

## *OceanPeople Resources*

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*Working the interface of science and policy toward thriving fishing communities and healthy ocean ecosystems.*

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Responses to Prompt for Discussion Questions on Draft PSEIS  
Purpose, Need and Alternatives  
NPFMC Ecosystem Committee Meeting April 2023

The following is an initial response to the questions of why the Council needs to reinstate the Programmatic SEIS evaluation at this time and what benefits and outcomes the process could achieve.

The focus of this effort should be on all Council-managed fisheries incorporating the reality that these fisheries do not exist in a vacuum and that broader ecosystem parameters are fundamental to the health of all fisheries. A comprehensive ecosystem perspective must be central to the usefulness of the review and evaluation. The resulting document should be structured as a planning tool so that it can be used efficiently to “tier” off ongoing management actions. Like any plan, it needs to be reviewed regularly to evaluate the status of Council actions and programs relative to stated goal and objectives.

The Council should be strongly encouraged to develop a more time-responsive and flexible mode of management and consider using standards for adaptive management as defined in the National Sea Grant Library. <https://nsgl.gso.uri.edu/conn/conng03002.pdf> . This second paper by Wilson, MacDonald, Fujita and Carr flushes out the process of adaptive management in more detail. [http://fishe.edf.org/sites/fishe/files/2020-10/Adaptive\\_Fisheries\\_Management\\_for\\_Nearshore\\_Fisheries.pdf](http://fishe.edf.org/sites/fishe/files/2020-10/Adaptive_Fisheries_Management_for_Nearshore_Fisheries.pdf)

### **Considerations**

- a. Our oceans are experiencing unprecedented changes which call to question the efficacy of current management protocols. The Council needs to create actionable guidelines for cautiously navigating these dynamic conditions. Climate change, ocean acidification, and altered species migration patterns all have significant implications to fisheries management decisions and are clearly overarching challenges that need to be addressed in a programmatic policy document. When marine life is responding to major shifts in temperatures, currents, and chemistry, we should be adapting to the unknowns and minimizing our fishing predation within the ecosystems we depend upon if we truly intend to maintain thriving fisheries into the future. The concept of maximum utilization needs to be abandoned.
- b. There have been multiple changes in the way fisheries have been operated and managed since the development of the 2004 PSEIS as well as an evolution in electronics and technology that can have a significant effect on conservation and the efficacy of management approaches. For instance, real-time electronic monitoring of the catch on all groundfish vessels is now a viable option. There has been a massive expansion as well as understanding of the effect of trawl gear on benthic ecosystems and the unaccounted-for mortality of non-target species. These points alone speak to the need for a comprehensive review of both groundfish FMP’s and all management programs under the Council’s purview.
- c. During the 1998-2004 review period, we were just beginning to implement the conservation changes mandated by the 1996 reauthorization of the MSA and consider ecosystem health in the management

process brought into focus by the Stellar sea lion lawsuit. The Goals and Management Objectives in the 2004 PSEIS reflect the language and aspirations of the time, but it is now timely to conduct a thorough review of how well we have implemented those objectives and achieved those goals, and introspect on where we need more focus and improvement.

- d. The Management Objectives for habitat protection (26-30) need to be completely overhauled to address the known behavior of the most destructive fishing gear and practices. The Council also needs to advocate for and develop a thorough and robust, well-funded and continual, Fisheries Oceanography Cooperative Investigations (FOCI) Program that identifies and links locations and conditions of primary reproductive areas with larval settlement and juvenile nursery areas, identifying recruitment processes to improve Council decisions. Without this information, which has been mostly hamstrung without funding over several decades, it is not possible to truly conserve essential fish habitat for the health of the ecosystem and protect the longevity of economically viable fishing activity.

Most importantly, EFH for crab species is established in the Bering Sea but not in the Gulf of Alaska because there is no federal FMP for crabs in the GOA. By Memorandum of Agreement, crabs in the GOA are managed by the state of Alaska. This means there are no EFH protections for crab in the Gulf, especially around Kodiak Island. The commercial king crab fishery off of Kodiak Island, once a large and robust fishery, has been shut down for decades. While there are federally managed groundfish trawl fisheries in the king crab habitat area, apparently, without a federal FMP in place for crab, there is no protection of EFH for king crab in federal waters in the Gulf of Alaska resulting in an enormous economic loss to the communities and the country. The trawl fleet will claim “natural fluctuation” while denying or ignoring their history of unaccounted for bycatch of RKC on the shelf of the Central Gulf for years. This discrepancy must be addressed and corrected.

- e. By 2004, only 3 major fisheries were being governed under catch share programs, halibut and Bering Sea pollock and crab. We now have over 20 years of data on the actual effects of those, as well as other so-called “rationalization” programs, on the social and economic fabric and diversity of fishing culture and communities. A significant review of Management Objectives 7, 8 & 9, is warranted and crucial to understanding the full ramifications of these Council actions and whether they are achieving the conservation goals expected. Objective 7 points to measures “designed to avoid significant disruption of existing social and economic structures.” This statement runs counter to the stated intentions at the introduction of quota share programs in the 1980’s which was to re-engineer those social and economic structures.
- f. All eight Management Objectives under Goal No. 4, Manage Incidental Catch and Reduce Bycatch and Waste, need to be reviewed and strengthened. Nowhere in that list do you find the word “minimize” which needs to be the primary objective. The entire list begs the question: “Reduce from what level and to what level?” What is meant by “biologically and socially acceptable levels”?

The management process has struggled with the thorny issues of how to allocate all marketable species that the gear encounter, how to set “appropriate bycatch limits”, and how fishermen can use bycatch limits to manipulate their market share and the price of the target catch and bycatch (most importantly sablefish) relative to the rest of the fleet. What is not addressed is how to account for “non-managed” species and specifically what does not come up in the trawls due to gear specifically constructed to leave unwanted species on the bottom. Assigning “unobserved mortality” an arbitrarily low rate, especially for molting and mating crab, as an example, is a huge blind spot in the assessment process.

Policy guidelines should reevaluate the usefulness of bycatch performance standards for pelagic trawl gear, such as the amount of prohibited species in the catch relative to the gear structure, and how it strains and sifts out living benthic habitat so that the crew does not have to handle it on deck much less account for unwanted bycatch. The ecological damage caused by the “leveling effect” of purportedly pelagic trawl gear - damage that has not been “scientifically” measured but is intuitively obvious – needs to be

addressed. It is physically impossible for a “Bering Sea Combination Trawl” with a 400-500 ft. footrope, towed at 3-4 knots, to fish off the bottom in 50 fm. of water, the deepest areas of the Bering Sea shelf. Moreover, the importance of “soft bottom” sediments and the abundant life in the benthic ecosystems cannot be overstated in their significance and importance to the ecology and health of the continental shelf living systems. Much more attention needs to be given to these critical issues and in a timely manner.

- g. At the risk of desecrating a sacred cow and challenging a more than 40-year tradition, it is time we dissect the entire concept of  $B_{MSY}$  and the use of broad-based optimum yield biomass caps for expansive regions like the whole of the GOA or the EBS. The  $B_{MSY}$  model is an overly blunt tool that is blind to the important relationships and nuances that are integral to life in the sea. It’s a modelling concept that was developed out of the nascent discipline of biometrics of the 1950’s and 60’s by policymakers who were looking for ways to justify investments in the unpredictable fishing economy while grappling with how to manage the new 200-mile EEZ. The mandate of NMFS in 1976 was “. . .to make fisheries bankable.” (Personal communication from my boss in 1977) But fish aren’t dollar bills. They are exquisite creatures living in a complex environment that is beyond the grasp of human experience – or our ability to measure their world with the accuracy assumed in assessment models. Unfortunately for the fish, they now represent a multi-billion dollar annual return on investment.

As mentioned above, this management strategy, however questionably adequate to begin with, clearly no longer fits the needs of radically changing marine ecosystems due to climate change and carbon sequestration. It is time to develop and transition to a new management approach.

The F40 level of fishing mortality has long been criticized as an overly ambitious approach to setting quotas. The term itself is deceptive. The assumption that the removal of 60% of an estimated population size, based on highly variable data, is a sustainable way to manage fisheries is decidedly suspect. For one, there is no precision possible, especially with non-selective gear, that allows for the taking of just one species without impacting the whole system. The removal of one targeted species inevitably affects countless others. We need to consider the implications of the fact that “managed” species, or fishery-targeted species, amount to a small fraction of all the varied life forms, or theoretically unmanaged species, in the exquisite ocean systems.

The huge variances in the population estimates call into question the veracity of the modelling output. More importantly, expecting that any population can sustain the pressure of 60% removals on an annual basis, regardless of the accuracy of the population estimates, and continue to produce a desired outcome unabated has never borne out in practice. More emphasis and research attention needs to be given to adaptive and ecosystem-based management as the single-species approach is failing us.

Imbedded in the models for calculating MSY is the concept that there is a theoretical maximum population size that would exist without fishing pressure which current production can be measured against. This idea must be challenged as there is no stable maximum in the fluctuating, fluid environment of the ocean, especially when human interference causes even larger variations and unknowns.

Moreover, the expectation of establishing baselines needs to be abandoned. Dr. Daniel Pauly aptly described the phenomenon of “shifting baselines,” the understanding that a baseline can only be relevant to what you can measure at any point in time. This is usually different, especially in the ocean, over a historical timeline. What we experience in the present becomes our point of reference regardless of changes that occurred before.

The current fisheries management regime is structured on the premise that if we just had enough timely data, we could manipulate marine fish and crustacean populations to produce according to our expectations and design – we could create a crystal ball. The firm truth, regardless of the sincere approach over the last 40-50 years, is that we don’t manage fish or species, we can’t manage ecosystems, we can’t manage nature, and we certainly can’t manage the oceans. The only thing we can manage is our own behavior. Once we

embrace this fundamental fact and shift our perspective, we can begin to develop a balanced approach to ecosystem-based fisheries management.

Given the current climate and ecological crisis, it is imperative that we throttle back our fishing behavior to give life in the ocean, “managed” and “un-managed” species alike, the opportunity to respond and adapt to their radically changing environment without the added stressors of massive human predation. Maximizing our take at this time is not advisable. Reducing our footprint is preferable.

The 1996 reauthorization of the MSA specifically included a mandate to “define conditions approaching overfishing” as an index to prevent overfishing. This directive needs to be added to the Goals and Objectives of the FMP’s and NOAA Fisheries must be encouraged to build an adaptable protocol to make this goal an active reality.

h. Word usage:

“Food web” is an outdated concept. What is more important is to focus on protecting the structural integrity of the intrinsic biological processes in the living oceans so they can support the integrity of the wider ecosystem. And please forgive me for my ignorance, but has the Council actually developed “indices of ecosystem health and employ[ed] them as targets for management”? (Objective No. 10) If not, they would dovetail well with the mandate to define conditions approaching overfishing.

The “precautionary principle” and “adaptive management” are established principles and “terms of art” which have important roles to play in groundfish management but they need to be clearly understood and applied. Adaptive management is a place-based conservation approach incorporating local knowledge and experience (see above), not a range of possible optimum yield values as described in Management Objective No. 3.

Then there is the interesting question of who gets to define “the overall benefit to the nation” and within what context? Is it measured in fishing community health or corporate shareholder dividends?

Finally, in an ever-shifting world, a clear definition of “sustainable” is warranted here.

- i. One outcome that I hope to see from this renewed EIS process is a significant reduction in the footprint of trawl gear on the bottom, both in the size of the nets fished individually and their collective impact. We also need abandon the name “pelagic trawl” and return to the term “midwater trawl” obtaining verifiable data using footrope electronic technology that the nets are, and remain, at least 10 feet off the bottom. Gear regulation is a successful time-tested tool for fishery management. The rope trawls being used today are simply too large and unnecessary in the pursuit of feed people from the riches of the sea.

Thank you for reviewing these responses to the discussion questions. I will be providing comments on the individual management objectives as we move forward in this process.

Sincerely,

A handwritten signature in black ink, appearing to be 'S. J. ...', with a long horizontal line extending to the right.