

10-Year American Fisheries Act Program Review

A presentation by [Marcus Hartley](#) and [Gary Eaton](#)

February 4, 2017



Presentation Outline

Introduction/Evolution (Chapter 1 & 2)

AFA Cooperative Contracts and Reports (Chapter 3)

BS Pollock Allocation, Harvest and Value (Chapter 4)

Participation, Consolidation, and Ownership (Chapter 5)

BS Pollock PSC (Chapter 6)

Excessive Shares (Chapter 7)

CDQ and Fishing Community Impacts (Chapter 8)

Retention and Utilization (Chapter 9)

Product Types and Markets (Chapter 10)

Sideboard Fisheries (Chapter 11)

Safety (Chapter 12)

Management Costs and Cost Recovery (Chapter 13)



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Inshore/Offshore vs AFA

Inshore/Offshore

- **Sectors**
 - Inshore
 - Offshore
- **Allocation**
 - 7.5% CDQ
 - 35% Inshore
 - 65% Offshore
- **Eligibility**
 - License limitation program, endorsing BSAI groundfish licenses by gear type, but not species.

AFA

- **Sectors**
 - Inshore
 - Catcher/processor
 - Mothership
- **Allocation**
 - 10% CDQ
 - ICA
 - 50% Inshore
 - 40% Catcher/processor
 - 10% Mothership
- **Eligibility**
 - Only vessels explicitly named in the Act or having satisfied minimum historic catch requirements.

Other AFA Provisions Include

Ownership requirements;

Buyout provision for ineligible catcher/processors;

Fishery cooperative regulations;

Harvesting and processing excessive shares limits; and

Sideboard protections.

These are all provisions which elicit Council/NMFS recommendations

Report to Congress, February 20, 2002

Congressional request embedded within Section 213(d) of the AFA.

Evolution of AFA

Amendments 61/61/13/8, December 2002

Giving effect to the required and discretionary provisions of the AFA pertaining to groundfish FMPs in the BSAI and GOA, and FMPs for BSAI crab and scallop fisheries.

Amendment 69 (Cooperative Leasing), February 2003

Amendment 82 (Framework for Management of the Aleutian Islands Subarea Directed Pollock Fishery), March 2005

Consolidated Appropriations Act of 2004

Amendment 84 (Modify Existing Chinook and Chum Salmon Savings Areas and created intercooperative agreements), October 2007

Evolution of AFA

Amendment 91 (Chinook Salmon Bycatch Management and created incentive plan agreements), August 2010

Amendment 106 (American Fisheries Act Vessel Replacement), September 2014

Coast Guard Authorization Act of 2010

Amendment 110 (Chinook and Chum Salmon Bycatch Management Measures), March 2016

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AFA Cooperatives

Legal entities formed under Fisherman's Collective Marketing Act of 1934 (15 U.S.C. 521)

AFA Cooperatives:

Further subdivide each sector's (and inshore cooperative's) pollock and sideboard allocations through private contractual agreements;

Facilitate transfers of pollock among the cooperative members;

Enforce contract provisions; and

Participate in agreements to minimize salmon PSC

The cooperative structure provides participants of the BS pollock fishery with greater flexibility and responsibility over the management of resources.

AFA Cooperatives

Catcher/processor sector

The Pollock Conservation Cooperative (PCC)—contained all (20) listed catcher/processors in the BS pollock fishery, and

The High Seas Catchers' Cooperative (HSCC)—contained all (7) catcher vessels eligible to deliver pollock to catcher/processors.

Mothership sector

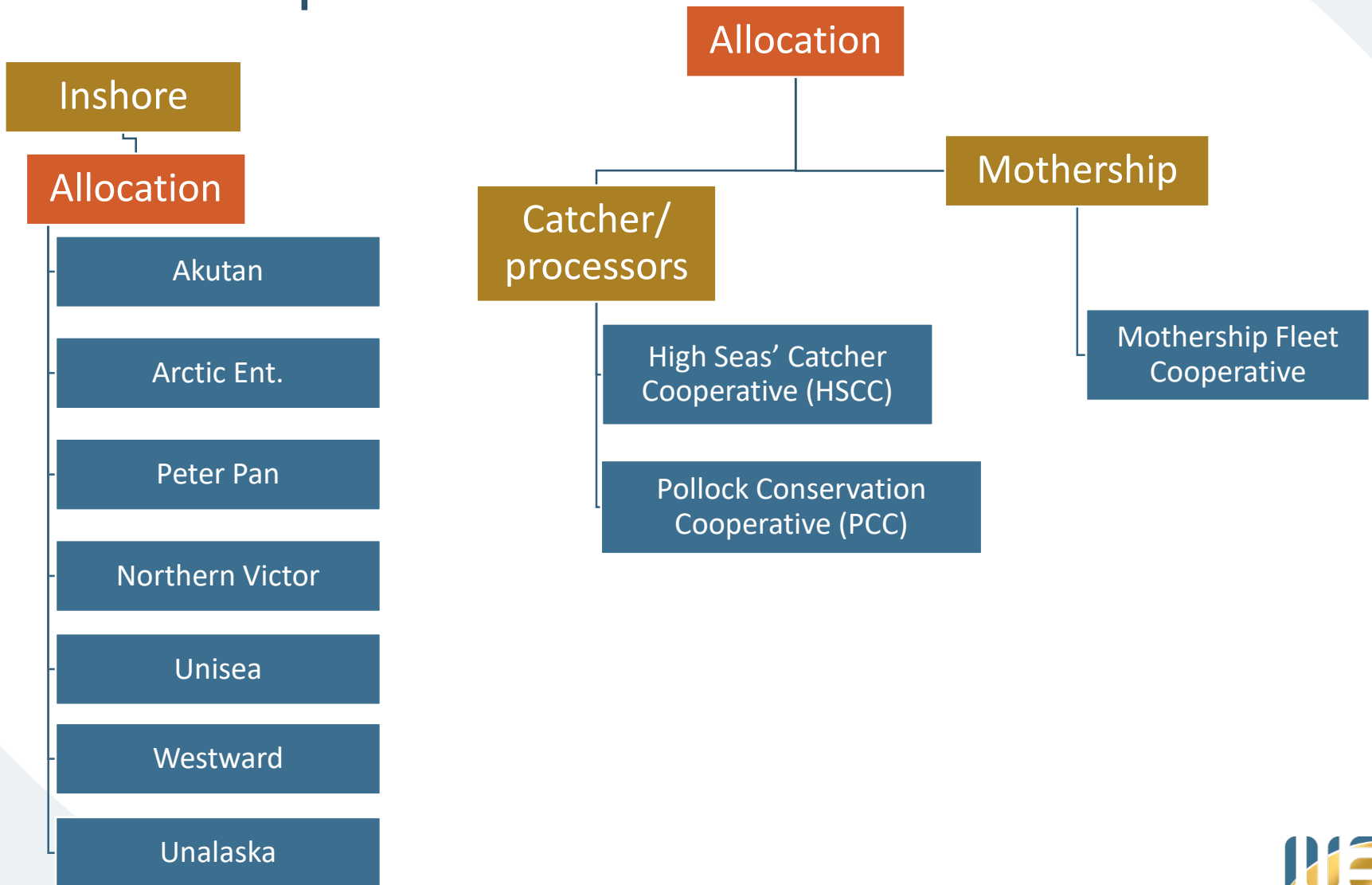
Mothership Fleet Cooperative (MFC)—contains all (20) catcher vessels delivering to AFA motherships.

Inshore sector

Since the first year of operation under a cooperative structure (2000), eligible inshore catcher vessels formed around 7 eligible inshore cooperatives.

All but four catcher vessels were members of an inshore cooperative for the 2001 fishing year.

AFA Cooperatives



AFA Reporting Requirements

All AFA cooperatives must comply with regulations governing filing deadlines, representative designation, agent appointment, and contract elements.

AFA requires cooperatives to submit preliminary and final annual written reports on fishing activity to the Council. Annual written reports must contain at a minimum:

- Catch (retained and discarded) of pollock, sideboard species, and PSC on an area-by-area and vessel-by-vessel basis;

- A description of the method used by the cooperative to monitor fisheries in which cooperative vessels participated;

- Any actions taken by the cooperative to penalize vessels that exceed their allowed catch and PSC in pollock and all sideboard fisheries;

- Landings of pollock made outside the State of Alaska on a vessel-by-vessel basis; and

- the number of salmon taken by species and season, and list of each vessel's number of appearances on the weekly “dirty 20” lists for non-Chinook salmon

AFA Cooperative Contract and Reporting Requirements

Additional reporting is required by intercooperative agreements (Amendment 84/non-Chinook salmon) and incentive plan agreements (Amendment 91/Chinook salmon) for salmon PSC.

If a cooperative contains AFA catcher vessels, additional regulations mandate the contract include adequate provisions to prevent each non-exempt member catcher vessel from exceeding an individual vessel sideboard limit for each BSAI or GOA sideboard species

While not a reporting requirement under the AFA, the United Catcher Boats Association, annually prepares the AFA catcher vessel intercooperative report, which is a summary of the eight catcher vessel cooperative reports.

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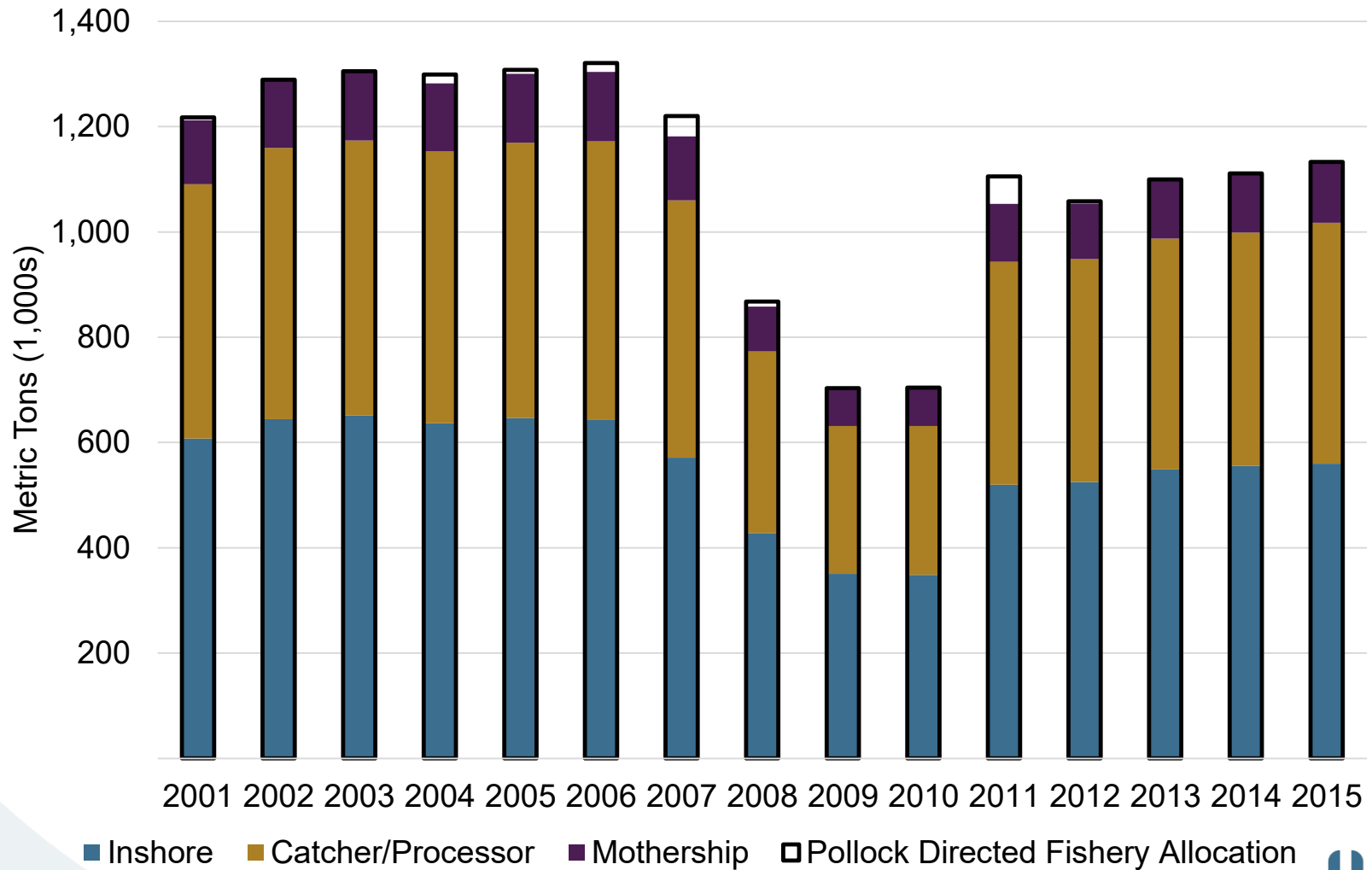
Sideboard Fisheries (Chapter 11)

Safety (Chapter 12)

Management Costs and Cost Recovery (Chapter 13)

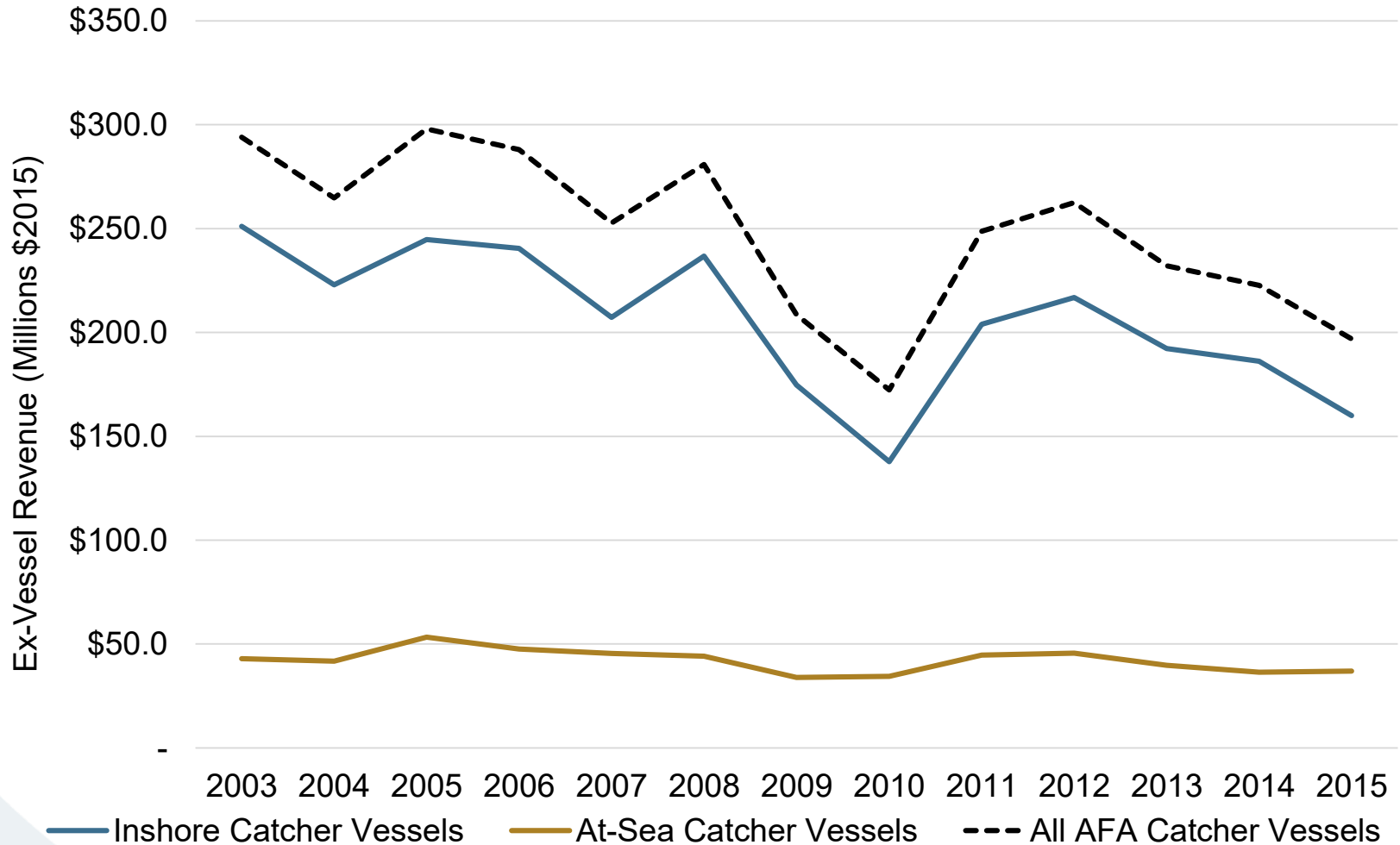


BS Pollock Allocation and Harvest



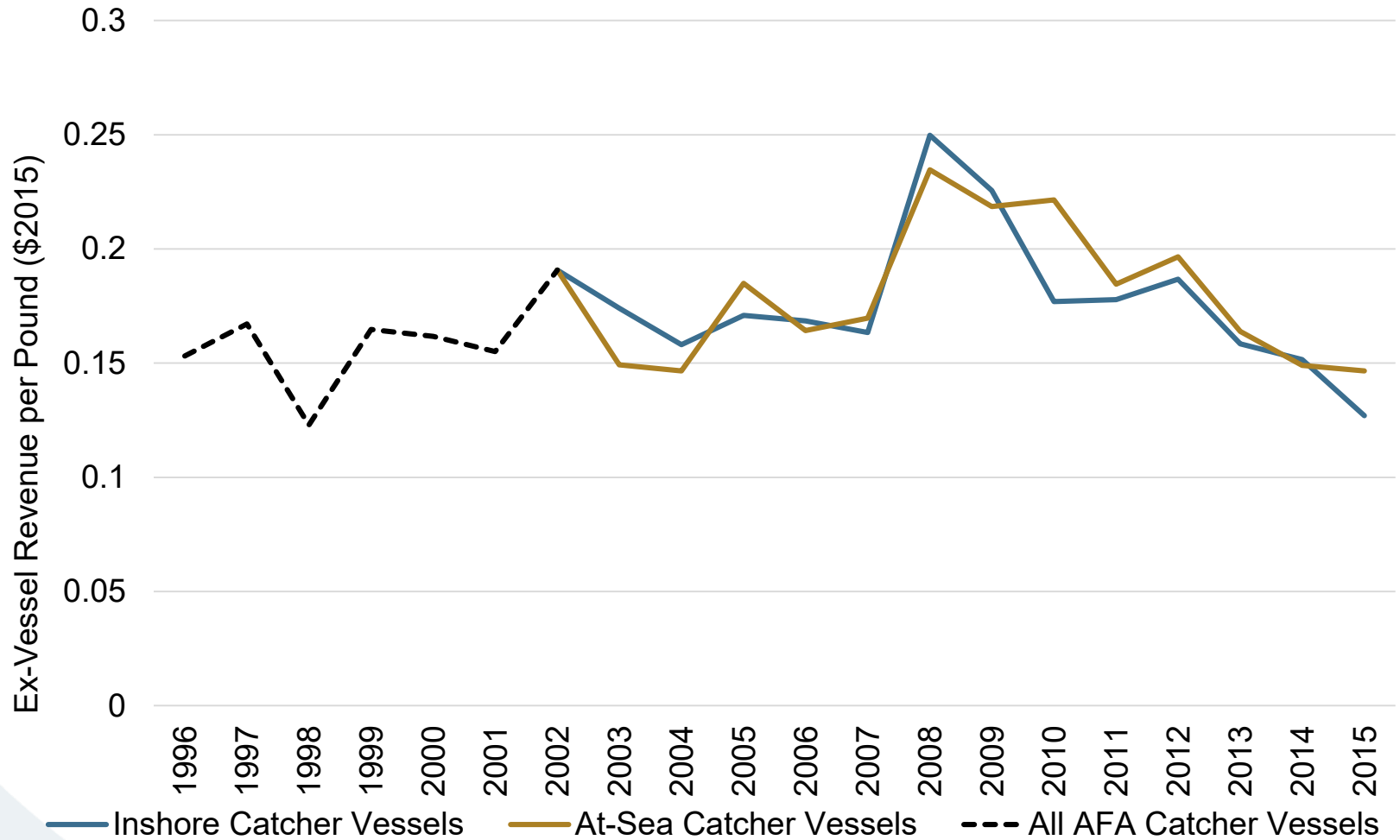
Document Location: Figure 1. Bering Sea Pollock Harvest, by AFA Sector, 2001–2015, Section 4, Page 11

BS Pollock Ex-Vessel Revenue

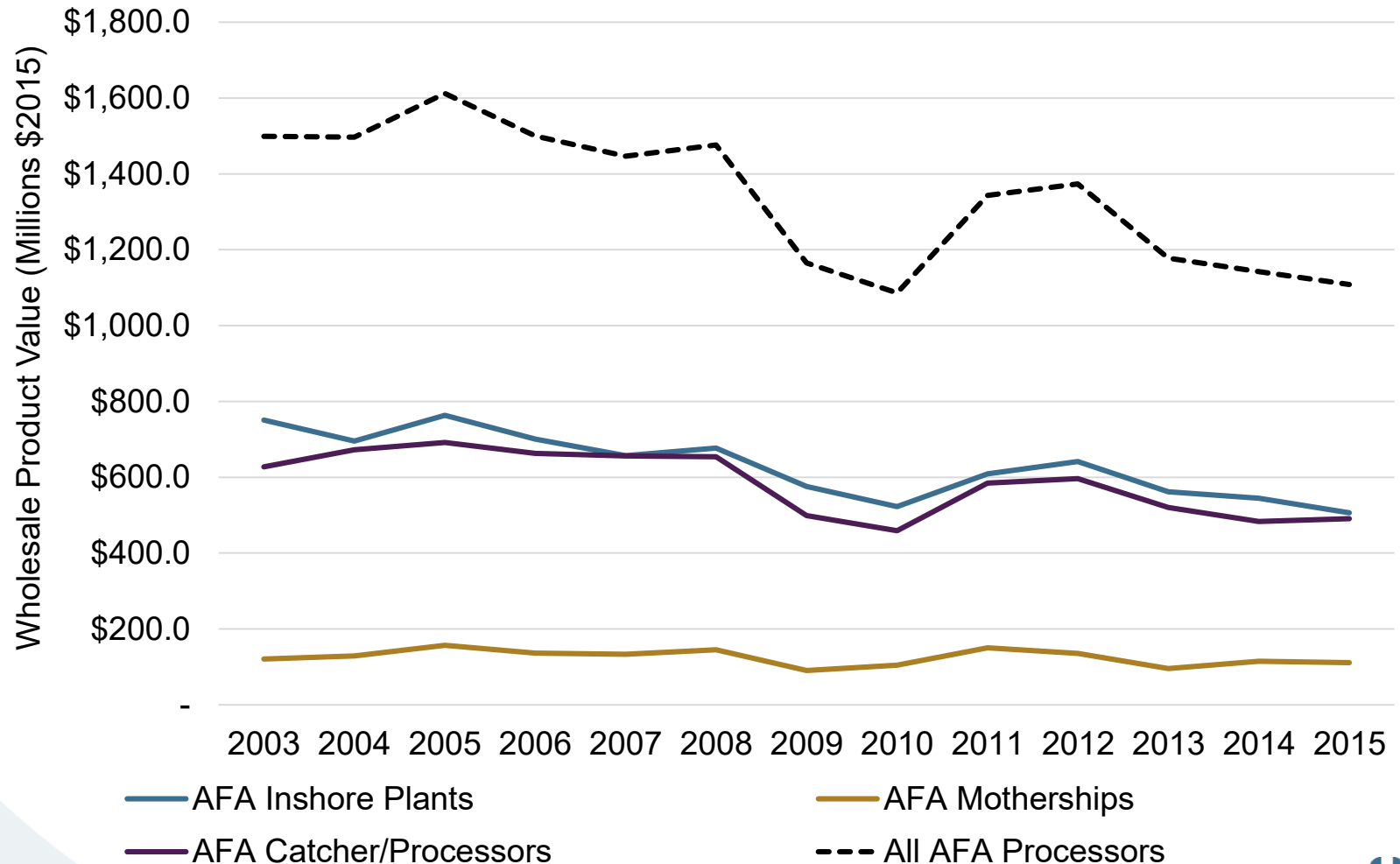


Document Location: Figure 3. Ex-vessel Revenues of AFA Catcher Vessels in the Bering Sea Pollock Fishery, 2003–2015, Section 4, Page 13

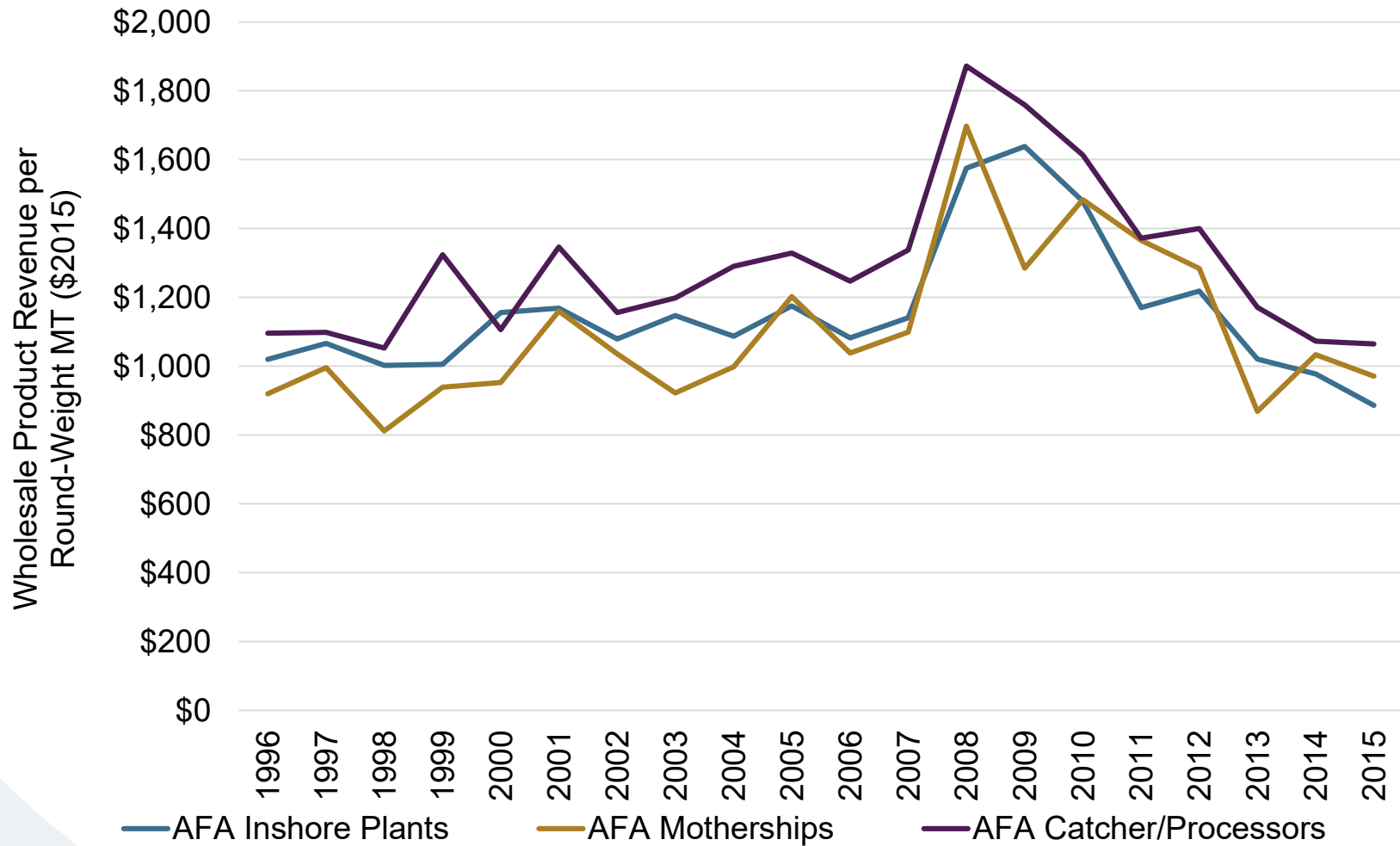
BS Pollock Ex-Vessel Revenue per Pound



BS Pollock Wholesale Revenue



BS Pollock Wholesale Revenue per MT



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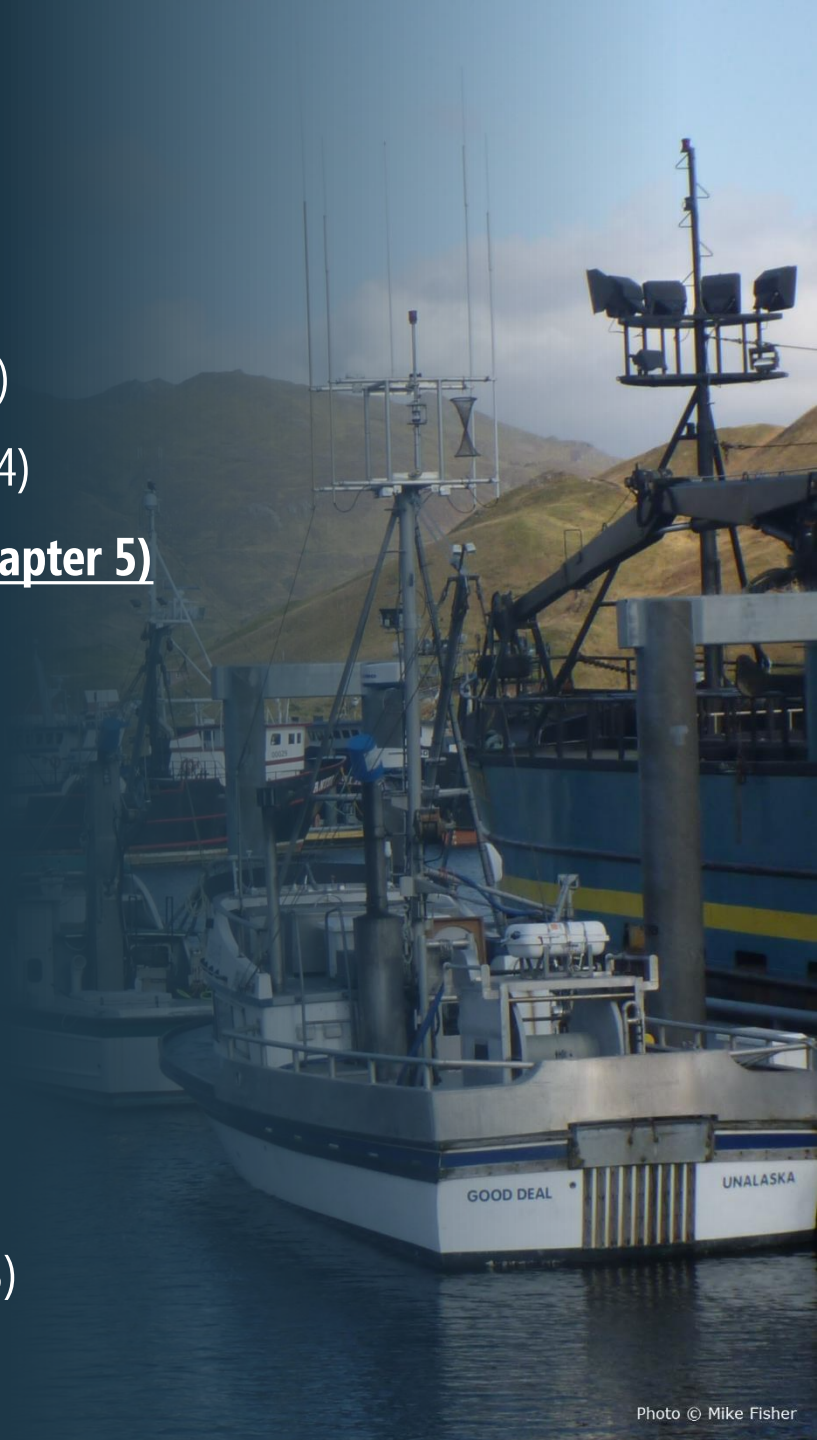
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Catcher/Processor Ownership

At the start of the 2000 fishing season, the 19 catcher/processors listed in the AFA were owned by 8 companies.

By 2015, 7 companies owned all catcher/processors

At the time HSCC was formed, two of the seven catcher vessels were owned by companies owning AFA catcher/processors.

Later, two additional catcher vessels were sold to owners of catcher/processors—leaving the remaining 3 catcher vessels thought to be independently owned.

Based on information from CDQ group annual reports and web pages, together with information obtained from interviews with key informants, it appears that many CDQ groups have ownership interests in many AFA catcher/processors.

Catcher/Processor Participation

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Number of Vessels	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Number of Active Vessels	14	15	16	16	17	16	16	16	18	14	14	15	14	14	15	14
Bottom Tertile (%)	25.2	21.3	21.4	21.7	21.3	21.4	24.3	21.8	17.6	23.9	20.1	20.7	27.0	25.2	20.9	27.4
Mid Tertile (%)	39.2	36.2	37.7	37.4	37.9	37.5	36.4	37.6	36.2	31.9	34.9	33.7	37.7	37.9	34.7	36.9
Top Tertile (%)	35.6	42.5	41.0	40.9	40.8	41.2	39.3	40.6	46.1	44.2	45.0	45.6	35.3	36.9	44.4	35.7
Gini Coefficient	0.13	0.16	0.15	0.15	0.20	0.15	0.12	0.15	0.21	0.20	0.25	0.19	0.12	0.15	0.18	0.12

Note: Data does not contain Ocean Peace

Document Location: Table 5. Pollock Conservation Cooperative Catcher/Processor Activity in the Bering Sea Pollock Fishery, 2000–2015, Section 5.1.2, Page 21

Mothership Ownership

At the time AFA was enacted, 3 separate companies owned each AFA mothership.

In 2010, the merger of Supreme Alaska Seafoods and Phoenix Processor Limited Partnership consolidated ownership of 2 motherships—the *Ocean Phoenix* and *Excellence*.

To ensure a measure of certainty in their fish supplies, AFA motherships have sold themselves, in part, to catcher vessels (Strong and Criddle 2013).

The Yukon Delta Fisheries Development Association CDQ group has ownership in both the *Golden Alaska* mothership and two catcher vessels delivering to motherships.

Mothership Participation

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Number of Affiliated Vessels	20	20	20	20	19	19	19	19	19	19	19	19	19	19	19
Number of Active Vessels	19	17	17	18	17	17	17	17	17	14	14	15	14	15	15
Vessels that Harvested > 105% of Allocation	11	10	10	9	12	12	12	11	10	12	11	12	10	11	9
Bottom Tertile (%)	14.1	24.1	22.4	20.3	26.5	18.5	20.6	14.5	17.8	23.2	25.4	22.8	23.6	18.3	18.2
Mid Tertile (%)	38.4	36.0	37.0	32.8	35.5	35.3	38.2	39.6	36.5	35.3	36.2	32.4	37.6	34.0	32.3
Top Tertile (%)	47.4	39.8	40.6	46.9	38.0	46.2	41.2	45.9	45.8	41.6	38.4	44.8	38.8	47.7	49.5
Gini Coefficient	0.27	0.16	0.19	0.20	0.14	0.25	0.21	0.28	0.25	0.20	0.16	0.17	0.17	0.23	0.25

Document Location: Table 6. Mothership Fleet Cooperative Catcher Vessel Activity in the Bering Sea Pollock Fishery, 2001–2015, Section 5.2.2, Page 23

Inshore Ownership

Currently, the six shorebased and two floating processors in the inshore sector are owned by four companies and organized into seven cooperatives.

Inshore catcher vessel ownership information available to this AFA Program review was insufficient to determine changes in ownership patterns in the fleet.

However, publically available information indicates that over the years, CDQ groups have acquired significant ownership interests in companies possessing inshore catcher vessels.

Inshore Participation

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Number of Affiliated Vessels	94	95	96	97	96	98	97	97	95	97	97	95	92	91
Number of Active Vessels	81	82	84	83	79	85	82	83	82	83	76	80	80	81
Vessels That Harvested > 105% of Allocation	29	28	33	30	32	25	30	34	29	27	39	33	30	30
Bottom Tertile (%)	7.3	7.5	6.5	5.7	5.3	5.0	4.5	5.4	5.4	6.2	7.2	6.4	6.1	6.0
Mid Tertile (%)	30.9	30.7	29.6	29.8	31.0	29.7	30.9	31.0	31.0	31.4	32.6	31.1	30.2	29.8
Top Tertile (%)	61.9	61.8	63.9	64.5	63.7	65.3	64.6	63.6	63.6	62.5	60.2	62.5	63.7	64.2
Gini Coefficient	0.44	0.45	0.47	0.49	0.47	0.47	0.46	0.45	0.45	0.44	0.41	0.44	0.46	0.45

Document Location: Table 5. Pollock Conservation Cooperative Catcher/Processor Activity in the Bering Sea Pollock Fishery, 2000–2015, Section 5.3.2, Page 26

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Prohibited Species Catch

Prohibited species in the BSAI Management Area for vessels fishing for groundfish include:

- Pacific salmon (Chinook and non-Chinook)
- Pacific halibut
- Pacific herring
- red king crab (in Zone 1)
- *Chionoecetes opilio* (in the *C. opilio* bycatch limitation zone or COBLZ)
- golden king crab
- blue king crab
- *Chionoecetes bairdi* (in Zone 1 and 2)
- other *C. opilio*

PSC limits in the BSAI groundfish fisheries are assigned to individual target fishery categories, with Chinook salmon representing the only PSC species with a binding limit in the BS pollock fishery (beginning in 2010 with Amendment 91).

Prohibited Species Catch

PSC Species		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Chinook Salmon (no.)										60,000 (PSC Limit)				
	AFA Fleet Limit	29,000 (Chinook Salmon Savings Area Closure Limit)								47,591 (Performance Standard)				
	% Caught	149	168	228	279	402	71	42	33	52	23	26	30	36
Non-Chinook Salmon (no.)	Trawl Sector Limit	42,000 (Non-Chinook Salmon Savings Area Closure Limit)												
	% Caught	330	1,037	1,666	711	205	35	108	30	447	53	297	517	554
Pacific Halibut (mt)	Trawl Sector Limit	232	232	232	232	232	N/A							
	Trawl Limited Access Sector Limit	No BS Trawl Limited Access Sector					125	175	250	250	250	250	250	250
	% Caught	32	35	43	47	113	219	226	82	114	138	81	58	42
Red king crab Zone 1 (no. 1,000s)	Trawl Sector Limit	200	406	406	406	406	N/A							
	Trawl Limited Access Sector Limit	No BS Trawl Limited Access Sector					400	400	400	400	197	197	197	197
	% Caught	16	4	-	7	2	11	11	17	6	38	8	29	0
C. opilio COBLZ (no. 1,000s)	Trawl Sector Limit	72.4	72.4	80.9	106.6	80.5	N/A							
	Trawl Limited Access Sector Limit	No BS Trawl Limited Access Sector					20.0	20.0	20.0	38.2	32.3	48.3	50.0	49.2
	% Caught	1	-	2	2	3	27	14	23	11	7	7	6	5
C. bairdi Zone 1 (no. 1,000s)	Trawl Sector Limit	17.2	17.2	17.2	17.2	17.2	N/A							
	Trawl Limited Access Sector Limit	No BS Trawl Limited Access Sector					5.0	5.0	4.2	4.2	5.0	5.0	5.0	5.0
C. bairdi Zone 2 (no. 1,000s)	Trawl Sector Limit	27.5	27.5	27.5	27.5	27.5	N/A							
	Trawl Limited Access Sector Limit	No BS Trawl Limited Access Sector					5.0	5.0	4.2	4.2	5.0	5.0	5.0	5.0
	% caught in Zone 1 & 2	2	2	1	2	2	14	15	19	65	11	20	17	12
Pacific Herring (mt)	Trawl Limit	1,330	1,635	1,754	1,542	1,558	1,505	1,480	1,722	1,984	1,827	2,365	1,940	2,449
	% Caught	73	59	33	28	22	7	4	20	18	123	41	7	61

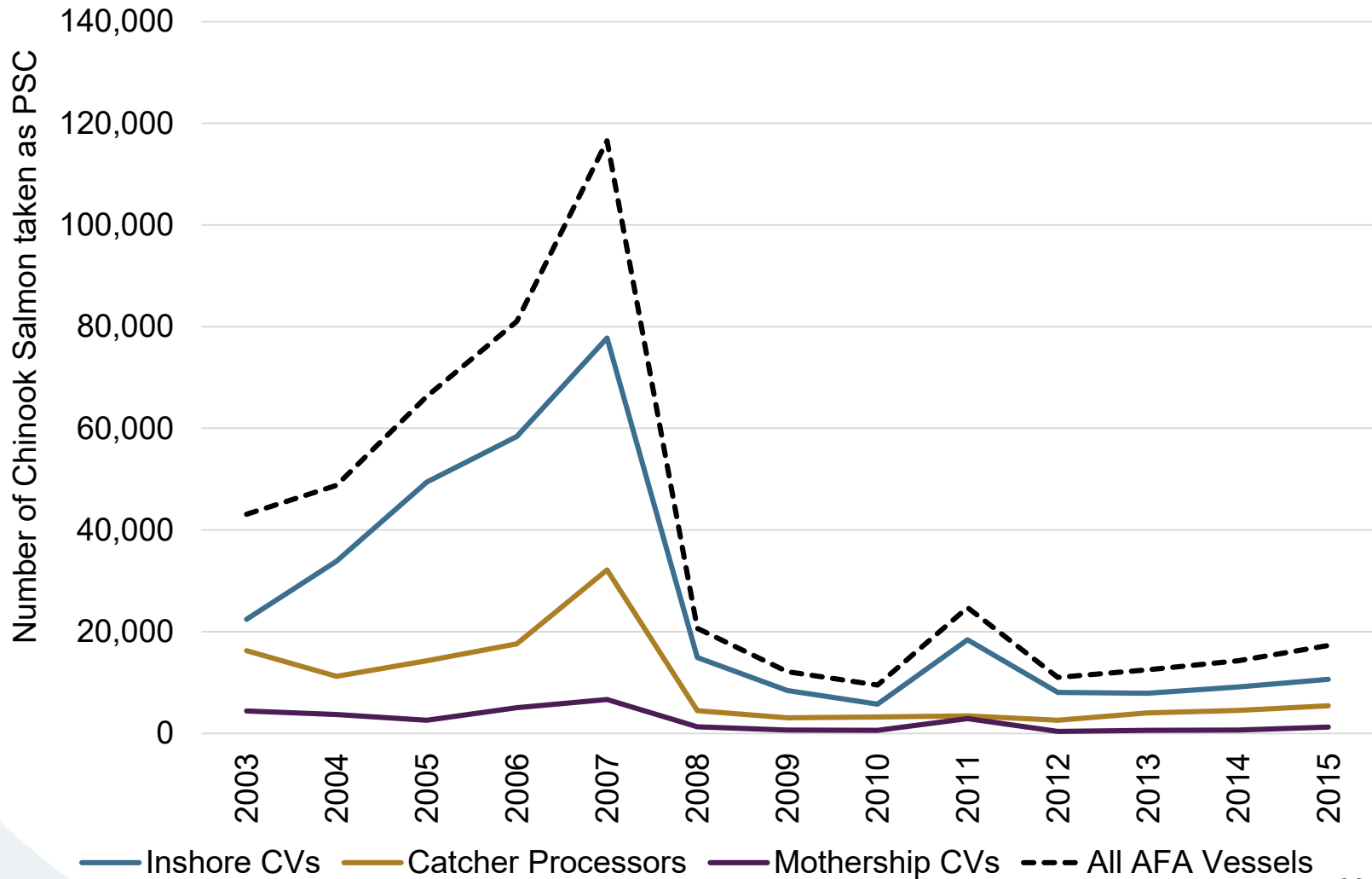
Document Location: Table 12. PSC of AFA Vessels as a Percentage of PSC Limits in the Bering Sea Pollock Fishery, 2003–2015, Section 6, Page 31

Prohibited Species Catch

PSC Species		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Chinook Salmon (no.)		29,000 (Chinook Salmon Savings Area Closure Limit)								60,000 (PSC Limit)				
	AFA Fleet Limit	29,000 (Chinook Salmon Savings Area Closure Limit)								47,591 (Performance Standard)				
	% Caught	149	168	228	279	402	71	42	33	52	23	26	30	36
Non-Chinook Salmon (no.)	Trawl Sector Limit	42,000 (Non-Chinook Salmon Savings Area Closure Limit)												
	% Caught	330	1,037	1,666	711	205	35	108	30	447	53	297	517	554
Pacific Halibut (mt)	Trawl Sector Limit	232	232	232	232	232	N/A							
	Trawl Limited Access Sector Limit	No BS Trawl Limited Access Sector					125	175	250	250	250	250	250	250
	% Caught	32	35	43	47	113	219	226	82	114	138	81	58	42
Red king crab Zone 1 (no. 1,000s)	Trawl Sector Limit	200	406	406	406	406	N/A							
	Trawl Limited Access Sector Limit	No BS Trawl Limited Access Sector					400	400	400	400	197	197	197	197
	% Caught	16	4	-	7	2	11	11	17	6	38	8	29	0
C. opilio COBLZ (no. 1,000s)	Trawl Sector Limit	72.4	72.4	80.9	106.6	80.5	N/A							
	Trawl Limited Access Sector Limit	No BS Trawl Limited Access Sector					20.0	20.0	20.0	38.2	32.3	48.3	50.0	49.2
	% Caught	1	-	2	2	3	27	14	23	11	7	7	6	5
C. bairdi Zone 1 (no. 1,000s)	Trawl Sector Limit	17.2	17.2	17.2	17.2	17.2	N/A							
	Trawl Limited Access Sector Limit	No BS Trawl Limited Access Sector					5.0	5.0	4.2	4.2	5.0	5.0	5.0	5.0
C. bairdi Zone 2 (no. 1,000s)	Trawl Sector Limit	27.5	27.5	27.5	27.5	27.5	N/A							
	Trawl Limited Access Sector Limit	No BS Trawl Limited Access Sector					5.0	5.0	4.2	4.2	5.0	5.0	5.0	5.0
	% caught in Zone 1 & 2	2	2	1	2	2	14	15	19	65	11	20	17	12
Pacific Herring (mt)	Trawl Limit	1,330	1,635	1,754	1,542	1,558	1,505	1,480	1,722	1,984	1,827	2,365	1,940	2,449
	% Caught	73	59	33	28	22	7	4	20	18	123	41	7	61

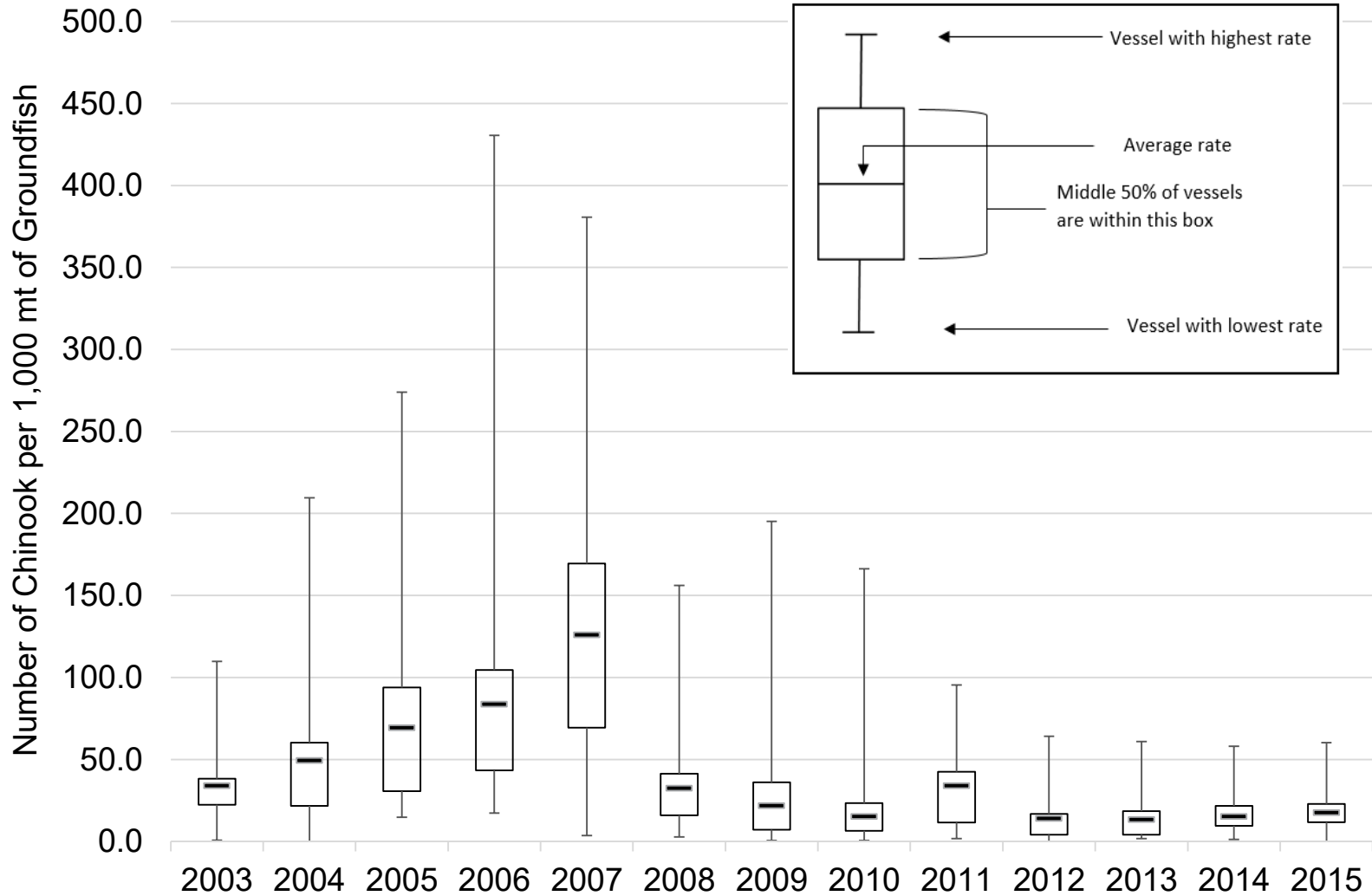
Document Location: Table 12. PSC of AFA Vessels as a Percentage of PSC Limits in the Bering Sea Pollock Fishery, 2003–2015, Section 6, Page 31

Chinook Salmon PSC



Document Location: Figure 8. Chinook Salmon PSC Amount and Rate in the Bering Sea Pollock Fishery, by AFA Sector, 2003–2015 , Section 6.1.1, Page 32

Chinook Salmon PSC



Document Location: Figure 10. Chinook Salmon PSC Rate Distribution in the AFA Inshore Sector, 2003–2015, Section 6.1.1, Page 34

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Excessive Shares

To prevent the excessive consolidation of participants and privileges in the AFA Program, section 210(e) of the AFA sets out excessive harvesting and processing limits for participants.

Section 210(e)(1) of the AFA restricts an individual, corporation, or other entity from **harvesting more than 17.5 percent** of the pollock available to be harvested in the Bering Sea directed pollock fishery.

Section 210(e)(2) of the AFA directed the Council to create management measures to prevent any particular individual or entity from processing an excessive share of pollock available in the directed Bering Sea **fishery—the Council and NMFS established the limit at 30 percent** of the sum of the Bering Sea pollock directed fishing allowances.

NMFS and the U.S. Maritime Administration (MARAD) receive limited ownership information for AFA entities for the purposes of managing and enforcing the excessive harvesting and processing limits.

Based on available expertise, a review of publically available data, and other confidential information submitted to NMFS, some entities are close to the limits, but do not appear to be exceeding the limits. However, with future replacement vessels in the fleet, there may be a greater need to examine ownership.

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CDQ and Fishing Community Impacts

A wide range of coastal communities are engaged in, and dependent, upon the BS pollock fishery. This report separately evaluates:

- Communities that participate in the BS pollock fishery primarily through the auspices of the CDQ Program

- Communities that participate in the fishery but are not a part of the CDQ Program

CDQ Communities

As documented in the Council's 2002 report, CDQ communities are impacted in several ways:

Direct Impacts

Royalty payments

U.S. Ownership Requirements and Increased Cost of Pollock Fishery Investments;

Foreign ownership divestment

Employment and Training Benefits and Educational Opportunities;

Community Based Fisheries Development; and

Fishery Conservation.

CDQ Communities

Quantifying the continuing impacts of the AFA on CDQ communities has become more problematic due to ongoing changes to the program

Coast Guard and Marine Transportation Act of 2006

Although more difficult to analyze, it seems clear that the CDQ groups have generally continued to perform well under the Act's management regime:

From 2001 through 2005, fisheries royalties ranged between \$42.6 and \$60.5 million per year, with increases seen in each successive year.

Pollock accounted for 79 to 86 percent of total all-species royalties

From 2007 through 2013, estimates of CDQ royalties for all species combined ranged between \$59.9 and \$79.5 million per year.

Estimates of pollock royalties ranged between 57 and 79 percent during the 2006–2010 period (the most recent years for which estimates are available)

Fishing Communities

Provides an overview of changes in the AFA catcher vessel sector between 2000 and 2015, both in terms of specific fishery participation and the geographic distribution of the fleet.

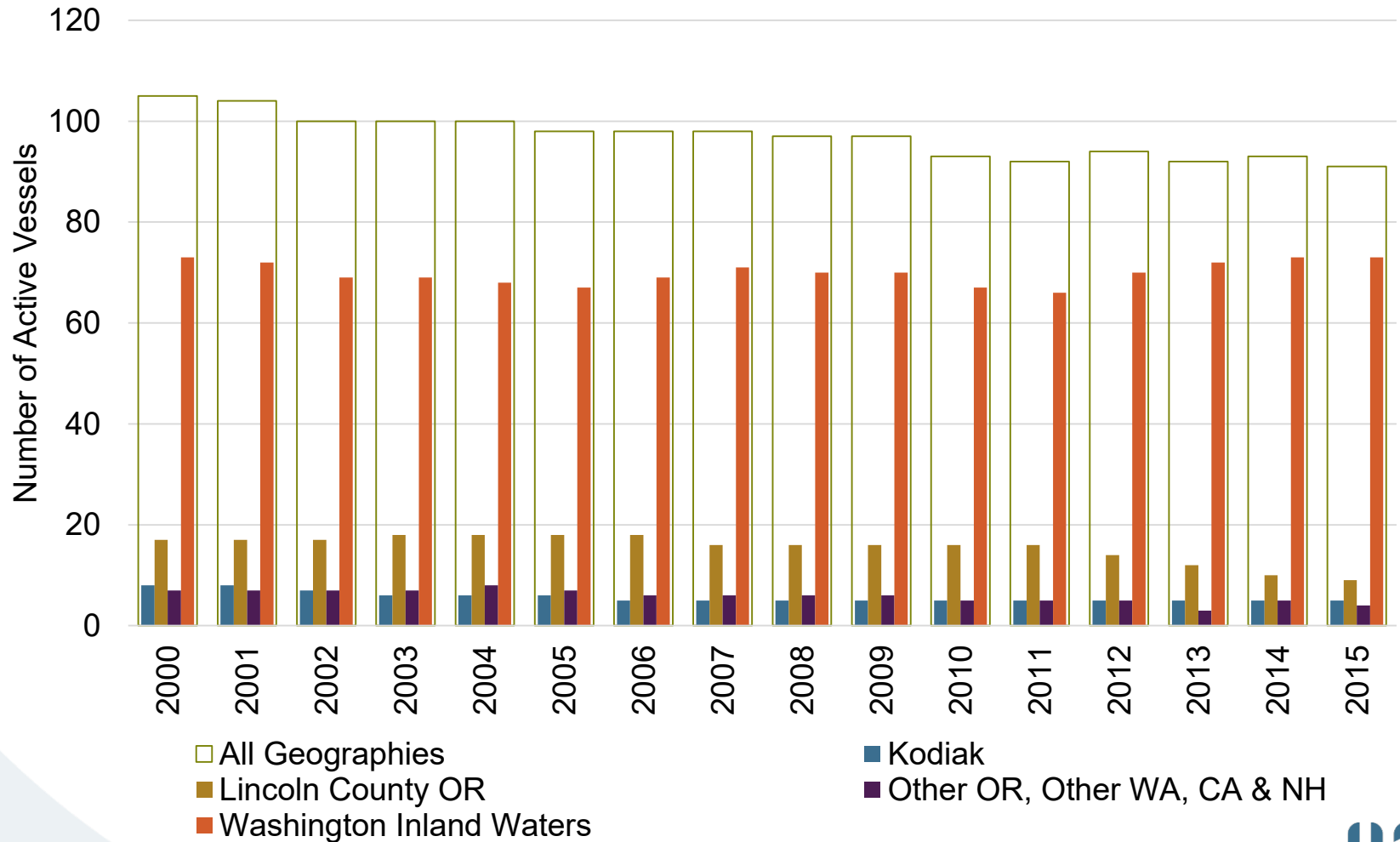
Continuing impacts of the AFA is focused on four regions: 1) Alaska Peninsula/Aleutian Islands, 2) Kodiak Island, 3) Washington inland waters, and 4) coastal Oregon.

We note that there are two changes in geographic definitions of these regions compared to the definitions used in the Council's 2002 report

First, the Kodiak Island region, formerly defined as Kodiak Island Borough, has been reduced in geographic scope to the City of Kodiak.

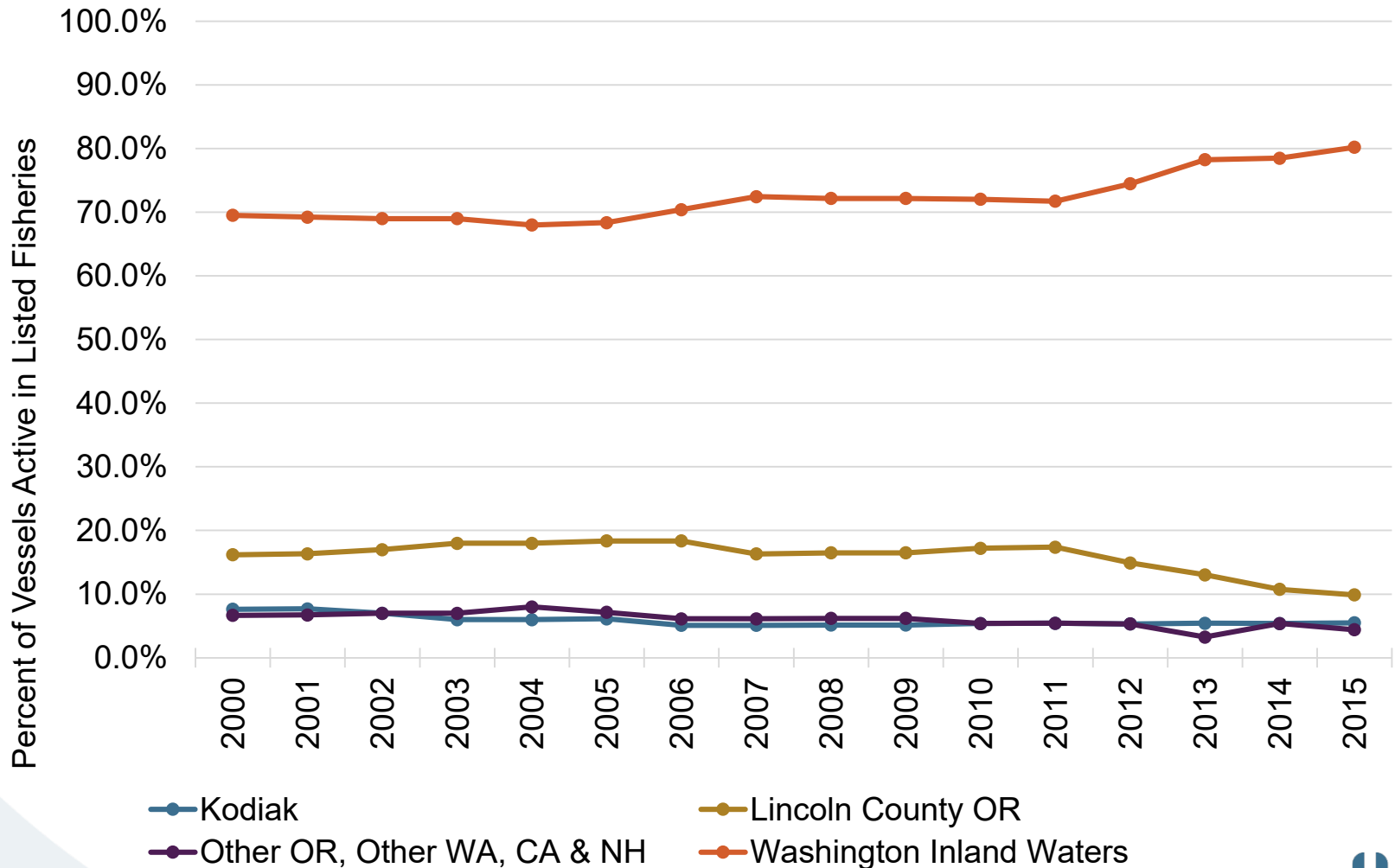
Second, the Oregon coast region, formerly defined as Lincoln, Tillamook, and Clatsop counties, has been reduced in geographic scope to Lincoln county alone.

Active AFA CVs by Major Geography



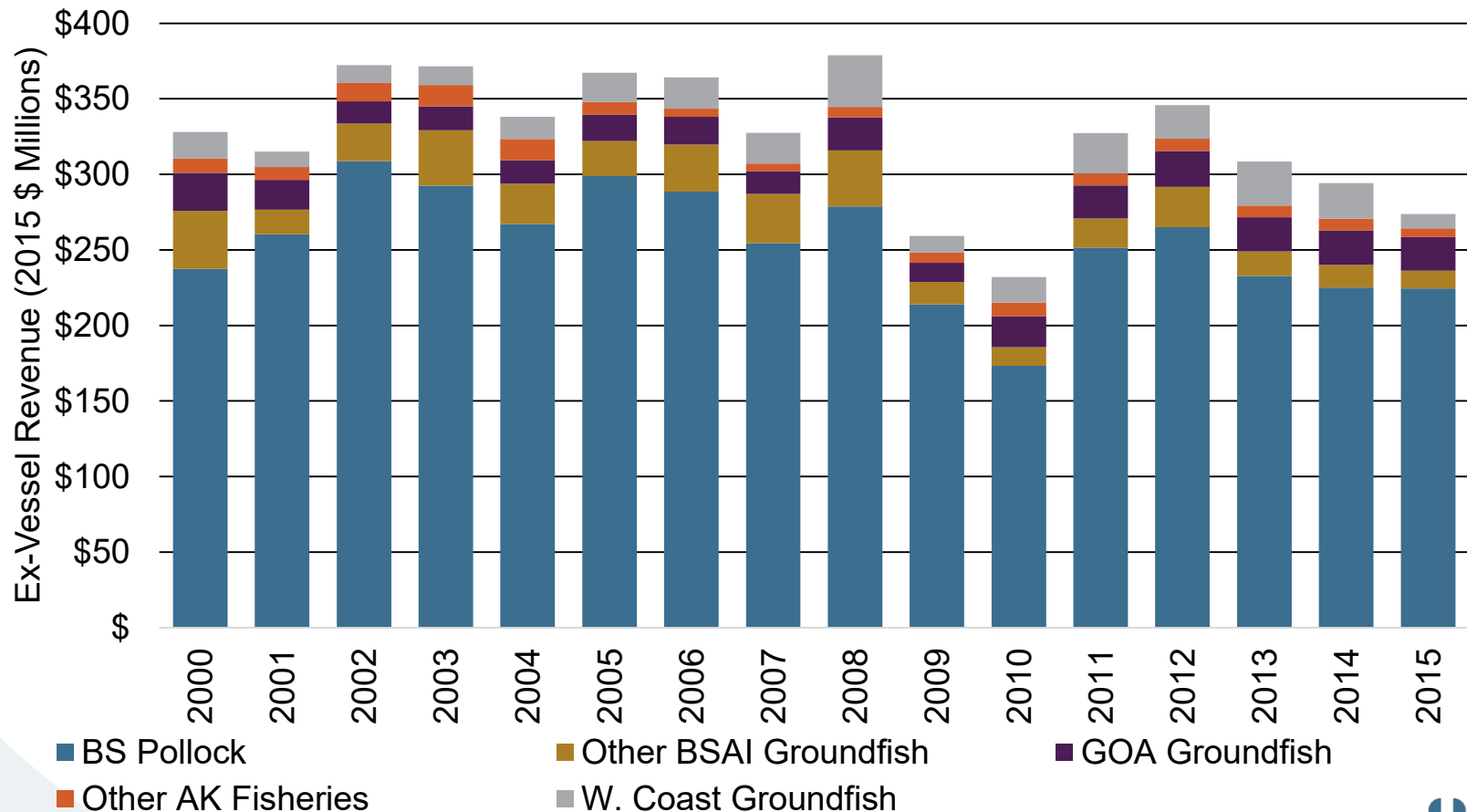
Document Location: Figure 18. Number of Active AFA Catcher Vessels, by Major Geography, 2000–2015, Section 8.3.2.1, Page 50

Active AFA CVs by Major Geography



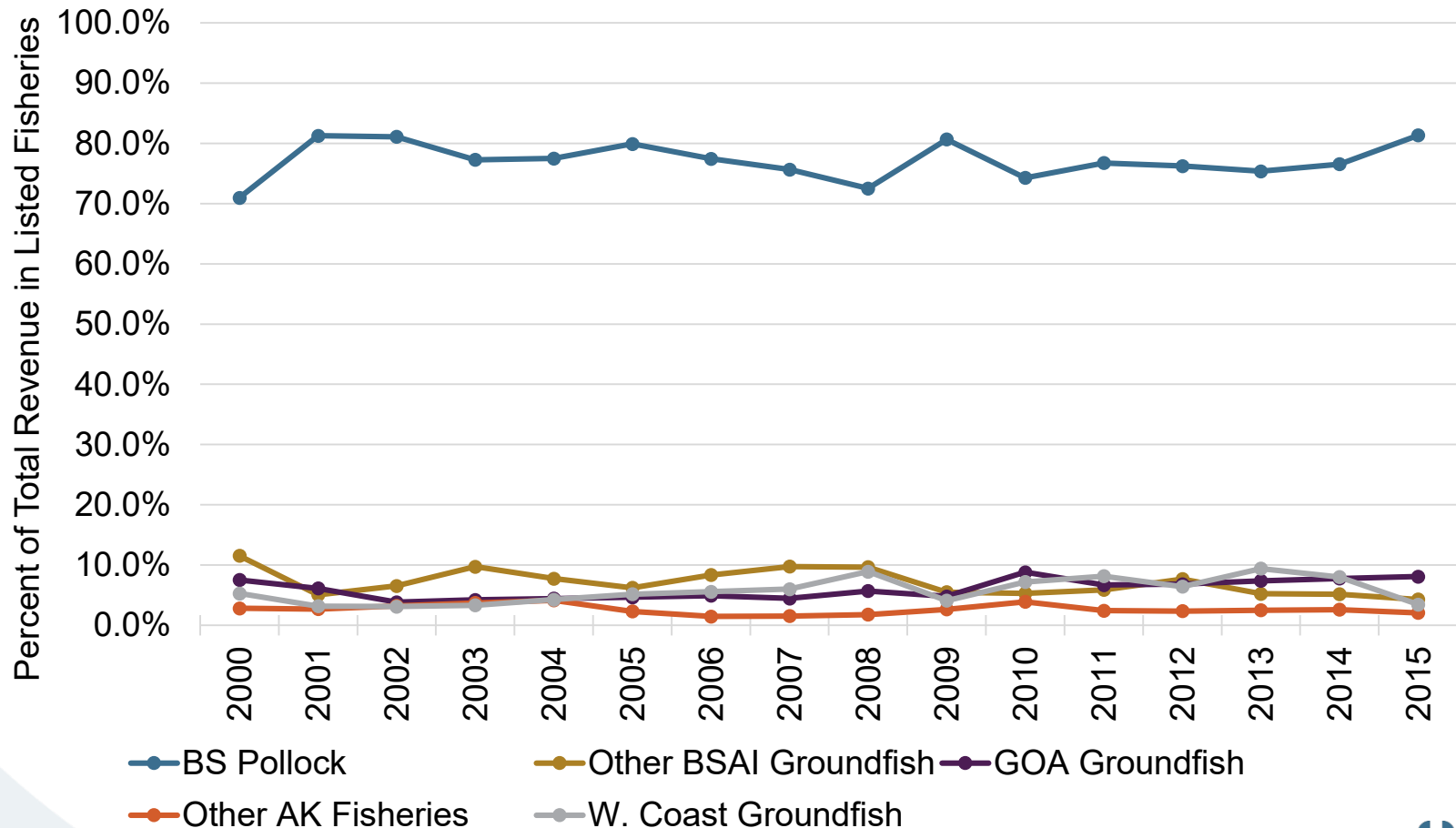
Document Location: Figure 19. Percent of Active AFA Catcher Vessels, by Major Geography, 2000–2015, Section 8.3.2.1, Page 50

AFA CV Ex-Vessel Revenue by Major Fishery

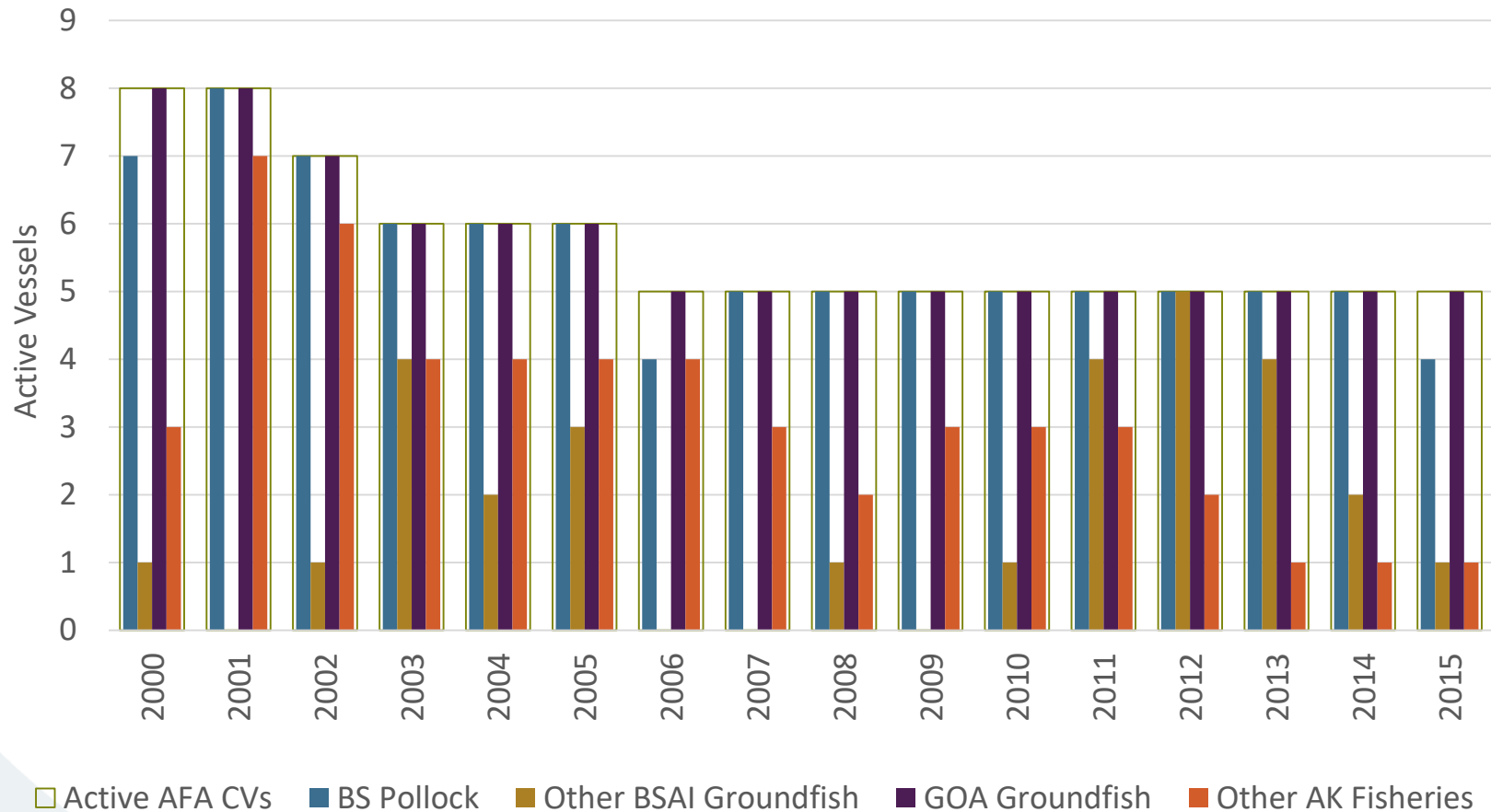


Document Location: Figure 16. AFA Catcher Vessel Ex-vessel Revenue, by Fishery, 2000–2015 (2015\$), Section 8.3.2.1, Page 49

AFA CV Ex-Vessel Revenue by Major Fishery

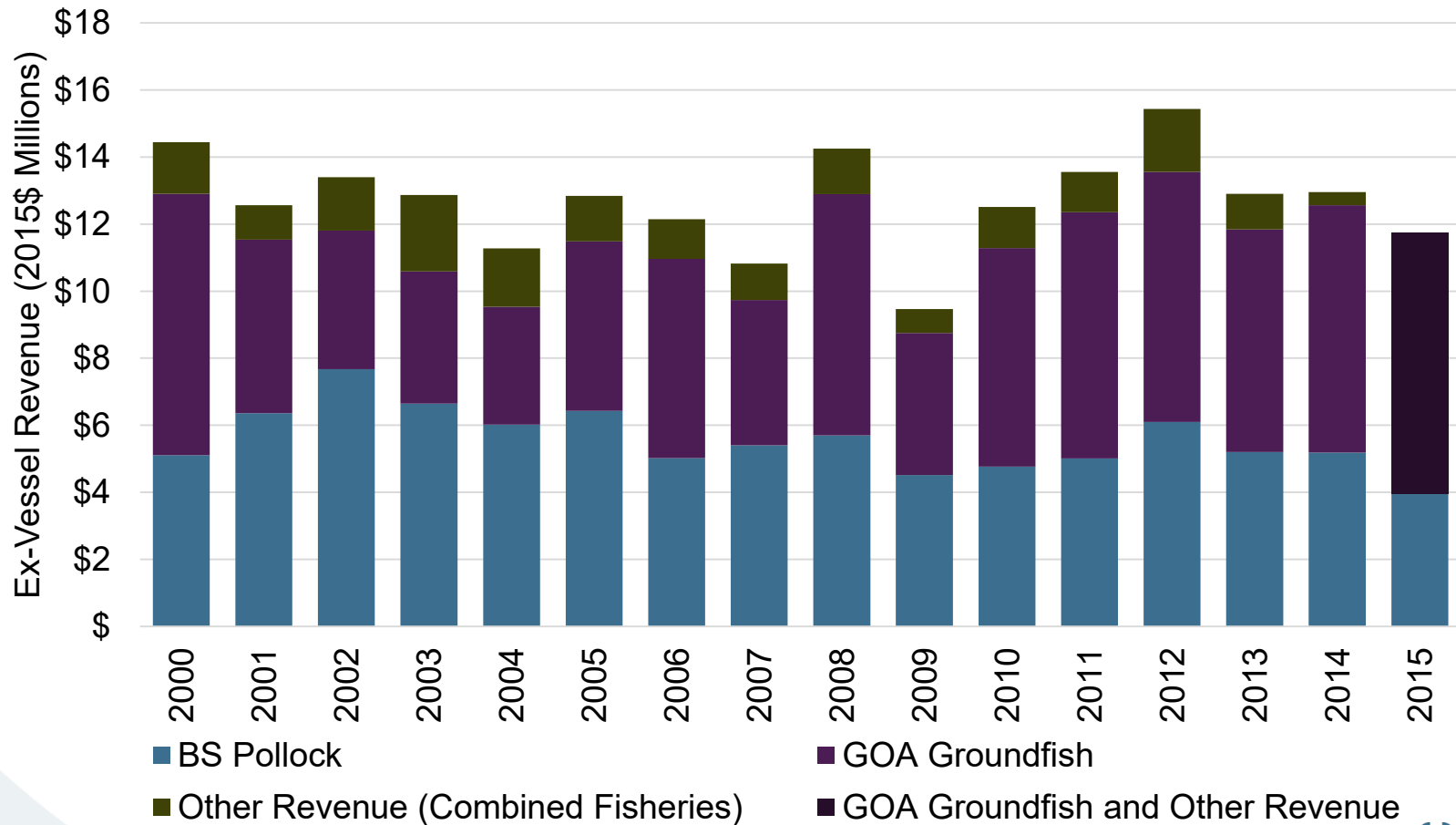


AFA CV Ex-Vessel Revenue by Region and Major Fishery (Kodiak)



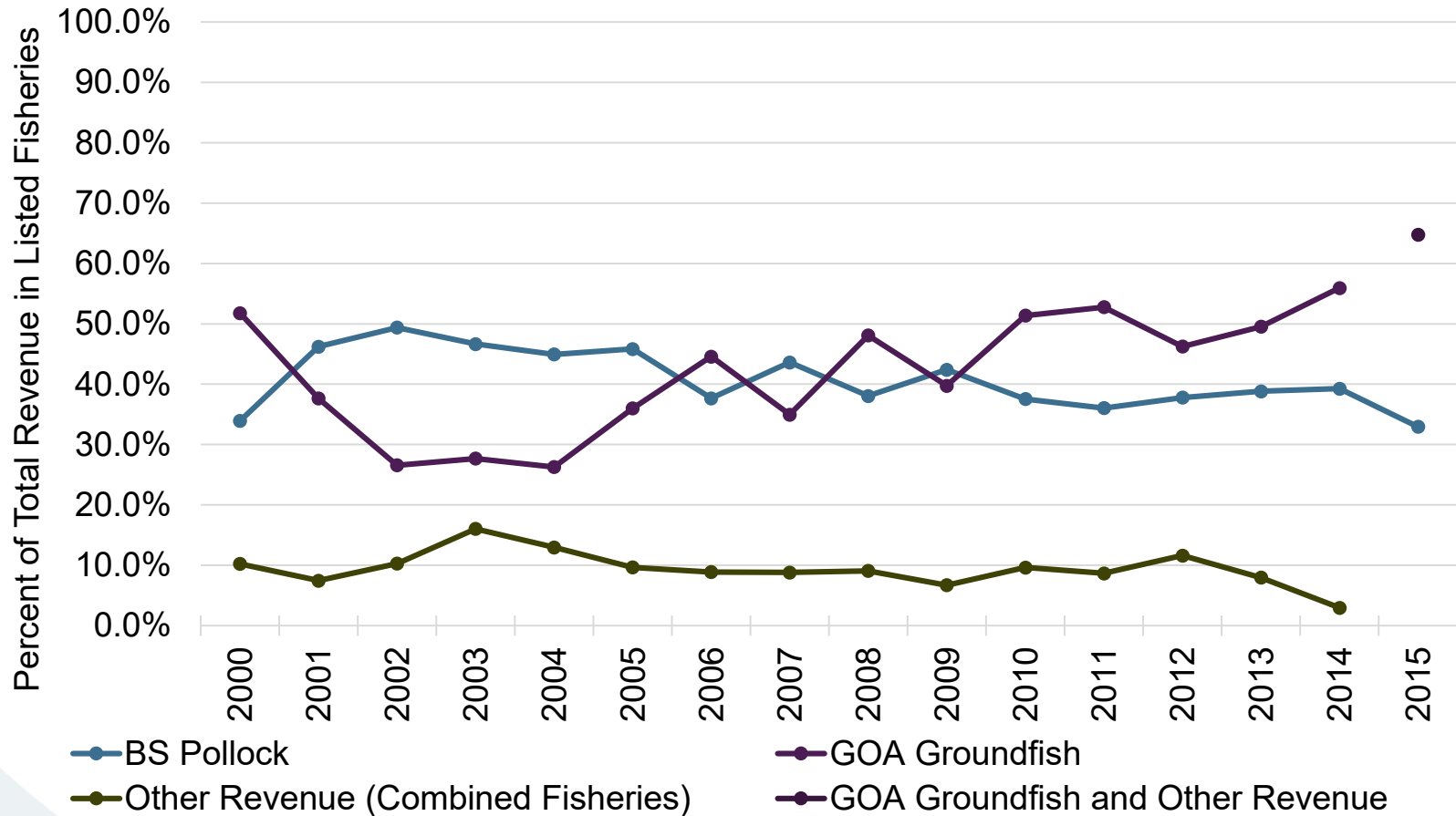
Document Location: Figure 22. Number of Active Kodiak AFA Catcher Vessels, by Activity in Various Fisheries, 2000–2015, Section 8.2.3.2, Page 53

AFA CV Ex-Vessel Revenue by Region and Major Fishery (Kodiak)



Document Location: Figure 23. Total Active Kodiak AFA Catcher Vessel Ex-vessel Revenue, by Fishery, 2000–2015 (2015\$), Section 8.2.3.2, Page 54

AFA CV Ex-Vessel Revenue by Region and Major Fishery (Kodiak)



Document Location: Figure 24. Total Active Kodiak AFA Catcher Vessel Ex-vessel Revenue, by Fishery, 2000–2015 (Percent), Section 8.2.3.2, Page 54

Fishing Communities

In summary, available data suggest that conclusions reached in the Council's 2002 report indicating the impacts of the AFA on fishing communities participating in the fisheries managed under the AFA have been largely beneficial remains accurate.

Employment and Payments to Labor

New information; not included in the draft report

- Average number of positions filled (per vessel / facility)
- Total positions filled (over all vessels and facilities)
- Total annual payments to labor
- Annual payments to labor per position
- Payments to labor per position per month

Note: Data in red font are not presented, but are available.

Data Sources and Major Assumptions

Inshore Plants

- Estimated by Alaska Department of Labor and Workforce Development using mandatory quarterly reports.
 - Some companies do not report employment for each plant separately, and instead report over the entire state or a region.
- Augmented by NEI with estimates for Northern Victor and Arctic Enterprise
- Includes all processing workers for all months each year
 - No way to distinguish employees by species.

Data Sources and Major Assumptions

Catcher Processors

- Positions reported in observer data or WPR data back through 2000
- Payments to labor estimated by NEI **assuming** crew are paid an average of 27 percent of wholesale value.
 - Payment percentage based on information collected from Amendment 80 Economic Data Reports
 - Is this percentage valid?
- Monthly estimates calculated using operating months on a vessel by vessel basis

Data Sources and Major Assumptions

Motherships

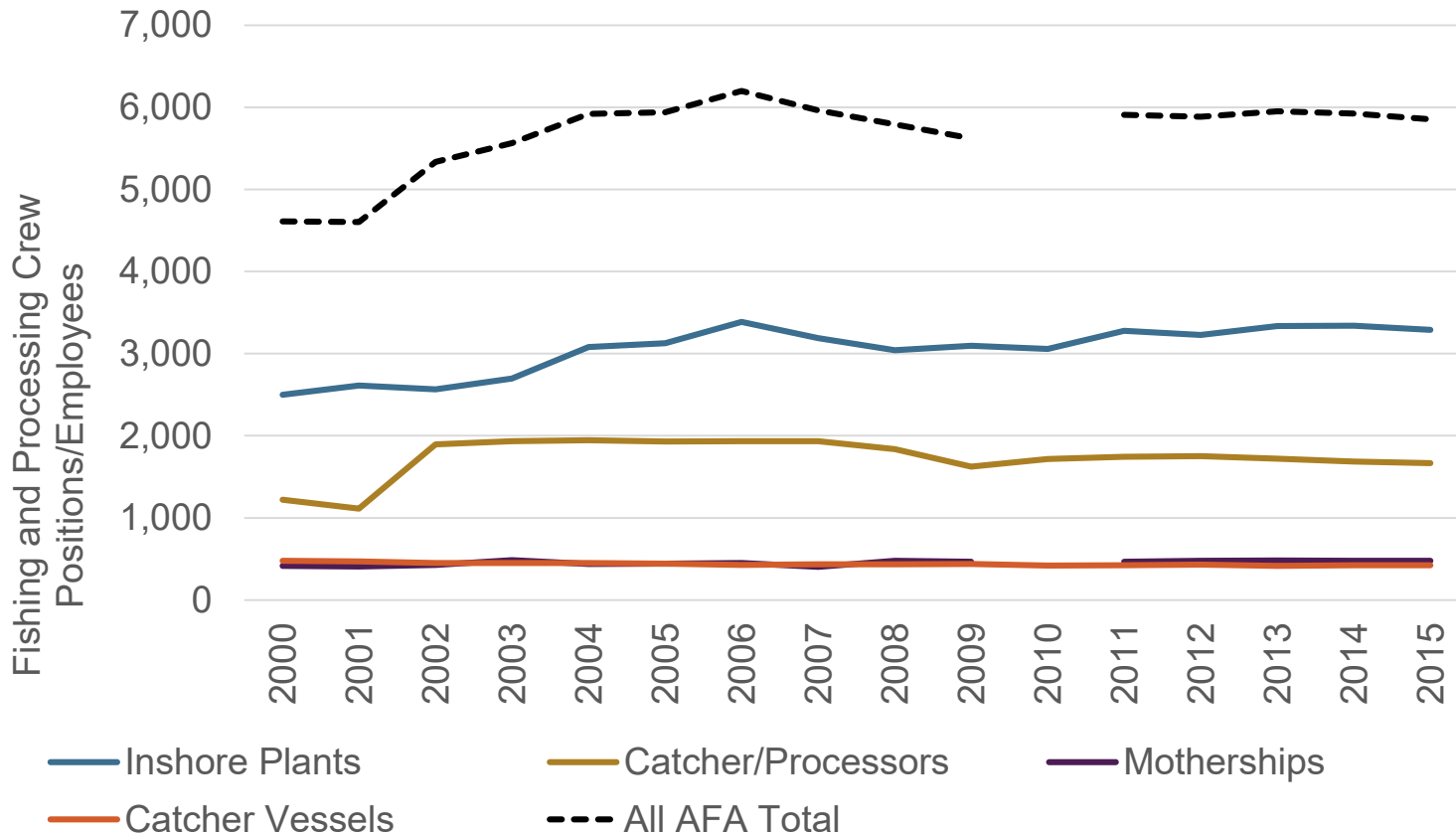
- Positions reported in WPR data back through 2000
- Payments to labor estimated by NEI **assuming** crew are paid an average of 22 percent of wholesale value.
 - Payment percentage is **assumed** to be less than percentage received by catcher/processors.
 - Is this percentage valid?
- Monthly estimates calculated using operating months on a vessel by vessel basis

Data Sources and Major Assumptions

Catcher Vessels

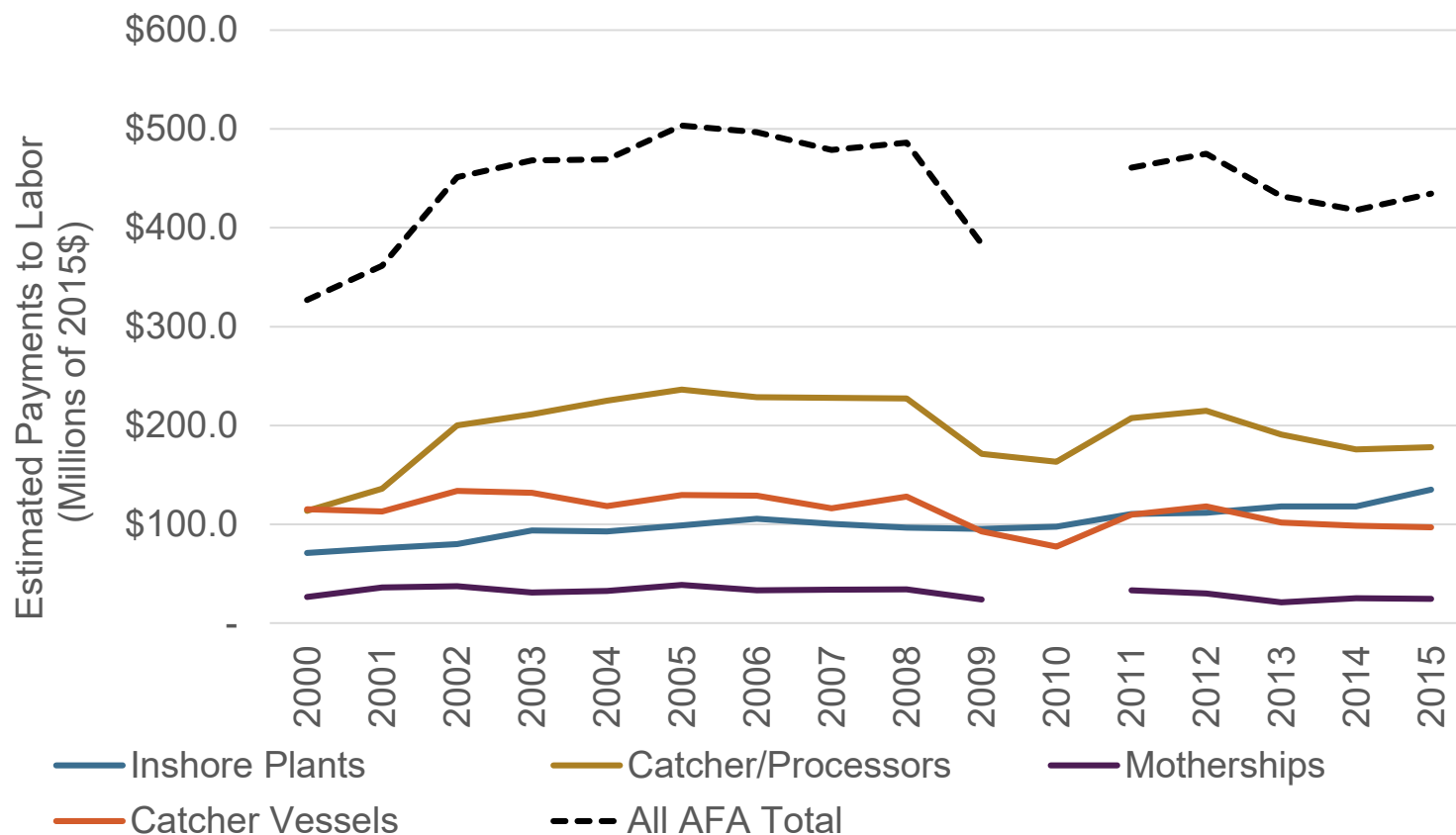
- Positions reported in observer data back through 2009
 - 2000–2008 are estimated by NEI assuming positions count for vessel from observer data for later years
 - If vessels did not operate from 2009–2015, then position counts are assigned NEI based on vessel length
 - Position counts range from 3.5 to more than 6
- Payments to labor estimated by NEI **assuming** crew are paid an average of 37.5 percent of ex-vessel value
 - Is this percentage valid?
- Monthly estimates calculated using operating months on a vessel by vessel basis

Positions/Employees in AFA Vessels and Facilities



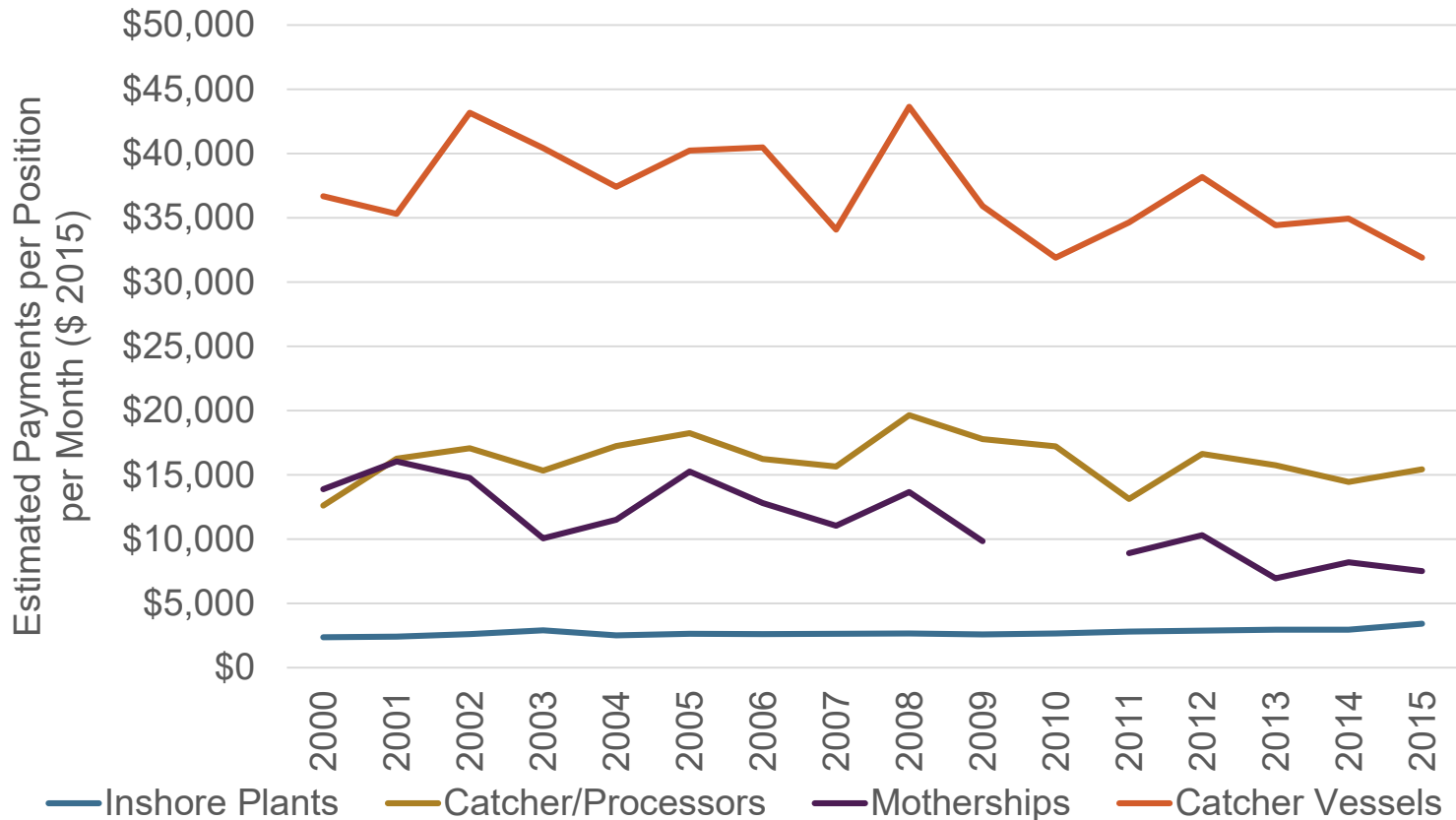
Note: Only two motherships participated in 2010 so data for that year cannot be disclosed. Data for all facilities is also not disclosed to protect the confidentiality of mothership data.

Estimated Payments to Labor by AFA Vessels and Facilities



Note: Only two motherships participated in 2010 so data for that year cannot be disclosed. Data for all facilities is also not disclosed to protect the confidentiality of mothership data.

Estimated Payments to Labor per Position per Month by AFA Vessels and Facilities



Note: Only two motherships participated in 2010 so data for that year cannot be disclosed.

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Product Types and Markets (Chapter 10)

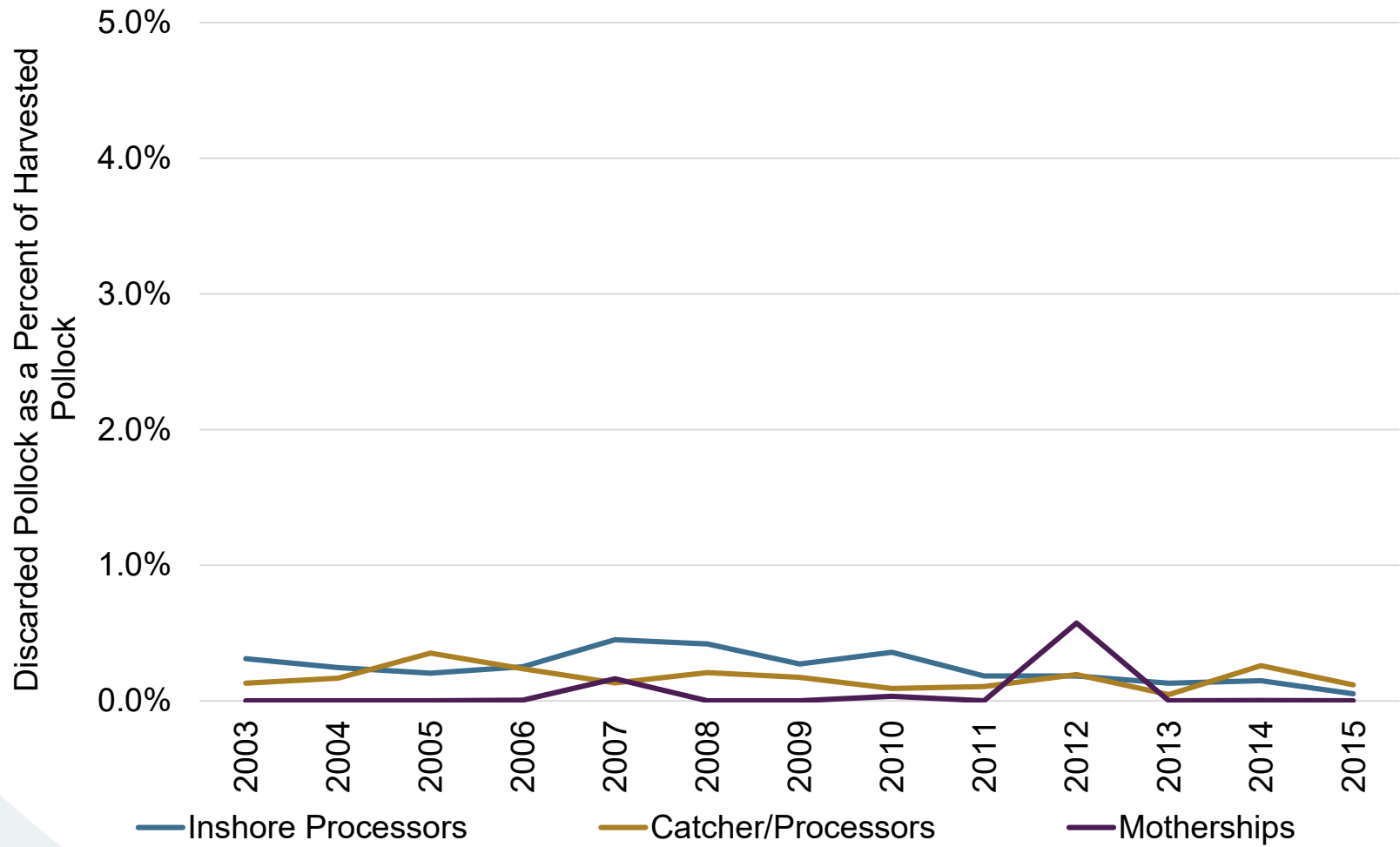
Sideboard Fisheries (Chapter 11)

Safety (Chapter 12)

Management Costs and Cost Recovery (Chapter 13)

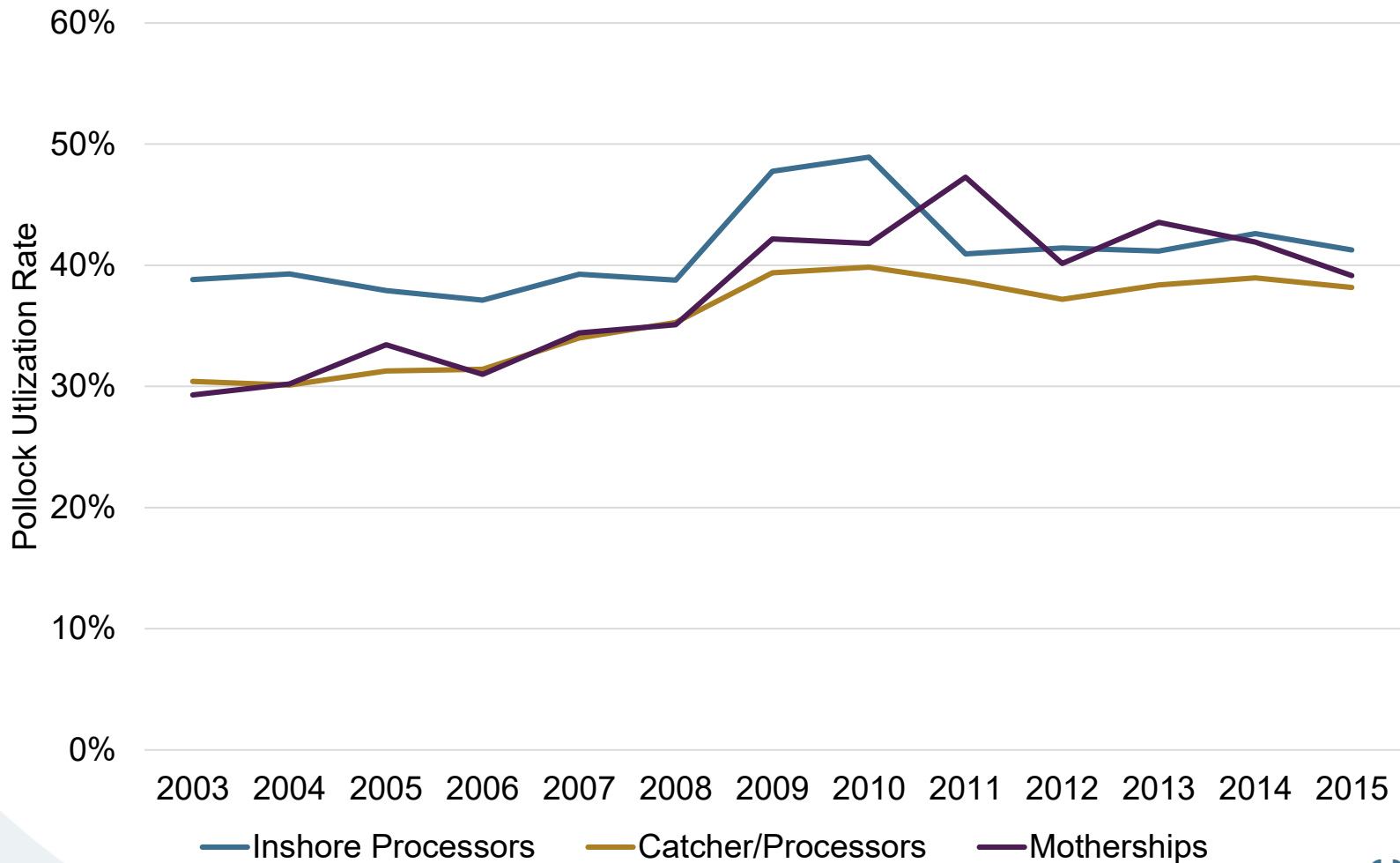


Discard Rates



Document Location: Figure 40. Discard Rate in the Bering Sea Pollock Fishery, by AFA Sector, 2003–2015, Section 9.1, Page 65

Utilization Rates



Document Location: Figure 41. Utilization Rate in the Bering Sea Pollock Fishery, by AFA Sector, 2003–2015, Section 9.2, Page 66

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Product Types and Markets

This section of the program review includes a brief description of each of the main types of products derived from pollock, followed by discussions pertaining to:

product mix

- Primary and secondary pollock products
- Processing plant upgrades
- Limitations

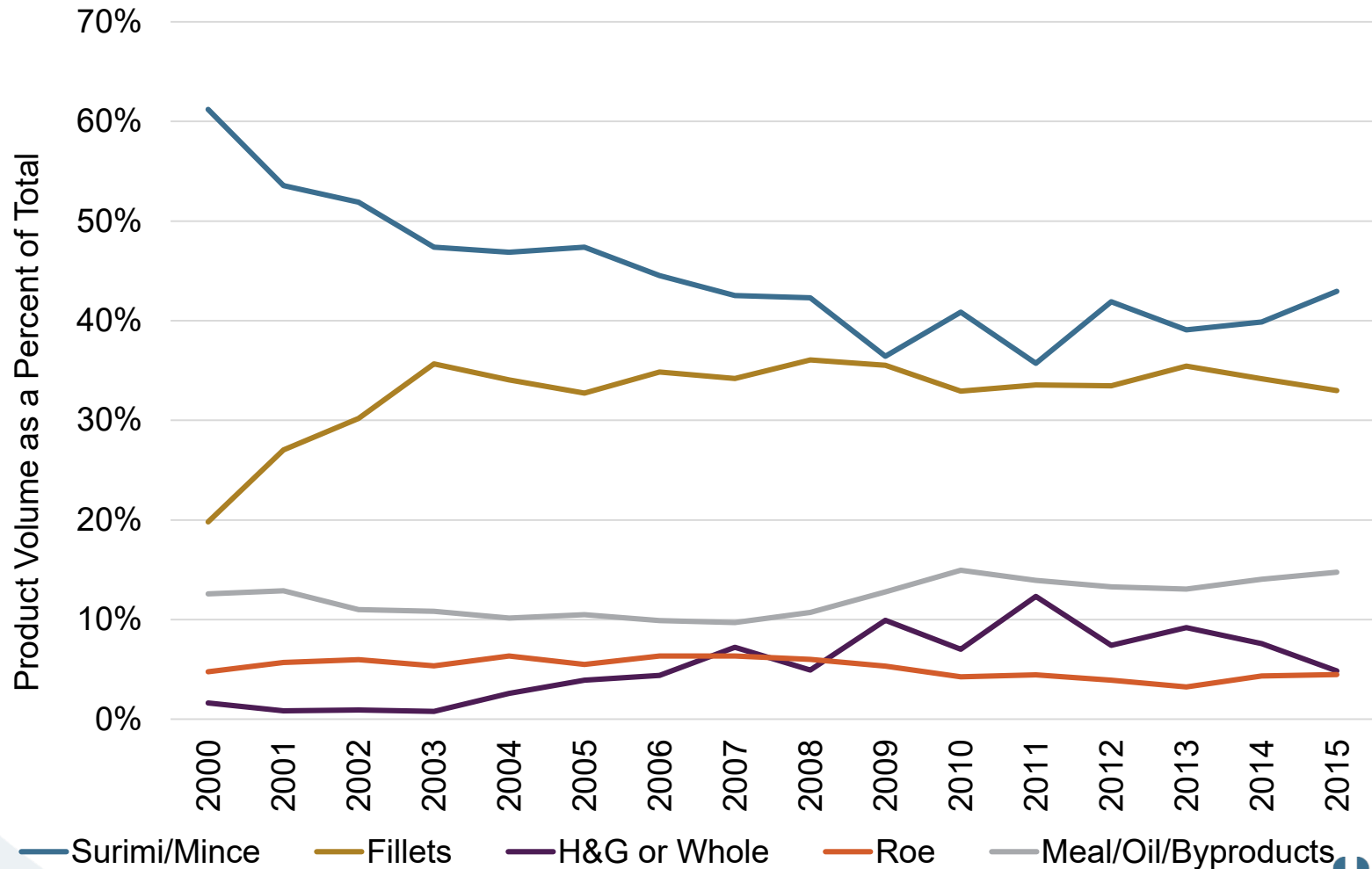
product branding

- Marine Stewardship Council Certification (MSC), 2000
- Alaska Responsible Fisheries Management Certification (RFM), 2011
- Association of Genuine Alaska Pollock Producers (GAPP), 2002

product markets

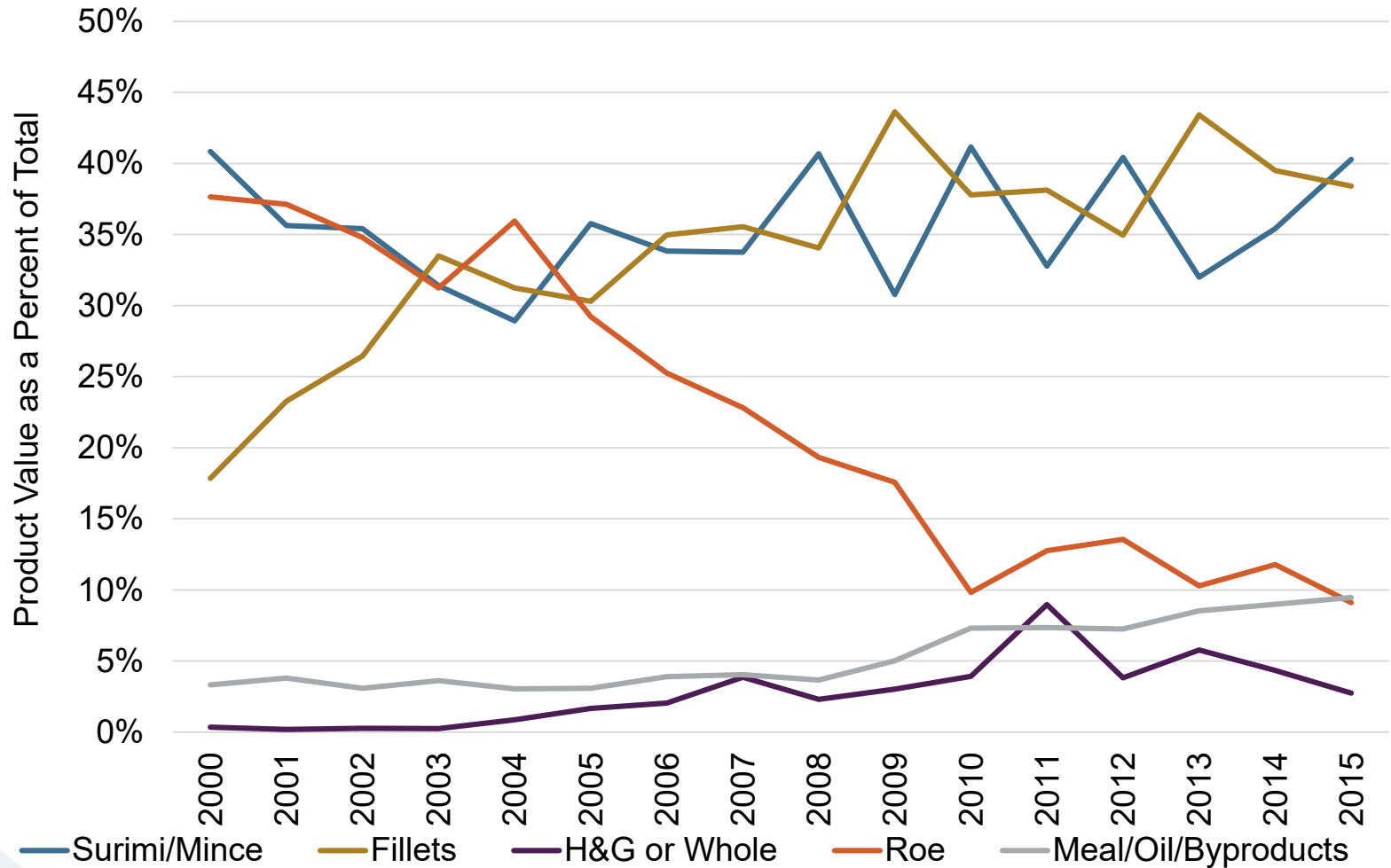
- Fillets
- Surimi

Offshore Primary Product Mix (Volume)



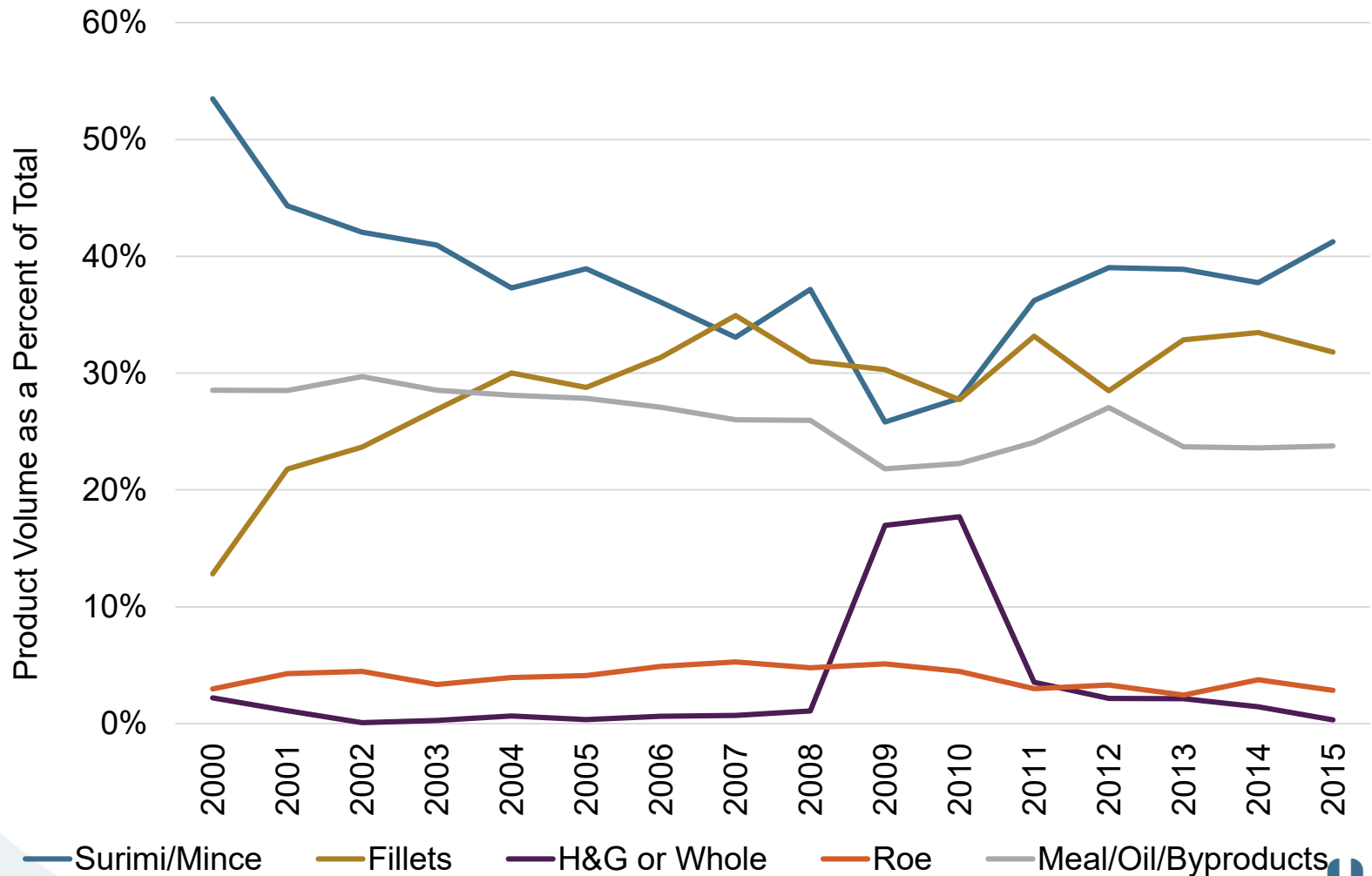
Document Location: Figure 42. Product Mix of the AFA Offshore Sector in Terms of Wholesale Product Volume, 2000–2015, Section 10.2.1, Page 70

Offshore Primary Product Mix (Value)



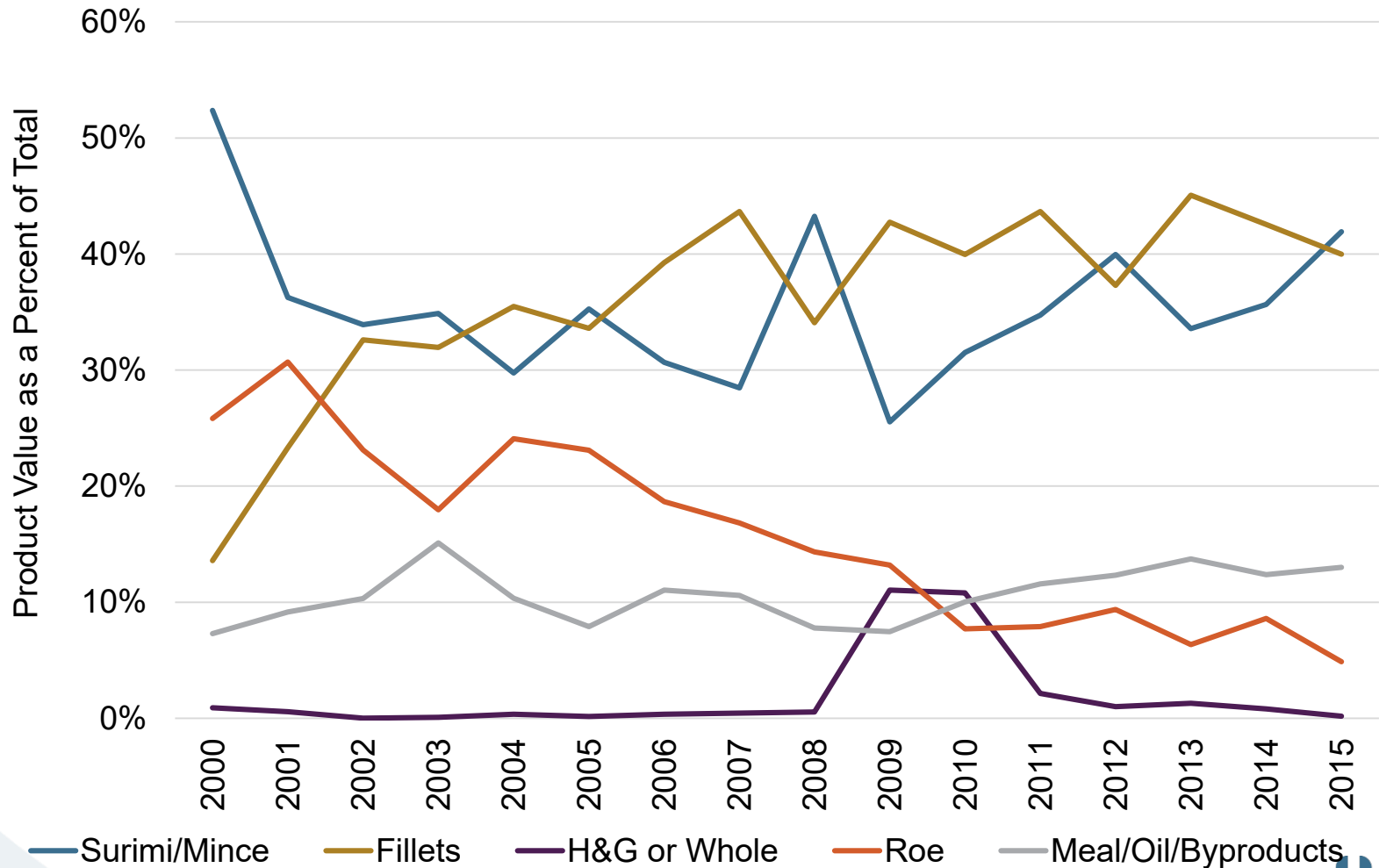
Document Location: Figure 43. Product Mix of the AFA Offshore Sector in Terms of Wholesale Value, 2000–2015, Section 10.2.1, Page 71

Inshore Primary Product Mix (Volume)



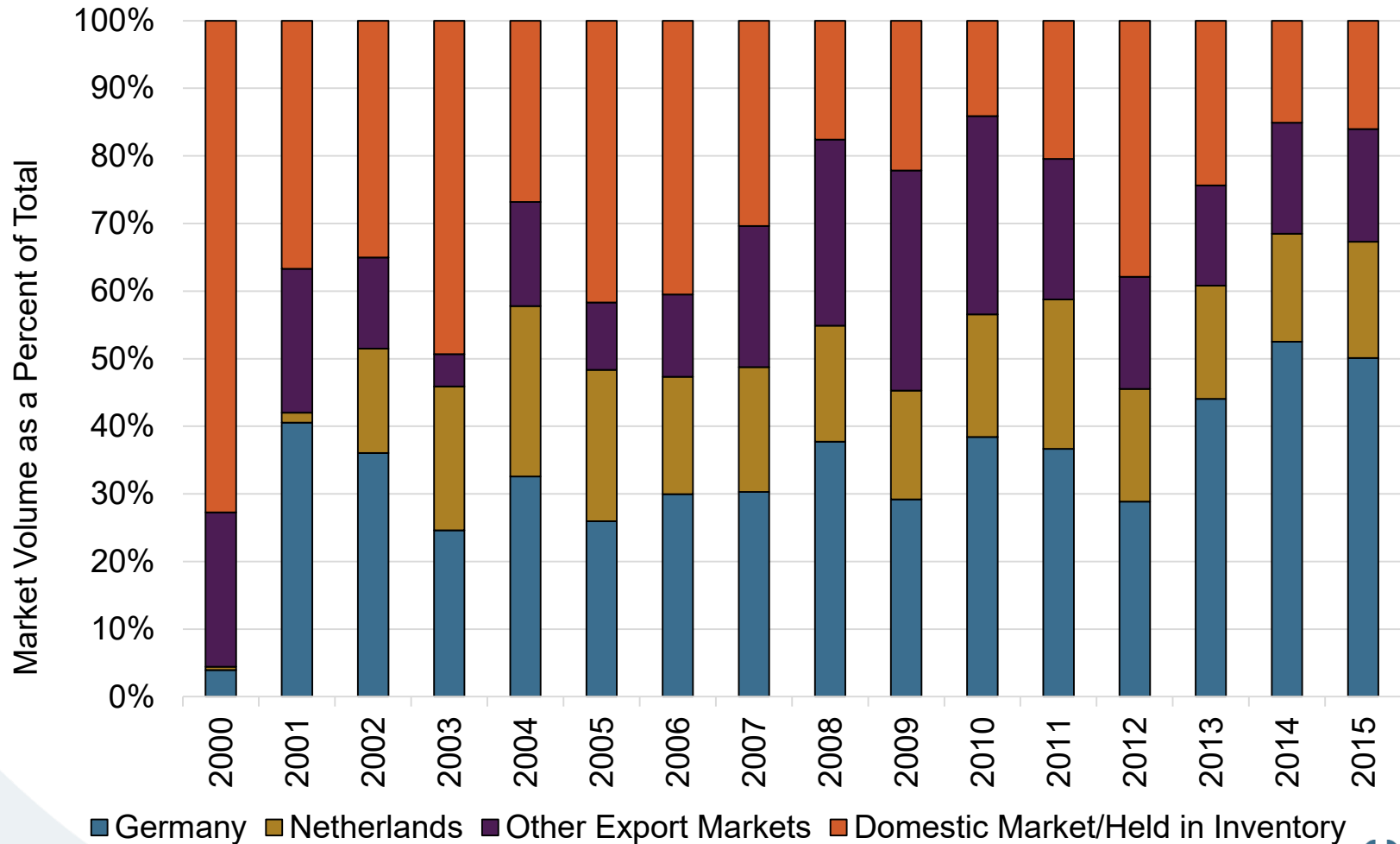
Document Location: Figure 44. Product Mix of the AFA Inshore Sector in Terms of Wholesale Volume, 2000–2015, Section 10.2.1, Page 72

Inshore Primary Product Mix (Value)

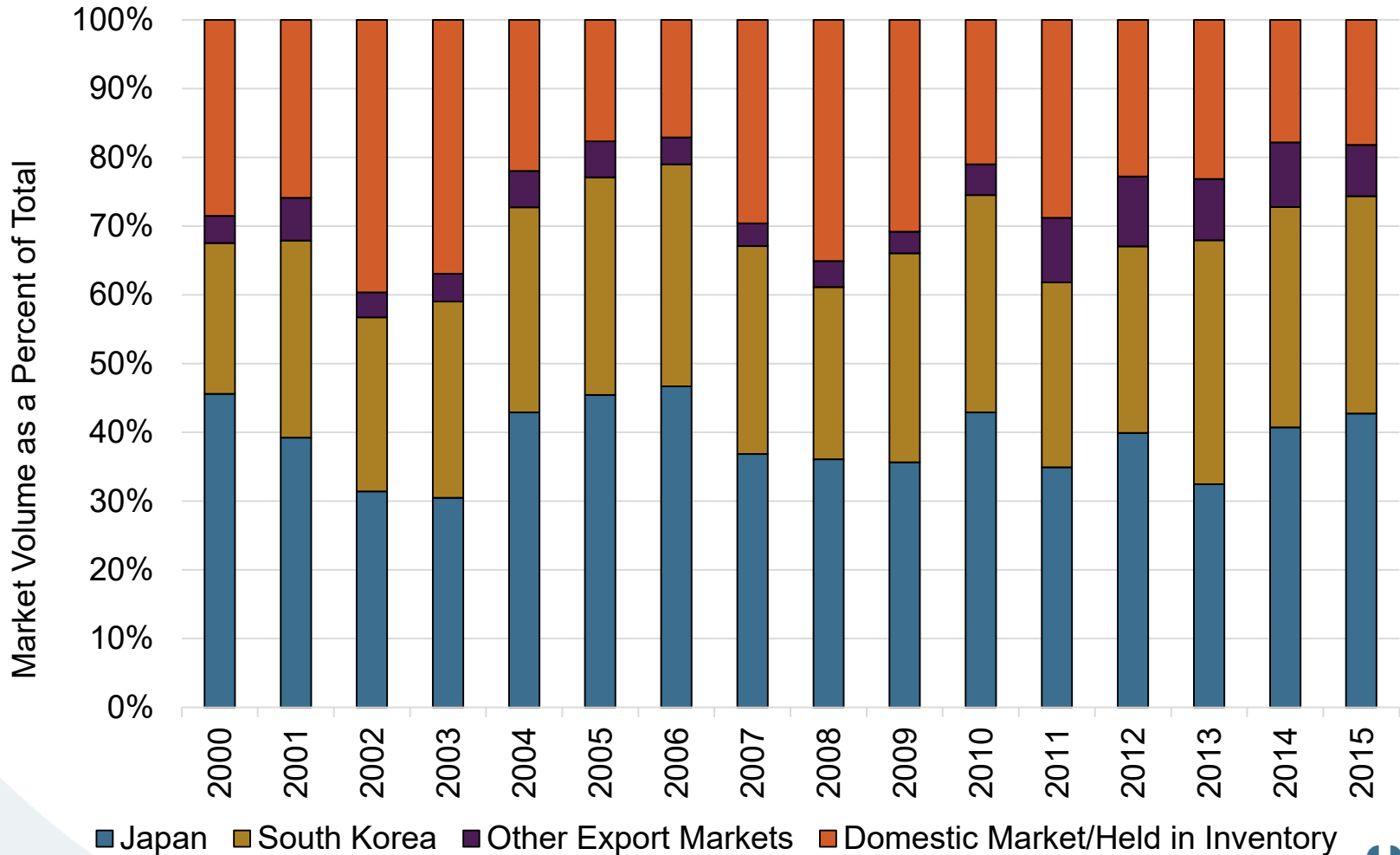


Document Location: Figure 45. Product Mix of the AFA Inshore Sector in Terms of Wholesale Value, 2000–2015, Section 10.2.1, Section 10.4.1, Page 73

Fillet Markets



Surimi Markets



Document Location: Figure 47. Surimi Markets of AFA Sectors, 2000–2015, Section 10.4.2, Page 81

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Sideboards

AFA created directed fishing limits, known as sideboards, on AFA vessels in non-pollock groundfish, crab, and scallop fisheries in the BSAI and GOA.

Vessels meeting length and catch criteria are issued exemptions from sideboard limits in Bering Sea Pacific cod and GOA groundfish fisheries.

NMFS sets separate sideboard harvest limits for non-exempt catcher vessels and catcher/processors for non-pollock target species of groundfish and currently listed prohibited species.

For the BSAI, NMFS issues sideboard limits on 16 different groundfish species/groups for catcher vessels and 20 species/groups for catcher/processors.

In addition, NMFS issues 20 different catcher vessel sideboard limits for fisheries in GOA.

Catcher vessel sideboard participation is primarily Pacific cod in the BSAI and GOA, and pollock in the GOA.

Catcher/processor sideboard participation is primarily in the yellowfin sole fishery.

Catcher Vessel BS Pacific Cod Sideboards

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Pacific Cod	Sideboard Limit (1,000 mt)	31.5	37.4	38.8	46.9	38.6	36.3	32.0	29.0	30.0	28.7	28.7	44.4	44.2	43.2	42.4
	Aggregate Catch (1,000 mt)	13.5	35.7	28.4	28.4	33.5	23.4	22.5	21.6	22.7	22.3	21.4	27.7	25.9	27.0	21.8
	% of Sideboard Limit Harvested	42.7	95.2	73.0	60.6	86.8	64.6	70.4	74.5	75.6	77.7	74.8	62.4	58.6	62.6	51.4
	Non-Exempt Directed Fishing Catcher Vessels	49	51	54	55	42	40	41	43	32	27	45	29	32	33	33
	Directed Fishing Catch (1,000 mt)	11.4	25.3	23.5	23.5	20.7	20.7	19.7	18.2	14.0	13.0	15.9	18.5	21.3	24.8	16.9

Document Location: Table 14. AFA Catcher Vessel Harvest and Participation in BSAI Pacific Cod, 2001–2015, Section 11.1.1, Page 85

Catcher Vessel GOA Pollock Sideboards

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Pollock	Sideboard Limit (1,000 mt)	32.5	19.2	18.2	24.0	30.9	29.3	24.5	20.2	16.4	27.0	28.9	33.9	29.7	41.1	41.2
	Aggregate Catch (1,000 mt)	10.4	6.8	5.2	6.7	7.9	6.9	6.3	3.2	1.9	5.6	4.4	6.6	12.6	13.1	15.1
	% of Sideboard Limit Harvested	32.2	35.2	28.4	28.2	25.4	23.7	25.7	15.9	11.3	20.8	15.2	19.5	42.4	31.8	36.6
	Non-Exempt Directed Fishing Catcher Vessels	11	5	9	9	8	9	7	6	9	9	7	6	9	6	6
	Directed Fishing Catch (1,000 mt)	9.8	3.2	4.4	5.9	6.8	6.6	4.7	2.5	1.8	6.7	4.1	6.4	11.5	12.0	13.7

Document Location: Table 17. AFA Catcher Vessel Harvest and Participation in GOA Groundfish Fisheries, 2001–2015, Section 11.1.2, Page 91

Catcher/Processor Yellowfin Sole Sideboards

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Yellowfin Sole	Sideboard Limit (1,000 mt)	24.4	22.4	17.0	13.5	16.8	17.7	18.7	26.6	No Limit							
	Aggregate Catch (1,000 mt)	7.4	2.0	2.0	4.5	4.2	7.6	12.5	20.6	17.1	11.3	19.5	23.9	22.5	23.7	23.2	9.3
	% Sideboard Limit	30.5	9.1	11.9	33.0	24.7	43.1	66.6	77.6	No Limit							
	No. of Directed Fishing CPs	4	3	3	3	3	5	6	8	12	8	9	9	10	8	10	7

Document Location: Table 20. AFA Catcher/Processor Harvest and Participation in BSAI Sideboard Fisheries, 2001–2015, Section 11.2.1, Page 99

Non-Constraining Sideboards

Since implementation of the AFA, other regulations and amendments have altered the mechanism by which harvest and PSC sideboards limits are calculated for the AFA fleet.

For AFA catcher/processors, both the yellowfin sole and Pacific cod sideboard fisheries have experienced changes resulting from Amendments 80 and 85, respectively.

For AFA catcher vessels, halibut PSC sideboard limits in the BSAI Pacific cod fishery are no longer constraining as a result of Amendment 80.

Sideboards for species are closed to directed fishing

NMFS prohibits directed fishing for the majority of non-target sideboard species that were never intended as a target fishery, but were merely the result of incidental catch in other target fisheries.

The report includes recommendations from NMFS to prohibit directed fishing for non-constraining sideboards and sideboards for species closed to directed fishing.

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Safety

Lincoln et al. (2007) analysis was restricted to reported non-fatal injuries that occurred between 1995 and 2005.

When pre- and post-AFA implementation periods were compared, the rate of nonfatal injuries had decreased by 76 percent.

However, the decline started to occur before AFA implementation.

Case et al. (2016) analyzed the number of fatalities occurring in the BS pollock fishery since implementation of the AFA.

They found that the five fatalities reported for the fishery during 2002 to 2014 is low compared to other Alaska fisheries.

The authors also note that the relatively few fatalities highlights the success of the BS pollock fleet in maintaining a high level of vessel safety, and conclude that the fleet is among the safest in Alaska.

Both studies note economic pressures still exist to maximize harvest, and that the continuing fatalities are reminders that serious hazards still exist in the fleet.

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Management Costs and Cost Recovery

NMFS manages the AFA Program as a limited access privilege program.

MSFCMA authorizes and requires the collection of cost recovery fees to recover direct program costs.

NMFS calculates the fee percentage that applies to landings made during the year by dividing the direct program costs by the fishery value.

For 2016, the direct program costs were tracked from February 4, 2016 (the effective date of the cost recovery rule), to September 30, 2016 (the end of the fiscal year). In subsequent years, direct program costs will be calculated based on a full fiscal year.

The 2016 estimated percentage of direct program costs to fishery value is:

- 0.10 percent for the catcher/processor sector,
- 0.17 percent for the mothership sector, and
- 0.10 percent for the inshore sector.

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Team Member	Organization	Project Role
Marcus Hartley	Northern Economics, Inc.	Project Manager
Jon McCracken	North Pacific Fishery Management Council	NPFMC Contract Manager
Dr. Donald Schug	Northern Economics, Inc.	Primary Author
Gary Eaton	Northern Economics, Inc.	Primary Analyst and Contributing Author
Dr. Katherine Wellman	Northern Economics, Inc.	Market Analyst
Dr. Mike Downs	Northern Economics, Inc.	Contributing Author
Stephen Weidlich	Northern Economics, Inc.	Contributing Author
Keeley Kent	NMFS Alaska Regional Office	NMFS Liaison; Contributing Author
Dr. Devin Lucas; Samantha Case; Krystal Mason	National Institute for Occupational Safety & Health	Contributors to Fishing Vessel Safety Section
Terri McCoy	Northern Economics, Inc.	Editor

Slides held in reserve if asked

Catcher vessel GOA groundfish harvesting sideboards

Pacific cod in the Eastern regulatory area/district

Shallow-water flatfish in the Eastern regulatory area/district

Deep-water flatfish in the Western regulatory area/district

Rex sole in the Eastern and Western regulatory area/district

Arrowtooth flounder in the Eastern and Western regulatory area/district

Flathead sole in the Eastern and Western regulatory area/district

Pacific ocean perch in the Western regulatory area/district

Northern rockfish Western regulatory area/district

Dusky rockfish in the entire GOA

Demersal shelf rockfish in the SEO district

Sculpins in the entire GOA

Squids in the entire GOA

Catcher vessel BSAI groundfish harvesting sideboards

Sablefish in the BS and AI

Northern rockfish in the BSAI

Atka mackerel in the Eastern AI/BS, Central AI (CAI), and Western AI (WAI)

Shortraker rockfish in the BSAI

Greenland turbot in the BS and AI

Rougheye rockfish in the BS/EAI and CAI/WAI

Arrowtooth flounder in the BSAI

Other rockfish in the BS and AI

Kamchatka flounder in the BSAI

Skates in the BSAI

Alaska plaice in the BSAI

Sculpins in the BSAI

Other flatfish in the BSAI

Sharks in the BSAI

Flathead sole in the BSAI

Squids in the BSAI

Rock sole in the BSAI

Octopuses in the BSAI

Pacific ocean perch in the BS, EAI, CAI, and WAI

Catcher/processor BSAI groundfish harvesting sideboards

Sablefish trawl in the BS and AI

Northern Rockfish in the BSAI

Rock sole in the BSAI

Shortraker Rockfish in the BSAI

Greenland turbot in the BS and AI

Rougheye Rockfish in the EBS/EAI and CAI/WAI

Arrowtooth flounder in the BSAI

Other rockfish in the BS and AI

Kamchatka flounder in the BSAI

Skates in the BSAI

Alaska Plaice in the BSAI

Sculpins in the BSAI

Other flatfish in the BSAI

Sharks in the BSAI

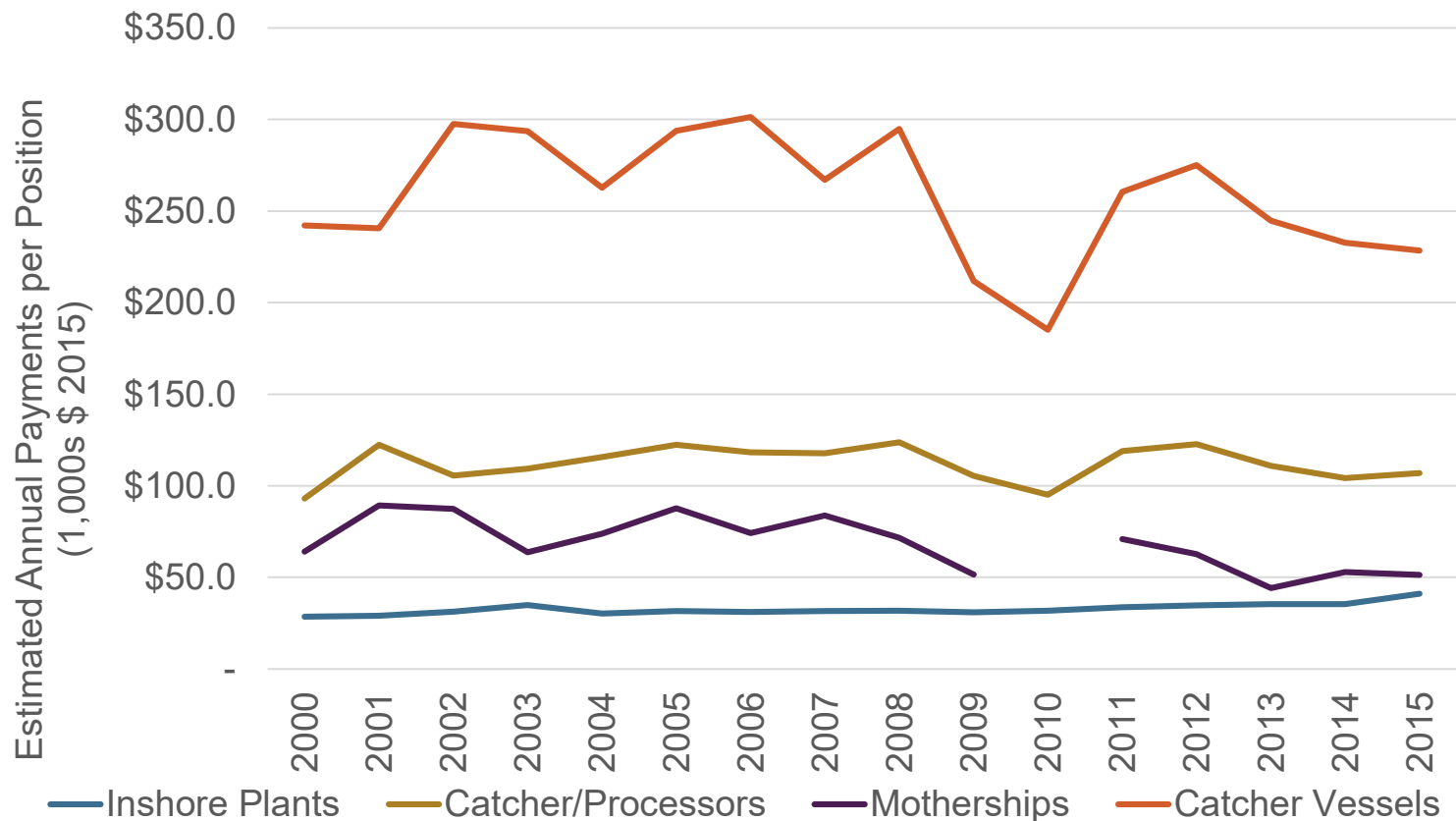
Flathead sole in the BSAI

Squids in the BSAI

Pacific ocean perch in the BS, EAI, CAI, and WAI

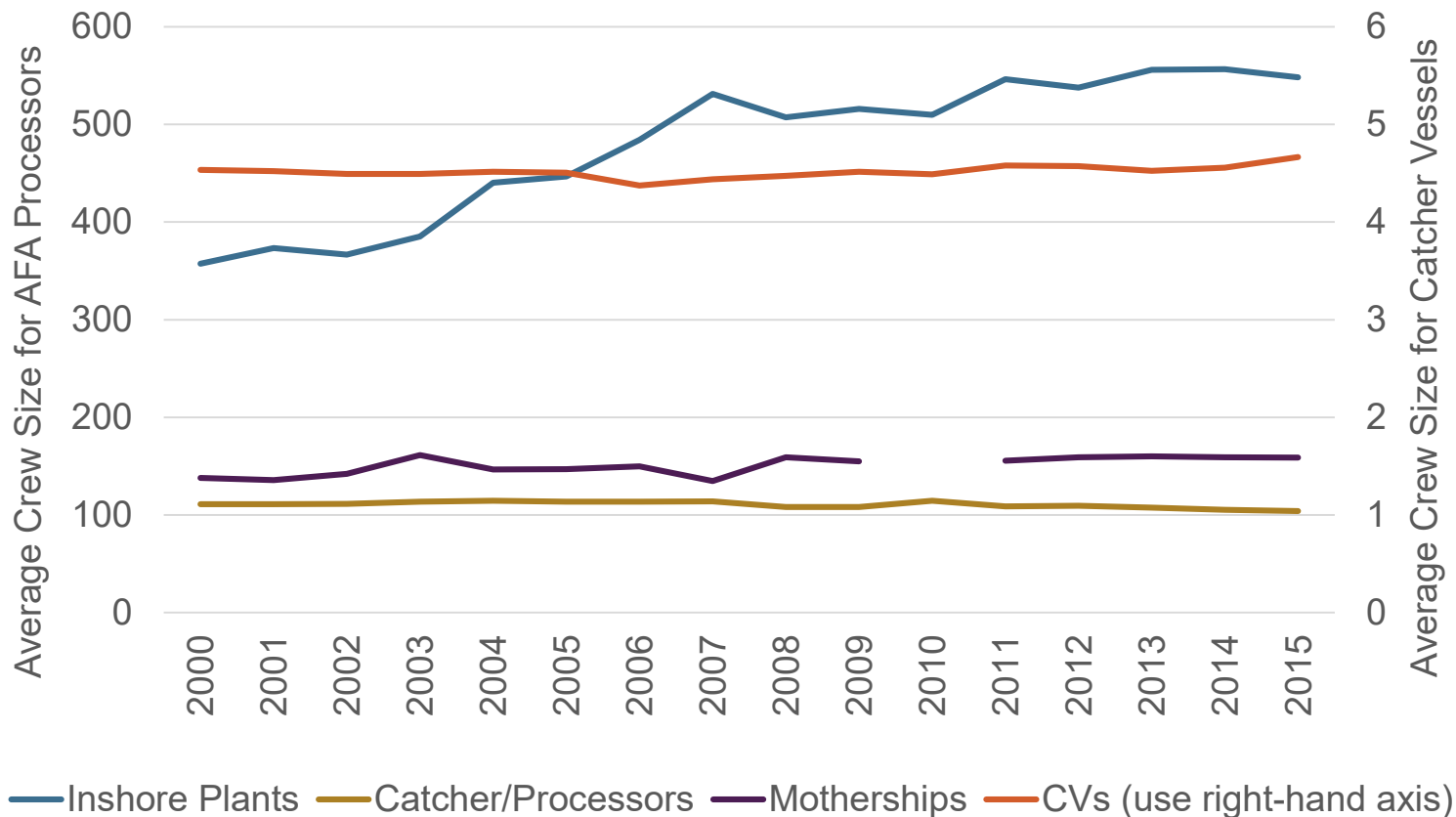
Octopuses in the BSAI

Estimated Annual Payments to Labor per Position by AFA Vessels and Facilities



Note: Only two motherships participated in 2010 so data for that year cannot be disclosed.

Estimated Annual Payments to Labor per Position by AFA Vessels and Facilities



Note: Only two motherships participated in 2010 so data for that year cannot be disclosed.