



NOAA and OAR Approaches to Research Planning

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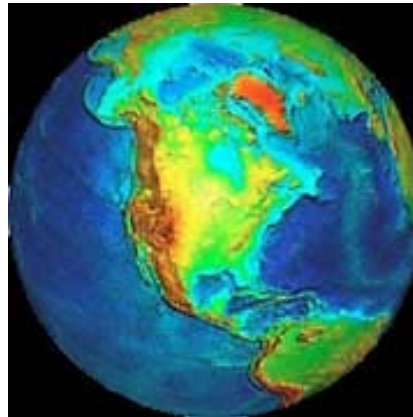
NOAA's Research Engine

Innovation

Climate



Incubation



**Ocean and
Coastal
Resources**

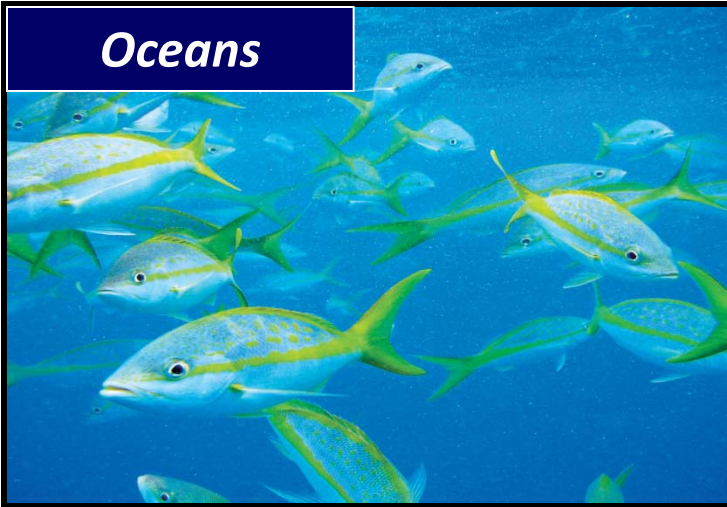
Integration

**Weather
and Air
Quality**



NOAA Goals

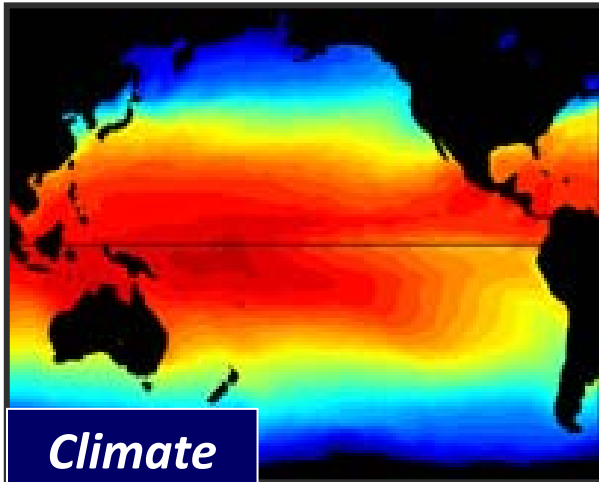
Oceans



Weather



Climate



Coastal Economies



Oceanic & Atmospheric Research

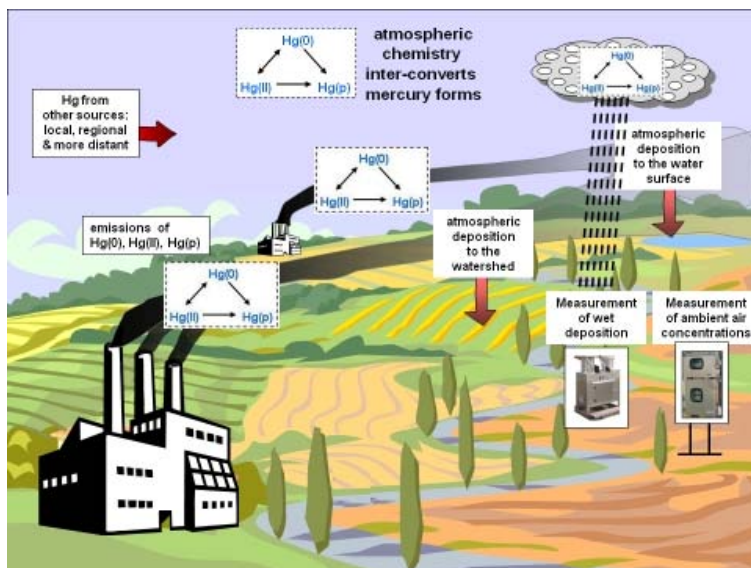
Vision

A society that uses the results of our research as the scientific basis for more productive and harmonious relationships between humans and the environment.



Mission

To conduct environmental research, provide scientific information and research leadership, and transfer research into products and services to help NOAA meet the evolving economic, social, and environmental needs of the Nation.





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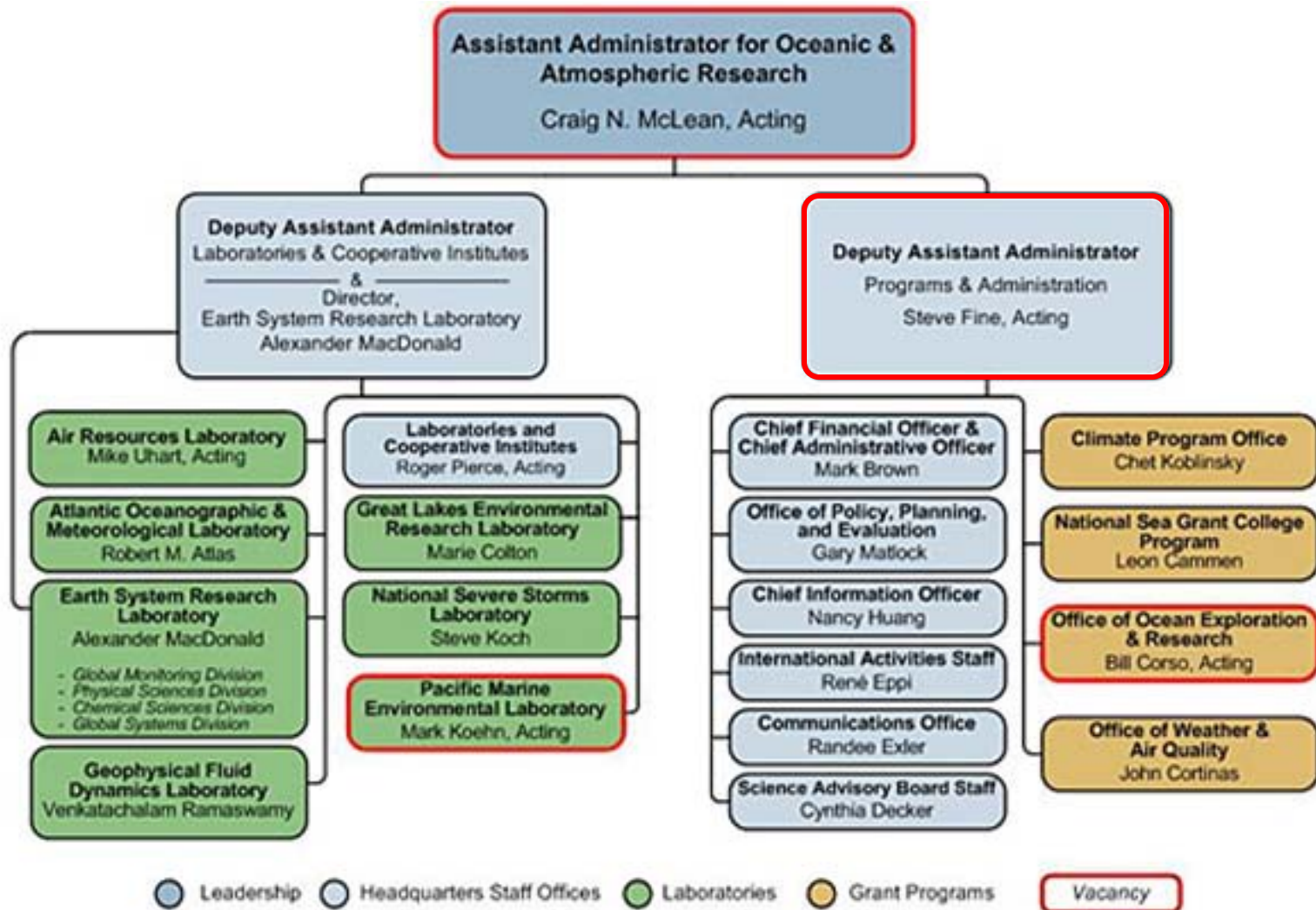
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Vacant

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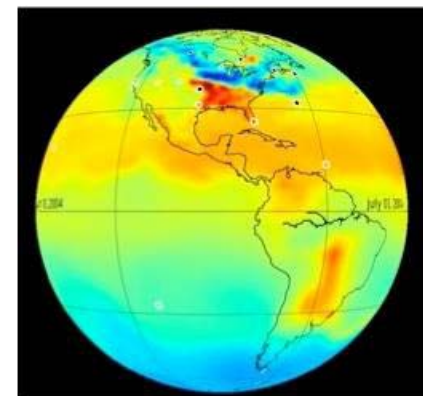
Office of Oceanic and Atmospheric Research





A Proposed Climate Service

- The President's FY 2012 Budget Request includes a **Climate Service Line Office** within NOAA
- The proposed Climate Service will bring together NOAA's existing climate research, observations, monitoring, modeling, information product development and delivery, and decision support functions
- It will sustain core capabilities and improve understanding and the characterization of the nation's vulnerability to climate change
 - Arctic Watch
 - Water Resources Research to Operations
 - Carbon Observing and Analysis System
 - Earth System Modeling
 - Global Ocean Observing System





NOAA's Changing Strategic Directions

1998 - 2008

2008 - Future

**Requirements
and Drivers**

**Ocean Commission
Blueprint
NOAA Strategic Plan
NOAA 20 Year Vision
NOAA 5 Year Research
Plan**

**National Ocean Policy
Next Generation Strategic
Plan
Proposed Climate Service
OAR Restructuring**

**NOAA
Actions**

**Creation of:
NOAA SAB
NOAA Research Council
Five Strategic Mission
Goals
Matrix Program Structure**

**NOAA Science Workshop
and Grand Challenges
Strengthening Science
Mission Goals
Enterprise Objectives**



NOAA Science Workshop

Strengthening NOAA Science

April 20 – 22, 2010

First-of-its-kind meeting to engage active NOAA scientists and science managers to identify grand science challenges for NOAA over the next five to twenty years

Overarching Grand Challenge

Develop and apply holistic, integrated Earth system approaches to understand the processes that connect changes in the atmosphere, ocean, space, land surface, and cryosphere with ecosystems, organisms and humans over different scales.

Also identified 7 topic specific challenges and 2 cross cutting challenges



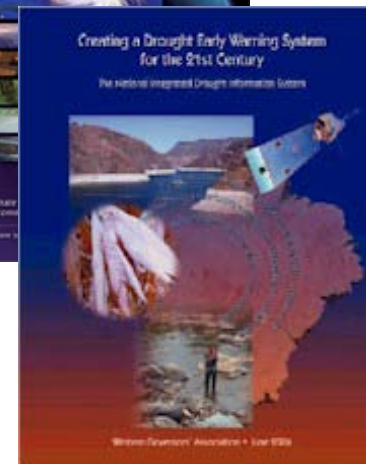
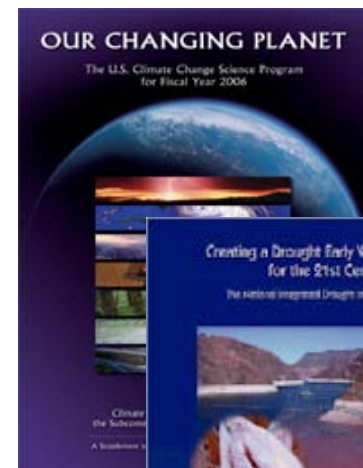
Drivers for NOAA Research

Policy Drivers

- United States Global Change Research Program (USGCRP)
- US National Ocean Policy
- NOAA Next Generation Strategic Plan
- NOAA 5-Year Research Plan
- NOAA 20-Year Research Vision
- National Response Framework

Legislative Drivers

- Clean Air Act
- National Climate Program Act
- America COMPETES Act





NOAA's Next Generation Strategic Plan

NOAA's Mission:

Science, Service, and Stewardship

- To understand and predict changes in climate, weather, oceans, and coasts,*
- To Share that knowledge and information with others, and*
- To conserve and manage coastal and marine ecosystems and resources*

NOAA's Vision:

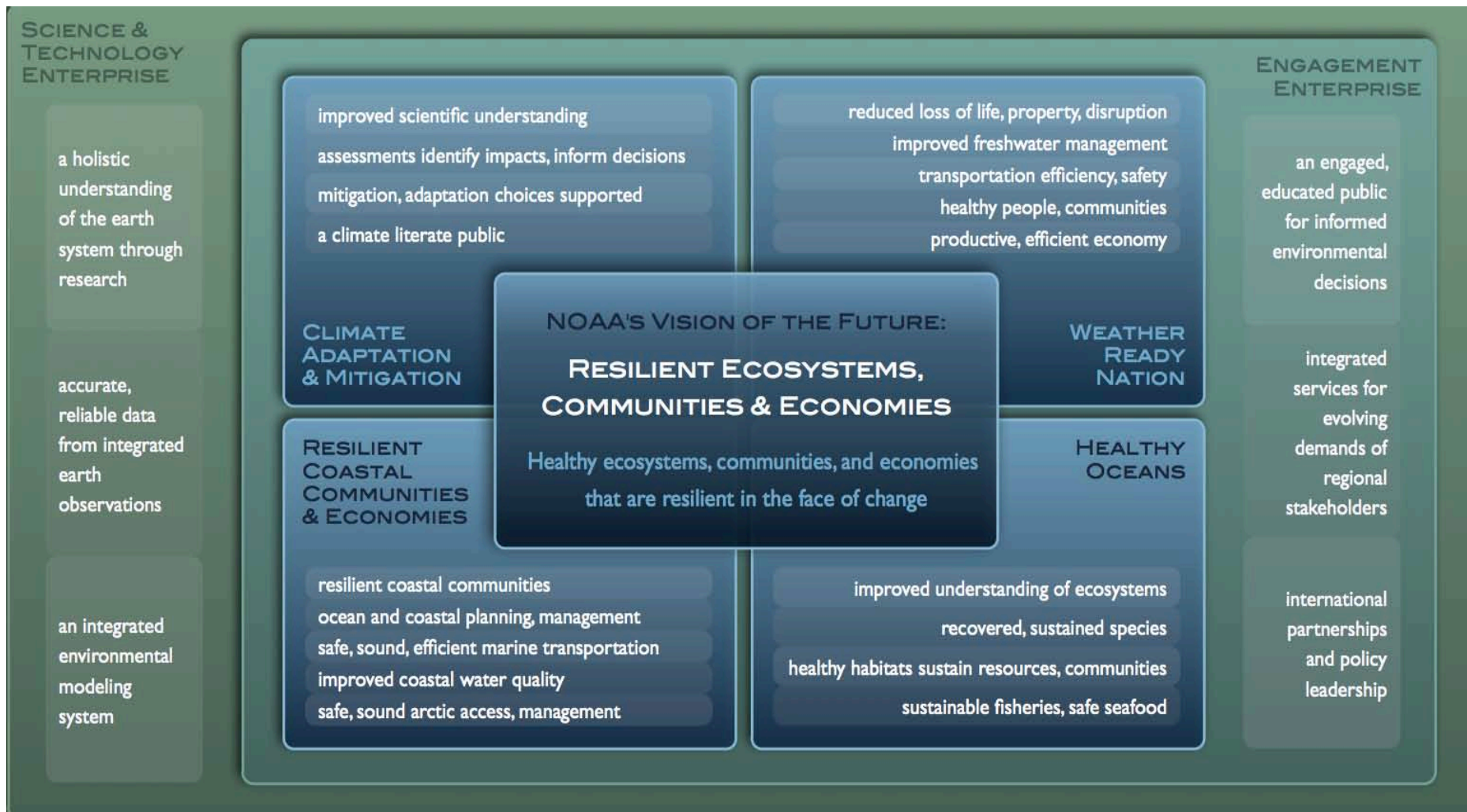
Resilient Ecosystems, Communities, and Economies

Healthy ecosystems, communities, and economies that are resilient in the face of change.





NOAA's Next Generation Strategic Plan





NOAA 5-Yr Research Plan

- Emphasizes the integration of the observational, experimental, analytical, and modeling tools that are the core of NOAA's research
 - Identifies specific research milestones and objectives to reach our Strategic Plan Goals and Objectives,
 - Encourages transformational research, and
 - Based on societal needs
- Developed by NOAA Research Council
 - Input from NOAA line offices and mission goals, external partners, along with public commentary

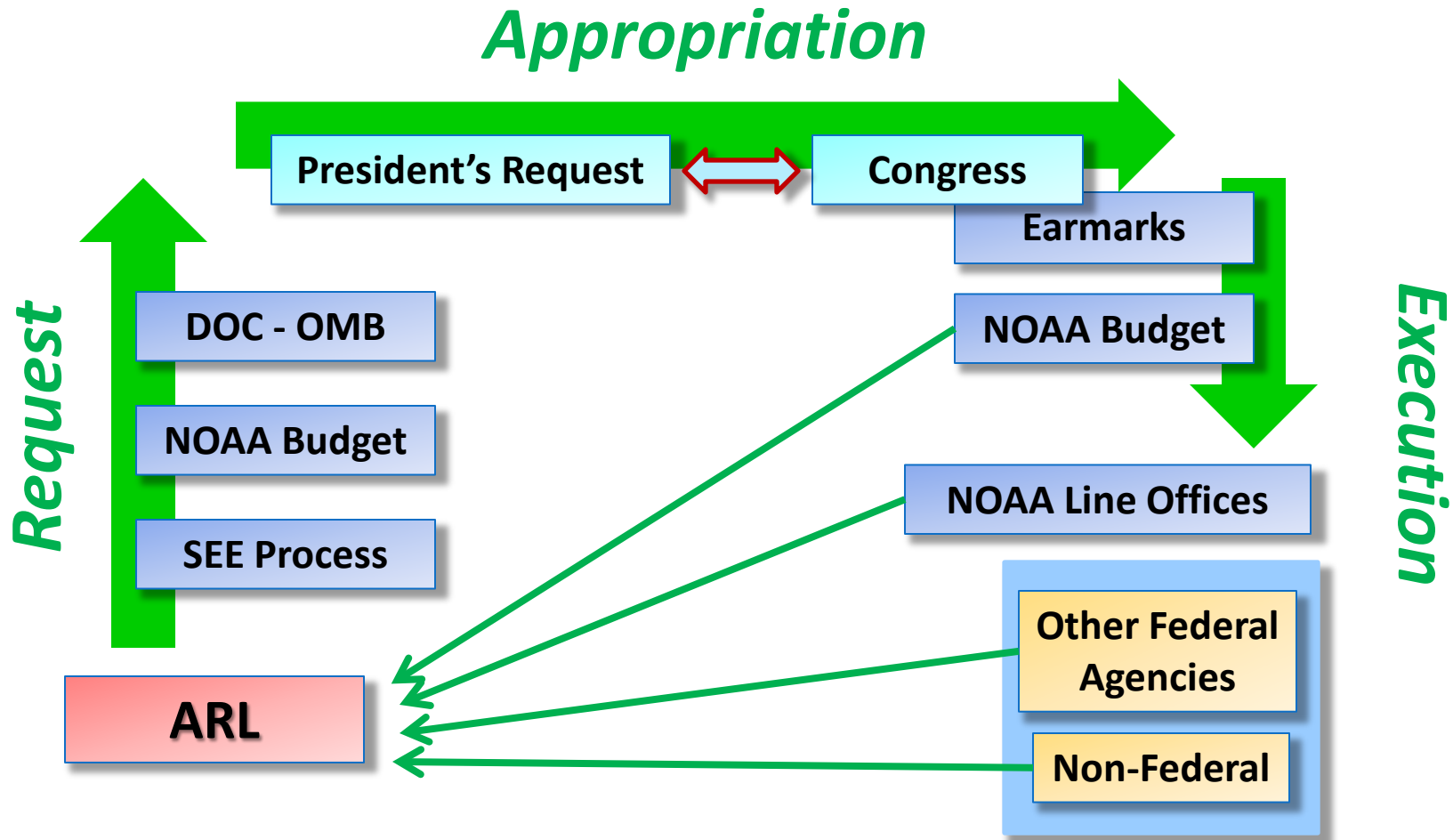


NOAA 5-Yr Research Plan

Overarching Research Questions

- What factors influence ecosystem processes and ... forecasts [of] their future state?
- What is the current state of biodiversity in the oceans, and what impacts will external forces have on this diversity...?
- What improvements to observing systems, analysis approaches and models will allow [lead] us to better predict[ions] ...?
- How are uncertainties ... best estimated and communicated?
- How can the ... warning times for ... high-impact environmental events be increased significantly?

The Research Funding Process





NOAA Research Science Reviews

- Conducted every 4 years to evaluate the quality, relevance, and performance of OAR laboratory research
 - Last ARL Review: 2005 Core Capabilities Analysis
- Assist labs in strategically positioning for and planning future science
- Intended to ensure that research is preeminent and linked to the NOAA Strategic Plan
- The Review Panel is asked to evaluate lab science areas based on specific questions within the Charge to the Review Panel



NOAA Research Tenets

Preeminent Research
Value to Society
Culture of Transparency