

North Pacific Fishery Management Council

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MINUTES Scientific Statistical Committee October 3-4, 2000

The Scientific Statistical Committee met October 3-4, 2000 at the Centennial Building in Sitka, Alaska. All members were present except Sue Hills, Doug Larson and Terry Quinn:

Rich Marasco, Chair
Doug Eggers
Al Tyler
Steve Berkeley

Jack Tagart, Vice Chair
Jeff Hartman
Steve Hare

Keith Criddle
Dan Kimura
Seth Macinko

C-1 PACIFIC COD - STELLER SEA LIONS

The SSC received a report from Sue Salvesson that outlined the analyses currently underway by NMFS evaluating the alternative management options as requested by the Council at the September meeting. The SSC notes that in its September minutes numerous issues were identified that should be addressed in the development of the revised EA/RIR. It was indicated that an attempt will be made to address as many of these suggestions as time permits.

C-4 HALIBUT CHARTER IFQ PRELIMINARY REVIEW

Chuck Hamel and Jane DiCosimo (NPFMC) reported on the status of the Halibut Charter IFQ EA/RIR analysis.

While the overall tenor and detail contained in the document are reasonable, there are a few issues that should be addressed before initial review of the analysis:

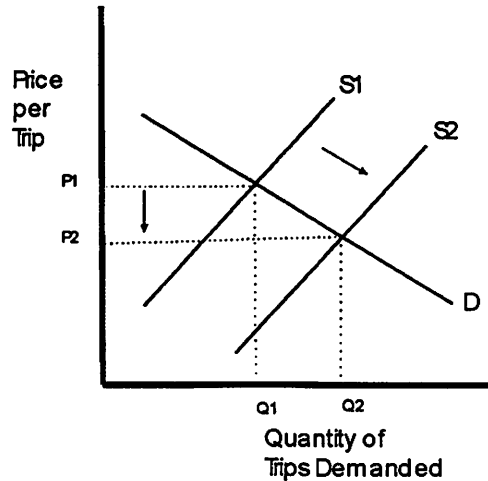
1. The SSC concurs with the staff recommendation to postpone initial review of this EA/RIR until revised ADF&G estimates can be incorporated into the analysis.
2. The document describing the proposed analysis of halibut charter IFQ alternatives suggests that the primary motivation for the development of such a program is excess capacity. This is consistent with the Council's problem statement. However, the consequences of excess capacity in the charter boat and commercial fisheries requires a more thorough discussion. The SSC illustrates the form of differences in Appendix 1.

3. The Council's intent and motivation with respect to IFQ or QS transfer restrictions should be elaborated.
4. If the Council chooses to consider community quotas as a component of the charter IFQ analysis, the characteristics of the community QS program need to be fleshed-out and the discussion of potential economic and social consequences needs to be expanded. The current discussion suggesting that the creation of community QS would exacerbate "excess capacity" in the charter fishery is flawed because of the apparent desire to allow selected groups to become involved in the fishery and confusion associated with the "excess capacity" problem discussed in item 2.
5. Issuance of QS to non-persons (e.g. companies, corporations) creates an absentee owner class. It would be helpful to this analysis if the Council could comment on whether absentee ownership is or is not a concern in the charter fishery.
6. The selection of any particular set of potential IFQ recipients (stakeholders) should be an explicit decision of the Council and should not be driven by data availability. Once the Council has decided which classes of stakeholders to recognize, criteria can be defined to identify members of those stakeholder classes. For example, while MSFCMA requires that limited entry allocations be based, at least in part, on previous participation in the fishery, the criteria for determining the magnitude of that allocation and the extent of past participation are not specified in law. Consequently, it would be consistent with MSFCMA to acknowledge a very broad set of stakeholders (e.g. skippers, owners, anglers) under mechanisms as varied as equal shares, random shares assigned by lottery, or shares proportional to historic days fished, catches, or landings.
7. While there are substantial advantages to markets as an allocative mechanism, it would be naïve to assume that the creation of charter IFQs and allowing transfers of QS will eliminate requests for the Council to intervene to the advantage of various interest groups. Therefore, language suggesting that IFQ eliminates allocation squabbles should be modified.
8. Retrospective analyses of the impacts of implementation of a charter IFQ program requires tracking the transfer of quota shares over time. Flagging QS initially allocated to charters would facilitate tracking patterns of transfer. It is suggested that staff consult with the RAM Division on the feasibility of implementing such a tracking system.
9. The analysis associates economic productivity with economic efficiency. When constructing limited entry programs, it is not accurate to characterize "efficiency" and social goals as in opposition to one another. The analysis needs to be broadened to recognize that "economic efficiency", properly construed, includes social objectives.

Appendix 1

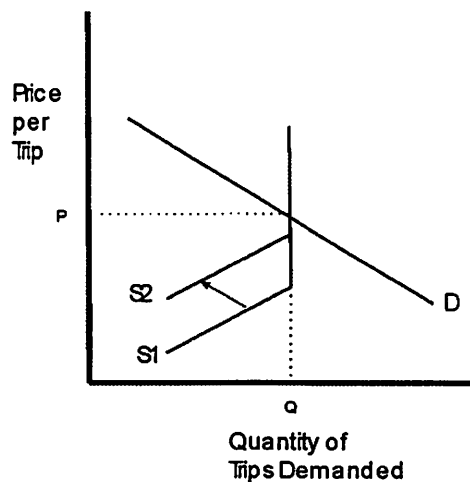
The discussion regarding "excess capacity" incorrectly characterizes the economic aspects of a charter fishery. In a charter fishery without capacity constraints, increases in the number of charter operators lead to the adoption of profit maximizing combinations of inputs and services. That is, operators choose to adopt inputs that minimize operation costs and maximize revenues. The entrance of additional service providers creates a two-fold pressure to increase the "quality" of services offered (at a given price) or to reduce the price per trip

(of a given quality). The combination of these attributes is that an increase in the number of charter operators results in an increase in consumer surplus and in social welfare (the sum of consumer and producer surplus) as long as the number of active charter operators does not increase to the point that congestion and localized depletion externalities serve to reduce the value of trip attributes to the charter customers. These effects can be represented graphically:



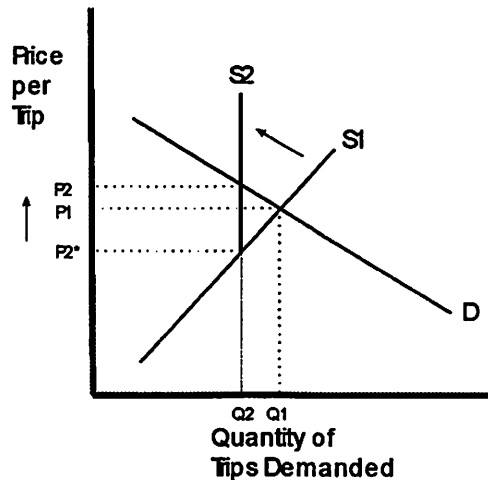
As the number of firms offering charter services increases, the supply function for charter trips shifts to the right (from S1 to S2). If all other trip characteristics remain constant and the demand for charter trips remains constant, the market-clearing price for a charter trip will fall (from P1 to P2) and the number of trips taken will rise (from Q1 to Q2). The consumer surplus is the integral between the market-clearing price and the demand (willingness-to-pay) function over quantity demanded and is a strictly increasing for price decreases. Producer surplus, the integral between the market clearing price and the supply function, also increases, although lower cost service providers will replace high cost service providers. These results are classical outcomes of competitive market equilibrium.

In contrast, in the usual case of the open access fishery where there is a binding limit to production (e.g. the TAC), the race for fish induces the adoption of cost increasing technologies that result in an upwards shift of the supply function as represented in the following figure.



Here, the increased supply costs have no effect on the number of trips taken or on the price per trip, thus the consumer surplus is unchanged. However, because the costs are increased without a concomitant increase in revenues, the producer surplus is reduced. These results reflect the classical outcome of the race for fish.

Reducing or capping the number of charter vessels would create partial monopoly power. The consequences are represented in the following figure:



Here, the initial market equilibrium (Q_1, P_1) is a competitive market equilibrium, with the properties of maximizing the sum of consumer and producer surplus. Restricting the number of participants (or equivalently, capping the number of participants in the face of expanding demand) creates a kink in the supply function, pushing the market equilibrium price to P_2 and reducing the consumer surplus. Because the charter operators' access to halibut is assured through IFQs, their costs for providing Q_2 trips decrease to P_2^* . Producer surplus increases, but not by as much as the reduction in consumer surplus, thus society as a whole is worse off. This is the classical result of deadweight loss under markets with monopoly power.

D-1(a) INTERIM AND PRELIMINARY SPECIFICATION FOR 2001 FOR THE BERING SEA/ALEUTIAN ISLANDS AND THE GULF OF ALASKA

A presentation was made by Tamara Faris (NMFS) on the Draft EA/RIR for the Proposed and Interim 2001 Alaska groundfish catch specifications. The SSC received the document immediately prior to presentation and therefore had no chance for a review. If meaningful SSC comment on the Proposed and Final Catch Specifications is expected then it is important that the document be made available a week or so prior to the December Council meeting.

A very brief review of the document did reveal an unexplained difference between the 2001 Interim Catch Specifications (listed in Tables 1 and 2) and the calculated totals using the formula prescribed for their computation. On page 8, it is stated: "Interim specifications are, with a few exceptions, one-fourth of the proposed TAC specifications...." In table 1, few of the 2001 Interim Specifications (column 7) are 25% of the proposed 2001 TAC (column 5). This discrepancy needs to be explained. The SSC recommends that the EA contain an explicit species specific set of algorithms for setting interim specifications.

D-1(b) BSAI PACIFIC COD POT GEAR SPLIT (CP/CV)

Nicole Kimball and Darrell Brannan provided the SSC an overview of the EA/RIR proposing a permanent allocation of TAC shares between Pacific cod pot catcher vessels and pot catcher processors. The SSC finds the document informative but notes the following concerns:

- (1) The problem statement is borrowed from Amendment 64 that allocated Pacific cod TAC between longline and pot fisheries. As such it does not apply specifically to the recommended action to further allocate TAC within the pot sector. Consequently, a revised problem statement should be developed.
- (2) Because of recent approval and implementation of the LLP program, and pending approval for species specific gear endorsements under the LLP program, and final determination of numbers of vessels qualifying, it is difficult to accurately characterize the fishery status quo. The Council would facilitate that process by expressing their intent as to what constitutes status quo.
- (3) The analysis should be expanded to include two items:
 - (a) description and discussion of spatial/temporal distribution of Pacific cod catch stratified by fleet (Pot CP vs CV),
 - (b) analysis of catch within and outside Steller sea lion critical habitat; and
 - (c) under the proposed alternatives, there should be a discussion of the opportunity/likelihood for development of harvester cooperatives.

Due to the dated nature of the problem statement and the SSC's responsibility to comment on whether the EA/RIR adequately addresses the expressed problem, the SSC recommends the document be returned for further review prior to release for public review.

PACIFIC HALIBUT DISCARD MORTALITY

The SSC heard a report from Gregg Williams of IPHC on an alternative method for estimating halibut discard mortality. This analysis indicated that gear and target species specific discard mortality rates have been stable over the last ten years. It was suggested that the 10 year mean is a better predictor of bycatch mortality than the average of the previous two years, the method currently used to project pre-season assumed discard mortality rates (DMRs). Considering the cost and manpower needed to develop new DMRs each year, IPHC recommends using the 10 year average and applying these estimates over a longer time period. The SSC recommends waiting until the Steller sea lion/Pacific cod issue is resolved before moving ahead on this issue as fishing areas, methods, and time frames may change enough to alter DMRs.

D-2 CRAB MANAGEMENT

Doug Pengilly presented the 2000 King and Tanner crab SAFE to the SSC. The SSC commends the crab plan team for continuing improvement of the SAFE with each iteration and its effort to examine crab overfishing definitions. The 2000 SAFE contains new information on crab bycatch, and crab stock and bycatch distribution maps.

The 2000 crab SAFE shows little recovery for the depressed crab stocks. For another year, only Bristol Bay red king crab and EBS snow crab are in condition to support any directed fishery. Bristol Bay red king crab is near B_{MSY} ; and EBS snow crab are slightly above their MSST. The 2001 snow crab GHF of 27.3 million pounds is actually lower than last year (28.5). This is due to the new opilio harvesting strategy adopted by the Alaska Board of Fish in March 2000 and a reduced number of males in the survey. It should be recalled that stock rebuilding plans are in place for EBS snow and tanner crabs, and St. Mathews blue king crab, so that these stocks are being cautiously managed according to our understanding of their biology.

MISCELLANEOUS - Team Appointments

It is recommended that Elizabeth Sinclair be appointed to the GOA Groundfish Plan Team. Ms. Sinclair replaces outgoing National Marine Mammal Laboratory (NMML) representative John Sease.