



**NOAA
FISHERIES**

Marine Recreational Information Program Update

Richard Cody

ECS Federal In Support of

NOAA Fisheries

Office of Science and Technology



Overview

- National Academies Review
- Fishing Effort Survey
- Access Point Angler Intercept Survey
- MRIP Strategic Plan
- Regional Implementation Plans
- MRIP Certification

2017 National Academies Review

- The National Academies of Sciences, Engineering and Medicine provides **independent, objective analysis** and advice to the nation and conducts other activities to solve complex problems and inform public policy
- The National Academies released a **comprehensive follow-up** review to its 2006 independent, expert analysis of NOAA Fisheries' saltwater recreational information collection efforts
- Recognized the agency for making "**impressive progress**" over the past 10 years
- Highlighted some remaining challenges, offered a series of **recommendations for continued improvements** to MRIP surveys
- Review will help us **further refine** our recreational fisheries information collection efforts, **prioritize** our improvement efforts to best meet evolving needs of fisheries scientists, stock assessors, managers, and stakeholders

Improving How We Measure Effort

- The Fishing Effort Survey was developed by a team of **state, regional, and federal partners**, along with outside experts.
 - 8 years of testing.
 - 6 MRIP pilot studies.
 - 2 independent reviews.
- Began **side-by-side benchmarking** with CHTS in 2015.
- Starting in 2018, we will use **only the FES** for shore and private boat modes.

New Fishing Effort Survey

- National Academies: “The methodologies, including the address-based sampling survey design, are **major improvements** from the original Coastal Household Telephone Survey that employed random-digit-dialing.”
- This mail survey is a **more accurate method** for estimating shore and private boat fishing effort on the Atlantic and Gulf Coasts.
 - Better coverage
 - Higher response rates
 - Better chance of reaching people who fished
- In pilot studies, the FES produced considerably **higher estimates** of fishing effort than the telephone survey.
- Plans for **continued development**
 - Evaluation of electronic reporting options in 2018



How Do the Numbers Compare?

- FES estimates are substantially higher than those from CHTS.
- This does not mean that overfishing is or has been occurring.
 - The number of fishing trips anglers take is only one factor in stock assessments.
- This does not mean that fishing effort has increased significantly.
 - Calibration model indicates the higher number is constant over time, as opposed to reflecting a recent increase in fishing effort.

How Will This Affect Fishing?

- Can't determine exactly how new estimates will impact management until re-estimation is complete and the calibrated numbers are used in stock assessments.
 - This will occur on a **species-by-species basis** according to a schedule developed by NOAA Fisheries with our state and regional partners.
- What we can expect over next three years:
 - **2018:** Revised data will be available and incorporated into stock assessments for some fisheries.
 - **2019:** Preliminary management changes may be made for stocks that have been assessed; additional assessments will be conducted for stocks that were not completed in 2018.
 - **2020:** Based on new stock assessments, management changes could occur for a number of species.

Transitioning to the FES

- Immediate implementation of the new FES would cause a major disruption
 - Stock assessments and fisheries management rely on having a comparable time series of recreational catch statistics
 - A calibration is needed to convert historical catch estimates based on legacy surveys into estimates compatible with those produced by any new surveys
 - We need numbers in the **same “currency”**
- Calibration is needed to account for the switch to the new FES

FES/CHTS Calibration Model

- Developed with MRIP consultants at Colorado State University and Westat
- Application of small area estimation methods using Fay-Herriot Model (linear mixed effects model)
- Separate models for fishing modes
 - Private boat
 - Shore
- Separate effects for states, waves, and states by waves

FES/CHTS Calibration Model

- Longer-term survey method effect (1981-2017)
 - Generally larger effect that adjusts the entire time series
- Shorter-term wireless telephone household effect (2000-2017)
 - Generally smaller effect that adjusts recent years attenuating to no adjustment prior to 2000
- Approach allows for calibrating to FES or CHTS series

Calibration Model Peer Review

- June 27-29, 2017 workshop held in Silver Spring, MD
- Review Panel:
 - Chair: Paul Rago (MAFMC SSC)
 - 3 CIE Reviewers:
 - Cynthia Jones (Old Dominion Univ.)
 - Rob Hicks (College of William & Mary)
 - Ali Arab (Georgetown Univ.)
 - 3 Non-CIE Reviewers:
 - Patrick Sullivan (NEFMC SSC)
 - Fred Serchuk (SAFMC SSC)
 - Jason McNamee (ASMFC/Rhode Island DEM)
- Workshop was accessible by webinar and fully recorded
 - Recordings and materials will post on MRIP website
- Panel's initial findings presented during workshop were positive
- Independent reviews and Chair's summary due soon

Access Point Angler Intercept Survey

- Concurrent with the FES calibration, work continues on finalizing a similar calibration model for APAIS, which was redesigned prior to its implementation in 2013.
- National Academies: “The current methods used in the Access Point Angler Intercept Survey (APAIS) for the Marine Recreational Information Program (MRIP) are **a vast improvement** over the previous sampling and estimation procedures and reflect state of the art methods in survey sampling.”
- **Potential for bias has been greatly reduced:**
 - Strict adherence to formal probability sampling protocols
 - Decision-making by samplers greatly limited
 - Expanded temporal coverage of daytime/nighttime fishing
 - Site-time assignments completed without rescheduling
- **State agency staff** now conduct field sampling in all Atlantic and Gulf Coast states covered by APAIS

Transition and Calibration Timeline

Step 1 2015-2017

- FES/CHTS Benchmarking

Step 2 2016-2017

- FES calibration model development
- FES calibration model peer review
- APAIS calibration model development

Step 3 2018

- APAIS final calibration model peer review
- Re-estimation of historical catch and effort

Step 4 mid-2018

- Calibrated catch and effort time series available for use in stock assessments and management

- **Three-year transition period** from current phone survey estimates to new mail survey estimates
- **Phone survey estimates will be used for science and management** until the calibration models are developed, peer-reviewed, adopted and used to update stock assessments and annual catch limits
- Plan developed with **extensive regional and state-level input** through Atlantic and Gulf subgroup of the Transition Team

Next Steps in Transition

1. MRIP response to peer reviews.
2. Post peer reviews and response on website
3. Apply FES/CHTS model to run preliminary calibrated effort estimates for prior years
4. Complete evaluation of models proposed for APAIS design change calibration
5. Peer review selected APAIS model
6. Apply both models to produce final calibrated effort and catch statistics by mid-2018

MRIP Strategic Plan



- The Government Accountability Office (GAO) issued its final analysis of MRIP.

- “NOAA Fisheries should develop a comprehensive strategy to guide [MRIP’s] data collection efforts.”

- A strategic planning process for the program was initiated.
- Final draft made available for partner and stakeholder review

- Includes appropriate responses to the National Academies recommendations.
- Establishes overall program goals and strategies including enhanced communications and outreach efforts.
- Identifies timelines for achieving objectives.
- Establishes program performance measures.

MRIP Strategic Plan (2017-2022)

Strategic plan finalized

- Responded to >150 comments and recommendations provided by States, Councils, Interstate Commissions and Individuals

Six major goals:

- Meeting customer needs, providing quality products, engaging key stakeholders, ensuring sound science, operating collaboratively and meeting program resource and funding needs

Plan emphasizes collaboration with regional partners

- (e.g., Interstate Commissions, Fishery Management Councils, and States)

Approach – Three-phased process

- Evaluation, Innovation (emerging technologies), and Implementation

Regional Implementation Plans

- Represent a **significant evolution** in the course of MRIP
- Each **region will take the lead role** in determining which survey methods are most suitable for their science, stock assessment, and management needs
- MRIP will use these plans to **develop a national inventory of partner needs and associated costs**, and annually specify priority-setting criteria for supporting those needs

Regional Implementation Plans

- Received Plans from: Gulf States, Atlantic States, Caribbean, Atlantic HMS
- Pacific States, Western Pacific Islands (draft completed), and Alaska plans in preparation
- Gulf States, Caribbean, and Atlantic HMS Plans approved by MRIP Executive Steering Committee

MRIP Certification

- Several Gulf States in latter stages of review (as of 11/21).
 - LA: State – Certification pending
 - AL: State responding to reviewer recommendations
 - MS: Currently in review
 - FL: Initial Peer Review Workshop scheduled for February, 2018
 - OR and WA: Responding to reviewer recommendations
 - CA: Requested Certification
 - FHTS also in the queue

Next Steps

- Complete decision-making on certification of LA Creel and supplemental surveys
- Conduct a 4th workshop in early 2018 to determine how best to:
 - Integrate supplemental surveys with general MRIP surveys
 - Ensure comparability of survey estimates across states
 - Benchmark and calibrate as needed to support a smooth transition from the legacy survey approach to a new integrated approach for Gulf red snapper
- Determine funding support for implementation of the new integrated MRIP approach for the Gulf of Mexico



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Questions & Discussion



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