

Bill Tweit Introductory Remarks

SSC Workshop, February 2023

Thank you for inviting me to provide some opening thoughts to help start this important workshop. As we are all aware, this workshop could not be more timely, as evidenced by the rate at which climate change is impacting the northern Bering Sea and the Chukchi Sea (no, George Hunt did not pay me to say that) and even more because we all hope that the results of this workshop will inform our management efforts throughout the Gulf, Aleutians, Bering and Arctic. The photo on my title slide is an example of the extreme effects of climate change in the region we are discussing today: it shows krill on the beach at Shishmaref following typhoon Merbok in September 2022. My understanding is that the photo was taken by Sadie Lucia; it was provided to me by Rose Fosdick of Nome.

Conversations about adapting fisheries management to changing ecosystems are, in my view, the most important conversations we can have at present. I appreciate the opportunity to contribute to these conversations from my perspective as a Council member. Please keep in mind that these are my thoughts, and while the Council has voiced its support for this workshop in their April 2022 motion, I am speaking as one Council member, since many of the thoughts I'm offering today are not specifically contained in Council actions.

You are holding this workshop because we are facing unprecedented new challenges, challenges that have an intensity that is outside of our experience. We are experiencing these challenges in many ways:

- Difficulty in finding the right balance between the moral imperative to protect the cultures and the people who depend on a subsistence way of life and our mission to provide sustainably harvested seafood to our nation.
- Rapid changes in distribution and population size that fall well outside of our collective experience, changes that cannot be incorporated in our current suite of tools that reflect decades of stationarity and stability in our ecosystems.
- The very real possibility that some species in the fishery may decline permanently to levels that will not support robust harvest.
- Elevated scrutiny of bycatch and of the impact that various fishing gears have on the ecosystem, as concerns increase for the longevity and productivity of our resources.
- Increased social conflict, often expressed as "us vs them". Rather than coalescing to address these new challenges collectively; increased risk and uncertainty seems to result in fragmenting to protect our individual livelihoods.

So, allow me to suggest what our critical needs are at this point; needs that if met will help us address and resolve those challenges.

- Most Council members and stakeholders don't have a strong understanding of the limitations of our current tools for decision-making in this new environment. We need to understand those limitations better, otherwise we will continue to want to rely on our current tools, as they have served us very well to this point.
- Our tendency to rely on the tried-and-true management tools is also based on our experience with litigation, a common concern across Councils. Our current tools generally are defensible; in that they have withstood legal challenges. There is a concern that new tools and approaches

will become the subject of new legal challenges, and until they have been tested and proven, the reluctance to adopt them will continue. We need real-world experience with new tools.

- We don't understand very well how an ecosystem-based approach to management will help, although I think most of us have an intuitive understanding that it is preferable. Transitioning to ecosystem-based management is going to be challenging, consuming a lot of Council's scarce resources. With the urgency of the crises associated with climate change, making that transition will be more challenging. We need clear demonstrations of the value of EBFM in facing the impacts of climate change.
- We aren't conversant yet, much less proficient, with the use of tools that help us make decisions in the face of greatly increased uncertainty and risks, and the vocabulary of risk-based management is a foreign language for many of us, with its descriptions of probabilities of outcomes and alternative scenarios for the future. Until we have had some successes and failures at using new approaches for setting fishery limits, Councils will continue to struggle with managing fisheries in the context of rapidly changing ecosystems. We need to emphasize the importance of gaining familiarity and proficiency with new approaches.

The design of this workshop will help address these four needs, not just for the focal areas of the northern Bering and Chukchi seas, but throughout our marine ecosystems. As you consider how to inventory and adapt to the rapid pace of change, please keep in mind these potential areas where we could go astray if we are not attentive.

- The choice of ecosystem indicators for use in management is a social issue as well as a scientific issue. In the North Pacific, as we begin to consider indicators, we are learning that the wide range of ecosystem services we depend on will translate directly into a wide range of ecosystem indicators, generating tension and sometimes conflict around the choice of indicators.
- Similarly, the impacts of changing species interactions are felt differently by different cultures and fishing sectors. As we all are aware, change creates new "winners and losers" in the ecosystem, including in fishing communities.
- We have also become aware that our historical timeframe for understanding species interactions is often very short, less than a half century in many cases, and our understanding of ecosystems is influenced by western culture. In order to gain the perspective of other cultures, and to gain a longer-term perspective, we intend to integrate the traditional ecological knowledge held by the indigenous peoples in our region into our management process. Accomplishing inclusion of indigenous peoples and indigenous knowledge in a respectful manner is a learning process, and takes time, which is difficult when the issues are urgent.
- Adaptive management is key, which requires a higher degree of trust among participants than other forms of management. Choosing approaches that help build and maintain trust, relying on transparency and admitting mistakes are all important.
- Notice that communication is the underlying theme here. Unless we are attentive to all aspects of communication, including: choice of vocabulary, broadening listening skills, encouraging creativity, eliminating communication hierarchies, our attempts to adapt will fall short.

One example of a looming communication issue. The science community is beginning to understand that we are engaged in transitioning from fishery management frameworks that are built on assumptions of stationarity and stability to management frameworks that can support sustainable exploitation in the face of significantly increased uncertainty. As I say this, I realize I'm not sure what it

means, heck, I even have difficulty saying stationarity without stumbling. Don't even ask me to say non-stationarity, it usually ties my tongue up completely. I'm not suggesting that we need a different approach because of my lack of fluency, instead I'm describing the critical importance of communication. Why can't we continue to rely on stationarity? How can we learn to adapt to a new state of non-stationarity? Are these even the right terms?

As the SSC conducts this workshop, please remember that as much thought must be given to inclusion, communication, implementation and defensibility as will be given to development. It does us little good to develop new management frameworks if the Council is uncomfortable implementing them, if stakeholders and the Council cannot understand them, and if they cannot be defended against the attacks that we know will ensue.

It's a lot to ask, but you are the best SSC in the nation, working with a supportive Council and stakeholders so you've got the right starting point. I am really looking forward to these discussions; they could not be more important or timely. Thanks again for the opportunity to provide these thoughts.

Bill Tweit

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