

NPFMC/IPHC Workshop on Halibut Bycatch Estimation, Halibut Growth and Migration, & Effects on Harvest Strategy

January 2012 DRAFT

Background

The North Pacific Fishery Management Council (Council) is evaluating proposed reductions to the halibut prohibited species catch (PSC) limits for trawl/longline fisheries in the Gulf of Alaska (GOA). Part of the evaluation should include an estimate of the impacts of halibut bycatch mortality levels on yield (CEY), exploitable and spawning biomass, and the dynamics of the halibut stock. In response to this need, the IPHC staff provided an analysis on these metrics, which was included both in the Council analysis and as an appendix to the GOA Halibut PSC Limit EA/RIR.

Halibut bycatch mortality impacts are a combination of both the level of bycatch mortality and its cumulative impact on yield and spawning biomass, both in total and area-specific based on estimated halibut movements. That is, bycatch impact is not just an issue of halibut biology (movement, growth, mortality), it is also an issue of the *amount* of bycatch mortality, and both components require analysis and evaluation.

On migration, the IPHC staff is preparing a white paper detailing the current understanding of halibut movements, including sources of information and analyses. This white paper may inform the Council's discussion of what the area-specific impacts of bycatch might be, given the available data and assuming the existing bycatch data are accurate. This white paper is anticipated to be made available sometime this winter, and would also be a subject of the workshop discussion. Implications of slow growth currently being observed in halibut, including the relationship to current minimum size limits, would also be reviewed at the workshop.

On bycatch estimation, there is broad agreement that the current levels of bycatch in the GOA are poorly understood, partly because of necessary extrapolations to vessels not subject to observer coverage, and are not subject to high confidence intervals. Recognizing that the groundfish observer program in the GOA is being restructured to address these deficiencies and to provide better use of available observer coverage, a review and assessment of bycatch estimation at this workshop could be very informative to that restructuring process. It could also be informative to the Council's desire to explore more comprehensive bycatch management measures (e.g., IBQs or similar 'rationalized' approaches).

The importance of the absolute level of bycatch mortality is that the Commission staff uses that estimate as one of the elements to calculate the appropriate harvest rate for the halibut stock. Essentially, the harvest rate for the stock is reduced to account for the amount of bycatch mortality that is estimated to occur. If that estimate is too low by a substantial amount, it means that the Commission's harvest rate, and the consequent yield taken from the halibut stock, is incorrect and the stock is being overexploited. However, regardless of uncertainties in total bycatch estimation in any given year, a primary goal of this workshop is to understand the impacts of *a given amount* of bycatch (for example, the current halibut PSC caps) on the IPHC's yield management strategy.

Discussions within the Council, between the Council and the Commission staffs, and between the contracting parties to the Commission would all benefit from a joint understanding of halibut bycatch mortality and its impacts. In addition, the Council desires to better understand the Commission's current view of halibut migration and halibut growth in order to understand both the total and the area-specific impacts of halibut bycatch mortality on halibut stock biomass, yield, and productivity, and the relevance

of halibut PSC limits. At its June 2011 meeting, the Council requested a jointly sponsored workshop with IPHC to examine the current understanding of halibut movements and growth.

Workshop Outline

Commission and Council staffs are therefore organizing a public workshop to review the methodology and accuracy of the estimation of halibut bycatch in trawl/longline groundfish fisheries off Alaska, and the impacts of any given amount of halibut bycatch on the halibut stock, both coastwide and by area given the current understanding of halibut migration. The workshop will also discuss general halibut ecology, including recent trends in exploitable biomass, spawning biomass, and length at age, as well as information concerning the causes and implications of halibut slow growth. The staffs believe that the workshop focus should be broader than the GOA because halibut movement is a coastwide phenomenon and the Council has stated its intent to review halibut PSC limits in the Bering Sea/Aleutian Islands (BSAI) in the future. The workshop would be jointly funded by the IPHC and the Council, and would replace the proposed SSC review of halibut migration (originally scheduled for February 2012).

The workshop is scheduled for April 24-25, 2012 and will be at the Crown Plaza Hotel in downtown Seattle, WA. These dates were chosen due to current IPHC, NPFMC, and NMFS meeting schedules and staff tasking, the need to develop background documentation and analyses of bycatch estimation, and ongoing discussions between IPHC staff and scientists contracted by the groundfish industry regarding halibut growth, migration, and harvest strategy, which are all subjects of the proposed workshop. These latter discussions, which will extend from mid-February through March 2012, are intended to develop a joint understanding of halibut bycatch and its impacts on halibut stock dynamics and yields. Neither the workshop nor the meeting report would be available to inform the Council on its selection of a preferred alternative for revising GOA halibut PSC limits, unless the Council delays that action until June of 2012, although the significant details of bycatch impact on the halibut stock were included in the September EA/RIR as noted.

The workshop would be comprised of short summary presentations from agency science staffs and invited industry science representatives, with a scientific panel that would be charged with providing a review of the discussion and its findings. The presentations, which would summarize documents that would be available prior to the workshop, would occur on Day 1. Day 2 would be reserved for comments, questions, and summary. The panel would include staff from IPHC, Council, the NMFS Alaska Fisheries Science Center, the Council's SSC, Canada's DFO, independent scientists sponsored by the fishing industry, and two independent, external scientific experts on bycatch issues. Dr. S. Martell and Mr. T. Jagielo are the currently identified independent scientists contracted by the industry. The workshop would be facilitated by an independent moderator, who would also be responsible for producing a workshop summary report to be distributed shortly after the workshop.

Workshop presentations include the following:

1. Halibut ecology;
 - a. Historical review of exploitable biomass, spawning biomass, and length at age of Pacific halibut stocks (IPHC staff)
 - b. Diet overlap of halibut and abundant Alaska flatfish — (presentations by IPHC staff and NMFS/AFSC staff)
 - c. Synopsis of theoretical and empirical evidence concerning the causes of halibut slow growth and potential differences in natural mortality by sex — (presentations by industry consultant and IPHC staff)

2. Impacts of halibut bycatch;
 - a. Halibut bycatch and wastage estimation procedures and resulting estimates for the BSAI and GOA groundfish fisheries and the Alaska halibut fisheries (presentations by NMFS/AFSC staff and IPHC staff).
 - b. Halibut bycatch and wastage estimation procedures and resulting estimates for the Canada groundfish and halibut fisheries (presentations by DFO designate and IPHC staff).
 - c. Incorporating halibut bycatch and wastage impacts within the IPHC harvest policy (IPHC staff).
 - d. Impacts of halibut bycatch and wastage in the GOA and BSAI on halibut coast wide CEY and spawning biomass (presentations by industry consultant and IPHC staff)
 - e. Current understanding of halibut migration (presentation by industry consultant and IPHC staff).

3. Management of halibut bycatch;
 - a. Reducing halibut bycatch mortality rates in Alaska groundfish fisheries. Description of past and current research and programs to return bycaught halibut to the sea with minimal injury (presentation by selected industry representatives).
 - b. Effects of a smaller size limit on halibut coast-wide CEY, spawning biomass, and wastage in the commercial setline fishery (presentation by industry consultant and IPHC staff).
 - c. Implementing improvements in estimating halibut bycatch (presentations by DFO designate and AFSC/NPGOP staff)
 - d. Experience with tradable individual halibut bycatch quotas – British Columbia and U.S. West Coast (presentations by DFO designate and NMFS/NWR designate).

4. Results and policy implications;
 - a. Participant discussion: A facilitator led discussion of the implications of the results for halibut (and halibut bycatch) management where workshop attendees are asked to provide their views on the implications of the results for halibut (and halibut bycatch) management, and during a moderated discussion the panel members provide feedback and-or questions about participant views and suggestions, as well as what additional research may be useful or informative.
 - b. Panel discussion: A facilitator led discussion and synthesis of the implications of the results and stakeholder views for halibut (and halibut bycatch) management in the North Pacific by a workshop panel constituted in advance of the workshop.

A detailed agenda, including identification of specific presenters and panelists, will be developed in advance of the workshop.