

## GROUND FISH ADVISORY SUBPANEL REPORT ON REVIEW OF FISHERY ECOSYSTEM PLAN INITIATIVES

Groundfish Advisory Subpanel (GAP) members reviewed briefing book materials under this item and offer the following comments with respect to proposed Fisheries Ecosystem Plan (FEP) Initiatives as seen in the Ecosystem Working Group Report 1 under this agenda item ([Agenda Item H.3.a, EWG Report 1 March 2022](#)).

The GAP remains cognizant of the potential for this work to compete for resources, staff time, and analysis with the many other concerns the GAP sees as a higher priority. However, two of the proposed initiatives are particularly compelling to the GAP.

### *2.2 Science Policy and Planning for Understanding the Effects of Oceanographic Conditions on Council-Managed Finfish Species:*

The GAP agrees oceanic conditions and recruitment success of many species, especially rockfish species, appear to be tightly linked and this linkage could inform recruitment deviations used in stock assessments.

With respect to rockfish, these ovoviviparous species are highly fecund (<sup>1</sup>[Haldorson and Love 1991](#)), with females bearing hundreds of thousands to millions of rockfish larvae seasonally. Survival of these larvae through their first few weeks of life is extremely low, highly variable and largely dependent on oceanographic conditions at the time. This is often referred to as the "critical period." At a few months of age fortunate survivors recruit to structure as young of the year (YOY). From that point forward survivorship is much less variable and indeed scientists observe a strong correlation between YOY abundance and ultimate recruitment to the fishery. Thus, these oceanographic conditions can have a much stronger effect on recruitment than spawning stock size. The GAP understands spawning stock size alone is commonly used to inform seasonal reproduction within some stock assessments and this initiative could better inform spawner/recruit dynamics.

The GAP endorses efforts to bring in existing data on YOY numbers and adults observed in scientific efforts such as the [CRANE/PISCO](#) and other SCUBA surveys, [manned submersible](#) and automated underwater vehicles (AUV) and remotely operated vehicles. YOY data could inform year to year recruitment deviations directly.

Further, the relationship of these data to oceanic conditions could be used to develop a proxy for survivorship past the critical stage. Remotely observed oceanographic data ([satellite](#) and [HF radar](#)) might be used to estimate likely recruitment success in any given year.

### *2.8 Assess Flexibility in Fisheries Management Process:*

The GAP previously commented on the need to assess and optimize flexibility in fisheries management. In our previous comments ([Agenda Item I.2.b, Supplemental GAP Report 1, March 2021](#)), we noted fisheries participants quickly adapt to new opportunities and challenges.

However, management can lag years behind in addressing these adaptations and potential methods for meeting the challenge of optimizing sustainable fishing opportunities.

Stock status information is not always up to date given assessment frequency of many stocks. Relying on older assessments to inform management can hamper sustainable management and fishing opportunities and is problematic when managing species with highly variable reproductive success.

Catch data is often more current than estimates of stock abundance. In particular, the GAP cites limited resources for data collection and stock assessment, which result in cases where increased abundance of a species results in increased fishery impacts when effective harvest rates do not increase leading to the appearance of overfishing. Other negative conservation outcomes can occur in cases where the stock is decreasing in abundance and assessments are conducted infrequently.

An exploration of what might be done to improve management flexibility is a worthy endeavor and would better address the Magnuson-Stevens Act mandates to conserve marine resources while implementing sustainable fishing opportunities.

1.Haldorson, L and Love, M 1991. Maturity and Fecundity in the Rockfishes, *Sebastes* spp., a Review. *Marine Fisheries Review*, 53(2): 25-31

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