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INTERNATIONAL PACIFIC HALIBUT COMMISSION

C1 IPHC Public Comment
June 2016
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June 2, 2016

Mr. Dan Hull, Chair
North Pacific Fishery Management Council
605 W 4th Avenue Suite 306
Anchorage, AK 99501

RE: Agenda Item C1

Dear Dan,

The Commission staff has reviewed relevant portions of the Annual Report from the NMFS North Pacific Observer Program and wishes to draw the Council's attention to three issues pertaining to observer data from the directed halibut longline fishery. The most prominent of these concerns the estimation of regulatory discards in this fishery, as a result of the IPHC minimum size limit. The Commission staff appreciates the considerable work involved in the production of this report and the efforts made by the Observer Program to respond to suggestions and concerns raised by directed halibut harvesters in previous communications. Additionally, we wish to thank the Observer Program for their cooperation with Commission staff in examining sampling design and estimation issues. We believe these ongoing efforts are producing an improved approach to the estimation of both discard estimates and their biological characteristics for halibut and groundfish fisheries.

1. Estimation of discards in the directed halibut fishery. The Annual Report of the Observer Program contains estimates of the weight of halibut discarded by the directed halibut fishery in the three major reporting regions in Alaska. In a November 2013 letter to the Alaska Longline Fishermen's Association and copied to the Council, the Commission staff outlined a number of errors inherent in the estimates of regulatory discards of halibut provided by the Observer Program. The chief among these errors were the combination of data from directed halibut fishing with other hook and line fishing and the average weight estimate used by the Catch Accounting System (CAS) to calculate the total weight of regulatory discards in the halibut fishery. We note that both of these errors have persisted in NMFS reporting up to 2015. The issue of using an incorrect average weight is particularly influential and has not been corrected, despite several assurances since 2013 that this problem was 'being addressed' by NMFS.

The 2015 Annual Report of the Observer Program contains the following text:

The at-sea discard of Pacific halibut in fisheries where halibut are retained (i.e. halibut IFQ fisheries) may be overestimated in Tables 4-2 through Table 4-8. As with all longline data observer collections, observers collect fish weights used to estimate the mean weight per fish from the unsorted (retained and discarded) catch. Because there is a minimum

size limit in the halibut IFQ fishery, smaller fish (less than 32 inches) are required to be discarded while larger fish are required to be retained. Hence, basing the mean weight per fish on observer data may overestimate the mean weight of discarded fish and underestimate the weight of retained fish. Thus the haul-specific estimates of at-sea discards of halibut in the IFQ fishery may be biased; however, how this bias impacts the final discard estimates is not yet known. Initial analyses suggest that some bias may persist in the fishery-level estimates of weight of at-sea discard of halibut in the IFQ fishery. (NMFS Observer Program 2015 Annual Report, §4.2)

The magnitude of the error associated with the use of an average weight for retained catch is likely to be substantial, based on the observed distribution of sublegal (less than 32 inch or U32) and legal (over 32 in or O32) fish in the annual IPHC setline survey. While this survey is not a direct analogue of the size distribution with the commercial fishery, it is a coastwide comprehensive survey and describes the size distribution of fish encountered on the fishing grounds. In areas where direct tests against commercial data are possible, the setline survey distribution of O32/U32 fish is very similar to that observed in the fishery.

Figure 1 shows average weight of O32 and U32 fish observed in the IPHC setline survey from 1997-2015. For 2015, the average net weight of U32 halibut on the setline survey ranged from 6.7-7.7 lb and the average net weight of O32 halibut ranged from 18.7-25.6 lb, representing an approximately 300% difference in average weights between these two categories. Tables 4-5 and 4-8 in the Observer Program 2015 Annual Report indicate that the proportion by weight of U32 fish of the O32 fish observed on catcher vessels ranged from approximately 47% in the Gulf of Alaska to approximately 28% in the BSAI. These percentages imply that the error caused by the use of a combined average weight for U32 and O32 fish in estimating U32 discard weights could range from approximately 100-150%, if IPHC setline weights represent the distribution of fish sizes encountered by the fishery.

While there are a number of *caveats* to these conclusions, including uncertainty about the extent to which IPHC setline data are a direct analogue of the fishery and the lack of observer coverage on <40 ft vessels, the direction of the bias resulting from an erroneous average weight of discarded fish is indisputable. This persistent error must be corrected since the estimated weight of U32 halibut discarded by regulation through the CAS is clearly wrong.

2. Observer coverage of tendered trips. The Observer Program 2014 and 2015 Annual Reports note that there are persistent differences in the characteristics of trips for vessels delivering to tender compared with vessels delivering to shore plants. This disparity was also noted by the Council's SSC. Given the magnitude of catch involved and the low level of observer coverage of tendered deliveries, the Commission staff understands the NMFS recommendation to create a separate sampling stratum for tendered deliveries. However, it is not clear how this stratum creation will on its own address the issue of tendered deliveries. For example, a vessel may be selected for trip coverage but opt to deliver to shore-based facilities for the observed trips and to tenders for unobserved trips. The creation of the tendered stratum would appear to require either 100% observer coverage of tendered deliveries or a requirement that vessels declare when a delivery will be a tender delivery, prior to the trip, so that selection of observed trips will be unbiased with regard to tendering.

3. Variance estimation for reported quantities. Although the Commission staff understands that the Observer Program is not uniquely responsible for the determination of target precision for estimated quantities derived from observer data, we do support the Council SSC's recommendation that the Observer Program develop the necessary procedures to calculate variance estimates for reported estimates of target catches, discards, and PSC quantities, so that they can be incorporated in assessment activities by customer agencies.

Thank you for the opportunity to comment on this agenda item and we iterate our thanks to the Observer Program for their cooperation in our discussions of these issues.

Sincerely,

A handwritten signature in black ink, appearing to read "Bruce". The signature is stylized with a large, sweeping initial letter.

Bruce M. Leaman, Ph.D.
Executive Director

cc: IPHC Commissioners
Chris Rilling, NMFS Observer Program

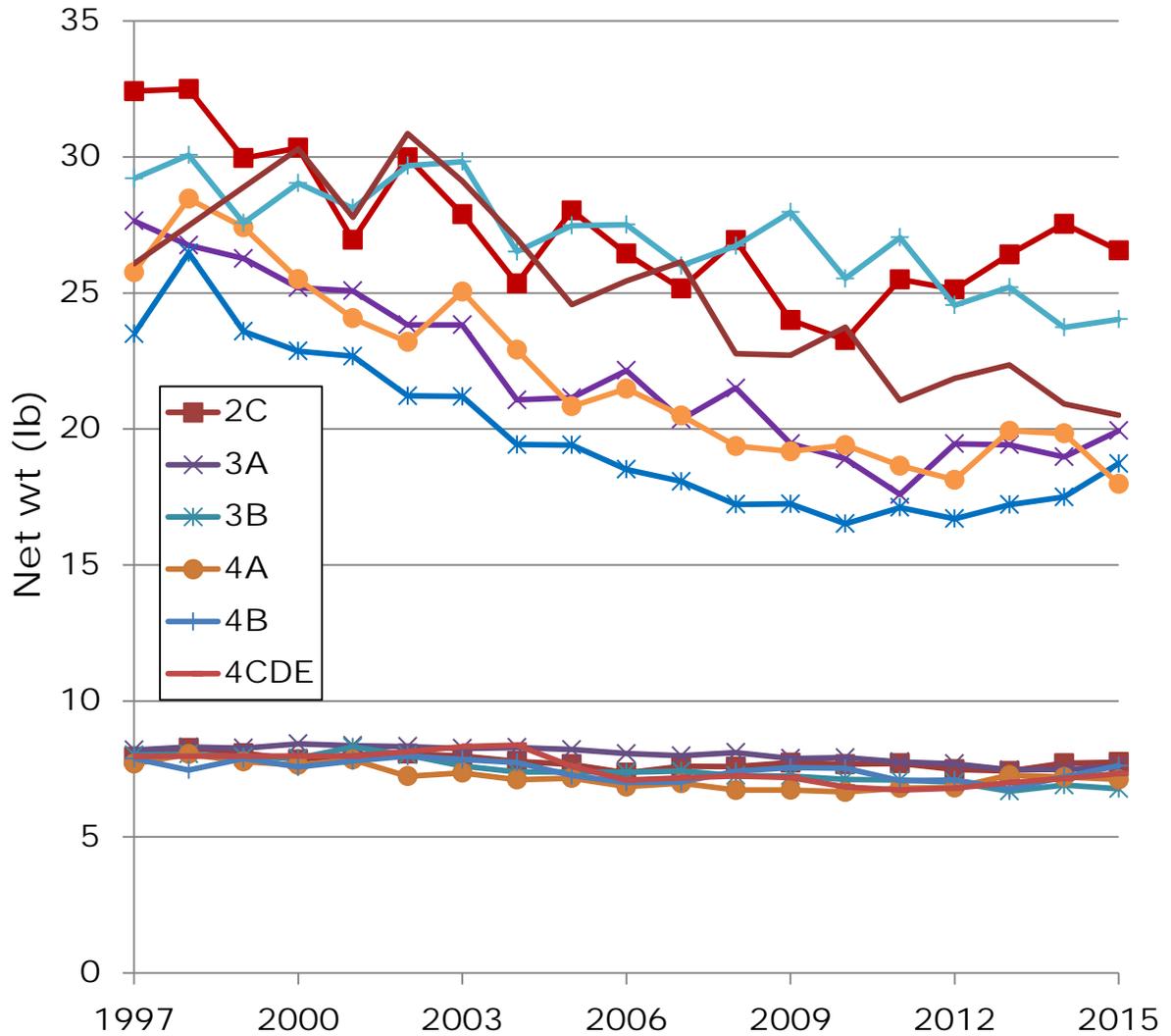


Figure 1. Average net weight of legal-sized (O32, upper lines) and sublegal-sized (U32, lower lines) halibut, by IPHC Regulatory Area, from the IPHC setline survey, 1997-2015.