

North Pacific Fishery Management Council

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MINUTES Scientific and Statistical Committee June 10-12, 1996

The Scientific and Statistical Committee of the North Pacific Fishery Management Council met June 10-12, 1996 at the Red Lion Hotel in Portland, Oregon. All members were present except Sue Hills:

Terrance Quinn II
Doug Eggers
Rich Marasco
Jack Tagart, Vice Chair
Phil Rigby
Marc Miller

Keith Criddle, Chair
Al Tyler
Harold Weeks
Jim Balsiger
Doug Larson

B-1(d) Plan Team

The SSC endorses the nomination of Rich Ferrero to the BS/AI groundfish Plan Team. Rich has made valuable contributions as a member of the GOA Plan Team. The SSC also endorses the nominations of John Sease to the GOA Plan Team and Andy Smoker to the BS/AI Plan Team. Dr. Vivian Mendenhall's expertise in seabirds is an area not currently represented on either groundfish plan team.

C-2 Bering Sea Halibut Quotas

As an information item, the SSC received a report from Steve Hoag, IPHC, on the halibut quota apportionment methods for the Bering Sea.

C-3 Allocation of Pacific cod in the BSAI

The SSC heard a staff presentation by Marcus Hartley and Darrell Brannan. Public testimony was given by Joe Kyle and John Gauvin.

The May 10, 1996, draft of the EA/RIR for Amendment 46 to the BSAI Groundfish FMP addresses issues raised by the SSC at its April meeting. The SSC believes that the document contains information essential for the Council's discussion of the allocation of Pacific cod. The document examines how various action alternatives address the problems of compressed fishing seasons, periods of high bycatch, discards, new entrants from moratorium crossover provisions, non-target bycatch of cod, habitat concerns, and fishery stability.

The SSC notes that data limitations precluded the estimation of the net benefits of the alternatives. This is a problem that has hampered the development of many EA/RIRs prepared for the Council. A serious commitment by the Council, federal and state agencies, and industry is required to address this deficiency. The SSC recommends initiation of an ongoing data collection and economic modeling effort comparable to that used in stock assessments.

The SSC believes that the approach used by staff to analyze the impacts of the alternatives being considered may be appropriate for other cases where data limitations exist. The SSC cautions that the ranking system used to present the results could lead to the conclusion that differences in the impact of the various options are large when in reality they could be small. It would be helpful if the model constraints were presented in a flow chart or decision tree format.

The analysis illustrates the central role that current management institutions such as PSC caps, TAC limits, and in-season reapportionments have on the allocation of Pacific cod. The results predicted by the model will depend on the order in which fisheries reach their TAC or PSC limits and trigger reapportionments. The model results are also sensitive to the assumed catch and bycatch rates.

C-4(a) ADF&G Report on Crab Meeting

Drs. Gordon Kruse and Jie Zheng gave an overview of their Bering Sea/Aleutian Islands crab research and stock assessment program. Dr. Kruse provided an extensive review of past and ongoing stock identification, abundance estimation, stock productivity and harvest strategy research. Dr. Zheng reviewed the population dynamics models, outlined the status of available data for modeling and discussed present estimates of stock abundance and an analysis of potential stock rebuilding strategies. ADF&G engages in cooperative research with federal agency and University scientists, which is leading to increased knowledge about factors affecting these populations. Despite these advances, there is considerable uncertainty associated with these populations and the complex mechanisms affecting them. The reports prepared by ADF&G are very helpful in describing what is being done and what needs to be done.

C-4 BS/AI Crab Bycatch Issues

The SSC received a review of proposed changes to Amendment 37 and the revised analysis of Amendment 41 from Dave Ackley, ADF&G, and Dave Witherell. Former drafts of these amendments were reviewed by the SSC in January and April 1996. Peggy Murphy, ADF&G, provided a review of the Crab Plan Team's recommendations. Public testimony was given by John Gauvin, Lisa Polito, Arni Thompson, Laura Jansen, and Dave Fraser.

The amendments present a variety of possible seasons, open and closed trawling areas and options for bycatch caps. Arguments favoring one suite of alternatives over another focus on the assumed conservation benefits to the crab stocks and the presumed economic impact, to the crab and trawl fishing fleets. The SSC notes that the estimated net benefits depend on whether the 1993 or 1994 data are used. Moreover, the measure of net economic benefits defined in the EA/RIR (net value of groundfish minus net value of bycatch) does not incorporate all sources of benefits or costs. There are indications that actions other than status quo will negatively affect the trawl sector, and that the combined effects of selected caps, and season and area closures may impose significant costs on the trawl sector. Similarly, although there is general evidence that fishing gear alters benthic habitat, there is currently no clear evidence that actions beyond the status quo will provide measurable conservation benefits to the recovery of Bristol Bay red king crab. Further research may provide such evidence.

The implementation of the bycatch caps was subject to considerable discussion. Continuous and stepwise approaches both present implementation difficulties. If bycatch caps are indexed to estimated crab abundance,

they would be subject to substantial annual variation. Smoothing algorithms, such as moving averages, may stabilize the index and, consequently, the cap. Stepwise caps can result in large changes at the boundaries between steps. Continuously adjustable caps avoid this problem but may result in excessively low or high caps at the extremes of crab population abundance. The addition of floor and ceiling rates to the floating caps could help resolve this deficiency.

Additional concerns involved unobserved crab fishing mortality. This mortality can occur from direct interaction with fishing gear, or from indirect interactions through impacts on critical habitat. The EA/RIR provides a general overview of these potential impacts. Area closures have the potential to provide protection to juvenile and female crab populations that is not afforded by caps. Unfortunately, there is insufficient information to quantify the impacts of closures on crab rebuilding that would result from the protection of habitat or juvenile and female crab. If this type of protection is critical to rebuilding, then area closure and cap provisions represent complimentary management measures. The SSC notes that time-area closures, once imposed, are seldom removed.

The model indicates a small decrease in net value for the alternative Red King Crab Savings Area closures. Closure of the nearshore Bristol Bay was found to have a larger impact on net values. Reductions were estimated to be slightly more than \$1.0 million for both the 1993 and 1994 data. Data presented in Tables 5.14 and 5.15 (pages 177 and 178) suggests that these negative effects could be significantly reduced by allowing trawlers to fish in the two-block area between 159° and 160° longitude and 58° and 58°43' N latitude.

There is a need for research over the next few years to increase the level of biological interpretation of the effects of caps and area closures. For example, revised bycatch caps can be entered into the population dynamics model and effects on stock abundance and rebuilding schedule evaluated. Additional insight can be gained by improving estimates of the size distribution of crab taken as bycatch from the yellowfin sole fishery, this would require more size composition sampling. However, the impact of area closures cannot be modeled without additional survey monitoring, which is not currently planned.

C-5 IR/IU

The SSC heard a staff presentation by Lew Queirolo and Dave Colpo, and public testimony by Teresa Kandianis and John Gauvin.

Since the costs of producing products from bycatch that would otherwise be discarded were unavailable, results presented in the EA/RIR were reported in terms of gross "discard savings values". While the results are qualified in the analysis, the SSC notes that the costs of producing products from bycatch may exceed the reported discard savings values. The SSC recommends that the document be released for public review after this qualification has been emphasized.

It is likely that the alternatives being considered will affect some segments of the fleet more than others because small vessels have limited ability to accommodate additional onboard processing capacity. The costs to both industry and management are potentially burdensome and perhaps even prohibitive. Consequently, there may be unexpected outcomes for bycatch "utilization" as producers seek to minimize these costs. Option 1 appears to be the least costly of the alternatives because it offers producers the greatest flexibility to meet retention and utilization standards. The SSC remains concerned, as noted in our December 1995 minutes, that there may be other ways to achieve the Council's IR/IU objectives more effectively and at lower cost.

C-7 Overfishing Definition Amendment

The overfishing definition amendment was proposed by the SSC to address concerns raised by the Plan Teams, SSC and a NMFS Overfishing Panel. These concerns are listed in the EA/RIR. The SSC recommends adoption of Alternative 2 which revises the overfishing definition to provide a buffer between ABC and OFL and to reflect current scientific knowledge about conservative fishing practices. The Groundfish Plan Teams also recommend adoption of Alternative 2. If Alternative 2 had been in place in 1996, reductions in TAC would have been necessary only for GOA rex sole, sablefish, and shortraker/rougheye rockfish and some of the BS/AI rockfish complexes (Table 2). Furthermore, the changes required would have been 15% or less.

The SSC agreed to changes and corrections to the document suggested by the Plan Teams. In particular, the addition to Tier 6 of the language "unless an alternative value is established by the SSC on the basis of the best available scientific information" is desirable. Tier 6 represents those species for which only limited information is available. The added language provides additional flexibility to deal with developing fisheries or to make adjustments based on relative abundance, spatial distribution, or other such information.

C-9 Electronic Reporting

Galen Tromble (NMFS-AKR) reported on the proposed regulatory amendment to require groundfish processors to use electronic reporting and record keeping.

Two implementation phases are intended: daily and weekly production reports and check-in/check-out reports would be implemented in early 1997; electronic log books, vessel activity and product transfer reporting would be implemented in 1998. A prototype reporting system for phase 1 is to be field tested in the summer of 1996 on some two dozen catcher processors operating in the Gulf of Alaska. Chris Blackburn provided testimony supporting the regulatory amendment while suggesting: (1) stepwise implementation by small groups of processors, and (2) incorporation of back-up reporting procedures. The SSC supports electronic reporting as a means to speed the reporting and error checking of essential in-season fishery management information. We recommend this regulatory amendment be distributed for public review and that prototype field testing proceed.

In moving toward implementation of phase 1, the SSC recommends careful consideration of the following issues:

- (1) provision of technical support and assistance to industry;
- (2) back-up data reporting and storage;
- (3) implementation pace which allows for unique circumstances of some processors;
- (4) coordination of data collection efforts with other agencies reliant on similar information; and
- (5) coordination of reporting systems to minimize requirements on industry.