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Presentation title: **The Center for Integrated Marine Technologies: Long-term Ocean Observing System in Monterey Bay Provides Oceanographic Data and Monitoring Information toward Improving the Understanding of Ocean and Coastal Ecosystems**

Abstract:

The Center for Integrated Marine Technologies' (CIMT) a project within the Central and Northern California Ocean Observing System (CeNCOOS) was organized to understand the relationship between the physical dynamics and productivity, from wind to whales, of California's coastal ocean. CIMT can provide the California Ocean Protection Council (OPC) with an ecosystem-based understanding of Monterey Bay. CIMT's mission is to create a coastal ocean observing and forecasting system that provides a scientific basis for the management and conservation of Monterey Bay, and serves as a model for monitoring all of California's coastal marine resources. This effort has been simultaneously collecting data via moorings, shipboard surveys, apex predator tagging and tracking, and satellite, aircraft, and land-based remote sensing since 2002 and is built on a foundation of data since 1997. Data integration provides new insights to complex interactions among resource characterization, climatic events, riverine input of iron, wind-driven coastal upwelling of nutrients to phytoplankton production, linkages to offshore water quality, and the distribution and abundance of animals from zooplankton to marine mammals. This long term monitoring approach allows for an improved understanding of the ocean and coastal ecosystems and the ability to develop predictive models of how marine resources respond to variability in coastal dynamics. Information on monitoring Monterey Bay is available and can prove valuable in the marine protected area process, water quality monitoring, restoring and maintaining ocean and coastal habitats and resources, and creating sustainable fisheries. The CIMT data collected is being integrated in multiple formats from raw data to models to GIS and is being shared with stakeholders to develop products that meet user needs. This poster fits under ocean observing and highlights CeNCOOS' CIMT project and the end user needs efforts that can help inform the OPC on the scientific understanding of ocean resources and ecosystem monitoring.