Alaska Longline
FISHERMEN'S ASSOCIATION

CRUISING SINCE 1980
The Boat Company
EXPLORATIONS

Simon Kinneen, Chairman
North Pacific Fishery Management Council
1007 West Third Street, Ste. 400
Anchorage, AK 99501-2252

Re: Agenda Item C-2 Halibut abundance-based management (ABM)

Dear Mr. Kinneen,

Thank you for the opportunity to comment on the proposed amendment to the Bering Sea/Aleutian Islands Groundfish FMP that would implement abundance-based management for halibut bycatch limits. We submit the following comments on behalf of The Boat Company and Alaska Longline Fishermen's Association (ALFA). The Boat Company and ALFA both promote conservation while operating in and advocating for Southeast Alaska's fishing communities that depend on the coastwide halibut resource for commercial fishing, sport fishing and subsistence.

ALFA is a commercial fishing organization that represents and advocates for small, community-based commercial fishing businesses. ALFA represents vessel owners, deckhands, and business members from nearly every community in southeast Alaska who participate in, or otherwise support and benefit from the commercial fishing economy.[1] ALFA includes members who have historically participated in Bering Sea fisheries and residents of Bering Sea communities. ALFA has received national and statewide recognition for its work to rebuild fish stocks, address food security in Alaska and beyond, improve fishery monitoring and to protect fish habitat and ensure the socio-economic viability of coastal communities.

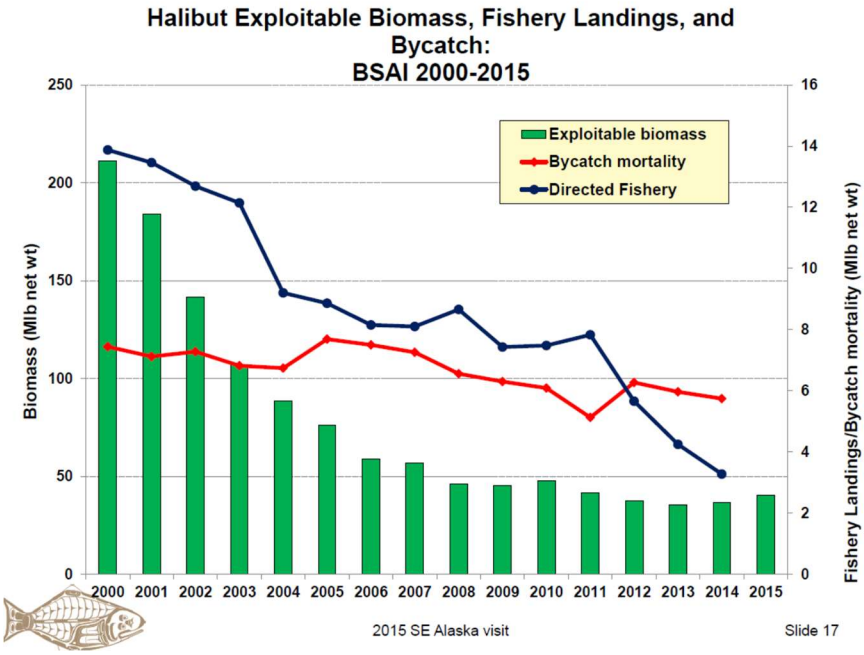
The Boat Company operates multi-day conservation and wilderness tours in Southeast Alaska aboard two vessels, the 145' M/V Liseron and the 157' M/V Mist Cove. Visitors on these vessels participate in a variety of activities, including environmental education, kayaking, hiking, beachcombing as well as sport fishing from smaller vessels. For many clients, the opportunity to fish for halibut is a highlight of their Alaska experience. Onboard chefs serve seafood to visitors, including halibut harvested by ALFA's members. Southeast Alaska's coastal fishing communities are a major attraction for visitors, and The Boat Company is a business member of commercial fishing organizations such as ALFA, the Alaska Trollers Association, and Southeast Alaska Seiners.

[1] ALFA also has members throughout the United States, including numerous members in Washington State.

Introduction

The Boat Company and ALFA strongly support the concept of abundance-based management. Regulation of both commercial and guided sport quotas respond to stock status. The current fixed halibut bycatch limits are inconsistent with management of the directed halibut fisheries. When halibut abundance declines, bycatch becomes a larger proportion of total halibut removals, and reduces the proportion and amount of halibut available for harvest in directed halibut fisheries. Both The Boat Company and ALFA have participated in regulatory efforts to reduce halibut bycatch in the Bering Sea over the past decade with particular concern for the effects of trawl bycatch on Bering Sea community fisheries.

For example, as shown in the International Pacific Halibut Commission's (IPHC) Slide 17, [2] bycatch under a fixed limit began to exceed halibut harvests in the directed fisheries in 2012. The proportion of the resource taken as bycatch mortality is worst in IPHC Area 4CDE, where bycatch is three times as high as harvests in the longline fishery. Abundance-based limits can mitigate those impacts by providing some conservation at low abundance rather than resting the full conservation responsibility on the directed fishery.

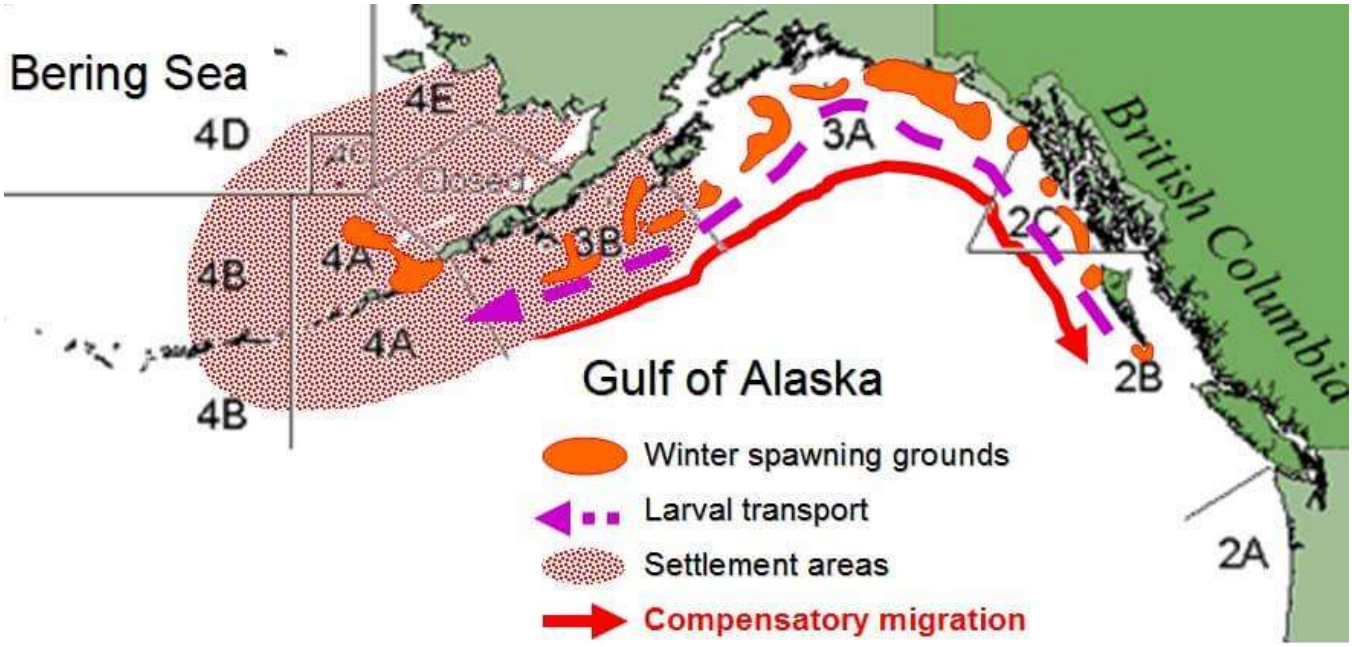


Further, the significant proportion of juvenile halibut killed in the Bering Sea as bycatch has adverse effects on downstream fishermen throughout Alaska. And conversely, reduced halibut PSC limits would yield significant benefits to downstream fishermen. Juvenile halibut migrate extensively across the North Pacific, so that most of the juvenile halibut bycatch in the Bering Sea affects all other downstream areas – including Areas 2C and 3A in the Gulf of Alaska where most Southeast Alaska fishermen harvest halibut. Juvenile halibut killed as bycatch would otherwise grow over a period of years and recruit to the resource and fishery, supporting resource productivity and future fishery yield for Alaska fishing communities.[3] The DEIS, Social Impact Assessment and net benefits findings ignored bycatch impacts to Southeast Alaska communities –

[2] PPT. IPHC. 2015. Current halibut science and management. Visit to Southeast Alaska. October 2015.

[3] *See* https://iphc.int/management/science-and-research/biological-and-ecosystem-science-research-program-bandesrp/bandesrp-migration/juvenile-migration.

even though they are among the most vulnerable to reductions in access to halibut.[4] And conversely, positive changes to access in halibut would benefit Southeast Alaska. The IPHC's latest Pacific Halibut Multiregional Economic Impact Assessment estimates that the most direct earnings for community residents per dollar of landed halibut accrue in Southeast Alaska communities.[5]



The DEIS relied on the coastwide aspect of the halibut stock to minimize the beneficial impacts of trawl bycatch reduction to Bering Sea halibut fishermen. Perversely, it then omitted benefits of bycatch reductions to halibut fishermen and communities in the Gulf of Alaska when identifying trade-offs between trawl bycatch and the directed fisheries. The analysis omitted ***half the halibut*** taken as bycatch. Because of this fundamental flaw and other misleading economic assumptions, the DEIS underestimated both the adverse impacts of bycatch and the benefits of bycatch reduction.

The Boat Company and ALFA recognize the urgency to reducing halibut bycatch; we also recognize the necessity of correcting stark inadequacies in the DEIS to support decision-making. For reasons described in greater detail below, the DEIS did not provide a scientifically sound analysis of biological, economic, or social coastwide impacts and failed to adequately inform balancing these impacts under the Magnuson-Stevens Act National Standards. The DEIS wildly overstates the projected economic impacts to Amendment 80 and substantially understates the benefits to the directed fishery. As a result, it fails to provide the Council with information it

[4] Hutniczak, B. 2021. Pacific Halibut Multiregional Economic Impact Assessment (PHMEIA): summary of progress at 5, Figure 1. IPHC-2021-IM097-14. *Available at:* iphc-2021-im097-14.pdf
[5] *Id.* at 5, Figure 1.

requires to make a reasoned and defensible decision. We request that the Council at a minimum review socio-economic analyses prepared by experts related to the halibut fishery and Alaska's coastal fishing communities and direct NMFS to add these documents in an appendix to the DEIS.[6]

We note that the data in the appended Social Impact Assessment showed significant loss of resource access for Bering Sea halibut dependent communities over the past decade. This impact alone justifies the highest level of bycatch reduction under analysis - Alternative 4. Only Alternative 4 restores a measure of equity by: 1) reducing bycatch commensurate with declines in halibut abundance since halibut PSC limits were set; and 2) adequately incorporating social equity, environmental justice, and the cultural connections of rural and indigenous Alaskans to the halibut resource. For these reasons, **we support Alternative 4 while also strongly encouraging the Council to direct NMFS to address the DEIS's shortcomings prior to publishing the final EIS.**

To be clear, ALFA maintains that the Council's ABM decision would benefit from identifying a PPA at the December meeting, directing corrections to the DEIS and additional analysis of the Council's PPA as appropriate, requesting SSC review of the corrected document, and scheduling final action for February 2022. After six years of work on ABM, a two month delay that results in an improved decision-making document and process would be time well spent and may ultimately expedite implementation of abundance based bycatch caps. We hope these comments will assist the Council in its deliberations whether you choose to identify a PPA at this meeting or take final action.

Description of the alternatives: The Council must select Alternative 4

The purpose and need statement recognizes that the Amendment 80 companies are responsible for the majority of halibut killed as bycatch in the Bering Sea groundfish fisheries, warranting additional restrictions as stocks decline and the bycatch fisheries consume a larger proportion of the resource, particularly in Area 4CDE.[7] The Amendment 80 bycatch limit decreased from 2,525 mt in 2008 to 2,325 mt in 2012-2015, and is now at 1,745 mt.[8] Continuing low levels of halibut biomass have reduced Area 4 and downstream harvests to a much greater degree and current stock projections suggest halibut catch limits will not be enough to provide for the directed fishery at the current limit.[9]

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[6] Watson, B., M.N. Reimer, M. Guettabi & A. Haynie. 2021. Commercial Fishing and Local Economies at 18. Institute of Social and Economic Research, University of Alaska Anchorage. Hutniczak, B. 2021. Pacific Halibut Multiregional Economic Impact Assessment (PHMEIA): summary of progress. IPHC-2021-IM097-14. *Available at:* iphc-2021-im097-14.pdf; Hutniczak, B. 2020. Pacific Halibut Multiregional Economic Impact Assessment (PHMEIA): summary of progress at 9. IPHC-2021-AM-097-14. *Available at:* https://iphc.int/uploads/pdf/am/amp097/iphc-2021-am097-14.pdf ; Stewart, I.J., A.C. Hicks & P. Carpi. 2021. Fully subscribed: Evaluating yield trade-offs among fishery sectors utilizing the Pacific halibut resource. Fisheries Research 234 (2021) 105800.

[7] NMFS & NPFMC. 2021. Draft Environmental Impact Statement (DEIS) for the Bering Sea and Aleutian Islands (BSAI) Halibut Abundance-Based Management (ABM) of Amendment 80 Prohibited Species Catch (PSC) Limit. September 2021 at 42. National Marine Fisheries Service, Alaska Region. P.O. Box 21668, Juneau, Alaska 99802-1668. ("DEIS").

[8] *Id.*, Table 1-1.

[9] *Id.* at 43.

The DEIS proposes three action alternatives that respond to different halibut abundance determinants from Bering Sea trawl and setline surveys. Alternative 2 limits would range from the current limit to 10-20% below the current limit.[10] Alternative 3 limits range from 15% above the current limit at higher levels of halibut abundance with cuts ranging between 20% and 30% below the current limit.[11] Alternative 4 would implement limits ranging from the current limit to between 20% and 45% of the current limit (960 mt, 1,047 mt, 1,222 mt or 1,396 mt).[12] **In general, our concern is that the existing limit (Alternative 1) and Alternatives 2 and 3 fail to provide a sufficient buffer for directed fisheries at the lowest levels of abundance.**

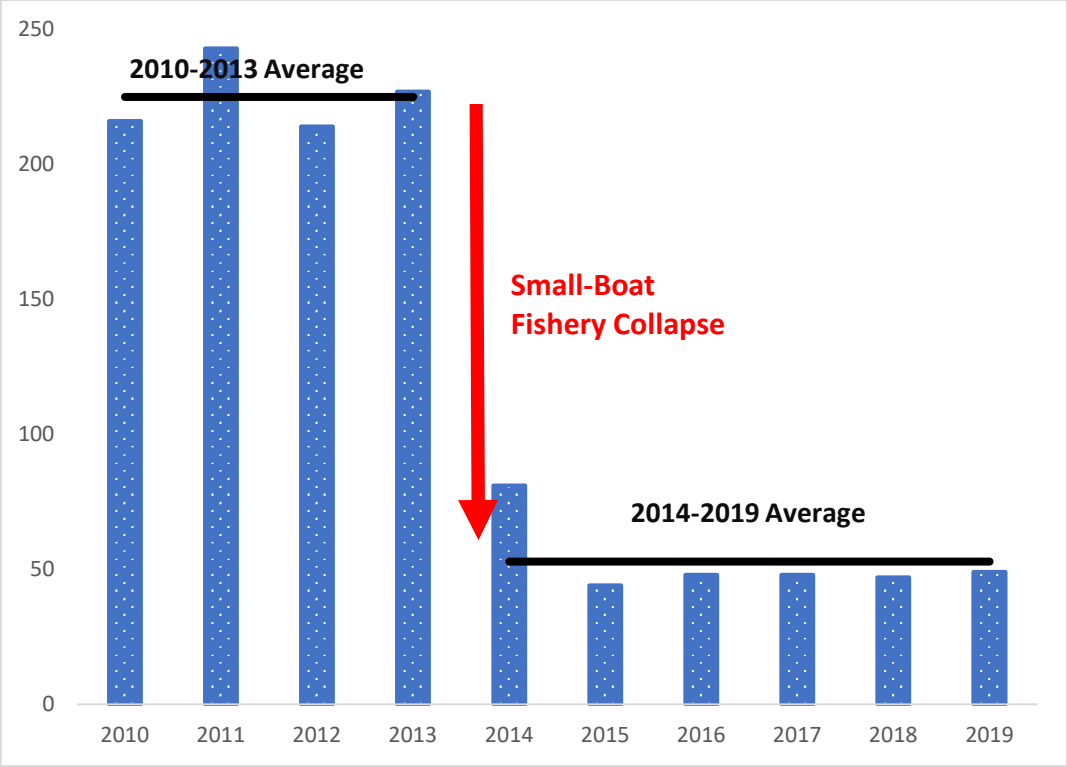
The DEIS measures the impacts of the alternatives almost exclusively in terms of how Amendment 80 companies' bycatch of halibut over 26 inches in length affects Bering Sea halibut harvest opportunities and ex-vessel values and conversely, how bycatch reductions may reduce Amendment 80 companies' wholesale revenues.[13] It identifies near-term benefits to Bering Sea halibut harvesters that would occur in subsequent years when IPHC harvest policy incorporates the lower bycatch numbers into its harvest policy and catch limits for the area.[14] Ultimately, as described in our discussion of the National Standards findings in the DEIS, the agency asserts that bycatch reduction alternatives result in negative net benefits to the Nation. **This conclusion is arbitrary, and in addition to improperly balancing social effects, it ignores downstream fisheries and the massive external costs imposed on Alaska communities by the bycatch fisheries**.

This action will determine the fate of St. Paul and other Bering Sea halibut-dependent communities for whom the halibut fishery is a way of life, a cultural touchstone and critical source of income. If the Council intends to take final action, we request that you identify Alternative 4 as the preferred alternative. It is the only alternative that:

- Provides meaningful relief to the directed halibut fishery.
- Advances environmental justice priorities by creating economic opportunities for communities that have—for many years—been forced to bear grossly disproportionate burdens.
- Furthers climate change resiliency objectives by providing a clean, stable, and sustainable economic base as other fisheries are ravaged by climate change.
- Is consistent with the Magnuson-Stevens Act National Standards and furthers conservation objectives by requiring practicable reductions that are fair and equitable; allows for optimum yield in the groundfish fishery; and ensures Bering Sea communities' continued participation in the halibut fishery.

[10] *Id.* at 60 (between 1,396 mt or 1,571 mt).
[11] *Id.* at 61 (2007 mt, 1,309 mt or 1,222 mt).
[12] *Id.* at 61.

[13] *Id.* at 41.
[14] *Id.* at 229.



Collapse of Small-Boat Fishery in Area 4[15]

In short, the DEIS discounts social justice, ignores cultural extinction, and fails to place into context the contribution to socioeconomic health of a dollar circulating in St Paul or Metlakatla vs Seattle and the Amendment 80 corporations. While correcting the DEIS is imperative, even a cursory look at retrospective data establishes that restoring an equitable distribution of the halibut resource demands a significant bycatch reduction during times of low abundance. As the graph above illustrates, the directed fishery has shouldered the conservation burden to an unacceptable degree; the 45% PSC cap reduction included in Alternative 4 at very low levels of abundance is a compromise, falling short of directed fishery reductions taken over the past seven years. No less of a reduction can be justified by the data, MSA National Standards, and this country's recent recommitment to social justice.

Corrections needed in the DEIS are discussed in greater detail below.

The DEIS unlawfully failed to consider impacts to all Alaska fishermen and communities

NEPA requires that federal agencies disclose sufficient information as needed to ensure two functions: "informed decision-making and informed public participation."[16] "Misleading

[15] Data from DEIS, Table 6-7 (corrected).

[16] *State of Cal. v. Block,* 690 F.2d 753, 767 (9th Cir. 1982); *see also Robertson v. Methow Valley Citizens Council,* 490 U.S. 332. 349 (1989)(explaining that an EIS serves two functions: (1) to ensure that agencies take a hard look at the environmental impacts of proposed projects and (2) to ensure the availability of information to the public so as to enable public participation in the decision-making process).

economic assumptions can defeat the first function of an EIS by impairing the agency's consideration of the adverse environmental effects" and "can also defeat the second function of an EIS by skewing the public's evaluation of a project.[17] One of the most significant analytical flaws was the improper exclusion of half the halibut bycatch from the analysis of the impacts of different alternatives.

The DEIS concluded that potential revenue losses to Amendment 80 companies outweigh the adverse ecological and socio-economic impacts to Alaska's marine resources and coastal fishing communities to such a degree that an action reducing the numbers of halibut killed by the Amendment 80 fisheries is bad for the United States. The failure of the DEIS to adequately consider the socio-economic contributions by all halibut harvesters in Alaska violates NEPA. Similarly, the DEIS also needed to consider the numbers of halibut killed by the Amendment 80 companies as a significant external cost with massive impacts on Alaska community fishery outputs. The analysts recognized that halibut bycatch and potential bycatch reductions will have downstream impacts, but the DEIS excluded downstream communities from its impact analysis.[18]

For the same reasons, the analysis violates the Administrative Procedure Act (APA) by failing to "examine the relevant data."[19] The analysis and analysts' conclusion that the Amendment 80 sector's prospective revenue reductions resulted in a loss of national net benefits ignored downstream fisheries, community impacts and the agency's own National Standard guidelines thus also violating the APA and the Magnuson-Stevens Act. Given National Standard 8's concern for community fishing economies, and broad explanation of net national benefits laid out in the National Standard 9 guidelines, the DEIS needed to do a much better job of analyzing and disclosing the directed halibut fishery's influence on community socio-economic well-being throughout Alaska. The DEIS discussed downstream impacts broadly, but then relied on erroneous assumptions that minimize the massive regional socio-economic benefits flowing from the halibut fisheries. Indeed, when evaluating net benefits to the nation under the National Standards, the DEIS relied in large part on the absence of a pound for pound linkage between halibut bycatch and Bering Sea halibut fisheries.[20]

The impacts analysis focuses exclusively on the extent to which cutting Amendment 80 halibut bycatch would have the short-term potential to affect catch limits for the commercial halibut fisheries in Area 4.[21] The DEIS contemplated impacts only to Bering Sea fishing communities, vessels and crew and improperly excluded impacts to other Alaska communities.[22] As noted by the North Pacific Fishery Management Council's Science and Statistical Committee,

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[17] *Hughes River Watershed Conservancy v. Glickman,* 81 F.3d 437, 446 (4th Cir. 1996); *see also Natural Resources Defense Council v. U.S. Forest Service,* 421 F.3d 797, 811-12 (9th Cir. 2005).

[18] DEIS, Appx. 1 at 2.

[19] *Motor Vehicle Manufacturers Ass'n v. State Farm Mutual Automobile Ins. Co.,* 463 U.S. 29, 43 (1983) (adding that [a]n agency action is "arbitrary and capricious if the agency … entirely failed to consider an important aspect of the problem").

[20] DEIS at 279.

[21] *Id.* at 41, 167.

[22] *Id.* at 185, 247, 252.

the analysis "narrowly focused on the fisheries and communities directly engaged in the BSAI groundfish and halibut fisheries" even though "potential direct and indirect effects of the alternatives also impact fisheries outside the BSAI."[23] This narrow focus failed to meet NEPA's requirements; an EIS needs to describe "the area(s) to be affected … by the alternatives under consideration" and discuss indirect effects, which mean effects "caused by the action and ***are later in time or farther removed in distance, but are still reasonably foreseeable***" and may be ecological, cultural, economic, or social.[24]

For example, the DEIS acknowledged that reducing the numbers of juvenile halibut killed by the Amendment 80 fleet could yield "longer term benefits to the directed halibut fisheries … throughout the distribution of the halibut stock.[25] The two main reasons why reductions in juvenile halibut bycatch will have impacts "later in time" or "farther removed in distance" are simple: Bering Sea halibut migrate to other areas and killing juvenile halibut can affect the overall productivity of the stock.[26] The DEIS speculated that "whatever potential benefits of this nature, were they to occur, would not be immediately apparent" and identified a realized benefit to directed halibut fisheries a few years later that would occur "to a greater spatial extent."[27] NEPA and the APA require the agency to explicitly consider these downstream impacts in the impacts analysis. Depending on fishery selectivity and other biological processes those impacts may be even larger than impacts to Bering Sea fisheries.

The exclusion of downstream impacts caused highly misleading economic information regarding the benefits of bycatch reduction because the DEIS omitted half the halibut from the analysis. The DEIS measured alternatives using ratios of 0, .25, .5, .75 and 1.0 to describe the relationship between bycatch limits and directed fishery quota.[28] A ratio of 1 means all the halibut killed by Amendment 80 companies are over 26 inches long and would transfer into the directed fishery catch limit.[29] Ratios of less than one would mean that a portion of the halibut killed by Amendment 80 companies are juvenile halibut (less than 26 inches long) and likely to die for reasons unrelated to trawling or migrate out of the Bering Sea.[30] The DEIS then concluded that the potential for non-trawl mortalities, or migration, "lower the impact of PSC usage on potential gains to the directed halibut fishery."[31]

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[23] Scientific and Statistical Committee Final Report to the North Pacific Fishery Management Council April 5th – 8th, 2021. *See* p.15.
[24] 40 C.F.R. § 1502.15; 40 C.F.R. § 1508.8(emphasis added).
[25] DEIS at 44.
[26] *Id.* at 44, 229*; see also id.* at 158-160 (explaining that juvenile halibut bycatch is "implicitly assumed to have an equal effect on the productivity of all IPHC areas" because of "the small size and future potential of these fish" and that Bering Sea juvenile halibut "are highly mobile and much less likely to occur in the same IPHC Regulatory Area in the upcoming year")
[27] *Id.* at 250.
[28] *Id.* at 231.
[29] *Id.*
[30] *Id.*
[31] *Id.* at 231, 250 (asserting that additional opportunities for halibut fishermen would not likely result in a pound for pound basis).

Thus, on one hand the agency says lower bycatch limits will only help Bering Sea fishermen to the extent that the Amendment 80 companies kill larger fish,[32] and on the other hand, juvenile mortality is irrelevant to the decision. This approach is wrong. Bycatch reductions result in directed halibut fishery catches at more than a 1:1 ratio according to a new IPHC analysis.[33] The 2021 assessment of the effect of the bycatch fisheries on the coastwide directed fisheries explains that "*potential yield to the directed fishery was generally larger than a simple reallocation from non-directed discards (115% on average),* [and] that the rate of exchange is variable over time (range of 86-139%)."[34] The DEIS arbitrarily dismissed this conclusion as a coastwide impact and not applicable to this action.[35] On average, more than half the halibut killed by the Amendment 80 companies each year over the past decade are juvenile fish less than 26 inches in length.[36]

The DEIS needs to more fully describe directed halibut fishery socio-economic contributions and external costs imposed on Alaska by the Amendment 80 companies

The Scientific and Statistical Committee raised multiple concerns about the economic analysis, particularly using comparisons of revenue impacts to the different fisheries to inform decision-making.[37] Identified flaws included: (1) NMFS measured bycatch fishery values in wholesale revenue and halibut fishery revenues in ex-vessel value; (2) NMFS relies on gross revenues without considering costs and (3) the DEIS did not explicitly consider other economic contributions each sector made in Alaska and the U.S..[38] The Committee concluded with the concern that "in its current form, reporting revenue estimates for each fleet will invite readers to make inaccurate comparisons across fleets, and suggests analysts consider whether it may be better to provide no estimate than a misleading one."[39] The DEIS referenced qualitative discussions and context but then ultimately relied on revenue impact comparisons to make findings under the Magnuson-Stevens Act National Standards.

The DEIS attempted to address the concern about comparing economic apples and oranges by explaining that reported revenue estimates "do not represent the full scope of the economic impacts."[40] Nevertheless, there is a significant disparity between the gross wholesale value generated by the Amendment 80 companies relative to the Bering Sea halibut fishery ex-vessel value. As explained in our discussion of the National Standards findings in the DEIS, the analysts relied on this disparity to draw conclusions about community impacts.

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[32] *Id.* at 230.

[33] Stewart, I.J., A.C. Hicks & P. Carpi. 2021. Fully subscribed: Evaluating yield trade-offs among fishery sectors utilizing the Pacific halibut resource. *Available at:* https://www.iphc.int/uploads/pdf/am/2020am/iphc-2020-am096-inf06.pdf

[34] DEIS at 231.

[35] *Id.*

[36] *Id.* at 231, Table 8-13.

[37] Scientific and Statistical Committee Final Report to the North Pacific Fishery Management Council April 5th – 8th, 2021. *See* p 12.

[38] *Id.*

[39] *Id.*

[40] DEIS at 189.

To correct this implicit and serious bias, the analysis needs to explore the socio-economic value of the Alaska commercial and sport halibut fisheries more fully. The DEIS dismissed the relevance of what it described as "generally understood but poorly quantified economic multipliers" and asserts that the "broad, downstream impacts of commercial fishing can be understood" without considering these metrics.[41] A discussion of multiplier effects is critical to understanding the relative socio-economic contributions of the statewide halibut fishery and the Amendment 80 companies. This discussion is essential to informing decision-making under the National Standards. The discussion would also help to counterbalance the bias created by analyzing the impacts of the alternatives based on Amendment 80 companies' gross wholesale revenues and the diminishing ex-vessel values generated by Alaska fishermen in the Bering Sea – diminishing values caused in large part by allowing the Amendment 80 companies to externalize the costs of bycatch.

As explained in a recent study by the University of Alaska Anchorage's Institute for Social and Economic Research (ISER):

> …while total employment increases with resource extraction activities in the oil-rich North Slope borough in Alaska, local residents receive little to none of these benefits. A similar story may be true of Alaska's fisheries. While Alaskan fishers represented 71% of permit owners in 2015, they earned only 33% of the total value of catch. Further, only 65% of the wholesale value from commercial fisheries can be attributed to a processor based in Alaska. Thus, a large portion of the value of commercial fisheries in Alaska may never enter into local economies.[42]

The socio-economic impacts of locally harvested and processed seafood differ significantly from the impacts of non-resident harvest and processing. Local ownership of fishery resources means earnings are spent locally on goods and services and local crew members, creating induced effects on local economies.[43] Each dollar in resident fishery earnings translates to 1.54 dollars in total community revenue and over 7 jobs per million dollars of fishery earnings.[44] The majority of Alaska fishermen own smaller catcher seller vessels, so that when most non-resident earnings leave the region, "the induced and indirect effects of commercial fishing in local economies can be expected to be small."[45] Earnings by non-residents result in "leakage" from Alaska coastal communities.[46] Thus, the ISER study's "findings demonstrate the importance of local resource ownership for generating benefits for local economies."[47]

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[41] *Id.*

[42] Watson, B., M.N. Reimer, M. Guettabi & A. Haynie. 2021. Commercia Fishing and Local Economies at 8. Institute of Social and Economic Research, University of Alaska Anchorage.

[43] *Id.* at 3.

[44] *Id.* at 1-2.

[45] *Id*. at 9.

[46] *Id*. at 3..

[47] *Id*. at 1.

The DEIS claimed that "[t]he high value of halibut relative to other white fish is widely acknowledged and is not diminished by the decision to describe the value chain only as far as the primary processing level."[48] This belief is wrong – especially because the agency relies on Amendment 80 gross wholesale revenue changes to measure impacts. The analysis arbitrarily failed to confront the capital flight out of Alaska's coastal communities caused by industrial, out-of-state bycatch fisheries. Both the new ISER study and the Pacific Halibut Multiregional Economic Impact Assessment show significant community or household impacts of resident seafood catches in Alaska – the ISER study explains that each dollar of resident catch results in an increase of 1.54 dollars in adjusted gross income for local communities.[49] 71% of direct earnings from the halibut fishery in 2019 accrued to Alaska communities.[50]

The DEIS recognized ongoing research regarding halibut fishery multiplier effects, but then dismissed that research as not relevant to Bering Sea fisheries.[51] As explained in the 2020 Pacific Halibut Multiregional Economic Impact Assessment:

> The complete path of landed fish, from the hook to the plate, also includes seafood wholesalers and retailers, and, in the case of highly-prized fish such as Pacific halibut, services. Traditionally, the vast majority of Pacific halibut is consumed at white-tablecloth restaurants. Any adjustment in gross revenue generated by these industries resulting from a change in the supply of directly affected fish is further magnifying the impact of management decision altering harvest levels.[52]

Because nearly all of the Amendment 80 companies' flatfish, Atka mackerel, and rockfish is exported to Asia, it is unclear whether there are similar benefits accruing to the U.S., let alone Alaska coastal fishing communities.[53]

For this reason, it is essential that the economic analysis fully describe the statewide value of the halibut fisheries. The 2020 Pacific Halibut Multiregional Economic Impact Assessment estimated the Pacific halibut commercial fishing's total estimated impact in 2018 as (1) $281 million in GDP; (2) $176 million in labor income (4453 jobs); (3) $179 million in household income and (4) over $666 million in output.[54] The $666 million estimate is five times the 2018 fishery

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[48] DEIS at 178.

[49] Watson, B., M.N. Reimer, M. Guettabi & A. Haynie. 2021. Commercial Fishing and Local Economies at 18. Institute of Social and Economic Research, University of Alaska Anchorage. Hutniczak, B. 2020. Pacific Halibut Multiregional Economic Impact Assessment (PHMEIA): summary of progress at 11, Table 2. IPHC-2021-AM-097-14. *Available at:* https://iphc.int/uploads/pdf/am/amp097/iphc-2021-am097-14.pdf.

[50] Hutniczak, B. 2021. Pacific Halibut Multiregional Economic Impact Assessment (PHMEIA): summary of progress. IPHC-2021-IM097-14.

[51] DEIS at 178, 190.

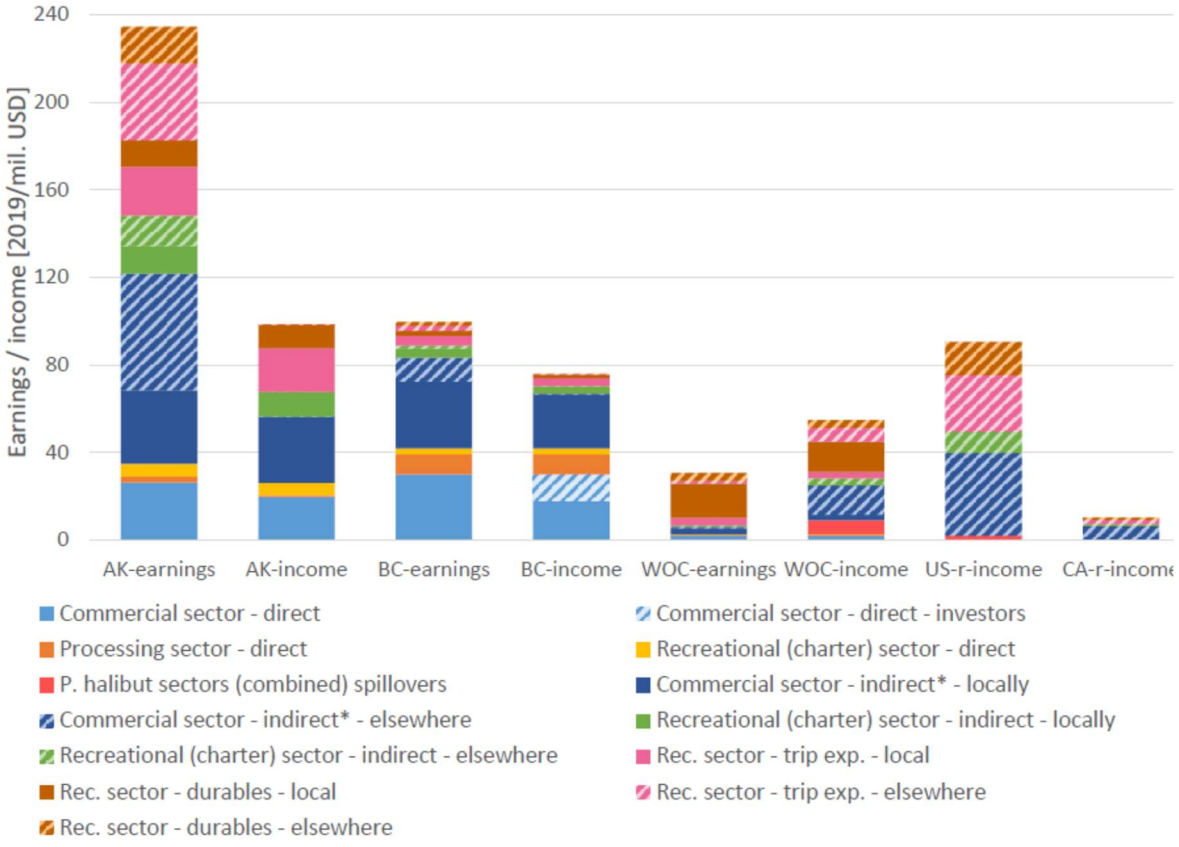
[52] Hutniczak, B. 2020. Pacific Halibut Multiregional Economic Impact Assessment (PHMEIA): summary of progress at 1. IPHC-2021-AM-097-14.

[53] DEIS at 114; *see also* McDowell Group. 2020. The economic value of Alaska's seafood industry. January 2020.

[54] Hutniczak, B. 2020. Pacific Halibut Multiregional Economic Impact Assessment (PHMEIA): summary of progress at 9. IPHC-2021-AM-097-14.

output value and includes direct, indirect, and induced effects from changes to the Pacific halibut fishing sector, as well as indirect and induced effects associated with forward-linked industries (Pacific halibut processing sector).[55] The 2019 estimate includes charter and recreational fishing and exceeds $750 million.[56]

The 2021 update to the Pacific Halibut Multiregional Economic Impact Assessment estimates 2019 fishery impacts using three components: (1) direct economic impacts, or impacts realized by direct users and processors; (2) indirect economic impacts related to expenditures on goods and services used in processing or harvesting halibut and (3) induced economic impacts which is activity generated by households spending earnings that rely on the Pacific halibut resource.[57] The 2021 Assessment explains that the flow of earnings from the halibut fishery "are particularly pronounced in Alaska where substantial flows are identified from harvest location to buyer's headquarters, from the landing area to vessel owner residence and quota holder residence, and from sport fishing location to Charter Halibut Permit owner residence."[58] As shown below in Figures 2 and 3 from the 2021 Assessment, a substantial portion of halibut fishery earnings accrues to Alaska coastal communities:

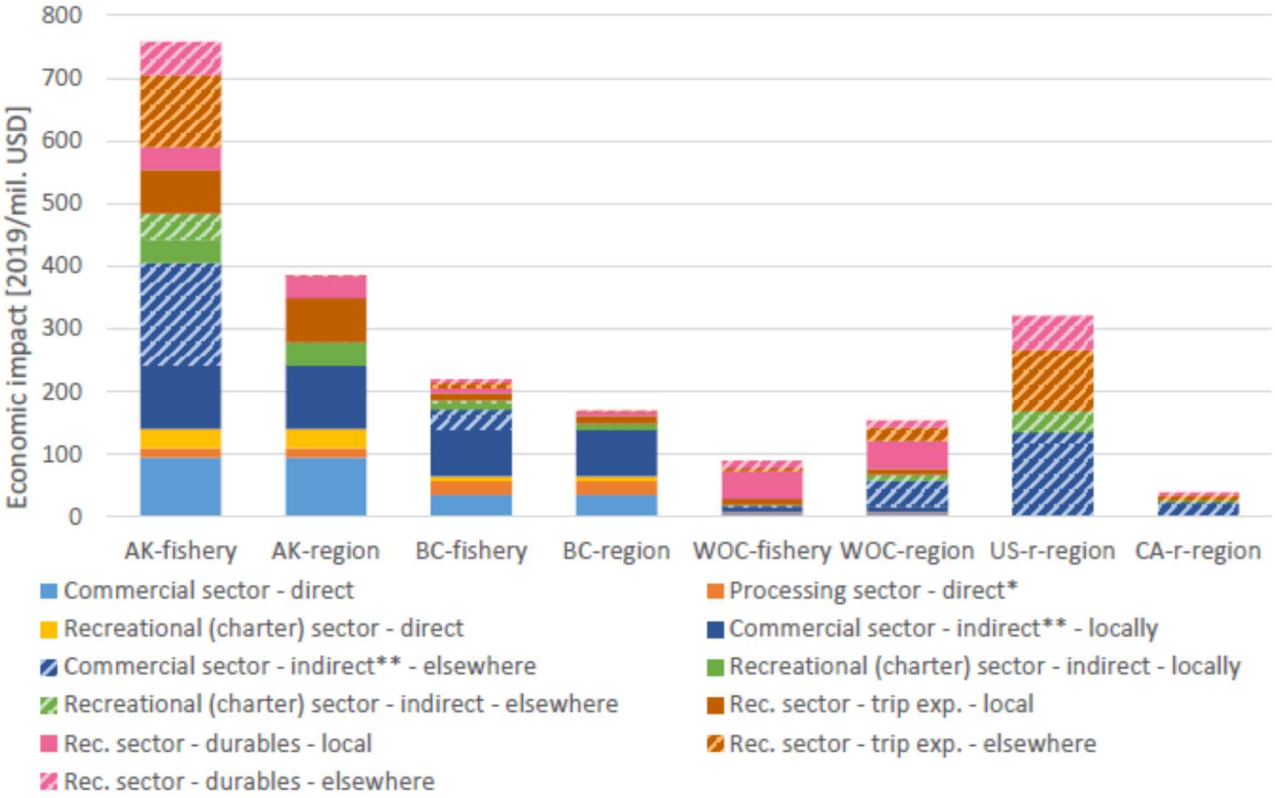


[55] *Id*. at 9.

[56] Hutniczak, B. 2021. Pacific Halibut Multiregional Economic Impact Assessment (PHMEIA): summary of progress at Figure 3. IPHC-2021-IM097-14. *Available at:* iphc-2021-im097-14.pdf

[57] *Id.* at 1, 3.

[58] *Id.* at 4.



The 2020 Pacific Halibut Multiregional Economic Impact Assessment concluded that "[t]he results suggest that the revenue generated by Pacific halibut at the harvest stage accounts for only a fraction of the economic activity that would be forgone if the resource was not available to fishers in the pacific northwest.[59] **Because of these values, the DEIS needs to contemplate "economic activity that would be forgone if the resource was not available to fishers." As noted by the Scientific and Statistical Committee, the disclosure of gross revenues can be misleading absent a consideration of costs.** External costs, or "externalities" are an economic concept that refers to uncompensated social or environmental effects.[60] Without considering external costs imposed by the Amendment 80 companies on society through bycatch of halibut and other species, habitat harms caused by bottom trawling and climate pollution, it is impossible to meaningfully assess the true costs or benefits of their products or services to society.[61] The overall Alaska commercial halibut catch has declined from 56.4 million pounds in 2010 to 21.2 million pounds in 2020, with total catches since 2014 ranging between 21.2 and 24.7 million pounds.[62]

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[59] Hutniczak, B. 2020. Pacific Halibut Multiregional Economic Impact Assessment (PHMEIA): summary of progress at 9. IPHC-2021-AM-097-14. *See also id.* at 2 (adding that sport fisheries may add to these values as "charter operators generate demand for fuel, bait fish, boat equipment, and fishing trip provisions. They also create employment opportunities and provide incomes that can be spent locally, supporting various local businesses. What is more, anglers themselves contribute to the economy by creating demand for goods and services related to their fishing trips," including lodging, local retailers, or restaurants).

[60] https://www.eltis.org/glossary/costs-internal-external-costs

[61] *See, e.g.* https://en.wikipedia.org/wiki/Externality

[62] DEIS at 170, Table 4-5.

The nearly 3 million pounds of juvenile and adult halibut killed by the Amendment 80 companies each year – at least – are a significant proportion of the available resource and a massive external cost imposed on Alaska commercial fishermen and coastal communities.

The DEIS refused to quantify the total cost of halibut killed by the Amendment 80 companies and the value of halibut savings for other user groups.[63] Recent research identifies serious halibut bycatch impacts on directed fisheries. In general, each pound of trawl halibut bycatch will generate more than a pound of yield to commercial halibut fisheries, but the actual rate is variable over time and depends on the location of the bycatch fishery and the size and age of halibut killed by trawlers. Recent IPHC estimates suggest that every 2.2 pounds of eliminated bycatch in the immediate short-term (2019-2021) would generate a 2.7 to 2.8 pound coastwide yield gain to directed fisheries.[64]

Assuming the agency's recent discard mortality estimates are accurate, the Amendment 80 companies were responsible for 17,361 metric tons of halibut mortality from 2010-2019.[65] This loss translates into roughly 28.7 million net pounds, and 33 million pounds assuming the 1:1.15 ratio estimated in "Fully Subscribed."[66] 33 million pounds at a statewide average ex-vessel price of $4.69[67] translates into nearly $155 million in ex-vessel revenue, and $774 million in total outputs using the 2020 Pacific Halibut Multiregional Economic Impact Assessment's 5:1 ratio. Much of this annual external cost is borne by Alaska fishermen and communities.

The IPHC further shifts some allocation to Canada to account for the impacts of juvenile halibut bycatch in the Bering Sea and Gulf of Alaska on Canadian fishermen. This is another external cost imposed by Amendment 80 companies and other trawlers on Alaska halibut fishermen that reduces catches in all regulatory areas.[68]

Amendment 80 company halibut bycatch externalities extend to other Alaska businesses. Alaska halibut harvests support what economists describe as "backward-linked industries" that supply commercial halibut fishing vessels. Added Alaska community costs caused by halibut bycatch include reduced expenditures by fishing vessels in Alaska, including, but not limited to: (1) making fewer trips and purchasing less fuel and local groceries; (2) less business to vessel repair and maintenance sectors and gear suppliers; (3) fewer employment opportunities and wage income.[69]

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[63] *Id.* at 280.
[64] Stewart, I.J., A.C. Hicks & P. Carpi. 2021. Fully subscribed: Evaluating yield trade-offs among fishery sectors utilizing the Pacific halibut resource. Fisheries Research 234 (2021) 105800
[65] DEIS at 61, Table2-4.
[66] 17,361 x 2204.6 = 38,274,060; 38,274,060 x .75 = 28,705,545.
[67] DEIS at 172, Figure 4-8.
[68] *Id.* at 160.
[69] Hutniczak, B. 2020. Pacific Halibut Multiregional Economic Impact Assessment (PHMEIA): summary of progress at 1. IPHC-2021-AM-097-14. *Available at:* https://iphc.int/uploads/pdf/am/amp097/iphc-2021-am097-14.pdf

Another externality may be loss of tax revenue and we request the Council direct NMFS to provide a more detailed analysis of the respective contributions of the statewide halibut fishery and Amendment 80 companies to Alaska communities. The DEIS identified two main sources of fishery taxes: shared taxes administered by the state, which are the Fishery Resource Landing Tax and the Seafood Marketing Assessment, and municipal taxes levied on raw fish landings - which the Amendment 80 companies do not pay.[70] Most of the Fishery Resource Landing Tax paid by trawlers derives from pollock fisheries. The amount of taxes paid appears to be small compared to fishery taxes paid per dollar in ex-vessel value in Southeast Alaska communities. This means that halibut bycatch may impose another external cost in terms of reducing community tax revenues from halibut that would otherwise be harvested in Alaska.

The misleading analysis in the DEIS resulted in a flawed net benefits finding

The DEIS stated that the range of alternative limits aim to provide a choice in balancing "competing" requirements of the National Standards - particularly standards 1, 8 and 9."[71] Its national net benefits conclusion purportedly reflected on a broad-based consideration of producer and consumer surplus in the U.S. economy that included all direct and indirect participants in the fishery.[72]

The agency's conclusion anticipated revenue declines to the Amendment 80 companies that are disproportionate to any benefits conferred upon Bering Sea halibut fishermen and fishing communities.[73] The analysis identified increased operating costs, reduced revenue in some years, negative effects on some suppliers and some potential impacts on Amendment 80 seafood consumers.[74] The analysts believe that any economic surpluses for fishermen, consumers and fishery suppliers generated by the Bering Sea halibut fisheries will not offset negative impacts to the bycatch fisheries.[75] The DEIS concluded that "[o]verall, net benefits to the Nation are expected to be negative" and alternatives that save the most halibut for fishermen, communities and consumers will cause the net benefits to be even "more negative."[76]

This conclusion relied on a flawed economic analysis that, as previously explained, excludes half the halibut, among other concerns. Additionally, economic losses to the bycatch fisheries do not alone drive the National Standard 9 practicability standard and rather are just "one of the factors that determine the extent to which it is practicable to reduce bycatch … in a particular fishery."[77] The National Standard 9 guidelines indicate that net benefits to the Nation are much broader than potential revenue losses to the Amendment 80 companies.[78] The determination of

[70] DEIS at 115.
[71] *Id.* at 282.
[72] *Id.* at 254.
[73] *Id.* at 254-255.
[74] *Id.*
[75] *Id.*
[76] *Id.* at 255.
[77] Magnuson-Stevens Act Provisions, National Standard Guidelines, Final Rule. 63 Fed. Reg. 24,212, 24,226 (May 1, 1998).
[78] *Id.;* 50 C.F.R. § 600.350(d).

whether a measure "minimizes bycatch or bycatch mortality to the extent practicable, consistent with other national standards and maximization of net benefits to the Nation" involves consideration of multiple factors – population effects for the bycatch species, changes in the economic, social or cultural value of fishing activities, non-consumptive uses, and social effects.[79]

The DEIS needs to more fully consider the value of conserving juvenile fish and allowing them to reach maturity. Reductions in juvenile halibut mortality seem essential to the health and potential for recovery of the stock from the current low level of exploitable biomass. There has long been a concern with bycatch of juvenile fish and the "problem of foregoing the potential growth of these fish."[80] It is impossible to substantiate a number of the findings, including those detailed under National Standard 1, in the absence of more detailed analysis of the effects of juvenile fish bycatch on an optimum halibut population size.

The DEIS needed to discuss how the alternatives respond to the precautionary principle

The National Standard 9 guidelines require decisionmakers to adhere to the precautionary approach when faced with uncertainty regarding, among other things, population effects for the bycatch species, changes in the economic, social, or cultural value of fishing activities, and social effects.[81] There are significant uncertainties regarding "population effects" for the halibut stock and future changes in biomass and stock condition, warranting a precautionary approach aimed at limiting bycatch well below a threshold at which there is a risk of contributing to further decline.[82] The precautionary approach provides that "[t]he absence of scientific information should not be used as a reason for postponing or failing to take measures to conserve … non-target species and their environment."[83] The rationale reflects the understanding that scientific certainty often arrives too late to design effective policy responses to environmental concerns. The Bering Sea Fishery Management Plan (FMP) policy also incorporates a precautionary approach. [84]

There are numerous uncertainties about population effects and other factors that warrant discussion of how the precautionary approach related to this action. Biological uncertainties include, among others, the substantial variability in weight at age and highly variable recruitment.[85] Uncertainties related to climate merit further consideration, whether the uncertain timing of Pacific Decadal Oscillation (PDO) events or serious climate changes that significantly

[79] 50 C.F.R. § 600.350(d)(3).
[80] *See* Magnuson-Stevens Act National Guidelines, Proposed Rule. 62 Fed. Reg. 41,907, 41011. August 4, 1997.
[81] 50 C.F.R. § 600.350(d)(3)(i), (ii). *See also* NPFMC. 2020. Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area at 4-5. Anchorage, AK. November 2020.
[82] Magnuson-Stevens Act Provisions, National Standard Guidelines, Final Rule. 63 Fed. Reg. 24,212, 24,226 (May 1, 1998).
[83] *Id.* at 24,227.
[84] NPFMC. 2020. Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area at 4-5. Anchorage, AK. November 2020 (directing consideration and adoption of "measures that accelerate the Council's precautionary, adaptive management approach … and where appropriate and practicable, increase habitat protection and bycatch constraints." The FMP's precautionary approach specifically aims at providing "socially and economically viable fisheries for the well-being of fishing communities").
[85] DEIS at 158.

reduce the ability to predict species distribution shifts or other biological behaviors of Bering Sea fish stocks.[86] The DEIS suggested that warmer conditions may worsen halibut bycatch by dispersing yellowfin sole, causing the Amendment 80 companies to kill more halibut in pursuit of target species or because warmer bottom temperatures themselves increase halibut bycatch.[87] A major concern of the Scientific and Statistical Committee was that the analysis may have missed the potential for even lower future halibut stock sizes, heightening the need for caution about future bycatch volumes.[88]

The Council should also consider the considerable uncertainty about the true numbers of halibut killed by the Amendment 80 companies. The Office of Law Enforcement has noted "increased reports of harassment, intimidation, hostile work environment and other efforts to bias observer samples."[89] Complaints about Amendment 80 company employees include "intimidating or coercive attempts to influence sample collection with intent to lower PSC estimates" or remove halibut from observer samples.[90] The Amendment 80 companies have one of the highest rates of enforcement concerns.

A related uncertainty pertains to the "effective mortality rate" or ratio of halibut killed to the number of halibut "encountered" by the trawl.[91] The number of halibut "encountered" has increased in recent years but the reported ratio of fish killed to caught has declined significantly largely due to the recent and increased use of deck sorting. [92] The reduced effective mortality rates rely on recent (since 2016) efforts by fishery observers to provide viability estimates and observer conclusions that roughly half the halibut are in "excellent" condition prior to release back into the sea. [93] Mortality sampling is random and often at the discretion of the observer.[94] Given the enforcement concerns, the Council's decision needs to recognize that halibut mortalities are likely low estimates to an unknown degree because of factors that may reduce the precision and accuracy of those estimates such as number of samples versus total catch or the number of complaints related to viability sampling.

A fuller discussion of the effective mortality rate was essential to understanding the impacts of the alternatives – in particular, which alternative limits will be most effective at constraining halibut bycatch at lower abundance levels. Halibut "encounters" have exceeded the 1,745 limit each of the past five years, including 3,067 mt in 2019 – the highest number of "encounters" over the past decade.[95] The new effective mortality rates have reached nearly 50% each of the last three years meaning that the rates are now a driving factor with regard to

[86] Scientific and Statistical Committee Final Report to the North Pacific Fishery Management Council April 5th – 8th, 2021. *See* p 9-10.
[87] DEIS at 210.
[88] *Id.*
[89] DEIS at 257.
[90] *Id.*
[91] *Id.* at 128.
[92] *Id.* at 142.
[93] *Id.* at 128.
[94] *Id.* at 191, 220 n. 91.
[95] *Id.* at 62, Table 2-4.

effective enforcement of the bycatch limits.[96] The DEIS notes year-to-year variability in deck sorting which raises the concern that using a previous year's mortality rate – or extrapolating observer samples too broadly - may result in the Amendment 80 companies exceeding the limit in reality but not on paper.[97]

The DEIS provided misleading analysis regarding community impacts and "incidental reallocations"

There are significant and interrelated problems with the agency's findings under National Standards 4 and 8 and the supporting analysis. The analysis underestimated potential benefits to halibut dependent communities. The agency's conclusions rewrote the history of the fisheries by ignoring the ongoing and uncompensated "reallocation" of halibut quota from Bering Sea Alaska fishermen to the bycatch fisheries.

National Standards 4 and 8 both reflect the conservation goals of the Magnuson-Stevens Act. There is no conflict between the MSA's commitments to both conservation and mitigating adverse economic impacts – decisionmakers "must give priority to conservation measures."[98] The Magnuson-Stevens Act defines conservation broadly:

> The term "conservation and management" refers to all of the rules, regulations, conditions, methods and other measures which (A) are required to rebuild, restore, or maintain, and which are useful in rebuilding, restoring or maintaining, any fishery resource and the marine environment; and (B) which are designed to assure that –
> (i) A supply of food and other products may be taken, and that recreational benefits may be obtained, on a continuing basis;
> (ii) Irreversible or long-term adverse effects on fishery resources and the marine environment are avoided; and
> (iii) There will be a multiplicity of options available with respect to future uses of these resources. [16 U.S.C. § 1802(5)].

National Standard 4 requires that allocations of fishing privileges be fair and equitable and reasonably calculated to promote conservation.[99] It is without question that bycatch limits "promote conservation of the halibut resource."[100] The plain meaning of conservation is "a careful preservation and protection of something, especially planned management of a natural resource to prevent exploitation, destruction or neglect" or to "prevent [natural resources] from being lost

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[96] *Id.*
[97] *Id.* at 220.
[98] *NRDC v. Daley,* 209 F.2d 747, 753 (D.C. Cir. 2000); *see also* 50 C.F.R. § 600.345(b) (decisions about the importance of fishery resources to fishing communities must occur "within the contexts of the conservation requirements of the Magnuson-Stevens Act" so that management measures "must not compromise the achievement of conservation requirements and goals of the FMP").
[99] 50 C.F.R. § 600.325(a).
[100] DEIS at 44.

or wasted."[101] Thus, while NMFS relies on the IPHC to maintain the spawning biomass, it still admits that reducing the numbers of halibut killed by the Amendment 80 companies would promote conservation of the halibut stock itself.[102]

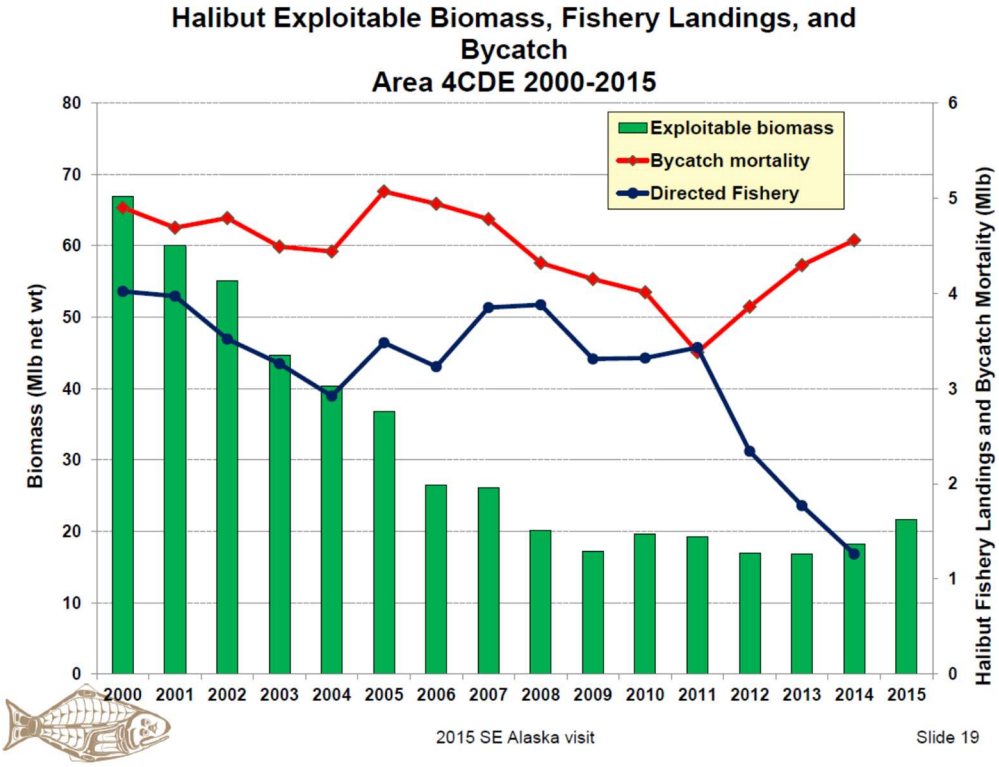
The DEIS recognized that an action to reduce bycatch is neither a direct allocation nor an assignment of fishing privileges.[103] But it then identified National Standard 4 "considerations" that pertain to the Amendment 80 companies.[104] Throughout the analysis the agency refers to "incidental reallocative effects" and asserts that action alternatives "could effectively (if indirectly) be a reallocation of access to halibut between the Amendment 80 companies and Bering Sea halibut fishermen.[105] An initial concern is that halibut are a prohibited species, defined as a "species … the catch of which must be avoided while fishing for groundfish, and which must be returned to sea with a minimum of injury."[106] In other words, the Amendment 80 companies are to avoid halibut in the first place, or, if "encountered," safely return them to the sea. The action before the Council is not one of reallocating halibut from Amendment 80 companies to Alaska fishermen; it is reducing the *de facto* reallocation that has been allowed to occur under static PSC limits set when halibut were far more abundant.

Another problem is the degree to which NMFS enabled the Amendment 80 companies to consume a disproportionate share of the Bering Sea halibut resource over the past two decades by delaying the development of appropriate bycatch limits. The conclusions about "reallocating" away Amendment 80 company halibut to Alaska fishermen are arbitrary and the analysis fails to adequately inform decision-making regarding either National Standard 8 or National Standard 4 to the extent it is relevant. The DEIS did show the proportionality problem to a very limited extent by disclosing bycatch and halibut harvest data from the past decade. Those data show that the volume of halibut killed in Area 4CDE as bycatch, mostly by the Amendment 80 companies, often is twice as much as the directed fishery harvests and in some years even more.[107]

The analysis should investigate the historical halibut harvest to bycatch ratio much further back in time with a narrower spatial focus on Area 4CDE in order to inform the public about the extent to which fixed PSC limits caused a shift in the historical share of the resource from the Area 4CDE directed fisheries to the trawl fisheries. The Amendment 80 companies disproportionately kill halibut in Area 4CDE, which accounted for between 83 percent and 90 percent of the companies' halibut mortality since 2015.[108] The graph below produced by the IPHC more clearly

[101] https://www.merriam-webster.com/dictionary/conservationcomments.
[102] DEIS at 250.
[103] *Id.* at 281.
[104] *Id.* at 281.
[105] *Id.* at 249-250, 281; Appx. 1 at 158.
[106] BSAI FMP at 11.
[107] DEIS at 170, Table 5, 235, Table 5-16.
[108] *Id.* at 249.

shows the extent to which the bycatch fisheries (including non-Amendment 80 bycatch)[109] have displaced Alaska halibut fishermen:



The National Standard 4 guidelines indicate that NMFS needs to reverse this trend. The guidelines specify that preserving an "*economic status quo cannot be achieved by excluding a group of long-time participants in the fishery*."[110] Relevant FMP objectives that justify restoring the directed fisheries with their historical share of the resource include providing sustainable opportunities for recreational, subsistence and commercial fishing participants and avoiding significant disruption of existing socio-economic structures in Bering Sea communities.[111] Measures must reflect consideration of other factors: economic and social effects, consumer interest and dependence on the fishery by present participants and coastal communities.[112]

The agency's findings under National Standard 8 similarly suffered from a failure to grasp the relationship between the bycatch fisheries and socio-economic harms to Alaska fishermen.

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[109] It is our understanding based on the analysis and conversions from metric tons to round pounds that Amendment 80 companies are responsible for at least half of this bycatch mortality; for example, in 2013 and 2014 the Amendment 80 companies' bycatch mortality exceeded 1800 metric tons, or at the very least well over 3 million pounds.

[110] 50 C.F.R. § 600.325(c)(3)(i).

[111] BSAI FMP at 5.

[112] 50 C.F.R. § 600.325(c)(3)(iv). The National Standard 4 guidelines explicitly reference closures of nursery areas to trawling in order to ensure fish are harvested at their maximum size – *see* 50 C.F.R. § 600.325(c)(3)(i); it would even be appropriate to prohibit trawling in the Closed Area, even if measure had direct allocative consequences – See *Nat'l Coalition for Marine Conservation v. Evans,* 231 F.Supp.2d 119, 131-32 (D.D.C. 2002).

National Standard 8 requires that conservation and management measures consider the importance of fishery resources to fishing communities in order to provide for their sustained participation and minimize adverse economic impacts to them.[113] A "fishing community" is "substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet ***social*** and economic needs" and a "social or economic group whose members reside in a specific location and share a common dependency."[114]

Lower bycatch limits will have significantly different socio-economic impacts on significantly different types of fishing communities. The status quo threatens further loss of Bering Sea communities while lower bycatch limits may prevent the Amendment 80 companies from harvesting their entire quotas in some years. Unlike many Alaska halibut fishermen, these companies at least have some capacity to adapt and prioritize their highest value target fisheries.

The Social Impact Analysis recognized numerous other values created by halibut harvests:

- opportunities for social cohesion in families and community households;
- opportunities for inter-generational transfers of knowledge;
- opportunities for extended family to come together and work alongside one another;
- a cultural significance of that includes but also transcends economic values
- halibut is a keystone cultural species and a traditional food that brings families together;
- increased halibut harvests provide substantial benefits for Bering Sea communities with relatively few economic alternatives and
- there is a large number of communities that would benefit from bycatch reduction and very few communities affected by declines in Amendment 80 company revenues and port calls.[115]

The Scientific and Statistical Committee's April 2021 review of the DEIS cautioned that "[s]imple conclusions about likely impacts are challenging and include … fundamental differences in the measures of social and financial impacts between the A80 and halibut fisheries.[116] For example, the DEIS never confronted the difference between the loss of a half million dollars in annual halibut fishing revenue from several smaller Bering Sea fishing communities and an equivalent or even much larger decline in corporate profit margins.

Despite the significant differences between Seattle and Alaska's many remote coastal fishing communities, NMFS' National Standard 8 findings relied on "simple" financial conclusions. NMFS admitted that less bycatch "might benefit" fishing communities that depend on halibut harvests.[117] But the analysis then minimized those potential benefits as "likely attenuated by the several biological and policy steps that separate bycatch mortality savings from directed harvest

[113] 50 C.F.R. § 600.345(a).
[114] 50 C.F.R. § 600.345(c).
[115] DEIS. Appx. 1 at 148, 155-158
[116] Scientific and Statistical Committee Final Report to the North Pacific Fishery Management Council April 5th – 8th, 2021. *See* p 9.
[117] DEIS at 282.

opportunities."[118] On the other hand, the DEIS claimed that "[c]ommunities that are engaged in the groundfish fisheries could be adversely impacted on a more direct basis."[119] After identifying this greater economic harm, the analysis then implied that decisionmakers should select an action alternative that does the least harm to "communities" that participate in the bycatch fisheries."[120]

The repeated references to "communities" from the section of the DEIS that evaluated the alternatives in the context of the National Standards is highly misleading. The analysis exaggerated the effects when it identified "many" coastal communities that may face adverse impacts from reductions in halibut bycatch by the Amendment 80 companies. Dutch Harbor is the only community that receives frequent port calls from Amendment 80 companies.[121] Other identified Alaska communities that purportedly depend on the Amendment 80 companies have activity limited to locally occurring product transfers or no activity at all and have lost their halibut fleets in large part because of poorly constrained bycatch fisheries.[122] Further, there is a significant number of Alaska vessels home-ported outside the Bering Sea, mostly from Anchorage, Homer, Kodiak, Juneau and Sitka that have and in many cases still do participate in Bering Sea halibut fisheries. These vessels likely make more frequent port calls to a larger number of ports, but the agency's conclusions neither acknowledge these visits nor consider the value of Bering Sea halibut fisheries to Alaska communities outside of the Bering Sea.

The agency's own findings in the Social Impact Analysis show that the main affected "community" is not that much of a fishing community but rather a physical residence for the Amendment 80 companies:

> "given the degree of centralization of ownership of the BSAI groundfish Amendment 80 sector in the Seattle Metropolitan Statistical Area (Seattle MSA), the centralization of the support services provided by Seattle-based firms, and the concentration of Amendment 80 crew member residence in the state of Washington, *potential adverse economic impacts associated with the proposed action alternatives … would largely accrue to the Seattle MSA in particular … with the limited exceptions described above*.[123]

Limited indeed. The Social Impact Assessment further finds that Seattle:

> "*is among the least substantially dependent of the engaged communities* … based on the relative number of fishing jobs and economic value of those fisheries when compared to the size of the overall Seattle metropolitan labor pool and the scale, diversity, and resilience of its economy. For many of the fisheries off Alaska, especially the industrial-scale fisheries such as the BSAI groundfish fishery, it could

[118] *Id.*
[119] *Id.*
[120] *Id*.
[121] DEIS, Appx. 1 at xv.
[122] *Id*, Appx. 1 at xvi-xvii.
[123] *Id.*, Appx. 1 at xix.

be stated, paradoxically perhaps, that the major BSAI fisheries in their present configurations are more dependent upon Seattle than Seattle is dependent upon the fisheries."[124]

In contrast, St. Paul has complete community dependency on halibut revenues, along with three other communities with smaller fleets.[125] Two of the agency's identified "bycatch dependent" communities - Adak and Atka - also have historical fleets that are 85 percent or more dependent on halibut.[126] The halibut fishery in these two communities provides one of the few private sector sources of employment and makes them particularly vulnerable to the ongoing "incidental reallocative effects" caused the Amendment 80 companies' waste of an increasing proportion of the resource.[127]

The DEIS also wrongly claimed that the resource "currently appears to be at a stable level" and that sustained participation of halibut communities is "more challenging" but not at risk.[128] Because of abundance declines and the "incidental reallocation" of the resource to the Amendment 80 companies, overall Bering Sea fishery ex-vessel values have dropped massively, from $53.9 million in 2011 to a low of $15.5 million in 2018.[129]

The agency's assumptions of stability are implausible in light of the stark statistics showing changes in the Bering Sea directed halibut fishery – even the analysts admit a downward trend in fleet size throughout Bering Sea communities.[130] The Bering Sea halibut fleet – overwhelmingly owned by residents of Alaska fishing communities - declined from 337 vessels in 2011 to 117 in 2017.[131] In 2010 there were 4 halibut vessels in Adak and Atka.[132] Now there is one.[133] In 2010 there were 158 halibut fishing vessels in the Bering Sea Coastal Villages Region.[134] Now there are zero. Some of these smaller community fisheries generated up to half a million dollars in revenue now lost in no small part to Amendment 80 company bycatch.[135] St. Paul, Nome, Dutch Harbor and Savoonga still have active fleets but have experienced fleet size reductions from 25 to 33 percent.[136] Southeast Alaska fishermen have been substantially engaged in the Bering Sea halibut fisheries, but the number of active vessels has shrunk from twelve to three. [137]

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[124] *Id.,* Appx. 1 at 125.
[125] *Id.* at 250.
[126] *Id.* Appx. 1 at xxiv, 158.
[127] *Id.* Dutch Harbor's fishing fleet also has a significant dependence on halibut.
[128] *Id.* Appx. 1 at xxvii.
[129] *Id.* Appx. 1 at 34, Table 15
[130] *Id.*, Appx. 1 at 174.
[131] *Id.* Appx. 1 at 174, Table 4-7.
[132] *Id.* Appx. 1 at 32, Table 13.
[133] *Id.*
[134] *Id.*
[135] *Id.*
[136] *Id.*
[137] *Id.*

In sum, multiple Bering Sea communities and halibut fishermen from throughout Alaska as have lost direct access to the halibut fishery and others are continually in jeopardy. Bering Sea and downstream Gulf of Alaska communities rely on harvestable and younger, migrating halibut for socio-economic well-being. The analysts National Standard 4 and 8 conclusions fail to inform the public and decisionmakers regarding the glaring social equity issues involved – on one side, over 2,000 halibut fishermen, rural coastal communities, indigenous dependence and a small-scale fishing industry that is one of the few long-term success stories in fisheries management versus five Seattle trawl companies and their 18 – 20 industrial fishing factories. Thousands of families, businesses, and fishing communities from Ketchikan to St. Paul depend on the health of the halibut resource.

Alternative 4 and social justice in Area 4CDE

While the impacts of Bering Sea bycatch throughout Alaska must be considered, particular attention should, of course, be focused on the Pribilof Islands and Area 4CDE. On average, eighty percent of Bering Sea bycatch occurs in Area 4CDE, which also contains the Pribilof Islands (Area 4C) and the halibut grounds for the islands' Aleut residents.[138] As described above, St Paul is particularly and unequivocally dependent on the halibut fishery for economic, social and cultural well-being.

In Areas 4CDE, over the past 20 years total removals have generally trended downward, with total 2020 removals representing a 52% reduction from 2001. The directed fishery has been disproportionately affected by these declines. Between 2001 to 2010, directed fishery landings and total PSC mortality generally followed a similar trend. Over the past 10 years, however, the reduction in directed fishery landings has substantially outpaced the reduction in total bycatch mortality. In fact, during this period, directed fishery landings were reduced by 53%, while bycatch mortality declined by only 19%. Excluding 2020, which was an anomalous year,* the difference is even more stark: while directed fishery landings were reduced by 52%, bycatch mortality actually increased, growing by 15% over 2011 levels (Table 1). This is grossly disproportionate and inequitable.

Table 1. Area 4CDE Removals (M lbs, net wt)

	2011	2019	Difference
Bycatch	3.030	3.490	+15%
Directed Fishery	3.414	1.637	-52%

* Amendment 80 operations were affected by multiple factors in 2020, including COVID-19 driving a collapse in foodservice demand and significantly reduced demand for commodity flatfish. In response, Amendment 80 vessels shifted fishing effort to low-PSC species such as Atka mackerel and Pacific ocean perch. In short, rates of PSC mortality in 2020 do not represent additional successful efforts to reduce mortality but rather profit-driven species targeting that resulted in incidental reductions in halibut mortality. See also DEIS at 120, n.4 (noting that "market disruptions due to international trade relations and a global health pandemic affecting demand for A80 species might have shaped companies' business plans as much or more than halibut PSC rates.").

[138] https://iphc.int/uploads/pdf/am/2018am/iphc-2018-am094-inf03.pdf

The share of removals between the directed fishery and bycatch in the trawl fisheries is also persistently inequitable. Halibut removals due to bycatch have consistently exceeded directed fishery removals over the past two decades. In other words, far more halibut is killed and discarded as trawl bycatch than the directed fishery is allowed to catch. Allowing well over half of the available halibut to be removed as bycatch under the best of circumstances is profoundly wasteful and unfair.

The inequity deepened considerably between 2012 and 2014, when bycatch mortality by the trawl sector accounted for nearly 80% of all halibut removals. This gross inequity illustrated the vulnerability of the directed fishery and Aleut communities to the Council's prioritization of maximum yield over optimum yield. Although the share of removals by the directed fishery has improved somewhat since the PSC limits were reduced in 2015, halibut removals by the directed fishery have remained consistently below the historical 43% level. In short, the directed fishery's share of removals continues to be less than what it historically was, leaving the Aleut fishermen with an unsustainable share of the resource. This trend must be reversed, and equity restored, if there is to be any future for the directed fishery and halibut-dependent communities in the BSAI. Only Alternative 4 reduces bycatch limits by a sufficient magnitude to address resource waste, restore social equity, and adequately incorporate MSA optimum yield considerations. To remind the Council, Optimum yield includes consideration of social, ecological and environmental factors, with social factors including consideration of: "…preservation of a way of life for fishermen and their families, and dependence of local communities on a fishery (*e.g.,* involvement in fisheries and ability to adapt to change)." [139]

Conclusion

The current pressure to conserve the halibut resource is borne by the directed halibut fisheries having lower catch limits at lower levels of halibut abundance. Lower bycatch limits at lower levels of halibut abundance will share the conservation mandate and sustain economies of halibut-dependent communities. ALFA and The Boat Company support abundance-based management of halibut bycatch in the Bering Sea and recognize the urgency of correcting existing management failures, particularly to preserve the Bering Sea halibut fishery. We note that the data in the appended Social Impact Assessment showing significant loss of resource access for Bering Sea halibut dependent communities over the past decade supports the highest level of bycatch reduction under analysis. **Only Alternative 4 restores a measure of equity between user groups by 1) reducing bycatch commensurate with declines in halibut abundance, and 2) adequately incorporating social equity, environmental justice, and the cultural connections of rural and indigenous Alaskans to the halibut resource.** The bycatch reductions under Alternative 4 are readily achievable with existing technologies and avoidance behaviors. History shows the reduced limits can be met with minimal economic impacts on the Amendment 80 sector. Amendment 80 will only change its behavior and fully implement tools to reduce bycatch if it is forced to do so.

[139] https://www.law.cornell.edu/cfr/text/50/600.310

The DEIS did not provide a scientifically sound analysis of biological, economic, or social coastwide impacts and fails to adequately inform balancing these impacts under the Magnuson-Stevens Act National Standards. A foundational premise of NEPA is that the agency's "hard look" at the environment consequences is "almost certain to affect the agency's substantive decision."[140] An EIS must include "a discussion of adverse impacts that does not improperly minimize side effects."[141] This DEIS unlawfully minimized "side effects" to Bering Sea and downstream fisheries to a significant extent. ALFA and The Boat Company find the DEIS arbitrary in its treatment of impacts to the halibut resource and in its treatment of the socioeconomic impacts to the directed halibut fisheries and fishing communities. We expect the inadequacies identified in these comments to be addressed prior to publication of the Final EIS and urge the Council to call for these corrections during the December Council meeting deliberations on ABM. Finally, we believe the Council's decision-making process would be improved by identifying a PPA, scheduling any additional analysis indicated by the PPA, requesting additional SSC review, and correcting the EIS prior to taking final action. While we recognize the urgency to reduce halibut bycatch, we also recognize that a two month delay to correct EIS shortcomings may ultimately expedite BSAI halibut ABM implementation.

Thank you for the opportunity to comment.
Sincerely,

Linda Behnken
Executive Director, ALFA

Hunter McIntosh, President
The Boat Company

[140] *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 350, 109 S.Ct. 1835, 104 L.Ed.2d 351 (1989)

[141] *N. Alaska Ctr. v. Kempthorne,* 457 F.3d 969, 975 (9th Cir. 2006).