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# MRIP Data User Seminar: Custom Domain Analyses, Part 2

March 31, 2022

John Foster

# Overview

- Resource Links
- Directed Trips
- Length Frequencies
- Catch (per trip) Frequencies
- Multi-year and Moving Average Estimates
- Simple Outlier Analysis



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# Resource Links

- [MRIP Data Downloads](#)
- [MRIP Data User Handbook](#)
- [Survey Datasets \(SAS, CSV\): Trip, catch, and size](#)
- [Read Me for Datasets and Template Programs \(.DOC\)](#)
- [Dataset Variables \(Data Dictionary\) \(.XLS\)](#)
- [MRIP Survey Design and Statistical Methods](#)
- [SAS Survey Procedures](#)
- [R Survey Package](#)
- [Applied Survey Data Analysis](#) (reference textbook)



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# Directed Trips

- [Direct Angler Trip Estimation Template Program \(SAS\)](#)
- South Atlantic
- Snapper-Grouper (multiple species) Example
- Domain definition
  - Either target (prim1 or prim2)
  - or
  - Landings (A+B1)



# Length Frequencies

- Size datasets
- Use wp\_size for analysis weight field
  - wp\_size analysis weights calibrated to (A+B1) landings (no.) estimates
- Imputation indicator fields
  - lngth\_imp
  - wgt\_imp
- [Length Frequencies Template Program](#) (SAS)
- [Length Frequencies Template Program](#) (R)



# Catch Frequencies

- Draft/Experimental template program (SAS)
- Landings per trip frequencies
  - Total Angler-Trips
  - Total Landings
- Grouped catch complication
- Summer Flounder, Mid-Atlantic by State, Private Boat, 2018



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# Multi-year and Moving Average Estimates

- MRIP Estimate or Public-use datasets
- Multi-year
  - Simple sums
  - Define multi-year domain in catch or effort template programs
- Moving average
  - Additional coding steps
- Catch Example
  - New York, Private Boat, Black Sea Bass, Landings (no.)



# Simple Outlier Analysis

- Z score
  - Scale a series of point estimates to N(0,1) distribution
    - $z_i = (x_i - \mu) / \sigma$
  - Rule of Thumb: any points beyond +/- 3 are considered outliers
  - Need a minimum of points (n=12) in series to detect outlier
- Modified Z score
  - Use median and median absolute deviation in place of mean and standard deviation, other minor changes
  - More robust to effects of outlier values, skewed distributions
  - Tends to flag more points







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