

# NOAA Research Matters

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**NOAA Assistant Administrator**  
**Office of Oceanic and Atmospheric Research**



NOAA Brown Bag Seminar  
25 March 2010

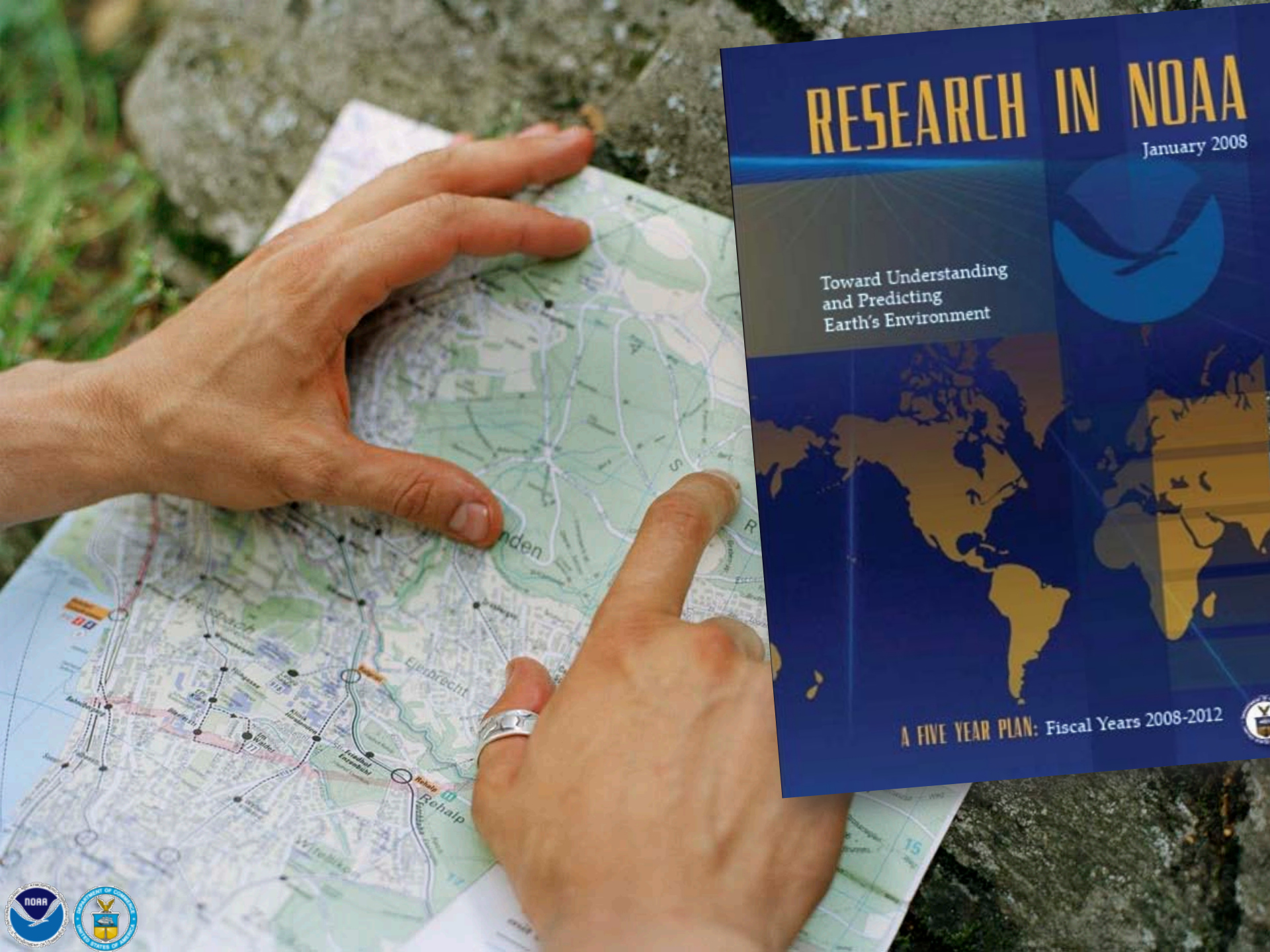
**The proof is in the [eating of] the  
pudding.**



**Milk, sugar, and eggs.**







# RESEARCH IN NOAA

January 2008

Toward Understanding  
and Predicting  
Earth's Environment



A FIVE YEAR PLAN: Fiscal Years 2008-2012



**OAR**

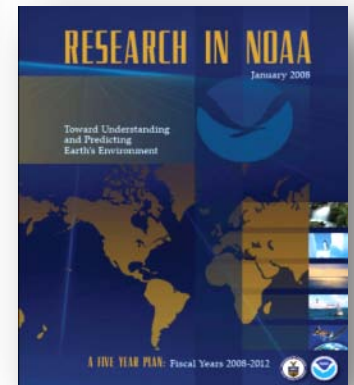
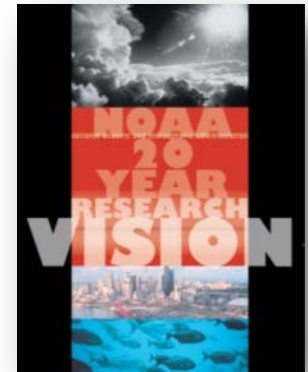
**core values**

**Preeminent  
research**

**Value to society**

**Culture of  
transparency**

# Laboratory Reviews



Core values as goals



**The proof is in the pudding.**





# Whom do you recognize?



Susan Solomon



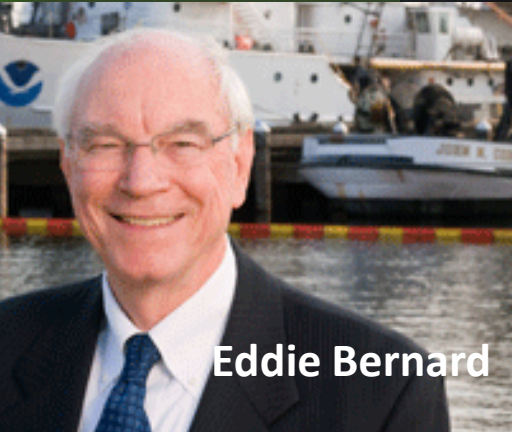
Mike McPhaden



Dick Feely



Evan Forde



Eddie Bernard



Isaac Held



Pam Heinselman



Yi Ming

Climate

Weather

Ocean,  
coasts, &  
Great  
Lakes

Arctic

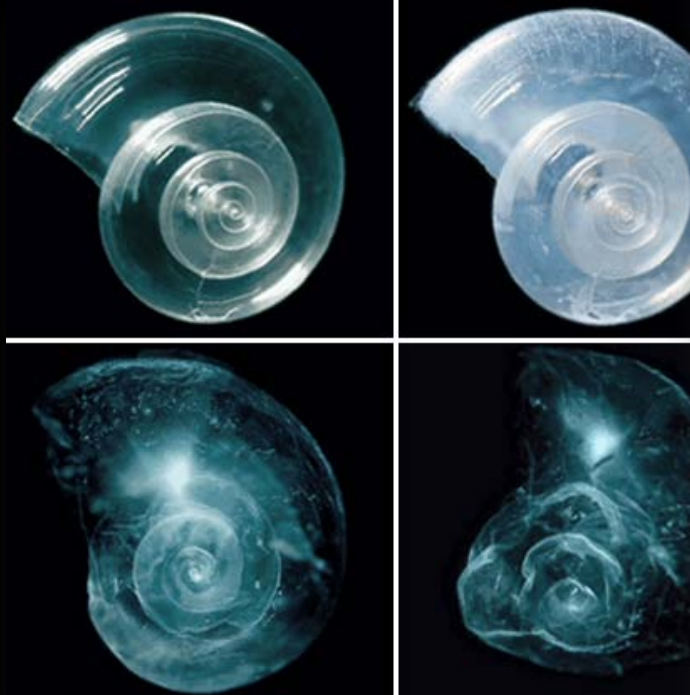
Observations · Modeling · Forecasts · Projections · Assessments



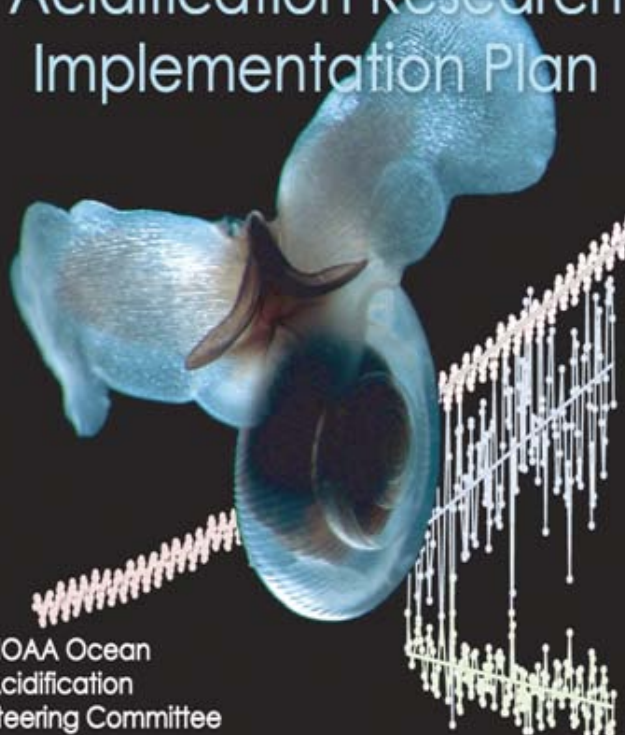


# Ocean acidification

Dick  
Feely



## NOAA Ocean and Great Lakes Acidification Research Implementation Plan

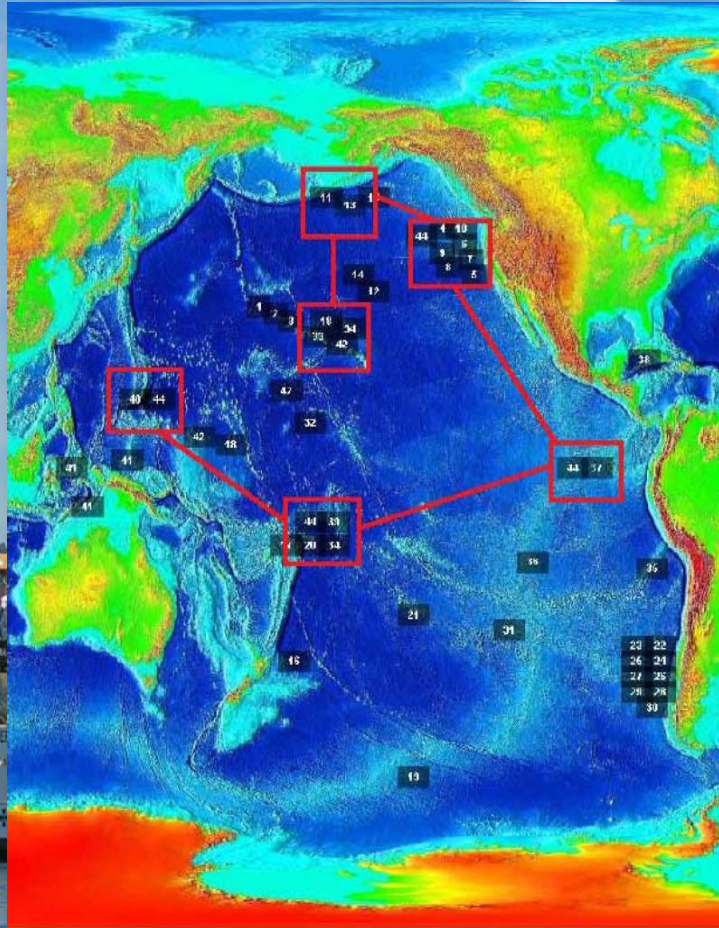


NOAA Ocean  
Acidification  
Steering Committee

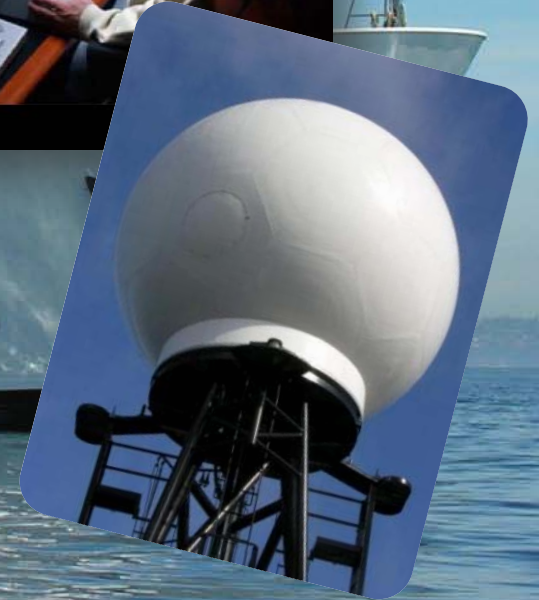
March 2010



# Ocean exploration



Doctors  
On Call



Boxes & Sticks

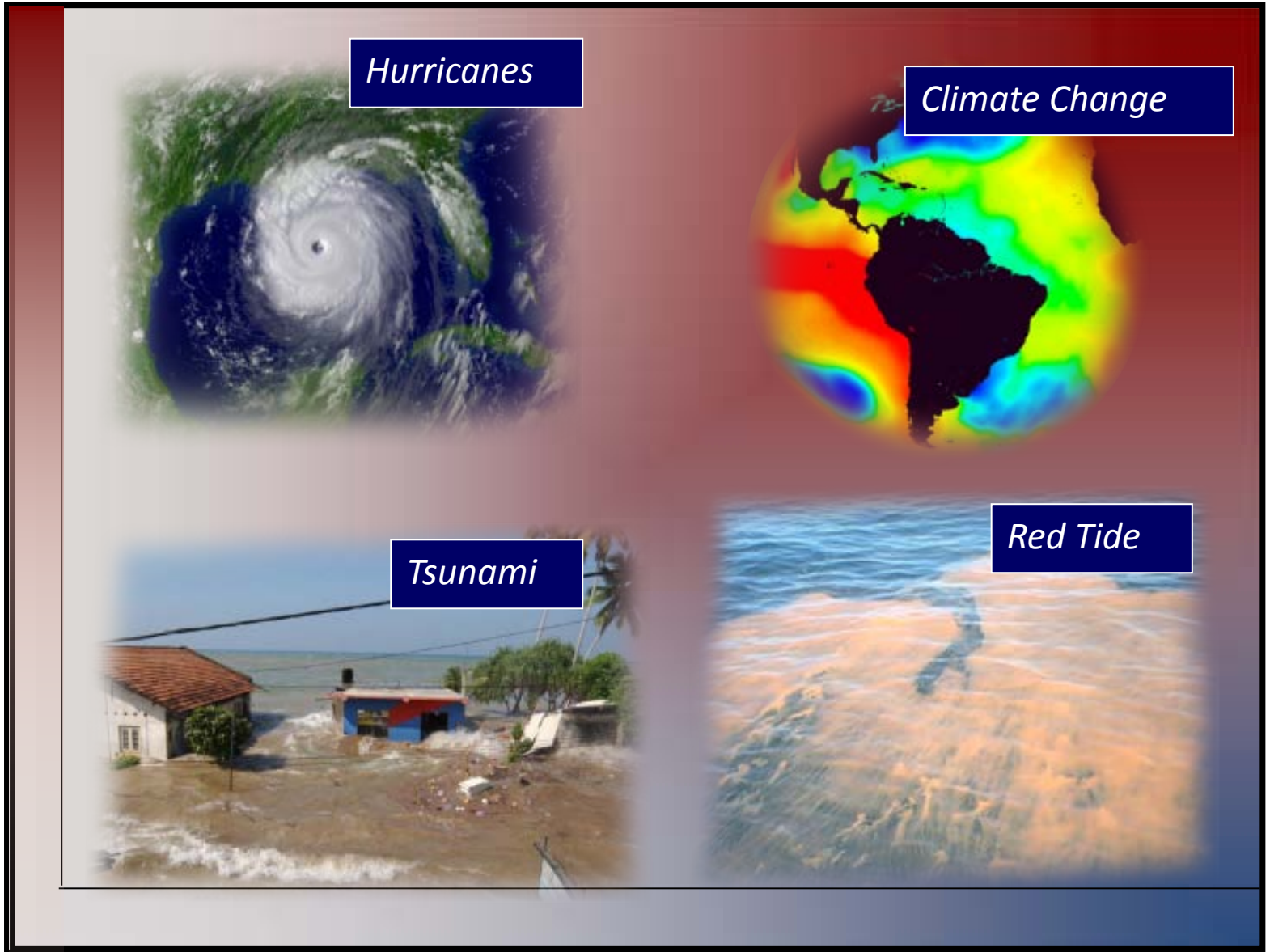




High

Risk

(= probability of hazard x consequence)

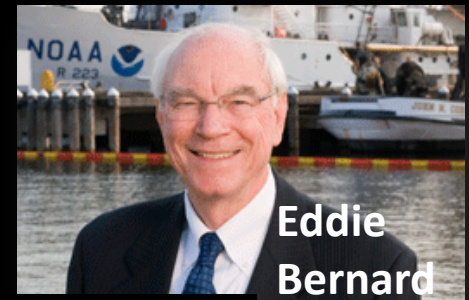


Low

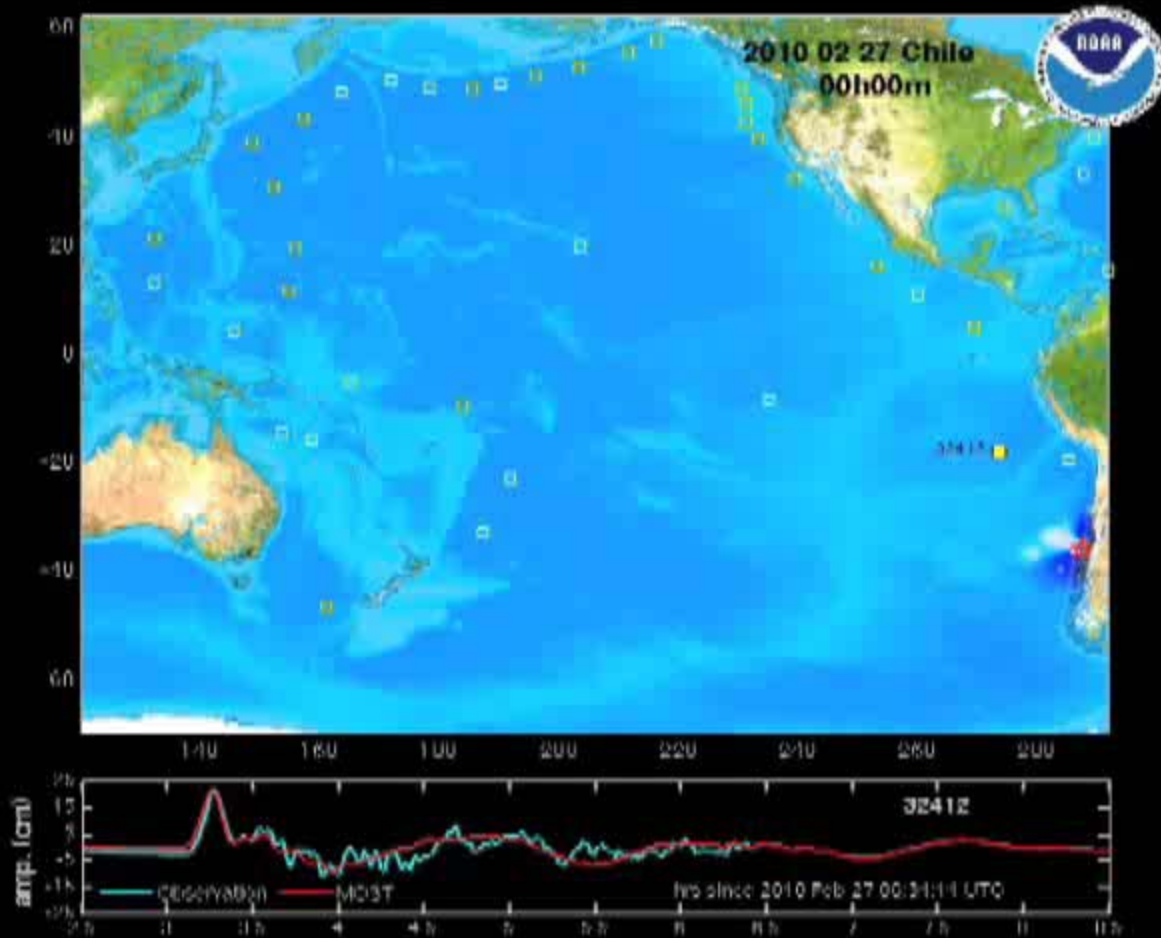
Uncertainty

High

# Buying down risk



Eddie  
Bernard



Tsunamis



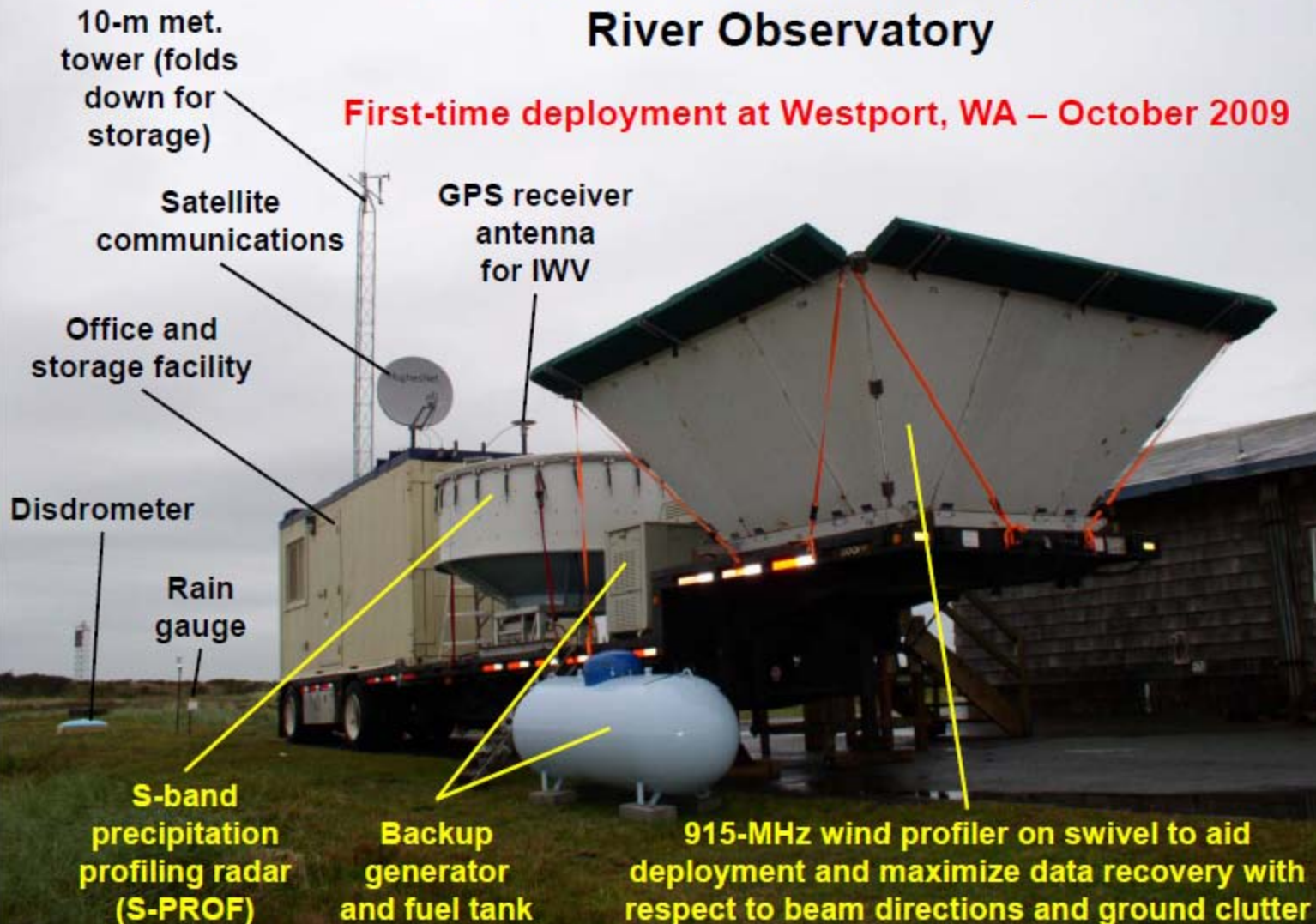


# Buying down risk

## Flooding

### NOAA's New Mobile Atmospheric River Observatory

First-time deployment at Westport, WA – October 2009



## Buying Down Risk

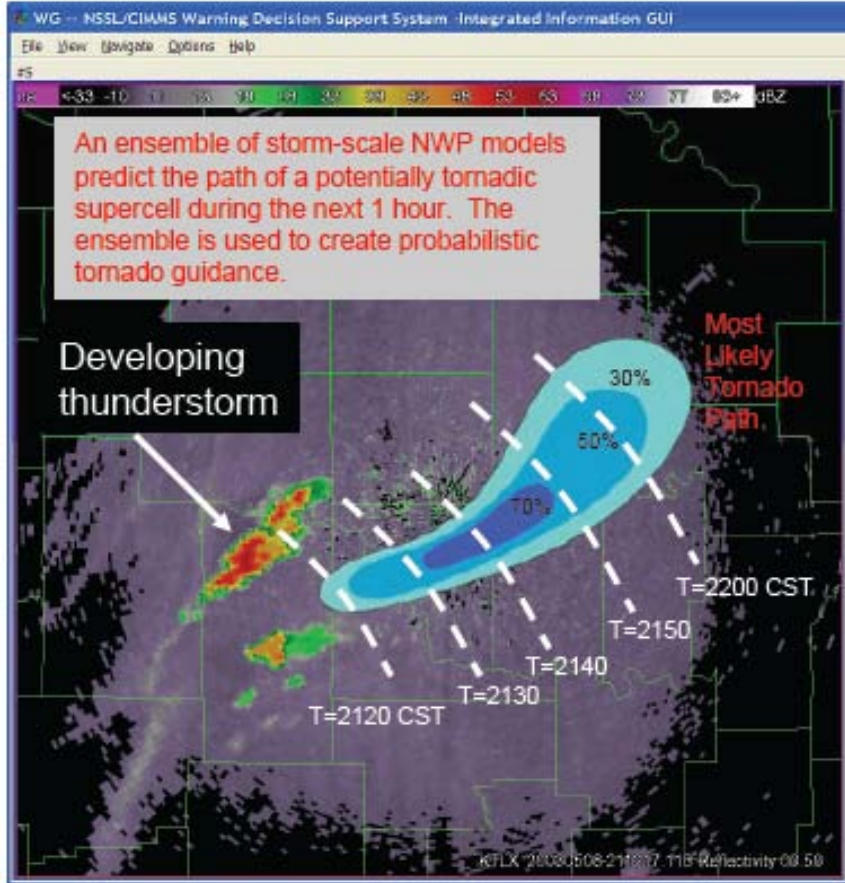


Pam Heinselman



Observations

### Radar and Initial Forecast at 2100 CST



Models & Forecasts





## Buying Down Risk



### Hurricane Forecast Improvement Project

### HFIP Goals

Reduce *track* error by 50% at all lead times

Reduce *intensity* error by 50% at all lead times

Increase the probability of detection and reduce the false alarm ratio of *rapid intensification* events

Extend lead time to 7 days

**You also need cornstarch.**

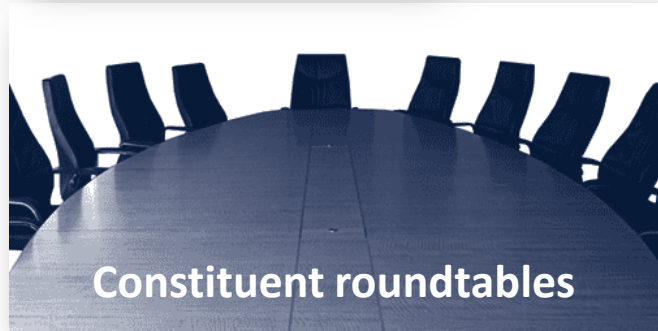




# Engaging stakeholders



Hill briefings  
& testimony



Constituent roundtables



International  
relations

# Science Partnerships



Hazardous Weather Testbed



UAS



Intra-agency · Interagency · Academic · Corporate · International

NOAA Line Office Retreats



# Next generation preeminence





# Creating an attentive public



+ **exploratorium**  
the museum of science,  
art and human perception



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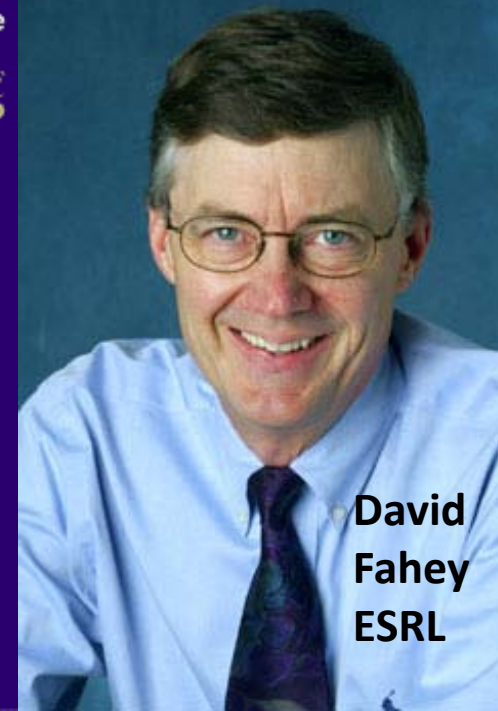
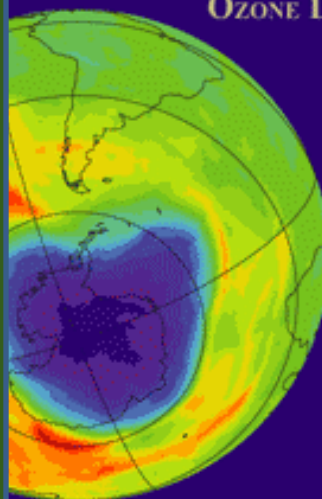
# Valuing scientists as communicators



Keith Dixon, GFDL

Twenty Questions and Answers  
About the Ozone Layer: 2006 Update

SCIENTIFIC ASSESSMENT OF  
OZONE DEPLETION: 2006



David  
Fahey  
ESRL

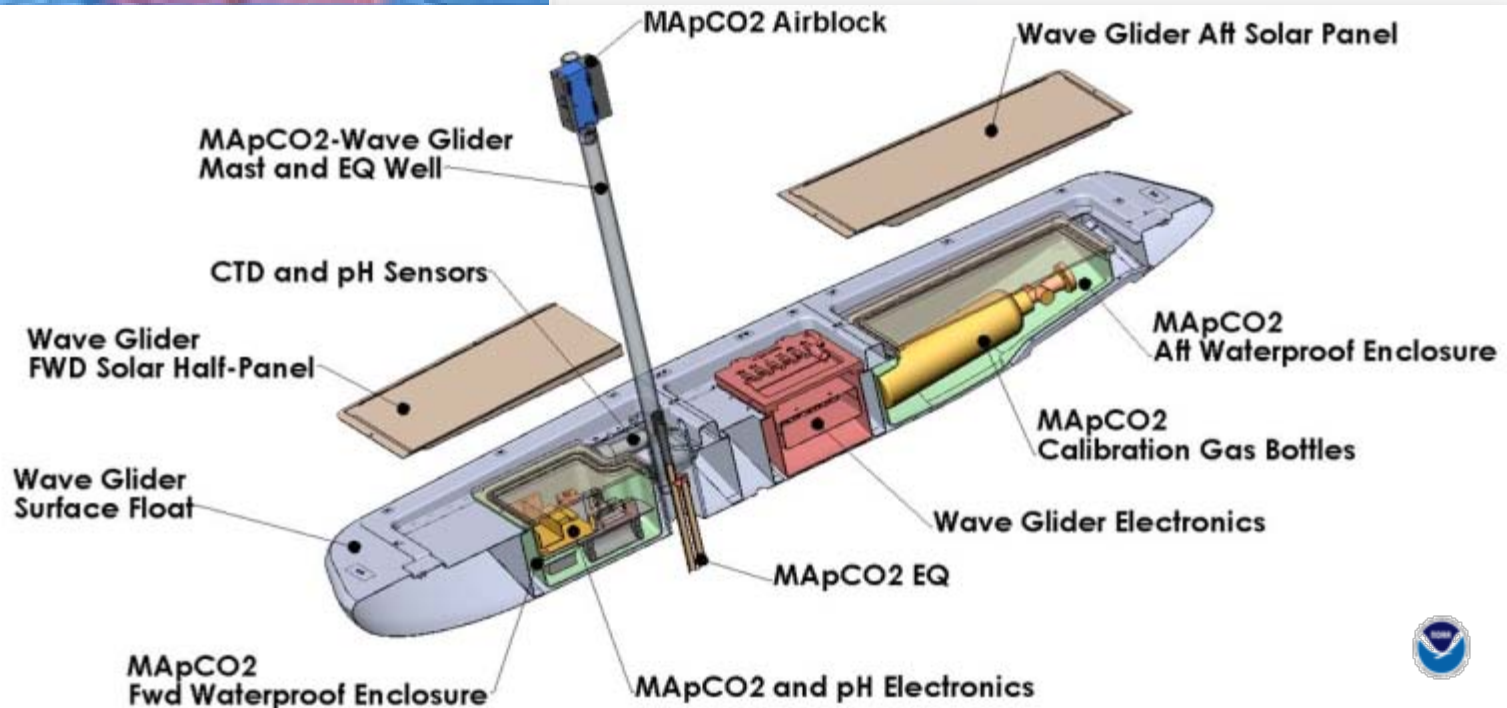
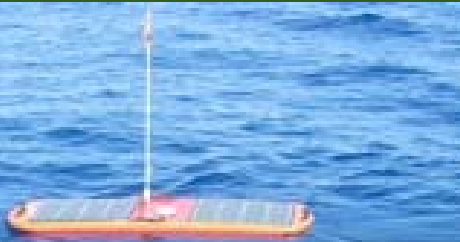


**Who invented tiramisu?**





# Wave Glider



*Novel platform*

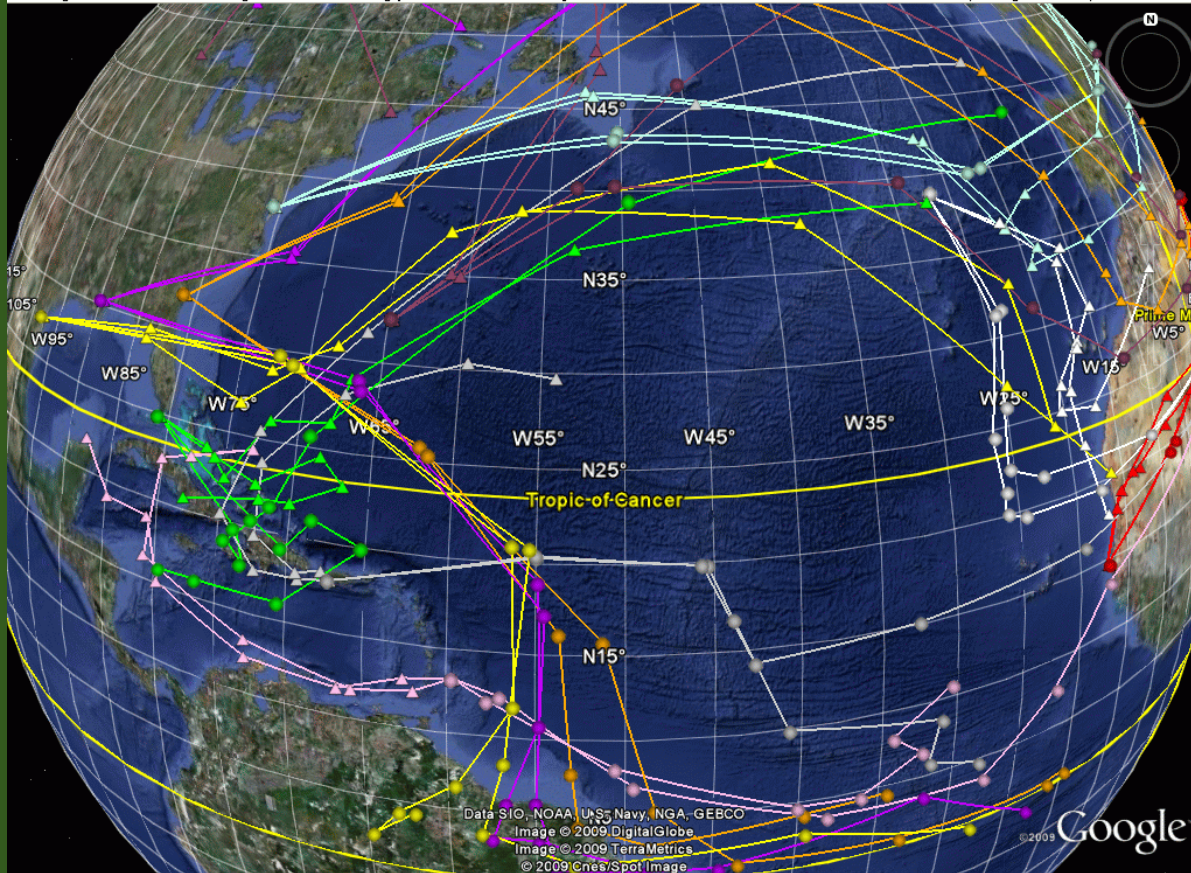
*Bio-geo-chemical payload*



# WISDOM



Half-deg GFS & FIM runs starting Nov30 00z showing predicted 0-7 model day WISDOM Balloon locations for launches at model start; triangles=12k ft, circles=26k ft.



**Bon appetit!**

**Thank you**

