



Ecosystem Based Fisheries Management (EBFM) Workshop

On August 1st -2nd, 2017, the Seafood Watch fisheries science team convened leading experts on Ecosystem Based Fisheries Management (EBFM) to provide near-term and long-term recommendations for SFW's assessment of forage fisheries. For the near term, these experts provided specific scoring guidance as a companion to the Lenfest Forage Fisheries Task Force (LFFTF) recommendations incorporated into the current Fisheries Standard to forage fish stocks. For the long term, the experts recommended areas of research to inform the next Standard revision. Participants and their affiliations are listed below.

The general outcomes of this expert workshop include:

Near Term:

- 1) Consensus on the level of precaution necessary for scoring Criterion 1 based on the LFFTF guidelines (Abundance and Fishing Mortality), also taking into account reference point adjustments to account for natural fluctuations in biomass. Adjusted C1 Scoring tables accordingly.
- 2) Consensus to test various combinations of time frames (based on Generation Time as well as fixed intervals) and calculation rules to evaluate biomass relative to reference points for data-rich forage fish stocks. This testing is currently underway by one of the experts in the group (Dr. Margaret Siple). Once the most appropriate combination is identified, this will be applied to in progress and new fisheries assessments for forage fish species.
- 3) Consensus to consider spatial variation in forage fish stock structure in Harvest Management Strategy (C3.1)

Long Term:

- 1) Additional work is necessary to identify robust indicators for Abundance and Fishing Mortality for data-poor forage fish stocks; likely avenues include measures of dependent predator health (this may be informed by the Data-Limited Fisheries work stream going forward).
- 2) Depending on need, develop research proposals to model dynamic reference points and harvest control rules appropriate for these highly variable stocks.

Discussions on these topics and associated projects will continue into 2018 and feed into our standard review process.



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Participant List – Expert Attendees

Name	Affiliation
Francisco Chavez	Monterey Bay Aquarium Research Institute
Tim Essington	University of Washington
Alec MacCall	National Marine Fisheries Service, retired
Emily McGregor	Marine Stewardship Council
Dan Okamoto	Simon Frasier University
Ellen Pikitch	Stony Brook University
Margaret Siple	University of Washington