



NOAA
FISHERIES

HMS Management
Division

3 Year Review of Individual Bluefin Quota Program

Preliminary Data

(2012 – 2014; 2015 - 2017)

HMS Advisory Panel Meeting
March 2018

Overview of 3-Year Review of IBQ Program

Purpose of 3-Year Review

- Describe and analyze the impacts of the IBQ Program since the “baseline” period (2012 – 2014; prior to implementation)
- Determine whether, and to what degree the goals of the IBQ program (and MSA) have been met due to implementation of the program
- Evaluate elements of the catch share program

Timing of 3-Year Review of IBQ Program

- March 2018 – Preliminary data ; AP Input
- Fall 2018 – Draft document; AP Input
- Spring 2019 – Final document

(Reviewed after 3 years in order to enable potential changes to IBQ Program (in response to results) to occur relatively quickly; Most catch share programs conduct formal reviews after 5 years)

Elements of 3-Year Review Currently Available

1) Preliminary Data – Why Preliminary?

- Soliciting input from HMS Advisory Panel on suggestions for additional relevant data and analyses
- Complete 2017 data not yet available (e.g., logbooks and observer data)

3) Draft Introduction

Data 'Chapters' in this Presentation

- Allocation Data
- Fishing Effort
- Bluefin Landings and Dead Discards
- IBQ Metrics
- Revenue
- Electronic Monitoring Program data
- VMS Reporting
- Cost Recovery & other topics

- Consider how the above data can be used to evaluate whether the objectives of the IBQ Program are being met;
- What other data would be useful to evaluate the IBQ Program?

IBQ Program Objectives

1. Limit bluefin tuna catch with PLL gear
2. Provide incentives to avoid bluefin
3. Flexibility in fishery operations
4. Optimize fishing opportunities
5. Balance above with potential impacts on other permit categories

Allocation Data

Annual Allocations

Additional Data Contained in Reference Document, but not presented here: Allocations by IBQ tier; Shareholders, Vessels distributed/receiving IBQ, New entrants to PLL fishery

Annual IBQ Allocations (mt) to the Longline Category (mt)

Type of Allocation	2015	2016	2017
Annual (Jan 1)	137.3	148.3	148.3
Transfer from Reserve Category	34.0 (Jul 28)	34 (Jan 4)	45.0 (Mar 2)
ICCAT Baseline Quota Increase	11.0 (Aug 28)	na	na
Total	182.3	182.3	193.3

Annual Allocations and 2015, 2016 Transfers: Only allocated to eligible shareholders, for which the valid permit was associated with a vessel.

2017 Transfers: only to *active* vessels (vessels with recent fishing activity (1/1/16 through 2/22/17))

Gulf of Mexico IBQ : 35 percent of IBQ

Atlantic IBQ : 65 percent of IBQ

Fishing Effort

(Jan through Oct; complete 2017 data not yet available, so compared same months among years)

Sets

Trips

Hooks

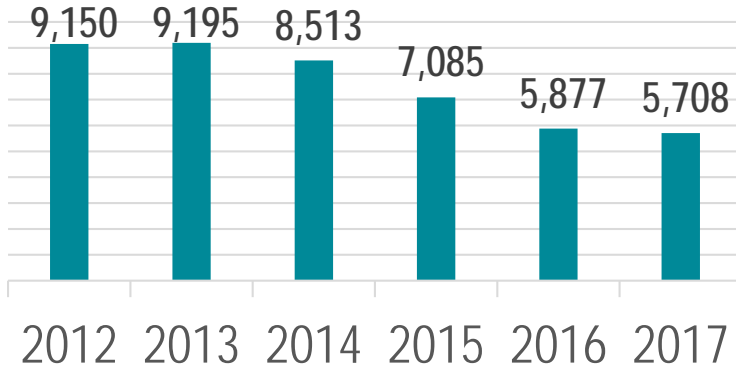
Active Vessels

**Additional Data Contained in Reference Document, but not presented here:
Complete 2017 data on sets, trips, hooks**

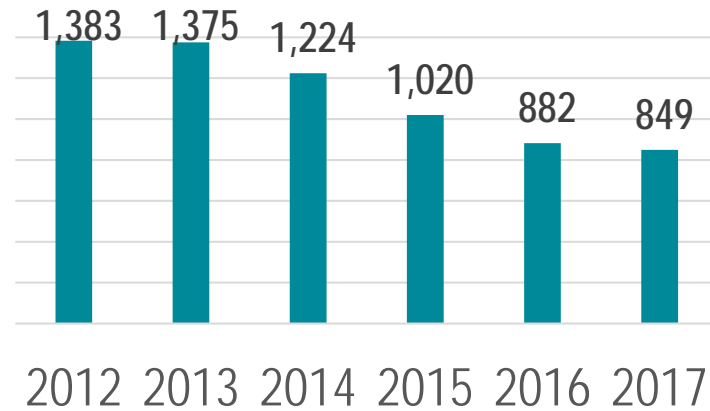
Fishing Effort Metrics – logbook

(Jan through Oct, to take into account that 2017 data is incomplete)

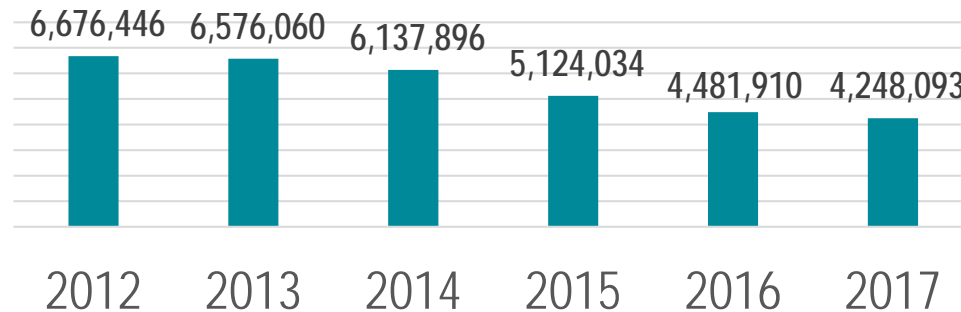
sets



trips

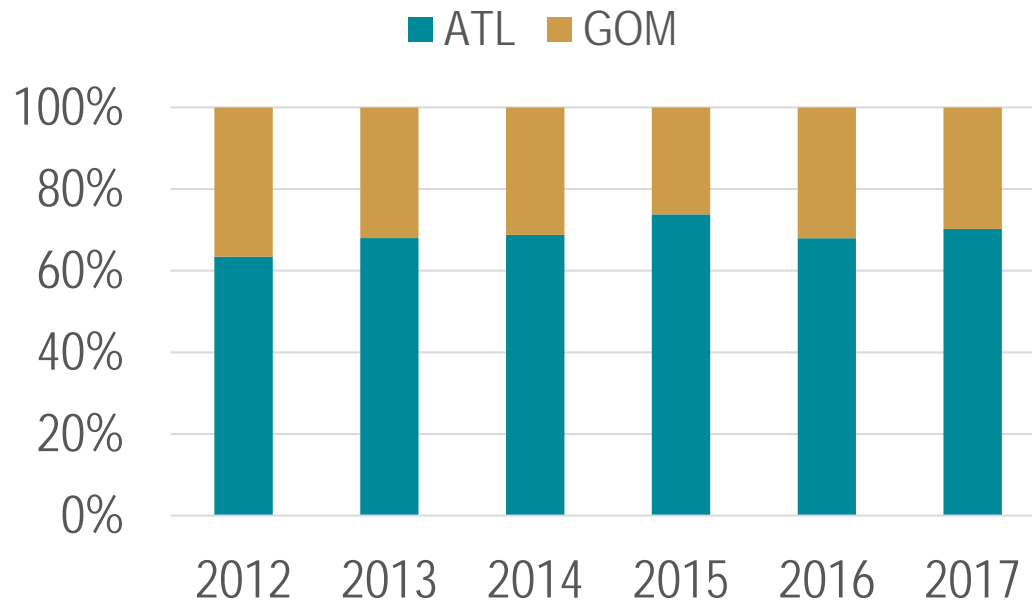


Decline in fishing effort may have leveled off



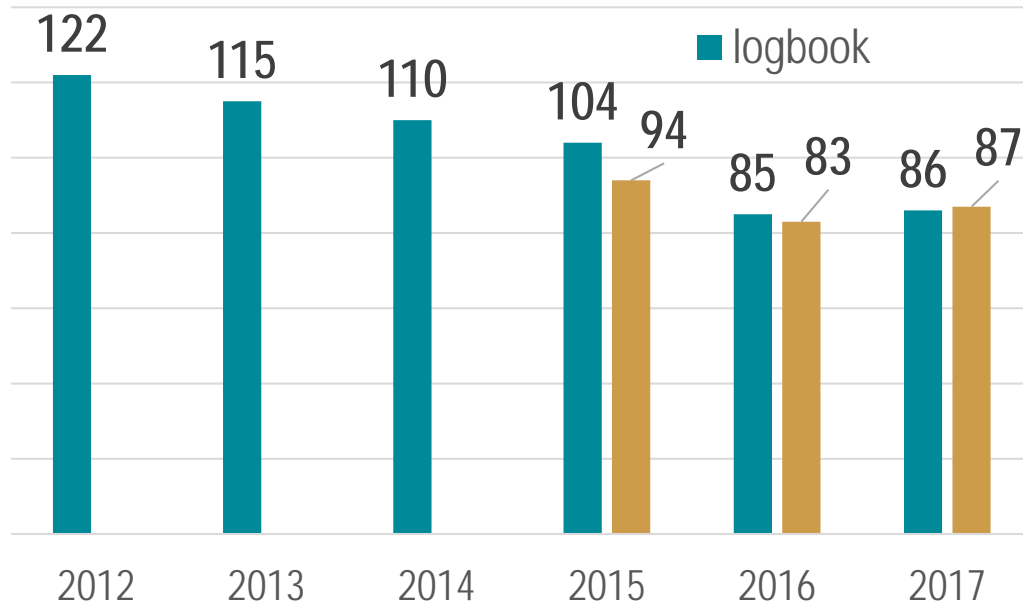
hooks

Percentage of Sets in Atlantic and Gulf of Mexico by Year



No substantial change in distribution of pelagic longline sets (GOM vs ATL)

Number of Active Vessels



Logbook: # of vessels fishing with PLL gear based on logbook data

VMS: # of vessels submitting Bluefin Set Reports via VMS (required beginning in 2015)

Bluefin Landings and Dead Discards

Catch compared to quota

Catch distribution by area: Gulf of Mexico vs Atlantic and NED

Landings distribution among vessels

Landings by month (average)

Dead discards CPUE

Additional Data Contained in Reference Document, but not presented here: Landings by month (detail), landings by state, additional data on landings and effort in NED, number of dead discards in source data vs. extrapolated

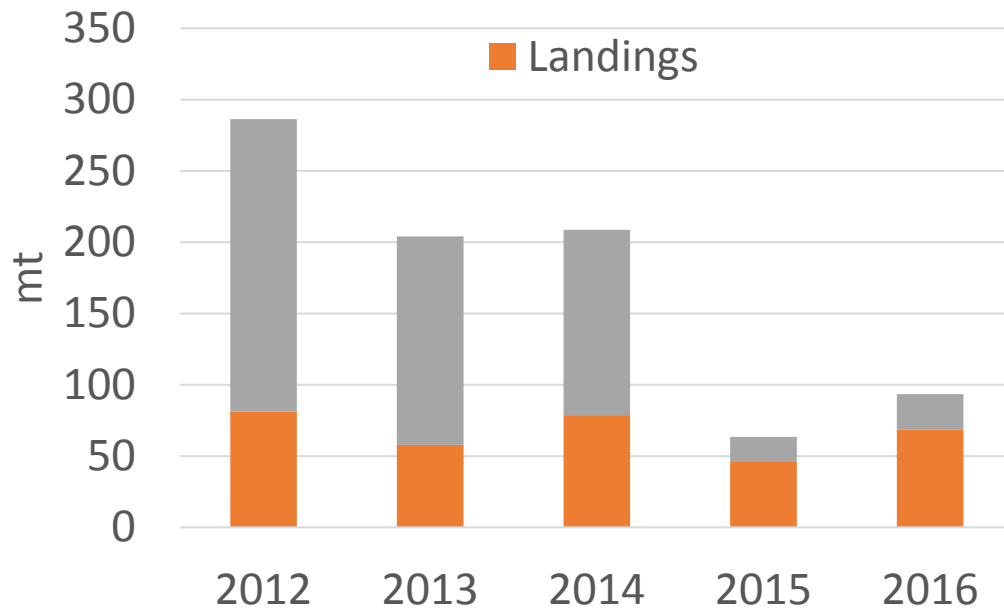
PLL Landings and Dead Discards, Quota and Adjusted Quota (mt, Not including NED) 2012-2017

Year	Bluefin Landings	Bluefin Dead Discards	Total Catch	Base Quota	% of Base Quota	Adjusted Quota	% of Adjusted Quota
2012	81.2	205.2	286.4	74.8	382 %	78.4	365 %
2013	57.9	146.2	204.1	74.8	273 %	21.0	972 %
2014	78.7	130.0	208.7	74.8	279 %	99.2	210 %
2015	46.4	17.1	63.5	137.3	46 %	182.3	35 %
2016	68.4	22.6	90.2	148.3	61 %	182.3	49 %
2017	78.8	*	pending	148.3	pending	193.3	pending

Landings: Dealer data; Dead Discards: estimate based on observer and logbook data

*2017 dead discard estimate is not available yet; Relevant Preliminary data indicate may be similar to 2015 or 2016

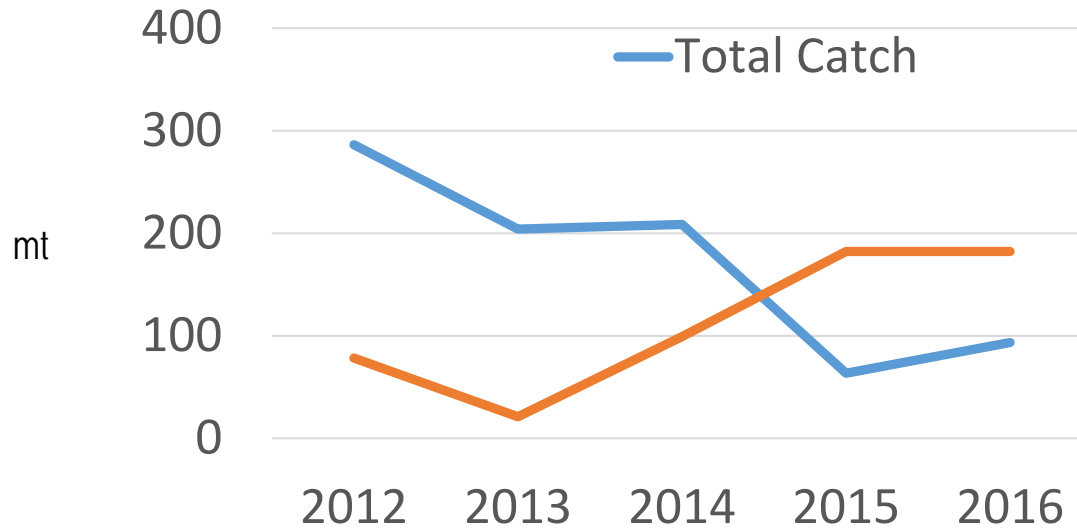
Bluefin Landings and Dead Discards (mt)



Landings: Dealer data; Dead Discards: estimate based on observer and logbook data

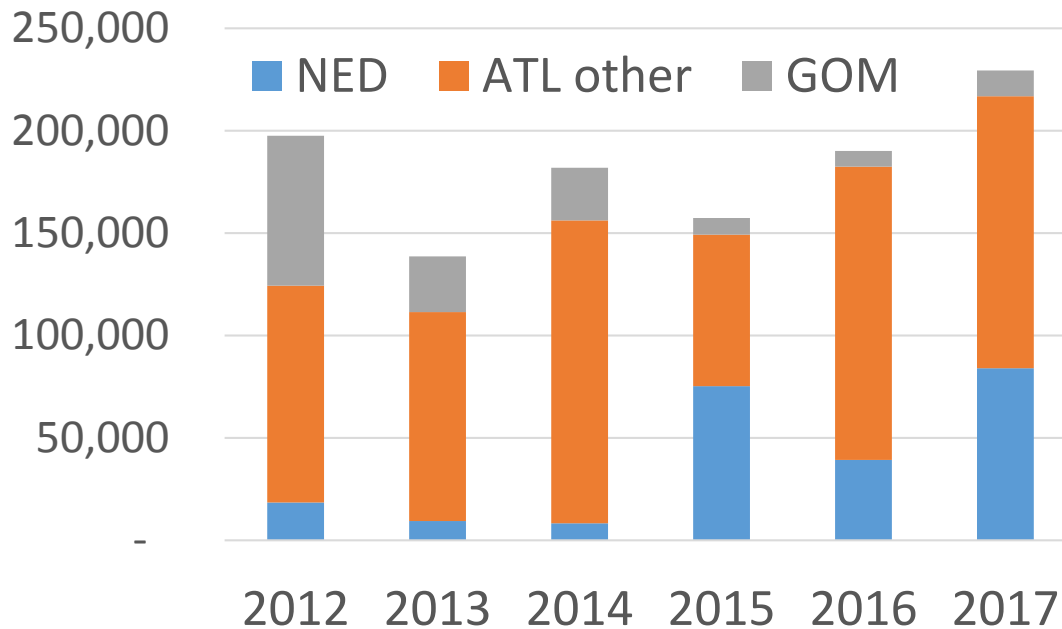
2017 dead discard estimate is not available yet; Preliminary data indicate will be similar in value to 2015 or 2016

Total Catch vs Adjusted Quota (mt)



Landings: Dealer data; Dead Discards: estimate based on observer and logbook data
2017 dead discard estimate is not available yet; Preliminary data indicate will be similar in value to 2015 or 2016

Bluefin Landings by Area (lbs) (including NED)

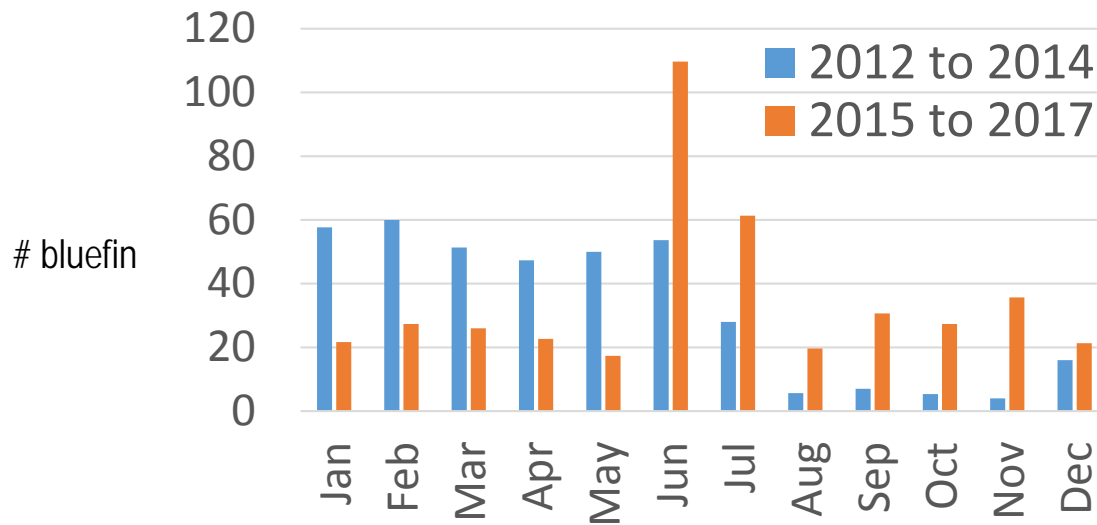


Proportion of total landings in GOM declining (from 41% in 2012 to 7% in 2017)

Proportion of total landings in NED increasing (from 9% in 2012 to 37% in 2017)

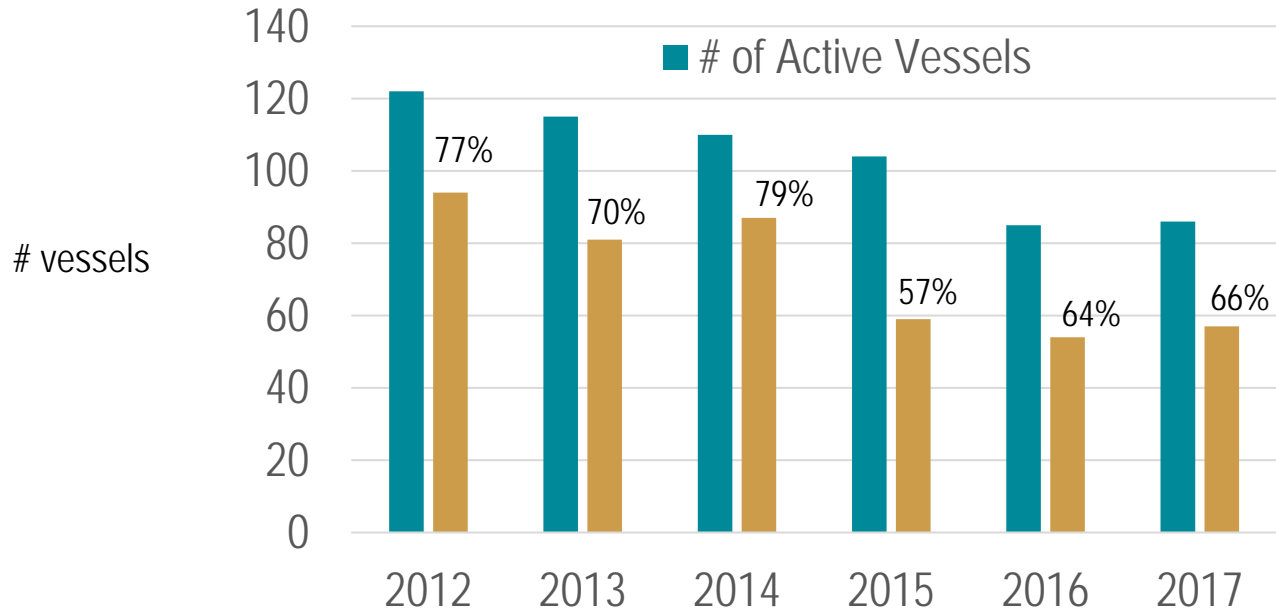
NED refers to geographic area and includes NED quota of 25 mt, and additional NED landings if total NED landings were > 25 mt
GOM 'Repose' began in 2017

Bluefin Landings by Month, Averages 2012 to 2014; 2015 to 2017



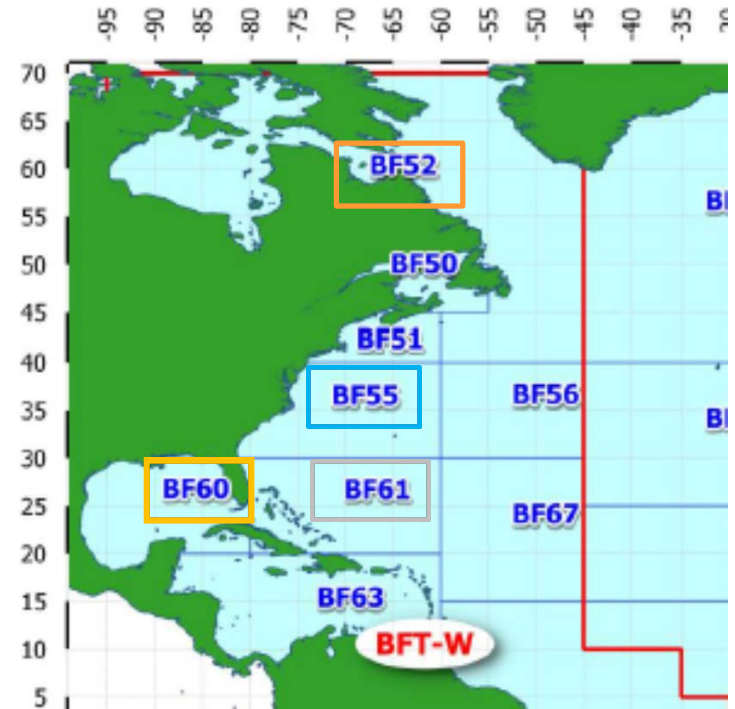
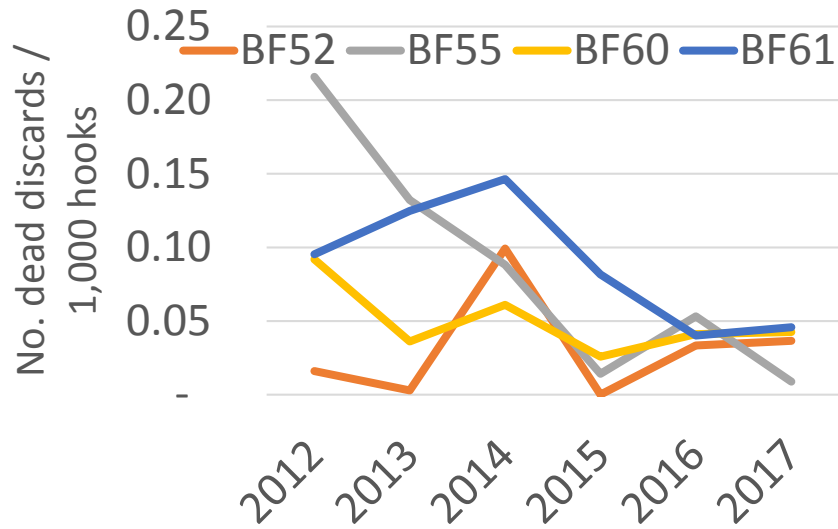
3-year averages also illustrate the different pattern of landings during 2015 to 2017

Number of Vessels Landing Bluefin (and percent of active vessels landing bluefin)



Landing based on Dealer Data, # Active Vessels based on Logbook Data
Decrease in the proportion of vessels landing bluefin

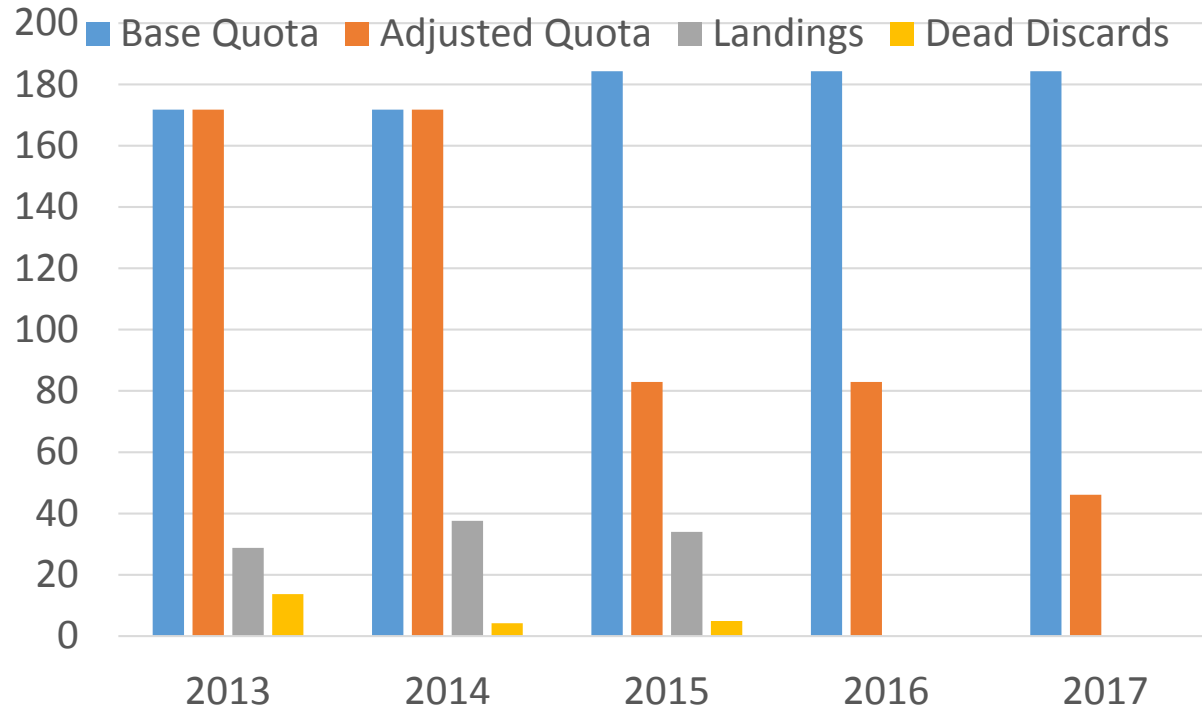
Number of Bluefin Dead Discards per Unit Effort (shown for ICCAT areas)



BF51: low numbers of bluefin, and low numbers of hooks results in different scale: 2012: 1.23 2015: 7.8 2016: 0.51 2017: 5.71

Observer dead discards data, extrapolated using logbook effort data (hooks)

Purse Seine Bluefin Fishery – Quota and Catch Trends



Declining Purse Seine quota due to Amendment 7 rules, which sets annual quota based on previous year's catch. Currently there are no permitted Purse Seine vessels.

IBQ Metrics

IBQ use over time

Vessels are placed into one of three IBQ tiers: Low, medium, and high based on the ratio of bluefin tuna interactions with target catch.

Share Percentages - High tier = 1.2 %; Medium tier = 0.6 %; Low tier = 0.37%

Shareholder tier analyses (high, medium, low)

Landings by tier

Quota debt by tier

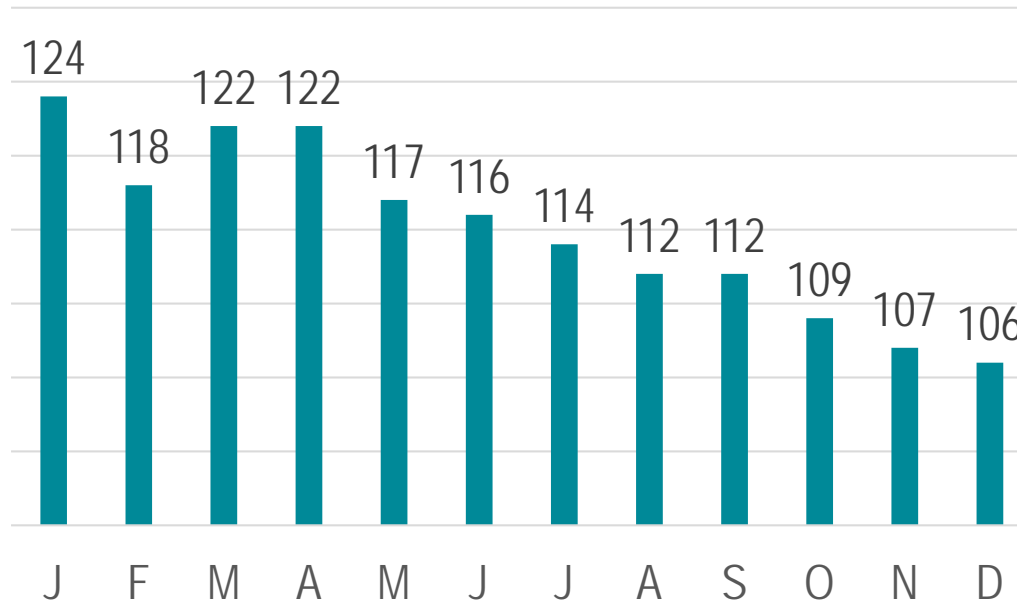
IBQ leasing by tier

IBQ leasing metrics – transactions by month, price, costs

Additional Data Contained in Reference Document, but not presented here:

IBQ usage over time (more info), duration of quota debt, additional IBQ metrics

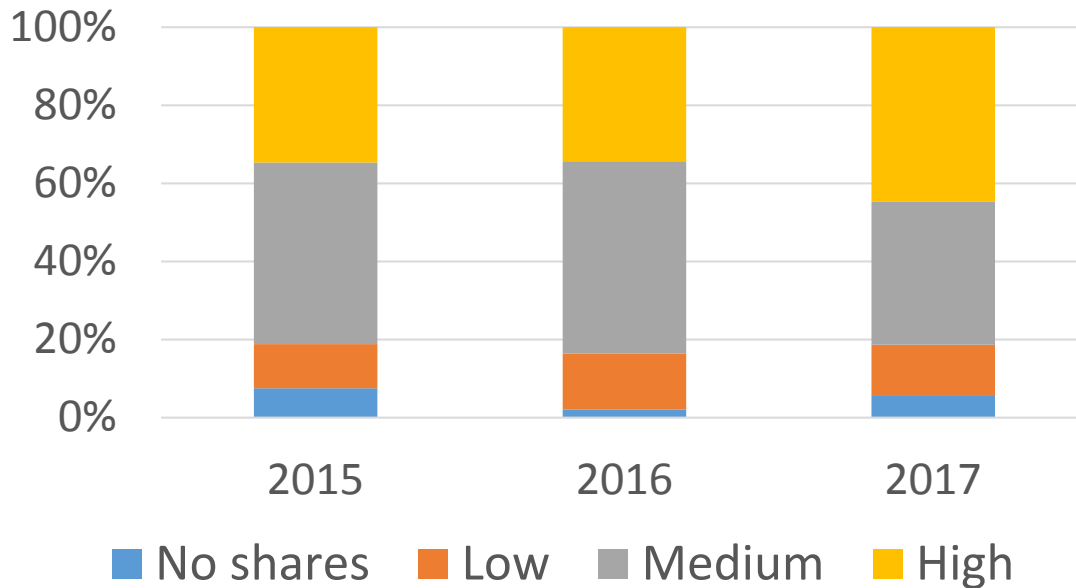
IBQ Balances Over Time; # of Vessels with IBQ; 2017



By end of year, 18 vessels that had IBQ at beginning of year have no IBQ at end of year

IBQ System Data; Number of vessels with the minimum amount of IBQ to fish in 2017; Minimum amount is IBQ equivalent to 1 bluefin (551 lb GOM IBQ; 276 lb ATL IBQ)

Proportion of Bluefin Landings by IBQ Shareholder Tier

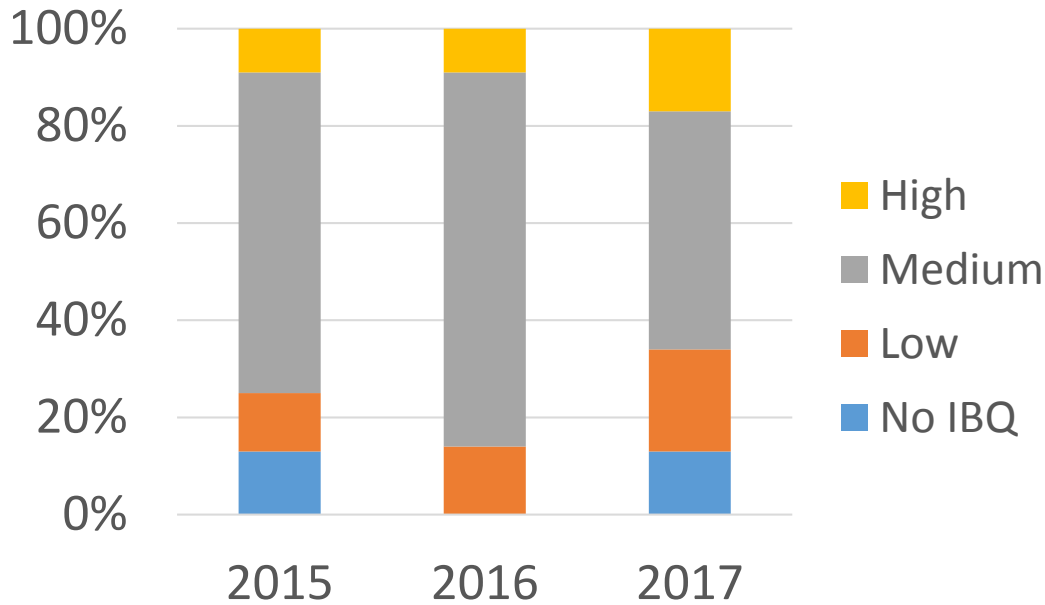


Total # vessels per tier
 High: 43
 Medium: 62
 Low: 31
 No shares: 6 active

*number of vessels landing bluefin by tier is less than total number vessels

Dealer Data; The high and medium tiers had similar amounts of landings

Percentage of Total Quota Debt by IBQ Shareholder Tier (high, medium, low, no shares (NA))

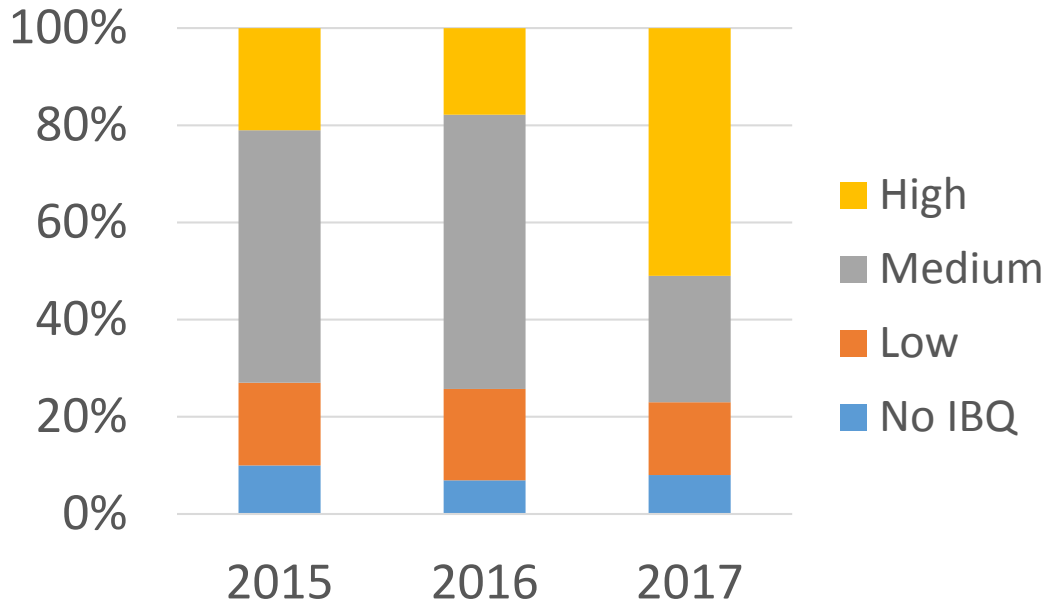


Pounds Quota Debt by Tier

	2015	2016	2017
High	3,702	4,112	3,990
Med	28,416	35,016	11,897
Low	5,179	6,196	5,116
No IBQ	5,449	0	3,085

IBQ System Data; The medium tier had the highest proportion of the total quota debt

Percentage of Total Leases (by weight) by IBQ Shareholder Tier (high, medium, low, no shares (NA))

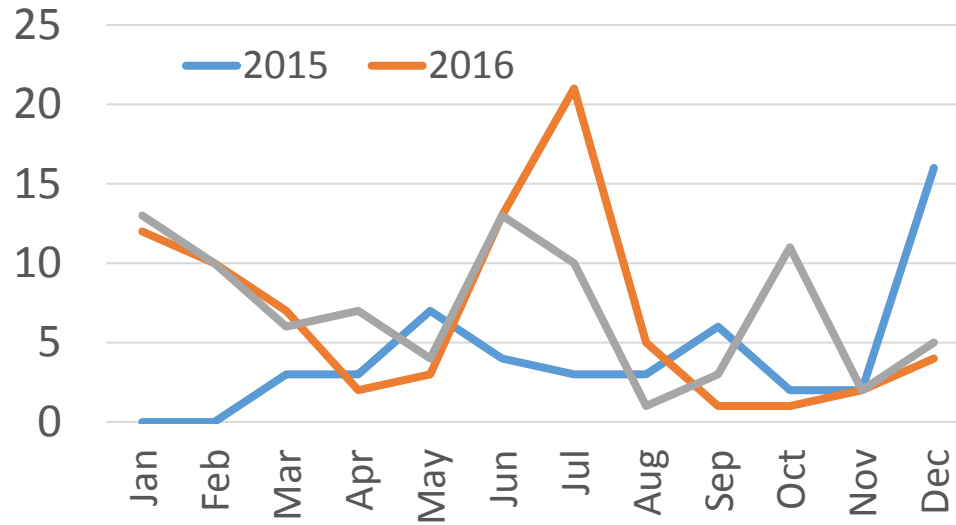


Pounds IBQ Leased by Tier

	2015	2016	2017
High	14,749	25,338	74,162
Med	36,875	79,789	38,216
Low	12,283	26,703	21,772
No IBQ	7,056	9,353	11,900

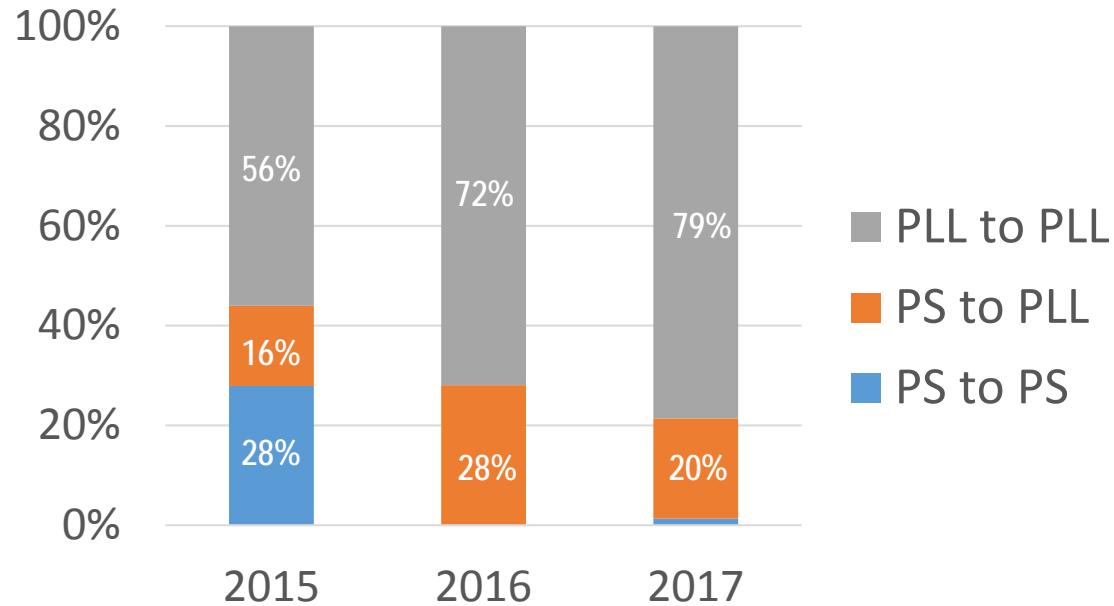
IBQ System Data; Changing distribution of leases by tier

Lease Transactions by Month



Note: 2015 trend due to newness of IBQ program and different regulations: Annual Accountability during 2015: Vessels did not need to balance the books until the end of the year

Pelagic Longline vs Purse Seine Leases (% of total leases by weight)



Price per Pound of Leased IBQ (weighted average) and Average Ex-Vessel price of Bluefin (from pelagic longline vessels)

Year	Weighted Average Lease Price	Bluefin Average Ex-Vessel Price*	# Transactions used to Calculated Lease Price	Total # of Lease Transactions
2015	\$ 3.46	\$ 4.01	14	49
2016	\$ 2.52	\$ 4.08	45	81
2017	\$ 1.67	\$ 3.99	27	85

Decline in the price of IBQ Leases from 2015 to 2017; Ex-vessel price of bluefin only slightly greater than cost to vessel to lease IBQ. Compliance with requirement to report lease price needs to improve.

*Round weight ex-vessel price, not including Purse Seine data; leasing price including purse seine. Lease price not including zeros; Less than one half of lease transactions provided data on lease price.

Estimated total Cost of Leasing IBO – Fleet-Wide (based on extrapolated data)

Year	Total lb Leased	Weighted Average Lease Price	Estimated Total Cost of Leased IBO (PLL fleet-wide)	Total PLL Revenue	Percent of PLL Revenue
2015	126,407	\$ 3.46	\$ 437,368	\$ 27,042,956	2%
2016	141,183	\$ 2.52	\$ 355,781	\$ 25,322,560	1%
2017	146,050	\$1.67	\$ 243,904	pending	pending

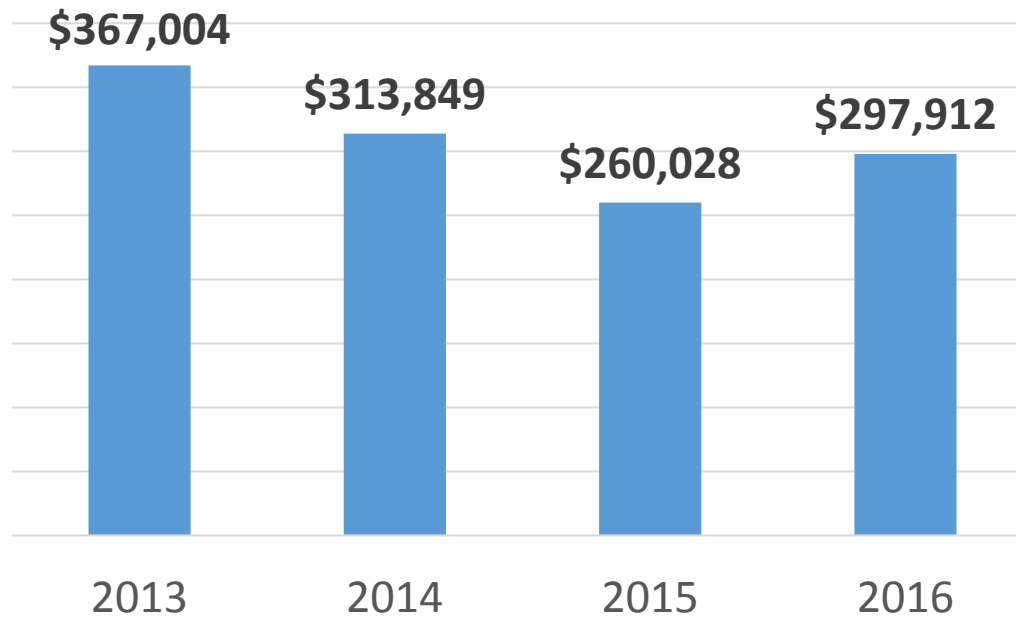
Based on average lease price, average pounds per lease, and average revenue per trip

Cost of a Lease Transaction as a Percentage of Trip Revenue – Vessel Level

Year	Average Pounds IBQ per Lease Transaction	Weighted Average Lease Price	Calculated Cost Per Transaction	Average Revenue per Trip per Vessel*	Cost of Lease as % of Trip Revenue
2015	2,580	\$ 3.46	\$ 8,927	\$ 26,421	34 %
2016	1,743	\$ 2.52	\$ 4,392	\$ 32,710	13 %
2017	1,789	\$1.67	\$ 2,988	\$ 23,887	13 %

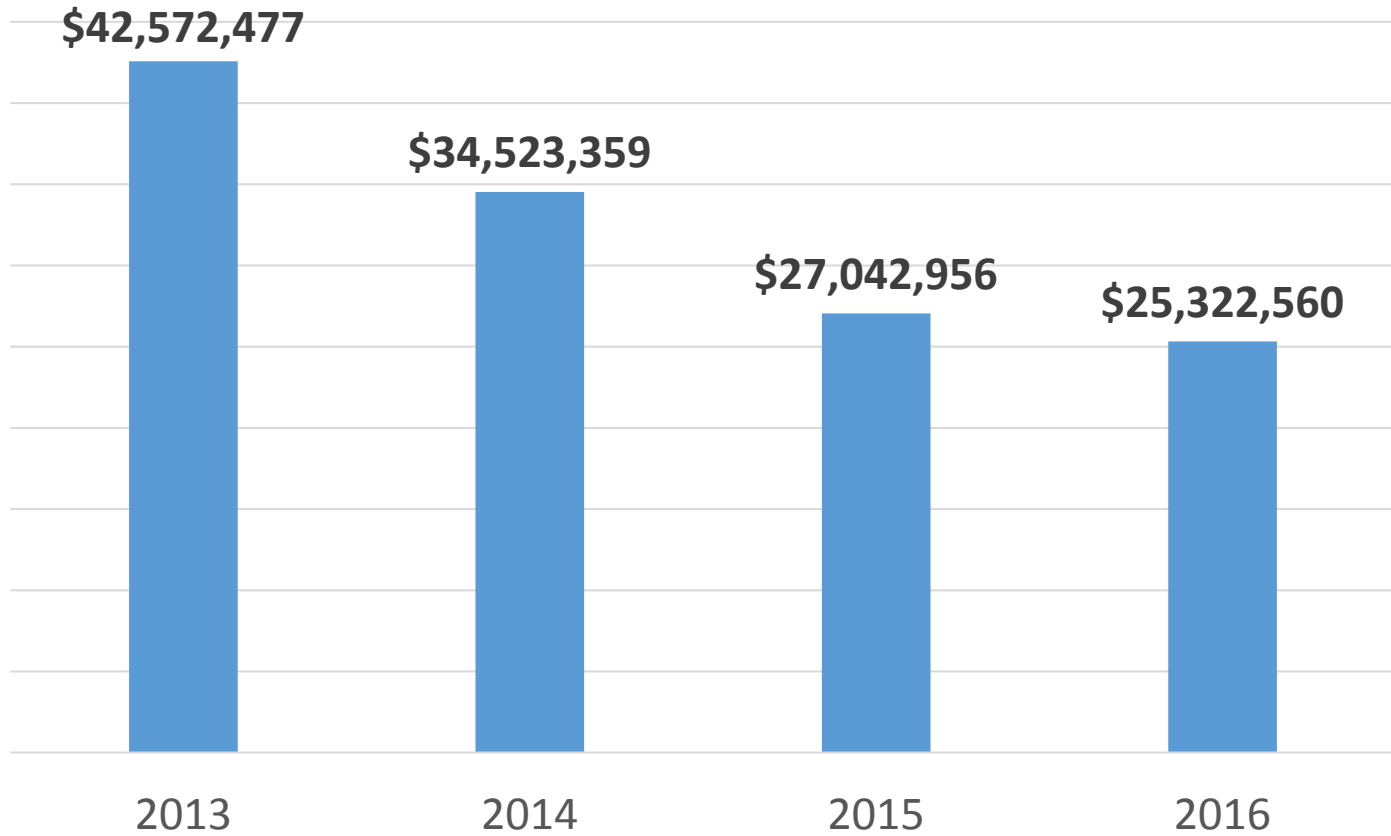
*Calculated using only vessels that leased IBQ (not fleet-wide average revenue); *Fleet-wide* average revenue per trip is *less* than for those vessels that leased IBQ: \$ 17,603, \$ 22,142, and \$ 23,673, for 2015, 2016, 2017, respectively). 2017 data incomplete.

Average Annual Revenue per Vessel (2017 data not available)



Total Revenue

(2017 data not available)



Electronic Monitoring Program

Compliance with hard drive submission requirement

Additional Data Contained in Reference Document, but not presented here:

Number of hard drives received and vessels submitting, Number of sets and vessels audited, Unsuccessful audits, Audit results, Troubleshooting

Compliance with Hard Drive Submission Requirements

Year*	# Hard Drives Received	Hard Drives Received Late	Multiple trips on one Hard Drive	Missing Trips**
2016	975	29 %	8 %	50 (5%)
2017	1,020	27 %	4 %	pending complete logbook data

* 2015 not included; First year of implementation; requirement effective June 1, 2015

** Based on logbook data of number of trips using pelagic longline gear; 1,025 trips in 2016
Late: received 14 days or more after end of trip based on VMS pre-landing declarations

VMS Reporting – Bluefin Set Reports (2015, 2016, 2017)

Vessels required to submit VMS reports within 12 hours after retrieving each PLL set, including data on number and disposition of bluefin tuna caught by size category, number of hooks, and location (ATL, NED, or GOM)

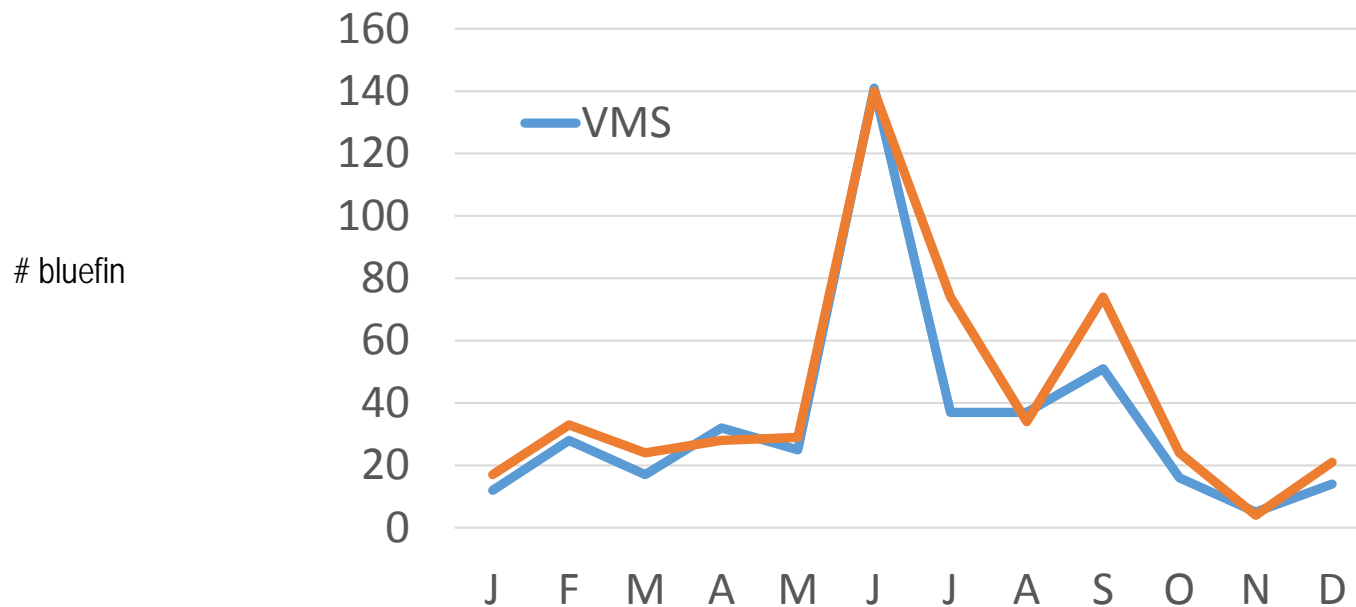
Landings Comparison: VMS vs Dealer Data - 2017

Additional Data Contained in Reference Document, but not presented here:

Landings comparison: VMS vs. Dealer data - 2015, 2016

Effort Comparison: VMS vs. Logbook data - 2015, 2016, 2017

VMS (# bluefin retained) vs Dealer (# bluefin landed); 2017



2017: Good correspondence between VMS and dealer data on number of bluefin retained and landed (respectively)

Cost Recovery & Other Topics

Preliminary Exploration of Cost Recovery

Other Topics for analysis & consideration in 3-year review

Exploration of Cost Recovery

- Under the Magnuson-Stevens Act, NMFS may collect fees to cover the cost of management, data collection and analysis and enforcement activities associated with the *costs of a catch share program. (**incremental, dedicated costs, that would otherwise not be incurred without the existence of the catch share program*)
- Maximum recoverable cost is 3% of total ex-vessel value of catch share species

Year	Bluefin Revenue	3 % of Bluefin Revenue from PLL vessels
2015	\$ 572,930	\$ 17,188
2016	\$ 736,755	\$ 22,103

Exploration of Cost Recovery – cont.

Considerations

Low amount of recoverable revenue (from PLL fleet based on bluefin revenue)

Costs to NMFS associated with the annual logistics associated with cost recovery:

- Annual development of estimate of NMFS annual incremental costs associated with the IBQ Program
- Development of Federal Register Notice
- Mailing of bills and instructions to PLL fleet
- Fees for computer interface/portal for industry payment
- Follow-up communication with fleet, troubleshooting, and compliance
- Oversight of cost recovery process

Preliminary Assessment

It may not make economic sense to implement a cost recovery program

(i.e., the annual costs to execute cost recovery may approach the amount recovered from the PLL fleet).

Other Topics for Analysis & Consideration in 3-Year Review

- IBQ permanent sale provisions
 - *(currently not allowed; should permanent sale of IBQ be explored?)*
- Cap on allocation or usage
 - *(currently cap are at category level; should there be a more restrictive cap?)*
- IBQ Allocation Revisions
 - *(are revisions warranted to share percentages or how quota is allocated?)*
- Purse seine fishery participants inclusion
 - *(currently allowed to lease purse seine quota; should this continue? Does the continued inclusion of this fishery in the IBQ program meeting it's objectives?)*

NMFS Requests input from the HMS Advisory Panel and the public on these items, in addition to the preliminary data

Deepwater Horizon Oceanic Fish Restoration Project*

Year	Months of Repose <i>(not fishing in Gulf of Mexico with pelagic longline gear)</i>	# Vessels Participating
2017	March through June	7
2018	January through June	10

*Implemented in cooperation with NOAA restoration center and National Fish and Wildlife Foundation. Vessels compensated for not using pelagic longline gear in the Gulf of Mexico (and encouraged to use alternative gear such as buoy gear).

Project designed to help restore fish species affected by 2010 Deepwater Horizon oil spill.

Funded through early restoration funds from BP (British Petroleum) in 2011

For more info:

Questions ?

Elements of Catch Share Program Reviews (from NMFS Catch Share Policy 01-121)

- 1) Purpose and need for the review (legal requirements)
- 2) Goals and objectives of the program
- 3) History of management (pre-implementation; program at time of implementation, and changes to program since implementation)
- 4) Description of biological, ecological/environmental, economic, social, and administrative environments before and since the programs implementation
- 5) Analysis of the program's biological, ecological/environmental, economic, social, and administrative effects
- 6) Evaluation of effects with respect to meeting the goals and objectives (i.e., program performance)
- 7) Summary of any unexpected effects (positive and negative) which do not fall under the program's goals and objectives
- 8) Identification of issues associated with the program's structure or function and potential need for additional data collection or research

Elements of Catch Share Program Reviews - continued

In addition to the goals and objectives, evaluate as applicable:

- Allocations
- Eligibility
- Transferability
- Catch and sustainability
- Accumulation limits/caps
- Cost recovery
- Data collection/reporting, monitoring
- Enforcement
- Duration
- New entrants
- Auctions and royalties.

Detailed Timeline of 3-Year Review of IBQ Program

May 2017 Advisory Panel Meeting

Presented draft timeline and elements of 3 year review; Presented qualitative and quantitative measures of Program objectives and solicited feedback

September 2017 Advisory Panel Meeting

Presented status report, including outline and timeline, solicited feedback

March 2018 Advisory Panel Meeting

Present Draft Data, solicit feedback

Fall 2018 Advisory Panel Meeting

Present Draft Document, solicit feedback

Spring 2019 Advisory Panel Meeting

Present Final Document, discuss potential changes to IBQ Program

Evaluating Achievement of Objectives

Objective 1	Limit the amount of BFT landings and dead discards
Quantitative Measure	Landings trend stable; dead discards reduced from baseline period; catch below or at quota; multiple metrics to measure indicate similar trends
Qualitative Measure	? Ideas on what a useful qualitative measure of success would be ?

Evaluating Achievement of Objectives

Objective 2	Provide strong incentives for the vessel owner and operator to avoid BFT interactions and thus reduce BFT dead discards
Quantitative Measure	Quantification of behavior change: Reduction in dead discards; reduction in numbers of vessels interacting with BFT; access to Cape Hatteras GRA (increasing trend in number of qualified vessels); leasing of IBQ; Compliance with accountability and reporting requirements
Qualitative Measure	Operation of fishery under the accountability, reporting and monitor requirements associated with the IBQ program.

Evaluating Achievement of Objectives

Objective 3	Provide flexibility in the quota system to enable PLL vessels to obtain BFT quota from other vessels with available IBQ to enable full accounting for BFT landings and dead discards, and minimize constraints on fishing for target species
Quantitative Measure	IBQ leasing metrics: large percentage of vessels leasing IBQ; leasing occurring to resolve quota debt; lease price maximizes revenue and contributes to profitable trips; vessels do not end the year with quota debt; lease price stability; NMFS provides flexibility to Program by providing IBQ allocation in-season, and optimizes via timing, scope, and magnitude of allocation
Qualitative Measure	? Ideas on what a useful qualitative measure of success would be ?

Evaluating Achievement of Objectives

Objective 4	Balance the objective of limiting BFT landings and dead discards with PLL gear with the objective of optimizing fishing opportunities and maintaining profitability
Quantitative Measure	Effort and revenue metrics; in-season allocations intended to optimize fishing opportunities; stable or increasing landings of target species
Qualitative Measure	Flexibility with implementation of IBQ and EM programs; Initial end of year accountability; EM: waivers provided to allow fishing under extenuating circumstances

Evaluating Achievement of Objectives

Objective 5	Balance the above objectives with potential impacts on the directed permit categories that target BFT, and the broader objectives of the FMP and MSA
Quantitative Measure	Longline quota not exceeded; accountability and level of reporting increased; Revenue and profitability; Harvest and effort levels.
Qualitative Measure	Quota allocations to PLL fishery were in the context of quota allocations to the directed fishery; All fisheries that rely of BFT were allocated inseason quota