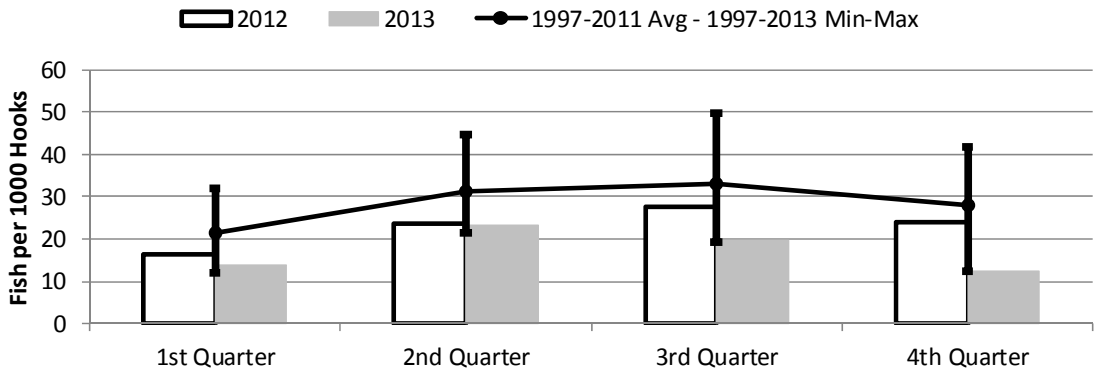

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 669 | 950 | 861 | 559 |
| 2012 | 875 | 1,045 | 923 | 1,043 |
| 1997-2013 Max | 1,692 | 1,934 | 1,729 | 1,819 |
| 1997-2011 Avg | 766 | 931 | 939 | 974 |
| 1997-2013 Min | 83 | 58 | 132 | 84 |

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



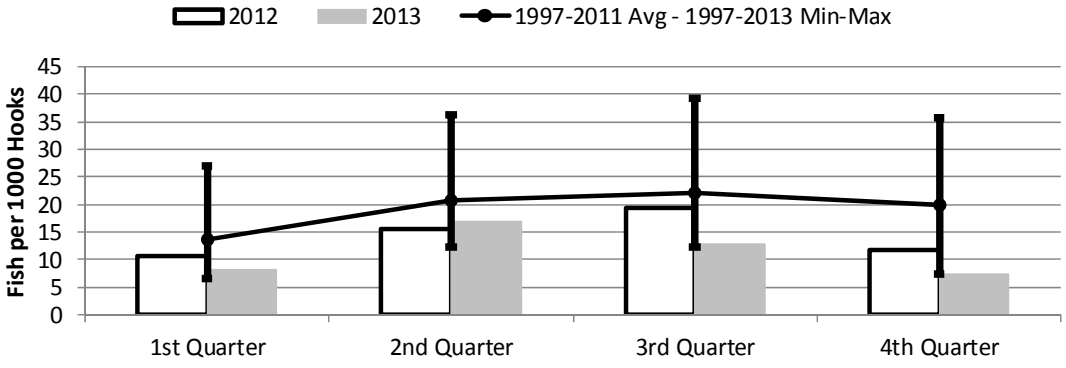

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 635 | 990 | 1,421 | 786 |
| 2012 | 1,565 | 2,405 | 1,723 | 1,349 |
| 1997-2013 Max | 2,260 | 3,562 | 3,686 | 2,697 |
| 1997-2011 Avg | 941 | 1,473 | 1,562 | 1,366 |
| 1997-2013 Min | 5 | 16 | 26 | 49 |

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



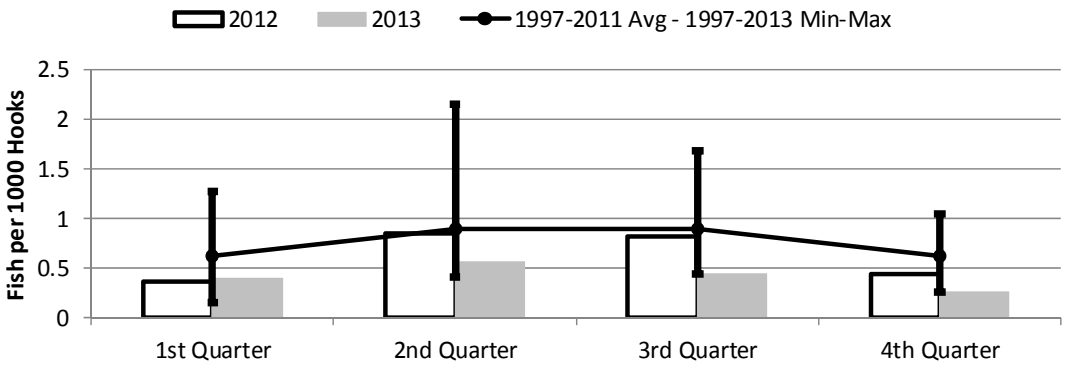

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 13.80 | 23.21 | 19.69 | 12.20 |
| 2012 | 16.36 | 23.78 | 27.52 | 24.12 |
| 1997-2013 Max | 31.98 | 44.76 | 49.87 | 41.86 |
| 1997-2011 Avg | 21.38 | 31.12 | 33.04 | 27.85 |
| 1997-2013 Min | 12.02 | 21.57 | 19.20 | 12.20 |

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



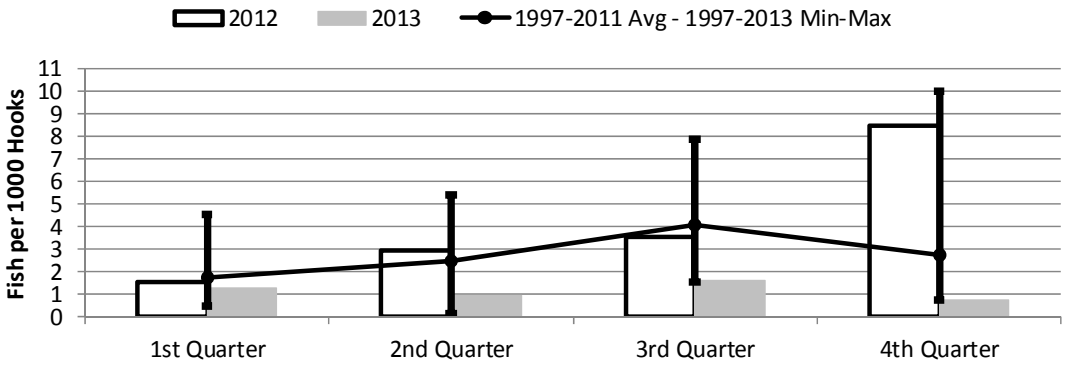

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 8.06 | 16.79 | 12.92 | 7.38 |
| 2012 | 10.68 | 15.53 | 19.33 | 11.72 |
| 1997-2013 Max | 27.01 | 36.18 | 39.13 | 35.75 |
| 1997-2011 Avg | 13.71 | 20.82 | 21.96 | 19.96 |
| 1997-2013 Min | 6.58 | 12.21 | 12.14 | 7.38 |

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



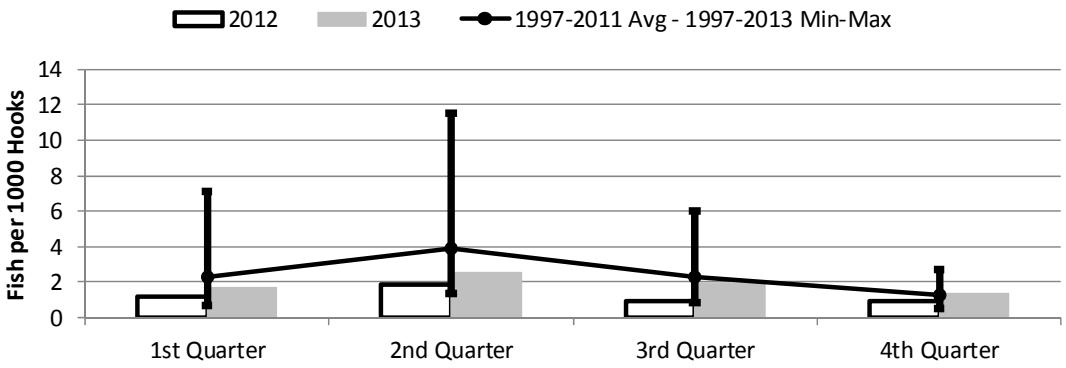

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 0.39 | 0.57 | 0.45 | 0.26 |
| 2012 | 0.36 | 0.85 | 0.81 | 0.45 |
| 1997-2013 Max | 1.27 | 2.15 | 1.68 | 1.05 |
| 1997-2011 Avg | 0.62 | 0.90 | 0.89 | 0.63 |
| 1997-2013 Min | 0.15 | 0.41 | 0.45 | 0.26 |

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



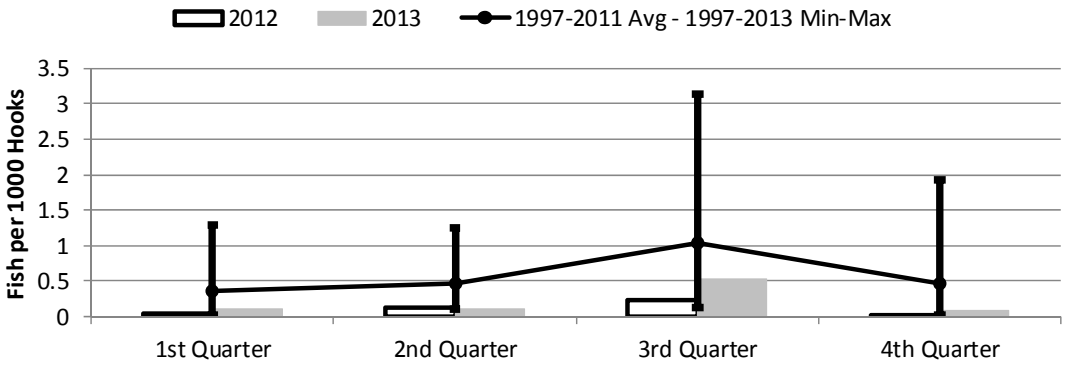

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 1.24 | 0.92 | 1.59 | 0.77 |
| 2012 | 1.51 | 2.92 | 3.53 | 8.47 |
| 1997-2013 Max | 4.56 | 5.39 | 7.84 | 9.98 |
| 1997-2011 Avg | 1.71 | 2.47 | 4.08 | 2.72 |
| 1997-2013 Min | 0.44 | 0.12 | 1.56 | 0.77 |

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



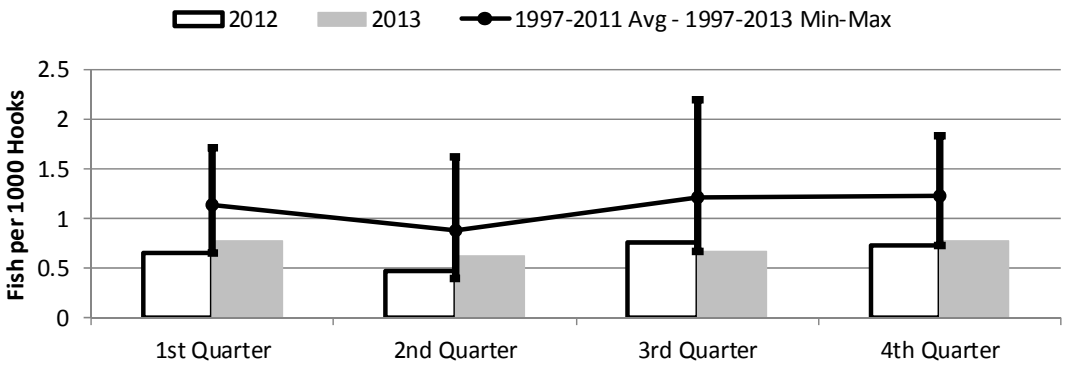

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 1.71 | 2.51 | 1.95 | 1.36 |
| 2012 | 1.15 | 1.84 | 0.90 | 0.97 |
| 1997-2013 Max | 7.11 | 11.51 | 6.04 | 2.76 |
| 1997-2011 Avg | 2.31 | 3.90 | 2.27 | 1.24 |
| 1997-2013 Min | 0.66 | 1.34 | 0.83 | 0.55 |

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



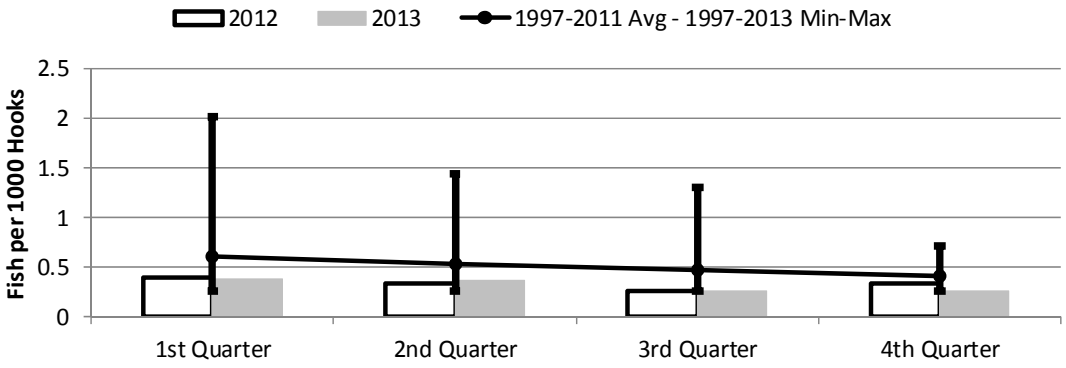

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 0.11 | 0.11 | 0.54 | 0.09 |
| 2012 | 0.04 | 0.13 | 0.23 | 0.02 |
| 1997-2013 Max | 1.30 | 1.25 | 3.13 | 1.93 |
| 1997-2011 Avg | 0.35 | 0.47 | 1.04 | 0.47 |
| 1997-2013 Min | 0.02 | 0.10 | 0.14 | 0.02 |

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



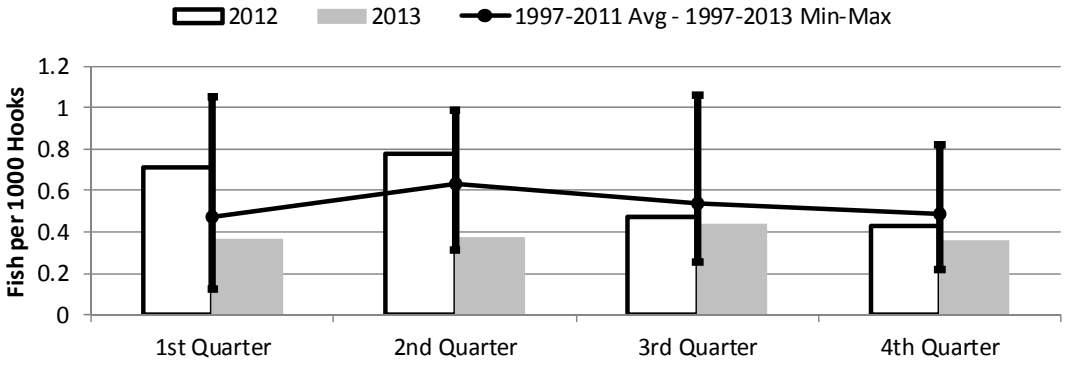

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| 2013 | 0.77 | 0.63 | 0.67 | 0.78 |
| 2012 | 0.64 | 0.47 | 0.76 | 0.73 |
| 1997-2013 Max | 1.71 | 1.62 | 2.20 | 1.83 |
| 1997-2011 Avg | 1.13 | 0.88 | 1.22 | 1.22 |
| 1997-2013 Min | 0.64 | 0.39 | 0.67 | 0.73 |

**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 | 0.25 |
| 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 | 0.25 |

**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 | 0.35 |
| 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 |