The Economics of Atlantic Highly Migratory Species For-Hire Fishing Trips

July - November 2013

Clifford Hutt and George Silva
Atlantic HMS Charter/Headboat Sector

• Owners of vessels that carry passengers for hire and fish for Atlantic HMS must have an Atlantic HMS Charter/Headboat permit
• Atlantic HMS include tunas, billfish, swordfish & sharks
• For-hire trip is one that involves carrying a fee-paying passenger
• HMS Charter/Headboat sector is unique due to mix of commercial and recreational operations
Unique Atlantic HMS For-Hire Sector

- Large pelagic species are often costly to pursue
- HMS fishing generally requires use of comparatively large fishing vessels that have a substantial range
- Expenditures of HMS private anglers are significantly higher than those of average saltwater angler
- While HMS for-hire trips make up just 2.8% of for-hire trips, unique nature and management of HMS for-hire fisheries warrant targeted assessment
# ATLANTIC HMS CHARTER HEADBOAT TRIP SUMMARY FORM

**HMS Permit Number:**

**Departure**
- **Date (MM/DD/YY):**
- **Time (military):**

**Vessel Number:**
(Provided by Coast Guard or State)

**Contact Phone Number:**
- (______)______-_______

**Contact Name:**
(Please Print)

**Port of Departure:**
- [ ] [ ]

**State:**

**Number of Anglers on Trip:**

**Number of Crew Members:**
(including captain)

**Number of Lines Fished:**

**Target(s):**
- □ Bluefin
- □ Yellowfin
- □ Albacore
- □ Bigeye
- □ Skipjack
- □ Marlin
- □ Swordfish
- □ Sailfish
- □ Pelagic Sharks
- □ Coastal Sharks
- □ Other (List) ______________________

**Gear Type:**
- □ Rod & Reel (Anchored/Drifting)
- □ Rod & Reel (Trolling)
- □ Greenstick
- □ Other (List) ______________________

**Coordinates of where the majority of fishing was conducted:**
- **LAT** [ ] [ ]
- **LONG** [ ] [ ]

**Fished with:**
- □ Artificial Lure
- □ Live Bait
- □ Dead Bait

**If using bait, hook type:**
- □ Circle Hooks
- □ J Hooks

**If using bait, type used:**
- □ Mackerel
- □ Squid
- □ Menhaden
- □ Herring
- □ Ballyhoo
- □ Butterfish
Logbook Part 2 – Trip Expenses

<table>
<thead>
<tr>
<th></th>
<th>Unit Cost</th>
<th>Quantities Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel:</td>
<td>Price per Gallon $</td>
<td>Gallons Used:</td>
</tr>
<tr>
<td>Bait:</td>
<td>Trip Cost $</td>
<td>Pounds: and/or</td>
</tr>
<tr>
<td>Tackle:</td>
<td>Trip Cost $</td>
<td>Count:</td>
</tr>
<tr>
<td>Ice:</td>
<td>Trip Cost $</td>
<td>Used Own Ice Maker: Yes No</td>
</tr>
</tbody>
</table>

| Other Trip Costs: (Specifically for this trip) | $ |

| Trip Payout: (See instructions) | Owner $ |
| Captain $ |
| Crew/Mate $ |

| Total Trip Fare: (Not including tips) |

I certify the information contained on this form is accurate and complete to the best of my knowledge:

Captain Name (Please Print): __________________________ Captain Signature: __________________________

Please keep the yellow copy for your records and mail the white copy to: QuanTech, Inc., 2020 14th Street North, Suite 560, Arlington, VA 22201
NO FISHING FOR HIGHLY MIGRATORY SPECIES (HMS) REPORTING FORM

HMS Permit # _______________ Vessel Name: ________________________________

During the entire week of ___________ / ___________ to ___________ / ___________, year ___________, this vessel DID NOT FOR-HIRE FISH for Atlantic HMS (tuna, billfish, shark, or swordfish).

Please check the box below and provide the date the vessel will resume for-hire HMS fishing activity, if the vessel is currently inactive (e.g. due to repair, out-of-season, etc.):

☐ This vessel WILL NOT FOR-HIRE FISH for HMS until ___________ / ___________, year ___________,

Signature: ___________________________ Phone: (________) ________ - ________

Please keep the yellow copy for your records and mail the white copy to: QuanTech, Inc., 2020 14th Street North, Suite 560, Arlington, VA 22201
Sampling Frame and Sample Draw

• Sampling frame:
  • Possess HMS Charter/Headboat permits
  • In coastal states from Maine to Texas
  • 3,733 for-hire vessels included
• Random sample of 1,200 vessels selected for logbook reporting
  • Proportionally stratified by port state
Response Rate

• Of the 1,200 notification pages mailed, we received responses from 907 (75.6%)
• 428 of the 907 did not plan to target HMS (47%)
• Of the remaining 479, 83 reported taking trips (17%) from July through November 2013
• To test for non-response bias, statistical comparisons were made between respondents and non-respondents across 4 vessel characteristics
Cost-Earnings Logbook Survey

- Conducted logbook survey of HMS CHB permit holders from July – November 2013
- Received trip forms on 536 trips targeting HMS
- Majority (79%) from Southeast Region (NC – TX)

<table>
<thead>
<tr>
<th>Region</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Atlantic (NC – FL)</td>
<td>297</td>
<td>55.4</td>
</tr>
<tr>
<td>Gulf of Mexico (FL – TX)</td>
<td>126</td>
<td>23.5</td>
</tr>
<tr>
<td>North Atlantic (ME – VA)</td>
<td>113</td>
<td>21.1</td>
</tr>
</tbody>
</table>
## Average HMS Charter Trip Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>N. Atlantic</th>
<th>S. Atlantic</th>
<th>Gulf of Mex.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trip Length (days)</td>
<td>1.4</td>
<td>1.0</td>
<td>1.3</td>
</tr>
<tr>
<td>% over-night</td>
<td>35.8</td>
<td>0.3</td>
<td>17.3</td>
</tr>
<tr>
<td>Day Trip Length (h)</td>
<td>11</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Anglers per trip</td>
<td>4.6</td>
<td>5.2</td>
<td>4.6</td>
</tr>
<tr>
<td>Crew per trip</td>
<td>2.1</td>
<td>1.8</td>
<td>2.2</td>
</tr>
<tr>
<td>Lines fished per trip</td>
<td>8.5</td>
<td>5.6</td>
<td>4.6</td>
</tr>
</tbody>
</table>
# HMS Charter Trip Target Species

<table>
<thead>
<tr>
<th>Target species (%)</th>
<th>N. Atlantic</th>
<th>S. Atlantic</th>
<th>Gulf of Mex.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bluefin Tuna</td>
<td>35</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Yellowfin Tuna</td>
<td>57</td>
<td>44</td>
<td>35</td>
</tr>
<tr>
<td>Albacore Tuna</td>
<td>14</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Bigeye Tuna</td>
<td>48</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Marlin</td>
<td>14</td>
<td>40</td>
<td>23</td>
</tr>
<tr>
<td>Sailfish</td>
<td>0</td>
<td>56</td>
<td>15</td>
</tr>
<tr>
<td>Swordfish</td>
<td>13</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Sharks</td>
<td>34</td>
<td>30</td>
<td>64</td>
</tr>
</tbody>
</table>

* Percentages exceed 100 percent as most trips targeted multiple species.
Average HMS Charter Trip Costs

Total Cost Breakdown

<table>
<thead>
<tr>
<th>Category</th>
<th>Average ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fare</td>
<td>$2,062</td>
</tr>
<tr>
<td>Total Costs</td>
<td>$1,251</td>
</tr>
<tr>
<td>Fuel</td>
<td>$770</td>
</tr>
<tr>
<td>Labor*</td>
<td>$251</td>
</tr>
<tr>
<td>Bait</td>
<td>$81</td>
</tr>
<tr>
<td>Tackle</td>
<td>$52</td>
</tr>
<tr>
<td>Ice</td>
<td>$35</td>
</tr>
<tr>
<td>Other</td>
<td>$62</td>
</tr>
</tbody>
</table>

* Labor = Crew + Captain (if not owner)
Economic Impact Analysis

• Total expenditures and net revenue for HMS charter boat trips were estimated for each region.

• The economic contribution of these for-hire operations were estimated for the Northeast, Southeast, and Gulf of Mexico regions using input-output models estimated in IMPLAN.
  • Input-output analyses were conducted using a sum-of-parts approach.
  • IMPLAN models were assembled for each aggregated region using state level data models and assigning charter boat expenditures to the appropriate industrial sectors.
## HMS For-Hire Regional Economic Impacts

<table>
<thead>
<tr>
<th>Region</th>
<th>Total Expenses (millions)</th>
<th>Labor Income (millions)</th>
<th>Total Output (millions)</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>$20.8</td>
<td>$13.7</td>
<td>$54.8</td>
<td>544</td>
</tr>
<tr>
<td>Southeast</td>
<td>$3.7</td>
<td>$2.8</td>
<td>$10.6</td>
<td>243</td>
</tr>
<tr>
<td>Gulf of Mexico</td>
<td>$3.2</td>
<td>$2.2</td>
<td>$8.8</td>
<td>428</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$27.6</strong></td>
<td><strong>$18.8</strong></td>
<td><strong>$74.2</strong></td>
<td><strong>1,215</strong></td>
</tr>
</tbody>
</table>
Next Steps

• Incorporate feedback
• Publish NOAA Technical Memorandum
• Refine methods
• Plan for future survey
Comments and Questions

Thank you

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