Moored physical and chemical parameters measured by Aanderaa at Isla Natividad, Mexico

Website: https://www.bco-dmo.org/dataset/719290
Data Type: Other Field Results
Version: 14 November 2017
Version Date: 2017-11-14

Project
» CNH: Enhancing Resilience of Coastal Ecosystems and Human Communities to Oceanographic Variability: Social and Ecological Feedbacks (CNH-Baja Pacific)

Contributors	Affiliation	Role
Micheli, Fiorenza	Stanford University	Principal Investigator
Woodson, Clifton Brock	University of Georgia (UGA)	Co-Principal Investigator
Rauch, Shannon	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

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Coverage

Spatial Extent: **Lat**:27.8804 **Lon**:-115.2134
Temporal Extent: 2010-06-06 - 2015-03-02

Dataset Description

Moored physical and chemical parameters measured by Aanderaa at Isla Natividad, Mexico.

Methods & Sampling

All instruments were mounted vertically on taut-line moorings. Instruments were deployed and recovered by scuba divers. Data were processed using vendor supplied software and quality controlled to remove bad data (salinity below 30 or above 40, temperature below 4 C or above 30 C, pressure < 1 m). No known issues or problems.

Data Processing Description

BCO-DMO Processing:
- added year column to better organize the data.

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Parameters

Parameter	Description	Units
Location	Mooring location/name	unitless
Latitude	Latitude; positive values = north	decimal degrees
Longitude	Longitude; negative values = west	decimal degrees
Type_Instrument	Instrument type	unitless
Country	Country of origin	unitless
Site	Region/site	unitless
deployment_name	Name of the deployment	unitless
Mooring_Name	Name of the mooring	unitless
year	4-digit year	unitless
Date_Time_LT	Time Stamp (LT; local standard time); formatted as yyyy-mm-dd HH:MM:SS	unitless
SN_Instrument	Instrument serial number	unitless
Sampling_Interval_minutes	Sampling interval	minutes
Salinity_Compensation	Salinity compensation	parts per thousand (ppt)
Depth_m	Water depth at location	meters (m)
MAB	Meters above bottom	meters (m)
Temperature_C	Water temperature	degrees Celsius
DissolvedOxygen_mgL	Water dissolved oxygen	milligrams per liter (mg/L)
DissolvedOxygen_Saturation	Percent dissolved oxygen saturation	unitless (percent)

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Instruments

Dataset-specific Instrument Name	Aanderaa 3835
Generic Instrument Name	Aanderaa Oxygen Optodes
Generic Instrument Description	Aanderaa Oxygen Optodes are instrument for monitoring oxygen in the environment. For instrument information see the Aanderaa Oxygen Optodes Product Brochure.

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Deployments

MP_Aanderaa

Website	https://www.bco-dmo.org/deployment/717403
Platform	Morro Prieto Pyramid
Start Date	2010-06-06
End Date	2015-03-02
Description	Aanderaa deployed at Morro Prieto Pyramid mooring from 06/06/2010 to 03/02/2015.

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Project Information

CNH: Enhancing Resilience of Coastal Ecosystems and Human Communities to Oceanographic Variability: Social and Ecological Feedbacks (CNH-Baja Pacific)

Coverage: Pacific Coast of Baja California 26 N – 32 N

This project will study the capacity of natural systems and human communities to adapt to environmental change. The research program will specifically investigate the impacts of oceanographic variability on coastal marine ecosystems and human communities of the Pacific coast of Baja California, Mexico, and the influences of local and global feedbacks on the resilience and adaptive capacity of these systems. Researchers will (1) characterize coastal oceanographic variability and the patterns and drivers of low-oxygen, or hypoxic, events; (2) assess the impacts of variability, particularly hypoxic events, on nearshore species, ecosystems, and fisheries, and compare these impacts with those of past ENSO events; (3) assess the cultural, social, and economic variables that influence the responses of local communities to these impacts, particularly their willingness and ability to invest in local conservation and adaptation; and (4) assess the willingness of selected groups of U.S. citizens to support these local conservation efforts and determine what factors influence such contributions.

As in a number of other coastal regions, the ecosystems and fisheries off Baja California have been heavily affected by extreme events driven by climate. ENSO events caused significant declines in key resources during 1982-83 and 1997-98, and recent episodes of low oxygen in the California Current region resulted in high mortality of ecologically and commercially important marine species. A better understanding of the capacity of humans and fisheries to adapt to oceanographic variability will help show how to mitigate the social and economic impacts of increased variability due to climate change and growing pressure on natural resources.

For example, this project will help allow us to anticipate the occurrence and effects on fisheries of low-oxygen events off western North America, and to design marine reserves so as to buffer them. By examining how the local effects of uncertainty in the ocean can spread more widely in society, the project will lead to broader adaptation strategies. The project will also train undergraduate and graduate students to integrate social and ecological studies, a vitally needed skill in an increasingly crowded world.

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Funding

Funding Source	Award
NSF Division of Environmental Biology (NSF DEB)	DEB-1212124

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