



Adapting Fisheries Management to a Changing Ecosystem

7th National Scientific Coordination Subcommittee Meeting

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Opening Remarks

Bill Tweit, NPFMC Vice Chair

On behalf of the North Pacific Council family, I'm pleased to be able to finally welcome you to SCS7 in Sitka, for the long overdue conversation about adapting fisheries management to a changing ecosystem. I appreciate the opportunity to contribute from my perspective as a Council member. Please keep in mind that these are my thoughts, and are neither Council nor agency policy or perspective.

Climate change is real, it is changing ecosystems now, and those changes bring us into a world of greater uncertainty. I get it. My fellow Council members get it, and I'm certain regional fishery management Council members across the nation get it. We are facing new challenges, challenges that have an intensity that we are not used to. Using my region and my Council as an example, we are experiencing:

- Conflicts between the moral imperative to protect cultures and 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, is one aspect of increased social conflict, as that scrutiny is expressed as "us vs them". We don't appear to be coalescing to address these new challenges collectively; we appear rather to be fragmenting to protect our individual livelihoods.

So, allow me to suggest what our critical needs are at this point.

- 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. Until we understand that, we will continue to rely on our current tools, as they have served us very well.
- 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 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 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.

The three topics that SCS7 is addressing are very relevant to meeting these needs, and as I think you are already aware, none of them are simple.

- 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. In order to gain a longer-term perspective, and to gain the perspective of other cultures, the North Pacific Council is working to integrate the traditional ecological knowledge held by the indigenous peoples in our region into our management process. Accomplishing that in a respectful manner is a learning process, and takes time, which is difficult when the issues are urgent.
- Finally, to the third topic, I would recommend that the SCS7 consider this as a problem of 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. In my remarks, I have already described some of the difficulties with that endeavor. As the science community tackles this, please remember that as much thought must be given to implementation, communication and defensibility as will be given to development. It does us little good to develop new management frameworks if Councils are uncomfortable implementing them, if stakeholders and Councils cannot understand them, and if they cannot be defended against the attacks that we know will ensue.

It’s a lot to ask, but the science community in our nation’s fishery management process is the right group to tackle it. I am really looking forward to the SCS7 discussions; they could not be more important or timely. Thanks again for the opportunity to provide these thoughts.

Bill Tweit
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