



AT A GLANCE:

California Current Integrated Ecosystem Assessment California Current Ecosystem Status Report 2017

THE “WARM BLOB” IS HUNGOVER

Signs show that 2017 won't bring another warm blob, however we don't know what effects of the warm blob will linger and what they mean for target species and other ecosystem components. The good news is that the three major indicators of basic-scale ocean and climate drivers, the ONI (Oceanic Nino Index), the PDO (Pacific Decadal Oscillation), and the NPGO (North Pacific Gyre Oscillation) all suggest a return to conditions of average productivity although remnants of the blob may dampen that outlook.

DROUGHT RELIEF?

Freshwater conditions are critical for salmon populations and for estuarine habitats like eelgrass that support multiple marine species. Snow-water equivalent (SWE) is the total water content in snowpack and provides a steady source of stream water into the summer months. Following recent winter storms across the West Coast, SWE is on pace to exceed 2016 and provide drought relief, but it may not be all good news for salmon if rapid snowmelt occurs. Fingers crossed for the official measure on April 1, 2017.

COPEPODS: THE CELERY DIET PERSISTS

In summer, northern “cheeseburger” copepods usually dominate the coastal zooplankton community while in winter the southern “celery” copepods move in. Since the autumn of 2014, the celery copepods have ruled, likely contributing to poor feeding conditions for pelagic fishes. Moreover, 17 new species of copepod have been identified in the California Current and while not a threat to local species, indicate yet more change in the ecosystem.

LANDINGS ARE DOWN

For data current through 2015, landings for key commercial west stocks are down, largely driven by declines in hake, CPS, and crab. Non-hake groundfish are in a historical low (2011-2015), and overall total revenue has declined since 2013, although the impacts are fishery-specific.

HYPOXIA AND OCEAN ACIDIFICATION

Dissolved oxygen (DO) and aragonite saturation are related to the strength of coastal upwelling and indicate ocean acidification. Both are critically important to ecosystem function and likely to alter under changing climate conditions. At the three geographic sampling stations used by the CCIEA, all measurements of DO were above hypoxic levels and aragonite was within average saturation levels. Due to the importance of these indicators to West Coast fisheries, the CCIEA proposes to better understand the ecologic and economic impacts of ocean acidification through more research.

HUMANS IN THE ECOSYSTEM

Social vulnerability is defined by the Community Social Vulnerability Index (CSVI). The index looks at social vulnerability of fishing-dependent communities and cross references with dependence on fishing. The report also looks at fleet diversity, noting that west coast and Alaskan fleets are less diverse on average than any point in the last 35 years. While there are no major changes noted this year, the CCIEA program presents a new time series using US Census data, and proposes to investigate community responses to environmental variability and climate change.



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