Tautog Tagging Trial

Presented to the Tautog Management Board
February 1, 2017

Overview

- The tank trial was led by New York Division of Marine Resources and conducted at the Stony Brook University Flax Pond Marine Laboratory
- Began on September 28, 2016 and concluded 30 days later
- Strap tags were used in the trial
  - *Subcommittee feedback on the strap tag (May 2016):* The best option as far as size and durability.
- FDA does not provide approval or oversight of tags on wild caught fish.

Tag + Applicator

Tagging

Tagged

Tanks

Tag Trial Highlights

- 21 fish (15 tagged and 6 controls)
- Avg handling time (to tag a fish) of 15 seconds
- Tag placed on the operculum bone
- Monitored for 30 days and then released
- Fish resumed normal behavior and feeding habits after 7-13 days
- One tag loss (after 7 days) because the locking mechanism of the tag was not engaged properly during application
- In all cases, the damage to the gill was localized and isolated to the area of the gill directly interior to the tag.
- No mortality
- Tagging tips are included in the final report

Commercial Harvest Tagging Program

Objectives (paraphrased)

1. *Implement a tagging program to reduce illegal, unreported and unregulated fishing*
   - The PDT is developing a program
2. *Standardized tags across states*
   - All states would use the same vendor to obtain the strap tags
3. *Single-use tags*
   - If one attempts to open a closed tag using pliers it is deformed in a manner that is noticeable.
4. *Accommodate the live market fishery*
   - Tags are applied to the operculum bone and do not degrade the meat quality of the fish.

Questions

Harvest Reduction and Projection Analysis

Tautog Management Board

January 2017

Presentation Overview

- Information about methodology
- Briefing on initial options
- Projections for SSB threshold

TC Analyses

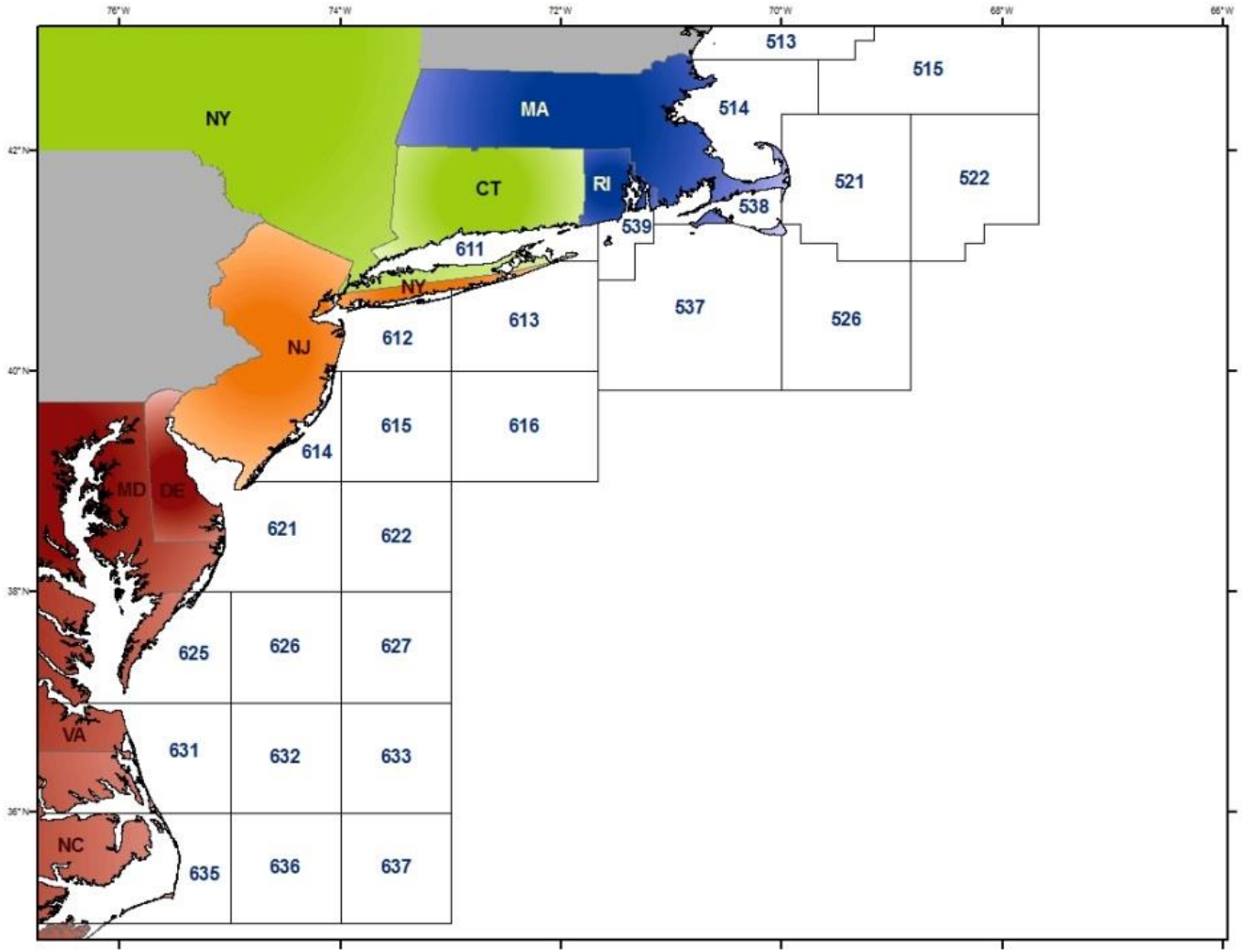
- The TC calculated harvest reductions to bring F to the target within 3 years with a probability of either 50% or 70%

- Reductions were calculated on a state-by-state basis

- New ways of managing the fishery not considered
  - Alternative ideas were brought up during the regional working group discussions and will be reviewed in the PDT presentation

Regional Structure

- The tautog stock will now be assessed with a regional approach



Methods: DelMarVa

- The DelMarVa region is at F target, therefore no need to calculate any reductions for the region.

Methods: All Other Regions

- For all analyses, illegal harvest removed so no credit
- Applied discard morality of 2.5%
- Used 2013-2015 data
  - MRIP data
  - ACCSP data
  - State-specific harvest and size data

Options: NJ-NY Bight

- NJ/NY Bight calculated options for:
  - 11% to meet a 70% probability of meeting F target by 2020
  - 2% to meet a 50% probability of meeting F target by 2020

- Review TC report for specific options, on the following slides

Options: NJ-NY Bight

Size Limit Changes

State	Length	Reduction
NJ comm + rec	15.5	16%
	16	32%
	16.5	49%
NY comm + rec	15.5	8%
	16	19%
	16.5	29%

Options: NJ-NYB

Maintaining current size limits

Commercial	Season reduction
New Jersey (11%)	11 days
New Jersey (2%)	4 days
New York (11%)	33 days
New York (2%)	10 days

Recreational	Season reduction
New Jersey (11%)	14 days
New Jersey (2%)	9 days
New York (11%)	11 days
New York (2%)	2 days

Options: LIS

- LIS calculated options for 47.2% decrease in harvest to meet a 50% probability of meeting F target by 2020 per MSY calculations
  - Additional options to meet goals for other potential reference points will be needed if board chooses something different

- Review TC report for specific options, on the following slides

Options: LIS

	Bag Limit	Size limit	# of additional days closed
NY	1	16	0
NY	2	17	20
NY	2	17.5	0
NY	3, 4	17.5	20
NY	3, 4	18	0
CT	1	16	30
CT	2	16	50% of current season closed
CT	2	17	0
CT	3	17.5	0

Methods: MARI

- MARI region has calculated reductions on a state specific and combined basis

- For all analyses, illegal harvest removed so no credit, but added back in for proportions
  - Assumes illegal harvest will occur in future

Options: MARI

- MARI calculated options for 60% decrease in harvest to meet a 70% probability of meeting F target by 2020 per MSY calculations
  - Additional options to meet goals for other potential reference points will be needed if board chooses something different

- Review TC report for specific options, on the following slides

Options: MARI

Size Limit Changes

Size	16.5”	17”
RI	13.6%	**33%**
MA	15.6%	**38%**
2 States Combined	**13.6%**	**35%**

Options: MARI

Options	Size (inches)	Bag Limit	Open Season
RI Option 1	17	3	April 15 - May 31; August - October 17
RI Option 2	17	2	August 1 - October 14
		3	October 15 - October 28
MA Option 1	17	3	April 15 - May 31; August 1 - October 22
MA Option 2	17	2	April 15 - May 31; August 1 - October 14
		3	October 15 - October 25
Combined States Option 1	17	3	March 1 - May 31; August 1 - October 23
Combined States Option 2	17	2	March 1 - May 31; August 1 - October 14
		3	October 15 - October 25

SSB PROJECTIONS

Projections

- Assessment team performed long term projections to supplement short term projection info already provided

- Ran 3 scenarios: status quo, 50%, 70% to determine when achievement of SSB threshold would occur

- Biological parameters (maturity, M, weights at age) were the same used in model and previous projections
  - exception was catch weights at age set equal to average of latest selectivity block

Projections - Results

DelMarVa – SPR calculations

2018-2020 Landings Scenario	Probability of being at or below F target in 3 years	Probability of being at or above SSB threshold in 3 years	Year when stock is at or above SSB threshold
Status quo (77 mt)	99.64%	18.15%	2020
139 mt	50%	9.9%	2022
125 mt	70%	11.9%	2021

Projections - Results

NJ/NY Bight – SPR calculations

2018-2020 Landings Scenario	Probability of being at or below F target in 3 years	Probability of being at or above SSB threshold in 3 years	Year when stock is at or above SSB threshold
Status quo (461 mt)	45%	85%	2046
450 mt	50%	86%	2042
410 mt	70%	88%	2030

Projections - Results

LIS – SPR calculations

2018-2020 Landings Scenario	Probability of being at or below F target in 3 years	Probability of being at or above SSB threshold in 3 years	Year when stock is at or above SSB threshold
Status quo (500 mt)	0%	0.60%	2238
255 mt	50%	28%	2021
229 mt	70%	33%	2021

Projections - Results

LIS – MSY calculations

2018-2020 Landings Scenario	Probability of being at or below F target in 3 years	Probability of being at or above SSB threshold in 3 years	Year when stock is at or above SSB threshold
Status quo (500 mt)	1.70%	0.60%	2149
264 mt	50%	34%	2021
237 mt	70%	40%	2021

Projections - Results

MARI – SPR calculations

- Note: error found in original analysis, below is corrected info

2018-2020 Landings Scenario	Probability of being at or below F target in 3 years	Probability of being at or above SSB threshold in 3 years	Year when stock is at or above SSB threshold
Status quo (390 mt)	0%	0.08%	2025
275 mt	50%	32.9%	2021
265 mt	70%	36.3%	2021

Projections - Results

MARI – MSY calculations

- Note: error found in original analysis, below is corrected info

2018-2020 Landings Scenario	Probability of being at or below F target in 3 years	Probability of being at or above SSB threshold in 3 years	Year when stock is at or above SSB threshold
Status quo (390 mt)	0%	0.00%	N/A
162 mt	50%	0.04%	2025
155.5 mt	70%	0.04%	2025

Caveats: Projections and Options

- Did not include structural (model) uncertainty
- Conditioned on set of functional forms (e.g., selectivity, recruitment)
- Fisheries assumed to continue at current allocations using current selectivity
  - New mgmt regs that alter the proportions or selectivities would likely affect projection results

Caveats: Projections and Options

- If future recruitment characterized by runs of large or small year classes, possibly due to environmental or ecological conditions, stock trajectories may be affected

- Options premised on future years harvest occur in similar fashion to average
  - Seasonal harvest rates, bag limit achieved per angler, population size structure all remain consistent

Questions

Comparison of Initial Regional Options

MARI

- Recreational harvest reduction, options based on waves 2-6:
  - Reduce season length, bag limit or increase minimum size
  - A methodology for combining size, bag, and season harvest reduction
- Commercial harvest reduction: Could be achieved through quota reduction or seasonal closures

LIS

- Recreational harvest reductions, options include:
  - Retain season closures, and change bag limit and minimum size
  - Close approximately 50% of the current season
  - 10 days of seasonal closure
- Commercial harvest reduction: Variety of size limit and seasonal closure options

NJ-NYB

- Recreational harvest reduction, options include:
  - Retain minimum size and bag limit, and increase seasonal closures
  - Retain current bag limit and seasonal closures, and raise minimum size
- Commercial harvest reduction, options include:
  - Retain current seasonal closures and raise minimum size limit to 15.5” / 16” or larger
  - Retain minimum size and reduce season length

Regional Working Group Feedback

Presented to the Tautog Management Board

January 31, 2017

October 2016 Meeting

Draft Amendment 1 Issues:

1. Reference points
2. Projections to reduce F
3. ~~Rebuilding plan~~

Board deferred to public comment

4. Commercial harvest quota
5. Commercial harvest tagging program
6. Differential sector reduction
7. Management within a region

Issues discussed as a regional working group

Presentation Outline

- Regional Working Group
  - Reference points
  - Overview of the discussion
  - PDT guidance
  - Technical Committee tasks for the Board to consider

DelMarVa Reference Points

	SSB Target (mt)	SSB Threshold (mt)	SSB 2015 (mt)	Stock Status
SPR	1,919	1,447	621	Overfished

	F Target	F Threshold	F 3-year Avg (2013-15)	Stock Status
SPR	0.16	0.24	0.16	Overfishing is not occuring

The region is overfished, but overfishing is not occurring.

Delaware-Maryland-Virginia

Overview of the Discussion:

- Agreement to propose measures that will not greatly expand the fishery.
- Interest in consistent regulations across the region

Commercial Regulations:

- Delaware and Maryland may consider a limited entry requirement
- Virginia is considering a hard commercial quota
  - Over the last 6 years, VA has harvested ~75% of the total regional landings on average

Delaware-Maryland-Virginia

PDT Guidance for Draft Amendment 1:

- Include an option for a limited entry program.
- Include an option that requires the sale of tautog to a federally permitted dealer.
- Ensure gear restrictions align with black sea bass gear restrictions.
- Require state quotas to be reviewed by the TC prior to implementation.
- De minimis states should be required to participate in the commercial harvest tagging program.

Delaware-Maryland-Virginia

TC Tasks for the Board Consider:

- Evaluate the impact of a uniform 16” size limit and a uniform possession limit; is it then possible for the region to only have spawning closures?
- Research peak spawning periods for tautog.

LIS Reference Points

	SSB Target (mt)	SSB Threshold (mt)	SSB 2015 (mt)	Stock Status
MSY	2,865	2,148	**1,603**	Overfished
SPR	2,980	2,238	**1,603**	Overfished

	F Target	F Threshold	F 3-year Avg (2013-15)	Stock Status
MSY	0.28	0.49	**0.51**	Overfishing
SPR	0.27	0.46	**0.51**	Overfishing

The public will comment on MSY vs. SPR reference points for LIS

NJ-NYB Reference Points

	SSB Target (mt)	SSB Threshold (mt)	SSB 2015 (mt)	Stock Status
SPR	3,154	2,351	**1,809**	Overfished

	F Target	F Threshold	F 3-year Avg (2013-15)	Stock Status
SPR	0.20	0.34	**0.54**	Overfishing

The public will comment on the SPR reference points for NJ-NYB

LIS and NJ-NYB

Overview of the Discussion:

- To implement the tagging program, each state is considering a different pathway:
  - Connecticut: considering a lottery or lease scenario. Does not want to allocate tags based on history.
  - New York: considering a limited entry program
  - New Jersey: has already implemented a limited entry program and commercial quota
- The LIS region is facing deep harvest reductions and would like to explore new ways of managing the fishery in Draft Amendment 1 – see TC tasks.
- Given the species complicated spawning pattern it may be necessary to institute spawning closures for the region.

LIS and NJ-NYB

PDT Guidance for Draft Amendment 1:

- There was a general agreement to explore a consistent minimum size limit and seasonal spawning closures across the two regions.
- Spawning closures should be included in recreational and commercial management measures to protect brooding females and large males.
- Include a biological and compliance justification for the minimum size to not exceed 16 inches.
- Implementation of the harvest reductions should happen concurrently with the commercial harvest tagging program.
- Consider a date the commercial harvest tags should be returned by, recommend February 15 of the following year.
- There should be unique codes for New York's LIS and South Shore.

LIS and NJ-NYB

TC Tasks for the Board Consider:

- Research peak spawning time periods

- Evaluate the impact on potential harvest if:
  - A slot limit is implemented and similar seasonal closures (including spawning closures)
  - The regions have a consistent minimum size limit (15” or 16”), seasonal closures (including spawning closures) and bag limits

MARI Reference Points

	SSB Target (mt)	SSB Threshold (mt)	SSB 2015 (mt)	Stock Status
MSY	3,631	2,723	2,196	Overfished
SPR	2,684	2,004	2,196	Not Overfished

	F Target	F Threshold	F 3-year Avg (2013-15)	Stock Status
MSY	0.14	0.28	0.23	Overfishing is not occurring
SPR	0.28	0.49	0.23	Overfishing is not occurring

The public will comment on MSY vs. SPR reference points for MARI

Massachusetts-Rhode Island

Overview of the Discussion:

Two potential regional management pathways were discussed:

1. State allocation of the regional maximum harvest (allocation options based on landings over a 3, 5, or 10 year timeframe)
2. Implement common recreational management measures across the region and manage the commercial fishery with a quota
   (TBD if it will be a state or regional quota)

- RI has a quasi-limited entry requirement and MA may consider a limited entry program (will think about tautog bycatch)

Questions

Draft Amendment 1 Timeline

- **Aug 2016:** Board reviews peer-reviewed LIS and NJ-NYB assessments; Board chooses one management region alternative (4 region)
- **Oct 2016:** Board reviews the stock assessment update & creates regional working groups
- **Dec 2016:** First regional working group calls
- **W/o January 16:** Second regional working group calls
- **January 31:** Board reviews the regional working group feedback
- **May 2017:** Board reviews Draft Amendment 1 for public comment
- **June-July 2017:** Public comment/hearings
- **August 2017:** Draft Amendment 1 is presented for public comment approval
- Earliest date of implementation: 2018