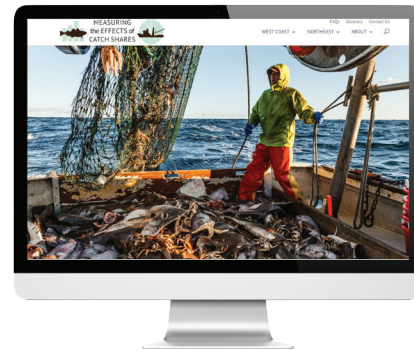


**Spotlight:**  
**NORTHEAST MULTISPECIES SECTOR PROGRAM**  
 A selection of findings. Complete results available at [www.CatchShareIndicators.org](http://www.CatchShareIndicators.org)

#8a

## Web-Based Dashboard for Fishery Managers and Stakeholders

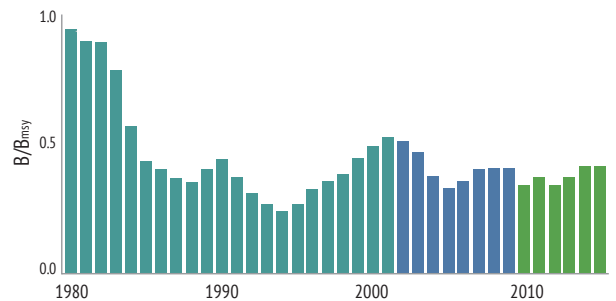
The Measuring the Effects of Catch Shares project provides data and information to answer key questions about how two catch share programs—the Northeast Multispecies Sector Program and the West Coast Shorebased IFQ Program—have affected fish stocks, the fishing industry, and local communities. The interdisciplinary project team developed and analyzed a set of ecological, economic, social, and governance indicators of change. The findings and user-friendly interactive charts are provided at [CatchShareIndicators.org](http://CatchShareIndicators.org).



### Ecological Indicators

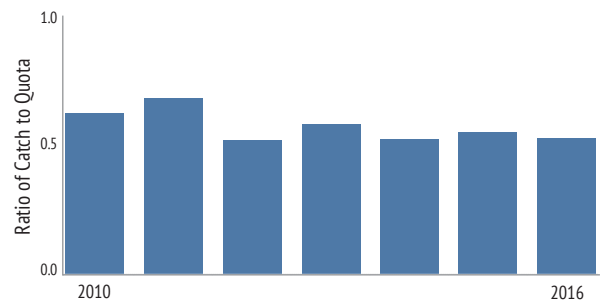
#### Did the status of fish stocks change?

Average biomass ( $B/B_{MSY}$ ) decreased 20 percent during the baseline period, with an eventual slight 1.2 percent increase following implementation of the Northeast Multispecies Sector Program. The proportion of stocks with depleted biomass ( $B < 0.5B_{MSY}$ ) increased from 27 percent to 53 percent of assessed stocks since the start of the extended baseline period. Several stocks were overfished during the catch share period, requiring rebuilding plans and reductions in catch limits.



#### Did fleetwide catches stay within quota?

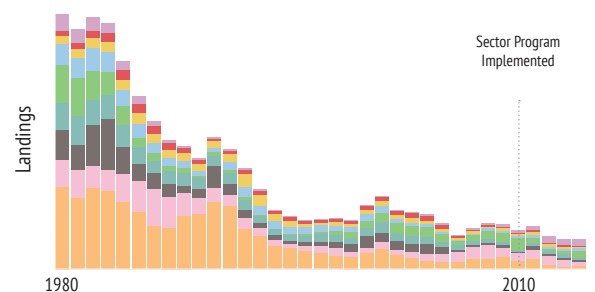
From 2010, when the fishery began operating under annual catch limits and the Sector Program, to 2016, the Sector Program had no large quota overages, while the common pool had three. Catch-to-quota ratios in the Sector Program across stocks fluctuated between approximately 50 and 70 percent. Still, some stocks were fished well below quota levels, most notably the GB haddock and yellowtail flounder stocks. Fishermen in the Sector Program caught higher amounts of fleetwide quotas than fishermen in the common pool fishery.



### Economic Indicators

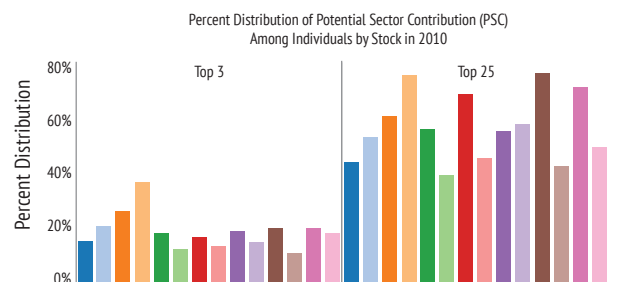
#### Did the financial viability of the fishery change?

Since the mid- to late-1980s, there has been an almost steady decrease in groundfish landings because of increased fishing restrictions and poor stock recruitment due to overfishing and other factors. The average annual landings of groundfish during the first five years of the Northeast Multispecies Sector Program were about 73 percent of the 2002–2009 average.



#### Did opportunities or barriers to entering the fishery change?

Prior to implementation of the Northeast Multispecies Sector Program, access to the groundfish fishery tightened in 1994 with implementation of a limited access program, and some fishermen left the fishery. Similarly, when the Northeast Multispecies Sector Program began in 2010, additional fishermen chose to leave the fishery. In the initial allocation of the catch share program, a majority of shares for several allocated stocks were concentrated among the top 25 quota holders.



## Interactive Dashboard of Fishery Data

- Best available data
- Objective expert analysis
- At-a-glance summaries
- Interactive, shareable charts

[CatchShareIndicators.org](http://CatchShareIndicators.org) provides user-friendly public access to high-quality, unbiased scientific information to support fisheries decision-making.

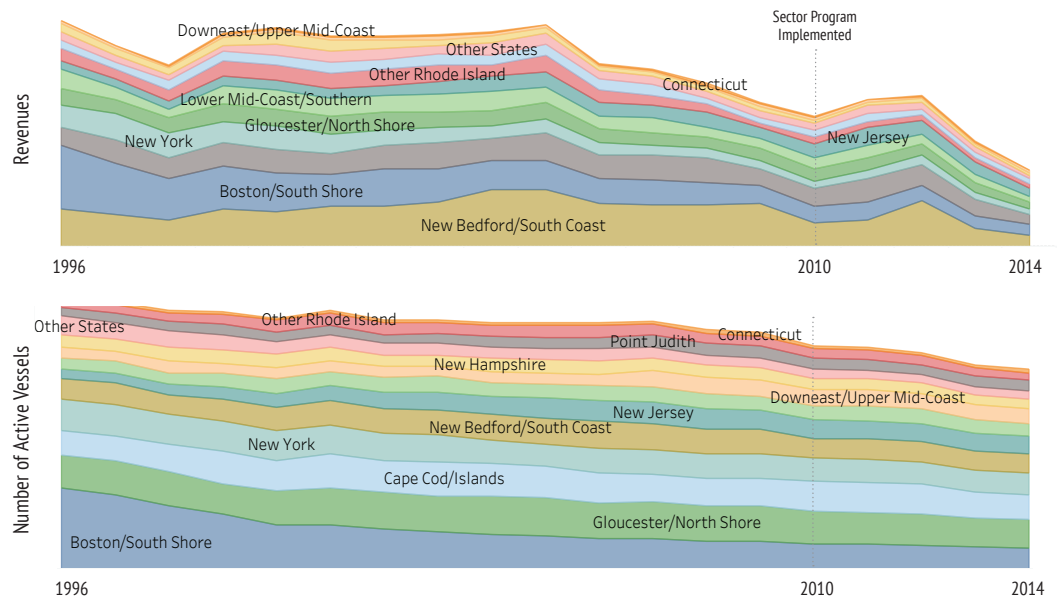
## Social Indicators

### Did economic and social effects on local communities change?

In Massachusetts, Maine, and New Hampshire, the states with the the largest stake in the groundfish fishery, groundfish landings and revenue generally showed a decreasing trend after the mid- to late-1980s due to regulations designed to protect overfished species. During the first five years of the Northeast Multispecies Sector Program, the economic importance of the groundfish fishery to each state's fishing industry continued to drop due to various factors, including lower annual catch limits for many stocks. By 2015, groundfish revenue as a percentage of total fishery revenue was around 11 percent in Massachusetts, about 1 percent in New Hampshire, and less than 1 percent in Maine. Vessels based in the major Massachusetts ports of Boston, Gloucester, and New Bedford have been especially hard hit by the continued decline in groundfish landings and revenue.

The number of vessels landing at least some groundfish during a given year varied annually in most states through about 2001, and then generally declined from 2002 through 2009 as catch and revenue fell due to stringent fishing restrictions. The decline in the number of active groundfish vessels continued across home port states and communities following implementation of the catch share program due to decreases in the annual catch limits of key allocated species and other factors.

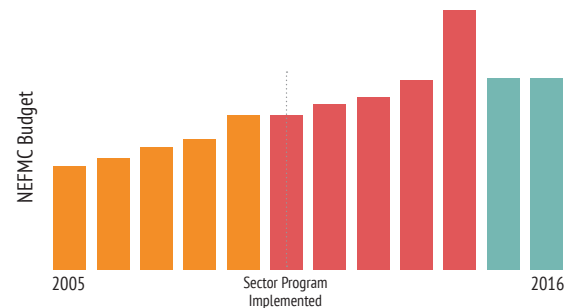
Each color represents revenues (upper graph) or number of active vessels (lower graph) for a homeport region.



## Governance Indicators

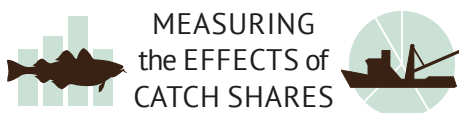
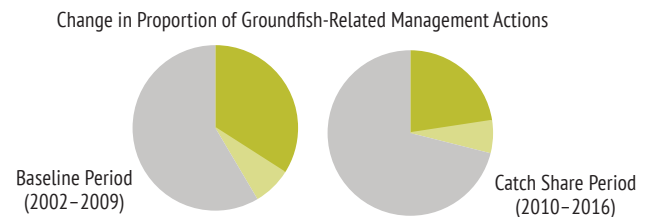
### Did the public cost of fishery management change?

The Northeast Sector Program received public financing through budget appropriations, federal grants, and disaster relief funds. Federal support for monitoring and enforcement activities, including at-sea and dockside monitoring, represented substantial upfront investments, but tapered off. Overall national catch share program funding received an initial appropriation of \$41 million in FY2011 and then dropped and remained constant at levels below \$28 million for FY2012–2016.



### Did the time required for fisheries management change?

The development of Amendment 16, which created the Sector Program, took nearly 100 days of participation by dozens of Council and agency staff, and fishery stakeholders over a three-year period. After the program took effect in 2010, the time spent by the Council on groundfish measures fell, but time spent by NMFS, as represented by rulemaking, increased.



The Measuring the Effects of Catch Shares project is led by MRAG Americas, Inc., and is conducted with a team of academic and private-sector partners.

[www.catchshareindicators.org](http://www.catchshareindicators.org) • [contact@catchshareindicators.org](mailto:contact@catchshareindicators.org) • [@catchsharestudy](https://twitter.com/catchsharestudy)