



**NOAA
FISHERIES**

Marine Recreational Information Program

Richard Cody, ECS
In support of NOAA Fisheries
Office of Science & Technology

Why We're Here

- **Share**

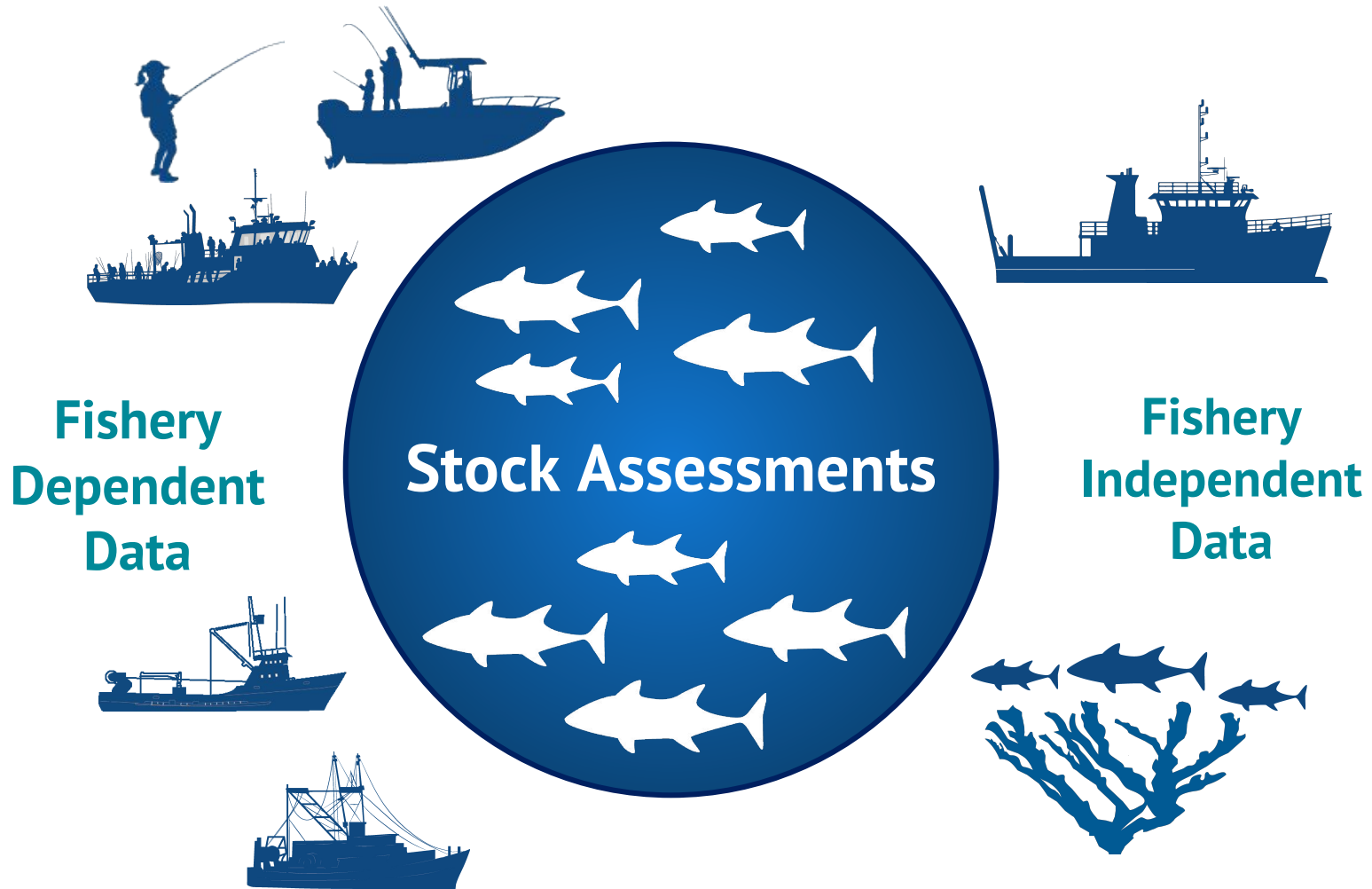
- How we estimate recreational fishing activity, and how the data is used.

- **Listen**

- To ways we can work with anglers and others to communicate more effectively.



Assessing the Health of Fish Stocks

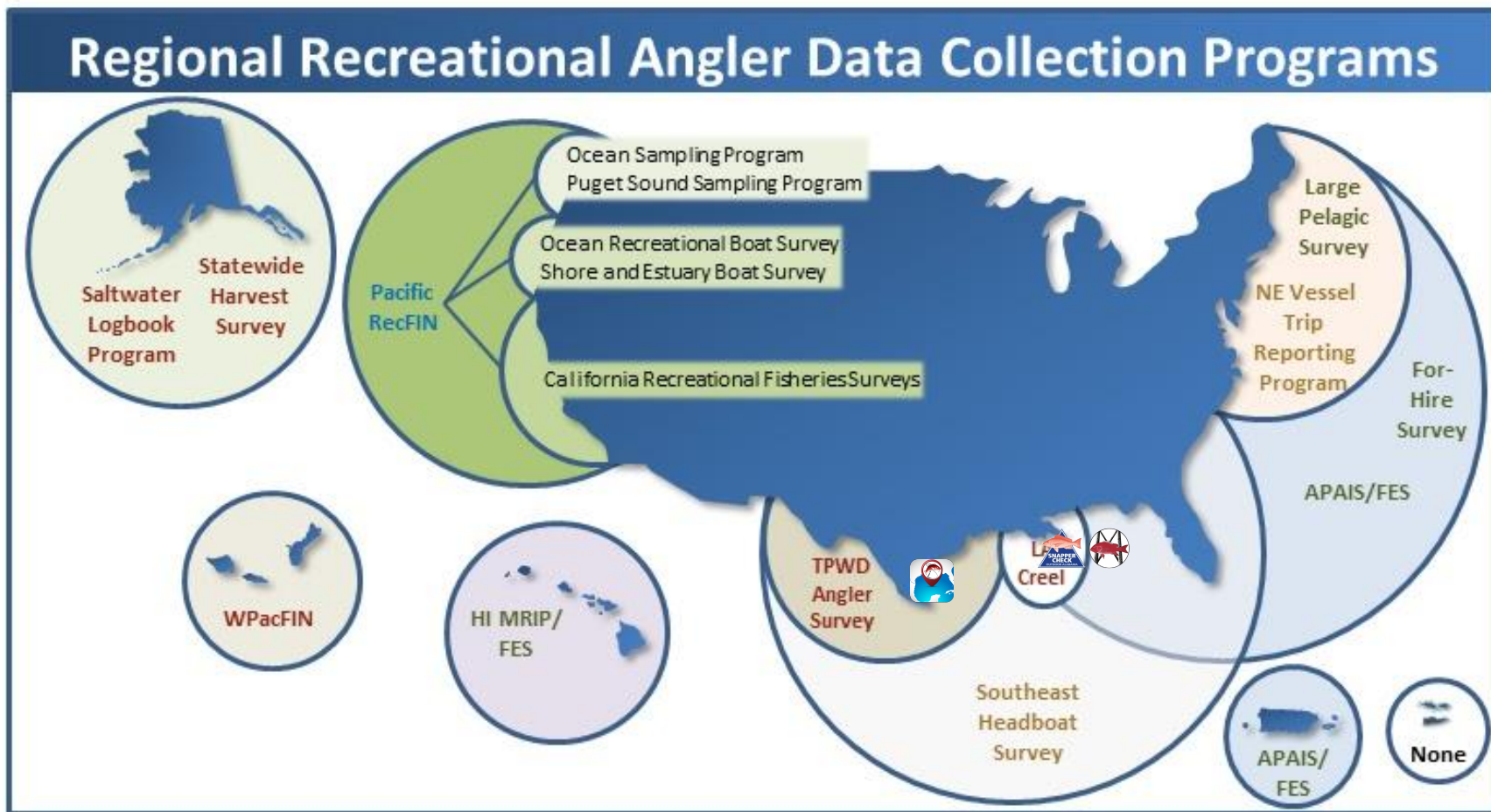


MRIP

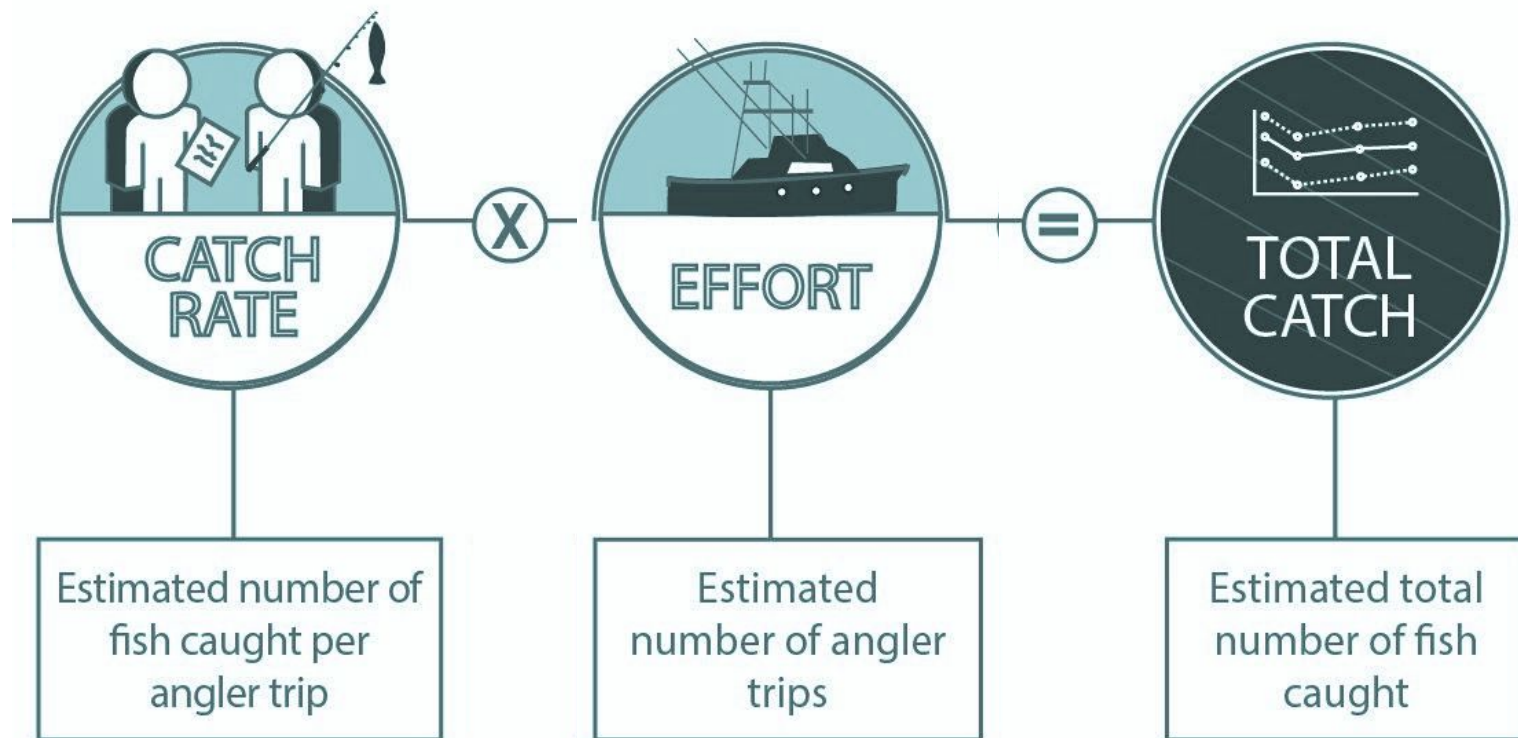
- The state-regional-federal partnership responsible for developing, improving, and implementing surveys that measure how many trips saltwater anglers take, and how many fish they catch.



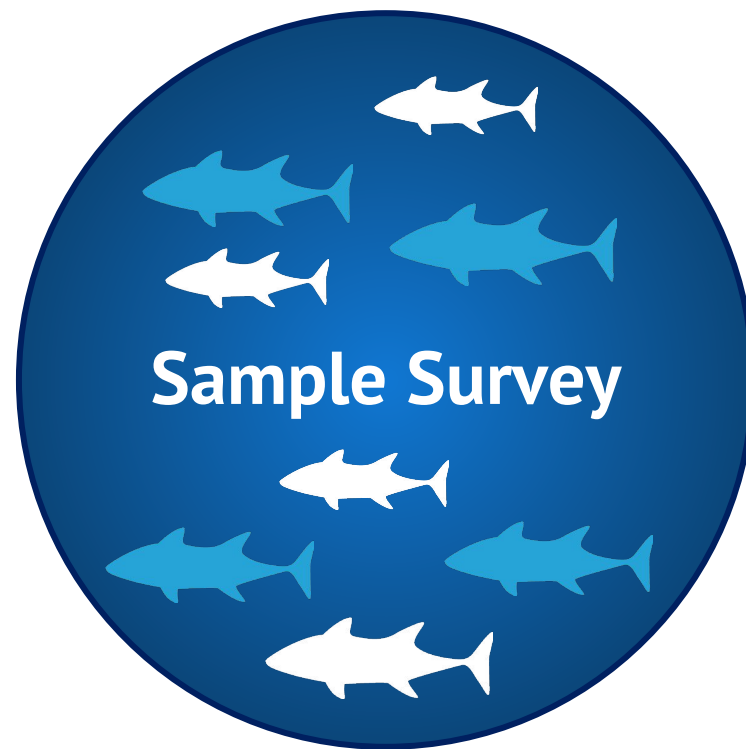
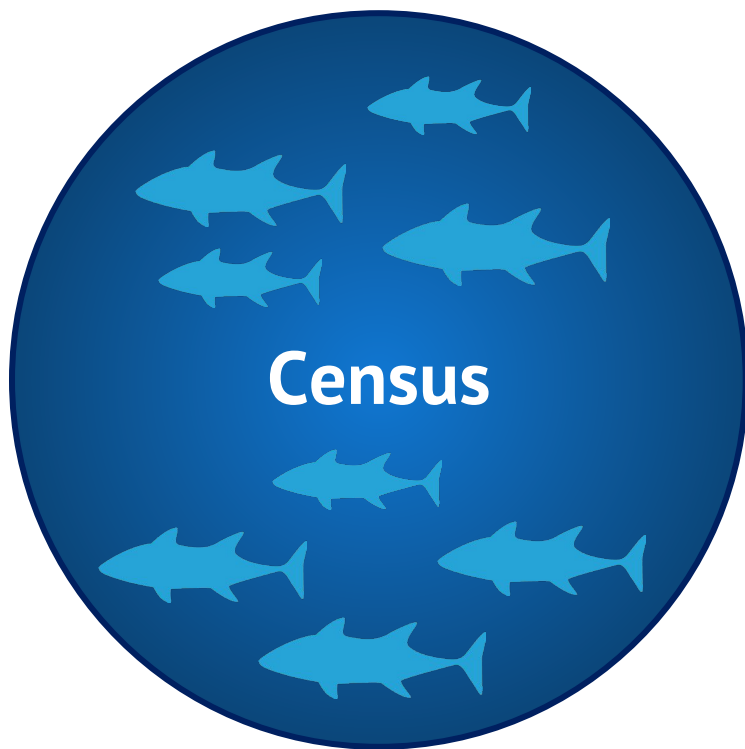
Regional Surveys, National Certification



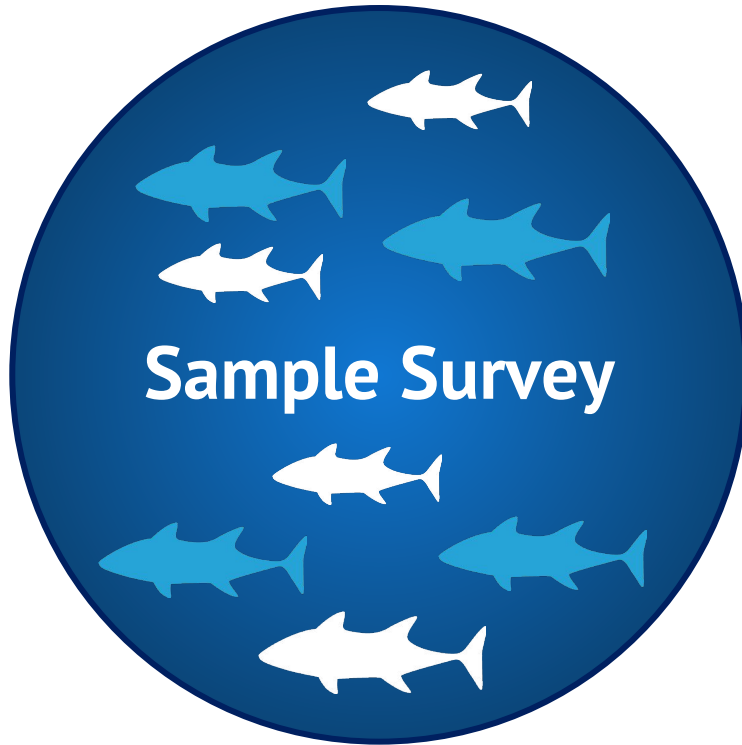
Estimating Total Recreational Catch



Census vs. Sample Survey



Why Sample Surveys



- Used when not possible or practical to conduct a census.
- Tried and true, mathematically sound approach.
- Key considerations
 - Properly designed.
 - Design accounted for in use of survey.

Estimating Catch Rate

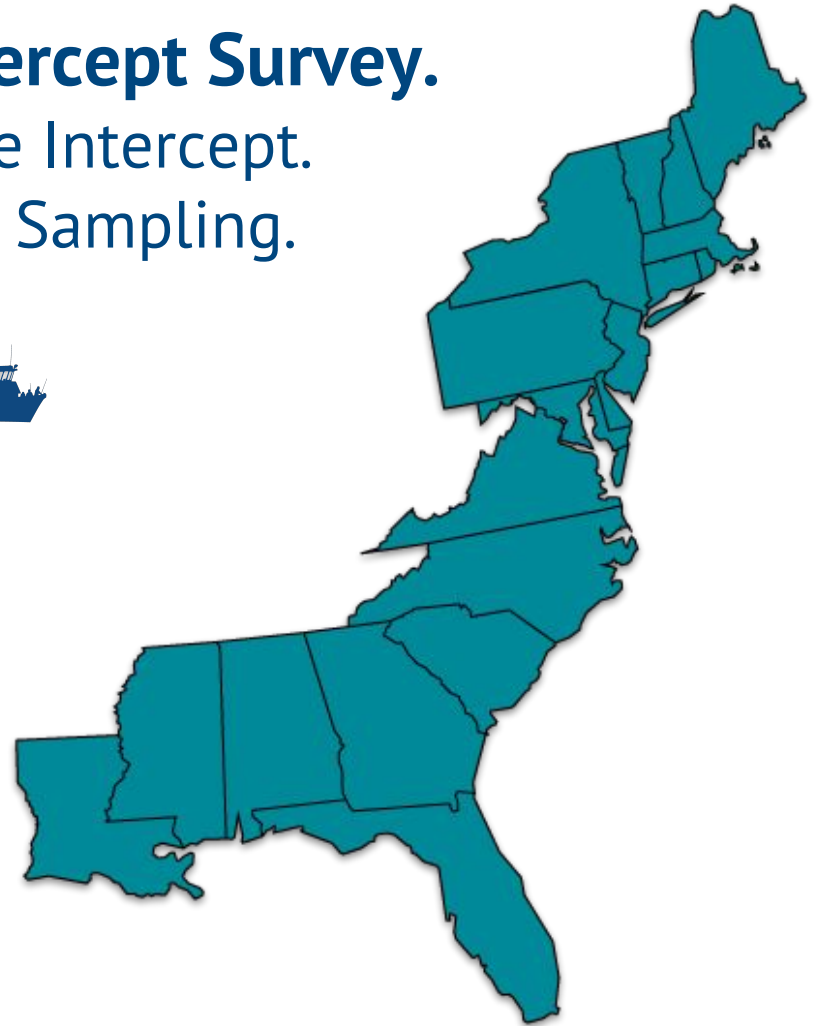
- **Access Point Angler Intercept Survey.**

- Shoreside and Dockside Intercept.
- At-Sea Party/Headboat Sampling.

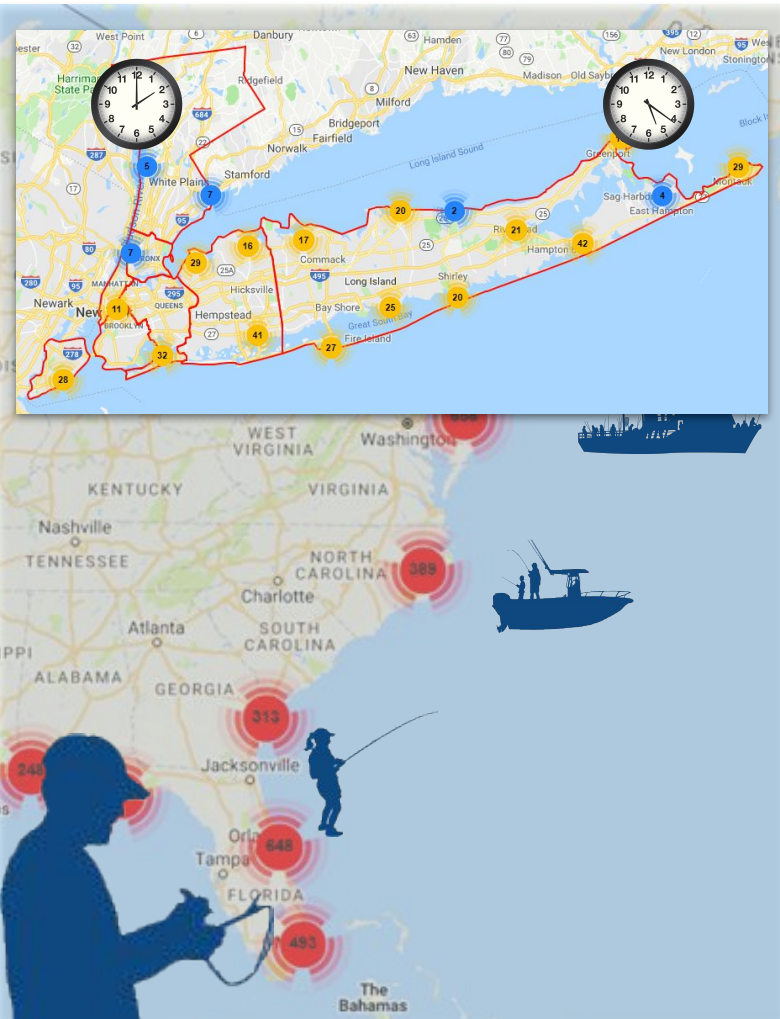


- **Large Pelagics Survey.**

- Dockside intercept.

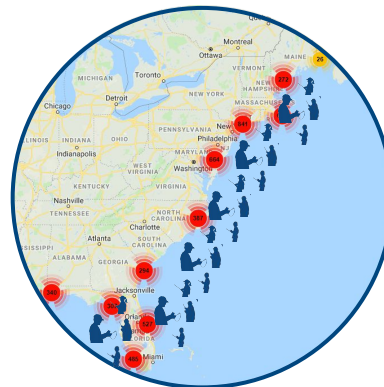


Estimating Catch Rate – APAIS



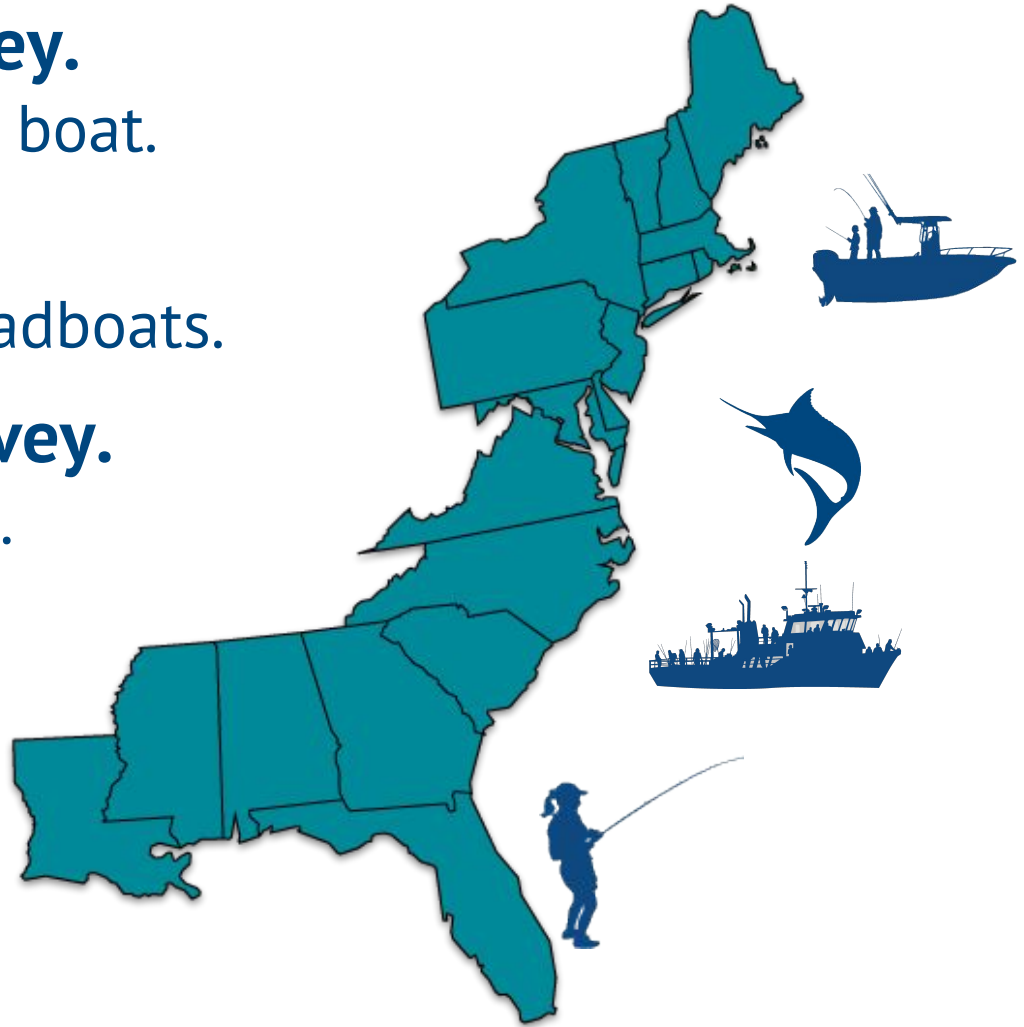
- Specially-trained state-based samplers.
 - MRIP data are state data
- Detailed assignments by date, time, sites, and type of fishing.
 - Mix of high- and low-activity sites.
 - Representative sample of anglers.
- Interview all anglers.
 - Count, measure, weigh fish.
 - Ask about releases.
- Nearly 5,000 public sites on Atlantic and Gulf Coasts.
 - 408 sites in New York alone.

Survey to an Estimate



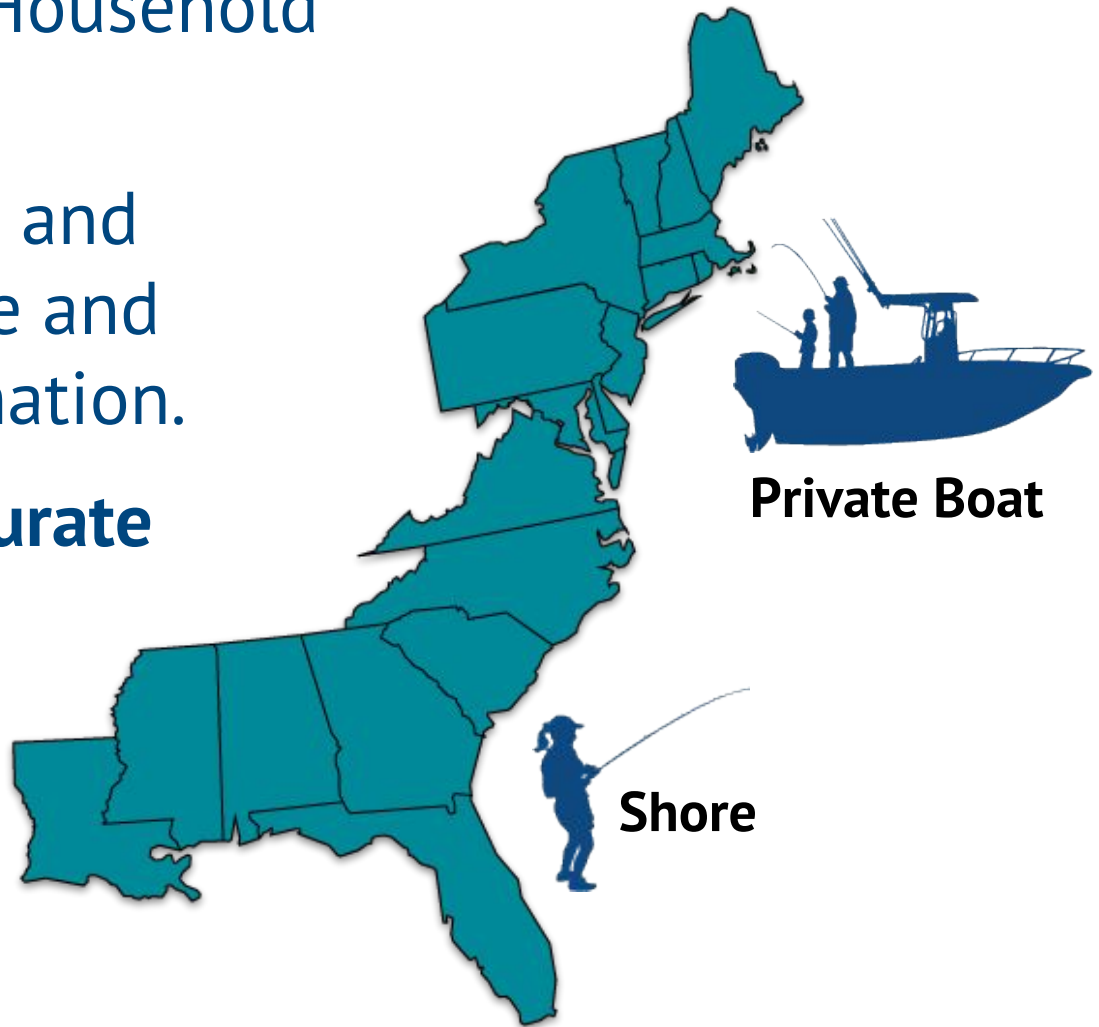
Estimating Effort

- **Fishing Effort Survey.**
 - Shore and private boat.
- **For-Hire Survey.**
 - Charter, Party/Headboats.
- **Large Pelagics Survey.**
 - Telephone survey.



Fishing Effort Survey

- Replaced Coastal Household Telephone Survey.
- Uses USPS records and state-based license and registration information.
- Provides **more accurate** estimates.
- Estimates are several times higher than CHTS.



More Accurate Estimates



We're reaching more anglers.



Surveys get into the right hands.



Improved questionnaire.



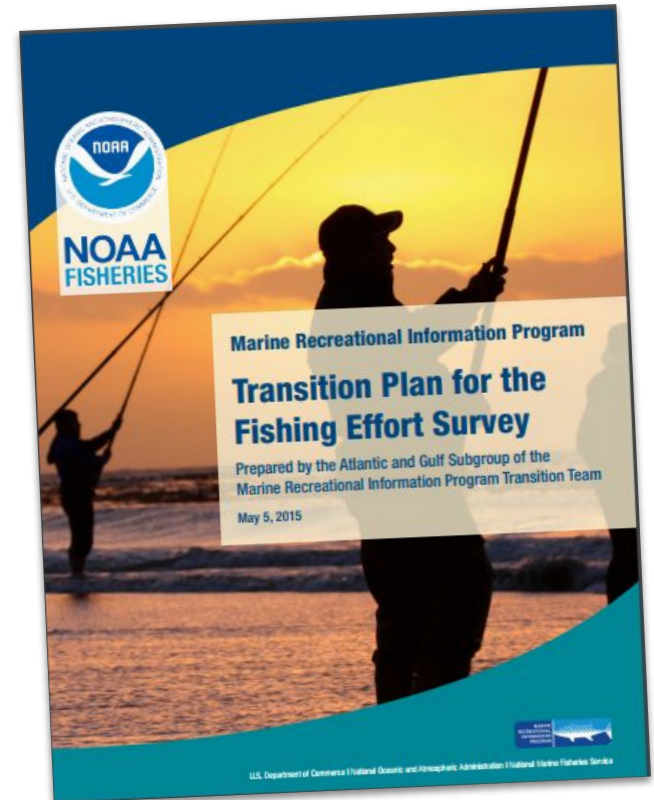
More complete answers.



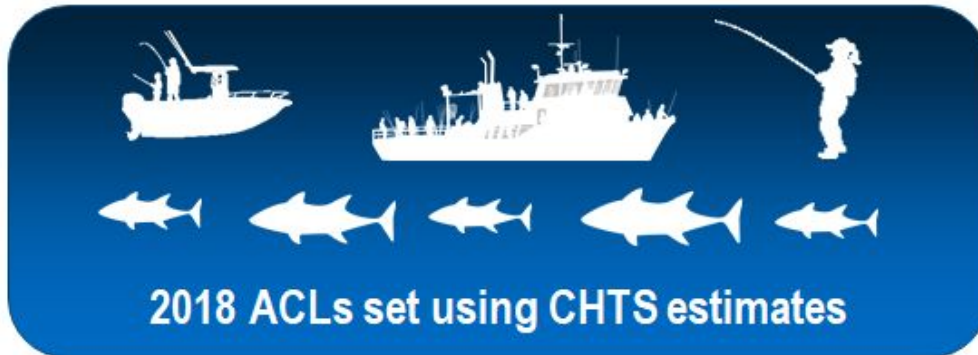
Three times the response rate.

Implementing the FES

- Three-year Transition Plan.
- Developed by NOAA, states, councils, commissions.
 - ✓ Side-by-side benchmarking.
 - ✓ FES calibration model.
 - ✓ APAIS adjustments.
 - ✓ Re-estimation.
 - Stock assessments.
 - Management decisions.



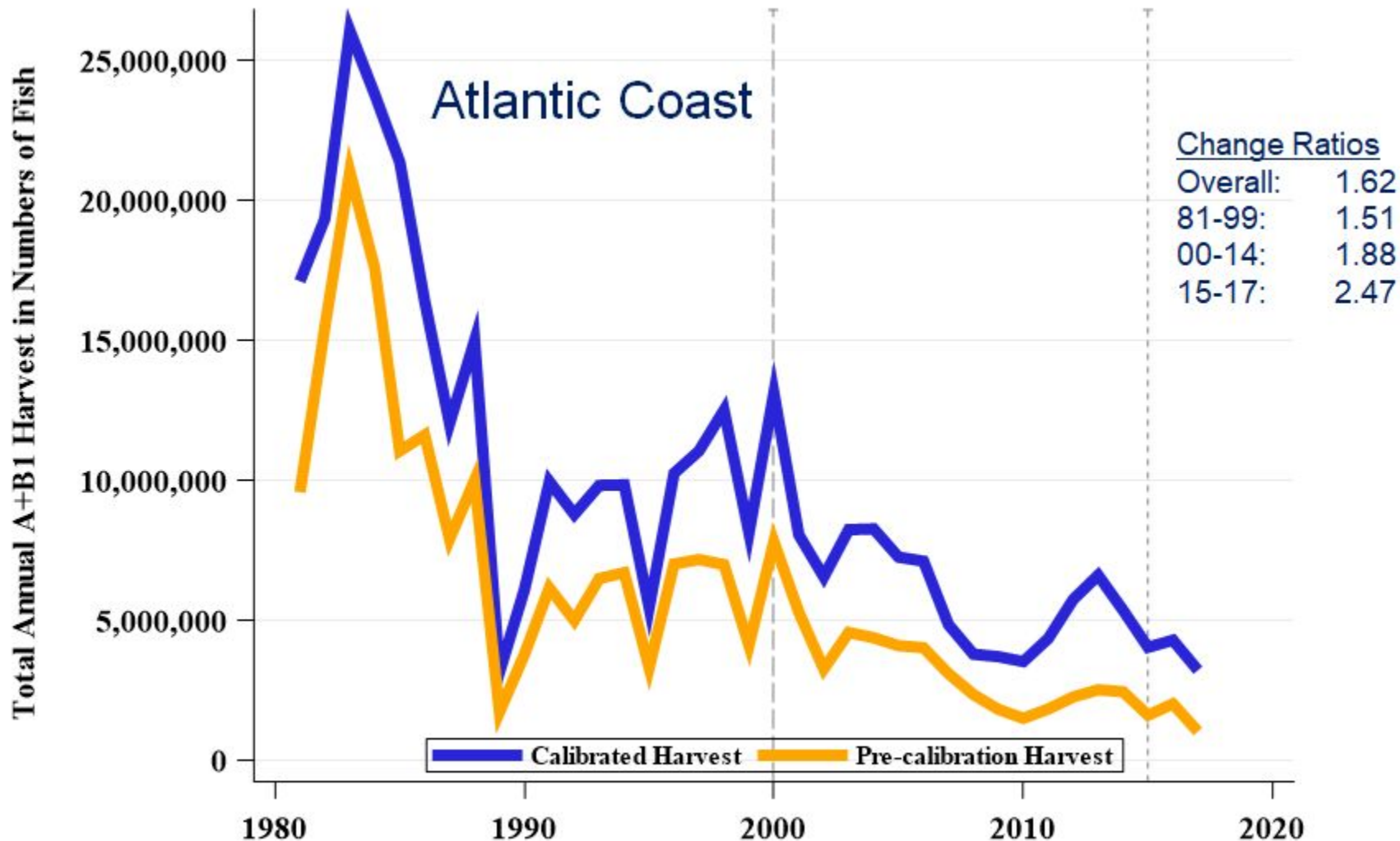
2018 Annual Catch Limits



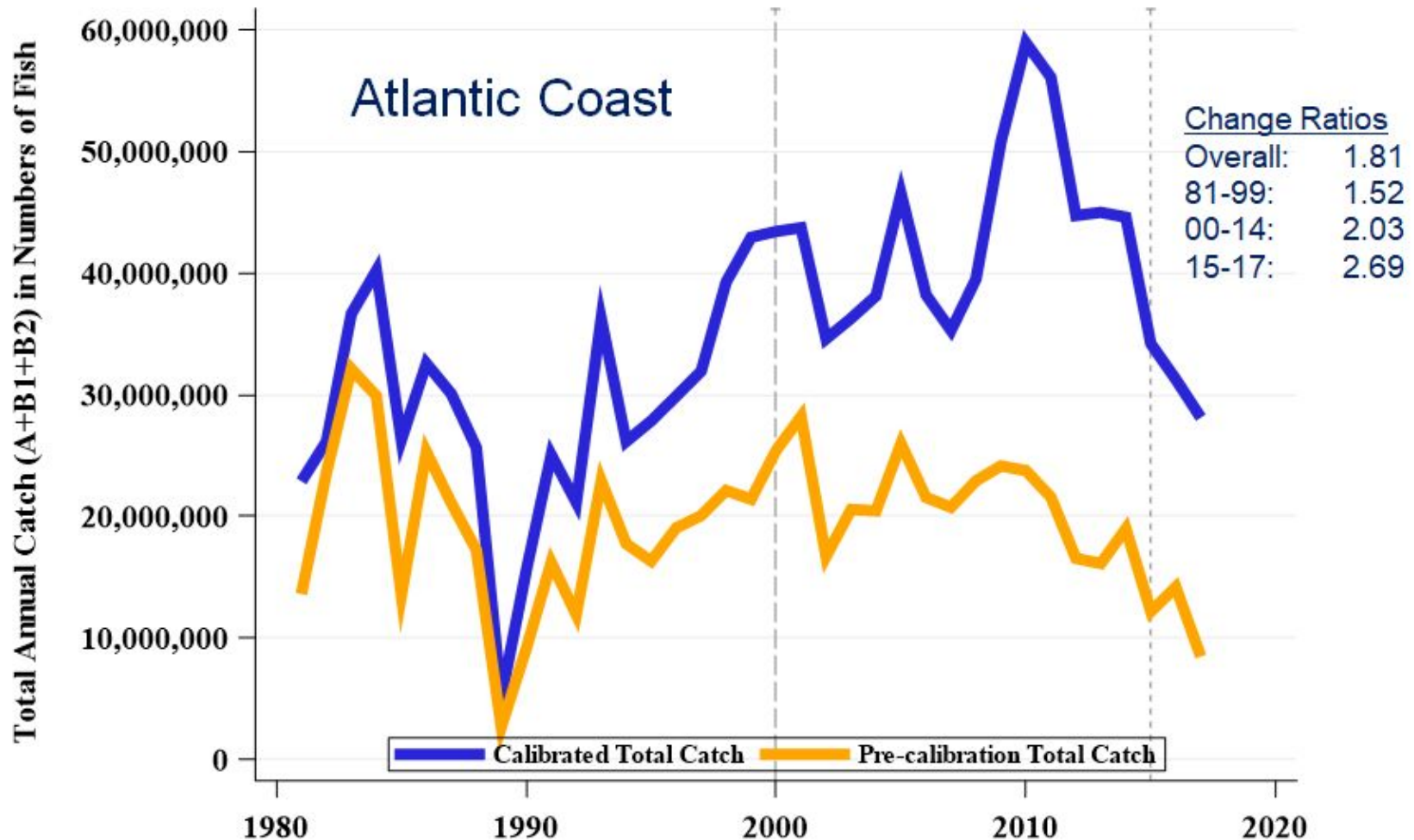
FES and Recreational Fishing



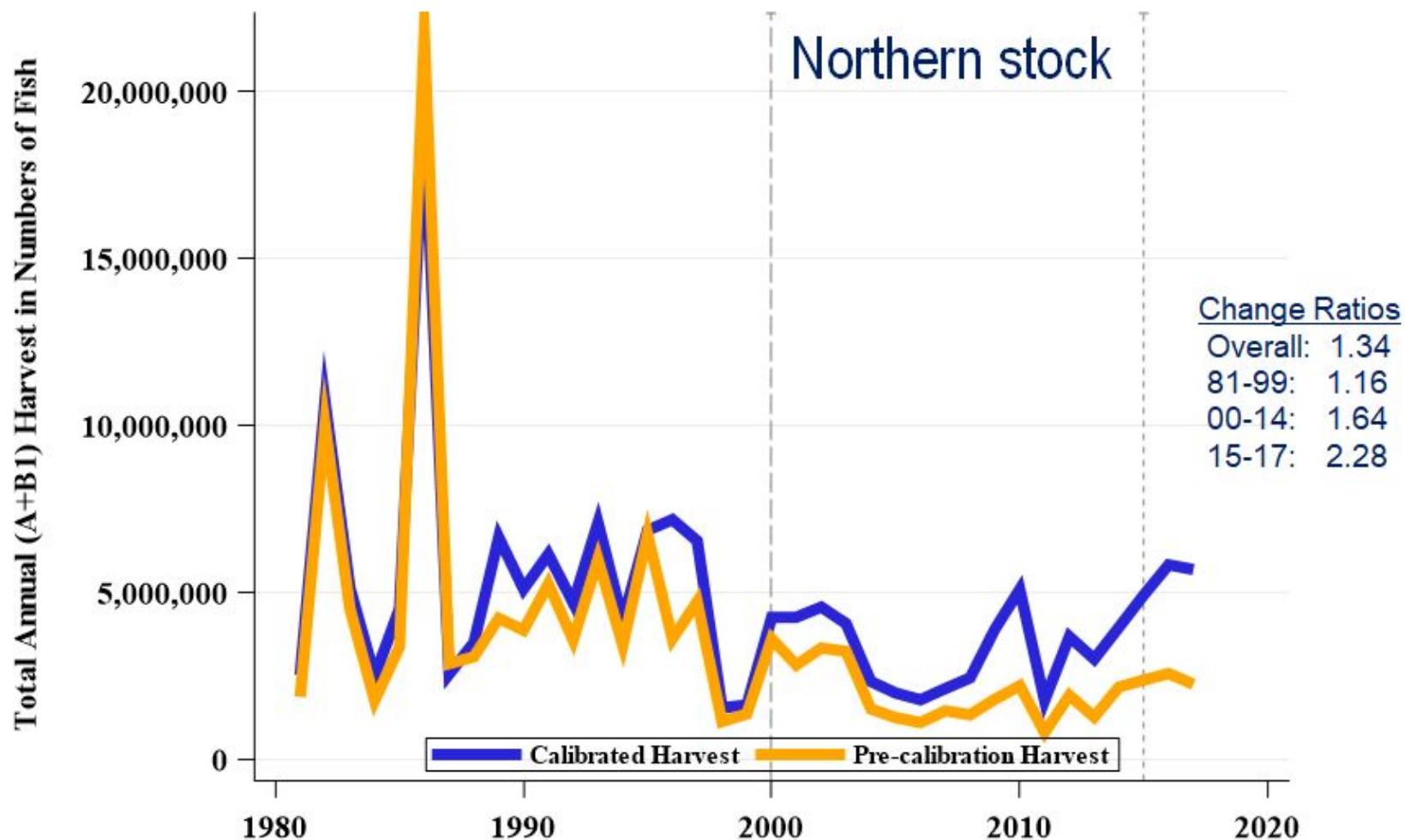
Summer Flounder Harvest



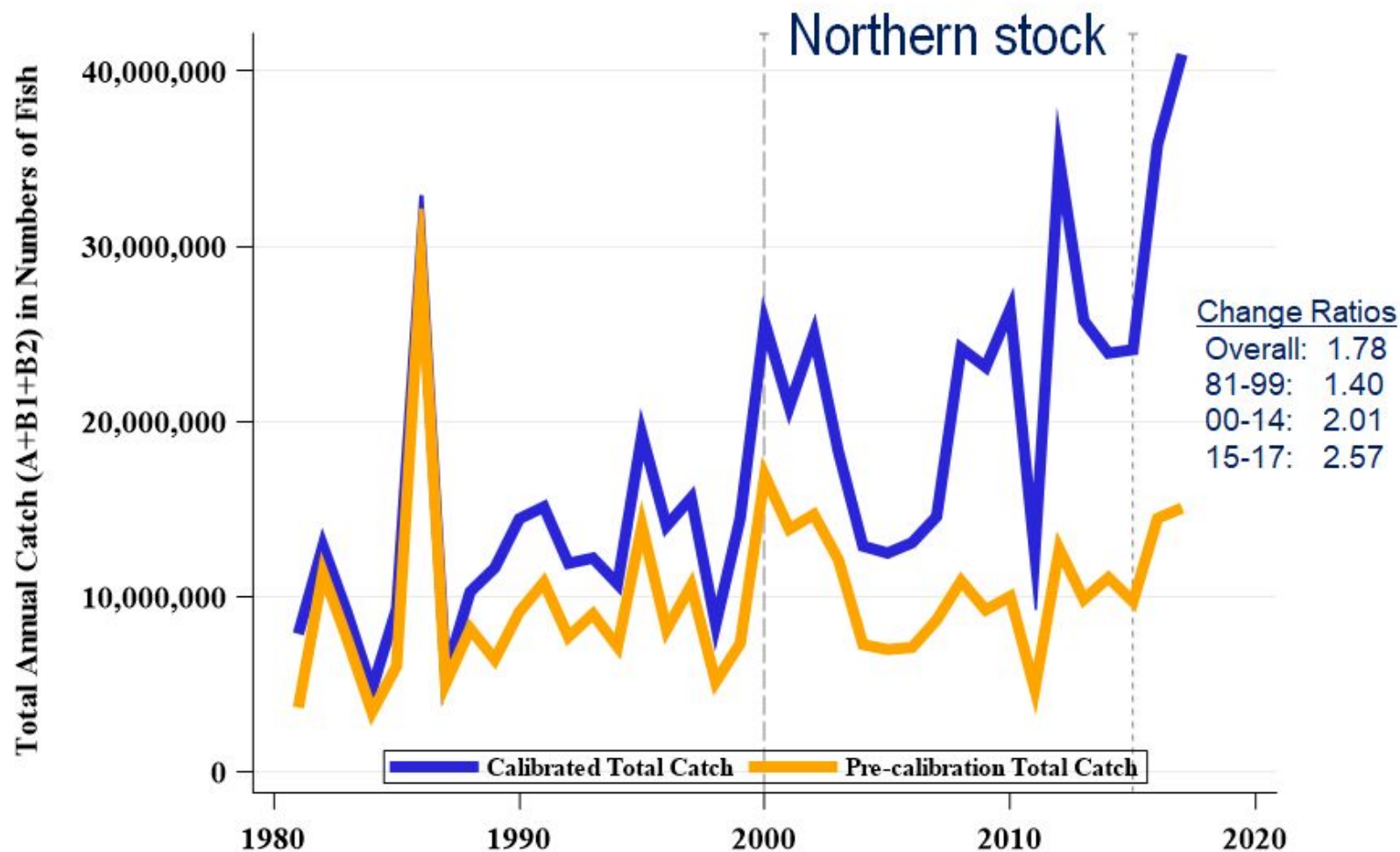
Summer Flounder Total Catch



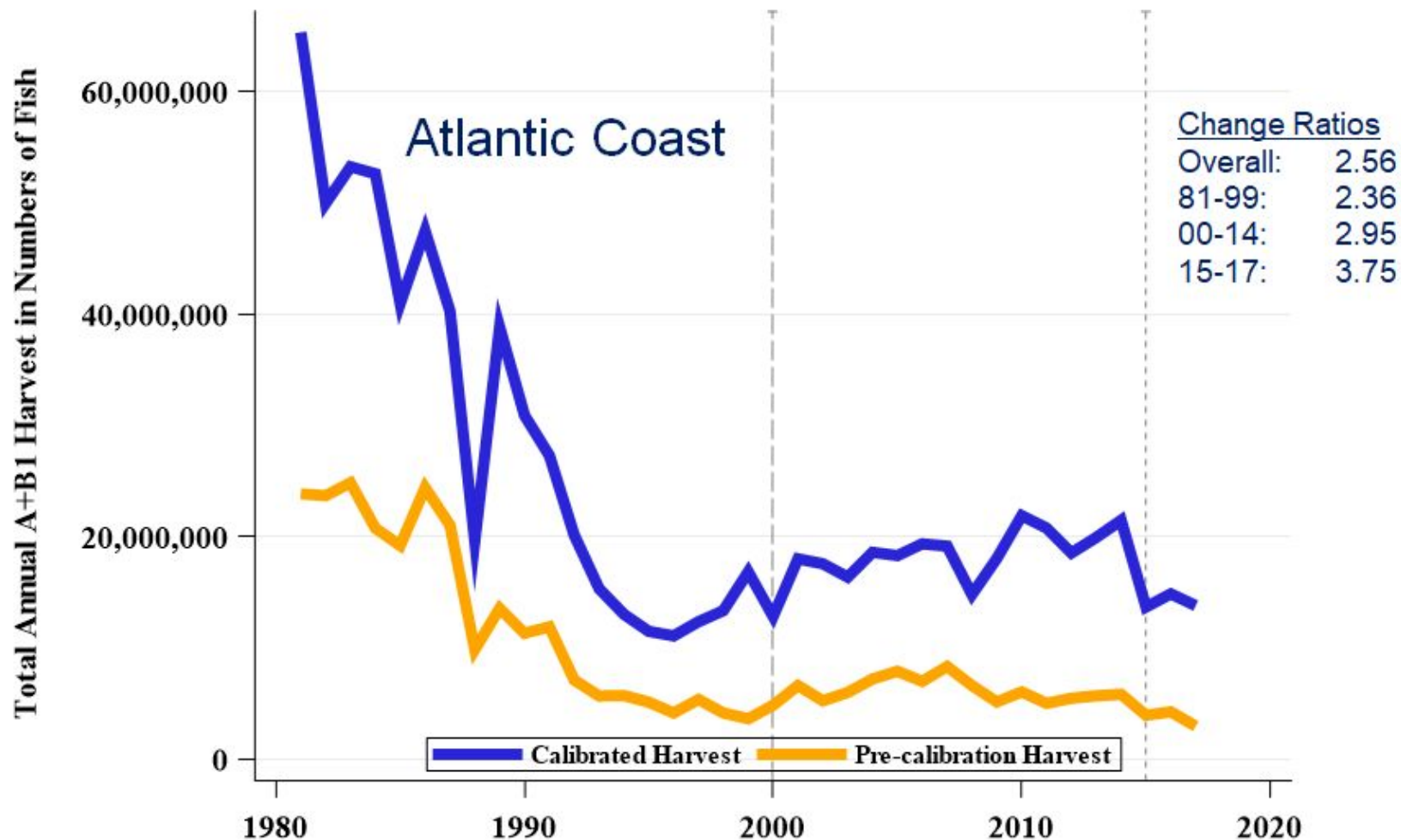
Black Sea Bass Harvest



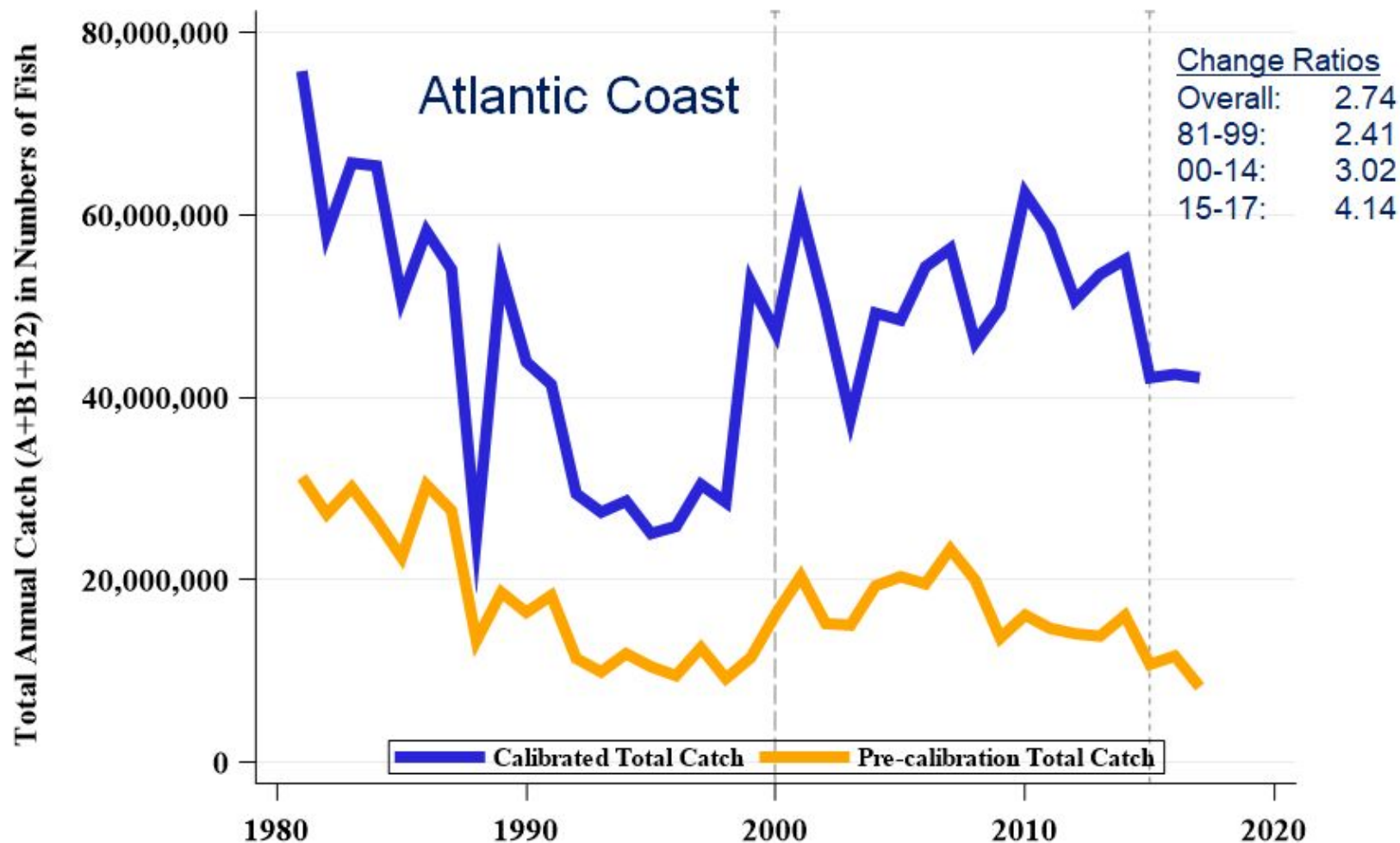
Black Sea Bass Total Catch



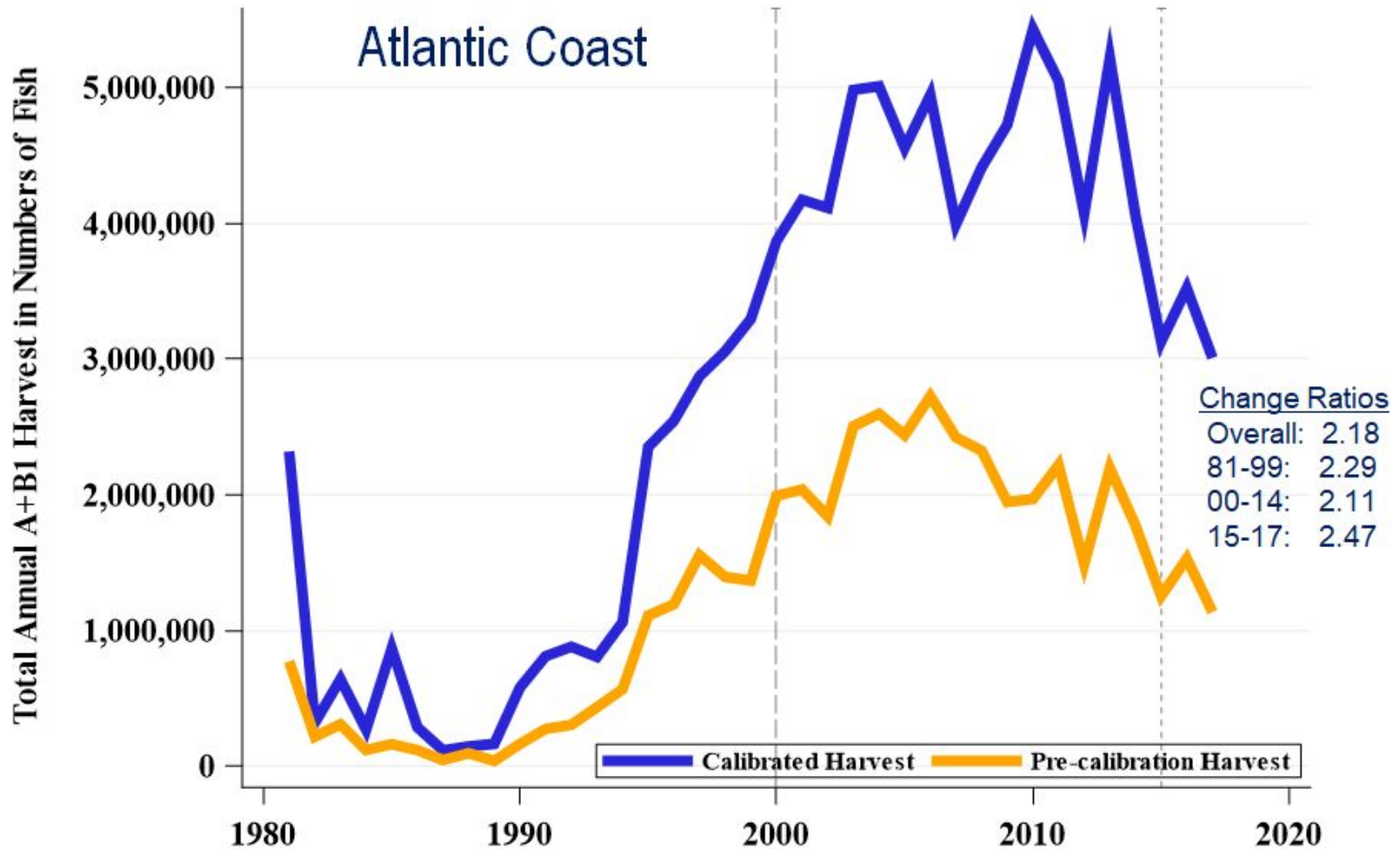
Bluefish Harvest



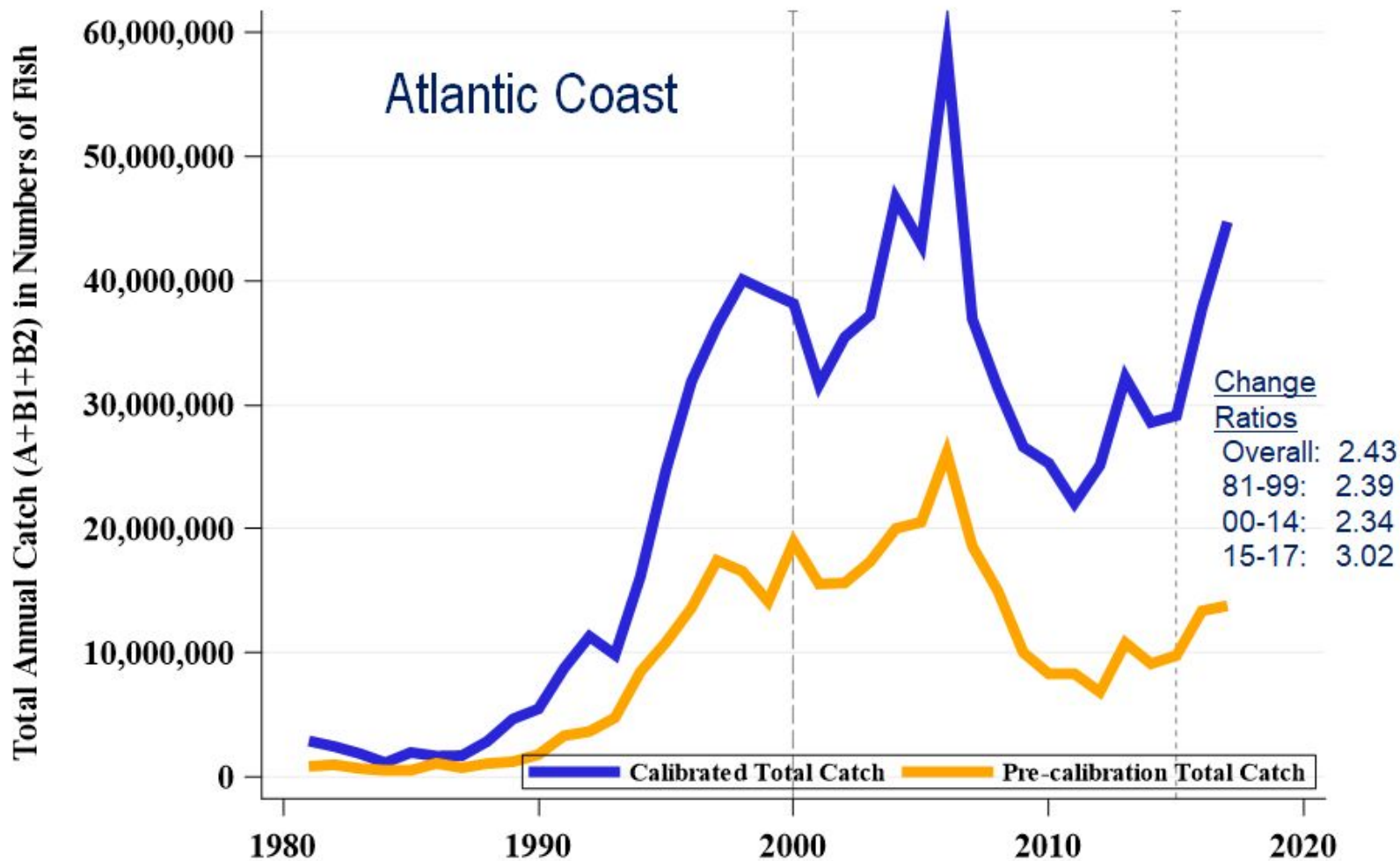
Bluefish Total Catch



Striped Bass Harvest



Striped Bass Total Catch



What's Next for FES

2018

- Revised total catch estimates now available for use in planned stock assessments.
- 2018 ACLs and catch estimates will be in the **same “currency.”**

2019

- Preliminary management changes may be made for re-assessed stocks.
- Calibrated statistics incorporated into additional stock assessments.

2020

- Based on new stock assessments, management changes could occur for a number of species.

[illegible]





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FISHERIES**

Office of
Science and
Technology

**Questions?
Discussion.**

Extensive Testing and Peer Review

“[The APAIS methods are] a **vast improvement** over the previous sampling and estimation procedures and reflect **state-of-the-art methods** in survey sampling.”



Anatomy of an Estimate

