Ocean Acidification: Connecting Science with those who need it

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"We will lose our farm, our homes, and six generations of our hopes and dreams and investments." The thesis:

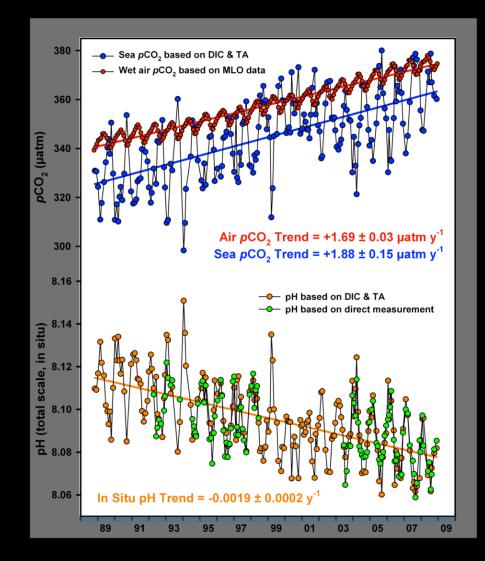
Millions of people

depend on the insights that

your research

can provide.

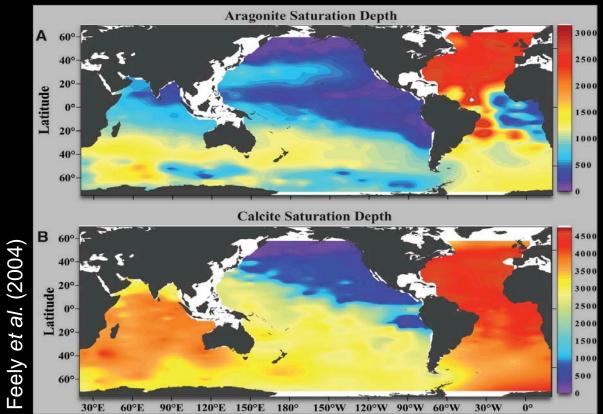
The Chemistry Problem:



Doney, Science 2010 Dore et al., PNAS 2009

The Biology Problem:

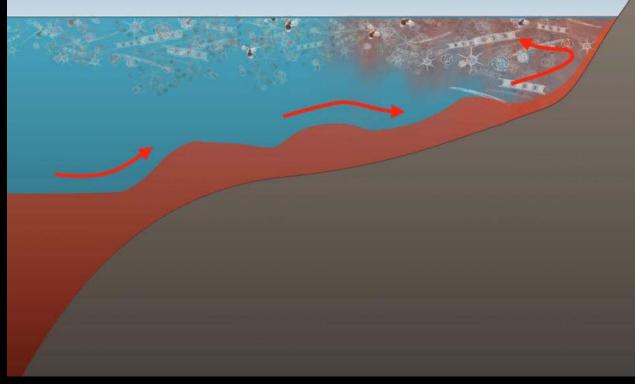
Observed aragonite & calcite saturation depths



The **aragonite saturation state** migrates towards the surface at the rate of 1-2 m yr⁻¹, depending on location.

The Coastal Problem:

Seasonal invasion of corrosive upwelled water on the west coast of North America



Upwelling of CO_2 -rich intermediate waters, undersaturated with aragonite (Ω_{arag}), onto continental shelf from a depth of 150 – 200m

People









Lobster Rolls Scallop Rolls Fresh Oysters Seafood To Go

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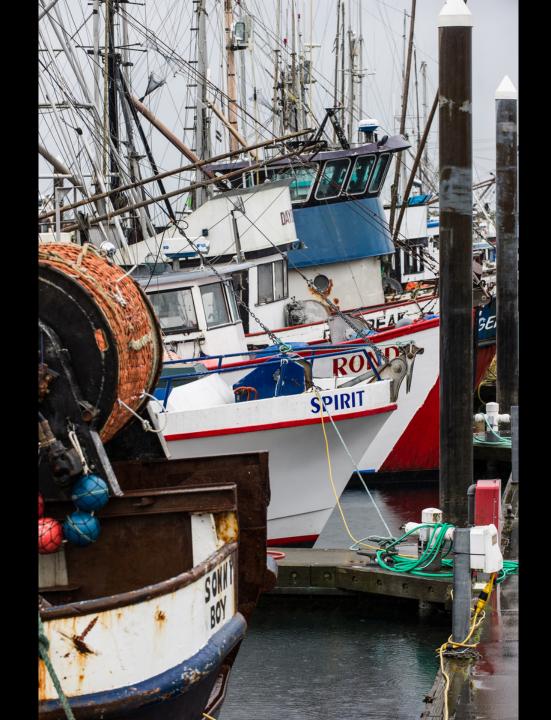
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Lobster Bisque Greamy Clam Chowder \$4.99 Salt Pond Oysters

Salt Pond Oysters Point Judith Littlenecks Jumbo Shrimp Cocktail

Cive Surite Root Beer Ce cold Water Constanting raw or under cooked meats, poultry, sealend, shelling or eggs may increase your risk of food bern liness



"This is a devastating ghost lurking in the shadows."

-Donald Waters, Gulf of Mexico Fisherman Testifying in a Senate hearing on OA April 2010 The thesis:

Millions of people

depend on the insights that

your research

can provide.

So how can you connect with those who need it?

But first, a word of warning...

Photo: Jason Baker

Don't just show data. Show what the data *mean*.

Photo: Stanford Medicine

Focus on the *insights* from the model, not the model. model itself.



Photo: Ariel Jacobsen

Whenever possible, bring the science back to the *human scale*.

Photo: Lachlan Telfer

Don't forget *context!* Give them the tools to understand.

Photo: Paul Newton

Own your *caveats and uncertainty*. Don't let them own you.

Photo: "towards light"

How you can connect:

- Don't just show data. Show what the data *mean*.
- Focus on the *insights* from the model, not the model itself.
- Whenever possible, bring the science back to the *human scale*.
- Don't forget *context*! Give them the tools to understand.
- Own your *caveats and uncertainty*. Don't let them own you.

It takes time, effort, and thoughtfulness.*

*It can't just be an afterthought!













Taylor Shellfish Farms 100 Years of Farming the Worlds Best Oysters



