

ECOSYSTEM WORKGROUP REPORT ON THE CALIFORNIA CURRENT ECOSYSTEM
AND INTEGRATED ECOSYSTEM ASSESSMENT REPORT
AND SCIENCE REVIEW TOPICS

The Ecosystem Workgroup (EWG) received a presentation of the California Current Ecosystem Status Report (the report) from Dr. Toby Garfield of the Southwest Fisheries Science Center (SWFSC) and Dr. Chris Harvey of the Northwest Fisheries Science Center (NWFSC) during our February 25, 2020, public webinar meeting. The EWG thanks Drs. Garfield and Harvey, the Integrated Ecosystem Assessment (IEA) team, and the other contributors for their efforts to provide another comprehensive and informative report.

Our general sense is that the conditions discussed in this year's report seem average, with fewer anomalous events like coastwide pyrosome invasions or persistent marine heat waves. However, there seems to be a buildup of heat in the system that, combined with near-term drought, may trigger longer-term ecosystem changes.

The EWG would like to emphasize the importance of the report and the continued collection, analyses, and syntheses of long-term data streams to monitor changing conditions in light of an uncertain future. We anticipate that these long-term data streams will become increasingly important as our marine environment continues to change. We note that the report is also now being used beyond the Council process. For example, ecosystem considerations have been presented to the public as part of the North of Falcon meetings when discussing seasonal salmon forecasts.

We particularly appreciate the Centers' efforts, described in Appendix C, to follow up on Ecosystem Initiative 2 by continuing to report back on which new indicators and information are derived from comments received during that initiative process. The EWG appreciates the Centers' efforts to include updated recreational fishery data in current analyses and investigate its inclusion in future indicators.

We offer the following points for the Centers' consideration for future ecosystem status reports:

- The EWG appreciates the discussion on marine heat waves and the proposed habitat compression indicator (Section 7.2 of the report). We are keen to see this proposed indicator be reviewed by the SSC in September. During the webinar we asked about the spatial coverage of the proposed habitat compression indicator and would like to know if it can be applied to a larger proportion of the California Current Ecosystem (CCE).
- The indicator on hypoxia (Section 3.3 of the report) focuses on the Newport Line and the CalCOFI area, thereby missing the seasonal hypoxic zone that forms seasonally on the Washington shelf. We understand that these syntheses are based on data availability and consistency of data collection practices. The Olympic Coast National Marine Sanctuary runs a seasonal mooring program to collect data on bottom oxygen and temperature. We are curious whether the sanctuary or other offshore data collection programs could provide similar information to that collected off Newport, Trinidad Head, and through CalCOFI.

- We appreciate the Centers' expansion of its condition reports for salmon to include Central Valley salmon (Table 4.3.1 of the report). We are curious whether similar stoplight-like analyses might be useful for select groundfish species or other managed stocks. If these analyses seem potentially useful for other species, we would recommend experimenting with one new species in a future ecosystem status report, not adding suites of new analyses to the report.
- We support the requests in Agenda Item G.1.a Integrated Ecosystem Assessment (EIS) Team Report 3 for Scientific and Statistical Committee review of new potential information and indicators for the ecosystem status report, particularly for the review of the revenue consolidation analyses. We appreciate the revenue consolidation discussion in this year's Section 6.3 of the report and the Centers' efforts to think more deeply about National Standard 8 of the Magnuson-Stevens Fishery Conservation and Management Act.
- In Section 5.2, Gear Contact with Seafloor, the report discusses the utility of examining the impacts of disturbance to different seafloor types. We note that this information also illustrates the use of ocean space by particular gear types over time. It may be useful to the Council to see the distribution of other gear types over time to see changes in fishing effort and location. We are also curious whether it would be useful to the Council to have more information on the spatial distribution of fishing fleets and scientific surveys in order to better understand the potential effects of emerging ocean activities that may conflict with fishing and science activities. (See also Figure 2.1 of the report for spatial distribution of surveys).

Finally, the EWG appreciated the opportunity to hear from the Science Centers in an advance webinar, which gave us time to read and absorb the report and its appendices before meeting in person in March. We note the usefulness of this process to request that it occur again in future years. A pre-meeting webinar review of the ecosystem status report may also benefit other advisory bodies and the public in future years.

PFMC
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