

NOAA Catch Share Performance Indicator Series

New England

General Category Scallop Individual Fishing Quota Program

NOAA Fisheries has developed standard indicators to measure the economic performance of individual U.S. catch share programs over time. To calculate these metrics catch, effort, landings, revenue, share accumulation and cost recovery data are used.

Management History: The General Category Scallop fishery was historically an open access fishery, allowing any vessel to harvest up to 400 pounds of Atlantic sea scallops. While the scallop fishery was not overfished or experiencing overfishing, there were concerns of overcapacity. Amendment 11, adopted in 2007, divided the scallop fishery allocation: the limited access fleet received 95% and the General Category Scallop IFQ fleet received 5% of total quota. Prior to the implementation of the IFQ Program, vessels targeting scallops operated under possession limits.

Objectives: The New England Fishery Management Council's vision for the General Category Scallop Fishery was to have a fleet comprised of relatively small vessels that maintain the historical character of this fleet and to provide opportunities to various participants, particularly those from smaller coastal communities. Specifically, the objectives of the Scallop IFQ Program are to: (1) control capacity and mortality in the general category scallop fishery; and (2) allow for better and more timely integration of sea scallop assessment results in management.

Key Management Events: Prior to implementation of the IFQ Program, quota was not allocated to the General Category fleet. Upon implementation of the catch share program, the IFQ quota was set at 2.6 million pounds. In the first year of the Scallop IFQ Program, IFQ holders landed approximately 90% of the scallop quota. General Category Scallop IFQ revenue declined by 25% in 2010 when compared to the Baseline Period*.

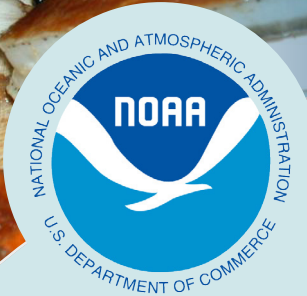
Performance Trends: Upon implementation of the IFQ Program in 2010, 321 vessels were allocated shares. Capacity, as measured by active vessels decreased by almost one-half in 2010 when compared to the Baseline Period*. In 2011, the number of entities holding quota share decreased by 12% and the number of active vessels decreased by 4% in 2011. Season length in the IFQ Program is unchanged from the Baseline Period*.

Economic benefits, as measured by scallop revenue, and average prices have increased under the IFQ Program. Despite scallop landings decreasing 43% in 2010 relative to the Baseline Period*, revenue only decreased by 24%. This was in part due to higher prices. However, in 2011, landings of scallops increased by 26% and revenue increased by 50% relative to the previous year. Ex-vessel prices for scallops increased from \$6.52 in the Baseline Period* to \$8.78 per pound in 2010 and to \$10.40 in 2011, a 60% increase in average price since the Program began.

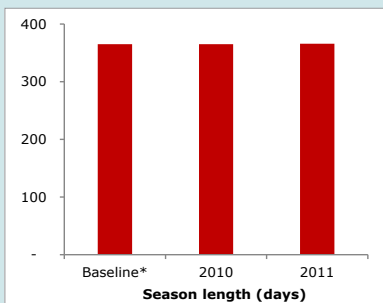
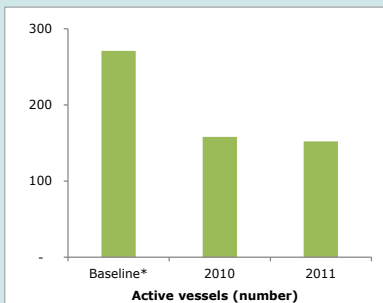
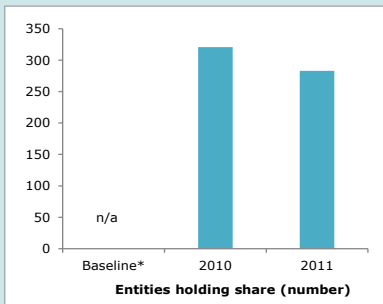
Economic efficiency, as measured by revenue per vessel, has been steadily increasing since implementation of the IFQ Program. Revenue per vessel increased by 31% to \$127,000 in 2010 when compared to the Baseline Period* and increased by 55% in 2011 relative to 2010.

*Baseline Period refers to average of three years prior to General Category Scallop IFQ implementation (2007 - 2009).

U.S. Department of Commerce | National Oceanic and Atmospheric Administration | National Marine Fisheries Service



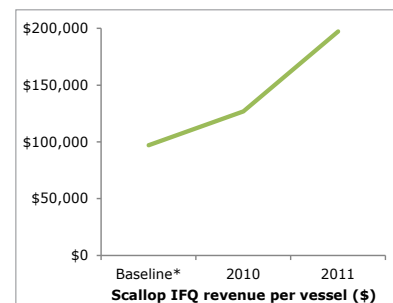
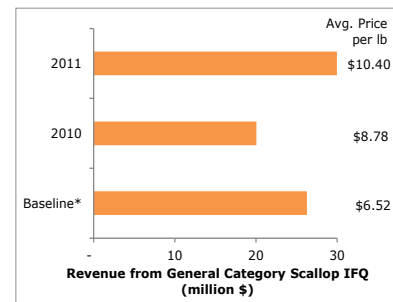
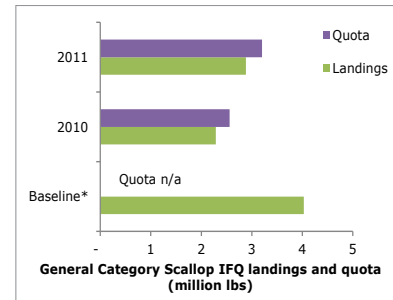
NOAA
FISHERIES
Science & Technology



For more information contact:

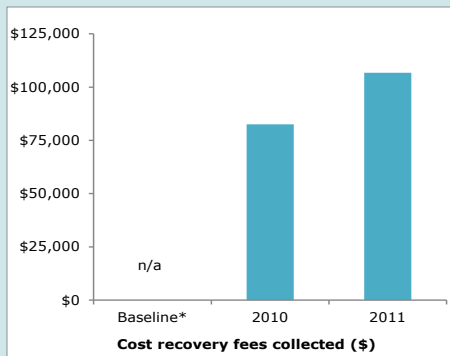
Ayeisha Brinson
ayeisha.brinson@noaa.gov

Eric Thunberg
eric.thunberg@noaa.gov



Cost Recovery Fees: The Magnuson-Stevens Act requires the Secretary to adopt regulations implementing a cost recovery program to recover the actual cost of managing and enforcing the IFQ Program.

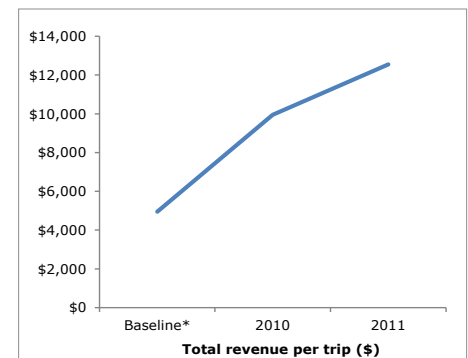
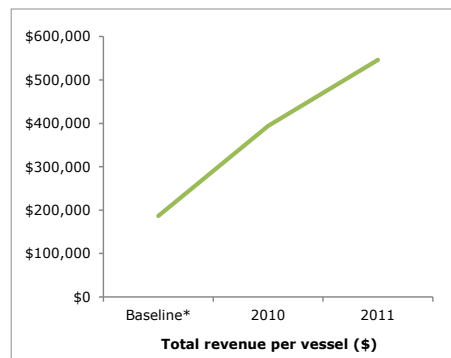
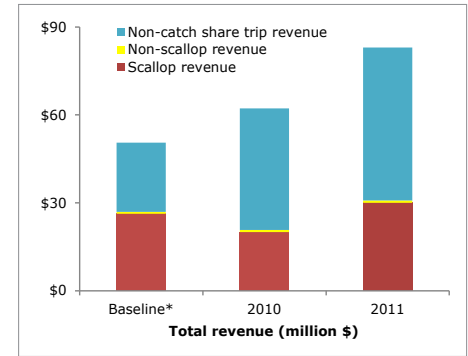
The cost recovery fee established for the General Category Scallop IFQ Program can be a maximum of 3% of the ex-vessel value. Cost recovery fees collected for 2010 were \$82,557 and \$106,723 in 2011. In 2011, the amount collected for cost recovery was 0.4% of General Category Sea Scallop IFQ Program revenue.



Accumulation Limits: The purpose of quota share caps is to prevent individual shareholders from controlling production, as well as to achieve management objectives, per the Magnuson-Stevens Act and the National Standards. The share ownership caps in 2010 and 2011 were 2.5% for vessels and 5% for individuals.

Total Revenue: Vessels who participate in the General Category Scallop IFQ Program generate revenue from landings of scallops, as well as small amounts of other species on scallop trips. In addition, these same vessels also participate in other fisheries (including non-catch share programs) and this revenue contributes to their total revenue.

Total revenue from scallop trips (scallop and non-scallop revenue) and non-scallop trips was \$50 million during the Baseline Period*. Total revenue increased by 23% to \$62 million in 2010 and by another 33% to \$83 million in 2011. During the Baseline Period*, scallop revenue accounted for 52% of vessel's total revenue, revenue from non-scallops on scallop trips accounted for approximately 1% of total revenue and non-catch share revenue accounted for 47% of total revenue.

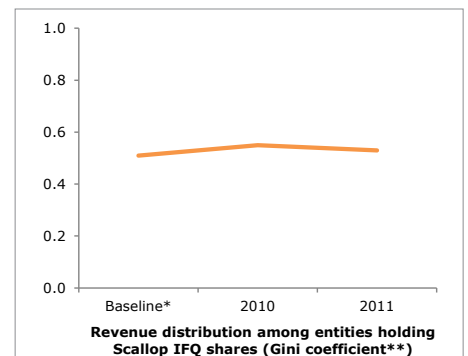


Total revenue per vessel and **total revenue per trip** both doubled when the IFQ Program began relative to the Baseline Period*.

Specifically, total revenue per vessel increased from \$186,000 during the Baseline Period* to \$394,000 in 2010 and to \$546,000 in 2011, increases of 111% and 39%, respectively. Total revenue per trip followed the same trend: an overall 154% increase in 2011 when compared to the Baseline Period*.

Revenue Distribution: The Gini coefficient measures the evenness of a distribution. Here, it measures the distribution of revenue among entities holding shares in the Scallop IFQ Program. A value of 0 indicates that all shareholders earn the same amount of revenue, while a value of 1 indicates that one shareholder earns all of the revenue.

The Gini coefficient for the General Category Scallop IFQ Program increased from 0.51 in the Baseline Period* to 0.55 in 2010 and decreased to 0.53 in 2011.



**0 = perfect equality; 1 = perfect inequality

For more detailed information on the Northeast General Category Atlantic Sea Scallop IFQ Program, please visit: <http://www.nero.noaa.gov/sfd/sfdscallopifq.html>

More fact sheets can be found at: <http://www.st.nmfs.noaa.gov/economics/fisheries/commercial/catch-share-program/fact-sheets/index>

For more information on catch share programs: http://www.nmfs.noaa.gov/sfa/domes_fish/catchshare/index.htm

*Baseline Period refers to average of three years prior to General Category Scallop IFQ implementation (2007 - 2009).

NOAA Catch Share Performance Indicator Series

New England

Multispecies Sectors Program

NOAA Fisheries has developed standard indicators to measure the economic performance of individual U.S. catch share programs over time. To calculate these metrics catch, effort, landings, revenue, share accumulation and cost recovery data are used.

Management History: From 2004-2006, two Pilot Sectors began operating with an allocation of Georges Bank cod. The Sector Program expanded in 2010 to 17 Sectors and approximately 55% of vessels with limited access permits joined a Sector. At the same time, annual catch limits (ACLs) were implemented for the first time and sharply reduced the available quota. These quota reductions were required to end overfishing and rebuild stocks and would have occurred regardless of whether the catch share program was implemented.

Objectives: The goals of the Northeast Multispecies Sector Program are to balance catch with quota; provide incentives for fishermen to self-govern; and reduce the need for Council-mandated measures. This program has a unique design: as each vessel voluntarily joins a sector, catch share of each stock is attributed to the sector and referred to as Potential Sector Contribution (PSC). Each Sector is then allocated an Annual Catch Entitlement (ACE) for each stock based on cumulative PSC. Sectors receive ACE as a whole and develop rules for distribution. Sector fishermen are able to continue fishing if they have reached their limit for a species by trading or leasing additional allocation; whereas, fishermen under effort controlled management (referred to as the "Common Pool") must stop fishing when that limit is reached. The trends provided herein refer to fishermen participating in the Sector Program and do not include those participating in the "Common Pool".

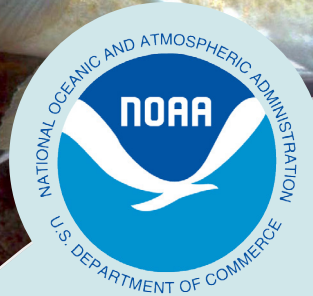
Key Management Events: The Sector Program expanded in 2010 to 17 Sectors and approximately 55% of vessels with limited access permits joined a Sector. At the same time, annual catch limits (ACLs) in the fishery were sharply reduced. Overall, quota was reduced by 38% in 2010 compared to the Baseline Period* and reduced again by 10% in 2011.

Performance Trends: As quota fell in 2010 to end overfishing and rebuild stocks relative to the Baseline Period*, fishing activity – whether measured by permit holders, active vessels, days absent, or trips – declined 45%, 28%, 58% and 40%, respectively. However, these trends reversed in the following year, with the number of permit holders, active vessels, days absent, or trips increasing by 2%, 1%, 22% and 20%, respectively, when compared to 2010.

Groundfish landings and groundfish revenue also declined slightly in 2010 relative to the Baseline Period* (10% and 8%, respectively). Economics benefits improved, with groundfish revenue increasing to \$89 million in 2011, an 11% increase relative to 2010. Groundfish average prices were higher in 2011 than the previous year and the Baseline Period*.

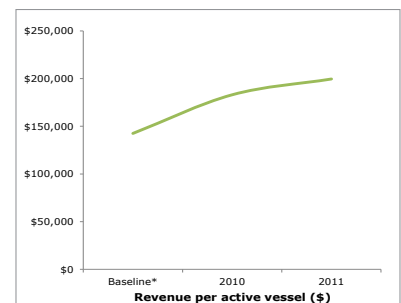
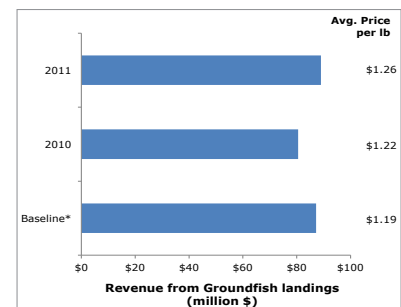
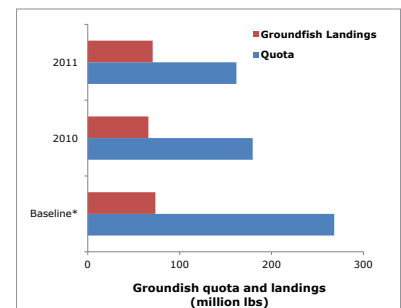
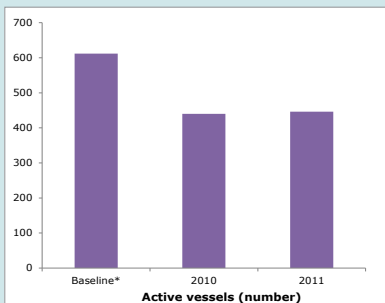
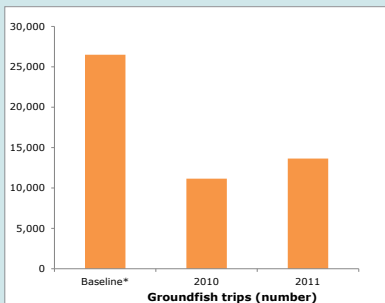
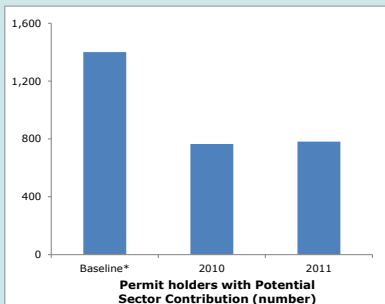
Economic efficiency, measured as groundfish revenue per vessel, improved under the Sector Program, increasing 28% in 2010 relative to the Baseline Period*. Groundfish revenue per vessel increased 9% in 2011 relative to 2010.

*Baseline Period refers to average of three years prior to Multispecies Sector Program expansion (2007-2009).
U.S. Department of Commerce | National Oceanic and Atmospheric Administration | National Marine Fisheries Service



NOAA FISHERIES

Science & Technology



For more information contact:

Ayeisha Brinson
ayeisha.brinson@noaa.gov

Eric Thunberg
eric.thunberg@noaa.gov

Cost Recovery Fees and Annual Catch Limits:

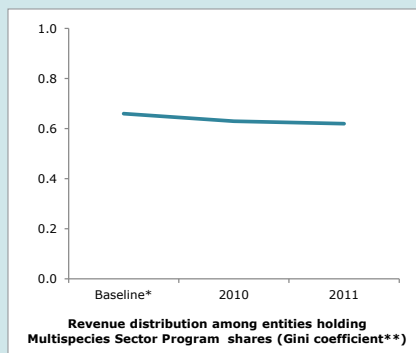
The Northeast Multispecies Sectors Program does not have a share cap or cost recovery system in place, as neither is required by the Magnuson-Stevens Act.

Prior to the Sector Program implementation, harvest limits were exceeded for three stocks (Gulf of Maine cod, Southern New England winter flounder and pollock) in 2009, two stocks (Southern New England yellowtail flounder and white hake) in 2008 and one stock (Southern New England yellowtail flounder) in 2007.

In 2010, no commercial catch exceeded the quota for stocks allocated to Sectors.

Revenue Distribution: The Gini coefficient measures the evenness of a distribution. Here, it measures the distribution of revenue among entities holding shares in the Northeast Multispecies Sector Program. A value of 0 indicates that all shareholders earn the same amount of revenue, while a value of 1 indicates that one shareholder earns all of the revenue.

Prior to implementation of the Northeast Multispecies Sectors Program, the Gini coefficient was 0.66 in the Baseline Period*. The Gini coefficient has decreased each year since the implementation of the Program: 0.63 in 2010 and 0.62 in 2011.

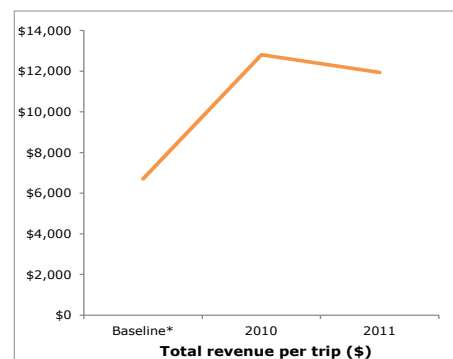
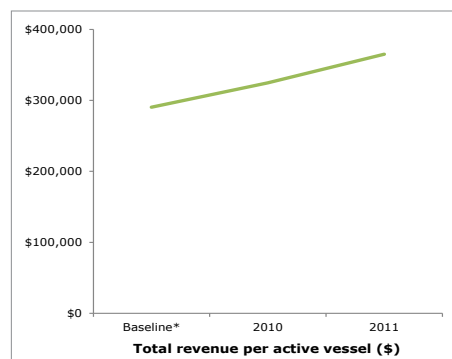
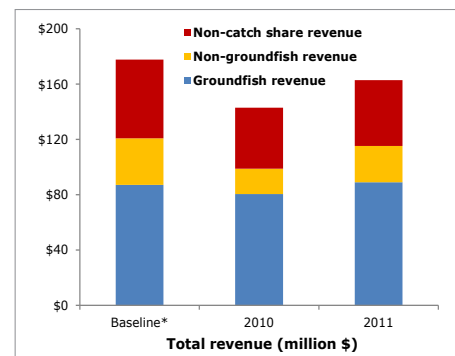


**0 = perfect equality; 1 = perfect inequality

Total Revenue: Vessels who participate in the Northeast Multispecies Sectors Program generate revenue on groundfish trips from groundfish and non-groundfish landings. In addition, these same vessels also participate in other fisheries (including non-catch share programs) and this revenue contributes to their total revenue.

Total revenue was \$178 million during the Baseline Period* and decreased by 20% in 2010 to \$143 million. Total revenue increased by 14% when compared to 2010 to \$163 million in 2011; however, this amount is still 8% lower than the total revenue during the Baseline Period*. The reduced revenue, landings and fishing effort coincided with a decrease in quota available to fishermen. Since implementation of the Multispecies Sector Program, non-groundfish landings on groundfish trips have been increasing (Murphy et al. 2012).

Overall, revenue from groundfish species comprised 49% of the total revenue in the Baseline Period*, 56% in 2010 and 55% in 2011. Revenue from non-catch share trips was approximately one-third of total revenue during the Baseline Period*, 2010 and 2011.



Total revenue per vessel and **total revenue per trip** earned by vessels in the Sector Program in 2010 were higher (12% and 91%, respectively) relative to the Baseline Period*. In 2011, total revenue per vessel continued to increase (by 12%) to \$365,000 relative to 2010. Total revenue per trip decreased slightly (by 7%) in 2011 relative to 2010.

Other trends: In 2011, there were an estimated 30.8 million pounds (live weight) of Annual Catch Entitlement (ACE) leased within and between Sectors, valued at approximately \$15.1 million. Nearly half of these transfers occurred within vessel affiliations.

Employment trends for vessel crew are mixed. Total crew positions (in both Sectors and the Common Pool) declined 3% in both 2010 and 2011. Total crew-trips and total crew days increased slightly in 2011 (1-3%, respectively), but remained lower than in 2009.

For more detailed information on the Northeast Multispecies Sectors Program, please see: Murphy et al. 2012 at <http://nefsc.noaa.gov/publications/crd/crd1230/>

More fact sheets can be found at: <http://www.st.nmfs.noaa.gov/economics/fisheries/commercial/catch-share-program/fact-sheets/index>

For more information on catch share programs: http://www.nmfs.noaa.gov/sfa/domes_fish/catchshare/index.htm

*Baseline Period refers to average of three years prior to Multispecies Sector Program expansion (2007-2009).