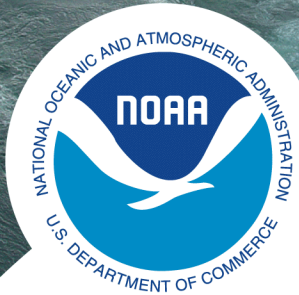




# Halibut and Sablefish IFQ Program Review – Review Draft



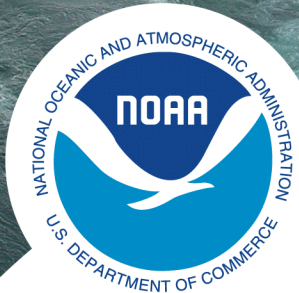
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Presentation to the NPFMC's Scientific and  
Statistical Committee

Marysia Szymkowiak

October 5, 2016



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# Presentation objective

- Key findings, data/info gaps, research interests (Section 3 of the review)
  - Highlight objectives that the program may not have met or may not be currently meeting
- SSC's feedback on any necessary improvements to this iteration of the IFQ Program Review
  - Future IFQ Program 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

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# 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



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# Data and information utilized

## 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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# Key findings – Objective 1



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Objective 1 – 10 problems that occurred with the open-access management regime or could emerge from the IFQ Program:

## **Allocation Conflicts**

- 18% of initial QS applications were denied; 10% (191) appealed

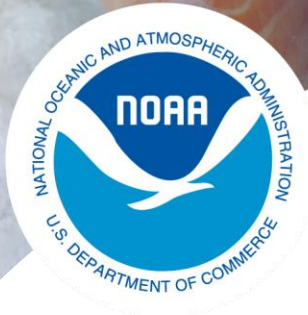
## **Gear Conflicts**

- Temporal and spatial flexibility in how IFQ participants fish, elimination of congestion on fishing grounds, consolidation, coordination of shareholders onto fewer vessels
- 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

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# Key findings – Objective 1



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## Deadloss from lost or abandoned gear

- 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)

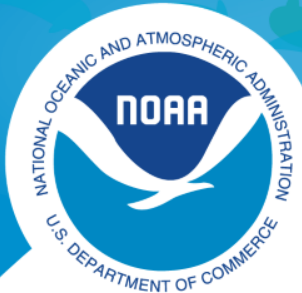
- Discards of other groundfish by the sablefish IFQ fleet have decreased relative to pre-IFQ period
- No estimates available for halibut

## Discard mortality

- 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

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# Key findings – Objective 1



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## Excess harvesting capacity

- IFQs have contained harvesting capacity - harvests have not exceeded TACs
- Substantial consolidation of vessels and QS holders immediately following IFQ and continued consolidation (at a slower rate) since
  - Mean and median QS holdings have increased for all areas; mean continues to be greater than median
  - Consolidation has been constrained by programmatic provisions
- 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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# Key findings – Objective 1



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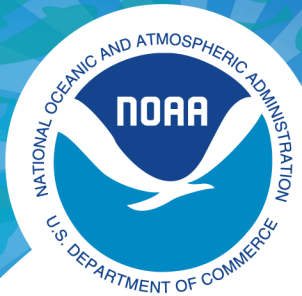
## Product wholesomeness

- Understood to mean overall quality
- Product form changed for halibut, not for sablefish
- 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)

## Safety

- USCG search and rescue data and the NIOSH safety assessment both indicate a slightly decreasing trend in hazards following IFQ
- Fatalities have continued to occur post-IFQ

# Key findings – Objectives 1 & 8



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## **Economic stability in fisheries and communities (Obj. 1) & Limit the adjustment costs to current participants including Alaskan coastal communities (Obj. 8)**

- 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**
  - **What's the metric? What's the baseline?**

# Key findings – Objective 1



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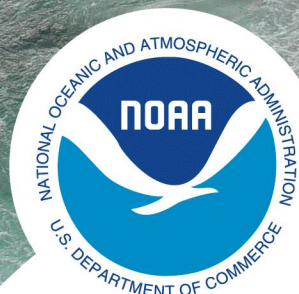
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## Rural coastal community development of a small boat fleet

- 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, metric, baseline

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# Key findings – Objectives 2 & 3



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## Link the initial QS allocations to recent dependence on the halibut and sablefish fixed-gear fisheries (Obj. 2)

- QS allocated to those who had owned or leased a vessel w/fixed gear halibut or sablefish landings during 3-year qualifying period (1988-1990)

## Broadly distribute QS to prevent excessively large QS from being given to some person (Obj. 3)

- QS allocations based on sum of best 5 years of landings
- 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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# Key findings – Objective 4



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## Maintain the diversity in the fleet with respect to vessel categories

- QS designated by vessel class (length specific) & no trading between classes
- QS distributions fixed at initial allocation
- Fish up and fish down provisions have provided for movement of IFQ across classes
- Composition of halibut fleet has changed slightly
  - Proportion of GT 35 to 60 ft. class has grown, LE 35 ft. class has decreased, and GT 60 ft. class has remained stable
  - Composition of sablefish fleet is back to pre-IFQ baseline levels
- Production efficiency costs of QS trading restrictions estimated at \$117 million for halibut and \$39 million for sablefish,
  - Or, 25% and 9% of the respective gross ex-vessel revenues in 2011

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# Key findings – Objective 5



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## 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
- Processor Impacts
  - No. of pre-IFQ processors has decreased by 90% in both fisheries
  - Increasing diversification of pre-IFQ processors
  - Decreasing bargaining strength for processors
    - Decrease processor price margins & research looking at rent distributions
    - Relative to pre-IFQ, more equal with harvesters
  - Role of tenders was eliminated
- IFQ Program changed the business relationships b/w vessel owners, crews, and processors
- **Obj. 5 may or may not have been met**

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# Key findings – Objective 6



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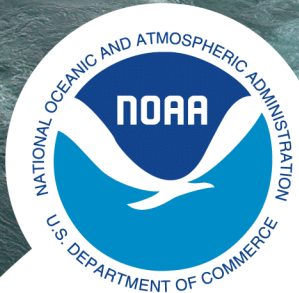
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## Assure that IFQ fisheries are dominated by owner/operator operations.

- 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
  - 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
- **Objective 6 may or may not have been met**

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# Key findings – Objective 7



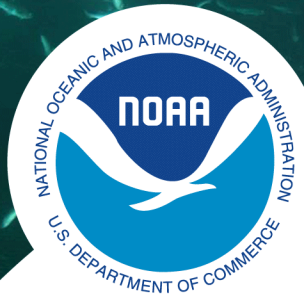
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## Limit the concentration of QS ownership and usage that will occur over time

- 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 constraining (21% of vessels)
- Block Program restricts how many QS blocks, and how many units of unblocked QS plus any blocked QS, may be held
  - Majority of QS holders hold blocked QS across all IFQ areas
- QS class designations have constrained QS consolidation
  - Limit the amount of QS available to any one vessel class
  - Fish up and down provisions have allowed greater consolidation

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## Key findings – Objectives 9 & 10

**Objective 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**

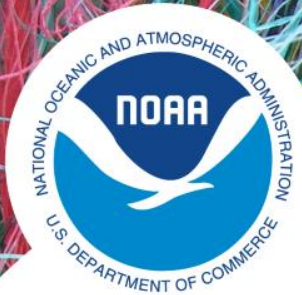
- Related to CDQ Program

**Objective 10 - Achieve previously stated Council goals and objectives and meet MSA requirements**

- Not expressly addressed but woven throughout analysis

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# Key findings – providing entry opportunities objective

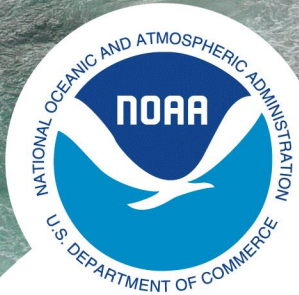


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- Provisions included in the program to provide entry opportunities
  - Block program, fish down provision, vessel and QS use caps
- New entrants hold a majority of the QS in both fisheries
  - Smaller average holdings than initial recipients
  - QS holdings distributions for new entrants 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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# Programmatic provisions of concern

## Sweep-ups of small blocked QS units

- QS blocks up to 3,000 lbs. (halibut) and 5,000 lbs. (sablefish) can be “swept up”
- 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 > bypassing owner-on-board provision and use for chronic conditions
- NMFS has also identified two administrative concerns with the provision

## Definition of “immediate family member” under beneficiary lease provision

- No regulatory definition > creates NMFS administrative issues

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# 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
- Sablefish size-at-age seems to have increased since IFQ (Echave et al., 2012)

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# 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**

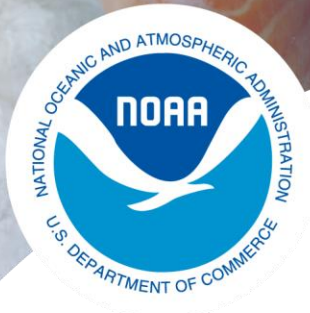
- Can help the Council understand potential impacts of IFQ changes and spillover effects
- AFSC is undertaking a study to examine income diversification at QS holder level

## **Processor impacts**

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

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# 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**

- Examine 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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