

“DRAFT”

**Climatic and Ecological Conditions in
the California Current LME for
January to March 2008**

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PaCOOS coordinator

Climate Predictions and Ecosystems

CLIMATE PREDICTIONS

- El Nino Southern Oscillation (ENSO)
- Madden Julian Oscillation (MJO)
- Pacific Decadal Oscillation (PDO)
- Upwelling Index (UI)

ECOSYSTEMS

- California Current Ecosystem Indicators:
 - Coastal Pelagics (Market squid, Pacific sardine, Northern anchovy).
 - Sardine
 - Salmon return and Salmon Management
 - Groundfish
 - Pacific Hake
 - Sablefish
 - Midwater species (Watson) from tropic & Central jack mackerel
 - Rockfish juveniles
 - Cassin's Auklet
- Invasive Species
- Marine Birds
- Harmful Algal Blooms
- Low Dissolved Oxygen Levels
- Copepod Community types Newport, Oregon
- **Mexico and Canada?**

Madden Julian Oscillation

- The National Weather Service (NWS) provides information about the Madden Julian Oscillation (MJO) and the El Nino Southern Oscillation (ENSO).
- The MJO is an equatorial intraseasonal oscillation that is 30-60 days long.
- <http://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/mjo.shtml>

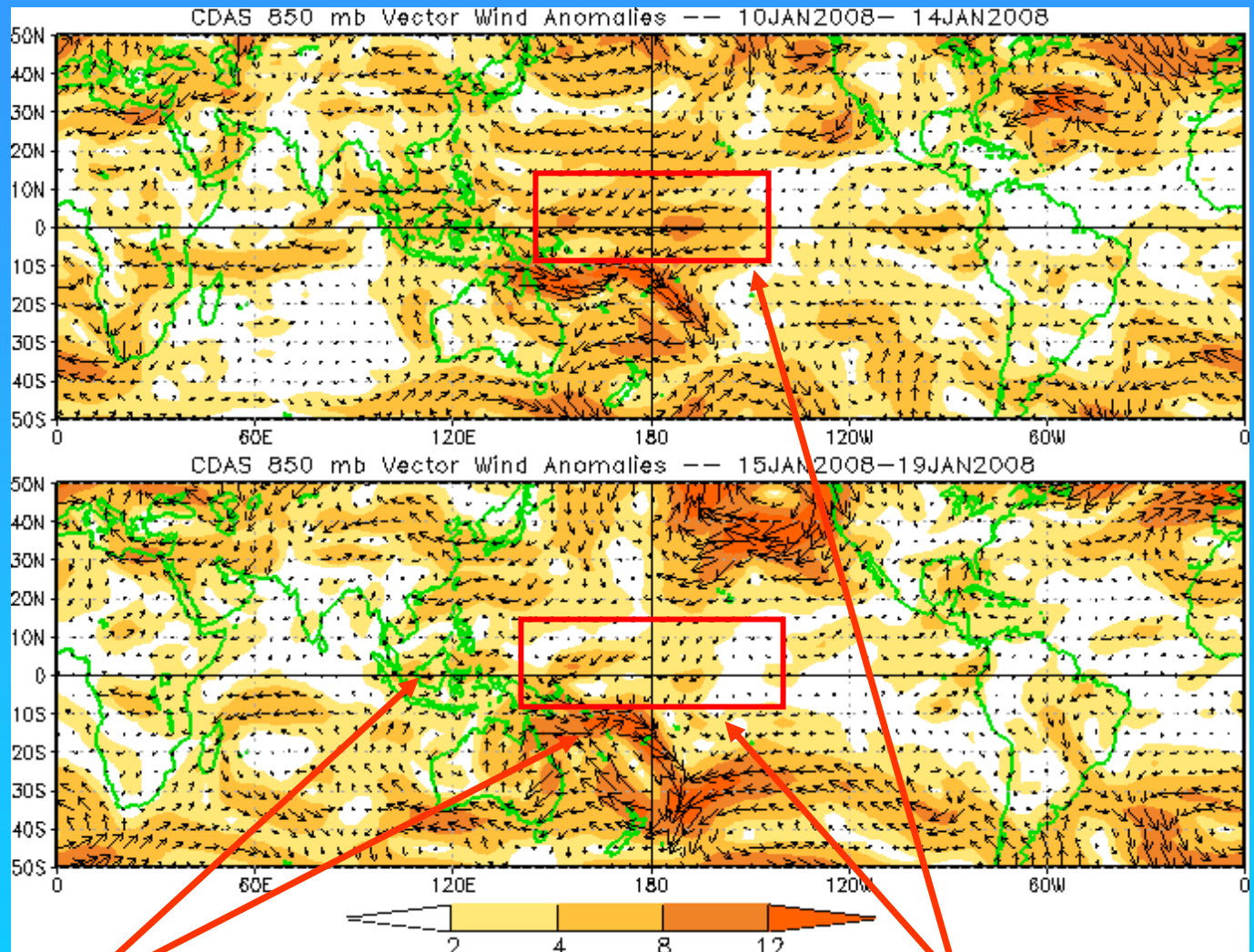
Madden Julian Oscillation

January Overview:

Observations indicate continued moderate-weak MJO activity but very slow eastward movements of enhanced convection into the western Pacific Ocean during early January.

850-hPa Vector Wind Anomalies (m s^{-1})

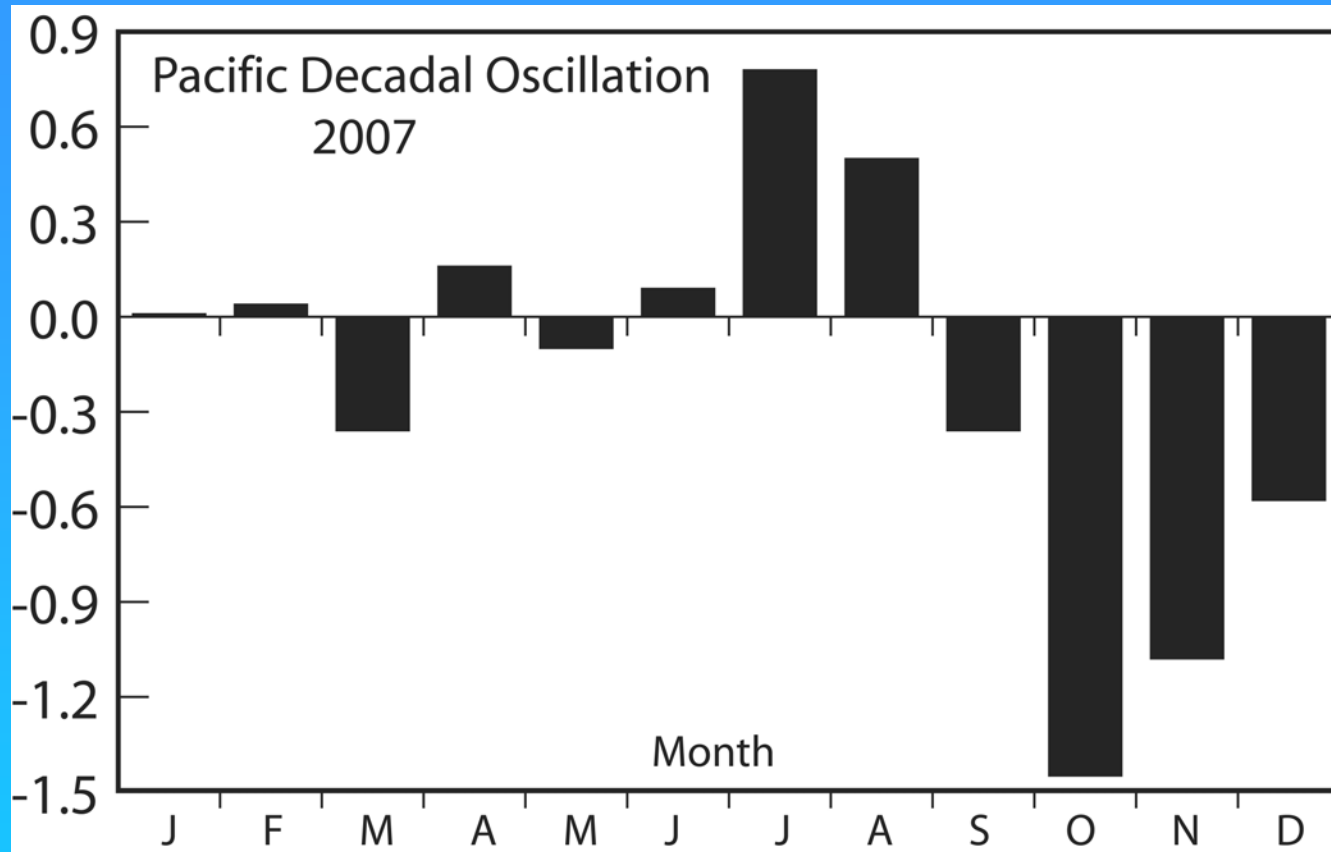
Note that shading denotes the magnitude of the anomalous wind vectors



Westerly anomalies continue across much of Indonesia and south of the equator in the western Pacific but have weakened slightly.

Easterly anomalies have weakened considerably across the western Pacific Ocean during the last five days.

Pacific Decadal Oscillation



The graph presents monthly values for the PDO index. Major changes in northeast Pacific marine ecosystems have been correlated with phase changes in the PDO; warm eras (positive index values) have seen enhanced coastal ocean biological productivity in Alaska and inhibited productivity off the west coast of the contiguous United States. Cold PDO eras (negative index) have seen the opposite north-south pattern of marine ecosystem productivity.

California Current Ecosystem Indicators

– Sardine

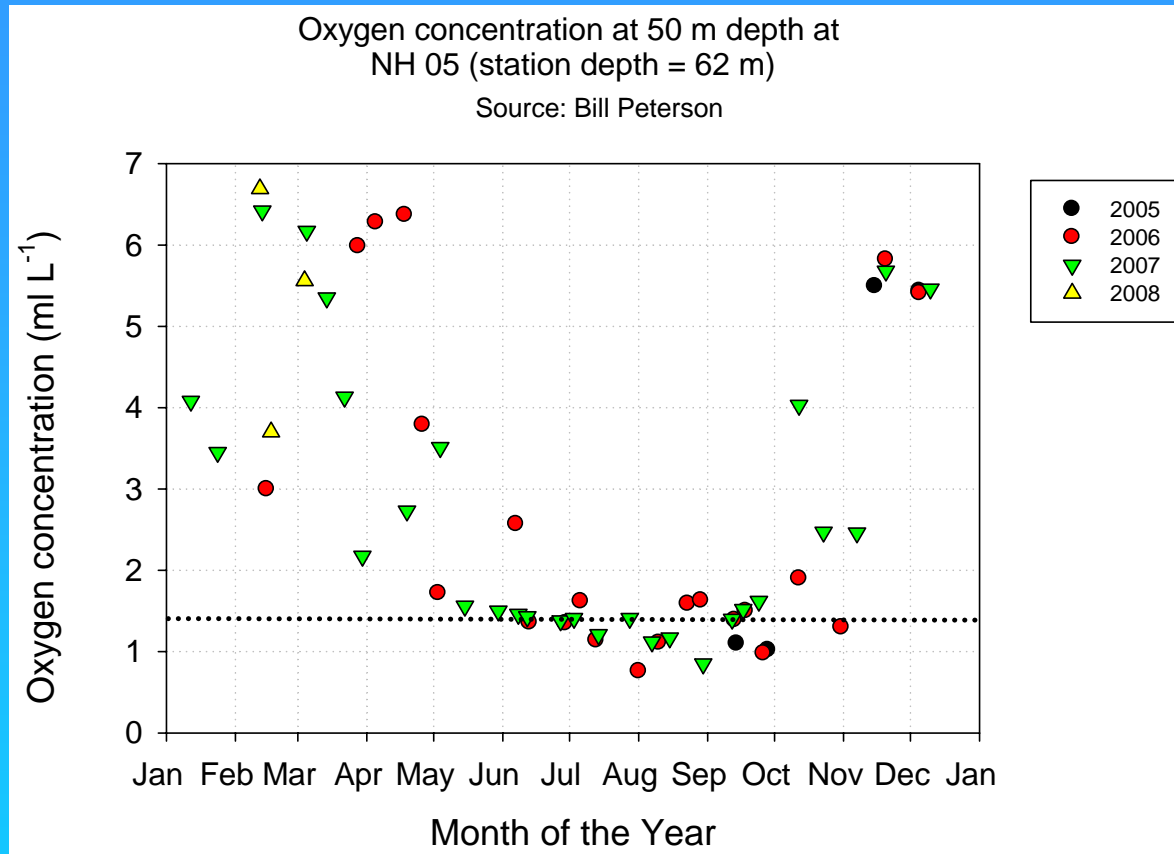
2007 California sardine (*Sardinops sagax*) landings was one of the largest since the decline of the early sardine fishery of the 1940s and 1950s. Landings in California, Oregon and Washington state fisheries were 89,231 metric tons (mt), 43,052 mt and 4,663 mt, respectively. The 2008 harvest guideline (HG) for Pacific sardines was established at 89,093 mt.

– Salmon

Salmon return to natal rivers of the Pacific coast during 2007 was poor to fair compared to 10-year average returns.

Salmon Management: The PFMC has released a report indicating that Sacramento fall Chinook salmon returns will fall to an all-time low in 2008. At the March meeting in Sacramento, the Council reviewed a list of 46 possible factors that may be contributing to the decline.

Low Dissolved Oxygen Levels



Oxygen concentration in bottom waters on the shelf off Newport, Oregon follow the seasonal cycle of upwelling. When upwelling is in progress (generally from May through September), cold and salty water with low oxygen appears in deep waters of the shelf. During winter months when downwelling is the dominant process and the poleward-flowing Davidson current dominates, oxygen values are high.

Next Steps

Posting on the PaCOOS website and sending out emails to those who sign up. The postings will have regular entries providing immediate information about unusual climatic and ecological conditions in the California Current Large Marine Ecosystem.

Water Headlines for May 5, 2008

Benjamin H. Grumbles

Assistant Administrator for Water Water Headlines is a weekly on-line publication that announces publications, policies, and activities of the U.S. Environmental Protection Agency's Office of Water

In This Week 's Water Headlines:

- 1) What's in Your Bottle?
- 2) EPA's Great Lakes Earth Day Challenge a Resounding Success
- 3) Three More Indian Tribes Authorized to Administer Water Quality Standards Program
- 4) Free May 8 Webcast on EPA's Draft Water Climate Change Strategy
- 5) Free May 13th Webcast on Wetlands and Climate Change
- 6) Sustainable Finance Online Training
- 7) Helping Water Systems to Inform the Public
- 8) Subscribe to Water Headlines

THE COLUMBIA BASIN BULLETIN:

Weekly Fish and Wildlife News

www.cbbulletin.com.

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All stories below are posted on the CBB's Free Newsletter page at <http://www.cbbulletin.com/Free/Default.aspx>.
Also available is a free RSS news feed. -----

TABLE OF CONTENTS:

* Sea Lion Mystery: 'How Did The Animals Die And How Did The Doors Get Closed?'

<http://www.cbbulletin.com/Free/273912.aspx>

* Parties Mull New BiOps; Not Clear If Another Round Of Litigation In The Works <http://www.cbbulletin.com/Free/273911.aspx>

* Tribes, Federal Agencies Sign 'Columbia Basin Fish Accords' Resulting From BiOp Remand

<http://www.cbbulletin.com/Free/273910.aspx>

* For First Time Montana Gets Desired Dam Operations In Federal Salmon Recovery Plans

<http://www.cbbulletin.com/Free/273909.aspx>

* Spring Chinook Returns Still Running Late; Willamette Falls Closed; Tribal Fishery Begins

<http://www.cbbulletin.com/Free/273908.aspx>

* Updated Basin Runoff Forecast Shows 98 Percent of Average For April-September

<http://www.cbbulletin.com/Free/273907.aspx>

* Weather Releases Enough Water To Meet Both McNary Fish Flows, Reservoir Objectives <http://www.cbbulletin.com/Free/273906.aspx>

* Council Report: BPA Spent \$716 Million in FY07 On F&W Mitigation, \$9.4 Billion Since 1978

<http://www.cbbulletin.com/Free/273903.aspx>

* Hydro, Fish Managers Balancing Idaho Flow Aug For Fish With Assuring Dworshak Refill

<http://www.cbbulletin.com/Free/273901.aspx>

* Pikeminnow Sport Reward Fishery Program Begins; \$500 Fish Out There

<http://www.cbbulletin.com/Free/273900.aspx>

* Sea Lion Mystery: 'How Did The Animals Die And How Did The Doors Get Closed?'

<http://www.cbbulletin.com/Free/273912.aspx>

In Summary

- Was this three month summary valuable?

Assuming that this is Valuable:

- Do we have all the right information?
- Who else should we contact?
(Mexico, Canada, Other?)

References

- Jerrold Norton (NOAA)
- Bill Peterson (NOAA)
- Gregg Langlois (Senior Environmental Scientist, CA Department of Public Health)
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- MJO <http://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/mjo.shtml>
- The Environmental Research Division of the Pacific Fisheries Environmental Laboratory
http://www.pfeg.noaa.gov/products/PFEL/modeled/indices/upwelling/NA/daily_upwell_graphs.html
- ODFW <http://www.dfw.state.or.us/MRP/finfish/sardine/sardland08.asp>
- Pacific Fisheries Management Council <http://www.pcouncil.org/>
- The Columbia Basin Fish and Wildlife News Bulletin
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- U.S. Fish and Wildlife Service <http://www.fws.gov/pacific/>
- Harmful Algal Blooms
http://www.cdph.ca.gov/HealthInfo/environhealth/water/Documents/Shellfish/MonthlyandQuarterlyReports/2008/Biotxin_Monthly_0108.pdf