### **Northeast Region**

There are five catch share programs implemented in the Northeast region including the oldest catch share programs among all federally managed Fishery Management Plans (FMPs). Individual Transferable Quota (ITQ) programs for the surfclam and ocean quahog fisheries were developed by the Mid-Atlantic Fishery Management Council and implemented in 1990. The Mid-Atlantic Council subsequently developed an IFQ program for the golden tilefish fishery that was implemented in 2009. The New England Council developed an IFQ program for a portion of the Atlantic sea scallop fishery that was partially implemented in 2008 and fully implemented in 2010. Last the Sector Management Program initially authorized in 2004 with Amendment 13 to the Northeast Multispecies FMP, commonly referred to as the New England Groundfish FMP, was greatly expanded with modifications under Amendment 16 and implemented during 2010. A snapshot of the performance indicators for the most recent complete available year is reported in Table 3.

More detailed trend data is provided for the Ocean Quahog fishery, followed by Surfclams, General Category Scallops, the Mid-Atlantic Golden Tilefish fishery and New England groundfish. In addition to trend data, the management history, objectives, and key events or features of each catch share program are briefly described. For all fisheries a Baseline Period has been constructed as the average of the three years prior to catch share program implementation. All price and revenue data are adjusted for inflation to 2010 equivalent dollars using the Gross Domestic Product price deflator. Quantities such as quotas and pounds are all reported in units consistent with each FMP. Ocean quahogs and surfclams are reported in bushels, scallops are reported in meat weights, golden tilefish are reported in live weight. Groundfish quota and catch are reported in live weight while landings are reported in landed weight.

**Table 3. Northeast Region Fishery Performance Measures by Catch Share Program** 

	Ocean Quahog (2011)	Surfclam (2011)	General Category Scallops (2010)	Golden Tilefish (2011)	Groundfish Sectors (2011)
Catch and Landings	Bushels	Bushels	Pounds of Scallop Meats	Pounds	Pounds
Quota allocated to Program	5,332,982	3,400,047	2,559,370	1,895,248	179,487,960*
Aggregate landings	3,045,417	2,219,951	2,280,679	1,884,695	61,038,536**
% Utilization	57%	65%	89%	99%	39%
ACL exceeded	No	No	No	No	No
Effort					
Entities holding share (number)	40	55	321	13	781
Active vessels (number)	34	37	159	9	301
Days at sea (days)	2,106	2,911	4,202	925	19,227
Trips (number)	2,147	1,916	6,281	97	13,642
Season length (days)	365	365	365	365	365
Revenue (\$)					
Catch Share Program revenue	\$20,838,866	\$26,014,314	\$20,024,836	\$5,314,396	\$87,145,765
Non-Catch Share Program revenue	\$107,098	\$74,167	\$652,144	\$5,281	\$25,714,597
Average price (\$/pound)	\$6.84	\$11.72	\$8.78	\$2.82	\$1.43
Catch Share revenue per active vessel	\$612,908	\$703,090	\$125,942	\$590,488	\$289,521
Non-Catch Share revenue per vessel	\$18,027	\$2,005	\$4,102	\$587	\$85,431
Catch Share revenue per day at sea	\$9,895	\$8,937	\$4,766	\$5,745	\$4,533
Non-Catch Share revenue per day at sea	\$51	\$39	\$104	\$54	\$1,337
Catch Share revenue per trip	\$9,706	\$13,577	\$3,188	\$54,788	\$6,388
Non-Catch Share revenue per trip	\$50	\$39	\$104	\$54	\$1,885
Other					
Excessive share cap	None	None	Yes	Yes	N/A
Cost recovery fee collected (\$)	None	None	\$82,557	\$20,907	N/A
* Live weight					

N/A denotes not applicable

<sup>\*</sup> Live weight
\*\* Landed weight

### Northeast General Category Atlantic Sea Scallop IFQ Program

### a. Management History

The majority of scallops landed in New England and Mid-Atlantic ports is harvested by fishermen operating under a limited access program managed by caps on days at sea and harvest limits for trips into scallop access areas defined through a rotational management area program. However, when the New England Fishery Management Council developed the limited access program in Amendment 4, it also created an open access permit to accommodate a small boat fishery that came to be known as the General Category Scallop fishery. This fishery was comprised of smaller vessels that had been harvesting comparatively small quantities of scallops (a trip limit of 400 pounds of scallop meats was imposed in 1994) on relatively short trips. As regulatory measures became more restrictive in a number of other fisheries, the general category scallop fishery increasingly became an alternative source of fishing income. Concerned with the growth in landings by the general category scallop fleet, in 2007, the Council proposed that a limited access program be implemented for the fishery; that small quota allocations be made for incidental harvest of scallops and for small-scale fishing in the Northern Gulf of Maine; that the fishery be subject to a landings limit of 5% of the total scallop catch limit; and that the majority of the fishery be regulated with an Individual Fishing Quota. This management program was implemented in 2008 and a start date of 2010 was set for the IFQ Program. Had the Council not taken action, growth in the fishery would likely have continued that may have led to reductions in the limited access days at sea fishery.

# b. Objectives

While recognizing that the fishery had changed over time, the Council's vision for the general category scallop fishery is one of "...a fleet made up of relatively small vessels, with possession limits to maintain the historical character of this fleet and provide opportunities to various participants including vessels from smaller coastal communities." The goals for the 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.

#### c. Key events/features

Full implementation of the IFQ Program was anticipated to take one to two years. To provide for a transition to the IFQ Program, a quarterly quota was set for the fishery set at 10% of the total scallop catch limit. In 2010, the IFQ Program's quota was set at its planned level of 5% of the scallop catch limit. While it may appear that the quota was reduced from 4.1 million pounds during the Baseline Period to 2.5 million pounds in 2010, this was a scheduled reduction designed to ease the transition to the IFQ Program.

The IFQ Program is subject to an ownership cap set at no more than 2.5% for any one vessel. In the event that a single entity (an individual owner or ownership group) owns more than one vessel, the entity may not hold more than 5% of the total allocation. Allocations may be transferred on a permanent basis or transferred (leased) on an annual basis to another IFQ allocation holder, provided the ownership caps are maintained.

Although the scallop fishing year runs from March 1 through the last day of February, the cost recovery fee is based on expenses and landings made during the fee period, which runs from October 1 through September 30 each year. The 2011 fee period (October 1, 2010 through September 30, 2011) was the first time that NOAA Fisheries collected fees from scallop IFQ vessels. Actual cost recovery fees during the first year of implementation amounted to \$82,556, which represents 0.29 % of the value of the scallop IFQ fishery during the fee period.

#### d. Recent Trends

The Baseline Period refers to the average of the three years prior to implementation of the General Category Scallop IFQ Program, 2007-2009.

i. Catch and Landings – All landings and quota are reported in pounds of meat weight.

Prior to IFQ Program implementation, the general category fishery operated without a hard quota since it was managed as a segment of the overall scallop fishery. During 2008 and 2009, quarterly quotas amounting to 10% of the total scallop quota were implemented. In the first year of IFQ Program, implementation of the general category quota was set at 2.6 million (5% of the total scallop quota) pounds of scallop meats (Figure 25). The general category scallop fleet landed 4.1 million pounds of scallop meats during the Baseline Period. Almost 2.3 million pounds, or 89% of the quota was utilized in 2010, down 44% from the 2007-2009 average. Note that this reduction in landings was actually lower than the 50% scheduled reduction in quota.

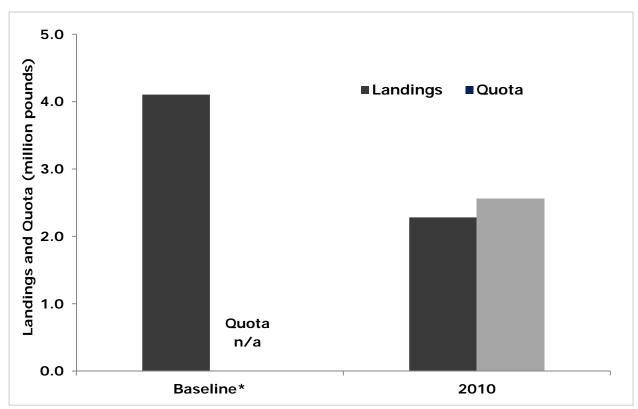


Figure 25. Quota and landings in the Northeast General Category Scallop IFQ Program

# ii. <u>Effort</u>

A total of 321 general category scallop vessels were allocated an IFQ Program share in the first year of the IFQ Program (Figure 26). Of the vessels allocated share, a total of 159 (just under 50% of the entities allocated share) were active in the general category scallop fishery during 2010 (Figure 27). Compared to the Baseline Period average, the number of active vessels in 2010 fell by 41%.

Total effort in the general category scallop fishery declined during 2010 compared to the 2007-2009 Baseline Period average. Total trips declined by 39% from over 10,330 to 6,281 (Figure 28). Similarly, days spent on general category scallop trips declined from 8,437 during 2007-2009 to 4,202 in 2010, an 18% reduction in average trip duration and an overall 50% reduction in total fishing time (Figure 29).

The general category scallop fishery has always been a comparatively small proportion of the overall scallop fishery. For this reason, supplies of general category scallops have relatively little impact on the availability of scallops to processors or seafood consumers. Implementation of the Northeast General Category Atlantic Sea Scallop IFQ Program does not alter this fact, in general, nor did it change the seasonal availability of scallops from the general category fishery, specifically (Figure 30).

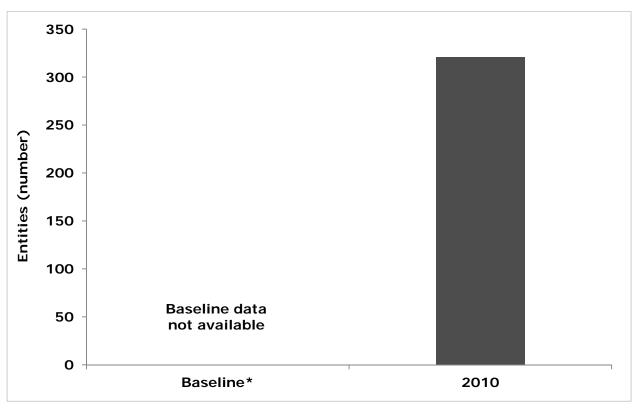


Figure 26. Number of entities holding share in the Northeast General Category Scallop IFQ Program

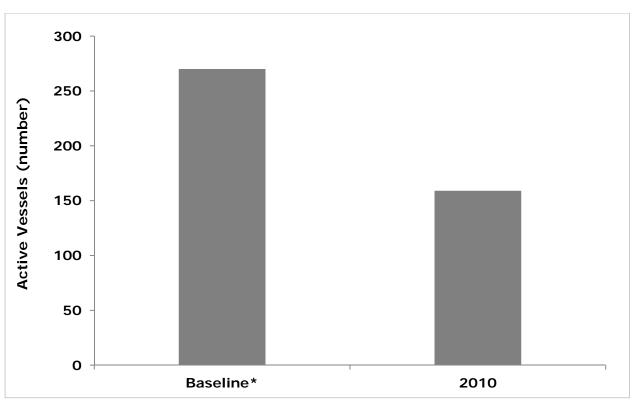


Figure 27. Active vessels fishing quota in the Northeast General Category Scallop IFQ Program

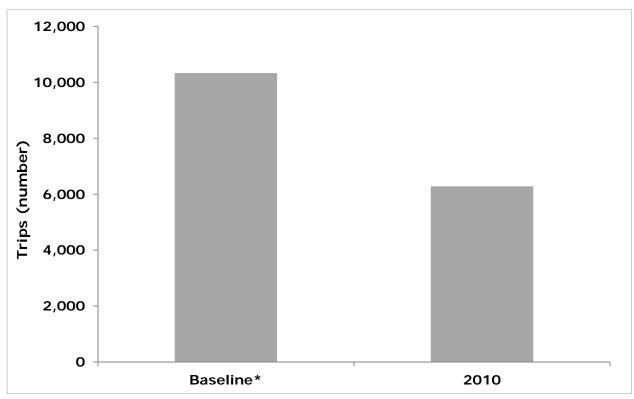


Figure 28. Number of trips harvesting scallops in the Northeast General Category Scallop IFQ Program

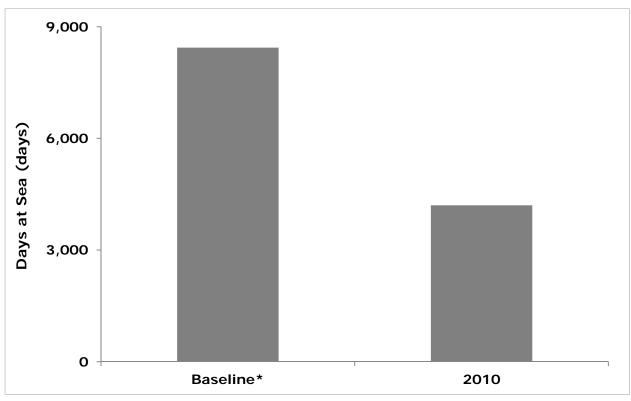


Figure 29. Number of days at sea on trips fishing quota in the Northeast General Category Scallop IFQ Program

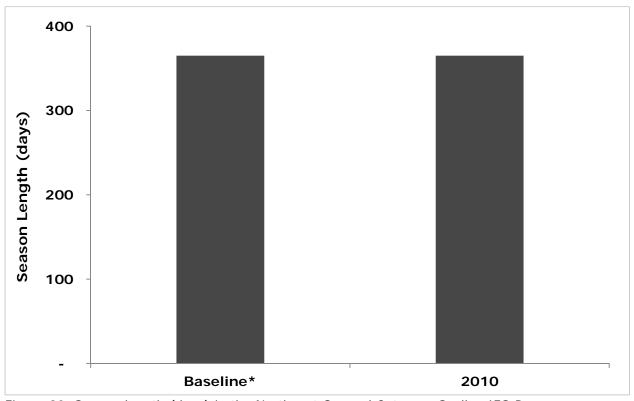


Figure 30. Season length (days) in the Northeast General Category Scallop IFQ Program

iii. Revenue – All revenue data have been adjusted by the GDP deflator indexed for 2010.

The 2010 reduction in general category scallop landings was partially offset by increased exvessel prices as 2010 prices increased by 31% from the \$6.69 Baseline Period average to \$8.78 per pound (Figure 31). The price increase meant that the landings revenues from scallop sales were \$21 million during 2010 as compared to \$27 million during the Baseline Period (Figure 32). This means that in 2010 general category scallop revenues declined by 27% as compared to the 44% reduction in landings.

While using scallop gear in the general category scallop fishery, fishermen harvest small amounts of other species that contribute to total revenues. On average, fishermen earned 2.3% of total sales on general category scallop trips from species other than scallops during the 2007-2009 Baseline Period (Figure 32). The proportion of revenue from species other than scallops increased to 3.2% in 2010, contributing an additional \$652,000 to total general category scallop fishery revenues.

In contrast to landings revenue, general category scallop revenue per active vessel increased from \$102,000 during the Baseline Period to \$125,000 in 2010, an increase of 24% (Figure 33). When the increased revenue from other species are considered, total revenue per vessel increased even more from \$104,000 during the 2007-2009 Baseline Period to \$130,000 in 2010.

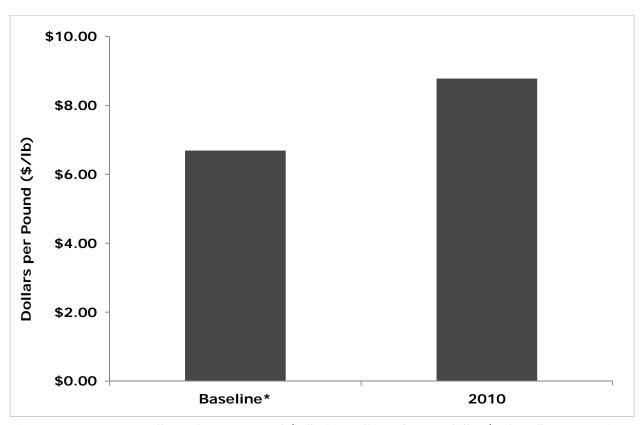


Figure 31. Average scallop price per pound (inflation-adjusted 2010 dollars) of scallop meats in the Northeast General Category Scallop IFQ Program

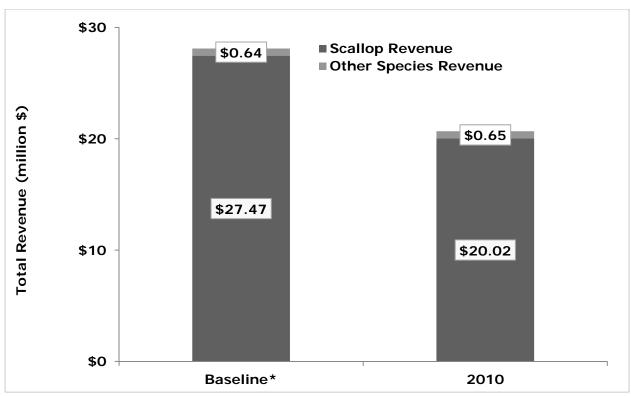


Figure 32. Total scallop and non-scallop revenue (inflation-adjusted 2010 dollars) by vessels fishing quota in the Northeast General Category Scallop IFQ Program

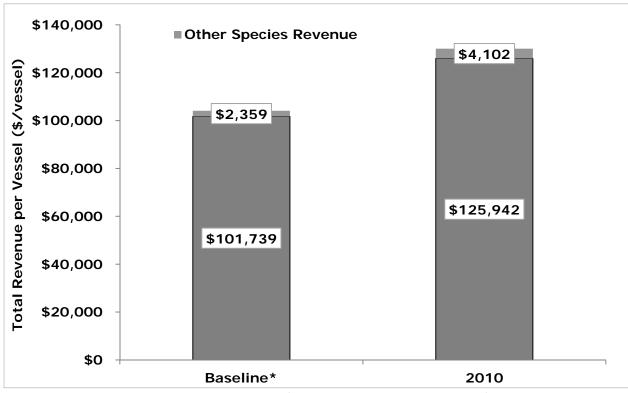


Figure 33. Scallop and non-scallop revenue (inflation-adjusted 2010 dollars) per vessel fishing quota in the Northeast General Category Scallop IFQ Program

Both general category scallop revenue per trip and total revenue per trip increased during the first year of the IFQ Program compared to the 2007-2009 Baseline Period average. Revenue per day also increased, however, since average trip duration declined in the first year of the IFQ Program, revenue per day increased proportionally more than revenue per trip. Specifically, general category scallop revenue per day increased from the Baseline Period average of \$3,256 per day to \$4,766 in 2010; a 46% increase. Including revenue from species other than scallops, total revenue per day increased in 2010 by 48% (Figure 35).

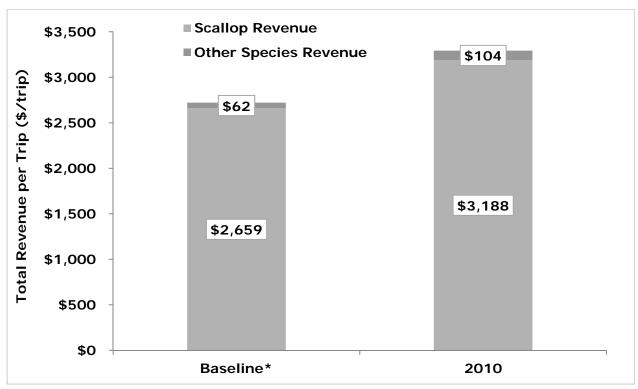


Figure 34. Scallop and non-scallop revenue (inflation-adjusted 2010 dollars) per trip that vessels fish quota in the Northeast General Category Scallop IFQ Program

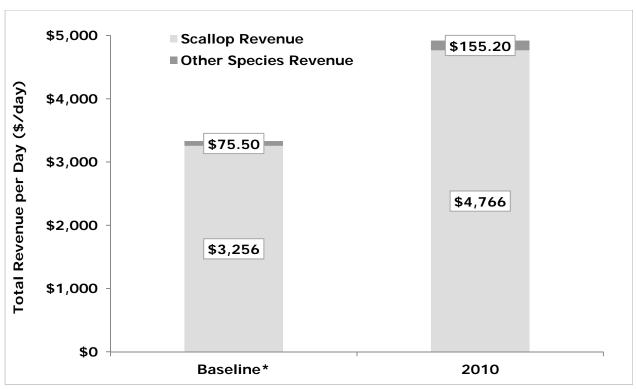


Figure 35. Scallop and non-scallop revenue (inflation-adjusted 2010 dollars) per day at sea that vessels fish quota in the Northeast General Category Scallop IFQ Program

### Northeast Multispecies Sectors Program

#### a. Management History

The Northeast multispecies fishery, hereafter, referred to as the groundfish fishery, is managed by the New England Fishery Management Council (NEFMC) and NOAA Fisheries. The groundfish fishery is prosecuted using both fixed (gillnet and hook gears including bottom longline, tub trawls and rod and reel) and otter trawl gears. The groundfish resource is distributed throughout waters of the Gulf of Maine and Georges Bank and to a lesser extent Southern New England and the Mid-Atlantic bight. In all, a total of 19 stocks are managed under the Northeast Multispecies FMP (Groundfish Plan) including three Georges Bank stocks of cod, haddock, and yellowtail founder that are jointly managed between the US and Canada under a transboundary resource sharing arrangement.

The Groundfish Plan was implemented in 1986 with a combination of minimum fish sizes and area-based controls intended to reduce effort and provide spawning protection for haddock and yellowtail founder. These measures and a series of Plan amendments were not sufficient to meet biological objectives, which eventually led to implementation of Amendment 5 in 1994. Amendment 5 included a moratorium on issuing groundfish permits and introduced an effort control program based on scheduled reductions in days-at-sea (DAS) supplemented by a number of indirect effort controls. Amendment 5 exempted some permit categories from the moratorium and exempted a substantial number of vessels from DAS controls. Nearly all of these exemptions were removed two years later with the implementation of Amendment 7 in 1996. Among a number of other measures taken at the time, Amendment 7 also accelerated the DAS reduction schedule established under Amendment 5. In the same year that Amendment 7 was implemented, the Magnuson-Stevens Act was reauthorized and amended to include a requirement to end overfishing. As a result, Councils were also required to revise each FMP to end overfishing and to rebuild overfished stocks. In meeting these new requirements, the NEFMC developed Amendment 9 (implemented in 1999) which established reference points for all groundfish stocks. In 1999, the NEFMC submitted a Report to Congress, which stated that a number of key groundfish stocks were found to be in need of rebuilding. This finding initiated what would eventually become Amendment 13.

Implemented in 2004, Amendment 13 fundamentally redefined initial allocations of DAS and how DAS may be used in the groundfish fishery. More importantly, Amendment 13 introduced a new program called "Sector Allocation." Sector allocation provided fishermen with the ability to voluntarily form a sector that would be bound by a quota instead of the DAS-based effort controls of Amendment 13. The sector quota allocation is based on the aggregated catch histories of the fishermen that join a sector. Additionally, sectors would be allowed to request exemptions from certain regulations, and in the subsequent year, the sector's quota would not be reduced (provided the sector did not exceed its own quota) if the target catch for the stock as a whole was exceeded by the rest of the groundfish fleet. At the time Amendment 13 was implemented only one sector (the Georges Bank Cod Hook Sector) had been submitted to the Council for approval. A second sector (the Georges Bank Cod Fixed Gear Sector) was approved in 2006.

Prior to 2010, the Groundfish Plan established an annual Target Total Allowable Catch (TTAC) for each groundfish stock. The TTAC's were set based on desired fishing mortality rates and were used as a means for determining the need for adjustments to the effort control program in the subsequent year. Exceeding a TTAC did not result in a cessation of fishing although, for some stocks, an in-season adjustment may be triggered to reduce the likelihood that the TTAC would be exceeded. It would not be until the 2007 Magnuson-Stevens Act reauthorization requiring the setting of Annual Catch Limits (ACLs) that the NEFMC would transition from effort controls as the primary management tool coupled with catch targets to output-based controls using sector allocation as the primary management tool. The transition from effort controls to sector

allocation was finalized through Amendment 16, implemented in 2010. Although Amendment 16 retained the underlying principle that sectors remain voluntary, the Amendment changed the qualification period for potential sector contribution (PSC) and provided a means for trading assigned quota or annual catch entitlement (ACE) between sectors. Under Amendment 13 sectors were able to request an allocation for specific stocks. Amendment 16 changed this provision, requiring that sectors be allocated all stocks for which the sector qualifies. Amendment 16 further specified which of the 19 stocks would be allocated to sectors and which stocks would not be allocated. The allocated stocks include Acadian redfish, pollock, white hake, witch flounder, American plaice, winter flounder (Georges Bank and Gulf of Maine), yellowtail flounder (Georges Bank, Cape Cod/Gulf of Maine, and Southern New England/Mid-Atlantic), cod (Gulf of Maine and Georges Bank) and haddock (Gulf of Maine and Georges Bank).

In keeping with the voluntary nature of the sector allocation program, vessel owners may choose to join a sector or remain in the so-called "common pool". Vessel owners that elect to remain in the common pool are principally regulated by DAS supplemented by a suite of additional effort controls such as possession limits, gear restrictions, and area closures. The common pool is also subject to an ACL. Since all vessel permits are assigned a PSC based on catch history, whether or not the permit is enrolled in a sector, the common pool ACL for all stocks is determined by the combined PSC for all permitted vessels in the common pool. In-season accountability measures may be made to specified effort control measures to prevent the common pool ACL from being exceeded.

#### b. Objectives

In addition to revising and enlarging the role sectors would play in the groundfish fishery, Amendment 16 specified the processes for setting ACLs and Accountability Measures, developed an effort control program for individuals that chose not to join a sector, as well as a substantial number of administrative changes. As such, the goals and objectives for Amendment 16 were broader than that of the sector allocation program alone and were unchanged from that of Amendment 13. These goals were:

Goal 1: Consistent with the National Standards and other required provisions of the Magnuson-Stevens Fishery Conservation and Management Act and other applicable law, manage the northeast multispecies complex at sustainable levels.

Goal 2: Create a management system so that fleet capacity will be commensurate with resource status so as to achieve goals of economic efficiency and biological conservation and that encourages diversity within the fishery.

Goal 3: Maintain a directed commercial and recreational fishery for northeast multispecies.

Goal 4: Minimize, to the extent practicable, adverse impacts on fishing communities and shoreside infrastructure.

Goal 5: Provide reasonable and regulated access to the groundfish species covered in this plan to all members of the public of the United States for seafood consumption and recreational purposes during the stock rebuilding period without compromising the Amendment 13 objectives or timetable. If necessary, management measures could be modified in the future to insure that the overall plan objectives are met.

Goal 6: Promote stewardship within the fishery.

The stated objectives of Amendment 16 were:

Objective 1: Achieve, on a continuing basis, optimum yield (OY) for the U.S. fishing industry.

Objective 2: Clarify the status determination criteria (biological reference points and control rules) for groundfish stocks so they are consistent with the National Standard guidelines and applicable law.

Objective 3: Adopt fishery management measures that constrain fishing mortality to levels that are compliant with the Sustainable Fisheries Act.

Objective 4: Implement rebuilding schedules for overfished stocks, and prevent overfishing.

Objective 5: Adopt measures as appropriate to support international transboundary management of resources.

Objective 6: Promote research and improve the collection of information to better understand groundfish population dynamics, biology and ecology, and to improve assessment procedures in cooperation with the industry.

Objective 7: To the extent possible, maintain a diverse groundfish fishery, including different gear types, vessel sizes, geographic locations, and levels of participation.

Objective 8: Develop biological, economic and social measures of success for the groundfish fishery and resource that insure accountability in achieving fishery management objectives.

Objective 9: Adopt measures consistent with the habitat provisions of the Magnuson-Stevens Act, including identification of Essential Fish Habitat and minimizing impacts on habitat to the extent practicable.

Objective 10: Identify and minimize bycatch, which include regulatory discards, to the extent practicable, and to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.

However, in addition to these broader goals and objectives the NEFMC took the following goals into consideration in the design of the sector allocation process and determination of sector contribution shares:

- 1. Address bycatch issues;
- 2. Simplify management;
- 3. Give industry greater control over their own fate;
- 4. Provide a mechanism for economics to shape the fleet rather than regulations (while working to achieve fishing and biomass targets); and
- 5. Prevent excessive consolidation that would eliminate the day boat fishery

#### c. Key Events and Features

Under the Groundfish Plan a sector is defined as being a "...group of persons (three or more persons, none of which have an ownership interest in the other two persons in the sector) holding limited access vessel permits who have voluntarily entered into a contract and agree to certain fishing restrictions for a specified period of time, and has been granted a Total Allowable Catch (TAC) in order to achieve objectives consistent with applicable FMP goals and objectives." Any such group may request authorization from the NEFMC to operate for the upcoming fishing

year. Once a sector has been authorized by the Council the sector must then be approved by NOAA Fisheries. The approval process includes a requirement to submit a sector Operations Plan that articulates how the sector will distribute its allocation, report and monitor catches, the permit numbers that will be committed to the sector, the regulations from which the sector will request an exemption, and other details that affect the manner in which the sector intends to operate. Individual vessel owners must decide whether or not to join a sector and which sector they will join. The PSC of any vessel that has been committed to a sector must remain with the sector for the entire fishing year even if the vessel itself is sold to another owner. This provision is necessary since it is the combined PSC by all enrolled permits brought into the sector at the beginning of the fishing year that determines the ACE that is assigned to the sector. If a vessel owner does not elect to join a sector then the vessel must fish under the effort control measures for the entire fishing year. Note that it is possible for an individual that owns multiple vessels to place some vessels in more than one sector and some vessels in the common pool.

Since sectors are approved to operate for only one fishing year, the number of sectors may change from one year to the next. This also means that the membership and number of permits that are committed to sectors as well as the number that may opt for the common pool is also subject to change. In the first year of the sector allocation program, a total of 17 different sectors were authorized by the NEFMC and approved by NOAA Fisheries. The number of permits that were enrolled in these sectors represented 54% (765) of all eligible limited access permits, but accounted for nearly 98% of the total sub-ACL allocated to the commercial fishery. One of the 17 sectors was formed by an industry association as a lease-only sector. Any lease-only sector may hold eligible permits with accumulated ACE that can then be made available to vessels in sectors that actively fish for groundfish. During 2011, the number of sectors approved to operate increased to 19 including three lease-only sectors; one of which was a permit bank operated by the State of Maine. The number of eligible permits enrolled in sectors increased to 56% (781) of eligible permits, accounting for approximately 99% of the sub-ACL allocated to the commercial fishery.

#### d. Recent Trends

The Baseline Period refers to the average of the three years (2007-2009) prior to implementation of the sector allocation program in 2010. All data are reported in terms of the groundfish fishing year which begins on May 1 and ends on April 30. This means, for example, that the Baseline Period covers the fishing years beginning on May 1, 2007 and ending on April 30, 2009.

<u>i.</u> <u>Catch and Landings</u> – Annual Catch Limits and catch are reported in live or whole weight. Landed quantities are reported in gutted weight.

Under the Groundfish Plan, the total ACL for each stock is specified in terms of live weight, and total catch (which includes landings and discards) is monitored. A small portion of the total ACL is set aside to account for catches in non-directed fisheries. Sub-ACLs with accompanying Accountability Measures are allocated to account for several sources of mortality including bycatch of haddock in the Atlantic herring fishery, yellowtail flounder in the scallop fishery, state waters, recreational catch, and to the commercial fishery. The sub-ACL allocated to the commercial fishery is sub-divided into a sector sub-ACL or ACE and a common pool sub-ACL. The aggregate ACL allocated to sectors during fishing year 2010 was 179 million pounds and 162 million pounds in 2011. The decline in the 2011 total ACL was anticipated since the ACLs for both 2010 and 2011 were specified under Framework Adjustment 44 to the Groundfish Plan. A substantial portion of the reduced ACL in 2011 is due to the lower Georges Bank haddock ACL as the impact of the extraordinarily large 2003 year class diminishes over time. However, the actual ACE available to sectors during 2011 included carryover of unused ACE from 2010. Including

carryover, the total ACE in 2011 was 179 million pounds, the same as it was during 2010 (Figure 48).

During the 2007-2009 Baseline Period, TTACs averaged a combined 268 million pounds. This Baseline Period average was constructed to approximate the TAC that would be comparable to stocks that were allocated to sectors during 2010 and 2011. The Baseline Period average is significantly higher for several reasons. First, the influence of the 2003 year class of Georges Bank haddock during the Baseline Period was substantially larger than during 2010 or 2011. Second, the fishing mortality rates required for rebuilding differed during the Baseline Period. Last, the target TACs set during the Baseline Period were not required to explicitly account for scientific or management uncertainty. It is probable that had the processes implemented under Amendment 16 been in place during the Baseline Period, the target TACs would have been lower during this period.

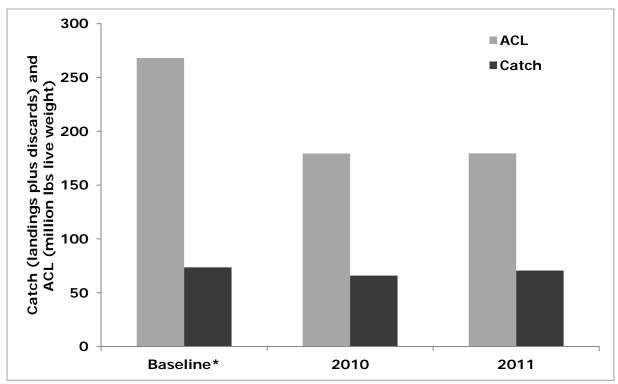


Figure 48. Catch and Baseline Period target TAC and ACLs in the Northeast Multispecies Fishery

Total catch averaged 74 million pounds during the 2007-2009 Baseline Period (Figure 48) for an average utilization rate of 27% (Figure 49). Utilization of the ACE assigned to sectors during 2010 was just under 37% and increased to just over 39% during 2011. This improvement in utilization rate was due to the fact that total catch increased while the 2011 ACE including carryover was the same as it was during 2010. Compared to the Baseline Period, the improved utilization rate in both 2010 and 2011 was partially due to the sector allocation program and partially due to the change in ACL. However, the lower ACL in 2010 and 2011 had a larger influence on the utilization rate than the sector allocation program since the lower ACL (-33%) was substantially greater than the change in catch in both 2010 and 2011.

During the Baseline Period, at least one of the TTACs was exceeded for the allocated groundfish stocks in each year. Specifically, the Southern New England/Mid-Atlantic yellowtail flounder TAC

was exceeded in both 2007 and 2008, the white hake TTAC was exceeded in 2008, and both Gulf of Maine cod and pollock TTACs were exceeded in 2009. None of the sector sub-ACLs were exceeded in either 2010 or 2011.

Landings of groundfish averaged 68 million pounds during the 2007-2009 Baseline Period (Figure 50). Landings declined to 57 million pounds in 2010, but increased to 61 million pounds in 2011. Note that Baseline Period landings only include species that were allocated to sectors during 2010 and 2011. Additionally, Baseline Period landings were estimated only for the vessels that had elected to be in a sector during 2010. This means that the Baseline Period average landings are comparable to landings in 2010 and 2011. Landings during fishing year 2011 improved by 6.9%, but were still about 10% lower than the 2007-2009 average.

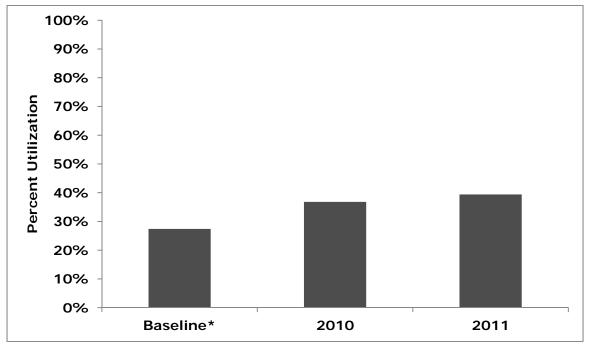


Figure 49. Utilization of Baseline Period catch target and utilization of annual catch entitlement in the Northeast Multispecies Fishery

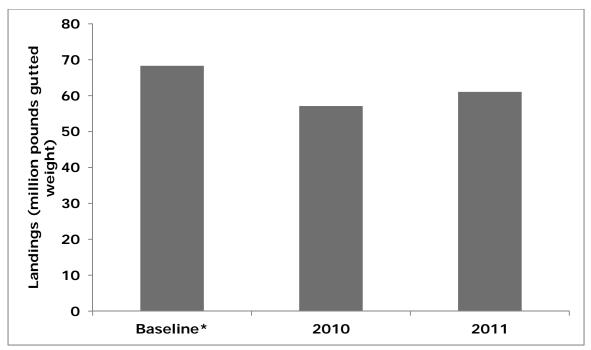


Figure 50. Landings of allocated groundfish species in the Northeast Multispecies Fishery

## ii. Effort

There were a total of 1,401 limited access permits held by vessel owners during the 2007-2009 Baseline Period (Figure 51). These permits represent the potential universe of vessel permits that may be enrolled in a sector. In 2010, the number of eligible vessel permits increased slightly to 1,408, but declined to 1,321 in 2011. During 2010, there were 765 (54% of all eligible) vessel permits with PSC that elected to join a sector. In 2011, the number of vessel permits with PSC that enrolled in a sector increased to 781 or 59% of all eligible vessel permits (Figure 51).

On average, 612 limited access vessels participated in the groundfish fishery (vessels that landed groundfish on at least one trip) during the 2007-2009 Baseline Period (Figure 52). The total number of participating vessels (i.e., sector plus common pool) declined to 445 vessels in 2010 and declined again in 2011 to 420 vessels. The number of active sector vessels was 303 in 2010, while the number of active sector vessels went down slightly to 301 in 2011. In each of these years, the number of active sector vessels as a percent of vessel permits enrolled in sectors was nearly identical at 39.6% and 39.0% in 2010 and 2011, respectively. This level of participation was higher compared to the common pool participation rate, which was 22% in both 2010 and 2011.

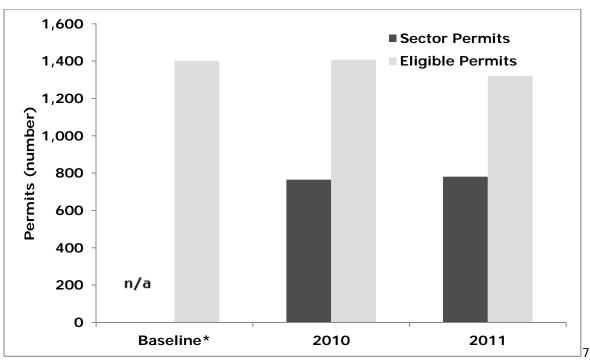


Figure 51. Number of eligible limited access permits and number of sector permits enrolled in the Northeast Multispecies Fishery

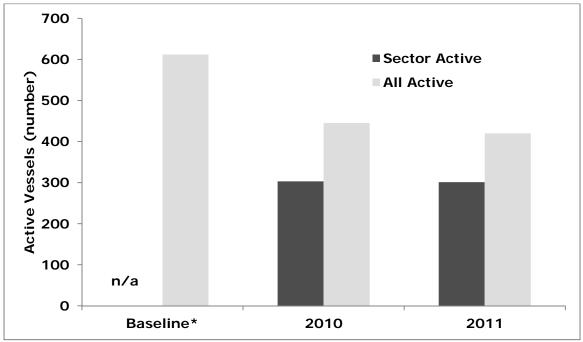


Figure 52. Active vessels (sector plus common pool) and active sector vessels fishing quota in the Northeast Multispecies fishery

On average, 26,500 trips were taken on which allocated groundfish species were landed during the Baseline Period (Figure 53). During 2010, sector vessels took 11,160 groundfish trips. The number of groundfish trips taken during 2011 increased 22% to 13,600 compared to 2010. Total days absent on groundfish trips averaged 26,750 days during the Baseline Period (Figure 54). Total days absent by sector vessels during 2010 were 16,000 days while days absent during 2011 totaled 19,000 days. During 2007-2009, trip duration averaged 24-hours. On average groundfish trip duration for sector vessels was higher during 2010 and 2011, averaging 1.4 days or 33.6 hours per trip.

Taken as a whole, the groundfish fishery is a year-round fishery. Furthermore, it is a multispecies fishery with a high degree of substitutability among species in seafood markets. This means that even in-season adjustments affecting one species or stock have comparatively little impact on the availability of fresh fish to the market throughout the year. With the exception of the three stocks included in the U.S./Canada resource sharing understanding, the target TACs set for the rest of the groundfish fishery were used as a tool to gauge whether or not the Groundfish Plan would need to be adjusted so as not to shut down the fishery during the year. Consequently, the fishery was effectively open for 365 days during the 2007-2009 Baseline Period (Figure 55). The sector allocation program did not change the season length.

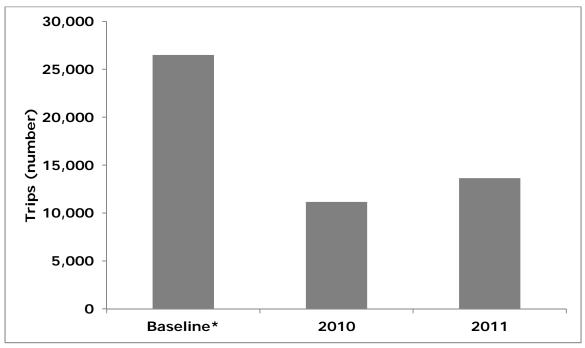


Figure 53. Number of trips taken by sector vessels harvesting groundfish in the Northeast Multispecies Fishery

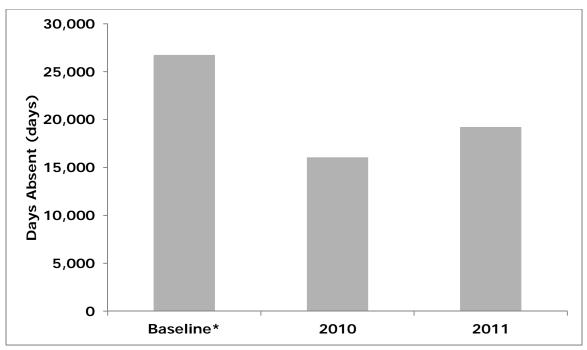


Figure 54. Number of days at sea on groundfish trips by all vessels during the Baseline Period and number of days absent on trips fishing quota in the Northeast Multispecies Fishery

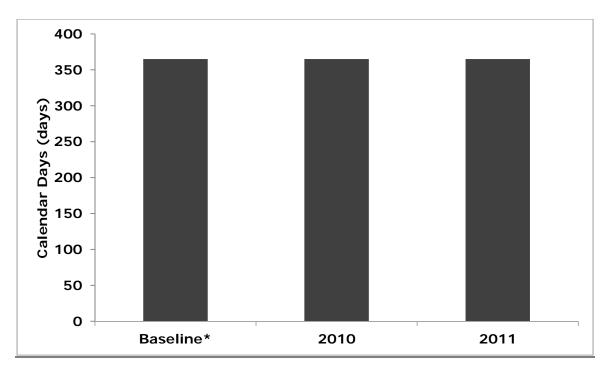


Figure 55. Season length (days) for sector vessels harvesting groundfish in the Northeast Multispecies Fishery

iii. Revenue – All revenue data have been adjusted for inflation using the GDP deflator indexed for 2010.

Total groundfish revenue averaged \$89 million during the Baseline Period (Figure 56). During the first year of the sector allocation program, groundfish revenue declined by 10% to \$81 million. In 2011, groundfish revenue increased 8% over 2010 levels to \$87 million, 97% of the Baseline Period. A substantial amount of revenue is earned from non-groundfish species while fishing for groundfish. Earnings from non-groundfish species comprised 28%, 19%, and 21%, respectively during the Baseline Period and fishing years 2010 and 2011. Total revenue from groundfish trips averaged \$124 million during the Baseline Period. Total sector groundfish trip revenue was \$99 million during 2010 and \$113 million during 2011.

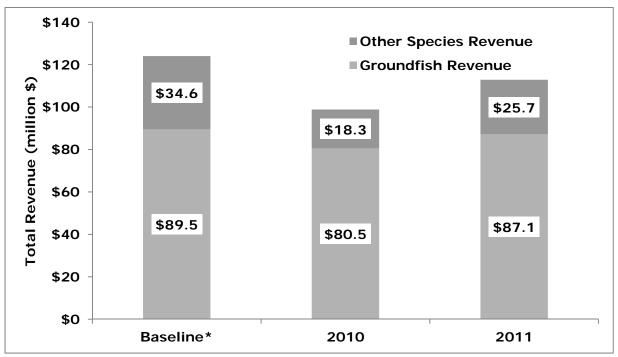


Figure 56. Total groundfish and non-groundfish revenue (inflation-adjusted 2010 dollars) by vessels fishing quota in the Northeast Multispecies Fishery

The average price for all combined groundfish species was \$1.31 per pound during the Baseline Period (Figure 57). Average price during 2010 increased to \$1.41 per pound and was \$1.43 per pound in 2011.

Groundfish revenue per active vessel on groundfish trips averaged \$146,000 during the Baseline Period (Figure 58), while total groundfish trip revenue per active vessel averaged \$203,000. Groundfish revenue per active sector vessel increased in both 2010 and 2011 to \$266,000 and \$289,000, respectively. Similarly total revenue per sector vessel on groundfish trips increased to \$326,000 in 2010 and \$375,000 in 2011. Compared to the Baseline Period, the improvement in revenue per vessel in 2010 was primarily due to the reduced number of vessels. Revenue per sector vessel increased during 2011, which had more to do with the increase in groundfish trip revenue than the small reduction in the number of active sector vessels.

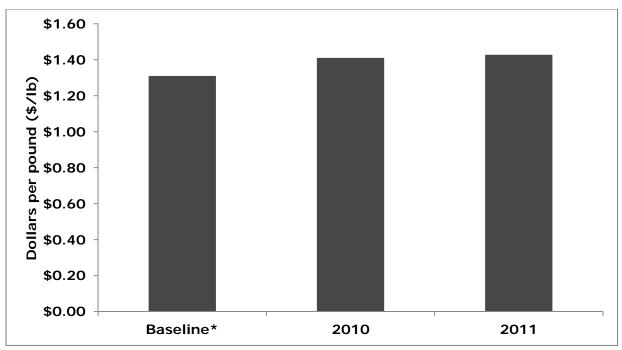


Figure 57. Average combined groundfish price per pound (inflation-adjusted 2010 dollars) in the Northeast Multispecies Fishery

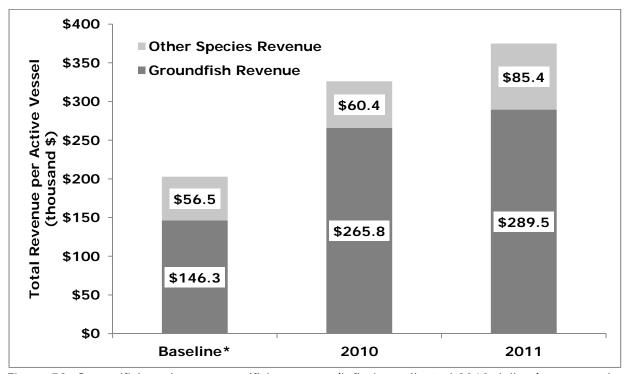


Figure 58. Groundfish and non-groundfish revenue (inflation-adjusted 2010 dollars) per vessel fishing quota in the Northeast Multispecies Fishery

Average groundfish revenue per trip and other revenue per trip were \$3,400 and \$1,300, respectively during the Baseline Period. Compared to the Baseline Period, sector vessel groundfish revenue per trip was higher in 2010 (\$7,200 per trip) and 2011 (\$6,388). Similarly, total revenue per groundfish trip was higher than the Baseline Period in both 2010 (\$8,900) and 2011 (\$8,300). The improvement in average trip revenue was primarily due to the substantial reduction in the number of trips taken during 2010 (58% fewer trips) and 2011 (49% fewer trips). Average groundfish trip revenue was higher during 2010 as compared to 2011 as the total number of groundfish trips taken by sector vessels in 2011 increased proportionally more than the 2011 increase in total groundfish trip revenue (Figure 59).

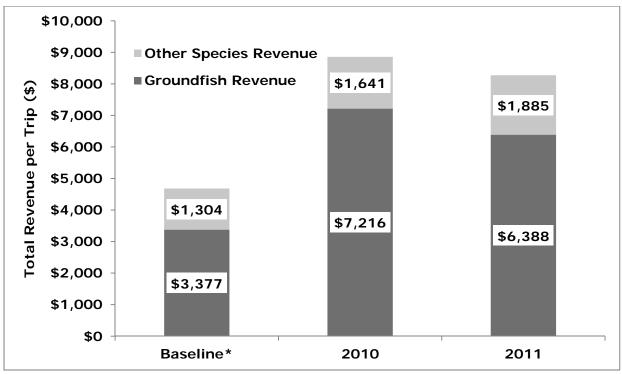


Figure 59. Groundfish and non-groundfish revenue (inflation-adjusted 2010 dollars) per trip that sector vessels fish quota in the Northeast Multispecies Fishery

The pattern for groundfish revenue per day and total revenue per day is identical to that found for revenue per trip. Specifically, both groundfish revenue and total revenue per day during 2010 and 2011 were higher than during the Baseline Period (Figure 60). Also, revenue per day during 2010 was higher than revenue per day during 2011 because days absent on groundfish trips in 2011 increased proportionally more than total revenues on groundfish trips.

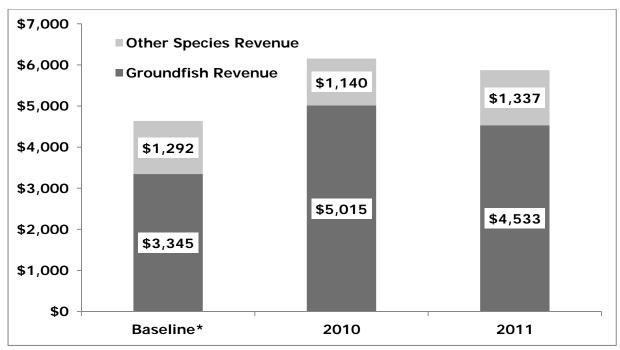


Figure 60. Groundfish and non-groundfish revenue (inflation-adjusted 2010 dollars) per day at sea that vessels fish quota in the Northeast Multispecies Fishery