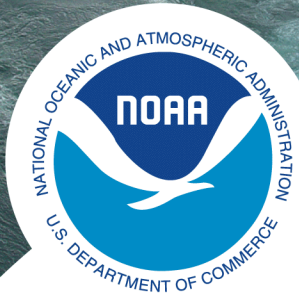




Halibut and Sablefish IFQ Program Review – Review Draft



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Presentation to the NPFMC
Marysia Szymkowiak

October 2016

Presentation objective



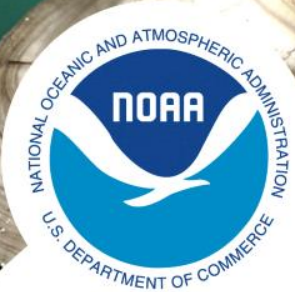
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- Walk through the IFQ Review
 - Highlight the key findings of each section
 - Note the objectives that the program may not have met or may not be currently meeting
- Feedback on any necessary improvements to this iteration of the IFQ Program Review
- Identify which data and information gaps are most critical to evaluation of the IFQ Program, for future reviews

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Requirement and scope of the review



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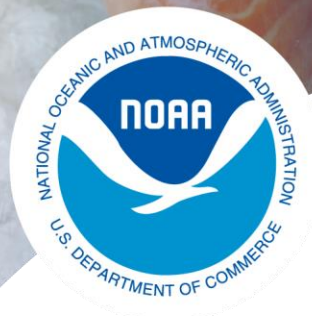
IFQ Program Review was conducted to be in compliance with the Magnuson-Stevens Act (MSA)

- MSA does not specify a checklist of required elements for LAPP reviews

Council, AP, and SSC reviewed and approved the work-plan for the review

- Performance of the program in relation to its 10 original policy objectives
 - Plus, entry opportunities and NMFS management issues

Limitations of the Review



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Evaluating programmatic success is difficult

- Some programmatic objectives are inherently conflicting
- Objectives are broad and do not include specific, measurable targets

Causal claims are largely not made

- Except from previously-conducted research

Examine trends in metrics, which are consistent with programmatic objectives

Draft review with Council, AP, SSC, and public comment informing revisions

Data and information utilized



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Quantitative data sources

- Harvest and administrative data - NMFS RAM and AKFIN
- Processor data - ADF&G's COAR data
- Loan data - NMFS's IFQ loan program data and Alaska DCCED's loan data
- Biological management data – IPHC and AFSC
- Monitoring and enforcement data – NOAA and USCG
- Safety data – NIOSH and USCG

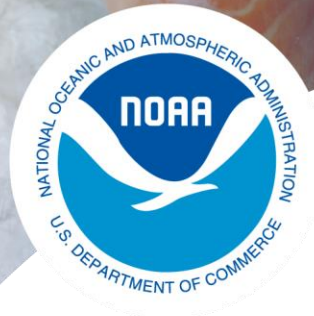
Qualitative information

- IFQ crew workshop held at April 2016 Council meeting
- Conversations with processor representatives, a tender representative, and IFQ participants

Baseline period

- Average of the values of the 3 years preceding the IFQ program (1992 through 1994)
- Less strategic behavior (IFQ program was adopted by Council in October 1992)
- Concerns about reliability of data further back in time

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1.2 Description of the IFQ Program

QS issued by vessel class

QS block program and sweep up provision

- 20K pounds or less in 1994 issued as blocked
- Small QS blocks can be “swept-up” into larger blocks

Fish up/fish down provisions

- Move IFQ across vessel classes

Overage/underage provision

- Up to 10% of remaining balance may be adjusted in following year

IFQ leasing and hired master use

- Leasing allowed for Class A IFQ and catcher vessel IFQ under medical, beneficiary, military, CQE, and GAF leases

QS use and vessel IFQ caps

- Southeast Alaska specific caps

2.1 Overarching trends and external impacts on IFQ participants



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2.1.1 Changes in season duration, TACs, and revenues

- Elongation of seasons from 24-hour openers to 8+ months
- TACs have generally declined since 2004
 - After halibut TAC increase (relative to baseline) in late 1990s
 - Sablefish TACs have been lower than baseline but were increasing in early 2000s
- Increasing ex-vessel prices buffered TAC declines

2.1.2 Impacts on IFQ fishermen external to the IFQ Program

- More limited entry and catch share programs and increasing entry prices, decreasing TACs and revenues in some alternative fisheries, and migration of fishing permits from rural communities
- Diversification more important for lenders
- Increasing USCG and EPA regulations

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2.2 Initial Allocation Process



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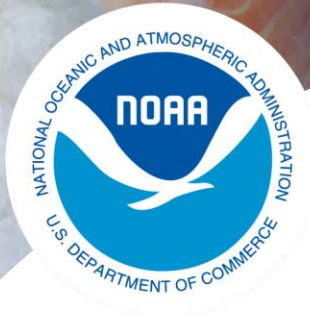
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Based on a three-year qualifying period (1988-1990) and the sum of the best five years of landings (mid 1980s to 1990)

- To those who had owned or leased a vessel with fixed gear halibut or sablefish landings
- Allowed the Council to fulfill Objectives 2 and 3
 - Link initial allocations to recent dependence (Obj. 2)
 - Broadly distribute QS (Obj. 3)
- QS allocated to larger number of participants than would have participated in any one year
- QS allocations that resulted in uneconomical amounts of IFQ
 - Large QS transfer rates in first several years of IFQ
 - Council adjusted policies on consolidation of small QS amounts – increasing pounds for sweep ups

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2.3 Harvesting flexibility, capacity, and consolidation



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- Several IFQ Program objectives relate to addressing issues with overcapacity while limiting consolidation and maintaining fleet diversity:
 - Objective 1 – excess harvesting capacity, allocation conflicts, gear conflicts, product wholesomeness
 - Objective 4 – maintain the diversity in the fleet with respect to vessel categories
 - Objective 7 – limit the concentration of QS ownership and IFQ usage that will occur over time
- Section 2.3 consists of several sub-sections

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Sections 2.3.1 & 2.3.2



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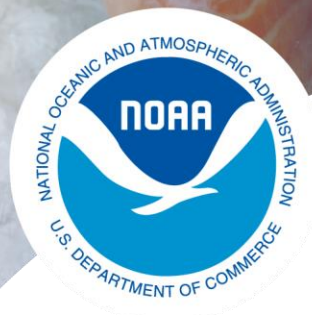
2.3.1 Gear Conflicts

- Objective 1
- IFQ expected impacts
 - Decrease gear conflicts b/w fixed-gear fishermen
 - Maybe increase conflicts b/w fixed-gear and trawl fishermen
- No quantitative data on gear conflicts
 - Previous research indicated reduction in congestion on fishing grounds (Knapp, 1997; Sigler and Lunsford, 2001)
- Council has iteratively lifted restrictions on longline pot gear in the sablefish IFQ fishery

2.3.2 Allocation Conflicts

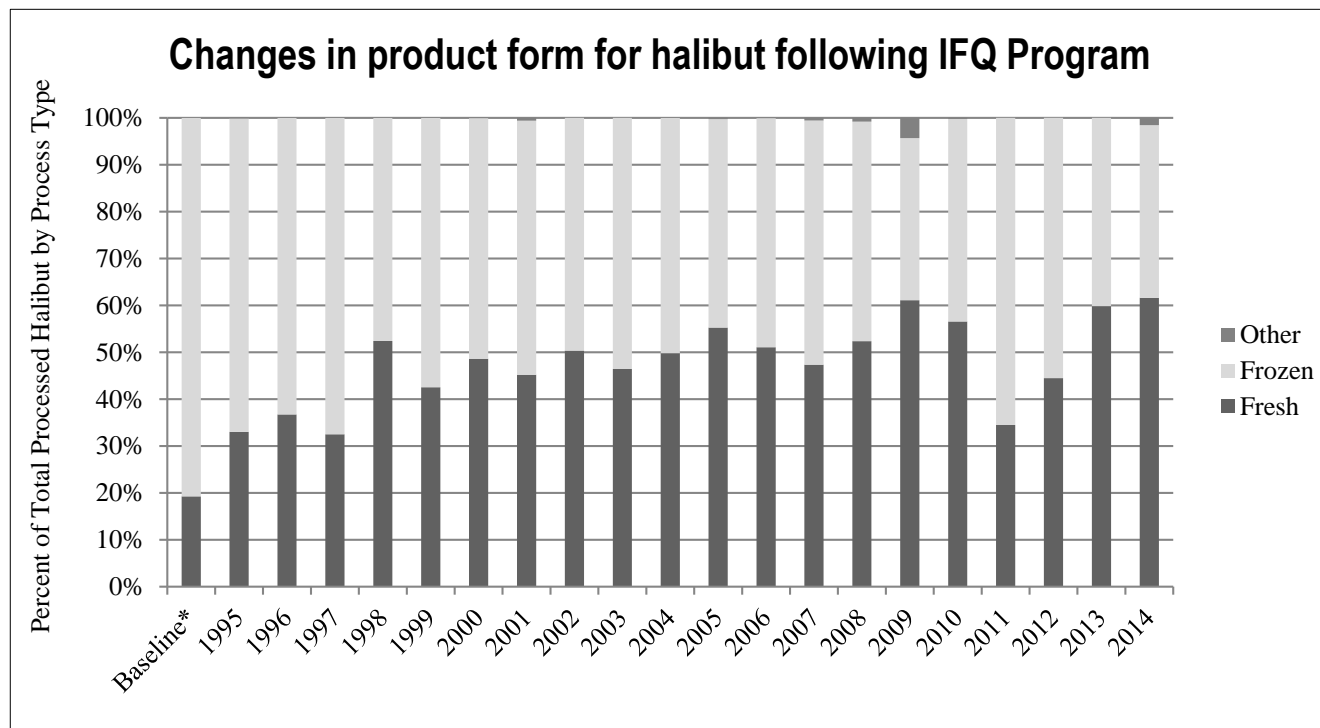
- Objective 1
- Section focuses on administrative appeals over initial allocations
- 18% of initial QS applications were denied
 - 10% (191) appealed
- Impetus for allocation appeals seems to have diminished over time

2.3.3 Product Wholesomeness



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- Objective 1 – product wholesomeness
- Wholesale and ex-vessel prices have increased for both species
- Research indicates increase in price as a result of IFQs for both species (Hermann and Criddle, 2006; Warpinski, Hermann, Greenberg and Criddle, 2016)

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2.3.4 Harvesting Flexibility

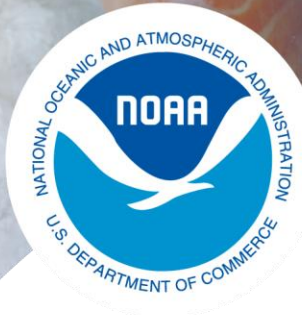


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- Underage/overage provision is highly utilized
 - Uncertainties over CPUE
 - May prevent highgrading
 - Annual underage adjustments exceed overage adjustments
 - Overage violations (above 10%)
 - 0.7% to 1.2% of all IFQ permit accounts from 2005 to 2015
- Area 4C IFQ and CDQ harvest in Area 4D (2005)
 - In response to low catch rates and localized depletion
 - Combined harvests of 4C and 4D TACs have increased
 - Annual underage adjustments have decreased slightly for 4C and increased slightly for 4D
 - Increased competition

2.3.5 Fleet Diversity



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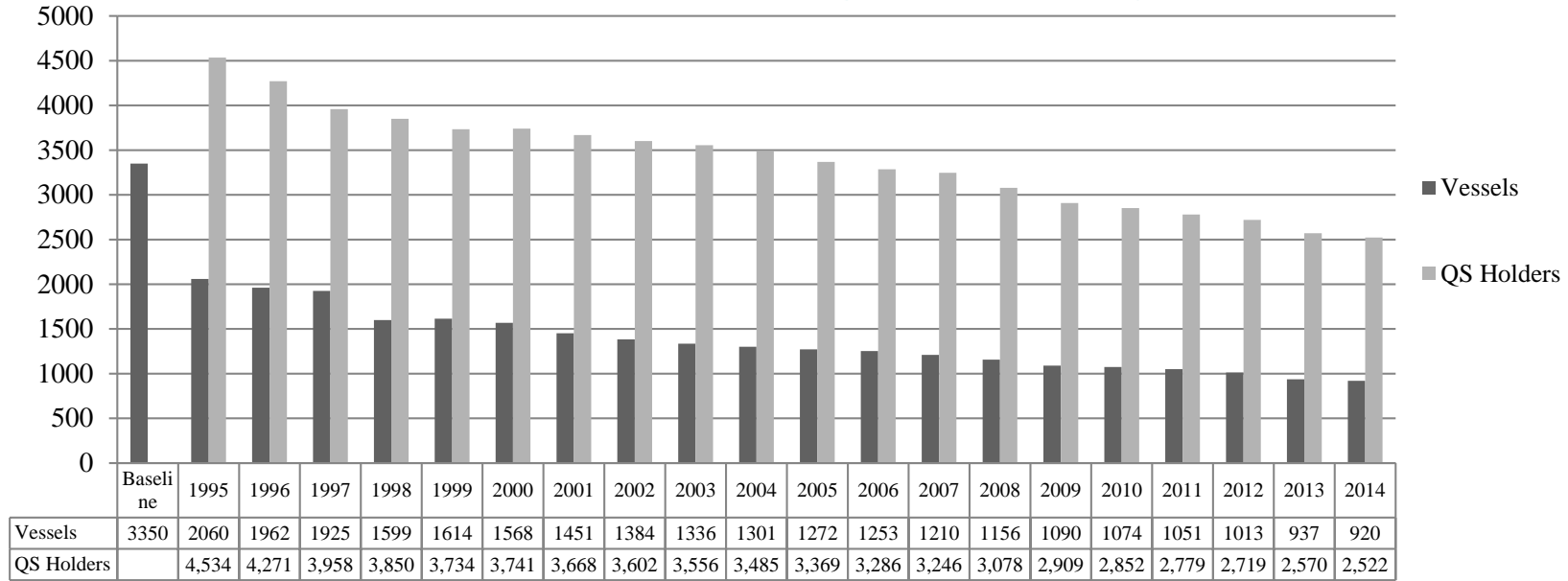
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- Objective 4 – maintain the diversity in the fleet with respect to vessel categories
- QS distributions fixed at initial allocation
- Fish up and fish down amendments allow for movement of IFQ between classes
 - Halibut – increasing portion of landings on mid-size vessels (35 to 60 ft.) and composition of fleet is changing towards these vessels
 - Sablefish – after a slight increase in landings by larger vessel class, composition of fleet has gone back to baseline
- Diversification
 - Increase in percent of vessels fishing across multiple IFQ areas and both IFQ fisheries
 - Kasperski and Holland (2013) found sig. reduction in diversification following IFQ
- Production efficiency costs
 - 25% and 9% of gross ex-vessel revenues for halibut and sablefish, respectively (Kroetz, Sanchirico, and Lew 2015)

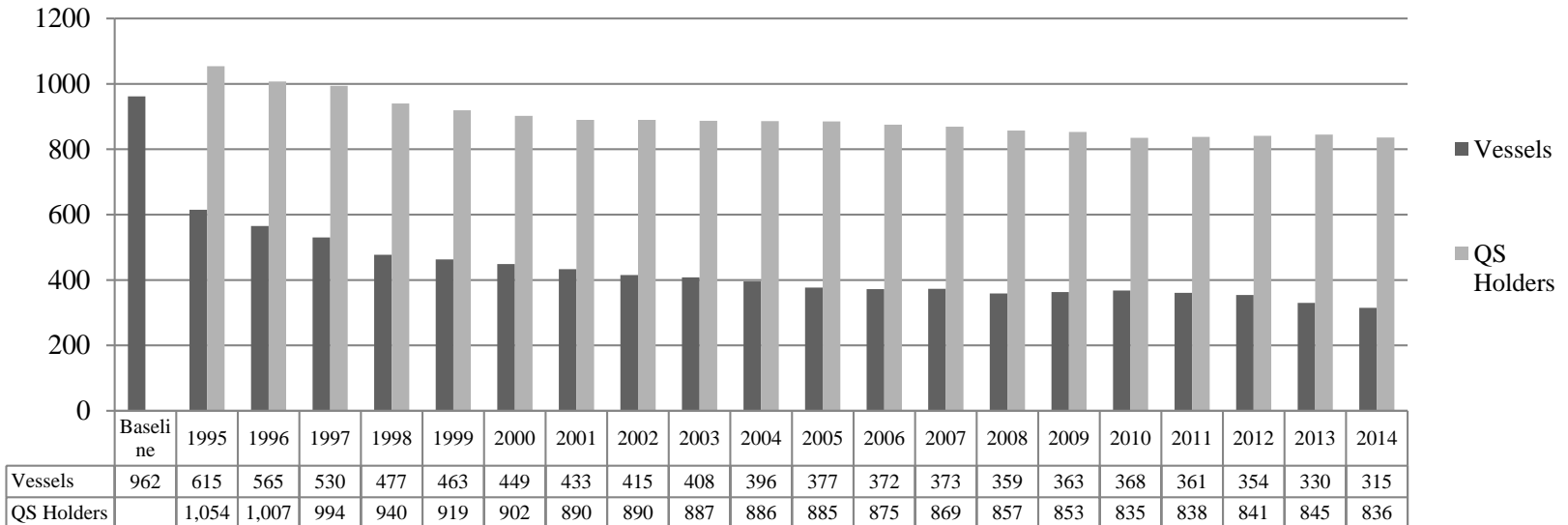
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2.3.6 Harvesting Capacity

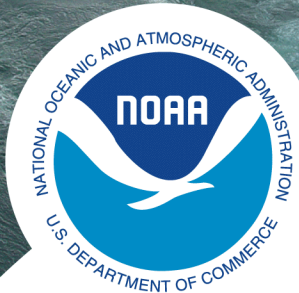
Halibut



Sablefish



2.3.6 Harvesting Capacity



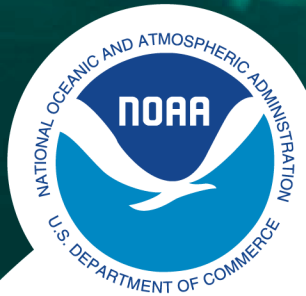
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- Objective 1 (excess harvesting capacity) and Objective 7 (limit consolidation)
- IFQs have contained harvesting capacity - harvests have not exceeded TACs
- Vessel IFQ caps and QS use caps are generally not constraining
 - Although percent of vessels and QS holders near cap has generally increased
 - 5-6% of vessels, 1-4% of QS holders within 10% of “all areas” caps
 - Sablefish Southeast vessel use cap is most binding (21% of vessels)
- Gini and HHI of vessel IFQ revenue distributions
 - Gini: measures evenness of a distribution
 - Halibut – less even distribution of revenues since IFQ
 - Sablefish – more even distribution of revenues since IFQ
 - HHI: measures market concentration
 - Halibut & sablefish – increase in revenue concentration since IFQ

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2.4.1 Crew Impacts



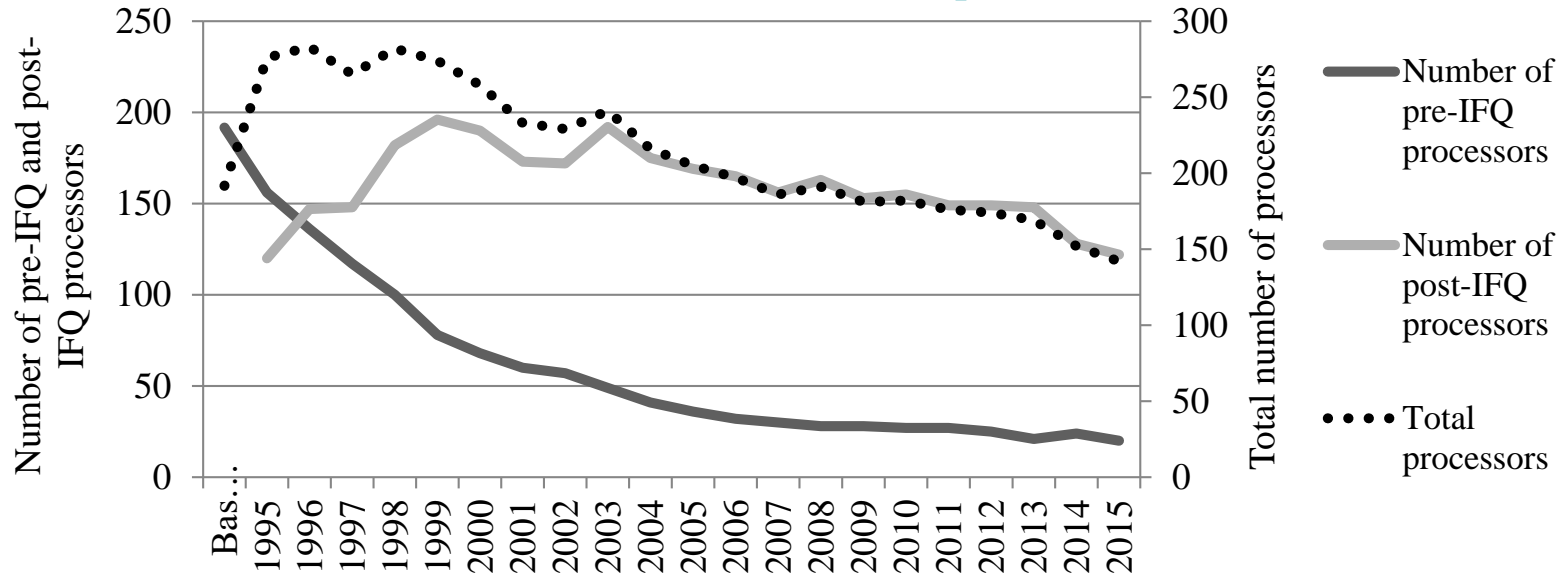
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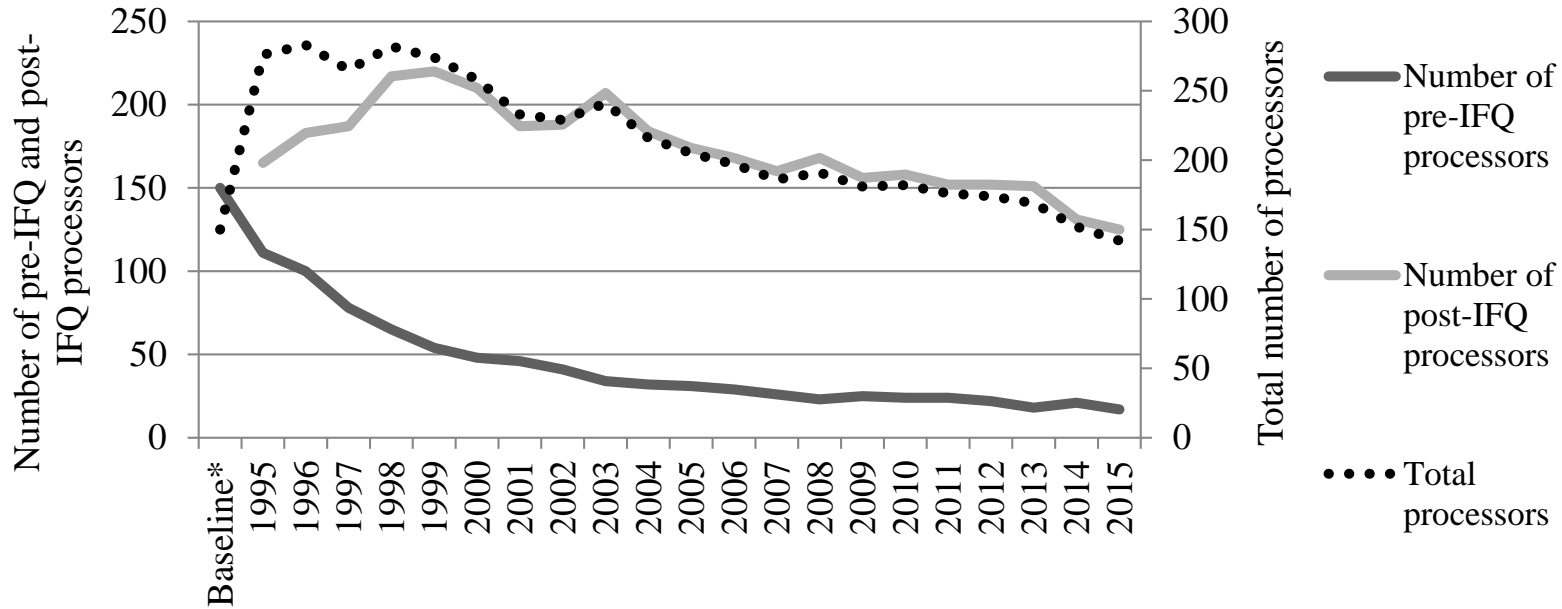
- Objective 5 - Maintain the existing business relationships among vessel owners, crews, and processors
- Crew Impacts
 - Dearth of data > IFQ crew workshop and previous research
 - Loss of several thousand crew jobs
 - Likely decrease in bargaining strength & crew shares
 - Average crew earnings have likely increased and become more stable, though not for all participants
- IFQ Program changed the business relationships b/w vessel owners and crews
- **Obj. 5 may or may not have been met**

2.4.2 Processor Impacts

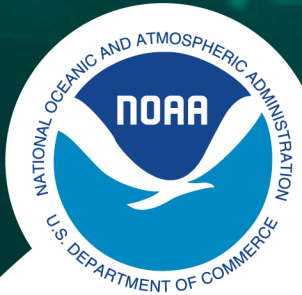
Halibut



Sablefish



2.4.2 Processor Impacts

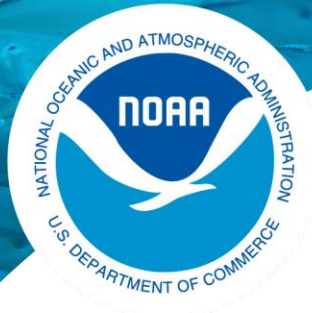


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- Objective 5 - Maintain the existing business relationships among vessel owners, crews, and processors
- Increasing diversification of pre-IFQ processors into the other IFQ species
- Decreasing bargaining strength for processors
 - As demonstrated by changing processor price margins and previous research
 - Relative to pre-IFQ, more equal with harvesters
- Role of tenders was eliminated
- **Obj. 5 may or may not have been met**

2.5 Owner-operator characteristic

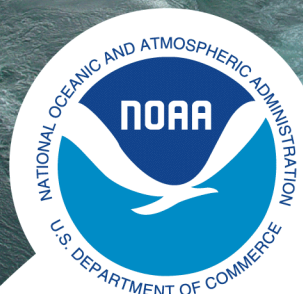


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- Objective 6 - Assure that IFQ fisheries are dominated by owner/operator operations.
- Owner-operator rules focus on catcher vessel QS
- Increase in formal leasing of catcher vessel IFQ
 - Beneficiary, medical, CQE, and GAF
 - Repeated use of medical lease provision
 - 2 out of 5 years for the same medical condition
- Increase in hired master use for catcher vessel IFQ harvest
 - Despite transfers of catcher vessel QS to individuals and regulatory amendments
 - From 1995 to 2014, halibut - 13% to 40%; and sablefish – 12% to 55% of total harvest
 - Although, decrease in hired master use over the last several years
- Some evidence of increasing lease rates
- Formidable incentives for leasing > walk-ons, ride-ons
- **Objective 6 may or may not have been met**

2.6 Entry Opportunities



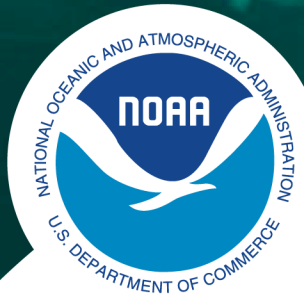
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- Provisions included in the program to provide entry opportunities
 - Block program, fish down provision, vessel and QS use caps
- New entrants hold a majority of the QS in both fisheries
 - Smaller average holdings than initial recipients
 - QS holdings distributions across the vessel classes are generally aligned with total distributions across the classes
 - Rate of entry has fallen over time
- Right-skewed age distribution of initial recipients and increasing use of hired masters > likely stymied new entry opportunities
- Gift QS transfers and transfers b/w family members have increased
 - Tax considerations
- Lenders increasingly relying on secondary collateral, income diversification, and down payments to assess credit risk

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2.7 Community Impacts



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- Objective 1 - Provide economic stability to coastal communities;
- Objective 8 - Limit the adjustment costs to Alaska coastal communities;
- Objective 9 - Provide rural coastal communities adjacent to the Bering Sea with the opportunity to participate in the IFQ fisheries (CDQ Program)
- Shoreside landings at Alaska processors of both IFQ species have increased
- Proportion of QS held by Alaska residents has been stable, decreased slightly for WA residents, remained stable for OR residents, and increased slightly for residents of other states
- For both IFQ fisheries, there have been substantial changes in processing and harvesting engagement at the community level since IFQ
 - Communities' engagement may be high in one sector and not the other and may have changed differently since IFQ
- **This sub-set of Objective 1 and Objective 8 may or may not have been met**
 - **Depending on whether one considers impacts at the aggregated level or for individual communities, the baseline used, the metric, etc.**

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2.7 Continued



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- Objective 1 - Rural coastal community development of a small boat fleet
- IFQ Program Review examined changes in IFQ landings and QS holdings for “rural” Alaska communities
 - Rural = community with population of fewer than 2,500 people
 - The percent of IFQ landed in rural Alaska communities has been relatively stable
 - Movement of landings away from more remote communities
 - Of the total QS held by Alaskans, the percent held by rural Alaska residents has remained relatively stable
 - Movement of QS holdings away from more remote communities
- This sub-set of Objective 1 may or may not have been met
 - Depending on how rural communities are defined, baseline, metric

2.8 Safety



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- Objective 1 – 10 problem areas: safety
- USCG search and rescue data and the NIOSH safety assessment both indicate a slightly decreasing trend in hazards following IFQ
 - IFQ crew workshop participants noted safety improvements due to the IFQ program and USCG requirements
- Fatalities have continued to occur post-IFQ

2.9 Biological Management



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Deadloss from lost or abandoned gear (Obj. 1)

- Amount of halibut mortality due to lost or abandoned gear decreased after IFQ
- No estimates available for sablefish

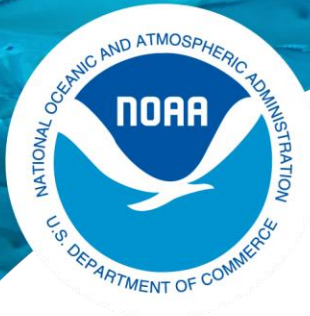
Bycatch loss (discards of non-target groundfish) (Obj. 1)

- Discards of other groundfish by the sablefish IFQ fleet have decreased relative to pre-IFQ period
- No estimates available for halibut

Discard mortality (Obj. 1)

- IFQ Program could have incentivized high-grading
- Discards (in metric tons and as a rate) of sablefish for the sablefish IFQ fleet have been above pre-IFQ baseline
- Sub-legal size discard mortality of halibut has increased since IFQ
 - High-grading of legal-size halibut is assumed to not occur

2.10 Inseason Management

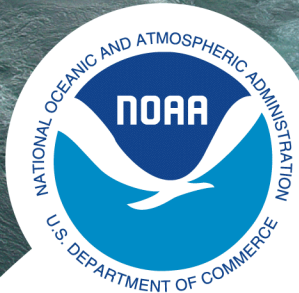


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- Potential need for an incidental catch allowance (ICA)
- No TAC is set aside for sablefish caught incidentally in other fixed-gear fisheries (e.g. Pacific cod)
 - Must be discarded and accrues toward the TAC
- Fixed-gear sablefish harvests have exceeded fixed-gear TACs in some areas of the Gulf in some years
- Trawl allocation has generally provided a buffer
 - However, CGOA and WY TACs have been exceeded several times
 - Increased utilization of trawl TAC
 - Total harvest has remained below the area-wide TACs and area-wide ABCs
- NMFS does not consider a management issue but is continuing to monitor it

2.11 Other Issues



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2.11.1 Recordkeeping and reporting

2.11.2 Observer Program

2.11.3 Monitoring and enforcement

- NOAA OLE identified two issues of concern for the IFQ fleet:
 - 1) false reporting of the area of harvest;
 - 2) multiple area violation
 - VMS could be required to address both of these issues

2.11.4 Management costs and recovery

2.11.5 Housekeeping

- Surviving heir provisions – no regulatory definition of “immediate family member”
 - Amend IFQ regs to *court appointed representative* for the QS holder’s estate
- Revise regulations about administrative appeals process
- Remove regulations on initial QS issuance

2.12 Native Village of Eyak

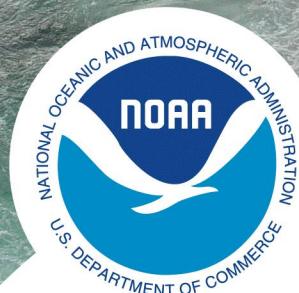


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- The Tribe's proposal for an IFQ allocation
 - 1,502,823 QS units in any vessel class in Area 3A
 - 50% immediately, other 50% over next four years based on TAC increases
 - Regardless of TAC changes, full QS allocation by year 5
 - Equivalent to 0.81% of 3A QS pool or 59,147 pounds in 2016
 - Decrease the percentage of the TAC that each QS holder receives
- The Tribe's past litigation on the IFQ Program
 - 1995 – lawsuit on basis of aboriginal title and exclusive hunting and fishing rights to GOA areas of the EEZ
 - 1998 – IFQ program restricts the exercise of non-exclusive aboriginal hunting and fishing rights in the EEZ
- Description of the Tribe's past request for tribal consultations of IFQ allocations
 - No formal tribal consultations requirements in effect during IFQ Program Development
 - Tribe requested IFQ allocations in a December 12, 1994 letter to NMFS
 - Past the July 15th application deadline for QS
 - No record of one or more vessels owned by the Tribe that would have qualified it for QS

3. Key findings, data and info gaps, potential research interests



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Programmatic provisions of concern

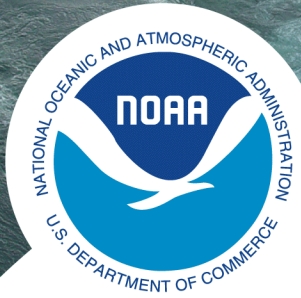
- Sweep-up provision may not be working to facilitate sweep ups
 - Sweep-able holdings represent a small percent of total QS pool; however a considerable percent of persons hold sweep-able QS
 - No. of sweep-up transfers has decreased substantially since IFQ
- Use of medical lease provision
 - Consecutive years of use by a few QS holders
 - Two administrative concerns with the provision
 - NMFS recommends discussion paper

Data and information gaps

- Crew data, VMS data, gear conflicts, lease rates, biological management issues (links between IFQ program and size-at-age, localized depletion, and overall stock health)

Potential research interests

- Entry opportunities, community impacts, QS holders' operational decisions, effects of area-specific regulations, income diversification, processor impacts, variability in violations, CQE program, GAF usage



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10 Original Policy Objectives



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- 1) 10 problems that occurred with the open-access management regime or could emerge from the IFQ Program:
 - 1) allocation conflicts; 2) gear conflicts; 3) fishing mortality due to lost gear; 4) bycatch loss of halibut and sablefish in other fisheries; 5) discard mortality for halibut and other retainable species in the halibut and sablefish fisheries; 6) excess harvesting capacity; 7) product wholesomeness as reflected in halibut and sablefish prices; 8) safety; 9) economic stability in the fixed gear halibut and sablefish fisheries and communities; and 10) rural coastal community development of a small boat fishery.
- 2) Link the initial QS allocations to recent dependence on the fisheries.
- 3) Broadly distribute QS to prevent excessively large QS from being given to some persons.
- 4) Maintain the diversity in the fleet with respect to vessel categories.
- 5) Maintain the existing business relationships among vessel owners, crews, and processors
- 6) Assure that those directly involved in the fishery benefit from the IFQ Program by assuring that these two fisheries are dominated by owner/operator operations.
- 7) Limit the concentration of quota share ownership and IFQ usage that will occur over time.
- 8) Limit the adjustment cost to current participants including Alaskan coastal communities.
- 9) Increase the ability of rural coastal communities adjacent to the Bering Sea and Aleutian Islands to share in the wealth generated by the IFQ Program.
- 10) Achieve previously stated Council goals and objectives and meet MSA requirements.

Data and Information Gaps



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Crew data

- No. crew jobs, crew shares, crew earnings
- Crew size field on fish tickets added in mid-2000s

VMS data

- Could be used to detect violations and provide spatial data for analysis of other things (e.g., gear conflicts)

Gear conflicts

- Council could seek systematic info through survey

Lease rates

- Percent of ex-vessel revenue that the QS holder receives
- Important determinant in how IFQ participants behave and provide information on profitability

Biological management issues

- Links between IFQ program and size-at-age, localized depletion, and overall stock health

Potential Research Interests



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QS holders' operational decisions

- Behavioral choice models of entry/exit, QS diversification, QS holder coordination, etc.

Effects of area-specific regulations

- Counterfactual analysis, D-I-D modeling

Vessel and individual QS holder income diversification

- Can help the Council understand potential impacts of IFQ changes and spillover effects
- AFSC is undertaking a study to examine income diversification at QS holder level

Processor impacts

- Market concentration in the processing sector (HHI), reasons for exit, processor diversification, and shifts in bargaining strength

Potential Research Interests (cont.)



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Entry Opportunities

- Responses to regulations, buying/selling QS decisions (residency factors), count of new entrants, social network analysis of QS transfer networks, and differentiated QS acquisition by recipients of gifted QS

Community Impacts

- Council could choose to define rural, and airport/road access differently
- IFQ impacts on specific communities – econometric or ethnographic techniques

Variability in violations

- Model violations as a factor of permit-holder attributes/area-specific regulations
- Provide NOAA OLE with better understanding of how to allocate enforcement efforts

CQE Program

- Examine community-level issues with QS acquisition and IFQ leasing

GAF usage

- AFSC survey of CHP holders and usage of the GAF program from commercial perspective

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