

# **PIFSC Report on the Logbook Program for the American Samoa Longline Fishery July – September 2012<sup>1</sup>**

Fisheries Research and Monitoring Division  
Pacific Islands Fisheries Science Center

The American Samoa longline fishery's summary catch and effort statistics for the third quarter of 2012, based on date of haul, are shown in Table 1. This table was derived from all logbook data submitted to the American Samoa Department of Marine and Wildlife Resources as of December 21, 2012. Table 1 reflects an estimated 100% of the number of sets made by vessels during this period.

The number of active vessels in the third quarter of 2012 (24) was the same as in the third quarter of 2011 (Fig. 1). The 24 active vessels made 1,273 sets and deployed 3,656,112 hooks during the third quarter of 2012. However, compared to the third quarter of last year, both the number of sets (Fig. 2) and the number of hooks set increased by 10.2% (Fig. 3). The average number of hooks per set stayed the same as in the third quarter of 2011.

The total catch for all species combined was 100,599 fish in 2012, an increase of 58% compared to the third quarter of 2011 (Fig. 4). Catch of all species, with the exception of yellowfin tuna and billfish, increased compared to third quarter 2011. As usual, albacore dominated the catch with 70,665 fish caught (an increase of 75.5% from the 40,269 fish caught in the third quarter of 2011, Fig. 5). The number of bigeye tuna caught increased slightly (0.6%, Fig. 6), while yellowfin catch decreased by 15.1% (Fig. 8) and skipjack tuna catch increased significantly (48%, Fig. 7). The number of mahimahi caught increased by 21.4% (Fig. 9), and the number of billfish caught decreased by 12.7% (Fig. 11). At the same time, the number of wahoo caught increased by 2.5% (Fig. 10) and numbers of sharks caught increased by 55% (Fig. 12).

The overall catch per unit effort (CPUE, number of fish per 1000 hooks), increased by 43.3% compared to the third quarter of 2011, from 19.2 fish per 1000 hooks to 27.5 fish per 1000 hooks (Fig. 13). CPUE for albacore, skipjack tuna, mahimahi, and shark increased. CPUE for all other species decreased. CPUE for albacore increased by 59.2% (Fig. 14), skipjack tuna CPUE increased by 34.2% (Fig. 16), CPUE of mahimahi increased by 9.5% (Fig. 18), and shark CPUE increased by 38.2% (Fig. 21). CPUE for bigeye tuna decreased by 9% (Fig. 15), yellowfin tuna CPUE decreased by 23.1% (Fig. 17), billfish CPUE decreased by 22% (Fig. 20), and wahoo CPUE decreased by 6.2% (Fig. 19).

While quarterly catch rates of albacore tuna, the primary target species, are reversing their downward trend and returning towards long term average catch rates, American Samoa's longline fishery continues to experience challenging conditions. Catch rates of albacore are still below long term averages and catch rates of many other marketable species are also at low levels.

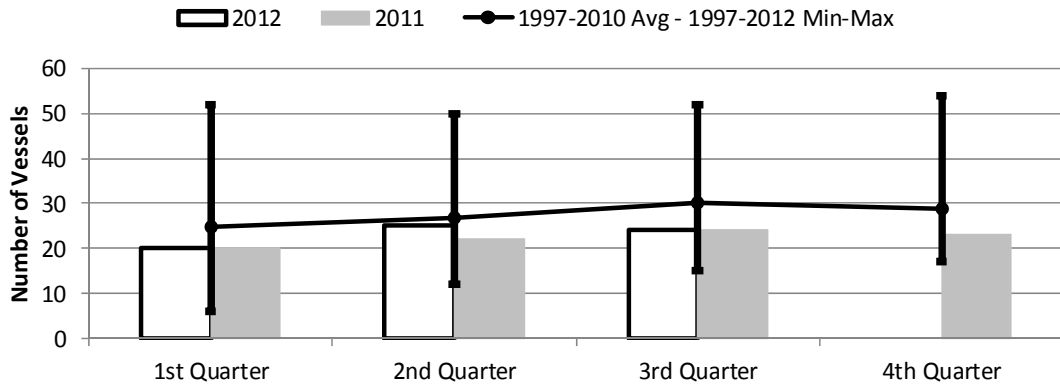
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<sup>1</sup> PIFSC Data Report DR-13-002  
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**Table 1. Summary of fish catch and nominal fishing effort by American Samoa Longline vessels during the third quarter of 2012 based on longline logbooks processed as of December 21, 2012.**

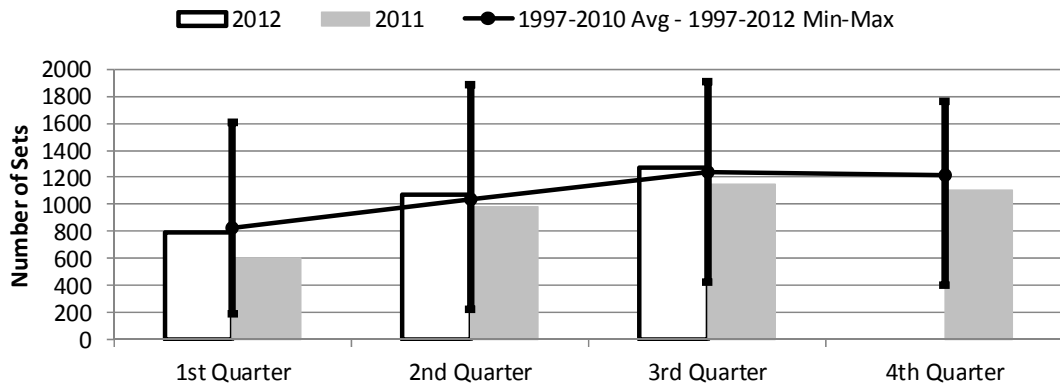
| <b>TRIP INFORMATION</b>      |                      |                    |                        |                                     |
|------------------------------|----------------------|--------------------|------------------------|-------------------------------------|
| Number of Vessels:           | 24                   |                    |                        |                                     |
| Number of Trips:             | 63                   |                    |                        |                                     |
| Number of Sets:              | 1,273                |                    |                        |                                     |
| 1000's of Hooks Set:         | 3,656                |                    |                        |                                     |
| Number of Light Sticks Used: | 532                  |                    |                        |                                     |
| <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                  | 330                  | 127                | 203                    | 0.09                                |
| Striped marlin               | 74                   | 19                 | 55                     | 0.02                                |
| Sailfish                     | 119                  | 8                  | 111                    | 0.03                                |
| Spearfish                    | 301                  | 18                 | 283                    | 0.08                                |
| Swordfish                    | 99                   | 78                 | 21                     | 0.03                                |
| <b>TOTAL BILLFISH</b>        | <b>923</b>           | <b>250</b>         | <b>673</b>             | <b>0.25</b>                         |
| <b>SHARKS</b>                |                      |                    |                        |                                     |
| Blue shark                   | 1,175                | 47                 | 1,128                  | 0.32                                |
| Shortfin mako shark          | 219                  | 2                  | 217                    | 0.06                                |
| Thresher shark               | 61                   | 0                  | 61                     | 0.02                                |
| White tip oceanic shark      | 195                  | 0                  | 195                    | 0.05                                |
| Sharks (unknown)             | 73                   | 0                  | 73                     | 0.02                                |
| <b>TOTAL SHARKS</b>          | <b>1,723</b>         | <b>49</b>          | <b>1,674</b>           | <b>0.47</b>                         |
| <b>TUNA</b>                  |                      |                    |                        |                                     |
| Albacore tuna                | 70,665               | 70,444             | 221                    | 19.33                               |
| Bigeye tuna                  | 2,965                | 2,721              | 244                    | 0.81                                |
| Bluefin tuna                 | 25                   | 21                 | 4                      | 0.01                                |
| Skipjack tuna                | 12,894               | 10,874             | 2,020                  | 3.53                                |
| Yellowfin tuna               | 3,300                | 3,078              | 222                    | 0.90                                |
| <b>TOTAL TUNA</b>            | <b>89,849</b>        | <b>87,138</b>      | <b>2,711</b>           | <b>24.58</b>                        |
| <b>OTHER PELAGICS</b>        |                      |                    |                        |                                     |
| Mahimahi                     | 838                  | 607                | 231                    | 0.23                                |
| Moonfish                     | 199                  | 75                 | 124                    | 0.05                                |
| Oilfish                      | 3,845                | 2                  | 3,843                  | 1.05                                |
| Pomfret                      | 260                  | 35                 | 225                    | 0.07                                |
| Wahoo                        | 2,768                | 1,888              | 880                    | 0.76                                |
| <b>TOTAL OTHER PELAGICS</b>  | <b>7,910</b>         | <b>2,607</b>       | <b>5,303</b>           | <b>2.16</b>                         |
| <b>NON-PMUS</b>              |                      |                    |                        |                                     |
| Pelagic fishes (unknown)     | 194                  | 0                  | 194                    | 0.05                                |
| <b>TOTAL NON-PMUS</b>        | <b>194</b>           | <b>0</b>           | <b>194</b>             | <b>0.05</b>                         |
| <b>TOTAL ALL SPECIES</b>     | <b>100,599</b>       | <b>90,044</b>      | <b>10,555</b>          | <b>27.52</b>                        |

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



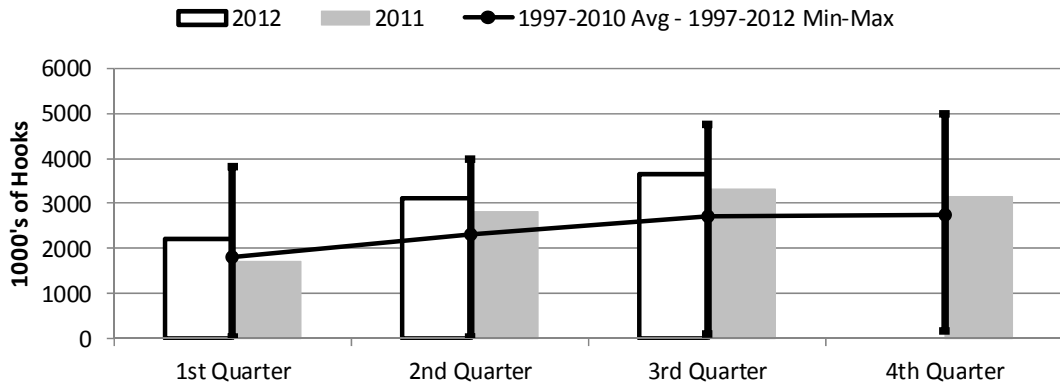
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 20          | 25          | 24          | 0           |
| 2011          | 20          | 22          | 24          | 23          |
| 1997-2012 Max | 52          | 50          | 52          | 54          |
| 1997-2010 Avg | 24          | 26          | 30          | 28          |
| 1997-2012 Min | 6           | 12          | 15          | 17          |

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



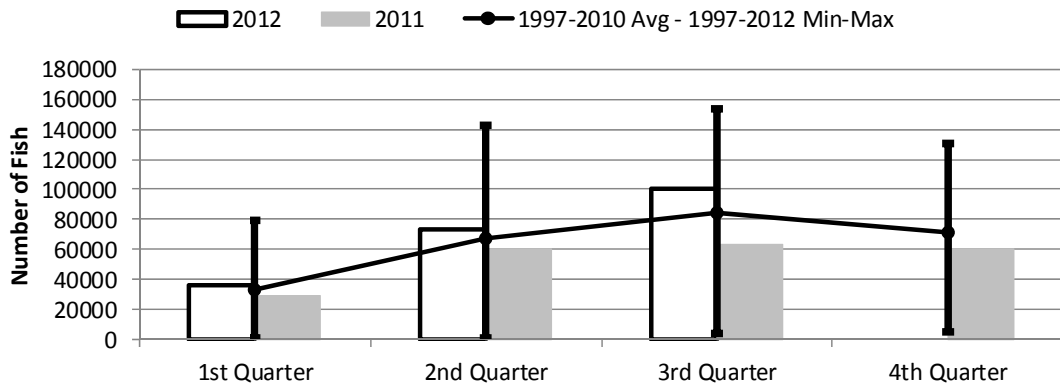
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 788         | 1,073       | 1,273       | 0           |
| 2011          | 601         | 986         | 1,155       | 1,104       |
| 1997-2012 Max | 1,602       | 1,886       | 1,904       | 1,759       |
| 1997-2010 Avg | 830         | 1,033       | 1,242       | 1,216       |
| 1997-2012 Min | 192         | 223         | 424         | 401         |

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



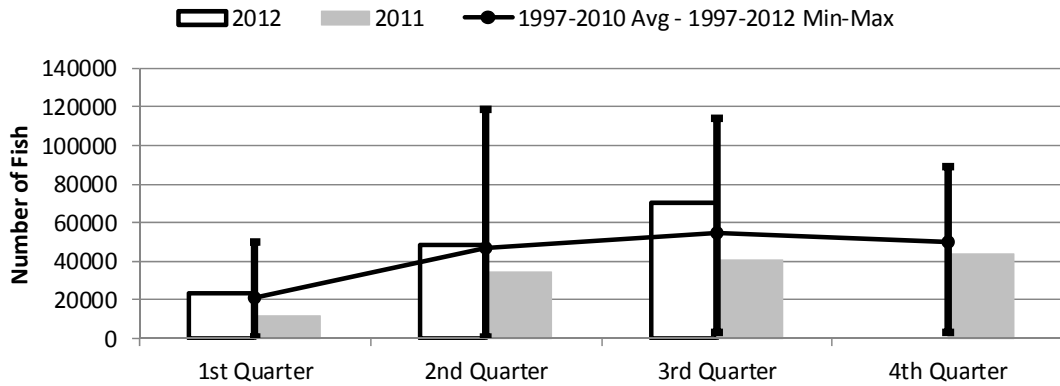
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 2,194       | 3,102       | 3,656       | 0           |
| 2011          | 1,695       | 2,811       | 3,317       | 3,138       |
| 1997-2012 Max | 3,805       | 3,992       | 4,769       | 4,985       |
| 1997-2010 Avg | 1,795       | 2,296       | 2,726       | 2,743       |
| 1997-2012 Min | 41          | 50          | 101         | 175         |

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



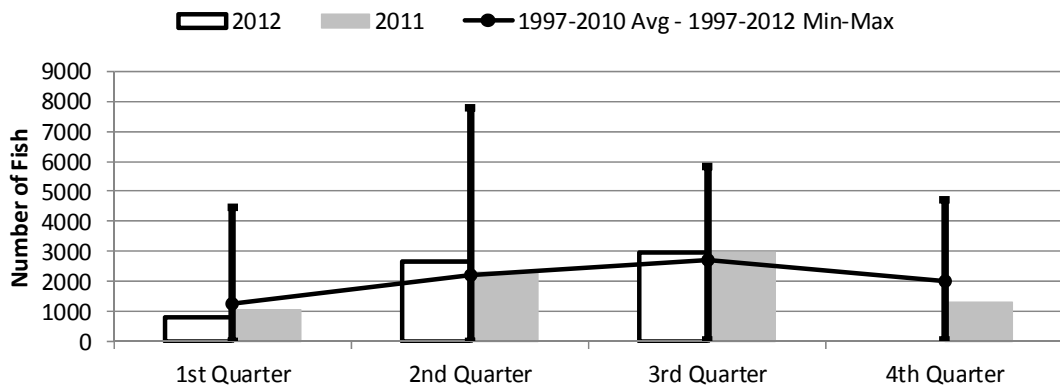
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 35,897      | 73,768      | 100,599     | 0           |
| 2011          | 29,498      | 60,624      | 63,705      | 60,582      |
| 1997-2012 Max | 79,588      | 142,603     | 153,301     | 130,238     |
| 1997-2010 Avg | 33,269      | 67,339      | 84,531      | 71,293      |
| 1997-2012 Min | 1,315       | 1,416       | 4,127       | 5,201       |

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



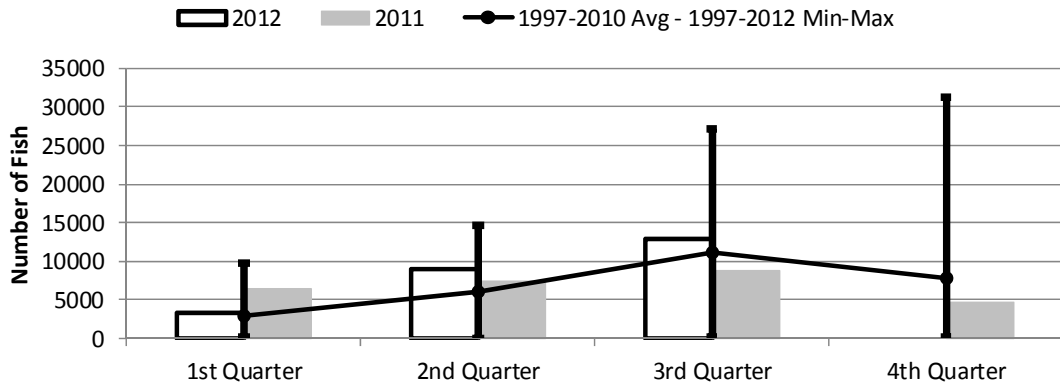
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 23,443      | 48,184      | 70,665      | 0           |
| 2011          | 11,899      | 34,320      | 40,269      | 43,983      |
| 1997-2012 Max | 50,382      | 118,994     | 113,831     | 89,389      |
| 1997-2010 Avg | 21,134      | 47,018      | 55,018      | 49,745      |
| 1997-2012 Min | 940         | 851         | 3,182       | 3,465       |

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



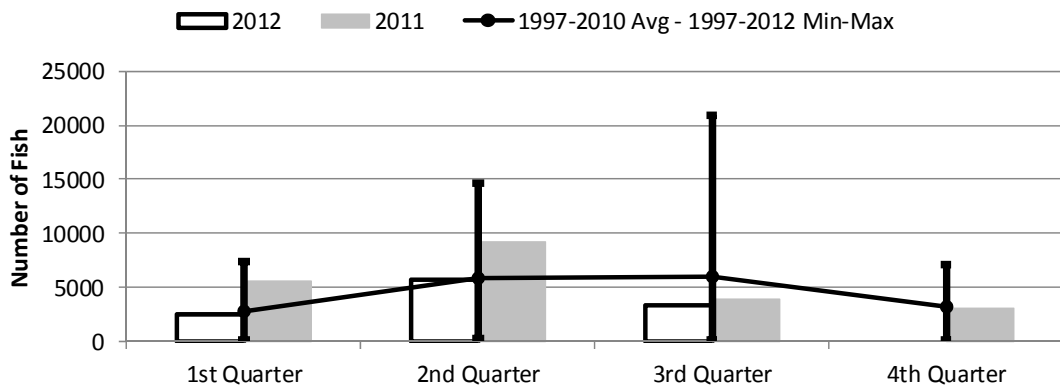
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 800         | 2,648       | 2,965       | 0           |
| 2011          | 1,043       | 2,303       | 2,948       | 1,320       |
| 1997-2012 Max | 4,470       | 7,785       | 5,824       | 4,728       |
| 1997-2010 Avg | 1,283       | 2,236       | 2,702       | 1,997       |
| 1997-2012 Min | 6           | 26          | 55          | 55          |

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



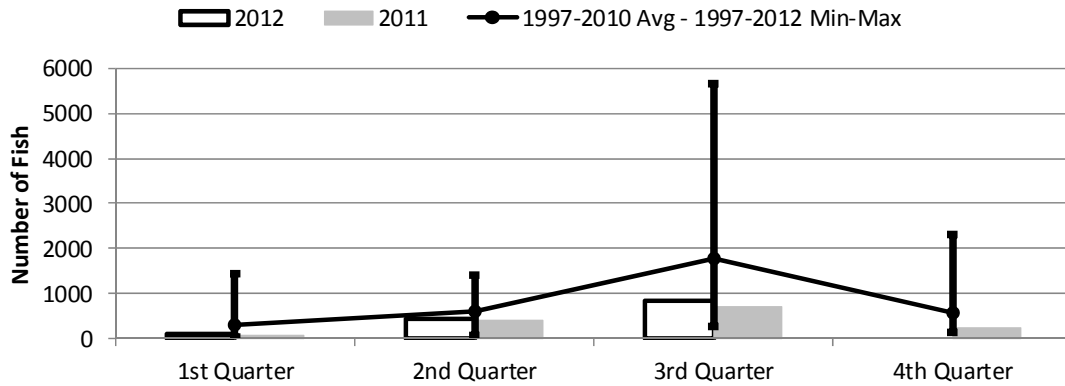
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 3,307       | 9,037       | 12,894      | 0           |
| 2011          | 6,446       | 7,465       | 8,717       | 4,718       |
| 1997-2012 Max | 9,801       | 14,606      | 27,234      | 31,191      |
| 1997-2010 Avg | 2,994       | 6,021       | 11,139      | 7,828       |
| 1997-2012 Min | 116         | 6           | 244         | 178         |

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



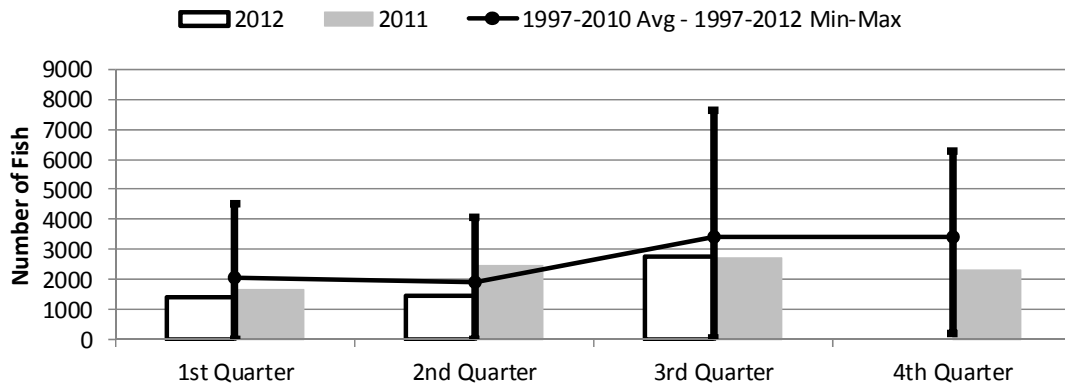
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 2,530       | 5,711       | 3,300       | 0           |
| 2011          | 5,645       | 9,185       | 3,887       | 3,111       |
| 1997-2012 Max | 7,426       | 14,681      | 20,993      | 7,104       |
| 1997-2010 Avg | 2,811       | 5,872       | 6,068       | 3,206       |
| 1997-2012 Min | 213         | 356         | 84          | 177         |

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



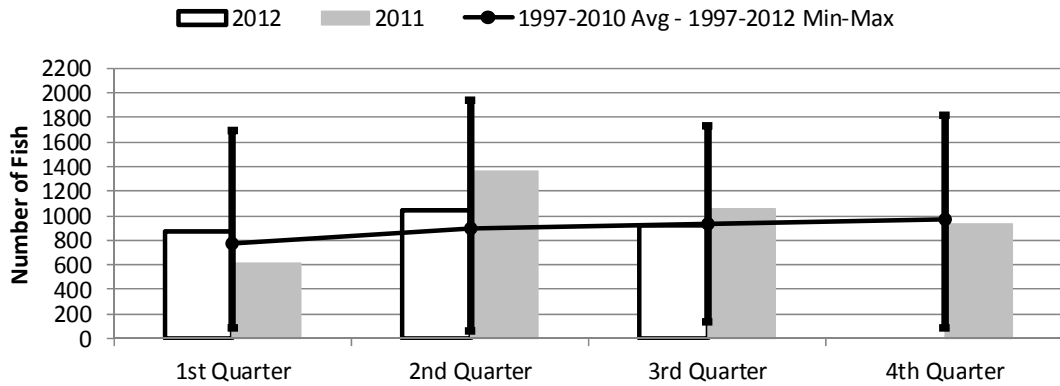
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 93          | 421         | 838         | 0           |
| 2011          | 72          | 405         | 690         | 240         |
| 1997-2012 Max | 1,454       | 1,392       | 5,642       | 2,297       |
| 1997-2010 Avg | 294         | 590         | 1,779       | 586         |
| 1997-2012 Min | 30          | 59          | 280         | 146         |

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



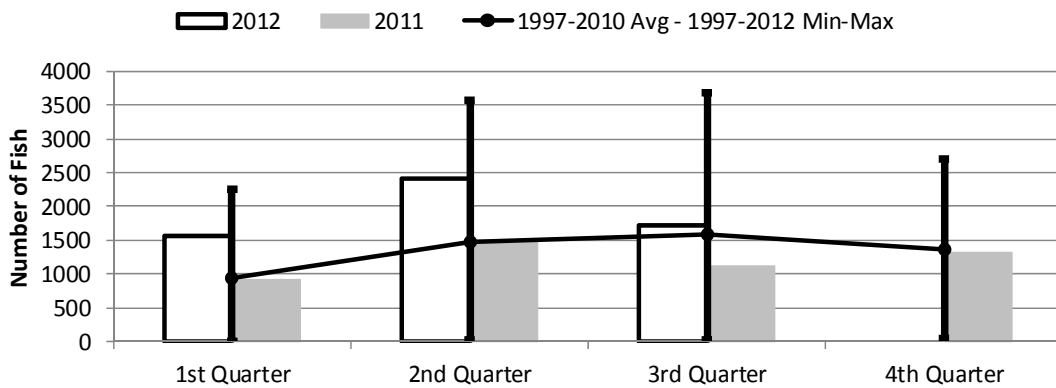
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 1,413       | 1,472       | 2,768       | 0           |
| 2011          | 1,682       | 2,484       | 2,701       | 2,331       |
| 1997-2010 Avg | 2,042       | 1,913       | 3,399       | 3,412       |
| 1997-2012 Max | 4,524       | 4,076       | 7,629       | 6,281       |
| 1997-2012 Min | 27          | 20          | 68          | 210         |

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



|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 875         | 1,045       | 923         | 0           |
| 2011          | 611         | 1,367       | 1,061       | 931         |
| 1997-2012 Max | 1,692       | 1,934       | 1,729       | 1,819       |
| 1997-2010 Avg | 777         | 900         | 930         | 973         |
| 1997-2012 Min | 83          | 58          | 132         | 84          |

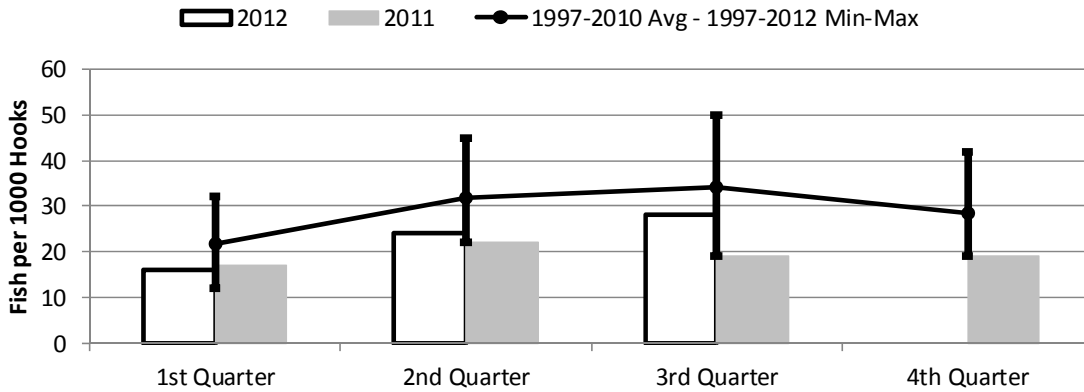
**Figure 12. American Samoa Shark Catch by Quarter for**



|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 1,565       | 2,405       | 1,723       | 0           |
| 2011          | 915         | 1,475       | 1,112       | 1,322       |
| 1997-2012 Max | 2,260       | 3,562       | 3,686       | 2,697       |
| 1997-2010 Avg | 943         | 1,472       | 1,594       | 1,361       |
| 1997-2012 Min | 5           | 16          | 26          | 49          |

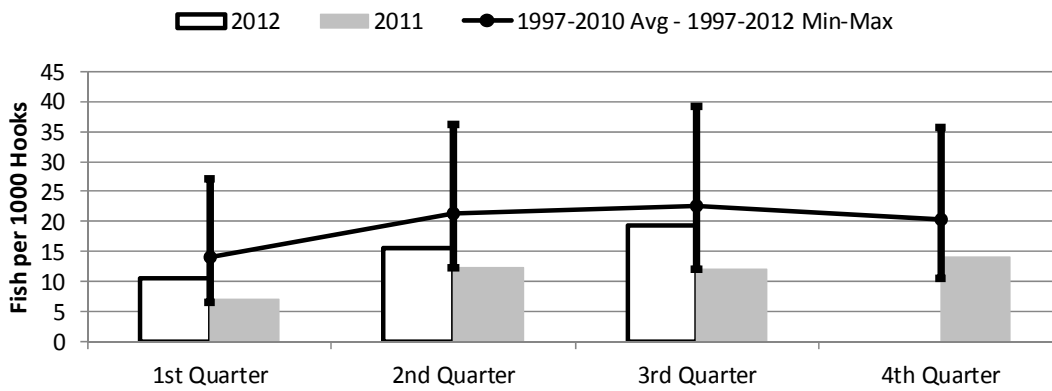


**Figure 13. American Samoa Longline Total Catch per 1000 Hooks by Quarter for**



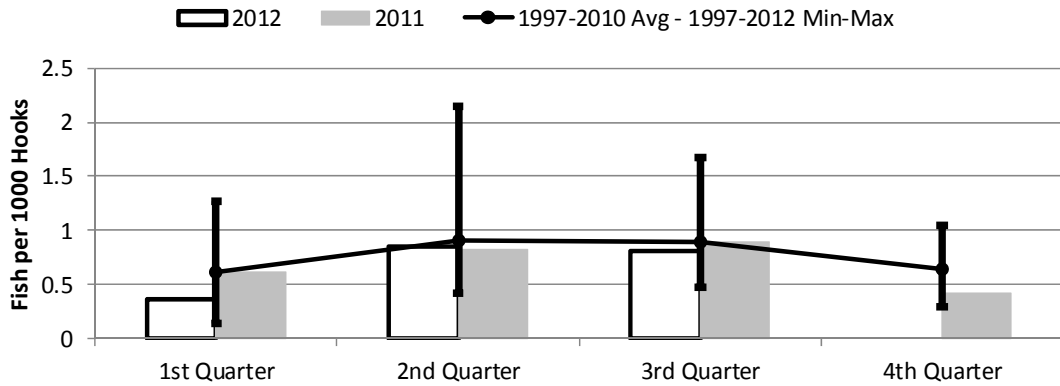
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 16          | 24          | 28          | 0           |
| 2011          | 17          | 22          | 19          | 19          |
| 1997-2012 Max | 32          | 45          | 50          | 42          |
| 1997-2010 Avg | 21          | 31          | 34          | 28          |
| 1997-2012 Min | 12          | 22          | 19          | 19          |

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



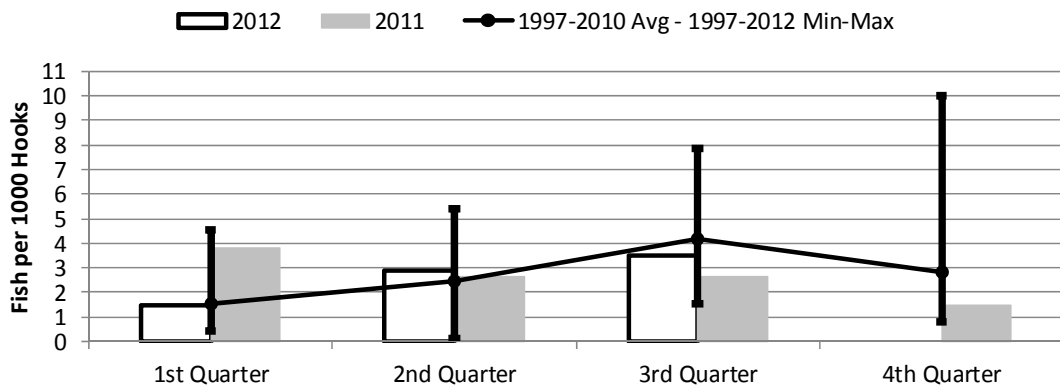
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 10.68       | 15.53       | 19.33       | 0.00        |
| 2011          | 7.02        | 12.21       | 12.14       | 14.01       |
| 1997-2012 Max | 27.01       | 36.18       | 39.13       | 35.75       |
| 1997-2010 Avg | 14.19       | 21.44       | 22.66       | 20.34       |
| 1997-2012 Min | 6.58        | 12.21       | 12.14       | 10.54       |

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



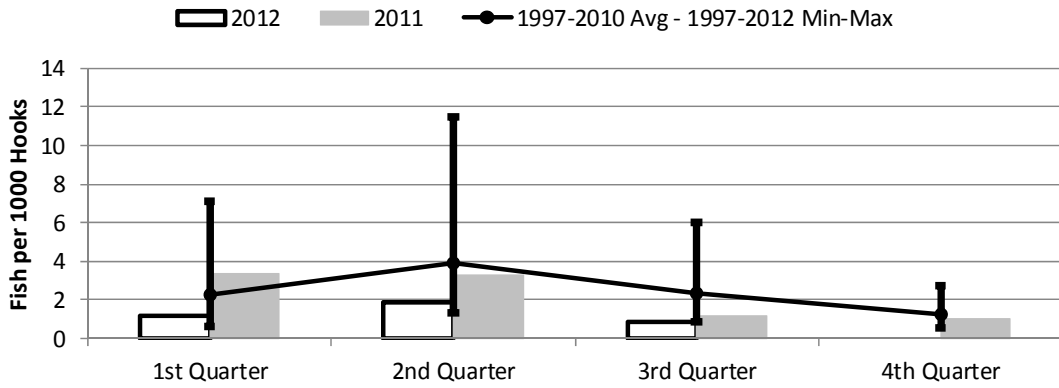
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 0.36        | 0.85        | 0.81        | 0.00        |
| 2011          | 0.62        | 0.82        | 0.89        | 0.42        |
| 1997-2012 Max | 1.27        | 2.15        | 1.68        | 1.05        |
| 1997-2010 Avg | 0.62        | 0.90        | 0.89        | 0.64        |
| 1997-2012 Min | 0.15        | 0.41        | 0.48        | 0.29        |

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



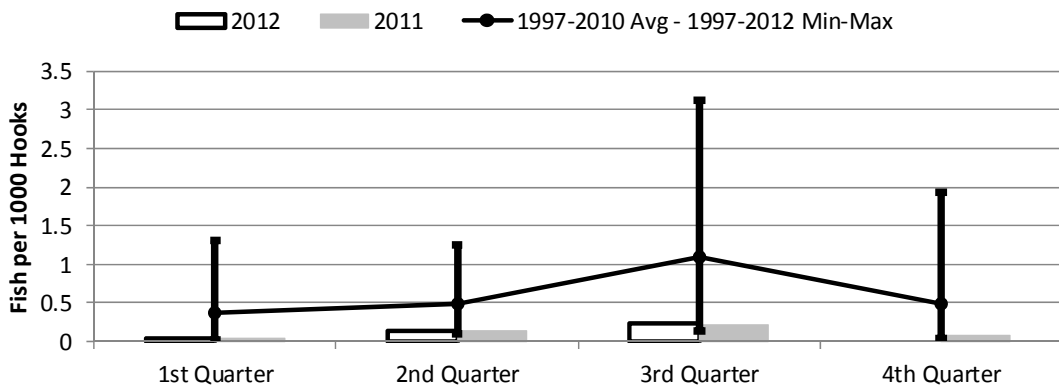
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 1.51        | 2.91        | 3.53        | 0.00        |
| 2011          | 3.80        | 2.66        | 2.63        | 1.50        |
| 1997-2012 Max | 4.56        | 5.39        | 7.84        | 9.98        |
| 1997-2010 Avg | 1.57        | 2.46        | 4.19        | 2.81        |
| 1997-2012 Min | 0.44        | 0.12        | 1.56        | 0.79        |

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



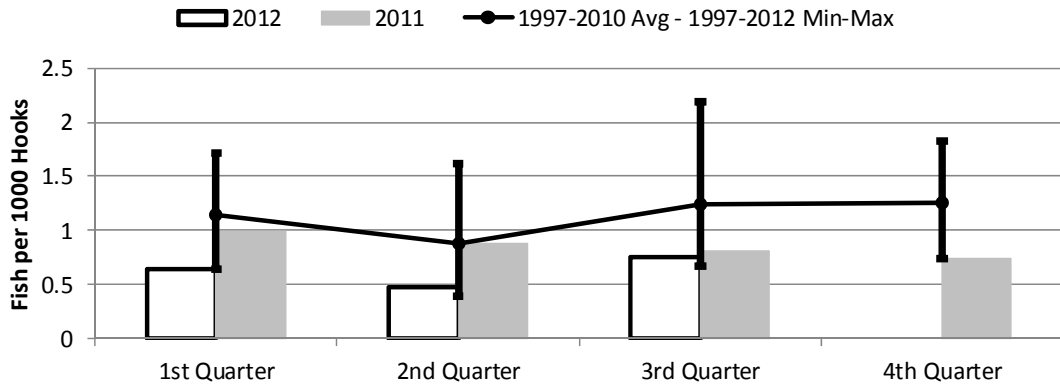
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 1.15        | 1.84        | 0.90        | 0.00        |
| 2011          | 3.33        | 3.27        | 1.17        | 0.99        |
| 1997-2012 Max | 7.11        | 11.51       | 6.04        | 2.76        |
| 1997-2010 Avg | 2.24        | 3.95        | 2.35        | 1.26        |
| 1997-2012 Min | 0.66        | 1.34        | 0.83        | 0.55        |

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



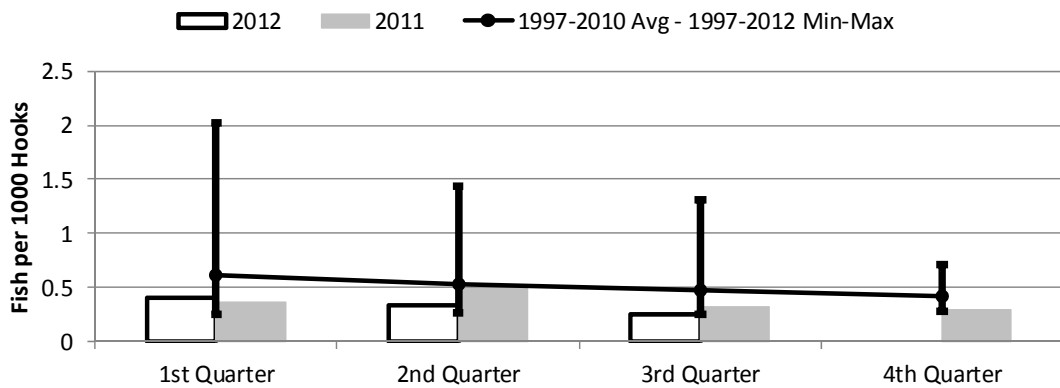
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 0.04        | 0.14        | 0.23        | 0.00        |
| 2011          | 0.04        | 0.14        | 0.21        | 0.08        |
| 1997-2012 Max | 1.30        | 1.25        | 3.13        | 1.93        |
| 1997-2010 Avg | 0.38        | 0.49        | 1.10        | 0.50        |
| 1997-2012 Min | 0.02        | 0.10        | 0.14        | 0.04        |

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



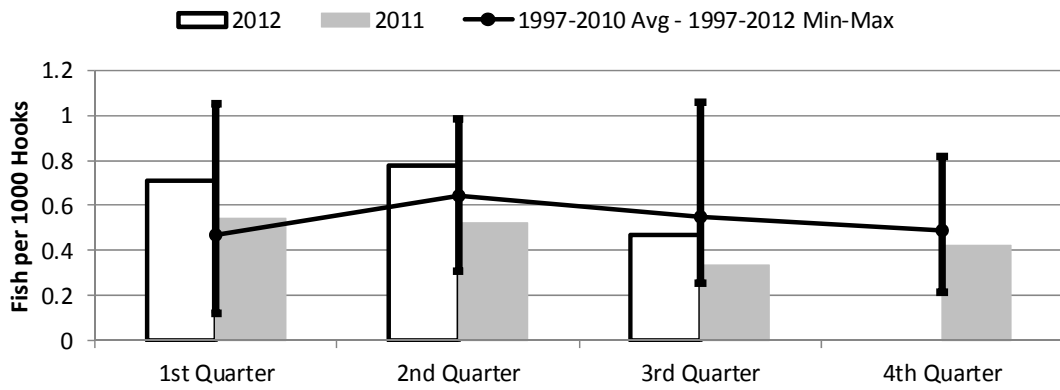
|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 0.64        | 0.47        | 0.76        | 0.00        |
| 2011          | 0.99        | 0.88        | 0.81        | 0.74        |
| 1997-2012 Max | 1.71        | 1.62        | 2.20        | 1.83        |
| 1997-2010 Avg | 1.14        | 0.88        | 1.24        | 1.25        |
| 1997-2012 Min | 0.64        | 0.39        | 0.67        | 0.74        |

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



|               | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 0.40        | 0.34        | 0.25        | 0.00        |
| 2011          | 0.36        | 0.49        | 0.32        | 0.30        |
| 1997-2012 Max | 2.02        | 1.44        | 1.31        | 0.71        |
| 1997-2010 Avg | 0.62        | 0.53        | 0.47        | 0.41        |
| 1997-2012 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 |
|---------------|-------------|-------------|-------------|-------------|
| 2012          | 0.71        | 0.78        | 0.47        | 0.00        |
| 2011          | 0.54        | 0.52        | 0.34        | 0.42        |
| 1997-2012 Max | 1.05        | 0.99        | 1.06        | 0.82        |
| 1997-2010 Avg | 0.47        | 0.64        | 0.55        | 0.49        |
| 1997-2012 Min | 0.12        | 0.31        | 0.26        | 0.22        |