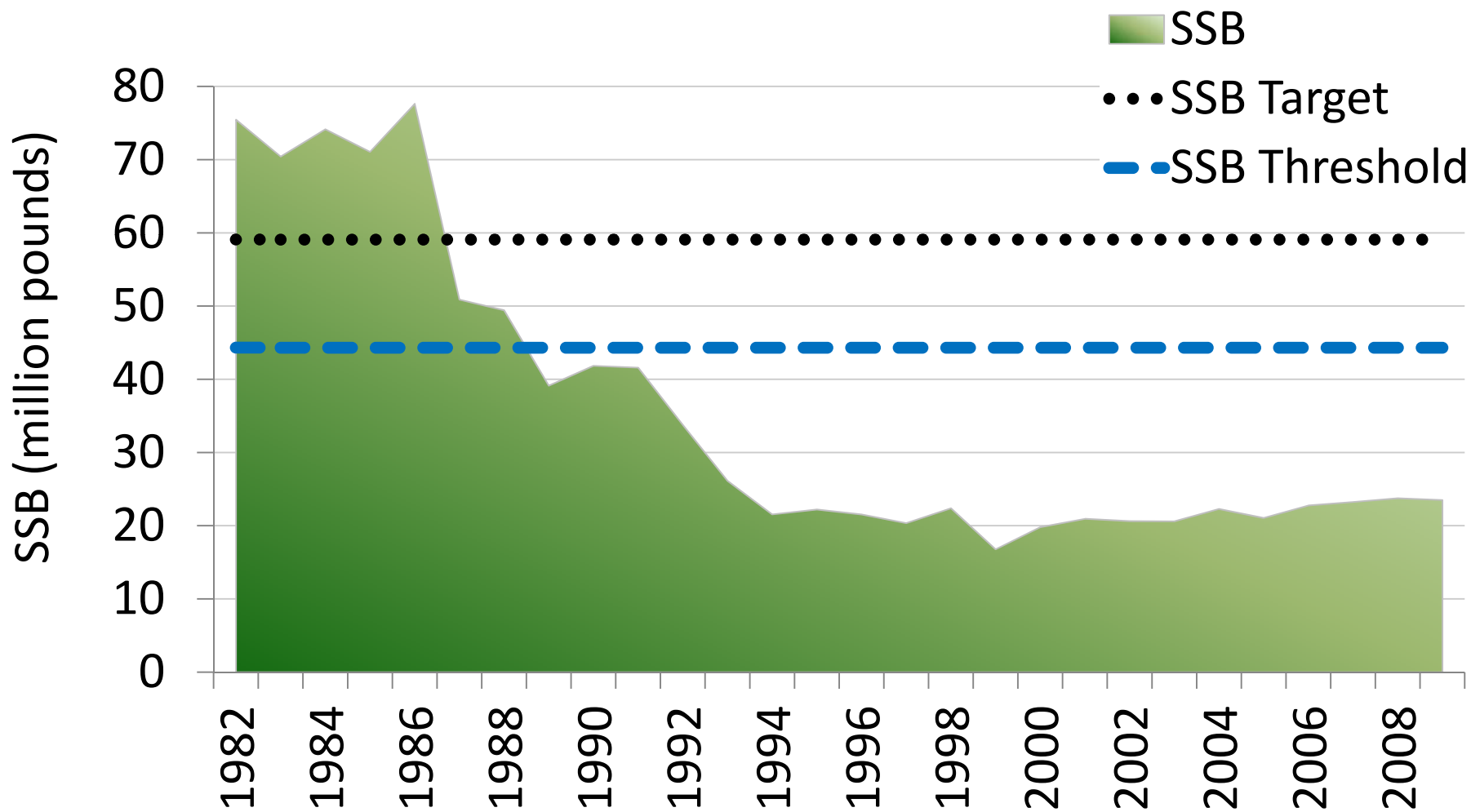
Working towards healthy, self-sustaining populations for all Atlantic coast fish species or successful restoration well in progress by 2015

Review of the Tautog FMP and State Compliance

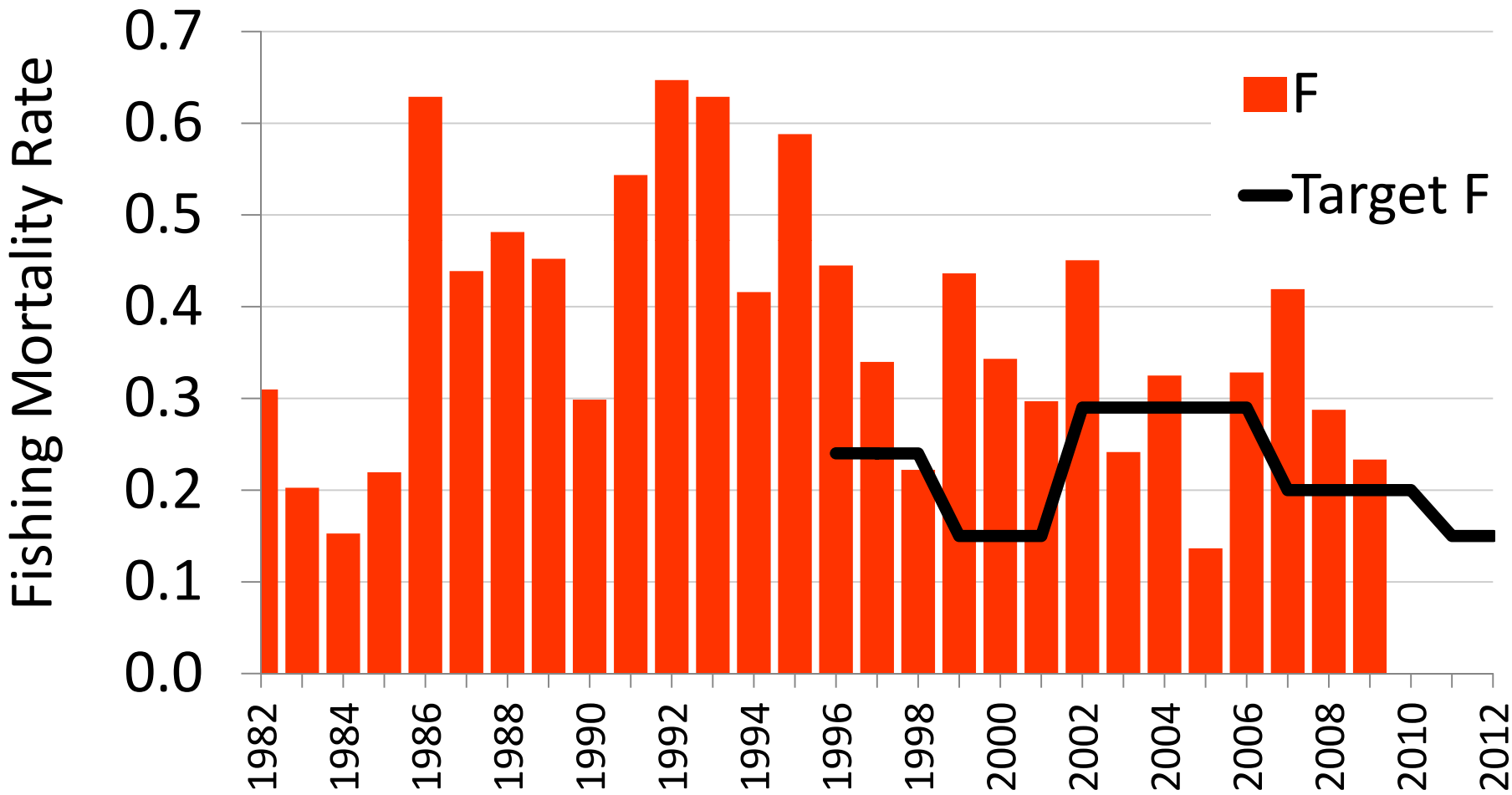
Tautog Management Board
May 2013

Status of Stock: Overfished



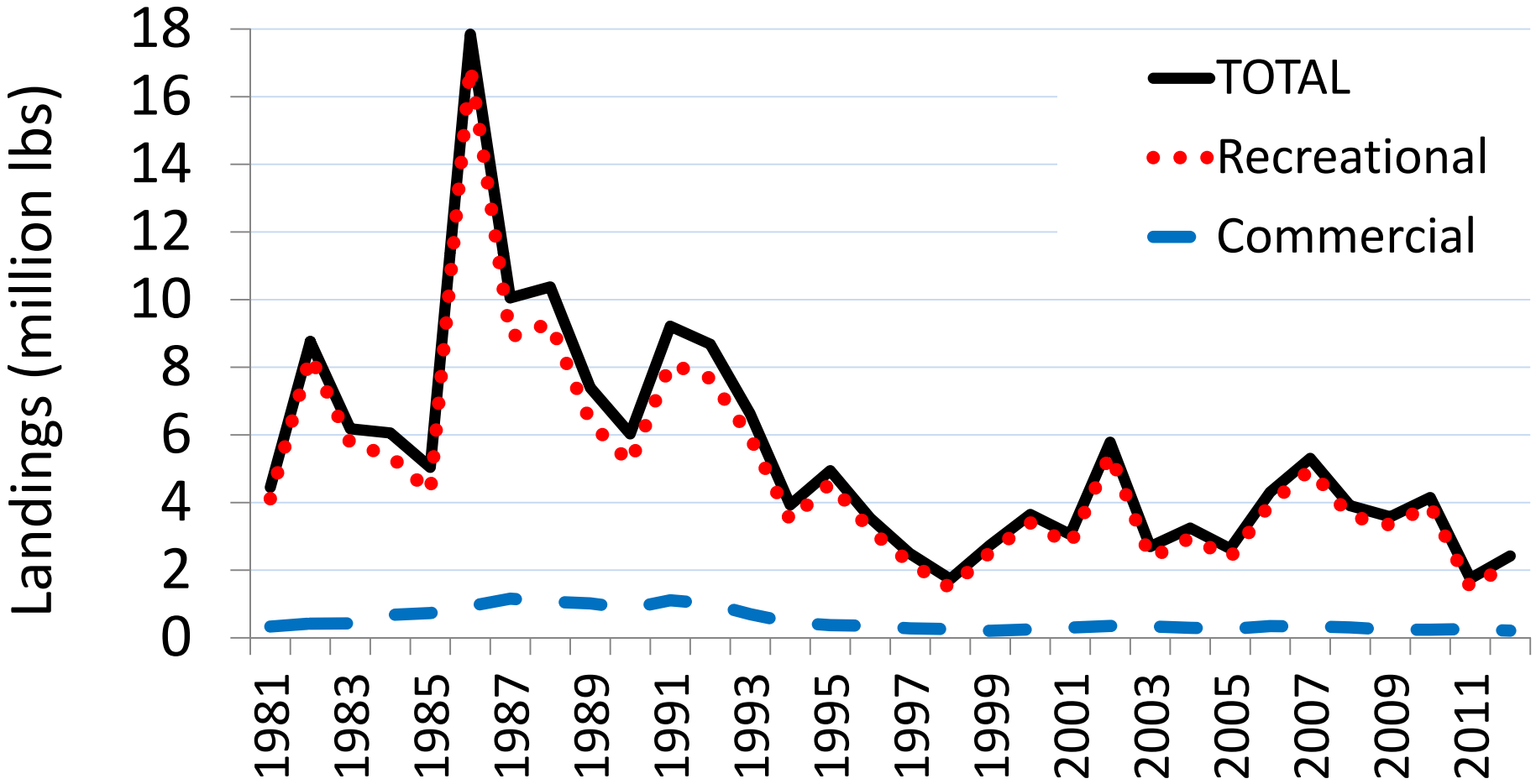
Source: ASMFC 2011 Stock Assessment Update

Status of Stock: Overfishing



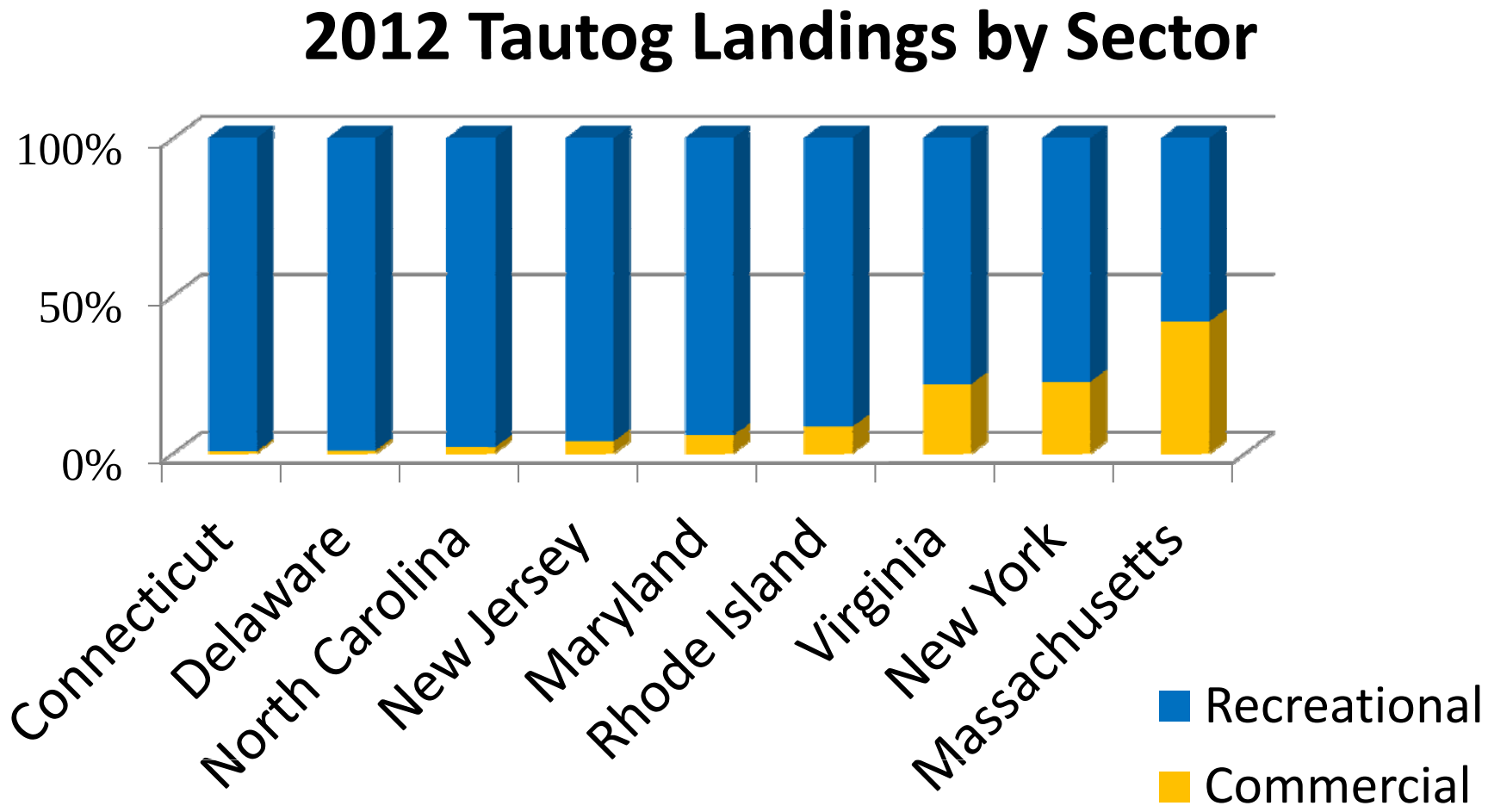
Source: ASMFC 2011 Stock Assessment Update

Status of the Fishery



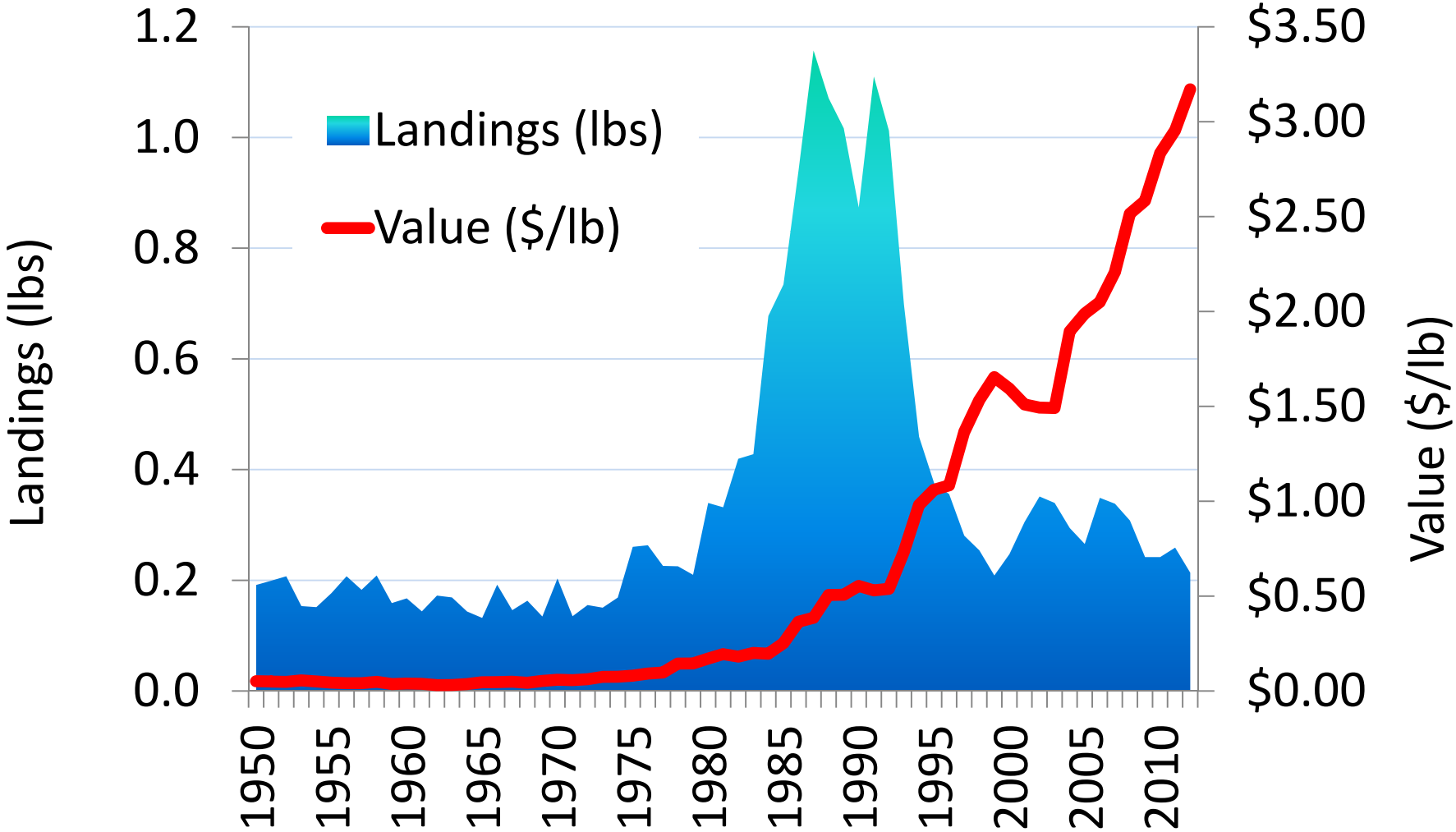
Source: MRIP, NMFS

Status of the Fishery



Source: MRIP. NMFS

Commercial Fishery



Source: ACCSP , NMFS

Status of Management

1996: FMP

1997: Addendum I

1999: Addendum II

2002: Addendum III

2007: Addenda IV and V

2011: Addendum VI

- Set $F_{target} = 0.15$
- Required a coastwide 39% reduction

Management Measures

- **Commercial and Recreational**
  - ☑ 14” minimum size limit
  - ☑ Biodegradable fasteners on fish traps/pots
  - ☑ Monitoring and data collection
  - ☑ Possession limits
  - ☑ Seasonal closures
- ✓ **Plan Review Team finds that all states had management programs consistent with the FMP.**

Biological Sampling

- Plan-specific requirements:
  All states must collect 200 opercula for ageing.
  - ☑ **MA, NJ, DE, and MD collected 200+ samples. VA collected 199.**
  - ☐ **RI, CT, and NY did not collect 200 samples, but tried.**

✓ **PRT finds that all states met, or tried to meet, biological sampling requirements of FMP.**

Addendum VI

2012: 57% Reduction Relative to 2008-2009 Average Total Harvest (Numbers of Fish)

State	2008-2009 Average Total Harvest	2012 Total Harvest	% change from 2008-2009 Ave Total Harvest
Connecticut	131,549	195,213	**48**
Rhode Island	106,064	114,215	**8**
Massachusetts	49,038	42,563	**-13**
Delaware	111,468	45,200	**-59**
Virginia	61,055	17,709	**-71**
New York	355,847	74,983	**-79**
New Jersey	162,630	31,873	**-80**
Maryland	29,282	5,535	**-81**
Coastwide	**1,006,932**	**527,293**	**-53**

Request for *De minimis* Status

- **Amendment 1**
  - **Criteria: commercial landings is less than 1% of coastwide landings or 10,000 pounds, whichever is greater.**
- **DE** and **NC** requests *de minimis* status
  - ☑ **PDT recommends granting *de minimis* status**
    - → **DE commercial landings = 1,444 lbs**
    - → **NC commercial landings = 227 lbs**

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Tautog Stock Assessment Information and Terms of Reference for the Benchmark Assessment

Stock Assessment - Summary

- **The Tautog TC and SASC met March 25-29, 2013**
  - **reviewed and evaluated available data sets for the benchmark stock assessment**
- **Evaluated all available fisheries-dependent and independent data sets, as well as tautog life history information**
- **Explored models for analyzing the data and possible definitions for regional stock unit(s) to replace the current coastwide management unit**
- **Stock assessment will engage an independent peer reviewer (IPR), who will provide guidance throughout the process**

Stock Assessment - Summary

- Terms of Reference (TORs) were drafted after the workshop
- Stock assessment process is moving in the right direction, considering that tautog is a data-poor species
- TC members will contribute additional data and analysis and hold a conference call before the stock assessment workshop in October 2013

Stock Assessment - Timeline

Date	Meeting/ Task	Status
2012 September 19-20	Scoping Workshop	Completed
2012 December 7	Pre-Data Workshop Conference Call	Completed
2013 March 25 - 29	Data Workshop	Completed
2013 May 1	Compliance reports and raw data due	In progress
2013 June 24	Data and analyses due	
2013 July 8	Conference call to discuss status of data	
2013 October (1^{st}|2^{nd} wk)	Stock Assessment Workshop	
2013 December	Deadline to complete stock assessment report	
2014 Summer	Review of stock assessment	

Stock Assessment - TORs

1. Characterize precision and accuracy of fishery-dependent and independent data used in the assessment, including, but not limited to:
   a. Provide descriptions of each data source (e.g. geographic location, sampling methodology, potential explanation for outlying or anomalous data)
   b. Describe calculation and potential standardization of abundance indices.

Stock Assessment - TORs

1. cont.:
   c. Discuss trends and associated estimates of uncertainty (e.g. standard errors)
   d. Justify inclusion or elimination of available data sources.
   e. Discuss the effects of data strengths and weaknesses (e.g. temporal and spatial scale, gear selectivities, aging accuracy, sample size) on model inputs and outputs.

Stock Assessment - TORs

2. Justify assumptions about stock structure and the geographical scale at which the population is assessed.

Stock Assessment - TORs

3. Develop models to estimate population parameters (e.g., F, biomass, abundance) and biological or empirical reference points at the coastwide and regional basis, and analyze model performance.

   a. Describe model structure, assumptions, and parameterization for both population and reference point models. Clearly and thoroughly explain model strengths and limitations.

Stock Assessment - TORs

3. cont.

   b. Justify choice of CVs, effective sample sizes, or likelihood weighting schemes.

   c. Describe stability of model (e.g. ability to find a stable solution, invert Hessian).

   d. Perform retrospective analyses and sensitivity analyses for starting parameter values, priors, major assumptions, etc. and conduct other model diagnostics as necessary for both population and reference point models.

Stock Assessment - TORs

3. cont.

   e. Perform continuity run with approved model from the previous benchmark assessment.

   f. Justify the choice of preferred model and explain any differences in results among models.

Stock Assessment - TORs

4. Characterize uncertainty of model estimates and biological or empirical reference points.

5. Recommend stock status as related to reference points (if available). For example:
   a. Is the stock below the biomass threshold?
   b. Is F above the fishing mortality threshold?

Stock Assessment - TORs

6. Develop detailed short/long-term prioritized lists of recommendations for research, data collection, and assessment methodology. ID recom that have been addressed since last assessment, or are in process of being addressed. Highlight improvements to be made by next benchmark.
7. Recommend timing of next benchmark and intermediate updates relative to biology and current management of the species.