

COASTAL PELAGIC SPECIES ADVISORY SUBPANEL REPORT ON
WEST COAST ECOSYSTEM-BASED FISHERY MANAGEMENT ROADMAP

The Coastal Pelagic Species Advisory Subpanel (CPSAS) reviewed the National Oceanic and Atmospheric Administration (NOAA) draft Western Roadmap Implementation Plan (WRIP) (Agenda Item G.1, Attachment 2) and also the Briefing Book comments submitted by Dr. Richard Parrish, retired member of the first CPS Management Team (Agenda Item G.1.b Public Comment 1). We appreciate NOAA's work to describe the agency's planning efforts toward attaining the goal of ecosystem-based fishery management.

We also agree with many of the comments and recommendations submitted by Dr. Parrish. For example, he found that the draft WRIP contains no information on the biology, species interactions or environmental forcing associated with the California Current, nor does it reference the several ecosystem models that have been developed. He suggested that an analysis of available ecosystem models of the California Current should be completed. Natural climatic variability at El Nino/Southern Oscillation and decadal time scales as well as global climate change should be an important part of ecosystem-based management. Models should be able to mirror that variability.

Dr. Parrish pointed out, for example, Olsen et al (2018) published a very recent evaluation of the effects of fishing on ocean ecosystems, using a number of Atlantis ecosystem models from around the world. Their analysis, which includes the California Current Atlantis Model, suggested that doubling the fisheries on small pelagic fishes would have minimal direct impacts on ecosystems.

The draft WRIP states "*Living marine resource management should consider best available ecosystem science in decision-making processes (within our legal and policy frameworks).*" This implies that there may be extensive legal and policy limitations that will prevent the use of the "best available ecosystem science." In a summary of recommendations, Dr. Parrish suggested that the WRIP process should include a review of the legal and policy measures that limit possible ecosystem-based management of protected species, and that determination should be made early in the planning process.

He further noted that ecosystem-based management differs from most previous management in that it will require input from multiple advisory committees. Ground rules for cooperative work between the advisory committees need to be established.

It is likely that protected species laws and policies will sharply limit the types of ecosystem-based management that are possible. Dr. Parrish suggested that an analysis of the types of ecosystem-based management that are both legal and desirable would be an efficient use of the Ad Hoc Ecosystem Workgroup.

Dr. Parrish also addressed a subject that has been largely missing from the forage fish vs. protected species ecosystem-based management controversy: Should management treat protected species that are near carrying capacity the same as it does protected species that have large healthy populations and are well below carrying capacity?

He pointed out that the population size of the California sea lion in the Southern California breeding colonies during the 1920s sardine outbreak was only one percent of that at the 2006 peak of the second sardine outbreak (Parrish, 2018)¹. “What causes a greater problem for struggling protected species such as the threatened marbled murrelet,” he asked, “an anchovy fishery with average annual landings of less than 10,000 mt or a California sea lion population that annually consumes 1-2 million tons of forage species?”

He stated, “Optimum ecosystem-based management policies should include variation in management designed with the observed climatic variations in mind, and they should also allow for both detrimental and favorable effects of global climatic change.” The Magnuson Act actually mandates achieving a balance between protected resources and optimum yield.

In conclusion, he said, “it is apparent that during the present environmental regime, competition between protected species is far more important than competition between protected species and the U.S. fishery for forage fishes.”

He complimented the Draft WRIP for doing an excellent job of showing the types of information and analyses that will be necessary before ecosystem-based management should be attempted.

We appreciate the Council’s consideration of Dr. Parrish’s comments and recommendations.

Minority Statement: A minority of the CPSAS thanks NMFS and the Council for its ongoing efforts to implement and operationalize EBFM on the West Coast. With respect to the Draft WRIP, a minority of the subpanel recommends that the document could be further improved by including key action items from the national EBFM Road Map that currently do not appear in the Draft WRIP – items such as the exploration of tradeoffs, an evaluation of how best to apply tools like ecosystem level reference points, and evaluation and tracking of such reference points and associated ecosystem indicators for eventual incorporation in management. For action items that are included in the Draft WRIP, the minority suggests that some could be strengthened by adding greater specificity and/or commitments to timelines or outputs.

PFMC
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¹ Parrish, R.H. Management of the Northern Anchovy in US Waters. PFMC Agenda Item C.4.b, Public Comment, April 2018.