



**NOAA  
FISHERIES**

• NEFSC

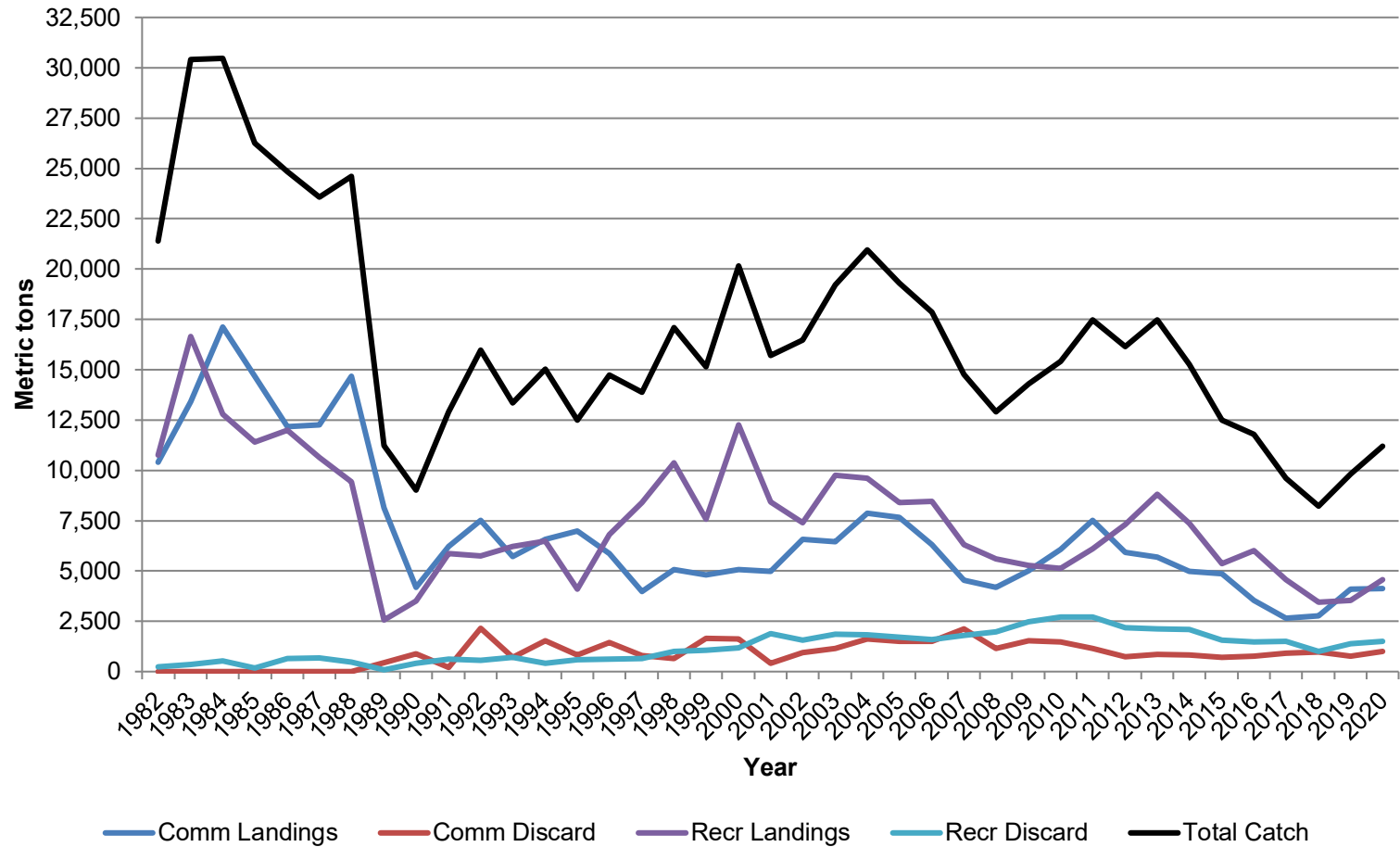
## **2021 Management Track Assessments (MTAs)**

- **Summer flounder, Scup,  
Black sea bass, Atlantic  
bluefish, Atlantic mackerel,  
Golden tilefish**
- **June 2021**

# **Summer flounder 2021 MTA Data and Modeling overview Lead: Mark Terceiro**

- **Add 2018-2019 fishery and research survey data to the 2018 SAW 66 assessment model**
- **Update mean weight and maturity averages for BRPs and projections**
- **Update BRPs**
- **Evaluate stock status relative to updated BRPs**
- **Conduct projections for 2022-2023 to determine OFLs**

## Summer flounder Fishery Total Catch: 1982-2020

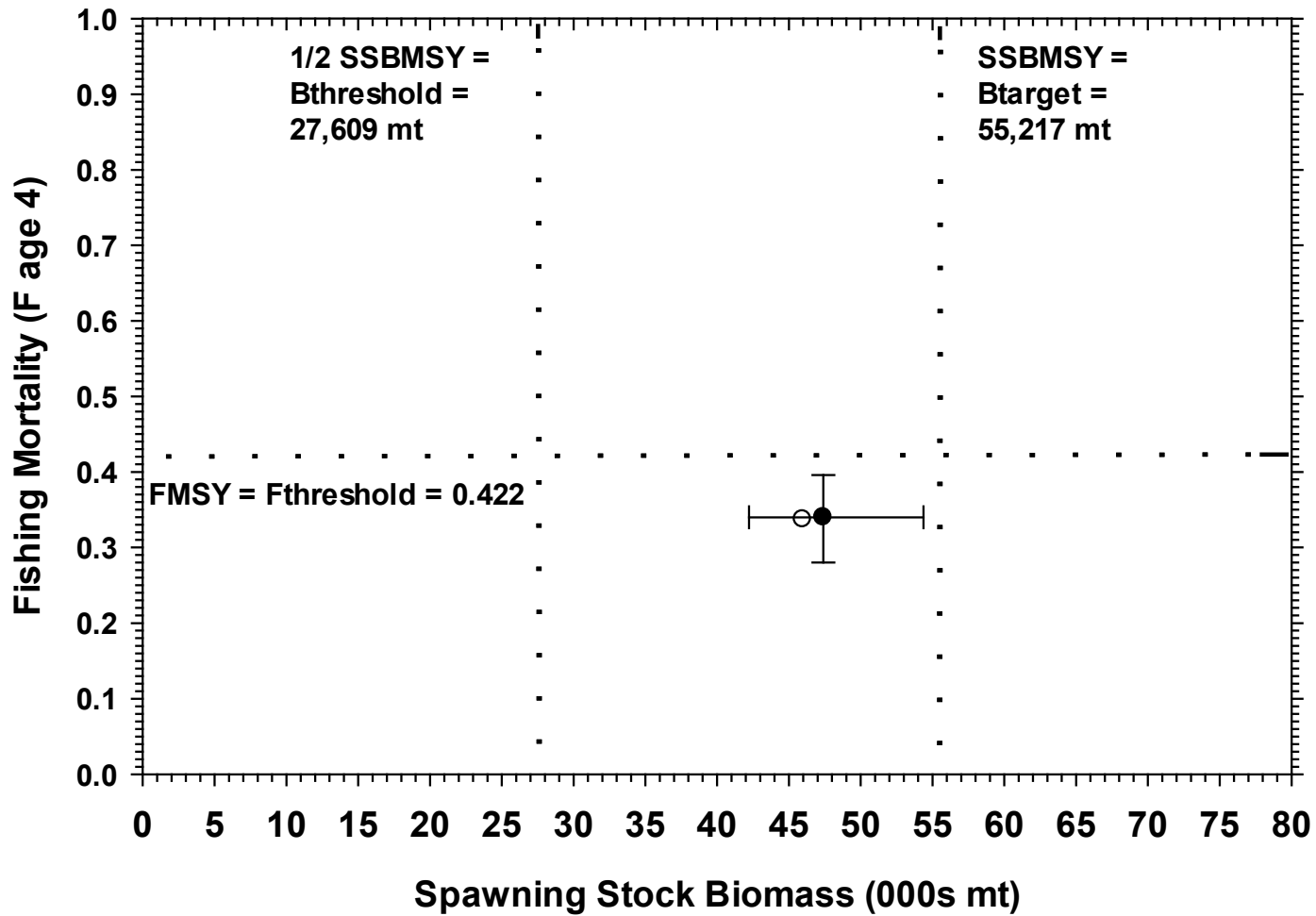


# Summer flounder 2021 MTA

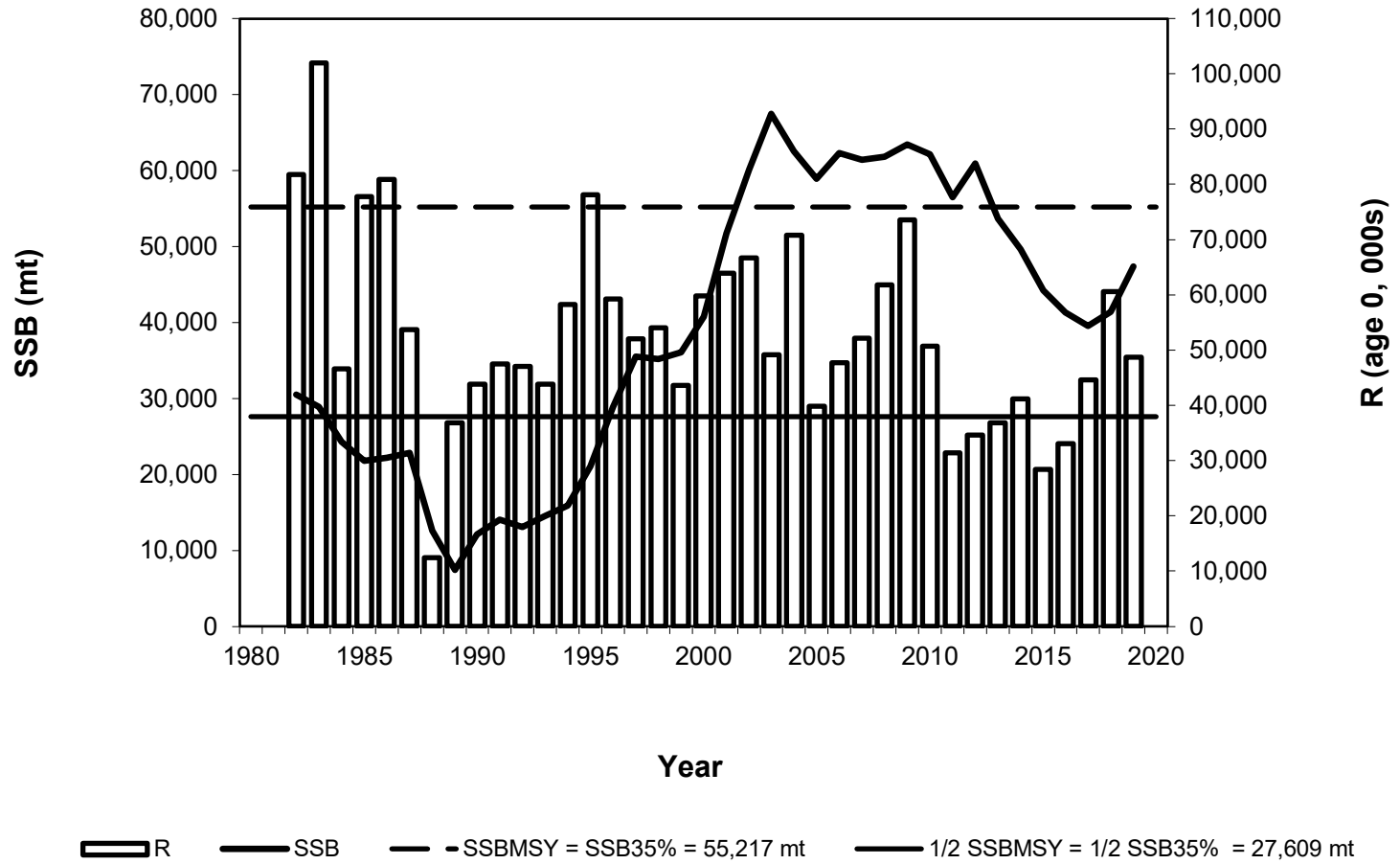
## ASAP Model Results

- Included 4 fishery fleets (comm landings, comm discards, recr landings, recr discards)
- Included all candidate state and federal research surveys, including stand-alone YOY and larval SSB indices
- ‘Internal’ Retrospective: minor at +3% for SSB and +1% for F; no terminal year adjustments required
- ‘Historical’ Retrospective: consistent trends over last 30 years (21 assessments)
- Small changes (~5%) in updated BRPs
- Stock status: Not overfished (86% of BMSY), not overfishing (81% of FMSY)

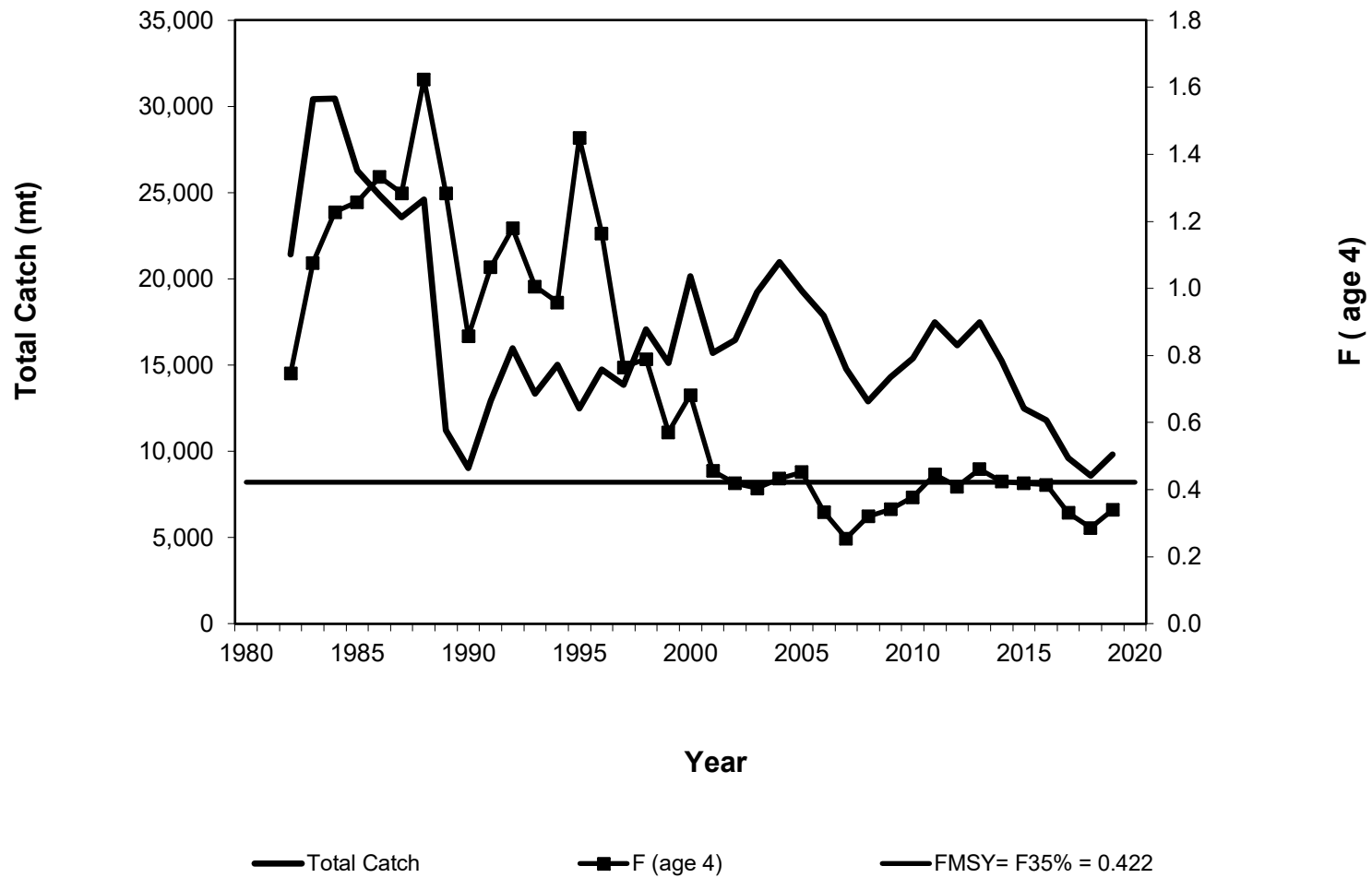
# Summer flounder 2021 MTA Stock Status



# Spawning Stock Biomass (SSB) and Recruitment (R)



**Total Catch and Fishing Mortality (F)**



# **Scup 2021 MTA**

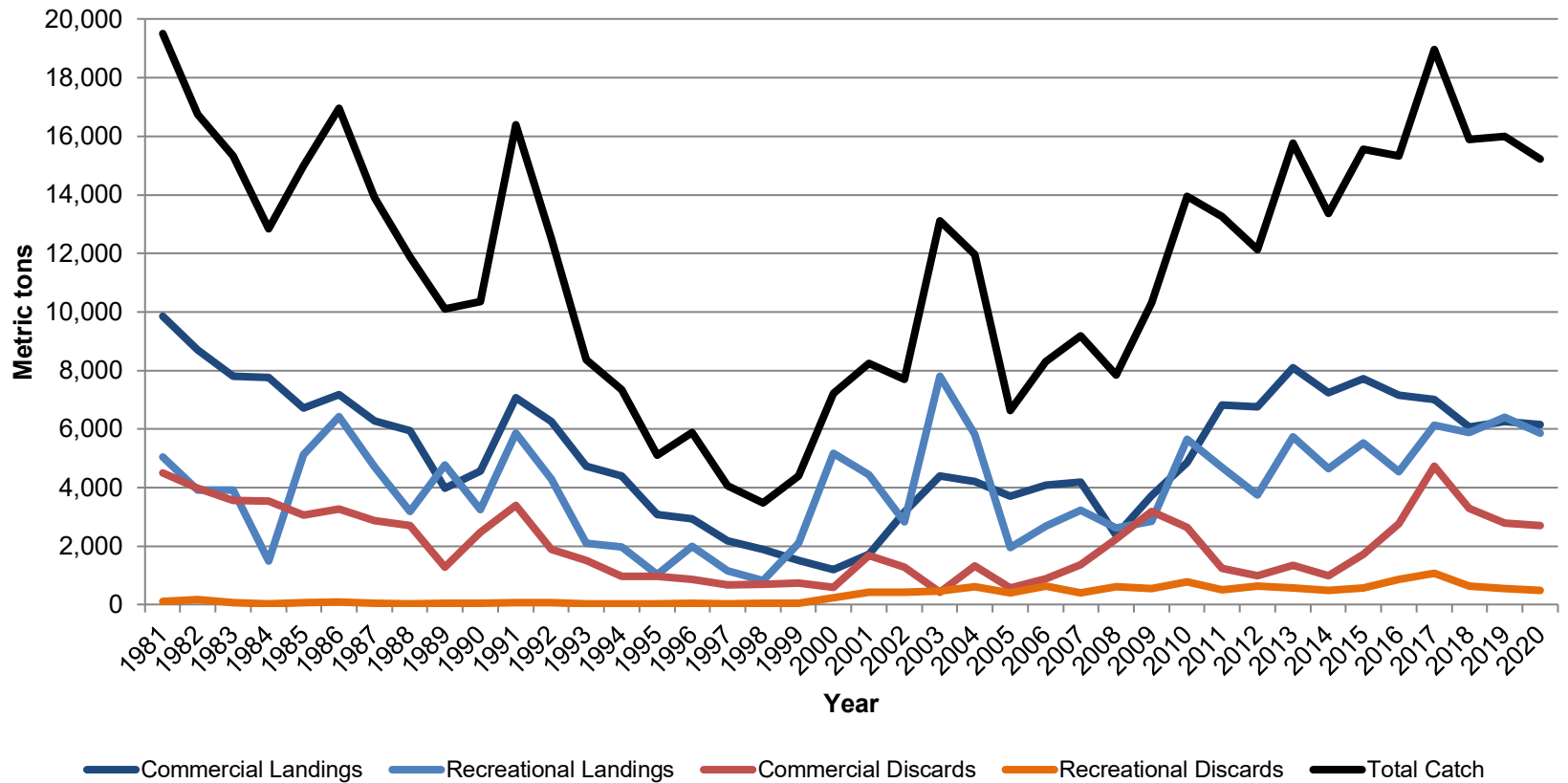
## **Data and Modeling overview**

### **Lead: Mark Terceiro**

- **Add 2019 fishery and research survey data to the 2015 SAW 60 / 2017 / 2019 assessment model**
- **Update mean weight and maturity averages for BRPs and projections**
- **Update BRPs**
- **Evaluate stock status relative to updated BRPs**
- **Conduct projections for 2022-2023 to determine OFLs**



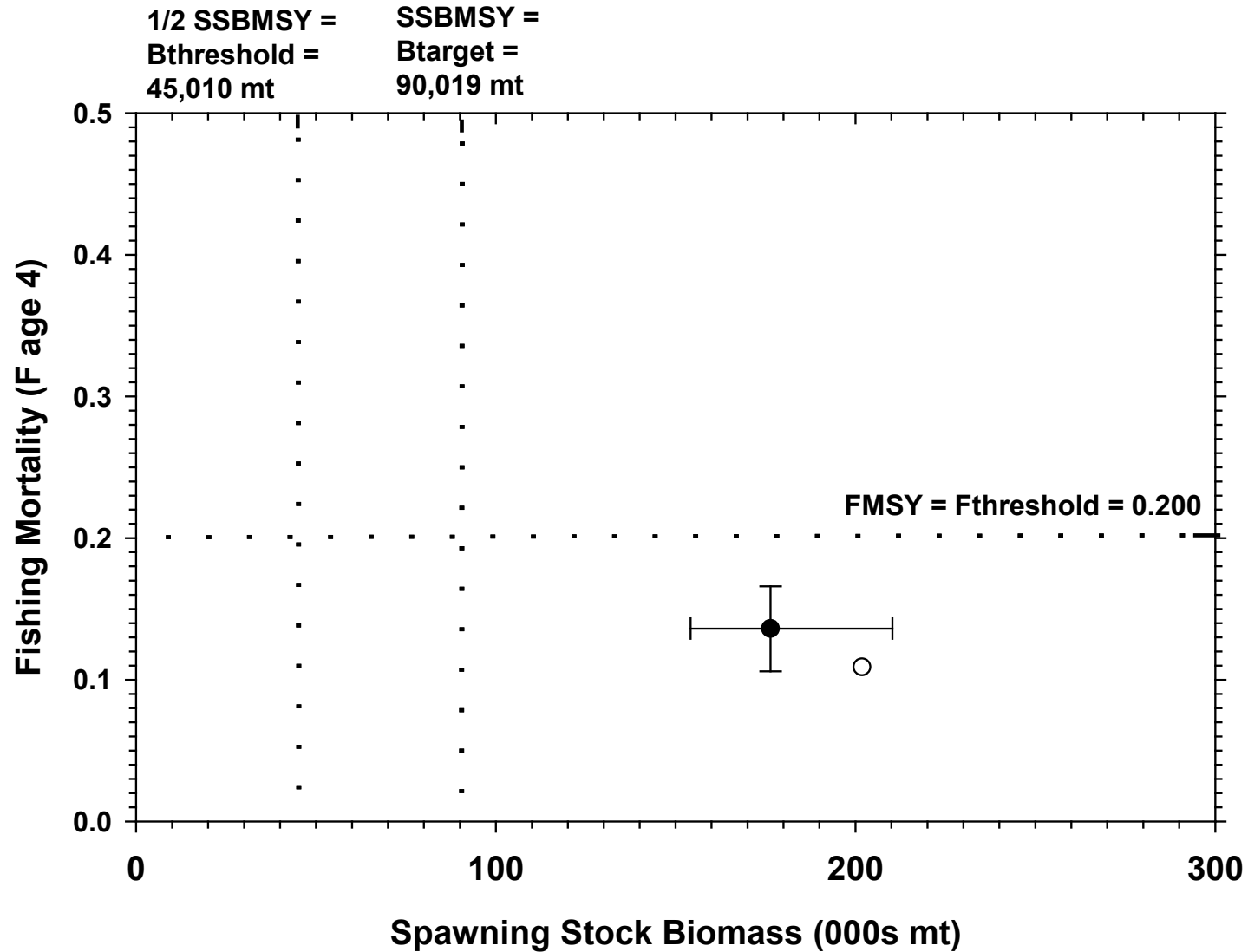
Scup Fishery Total Catch: 1981-2020



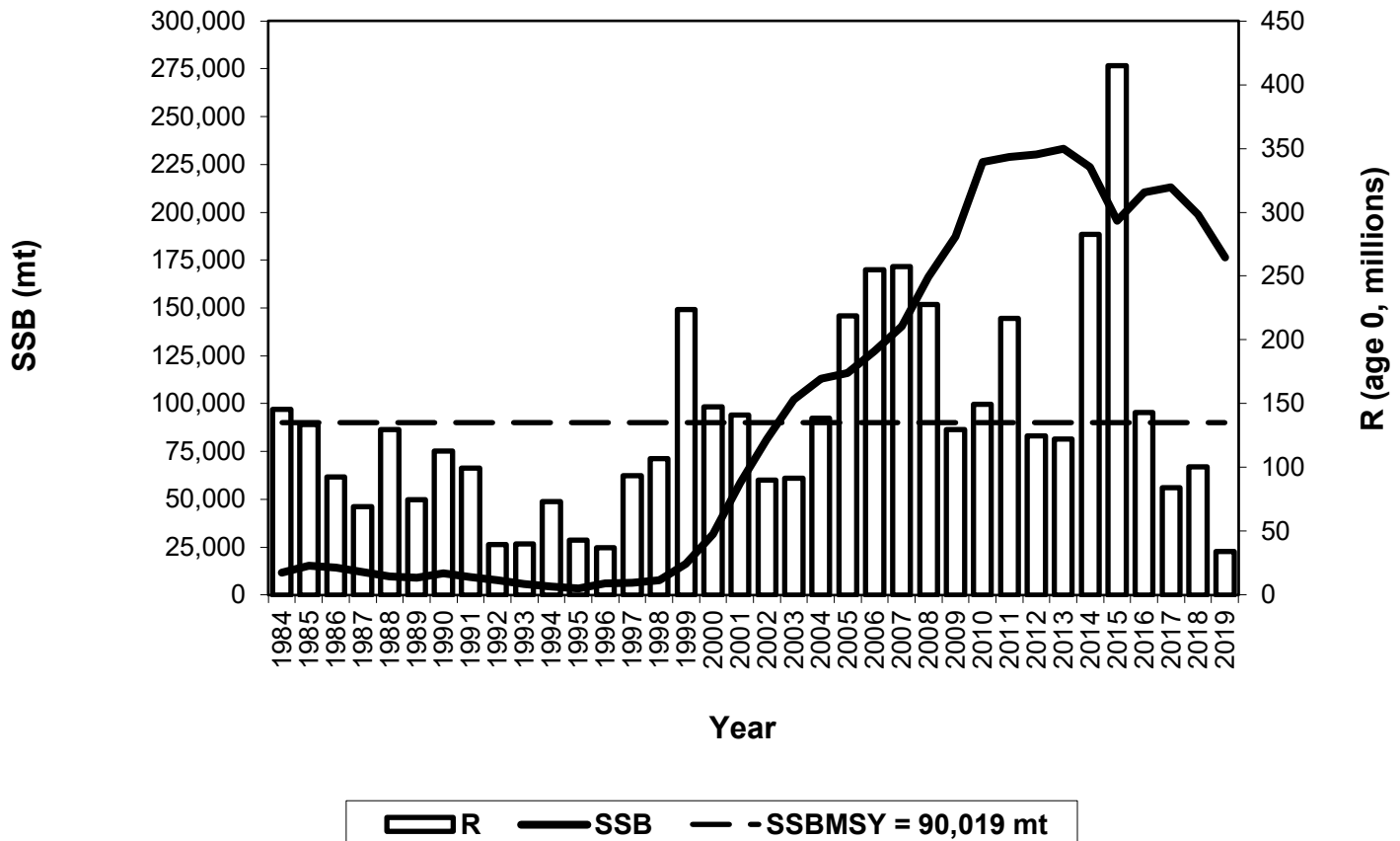
# **Scup 2021 MTA ASAP Model Results**

- **Includes 4 fishery fleets - (comm landings, comm discards, recr landings, recr discards)**
- **Several surveys with age comps and one stand-alone YOY index**
- **Several aggregate indices of biomass**
- **‘Internal’ Retrospective: minor at -14% for SSB and +20% for F; ‘good retrospective’; no terminal year adjustments required**
- **‘Historical’ Retrospective: consistent trends over last 20 years (8 assessments)**
- **Small changes (~5%) in updated BRPs**
- **Stock status: Not overfished (2X BMSY), not overfishing (68% of FMSY)**

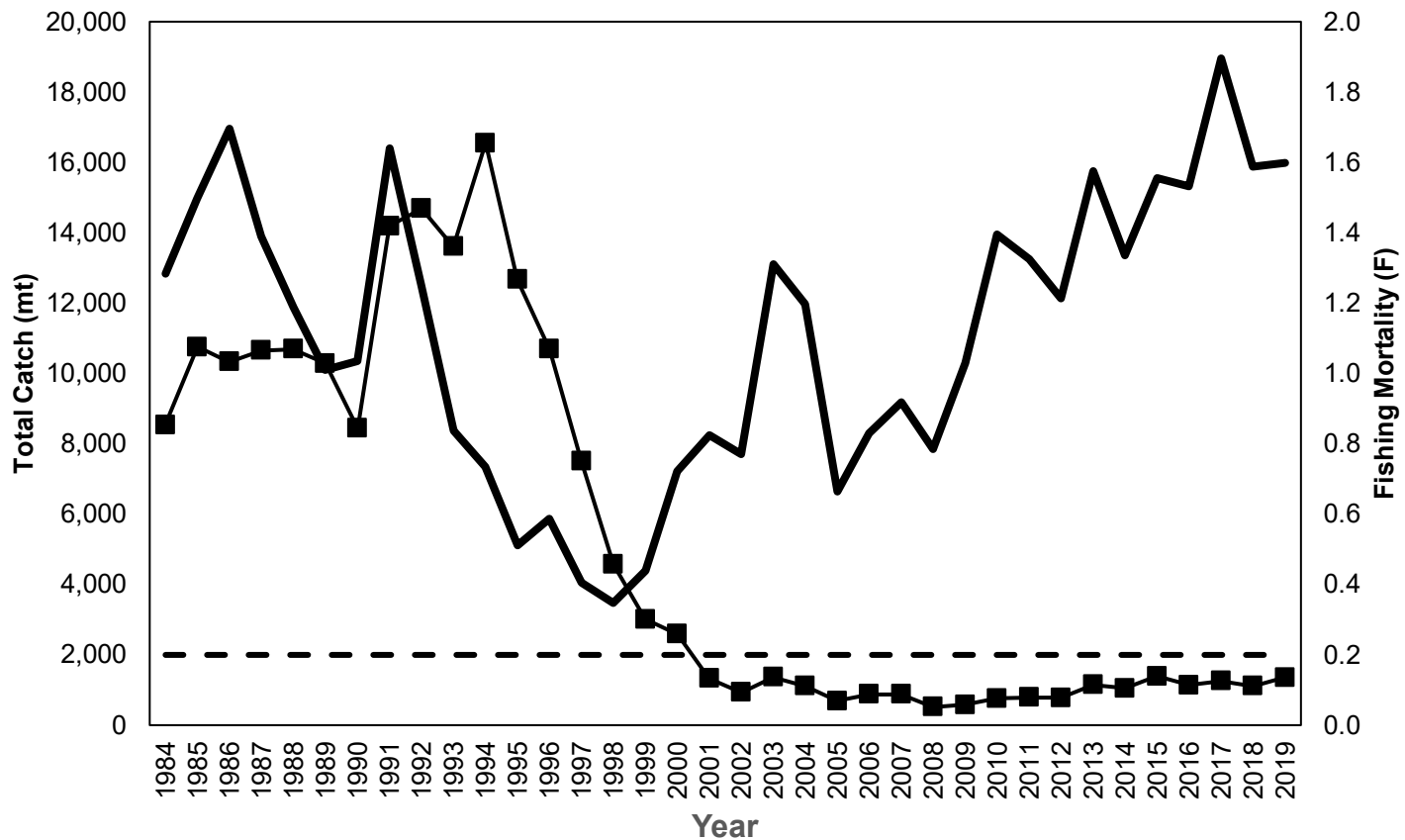
# Scup 2021 MTA Stock Status



### Spawning Stock Biomass (SSB) and Recruitment (R)



**Total Catch and Fishing Mortality**



— Total Catch    ■ F    - - FMSY = 0.200

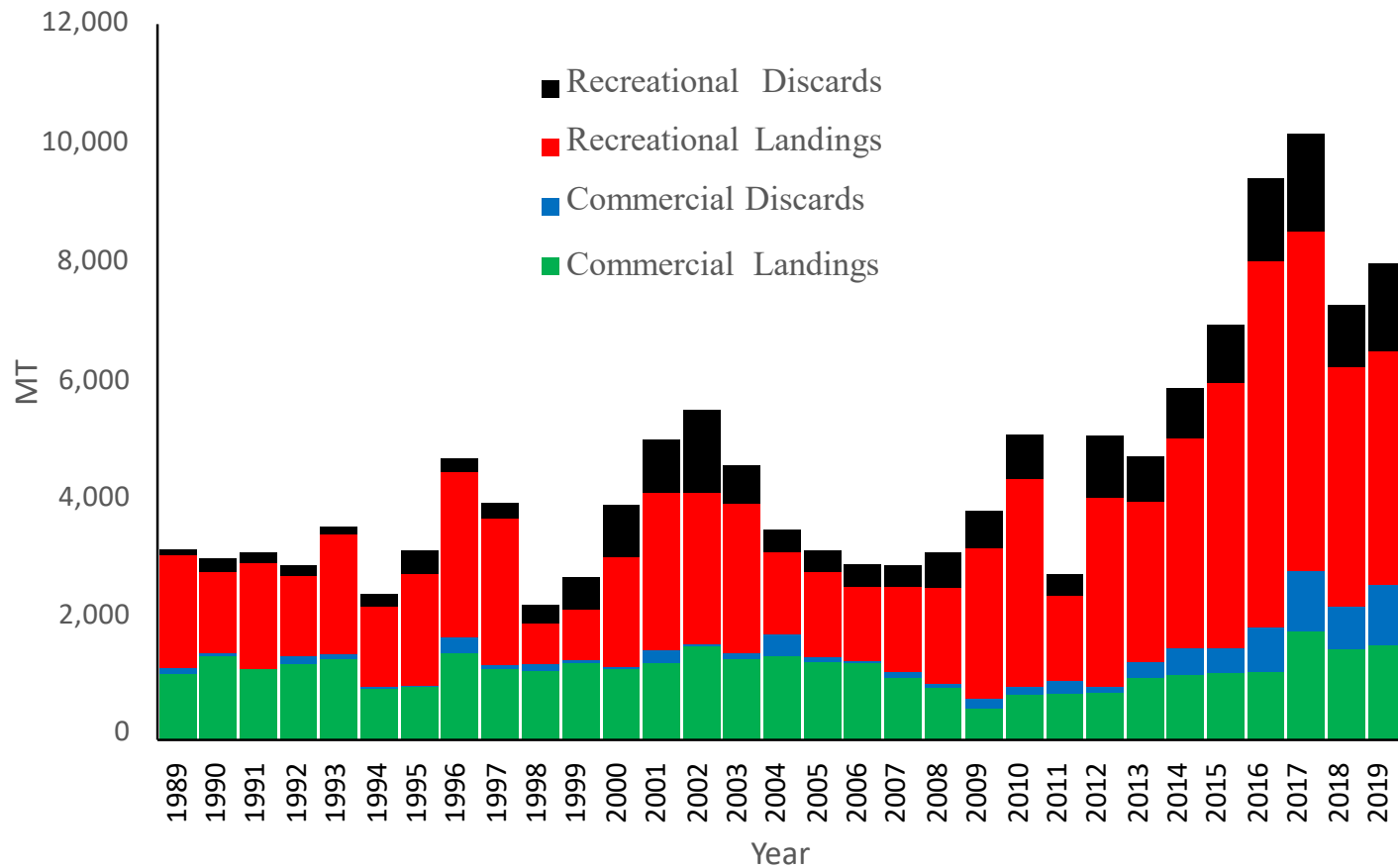
# **Black sea bass 2021 MTA**

## **Data and Modeling overview**

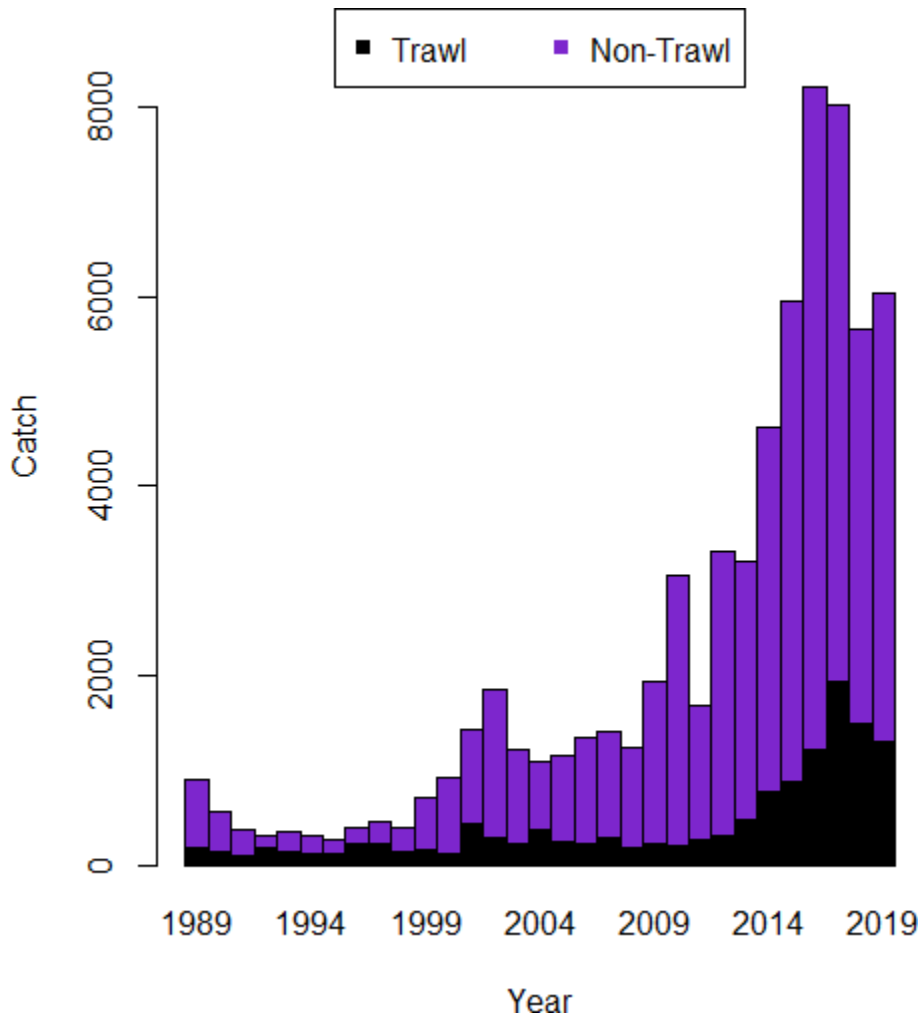
### **Lead: Kiersten Curti**

- **Add 2019 fishery and research survey data to the 2019 Operational Assessment model: North and South models run independently and then combined**
- **Update mean weight and maturity averages for BRPs and projections**
- **Update BRPs**
- **Evaluate stock status relative to updated BRPs**
- **Conduct projections for 2022-2023 to determine OFLs**

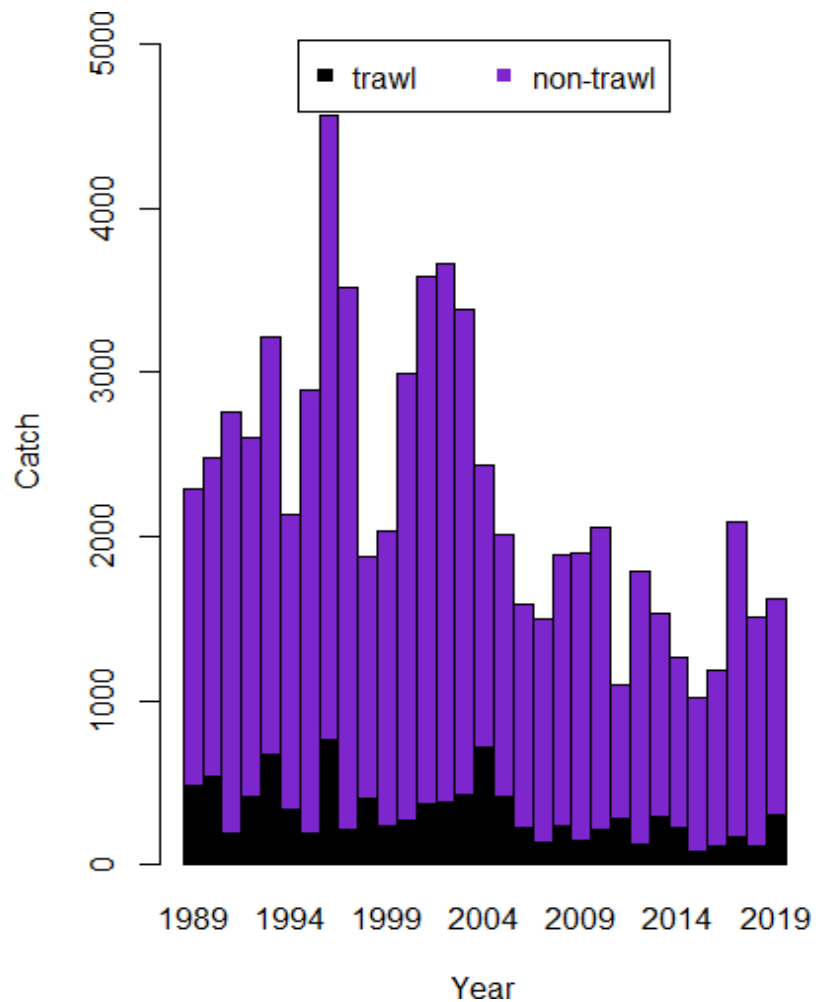
# Black sea bass Total Catch (mt) 1989-2019



## North



## South



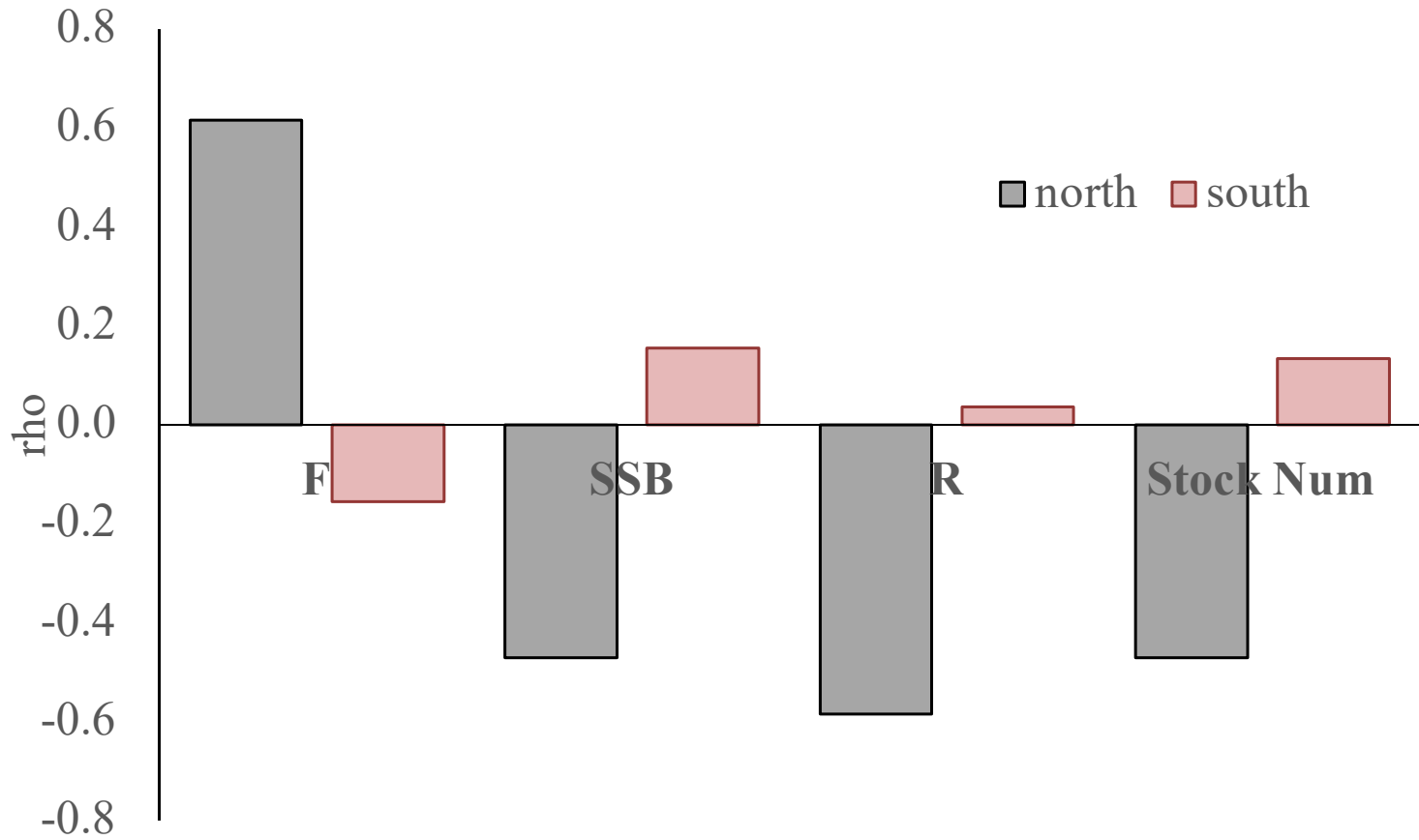
Non-trawl catch includes recreational and commercial hook and line, fish pot and lobster pot catches



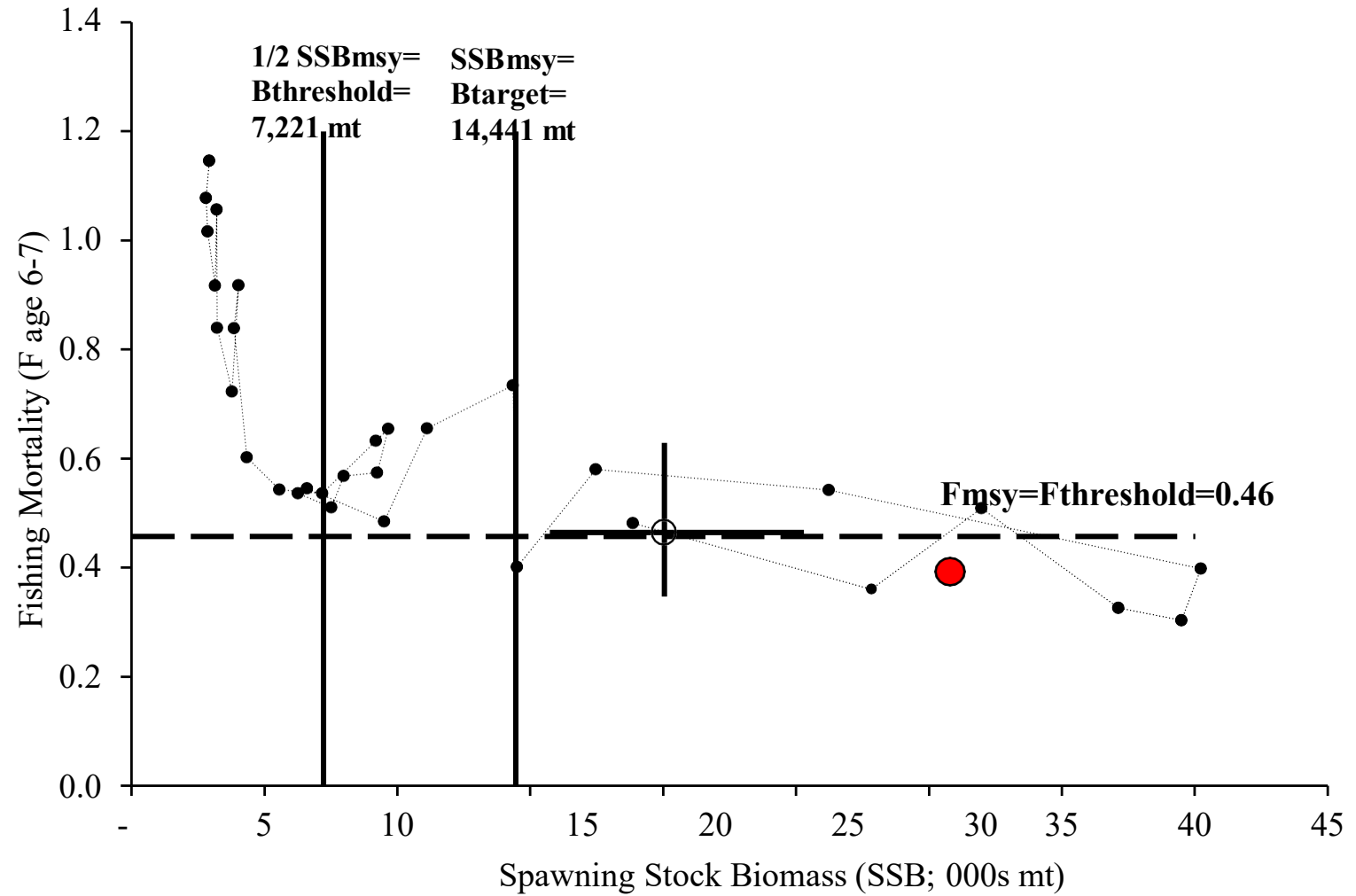
# **Black sea bass 2021 MTA ASAP Model Results**

- **Includes 2 fishery fleets - (comm trawl catch, all non-trawl catch)**
- **Several surveys with age comps and two stand-alone age-1 indices; one fishery-dependent index; some split between regions**
- **‘Internal’ Retrospective: major and ‘off-setting’ between regional models, but ‘good’ retrospective:  
North at -46% for SSB and +65% for F  
South at +12% for SSB and -15% for F  
terminal year adjustments required**
- **‘Historical’ Retrospective: consistent trends over last 5 years (3 assessments 2016, 2019, 2021)**
- **Small changes (~2%) in updated BRPs**
- **Stock status: Not overfished (2X BMSY), not overfishing (89% of FMSY)**

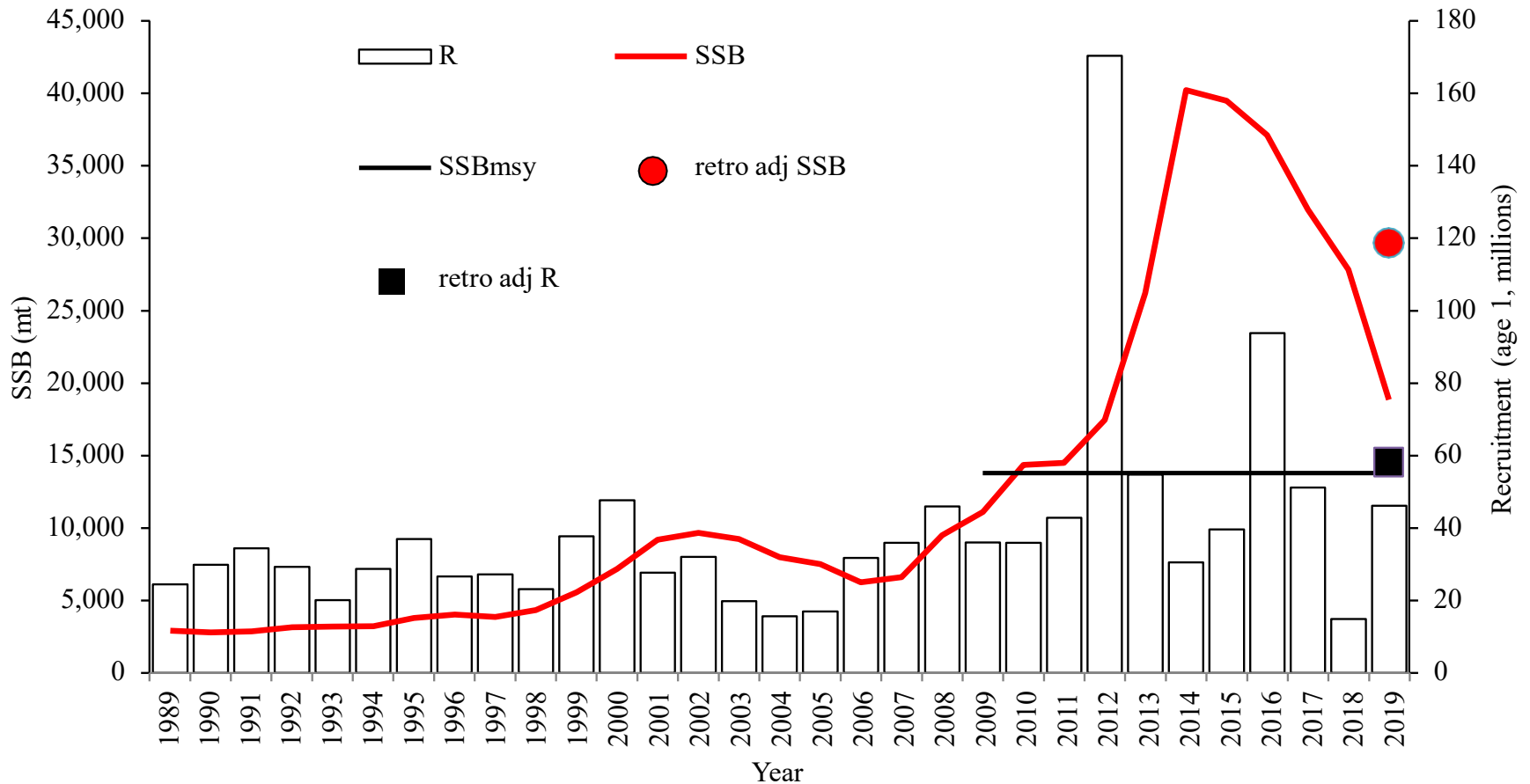
**Black sea bass:  
rho values for North and South  
Final model**



## Black sea bass SSB and F with Updated BRPs

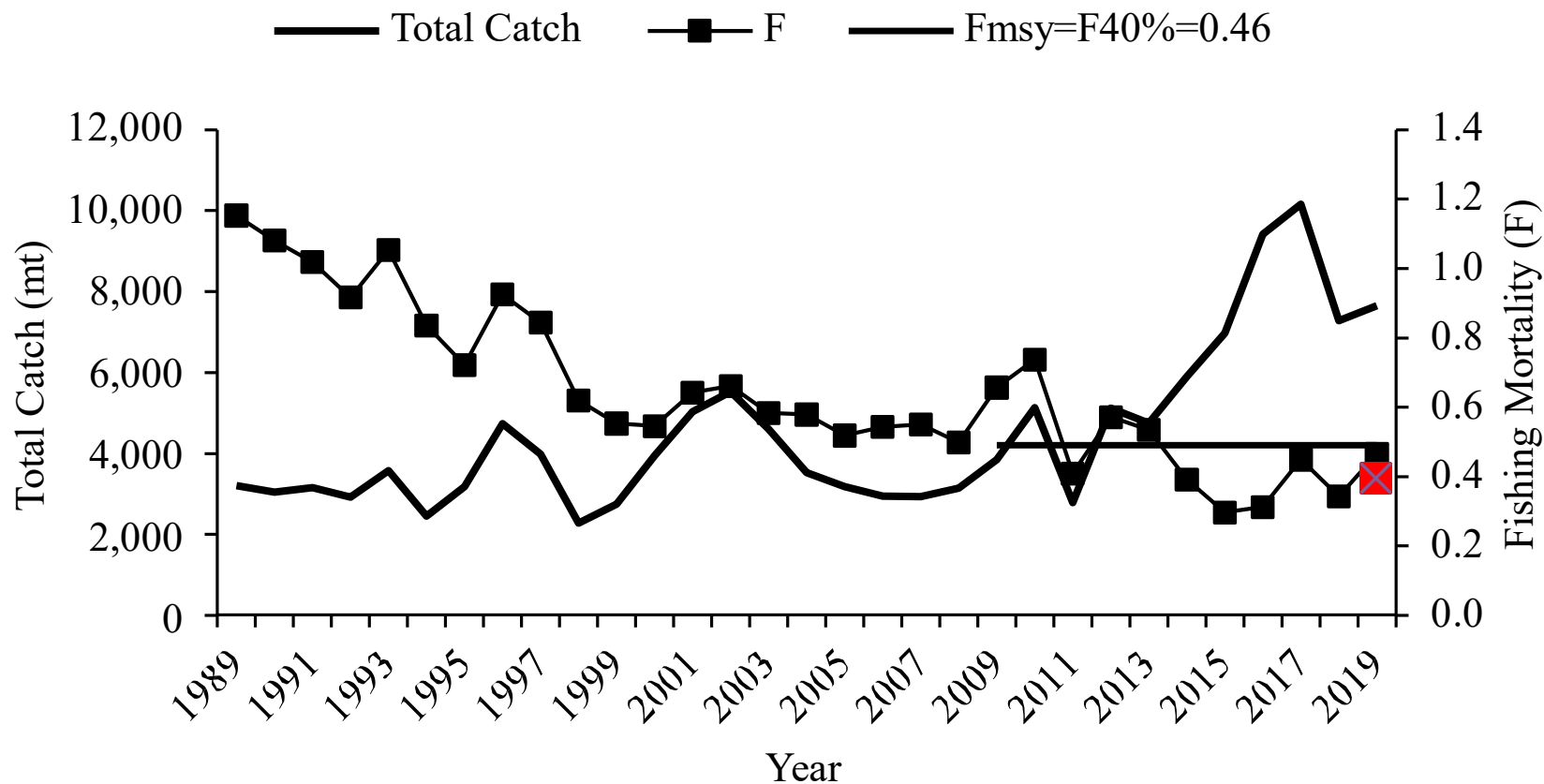


# Black sea bass Spawning Stock Biomass and Recruitment



Retrospective adjusted points indicated in terminal year

## Black sea bass Total Catch and Fishing Mortality

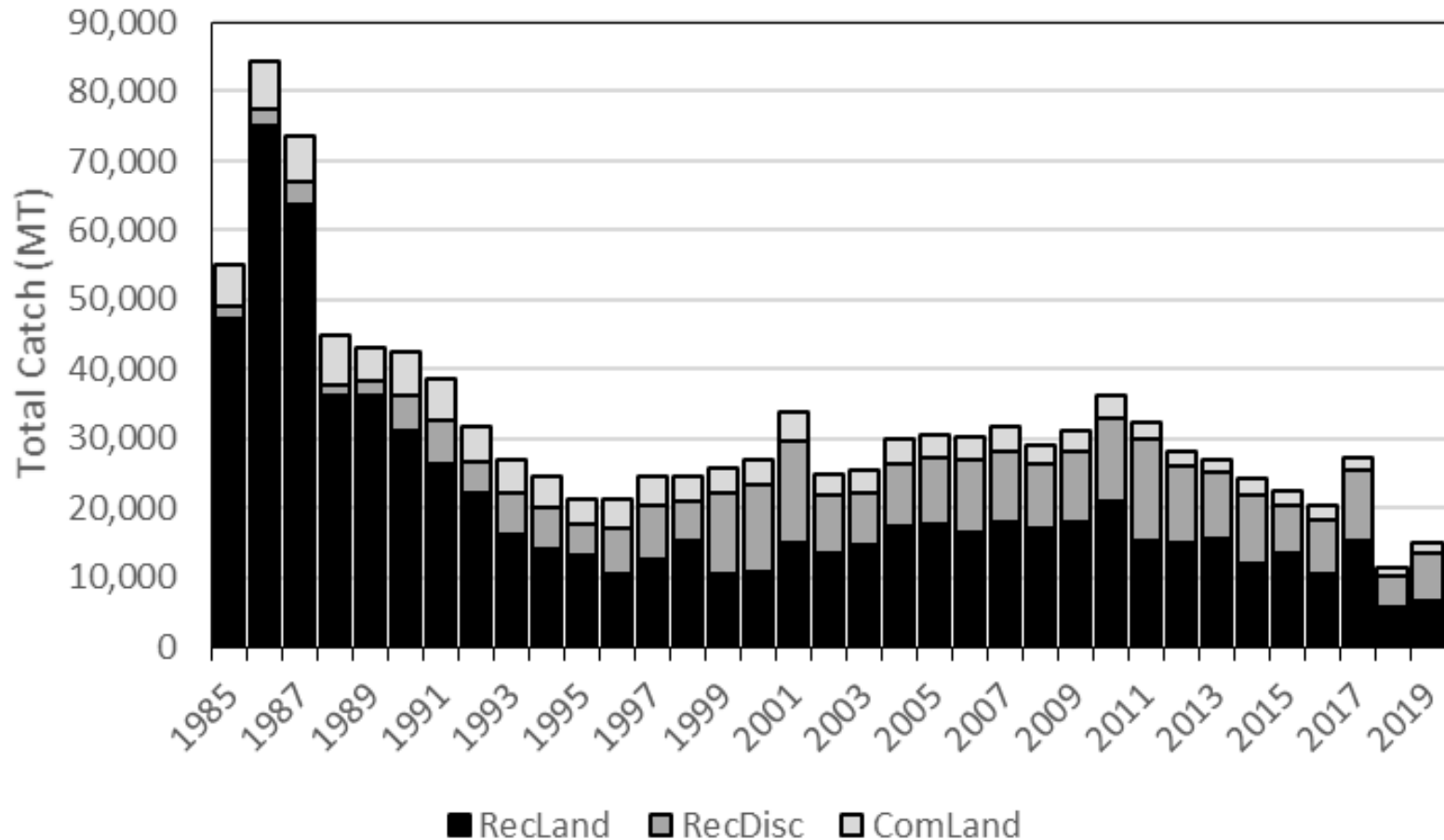


Retrospective adjusted points indicated in terminal year

# **Atlantic bluefish 2021 MTA Data and Modeling overview Lead: Anthony Wood**

- Add 2019 fishery and research survey data to the 2019 Operational Assessment model
- Update mean weight and maturity averages for BRPs and projections
- Update BRPs
- Evaluate stock status relative to updated BRPs
- Conduct projections for 2022-2024 to determine OFLs

# Atlantic bluefish Total Catch (MT)



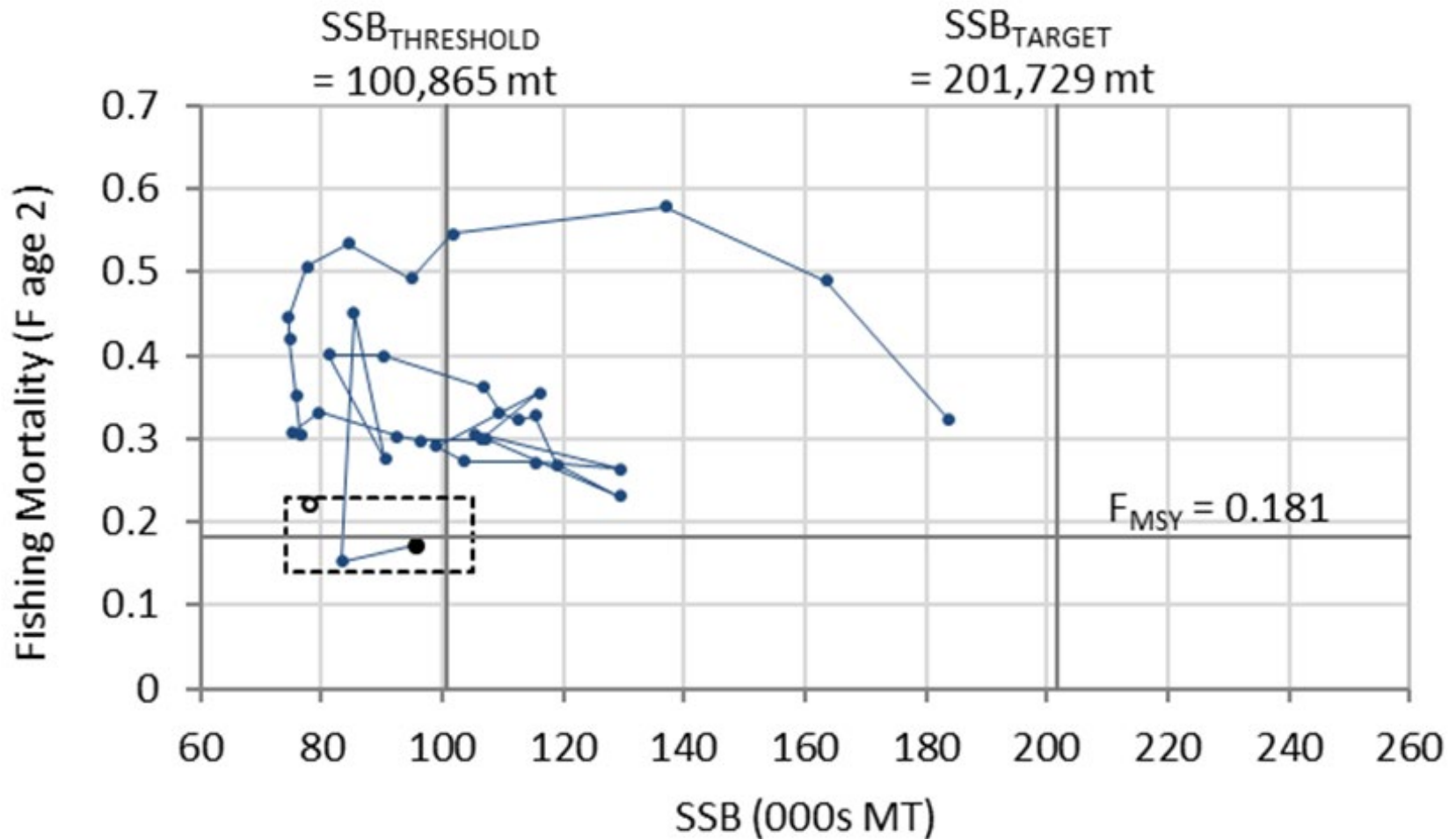
- 2019 Com Land = 1,353 MT (Avg: 3,737 MT), Rec Land = 6,612 MT (Avg: 20,600 MT), Rec Disc = 6,992 MT (Avg: 7,697 MT)
- Commercial Landings ~9% (Avg: 11.7%), Rec Landings ~44% (Avg: 64.3%), Rec Discards ~47% (Avg: 24.0%)

# **Atlantic bluefish 2021 MTA ASAP Model Results**

- Includes 2 fishery fleets (comm landings, recr catch [landings plus discards])
- Multiple surveys with age comps and stand-alone YOY index, including fishery-dependent, MRIP age-comp index
- ‘Internal Retrospective: minor at +20% for SSB and -23% for F: no terminal year adjustment required
- ‘Historical’ Retrospective: generally consistent trends over last 6 years (3 assessments)
- Small changes (~1%) in updated BRPs
- Stock status: Overfished (48% of BMSY), not overfishing (95% of FMSY)

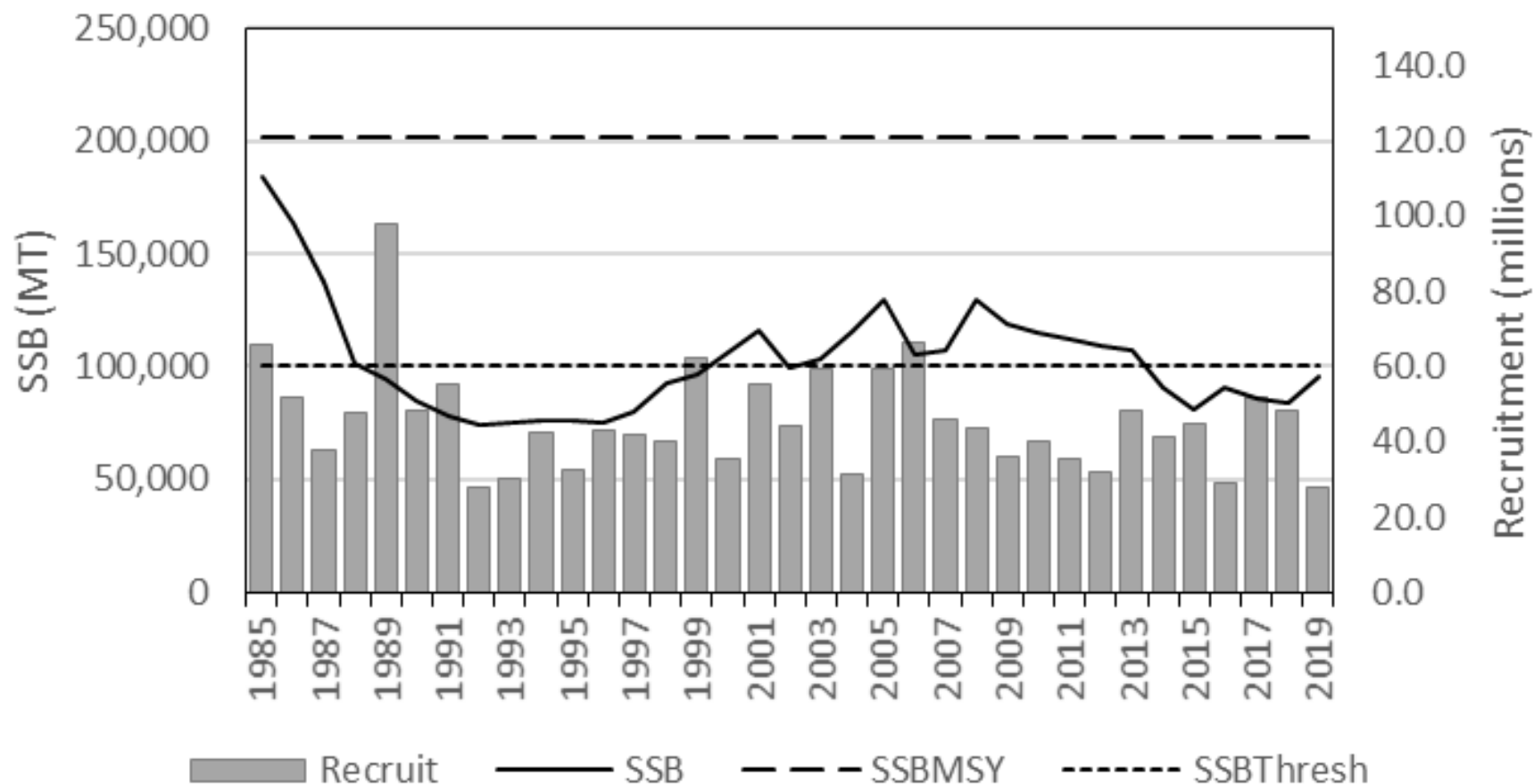


# Atlantic bluefish 2021 MTA Stock Status

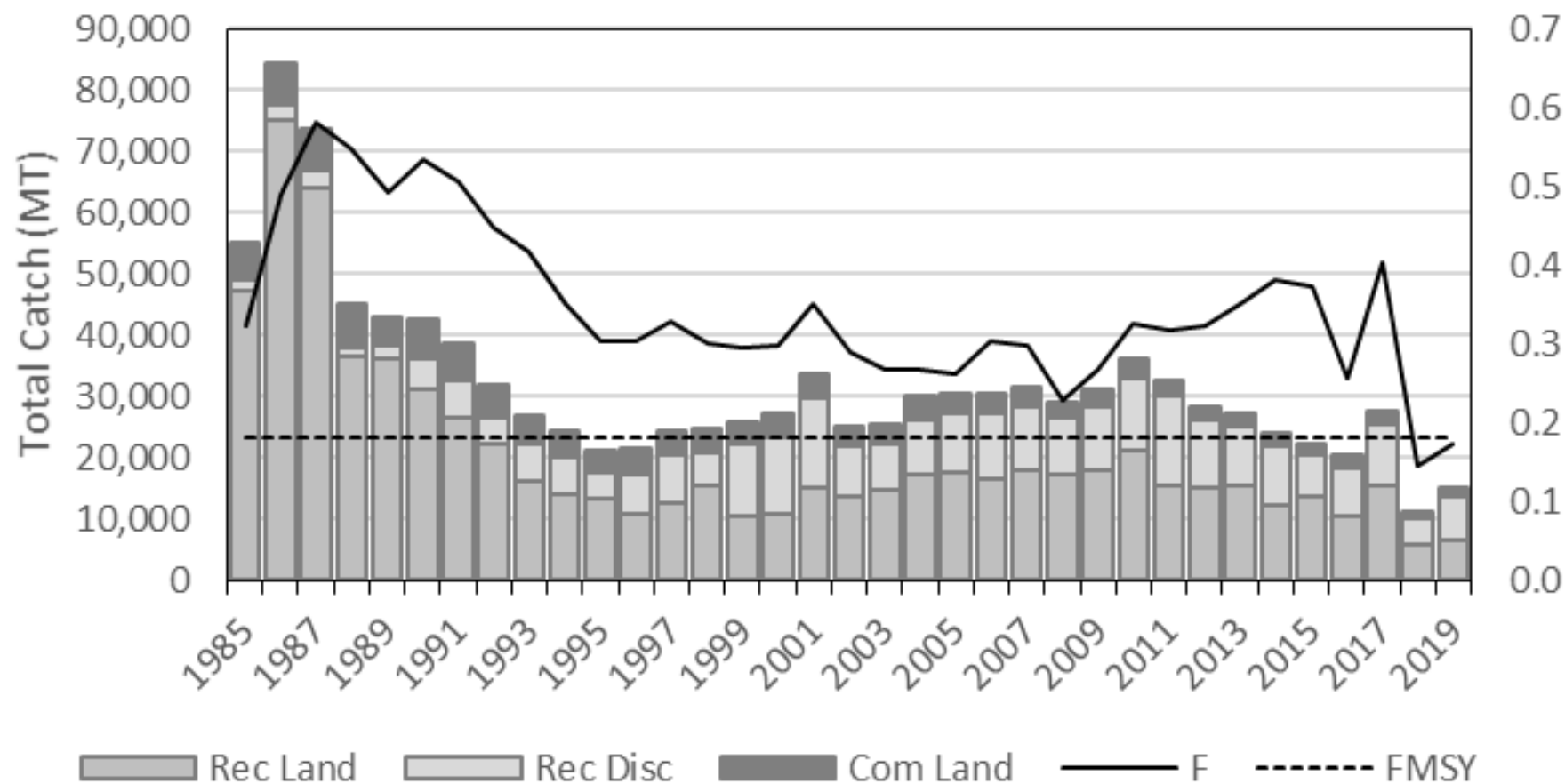


- Overfished and No Overfishing

## Atlantic bluefish SSB and Recruitment



## Atlantic bluefish total catch and Fishing Mortality



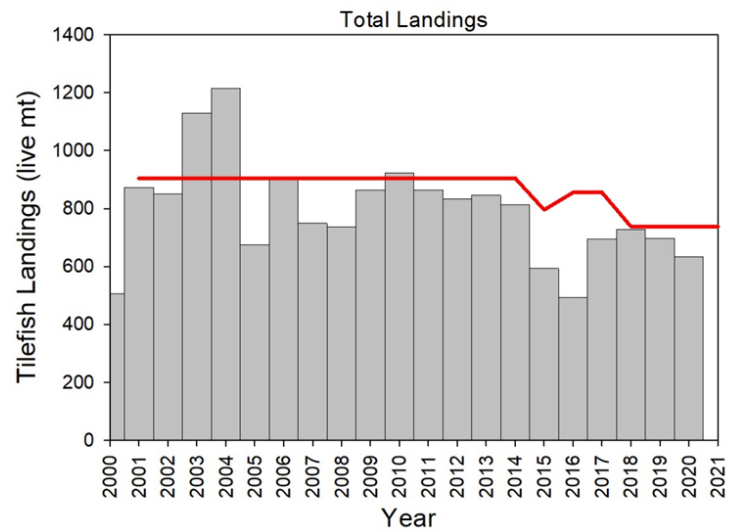
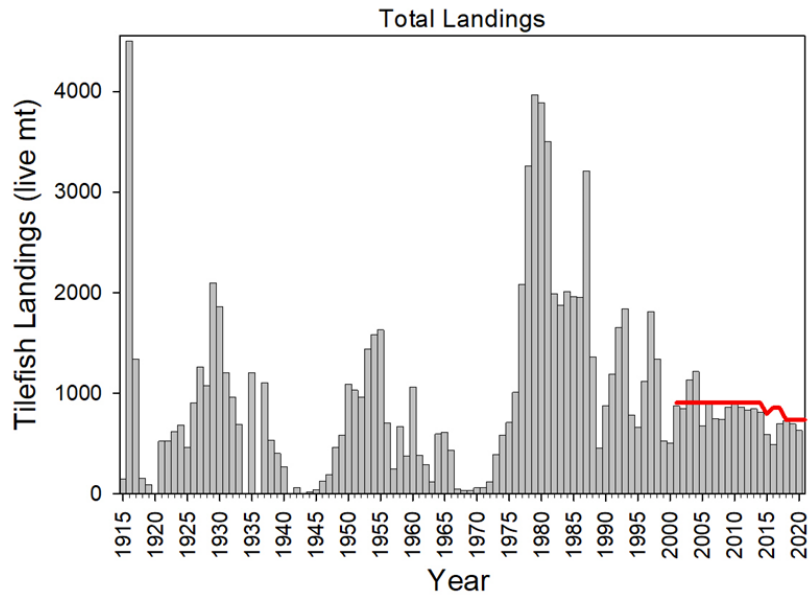
# **Golden tilefish 2021 MTA**

## **Data and Modeling overview**

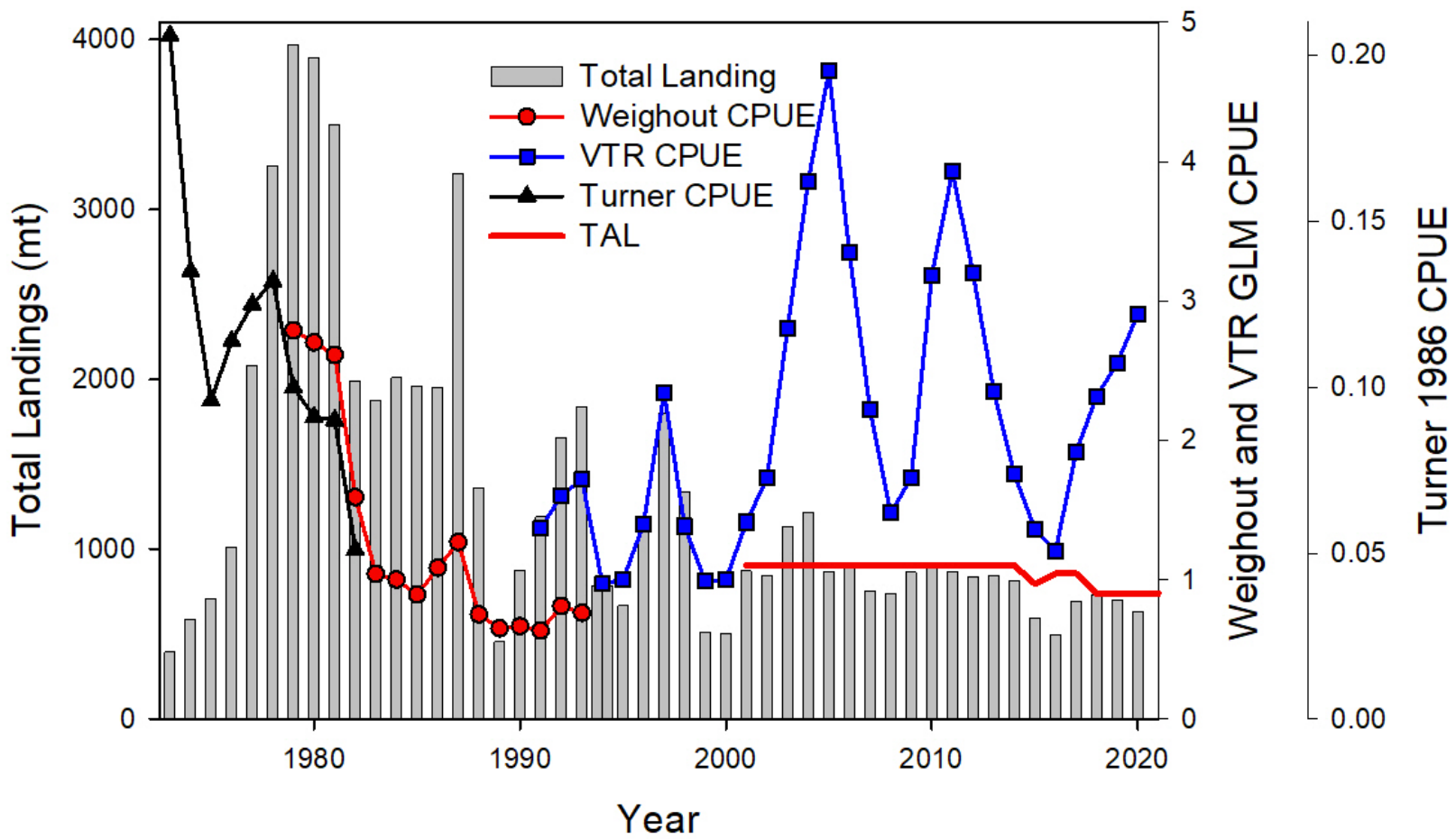
### **Lead: Paul Nitschke**

- **Add 2017-2020 commercial fishery landings and commercial fishery CPUE index of abundance to 2017 Operational Assessment model (no recr catch or comm discards or fishery-independent survey indices included)**
- **Update pooled age-length key and increase use of annual keys as series accumulates**
- **Update BRPs**
- **Evaluate stock status relative to updated BRPs**
- **Conduct projections for 2022-2024 to determine OFLs (MTA every 3 years)**

# Golden tilefish



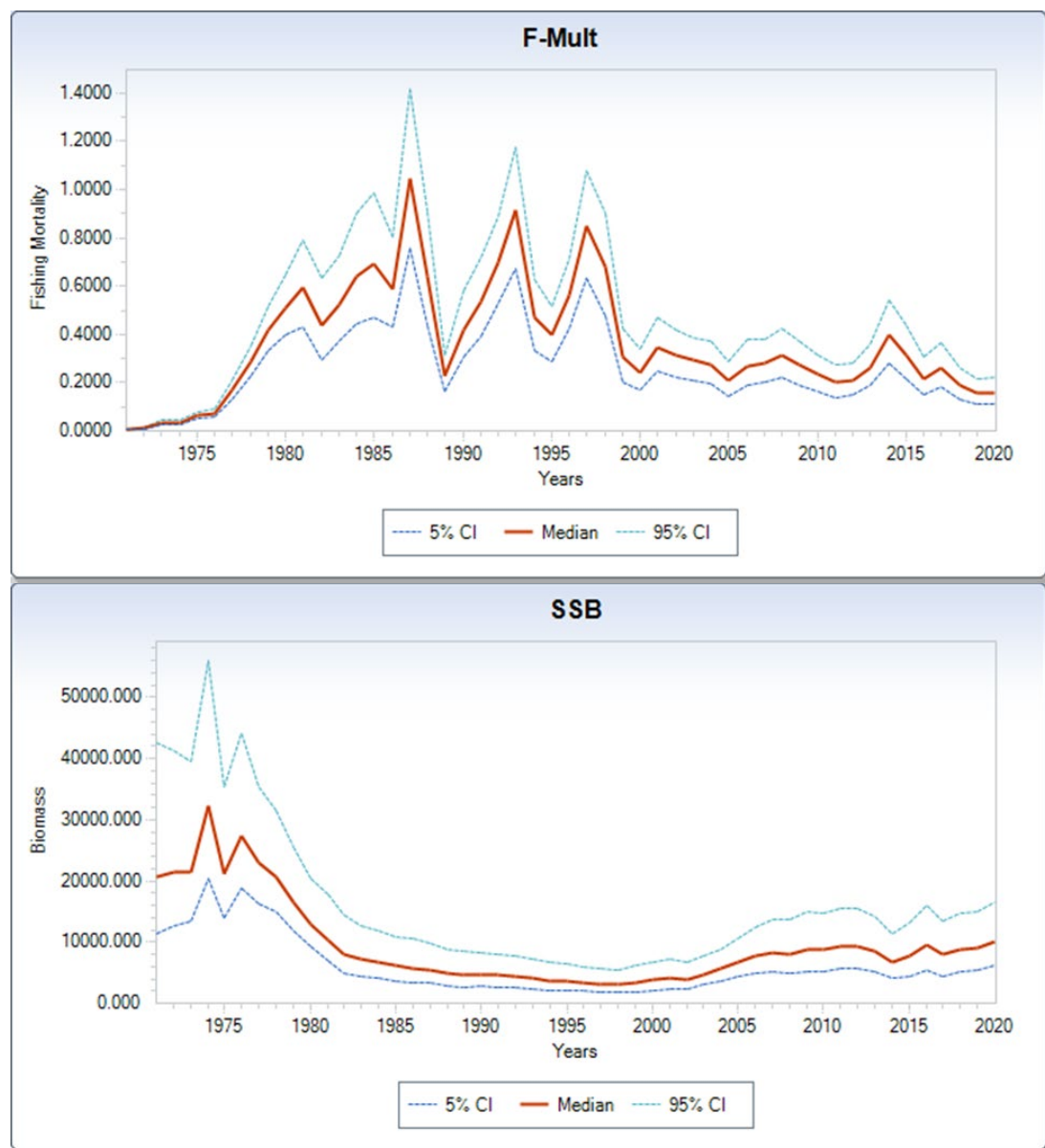
# Golden tilefish



# **Golden tilefish 2021 MTA ASAP Model Results**

- **Includes 1 fishery fleet - (comm landings)**
- **Three commercial fishery-dependent indices of abundance based on Turner/WO/VTR sequential time series of data**
- **‘Internal’ Retrospective: minor at +2% for SSB and -9% for F; no terminal year adjustments required**
- **‘Historical’ Retrospective: consistent trends over last 7 years (3 assessments: 2014, 2017, 2021)**
- **Revision to BRP basis (F38% to F40%): changes in values of -16% for FMSY (0.31 to 0.26) and +17% for BMSY (9,420 to 10,995 mt)**
- **Stock status: Not overfished (96% of BMSY), not overfishing (61% of FMSY)**

# Golden tilefish





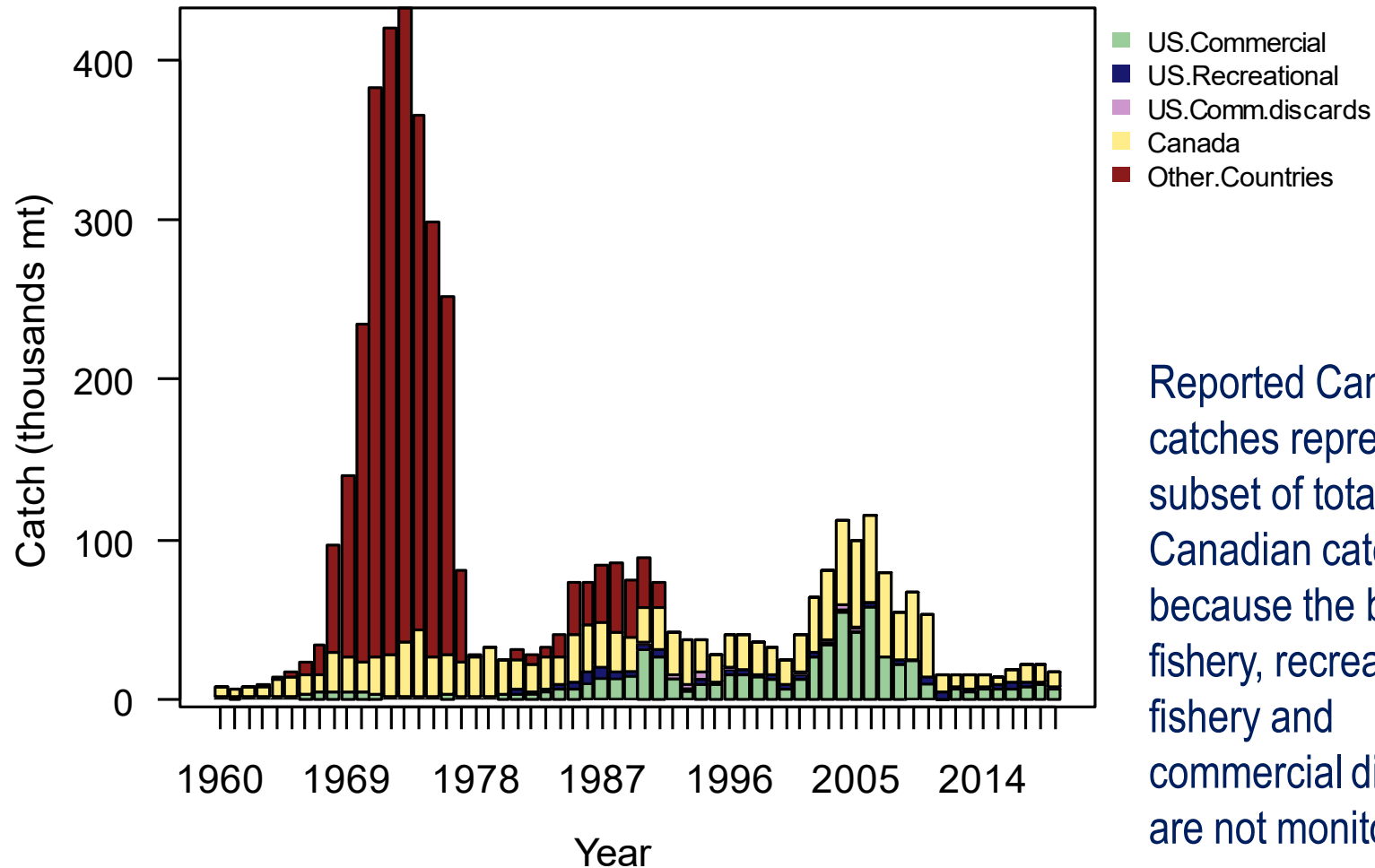
# **Atlantic mackerel 2021 MTA**

## **Data and Modeling overview**

### **Lead: Kiersten Curti**

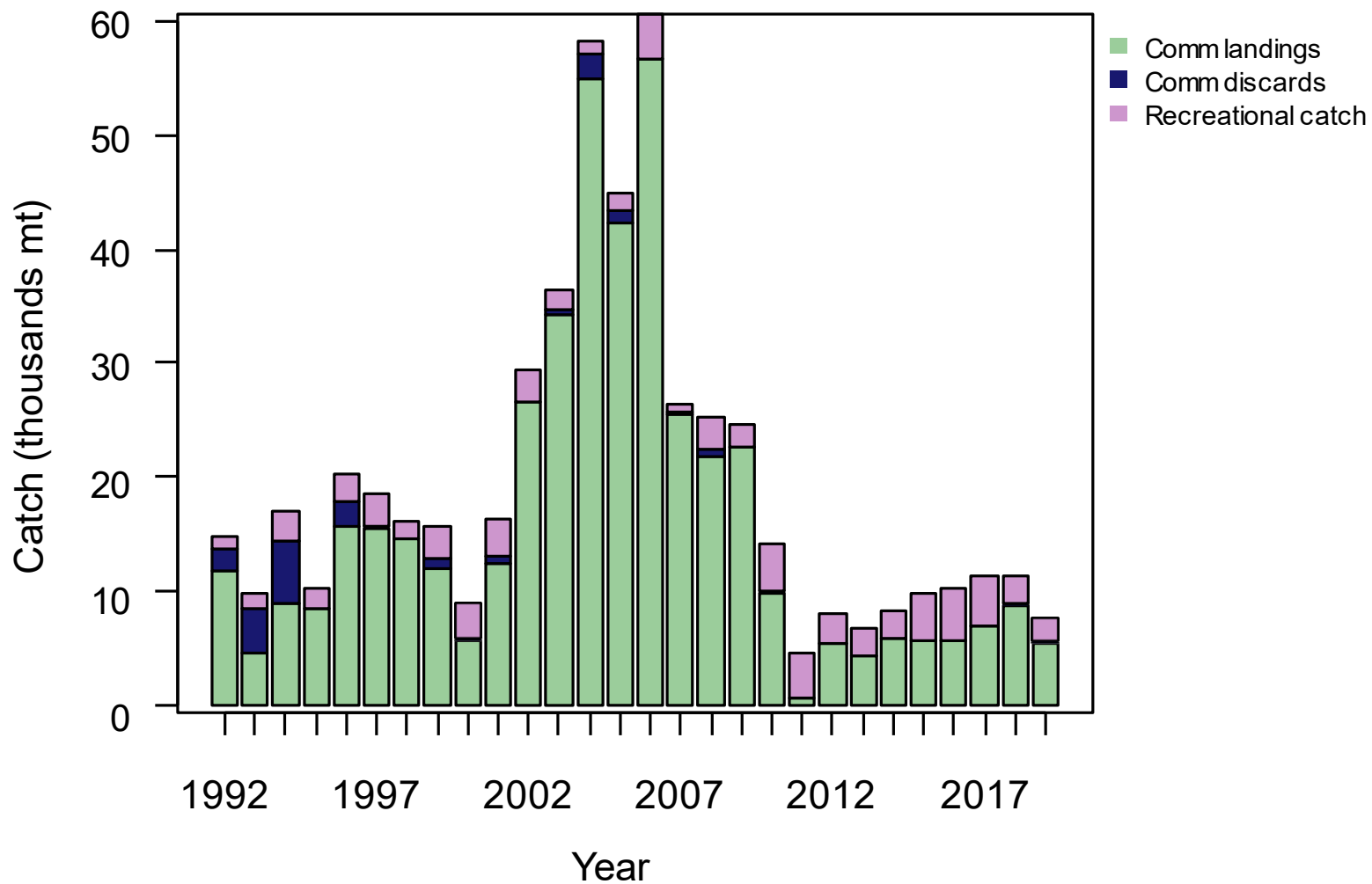
- **Add 2017-2019 fishery and research survey data to the 2017 SAW 64 Assessment model**
- **Update mean weight and maturity averages for BRPs and projections**
- **Update BRPs**
- **Evaluate stock status relative to updated BRPs**
- **Conduct projections for 2022-2023 to determine OFLs**

# Mackerel Total catch (thousands mt)



Reported Canadian catches represent a subset of total Canadian catch because the bait fishery, recreational fishery and commercial discards are not monitored.

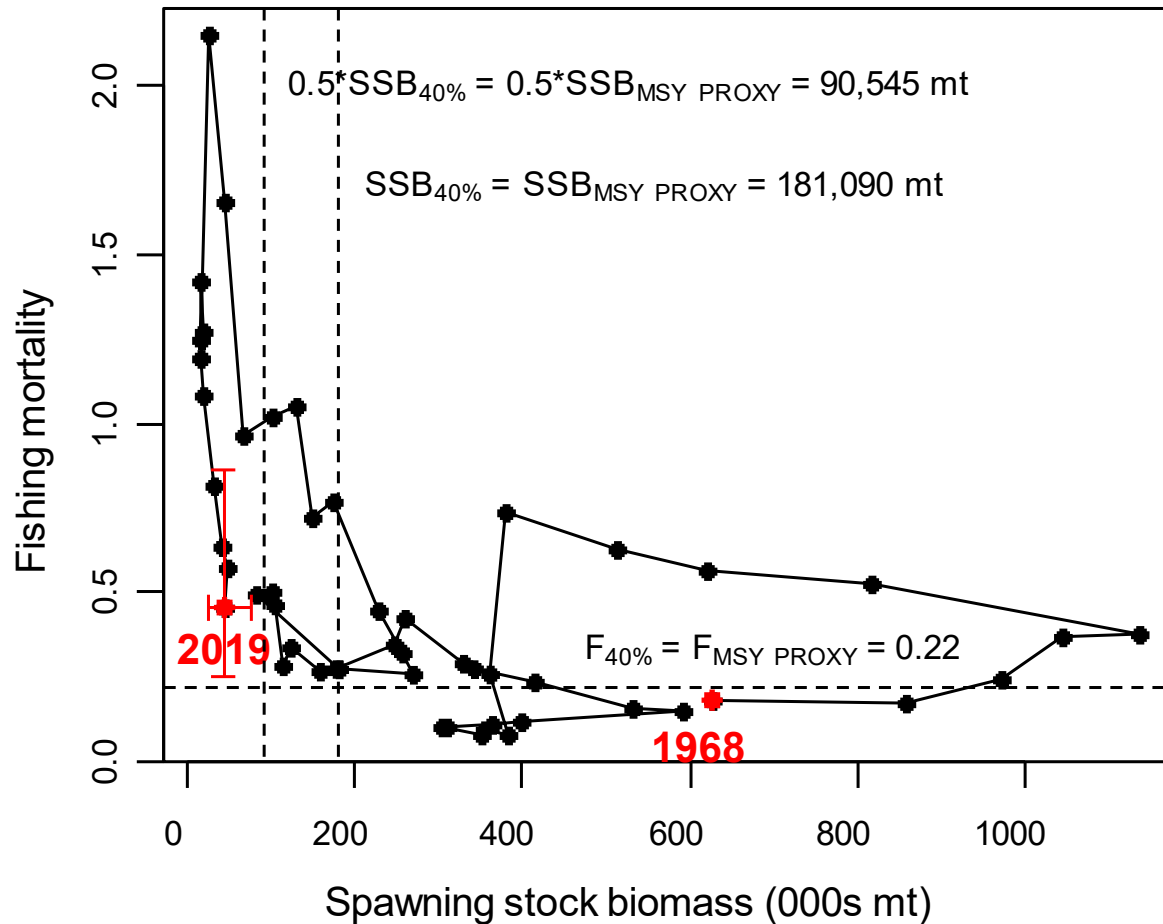
# Mackerel U.S. catch (thousands mt)



# **Atlantic mackerel 2021 MTA ASAP Model Results**

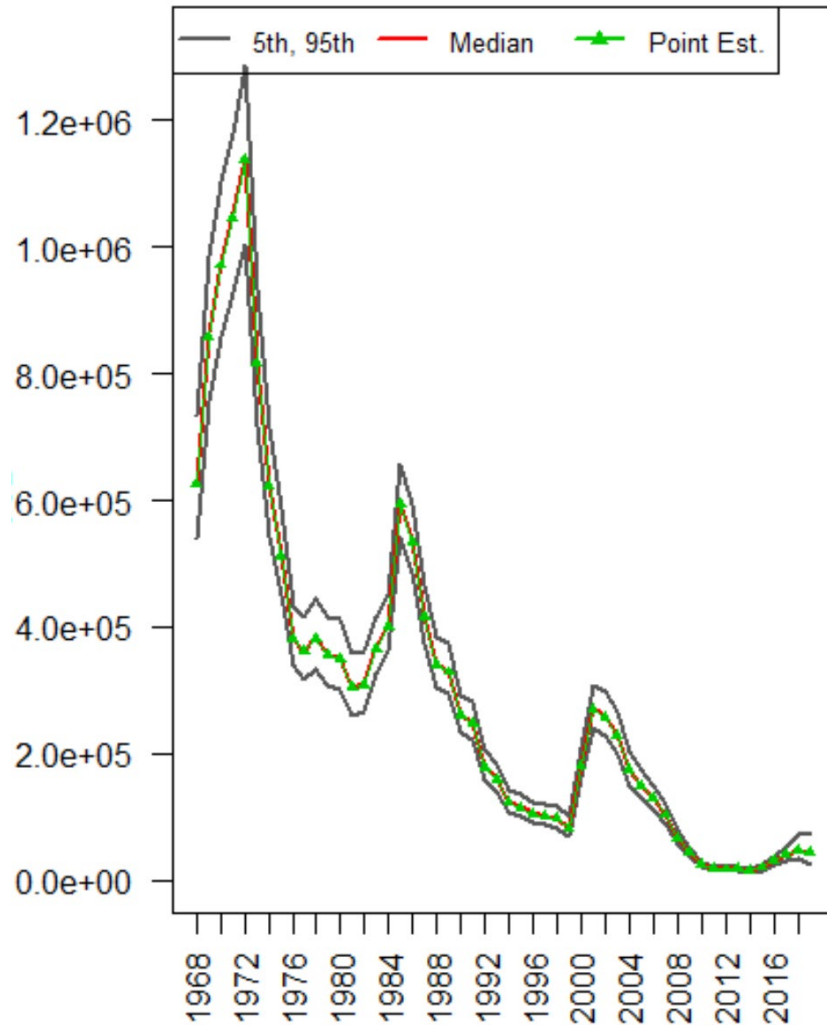
- **Includes 1 fishery fleet - (US comm and recr landings and discards, CAN 'catch')**
- **Two NEFSC spring trawl surveys and egg survey index of SSB**
- **'Internal' Retrospective: minor retrospective at +33% for SSB and -9% for F; no terminal year adjustments required (wide terminal year CIs)**
- **'Historical' Retrospective: consistent trends over last 4 years (assessments 2017 and 2021)**
- **Changes (decrease of 8-15%) in updated BRPs**
- **Stock status: Overfished (24% of BMSY), overfishing (2X FMSY)**

## Atlantic mackerel SSB and F: Recommended stock status

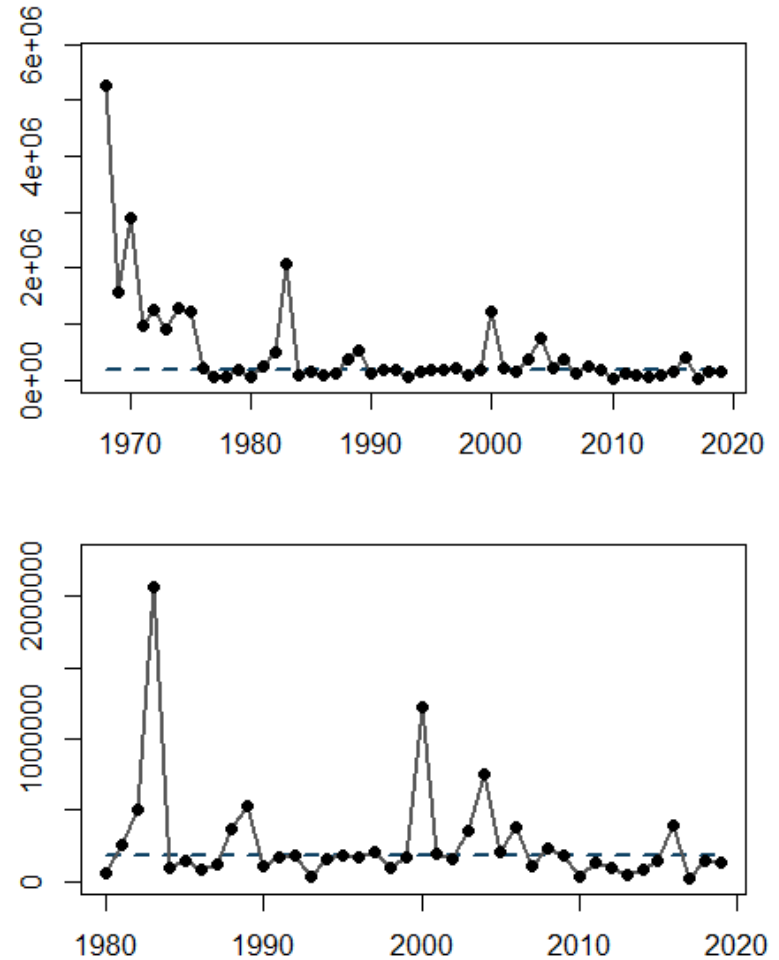


# Atlantic mackerel ASAP estimates:

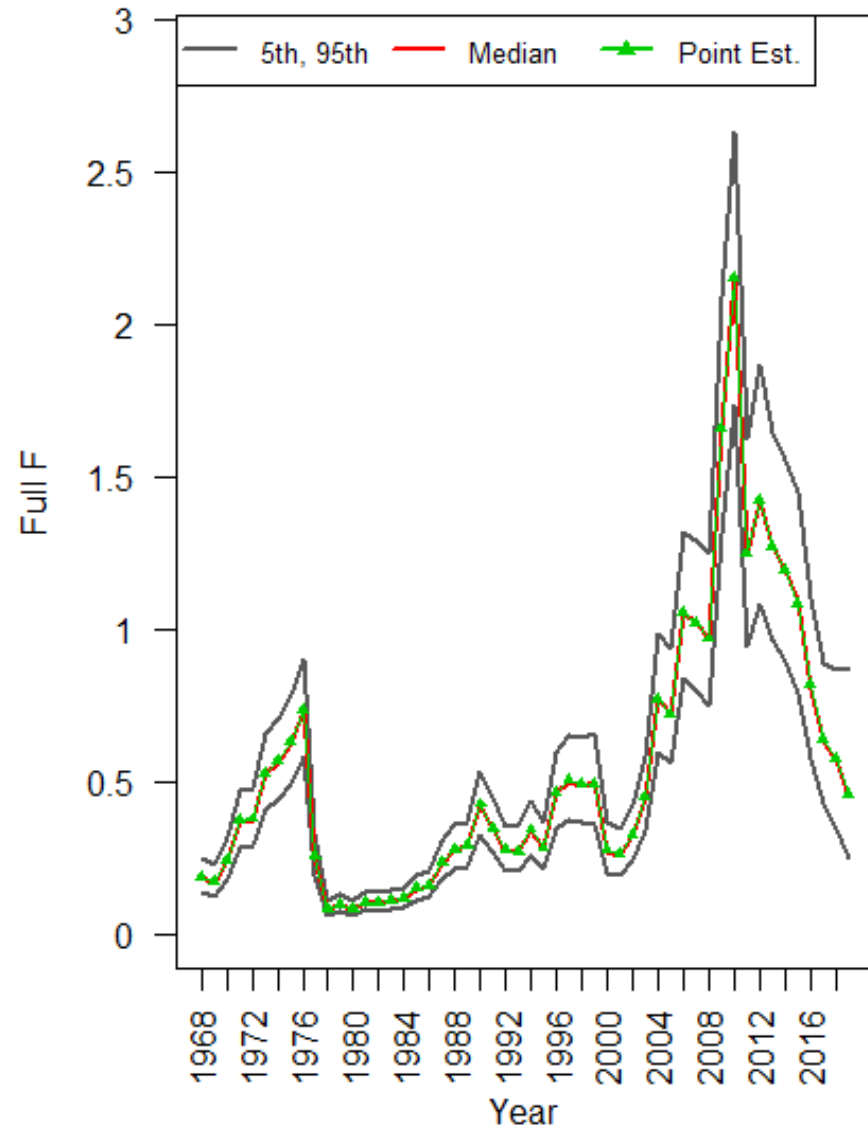
## Spawning stock biomass (mt)



## Recruitment (000s)



# Atlantic mackerel ASAP estimates: Fishing mortality



**Questions?**