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Marine  
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# NOAA Fisheries' Fishing Effort Survey Pilot Study and Next Steps

**South Atlantic Fishery Management Council  
Meeting, Charleston, SC  
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# Background

- The Fishing Effort Survey (FES) replaced NOAA's Coastal Household Telephone Survey (CHTS) in 2018.
- The FES is a self administered household mail survey that collects saltwater fishing effort information for each responding household resident.
- The Survey uses the USPS delivery sequence file matched to angler license information provided by states to sample licensed and unlicensed angling households.
- Survey respondents sampled bimonthly, provide the number of shore and private boat trips taken in the past two months and the past year in their state of residence.
- Information on non-resident anglers and waters fished are obtained in the shoreside catch survey.
- Program of continual evaluation of sources of error through pilot studies and survey performance monitoring



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# FES Pilot Studies Report

- Report includes two separate studies to evaluate potential sources of bias in Fishing Effort Survey:
  - One-month fishing activity questions (one-month waves)
  - Question order changes to the 2-month and 12-month fishing activity questions



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# One-Month Waves Key Points

- Compared FES design to two options for one-month fishing activity questions
  - Asking about a single month
  - Asking about two months individually
- Single month questionnaire resulted in consistently **higher estimates** compared to the current design
- The two individual months questionnaire produced estimates that were **similar** to the current design
- **Limitations:** Conducted in four states over six months with smaller sample sizes compared to the FES



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# One-Month Wave Questionnaires (not finished)

FES compared to two different alternative questionnaires for monthly estimates

FES Questionnaire (Q's 15 and 16)	Treatment 1 Questionnaire (Q's 15 and 16)	Treatment 2 Questionnaire (Q's 15 and 16)
<p><b>Please think only about recreational saltwater fishing in &lt;Merged State&gt;.</b></p> <p><b>15</b> How many days did you go recreational saltwater fishing from the shore in &lt;Merged State&gt;? The shore includes docks, bridges, causeways, beaches, banks, or any other shore-based place or area.</p> <p><input type="checkbox"/> No shore recreational saltwater fishing in the last 12 months → <i>Go to question 16</i></p> <p><input type="text"/> <input type="text"/> Number of days in July and August of 2015</p> <p><input type="text"/> <input type="text"/> Total number of days in last 12 months</p> <p><b>16</b> How many days did you go recreational saltwater fishing from a private or rental boat that returned to shore in &lt;Merged State&gt;? Do not include charter boats or commercial boats that have a captain or crew who helped locate and catch fish.</p> <p><input type="checkbox"/> No private boat recreational saltwater fishing in last 12 months → <i>Go to Household Member 2</i></p> <p><input type="text"/> <input type="text"/> Number of days in July and August of 2015</p> <p><input type="text"/> <input type="text"/> Total number of days in last 12 months</p> <p><b>If you have more household members, continue to household member 2.</b></p>	<p><b>Please think only about recreational saltwater fishing in &lt;Merged State&gt;.</b></p> <p><b>15</b> How many days did you go recreational saltwater fishing from the SHORE in &lt;Merged State&gt;? <i>The shore includes docks, bridges, causeways, beaches, banks, or any other shore-based place or area. Do not include freshwater fishing.</i></p> <p><input type="checkbox"/> Did not recreational saltwater fish from shore in the last 12 months → <i>Go to question 16</i></p> <p><input type="text"/> <input type="text"/> Number of days shore fishing in Jun. of 2015</p> <p><input type="text"/> <input type="text"/> Number of days in Jul. of 2015</p> <p><input type="text"/> <input type="text"/> Total number of days in last 12 months, including Jun. and Jul.</p> <p><b>16</b> How many days did you go recreational saltwater fishing from a private or rental BOAT that returned to shore in &lt;Merged State&gt;? <i>Do not include charter boats or commercial boats where a paid captain or crew helped locate and catch fish.</i></p> <p><input type="checkbox"/> Did not recreational saltwater fish from private boat in last 12 months.</p> <p><input type="text"/> <input type="text"/> Number of days boat fishing in Jun. of 2015</p> <p><input type="text"/> <input type="text"/> Number of days boat fishing in Jul. of 2015</p> <p><input type="text"/> <input type="text"/> Total number of days boat fishing in last 12 months, including Jun. and Jul.</p> <p><b>If you have more household members, continue to household member 2.</b></p>	<p><b>Please think only about recreational saltwater fishing in &lt;Merged State&gt;.</b></p> <p><b>15</b> How many days did you go recreational saltwater fishing from the SHORE in &lt;Merged State&gt;? <i>The shore includes docks, bridges, causeways, beaches, banks, or any other shore-based place or area. Do not include freshwater fishing.</i></p> <p><input type="checkbox"/> Did not recreational saltwater fish from shore in the last 12 months → <i>Go to question 16</i></p> <p><input type="text"/> <input type="text"/> Number of days in Jul. of 2015</p> <p><input type="text"/> <input type="text"/> Total number of days in last 12 months, including Jul.</p> <p><b>16</b> How many days did you go recreational saltwater fishing from a private or rental BOAT that returned to shore in &lt;Merged State&gt;? <i>Do not include charter boats or commercial boats where a paid captain or crew helped locate and catch fish.</i></p> <p><input type="checkbox"/> Did not recreational saltwater fish from private boat in last 12 months.</p> <p><input type="text"/> <input type="text"/> Number of days boat fishing in Jul. of 2015</p> <p><input type="text"/> <input type="text"/> Total number of days in last 12 months, including Jul.</p> <p><b>If you have more household members, continue to household member 2.</b></p>

# Question Order Change Key Points

- Revising order of questions in pilot resulted in **fewer observed reporting errors/illogical responses**.
- Resulting **effort estimates generally lower** than current FES design
  - **20-30 percent** lower for private boat
  - **40-50 percent** lower for shore
- **Limitations:** Conducted over 6 months, smaller sample size than full FES administration - study estimates were less precise and **results varied by state, wave, and fishing mode**.



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# Switching 2 & 12-month Fishing Activity Questions

FES: SH:PR/2:12

- 15** How many days did you go recreational saltwater fishing from the SHORE in North Carolina?
- The shore includes docks, bridges, causeways, beaches, banks, or any other shore-based place or area. Do not include freshwater fishing.*
- Did not recreational saltwater fish from shore in last 12 months → **Go to question 16**
- Number of days saltwater shore fishing in January and February of 2018
- Number of days saltwater shore fishing in last 12 months, including January and February
- 16** How many days did you go recreational saltwater fishing from a private or rental BOAT that returned to shore in North Carolina?
- Do not include freshwater trips or trips where a paid captain or crew helped locate and catch fish.*
- Did not recreational saltwater fish from private boat in last 12 months
- Number of days saltwater boat fishing in January and February of 2018
- Number of days saltwater boat fishing in last 12 months, including January and February

EXP1: SH:PR/12:2

- 15** How many days did you go recreational saltwater fishing from the SHORE in <<statefull>>?
- The shore includes docks, bridges, causeways, beaches, banks, or any other shore-based place or area. Do not include freshwater fishing.*
- Did not recreational saltwater fish from shore in last 12 months → **Go to question 16**
- Number of days saltwater shore fishing in last 12 months
- Number of days saltwater shore fishing in <<relperiod2>>
- 16** How many days did you go recreational saltwater fishing from a private or rental BOAT that returned to shore in <<statefull>>?
- Do not include freshwater trips or trips where a paid captain or crew helped locate and catch fish.*
- Did not recreational saltwater fish from private boat in last 12 months
- Number of days saltwater boat fishing in last 12 months
- Number of days saltwater boat fishing in <<relperiod2>>

EXP2: PR:SH/2:12

- 15** How many days did this person go recreational saltwater fishing from a private or rental BOAT that returned to shore in North Carolina?
- Do not include freshwater trips or trips where a paid captain or crew helped locate and catch fish.*
- Did not recreational saltwater fish from private boat in last 12 months → **Go to question 16**
- Number of days saltwater boat fishing in November and December of 2019
- Number of days saltwater boat fishing in last 12 months, including November and December
- 16** How many days did this person go recreational saltwater fishing from the SHORE in North Carolina?
- The shore includes docks, bridges, causeways, beaches, banks, or any other shore-based place or area. Do not include freshwater fishing.*
- Did not recreational saltwater fish from shore in last 12 months
- Number of days saltwater shore fishing in November and December of 2019
- Number of days saltwater shore fishing in last 12 months, including November and December

EXP3: PR:SH/12:2

- 15** How many days did you go recreational saltwater fishing from a private or rental BOAT that returned to shore in North Carolina?
- Do not include freshwater trips or trips where a paid captain or crew helped locate and catch fish.*
- Did not recreational saltwater fish from private boat in last 12 months → **Go to question 16**
- Number of days saltwater boat fishing in last 12 months
- Number of days saltwater boat fishing in November and December of 2019
- 16** How many days did you go recreational saltwater fishing from the SHORE in North Carolina?
- The shore includes docks, bridges, causeways, beaches, banks, or any other shore-based place or area. Do not include freshwater fishing.*
- Did not recreational saltwater fish from shore in last 12 months
- Number of days saltwater shore fishing in last 12 months
- Number of days saltwater shore fishing in November and December of 2019



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# Follow-up Study & Next Steps

- Revised design administered concurrently with current FES over full course of 2024 (**larger sample size over longer duration**).
- **IRA funding** received at end of July 2023 to conduct in 2024.
- New study design is informed by results of two previous pilot studies (one month waves, question order) and additional cognitive interviewing.
- Revised design includes **both questionnaire changes and increasing the administration of the survey** from every two months to monthly.
  - Study will determine **combined effects**, which allows for a more efficient transition/calibration process.
  - **Monthly sampling** is a priority of our partners and will produce **more frequent estimates and a shorter respondent recall** period that may also improve reporting error.



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# Follow-up Study & Next Steps

- Existing FES **calibration will be updated** to account for new design changes
- Calibration update work has started and will continue as needed into 2024 and 2025 pending results from the 2024 follow-up study
- Full implementation of an improved FES design would occur **no earlier than 2026** and would be dependent on
  - Successful completion of the follow-up study and calibration updates
  - Favorable technical peer review and updated FES Transition Plan developed in coordination with partners on the MRIP Transition Team
  - Fully calibrated historic time series of catch and effort estimates



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# Questions



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