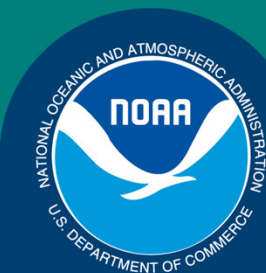


*Science, Service, Stewardship*



# **MRIP Calibration Workshop: For-Hire Survey Calibration**

V. Matter, S. Turner, G. Diaz, and T. Sminkey  
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Raleigh, NC

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## Overview

Change in the effort of charter boat mode over time

- traditional MRFSS estimation

- For-Hire Survey estimation

Need to develop consistent time series of catch and effort estimates

GLM approaches used to estimate the marginal mean ratios of MRFSS to FHS effort

Calibration factors can be applied to all species' catch estimates



## Traditional MRFSS effort Coastal Household Telephone Survey

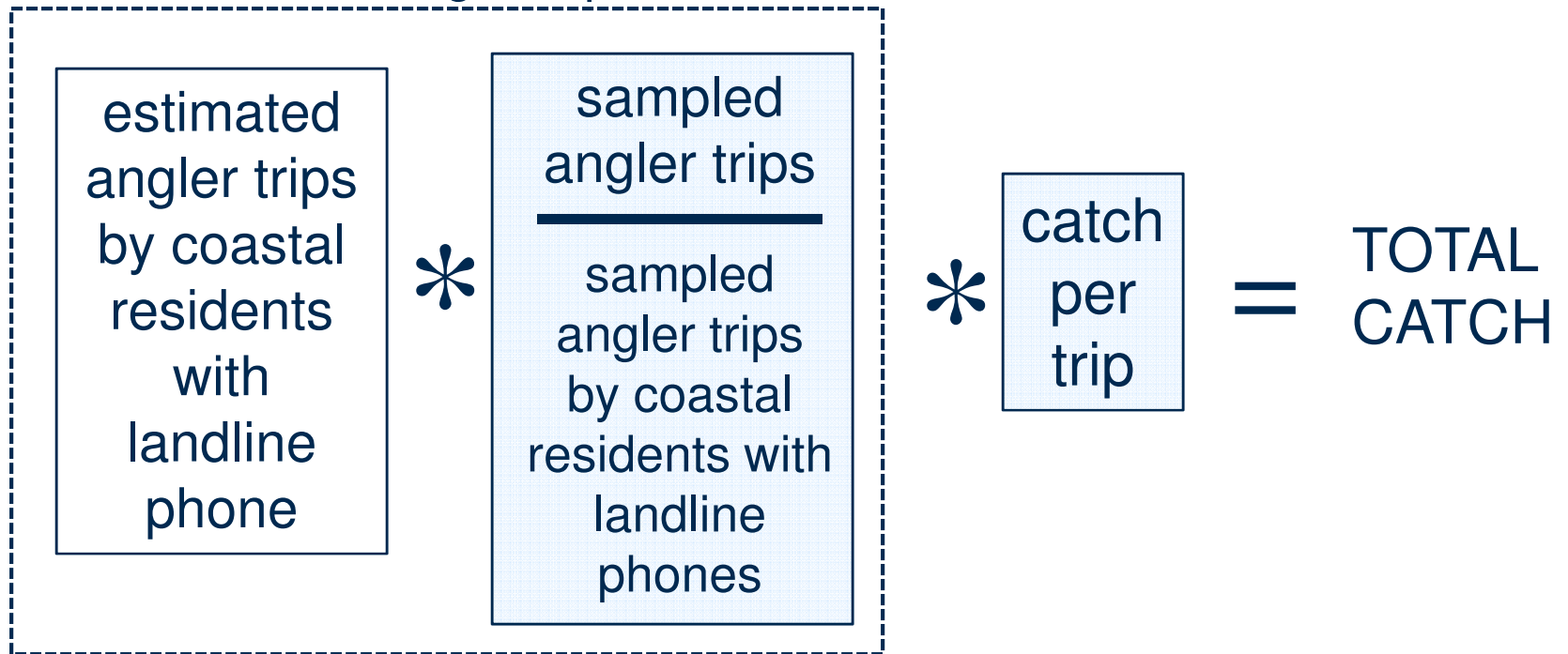
- Surveys households in coastal counties
- Random-digit-dialing sampling method
- Only gathers fishing effort (number of trips) from coastal residents' marine recreational fishing activity
- No catch information is collected.
- Two-month recall
- Low incidence of charter fishing by households contacted in the telephone survey





## Traditional MRFSS Catch Estimation

Total angler trips



Coastal Household  
Telephone Survey

Angler Intercept Survey



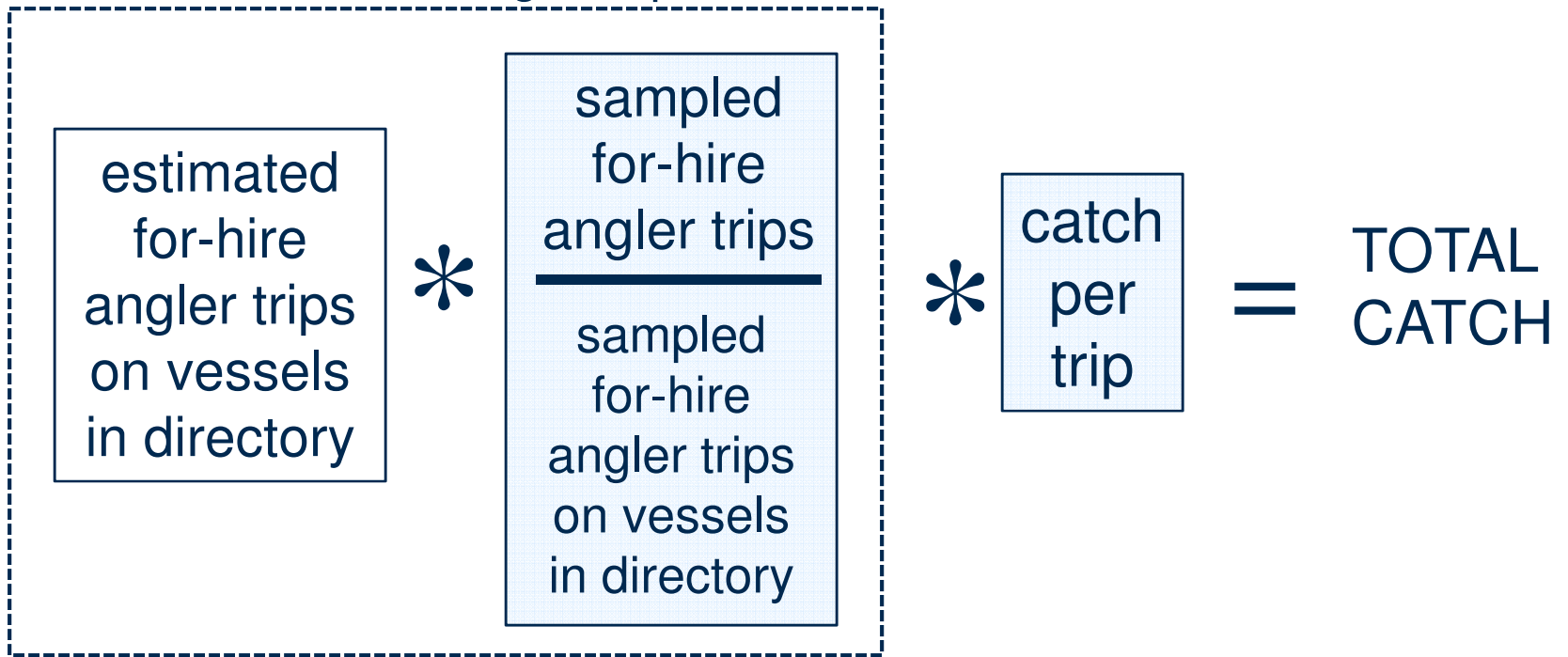
## For-Hire Survey effort

- Surveys charter boats
- Utilizes directory of charter boats
- Weekly survey within 2-month ‘wave’
  - Selects random sample of vessels
  - Contacts operators/owners
  - Collects fishing effort only
  - (trips & number anglers per trip)
  - Only one week recall



## MRIP Charter Catch Estimation

Total for-hire angler trips



For-Hire Telephone  
Survey

Angler Intercept Survey



## **GLM approaches Gulf of Mexico, 1986+**

FHS implemented in 2000 (FLW-LA); pilot years 98-99  
Calibration factors estimated using 1998-2003 data and  
applied to 1986-1997 estimates of catch and effort  
FLW treated separately from LA, MS, and AL  
Resulting ratios significant among waves and areas  
fished



## **GLM approaches South Atlantic, 1986+**

FHS implemented in 2003 (FLE) and 2005 (GA-NC);  
pilot year 2004 for GA and north

Calibration factors estimated using 2004-2010 data and  
applied to 1986-2003 estimates of catch and effort

Resulting ratios significant among states, waves and  
areas fished



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## **GLM approaches Gulf of Mexico and South Atlantic, 1981-1985**

MRFSS combined charter and headboat modes 1981-1985

Calibration factors estimated using 1986-1990 effort estimates (charter plus headboat effort (SRHS)) and applied to 1981-1985 cbt/hbt estimates of catch and effort

Resulting ratios significant among states and waves



## **GLM approaches Mid-Atlantic**

FHS implemented in 2005; pilot year 2004

MRFSS combined charter and headboat 1981-2003

Calibration factors estimated using 2004-2007 data and  
applied to 1981-2003 estimates of catch and effort

Resulting ratios significant among states and waves



## **Considerations for MRIP-MRFSS Calibration**

- MRFSS to MRIP calibration needed to account for changes in intercept survey design
- Need to calibrate historical estimates for changes in methods of charter effort as well
- Highly desirable to account for multiple design changes simultaneously
- Serve as model for dealing with future changes in survey design and/or methodology