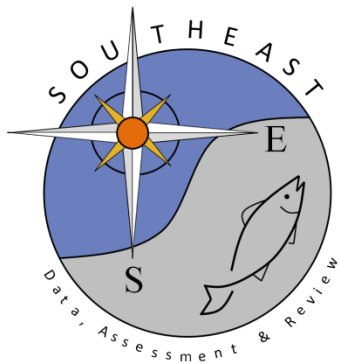


Marine Recreational Information Program Transition to Improved Survey Designs

John Foster and Kelly Denit

SEDAR65-RD15

Received: 10/22/2020





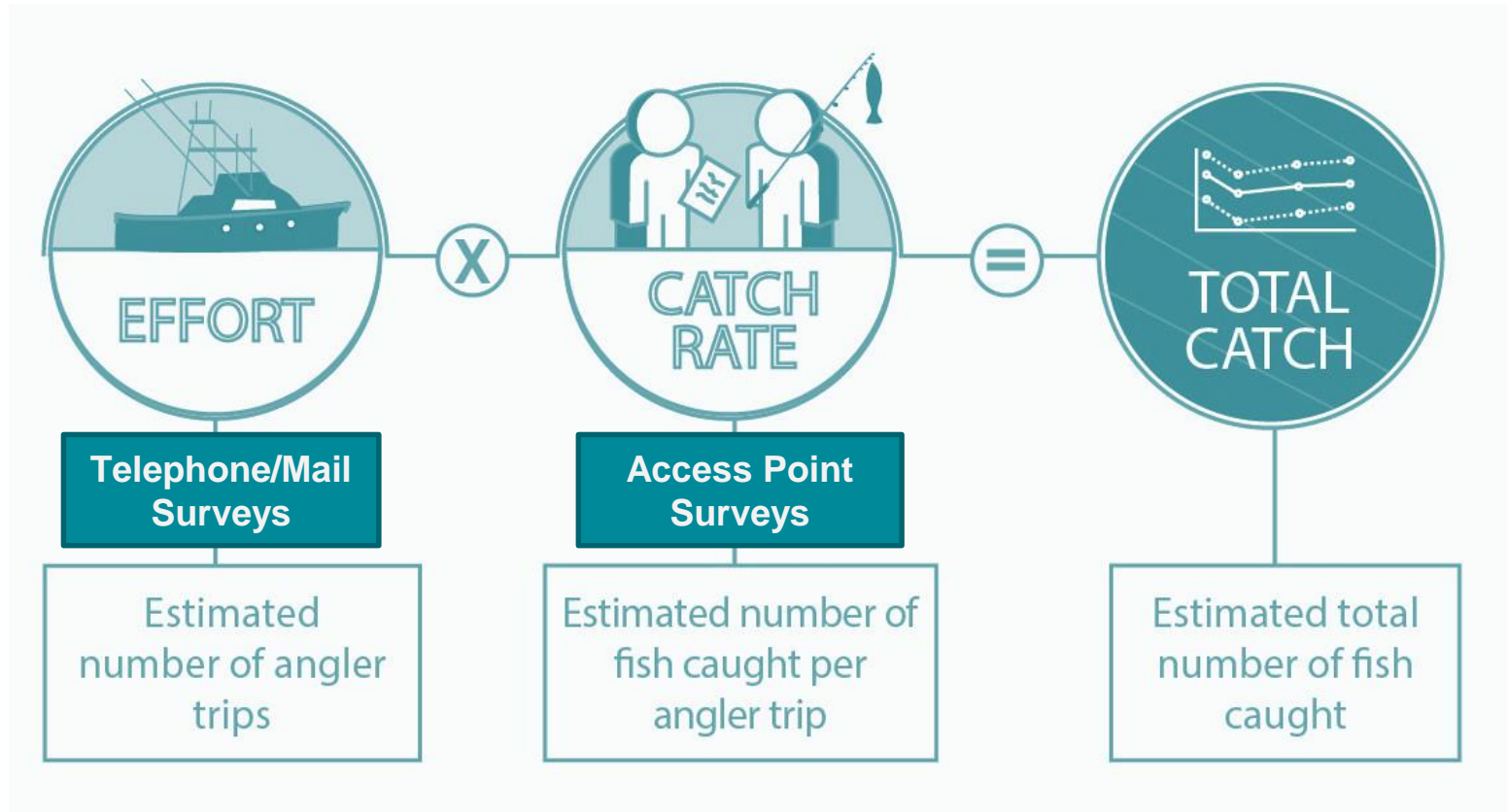
**NOAA
FISHERIES**

Marine Recreational Information Program

Transition to Improved Survey Designs

John Foster
Kelly Denit

Estimating Total Recreational Catch



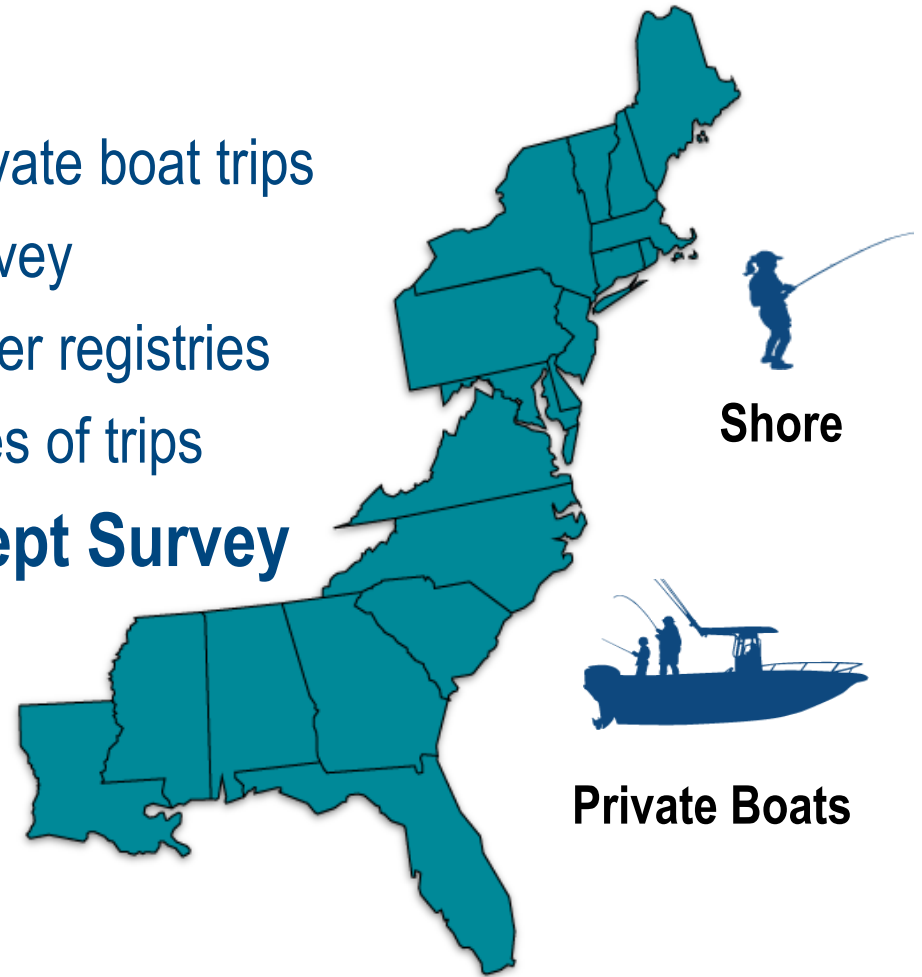
Improved Survey Designs

Fishing Effort Survey

- New mail survey of shore & private boat trips
- Replaces legacy telephone survey
- Uses USPS database and angler registries
- Higher, more accurate estimates of trips

Access Point Angler Intercept Survey

- New design for sampling catch
- Better time-of-day coverage
- More statistically sound



Fishing Effort Survey



We're reaching more anglers.



Surveys get into the right hands.

3X

Much higher response rate.



Improved questionnaire.



More complete answers.

Extensive Testing and Peer Review

“**The [Fishing Effort Survey] methodologies**, including the address-based sampling survey design, are **major improvements.**”

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

*The National
Academies of*

SCIENCES
ENGINEERING
MEDICINE

Transition Plan

Improving designs can change estimates

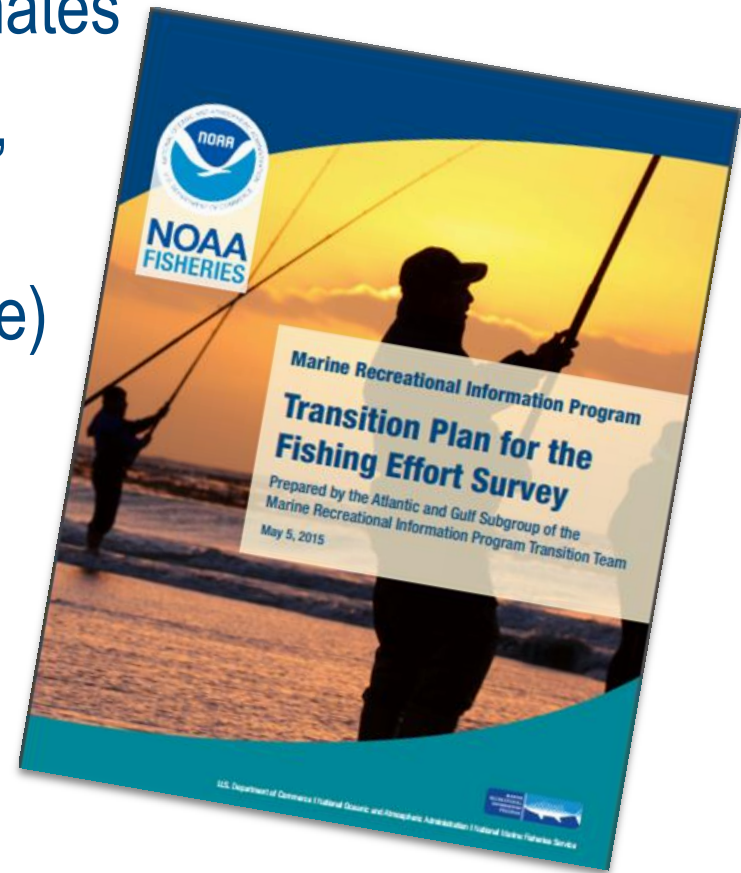
Transition Plan developed by NOAA, states, councils, and commissions.

- ✓ Benchmarking (mail vs. phone)
- ✓ Calibration (old vs. new)
- ✓ Convert “old” estimates into “new” currency



Stock assessments

Management decisions



MRIP Calibration Models

Fishing Effort Survey

- Fay-Herriot small area estimation model.
- Developed with independent consultants at Colorado State University.

Access Point Angler Intercept Survey

- Sample weight adjustment method.
- Developed with independent consultants at Colorado State University.

MRIP Calibration Model Peer Reviews

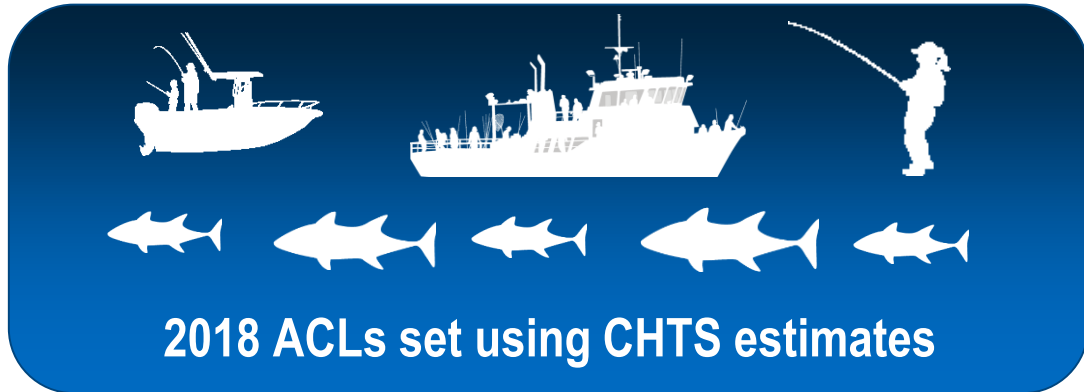
Fishing Effort Survey

- June 27-29, 2017 workshop in Silver Spring, MD.
- Reviewers unanimously endorsed the proposed FES/CHTS calibration model.

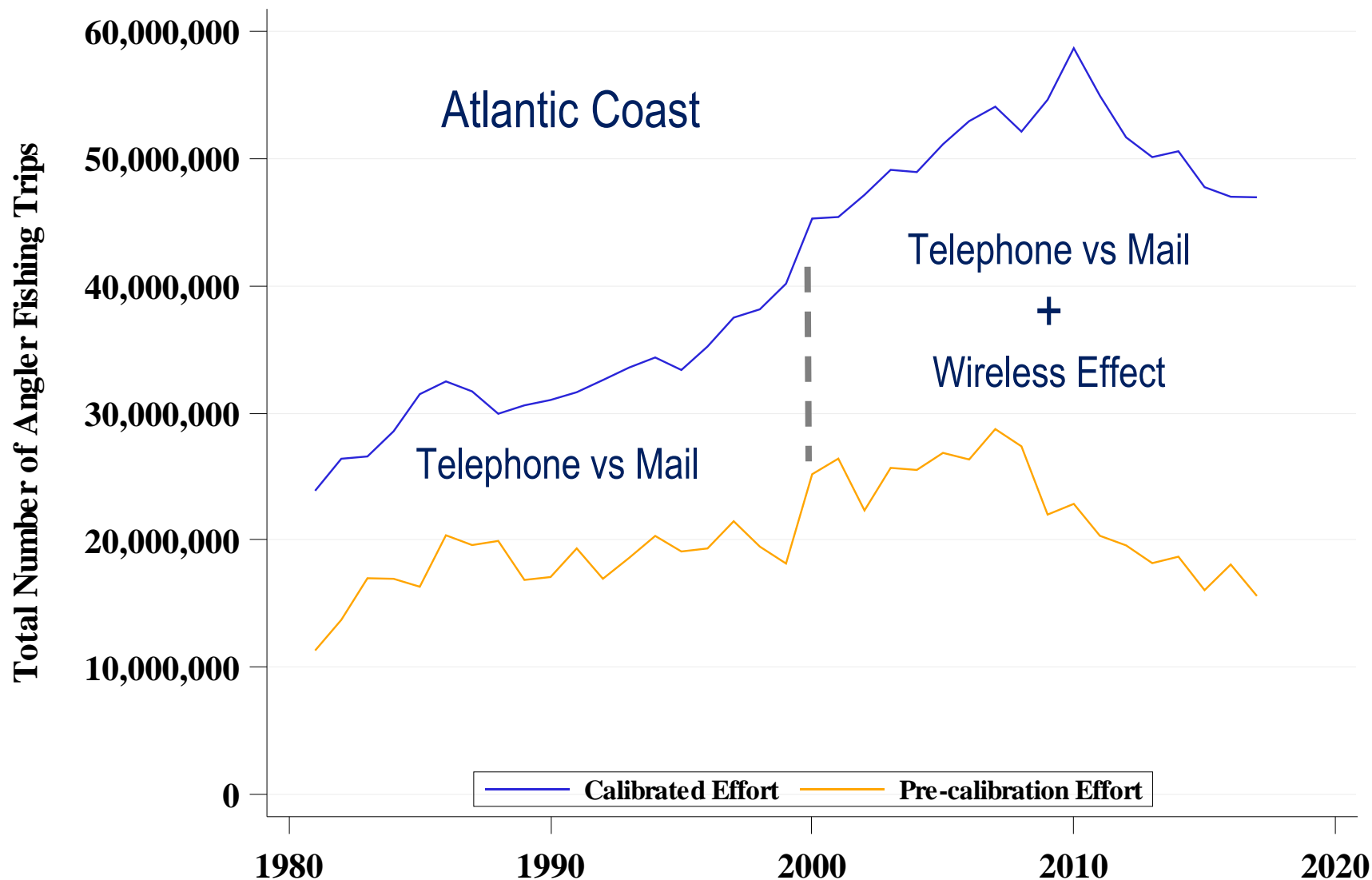
Access Point Angler Intercept Survey

- March 20-22, 2018 workshop in Silver Spring, MD.
- Initial reviews positive, anticipating full review reports in coming weeks.

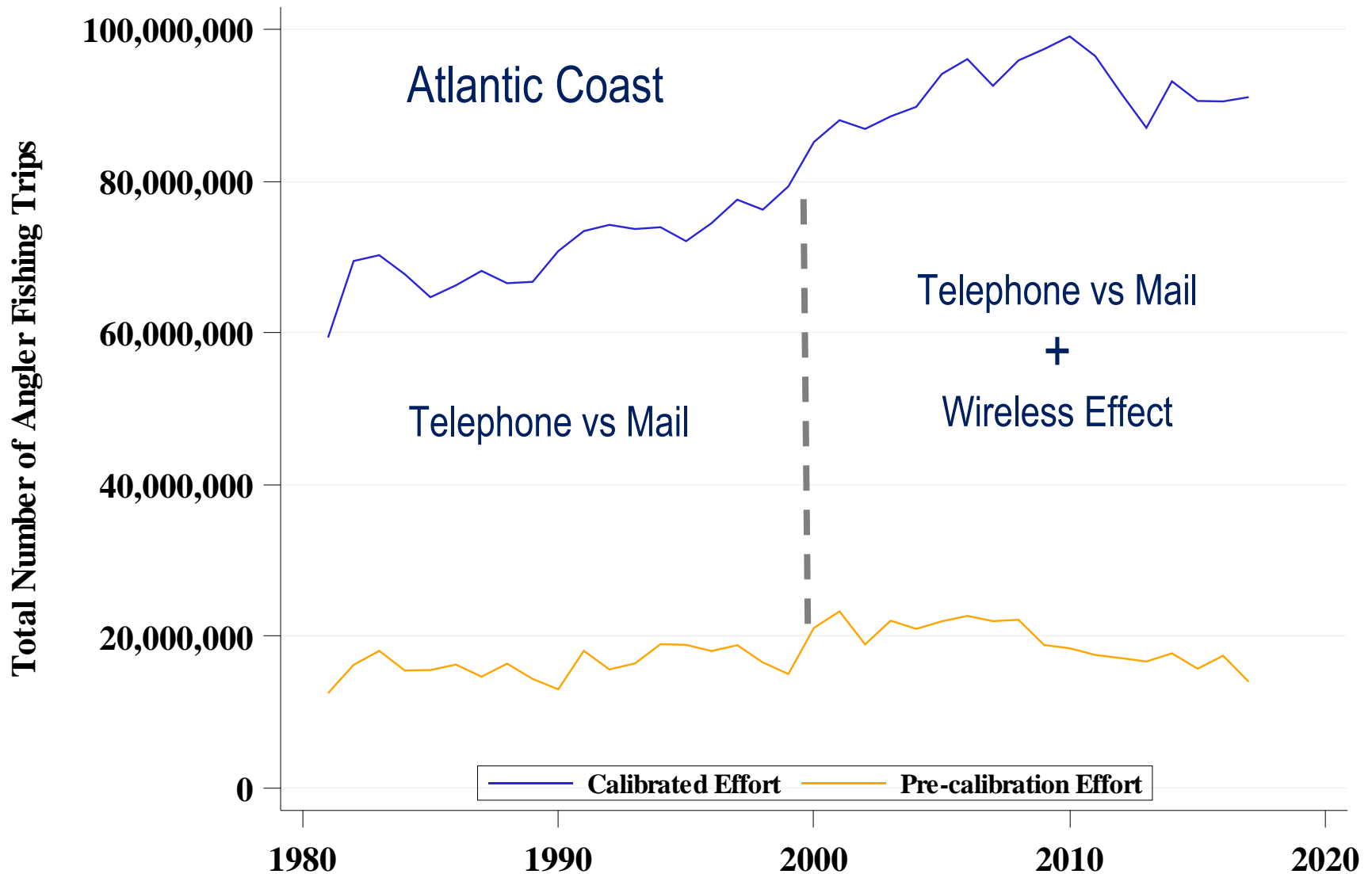
2018 Annual Catch Limits



Private Boat Effort



Shore Effort



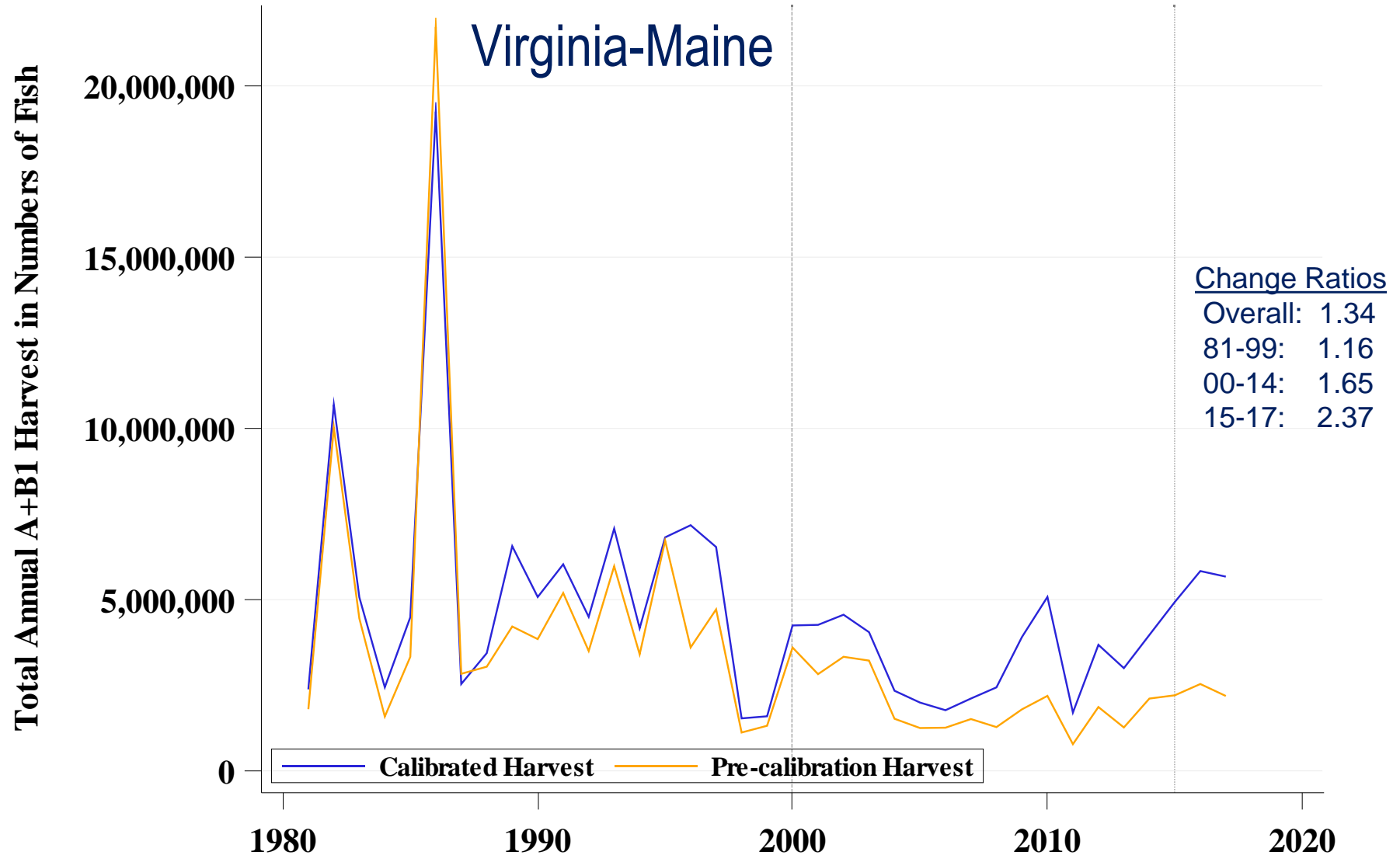
Private Boat Effort – Change Ratios

	Overall	1981-1999	2000-2014	2015-2017
Atlantic Coast	2.03	1.78	2.15	2.85
New England	1.83	1.65	1.92	2.34
Mid-Atlantic	1.98	1.71	2.13	2.91
South Atlantic	2.18	1.92	2.29	3.00

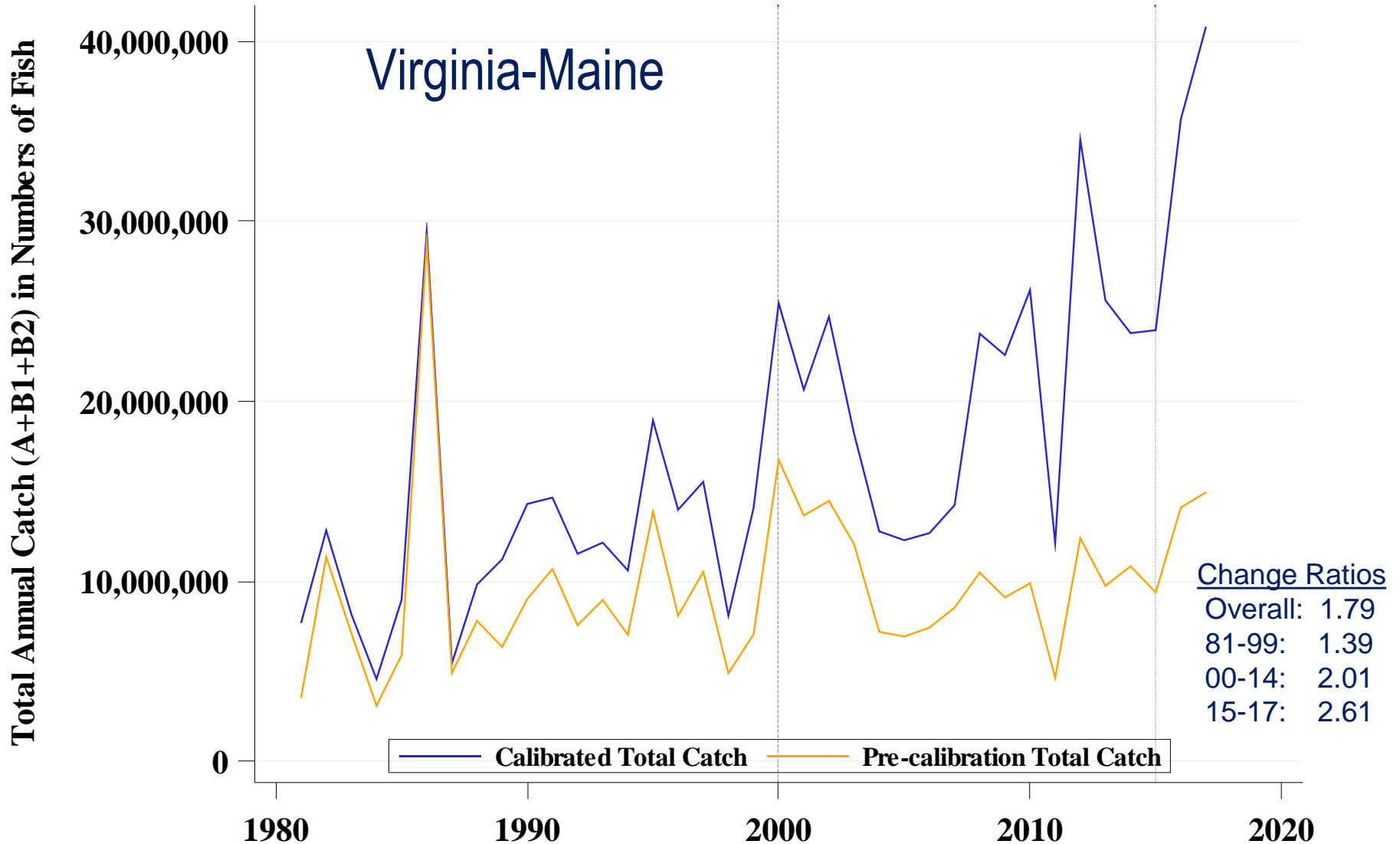
Shore Effort – Change Ratios

	Overall	1981-1999	2000-2014	2015-2017
Atlantic Coast	4.55	4.34	4.57	5.75
New England	3.91	3.72	4.00	4.61
Mid-Atlantic	3.80	3.37	3.98	5.33
South Atlantic	5.24	5.13	5.18	6.30

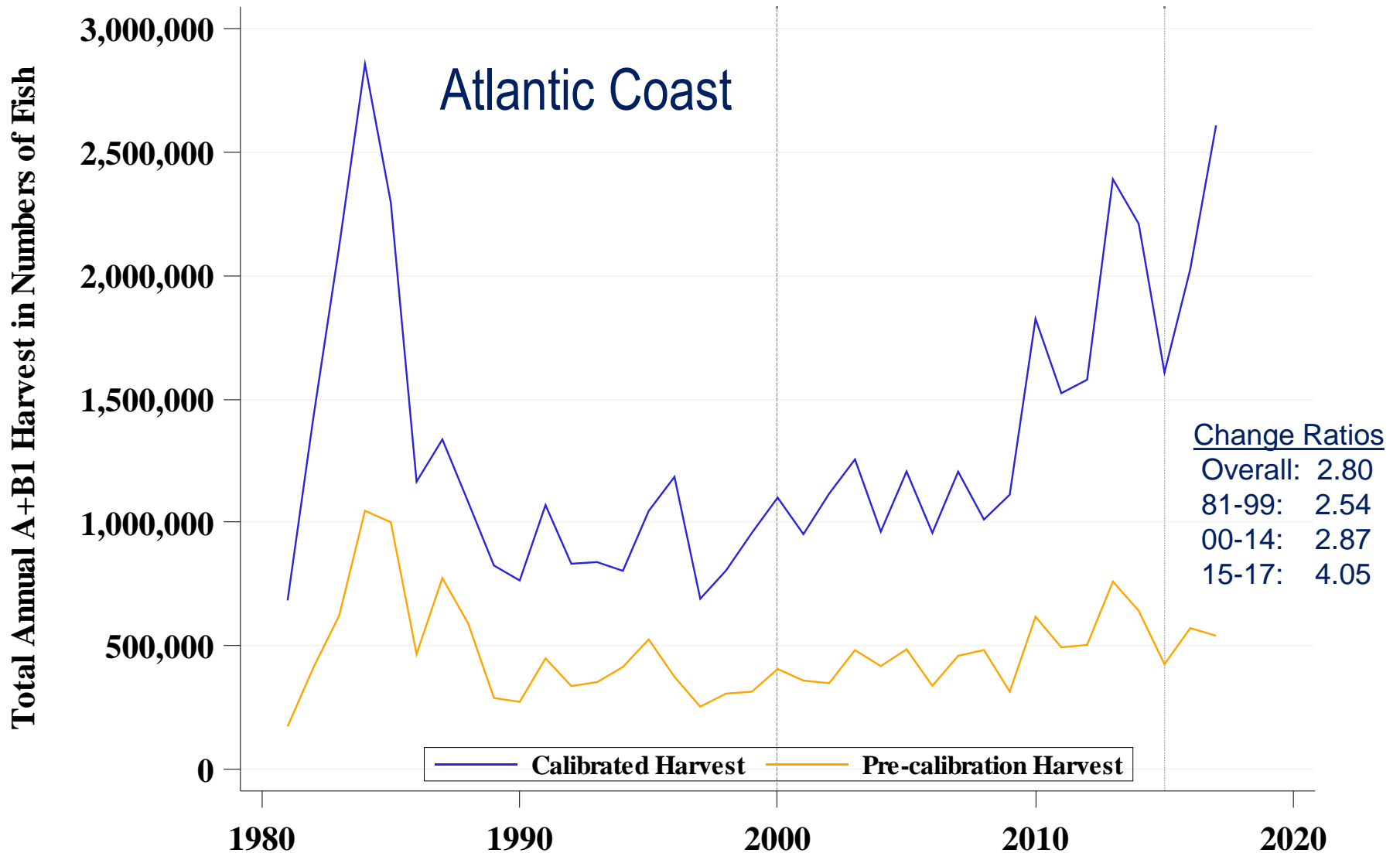
Black Sea Bass Harvest



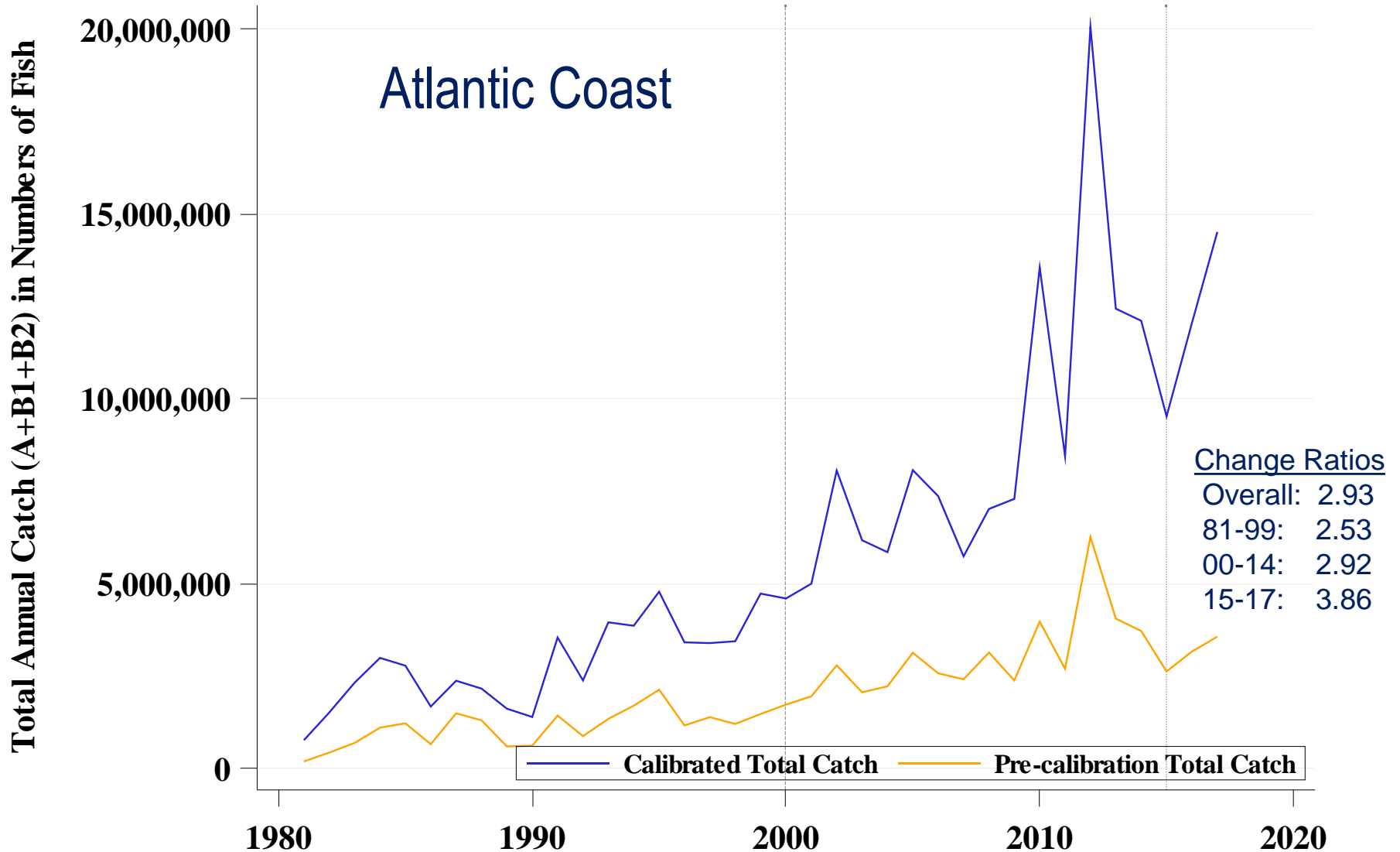
Black Sea Bass Total Catch



Red Drum Harvest



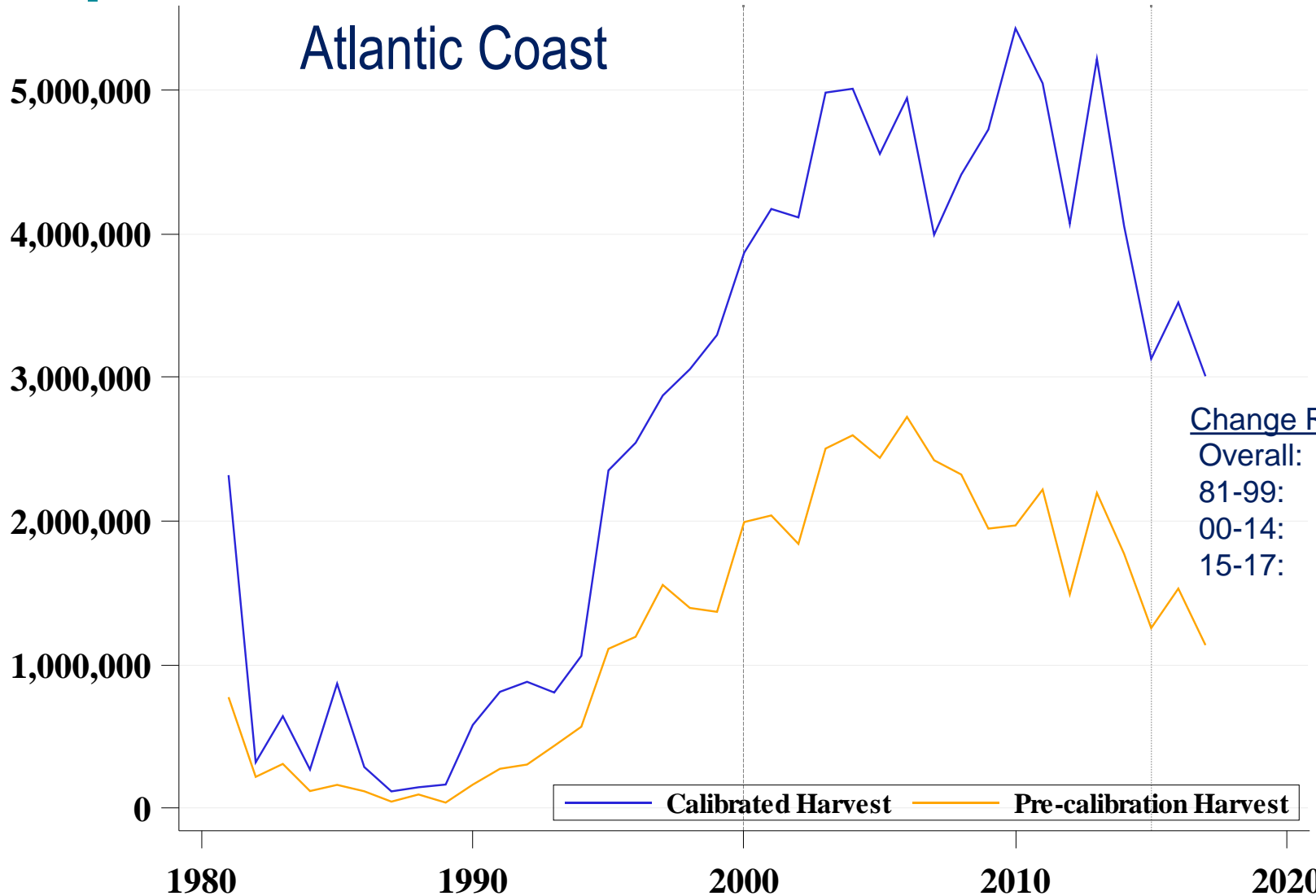
Red Drum Total Catch



Striped Bass Harvest

Atlantic Coast

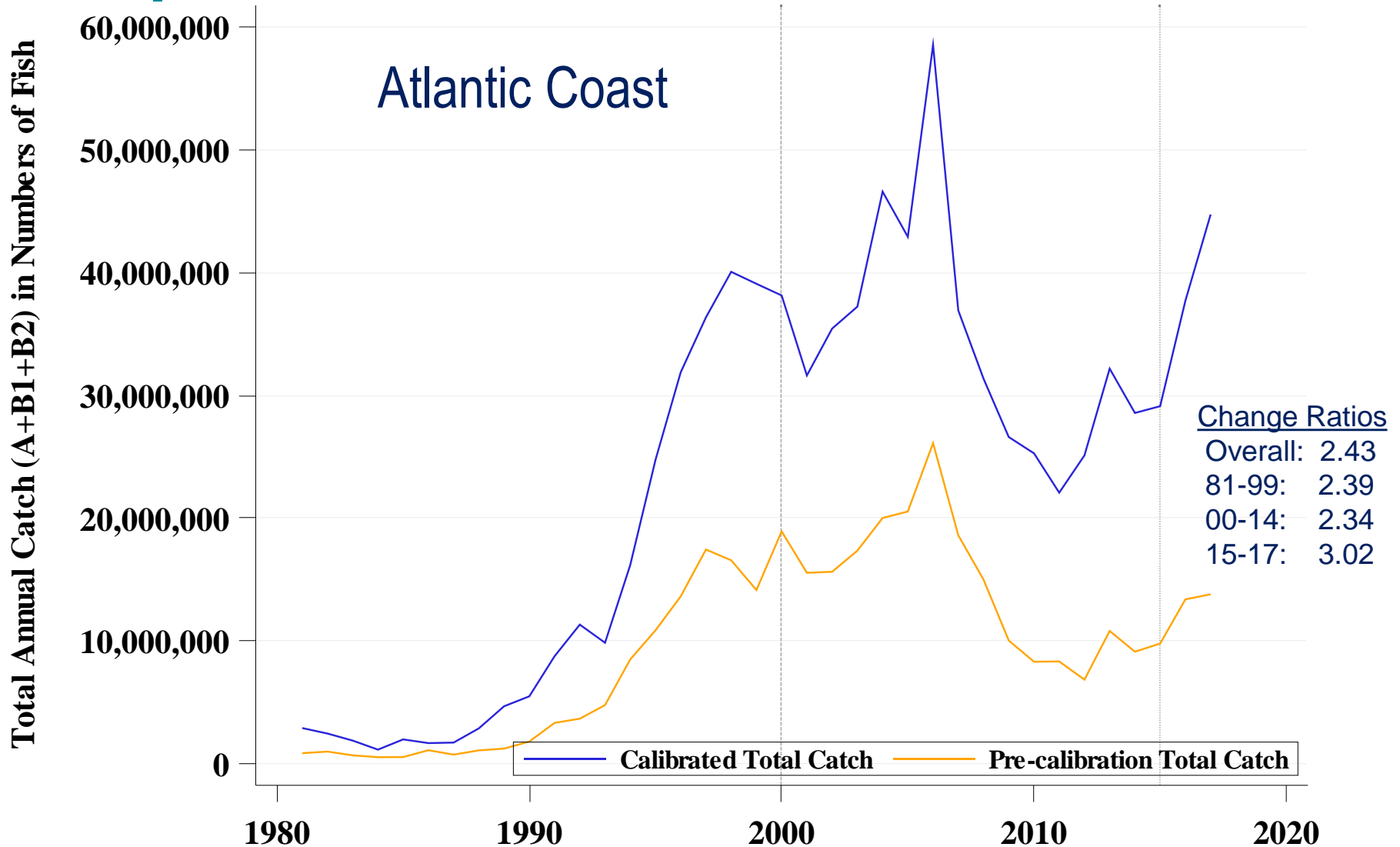
Total Annual A+B1 Harvest in Numbers of Fish



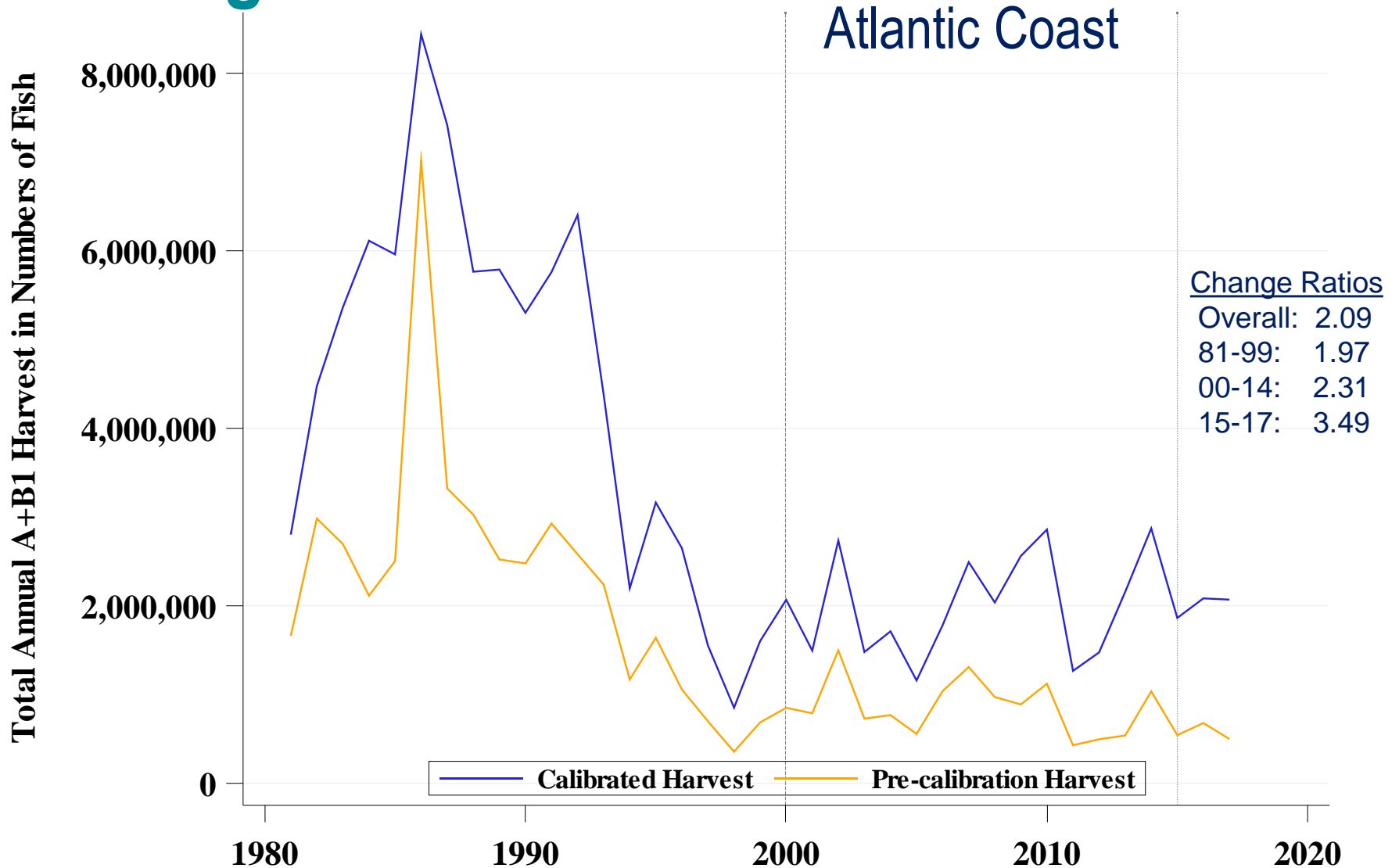
Change Ratios
Overall: 2.18
81-99: 2.29
00-14: 2.11
15-17: 2.47

— Calibrated Harvest — Pre-calibration Harvest

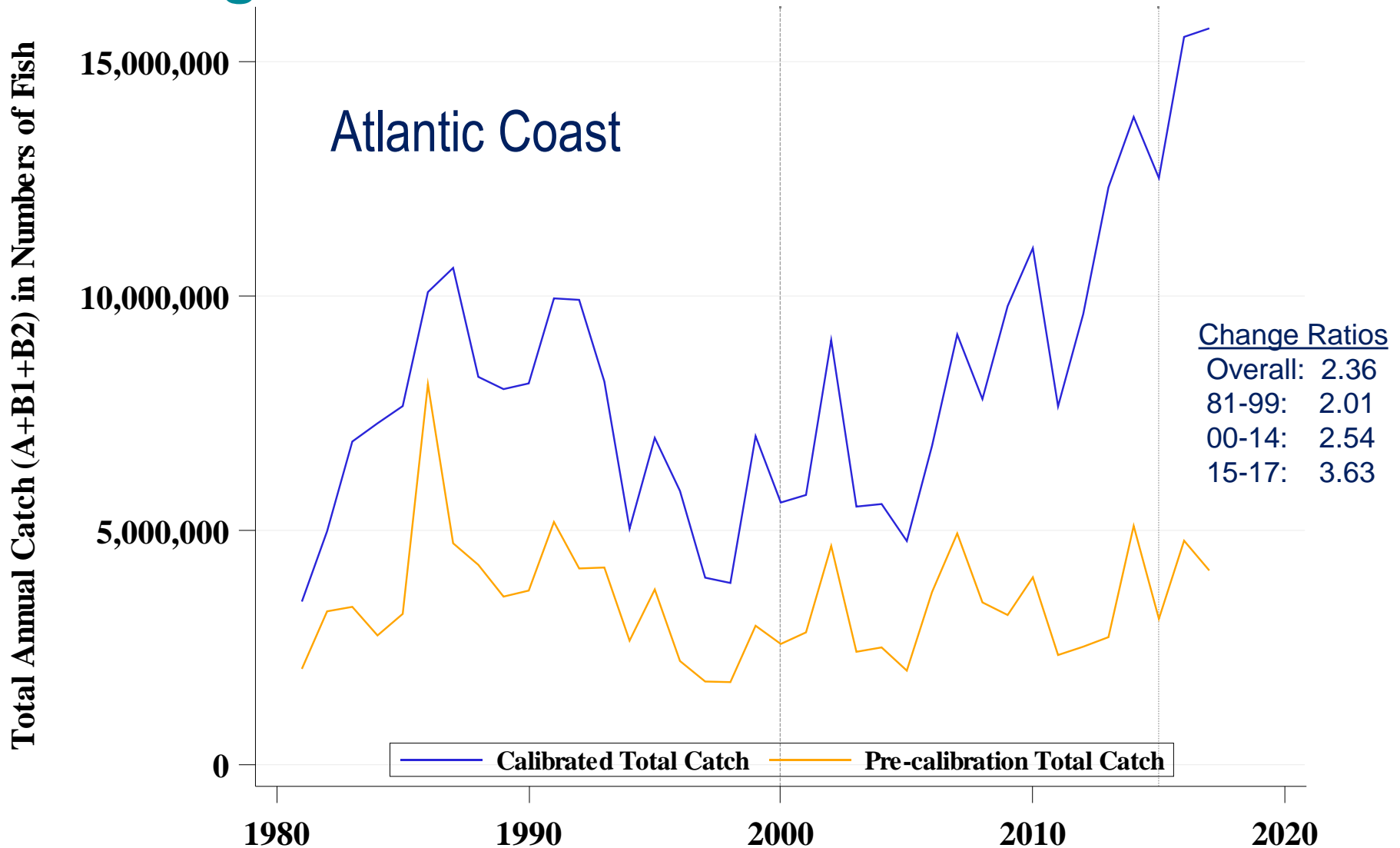
Striped Bass Total Catch



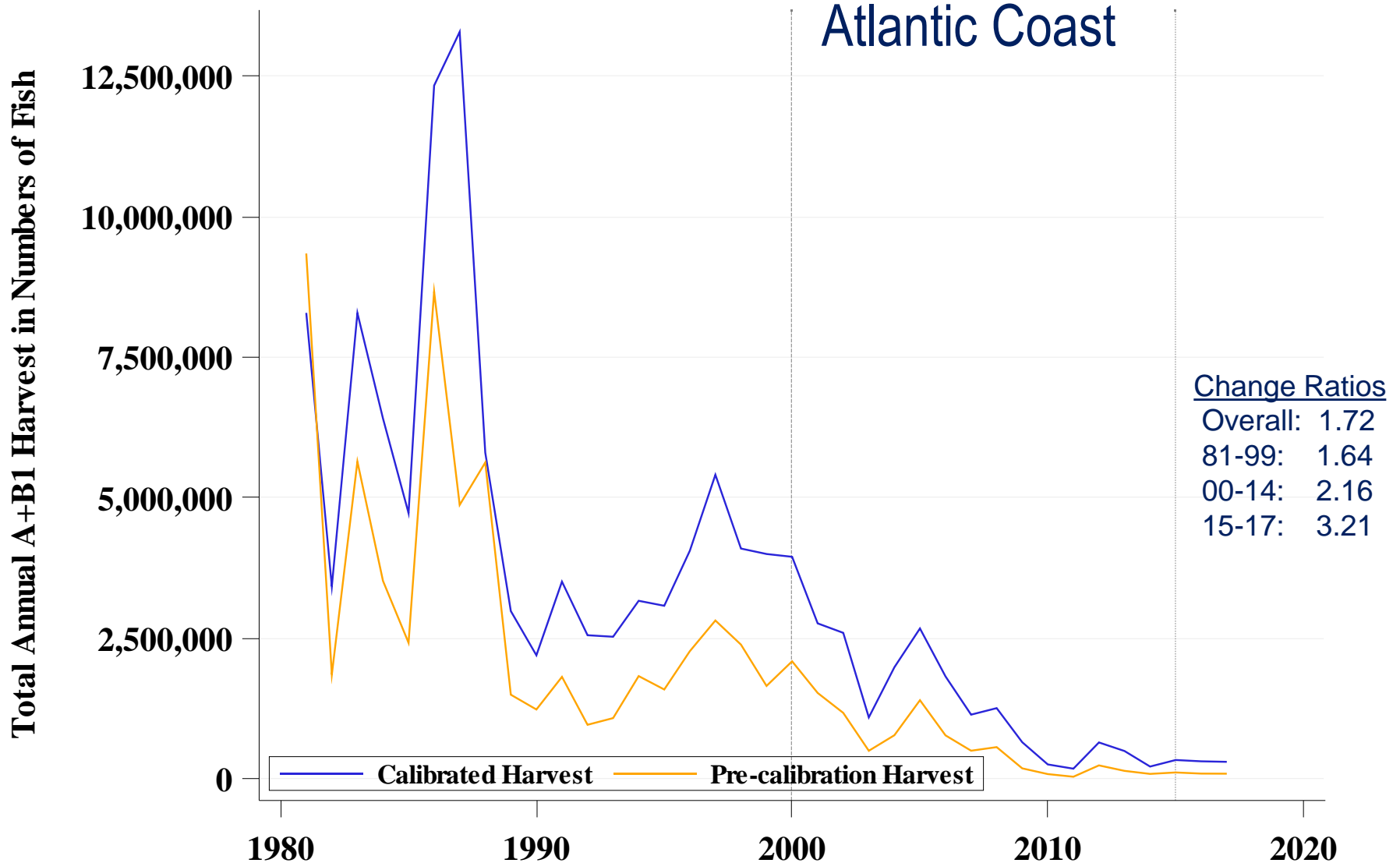
Tautog Harvest



Tautog Total Catch

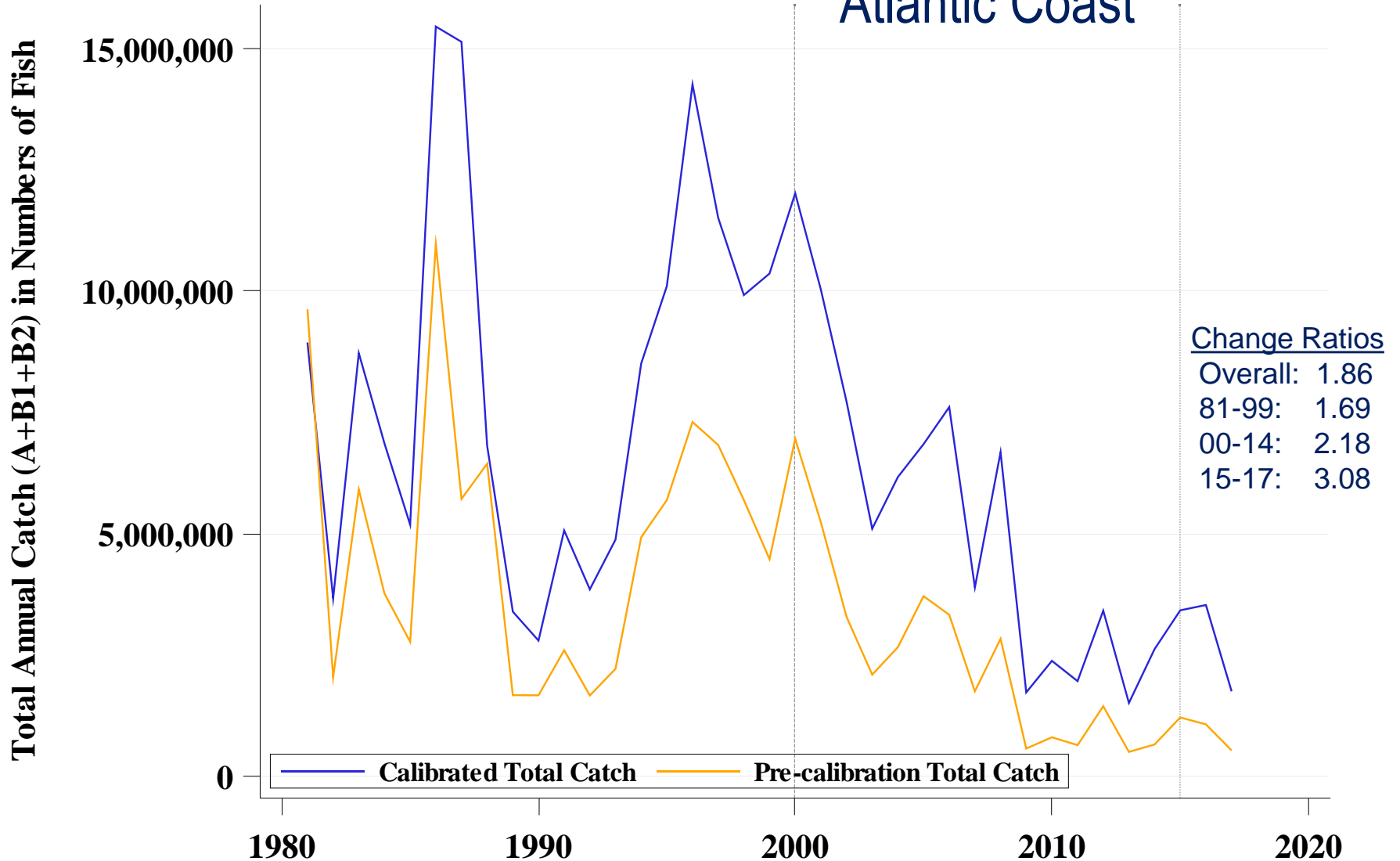


Weakfish Harvest

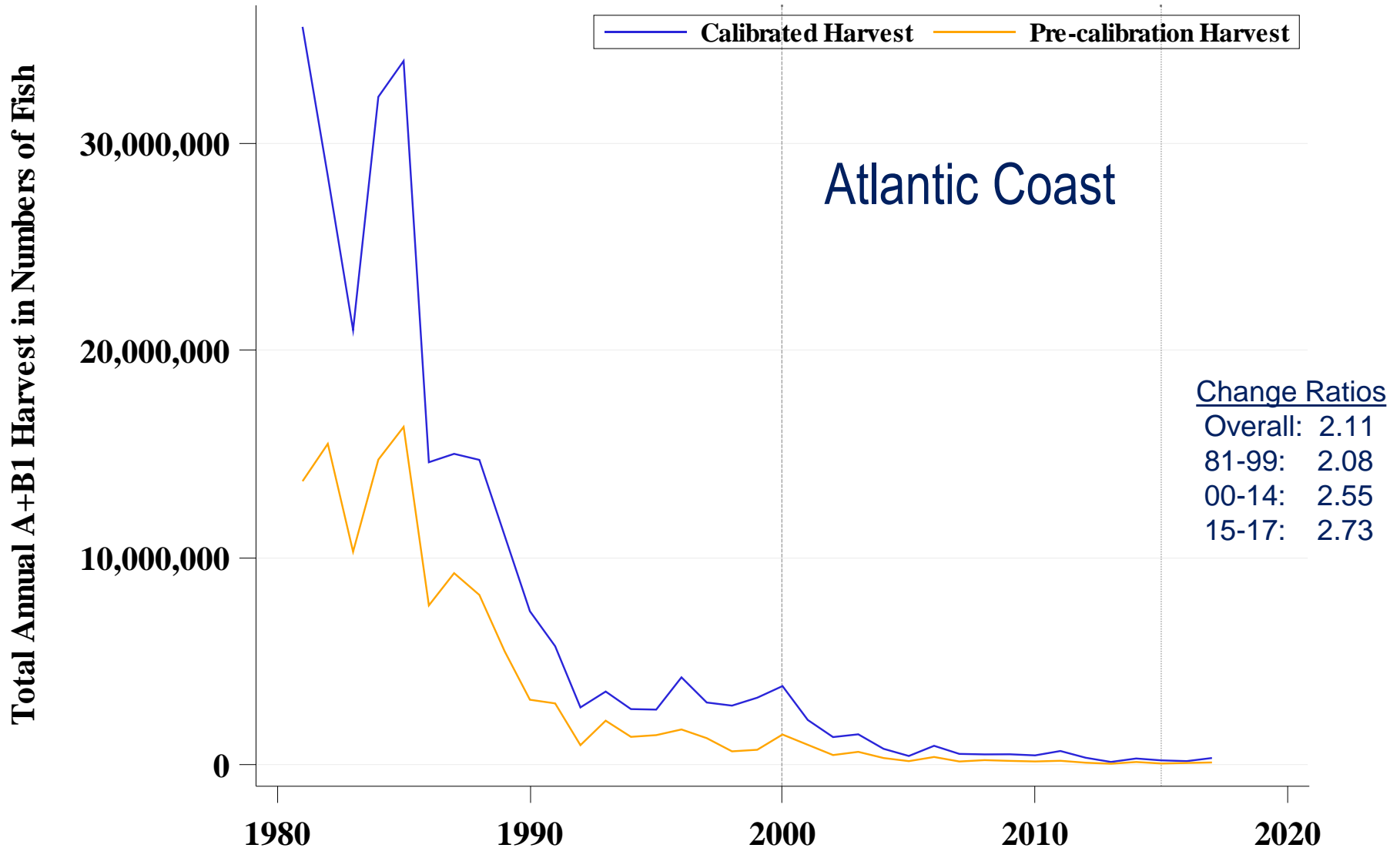


Weakfish Total Catch

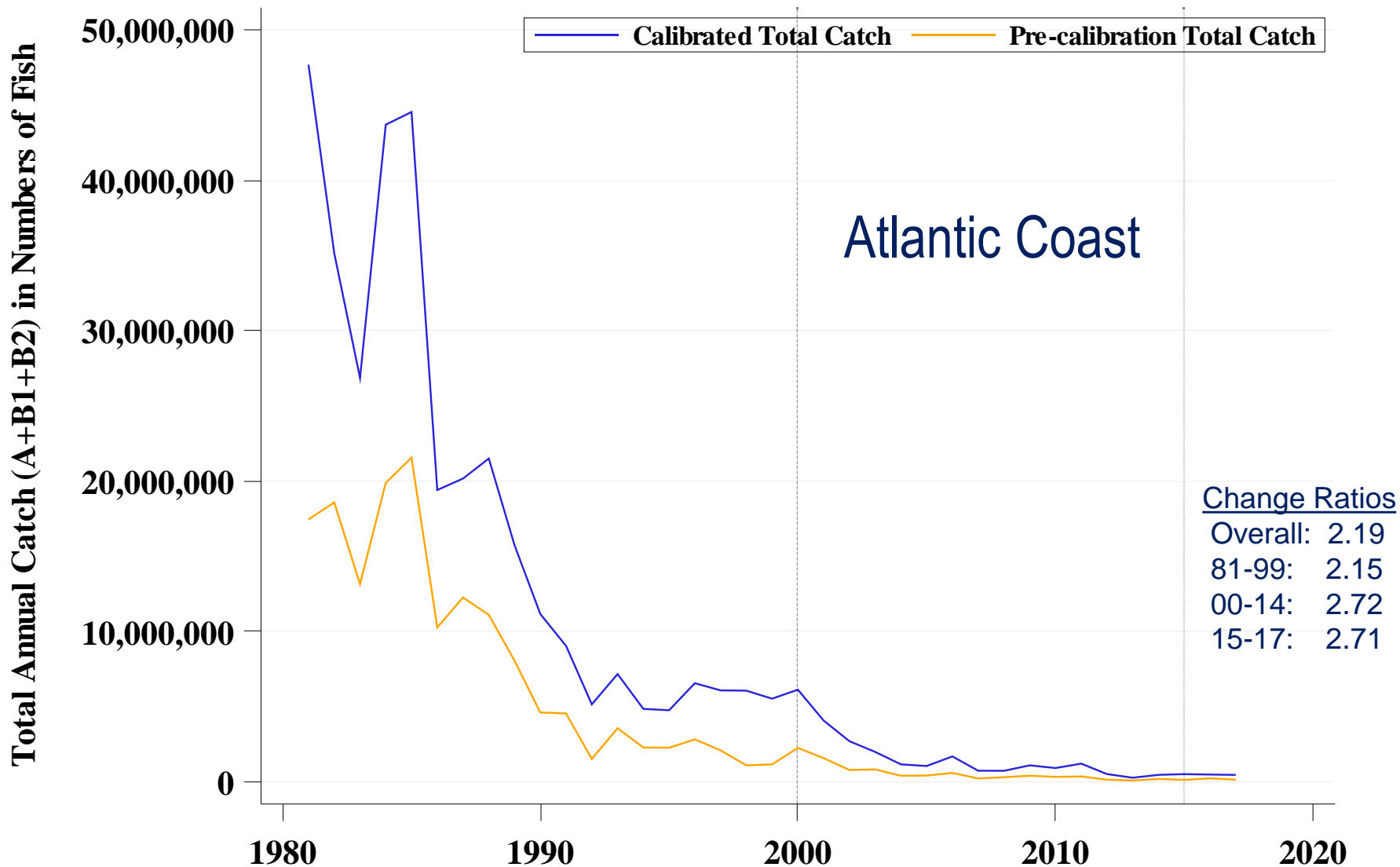
Atlantic Coast



Winter Flounder Harvest



Winter Flounder Total Catch



Impacts on Recreational Fishing



Stock Assessment Schedule

Species	Region	Type	Timing
Striped Bass	Atlantic Coast	Benchmark	Fall 2018
Summer Flounder	Mid-Atlantic Coast	Benchmark	Fall 2018
Red Snapper	Gulf of Mexico	Data Update	Fall 2018
Atlantic Cod	Gulf of Maine	Operational	Early 2019
Black Sea Bass	Mid-Atlantic Coast	Operational	Early 2019
Bluefish	Atlantic Coast	Operational	Early 2019
Scup	Atlantic Coast	Operational	Early 2019
Spot	Atlantic Coast	Operational	Early 2019
Red Porgy	Southern Atlantic Coast	Full Update	May 2019
Greater Amberjack	Southern Atlantic Coast	Full Update	May 2019
Red Grouper	Gulf of Mexico	Full Update	July 2019
Gray Triggerfish	Gulf of Mexico	Full Update	Aug. 2019
Yellowtail Snapper	Southern Atlantic Coast/Gulf of Mexico	Benchmark	Nov. 2019
Red Snapper	South Atlantic	Full Update	2020

Key Takeaways

- We see a substantial increase in effort, especially in the shore mode.
- Those stocks that have high proportion of catch from shore are more heavily impacted.
- The changes in effort are generally larger in more recent years, mostly driven by the “wireless” effect.
- 2018 catch will be back-calibrated to ensure ACLs and catch are in the same “currency.”
- Stock assessments incorporating this new data will be used to determine stock status and ACLs.



What's Next

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.

Upcoming Presentations



August 7

- Atlantic States Marine Fisheries Commission



August 14

- Mid-Atlantic Fishery Management Council



September 24

- New York State Department of Environmental Conservation, Division of Marine Resources, Marine Resources Advisory Council

Scheduling Underway



September 5-6

- NOAA Fisheries Atlantic Highly Migratory Species Advisory Panel



September 20

- South Atlantic Fishery Management Council



New England

Fishery Management
Council

September 25-27

- New England Fishery Management Council



Scheduling Underway



October 2-4

- Gulf of Mexico Fishery Management Council Scientific & Statistical Committee



October 15-18

- Gulf States Marine Fisheries Commission



October 22-25

- Gulf of Mexico Fishery Management Council



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Questions?



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