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

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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



Image: C. Baez

# 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

[Image: C. Baez](#)



# 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
  - **30 percent**
- **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**.

[Image: C. Baez](#)



# 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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# Possible Implications for Atlantic HMS

- FES studies and potential design changes **will not impact LPS** (including the current LPS redesign project) **or FHS** (For-Hire Survey).
- **Full potential impacts unknown** until we've completed follow-up study. Previous pilot studies do not provide a full benchmark for comparison.
- While scaling of the estimates may change if transitioning to a revised survey, we **expect critical catch and effort trend information to remain similar**.
- In general, **stock status** relatively **consistent** when trend info hasn't changed.
- Focus on **continued conversations with partners and programmatic improvements** to further mitigate disruptions to stock assessment and management from continuous survey improvement and future survey design changes.
  - Coordinate revisions to both LPS and general MRIP catch and effort estimates





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