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AT A GLANCE

California Current Integrated Ecosystem Assessment

State of the California Current Report | 2020

Do fish sweat?

Just as the California Current Ecosystem (CCE) began to show signs of recovery from the "warm blob" in 2014-2016, we experienced yet another marine heatwave of similar size (but shorter duration) in 2019. Due to these repeated warm events, the North Pacific appears to have a lot of heat stored up in the system. The Integrated Ecosystem Assessment (IEA) team can't be sure what effect this recent heatwave will have on the California Current because it started after most of surveys had already been completed for the year, but we're getting out the sunblock.

Diagnosis is unclear

Overall, the ecosystem showed some signs of being healthy and other signs of being not as well. The good news was that lipid-rich copepods were abundant and anchovy densities were high along most of the coast. However, juvenile rockfish, krill and seabird numbers were down. Pyrosomes were also back in large numbers. Geographically speaking, the central California region saw more negative impacts than other regions of the coast last year. All in all, this points to a mixed diagnosis for the ecosystem.

Missed the landing

In 2018, West Coast fishery landings declined 8% and revenue declined 7% relative to 2017. The news isn't all bad, though. While coastal pelagic species and squid were down, hake landings were at near highs. Revenues across all fisheries also remained at near highs despite the recent dip.

The not-so-fresh squeeze

The report features a new index that tracks habitat compression associated with marine heatwaves. When these large heatwaves occur offshore, cooler upwelling habitats are 'squeezed' against the coast. The new index tracks this compression annually and may offer an improved indicator to understand how marine heatwaves impact fish habitat.

Something to bark about?

Sea lion pup counts and growth rates were above their long-term averages for the second consecutive year. These improvements were indicative of good prey availability to the ecosystem south of Monterey Bay. However, in the region further north between the central California coast and southern Oregon, seabird indicators were pointing down, which suggests less prey availability at lower trophic levels.

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