



**NOAA
FISHERIES**

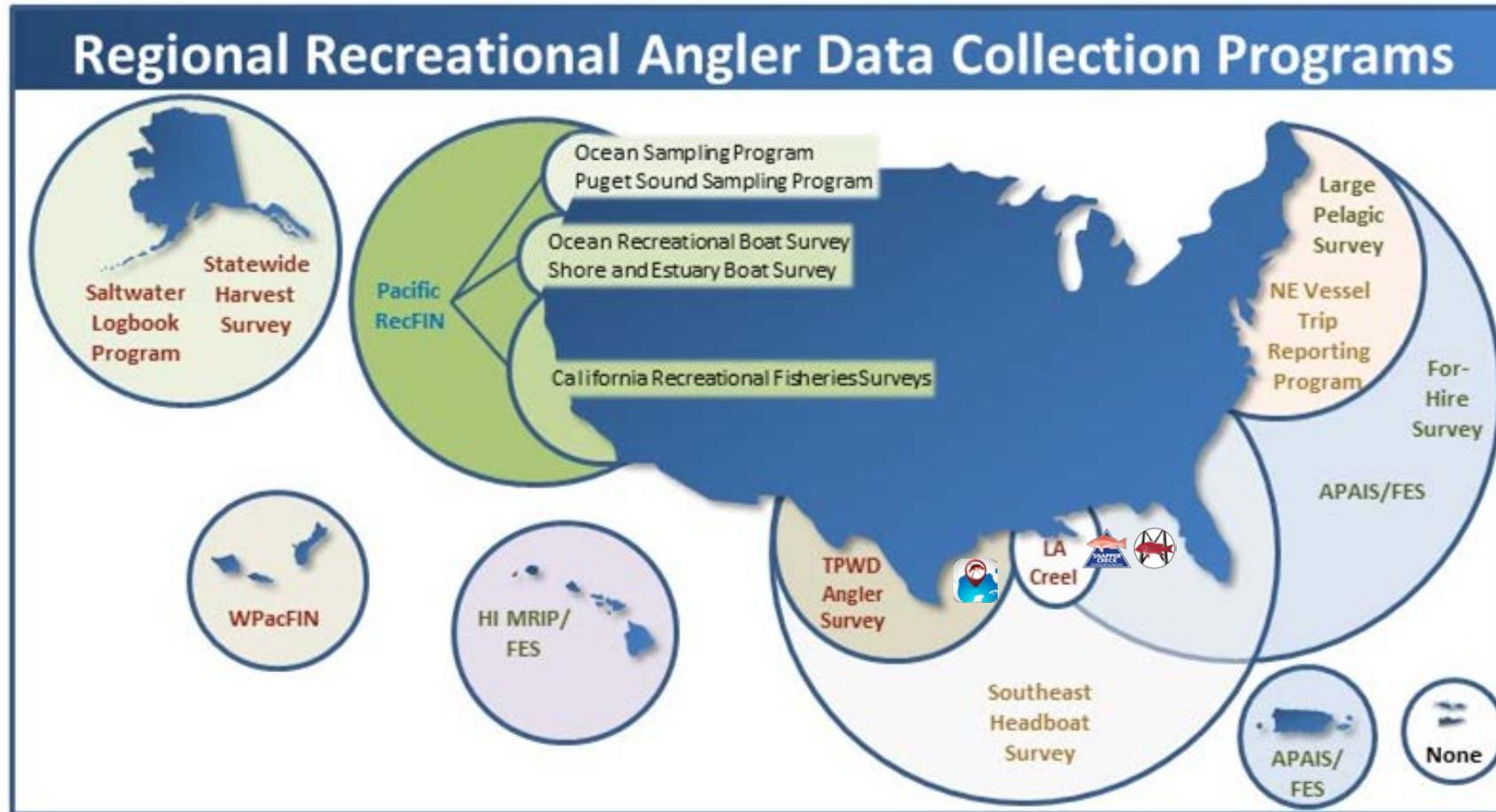
Marine Recreational Information Program

Electronic Reporting Surveys

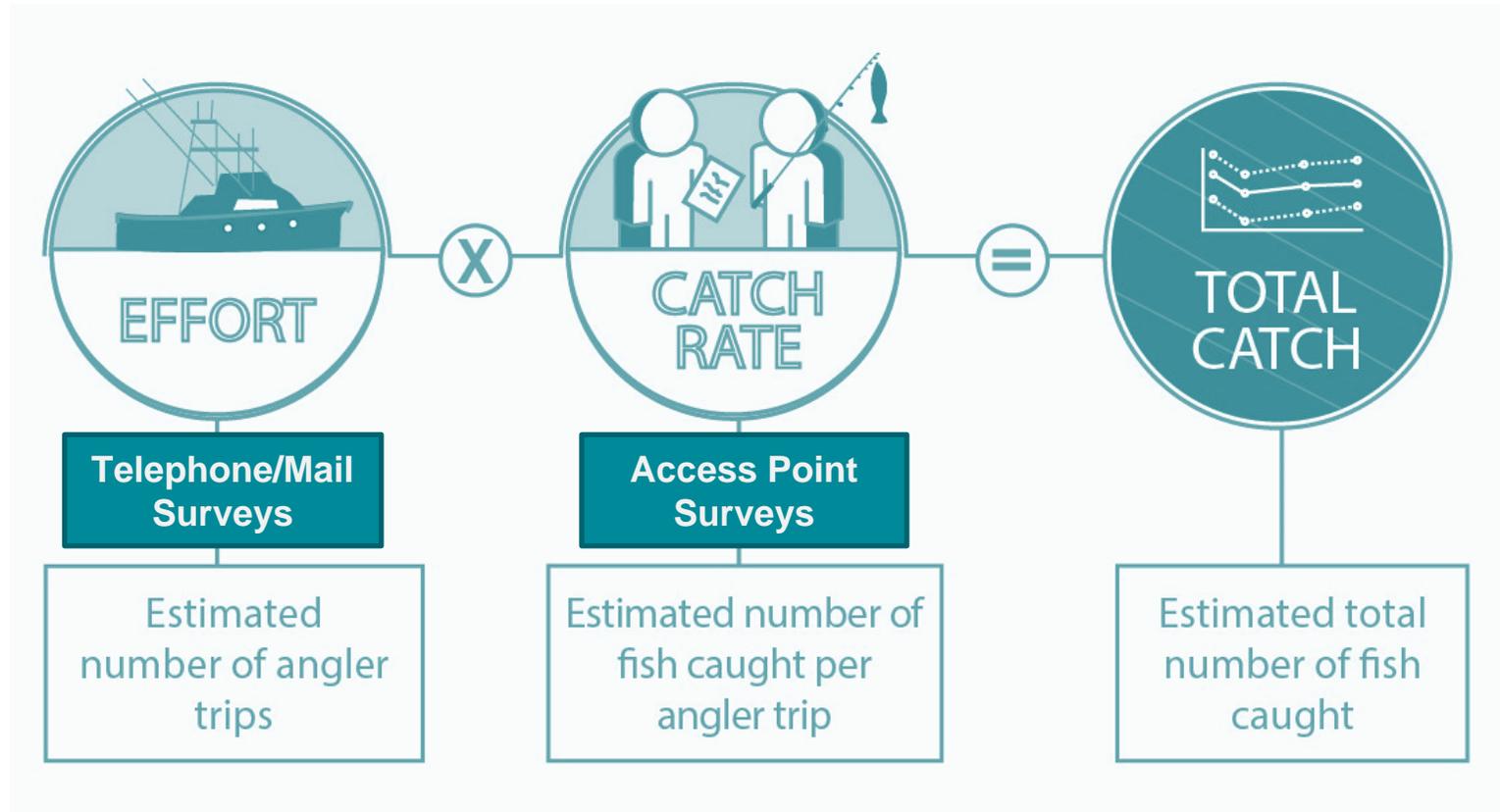
Dr. Richard Cody, ECS in support of: NOAA Fisheries,
Office of Science and Technology

November 06, 2018

Regional Surveys, National Certification



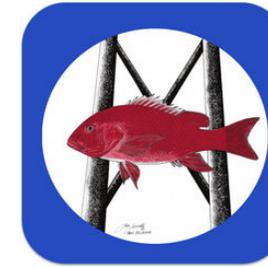
Estimating Total Recreational Catch



State Surveys (Gulf of Mexico)



LA Creel



MS Tails n' Scales



AL Snapper Check



FL Gulf Reef Fish Survey

State Surveys using electronic reporting

- Supplement MRIP Access Point Angler Intercept Survey
- Goal of producing more accurate and timely recreational catch estimates for Red Snapper
- Census based approaches
- Dockside validation of reported trips
- Capture-recapture survey design
 - Angler reports = Capture phase
 - Dockside surveys = Recapture phase

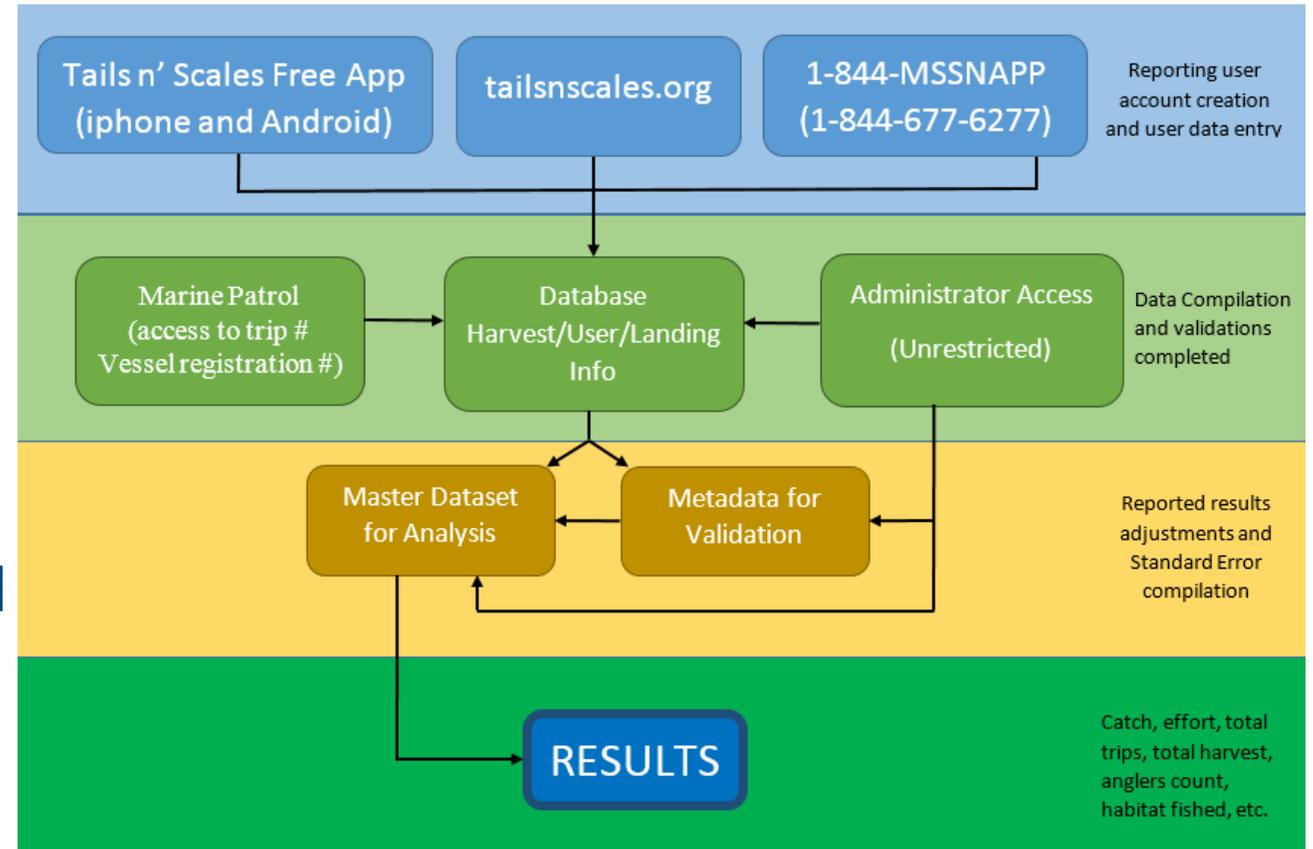


Capture - Recapture Survey Design

- Well established methods (ecological and epidemiological applications)
 - Capture Phase: Anglers report trip and catch information via App (or other means)
 - Recapture Phase: Dockside sampling of fishing trips
 - Probability based sampling required for recapture phase only
 - Assumption that capture and recapture events are independent
 - 100% compliance not required but performance improves with compliance
 - Ability to match capture and recapture events (i.e., identify fishing trips) is critical to effectiveness of the method

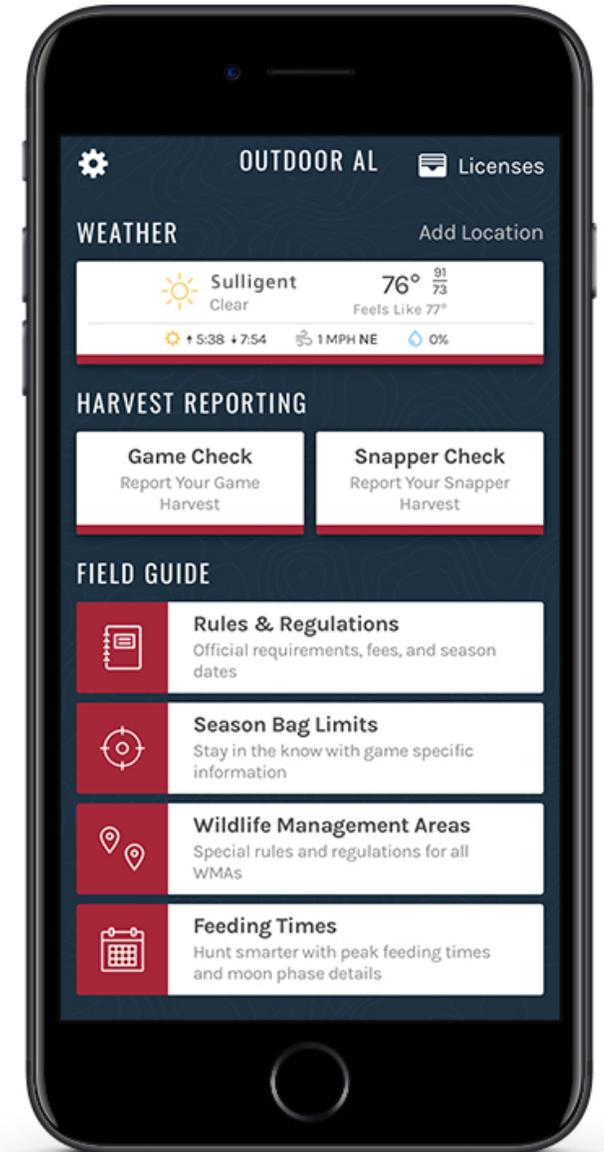
MS Tails n' Scales

- Permit defined angler universe
- High compliance (>80%)
- Enforcement helped by geography
- Trip identification number issued to angler prior to fishing trip
- Trip must be "closed out" before new trip number can be obtained
- < 5% expired trip numbers (unreported trips)
- Daily sample draw of public access sites



AL Snapper Check

- License defined angler universe
- Compliance (< 35% in 2016)
- Educational approach to improving compliance
- Weekly sample draw of “Red Snapper sites”
- No unique Trip Identification number
 - Trip matching based on interview time



What we've learned!

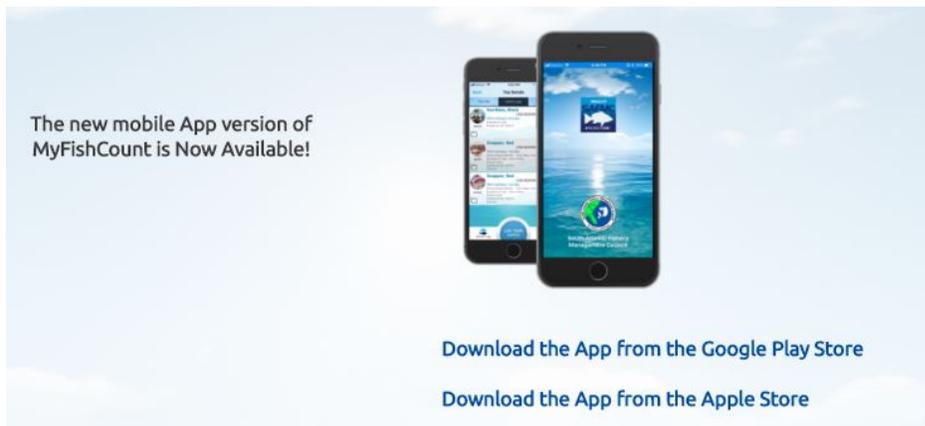
- Different trip matching approaches to test independence assumption
 - Unique trip number
 - Matching criteria
- Different approaches to compliance
 - Strict enforcement with penalties
 - Educational with gradual enforcement of penalties
- Cost varies depending on approach used, temporal and spatial coverage, size of fishery
 - Mississippi geography and fishery size helps with enforcement
 - Currently, supplemental surveys do not provide full coverage of red snapper fishery
- Concerns that reporting systems can be exploited

Management considerations

- Changes to the way we estimate catch and effort requires a plan for transition to the new methods
 - Need a way to integrate catch and effort information from different surveys
 - Need a way to maintain the historical time series used in assessments – Calibration

South Atlantic Fishery Management Council

- MyFishCount App allows anglers to report catch and effort information
 - Partnership with Snook and Gamefish Foundation
- Catch and Trip information summarized and published on the Council website
- Plans to expand use of the app to include other reef fish trips



Species Reported During the First Atlantic Red Snapper Mini-Season Weekend

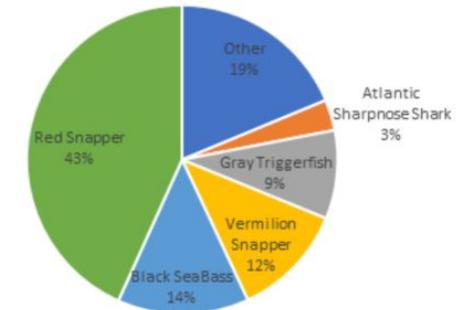


Figure 1. Species Reported Through MyFishCount During the First Red Snapper Mini-Season Weekend

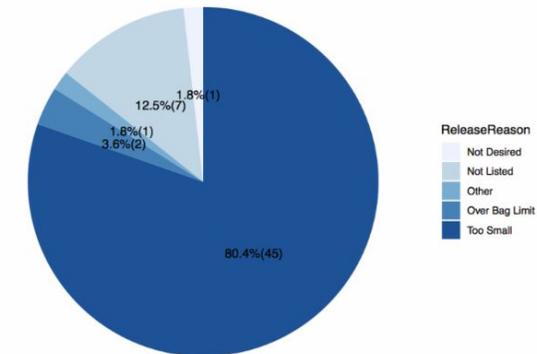


Figure 3. Reason for Releasing Red Snapper

Self-selected app based reporting

- MRIP report from study that assessed the ability of SGF *iAngler* app to provide information for stock assessments completed recently
 - May have some regionally and temporally limited or specialized applications for the most common species
 - Major challenges to maintaining angler participation
 - Almost complete turnover of participants within two years
 - Most anglers discontinue after two reports
 - Avidity bias – Higher than expected catch rates

Questions