

NOAA Catch Share Performance Indicator Series

Gulf of Mexico

Red Snapper Individual Fishing Quota Program

NOAA Fisheries has developed standard indicators to measure the economic and biological 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: Prior to the 2007 implementation of the IFQ Program, commercial fishermen raced to harvest the quota before the season was closed. Limited access fishing permits, trip limits, closed seasons, and quotas were the primary management tools used to constrain commercial harvest. Overfishing, overcapacity, and short fishing seasons led to unsafe fishing conditions and created market gluts, reducing ex-vessel prices. High bycatch and discard rates often occurred in the fishery. Red snapper stocks were overfished and subject to overfishing since the late 1980s.

Objectives: The primary objectives of the IFQ Program are to reduce overcapacity and to the extent possible, mitigate derby fishing conditions. Ending the "race to fish" was anticipated to help end overfishing and rebuild Gulf of Mexico red snapper, eliminate seasonal closures, increase market stability, increase flexibility and efficiency of fishing operations, improve safety at sea, improve management, compliance, and provide biological benefits to other marine resources.

Key Management Events: Coincident with the introduction of the IFQ in 2007, the commercial quota was also reduced from 4.2 million pounds in 2006 to 3.0 million pounds in 2007 and to 2.3 million pounds in 2008 and 2009. These reductions in quota were implemented to end overfishing and rebuild Gulf of Mexico red snapper stocks and would have occurred regardless of whether the catch share program was implemented. In 2010 and 2011, quota was increased to 3.2 and 3.3 million pounds, respectively. Utilization of the quota has remained constant from the Baseline Period* through 2011.

Performance Trends: As quota fell from 2007 – 2009, red snapper revenue also declined (by 21%), but not as sharply as landings due to higher prices. In 2010, this trend reversed: the quota was raised by 39% compared to the previous year and revenue increased 28%. In 2011, the quota was increased 3% and red snapper revenue increased 13% over the previous year.

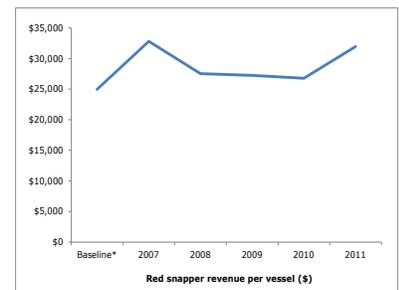
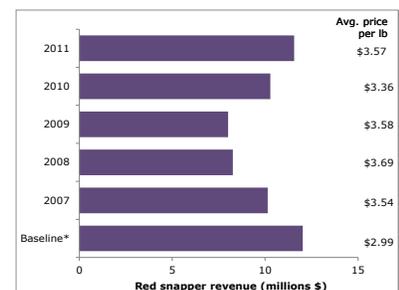
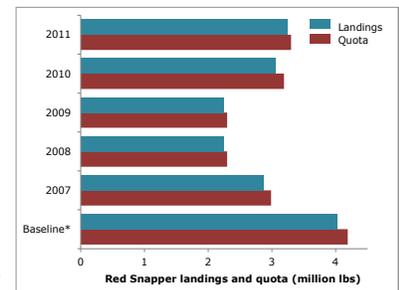
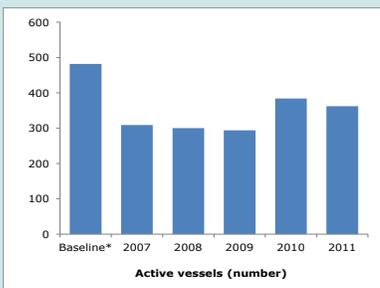
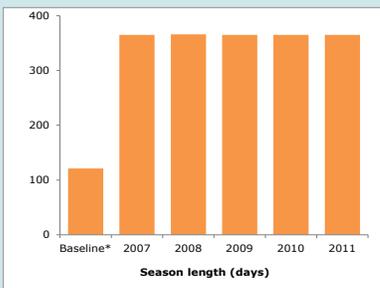
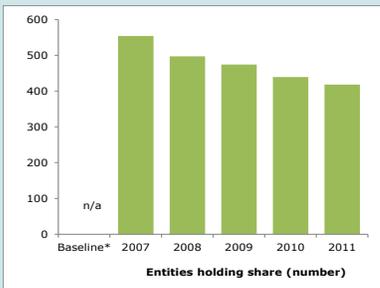
Economic efficiency, as measured by revenue per vessel, increased in 2007 relative to the Baseline Period* by 31%. Revenue per vessel fluctuated slightly over time but has always been higher than the Baseline Period* and is currently 26% greater than the Baseline Period*. Capacity reduction has also been achieved under the IFQ Program, albeit there has been a slight increase in active vessels in 2010 and 2011 relative to previous years, in part due to higher quotas and in part due to more vessels participating in the IFQ Program. Derby fishing was also ended, with season length increasing from 121 days during the Baseline Period* to a full-year, 365 day fishery under the IFQ Program.

Since the IFQ Program began, the number of shareholders declined by 25% compared to the Baseline Period*, with more shares now held by fishermen residing in Florida and less shares held by other Gulf fishermen.

*Baseline Period refers to average of three years prior to Red Snapper IFQ implementation (2004-2006).



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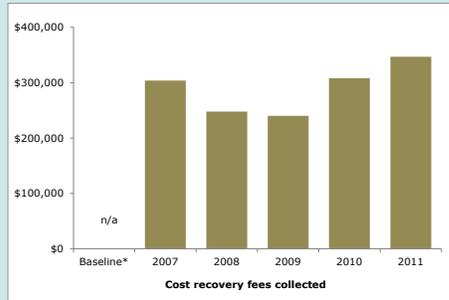
For more information contact:

Ayeisha Brinson
ayeisha.brinson@noaa.gov

Eric Thunberg
eric.thunberg@noaa.gov

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

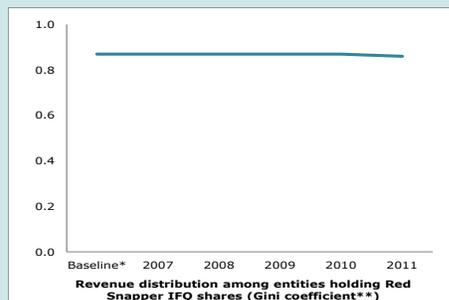
The cost recovery fee established for the Red Snapper IFQ Program is currently 3% of the ex-vessel value of Gulf red snapper. IFQ holders are responsible for paying a fee to dealers purchasing red snapper. These dealers in turn submit these fees on a quarterly basis to NOAA Fisheries.



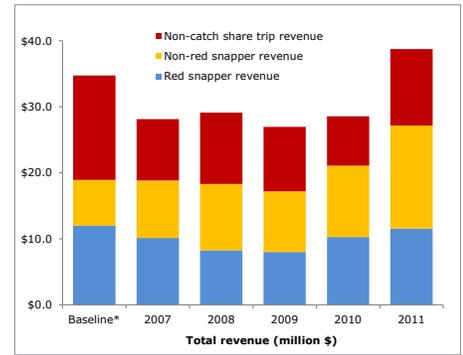
Share Caps: The purpose of share caps is to prevent individual shareholders from controlling production and prices, as well as to achieve management objectives, per the Magnuson-Stevens Act and the National Standards. The share ownership cap for this IFQ Program is 6.0203%.

Revenue Distribution: The Gini coefficient measures the evenness of a distribution. Here, it measures the distribution of revenue among entities holding shares in the Red Snapper 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.

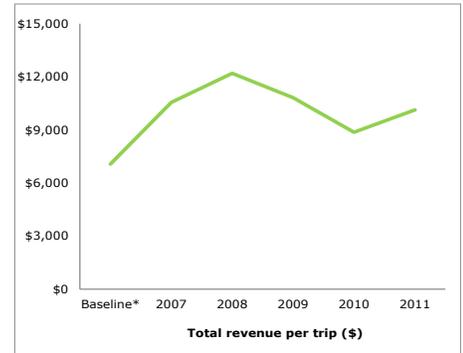
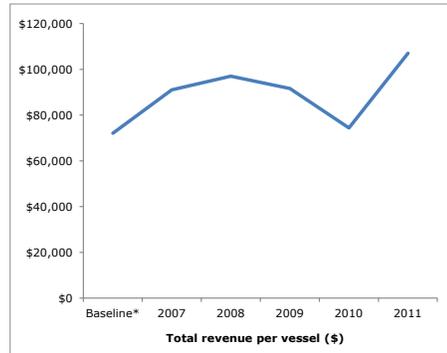
Prior to implementation of the Gulf of Mexico Red Snapper IFQ Program, the Gini coefficient was 0.87 during the Baseline Period* and remained at this amount until 2011, when the Gini coefficient slightly reduced to 0.86.



Total Revenue: The Gulf of Mexico Red Snapper IFQ Program is a multi-species fishery where red snapper and other reef fish species are caught on the same trips. While red snapper are managed under an IFQ Program, the other harvested species may not be managed by a catch share program. Vessels who participate in this IFQ Program generate revenue from landings of red snapper, as well as other species on red snapper 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 red snapper trips (red snapper and non-red snapper revenue) and non-red snapper trips was \$35 million during the Baseline Period*. Total revenue initially decreased (by 19%) to \$28 million upon implementation of the IFQ Program in 2007, when compared to the Baseline Period*. In 2011, total revenue was \$39 million, a 12% increase over total revenue during the Baseline Period*. During the Baseline Period*, red snapper revenue accounted for 35% of total revenue, non-red snapper revenue on red snapper trips accounted for 20% of total revenue and non-catch share trip revenue accounted for 46% of total revenue. Since implementation of the Program, non-red snapper revenue on red snapper trips has become increasingly important and accounted for 40% of total revenue in 2011, while red snapper revenue and non-catch share revenue each accounted for one-third of total revenue.



Total revenue per vessel and **total revenue per trip** both initially increased in 2007 when the IFQ Program began. While both of these metrics decreased in 2009 and 2010, these metrics were still higher than the Baseline Period. In 2011, both of these metrics increased (by 44% for total revenue per vessel and 14% for total revenue per trip) when compared to the previous year. This was most likely due to a decreasing number of active vessels and an increase in the number of trips where red snapper were landed.

Catch Limits: In 2006 the commercial quota was exceeded for red snapper. Since implementation of the IFQ Program in 2007, the red snapper commercial quota has not been exceeded.

Other Trends: In 2010, the Deepwater Horizon accident and resulting oil spill severely affected Gulf fisheries. Large parts of the Gulf of Mexico, including state and federal waters, were closed to fishing during May through November 2010. Despite these closures, the commercial red snapper sector was less affected by the oil spill because fishermen were able to transfer quota allocation during the oil spill to fishermen fishing in other areas of the Gulf of Mexico or use their quota allocation once these areas were reopened.

For more detailed information on the Gulf of Mexico Red Snapper IFQ Program, please visit: <http://sero.nmfs.noaa.gov/sf/GulfReefFishIFQ.htm>

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 Red Snapper IFQ implementation (2004-2006).

**0 = perfect equality; 1 = perfect inequality

NOAA Catch Share Performance Indicator Series

Gulf of Mexico

Grouper-Tilefish 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: Regulations prior to the implementation of the IFQ Program resulted in a race to fish that led to early closures and quota overages of some species. Limited access fishing permits, trip limits, closed seasons and quotas were the primary management tools.

Objectives: The Grouper-Tilefish IFQ Program was implemented to reduce overcapacity and mitigate the race to fish the grouper-tilefish segment in the commercial reef fish fishery. Ending the "race to fish" is anticipated to help end overfishing and rebuild Gulf of Mexico grouper and tilefish stocks, eliminate seasonal closures, increase market stability, increase flexibility and efficiency of fishing operations, improve safety at sea, improve management and compliance, and provide biological benefits to groupers and tilefish and other marine resources.

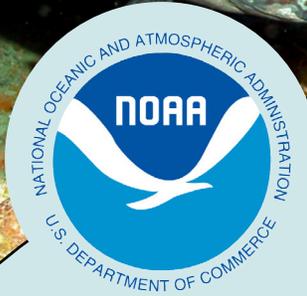
Key Management Events: With the introduction of the IFQ Program in 2010, commercial closures were eliminated, as fishermen were allocated percentages of the grouper-tilefish quotas based on historical participation. The quota allocated in 2010 was 800,000 pounds less than the Baseline Period*; the 2011 quota was 1.5 million pounds less than the 2010 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. Quota utilization was lower in 2010 (50%) when compared to the Baseline Period* (70%), but increased in 2011 to 86%.

The Deepwater Horizon Oil Spill led to large-scale area closures, confounding evaluation of the IFQ Program. Grouper-Tilefish landings in 2010 were reduced due in part to these area closures.

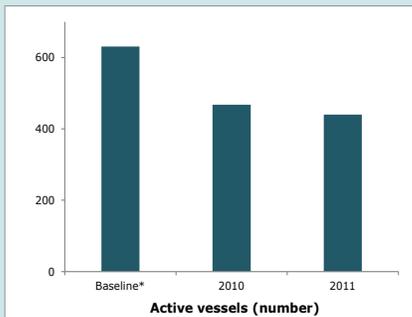
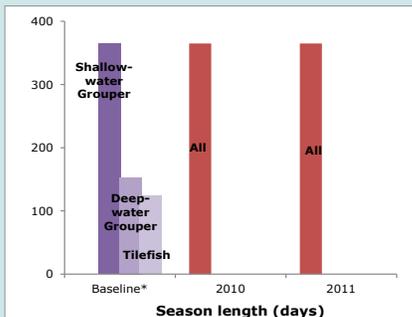
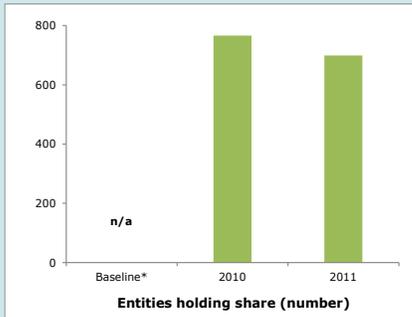
Performance Trends: The race to fish was ended with the implementation of the IFQ Program. During the Baseline Period*, season length had varied from 124-365 days but is now 365 days for all segments of the fishery. Capacity was also reduced, with the number of active vessels decreasing by 25% in the first year of the IFQ Program and by 6% in 2011 relative to 2010. Economic efficiency, as measured by revenue per vessel, declined by 11% in 2010 relative to the Baseline Period*, but increased by 54% in 2011 over 2010 levels.

As quota fell from Baseline Period* levels in order to rebuild stocks, grouper-tilefish revenue declined by 68% in 2010. However, despite the further reduction in quota in 2011, grouper-tilefish revenue increased by 47% to \$21 million in 2011 and is essentially equivalent to landings revenue in the Baseline Period*.

*Baseline Period refers to average of three years prior to Grouper-Tilefish IFQ implementation (2007-2009).



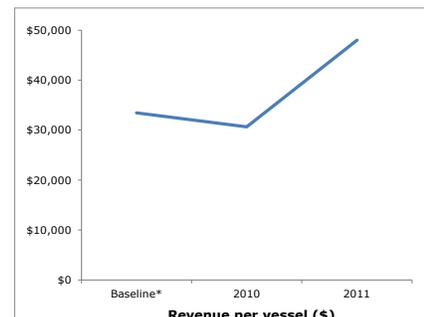
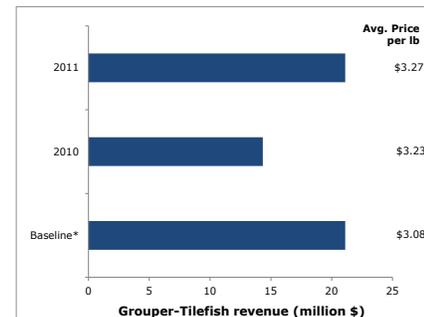
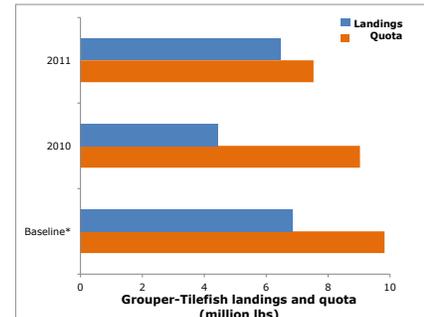
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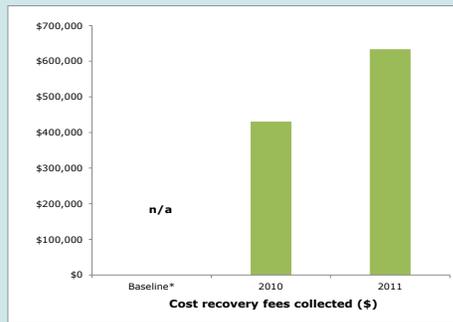
For more information contact:

Ayeisha Brinson
ayeisha.brinson@noaa.gov

Eric Thunberg
eric.thunberg@noaa.gov



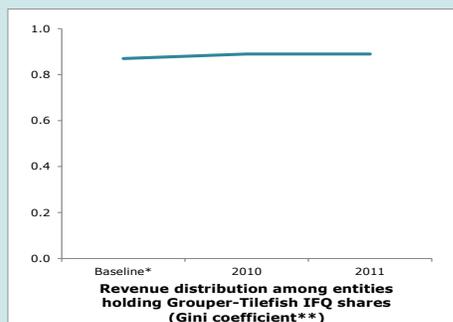
Cost Recovery Fees: The Magnuson-Stevens Act requires the Secretary to adopt regulations implementing a cost recovery program to recover the actual cost of managing and enforcing limited access privilege programs. The cost recovery fee established for the Grouper-Tilefish IFQ Program is currently 3% percent of the actual ex-vessel value of the various grouper/tilefish species.



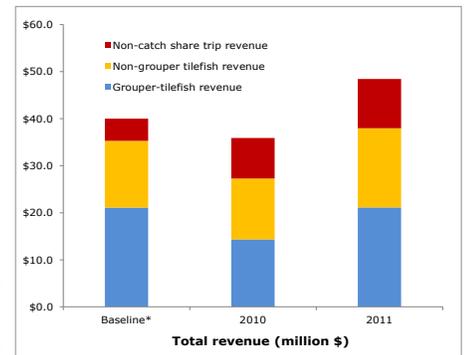
Share Caps: The purpose of share caps is to prevent individual shareholders from controlling production and prices, as well as to achieve management objectives, per the Magnuson-Stevens Act and the National Standards. The share ownership cap is 2.3-14.7% in the IFQ Program, depending on the fishery segment.

Revenue Distribution: The Gini coefficient measures the evenness of a distribution. Here, it measures the distribution of revenue among entities holding shares in the Grouper-Tilefish 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.

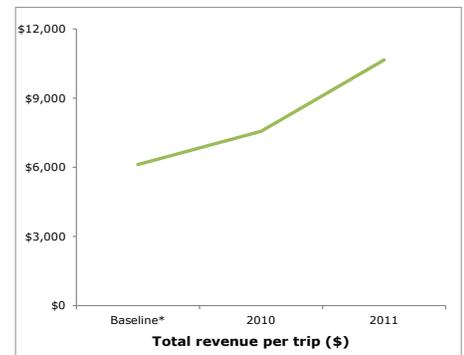
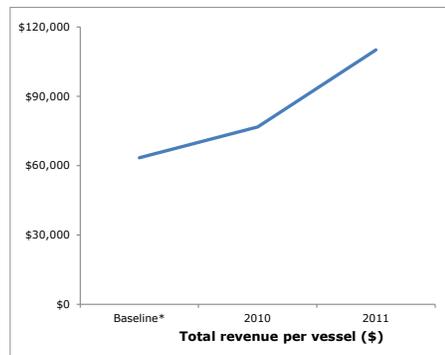
Prior to implementation of the Gulf of Mexico Grouper-Tilefish IFQ Program, the Gini coefficient was 0.87 during the Baseline Period*. In 2010, the Gini coefficient increased slightly to 0.89 and remained at this level in 2011.



Total Revenue: The Gulf of Mexico Grouper-Tilefish IFQ Program is a multi-species fishery where deep-water groupers, shallow-water groupers and tilefish are caught on the same trips. While grouper-tilefish are managed under an IFQ Program, the other harvested species may not be managed by a catch share program. Vessels who participate in this IFQ Program generate revenue from landings of groupers and tilefish, as well as other species on grouper-tilefish 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 grouper-tilefish trips (grouper-tilefish and non-grouper tilefish revenue) and non-grouper-tilefish trips was \$40 million during the Baseline Period*. Total revenue decreased by 10% to \$36 million in 2010 and increased by 35% to \$48 million in 2011; total revenue in 2011 was 21% greater than total revenue during the Baseline Period*. During the Baseline Period*, grouper-tilefish revenue accounted for 53% of vessels' total revenue, revenue from non-grouper tilefish on grouper-tilefish trips accounted for approximately 35% of total revenue and non-catch share revenue accounted for 12% of total revenue. Upon implementation of the Catch Share Program in 2010, the proportion of grouper-tilefish to total revenue decreased to approximately 40% of total revenue, while non-catch share trip revenue increased and accounted for approximately 20% of total revenue.



Total revenue per vessel and **total revenue per trip** both increased when the IFQ Program began relative to the Baseline Period*, however the 2011 levels were 43% and 41% higher than 2010 levels, respectively. This was due to an increase in revenue, coupled with a decreasing number of active vessels and trips targeting groupers and tilefish.

Annual Catch Limits: During the three years prior to implementation of the IFQ Program, the commercial quota was exceeded for deep-water groupers and tilefish, but not for shallow-water groupers. The commercial quota was not exceeded for any of the three species complexes in 2010 or 2011.

Other Trends: In 2010, the Deepwater Horizon accident and resulting oil spill severely affected Gulf fisheries. Large parts of the Gulf of Mexico, including state and federal waters, were closed to fishing during May through November 2010.

For more detailed information on the Gulf of Mexico Grouper-Tilefish IFQ program, please visit: <http://sero.nmfs.noaa.gov/sf/GulfReefFishIFQ.htm>

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