



Success

# CeNCOOS

## Interactive Geographic Information System (GIS)

### Project Description

The Center for Integrated Marine Technologies (CIMT) in collaboration with the University of California Santa Cruz Geographic Information System (GIS) Laboratory has brought together ship board, satellite, and buoy data sets to be displayed in an online interactive GIS.

<http://gis.ucsc.edu/website/cimt/default.htm>

CIMT data from various ship board data sets (zooplankton and krill) along with sea surface temperature (SST) accessed via satellites, and mooring data sets (water, air temperature, salinity, and meteorological data such as wind speed and direction) provide a more comprehensive understanding of the ocean environment in Monterey Bay. The biological data displayed has been collected from 2003-2006 and the SST and mooring data is provided in near-real time.

### Approach

We have chosen to use a GIS for our product display to illustrate our ability to geographically display various data sets into one integrated view of Monterey Bay. The online GIS also provide access to cartographic quality maps for printing.

### Value

This GIS allows viewers to look at the Monterey Bay and its changing conditions daily, monthly, and yearly, depending on the data selection. The GIS allows users to visualize a variety of CIMT data sets in order to explore possible associations between them. For example, overlaying shipboard zooplankton abundance with satellite imagery to help understand the relationships between zooplankton and temperature. This might give us a better understanding of the health of the bay.

### Future development

This project illustrates the developing capabilities of ocean observation systems and the potential for integrating and visualizing various data sets collected from a wide variety of sources.

### Resources

GIS website - <http://gis.ucsc.edu/website/cimt/default.htm>

CeNCOOS - <http://www.cencoos.org>

CIMT - <http://cimt.ucsc.edu>

