C-CAN

California Current Acidification Network

Photograph by David Littschwager

What is C-CAN?

C-CAN is an *ad hoc* collaboration of academic scientists, commercial fishing and aquaculture interests together with state and federal resource managers who came together in an effort to better understand the drivers of ocean acidification along the US West Coast, and its likely impacts on organisms along the coast.

It grew out of a workshop held in Costa Mesa, CA in July 2010 to talk about *Ocean Acidification Impacts on Shellfish*.

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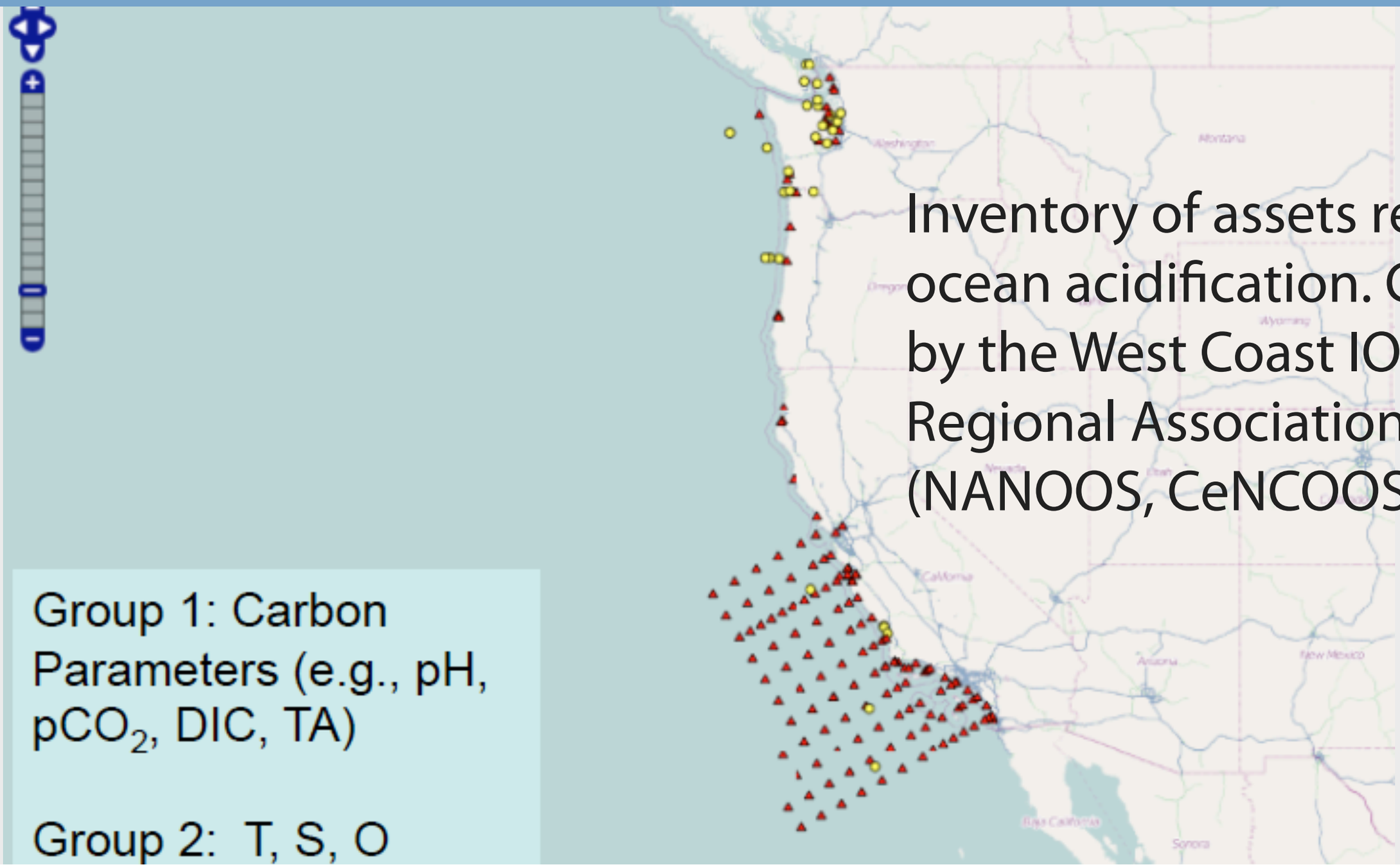

Inventory of assets relevant to ocean acidification. Compiled by the West Coast IOOS Regional Associations (NANOOS, CeNCOOS, SCOOS).

Group 1: Carbon Parameters (e.g., pH, pCO_2, DIC, TA)

Group 2: T, S, O

Problem

Much current carbon chemistry data along the US West Coast are unsuitable for the needs of C-CAN stakeholders

- Carbon chemistry often not measured at locations that coincide with biological studies
- Existing measurements not of uniform quality
- Predictive models not available on local scales

C-CAN was initiated (in part) to develop a network that integrates biological and chemical monitoring

Has held 3 workshops within past 15 months bringing these disparate stakeholders together

July 2011	*Costa Mesa, CA*
December 2011	*Palo Alto, CA*
August 2012	*La Jolla, CA*

Supported by a grant to UC San Diego from the

GORDON AND BETTY MOORE FOUNDATION

Progress

Various stakeholders are now talking regularly with each other and see themselves as involved with C-CAN

This has resulted in enhanced attention from the management community

There has been broad agreement on various technical aspects of establishing an observing network

What to measure? Where? Data handling?

Measurements are required that enable the aragonite saturation state of seawater to be determined with an overall uncertainty of ±0.2, and that also enable a complete description of the seawater CO_2 system – including p(CO_2) and pH.

The focus should be on the waters along the shore line, particularly in places where they can better inform co-located biological studies.

The regional associations of IOOS could provide an appropriate data handling and dissemination mechanism for this C-CAN network.

What is still needed for this to happen?

Need explicit guidance for potential participants (at a variety of levels of expertise) as to how best to make such such measurements.

- What available instruments can achieve these goals?
- How should they be used? (Methods / Training)
- How should the resulting data be reported?
- What data synthesis will increase its value to users?

C-CAN is working (together with others) to document this information and to plan (and seek support) for the necessary training and other essential infrastructure.

Debbie Aseltine-Neilson	California Department of Fish & Game
Alan Barton / Sue Cudd	Whiskey Creek Hatchery, OR
Andrew Dickson	University of California, San Diego
Richard Feely	NOAA Pacific Marine Environmental Lab
Gretchen Hofmann	University of California, Santa Barbara
Ian Jefferds	Penn Cove Shellfish, WA
Teri King	Washington Sea Grant
Chris Langdon	Oregon State University
Skyli McAfee	California Ocean Science Trust
Jan Newton	University of Washington – NANOOS
Diane Pleschner-Steele	California Wetfish Producers Association
Bruce Steele	California sea urchin diver
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New C-CAN co-chairs moving into the future