

Draft SSC Report April 2021



Full SSC Report

B3 Seabird Status Report

- **Summary:** The SSC received a report on the status of seabirds in the waters off Alaska. Issues discussed included Bycatch, Distribution movements, and Mass Mortality/Die-off Events
- **Seabird Bycatch:** numbers of bycaught seabirds in general, and albatrosses in particular, **declined somewhat in 2020**.
 - There may be higher numbers of seabirds bycaught in years when there are mass-mortality events.
 - The SSC **suggests** that measuring the body mass of bycaught seabirds may provide evidence of emaciation. If bycatch is driven by starvation, then mass-mortality events in a given year may provide an indication that bycatch avoidance will be difficult in that year

B3 Seabird status report

- The **Endangered and Threatened Species Bycatch**
 - 2 Short-tailed Albatrosses- 2020- Bi-Op allows 6 takes in 2 years
 - 1 Steller's Eider- 2020- Bi-Op allows 3 takes in 3 years
 - 1 spectacled Eider- 2019- Bi-Op allows 25 takes in 4 years
 - Eiders came to ships at night- likely attracted by deck lights
 - The 2021 Bi-Op will suggest that use of deck-lights be minimized as is safe
 - To evaluate possible remediation efforts, the SSC **requests** data on the dates, time of day, species, and number of birds landing on ships so that the fishing fleets may adjust behavior proactively

B3 Seabird status report

- **Shifts in Seabird Distribution/Abundance**
 - There were reports of planktivorous seabirds shifting their distributions southward from the Chukchi Sea in 2018 and 2019.
 - The SSC ***recommends*** that seabird observers be placed on research vessels in the Federal waters of Alaska, as the shifting seabird distributions may provide indication of a shifting prey base, which is shared with commercially important fish species.

B3 Seabird status report

- **Mass Mortality Events/Beach-caste seabirds**
 - There were several major die-offs of seabirds in 2018 and 2019, but **fewer birds dying in 2020**
 - Mostly zooplanktivorous auklets in the Northern Bering Sea
 - Prey- large copepods, euphausiids, amphipods
 - Mostly shearwaters in in the southeastern Bering Sea
 - Prey- mostly euphausiids, also age-0 pollock

B3 Seabird status report

- **Mass Mortality Events/Beach-caste seabirds cont.**
 - Limited evidence suggests that the major cause of these die-offs is **starvation**.
 - The SSC **requests** that the authors develop a time series of die-offs that includes both the raw numbers of dead birds counted, and an estimate corrected for survey effort. These time series could then be related to various indices of climate change or fish recruitment.

B3 Essential Fish Habitat 5-Year Review planning

- The SSC reviewed plans for the upcoming 5-year review of EFH, scheduled to be completed by the end of 2022
- The SSC **commends** the contributors on the substantial progress to date and their responsiveness to past SSC comments.
- However, the SSC **recommends** that additional SSC review is necessary to fully vet the products resulting from this 5-year review
 - These products are hierarchical and inter-dependent
 - They inform multiple non-EFH Council data streams and products
 - There were concerns raised in public testimony regarding transparency.

B3 Essential Fish Habitat 5-Year Review planning

- These reviews will permit SSC consideration of finalized EFH models and products, and outcomes from consultations with assessment authors
- The SSC ***recommends*** a two-part approach for review.
 - First, a review in October 2021 that is focused on the species distribution models (SDMs) and results from discussions with federal stock assessors.
 - Second, an additional review in the spring (February or April) of 2022 that is focused on the Fishing Effects model and responses to SSC comments from the October 2021 meeting.

C1 Scallop Harvest Specifications

- Executive Summary SAFE
- Stock status unknown; however, exploitation well below ABC in recent years
- Stock is not overfished in 2019/2020
- The SSC **recommends** setting OFL for the 2021/22 season equal to max OY (582 t, 1.284 million lbs) and ABC at 524 t (1.156 million lbs, 90% OFL), consistent with the scallop FMP
- The SSC **supports** additional flexibility in the specification schedule-
e.g., multi-year assessment
 - FMP amendment required for a true off-year for the SAFE

C1 Scallop Harvest Specifications

- The SSC provided the following suggestions/recommendations for the full SAFE next year:
 - Continued research on scallop stock structure and progress towards an age/length based assessment
 - Investigation of environmental covariates and their relationship with trends in meat weight and influence on survey design
 - Inclusion of the ADF&G large mesh trawl survey data, as available
 - Provide an analysis of the shell height measurement change (“top-shell” to “outer-shell”)
 - Provide a description/presentation on the survey design and new two-stage estimation method
 - Supportive of efforts by ADF&G to make fishery dependent/independent data electronically available

C2 Halibut ABM

- At this meeting, the SSC fully reviewed all aspects of the DEIS and DSIA, including material presented in October 2020.
- These documents describe the proposed management measures to index halibut PSC limits for the A80 sector, to indices of halibut abundance, including all combinations of the alternatives and options.
- The SSC received extensive written and oral testimony and considered the topics raised, which highlight the importance and challenges of this action.
- The SSC wishes to recognize the extensive work completed by the analysis team, and their efforts to adapt to changing requests by the Council.

C2 Halibut ABM

- The SSC ***does not support*** using the results of the simulation model, due to concerns over the treatment of size-at-age, recruitment cycles (PDO), and the simulated coastwide harvest level and allocation to the BSAI.
- Based on the consistency between halibut management using SPR and the Council's tier system, the SSC ***supports*** the general conclusion that there is likely to be little difference among average future halibut spawning biomass under different levels of PSC, except under extremely high PSC.

C2 Halibut ABM

- The SSC ***does not support*** using the simulated probabilities of future states occurring in each cell of the lookup tables. In light of dynamic recent changes observed in the BSAI, the SSC suggests that predictability is low, and that the Council should not base its evaluation on the relative likelihood of future states.
- The SSC ***does not support*** using the simulated ratios of change in PSC to change in halibut fishery limits.
- The SSC recognizes that these ratios will vary over time, and a single most likely value will not represent the range of likely effects; the SSC ***suggests*** evaluating a range of ratios (0.0 – 1.0) without a likelihood assigned to each.

C2 Halibut ABM

- As currently employed, the SSC ***finds*** that the simulation does not provide an objective exploration of possible consequences and risks associated with the alternatives under consideration.
- The SSC ***recognizes*** the value of closed-loop simulation modelling and the contributions of the working group; the concerns identified should not discourage this type of analysis for future amendments.
- The SSC appreciates the revisions to the revenue impacts analysis, but ***recommends*** that the analysis be revised to include more empirical evidence to clarify the degree to which halibut abundance indices reflect A80 encounter rates.

C2 Halibut ABM

- The SSC cautions against comparisons of revenue impacts between the two sectors; as these impacts are highly uncertain and do not equate to a comparison of value.
- The SSC ***recommends*** that the estimated revenue impacts be used only for comparing across alternatives within a sector and not across sectors.

C2 Halibut ABM

- The SSC ***recommends*** additional discussion be added to the DEIS on the inter-annual variability in PSC use among IPHC regulatory areas within the BSAI and the observed and potential effects on halibut fisheries.
- The SSC ***recommends*** the DEIS be advanced to public review after these revisions have been made.
- The SSC ***finds*** the SIA adequate to allow the Council to understand the fishery and policy impacts of the alternatives.

C2 Halibut ABM

- The SSC ***strongly cautions*** against using indices of abundance couched in absolute units for the lookup tables. Because these are relative indices, any future addition of new data or methodological changes could change the application of the tables relative to their intent at the outset.
- The SSC ***recommends*** converting these indices to values relative to a year (or years), which would not change the application, but would avoid potential scaling problems in the future use of the tables.

C2 Halibut ABM

- The SSC ***recommends*** that the Council consider how and with what frequency an adopted alternative would be re-evaluated in the future and what the process for amending this program would be.
- In light of the challenges encountered in this analysis, the SSC ***encourages*** the Council to examine the lessons learned and consider ways in which to improve the future efficiency, transparency, and consistency of PSC actions.

D5 Salmon Genetics

- The SSC **appreciates** the efforts to catch up on reports and respond to recommendations from the 2019 salmon bycatch workshop and past SSC recommendations.
- The SSC is **encouraged** by and **supports** the progress being made in adopting new technologies and updating the workflow to improve deliverables and provide them in a timelier manner.
- The SSC **recommends** that an update on progress being made on each recommendation from the 2019 workshop and recent SSC reports be provided.
- The SSC **suggests** that a clear set of management objectives be developed that take full advantage of the data being collected.

D6 EDR Workshops and SSPT Report

- The SSC ***commends*** EDR workshop personnel, involved stakeholders, the SSPT, and staff for their work developing recommendations for changes to the EDRs.
- The SSC appreciates the approach of the SSPT and ***agrees*** that taking a step back to examine what data are needed for what questions and subsequent analyses is necessary.
- The SSC ***acknowledges*** that to collect and utilize data efficiently, the questions for which the data are collected need to be identified first.

D6 EDR Workshops and SSPT Report

- The SSC **identified** three primary reasons that the goals for the EDRs be revisited
 - To determine whether there are different considerations for LAPPs when they are reviewed for the second or third time
 - To consider the current relevance of the EDRs
 - To identify what information is needed across EDRs
- Therefore, SSC **supports** the SSPT recommendation to revisit the purpose and need statements of the individual EDR programs.
- The SSC **supports** the SSPT recommendation to explore a more holistic program for collecting baseline socio-economic data as raised in Issue 2 of the Council's April 2019.

D6 EDR Workshops and SSPT Report

- Before standardizing elements across EDRs as suggested by the SSPT, the SSC **recommends** examining what questions need to be answered across all fisheries.
- The SSC **recommends** identifying needs for broad data collections across fisheries before discontinuing current EDR data collections.
- The SSC **recognizes** that developing a framework for broad data collections is a critical first step and has included both developing a framework and collecting data as part of the Top Ten research priorities.
- The SSC **finds** the SSPT-recommended small changes to individual EDRs valuable and **suggests** these be considered by the Council.

D7 Research Priorities

- Research priorities are now on a triennial review schedule
- Reviewed new priorities (5) from Plan Teams and elsewhere
- Reviewed 2018 Top Ten list
- Revised the Top 10 for 2022 - 2024
- Not reviewing critical, ongoing monitoring (COM) priorities, or previously reviewed priorities, unless there is a proposal to add/change/drop

D7 Research Priorities

- The SSC ***supports*** new Plan Team recommended priorities and their ratings of Urgent and Important
- The SSC ***recommends*** the SSPT provide research priorities for the 2024 review
- The SSC ***suggests*** adding “Date added” to both the Top 10 list and the database
- The SSC ***requests*** an opportunity to comment if any COM activities were to be discontinued
- The SSC ***recommends*** that an SSC subcommittee finalize document summarizing new processes and text for approval at June 2021 meeting

D7 Research Priorities - Top 10

- Added two new priorities (NSRKC integrated approach) and Effects of biological data loss from EM on assessment and management
- Retained four previous Top 10 that were recommended by the crab and groundfish Plan Teams
- Retained one priority that pertained to Protected resources (marine mammals and seabirds)
- Removed two priorities that were specific to halibut ABM
- Removed two priorities that were instigated prior to 2012
- Revised and added two priorities that dealt specifically with building frameworks and data collection for economic and socio-economic data

D8 Annual Community Engagement and Participation Overview (ACEPO) Report

- The SSC received a presentation on ACEPO, the new annual report focusing on sustained participation of fishing communities engaged in FMP groundfish and crab fisheries.
- The SSC ***commends*** the authors on producing a community level analysis guided by NPFMC management objectives and National Standard 8.
- The SSC ***concluded*** that ACEPO would be useful resource for staff in the preparation of FMP and program review analyses as well as for the public.

D8 Annual Community Engagement and Participation Overview (ACEPO) Report

- The SSC provided several ***recommendations*** to the authors, including:
 - Incorporate highly engaged communities outside of Alaska.
 - Prioritize adding information on the sustained participation (or lack thereof) of small communities in federally managed fisheries.
 - Provide for ease of public access to non-confidential data contained in the report.
 - Add community dependence indices to supplement current community engagement indices.

ID	Title	Rationale for Elevation to Top Ten	SSC Priority
148	Spatial distribution and movement of crabs relative to life history events and fishing	Environmental conditions are changing rapidly in the eastern Bering Sea, driving related changes in the distribution of commercial crab stocks. Fishing behavior and life history timing (e.g., reproduction, growth) may subsequently be influenced by changes in crab distribution. The CPT discussed collection of data on distribution and movement relative to oceanographic conditions as critical for the development of the complex models needed to predict future stock abundance, stock boundaries, stock production, and management strategies.	Urgent
163	Conduct routine fish, crab, and oceanographic surveys in the Arctic Ocean	Although fishing is currently prohibited in Alaska's Arctic waters, the region is changing rapidly and fish or crab populations may expand into or increase locally in the Arctic. Therefore, it is important to conduct routine surveys to monitor changes in Arctic waters.	Important
178	Develop a framework and collect economic information	Addresses the need for a framework for collection of economic information on commercial, recreational, and charter fishing, as well as fish processing, to meet the requirements of the MSFCMA sections 303(a)(5, 9, 13), 303(b)(6), and 303A.	Urgent
189	Develop stock-specific ecosystem indicators and incorporate into stock assessments	To support an ecosystem approach to management in the context of single- (or multi-) species assessments, there is a continued need to develop indicators that link ecosystem variability and changes to variability in growth, survival and recruitment of fish stocks as illustrated by the recent dramatic downturn in Pacific cod. This provides an important avenue for linking ecosystem changes directly to management-relevant reference points such as OFL and ABC.	Urgent

ID	Title	Rationale for Elevation to Top Ten	SSC Priority
246	Cooperative research efforts to supplement existing at-sea surveys that provide seasonal, species-specific information on upper trophic levels	The pelagic distributions and abundances of top predators (seabirds and marine mammals) provide indicators of the availability of prey, many of which are commercially important species such as pollock or Pacific cod. Thus, knowledge of seabird and marine mammal distributions and abundances can be useful as indicators of ecosystem "health". Also, in some instances, these top predators are inadvertently impacted by fisheries. Thus knowledge of their distributions can be important for fisheries where impacts may occur.	Important
431	Develop tools for analyzing coastal community vulnerability to fisheries management changes	Predictive accuracy of pre-implementation economic and social impact assessments of proposed fishery management changes (e.g., halibut ABM) would be improved through better understanding of how various dimensions of community vulnerability and resilience can be effectively analyzed and, ultimately, how identified and measured vulnerabilities are likely to interact with the nature, direction, and magnitude of proposed changes to the fishery. An example is the application of genetic tools for tracing the linkages between federal commercial fisheries PSC catch of Chinook salmon and impacts on the use of the salmon resource by communities in western coastal Alaska.	Important
592	Maturity estimates for Bering Sea and Aleutian Island crab stocks	The availability of maturity data from male and female crab is insufficient for use in stock assessment models. Key parameters defining size at maturity, proportion mature at size, and the potential for biennial reproductive cycles are currently uncertain for many stocks. Methods for determining spatial and temporal variability of these quantities are needed to adequately characterize mature biomass.	Urgent

ID	Title	Rationale for Elevation to Top Ten	SSC Priority
611	Collection of socio-economic information	Collect socio-economic information on commercial, recreational, and charter fishing, as well as fish processing, to meet the requirements of the MSFCMA sections 303(a)(5, 9, 13), 303(b)(6), and 303A.	Critical Ongoing Monitoring
712	Gap Analyses on loss of biological samples due to implementation of EM	Research to determine the effects of loss of biological data collections due to the introduction of Electronic Monitoring (EM). As the use of EM increases in different fisheries, fewer at-sea observer observations and collections are being made which reduces haul-specific data collections. Evaluations of the effects of this on catch accounting estimates and stock assessment are needed.	Urgent
New	Norton Sound Red King Crab case study	Needed to help understand and address urgent stock assessment and management challenges in the NSRKC fishery, including the efficacy of previously instituted community protection management measures through the collaborative involvement of the LKTKS taskforce and the Climate Change taskforce. This research could provide a better understanding of the amount of predation by groundfish on juvenile crab in nearshore areas and other population bottlenecks, and inform management to improve stock condition. What is happening in this fishery involves cross-jurisdictional considerations, points to the need to work with multiple knowledge systems, highlights the intertwined nature of human dimensions and fishery changes (e.g. the effect of climate changes on species distribution and harvest capabilities), and is an urgent matter given the gravity of the changes occurring with the crab population and commercial and subsistence harvests.	Urgent