



Advancing Observations and Understanding off Northern California: A Critical Expansion to Quantify Climate Change Impacts, Support Model Development, and Build Community Resilience

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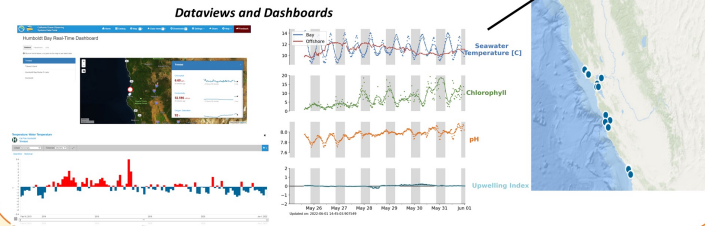
Observing California's North Coast

The importance of ocean dynamics off northern California at a regional scale and across the broader CCE is not fully captured in the distribution of ocean observation capacity. Despite the CCE as a whole being one of the most highly observed ocean regions in the world, observing capacity along the California Coast remains sparsely distributed in regions north of the San Francisco Bay Area, as do the modeling and forecasting services that require such observations. In response, CeNCOOS partners aim to fill information needs and observational capacity that identify the waters off northern California as a major spatial gap in OAH information (Weisburg et al 2020, OST 2021).



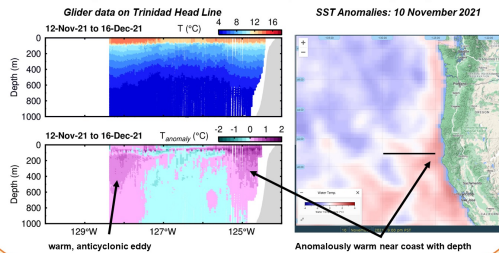
CeNCOOS/SCCOOS Coastal Observing Network

The Cal OOS Coastal Obs (*shore station*) network delivers high quality, reliable, real-time observations of temperature, salinity, chl-a, dissolved oxygen, nutrients, and increasingly, carbonate chemistry variables (pH, pCO₂).



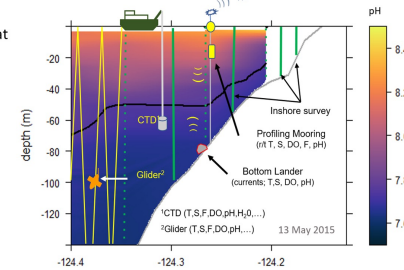
THL Glider and Survey Operations

The THL glider continuously transects from approximately 10km offshore of Trinidad Head to about 300 km offshore, repeating the line every 15-20 days. The glider augments THL surveys led by SWFSC and CPH roughly quarterly. This suite of observing assets leaves State waters beyond the beach poorly observed.



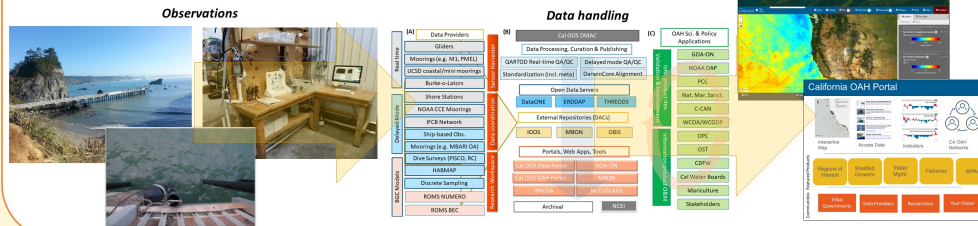
Trinidad Head Ocean Observing Node (THOON)

The THOON project builds on and connects three existing observation programs—monthly ship-based surveys along the THL, the CeNCOOS shore station at Trinidad Wharf (and complementary sensors in Humboldt Bay), and a glider line that extends to 300 nautical miles offshore—by establishing the Trinidad Head Ocean Observing Node (THOON) at a mid-shelf station and by enhancing ship-based survey coverage of State waters.



OAH Information Aggregation to Improve Access and Delivery

CeNCOOS and SCCOOS are teaming up with CalCOFI, Point Blue, CCE-LTER, and SCWRP to build a statewide information hub to enable understanding of OAH status and trends.



Knowledge-to-Action Pipeline



Founded in 2009, C-CAN is a collaboration of interdisciplinary scientists, resource managers, industry and others from local, state, federal and tribal levels dedicated to advancing the understanding of ocean acidification and its effects on the biological resources of the US west coast. Learn more at <https://c-can.info/>.



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