



AT A GLANCE:

California Current Integrated Ecosystem Assessment State of the California Current Report 2018

THE BEGINNING OF THE END?

Signals indicate that the anomalous oceanographic conditions of recent years may be over and we'll return to long-term average conditions (pg. 3). These cooler temperatures hopefully mean a more productive ecosystem, although exact conditions and their impacts on the food web remain unknown. We do know that while some warmer than usual water remains in the northern part of the California Current ecosystem, the warm blob has largely departed. Fortunately, NOAA is working on an early warning index that may help us understand and predict ecosystem state shifts in the future (pg. 22).

SOME LASTING EFFECTS OF THE BLOB

Marine conditions in 2017 were not favorable for Fall Chinook, Spring Chinook, and coho stocks returning to the Columbia Basin, indicating poor expected returns in 2018. NMFS scientists suspect this may be in part due to some lasting effects of the warm blob. While not optimistic news for salmon, the hard work by many to develop the stoplight approach that links environmental conditions to management is allowing us to proceed with caution (p12).

NEW REPORTING TOOL: THRESHOLDS

This year's report includes thresholds for several key indicators. These thresholds were established scientifically through modeling and experiments, and can serve as sign-posts for managers. Thresholds for dissolved oxygen and ocean acidification were developed (pg. 6), and an exploratory relationship between upwelling and sea lion pup counts are included in this year's report along with an update on the development of a new ecosystem-wide early warning index (pg. 22). These represent an approach to using indicators that could be extremely useful in the future. And the good news is that while still experimental, these sign-posts don't indicate any major system re-organizations this year.

WHALE OF A TIME

Reports of whale entanglements (the unintentional "tangling" of a whale in debris, often fishing gear) have been at an all-time high in the last four years with 203 whales reported as entangled 2014-17 (pg. 15). This is an average of over 50 whales per year, compared to the 2000-12 average of 11. The exact cause of this increase is unknown, but the impacts on whales and fisherman are substantial. There is hope that with changing ocean conditions these numbers will return to normal, in the meantime, the State of California is working with fisherman and other stakeholders to explore solutions.¹

RECREATIONAL FISHERIES IN THE SPOTLIGHT

This year's report includes a new indicator of recreational fishing and its relationship to coastal communities (pg. 20). This will enable managers to better understand the connection between recreational fishing and communities, and is a start in helping infuse much-needed insights into the management process. Although many of our social and economic indicators are nascent, this is an important step in the right direction.

A LACK OF FLEET DIVERSITY

All categories of vessels that fished along the West Coast decreased in average diversification from 2015 to 2016, with 2016 being the least diverse fleet in 36 years (pg. 20). Although the decline has been slow and steady, diversity is important for maintaining individual financial solvency and overall fleet stability, especially in changing environmental conditions. The inherent variability of the California Current and predicted impacts of climate change make diversity an important factor to consider.

VISUALIZING HMS

This year's report includes graphs and time plots that show how recent trends in HMS biomass and recruitment can be integrated into a stoplight approach (pg. 14). No fancy modeling here, but a useful and easy-to-digest representation of HMS species. Swordfish and skipjack biomass are well above the long-term average, while bluefin tuna, bigeye tuna, and, are all well below. Recruitment is a similar picture, with skipjack doing well and bluefin continuing to show poor recruitment.

¹ <http://www.opc.ca.gov/whale-entanglement-working-group/>



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