

### **C-3 BSAI Crab 10-year Review**

The SSC received a presentation of the BSAI Crab Rationalization 10-year program review from Sarah Marrinan (NPFMC) and Brian Garber-Yonts (NMFS-AFSC) and of the Social Impact Assessment appendix by Mike Downs and Stev Weidlich of Northern Economics. Public testimony was received from Matteo Paz Soldán and Simeon Swetzof (City of St Paul), Stephen Taufen (Groundswell Fisheries Movement) and Sean Dochtermann (Bering Sea Crab Crewmen’s Association).

The SSC commends the analysts on the considerable scope of the data they were able to summarize in the document. In particular, the analysts directly responded to many of the comments provided by the SSC in April 2015, including: 1) identifying quota holders; presenting trends in crew compensation, the division of rents between crew and quota vessel owners, fleet efficiency, and entry opportunities; 2) a description of how the markets for various forms of quota and product affect the flow of rents from the fishery; 3) detailed descriptions and index-driven analyses of community trends; and 4) information on the processing sector. The discussion was sensitive to baselines and elucidated heterogeneity in the fleet, and usefully combined qualitative and quantitative information to provide a complete picture of the state of the program. **The SSC finds the document to be a satisfactory broad and comprehensive review of the crab rationalization program.** The document presents the best data available on a broad range of measures affected by crab rationalization, and is summarized in a fashion that is useful for identifying “red flags” in program performance.

However, the SSC believes the 10-year program review falls well short of what was originally intended by the Council at the time the crab rationalization program was created. When the Council adopted the program, then Chairman David Benton wrote to the US Congress presenting the program for Congressional approval. In his letter, Chairman Benton noted the expected benefits of the program: “Rationalization will improve economic conditions substantially, for all sectors of the industry. Community concerns and the need to provide for economic protections for hired crew will be addressed. Safety in the fisheries will be enhanced. Biological benefits will also be realized.” The Chairman’s letter to Congress then noted that the Council specifically designed a periodic review mandate as one of several safeguards built into the program: “The novelty of the program has compelled the Council to include several safeguards into the program, including... review programs to assess the success of the rationalization program.” Attached to the Chairman’s letter to Congress was a summary of the Council’s rationalization program, the Executive Summary of which listed nine “primary elements” of the program. One of these nine primary elements was the call for: “Comprehensive data collection and program review to assess the success of the rationalization program.”

The Council provided Congress with a description of what was expected from the review mandate in a section of the summary entitled “Program Review”:

“Given the novelty of the program, the Council is acutely sensitive to the need for monitoring the program’s success. Under the program.... [there would be] a preliminary report on the program at three years. A full review of the program would be undertaken at the first Council meeting in the fifth year after implementation of the program. This fifth year review would be intended to objectively measure the success of the program in addressing the concerns and achieving the goals and objectives specified in the Council’s problem statement and the Magnuson-Stevens Act

standards. Impacts of the program on vessel owners, captains, crew, processors, and communities would be examined. The review would include an assessment of options to mitigate negative impacts of the program. Additional reviews would be conducted every five years.”

Thus, from the beginning, a formal program evaluation was envisioned as an essential element of the program, whereby formal hypotheses regarding the effects of the program are tested, with adequate controls to isolate the effects of the program from broader trends, or relative to what conditions would have been in the absence of the program.

The SSC is on record noting that the 18-month, 3-year, and 5-year reviews have all fallen short of the kind of review necessary to meet the original intent of the review component of the program. Commenting on the 5-year review document at their December, 2010 meeting, the SSC incorporated some of the comments on earlier efforts:

“In October, 2008, in reference to the 3-year review, the SSC remarked (emphasis in the original):

**“Without quantitative estimates of these changes, it is not possible to determine if implementation of crab rationalization has resulted in improvements or losses of net benefits to the Nation or if it has resulted in changes in the distribution of net benefits that have resulted in unintended harm to particular regions, communities, or segments of the fishery.** Certainly by the time the Council’s 5-year program review is prepared, the SSC anticipates that rigorous quantitative estimates of these outcomes will be available. At that time, analyses that compare the impacts predicted in the Crab Rationalization EIS to actual impacts would be very useful.”

“The SSC notes that the 5-year review does not materially address our criticism of the 3-year review. While we find that the 5-year review document and appendices provide useful information, we view the lack of formal quantitative modeling and statistical analysis as a missed opportunity to better understand the causal effects of design features included in the crab rationalization program. Better understanding of these consequences would help inform the analysis of future catch share programs that might be contemplated by the Council, as well as the likely consequences of possible modifications to the existing crab rationalization program.”

The current effort (the 10-year review document) is an almanac of relevant data that provides a broad and comprehensive review of the program. While such summaries of existing data and trends are useful for identifying items of concern that require further analysis, it is only the first step in the program evaluation process. Therefore, the **SSC determined that the framework and format for this document falls short of the scientific standard for analysis that is mandated for a ten-year review.** This review did not identify program impacts separate from other causes and trends, or evaluate them against the goals and objectives laid out in the Council’s problem statement.

The SSC acknowledges that a formal program evaluation demands significant resources and data, and therefore requires identifying a narrower scope and specific performance metrics for careful evaluation. Further, the SSC recognizes that the role of program evaluation spans multiple Council programs that require periodic review. The SSC is concerned that the current process for reviewing management

programs does not include systematic refinement and improvement of data and analyses like that used for stock assessments. As a result, significant information gaps arise and are allowed to persist without a clear plan to address the issue before gathering data for the ensuing five-year review. Given the persistent problems in producing reviews that meet the expectations for evaluating management programs, **the SSC recommends that the Council consider an alternative process for program monitoring and evaluation**, possibly establishing a “social science plan team” that could meet once or twice a year to discuss program evaluation strategies, refinements in data collection, and analytical methods. This could be specific to crab rationalization or span multiple programs. The SSC and AFSC social scientists have an upcoming workshop in June to discuss the development of a Human Dimensions SAFE, and will discuss how a social science plan team could contribute to the Council’s process for conducting program evaluations.

Going forward with the monitoring and evaluation of the crab rationalization program, the SSC identifies the following specific issues raised by this review:

- There is a need to reinstate fieldwork funds for the social impact assessment (SIA) in the next program review. While the current SIA is a remarkably comprehensive document, there are many limitations of the data used by the analysts because they were not provided adequate resources for conducting fieldwork.
- There is a need for a description of active participation by quota holders.
- Given the importance of accessibility to the crab fisheries, there is a need to develop methods to characterize how access and upward mobility has changed. In particular, there is a need to characterize accessibility under the LLP.
- Analysis is required to identify the extent to which crew pay is changing as a result of being charged for quota royalties.
- Data and analysis are required to capture how the change in the length of the season has altered the nature of crab jobs for participants, and the ability to dovetail working in the crab fishery with other occupations.
- Data and analysis are required to evaluate the effects of implementing measures to prevent excessive consolidation of quota in the harvesting and processing sectors. For example, the combination of IPQ caps and the consolidation of Tanner crab processing onto a couple of processing facilities currently prevents the Tanner crab TAC from being fully prosecuted, and could be indicative of a larger problem in the design of the crab rationalization program.
- Integrating analyses between economic and social impacts is required to link changes in job structure to changes in community structures and lifestyles.
- Questions of entry and access are central to monitoring catch share programs and have motivated recent Council actions; however, the data are not able to answer the basic question of how much quota is held by new entrants. For example, Table 10-1 reports that approximately 20% of quota is held by entity names that did not receive initial allocations, but an unknown portion of this is reclassification of ownership entities involving the same individuals.
- The data in the community profiles have not been maintained well enough to track community effects, and the SIA lacks a way to characterize how the change in the structure of harvesting jobs affects participants’ engagement and vulnerability to changes in the status of the fishery.

The 10-year review document, in its current form, would be more useful with the following adjustments in presentation:

- Extend the Summary and Conclusion section, which identifies the pieces of evidence for (or against) achieving each implicit program objective, to highlight major questions that remain unanswered, performance indicators whose status is not currently known, and data/information deficiencies that preclude assessing whether program objectives have been met. Extending the Summary and Conclusion section in such a way could serve as a useful starting point for initiating more in-depth analyses of particular items of concern.
- Conduct additional analysis to establish whether differences in ex-vessel prices among share types (e.g., Table 9-10) persist after controlling for the vessels and processors involved, etc.
- In the SIA, major shifts in the geography of quota are driven by CDQ groups with business addresses in Anchorage or Wasilla. Since this benefit is clearly linked to the CDQ region, this should be distinguished from non-CDQ owned quota in presentation of this information.
- The SSC is excited to see the AFSC’s new market profiles, and looks forward to reviewing them in a future meeting, but this document is probably not the best venue for them.
- The document would be enhanced by a discussion of what was learned in the process of designing and implementing the data collection for monitoring and evaluating the crab rationalization program, and how it led to discontinuities that limit its current value.
- The community engagement indices in Appendix B could be enhanced by further decomposing the observed trends into different components. For example, are the observed trends in community engagement due to community-specific factors that affect engagement in all fisheries, or are the observed trends specific to engagement in the crab fisheries? Extending the analysis to include engagement in other fisheries and/or using some form of shift-share analysis to further decompose the trends could be useful in this regard.
- Appendix A stands alone from the main document, and would be more relevant if both sections drew on the data presented between them to provide greater context for change. The SSC felt the SIA lacked a full assessment of impacts beyond quantitative shifts in vessels, quota, quota holders, for example, but recognizes that ethnographic fieldwork is the only way to responsibly characterize impacts.
- Qualifying words such as “only” should be removed from the community-by-community summaries. For example, statements such as “there are only two vessels” or “only 4 crew jobs” are not contextualized for the role those small numbers represent, and that the losses of those may adversely affect communities.