

DRAFT REPORT
of the
SCIENTIFIC AND STATISTICAL COMMITTEE
to the
NORTH PACIFIC FISHERY MANAGEMENT COUNCIL
February 4th – 6th, 2019

The SSC met from February 4th through 6th at the Benson Hotel, Portland, OR.

Members present were:

Gordon Kruse, Co-Chair <i>University of Alaska Fairbanks</i>	Anne Hollowed, Co-Chair <i>NOAA Fisheries—AFSC</i>	Sherri Dressel, Vice Chair <i>Alaska Dept. of Fish and Game</i>
Chris Anderson <i>University of Washington</i>	Amy Bishop <i>Alaska Sea Life Center</i>	Mike Downs <i>Northern Economics</i>
Dana Hanselman <i>NOAA Fisheries—AFSC</i>	Brad Harris <i>Alaska Pacific University</i>	George Hunt <i>University of Washington</i>
Dayv Lowry <i>Washington Dept. of Fish and Wildlife</i>	Andrew Munro <i>Alaska Dept. of Fish and Game</i>	Franz Mueter <i>University of Alaska Fairbanks</i>
Terry Quinn <i>University of Alaska Fairbanks</i>	Kate Reedy <i>Idaho State University Pocatello</i>	Ian Stewart <i>Intl. Pacific Halibut Commission</i>
Alison Whitman <i>Oregon Dept. of Fish and Wildlife</i>		

Members absent were:

Ron Felthoven <i>NOAA Fisheries—AFSC</i>	Jason Gasper <i>NOAA Fisheries – Alaska Region</i>	Heather Renner <i>U.S. Fish and Wildlife Service</i>
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C-4 BSAI Pacific Cod Trawl CV Analysis Initial Review

The SSC received a presentation on an initial review draft of a Regulatory Impact Review (RIR) and Social Impact Assessment (SIA) by Darrell Brannan (Brannan & Associates) and Mike Downs (Wislow Research Associates). Public testimony was provided by Jeff Lackey (FV Seeker), Brent Paine (United Catcher Boats), Nicole Kimball (Pacific Seafood Processors Association), Todd Loomis (Ocean Peace), and Dennis Robinson (City of Unalaska). Additional public testimony from three constituents was submitted via the online portal.

The SSC commends the analysts for compiling and organizing a tremendous amount of information about the harvesting and processing businesses that would be affected by the proposed actions. The analysts did a thorough job of characterizing the harvesters and processors who would qualify to harvest, deliver, and/or receive Pacific cod in the Bering Sea under the numerous combinations of year stanza options associated with the specified alternatives. It is particularly impressive that a clear characterization emerged despite the persistent and widespread challenges with data confidentiality when numbers of vessels or processing plants are small. After some discussion, and in consideration of the importance and urgency of addressing the influx of effort in the BSAI Pacific cod trawl CV fishery, **the SSC recommends that the analysis of Alternatives 1, 2, 3, 4 and 6 be released for public review, after some critical additional analysis.**

Alternative 5 was presented for discussion, and there is no analysis of its effects in this document, thus it cannot be advanced for further consideration at this time.

The RIR thoroughly describes the alternatives, and the SIA presents community-level dependence on the fishery and time series showing how participation has changed. An active reader can find information in the tables that depict the accelerating race to fish: CV participation has increased from the 40s in 2009-2012 to 61 in 2018 (Table A.2); the season has shortened from closing in mid-March prior to 2015 to early February in 2018 (Table 2-5); and, concurrently, vessels delivering to motherships have increased from 2-3 catcher processors in 2008-2015 to 7-8 in 2016 – 2018 (Table A.16). Mothership deliveries accounted for 17.7% of landings in 2018, twice the previous average (Table 2-48). A description of the already-closed 2019 A-season indicated further season-shortening, increased halibut bycatch, and about 31% of Pacific cod delivered to eight motherships, suggesting an accelerating trend. The community profiles illustrate that the cod fishery has historically contributed high levels of wholesale and tax revenue especially to Dutch Harbor/Unalaska, Akutan, and King Cove through shoreside landings, whereas A80 and AFA motherships are owned in the Pacific Northwest (predominantly the Seattle metropolitan statistical area). Catcher vessels are predominantly from the Pacific Northwest and Kodiak; Pacific Northwest vessels hire Pacific Northwest crew, and Alaskan vessels draw crew half from Alaska and half from the Pacific Northwest.

To allow the public and the Council to understand the impacts of the alternatives, the RIR compares the first wholesale value of a ton of Pacific cod delivered offshore and shoreside, using gross revenue as a proxy for profit in the absence of cost information. Since the values are negligibly different (less than 10% of the interannual standard deviation), the analysis concludes that the allocation between offshore and shoreside delivery does not affect the profits earned from the fishery, which comprise the net benefits to the nation. However, at that rate, the RIR also calculates that the value of 1% of the 2018 fishery was worth approximately \$400,000, which can be used to estimate the scale of the wholesale revenue associated with reallocating 0-10% of landings between sectors through this action.

However, the analysis presented in the RIR and SIA does not use this value to characterize the effects of the alternatives on different stakeholders. Public testimony illuminated the measures of interest to the public, but they were not developed in the analysis. Public testimony further raised the extent of the escalating race to fish, and the role the growth in mothership participation played in accelerating the fishing season. **The SSC recommends the analysis incorporate predictions of how effectively the alternatives will attenuate entry and the race to fish, and synthetically consider consequences for crew safety, bycatch, ecological impacts of shortened seasons, etc.**

Testimony also discussed how local tax revenues would fall in proportion to the level of offshore delivery, the role of support services, and local infrastructure impacts. **The SSC recommends the analysts use history to predict which communities will gain or lose landings under the various alternatives, and apply the differential tax rates to describe the changes in the total tax revenue levels that are currently a focus of the community dependence analysis in the SIA.** Public testimony was also concerned with how reduced fish deliveries would affect shoreside plants. **The SSC recommends that the analysis use prediction of port-specific reductions in landings under the alternatives to gauge employment impacts, perhaps using a social accounting matrix appropriate for economic impact analysis in isolated fishing communities.**

In developing these predictions, **the SSC recommends that the analysts thoroughly consider possible differences in costs between shoreside and offshore delivery of Pacific cod.** The RIR discusses categories of cost, but does not reflect on their relative scale. In this analysis, **the absence of cost data is particularly problematic because it does not prevent just calculation of net benefits to the nation, but also prevents prediction of the entry of new CVs and motherships, which is the fundamental economic driver of the problem to be addressed by this action. Particularly as Alternative 5 evolves, the SSC**

strongly encourages development of a system for collecting cost data that would permit evaluation of action objectives.

In presenting results, expected decreases in the Pacific cod ABC reduce the probative value of impact estimates scaled to historical stock and landings levels. Therefore, **the SSC recommends that the analysts complement calculations of the effects of alternatives at historical ABC levels with predictions of effects at the projected lower ABC levels for 2020.**

The SSC struggled with whether these predictions that illuminate the effects of the alternatives on different user groups—involving scientific and modeling judgement that would ideally be reviewed by the SSC—justified delaying release of this analysis. In the end, the SSC determined the rapid change within this fishery presented an urgency for the Council to consider this action, but the SSC is willing to review additional analyses as this action moves forward if so desired by the Council.

In addition to these analytical treatments of the data presented, the SSC recommends the following minor additions:

- The SSC appreciates the discussion of the state GHF fishery. It would be useful to consider the extent to which the State of Alaska may elect to continue expanding its inshore GHF fishery to ensure a continued supply for shore-based processors, if the federal fishery continues to move activity offshore.
- Consistently calculate eligibility criteria using either trip-specific fish tickets or weekly aggregated landings from the catch accounting system, reflecting the Council's intent. Currently, Alternative 4 is evaluated with fish tickets, as requested by the Council, but the others with the CAS. The preferred alternative is to use fish ticket data in all cases because aggregating data to week tends to underestimate the number of trips targeting cod when they coincide with numerous trips targeting other species.
- The literature review presented as a discussion of the effects of limited rights programs in the analysis of Alternative 5 focuses primarily on constructive criticism of older programs. More recent catch share programs have had features designed to mitigate these adverse effects, and a more developed synthesis of this literature would also provide case-based guidance on lessons learned from these efforts.
- Incorporate season length in days in Table 2-5 to highlight the race to fish, with simple symbol annotations for different reasons for closure; retitle Table 2-42 to reflect that it is the value of the reallocation, not the change in value through reallocation; redesign Table X (in errata) to show the changes in taxation rates or revenue, rather than status quo revenue composition.
- Be explicit about the baseline for impact comparison, because the status quo is rapidly changing.
- Description of trends in the fishery may be better represented with figures than tables. For example, Table 2.1 presents time series, and the box on page 11 might be more clearly communicated with a pie chart.
- In section 2.6.5 on Amendment 113, clarify what is already implemented and what is in the proposed revisions.
- Remove speculations about subsistence impacts in Section 9 that are based upon data from other regions/cultures of Alaska. Reach out to the Office of Subsistence Management for more current Aleutian subsistence data.
- Explore ways to potentially repackage data in contexts with small numbers of participants that still preserves confidentiality.

While probably too dramatic a redesign for this document, the SSC discussed ways to make analyses like this one more effective in the future. Specifically, the SSC believes analyses would be more useful to the public, and to the Council, in a format that focused on synthetic analysis that provides insight about the likely effects of the proposed alternatives. Ideally, results would illuminate the tradeoffs presented by the

alternatives. In this format, data describing the status quo is important in empirically characterizing the problem described in the purpose and need statement, and providing context for predicted changes as a result of the proposed alternatives. Then, the presented analysis should focus on predicting likely changes using the best available science, and comparing consistent outcome measures among alternatives. **The SSC recommends greater integration between RIRs and SIAs to characterize how economic changes described in the RIR will lead to changes in social indicators in the SIAs.** While such analysis may often be scenario- or range-based, rather than through mechanistic models generating precise predictions, these exercises can still provide essential insight about the effects of action alternatives, and represent best available science.