

ECOSYSTEM WORKGROUP REPORT ON THE CALIFORNIA CURRENT ECOSYSTEM REPORT INCLUDING INTEGRATED ECOSYSTEM ASSESSMENT

The Ecosystem Workgroup briefly reviewed the State of the California Current Ecosystem Report (hereinafter “the Report”) and appreciates the Science Centers’ submission of the report and its supplemental materials, and thanks the Centers and the Scientific and Statistical Committee for organizing a review of the report’s scientific underpinnings. Our only major comment on the report is that it would be useful, possibly in the highlights box, to see some more general conclusions for each of the fishery management plan (FMP) species groups about whether environmental trends are broadly positive or broadly negative for near-future productivity of Council-managed stocks. We also think that it would be interesting and useful to the FMP-specific advisory bodies if some of the Report authors could meet with each of those groups, perhaps on a rotating basis, to explain some of the potential implications of the report’s indicators for FMP species and their fisheries. We did not have access to the supplemental materials when we conducted our review; some of our minor comments, below, may be answered therein.

Our remaining comments on the Report are minor, address specific sections of the report in order, and probably challenge the Council’s goal of keeping the report’s length to 20 pages:

- The 5-year trend comparisons in this year’s report are much more consistent between indicators than in past years. This is a significant improvement over prior years’ reports and we appreciate the report’s new format.
- More maps could be used throughout the report to show the reader whether an indicator addresses the whole coast or some part of the coast.
- The figures at 2.1 are difficult to see or read, making it unclear why they are included in the report.
- For dissolved oxygen (DO), there is a reference to the possibility that Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO) data may have greater applicability for the indicator. If that is the case, what determines which dataset is used for each indicator? Is this a case where the tradeoff between consistency and usefulness might be re-visited? Are there others elsewhere in the report?
- The report presents summer or winter values in several cases (i.e., Aragonite, MEI, PDO, NPGO) and notes that the other values are available in the supplemental materials. It would be helpful for the lay reader to include a brief explanation about why one season’s value is chosen over the other season for the main report.
- Figure 4.2 should specify that the forage groups referred to are Young-Of-Year (YOY) rockfish, sanddabs, etc.
- We find the visualization of trends in Chinook abundance interesting and suggest that the salmon advisory bodies particularly consider whether a 10-year time-scale is a useful indicator of future productivity and abundance.
- Figure 4.6, the bar graph of pup counts might be useful to compare to a long term mean over some representative period, possibly 20 years?
- Figure 5.1 represents landings by weight. It would be useful to include a similar set of graphs for landings by value. We appreciated the discussion of the effects of whiting and

coastal pelagic species (CPS) landings on total coastwide landings. Is there discussion elsewhere, perhaps in the supplemental materials, on whether and how shifting landings levels of whiting and CPS species affect or are affected by shifts in prices for those species?

- Figure 5.1 might split CPS into more groups or into a north and south group, especially if there were some identified links between these species' productivity and the oceanographic indicators.
- For the "Total fisheries landings Coastwide" graph within Figure 5.1, it would be useful to see the landings data in a separate graph, where landings are stacked by species type, so that the reader could see the proportions that each species type contribute to the total landings.
- What is the purpose of including the aquaculture and the seafood demand indicators and do the FMP-specific advisory bodies find these indicators useful? If not, are there other market/economic indicators that might be more useful to fisheries participants?
- Under nutrient inputs in Section 5.3, define PAH – polycyclic aromatic hydrocarbon
- Figure 6.1 could be made more useful if it included 5-year trend lines, similar to those used in other sections of the report.
- We liked the new Figure 6.2 commercial fishing dependence and engagement figures. A more detailed explanation of the "variables drawn from extant community-level data" to derive the figures would be useful to understanding the figures and the connection between the analysis and other assessments of fishing community dependence, engagement, and vulnerability, if any. We also suggest including similar analyses and figures for recreational fisheries, if possible.
- Additional indicators that should be considered for inclusion:
 - precipitation levels
 - reproductive hormone inputs (from human contraception; they are documented to have effects on flatfish development in the Los Angeles Basin) in addition to nutrient inputs

PFMC
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